

**POINT WISE COMPLIANCE OF EARLIER BIOLOGICAL DATA VS AMENDED  
CORRECT INFORMATION**

| <b>Table No. /Sr. No. / Page No.</b>       | <b>Earlier Biological Name</b>                             | <b>Amended/Revised<br/>Biological Name</b>    |
|--|--|---|
| Table 3.21 Sr. No. 1 Page No 3-66          | <i>Aeuropus lagopoides</i>                                 | <i>Aeluropus lagopoides</i>                   |
| Table 3.23 (A) Sr. No. 1 Page No 3-67      | <i>Acacia leucophloea</i>                                  | <i>Vachellia leucophloea</i>                  |
| Table 3.23 (A) Sr. No. 3 Page No 3-67      | <i>Ailanthus excelsa</i>                                   | <i>Ailanthus excelsa</i>                      |
| Table 3.23 (A) Sr. No. 4 Page No 3-67      | <i>Azadhirachta indica</i>                                 | <i>Azadirachta indica</i>                     |
| Table 3.23 (A) Sr. No. 5 Page No 3-67      | <i>Embllica officinale</i>                                 | <i>Phyllanthus emblica</i>                    |
| Table 3.23 (D) Sr. No. 1 Page No 3-68      | <i>Achyranthus aspera</i>                                  | <i>Achyranthes aspera</i>                     |
| Table 3.23 (D) Sr. No. 2 Page No 3-68      | <i>Asparagus filicinis</i>                                 | <i>Asparagus filicinus</i>                    |
| Table 3.24 Sr. No. 2 Page No 3-70          | <i>Apis dorseta</i>  | <i>Apis dorsata</i>                           |
| Table 3.24 Sr. No. 3 Page No 3-70          | <i>Apis indica</i>   | <i>Apis cerana indica</i>                     |
| Table 3.24 Sr. No. 5 Page No 3-70          | <i>Gastrimargles marmoratus</i>                            | <i>Gastrimargus marmoratus</i>                |
| Table 3.24 Sr. No. 7 Page No 3-70          | <i>Pholcus phalangiodes</i>                                | <i>Pholcus phalangioides</i>                  |
| Table 3.24 Sr. No. 8 Page No 3-70          | <i>Spoleda recurralis</i>                                  | <i>Spoladea recurvalis</i>                    |
| Table 3.24 Sr. No. 9 Page No 3-70          | <i>Typhlochactus mitchelli</i>                             | <i>Hottentotta tamulus</i>                    |
| Table 3.25 Sr. No. 3 Page No 3-70          | <i>C. macrourus</i>  | <i>Circus macrourus</i>                       |
| Table 3.25 Sr. No. 4 Page No 3-70          | <i>C. pygargus</i>   | <i>Circus pygargus</i>                        |
| Table 3.25 Sr. No. 10 Page No 3-70         | <i>Eudynamys scolopacea</i>                                | <i>Eudynamys scolopaceus</i>                  |
| Table 3.25 Sr. No. 13 Page No 3-70         | <i>Francoleus pondicerianus</i>                            | <i>Francolinus pondiceranus</i>               |
| Table 3.25 Sr. No. 17 Page No 3-70         | <i>Hieracaccyx varius</i>                                  | <i>Hierococcyx varius</i>                     |
| Table 3.25 Sr. No. 20 Page No 3-70         | <i>Pericrocotus cinnamomus</i>                             | <i>Pericrocotus cinnamomeus</i>               |
| Table 3.25 Sr. No. 23 Page No 3-71         | <i>Sypheotides indica</i>                                  | <i>Sypheotides indicus</i>                    |
| Table 3.26 (A) Sr. No. 1 Page No 3-71      | <i>Rana caterbeiana</i>                                    | <i>Rana tigerina</i>                          |
| Table 3.26 (B) Sr. No. 4 Page No 3-71      | Western rat snake  | Indian rat snake (Dhaman)                     |
|  | <i>Pantherophis obsoletus</i>                              | <i>Ptyas mucosa</i>                           |
| Table 3.26 (B) Sr. No. 5 Page No 3-71      | Lizard   | Common Lizard                                 |
|  | <i>Podaris muralis</i>                                     | <i>Hemidactylus frenatus</i>                  |
| Table 3.26 (B) Sr. No. 7 Page No 3-71      | <i>Varanus benghalensis</i>                                | <i>Varanus bengalensis</i>                    |
| Table 3.27 Sr. No. 1 Page No 3-71          | <i>Antelope cervicapra</i>                                 | <i>Antelope cervicapra</i>                    |
| Table 3.27 Sr. No. 6 Page No 3-71          | <i>Felis libyca</i>  | <i>Felis lybica</i>                           |
| Table 3.27 Sr. No. 7 and<br>8 Page No 3-72 | Five stripped Khiscoli &<br>Gilahari/squirrel              | Five stripped Khiscoli<br>(Gilahari/squirrel) |
|  | <i>Funambulus pennemanti</i><br><i>Funembulus palmerum</i> | <i>Funambulus pennantii</i>                   |
| Table 3.27 Sr. No. 8 Page No 3-72          | <i>Herpestus edwardsi</i>                                  | <i>Herpestes edwardsii</i>                    |
| Table 3.27 Sr. No. 10 Page No 3-72         | <i>Lepus nigricauillis dayanus</i>                         | <i>Lepus nigricollis</i>                      |
| Table 3.27 Sr. No. 11 Page No 3-72         | <i>Meriones hurricanae</i>                                 | <i>Meriones hurrianae</i>                     |
| Table 3.27 Sr. No. 13 Page No 3-72         | <i>Suncus murinus</i>                                      | <i>Suncus murinus sindensis</i>               |

|   |   |  |
|---|---|--|
| Table No. 3.28 Page No 3-72                             |   | The entire table has been revised and details of Phytoplankton Species have been added.  |
| Section 3.8.6 Page 3-74                                 | The common trees/species along the alignment were <i>Azadirachta indica</i> (Neem), <i>Acacia nilotica</i> (Desi Bawal), <i>Prosopis juliflora</i> (Gando bawal), <i>Eucalyptus globulus</i> (Nilgiri), <i>Mangifera indica</i> (Mango), <i>Phyllanthus emblica</i> (Amla), <i>Syzygium cumini</i> (Jamun), <i>Cassia fistula</i> (Amaltas) etc | The common trees/species along the alignment were <i>Vachellia leucophloea</i> (Ronjh), <i>Acacia nilotica</i> (Babul), <i>Acacia tortilis</i> ( <i>Vachellia tortilis</i> ) (Babool), <i>Ailanthus excels</i> (Maharukh), <i>Azadirachta indica</i> (Neem), <i>Phyllanthus emblica</i> (Amla) etc           |
| Section 3.8.7 Page 3-74                                 |   | References (Literature Consulted) has been added to the Chapter.   |
| Section 4.6.1, 1 <sup>st</sup> Paragraph, Page No. 4-20 | The black buck is grazer and prefers open grasslands with intermittent tall grasses or bushes. It is habituated to human beings.  | The black buck is grazer and prefers open grasslands interrupted by bushes.  |
| Section 4.6.1, 4 <sup>th</sup> Paragraph, Page No. 4-21 | The proposed project activities will cause habitat fragmentation in areas near intersections especially which will disturb the normal life of wild animals and also act as barrier to their gene flow and migration.  | The proposed project activities may cause marginal and temporary habitat degradation near wetland area which is reversible. Thus, the normal life of wild animals, gene flow and migration will remain unaffected in long-run by vegetation on available RoW and on slopes after completion of construction. |
| Section 4.6.1, 5 <sup>th</sup> Paragraph, Page No. 4-21 | The habitat quality will get degraded on account of damage to vegetation (due to digging, trenching and presence of construction camps) and soil erosion. Repeated disturbance  | The digging, trenching and temporary construction of camps may degrade habitat quality due to clearing of vegetation but it is a temporary in nature. The entire area of the camp site   |

|   |  |   |
|---|--|---|
|   | <p>during construction phase along the proposed expressway will deter wildlife from using habitats in their vicinity. The complete avoidance of the habitat due to disturbance will lead to animal isolation.</p>  | <p>will be rehabilitated as per original vegetation rehabilitated as per original vegetation.</p>   |
| <p>Section 4.6.1, 6<sup>th</sup> Paragraph, Page No. 4-21</p> | <p>Human activities on account of the present project will increase in the area and promote invasion by weeds and non-fodder species, pollution due to liquid, solid and gaseous (due to transport) waste. The motor vehicles will also release heavy metals in the areas of construction and labours camp. All these will adversely affect the habitat quality. The unmanaged population of labourers during the construction phase may also encourage poaching in the wildlife area.</p> | <p>The site clearing activities also will temporarily promote the growth of weeds and non-fodder species due to disturbance to the existing soil structure. The weedy species will get eliminated in long run as the site will get stabilized naturally. The species for roadside plantation will choice as per existing vegetation type. The slope will be stabilized with turfing (By engineering). The solid waste will be reused for construction of embankment. The liquid waste will be treated in camp side before its disposal in sewage canal.</p> |
| <p>Section 4.6.1, 7<sup>th</sup> Paragraph, Page No. 4-21</p> | <p>The noise, light and human presence will make site less attractive for wild animals. The artificial light will disturb the breeding and foraging behavior of the animals. The headlight glare will interfere in the movement of birds; disrupt horning behavior of these wild animals. At times, the sudden noise may also cause shock to these wild animals. The proposed expressway may also contribute as a source of</p>  | <p>The noise and antiglare barrier will be constructed in forest patches for conservation of habitat.</p>   |

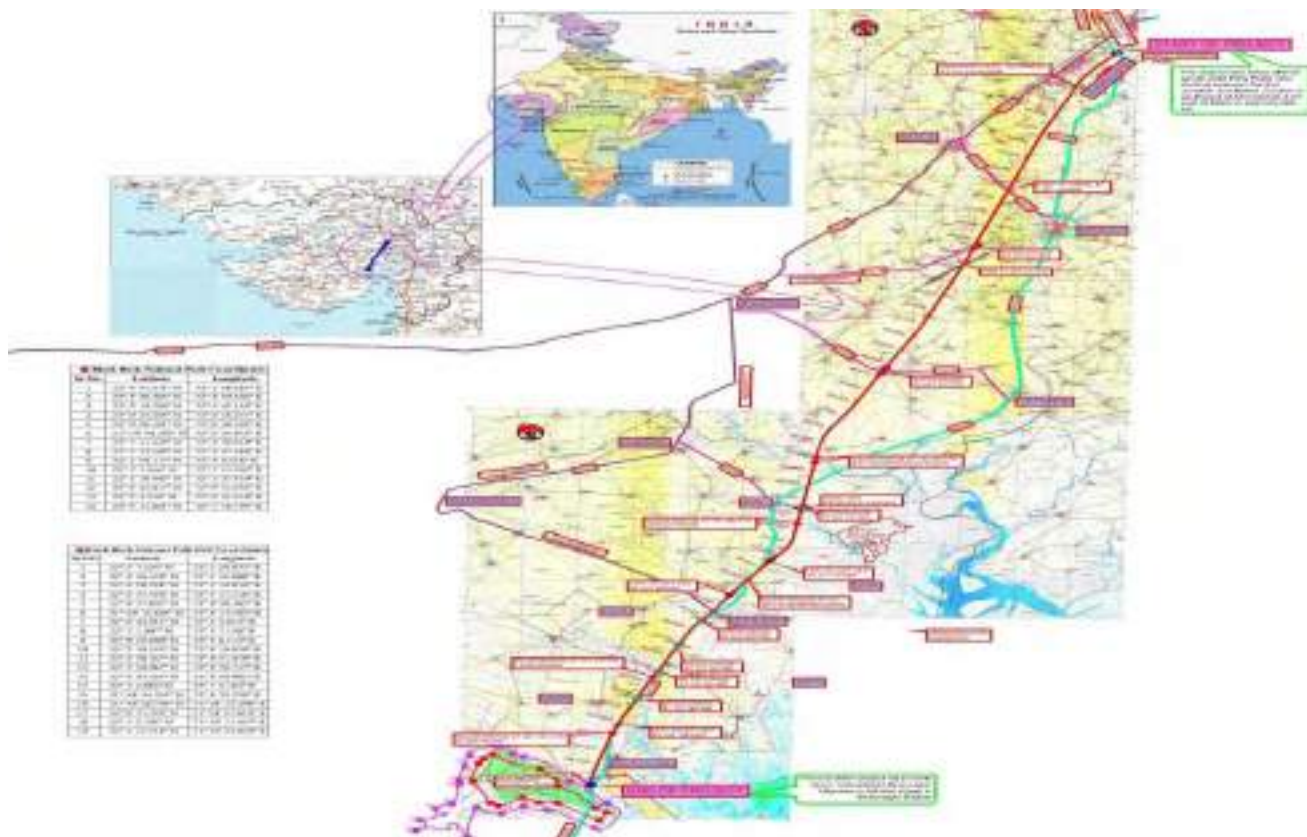
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|  | ignition of fire in the landscape.   |  |
| Section 4.6.5 Point No. 12 Page No. 4-29 | <p><b>Increased Human-Wildlife Conflict</b></p> <p>The disruption of home ranges may force the wild animals to explore new areas for foraging where they may come into conflict with human beings. Human settlements and cultivation near road also increases conflicts.</p> | <p><b>Human-Wildlife Conflict</b></p> <p>The proposed project is away from ESZ and there is no contiguous forest patch on either side of the project road except revenue forests and protected forest (Cross road, canal crossing etc). However 04 nos of underpasses and box culverts are providing in the interval of 200 to 250m. These will be used for cattle and animal for passage.</p> |



# **R1 FINAL ENVIRONMENTAL IMPACT ASSESSMENT REPORT & ENVIRONMENTAL MANAGEMENT PLAN**

**For**

**Construction of Ahmedabad-Dholera Expressway Road (Approx.110  
km) (NHAI/BM/21) in the state of Gujarat**



## **Project Proponent:**

**NATIONAL HIGHWAYS AUTHORITY OF INDIA  
(Ministry of Road Transport & Highways, Government of  
India)**

## **PROJECT CONSULTANT**

**SMEC INDIA PVT. LTD. in association with Design Aid**

## **Environmental Consultant:**

**ENVIRO INFRA SOLUTIONS PVT. LTD.**

**(QCI/NABET Certificate No. NABET/EIA/1922/RA 0157)**

**August 2020**





# Quality Council of India

## National Accreditation Board for Education & Training



### CERTIFICATE OF ACCREDITATION

**Enviro Infra Solutions Private Limited, Ghaziabad**

**301,302 & 305, SRBC, Plot No. INS - 12, Sector - 9, Vasundhara, Ghaziabad- 201012**

Accredited as Category - A organization under the QCI-NABET Scheme for Accreditation of EIA Consultant Organizations: Version 3 for preparing EIA-EMP reports in the following Sectors:

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| 3     | River Valley projects   | 3               | 1 (c)     | A    |
| 4     | Thermal power plants  | 4               | 1 (d)     | A    |
| 5     | Metallurgical industries (ferrous only)   | 8               | 3 (a)     | B    |
|       | Metallurgical industries (non ferrous only)   |                 |           | A    |
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| 8     | Pesticides industry and pesticide specific intermediates (excluding formulations)   | 17              | 5 (b)     | A    |
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| 10    | Synthetic organic chemicals industry  | 21              | 5 (f)     | A    |
| 11    | Distilleries  | 22              | 5 (g)     | A    |
| 12    | Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs / ecologically sensitive areas including LNG terminal | 27              | 6 (a)     | A    |
| 13    | Isolated storage & handling of Hazardous chemicals  | 28              | -         | B    |
| 14    | Airport   | 29              | 7 (a)     | A    |
| 15    | Ports, harbours, break waters and dredging  | 33              | 7 (c)     | A    |
| 16    | Highways  | 34              | 7 (f)     | A    |
| 17    | Building and construction projects  | 38              | 8 (a)     | B    |
| 18    | Townships and Area development projects   | 39              | 8 (b)     | B    |

*Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in RAAC minutes dated Feb 07, 2020 posted on QCI-NABET website.*

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**Sr. Director, NABET**  
**Dated: March 16, 2020**

**Certificate No.**  
**NABET/ EIA/1922/ RA 0157**

**Valid till**  
**Nov 13, 2022**

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**DECLARATION BY EXPERTS CONTRIBUTING TO THE EIA: Construction of Ahmedabad-Dholera Expressway Road (110 km) (NHA/BM/21) in the State of Gujarat.**

I, hereby certify that I was a part of the EIA team in the following capacity that developed the above EIA.

**EIA coordinator:-**

Name : Sanjeev Sharma

Signature and Date :


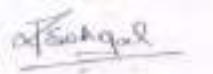


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| S. No. | Functional Areas | Name of the experts       | Signature   |
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| 3      | SHW              | Sanjeev Sharma            |  |
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| 10     | NV               | Sanjeev Sharma            |  |
| 11     | LU               | Yasir Ahmed               |  |

|  |         |                     |   |
|--|---------|---------------------|---|
| 12                                     | RH      | Anoop Kishore Misra |  |
| <b>Functional Area Associate (FAA)</b> |         |                     |   |
| 1                                      | AP & NV | Rishabh Sehgal      |  |

### **Declaration of association in the EIA**

Declaration by the Head of the accredited consultant organization/ authorized person:

I, ML Sharma, Director, hereby, confirm that the above-mentioned experts prepared the EIA/EMP report for Construction of Ahmedabad-Dholera Expressway Road (110 km) (NHAI/BM/21) in the State of Gujarat. I also confirm that the consultant organization shall be fully accountable for any misleading information mentioned in this statement.

Signature :



Name : **ML Sharma**

Designation : **Director**

Name of the EIA consultant organization : **Enviro Infra Solutions Pvt. Ltd.**

NABET Certificate issued vide Letter No : **NABET/EIA/1922/RA 0157 dated  
March 16, 2020**



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## **CHAPTER-1: INTRODUCTION**

### **1.1 PROJECT BACKGROUND**

The National Highways Authority of India (NHAI) has entrusted SMEC India Pvt. Ltd. in association with Design Aid, with the assignment of preparation of feasibility study / Detailed project report and implementation of road stretches selected for Delhi-Mumbai Industrial Corridor Development Corporation Ltd. (DMICDC) under Bharat Mala Scheme – Ahmedabad – Dholera Expressway (up to centre of DSIR) (110 Km) (BM/21) in the state of Gujarat.

SMEC (India) Pvt. Ltd in association with Design Aid, have been appointed as Consultants by NHAI to carry out the preparation of Feasibility study / Detailed Project Report

Further, SMEC (India) Pvt. Ltd in association with Design Aid, has assigned Enviro Infra Solutions Pvt. Ltd. a NABET accredited consultant to prepare the Environmental Impact Assessment report including Environmental Management Plan.

### **1.2 IDENTIFICATION OF PROJECT AND PROJECT PROPONENT**

The proposed expressway is part of an exclusive transport corridor being planned between Ahmedabad and Bhavnagar by the Government of Gujarat, keeping the development of SIR around Dholera in centre. The proposed expressway will pass through Ahmedabad and Bhavnagar districts in the state of Gujarat.

The project proponent is National Highways Authority of India (Ministry of Road Transport & Highways (MORT&H), Government of India.) Project Implementation Unit, Ahmedabad, Gujarat.

### **1.3 BRIEF DESCRIPTION OF THE PROJECT AND ITS IMPORTANCE TO THE COUNTRY**

The proposed expressway is mostly green field project and proposed for 4 lane expressway from Ahmedabad to Dholera having a total length of 109.019 Kms. The proposed project expressway takes off from Sardar Patel Ring Road near Sarkhej between Santhal Junction and Bakrol Junction in southwest of Ahmedabad, 2 km east of National Highway NH-8A. The corridor runs southerly towards Dholera between NH-8 (in the west) and SH-4, SH-6, Sabarmati river course/Gulf of Khambat (on east side). The proposed access-controlled expressway project has been envisaged through an area which shall have the advantage of simultaneous development as well as shall result in a shorter distance to travel. Expressway project was originally conceived as 6-lane green field alignment, however during the course of DPR study it was decided to plan for 4-for lane divided expressway project with depressed median initially with provision for future 8-lane configuration (MoM held on 04.09.2018 at NHAI HQ and issued on dated 25.09.2018, ref. letter no. NHAI/CM/DMICDC/02/2016/124163).The location of proposed project has been shown in Figure 1.1



For ease of construction, the project has been divided into the four construction packages. The details of construction packages have been presented in **Table 1.1**:

**Table 1.1: Details of Construction Packages**

| Package      | From (km) | To (km) | Length of package (km) | Location                                   | District              |
|--------------|-----------|---------|------------------------|--|-----------------------|
| Package-1    | 0.000     | 22.000  | 22.000                 | Sardar Patel ring road to Sindhrej Village | Ahmedabad             |
| Package-2    | 22.000    | 48.520  | 26.520                 | Sindhrej Village to Vejalka village        | Ahmedabad             |
| Package-3    | 48.520    | 71.060  | 22.540                 | Vejalka village to start of DSIR Zone      | Ahmedabad             |
| Package-4    | 71.060    | 109.019 | 37.959                 | Start of DSIR Zone to Adhelai village      | Ahmedabad & Bhavnagar |
| <b>Total</b> |           |         | <b>109.019</b>         |  |                       |







### 1.3.1 Salient features of the project

The salient features of the proposed project have been presented in **Table 1.2**.

**Table 1.2: Salient features of the proposed project**

|  |   |   |
|--|---|---|
| 1.   | Project Road  | Construction of Ahmedabad-Dholera Expressway Road (110 km) (NHAI/BM/21) in the State of Gujarat                                   |
| 2.   | Type of PPP   | EPC/Hybrid Annuity Model  |
| 3.   | Location of the proposed project                              | The proposed project is from Ahmedabad to Dholera, falling in districts of Ahmedabad & Bhavnagar in the state of Gujarat          |
| 4.   | No. of affected villages by Land acquisition                  | 24 villages   |
| 5.   | Total Length of the proposed project                          | 109.019 km  |
| 6.   | Total Area of Land Acquisition                                | Total Land Acquisition: 959.14 Ha.<br>Private Land: 886.26 Ha.<br>Government Land: 72.88 ha (including 1.530 ha Forest Land)      |
| 7.   | Terrain   | Mostly Plain and some areas in rolling  |
| 8.   | Seismic Zone  | Zone III  |
| 9.   | Geographical Location   | Start Location: 22° 56' 46" N 72° 29' 06" E<br>End Location: 22° 02' 21" N 72° 05' 59" E.   |
| 10.  | Proposed Bridges  | 13 nos. Major Bridge<br>21 nos. Minor Bridge  |
| 11.  | Proposed Underpasses / Flyover including Pedestrian underpass | Vehicular Underpass: 20<br>Light Vehicular Underpass: 26<br>Cattle Underpass: 1<br>Flyovers: 10                                   |
| 12.  | Culverts (Widening / Reconstruction / New)                    | 216 Nos   |
| 13.  | Right of Way  | 120 m   |
| 14.  | Design Speed  | 120 km/hr for plain terrain   |
| 15.  | Carriageway   | 3.75 m Lane width   |
| 16.  | Embankment  | 5 m to 8 m (average)  |
| 17.  | Proposed Toll Plazas (Main)                                   | 03 Nos  |
| 18.  | Safety Measure  | Crash Barriers  |
| 19.  | Lighting  | Lighting all along including High Masts at Toll plazas, interchanges, major bridges / ROB's and Amenities and Truck Parking Areas |
| 20.  | No of Structures Affected                                     | 144   |
| 21.  | Total Cost (Civil)  | 3300.48 Crores  |
| <b>Environmental &amp; Social Features</b> |   |   |
| 22.  | Forest Land Diversion   | 1.530 Ha. (Protected)   |





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|     |  |   |
|-----|--|---|
| 23. | Wells  | 19 Nos  |
| 24. | Ponds  | 31 nos. of impacted ponds   |
| 25. | Quantity of waste generation                                     | Municipal solid waste : About 0.19 tonnes/day from labor camps                            |
| 26. | Existing trees within ROW of 80m                                 | 4478 (excluding DSIR area)  |
| 27. | Compensatory plantation  | 97195 nos of trees shall be planted (3 rows plantation on both the side)                  |
| 28. | Green belt development   | As per IRC SP 21:2009 /MoRTH Code/Guidelines  |
| 29. | Cropping pattern   | Kharif and Rabi crops are grown in Ahmedabad. Paddy is the main crop in the project area. |
| 30. | No. of project affected persons (PAFs) & (PAPs)                  | Total PAFs – 180<br>Total PAPs – 720  |
| 31. | Resettlement Action Plan (RAP) including Land Acquisition Budget | 837.66 Crores.  |

The proposed expressway is part of an exclusive transport corridor being planned between Ahmedabad and Bhavnagar by the Government of Gujarat, keeping the development of SIR around Dholera in centre. The proposed expressway corridor is sited between two existing road routes to Bhavnagar; Ahmedabad-Bagodara-Dhandhuka-Bhavnagar route at its west and Ahmedabad- Dholka-Wataman-Dholera-Bhavnagar route to its east. However, the proposed expressway merges with the later before Dholera and follows thereafter.

The part of proposed Ahmedabad - Dholera expressway alignment crosses through Bhogwa and Golsar creek near Valinda, Anandpur, Pipli and Bholad villages of Ahmedabad District, which is under CRZ region such as CRZ IB, CRZ III and CRZ IV. The proposed Expressway passes through creek/river at two locations i.e. from **Ch. 59+700 to Ch.61+200** and from **Ch.68+800 to Ch.70+500**. **Ecologically sensitive areas such as mangroves are not observed in the study area whereas; extensive intertidal zone and tidally influenced water bodies were observed along the river/creek where the proposed expressway passes at above referred two locations.** The detailed Rapid EIA report including Marine and Terrestrial component & Disaster Management Plan of CRZ locations along with the approved CRZ map from National Centre for Sustainable Coastal Management (NCSCM), Chennai (Ministry of Environment, Forest & Climate Change, Government of India) have been attached as **Annexure VIII**. The recommendation letter of CRZ clearance from Gujarat Coastal Zone Management Authority (GCZMA) for the proposed expressway has been attached as **Annexure XI**.

The proposed access controlled expressway project with new alignment has been envisaged through an area which shall have the advantage of simultaneous development as well as shall result in a shorter distance to travel. The junctions with existing road will be planned in the form of interchanges and flyover to ensure uninterrupted flow of traffic.

The proposed expressway would act as the prime artery for the economic flow to this region. It will enhance economic development, provide employment opportunities to locals, strengthen tourist development, ensure road safety and provide better transportation facilities and other facilities such as way side amenities. Vehicle operating cost will also be reduced due to



improved road quality. The compensatory plantation and road side plantation shall further improve the air quality of the region.

#### **1.4 SCOPE OF THE EIA/EMP STUDY (AS PER TOR)**

The Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India, in its Notification S.O. 1533 dated September 14, 2006 has made it mandatory to obtain Environmental Clearance (EC) for any expansion, widening or construction of a new road project before its implementation. The Project falls under category „A” as per the MoEF&CC Notification on EIA dated Sep. 14, 2006 and amendment thereafter. As a requirement for seeking Environmental Clearance (EC), the consultants are required to prepare the detailed Environmental Impact Assessment (EIA) report and the Environmental Management Plan (EMP) for getting environmental clearances from the Ministry of Environment, Forest and Climate Change (MoEF&CC). The ToR was obtained for the proposed project vide (F.No. 10-9/2018-IA-III) dated 11.06.2018 and EIA has been prepared as per the approved ToR (Copy of the Approved ToR is attached as Annexure- I)

The scope of the EIA/EMP study is: -

- To establish present environmental condition along the project corridor through available data/information supported by field studies.
- Screening, scoping and consultations with public, experts in various fields, non-government organization (NGOs), etc.
- Review of policies and legal framework.
- Identification of the potential impacts during pre-construction, construction and operation phases.
- Developing mitigation measures to sustain and maintain the environmental scenario.
- Providing compensatory developments wherever necessary, including plans for highway side tree plantation.
- Designing the Environmental Management Plan.
- Suggesting the Environmental Enhancement and its monitoring Scheme.

#### **1.5 OBJECTIVES OF THE CONSULTANCY SERVICES**

The main objectives of the Consultancy service are: -



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- To establish the inception report of an expressway corridor between Ahmedabad to Dholera on the basis of technical, economical and financial viability of the project in the first stage and thereafter prepare feasibility cum preliminary design report for construction of the expressway along the selected highway including Environmental Clearance through its NABET accredited EIA consultant.
- To plan the Expressway as a fully access controlled facility taking into account the requirements of highway design, pavement design and provision of service roads, underpasses for both vehicles and pedestrians, rehabilitation and widening of existing structures and provision for new bridges/ structures and cost estimates vis-a-vis investment and financial return through toll revenues.
- To suggest appropriate measures for mitigating the effects of property and community severance and circulation of the local traffic.
- To ensure that the drainage pattern of the area is not disturbed and natural environment, human habitation and heritage sites are fully protected.
- To integrate safety in design, construction and operation of the express-way. Infrastructure for user amenities, operation and maintenance, incident management and user information system will be an integral part of the study.
- To develop the express-way in EPC/Hybrid Annuity Model.

## 1.6 POLICIES, LEGAL AND ADMINISTRATIVE FRAMEWORK

Statutory permissions and clearances required during construction and operation of the project are summarized in **Table 1.3**.

**Table 1.3: Summary of Relevant Environmental Acts and Guidelines**

| Sl. No | Act/Rules  | Year         | Objective  | Applicable Yes/No | Reason for applicability  | Authority  |
|--------|--|--------------|--|-------------------|---|--|
| 1.     | Environmental (Protection) Act                               | 1986         | To protect and improve overall environment   | Yes               | An umbrella Act of all environmental Acts, notifications, rules and schedules       | MoEF&CC<br>GoI, Forests & Env. Dept.,<br>GoG, CPCB, GPCB |
| 2.     | Environmental Impact Assessment (EIA) Notification           | 2006         | To provide environmental clearance to new development activities following environmental impact assessment | Yes               | The project attracts the conditions of EIA Notification 2006 and further amendments | MoEF&CC  |
| 3.     | Forest (Conservation) Act & National Forest Policy (Revised) | 1980<br>1988 | To check deforestation by restricting conversion of forested areas into non-forested areas                 | Yes               | There is notified protected forest area at crossings of the intersection (1.530 ha) | Forest Department<br>GoG                                 |



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| Sl. No | Act/Rules   | Year | Objective   | Applicable Yes/No | Reason for applicability   | Authority                  |
|--------|---|------|---|-------------------|--|----------------------------|
| 4.     | Wildlife (Protection) Act   | 1972 | For protection of wildlife  | No                | The proposed project does not pass through any Wildlife Sanctuary or its eco sensitive zone.   | SBWL, NBWL, MoEF&CC        |
| 5.     | Biological Diversity Act  | 2002 | To provide mechanism for equitable sharing of benefits arising out of use of traditional biological resources and knowledge | Yes               | Preserve Biological Diversity  | Forest Dept., GoG, MoEF&CC |
| 6.     | Water (Prevention and Control of Pollution) Act and Cess Act of 1977 as amended in 1988 | 1974 | To control water pollution by controlling emission & Water pollutants as per the prescribed standards                       | Yes               | This act will be applicable during construction, for establishments of hot mix plant, stone crusher, construction camp, workers' camp, etc.                            | GPCB                       |
| 7.     | Air (Prevention and Control of Pollution) Act as amended in 1987                        | 1981 | To control air pollution by controlling emission and air pollutants according to prescribed standards                       | Yes               | This act will be applicable during construction; for obtaining NOC for establishment of hot mix plant, workers' camp, stone crusher, construction camp, etc.           | GPCB                       |
| 8.     | Noise Pollution (Regulation and Control) rules  | 2000 | Noise pollution regulation and controls   | Yes               | This act will be applicable as vehicular noise on project routes required to assess for future years and necessary protection measure need to be considered in design. | GPCB                       |



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| Sl. No | Act/Rules   | Year | Objective  | Applicable Yes/No | Reason for applicability   | Authority  |
|--------|---|------|--|-------------------|--|--|
| 9.     | The GoG, notification No. GWR/1095/61/I-1/J-1 dated 19.09.2001 for control and regulation of ground water resources | 2002 | Conservation of ground water and for the regulation and control of its extraction and use in the State of Gujarat  | Yes               | This act will be applicable during construction for extraction of use of groundwater   | Gujarat Ground Water Authority (GGWA), GoG           |
| 10.    | Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010                         | 2010 | Conservation of Cultural and Historical remains found in India   | No                | The project route is not close to any Ancient Monument, declared protected under the act.  | Archaeological Dept. Gol, Dept. of Archaeology, GoG, |
| 11.    | Notification for use of fly ash   | 2016 | Promoting the utilization of fly ash in the manufacture of building materials and in construction activity within a specified radius of 300 kilometers from coal or lignite based thermal power plants | Yes               | Sabarmati Thermal Power Station, Ahmedabad (400MW) and Dhuvaran Thermal Power Station (220 MW) power plants are located within 300 km. | MoEF&CC  |
| 12.    | The Explosives Act (& Rules)  | 1884 | An Act to regulate the manufacture, possession, use, sale, transport, import and export of Explosives  | Yes               | For transporting and storing diesel, bitumen etc.  | GPCB   |
| 13.    | Public Liability Insurance Act  | 1991 | Insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling any hazardous substance and for matters connected therewith or incidental thereto | Yes               | Contractor need to stock hazardous material like diesel, Bitumen, Emulsions etc. safely  | GPCB   |



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| Sl. No | Act/Rules  | Year | Objective   | Applicable Yes/No | Reason for applicability  | Authority      |
|--------|--|------|---|-------------------|---|----------------|
| 14.    | Coastal Regulation Zone  | 2011 | To regulate activities in the coastal zone to protect ecologically sensitive areas  | Yes               | The part of proposed Ahmedabad - Dholera expressway crosses through Bhogwa and Golsar creek near Valinda, Anandpur, Pipli and Bholad villages of Ahmedabad District, which is under CRZ region such as CRZ IB, CRZ III and CRZ IV from Ch. 59+700 to Ch.61+200 and from Ch.68+800 to Ch.70+500. | GCZMA, MoEF&CC |
| 15.    | Hazardous and Other Wastes (Management and Transboundary Movement) Rules | 2016 | Storage, handling, transportation and disposal of hazardous waste   | Yes               | Storage and handling of hazardous waste during construction   | GPCB           |
| 16.    | Solid Waste Management Rules   | 2016 | Management and handling of solid waste  | Yes               | For disposal of solid waste generated during construction   | GPCB           |
| 17.    | Construction and Demolition Waste Management Rules                       | 2016 | Management of construction and demolition waste   | Yes               | For disposal of solid waste generated due to construction and demolition  | GPCB           |
| 18.    | Batteries (Management & Handling) Amendment Rules                        | 2010 | Management and handling of used lead batteries  | Yes               | Safe disposal of used lead batteries  | GPCB           |
| 19.    | E-Waste (Management) Rules   | 2016 | Effective mechanism to regulate generation, collection, storage, transport, import, export, recycling, treatment and disposal of e-wastes | Yes               | Handling of e-waste   | GPCB           |



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| Sl. No | Act/Rules  | Year | Objective   | Applicable Yes/No | Reason for applicability   | Authority                           |
|--------|--|------|---|-------------------|--|-------------------------------------|
| 20.    | Central Motor Vehicles Act   | 1988 | To control vehicular air and noise pollution.                       | Yes               | This rule will be applicable to road users and construction machinery  | Motor Vehicle Department            |
| 21.    | Minor Mineral and concession Rules   | 1960 | For opening new quarry  | Yes               | Regulate use of minor minerals like stone, soil, river, sand etc.  | District Collector                  |
| 22.    | The Mining Act   | 1952 | The mining act has been notified for safe and sound mining activity | Yes               | The construction of proposed expressway will require aggregates. These will be procured through mining from quarries | Department of mining, GoG           |
| 23.    | The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act | 2013 | Set out rules for fair compensation and acquisition of land         | Yes               | This act will be applicable as there will be acquisition of land for widening, geometric improvements and bypasses   | Revenue Department State Government |
| 24.    | The National Highway Act   | 1956 | For Land Acquisition  | Yes               | This act will be applicable as there will be acquisition of land for widening, geometric improvements and bypasses   | NHAI Revenue Department, GoG        |

## 1.7 STRUCTURE OF THE REPORT

The report consists of ten Chapters and the content is briefly described in this section

### Chapter 1: Introduction

This chapter contains the general information about the project, scope of the EIA/EMP study and the policies, legal and administrative framework and identification of the project proponent.

### Chapter 2: Project Description

This chapter contains the description of the project, such as, the type of project, need for the project, project location, highway alignment, utilities, implementation schedule and the road side safety measures.





### **Chapter 3: Analysis of Alternatives**

This chapter contains the details of various alternatives in respect of both location of site and technologies to be deployed. Alternatives have been compared in terms of their potential environmental impacts, capital and recurrent costs, suitability under local conditions, and institutional training and monitoring requirements.

### **Chapter 4: Description of Environment**

The methodology for assessing various baseline environmental components in the study area prior to the commencement of the project has been identified in this chapter. The various parameters of present environmental status are identified under different aspects, which include location and regional setting of the area, topographical aspect which include land use, land cover and soil quality of the study area. Drainage aspect consists of surface and ground water quality. Meteorological aspect contains all the climatic factors and ambient air quality of the study area. Ecological environment describes the flora and fauna of the region. Human aspect includes the demography features, socio-economic environment and infrastructure facilities of the area.

### **Chapter 5: Anticipated Environmental Impact and Mitigation Measures**

This chapter contains the anticipated impact on the environment and mitigation measures. The method of assessment of impact including studies carried out, modeling techniques adopted to assess the impact where pertinent shall be elaborated in this chapter. It gives the details of the impact on the baseline parameters, both during the construction and operational phases and mitigation measures to be implemented by the proponent.

### **Chapter 6: Environmental Monitoring Programme**

This chapter covers the planned Environmental Monitoring Program. It includes the technical aspects of monitoring the effectiveness of mitigation measures and the cost for the Environmental Monitoring.

### **Chapter 7: Additional Studies**

This chapter covers the details of the additional studies, required in addition to those specified in the approved TOR by MoEF&CC and which are necessary to cater to more specific issues applicable to the particular project.

### **Chapter 8: Project Benefits**

This chapter covers the benefits accruing to the locality, neighborhood, region and nation as a whole. It brings out the details of benefits by way of improvement in the physical infrastructure, social infrastructure, employment potential and other tangible benefits.

### **Chapter 9: Environmental Management Plan**

This chapter comprehensively presents the Environmental Management Plan (EMP), which includes the administrative and technical setup, summary matrix of EMP, green belt development plan, the cost involved to implement the EMP, both during the construction and operational phases.





## Chapter 10: Disclosure of Consultants Engaged

This chapter should include the names of the consultants engaged along with a brief resume and nature of consultancy rendered.

### 1.8 TOR APPROVED BY MOEF&CC AND ITS COMPLIANCE

The EIA/EMP report has been prepared in conformity with all issues brought out in the detailed ToR issued by MoEF&CC vide letter No. 10-9/2018-IA.III dated 11.06.2018. The copy of the approved ToR has been attached as **Annexure-I**. The brief issues involved and their compliance have been presented in **Table 1.4**:

**Table 1.4: Compliance of ToR**

| Sr. No.                       | ToR Points  | Reference of Compliance  |
|-------------------------------|---|--|
| <b>A. Specific Conditions</b> |   |  |
| i.                            | Proponent should incorporate the integrated eco-friendly design for entire stretch on either side of Velavadar National Park as per the WII guidelines.<br><br>Impact of proposed project on movement of wildlife up to 10 km radius of the park should also be taken into account in the impact assessment study | The proposed alignment is away from the Velavadar Black Buck National Park and its eco sensitive zone (The letter from ACF regarding the distance is attached in <b>Annexure -XIII</b> )<br><br>Movement of wildlife up to 10 km radius of the Velavadar Black Buck National Park and its eco sensitive zone has been taken into consideration in the baseline study and presented in section 3.8 at Page No. 3-57 and their impact has been presented in section 4.6 at Page No. 4-20.<br><br>The details of integrated eco-friendly design have been presented in section 4.6.4.1 at Page No. 4-24 of Chapter 4.   |
| ii.                           | Proponent should explore the possibilities to find alternate alignment to avoid disturbance to the wildlife including Blackbuck and roosting and feeding sites for harriers and Lesser Florican   | Alignment of Expressway is fixed in conformity with approved alignment of Mass Rapid Transit System (MRTS) project with the approval of State Government as well as Government of India. NHAI is the implementing authority of the fixed alignment. A meeting was held on 20th January 2017 under chairmanship of CEO & MD, DMICDC and it was decided to fix alignment of Expressway as per standards and in conformity with approved alignment of MRTS project included in JICA Rolling Plan to establish the technical, economic and financial viability of the project and prepare project report for four lane expressway configurations for DMICDC. The proposed expressway corridor is sited between two existing road routes to Bhavnagar; Amhedabad – Bagodara - Dhandhuka |



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|       |   | <p>Bhavnagar route at its west and Ahmedabad- Dholka- Vataman-Dholera-Bhavnagar route to its east. However, the proposed expressway merges with the later before Dholera and follows thereafter</p> <p>The proposed alignment is away from the Velavadar Black Buck National Park and its eco sensitive zone (The letter from ACF regarding the distance is attached in <b>Annexure -XIII</b>).</p> <p>Movement of wildlife including Blackbuck and roosting and feeding sites for harriers and Lesser Florican up to 10 km radius of the Velavadar Black Buck National Park and its eco sensitive zone has been taken into consideration in the baseline study and presented in section 3.8 at Page No. 3-57 and their impact has been presented in section 4.6 at Page No. 4-20.</p> |
| iii.  | Furnish the authentic maps of all perennial and seasonal wetlands (based on Survey of India topo sheets) along the proposed and alternate alignment. Also state the size of each wetland and distance from proposed and alternate alignment | The details of the wetlands along the proposed alignment have been attached as <b>Annexure II</b> .  |
| iv.   | Carry out the study of cumulative impact of proposed project on Sarus Crane, Harrier roosting and foraging sites, lesser florican and Blackbuck and other important wildlife species along the proposed and alternate alignment             | The details have been presented in sections 4.6 & 4.6.1 at Page No. 4-20 and 4-21 of Chapter 4.  |
| v.    | Carry out detailed traffic study to assess inflow of traffic from adjoining areas like airport/urban cities   | The details have been presented in section 2.5 at page No 2-4 of Chapter 2.  |
| vi.   | Furnish report on Acoustic and Light Proofing measures considering the WII manual and if any, other such documents. It should be conducted by the reputed institute having adequate experience for such study                               | <p>The proposed alignment is falling away from the ESZ of Velavadar Black Buck National Park. Therefore, additional study is not pertinent for this proposed expressway from Ahmedabad to Dholera.</p> <p>However, details of Acoustic and Light Proofing mitigation measures for the proposed project have been presented in section 4.6.4.2 &amp; 4.6.5 at page No. 4-27 to 4-29 of Chapter 4.</p>   |
| vii.  | Wildlife corridors mapped by the Wildlife Institute of India also need to be taken into account in project planning and requirement of suitable eco-friendly measures   | As per Wildlife Corridors in India published by Worldwide Fund for Nature-India, No Wildlife Corridor is noticed in the proposed project area from Ahmedabad to Dholera.   |
| viii. | CRZ clearance to be obtained by DSIR for the part of proposed alignment within the specified CRZ area   | The CRZ clearance for the part of DSIR is under process by DSIR.   |



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| ix.                          | Beyond DSIR area, CRZ clearance is to be obtained by NHAI, if applicable  | The recommendation letter from GCZMA for the proposed project has been attached as <b>Annexure XI</b> .  |
| <b>B. General Conditions</b> |   |  |
| i.                           | A brief description of the project, project name, nature, size, its importance to the region/state and the country shall be submitted   | The details have been shown in section 1.3 at Page No. 1-1 of Chapter 1.   |
| ii.                          | In case the project involves diversion of forests land, guidelines under OM dated 20.03.2013 shall be followed and necessary action be taken accordingly  | The stage – 1 clearance has been obtained and attached as <b>Annexure XII</b> .  |
| iii.                         | Details of any litigation(s) pending against the project and/or any directions or orders passed by any court of law/any statutory authority against the project to be detailed out  | There is no litigation against the project with any court.   |
| iv.                          | Detailed alignment plan, with details such as nature of terrain (plain, rolling, hilly), land use pattern, habitation, cropping pattern, forest area, environmentally sensitive areas, mangroves, notified industrial areas, sand dunes, sea, rivers, lakes, details of villages, tehsil, districts and states, latitude and longitude for important locations falling on the alignment by employing remote sensing techniques followed by "ground truthing" and also through secondary data sources shall be submitted | The nature of the terrain is mostly plain and in some areas it is in rolling terrain. The land use pattern along the project area has been present in section 3.3.3 at Page No. 3-7 of Chapter 3.  |
| v.                           | Describe various alternatives considered, procedures and criteria adopted for selection of the final alternative with reasons   | Alignment of Expressway is fixed in conformity with approved alignment of Mass Rapid Transit System (MRTS) project with the approval of State Government as well as Government of India. NHAI is the implementing authority of the fixed alignment. A meeting was held on 20th January 2017 under chairmanship of CEO & MD, DMICDC and it was decided to fix alignment of Expressway as per standards and in conformity with approved alignment of MRTS project included in JICA Rolling Plan to establish the technical, economic and financial viability of the project and prepare project report for four lane expressway configurations for DMICDC. The proposed expressway corridor is sited between two existing road routes to Bhavnagar; Amhedabad-Bagodara-Dhandhuka-Bhavnagar route at its west and Ahmedabad- Dholka- Vataman-Dholera-Bhavnagar route to its east. However, the proposed expressway merges with the later before Dholera and follows thereafter. |



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|       |  | The details of 'With' and 'Without' project has been presented in Chapter 5 at Page No 5-1 to 5-2.   |
| vi.   | Land use map of the study area to a scale of 1: 25,000 based on recent satellite imagery delineating the crop lands (both single and double crop), agricultural plantations, fallow lands, waste lands, water bodies, built-up areas, forest area and other surface features such as railway tracks, ports, airports, roads, and major industries etc. along with detailed ground survey map on 1:2000 scale showing the existing features falling within the right of way namely trees, structures including archaeological & religious, monuments etc. if any, shall be submitted. | The land use map of the study area of 1: 25,000 is shown in Figure 3.1 (stretch 1 to18) at Page No 3-7 to 3-26 of Chapter 3.<br><br>The ground survey map of 1:2000 is enclosed as <b>Annexure III</b> .   |
| vii.  | If the proposed route is passing through any hilly area, the measures for ensuring stability of slopes and proposed measures to control soil erosion from embankment shall be examined and submitted.  | The proposed expressway lies generally in plain terrain. However, certain length of expressway lies in rolling terrain. The details of the measures for ensuring stability of slopes and to control soil erosion from embankment have been presented in Chapter 2 and section 9.2 of EMP of the report.      |
| viii. | If the proposed route involves tunneling, the details of the tunnel and locations of tunneling with geological structural fraction should be provided. In case the road passes through a flood plain of a river, the details of micro-drainage, flood passages and information on flood periodicity at least of the last 50 years in the area shall be examined and submitted.   | There is no provision of tunnel in the proposed expressway.<br>The natural drainage of the project impacted area shall be maintained through improvement of 216 nos. of culverts, 13 nos. of major bridges and 21 nos. minor of bridges. The proposed alignment does not pass through any flood prone area.. |
| ix.   | If the project is passing through / located within the notified ecologically sensitive zone (ESZ) around a notified National Park/ Wildlife Sanctuary or in the absence of notified ESZ, within 10 km from the boundary of notified National Park/ Wildlife Sanctuary, the project proponent may simultaneously apply for the clearance for the standing committee of NBWL. The EC for such project would be subject to obtaining the clearance from the standing committee of NBWL.   | The proposed alignment does not pass through Wildlife Sanctuary/National Park and its eco sensitive zone. The proposed alignment is away from the protected area of Velavadar Black Buck National Park and its eco sensitive zone.   |
| x.    | Study regarding the animal bypasses/underpasses etc. across the habitation areas shall be carried out. Adequate cattle pass for the movement of agriculture material shall be provided at the stretches passing through habitation areas. Underpasses shall be provided for the  | The details of vehicular, light & pedestrian underpasses and culverts are presented in section 2.7.6 and 2.7.7 respectively from Page no. 2-18 to Page No. 2-24 of Chapter 2.  |



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|        | movement of Wild animals.   |  |
| xi.    | Study regarding in line with the recent guidelines prepared by Wildlife Institute of India for linear infrastructure with strong emphasis on animal movement and identifying crossing areas and mitigation measures to avoid wildlife mortality.  | The details have been presented in Section 4.6.4 & 4.6.5 at Page No. 4-21 to 4-29 of Chapter 4.  |
| xii.   | The information shall be provided about the details of the trees to be cut including their species and whether it also involves any protected or endangered species. Measures taken to reduce the number of the trees to be removed should be explained in detail. The details of compensatory plantation shall be submitted. The possibilities of relocating the existing trees shall be explored. | <p>Approx. 4,478 trees are enumerated in Corridor of Impact, which are common to the locality. The tree inventory has been attached as <b>Annexure X</b>. However, bare minimum trees will be felled which comes directly in the clear zone of the road formation. Therefore, the trees falling in median and embankment area will be saved.</p> <p>The details of the compensatory plantation have been covered in section 9.6 in Green Belt Development Plan of EMP.</p> |
| xiii.  | Necessary green belt shall be provided on both sides of the highway with proper central verge and cost provision should be made for regular maintenance.  | <p>The green belt Development Plan has been presented in Section 9.6 at Page No. 9-20 of Chapter 9.</p> <p>The cost for regular maintenance has been covered in EMP budget.</p>  |
| xiv.   | If the proposed route is passing through a city or town, with houses and human habitation on either side of the road, the necessity for provision of bypasses/ diversions/ under passes shall be examined and submitted. The proposal should also indicate the location of wayside amenities, which should include petrol stations/service centres, rest areas including public conveyance, etc     | <p>The alignment of the expressway is proposed mostly as green field development and thus houses and human habitation are mostly falling away from the alignment.</p> <p>There are two rest areas proposed at Design Ch.35+000 and at Ch. 66+150.</p>  |
| xv.    | Details about measures taken for the pedestrian safety and construction of underpasses and foot-over bridges along with flyovers and interchanges shall be submitted  | The proposed expressway is access control for pedestrian. However, footpaths and stairs are proposed at all rail over bridges (ROB). The details have been presented in Chapter 2.   |
| xvi.   | The possibility that the proposed project will adversely affect road traffic in the surrounding areas (e.g. by causing increases in traffic congestion and traffic accidents) shall be addressed  | The project will enhance traffic movement and the design of the proposed expressway will address safety concerns and reduce accidents.   |
| xvii.  | The details of use of fly ash in the road construction, if the project road is located within the 100 km from the Thermal Power Plant shall be examined and submitted.  | The details of the use of fly ash have been presented in section 4.4.1.1 at Page No. 4-5 of Chapter 4.   |
| xviii. | The possibilities of utilizing debris/waste materials available in and around the project area shall be explored  | The 1,73,82,226 m <sup>3</sup> amount of fly ash will be used for the construction of the proposed project. Details are given in section 4.4.1.1 page No. 4-5  |





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| xix.   | The details on compliance with respect to Research Track Notification of Ministry of Road, Transport and Highways shall be submitted.  | Followed the IRC and MoRTH guidelines.   |
| xx.    | The details of sand quarry and borrow area as per OM No.2-30/2012-IA-111 dated 18.12.2012 on 'Rationalization of procedure for Environmental Clearance for Highway Projects involving borrow areas for soil and earth" as modified vide OM of even No. dated March 19,2013, shall be examined and submitted.   | The details of the borrow areas, course aggregates, fine aggregates and sand quarry have been presented in sections 4.4.1.2, 4.4.1.3, and 4.4.1.4 respectively from Page No. 4-5 to Page No. 4-8 of Chapter 4.   |
| xxi.   | Climate and meteorology (max and min temperature, relative humidity, rainfall, frequency of tropical cyclones and snow fall); the nearest IMD meteorological station from which climatological data have been obtained to be indicated   | The details have been presented in section 3.3.4 from Page No. 3-27 to Page No. 3-31 of Chapter 3. The metrological data has been obtained from Ahmedabad and Bhavnagar IMD stations.  |
| xxii.  | The air quality monitoring shall be carried out as per the notification issued on 16 <sup>th</sup> November 2009. Input data used for Noise and Air quality modelling shall be clearly delineated  | The air quality monitoring has been carried as per the mentioned notification of MoEF&CC regarding EIA and for the modeling, the details for Air modeling for homogenous sections crossing the project alignment has been presented in Sections 4.4.1.5 & 4.4.2 from Page No. 4-9 to Page No. 4-15 of Chapter 4. |
| xxiii. | The project activities during construction and operation phases, which will affect the noise levels and the potential for increased noise resulting from this project shall be identified. Discuss the effect of noise levels on nearby habitations during the construction and operational phases of the proposed highway. Identify noise reduction measures and traffic management strategies to be deployed for reducing the negative impact if any. Prediction of noise levels shall be done by using mathematical modelling at different representative locations | The impact on the noise levels during construction and operation phase has been presented in section 4.5 at page No. 4-15 of Chapter 4.<br><br>The Noise modeling has been presented in section 4.5.1 from Page No. 4-16 to Page No. 4-20 of Chapter 4.  |
| xxiv.  | The impact during construction activities due to generation of fugitive dust from crusher units, air emissions from hot mix plants and vehicles used for transportation of materials and prediction of impact on ambient air quality using appropriate mathematical model, description of model, input requirement and reference of derivation, distribution of major pollutants and presentation in tabular form for easy interpretation shall be examined and carried out  | The details have been presented in section 4.4 at Page No. 4-4 of Chapter 4.   |
| xxv.   | The details about the protection to existing habitations from dust, noise, odour etc.  | The details have been present in Table 4.11 at Page No. 4-36 of Chapter 4.   |



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|         | during construction stage shall be examined and submitted  |   |
| xxvi.   | If the proposed route involves cutting of earth, the details of area to be cut, depth of cut, locations, soil type, volume and quantity of earth and other materials to be removed with location of disposal/ dump sites along with necessary permission   | The details have been presented in section 4.4.1.2 to 4.4.1.4 from Page No. 4-5 to Page No. 4-8 of Chapter 4.   |
| xxvii.  | If the proposed route is passing through low lying areas, details of filling materials and initial and final levels after filling above MSL, shall be examined and submitted   | Selected borrow pit soil used for embankment fill with slope protection.  |
| xxviii. | The water bodies including the seasonal ones within the corridor of impacts along with their status, volumetric capacity, quality and likely impacts on them due to the project along with the mitigation measures, shall be examined and submitted  | The details of all the water bodies within the corridor have been presented in <b>Annexure II</b> .   |
| xxix.   | The details of water quantity required and source of water including water requirement during the construction stage with supporting data and also classification of ground water based on the CGWA classification, shall be examined and submitted  | The peak water requirement is 450 KLD during construction stage and will be extracted from local surface water resources.   |
| xxx.    | The details of measures taken during constructions of bridges across rivers/ canals/major or minor drains keeping in view the flooding of the rivers and the life span of the existing bridges shall be examined and submitted. Provision of speed breakers, safety signals, service lanes and foot paths shall be examined at appropriate locations throughout the proposed road to avoid accidents | 13 nos of major bridges and 21 nos of minor bridges have been proposed. The details provision of speed breakers, safety signals, service lanes and foot paths to avoid accidents has been presented in chapter 2.<br><br>Provision of diversions with direction signs, speed breakers and other safety requirements followed as per IRC & MoRTH guidelines. |
| xxxi.   | If there will be any change in the drainage pattern after the proposed activity, details of changes shall be examined and submitted  | The details have been attached as <b>Annexure II</b> .  |
| xxxii.  | Rain water harvesting pit shall be at least 3 - 5 m above the highest ground water table. Provisions shall be made for oil and grease removal from surface runoff.   | Rainwater harvesting structures @ every 500 mtrs has been proposed as per IRC-SP-58 and the details has been presented in section 4.3.3 from Page No. 4-3 to Page No. 4-4 of Chapter 4 and cost for construction of structures has been taken in EMP.   |
| xxiii.  | If there is a possibility that the construction/widening of road may cause an impact such as destruction of forest, poaching or reduction in wetland areas, examine the impact and submit details  | The impact on the Flora, Fauna and Ecosystem due to the construction of the expressway and its mitigation measures has been presented in section 4.6 from Page No. 4-20 to Page No. 4-29 of Chapter 4.  |
| xxiv.   | The details of road safety, signage, service roads, vehicular under passes, accident prone zones and the mitigation measures,  | The proposed expressway is access control. However, provision of diversions with direction signs, speed breakers and other  |





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|         | shall be submitted   | safety requirements followed as per IRC & MoRTH guidelines.  |
| xxv.    | IRC guidelines shall be followed for widening & upgradation of roads   | Complied as per the latest IRC codes.  |
| xxvi.   | The details of social impact assessment due to the proposed construction of the road, shall be submitted   | The details of the Social Impact Assessment have been presented in section 7.4 from Page No. 7-9 to Page No. 7-13 of Chapter 7   |
| xxvii.  | Examine the road design standards, safety equipment specifications and Management System training to ensure that design details take account of safety concerns and submit the traffic management plan   | All relevant guideline has been followed for designing the expressway as per traffic, pedestrian and accident safety.<br>The details of the traffic Management plan has been attached as <b>Annexure VI</b> .                        |
| xxviii. | Accident data and geographic distribution shall be reviewed and analyzed to predict and identify trends - in case of expansion of the existing highway and provide Post accident emergency assistance and medical care to accident victims   | Proposed expressway is mostly green field development. However, provision for accident emergency assistance and medical care to accident victims has been considered as road safety measures.  |
| xxix.   | If the proposed project involves any land reclamation, details shall be provided of the activity for which land is to be reclaimed and the area of land to be reclaimed  | The proposed project does not involve any land reclamation.  |
| xl.     | Details of the properties, houses, business activities etc. likely to be affected by land acquisition and an estimation of their financial losses, shall be submitted  | The details have been presented in section 7.5.1 from Page No. 7-14 to Page No. 7-18 of Chapter 7  |
| xli.    | Detailed R&R plan with data on the existing socio-economic status of the population in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternative livelihood concerns/employment and rehabilitation of the displaced people, civil and housing amenities being offered, etc and the schedule of the implementation of the specific project, shall be submitted. | The details of the socio-economic profile of the study area have been presented in section 3.10 from Page No 3-76 to Page No. 3-85 of Chapter 3.<br><br>The R&R plan & policy along with its budget have been provided in Chapter 7. |
| xlii.   | Estimated cost of the project including that of environment management plan (both capital and recurring) and source of funding. Also, the mode of execution of the project, viz, EPC, BOT, etc, shall be submitted.  | The cost of the environmental management plan has been presented in Table 9.3 at Page No. 9-23 of Chapter 9. The mode of execution of the project is Hybrid Annuity Model.   |
| xliii.  | Fund allocation for Corporate Environment Responsibility (CER) shall be made as per Ministry's O.M. No. 22-65/2017-IA.III dated 1st May, 2018 for various activities therein. The details of fund allocation and activities for CER shall be incorporated in EIA/EMP report.   | The cost for Fund allocation for Corporate Environment Responsibility (CER) has been attached as <b>Annexure XIV</b> .   |
| xliv.   | Details of blasting if any, methodology/technique adopted, applicable regulations/permissions, timing of blasting, mitigation measures proposed keeping in   | There is no blasting required for this project. The conservation and mitigation measures for wildlife have been present at section 4.6.4 at Page No. 4-21 to Page No. 4-27 of  |



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|       | view mating season of wildlife.   | Chapter 4.  |
| xlv.  | In case of river/ creek crossing, details of the proposed bridges connecting on either bank, the design and traffic circulation at this junction with simulation studies  | The details have been attached as <b>Annexure VI.</b>   |
| xlvi. | Details to ensure free flow of water in case the alignment passes through water bodies/river/streams etc.   | The details have been attached as <b>Annexure II.</b>   |
| xlvi. | In case of bye passes, the details of access control from the nearby habitation/habitation which may come up after the establishment of road.   | Proposed expressway is access control and bypassing all major habitations between Ahmedabad to Dholera.   |
| xlvi. | Bridge design in eco sensitive area /mountains be examined keeping in view the rock classification hydrology etc  | The proposed project does not pass through the eco sensitive zone/mountain.   |
| xlix. | Details of litigation pending against the project, if any, with direction/order passed by any Court of Law against the Project should be given.   | There is no litigation pending against the project in any court.  |
| i.    | The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out   | The cost of the project has been presented in section 2.9 from Page No. 2-26 to Page No. 2-27 of Chapter 2 and environmental management plan has been presented in Table 9.3 at Page No. 9-23 of Chapter 9.   |
| ii.   | In case of alignment passing through coastal zones, following documents are required to furnished along with EIA/EMP report:<br>a. Form-I (Annexure-IV of the CRZ Notification, 2011)<br>b. Rapid EIA Report including marine and terrestrial component,<br>c. Disaster Management Report, Risk Assessment Report and Management Plan,<br>d. CRZ map indicating HTL and LTL, demarcated by one of the authorized agency in 1:4000 scale,<br>e. Project layout superimposed on the above map,<br>f. CRZ map covering 7 km radius around the project site, and indicating the CRZ-I, II, III & IV areas including other notified ecologically sensitive areas,<br>g. NOC from the concerned SPCB/UT PCC for the projects involving discharge of effluents, solid wastes, sewage and the like. | The rapid EIA/EMP report along with the approved CRZ map of the coastal zones by National Centre for Sustainable Coastal Management (NCSCM), Chennai has been attached as <b>Annexure VIII.</b><br><br>The recommendation letter from GCZMA for the proposed project has been attached as <b>Annexure XI.</b> |
| iii.  | Any further clarification on carrying out the above studies including anticipated impacts due to the project and mitigative measure, project proponent can refer to the model ToR available on Ministry website<br><a href="http://moef.nic.in/Manual/Highways">"http://moef.nic.in/Manual/Highways"</a> .  | Complied.   |



## **CHAPTER-2: PROJECT DESCRIPTION**

### **2.1 INTRODUCTION**

The Ministry of Road Transport and Highways (MoRTH), a ministry of the Government of India, is the apex body for formulation and administration of the rules, regulations and laws relating to road transport and transport research, in order to increase the mobility and efficiency of the road transport system in India.

The Government of India is setting up a multi-modal Dedicated Freight Corridor (DFC) between Delhi and Mumbai. Out of the total 1483 kms of the length of DFC, 38% is falling in Gujarat. Delhi Mumbai Industrial Corridor Development Corporation Ltd. (DMICDC), a special purpose company, was incorporated to establish, promote and facilitate development of DMIC project. DMICDC has planned to develop Special Investment Regions (SIRs) and Industrial Areas (IRs) having world class infrastructure along the Delhi Mumbai Dedicated Freight Corridor.

Dholera Special Investment Region in Gujarat (DSIR) is the first investment region to be designated under the proposed Delhi-Mumbai Industrial Corridor project (DMIC). To provide a seamless connectivity to DSIR from Ahmedabad and Bhavnagar, a four-lane expressway, Ahmedabad to Dholera has been proposed.

Proposed Project expressway is mostly green field alignment project and proposed for 4 lane expressway. The proposed Ahmedabad- Dholera Expressway starts near Sarkhej on Sardar Patel Ring Road and ends after Dholera Special Investment Region (DSIR) and merging with SH-6 at end point. The corridor runs southerly towards Dholera between NH-8A (in the west) and SH-4, SH-6, Sabarmati river course/Gulf of Khambhat (on east side). The proposed access controlled expressway project has been envisaged through an area which shall have the advantage of simultaneous development as well as shall result in a shorter distance to travel. The Project falls under category 'A' as per the MoEF&CC Notification on EIA dated Sep. 14, 2006 and amendment thereafter.

### **2.2 NEED OF THE PROJECT & BRIEF ABOUT THE PROJECT**

#### **2.2.1 Need of the Project**

The proposed expressway is part of an exclusive transport corridor being planned between Ahmedabad and Bhavnagar by the Government of Gujarat, keeping the development of SIR around Dholera in center. The proposed access controlled expressway project with new alignment has been envisaged through an area which shall have the advantage of simultaneous development as well as shall result in a shorter distance to travel. The proposed expressway would act as the prime artery for the economic flow to this region. It will enhance economic development, provide employment opportunities to locals, strengthen tourist development, ensure road safety, and provide better transportation facilities and other facilities such as way side amenities. Vehicle operating cost will also be reduced due to improved road quality.

#### **2.2.2 Proposed Pavement & Overlay**

The expressway is designed by both flexible and concrete pavement options. The flexible pavement is adopted for proposed ramp roads and slip roads – 20 years Design in accordance with IRC:37-2012. Rigid Pavement is designed for New Construction of Expressway for 30 years design life with granular sub-base (GSB), base as DLC and PQC Slab (M-40 grade PCC)



in accordance with IRC:58-2015 or granular layers and bituminous surfacing (VG-40 bitumen) - 20 years Design in accordance with IRC:37-2012.

### **2.2.3 Traffic Control, Road Marking, Traffic Signs and Safety Measures**

Indian Road Congress (IRC) codes are followed in proposing and designing road safety features. Pavement markings are done for traffic lane line, edge lines and hatching. The marking shall be with hot applied thermoplastics materials. The pavement markings shall be reinforced with raised RR pavement markers and shall be provided for median and shoulder edge longitudinal lines and hatch markings. Highway lightings including high masts shall be provided at intersections in order to improve the night time visibility. All the urban locations as well grade separated structure locations shall be provided lighting arrangements.

### **2.2.4 Proposal for Truck Lay byes/Parking cum Rest Area**

As per the detailed field surveys and reconnaissance, truck lay byes and bus stop have been proposed. The rest area will provide common facilities like petrol pump, first aid medical facilities, police office, restaurant and vehicle parking etc. For petrol pump, the guidelines issued by OISD of Ministry of Petroleum shall be followed. The facilities shall be planned at approximately 50 km interval.

### **2.2.5 Toll Plazas and Weighing Stations**

The DPR Consultant has proposed three main toll plazas on the expressway and ramp toll plazas are proposed at interchanges of the expressway.

Weighing stations shall be located near toll plazas so that overloaded vehicles can be easily identified and suitably penalized / unloaded before being allowed to proceed further. The type of weighing system suitable for the project shall be brought out giving merits of each type of the state-of-the art and basis of recommendations for the chosen system.

### **2.2.6 Standards and Specifications Adopted**

Geometric design standards are adopted as per requirement. The proposed expressway lies in plain/rolling terrain. The geometric design is prepared based on **IRC: SP: 99-2013**.

**“Manual of Specifications and Standards for Expressways”** besides adopting relevant standards from IRC: SP:23 - Vertical Curves for Highways, IRC:38 - Guidelines for Design of Horizontal Curves for Highways and Design Tables and IRC:73-Geometric Design Standard of Rural (Non-Urban) Highway.

**Following is the list of IRC standards which are followed:**

- IRC: SP:99-2013- Manual of Specifications and Standards for Expressways
- IRC:35-2015- Code of Practice for Road Markings (Second Revision)
- IRC:67-2012- Code of Practice for Road Signs (Third Revision)
- IRC:79-1981- Recommended Practice for Road delineators
- IRC:93-1985- Guidelines on Design and Installation of Road Traffic Signals
- IRC: SP:37-2010- Guidelines for Evaluation of Load Carrying Capacity of Bridges (First Revision)
- IRC:37-2012- Guidelines for the Design of Flexible Pavements
- IRC:102-1988- Traffic Studies for Planning Bypasses Around Towns



- IRC:56-2011- Recommended Practices for Treatment of Embankment and Roadside Slopes for Erosion Control (First Revision)
- IRC:73-1980 - Geometric Design Standards for Rural (Non-Urban) Highways
- IRC:106-1990- Guidelines for Capacity of Urban Roads in Plain Areas
- IRC:64-1990- Guidelines for Capacity of Roads in Rural Areas (First Revision)
- IRC: 38:1988- Guidelines for Design of Horizontal Curves for Highways and Design Tables (First Revision)
- IRC: SP:23-1983- Vertical Curves for Highways

## 2.2.7 Geometric Design Standards for 4-lane Expressway

### 2.2.7.1 General

The design of the road geometry for the assigned project shall cover the following main principles, which form the basis of desirable standard of highway design.

- Road safety and the smooth flow of traffic is of prime concern in the design. The selection of optimum design standards reduces the possibility of undesirability of the facility to be provided.
- Both horizontal and vertical geometry shall be accorded due importance as per selected standards. It shall not be compromised unless it becomes formidable to accept for the particular situation.
- Consistent Design shall be adopted and abrupt changes in the design speed to be avoided.
- The proposed design will minimise the total transportation cost, including initial construction costs, costs for the maintenance of the facility and the costs borne by the road users. "Ruling" standards are adopted and "Minimum" standards are allowed only where serious restrictions are imposed by technical or economic considerations.

### 2.2.7.2 Warrant for 4 Laning

Rural expressways shall be designed for Level of Service-B for the purpose of design and future augmentation of the Project Expressway. The design service volume for level of service- B for plain/rolling terrain shall be 1300 PCU/hr/lane. The design service volume can be determined as per MORTH Guidelines for Expressways. The design service volume per day depends on the peak hour flow and is presented in **Table 2.1**.

**Table 2.1: Design Service Volume for Expressway in Plain & Rolling Terrain (in PCUs per day for LOS B**

| Design Service Volume in PCUs per day for LOS B |
|---|
| <b>4-lane</b>                                   |
| 86,000 for Peak hour flow (6%)                  |
| 65,000 for Peak hour flow (8%)                  |

## 2.3 LAND REQUIREMENT FOR THE PROPOSED PROJECT

The proposed RoW is 120m in entire project stretch except Ch.71.060 to 107.300 where RoW is 90m. The total land requirement for the project is 959.14 ha. out of which 886.26 ha is private and 72.88 ha is government land (including 1.530 ha Forest Land) and remaining around 685.97 ha. land will be provided by DSIRDA (Dholera Special Investment Regional Development Authority). Most of the private land is agricultural.





## 2.4 WATER REQUIREMENT FOR THE PROPOSED PROJECT

The peak water requirement for the project will be 450 KLD during construction stage. The water requirement shall be extracted from local surface water sources. The breakup of the water requirement has been presented in **Table 2.2**.

**Table 2.2: Water requirement for the Project**

| Purpose                   | Peak (KLD) | Source                        |
|---------------------------|------------|-------------------------------|
| Road making               | 350        | Local Surface Water Resources |
| Dust suppression          | 75         |                               |
| Others including drinking | 25         |                               |
| <b>Total</b>              | <b>450</b> |                               |

## 2.5 TRAFFIC SURVEY AND ANALYSIS

### 2.5.1 Introduction

In order to capture and assess the traffic characteristics, travel pattern, the Consultants have conducted the following primary traffic surveys.

- Classified Traffic Volume Count Surveys
- Origin - Destination and Commodity Movement Surveys
- Speed & Delay Surveys
- Axle Load Data

These features facilitated a framework for carrying out the necessary count surveys in accordance with the guidelines specified in IRC codes of practice. The various survey locations have been selected with careful assessment of the traffic of competing road of project. These points were further refined jointly at site as required by the NHAI. The survey schedule, duration and location have been shown in **Figure 2.1** and presented in **Table 2.3**.



**Figure 2.1: Traffic Survey Locations for the Project**



**Table 2.3: Traffic Survey Details**

| Type             | Location                                    | Date                 | Duration |
|------------------|---|----------------------|----------|
| TVC              | Km 32.0 (Near Dholka on SH 4)               | 2/1/2017 to 8/1/2017 | 24 Hrs   |
|                  | Km 93.2 (Near Pipli on SH 6)                | 2/1/2017 to 8/1/2017 | 24 Hrs   |
|                  | Km 103.2 (Near Pipli on SH 6)               | 2/1/2017 to 8/1/2017 | 24 Hrs   |
|                  | Km 131.8 (Near Bavlihari on SH 6)           | 2/1/2017 to 8/1/2017 | 24 Hrs   |
| OD               | Km 32.0 (Near Dholka on SH 4)               | 06/01/2017           | 24 Hrs   |
|                  | Km 93.2 (Near Pipli on SH 6)                | 07/01/2017           | 24 Hrs   |
|                  | Km 103.2 (Near Pipli on SH 6)               | 07/01/2017           | 24 Hrs   |
|                  | Km 131.8 (Near Bavlihari on SH 6)           | 07/01/2017           | 24 Hrs   |
| WTP              | Km 93.2 (Near Piple on SH 6)                | 07/01/2017           | 24 Hrs   |
|                  | Km 131.8 (Near Bavlihari on SH 6)           | 08/01/2017           | 24 Hrs   |
| Speed and Delay  | Sarkhej - Dholka - Watman - Pipli – Dholera | 04/01/2017           | NA       |
|                  | Sarkhej - Bagodra - Dhandhuka - Fedra       | 04/01/2017           | NA       |
| Axle Load Survey | Km 32.0 (Near Dholka on SH 4)               | 06/01/2017           | 24 Hrs   |
|                  | Km 131.8 (Near Bavlihari on SH 6)           | 07/01/2017           | 24 Hrs   |

## 2.5.2 Traffic Surveys

Data collected at the site was computerized for further analysis. The various vehicle types having different size and characteristics were converted into passenger car equivalents. Passenger car unit values (PCU) suggested in IRC-64-1990, 'Guidelines for Capacity of Roads in Rural Areas' have been adopted. The PCU values are presented in **Table 2.4**.

**Table 2.4: Adopted PCU Factors**

| Vehicle Type                         | PCU | Vehicle Type                   | PCU |
|--------------------------------------|-----|--------------------------------|-----|
| Car                                  | 1   | Auto Rickshaw                  | 1   |
| Mini Bus                             | 1.5 | Van/Tempo                      | 1   |
| Standard Bus                         | 3   | Agricultural Tractor           | 1.5 |
| LCV                                  | 1.5 | Agricultural Tractor & Trailer | 4.5 |
| 2 Axle Truck                         | 3   | Horse Drawn                    | 4   |
| 3 Axle Truck                         | 3   | Bullock Drawn                  | 8   |
| MAV (4 to 6 Axles)                   | 4.5 | Cycle Rickshaw                 | 2   |
| Oversized Vehicles ( $\geq 7$ Axles) | 4.5 | Cycle                          | 0.5 |
| Two-Wheeler                          | 0.5 |                                |     |

## 2.5.3 Secondary Data

Secondary data required for traffic analysis and forecast were collected during course of traffic survey. These data are necessary for analyzing AADT, Seasonal Correction Factor and growth rate of traffic on project road.

In order to convert ADT (Average Daily Traffic) into AADT (Annual Average Daily Traffic) fuel sales data of following stations has been procured at Km 133 of SH 6, Bharat Petroleum Pump.





For future traffic growth secondary data were collected from respective Government agencies and websites. **Table 2.5** gives the references of data collected.

**Table 2.5: Data Collected from Govt. Agencies and Websites**

| S. No | Data                      | Source                  |
|-------|---------------------------|-------------------------|
| 1.    | Vehicle Registration Data | Gujrat Motor Department |
| 2.    | Time Series NSDP - Gujrat | Niti Aayog Web Site     |
| 3.    | Time Series PCI - Gujrat  | Niti Aayog Web Site     |
| 4.    | Population Data           | India Stats             |
| 5.    | GDP India Forecast        | RBI Web Site            |

## 2.5.4 Analysis of Traffic Surveys

As mentioned above analysis of traffic survey has been performed in accordance of various IRC codes. In subsequent sections detailed analyses of various traffic survey are presented in sequence.

### 2.5.4.1 Traffic Volume Count

Traffic survey has been conducted as per IRC line guidelines and has been analyzed accordingly. **Table 2.6** gives the average daily traffic at 4 locations as mentioned above.

**Table 2.6: Traffic Volume Counts Collected (ADT)**

| Station | Car  | 2-Wheeler | 3-Wheeler | Mini Bus | Bus | LCV | 2 A Truck | 3 A Truck | MAV  | Non-Motorized | Total | PCU   |
|---------|------|-----------|-----------|----------|-----|-----|-----------|-----------|------|---------------|-------|-------|
| Km 32   | 3501 | 4283      | 1601      | 90       | 229 | 831 | 276       | 240       | 107  | 57            | 11216 | 11517 |
| Km 93.2 | 2426 | 757       | 135       | 37       | 749 | 466 | 949       | 966       | 1186 | 5             | 7677  | 17040 |
| Km 103  | 2734 | 1275      | 260       | 59       | 633 | 678 | 521       | 652       | 1372 | 11            | 8196  | 16364 |
| Km 131  | 2542 | 703       | 99        | 48       | 514 | 899 | 369       | 659       | 1984 | 4             | 7819  | 17978 |

### Homogeneous section

Based on the character, composition, traffic movements at different intersections and from the results of the traffic volume counts, homogenous sections have been considered for the entire length which is presented in the **Table 2.7**.

**Table 2.7: Homogenous Section**

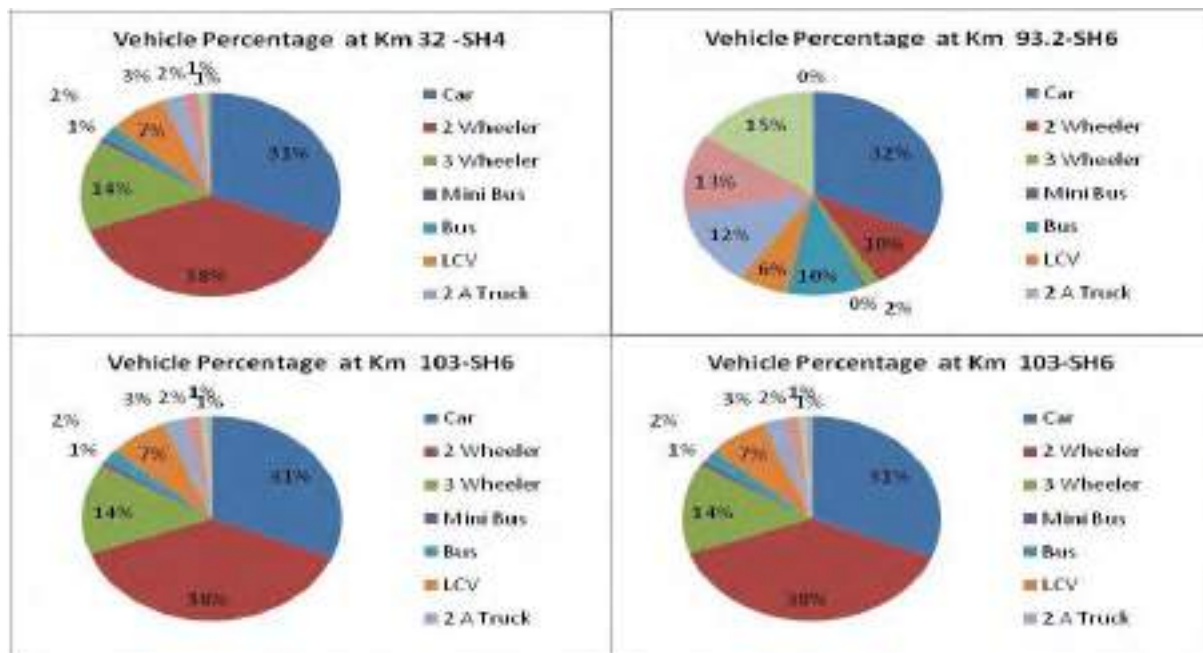
|      | Location          | Start Chainage* | End Chainage* |
|------|-------------------|-----------------|---------------|
| HS 1 | Ahmedabad Dholka  | 0               | 28.9          |
| HS 2 | Dholka Wataman    | 28.9            | 47.2          |
| HS 3 | Wataman           | 47.2            | 67            |
| HS 4 | Pipli - Bavliyari | 67              | 109.019       |

**\*Above Chainages are of Proposed Expressway.**

Percentage contribution of various categories of vehicle gives us the perception of users commuting on the project road. Following figures give the percentages of various categories of vehicles at different locations in following Figure.

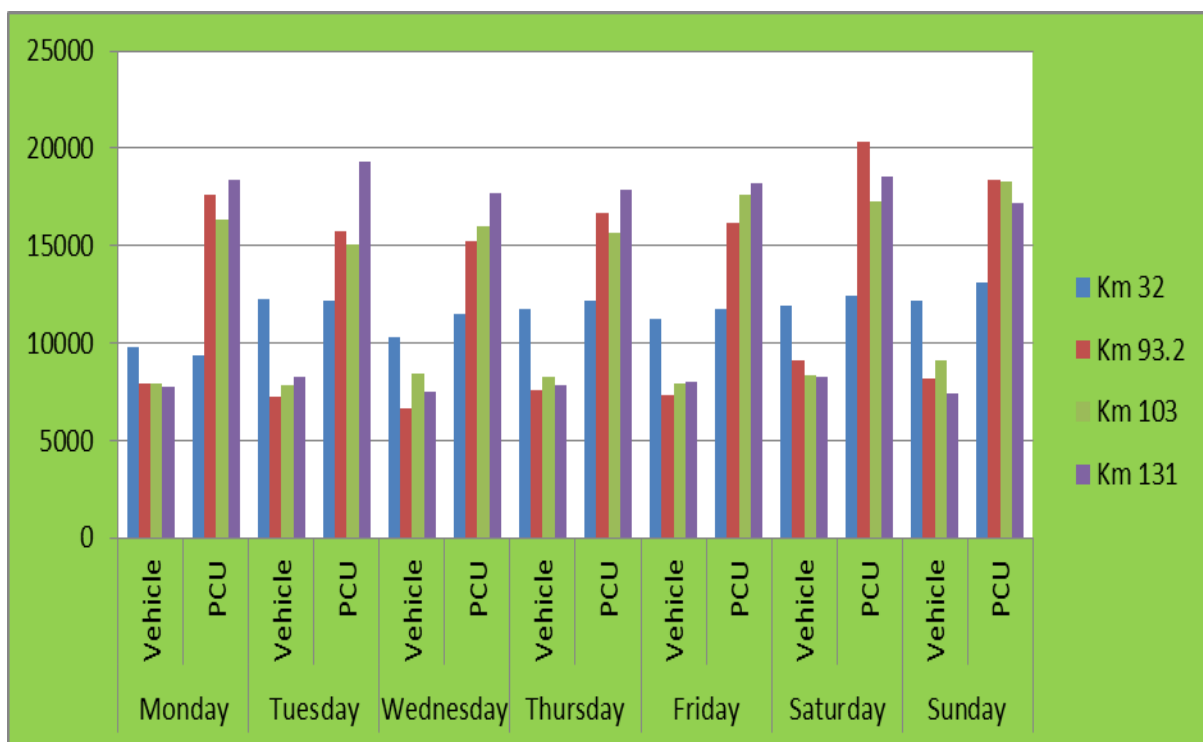


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**Figure 2.2: Traffic Composition at Different Survey Location**

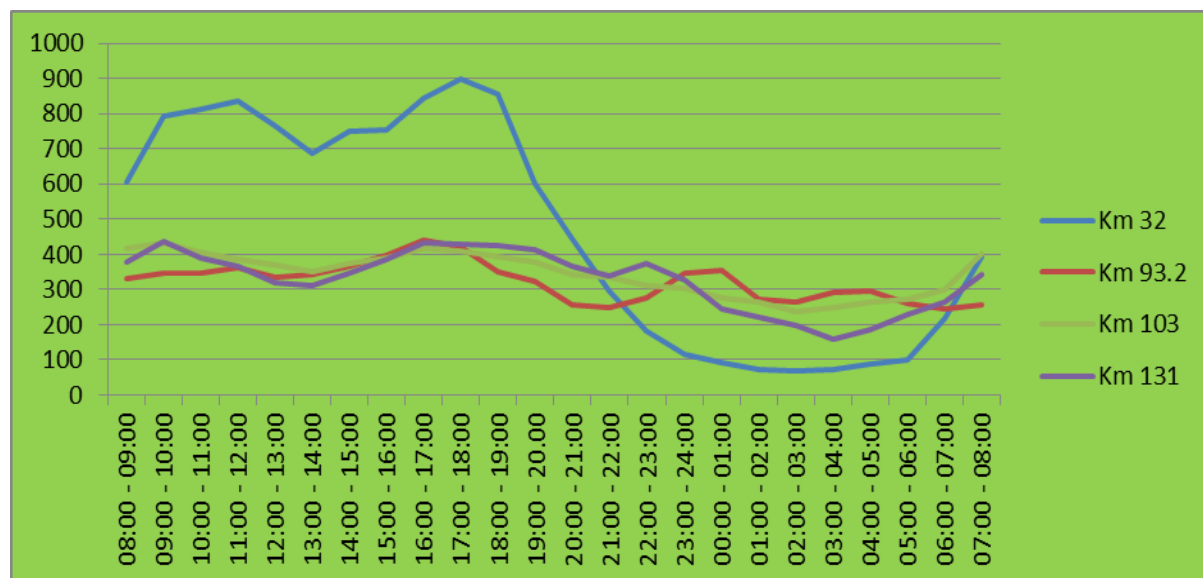
The above figure shows high contribution of passenger vehicles mainly due project road falling in urban localities.



**Figure 2.3: Day to Day Variability of Traffic at Different Survey Location**



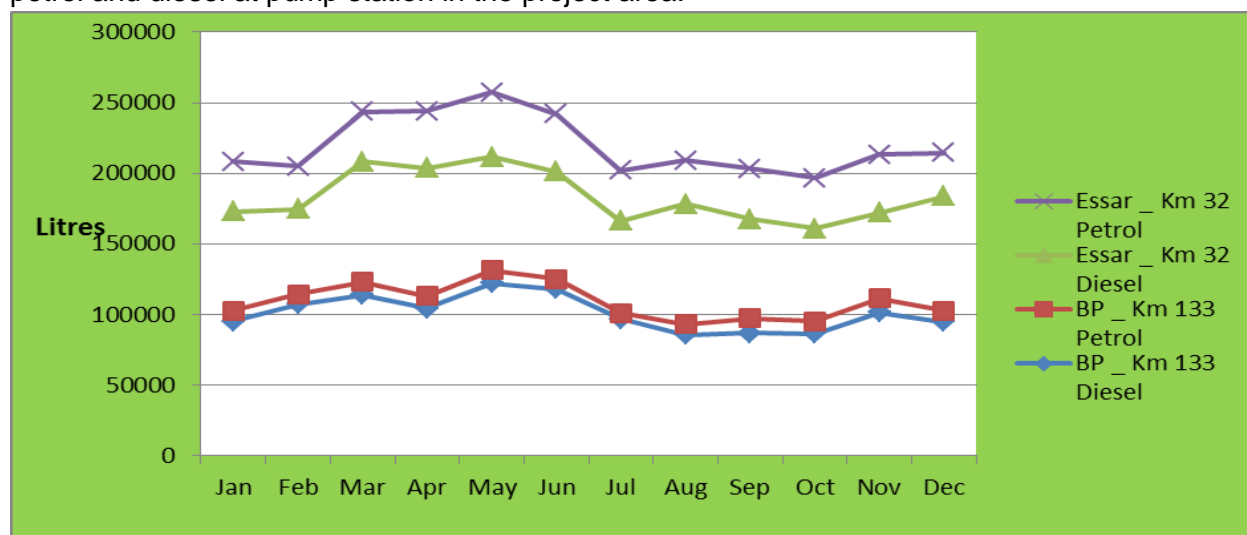
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**Figure 2.4: Hourly Variation of Traffic at Different Survey Location**

### AADT and SCF

In order to convert ADT into AADT consultant has collected fuel sales data at various location to understand SCF (Seasonal Correction Factor). Following figure gives average fuel sales of petrol and diesel at pump station in the project area.



**Figure 2.5: Fuel Sales at Various Pump Stations of Project Corridor.**

From fuel sales data seasonal correction factor has been derived at various TVC locations for various vehicle categories is presented in **Table 2.8**.

**Table 2.8: Seasonal Correction Factors**

|         | Car/3w/2w | Mini Bus | Bus  | LCV  | 2 A Truck | 3A Truck | MAV  |
|---------|-----------|----------|------|------|-----------|----------|------|
| Km 32   | 1.03      | 1.05     | 1.05 | 1.05 | 1.05      | 1.05     | 1.05 |
| Km 93.2 | 1.08      | 1.06     | 1.06 | 1.06 | 1.06      | 1.06     | 1.06 |
| Km 103  | 1.08      | 1.06     | 1.06 | 1.06 | 1.06      | 1.06     | 1.06 |
| Km 131  | 1.08      | 1.06     | 1.06 | 1.06 | 1.06      | 1.06     | 1.06 |



Based on above data Average Annual Daily Traffic (AADT) at all locations are presented in **Table 2.9.**

**Table 2.9: Annual Average Daily Traffic (AADT) at Survey Locations**

|         | Car  | 2-<br>Wheeler | 3-<br>Wheeler | Mini<br>Bus | Bus | LCV | 2 A<br>Truck | 3 A<br>Truck | MAV  | Non-<br>Motorize<br>d | Total | PCU   |
|---------|------|---------------|---------------|-------------|-----|-----|--------------|--------------|------|-----------------------|-------|-------|
| Km 32   | 3606 | 4411          | 1649          | 94          | 241 | 873 | 290          | 252          | 113  | 57                    | 11587 | 11939 |
| Km 93.2 | 2620 | 818           | 146           | 39          | 794 | 494 | 1006         | 1024         | 1257 | 5                     | 8204  | 18121 |
| Km 103  | 2952 | 1377          | 281           | 63          | 671 | 719 | 552          | 691          | 1455 | 11                    | 8772  | 17417 |
| Km 131  | 2745 | 759           | 107           | 50          | 545 | 952 | 391          | 699          | 2103 | 4                     | 8355  | 19115 |

### 2.5.5 Traffic Forecast

Traffic growth rates are to be used for forecasting traffic on the project road have been estimated by adopting the Elasticity of Transport Demand method and which is the most commonly adopted technique for traffic forecast on rural highways in India. This method correlates between past trends in traffic growth on the Project Road / vehicle registration of the influencing states, and state income (NSDP), population and per capita income (PCI) of the influencing states. **Table 2.10** presents the Gross State Domestic Product (GSDP)

**Table 2.10: Gross State Domestic Product (GSDP) (Rs in Crore)**

| S No. | Year    | Constant (2004-05) Prices | % Growth |
|-------|---------|---------------------------|----------|
| 1     | 2004-05 | 203373                    | -        |
| 2     | 2008-09 | 300341                    | 6.8      |
| 3     | 2009-10 | 334127                    | 11.2     |
| 4     | 2010-11 | 367581                    | 10       |
| 5     | 2011-12 | 392058                    | 6.7      |
| 6     | 2012-13 | 416163                    | 6.1      |
| 7     | 2013-14 | 452625                    | 8.8      |

Net State Domestic Product (NSDP) at factor cost at constant (2004-05) prices in 2013-14 is estimated at Rs 385472 crore as against Rs 356477 crore in 2012-13, showing a growth of 8.1 percent during the year. The Net State Domestic Product of the Gujarat State based on constant (Year 2004- 05) prices is estimated to be Rs. 172265 crores in the year 2004-2005 and which is estimated to Rs. 342088 crores in the year 2011-12 with the cumulative average growth rate of 10.3%.

#### 2.5.5.1 Key Growth Drivers

This state is one of the economically well performing states in the country.

- Government of Gujarat has introduced a modified scheme for the financial assistance to Industrial park with a view to promote and encourage Industrial Park by private institution for accelerating industrial infrastructure in the state.
- Gujarat GSDP (at factor cost constant prices) grew at an average rate of 7.1% during FY-01- FY05 and 9.7% during FY06-FY13. During the respective period India's GDP



grew at 5.75 and 8.0%. However, service sector grew at an average rate of 11.5% during FY06-FY13 and Industrial sector grew at 9.6% during the same period.

- Gujarat has emerged as one of the leading industrial states and the most preferred destination for investors due to its industry friendly policies and favorable investment climate. Gujarat has witnessed impressive growth in the last ten years. Stable government and economic reforms have propelled growth of Gross State Domestic Product (GSDP). The GSDP of Gujarat has increased at an average rate of 8.8% during FY01-FY10 as against India's GDP growth of 7.2% during the same period. Given the financial and European debt crises, India's growth rate moderated to 6.7% during FY11-FY13, whereas growth in Gujarat's GSDP remained elevated at 8.5%.
- The industry sector is the backbone of the Gujarat economy. The total number of Micro, Small and Medium Enterprises (MSMEs) in the state stood at 0.6 mn as on FY14, providing employment to 3.7 mn people. Infrastructure development, power availability and business friendly policies are benefiting the industry and service sector in Gujarat.

### 2.5.5.2 Estimation of Base Elasticity

The econometric models developed for estimating elasticity by regression of socioeconomic data with vehicle registration data. The base elasticity values arrived at for various modes with different socioeconomic variables are presented in **Table 2.11**.

**Table 2.11: Base Elasticity Values**

| Vehicle Type/Economic Variable | Elasticity | R2   | t-stat |
|--------------------------------|------------|------|--------|
| CAR                            |            |      |        |
| NSDP                           | 1.07       | 0.99 | 23.7   |
| PCI                            | 1.26       | 0.99 | 22.2   |
| Population                     | 6.38       | 0.95 | 11.1   |
| Buses                          |            |      |        |
| NSDP                           | 0.35       | 0.93 | 9.21   |
| PCI                            | 0.41       | 0.93 | 9.1    |
| Population                     | 2.03       | 0.88 | 6.5    |
| LCV                            |            |      |        |
| NSDP                           | 0.98       | 0.99 | 27.5   |
| PCI                            | 1.14       | 0.99 | 24.4   |
| Population                     | 5.77       | 0.95 | 10.7   |
| TRUCK                          |            |      |        |
| NSDP                           | 0.64       | 0.99 | 20.5   |
| PCI                            | 0.75       | 0.98 | 19.2   |
| Population                     | 3.77       | 0.94 | 9.3    |

The traffic growth rates, by vehicle type, are obtained by running simple regression and fitting the regression equation with prospective values of independent variables. The separate equations using PCI and registered motor vehicles have been developed for influencing states and districts for passenger vehicles. Similarly, equations by using NSDP and registered motor vehicles of influencing states are developed for freight vehicles. Traffic growth rate projections are done using the below formula.



$$T = [(1+P/100)*(1+R/100) - 1] * 100 * E$$

Where,

T - Traffic growth rate (in %)

P - Growth rate of population

R - Growth rate of per capita NSDP /per capita income

E - Elasticity

Based on the derived elasticity values and the projected growth in economy of PIA, traffic growth rates have been estimated and presented in **Table 2.12**.

**Table 2.12: Traffic Growth Rate**

| Year        | Car  | 2- Wheeler | 3- Wheeler | Mini Bus | Bus  | LCV  | 2 A Truck | 3 A Truck | MAV  |
|-------------|------|------------|------------|----------|------|------|-----------|-----------|------|
| 2017 - 2021 | 9.5% | 10.0%      | 10.0%      | 7.0%     | 7.0% | 6.0% | 7.5%      | 7.5%      | 7.5% |
| 2022 - 2026 | 8.0% | 8.0%       | 8.0%       | 5.5%     | 5.5% | 5.0% | 6.5%      | 6.5%      | 6.5% |
| 2027 - 2031 | 6.0% | 6.0%       | 6.0%       | 4.5%     | 4.5% | 4.0% | 4.5%      | 4.5%      | 4.5% |
| 2032 - 2036 | 3.5% | 4.0%       | 4.0%       | 2.5%     | 2.5% | 2.5% | 3.0%      | 3.0%      | 3.0% |
| 2037 Beyond | 2.0% | 2.0%       | 2.0%       | 1.5%     | 1.5% | 1.5% | 2.0%      | 2.0%      | 2.0% |

### 2.5.5.3 Estimation of Traffic Forecast

Based on realistic traffic growth rate and AADT derived and traffic generated/induced the **table 2.13** gives the forecast traffic on project road.

**Table 2.13: Forecast Traffic on Project Road**

|      | HS 1     |       | HS 2     |        | HS 3     |        | HS 4     |        |
|------|----------|-------|----------|--------|----------|--------|----------|--------|
|      | Vehicles | PCU   | Vehicles | PCU    | Vehicles | PCU    | Vehicles | PCU    |
| 2022 | 6572     | 7420  | 11354    | 25746  | 12279    | 26083  | 15595    | 32274  |
| 2023 | 7071     | 7948  | 12143    | 27440  | 13143    | 27813  | 16704    | 34425  |
| 2024 | 7608     | 8516  | 12989    | 29247  | 14068    | 29660  | 17894    | 36721  |
| 2025 | 8186     | 9125  | 13894    | 31175  | 15061    | 31631  | 19170    | 39172  |
| 2026 | 11596    | 15758 | 18445    | 40916  | 21297    | 44830  | 28499    | 58866  |
| 2027 | 12463    | 16860 | 19736    | 43626  | 22802    | 47821  | 30528    | 62807  |
| 2028 | 13158    | 17726 | 20750    | 45708  | 23989    | 50123  | 32128    | 65830  |
| 2029 | 13892    | 18638 | 21818    | 47892  | 25240    | 52537  | 33814    | 69000  |
| 2030 | 14668    | 19598 | 22942    | 50181  | 26557    | 55070  | 35590    | 72327  |
| 2031 | 23449    | 37685 | 34359    | 74528  | 42727    | 89431  | 60204    | 124593 |
| 2032 | 24246    | 38879 | 35452    | 76798  | 44096    | 92170  | 62158    | 128431 |
| 2033 | 25071    | 40112 | 36580    | 79137  | 45510    | 94994  | 64177    | 132387 |
| 2034 | 25925    | 41385 | 37745    | 81548  | 46970    | 97905  | 66262    | 136466 |
| 2035 | 26808    | 42699 | 38947    | 84033  | 48477    | 100906 | 68416    | 140673 |
| 2036 | 39351    | 68449 | 55140    | 117958 | 71630    | 149303 | 103865   | 214703 |
| 2037 | 40667    | 70599 | 56898    | 121563 | 73925    | 153886 | 107224   | 221319 |
| 2038 | 41464    | 71980 | 58006    | 123931 | 75367    | 156892 | 109319   | 225654 |





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|      |       |        |        |        |        |        |        |        |
|------|-------|--------|--------|--------|--------|--------|--------|--------|
| 2039 | 42276 | 73389  | 59136  | 126346 | 76837  | 159956 | 111456 | 230074 |
| 2040 | 43105 | 74825  | 60289  | 128808 | 78335  | 163081 | 113635 | 234582 |
| 2041 | 60977 | 111196 | 83358  | 176204 | 111386 | 230998 | 164506 | 338914 |
| 2042 | 62172 | 113376 | 84985  | 179647 | 113563 | 235520 | 167726 | 345562 |
| 2043 | 63391 | 115599 | 86645  | 183157 | 115782 | 240131 | 171009 | 352342 |
| 2044 | 64634 | 117866 | 88337  | 186736 | 118044 | 244832 | 174357 | 359255 |
| 2045 | 65902 | 120177 | 90062  | 190385 | 120351 | 249626 | 177770 | 366305 |
| 2046 | 67194 | 122534 | 91821  | 194106 | 122704 | 254515 | 181251 | 373493 |
| 2047 | 68512 | 124938 | 93614  | 197900 | 125102 | 259500 | 184800 | 380823 |
| 2048 | 69856 | 127388 | 95443  | 201769 | 127548 | 264582 | 188419 | 388298 |
| 2049 | 71226 | 129887 | 97308  | 205714 | 130042 | 269765 | 192109 | 395920 |
| 2050 | 72624 | 132436 | 99210  | 209736 | 132585 | 275050 | 195872 | 403692 |
| 2051 | 74049 | 135034 | 101148 | 213838 | 135177 | 280439 | 199709 | 411617 |

## 2.6 TRAFFIC MANAGEMENT PLAN

IRC SP55 is the guideline to be followed for circulating traffic during construction. Following picture gives the work zone safety criteria during construction. The details of the traffic management plan have been attached as **Annexure VI**.

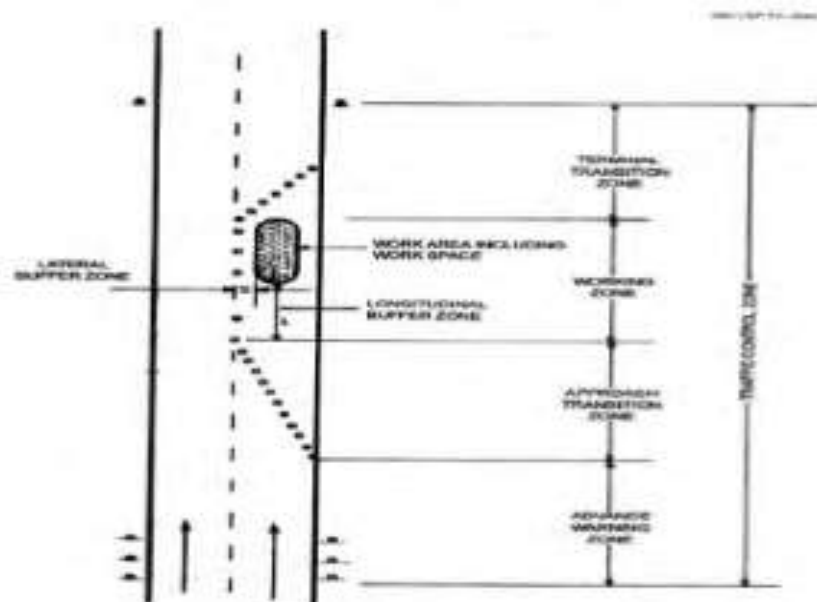


Figure 2.6: Work Zone Safety during Construction

## 2.7 DETAILS OF THE STRUCTURES PROPOSED ALONG THE PROPOSED ALIGNMENT

### 2.7.1 Details of the proposed bridges

The list of the proposed bridges (major/minor) has been presented in following **Table 2.14**:





**Table 2.14: List of the proposed bridges (major/minor)**

| SL. No | Proposed Chainage (km)       | Name / Type of the Canal / Stream / River | Type of Bridge (Major /Minor) | Proposed Span Arrangement (Nos. x Each Span)            | Remarks  |
|--------|------------------------------|---|-------------------------------|---|--|
| 1.     | 1.015(LHS)<br>0.972 (RHS)    | Dholka Branch Canal                       | Major Canal Over Bridge       | 1x45+1x37.5+1x22.5                                      | 12m width canal + 5.5 m B.T. Road along the alignment. |
| 2.     | 2.539(RHS)<br>2.527(LHS)     | Fatewadi Canal                            | Minor Canal Over Bridge       | 1x45  | 16m width canal + Kachha Road along the alignment.     |
| 3.     | 2.945(LHS)<br>2.877(RHS)     | Canal                                     | Minor Canal Over Bridge       | 2x30  | 6m width canal + 3.5 m Road along the alignment.       |
| 4.     | RHS=4.985<br>LHS=5.030       | Canal                                     | Minor Canal Over Bridge       | 2x30  | 8m width canal + 3.5 m Road along the alignment.       |
| 5.     | RHS=8.362<br>LHS=8.455       | Canal                                     | Major Canal Over Bridge       | 2X45  | 8m width canal + 3.5 m Road along the alignment.       |
| 6.     | 8.885                        | Canal                                     | Minor Canal Over Bridge       | 1x25.7  | 5m width canal + 3.5 m Road along the alignment.       |
| 7.     | LHS=10.440<br>RHS=10.463     | Canal                                     | Major Canal Over Bridge       | LHS 1x37.5+1x30<br>RHS 1x30+1x37.5                      | 12m width canal + 5.5 m Road along the alignment.      |
| 8.     | RHS=10.790<br>LHS 10.760     | Canal                                     | Minor Canal Over Bridge       | 1x37.5  | 8 m width canal + Kachha Road                          |
| 9.     | 14.325(LHS)<br>14.352(RHS)   | Canal                                     | Minor Canal Over Bridge       | 1x45  | 9 m width canal + Kachha Road                          |
| 10.    | LHS=15.515<br>RHS=15.525     | Canal                                     | Minor Canal Over Bridge       | 1x45  | 30 m width Canal                                       |
| 11.    | LHS=22.557<br>RHS= 22.545    | Pond                                      | Major                         | RHS- 1x30+1x22.2+1x30+3x37.5<br>LHS- 1x22.2+1x30+3x37.5 | 125 m width Pond + 7 m road along the alignment        |
| 12.    | 24.855 (LHS)<br>24.896(RHS)  | Rajpura Sub-branch Canal                  | Major Canal Over Bridge       | 1x22.5+1x45+1x22.5                                      | 35 m Canal + Earthen Road along the alignment          |
| 13.    | 28.195(LHS)<br>28.215 (RHS)  | Canal                                     | Minor Canal Over Bridge       | 1x45  | 15 m Canal width + Earthen Road along the alignment    |
| 14.    | LHS=30.795<br>RHS=30.806     | Canal                                     | Minor Canal Over Bridge       | 1x37.5  | 30 m width Canal along the alignment                   |
| 15.    | 32.410                       | Pond                                      | Major                         | 4x37.5  | 130 m pond width + 5 m Rd along the alignment          |
| 16.    | 34.301 (LHS)<br>34.282 (RHS) | Canal                                     | Minor Canal Over Bridge       | 1X30  | 7 m Canal + 3.5m Cart Track along the alignment        |
| 17.    | RHS=36.878<br>LHS = 36.885   | Canal                                     | Minor Canal Over Bridge       | 1x30  | 7 m Canal + 3.5m Cart Track along the alignment        |
| 18.    | 43.302 (LHS)<br>43.292 (RHS) | Canal                                     | Minor Canal Over Bridge       | 1x22.5  | 7 m Canal + 3.5m Cart Track along the alignment        |
| 19.    | RHS=45.287                   | Canal                                     | Minor Canal                   | 1x22.5  | 7 m Canal + 3.5m Cart Track                            |



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| SL. No | Proposed Chainage (km)     | Name / Type of the Canal / Stream / River | Type of Bridge (Major /Minor) | Proposed Span Arrangement (Nos. x Each Span) | Remarks  |
|--------|----------------------------|---|-------------------------------|--|--|
|        | LHS= 45.269                |   | Over Bridge                   |  | along the alignment                                    |
| 20.    | RHS= 45.969<br>LHS= 45.978 | Canal                                     | Minor Canal Over Bridge       | 1x22.5                                       | 7 m Canal + 3.5m Cart Track along the alignment        |
| 21.    | 49.519                     |   | Minor Canal Over Bridge       | 1x 22.2                                      |  |
| 22.    | 60.150                     | Bhogavo River                             | Major Bridge                  | 20x37.5                                      | Major Bridge   |
| 23.    | 61.000                     | Bhogavo River                             | Major Bridge                  | 1x37.5+1x30.0+1x37.5                         | Major Bridge   |
| 24.    | 63.582                     | Water course (Bhogavo River)              | Minor Bridge                  | 6x5.0  |  |
| 25.    | 63.800                     | Water course (Bhogavo River)              | Minor Bridge                  | 6x5.0  |  |
| 26.    | RHS=64.465<br>LHS=64.525   | Canal                                     | Minor Canal Over Bridge       | (2x45 RHS) & (2x37.5 LHS)                    | 15 m width Canal + 3.5m Cart Track along the alignment |
| 27.    | 69.315                     | Ghelo River                               | Major Bridge                  | 11x37.5                                      | Major Bridge   |
| 28.    | 74.300                     | Water course (Bhadar River)               | Minor Bridge                  | 2x5.0  |  |
| 29.    | 78.110                     | Bhadar River                              | Major Bridge                  | 10x37.5 (SK)                                 |  |
| 30.    | 78.720                     | Water course (Bhadar River)               | Minor Bridge                  | 2x5.0  |  |
| 31.    | 81.492                     | Bhadar Tributary                          | Major Bridge                  | 15X(5x5)                                     |  |
| 32.    | 93.378                     | Lilka River                               | Major Bridge                  | 6x37.5                                       |  |
| 33.    | 94.380                     | Water course area                         | Minor Bridge                  | 2x3.0  |  |
| 34.    | 101.830                    | Lilka River                               | Major Bridge                  | 6x37.5 (SK)                                  |  |

## 2.7.2 Details of the proposed major/minor Junctions

The proposed access-controlled expressway project with new alignment has been envisaged through an area which shall have the advantage of simultaneous development as well as shall result in a shorter distance to travel. The junctions with existing road will be planned in the form of interchanges and flyover to ensure uninterrupted flow of traffic. One Rotary junction is



proposed at start point of the project to connect the Sardar Patel Ring Road. One Rotary junction is proposed at end point of the project to connect the SH-6 (Bhavnagar – Pipali).

### 2.7.3 Details of the proposed ROBs

The expressway is an access-controlled facility and all other road crossings therefore will be provided with a flyover/vehicular underpass with no access to the expressway. Similarly ROB's are proposed at railway crossings. The list of the proposed ROB's has been presented in following Table 2.15.

**Table 2.15: List of the proposed ROB's**

| Sl. No. | Design Chainage (Km) | Carriageway width (m) | Overall width (m)                             | Span Arrangement (m)   | Super Structure                       | Sub-structure   |
|---------|----------------------|-----------------------|---|--|---------------------------------------|-----------------|
| 1.      | 5.696                | 2x12.75               | 27.5(without footpath)<br>31.1(with footpath) | (LHS) - 2x37.5+2x47+1x34+1x37.5<br>(RHS)1x37.5+1x34+1x47+1x22.5+1x37.5+1x24.5+1x37.5 | Composite Steel Girder + PSC I Girder | RCC wall type   |
| 2.      | 20.694               | 2x12.75               | 27.5(without footpath)<br>31.1(with footpath) | 1x37.5+1x45+1x37.5   | Steel BOW STRING+PSC I Girder         | RCC Portal-Pier |
| 3.      | 31.410               | 2x12.75               | 31.1 (5 spans)<br>27.5 (4 spans)              | 9x40.0   | Steel Composite                       | RCC Portal-Pier |

### 2.7.4 Details of proposed Interchanges

The efficiency, safety, speed, cost of operation and capacity of expressway is influenced by the design of the interchanges. Interchanges are required for uninterrupted transfer of traffic from one road to another. The design of interchanges is required for the maximum capacity of roads to accommodate the coming & leaving traffic and level-of-service without interrupting the Expressway users. The details of the proposed interchanges have been presented in **Table 2.16 (a) and 2.16 (b)**.

**Table 2.16 (a): Details of the proposed Interchanges**

| Sl.No. | Location Design Chainage (km) | No. & length | Total Length & excluding earth retaining structure) | Carriageway width | Deck width 2x2 lane | Total Deck width (m) | Min. vertical clearance | Remark         |
|--------|-------------------------------|--------------|---|-------------------|---------------------|----------------------|-------------------------|----------------|
| 1.     | 28.122                        | 1x22.2       | 22.5  | 2x12.75           | 2x13.75             | 27.5                 |                         | Dumb bell type |
| 2.     | 28.868                        | 2x22.2       | 44.4  | 2x12.75           | 2x13.75             | 27.5                 |                         | Dumb bell type |
| 3.     | 29.561                        | 1x22.2       | 22.2  | 2x12.75           | 2x13.75             | 27.5                 |                         | Dumb bell type |
| 4.     | 46.505                        | 1x22.20      | 22.2  | 2x12.75           | 2x13.75             | 27.5                 |                         | Dumb bell type |
| 5.     | 47.24                         | 2x30.0       | 60  | 2x12.75           | 2x13.75             | 27.5                 |                         | Dumb           |



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| Sl.No. | Location<br>Design<br>Chainage<br>(km) | No. &<br>length | Total<br>Length<br>& excluding<br>earth<br>retaining<br>structure) | Carriageway<br>width | Deck<br>width<br>2x2 lane | Total<br>Deck<br>width<br>(m) | Min.<br>vertical<br>clearance | Remark                  |
|--------|--|-----------------|--|----------------------|---------------------------|-------------------------------|-------------------------------|-------------------------|
|        |  |                 |  |                      |                           |                               |                               | bell type               |
| 6.     | 47.975                                 | 1x22.20         | 22.2   | 2x12.75              | 2x13.75                   | 27.5                          |                               | Dumb<br>bell type       |
| 7.     | 67.216                                 | 1x37.5          | 37.5   | 2x12.75              | 2x13.75                   | 27.5 m                        |                               | Clover<br>leaf type     |
| 8.     | 84.541                                 | 2x30.0          | 60.0   | 1x16.5               | 1x17.5                    | 17.5                          | 5.5                           | Overpass                |
| 9.     | 84.709                                 | 1X10.5          | 12.5   | 2x12.75              | 2x13.75                   | 27.5                          | 4.0                           | Cycle-<br>track<br>LVUP |
| 10.    | 84.876                                 | 2x30.0          | 60.0   | 1x16.5               | 1x17.5                    | 17.5                          | 5.5                           | Overpass                |
| 11.    | 84.709                                 | 1X7.0           | 9.0  | 1x16.5               | 1x17.5                    | 17.5                          | 4.0                           | Cycle-<br>track<br>LVUP |
| 12.    | 84.709                                 | 1X7.0           | 9.0  | 1x16.5               | 1x17.5                    | 17.5                          | 4.0                           | Cycle-<br>track<br>LVUP |
| 13.    | 84.709                                 | 1X7.0           | 9.0  | 1x16.5               | 1x17.5                    | 17.5                          | 4.0                           | Cycle-<br>track<br>LVUP |
| 14.    | 84.709                                 | 1X7.0           | 9.0  | 1x16.5               | 1x17.5                    | 17.5                          | 4.0                           | Cycle-<br>track<br>LVUP |
| 15.    | 88.313                                 | 2x30.0          | 60.0   | 1x16.5               | 1x17.5                    | 17.5                          | 5.5                           | Overpass                |
| 16.    | 88.480                                 | 1X10.5          | 12.5   | 2x12.75              | 2x13.75                   | 27.5                          | 4.0                           | Cycle-<br>track<br>LVUP |
| 17.    | 88.648                                 | 2x30.0          | 60.0   | 1x16.5               | 1x17.5                    | 17.5                          | 5.5                           | Overpass                |
| 18.    | 88.480                                 | 1X7.0           | 9.0  | 1x16.5               | 1x17.5                    | 17.5                          | 4.0                           | Cycle-<br>track<br>LVUP |
| 19.    | 88.480                                 | 1X7.0           | 9.0  | 1x16.5               | 1x17.5                    | 17.5                          | 4.0                           | Cycle-<br>track<br>LVUP |
| 20.    | 88.480                                 | 1X7.0           | 9.0  | 1x16.5               | 1x17.5                    | 17.5                          | 4.0                           | Cycle-<br>track<br>LVUP |
| 21.    | 88.480                                 | 1X7.0           | 9.0  | 1x16.5               | 1x17.5                    | 17.5                          | 4.0                           | Cycle-<br>track<br>LVUP |
| 22.    | 92.336                                 | 2x30.0          | 60.0   | 1x16.5               | 1x17.5                    | 17.5                          | 5.5                           | Overpass                |
| 23.    | 92.503                                 | 1X10.5          | 12.5   | 2x12.75              | 2x13.75                   | 27.5                          | 4.0                           | Cycle-<br>track<br>LVUP |
| 24.    | 92.671                                 | 2x30.0          | 60.0   | 1x16.5               | 1x17.5                    | 17.5                          | 5.5                           | Overpass                |



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| Sl.No. | Location Design Chainage (km) | No. & length | Total Length (excluding earth retaining structure) | Carriageway width | Deck width 2x2 lane | Total Deck width (m) | Min. vertical clearance | Remark           |
|--------|-------------------------------|--------------|--|-------------------|---------------------|----------------------|-------------------------|------------------|
| 25.    | 92.617                        | 1X7.0        | 9.0  | 1x16.5            | 1x17.5              | 17.5                 | 4.0                     | Cycle-track LVUP |
| 26.    | 92.617                        | 1X7.0        | 9.0  | 1x16.5            | 1x17.5              | 17.5                 | 4.0                     | Cycle-track LVUP |
| 27.    | 92.617                        | 1X7.0        | 9.0  | 1x16.5            | 1x17.5              | 17.5                 | 4.0                     | Cycle-track LVUP |
| 28.    | 92.617                        | 1X7.0        | 9.0  | 2x12.75           | 2x13.75             | 27.5                 | 4.0                     | Cycle-track LVUP |
| 29.    | 96.339                        | 2x30.0       | 60.0   | 1x16.5            | 1x17.5              | 17.5                 | 5.5                     | Overpass         |
| 30.    | 96.507                        | 1X10.5       | 12.5   | 2x12.75           | 2x13.75             | 27.5                 | 4.0                     | Cycle-track LVUP |
| 31.    | 96.676                        | 2x30.0       | 60.0   | 1x16.5            | 1x17.5              | 17.5                 | 5.5                     | Overpass         |
| 32.    | 96.507                        | 1X7.0        | 9.0  | 1x16.5            | 1x17.5              | 17.5                 | 4.0                     | Cycle-track LVUP |
| 33.    | 96.507                        | 1X7.0        | 9.0  | 1x16.5            | 1x17.5              | 17.5                 | 4.0                     | Cycle-track LVUP |
| 34.    | 96.507                        | 1X7.0        | 9.0  | 1x16.5            | 1x17.5              | 17.5                 | 4.0                     | Cycle-track LVUP |
| 35.    | 96.507                        | 1X7.0        | 9.0  | 1x16.5            | 1x17.5              | 17.5                 | 4.0                     | Cycle-track LVUP |

**Table 2.16 (b): List of the proposed Left in – Left Out**

| S. No | Location Design Chainage (km) | No. & length | Total Length (excluding earth retaining structure) | Carriageway width | Deck width 2x2 lane | Total Deck width |
|-------|-------------------------------|--------------|--|-------------------|---------------------|------------------|
| 1     | RHS=74.978 / LHS =74.970      | 1 x 37.5     | 37.5   | 2x12.75           | 2x13.75             | 27.5 m           |
| 2     | 80.580                        | 1x37.5       | 37.5   | 2x12.75           | 2x13.75             | 27.5 m           |
| 3     | 100.484                       | 1x37.5       | 37.5   | 2x12.75           | 2x13.75             | 27.5 m           |

### 2.7.5 Details of proposed flyovers

The details of the proposed flyovers have been presented in **Table 2.17**.



**Table 2.17: Details of the proposed flyovers**

| S. No. | Location Design Chainage (km) | No. & length   | Total Length (excluding earth retaining structure) | Carriage way width (m) | Deck width 2x2 lane (m) | Total Deck width |
|--------|-------------------------------|--|--|------------------------|-------------------------|------------------|
| 1.     | RHS=6.209 & LHS 6.169         | 1X45   | 45   | 2x12.75                | 2x13.75                 | 27.5 m           |
| 2.     | 12.546                        | 1x30   | 30   | 2x12.75                | 2x13.75                 | 27.5 m           |
| 3.     | 19.7 (LHS)<br>19.716 (RHS)    | 1x30   | 30   | 2x12.75                | 2x13.75                 | 27.5 m           |
| 4.     | 39.232                        | 1x30   | 30   | 2x12.75                | 2x13.75                 | 27.5 m           |
| 5.     | LHS=57.916<br>RHS= 57.844     | LHS<br>1x22.2+1x<br>47+1x37.5<br>RHS<br>1x37.5+1x<br>47+1x22.2 | 104.4  | 2x12.75                | 2x13.75                 | 27.5 m           |
| 6.     | 64.14                         | 2x30.0   | 60   | 2x12.75                | 2x13.75                 | 27.5 m           |
| 7.     | 86.490                        | 2x22.2   | 44.4   | 2x12.75                | 2x13.75                 | 27.5 m           |
| 8.     | 90.491                        | 2x22.2   | 44.4   | 2x12.75                | 2x13.75                 | 27.5 m           |
| 9.     | 94.520                        | 2x22.2   | 44.4   | 2x12.75                | 2x13.75                 | 27.5 m           |
| 10.    | 97.848                        | 2x22.2   | 44.4   | 2x12.75                | 2x13.75                 | 27.5 m           |

## 2.7.6 Details of vehicular, light and pedestrian underpasses

Vehicular underpasses, light vehicular underpass and cattle underpass are few improvements proposed under the project activity based on the requirement near major junctions and crossing points of settlements. The detail of the proposed vehicular underpasses, light vehicular underpasses and cattle underpass have been presented in **Table 2.18**.

**Table 2.18: Details of proposed vehicular underpass**

| S. No.     | Location Design Chainage (km) | No. & length | Total Length (excluding earth retaining structure) | Carriageway width (m) | Deck width 2x2 lane (m) | Total Deck width |
|------------|-------------------------------|--------------|--|-----------------------|-------------------------|------------------|
| <b>VUP</b> |                               |              |  |                       |                         |                  |
| 1.         | 2.176                         | 1X12.0       | 14   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 2.         | 9.128                         | 1x13.5       | 13.5   | 2x12.75               | 1x92                    | 92m              |
| 3.         | 11.772                        | 1X12.0       | 14   | 2x12.75               | 2x13.75                 | 27.5m            |
| 4.         | 15.382                        | 1X12.0       | 14   | 2x12.75               | 2x13.75                 | 27.5m            |
| 5.         | 23.362                        | 2x13.5       | 27   | 2x12.75               | 2x13.75                 | 27.5             |
| 6.         | 24.352                        | 2x12.0       | 26.8   | 2x12.75               | 2x13.75                 | 27.5             |
| 7.         | 26.320                        | 2x12.0       | 26.8   | 2x12.75               | 2x13.75                 | 27.5             |
| 8.         | 33.575                        | 2x12.0       | 26.8   | 2x12.75               | 2x13.75                 | 27.5             |
| 9.         | 35.000                        | 1x12.0       | 12.5   | 2x12.75               | 2x13.75                 | 27.5             |
| 10.        | 35.956                        | 2x12.0       | 26.8   | 2x12.75               | 2x13.75                 | 27.5             |



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| S. No.      | Location Design Chainage (km) | No. & length              | Total Length (excluding earth retaining structure) | Carriageway width (m) | Deck width 2x2 lane (m) | Total Deck width |
|-------------|-------------------------------|---------------------------|--|-----------------------|-------------------------|------------------|
| 11.         | 41.666                        | 1x12.0                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5             |
| 12.         | 44.130                        | 1x13.5                    | 14.5   | 2x12.75               | 2x13.75                 | 27.5             |
| 13.         | 46.350                        | 2x12.0                    | 26.8   | 2x12.75               | 2x13.75                 | 27.5             |
| 14.         | 48.162                        | 1x18.5                    | 18.5   | 2x12.75               | 2x13.75                 | 27.5             |
| 15.         | 52.250                        | 1X13.5                    | 13.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 16.         | 58.963                        | 1X13.5                    | 13.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 17.         | 62.164                        | 1X13.5                    | 13.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 18.         | 66.150                        | 1X14.8                    | 16.8   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 19.         | 68.764                        | 1X13.5                    | 13.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 20.         | 108.149                       | 1X12.0 (SQ) /1X13.59 (SK) | 14   | 2x12.75               | 2x13.75                 | 27.5 m           |
| <b>LVUP</b> |                               |                           |  |                       |                         |                  |
| 1.          | 3.300                         | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 2.          | 4.033                         | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 3.          | 7.050                         | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 4.          | 11.505                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 5.          | 12.100                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 6.          | 13.850                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 7.          | 16.375                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 8.          | 17.300                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 9.          | 18.717                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 10.         | 18.971                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 11.         | 21.500                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 12.         | 25.883                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5             |
| 13.         | 27.080                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5             |
| 14.         | 29.855                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5             |
| 15.         | 35.682                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5             |
| 16.         | 37.515                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5             |
| 17.         | 40.100                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5             |
| 18.         | 50.696                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 19.         | 51.495                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 20.         | 52.723                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 21.         | 53.423                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 22.         | 54.948                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 23.         | 56.323                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 24.         | 59.255                        | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| 25.         | 63.21                         | 1X10.5                    | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |





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| S. No.                    | Location Design Chainage (km) | No. & length | Total Length (excluding earth retaining structure) | Carriageway width (m) | Deck width 2x2 lane (m) | Total Deck width |
|---------------------------|-------------------------------|--------------|--|-----------------------|-------------------------|------------------|
| 26.                       | 65.40                         | 1X10.5       | 12.5   | 2x12.75               | 2x13.75                 | 27.5 m           |
| <b>Cattle underpasses</b> |                               |              |  |                       |                         |                  |
| 1.                        | 107.840                       | 1X7.0        | 8  | 2x12.75               | 2x13.75                 | 27.5 m           |

### 2.7.7 Details of the Proposed Box Culverts

A summary of the total culverts is presented in **Table 2.19**.

**Table 2.19: A summary of the total culverts**

| Sl. No. | Culvert Location (Design chainage) | Type of Culvert | Span / opening (No. x Length in m x Height in m) |
|---------|------------------------------------|-----------------|--|
| 1.      | 0.540                              | Box             | 1 x 2 x 2  |
| 2.      | 1.210                              | Box             | 1 x 2 x 2  |
| 3.      | 1.950                              | Box             | 1 x 2 x 2  |
| 4.      | 2.245                              | Box             | 2 x 2 x 2  |
| 5.      | 2.650                              | Box             | 1 x 2 x 2  |
| 6.      | 3.150                              | Box             | 1 x 2 x 2  |
| 7.      | 3.700                              | Box             | 1 x 2 x 2  |
| 8.      | 4.600                              | Box             | 1 x 2 x 2  |
| 9.      | 6.860                              | Box             | 1 x 2 x 2  |
| 10.     | 7.150                              | Box             | 1 x 2 x 2  |
| 11.     | 7.560                              | Box             | 1 x 2 x 2  |
| 12.     | 8.200                              | Box             | 1 x 2 x 2  |
| 13.     | 8.780                              | Box             | 1 x 2 x 2  |
| 14.     | 9.107                              | Box             | 1 x 2 x 2  |
| 15.     | 9.320                              | Box             | 1 x 2 x 2  |
| 16.     | 9.705                              | Box             | 1x3x3  |
| 17.     | 10.150                             | Box             | 1 x 2 x 2  |
| 18.     | 10.615                             | Box             | 1 x 2 x 2  |
| 19.     | 11.340                             | Box             | 1 x 2 x 2  |
| 20.     | 11.550                             | Box             | 1 x 2 x 2  |
| 21.     | 12.400                             | Box             | 1 x 2 x 2  |
| 22.     | 12.650                             | Box             | 1 x 2 x 2  |
| 23.     | 12.900                             | Box             | 1x5x5  |
| 24.     | 13.300                             | Box             | 1 x 2 x 2  |
| 25.     | 13.822                             | Box             | 1 x 2 x 2  |
| 26.     | 14.750                             | Box             | 1 x 2 x 2  |
| 27.     | 15.300                             | Box             | 1 x 2 x 2  |
| 28.     | 16.050                             | Box             | 1 x 2 x 2  |
| 29.     | 16.600                             | Box             | 1 x 2 x 2  |
| 30.     | 17.075                             | Box             | 1 x 2 x 2  |
| 31.     | 17.620                             | Box             | 1 x 2 x 2  |
| 32.     | 18.000                             | Box             | 1 x 2 x 2  |
| 33.     | 18.450                             | Box             | 1 x 2 x 2  |
| 34.     | 18.920                             | Box             | 1 x 2 x 2  |
| 35.     | 19.240                             | Box             | 1 x 2 x 2  |
| 36.     | 19.400                             | Box             | 1 x 3 x 3  |
| 37.     | 19.760                             | Box             | 1 x 2 x 2  |



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| Sl. No. | Culvert Location<br>(Design chainage) | Type of Culvert | Span / opening<br>(No. x Length in m x Height in m) |
|---------|---------------------------------------|-----------------|---|
| 38.     | 20.175                                | Box             | 2 x 2 x 2   |
| 39.     | 20.945                                | Box             | 1 x 2 x 2   |
| 40.     | 21.400                                | Box             | 1 x 3 x 3   |
| 41.     | 21.830                                | Box             | 1 x 2 x 2   |
| 42.     | 22.25                                 | Box             | 1 x 2 x 2   |
| 43.     | 22.8                                  | Box             | 1 x 2 x 2   |
| 44.     | 23.075                                | Box             | 1 x 2 x 2   |
| 45.     | 23.4                                  | Box             | 2 x 2 x 2   |
| 46.     | 23.61                                 | Box             | 1 x 2 x 2   |
| 47.     | 24.14                                 | Box             | 2 x 2 x 2   |
| 48.     | 24.75                                 | Box             | 1 x 2 x 2   |
| 49.     | 25.34                                 | Box             | 1 x 2 x 2   |
| 50.     | 25.8                                  | Box             | 1 x 2 x 2   |
| 51.     | 26.24                                 | Box             | 1 x 2 x 2   |
| 52.     | 26.6                                  | Box             | 1 x 2 x 2   |
| 53.     | 26.9                                  | Box             | 1 x 2 x 2   |
| 54.     | 27.1                                  | Box             | 1 x 2 x 2   |
| 55.     | 27.7                                  | Box             | 1 x 2 x 2   |
| 56.     | 28                                    | Box             | 1 x 2 x 2   |
| 57.     | 28.5                                  | Box             | 1 x 2 x 2   |
| 58.     | 28.75                                 | Box             | 1 x 2 x 2   |
| 59.     | 29.03                                 | Box             | 1 x 2 x 2   |
| 60.     | 29.4                                  | Box             | 1 x 2 x 2   |
| 61.     | 29.7                                  | Box             | 1 x 2 x 2   |
| 62.     | 29.94                                 | Box             | 1 x 2 x 2   |
| 63.     | 30.29                                 | Box             | 1 x 2 x 2   |
| 64.     | 31                                    | Box             | 1 x 2 x 2   |
| 65.     | 31.7                                  | Box             | 1 x 2 x 2   |
| 66.     | 32.800                                | Box             | 1 x 2 x 2   |
| 67.     | 33.045                                | Box             | 1x5x5   |
| 68.     | 33.362                                | Box             | 2 x 2 x 2   |
| 69.     | 33.7                                  | Box             | 1 x 2 x 2   |
| 70.     | 33.95                                 | Box             | 1 x 2 x 2   |
| 71.     | 34.725                                | Box             | 1 x 2 x 2   |
| 72.     | 35.1                                  | Box             | 1 x 2 x 2   |
| 73.     | 35.64                                 | Box             | 1 x 2 x 2   |
| 74.     | 35.81                                 | Box             | 1 x 2 x 2   |
| 75.     | 35.98                                 | Box             | 1x3x3   |
| 76.     | 36.14                                 | Box             | 1 x 2 x 2   |
| 77.     | 36.53                                 | Box             | 1 x 2 x 2   |
| 78.     | 37.075                                | Box             | 1 x 2 x 2   |
| 79.     | 37.375                                | Box             | 1 x 2 x 2   |
| 80.     | 37.95                                 | Box             | 1 x 2 x 2   |
| 81.     | 38.5                                  | Box             | 1 x 2 x 2   |
| 82.     | 39.065                                | Box             | 1x3x3   |
| 83.     | 39.6                                  | Box             | 1x3x3   |
| 84.     | 40.3                                  | Box             | 1 x 2 x 2   |
| 85.     | 40.6                                  | Box             | 1x3x3   |
| 86.     | 41.013                                | Box             | 1 x 2 x 2   |
| 87.     | 41.42                                 | Box             | 2 x 2 x 2   |



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|---------|---------------------------------------|-----------------|---|
| 88.     | 41.8                                  | Box             | 1 x 2 x 2   |
| 89.     | 41.95                                 | Box             | 1 x 2 x 2   |
| 90.     | 42.483                                | Box             | 1x3x3   |
| 91.     | 43.9                                  | Box             | 1 x 2 x 2   |
| 92.     | 44.1                                  | Box             | 1x3x3   |
| 93.     | 44.6                                  | Box             | 1 x 2 x 2   |
| 94.     | 44.98                                 | Box             | 1 x 2 x 2   |
| 95.     | 46.4                                  | Box             | 2 x 2 x 2   |
| 96.     | 46.82                                 | Box             | 1x2x2   |
| 97.     | 47.412                                | Box             | 1x5x5   |
| 98.     | 48.1                                  | Box             | 1 x 2 x 2   |
| 99.     | 48.39                                 | Box             | 1 x 2 x 2   |
| 100.    | 48.600                                | Box             | 2 x 2 x 2   |
| 101.    | 49.000                                | Box             | 1 x 2 x 2   |
| 102.    | 49.700                                | Box             | 1 x 2 x 2   |
| 103.    | 49.950                                | Box             | 1 x 2 x 2   |
| 104.    | 50.150                                | Box             | 1x5x5   |
| 105.    | 50.720                                | Box             | 1 x 2 x 2   |
| 106.    | 51.170                                | Box             | 1x5x5   |
| 107.    | 51.650                                | Box             | 1 x 2 x 2   |
| 108.    | 52.175                                | Box             | 1 x 2 x 2   |
| 109.    | 52.600                                | Box             | 1 x 2 x 2   |
| 110.    | 53.200                                | Box             | 1 x 2 x 2   |
| 111.    | 53.700                                | Box             | 1 x 2 x 2   |
| 112.    | 54.250                                | Box             | 1 x 2 x 2   |
| 113.    | 54.750                                | Box             | 1 x 2 x 2   |
| 114.    | 55.075                                | Box             | 1 x 2 x 2   |
| 115.    | 55.900                                | Box             | 1 x 2 x 2   |
| 116.    | 56.550                                | Box             | 1 x 2 x 2   |
| 117.    | 57.350                                | Box             | 1 x 2 x 2   |
| 118.    | 57.622                                | Box             | 1 x 2 x 2   |
| 119.    | 58.400                                | Box             | 1 x 2 x 2   |
| 120.    | 58.920                                | Box             | 1 x 2 x 2   |
| 121.    | 59.100                                | Box             | 1 x 2 x 2   |
| 122.    | 59.280                                | Box             | 1 x 2 x 2   |
| 123.    | 61.500                                | Box             | 1 x 2 x 2   |
| 124.    | 62.180                                | Box             | 2 x 2 x 2   |
| 125.    | 62.650                                | Box             | 1 x 2 x 2   |
| 126.    | 63.000                                | Box             | 1 x 2 x 2   |
| 127.    | 63.450                                | Box             | 1 x 2 x 2   |
| 128.    | 64.300                                | Box             | 1 x 2 x 2   |
| 129.    | 65.032                                | Box             | 1x5x5   |
| 130.    | 65.580                                | Box             | 1 x 2 x 2   |
| 131.    | 66.020                                | Box             | 1 x 2 x 2   |
| 132.    | 66.380                                | Box             | 1 x 2 x 2   |
| 133.    | 66.700                                | Box             | 1x5x5   |
| 134.    | 67.375                                | Box             | 1 x 2 x 2   |
| 135.    | 67.800                                | Box             | 1 x 2 x 2   |
| 136.    | 68.375                                | Box             | 1 x 2 x 2   |
| 137.    | 68.718                                | Box             | 1 x 2 x 2   |



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|---------|---------------------------------------|-----------------|---|
| 138.    | 68.900                                | Box             | 1 x 2 x 2   |
| 139.    | 70.150                                | Box             | 1x5x5   |
| 140.    | 70.582                                | Box             | 2 x 2 x 2   |
| 141.    | 71.000                                | Box             | 1 x 2 x 2   |
| 142.    | 71.425                                | Box             | 1 x 2 x 2   |
| 143.    | 71.800                                | Box             | 1 x 2 x 2   |
| 144.    | 72.300                                | Box             | 1 x 2 x 2   |
| 145.    | 72.850                                | Box             | 2 x 2 x 2   |
| 146.    | 73.100                                | Box             | 1 x 2 x 2   |
| 147.    | 73.520                                | Box             | 1 x 2 x 2   |
| 148.    | 73.850                                | Box             | 1 x 2 x 2   |
| 149.    | 74.087                                | Box             | 1 x 2 x 2   |
| 150.    | 74.650                                | Box             | 1 x 2 x 2   |
| 151.    | 75.600                                | Box             | 1 x 2 x 2   |
| 152.    | 76.240                                | Box             | 1 x 2 x 2   |
| 153.    | 76.450                                | Box             | 1 x 2 x 2   |
| 154.    | 76.700                                | Box             | 1 x 2 x 2   |
| 155.    | 76.979                                | Box             | 1 x 2 x 2   |
| 156.    | 78.500                                | Box             | 1 x 2 x 2   |
| 157.    | 79.350                                | Box             | 2 x 2 x 2   |
| 158.    | 79.600                                | Box             | 1 x 2 x 2   |
| 159.    | 79.950                                | Box             | 1 x 2 x 2   |
| 160.    | 80.830                                | Box             | 1 x 2 x 2   |
| 161.    | 81.000                                | Box             | 1 x 2 x 2   |
| 162.    | 81.880                                | Box             | 1 x 2 x 2   |
| 163.    | 82.200                                | Box             | 1 x 2 x 2   |
| 164.    | 82.600                                | Box             | 1 x 2 x 2   |
| 165.    | 83.200                                | Box             | 1 x 2 x 2   |
| 166.    | 83.575                                | Box             | 1 x 2 x 2   |
| 167.    | 83.840                                | Box             | 1 x 2 x 2   |
| 168.    | 84.440                                | Box             | 1 x 2 x 2   |
| 169.    | 84.650                                | Box             | 1 x 2 x 2   |
| 170.    | 84.780                                | Box             | 1 x 2 x 2   |
| 171.    | 85.060                                | Box             | 1 x 2 x 2   |
| 172.    | 85.480                                | Box             | 1 x 2 x 2   |
| 173.    | 86.050                                | Box             | 1 x 2 x 2   |
| 174.    | 86.700                                | Box             | 1 x 2 x 2   |
| 175.    | 87.000                                | Box             | 2 x 2 x 2   |
| 176.    | 87.650                                | Box             | 1 x 2 x 2   |
| 177.    | 88.300                                | Box             | 1 x 2 x 2   |
| 178.    | 88.800                                | Box             | 2 x 2 x 2   |
| 179.    | 89.490                                | Box             | 1 x 2 x 2   |
| 180.    | 90.530                                | Box             | 1 x 2 x 2   |
| 181.    | 91.150                                | Box             | 2 x 2 x 2   |
| 182.    | 91.500                                | Box             | 2 x 2 x 2   |
| 183.    | 92.150                                | Box             | 1 x 2 x 2   |
| 184.    | 92.712                                | Box             | 1x5x5   |
| 185.    | 94.000                                | Box             | 1 x 2 x 2   |
| 186.    | 94.638                                | Box             | 1x5x5   |
| 187.    | 94.910                                | Box             | 1x5x5   |



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| Sl. No. | Culvert Location<br>(Design chainage) | Type of Culvert | Span / opening<br>(No. x Length in m x Height in m) |
|---------|---------------------------------------|-----------------|---|
| 188.    | 95.189                                | Box             | 2 x 2 x 2   |
| 189.    | 95.700                                | Box             | 2 x 2 x 2   |
| 190.    | 96.158                                | Box             | 2 x 2 x 2   |
| 191.    | 96.380                                | Box             | 2 x 2 x 2   |
| 192.    | 96.800                                | Box             | 2 x 2 x 2   |
| 193.    | 97.150                                | Box             | 1 x 2 x 2   |
| 194.    | 97.500                                | Box             | 2 x 2 x 2   |
| 195.    | 97.890                                | Box             | 1 x 2 x 2   |
| 196.    | 98.229                                | Box             | 1 x 2 x 2   |
| 197.    | 98.600                                | Box             | 1 x 2 x 2   |
| 198.    | 99.200                                | Box             | 1 x 2 x 2   |
| 199.    | 99.850                                | Box             | 2 x 2 x 2   |
| 200.    | 100.200                               | Box             | 1 x 2 x 2   |
| 201.    | 100.705                               | Box             | 2 x 2 x 2   |
| 202.    | 101.130                               | Box             | 2 x 2 x 2   |
| 203.    | 102.200                               | Box             | 1x3x3   |
| 204.    | 102.545                               | Box             | 2 x 2 x 2   |
| 205.    | 102.770                               | Box             | 2 x 2 x 2   |
| 206.    | 103.270                               | Box             | 1 x 2 x 2   |
| 207.    | 103.750                               | Box             | 2 x 2 x 2   |
| 208.    | 104.400                               | Box             | 1 x 2 x 2   |
| 209.    | 104.750                               | Box             | 2 x 2 x 2   |
| 210.    | 105.380                               | Box             | 2 x 2 x 2   |
| 211.    | 105.600                               | Box             | 2 x 2 x 2   |
| 212.    | 106.000                               | Box             | 2 x 2 x 2   |
| 213.    | 106.540                               | Box             | 1 x 2 x 2   |
| 214.    | 107.200                               | Box             | 1 x 2 x 2   |
| 215.    | 107.550                               | Box             | 1 x 2 x 2   |
| 216.    | 108.200                               | Box             | 1 x 2 x 2   |

## 2.7.8 Details of the proposed Toll Plazas

Three main toll plazas and sixteen ramp toll plazas on the expressway have been proposed. The details of the toll plaza proposed have been presented in **Table 2.20**.

**Table 2.20: Details of the proposed Toll Plazas**

| Chainage           | Location        | Direction (Entry: to highway, Exit: from Highway) | No. of toll lanes<br>(Normal) |
|--------------------|-----------------|---|-------------------------------|
| <b>Toll Plazas</b> |                 |   |                               |
| 70+730             | Main Toll Plaza | -   | 6+1(Each Side)                |
| 107+310            | Main Toll Plaza | -   | 7+1(Each Side)                |
| <b>Ramp Plazas</b> |                 |   |                               |
| 28+600             | Ramp plaza      | Entry   | 2+1                           |
| 28+600             | Ramp plaza      | Exit  | 2+1                           |
| 29+100             | Ramp plaza      | Entry   | 2+1                           |



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| Chainage | Location   | Direction (Entry: to highway, Exit: from Highway) | No. of toll lanes (Normal) |
|----------|------------|---|----------------------------|
| 29+100   | Ramp plaza | Exit  | 2+1                        |
| 47+000   | Ramp plaza | Entry   | 2+1                        |
| 47+000   | Ramp plaza | Exit  | 2+1                        |
| 47+500   | Ramp plaza | Entry   | 2+1                        |
| 47+500   | Ramp plaza | Exit  | 2+1                        |
| 67+000   | Ramp plaza | Exit (From Ahmedabad To Airport Road)             | 2+1                        |
| 67+000   | Ramp plaza | Entry (From Pipali to Dholera)                    | 2+1                        |
| 67+000   | Ramp plaza | Entry (From Pipali to Ahmedabad)                  | 2+1                        |
| 67+000   | Ramp plaza | Exit (From Ahmedabad to Pipali)                   | 2+1                        |
| 67+550   | Ramp plaza | Exit (From Dholera to Pipali)                     | 2+1                        |
| 67+550   | Ramp plaza | Entry (From proposed Airport Road to Ahmedabad)   | 2+1                        |
| 67+550   | Ramp plaza | Exit (From Dholera to proposed Airport Road)      | 2+1                        |
| 67+550   | Ramp plaza | Entry (From Pipali Ahmedabad)                     | 2+1                        |

## 2.7.9 Details of Way side Amenities / Service Areas

Wayside amenity of minimum about 6 Hectares shall be developed at the following location. The details of the Wayside amenity proposed have been presented in Table 2.21.

**Table 2.21: Details of the way side Amenities**

| Sl. No. | Location (Km) | Side      |
|---------|---------------|-----------|
| 1       | 35+000        | Left Side |
| 2       | 66+140        | Left Side |

## 2.8 DETAILS OF AFFECTED RELIGIOUS STRUCTURES

During the finalization of the alignment options, efforts were made to save as religious structures as possible from acquisition. Majority of the religious structures in the vicinity of the project corridor has been saved vide the proposed alignment and a summary of the religious structure that has been partially/completely affected still, is presented in **Table 2.22**.

**Table 2.22: Details of the affected religious structures**

| S. No. | Proposed Chainage (Km) | Religious Structures            |
|--------|------------------------|---------------------------------|
| 1.     | 2+100                  | Small Old Temple                |
| 2.     | 2+275                  | Temple                          |
| 3.     | 5+760                  | Small Old Temple                |
| 4.     | 8+820                  | Temple                          |
| 5.     | 10+725                 | Temple with Well and Water Tank |



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|     |        |                       |
|-----|--------|-----------------------|
| 6.  | 14+375 | Temple with Well      |
| 7.  | 15+260 | Temple                |
| 8.  | 21+120 | Temple/Well/Bore Well |
| 9.  | 21+760 | Temple                |
| 10. | 22+650 | Temple                |
| 11. | 22+660 | Temple                |
| 12. | 29+965 | Temple                |

## 2.9 COST ESTIMATES

The total cost includes Contingencies, Supervision charges, Administrative charges, Quality Control charges, Road Safety cell audit charges and cost of Resettlement and Rehabilitation, Land acquisition cost, Environmental cost and shifting of utilities. The general Abstract of cost is presented in **Table 2.23**.

**Table 2.23: Abstract of Cost (H.A. Mode)**

| Bill No. | Description   | Amount INR      |
|----------|---|-----------------|
| 1        | SITE CLEARANCE  | 3,25,44,304     |
| 2        | EARTH WORK  | 4,05,99,11,560  |
| 2a       | EARTH WORK (APPROACHES)                                       | 2,37,63,52,678  |
| 3        | SUB-BASE, BASE-COURSES  | 2,72,76,46,011  |
| 4        | BITUMINOUS PAVEMENT COURSES                                   | 4,87,74,25,551  |
|          | SUBTOTAL FOR HIGHWAY  | 14,07,38,80,104 |
| 5        | CROSS DRAINAGE WORKS  | 67,24,35,574    |
| 6A       | MAJOR, MINOR BRIDGES, ROB, FLYOVERS, OVERPASS & UNDERPASSES   |                 |
| I)       | FLYOVERS  | 1,04,63,97,880  |
| II)      | VUP   | 1,30,23,20,582  |
| iii)     | LVUP  | 83,29,31,263    |
| iv)      | CUP (Box)   | 2,08,84,835     |
| IV       | INTERCHANGE STRUCTURES  | 79,45,28,676    |
| V)       | MINOR BRIDGES   | 1,69,67,77,901  |
| VI)      | MAJOR BRIDGES   | 3,90,21,40,887  |
| VII)     | ROB'S   | 1,43,48,25,638  |
| 6B       | R.E.Wall, Crashbarrier with Friction slab                     | 3,23,75,97,371  |
|          | SUBTOTAL FOR STRUCTURES                                       | 14,94,08,40,607 |
| 7        | TRAFFIC SIGNAGES, ROAD MARKING, LIGHTING & APPURTENANCES      | 1,56,09,16,681  |
| 8        | DRAINAGE AND PROTECTION WORKS                                 | 1,41,35,49,521  |
| 9        | TRAFFIC MANAGEMENT SYSTEM                                     | 24,59,91,565    |
| 10       | GENERAL ITEMS   | 10,01,83,241    |
| 11       | WAYSIDE AMENITIES   | -               |
| 12       | TOLLPLAZA & RAMP PLAZA  | 66,94,35,792    |
|          | SUBTOTAL FOR MISC.  | 3,99,00,76,800  |
|          | EFFECTIVE GST 5% (CONSIDERING INPUT CREDIT OF 7%) ON 1 TO 6,8 |                 |
|          | TOTAL GST TAKEN AS 12%  |                 |
| i)       | CIVIL COST  | 33,00,47,97,511 |





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| Bill No. | Description  | Amount INR             |
|----------|--|------------------------|
| ii       | ESCALATION @ 5% UP TO BID DUE DATE   |                        |
| iii)     | TOTAL CIVIL COST AS ON BID DUE DATE  | 33,00,47,97,511        |
| iv       | CONTINGENCIES @ 1%   |                        |
|          | TOTAL EPC COST   | 33,00,47,97,511        |
|          | HA MODE COST PER KM (RS. IN CR.)   | 31                     |
| v        | CENTAGES (FOR HYBRID ANNUITY PROJECTS*)  |                        |
| a        | IC & PRE-OPERATIVE EXPENCES @ 1% OF EPC COST   | 23,86,76,295           |
| b        | MAINTENANCE DURING DEVELOPMENT PERIOD  |                        |
| c        | FINANCING COST DEBT AT 70:30 DER   | 13,62,50,000           |
| d        | INTEREST DURING CONSTRUCTION   | 1,03,05,50,000         |
|          | TOTAL CENTAGES   | 1,40,54,76,295         |
| vi       | ESTIMATED PROJECT COST (COST OF CONSTRUCTION +CENTAGE)   | 34,41,02,73,806        |
| vii      | PRE-CONSTRUCTION ACTIVITIES  |                        |
| a)       | COST OF LAND ACQUISITION   | 7,43,07,00,000         |
| b)       | SHIFTING OF UTILITIES  | 66,68,90,782           |
| c)       | ENVIRONMENTAL MEASURES ETC   | 39,50,00,000           |
|          | <b>TOTAL(VII)</b>  | <b>8,49,25,90,782</b>  |
|          | <b>TOTAL CAPITAL COST (COST OF CONSTRUCTION + COST OF PRE-CONSTRUCTION ACTIVITIES + CENTAGE CHARGES)</b> | <b>42,90,28,64,588</b> |
|          | <b>TOTAL PROJECT COST PER KM (RS. IN CR.)</b>  | <b>39.35</b>           |
|          | <b>TOTAL LENGTH (KMS)</b>  | <b>109.019</b>         |



## **CHAPTER - 3: DESCRIPTION OF ENVIRONMENT**

In order to understand the baseline environmental status and impacts due to the proposed construction of expressway, observations were made by field visits. The relevant secondary data were also collected. The methodologies adopted can be classified in the following way:

1. The preparation of questionnaire for environmental surveys.
2. Field observations of these questionnaires including public consultation.
3. Screening, testing and monitoring of environmental factors like Air, Water, Soil and Noise level.
4. Collection of secondary data from various departments.
5. Compilation, analysis and presentation of the report.

### **3.1 PREPARATION OF QUESTIONNAIRES FOR ENVIRONMENTAL PARAMETERS**

Questionnaires were prepared after thoroughly studying the environmental guidelines and conditions of the Ministry of Environmental, Forest and Climate Change (MoEF&CC). Questionnaires for Environmental appraisal for Road / Highway projects by MoEF&CC were also taken into account while preparing Questionnaire. Total four sets of questionnaires were prepared for field survey/data collection. The details of these are as follows:

1. Environmental screening information like national parks, wild life sanctuary, forests, archeological, cultural, religious structures etc. within 10 Kms on both sides of the expressway.
2. Environmental screening survey, effects on environment: views of the community.
3. The survey of features within Right of Way (ROW) on both the sides of the proposed expressway.
4. Wild life/National Park survey questionnaires for villagers, road users etc.

#### **3.1.1 Field Observation on Questionnaire**

A team under the leadership of Environmental Expert was constituted to undertake the field survey of the questionnaire. The young workers were apprised of the comprehension of the work emphasis on public consultation.

#### **3.1.2 Screening, Testing & Monitoring of Physical Environmental Factors**

The entire stretch of proposed alignment was surveyed and screened. The collection of water samples, soil samples and other data pertaining to air quality and noise were done along the proposed alignment. The samples were analyzed in NABL accredited laboratory



### **3.1.2.1 Ambient Air Quality**

Ambient air quality is the most significant parameter that is required to quantify the impact on the natural and biophysical environment.

Ambient Air Quality (AAQ) was monitored along the proposed alignment at selected sites. The locations selected were those of the city / town area, the market place and the rural areas. The details of locations and monitoring results are discussed in Chapter – 3. The air quality parameters considered for the study includes Particulate Matter 10 (PM<sub>10</sub>), Particulate Matter 2.5 (PM<sub>2.5</sub>), Nitrogen Oxides (NO<sub>x</sub>) Sulphur Di-oxide (SO<sub>2</sub>), and Carbon monoxide (CO).

#### **a) Particulate Matters (PM<sub>10</sub> & PM<sub>2.5</sub>)**

PM<sub>10</sub> and PM<sub>2.5</sub> were monitored using a Respirable Dust sampler (RDS) and PM<sub>2.5</sub> Sampler. A pre-conditioned and weighted glass fiber filter paper is used for PM<sub>10</sub> and PTFE filter paper is used for RDS/PM<sub>2.5</sub> samplers. A known quantity of the air was sucked through the filter paper in a prescribed sampling time. The flow was noted from the manometer. The multiplication of time with rate gave the total quantity of air passed through the filter paper. After sampling, the filter paper was removed, conditioned and weighed finally for getting the concentrations in ambient air.

#### **b) Sulphur Di-Oxides (SO<sub>2</sub>)**

A known quantity of the air was bubbled through impingers containing tetrachloromercurate. SO<sub>2</sub>, formed a disulfiteomercurate complex, which gave a pinkish blue colour with p-rosaniline and formaldehyde solution. The intensity of colour produced was proportional to concentration of sulphur dioxide. The measurement was made by using spectrophotometer at the wavelength of 560 nm.

#### **c) Nitrogen Di-Oxides (NO<sub>x</sub>)**

A known quantity of air was passed through impingers containing sodium hydroxide-sodium arsenite solution. The estimation of NO<sub>x</sub> was done calorimetrically using hydrogen peroxide, sulfanilamide, NEDA, etc. The intensity of the colour was measured at 540 nm using a spectrophotometer.

#### **d) Carbon Monoxide (CO)**

NDIR based samplers are used to monitor the carbon monoxide levels.

##### **3.1.2.1.1 Instrument Used for Sampling**

Respirable Dust Samplers APM-250 of Lata Envirotech Services make were installed for monitoring Suspended Particulate Matter (SPM), Respirable fraction (<10 microns) and gaseous pollutants like SO<sub>2</sub> and NO<sub>x</sub>. whereas the concentration Particulate matter 2.5 was monitored by installing Envirotech made APM 50MFC particulate matter sampler.



### 3.1.2.1.2 Techniques for Ambient Air Quality Monitoring

The techniques used for Ambient Air Quality monitoring have been presented in **Table 3.1**.

**Table 3.1: Techniques used for Ambient Air Quality Monitoring**

| Parameter                     | Technique                                     | Technical Protocol |
|-------------------------------|---|--------------------|
| Suspended Particulate Matter  | Respirable Dust Sampler (Gravimetric method)  | IS-5182 (Part-IV)  |
| Respirable Particulate Matter | Respirable Dust Sampler (Gravimetric method)  | IS-5182 (Part-IV)  |
| PM 2.5                        | PM 2.5 APM 550 Fine Particle Sampler          |                    |
| Sulphur Dioxide               | West and Gaeke                                | IS-5182 (Part-II)  |
| Oxides of Nitrogen            | Jacob and Hochheiser                          | IS-5182 (Part-IV)  |
| CO                            | Non – dispersive Infrared (NDIR) Spectroscopy | IS-5182 (Part-IV)  |

### 3.1.2.2 Water Quality

Samples of ground water were collected from existing hand pumps, wells and Tube-wells whereas samples of surface water were collected from rivers and available local surface water body like ponds, lakes etc.. The samples were analyzed for parameters necessary to determine water quality (based on IS: 10500 criteria) and those which are relevant from the point of view of environmental impact of the proposed highway project.

### 3.1.2.3 Soil Quality

For studying soil quality, sampling location was selected to assess the existing soil conditions in and around the project area representing various land use conditions. The sample was collected by ramming a core-cutter into the soil up to 90-cm depth. Soil samples were collected and analyzed for relevant physical and chemical characteristics in order to assess the impact of the proposed project on soil.

#### 3.1.2.3.1 Sampling Frequency and Analysis Methodology

The physical and chemical characteristics of the soil of the study area have been assessed by analyzing various parameters as per the methods described in “Soil Chemical Analysis” (M.L Jackson) and Department of Agriculture and Cooperation. Standard classification of Soil as per Indian Council of Agriculture Research, New Delhi has been presented in **Table 3.2**.



**Table 3.2: Standard Classification of Soil**

| S. No. | Soil Test  | Classification  |
|--------|--|---|
| 1.     | pH   | <4.5 Extremely acidic<br>4.51- 5.50 Very strongly acidic<br>5.51-6.0 moderately acidic<br>6.01-6.50 slightly acidic<br>6.51-7.30 Neutral<br>7.31-7.80 slightly alkaline<br>7.81-8.50 moderately alkaline<br>8.51-9.0 strongly alkaline<br>9.01 very strongly alkaline |
| 2.     | Salinity Electrical Conductivity (mmhos/cm)<br>(1 ppm = 640 mmho/cm) | Upto 1.00 Average<br>1.01-2.00 harmful to germination<br>2.01-3.00 harmful to crops (sensitive to salts)  |
| 3.     | Organic Carbon   | Upto 0.2: very less<br>0.21-0.4: less<br>0.41-0.5 medium,<br>0.51-0.8: on an average sufficient<br>0.81-1.00: sufficient<br>>1.0 more than sufficient   |
| 4.     | Nitrogen (Kg/ha)   | Upto 50 very less<br>51-100 less<br>101-150 good<br>151-300 Better<br>>300 sufficient   |
| 5.     | Phosphorus (Kg/ha)   | Upto 15 very less<br>16-30 less<br>31-50 medium,<br>51-65 on an average sufficient<br>66-80 sufficient<br>>80 more than sufficient  |
| 6.     | Potash (Kg/ha)   | 0-120 very less<br>120-180 less<br>181-240 medium<br>241-300 average<br>301-360 better<br>>360 more than sufficient   |

### 3.1.2.4 Noise Level

Sound Pressure Level (SPL) was measured by a sophisticated sound level meter (Integrating Sound Level Meter Cygnet, Model 2031A). The noise level (Leq) was measured using noise meter at various sites along the entire stretch of expressway during day (6.00 am to 10 pm) and night (10 pm to 6.00 am).

The noise levels is expressed as an equivalent noise level (Leq) which is the measurement duration of sound pressure level as the averaging time. It is calculated as follows:

$$Leq = 10 \log_{10} \left[ \sum^n \frac{1}{n^{10^{n/10}}} \right]$$

Where, Li = Instantaneous sound intensity level dB (A)



n = No. of observations

### 3.1.2.4.1 Noise Standards

The Ambient Noise Quality Standards with respect to noise have been stipulated by Govt. of India vide Gazette Notification dt. 14.02.2000. Table 3.3 describes the Ambient Noise Standards.

**Table 3.3: Ambient Noise Standards**

| Area Code | Category of Area | Limits in dB (A), Leq |            |
|-----------|------------------|-----------------------|------------|
|           |                  | Day time              | Night time |
| A         | Industrial Area  | 75                    | 70         |
| B         | Commercial Area  | 65                    | 55         |
| C         | Residential Area | 55                    | 45         |
| D         | Silence Zone*    | 50                    | 40         |

\*- Silence zone is defined as an area up to 100 meters around such premises as hospitals, educational institutions and courts. The silence zones are to be declared by the competent authority;

### 3.1.3 Secondary Available Data

The secondary data were collected from following sources has been presented in **Table 3.4:**

**Table 3.4: Secondary data collective from sources**

|     |   |   |
|-----|---|---|
| 1.  | General information                       | District Collector/Gazetteer Office, Ahmedabad and Bhavnagar  |
| 2.  | Meteorological data                       | Indian Meteorological Department  |
| 3.  | Statistical data                          | District Statistical Office   |
| 4.  | Irrigation and hydrogeology data          | Central Ground Water Board  |
| 5.  | General Land use and Cropping Pattern     | Agriculture Department  |
| 6.  | Relief and slope                          | Survey of India   |
| 7.  | Rocks and minerals                        | Geological Survey of India  |
| 8.  | Industries                                | District Industries Center  |
| 9.  | Maps and Topo sheets                      | Survey of India   |
| 10. | Forest Types, Wild life and Bio-diversity | State Forest Department, Government of Gujarat, GEER Foundation, Gandhinagar and Gujarat Ecology Commission, Gandhinagar and Published studies in scientific journals and magazines |
| 11. | Archaeological Data                       | Archaeological Survey of India  |
| 12. | CRZ Map                                   | National Centre for Sustainable Coastal Management (NCSCM), Chennai (Ministry of Environment, Forest & Climate Change, Government of India)   |



### **3.2 ANALYSES, COMPILATION AND PREPARATION OF REPORT**

The data collected by survey teams were compiled. Along with the field monitoring studies and secondary data, these were used to identify the environmental problem spots or 'Hot Spots'.

The following analyses were carried out based on compiled information:

1. The levels of environmental parameters were compared with the prescribed limits suggested by Central Pollution Control Board (CPCB). This gave a clear idea that special attention is paid in areas where the level of pollution is higher than desirable. Those stretches, where the pollution level does not exceed the desired limits despite construction of the expressway will be dropped from further study.
2. The sites where the impact is minimum or nearly absent has been identified. This may help in selection of major storage sites during construction work.
3. The mitigation measures have been suggested to reduce the adverse impacts due to the proposed widening and detailed environmental management plan have been prepared covering both the phases i.e. construction and operation of highway.

### **3.3 BASELINE ENVIRONMENTAL CONDITIONS**

#### **3.3.1 Physical/Natural Environment**

Baseline environmental data plays a key role in identification of environmental parameters likely to be affected due to the proposed project. This also facilitates the decision maker to assess a particular environmental parameter which needs to be incorporated during the detailed Environmental Assessment study and for further detailed investigation. The scope of this chapter is limited to only those issues, which are of concern in the environmental assessment. With rapid strides in economic development, the need to rationalize the development is imperative. During the process of development, there has been intensive use of natural resources, very often leading to ecological imbalances. In a road project like this involving wide ranging construction activities, conservation of flora, fauna and the ecosystem forms important aspect of overall sustainable development process. The data/ features documented hereunder have been collected through field investigation, interaction with local population and desk research and published data sources.

The environmental baseline data comprise the features present within a strip of 10 km or affected area whichever is more on either side of the proposed alignment. This area is referred to as study area/ project area in the report. It includes environmental features such as forest areas, conservation areas, water bodies (rivers, lakes ponds and reservoirs), industries, wildlife/National parks and, places of historical importance, tourism etc.

#### **3.3.2 Geographical Location of the project expressway**

The proposed Expressway is entirely green field project and proposed for 4 lane expressway from Ahmedabad to Dholera having a total length of 109.019 Kms. The proposed project passes through Ahmedabad and Bhavnagar districts in the state of Gujarat. The proposed expressway





takes off from Sardar Patel Ring Road near Sarkhej between Santhal Junction and Bakrol Junction in southwest of Ahmedabad, 2 km east of National Highway NH-8A. The corridor runs southerly towards Dholera between NH-8 (in the west) and SH-4, SH-6, Sabarmati river course/Gulf of Khambhat (on east side). The proposed Project expressway traverses at 22° 56' 46"N 72° 29' 06" E to 22° 02' 21"N 72° 05' 59" E.

### 3.3.3 Land Use and Terrain

The existing land use around the proposed expressway primarily comprises of agricultural land both under private and government ownership, land for cattle grazing, village settlements and village ponds and mangrove vegetation along Gulf of Khambhat. Land adjoining Gulf of Khambhat is regulated under CRZ. The alignment proposed passes mostly through uninhabited area avoiding village establishments. The agriculture practiced is mostly multicrop due to the network of canals and the main crops grown in the area are rice, jowar, bajra, wheat and maize. The habitation along the expressway corridor are Vishalpur, Tajpur, Bhat, Vasna Chacharavadi, Kavitha, Chaloda, Juval- Rupvati, Sindhraj, Lana, Jalalpur, Sarandi, Karyana, Rupgadh, Kesargadh, Vejalka, Saragwala, Bholad, Anandapur, Pipli, Valinda, Ambli, Kadipur, Dholera, Mundi, Sandhida, Panchi, Hebatpur, Bavliyari and Adhelai. The proposed expressway lies generally in plain terrain. However certain length of expressway lies in rolling terrain.

#### 3.3.3.1 Land Use within 500 m buffer

The land use map for a buffer length of 500m around the proposed project has been prepared to a scale of 1:25000 based on recent satellite imagery. It shows features such as crop lands, agricultural plantations, fallow lands, waste lands, water bodies, built-up areas, forest areas and other surface features such as railway tracks, roads.

**Table 3.5** describes the land use of the study area. The land use map based on satellite imagery within 500m buffer length of the proposed project has been shown in **Figure-3.1**.

**Table 3.5: Land use of the Study Area (500m)**

| Sl. No.      | Land use pattern      | Area in (ha.)   | Percentage (%) |
|--------------|-----------------------|-----------------|----------------|
| 1.           | Agriculture-Crop Land | 9187.25         | 83.97          |
| 2.           | Scrub Land            | 1035.09         | 9.46           |
| 3.           | Builtup-Urban         | 157.14          | 1.44           |
| 4.           | Water Bodies          | 103.69          | 0.95           |
| 5..          | Railway Line          | 12.82           | 0.12           |
| 6.           | River                 | 324.65          | 2.97           |
| 7.           | Road                  | 82.99           | 0.76           |
| 8.           | Canal                 | 37.54           | 0.34           |
| <b>TOTAL</b> |                       | <b>10941.17</b> | <b>100</b>     |

**Figure 3.1(a) to 3.1(r)** shows the stretch wise project area under different land use/land cover within 500 m buffer length of the project expressway.

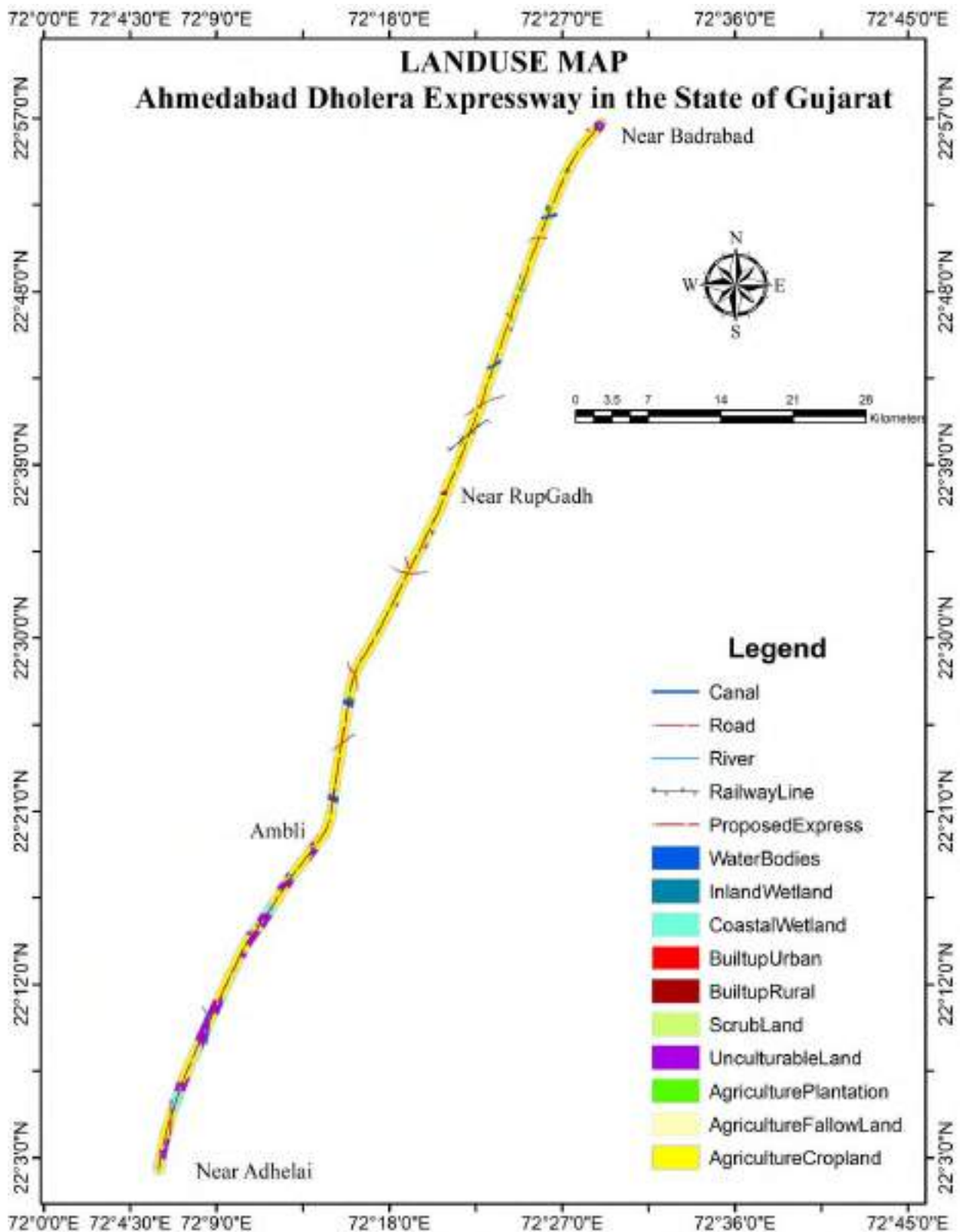


Figure 3.1: Land use of the proposed expressway (500 m buffer zone)

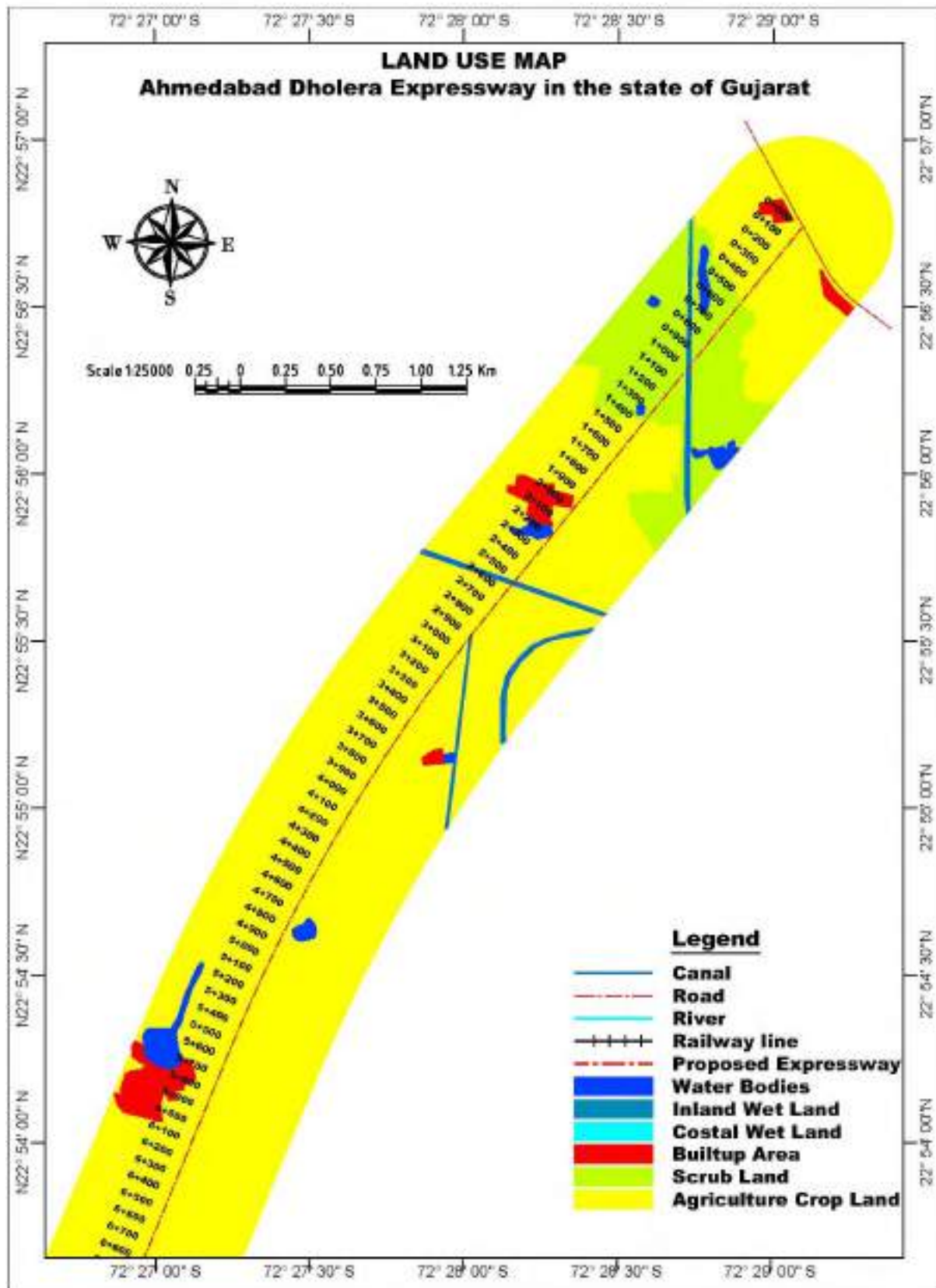


Figure 3.1(a): Land use of the study area, 500 m buffer (stretch 1)

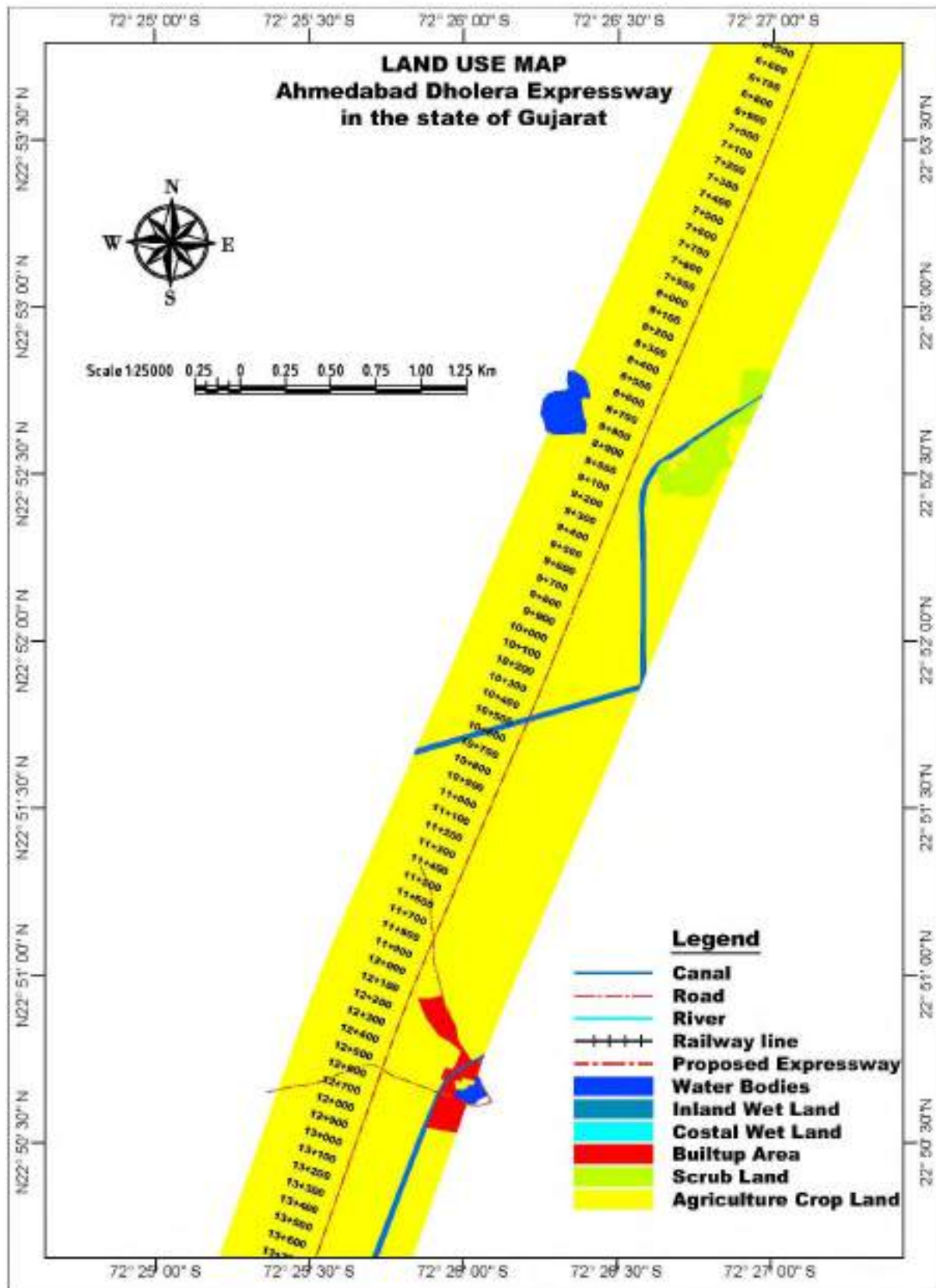


Figure 3.1(b): Land use of the study area (stretch 2)





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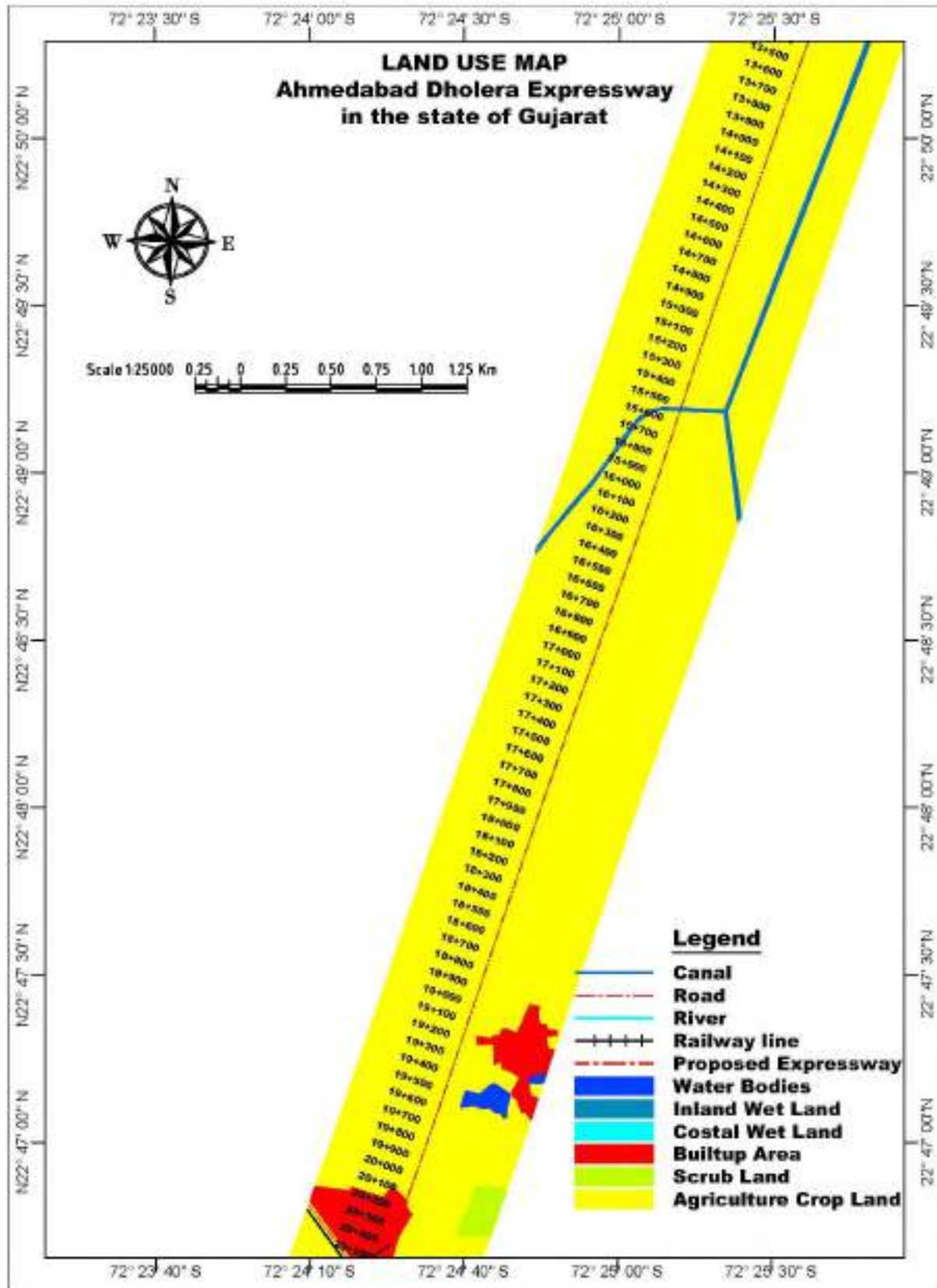


Figure 3.1 (c): Land use of the study area (stretch 3)



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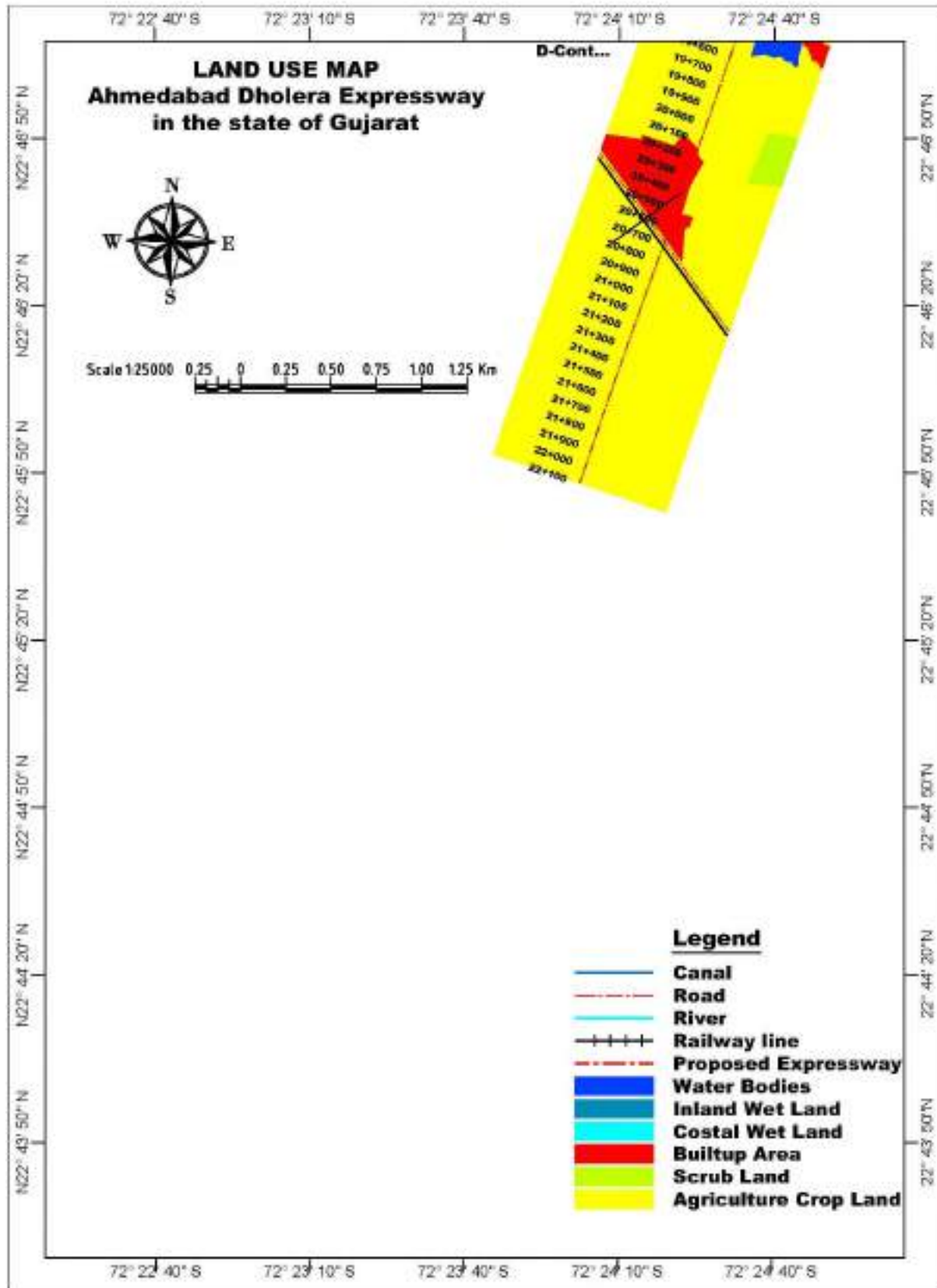


Figure 3.1 (d): Land use of the study area (stretch 4)



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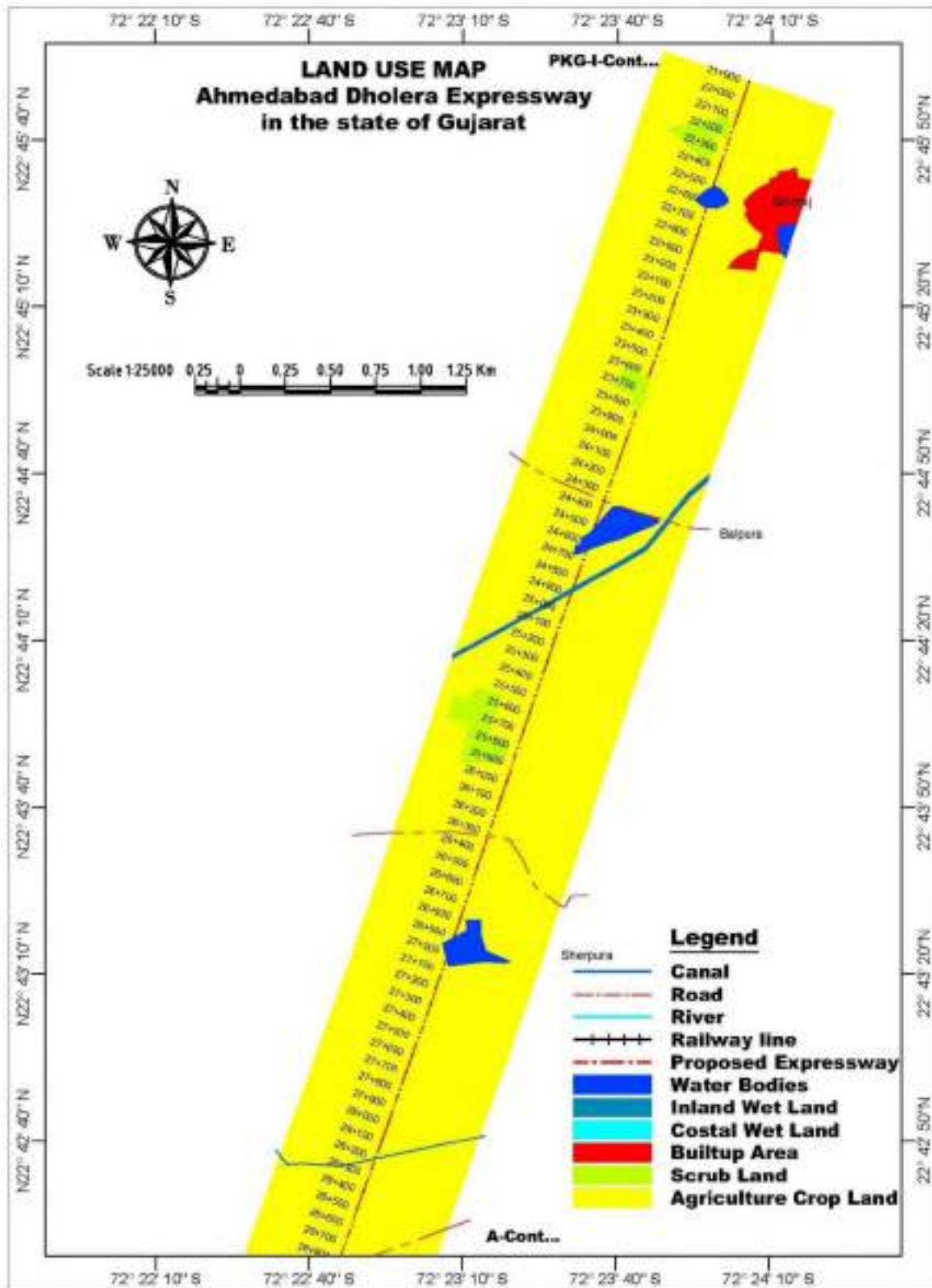


Figure 3.1 (e): Land use of the study area (stretch 5)



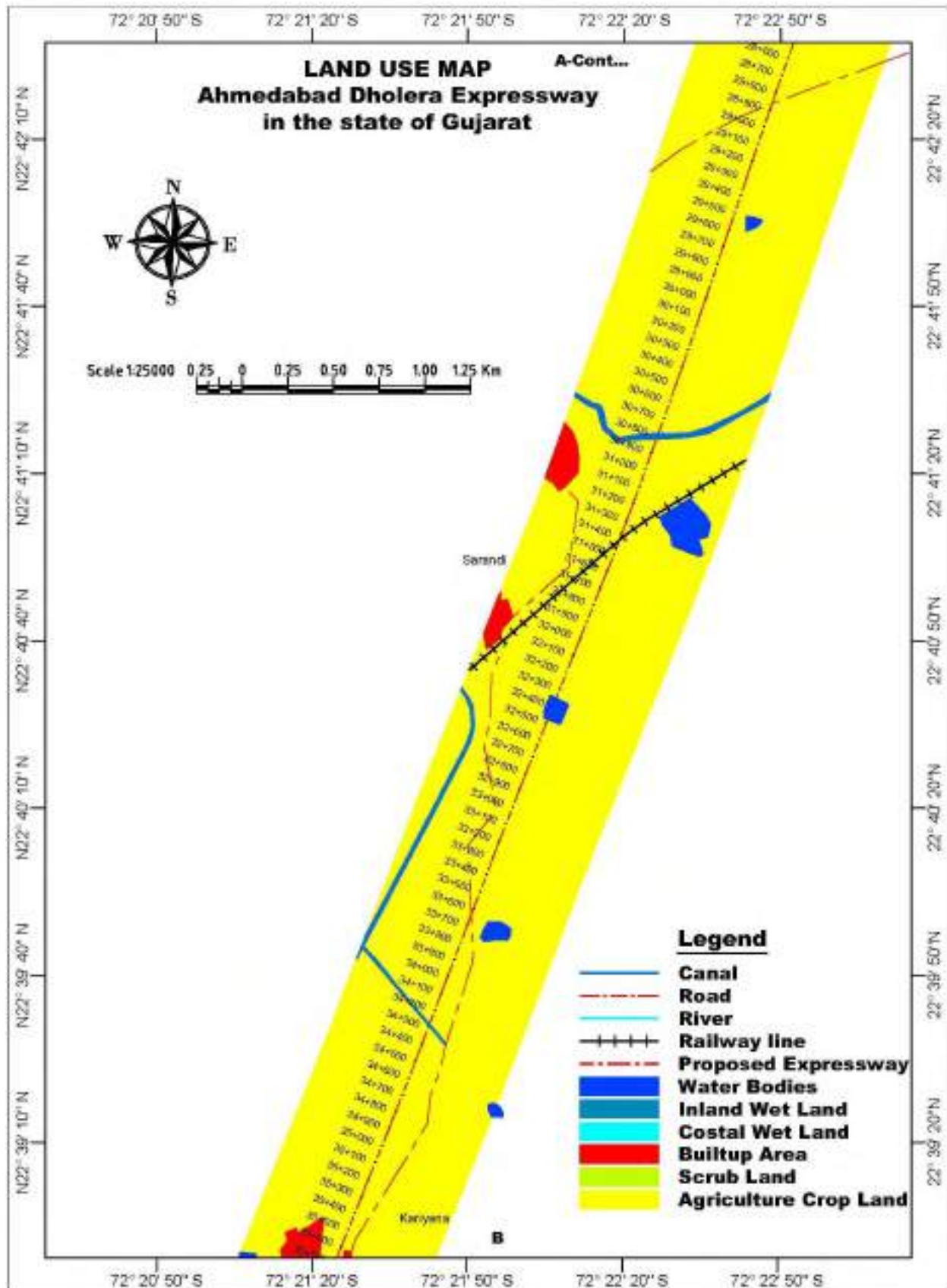


Figure 3.1 (f): Land use of the study area (stretch 6)



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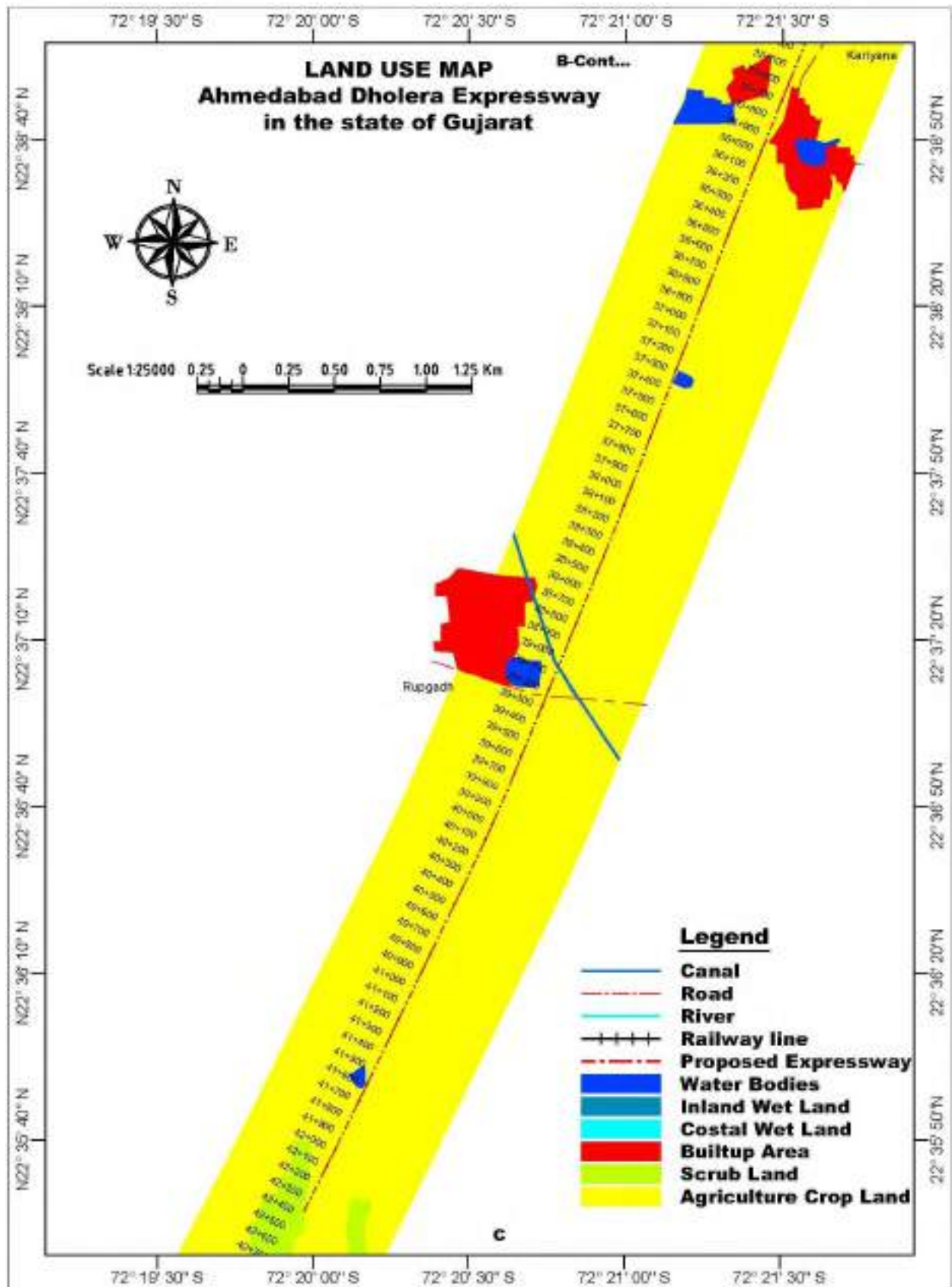


Figure 3.1(g): Land use of the study area (stretch 7)



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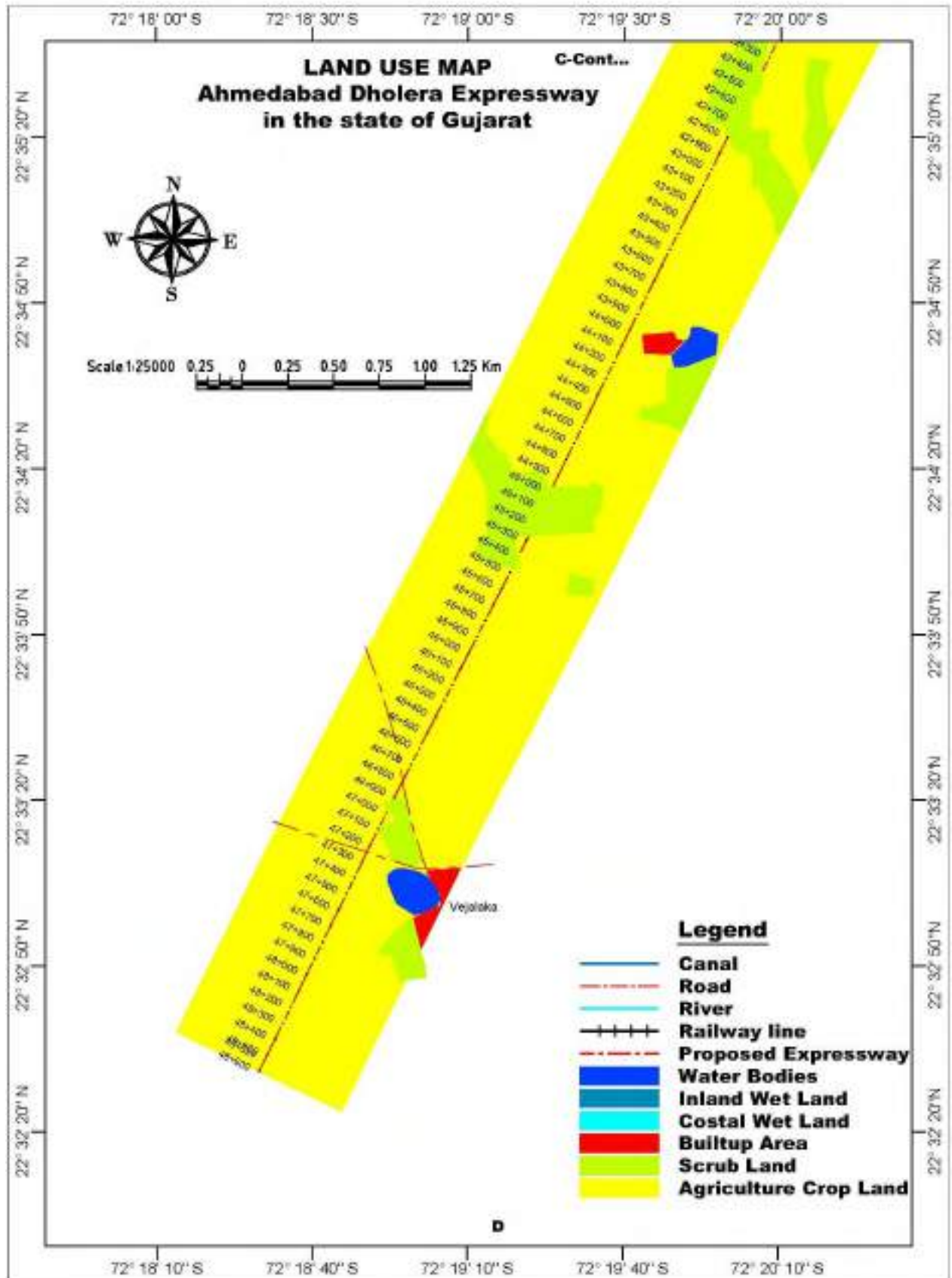


Figure 3.1(h): Land use of the study area (stretch 8)



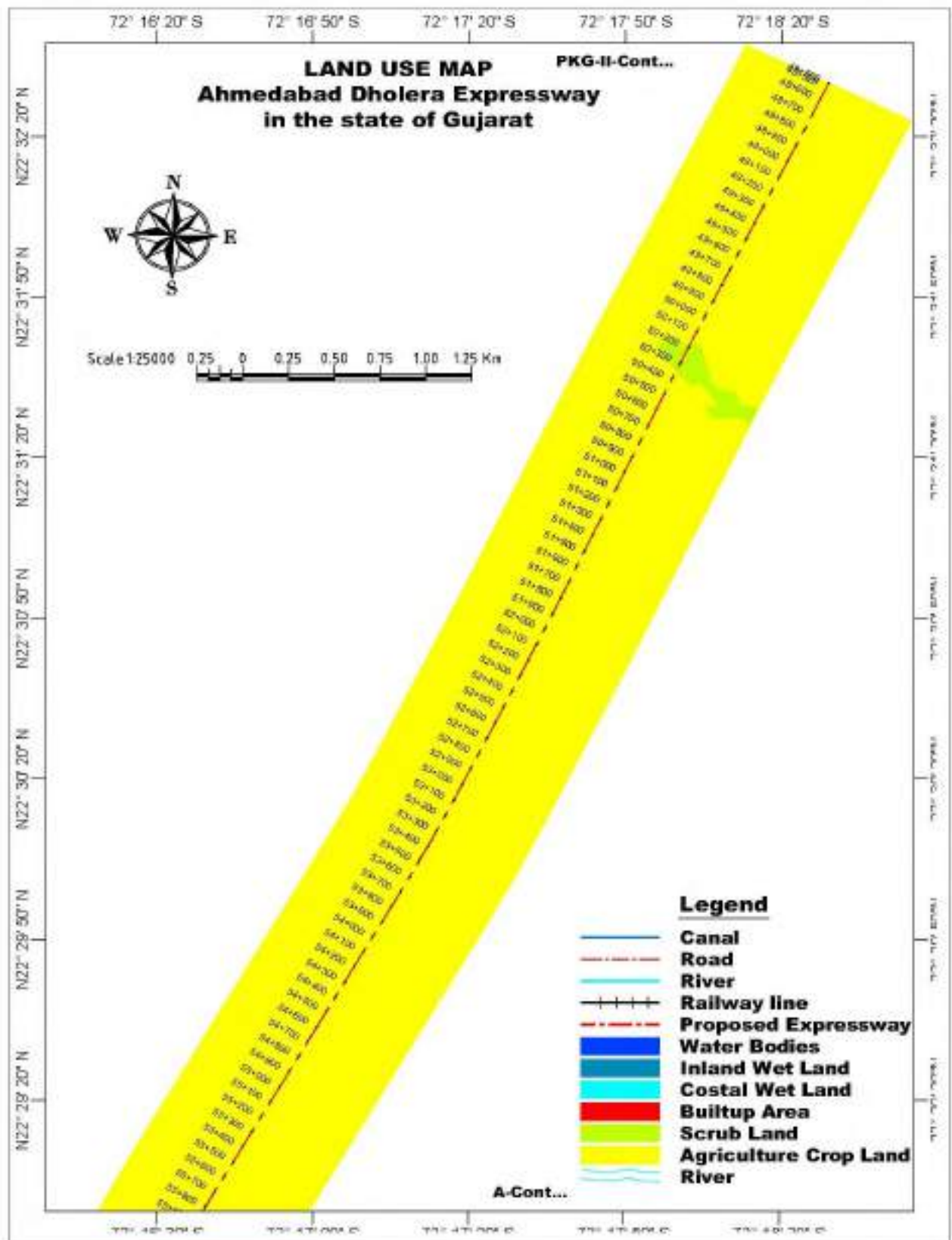


Figure 3.1(i): Land use of the study area (stretch 9)

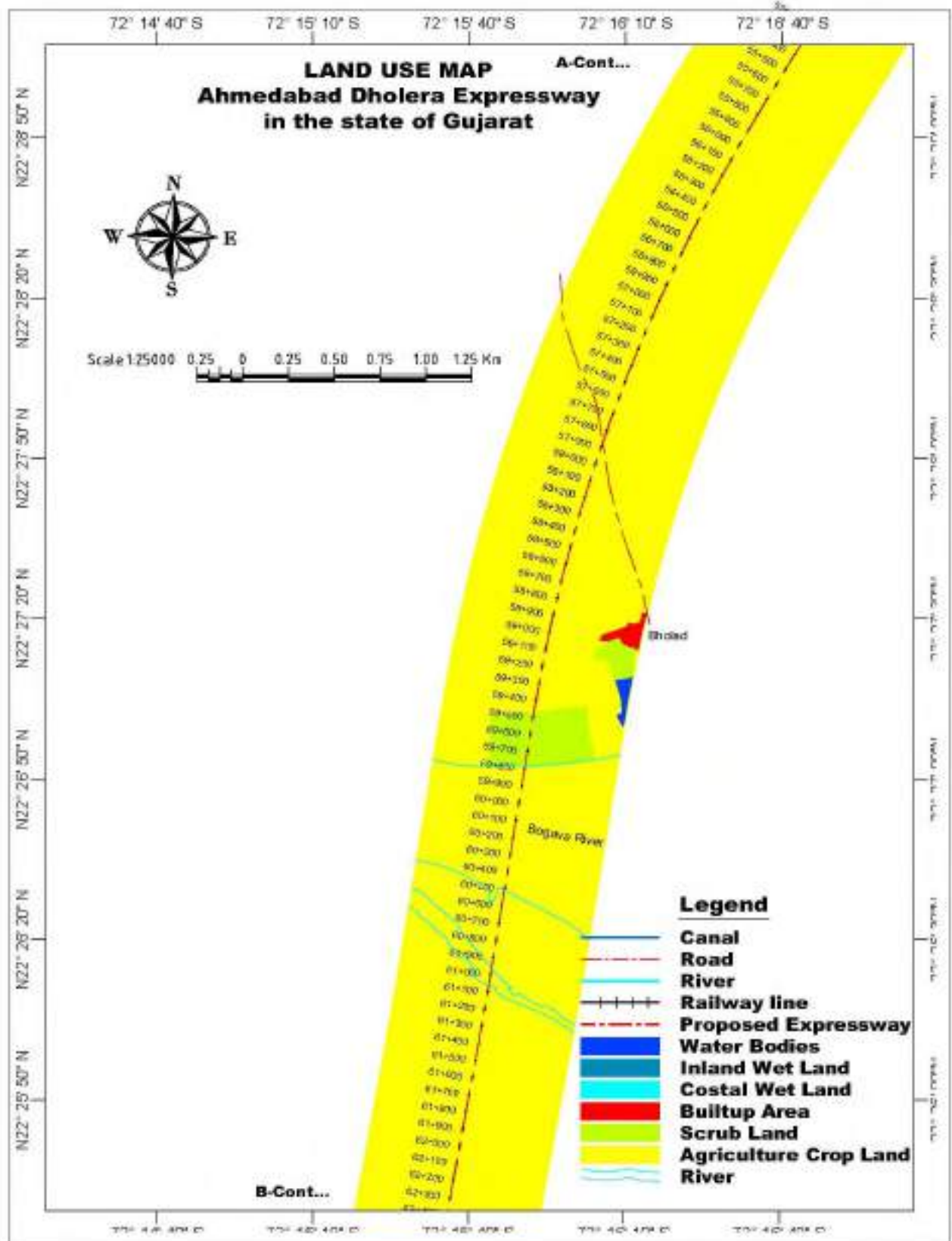


Figure 3.1(j): Land use of the study area (stretch 10)

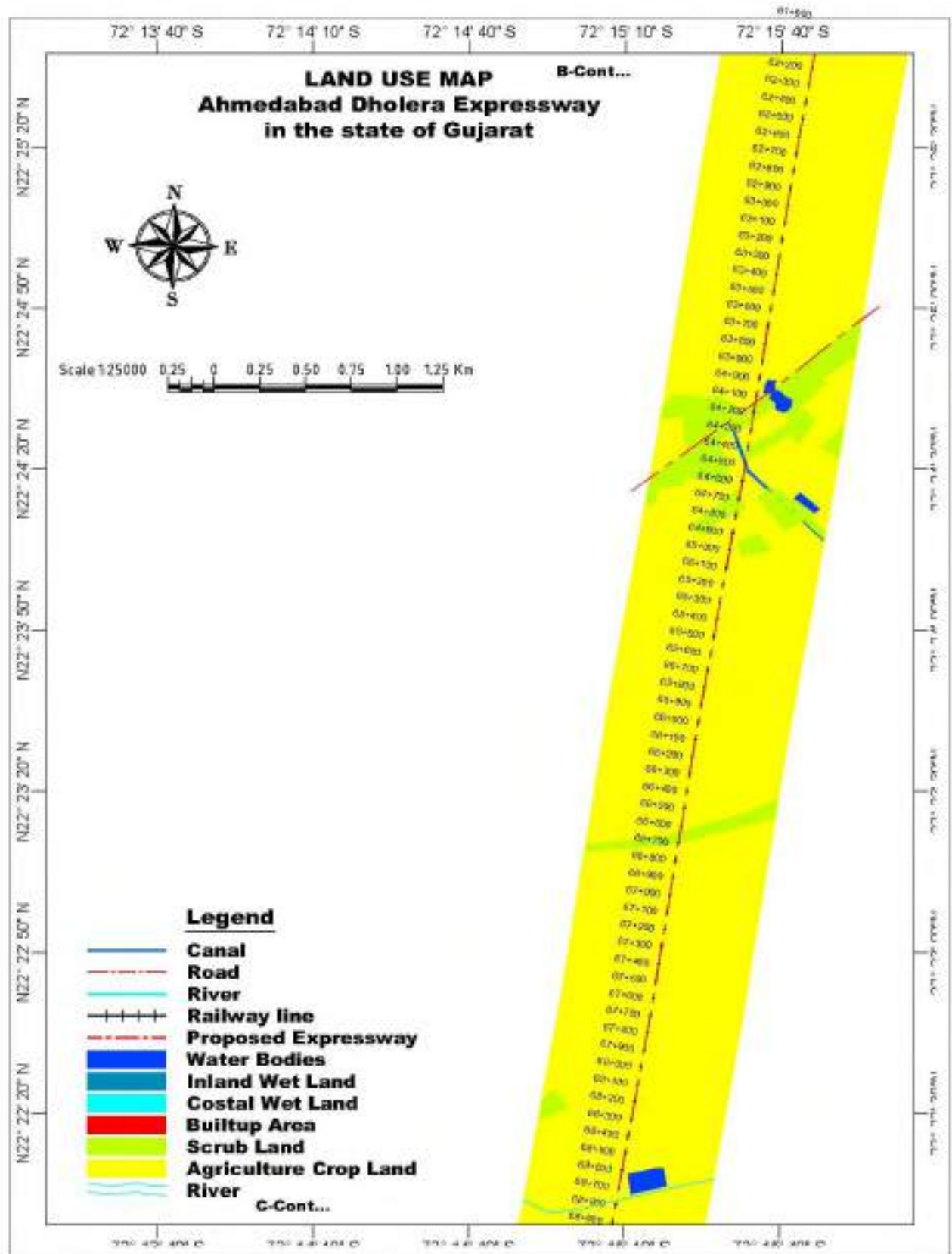


Figure 3.1(k): Land use of the study area (stretch 11)

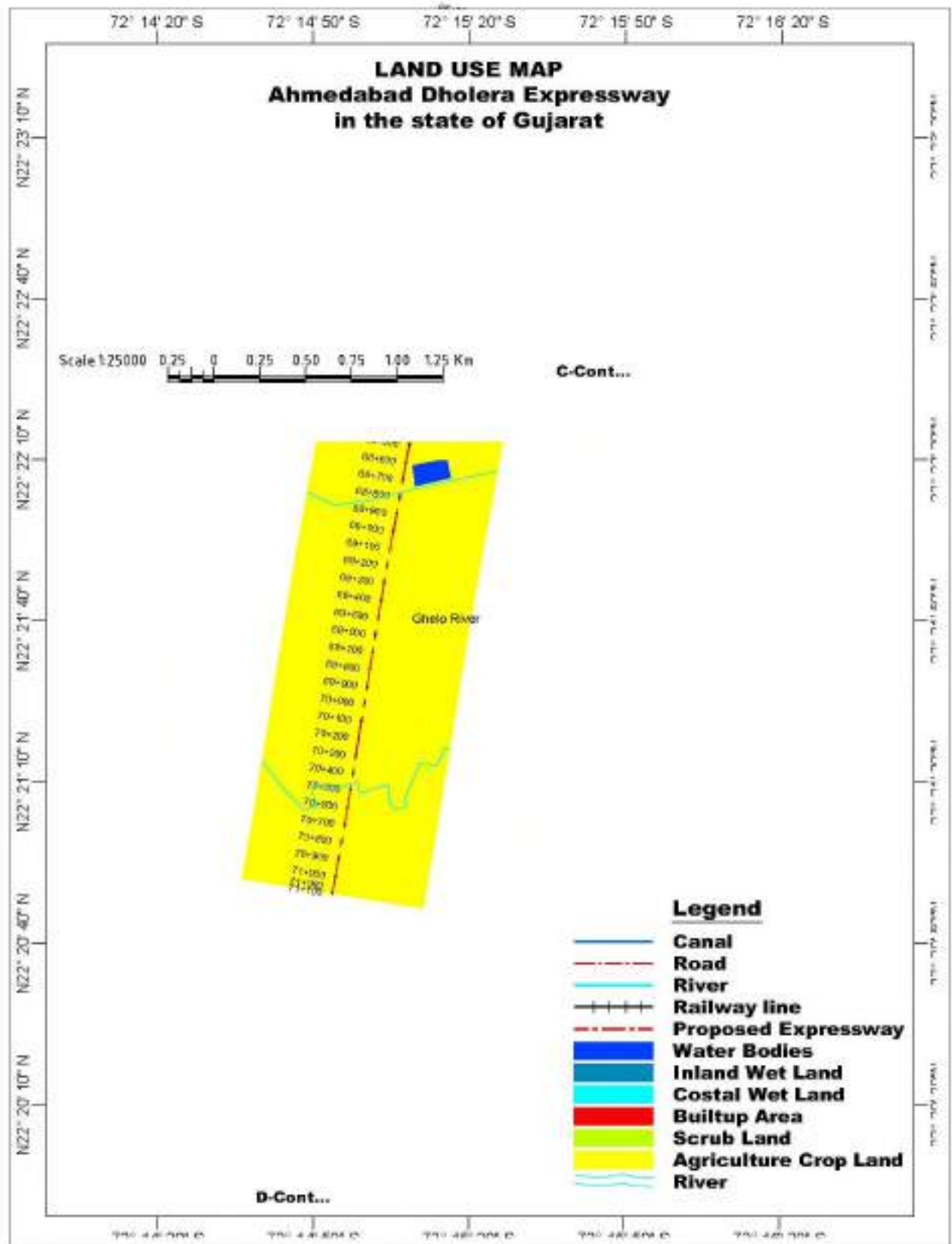


Figure 3.1(l): Land use of the study area (stretch 12)



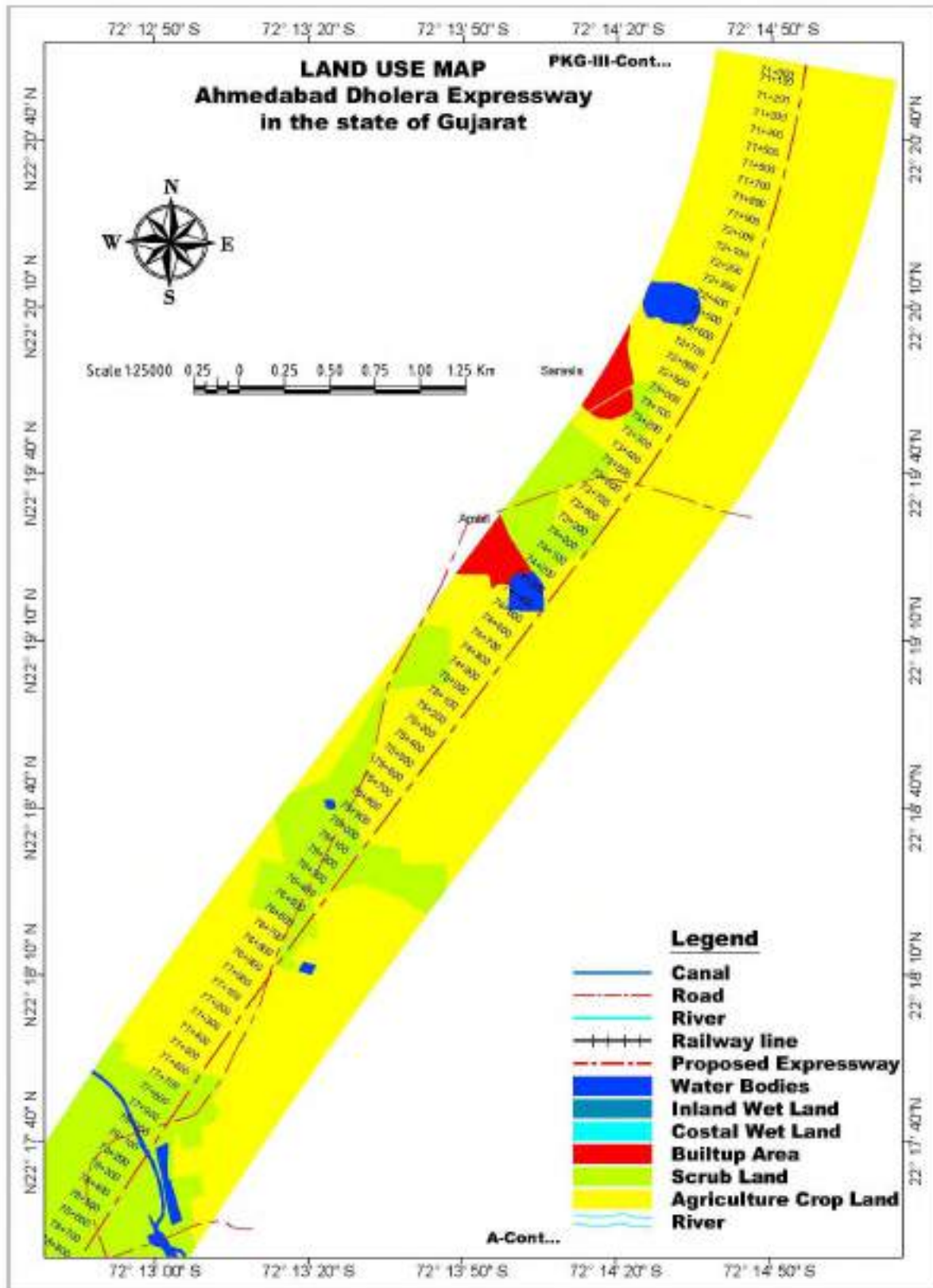


Figure 3.1(m): Land use of the study area (stretch 13)

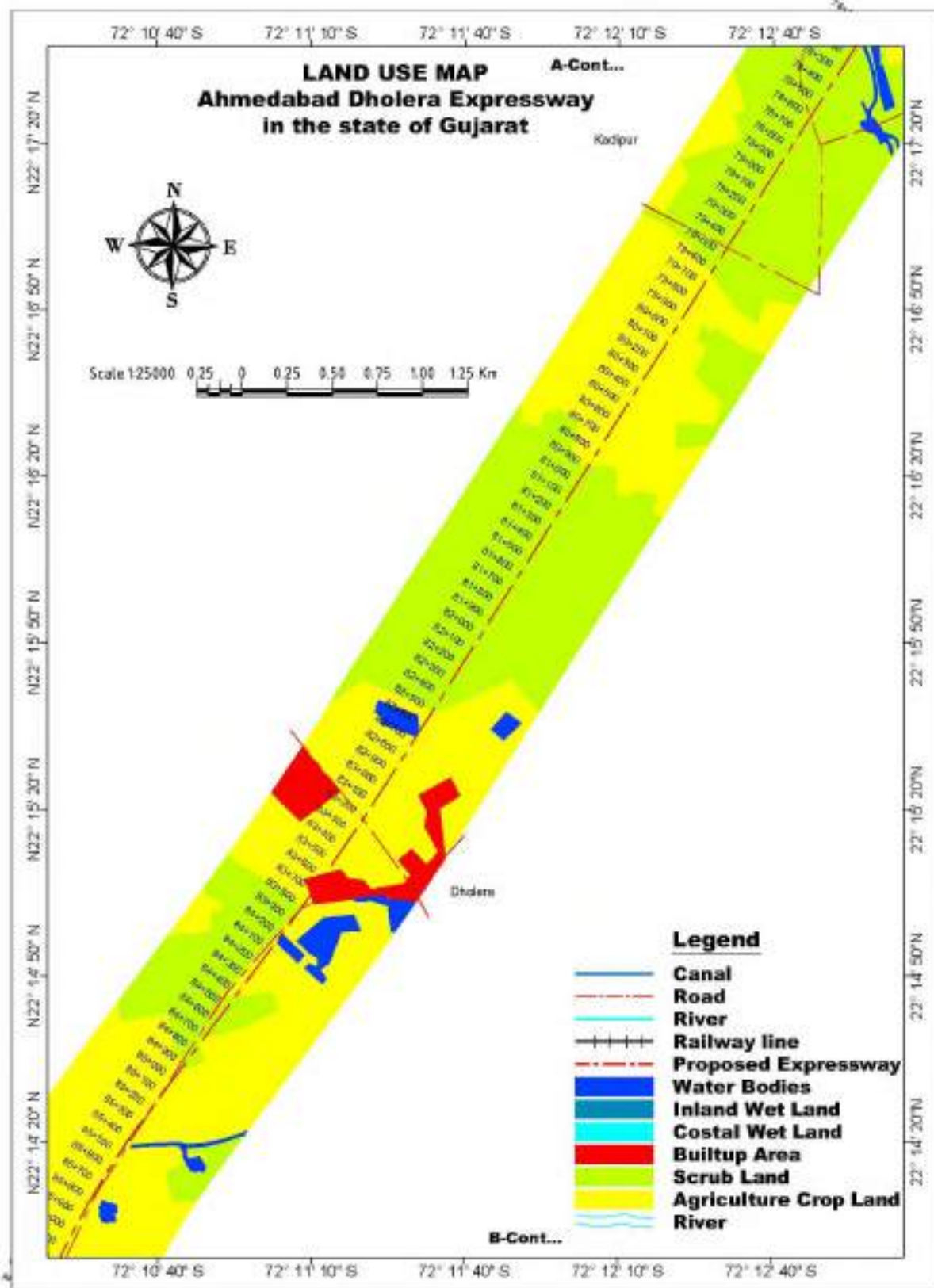


Figure 3.1(n): Land use of the study area (stretch 14)



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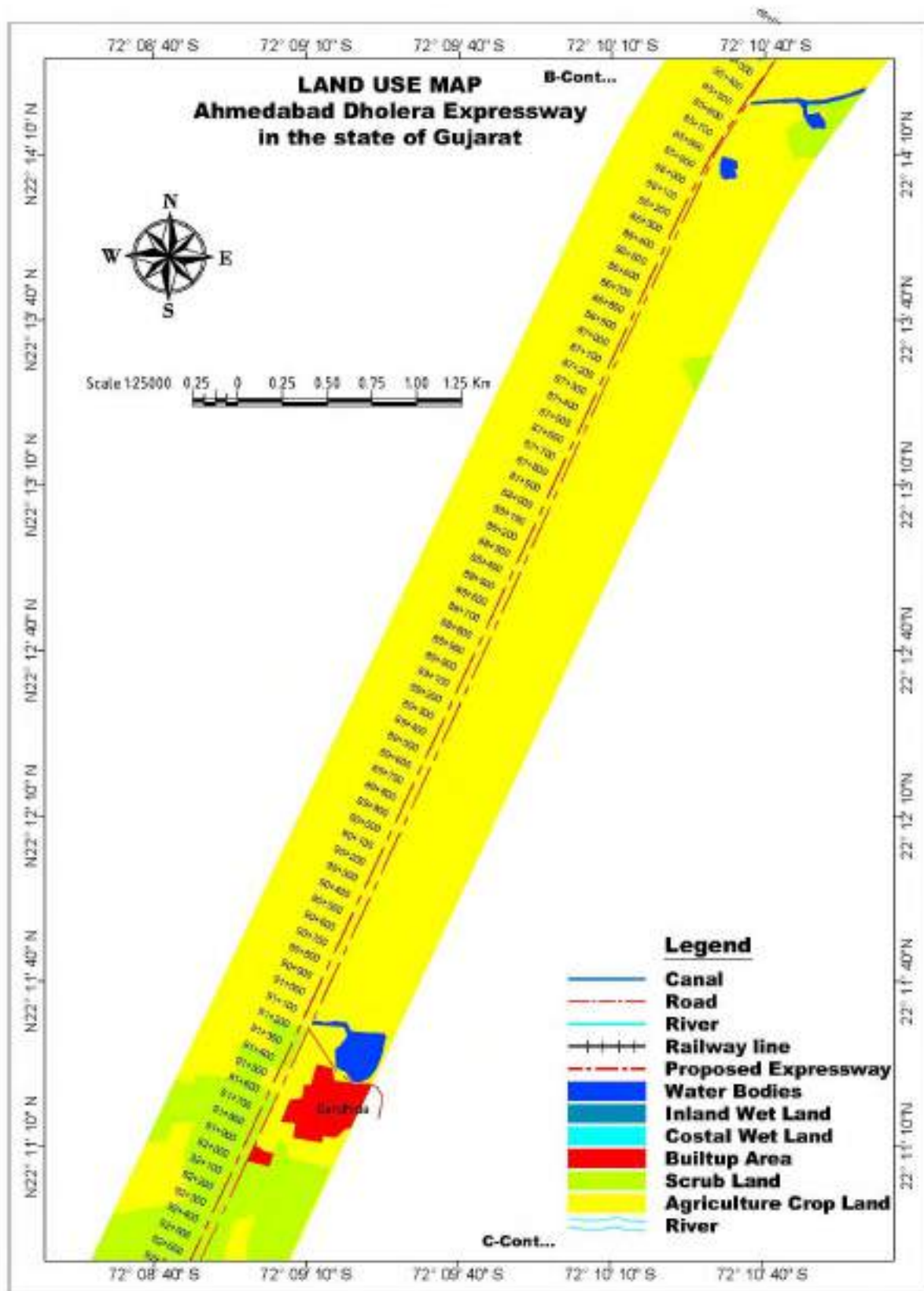


Figure 3.1(o): Land use of the study area (stretch 15)



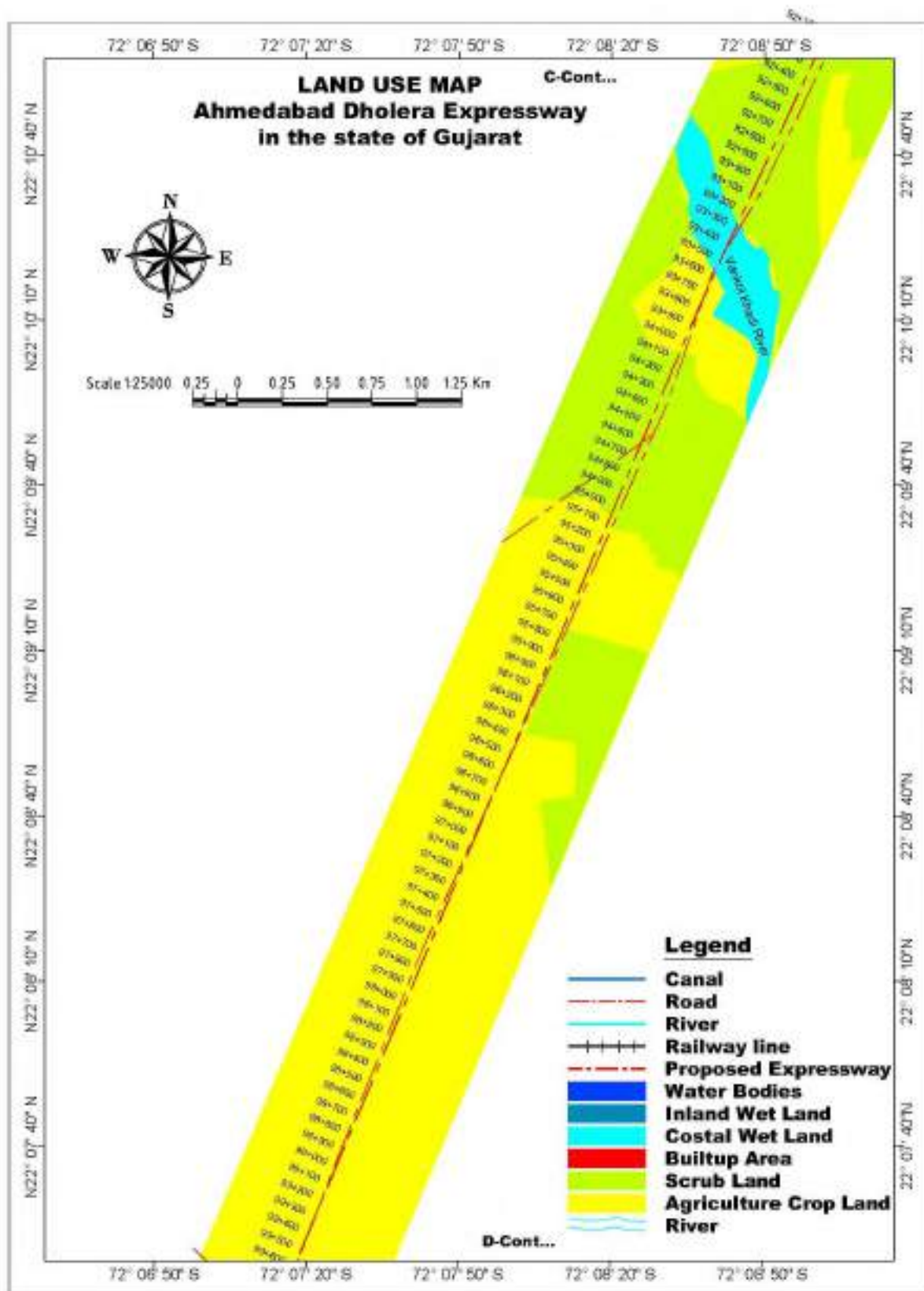


Figure 3.1(p): Land use of the study area (stretch 16)

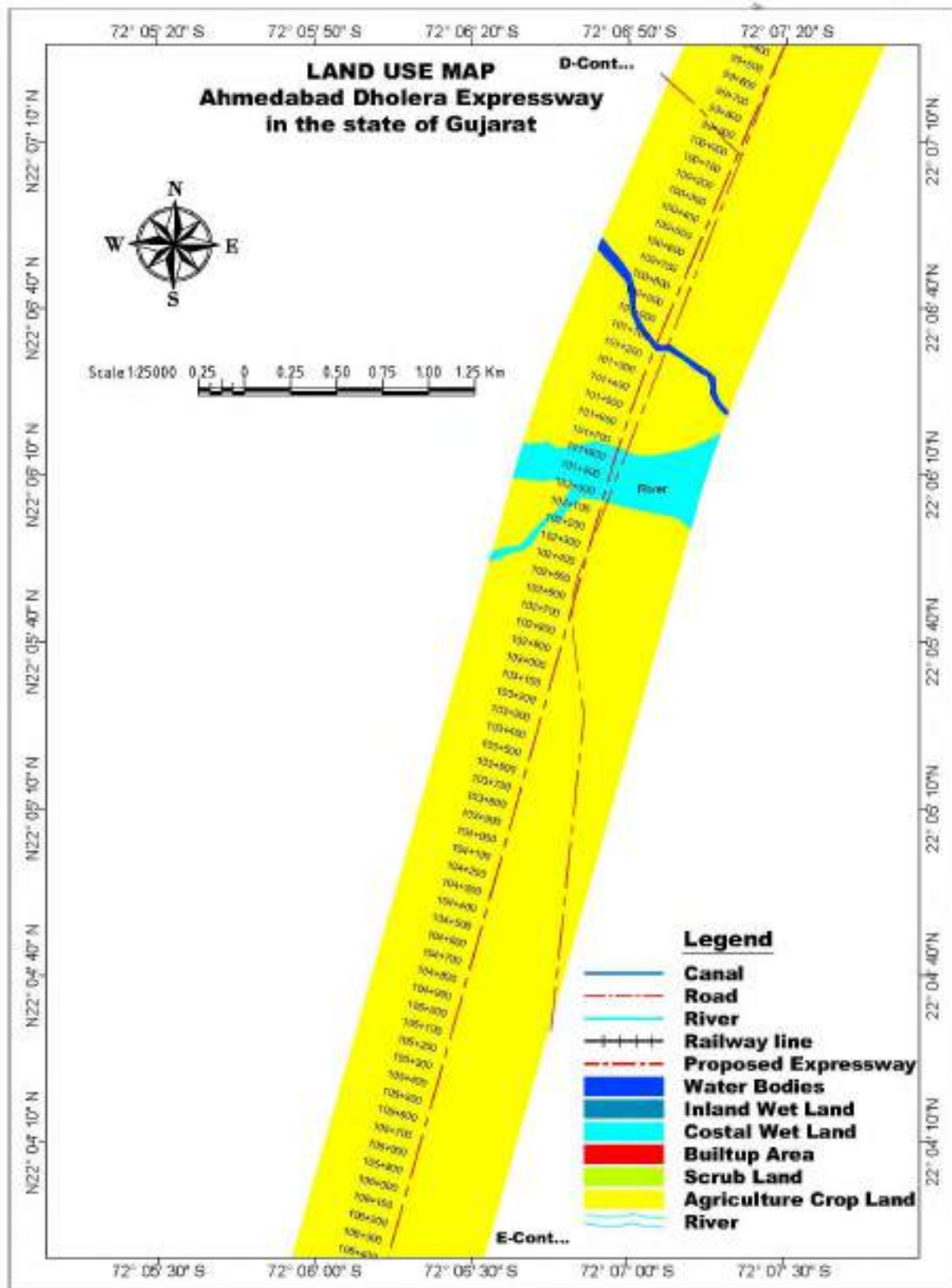


Figure 3.1(q): Land use of the study area (stretch 17)

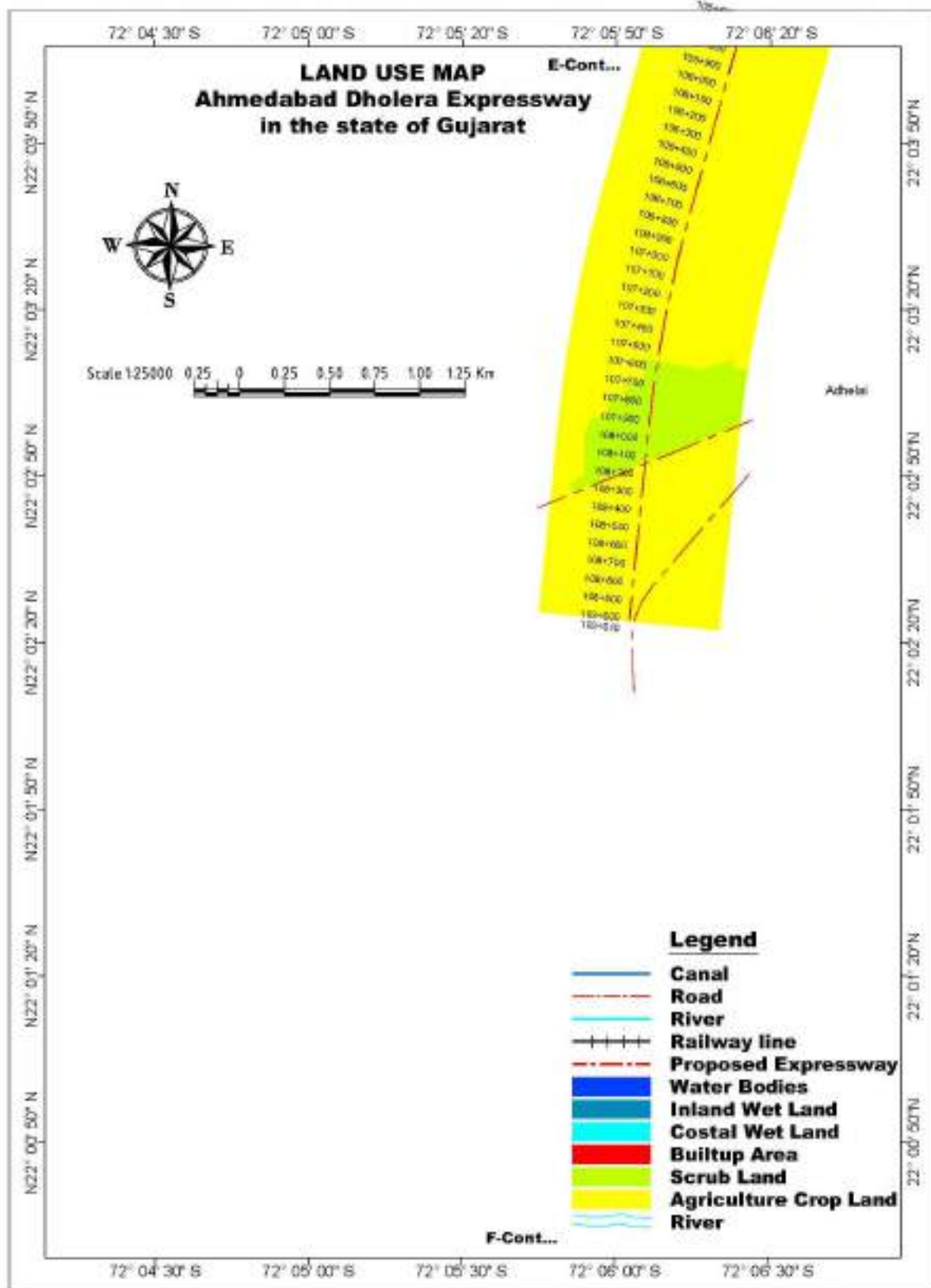


Figure 3.1(r): Land use of the study area (stretch 18)



### **3.3.4 Climate and Micro-Meteorological Parameters**

#### **3.3.4.1 Climate and Rainfall**

The project area experiences semi-arid tropical to arid climatic conditions. The region has four seasons namely summer, south-west monsoon, post monsoon and winter. The summer season starts from March and continues up to June end. October and November constitute the post monsoon season. The weather is generally cold during December to February. Aside from the monsoon season, the climate is dry. On an average, both Ahmedabad and Bhavnagar districts receives annual rainfall ranging between 700 to 800 mm. The annual total rainfall in Ahmedabad and Bhavnagar was 929.1 mm and 495.8 mm respectively. June, July, August and September months received heavy rainfall. July received highest rainfall in the project districts. The nearest IMD meteorological from the project location is Ahmedabad.

#### **3.3.4.2 Humidity**

The average relative humidity in monsoon months is recorded around 88%. The relative humidity is generally high during the period from June to September. Summer months form the driest part of the year when humidity is low particularly in April and May. During the south-west monsoon season the relative humidity is generally 60% and over. In the rest of the year, the air is comparatively dry. In summer season humidity is around 25% while in monsoon generally the rainfall occurs whenever the relative humidity is more than 80%.

#### **3.3.4.3 Temperature**

The temperature is hot during the months of March to June, the average summer maximum is 45°C, and the average minimum is 23 °C. From November to February, the average maximum temperature is 30 °C, the average minimum is 15 °C and the climate is extremely dry. Cold northerly winds are responsible for a mild chill in January. The southwest monsoon brings a humid climate from mid-June to mid-September. The highest temperature recorded was around 47 °C and the lowest was around 5 °C. on 21 May 2010, mercury touched 46.8 °C, making highest temperature recorded in last 40 years in Ahmedabad.

#### **3.3.4.4 Cloud Cover**

The sky is heavily overcast during the south west monsoon season. During the rest of the year the sky is clear and lightly clouded.

#### **3.3.4.5 Wind Speed/Direction**

The wind speeds are light to moderate with some strengthening during the southwest monsoon. The wind speeds are generally high during the period from April to August. The prevalent wind direction in Ahmedabad is from N-NE to S-SW in winter and post monsoon seasons and from SW-W to NE-E during summer and monsoon. The wind direction persistent in Bhavnagar is slightly different than Ahmedabad and the dominant direction is W-NW to E-SE throughout the year.





The wind rose diagram for Ahmedabad and Bhavnagar IMD station (project road districts) were developed during the months from March 2018 to May 2018 (study period) and shown in Figure 3.2 (a) and 3.2 (b) respectively, which reveals that pre-dominant wind direction occurs mostly from North West direction in Ahmedabad district whereas from South direction in Bhavnagar district and the average wind speed is 8.9 kmph and 14.8 respectively.

The meteorological Data Parameters at Ahmedabad and Bhavnagar IMD has been presented in **Table 3.6 (a)** and **3.6 (b)** respectively.



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**Table 3.6 (a):- Meteorological Data Parameters at Ahmedabad IMD station**

| Date         | Temperature, deg C |      |       | Humidity, % |     |      | Pressure, hPa |        |         | Wind Speed, km/Hr | Predominant Wind Direction | Rainfall mm |
|--------------|--------------------|------|-------|-------------|-----|------|---------------|--------|---------|-------------------|----------------------------|-------------|
|              | Min                | Max  | Avg   | Min         | Max | Avg  | Min           | Max    | Avg     | Avg               |                            |             |
| <b>March</b> | 19.5               | 35.8 | 27.65 | 21          | 50  | 35.5 | 1002.4        | 1006.1 | 1004.25 | 7.1               | NW                         | 0.6         |
| <b>April</b> | 23.9               | 39.6 | 31.75 | 20          | 56  | 38   | 999.2         | 1003.4 | 997.8   | 8.3               | NW                         | 2.4         |
| <b>May</b>   | 27                 | 41.6 | 34.3  | 25          | 65  | 45   | 991.4         | 994    | 992.7   | 11.3              | W                          | 7           |

Source: IMD

**Table 3.6 (b):- Meteorological Data Parameters at Bhavnagar IMD station**

| Date         | Temperature, deg C |      |       | Humidity, % |     |      | Pressure, hPa |        |         | Wind Speed, km/Hr | Predominant Wind Direction | Rainfall mm |
|--------------|--------------------|------|-------|-------------|-----|------|---------------|--------|---------|-------------------|----------------------------|-------------|
|              | Min                | Max  | Avg   | Min         | Max | Avg  | Min           | Max    | Avg     | Avg               |                            |             |
| <b>March</b> | 20.4               | 35.1 | 27.75 | 27          | 49  | 38   | 1007.3        | 1011.2 | 1009.25 | 12.1              | NW                         | 0.3         |
| <b>April</b> | 24.1               | 38.3 | 31.2  | 30          | 51  | 40.5 | 1004.5        | 1008.7 | 1006.6  | 14.9              | S                          | 2.4         |
| <b>May</b>   | 26.6               | 40   | 33.3  | 39          | 62  | 50.5 | 1001.6        | 1006.1 | 1003.85 | 17.4              | S                          | 2.5         |

Source: IMD



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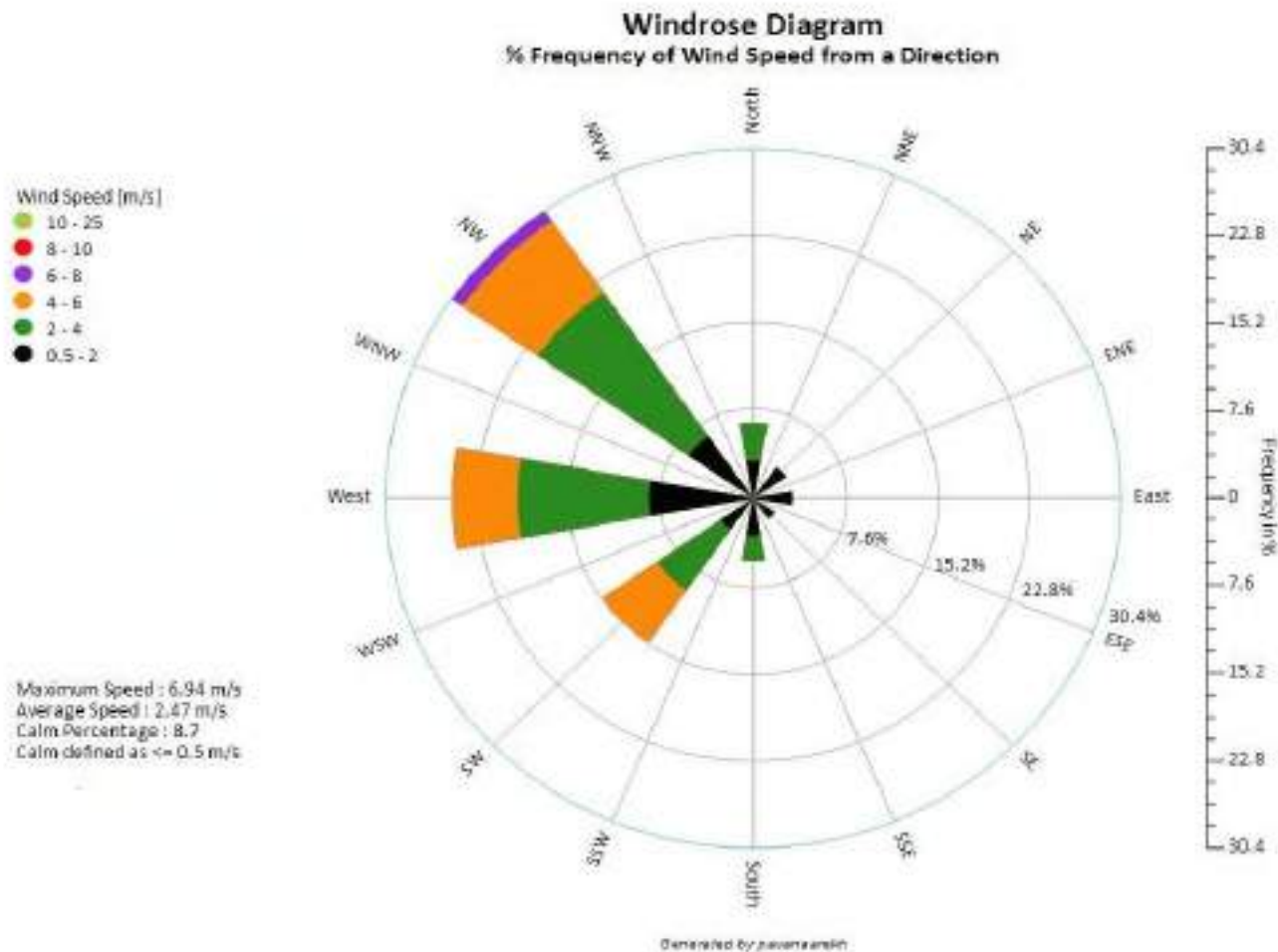


Figure 3.2 (a): Wind Rose Diagram for Ahmedabad



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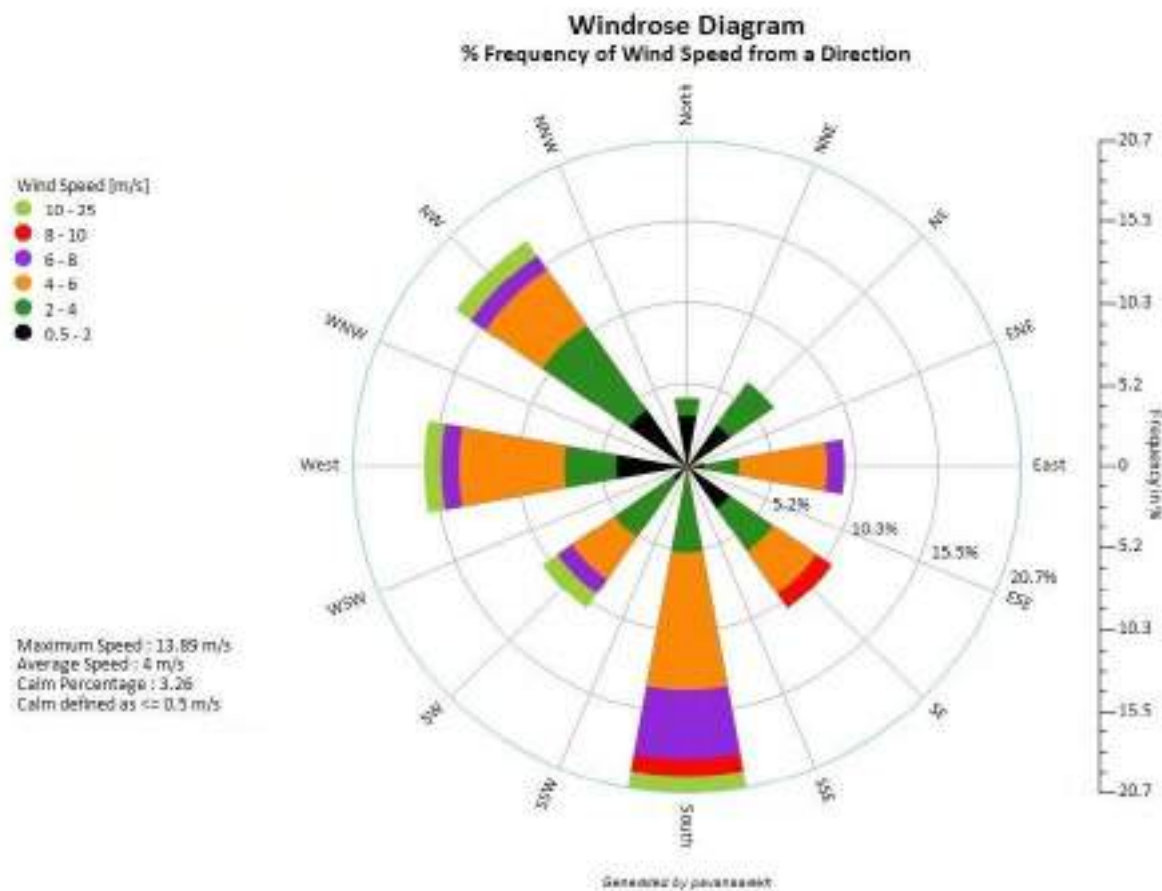


Figure 3.2 (b): Wind Rose Diagram for Bhavnagar



### 3.3.5 Natural Hazards and Vulnerability of the sub project area

#### 3.3.5.1 Seismic Profile of the area

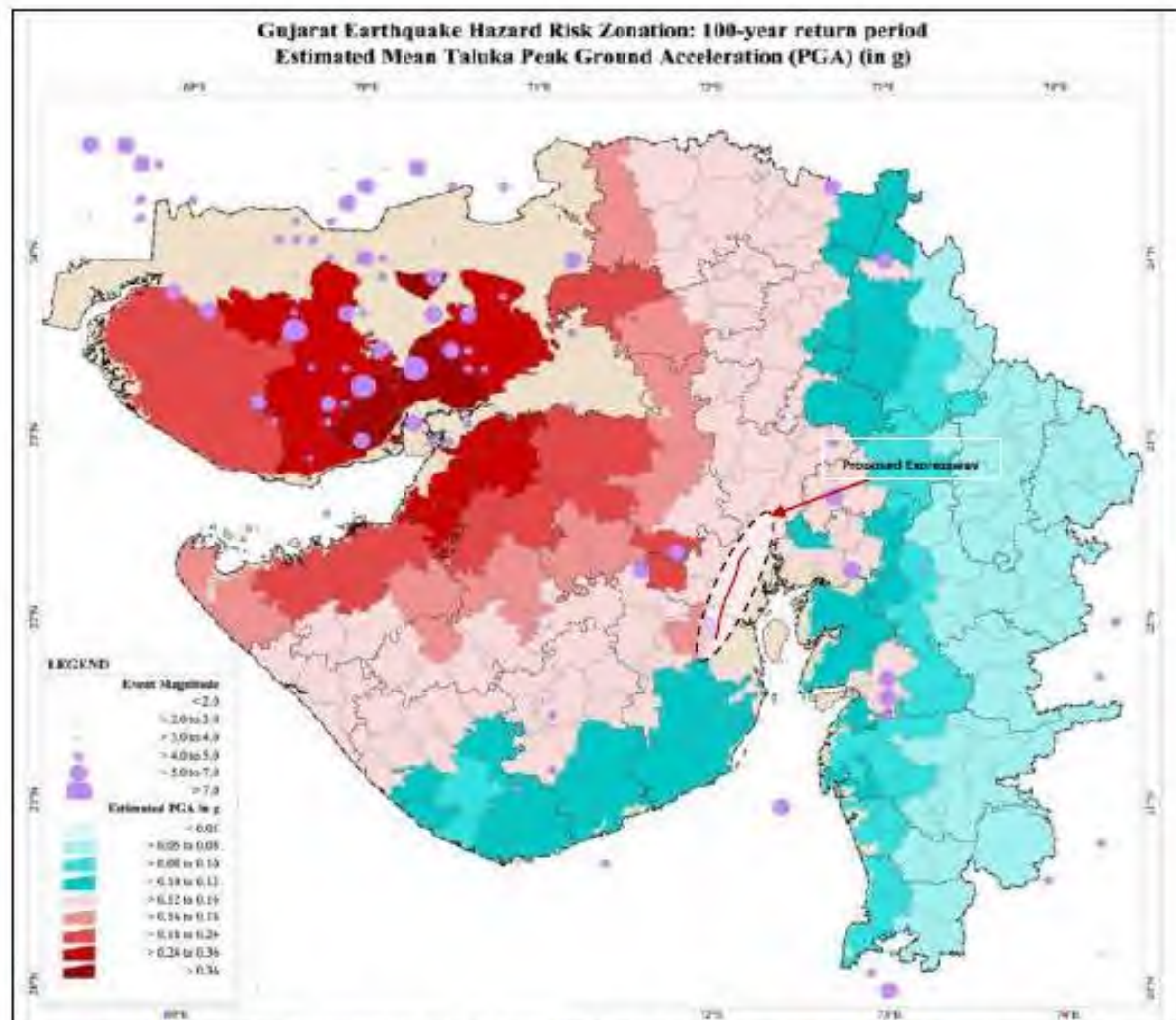
According to the seismic zoning map of India, the state of Gujarat falls in Zone III, IV & V on the basis seismic hazard as shown in Figure 3.3. However the entire project area falls in Zone III (Moderate Seismic Zone) where intensity VII where intensity VII earthquakes can be expected due to moderate local earthquakes or strong Kachchh earthquakes. This zone is classified as moderate damage risk zone which is liable to MSK VII. The IS code assigns zone factor of 0.16 for Zone III. The proposed expressway falls in Zone III.

Also, as per Global Seismic Hazards Assessment Program (GSHAP) data (as shown in **Figure 3.4**) the state of the Gujarat falls in a region of low to moderate seismic hazard. The proposed expressway falls in low to moderate hazard zone.



Figure-3.3: Seismic Zone of India





**Figure 3.4: Seismic zone map of Gujarat (Gujarat Earthquake Hazard Risk Zonation Map)**

### 3.4 GEOLOGY OF THE STUDY AREA

The entire area of expressway comprises of a cover of thick Alluvium with a few sporadic outcrops of Deccan Trap and Limestone towards southern part of the region. The area is almost flat covered by brown sandy and clayey soil and has gentle southerly and south westerly slope. It forms part of Cambay basin. The sub surface geological history of the Ahmedabad District has to be understood along with that of the entire Cambay sedimentary basin as the area covered by this district forms but a small part of it. Geological rock formations include a variety ranging from Lower Eocene to intertappian bed deccan trap, Upper (Cretaceous), are represented by the Cambay shale whereas the recent formation are represented by the tarapur shale and Kalol formations. The soil map of the Gujarat state showing the project area has been shown in **Figure 3.5**.

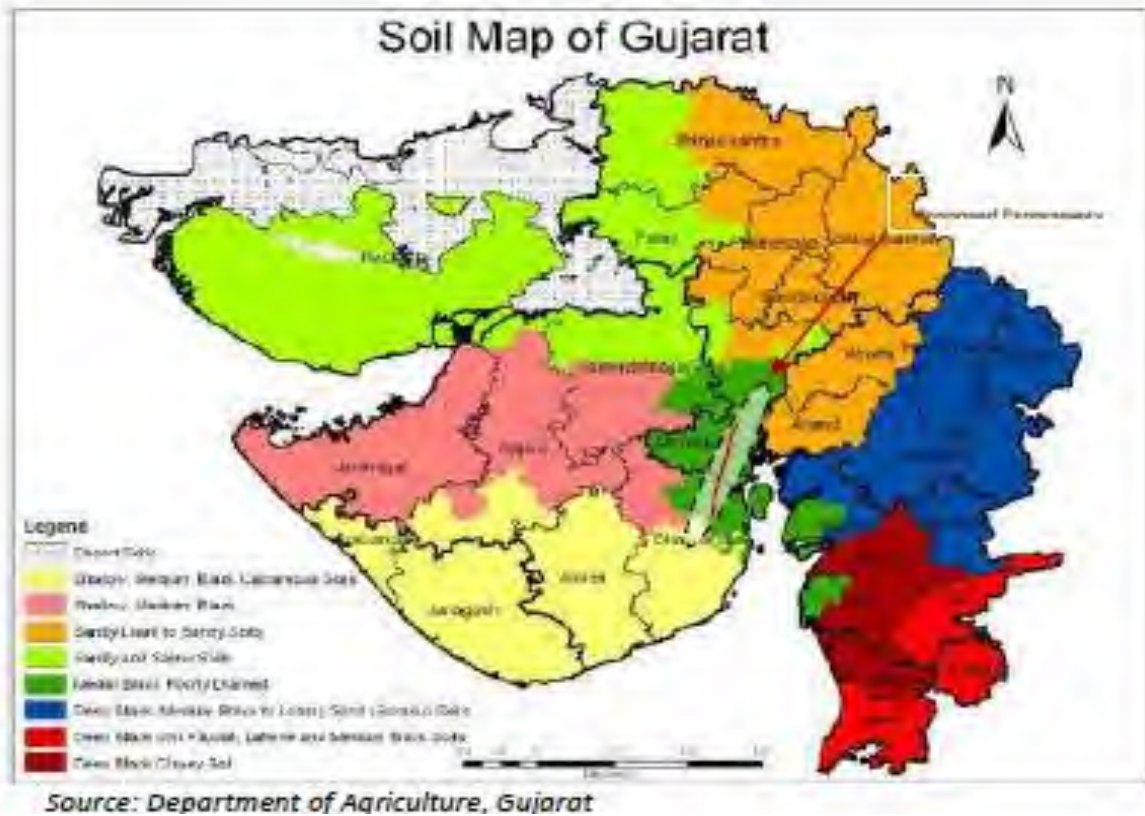


Figure 3.5: Soil Map of Gujarat showing Project Area

### 3.4.1 Field Study and Sampling Locations

For studying soil quality, sampling location was selected to assess the existing soil conditions in and around the project area representing various land use conditions. The sample was collected by ramming a core-cutter into the soil up to 90-cm depth. The sample collection, preservation, storage, transportation and analysis were carried out as per the standard methods. The soil samples after collection were immediately subjected to the analysis of various parameters in the NABL Accredited laboratory. The details of the soil sampling locations have been presented in Table 3.7 and Figure 3.6.

Table 3.7: Soil Sampling Locations

| S. No. | Location Name   | Chainage (km) | Code |
|--------|---|---------------|------|
| 1      | Starting Point near Sarkhej on Sardar Patel Ring Road | 0+000         | S1   |
| 2.     | Near Tajpur   | 5+500         | S2   |
| 3      | Near Kavitha  | 12+500        | S3   |
| 4      | Near Sindhrej   | 22+500        | S4   |
| 5      | Near Vejalaka   | 47+500        | S5   |
| 6      | Near Bholad   | 59+000        | S6   |
| 7      | Near Ambli  | 74+000        | S7   |
| 8      | Near Dholera  | 83+500        | S8   |
| 9      | Near Sandhida   | 91+500        | S9   |
| 10     | Near Adhelai  | 108+000       | S10  |





**Some Photographs showing soil sampling has been presented below**





Figure 3.6: Map showing Soil Sampling locations

#### 3.4.1.1 Soil Quality along the study area

All these soil samples were collected along the proposed expressway and analyzed for the physical, chemical properties and heavy metal concentrations. They were assessed for agricultural and afforestation potential. The characteristic of the soil along the expressway has been presented in **Table 3.8**.



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**Table 3.8: Soil Analysis along the proposed project**

| S. No | Parameters  | Test Method      | Unit                | S1         | S2         | S3         | S4         | S5         | S6         | S7         | S8         | S9         | S10        |
|-------|---|------------------|---------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 1.    | pH (1:5 suspension)                               | IS:2720(Part-26) | -                   | 8.1        | 8.6        | 7.85       | 8.4        | 7.62       | 7.78       | 7.52       | 7.92       | 7.60       | 7.46       |
| 2.    | Electrical Conductivity at 25°C (1:5 suspension.) | IS:2720(Part-21) | µmhos/cm            | 188        | 202        | 245        | 231        | 217        | 175        | 153        | 184        | 141        | 196        |
| 3.    | Moisture  | STP/SOIL         | %                   | 4.51       | 4.72       | 4.78       | 4.82       | 4.63       | 5.0        | 5.11       | 5.18       | 5.23       | 5.34       |
| 4.    | Texture   | STP/SOIL         | -                   | Sandy loam | Sandy loam | Sandy loam | Sandy loam | Sandy loam | Sandy loam | Sandy loam | Sandy loam | Sandy loam | Sandy loam |
| 5.    | Sand  | STP/SOIL         | % by mass           | 64.8       | 68.00      | 66.4       | 63.4       | 60.9       | 63.8       | 65.00      | 67.4       | 60.2       | 62.4       |
| 6.    | Clay  | STP/SOIL         | % by mass           | 21.6       | 20.00      | 23.1       | 19.7       | 20.4       | 21.7       | 20.00      | 23.9       | 25.6       | 22.1       |
| 7.    | Silt  | STP/SOIL         | % by mass           | 13.6       | 12         | 10.5       | 16.9       | 18.7       | 14.5       | 15         | 8.7        | 14.2       | 15.5       |
| 8.    | Nitrogen  | STP/SOIL         | % by mass           | 19.3       | 22.00      | 19.7       | 20.2       | 24.5       | 22.2       | 21.00      | 19.7       | 23.0       | 24.6       |
| 9.    | Potassium (as K)                                  | STP/SOIL         | mg/100g             | 6.18       | 6.12       | 6.85       | 6.34       | 7.8        | 6.89       | 6.23       | 7.52       | 7.83       | 7.10       |
| 10.   | Phosphorus  | STP/SOIL         | mg/kg               | 15.62      | 15.33      | 16.78      | 18.32      | 20.3       | 14.2       | 15.56      | 12.3       | 13.2       | 12.4       |
| 11.   | Organic Matter                                    | IS:2720(Part-22) | % by mass           | 6.78       | 6.51       | 6.98       | 6.26       | 7.4        | 6.85       | 6.78       | 8.8        | 7.9        | 8.3        |
| 12.   | Moisture Retention Capacity                       | STP/SOIL         | % by mass           | 4.75       | 4.72       | 4.82       | 4.36       | 4.21       | 4.69       | 4.88       | 3.9        | 3.6        | 4.32       |
| 13.   | Infiltration Rate                                 | STP/SOIL         | mm/hr               | 6.6        | 6.3        | 6.4        | 6.1        | 7.3        | 6.4        | 6.7        | 5.7        | 5.5        | 6.0        |
| 14.   | Sulphates   | STP/SOIL         | mg/100g             | 1.3        | 1.2        | 1.41       | 1.58       | 1.66       | 1.2        | 1.9        | 2.4        | 2.1        | 2.3        |
| 15.   | Sodium Sulphate                                   | STP/SOIL         | mg/100g             | 51.2       | 54.04      | 56.3       | 52.0       | 48.4       | 20.9       | 24.11      | 26.8       | 23.9       | 25.2       |
| 16.   | Calcium Sulphate                                  | STP/SOIL         | mg/100g             | 1.63       | 1.40       | 1.56       | 1.78       | 1.93       | 1.42       | 1.57       | 2.0        | 1.71       | 2.13       |
| 17.   | Bulk Density                                      | STP/SOIL         | gm /cm <sup>3</sup> | 1.25       | 1.39       | 1.45       | 1.66       | 1.5        | 1.66       | 1.83       | 2.6        | 2.2        | 2.45       |
| 18.   | Porosity  | STP/SOIL         | %                   | 38.6       | 39.2       | 42.3       | 40.0       | 43.6       | 40.8       | 43.2       | 45.1       | 41.6       | 43.9       |





### 3.5 AIR ENVIRONMENT

Air pollution can cause significant effects on the environment and subsequently on human, animals, vegetation and materials. In most cases, air pollution aggravates pre-existing diseases or degrades health status, making people easily susceptible to other infections and development of chronic respiratory and cardiovascular diseases. Further, environmental impacts from air pollution can include acidic deposition and reduction in visibility. Ambient air quality is the most significant parameter that is required to quantify the impact on the natural and biophysical environment.

All air pollutants emitted by point and non-point sources are transported, dispersed or concentrated by meteorological and topographical conditions. In order to assess the impact on existing air environment due to the proposed projects, it is necessary to have baseline air status of various pollutants. The prime objective of baseline air quality survey was to assess the existing air quality of the area. This will also be useful for assessing the conformity to standards of the ambient air quality.

#### 3.5.1 Ambient Air Monitoring Locations

The Ambient air quality has been carried out at ten different locations. Major environmental receptors such as settlements etc. were also considered for selection of monitoring locations in the study area. The details of the Ambient Air monitoring locations have been presented in **Table 3.9** and **Figure 3.7**.

**Table 3.9: Air Monitoring Locations**

| S. No. | Location Name   | Chainage (km) | Category of the Area | Code  |
|--------|---|---------------|----------------------|-------|
| 1      | Starting Point near Sarkhej on Sardar Patel Ring Road | 0+000         | Commercial           | AAQ1  |
| 2.     | Near Tajpur   | 5+500         | Residential          | AAQ2  |
| 3      | Near Kavitha  | 12+500        | Commercial           | AAQ3  |
| 4      | Near Sindhrej   | 22+500        | Residential          | AAQ4  |
| 5      | Near Vejalaka   | 47+500        | Residential          | AAQ5  |
| 6      | Near Bholad   | 59+000        | Residential          | AAQ6  |
| 7      | Near Ambli  | 74+000        | Residential          | AAQ7  |
| 8      | Near Dholera  | 83+500        | Commercial           | AAQ8  |
| 9      | Near Sandhida   | 91+500        | Residential          | AAQ9  |
| 10     | Near Adhelai  | 108+000       | Commercial           | AAQ10 |



**Some Photographs showing air sampling has been presented below**





Figure 3.7: Map showing the Ambient Air Quality Monitoring Locations

### 3.5.2 Analysis of Ambient Air Quality along the study area

The Ambient Air Quality was measured during the period from March 2018 to May 2018 at ten locations and results have been presented in **Table-3.10**. The chart showing the concentrations of the pollutants at various locations has been shown from **Figure-3.8 (a) to 3.8 (e)**. The Results show that all the parameters are well below the National ambient air quality standards, 2009 except at Sarkhej where PM<sub>10</sub> and PM<sub>2.5</sub> exceeds the limit.





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**Table-3.10: Value of the AAQ along the proposed project location**

| S. No. | Locations | PM10 ( $\mu\text{g}/\text{m}^3$ ) |       |       |       | PM2.5 ( $\mu\text{g}/\text{m}^3$ ) |      |      |      | SO2 ( $\mu\text{g}/\text{m}^3$ ) |      |      |      | NOx ( $\mu\text{g}/\text{m}^3$ ) |      |      |      | CO ( $\text{mg}/\text{m}^3$ ) |      |      |       |
|--------|-----------|-----------------------------------|-------|-------|-------|------------------------------------|------|------|------|----------------------------------|------|------|------|----------------------------------|------|------|------|-------------------------------|------|------|-------|
|        |           | Min                               | Max   | 98P   | Avg   | Min                                | Max  | 98P  | Avg  | Min                              | Max  | 98P  | Avg  | Min                              | Max  | 98P  | Avg  | Min                           | Max  | 98P  | Avg   |
| 1      | AAQ1      | 160.4                             | 182.5 | 180.1 | 172.4 | 50.5                               | 70.4 | 68.9 | 62.5 | 10.2                             | 15.5 | 15.1 | 13.6 | 14.2                             | 22.8 | 22.2 | 19.2 | 0.98                          | 1.8  | 1.6  | 1.42  |
| 2      | AAQ2      | 62.2                              | 73.6  | 73.1  | 68.4  | 24.9                               | 32.1 | 31.6 | 29.8 | 7.2                              | 9.2  | 8.6  | 8.8  | 9.8                              | 16.4 | 16.0 | 13.8 | 0.35                          | 0.41 | 0.39 | 0.38  |
| 3      | AAQ3      | 74.5                              | 82.3  | 82.0  | 78.9  | 32.2                               | 38.6 | 38.1 | 35.9 | 8.9                              | 11.4 | 10.8 | 10.6 | 11.8                             | 18.6 | 18.1 | 15.4 | 0.85                          | 1.1  | 1.09 | 0.99  |
| 4      | AAQ4      | 68.4                              | 76.6  | 75.8  | 73.1  | 27.8                               | 35.6 | 35.4 | 32.6 | 7.8                              | 10.5 | 10.3 | 9.4  | 9.6                              | 15.5 | 15.0 | 12.9 | 0.34                          | 0.43 | 0.41 | 0.39  |
| 5      | AAQ5      | 66.6                              | 74.8  | 74.2  | 71.4  | 25.6                               | 33.8 | 32.7 | 30.8 | 7.6                              | 8.8  | 8.0  | 8.1  | 10.2                             | 17.2 | 16.8 | 14.1 | 0.38                          | 0.49 | 0.47 | 0.43  |
| 6      | AAQ6      | 61.7                              | 73.3  | 72.9  | 68.2  | 26.4                               | 30.2 | 29.5 | 29.2 | 8.2                              | 9.0  | 8.9  | 8.4  | 8.8                              | 15.6 | 15.4 | 12.8 | 0.31                          | 0.41 | 0.39 | 0.35  |
| 7      | AAQ7      | 60.2                              | 72.2  | 72.1  | 66.9  | 25.3                               | 35.5 | 35.3 | 31.6 | 6.5                              | 10.6 | 9.7  | 8.4  | 9.5                              | 16.2 | 14.8 | 13.6 | 0.3                           | 0.52 | 0.50 | 0.43  |
| 8      | AAQ8      | 73.8                              | 81.7  | 81.5  | 78.2  | 30.6                               | 37.5 | 36.8 | 34.6 | 9.1                              | 12.3 | 11.9 | 10.5 | 11.2                             | 18.4 | 17.6 | 15.5 | 0.81                          | 1.05 | 1.0  | 0.95  |
| 9      | AAQ9      | 62.8                              | 74.9  | 74.2  | 69.3  | 24.7                               | 29.6 | 29.0 | 27.8 | 7.2                              | 9.2  | 8.8  | 8.3  | 8.6                              | 15.6 | 14.2 | 12.8 | 0.29                          | 0.54 | 0.53 | 0.425 |
| 10     | AAQ10     | 72.6                              | 85.2  | 84.4  | 79.2  | 38.4                               | 43.6 | 43.3 | 41.5 | 9.6                              | 13.6 | 13.1 | 11.9 | 11.4                             | 20.2 | 19.1 | 16.3 | 0.91                          | 1.65 | 1.64 | 1.310 |

Source: Noida Testing Laboratories (March 2018 to May 2018)

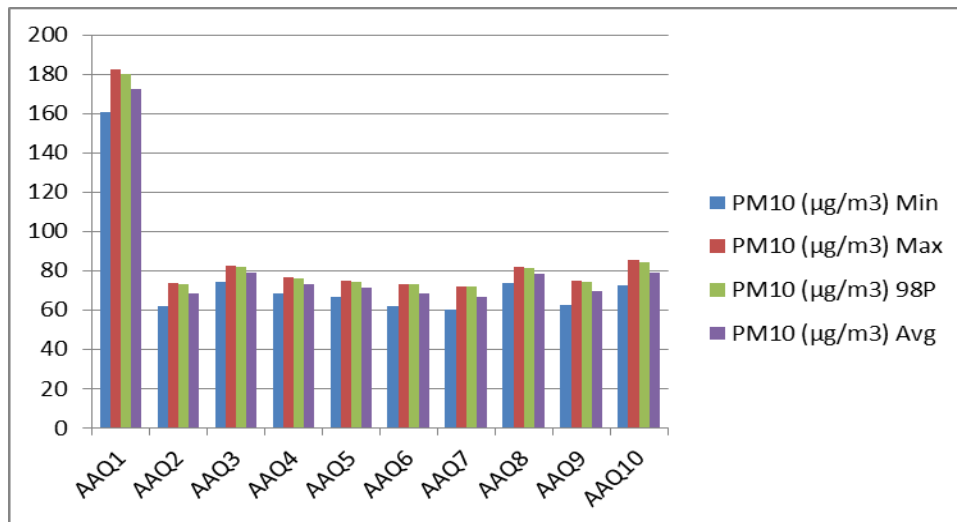


Figure 3.8 (a): Chart Showing Concentration of PM 10 at various locations.

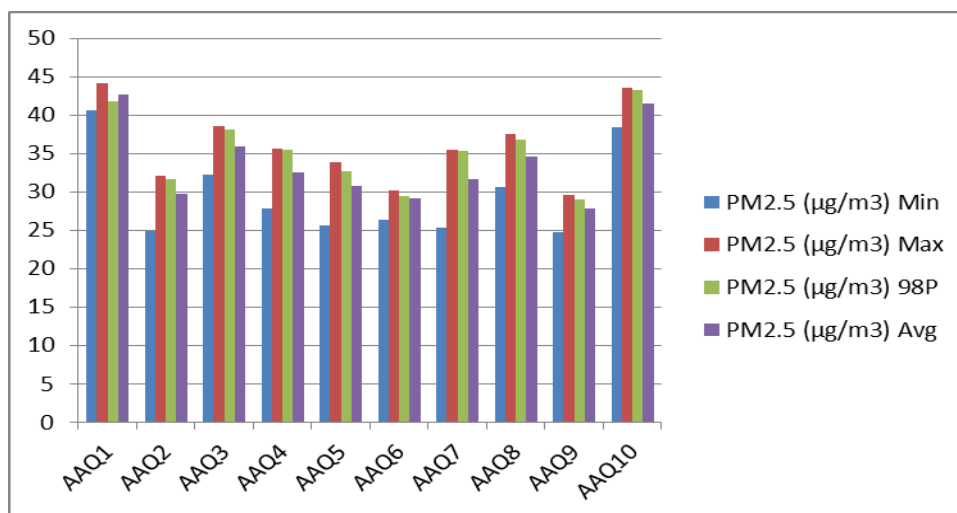


Figure 3.8 (b): Chart Showing Concentration of PM 2.5 at various locations.

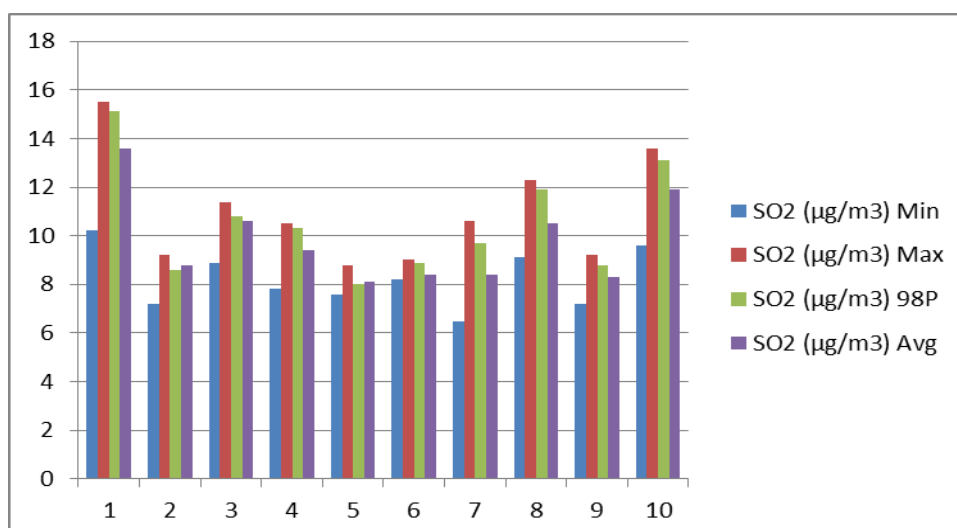




Figure 3.8 (c): Chart Showing Concentration of SO<sub>2</sub> at various locations.

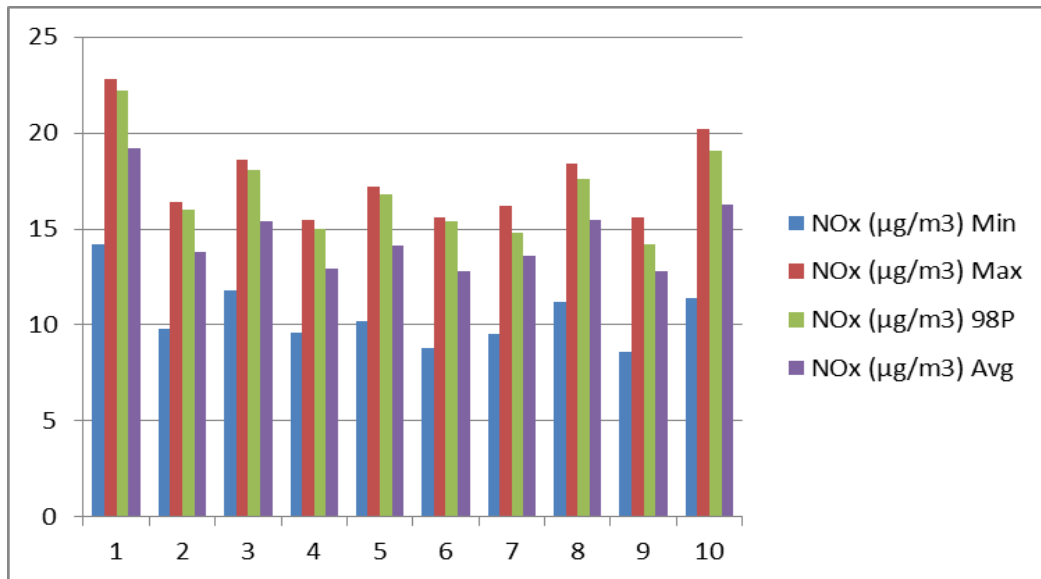


Figure 3.8 (d): Chart Showing Concentration of NOx at various locations.

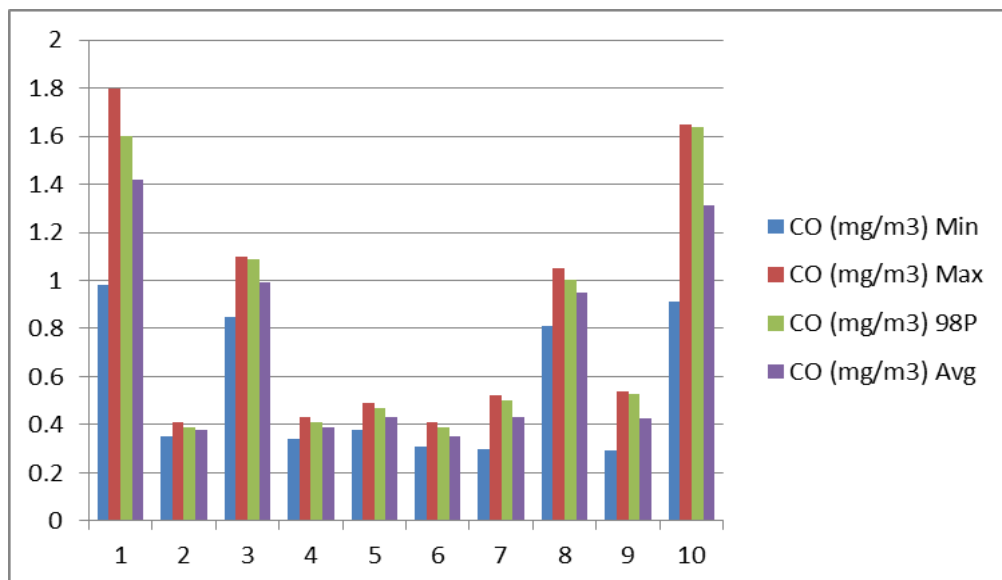


Figure 3.8 (e): Chart Showing Concentration of CO at various locations.

### 3.6 NOISE ENVIRONMENT

Noise can be defined as any sound that is undesirable because it interferes with speech and hearing, and is intense enough to damage hearing or is otherwise annoying. Noise impacts can be of concern during construction and operational phases of the project. Factors those are important in determining noise levels include distance from the noise source, natural or manmade barriers between the source and the receptors, whether conditions, etc



### 3.6.1 Noise monitoring locations

An assessment of baseline noise quality was undertaken to (a) establish the status of exposure of the major sensitive receptors, and (b) to identify the noise pollution levels in and around the site. The noise monitoring was done following CPCB protocol of Noise Monitoring. The details of the Noise level monitoring locations have been presented in **Table 3.11** and **Figure 3.9**

**Table 3.11: Noise level Monitoring Locations**

| S. No. | Location Name   | Chainage (km) | Category of the Area | Code |
|--------|---|---------------|----------------------|------|
| 1      | Starting Point near Sarkhej on Sardar Patel Ring Road | 0+100         | Commercial           | N1   |
| 2.     | Near Tajpur   | 5+550         | Residential          | N2   |
| 3      | Near Kavitha  | 12+600        | Commercial           | N3   |
| 4      | Near Sindhrej   | 22+400        | Residential          | N4   |
| 5      | Near Vejalaka   | 47+590        | Residential          | N5   |
| 6      | Near Bholad   | 59+120        | Residential          | N6   |
| 7      | Near Ambli  | 74+080        | Residential          | N7   |
| 8      | Near Dholera  | 83+620        | Commercial           | N8   |
| 9      | Near Sandhida   | 91+450        | Residential          | N9   |
| 10     | Near Adhelai  | 108+200       | Commercial           | N10  |



**Some Photographs showing noise sampling has been presented below**







Figure 3.9: Map showing the Ambient Noise Monitoring Locations

### 3.6.2 Analysis of Noise Monitoring along the study area

An analysis of the different Leq data obtained during the study period (March 2018 to May 2018) has been made. Variation was noted during the day-time as well as night-time Noise monitoring was conducted at ten locations along the proposed project. The details of the ambient noise quality along the proposed project locations have been presented in **Table 3.12**. The chart showing the noise level along the proposed project locations has been shown in **Figure 3.10**.

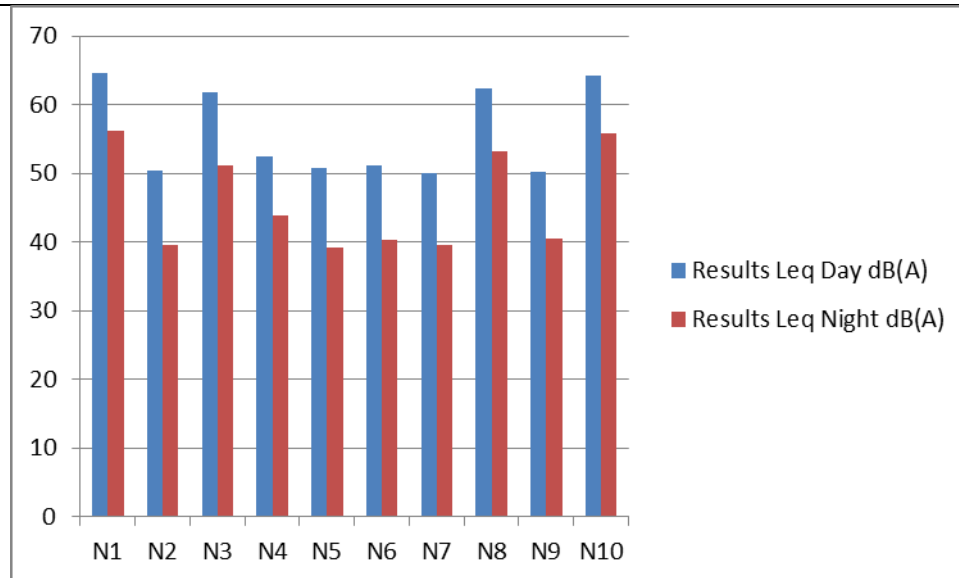
Table-3.12: Ambient Noise Quality along the proposed project

| Location | Results       |                 | CPCB Limits Leq db(A) |        |
|----------|---------------|-----------------|-----------------------|--------|
|          | Leq Day dB(A) | Leq Night dB(A) | Day*                  | Night* |
| N1       | 64.6          | 56.2            | 65                    | 55     |
| N2       | 50.4          | 39.6            | 55                    | 45     |
| N3       | 61.8          | 51.2            | 65                    | 55     |
| N4       | 52.5          | 43.8            | 55                    | 45     |



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|   |      |      |           |           |
|---|------|------|-----------|-----------|
| N5  | 50.7 | 39.2 | <b>55</b> | <b>45</b> |
| N6  | 51.2 | 40.4 | <b>55</b> | <b>45</b> |
| N7  | 50   | 39.6 | <b>55</b> | <b>45</b> |
| N8  | 62.4 | 53.2 | <b>65</b> | <b>55</b> |
| N9  | 50.2 | 40.5 | <b>55</b> | <b>45</b> |
| N10                                       | 64.2 | 55.8 | <b>65</b> | <b>55</b> |
| <b>Source: Noida Testing Laboratories</b> |      |      |           |           |



**Figure 3.10: Noise level along the proposed project location**

### 3.7 WATER ENVIRONMENT

#### 3.7.1 Streams/Canals/Nalas and Bridges Crossings the proposed alignment

There are many streams/canals which the Expressway alignment is crossing. The Expressway crosses major stream of Bhogavo river, Bhadar River, Ghelo River and Lylka River and its tributaries. There are many Canals crossing the alignment, some of them are Dholka Branch Canal, Fatewadi and Rajpura Branch Canal

There are two Major streams of Lylka River where bridges exist on the SH-6 alignment at the location of Expressway alignment exactly following the existing SH-6 alignment. The details of the river/canals crossing along the proposed alignment have been presented in **Table 3.13**

**Table 3.13: Details of Rivers/canals crossing along the proposed alignment**

| Sl. No | Chainage (km) | Type          | Remarks                      |
|--------|---------------|---------------|------------------------------|
| 1      | 0+980         | Narmada Canal | Crossing                     |
| 2      | 2+540         | Canal         | Crossing                     |
| 3      | 2+870         | Canal         | Crossing                     |
| 4      | 5+000         | Canal         | Crossing                     |
| 5      | 5+708         | Canal         | Crossing Near Tajpur Village |



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|    |         |              |  |
|----|---------|--------------|--|
| 6  | 8+402   | Canal        | Crossing   |
| 7  | 8+920   | Canal        | Crossing   |
| 8  | 9+716   | Canal        | Crossing   |
| 9  | 10+403  | Canal        | Crossing   |
| 10 | 10+693  | Canal        | Crossing   |
| 11 | 10+908  | Canal        | Crossing   |
| 12 | 14+350  | Canal        | Crossing   |
| 13 | 15+555  | Canal        | Crossing   |
| 14 | 22+472  | Canal        | Crossing Near Sidhraj Village  |
| 15 | 24+858  | Canal        | Crossing   |
| 16 | 30+798  | Canal        | Crossing Near Saran Village  |
| 17 | 32+894  | Canal        | Crossing   |
| 18 | 34+285  | Canal        | Crossing   |
| 19 | 35+966  | Canal        | Crossing Near Kariyana Village   |
| 20 | 39+000  | Canal        | Crossing Near Rupgadh Village  |
| 21 | 40+598  | Canal        | Crossing   |
| 22 | 42+252  | Canal        | Crossing   |
| 23 | 45+285  | Canal        | Crossing   |
| 24 | 46+000  | Canal        | Crossing   |
| 25 | 46+795  | Canal        | Crossing Near Vejalka Village on SH-08   |
| 26 | 47+382  | Canal        | Crossing Near Vejalka Village on SH-08   |
| 27 | 49+520  | Canal        | Crossing   |
| 28 | 51+165  | Canal        | Crossing   |
| 29 | 57+825  | Canal        | Crossing Near Bholad Village on SH-08  |
| 30 | 60+150  | Bogava River | Crossing   |
| 31 | 61+000  | Bogava River | Crossing   |
| 32 | 64+300  | Canal        | Crossing   |
| 33 | 64+990  | Canal        | Crossing   |
| 34 | 69+315  | Ghelo Nadi   | Crossing   |
| 35 | 78+110  | Bhadar River | Crossing   |
| 36 | 81+440  | Adhiya River | Crossing   |
| 37 | 91+996  | Canal        | Start on Right side and end at 92+850 on SH-06   |
| 38 | 92+380  | Canal        | Start on Left side and fall in Vankol Khadi  |
| 39 | 93+195  | Vankol Khadi | Crossing   |
| 40 | 94+380  | Canal        | Crossing   |
| 41 | 94+910  | Canal        | Crossing   |
| 42 | 95+566  | Canal        | Crossing   |
| 43 | 95+190  | Canal        | After this chainage canal running parralel on both side of SH-06 upto 98+100 with Prop ROW |
| 44 | 101+850 | River        | Crossing   |
| 45 | 102+390 | Canal        | Crossing   |



### 3.7.2 Water bodies crossing the proposed project

The river basins of Mahi, Tapi and Narmada are the important drainage basins of Gujarat raining into the gulf of Khambhat. The study area is rich in water sources. Such water resources include the rivers streams, backwaters, lakes, irrigation tanks, ponds, brackish water etc. The details of water resources found within the project alignment have been presented in **Table 3.14**.

**Table 3.14: Details of water bodies crossing the proposed alignment**

| Sl No             | Chainage (km) | Falling within proposed ROW |        |      | Area (Sqm)       | Remarks                               |
|-------------------|---------------|-----------------------------|--------|------|------------------|---------------------------------------|
|                   |               | LHS                         | Center | RHS  |                  |                                       |
| 1                 | 2+223         |                             |        | Pond | 16202.63         |                                       |
| 2                 | 6+407         |                             | Pond   |      | 9203.28          |                                       |
| 3                 | 6+920         |                             | Pond   |      | 27128.71         |                                       |
| 4                 | 13+760        | Pond                        |        |      | 7478.38          |                                       |
| 5                 | 16+416        |                             |        | Pond | 14583.64         |                                       |
| 6                 | 22+583        |                             | Pond   |      | 13710.64         | Near Sidhraj Village                  |
| 7                 | 24+515        | Pond                        |        |      | 48908.83         |                                       |
| 8                 | 26+910        | Pond                        |        |      | 45297.21         | Near Sherpara Village                 |
| 9                 | 31+700        |                             |        | Pond | 4900.37          | Near Railway Crossing                 |
| 10                | 32+378        | Pond                        |        |      | 11122.86         |                                       |
| 11                | 37+300        | Pond                        |        |      | 7873.90          |                                       |
| 12                | 39+152        |                             |        | Pond | 25057.24         | Near Rupgadh Village (Dudhesar Talav) |
| 13                | 41+544        |                             |        | Pond | 4964.57          |                                       |
| 14                | 46+905        | Pond                        |        |      | 3272.92          |                                       |
| 15                | 48+250        |                             |        | Pond | 13466.03         |                                       |
| 16                | 50+000        | Pond                        |        |      | 2907.83          |                                       |
| 17                | 50+215        |                             |        | Pond | 2754.32          |                                       |
| 18                | 50+345        |                             | Pond   |      | 5728.85          |                                       |
| 19                | 51+395        | Pond                        |        |      | 3114.46          |                                       |
| 20                | 52+000        |                             | Pond   |      | 4363.77          |                                       |
| 21                | 54+196        |                             |        | Pond | 4469.94          |                                       |
| 22                | 58+050        | Pond                        |        |      | 4402.22          | Near Bholad Village                   |
| 23                | 65+680        | Pond                        |        |      | 5405.33          |                                       |
| 24                | 66+660        |                             |        | Pond | 870.99           |                                       |
| 25                | 68+590        | Pond                        |        |      | 19973.06         |                                       |
| 26                | 70+490        |                             | Pond   |      | 9062.93          |                                       |
| 27                | 84+388        |                             |        | Pond | 27744.72         | Near Dholera                          |
| 28                | 95+628        |                             |        | Pond | 2801.41          |                                       |
| 29                | 96+074        |                             |        | Pond | 3978.49          |                                       |
| 30                | 105+020       |                             | Pond   |      | 12409.65         |                                       |
| 31                | 105+483       |                             | Pond   |      | 19899.20         |                                       |
| <b>Total Area</b> |               |                             |        |      | <b>383058.36</b> |                                       |





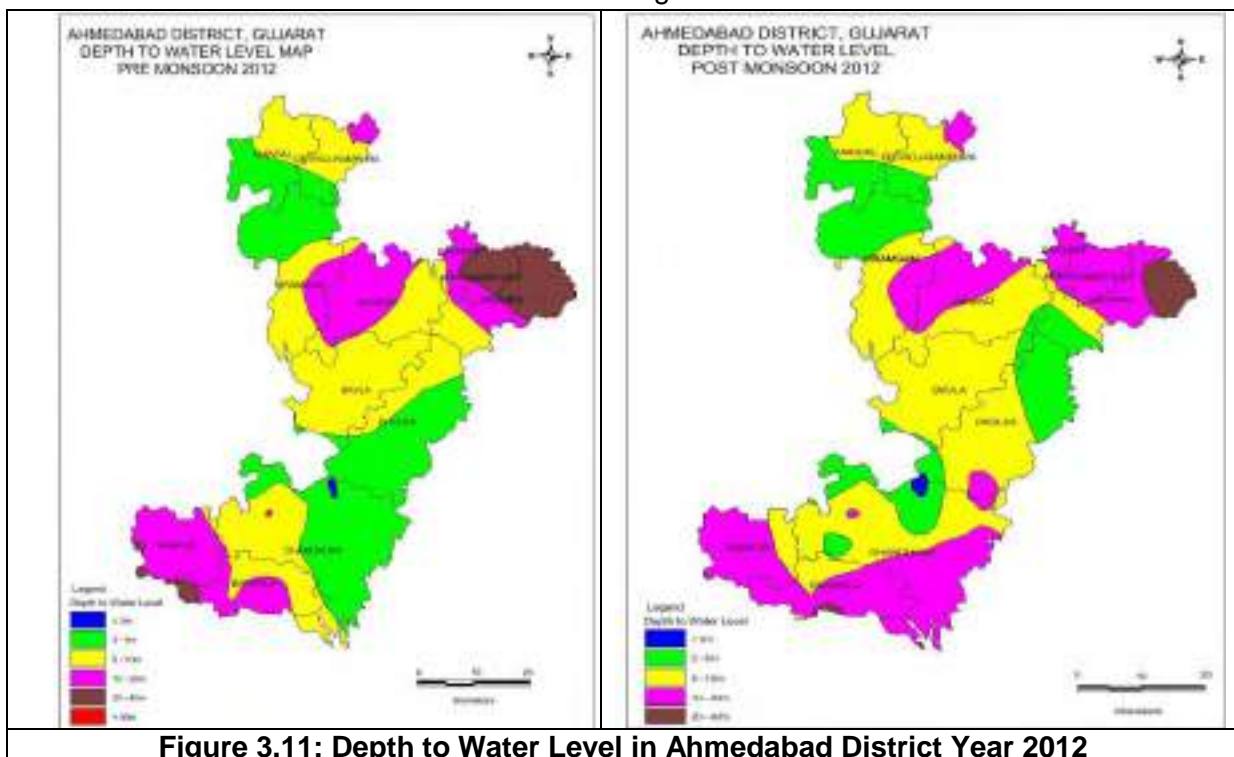
### 3.7.3 Hydrogeology for the study area

#### Ground Water:

As per Central Ground Water Board reports, the net annual groundwater availability for the state of Gujarat is 15.02 BCM (Billion Cubic Meters), annual groundwater Final is 11.49 BCM and the stage of groundwater development is 76%. The alluvial plains in the project area provide better conditions for the storage of groundwater. The ground water table in the project area is very high at about 2 to 3m. However the water is contaminated with salt ingress. The source of drinking water is piped supply and the irrigation is either through canals or natural ponds in which water is collected during rains.

Depth to groundwater table for pre monsoon and post monsoon for the project area has been shown in **Figures 3.11** and **Figure 3.12**. This shows that the depth to groundwater table in Bhavnagar and Ahmedabad districts varies between 5 to 10 mbgl

In Ahmedabad the Annual Ground Water Recharge varies from 1601.62 ha.m to 20271.87 ha.m. The Gross Annual Ground Water Recharge in the district is 61686.37 ha.m. The net available recharge after leaving natural discharge from monsoon period varies from 1521.54 ha.m to 19258.28 ha.m. The net available recharge in the district is 58309.42 ha.m.



**Figure 3.11: Depth to Water Level in Ahmedabad District Year 2012**

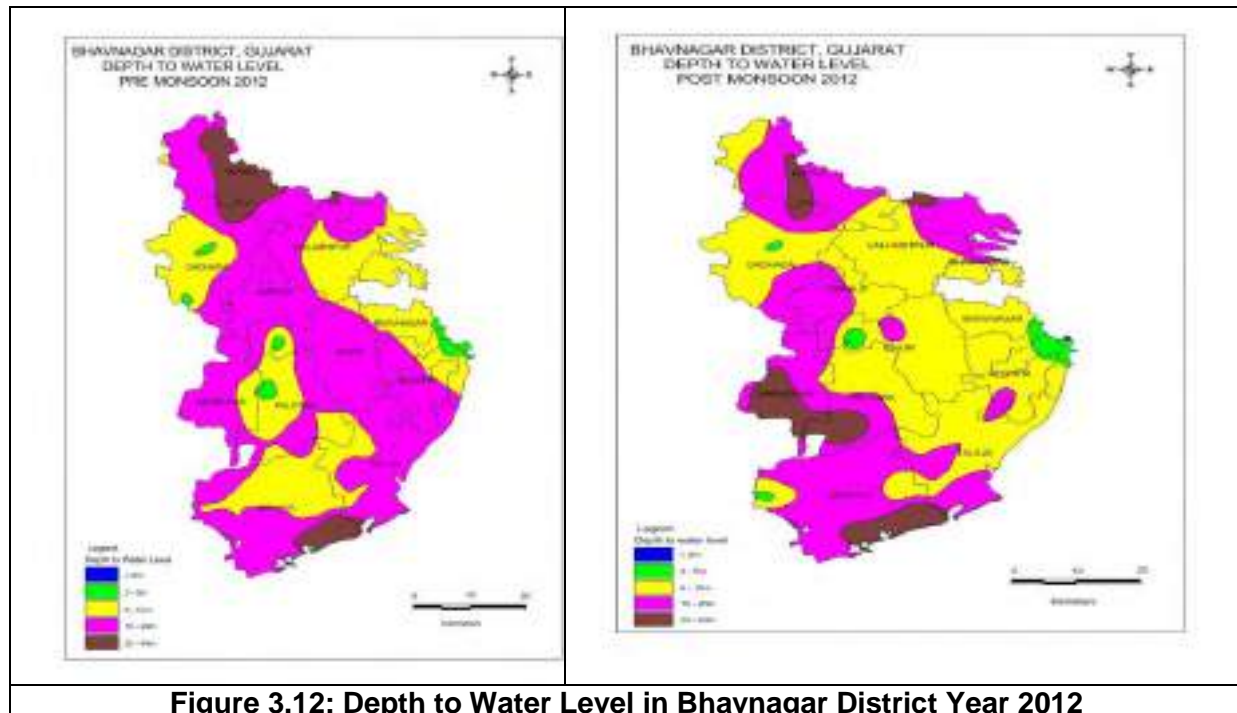
**Source: Ministry of Water Resources, Central Ground Water Board, Government of India**

Annual ground water recharge of Bhavnagar district, (GWRE 2011), is 942.79 MCM and keeping provision of 47.13MCM for environmental /runoff purposes, net annual ground water availability is worked out to be of 895.65 MCM. The gross annual ground water Final in the district comes out to be 573.71 MCM out of which 517.33 MCM per year is due to irrigation while remaining 56.38 MCM is accounted for domestic and industrial uses.

The water level during pre-monsoon lies within a range of 10 to 20 meters below ground level whereas during post monsoon it is less than 20 meters in most of the district.



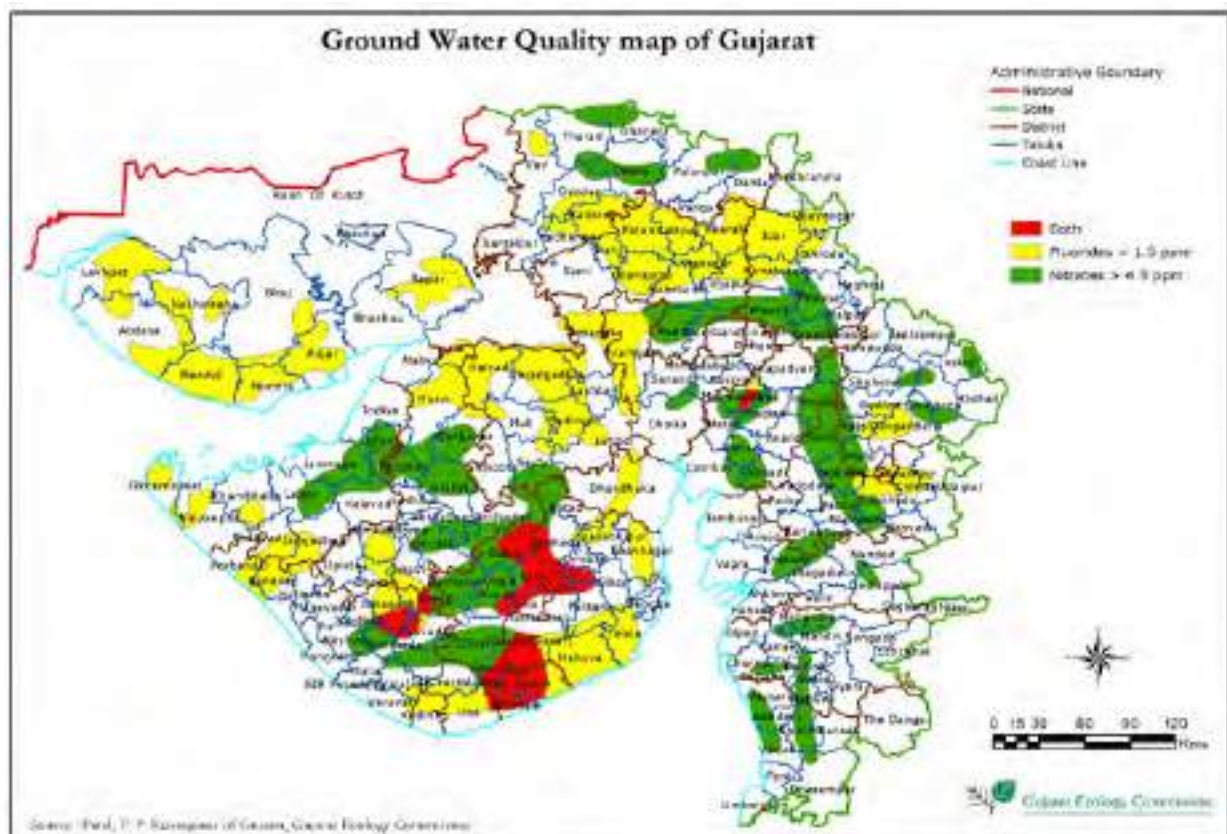
**NATIONAL HIGHWAYS AUTHORITY OF INDIA**  
(Ministry of Road Transport & Highways Government of India)



**Figure 3.12: Depth to Water Level in Bhavnagar District Year 2012**

Source: Ministry of Water Resources, Central Ground Water Board, Government of India

Groundwater quality map of Gujarat is shown in **Figure 3.13** and it is observed that expressway traverses areas having fluoride content in excess of 1.5 ppm



**Figure 3.13: Ground water Quality Map of Gujarat**





### 3.7.4 Water quality along the project

Selected water quality parameters of ground water and surface water resources within 10 km radius of the study area has been studied for assessing the water environment and evaluate anticipated impact of the project activity. Understanding the water quality is essential in preparation of Environmental Impact Assessment and to identify critical issues with a view to suggest appropriate mitigation measures for implementation. The purpose of this study is to:

- Assess the water quality characteristics for critical parameters; and
- Predict the impact of water quality due to project activities

#### 3.7.4.1 Water Sampling Locations

The information required has been collected through primary surveys and secondary sources. Water quality is a concern for the numerous surface water sources and the groundwater sources. Three surface and five ground water samples have been collected from sources present along the proposed project to ascertain the baseline conditions of water quality. The locations of the Water sampling have been presented in **Table 3.15** and **Figure 3.14**.

**Table 3.15: Details of water sampling locations**

| S. No.               | Water Sampling Location Station | Source   | Project Chainage (km) | Sample Code |
|----------------------|---------------------------------|----------|-----------------------|-------------|
| <b>Surface Water</b> |                                 |          |                       |             |
| 1                    | Near Vejalaka village           | Pond     | 46+500                | SW1         |
| 2                    | Bhogavo River (Downstream)      | River    | 61+000                | SW2         |
| 3                    | Lilka River (Downstream)        | River    | 95+500                | SW3         |
| <b>Ground Water</b>  |                                 |          |                       |             |
| 1                    | Tajpur Village                  | Handpump | 7+700                 | GW1         |
| 2                    | Sindhrej Village                | Handpump | 22+500                | GW2         |
| 3                    | Bholad Village                  | Handpump | 59+100                | GW3         |
| 4                    | Dholera                         | Handpump | 83+800                | GW4         |
| 5                    | Adhelai                         | Handpump | 108+100               | GW5         |



**Some Photographs showing water sampling has been presented below**





Figure 3.14: Map showing the Ambient Air Quality Monitoring Locations

#### 3.7.4.2 Ground Water Quality along the Study Area

A number of ground water sources like handpumps/tube wells/ wells exists along the project area. 5 numbers of sampling locations were identified and the ground water sources monitored were Hand Pumps to assess the ground water quality along the project area. All physical and general parameters were observed within the desirable limit at all the five sampling locations as per IS10500:2012. The ground water quality along the proposed project locations were analyzed and have been presented in **Table 3.16**.



**Table-3.16: Ground Water Quality along the proposed project locations**

| S. No. | Parameter                                | Units      | GW1       | GW2       | GW3       | GW4       | GW5       |
|--------|--|------------|-----------|-----------|-----------|-----------|-----------|
| 1      | pH                                       | --         | 8.29      | 7.43      | 7.28      | 7.71      | 7.92      |
| 2      | Colour                                   | Hazen      | <5.0      | <5.0      | <5.0      | <5.0      | <5.0      |
| 3      | Odour                                    | --         | Agreeable | Agreeable | Agreeable | Agreeable | Agreeable |
| 4      | Conductivity @ 25°C                      | µS/cm      | 3639.08   | 3485.23   | 3727.23   | 3569.08   | 3597.69   |
| 5      | Sulphate (SO <sub>4</sub> )              | mg/l       | 272       | 258       | 283       | 266       | 275       |
| 6      | Nitrate (NO <sub>3</sub> )               | mg/l       | 21.6      | 20.2      | 19.5      | 18.5      | 20.9      |
| 7      | Total Hardness (as CaCO <sub>3</sub> )   | mg/l       | 842       | 799.90    | 896.60    | 847.90    | 843.70    |
| 8      | Chloride(as Cl)                          | mg/l       | 815       | 796       | 826       | 820       | 861       |
| 9      | Fluoride (as F)                          | mg/l       | 0.68      | 0.65      | 0.72      | 0.54      | 0.60      |
| 10     | Total Dissolved Solid (TDS)              | mg/l       | 2365.40   | 2265.40   | 2422.70   | 2319.90   | 2338.50   |
| 11.    | Calcium (as Ca)                          | mg/l       | 140       | 133       | 152       | 144       | 162       |
| 12.    | Magnesium (as Mg)                        | mg/l       | 120       | 114       | 126       | 119       | 107       |
| 13.    | Sodium (as Na)                           | mg/l       | 318       | 304       | 327       | 320       | 294       |
| 14.    | Potassium (as K)                         | mg/l       | 320       | 291       | 322       | 288       | 267       |
| 15.    | Total Alkalinity (as CaCO <sub>3</sub> ) | mg/l       | 598       | 582       | 612       | 574       | 586       |
| 16.    | Phosphate (as P)                         | mg/l       | <0.05     | <0.05     | <0.05     | <0.05     | <0.05     |
| 17.    | TKN (N)                                  | mg/l       | <1.0      | <1.0      | <1.0      | <1.0      | <1.0      |
| 18.    | Total Suspended Solid (TSS)              | mg/l       | <1.0      | <1.0      | <1.0      | <1.0      | <1.0      |
| 19.    | Arsenic (as As)                          | mg/l       | BDL       | BDL       | BDL       | BDL       | BDL       |
| 20.    | Chromium (as Cr)                         | mg/l       | BDL       | BDL       | BDL       | BDL       | BDL       |
| 21.    | Iron (as Fe)                             | mg/l       | 0.29      | 0.22      | 0.26      | 0.24      | 0.28      |
| 22.    | Mercury (as Hg )                         | mg/l       | BDL       | BDL       | BDL       | BDL       | BDL       |
| 23.    | Zinc (as Zn)                             | mg/l       | 0.06      | 0.04      | 0.05      | 0.08      | 0.05      |
| 24.    | Faecal Coliform                          | MPN/100 ml | Absent    | Absent    | Absent    | Absent    | Absent    |
| 25.    | Total Coliform                           | MPN/100 ML | Absent    | Absent    | Absent    | Absent    | Absent    |

**Source: Noida Testing Laboratories**





### 3.7.4.3 Surface Water Quality along the study area

Three sampling locations for the surface water quality was selected and monitored along the proposed project. The result of the surface water quality along the proposed project locations were analysed and have been presented in **Table 3.17**, which revealed that the water quality of the surface water are well within the limits.

**Table-3.17: Surface Water Quality along the proposed project locations**

| S. No. | Parameter                                | Units      | Vejalaka village Pond | River-Bhogavo | Lilka River |
|--------|--|------------|-----------------------|---------------|-------------|
| 1      | pH                                       | --         | 7.35                  | 6.93          | 7.18        |
| 2      | Colour                                   | Hazen      | 50 Hazen              | 40 Hazen      | 45 Hazen    |
| 3      | Odour                                    | --         | Odorous               | Odorous       | Odorous     |
| 4      | Conductivity @25 <sup>0</sup> C          | μS/cm      | 757.06                | 385.88        | 435.34      |
| 5      | Sulphate (SO <sub>4</sub> )              | mg/l       | 45.78                 | 23.46         | 30.8        |
| 6      | Nitrate (NO <sub>3</sub> )               | mg/l       | 2.51                  | 3.39          | 2.88        |
| 7      | Total Hardness(as CaCO <sub>3</sub> )    | mg/l       | 195.96                | 164.67        | 156         |
| 8      | Chloride(as Cl)                          | mg/l       | 154.80                | 35.99         | 52.6        |
| 9      | Fluoride (as F)                          | mg/l       | 0.88                  | 1.06          | 1.20        |
| 10     | COD                                      | mg/l       | 116.0                 | 120.0         | 95          |
| 11.    | Dissolve Oxygen                          | mg/l       | 5.6                   | 5.4           | 5.1         |
| 12.    | Total Dissolved Solid                    | mg/l       | 492.09                | 250.82        | 282.97      |
| 13.    | BOD (3 days at 27 <sup>0</sup> C)        | mg/l       | 22.0                  | 32.0          | 26          |
| 14.    | Calcium (as Ca)                          | mg/l       | 44.60                 | 35.2          | 38.8        |
| 15.    | Magnesium (as Mg)                        | mg/l       | 20.60                 | 18.7          | 14.39       |
| 16.    | Sodium (as Na)                           | mg/l       | 102.0                 | 28.7          | 44.3        |
| 17.    | Potassium (as K)                         | mg/l       | 10.2                  | 4.7           | 5.6         |
| 18.    | Total Alkalinity (as CaCO <sub>3</sub> ) | mg/l       | 186                   | 167           | 156         |
| 19.    | Phosphate (as P)                         | mg/l       | 0.208                 | 0.34          | 0.32        |
| 20.    | TKN                                      | mg/l       | 8.63                  | 38.63         | 31.2        |
| 21.    | Total Suspended Solid                    | mg/l       | 48.3                  | 142.7         | 64.8        |
| 22.    | Arsenic (as As)                          | mg/l       | <0.05                 | <0.05         | <0.05       |
| 23.    | Chromium (as Cr)                         | mg/l       | <0.1                  | <0.1          | <0.1        |
| 24.    | Iron (as Fe)                             | mg/l       | 1.01                  | 4.15          | 2.78        |
| 25.    | Mercury (as Hg)                          | mg/l       | <0.001                | <0.01         | <0.01       |
| 26.    | Zinc (as Zn)                             | mg/l       | 0.07                  | 0.13          | 0.10        |
| 27.    | Faecal Coliform                          | MPN/100 ml | 940                   | 1120          | 1060        |
| 28.    | Total Coliform                           | MPN/100ML  | 1820                  | 1900          | 1840        |

Source: Noida Testing Laboratories



Figure 9.8: forest cover map of Gujarat

**Source: India State of Forest Report, FSI 2017**



### 3.8.1 Methodology for the Study

Following the TOR for the project “**Construction of Ahmedabad-Dholera Expressway road (110 km) NH-A1/BM/21 in the state of Gujarat by M/s National Highway Authority of India( Ref. F No. 10-9/2018-1A.III dated 11<sup>th</sup> June 17, 2018)**”, the studies on ecology and biological environment assessment were undertaken during pre-monsoon season (March 2018 to May 2018). A phased and consultative approach was followed to carry out the ecological assessment. The successive phases include: (i) Reconnaissance survey, (ii) on-site primary data collection for flora and fauna, and (iii) secondary data collection through review of available literature, reports and government documents. Wherever necessary, the required information was also collected through formal and informal discussions with the Velavadar Black Buck National Park and forest department officials and staff, personnel of National Highway Authority of India, Gujarat and local inhabitants and natural resource users. Both the terrestrial and aquatic ecosystems were studied. The primary data were collected through extensive field visits and using ecological methods as per requirement as described in **Mishra (1968) and personal interactions with staff and local people..**

In order to understand the composition of the vegetation, most of the plant species were identified in the field itself with necessary support from the National Park Warden and staff, Forest department field staff and local inhabitants. In case of species that could not be identified at the site itself, herbarium specimen of the same were collected without uprooting the plant; in addition, their photographs were also taken wherever necessary for identification later with the help of available published literature and flora of the region and adjacent states, Madhya Pradesh and Rajasthan.

The vegetation of the forest, savannah and grassland was described following **Champion and Seth (1968)** and **Dabadghao and Shankarnarayan (1973)**, respectively. The flora and fauna of the project site were classified and identified following published Floral and Faunal literature as cited in the section “References”. The conservation status of the species has been recorded following the Red Data Books of BSI, MoEF&CC and ZSI, The Wildlife (Protection) Act, 1972 and IUCN Red list of threatened species. An illustration of the project site and interaction with the Velavadar Black Buck National Park staff is shown from **Figures 3.16 (a) to 3.16 (p)**.

Impact of proposed project on movement of wildlife up to 10 km radius of the Velavadar Black Buck National Park and its eco sensitive zone has been taken into consideration in the impact assessment study.



Fig. 3.16 (a)



Fig. 3.16 (b)



Fig. 3.16 (c)



Fig. 3.16 (d)

Figure 3.16 (a): A view of monotypic *Prosopis juliflora* stand , Fig. 3.16(b): Blackbuck droppings in the low lying area in the Park, Fig. 3.16(c): Blackbuck herd droppings that facilitate spread of *P. juliflora*, Fig. 3.16(d): Low lying area on the fringes of Park and around supporting grasslands development during pre-monsoon season.





Fig. 3.16 (e)



Fig. 3.16 (f)



Fig. 3.16 (g)



Fig. 3.16 (h)



Fig. 3.16 (i)



Fig. 3.16 (j)

Figure 3.16(e): A view of Blackbuck herd in Velavadar Black Buck National Park, Fig. 3.16(f): A wide angle view of Blackbuck herd in *P.juliflora* dominated savannah, Fig. 3.16(g): A view of saline low lying area on the south of Velavadar Black Buck National Park, Fig. 3.16(h): Human-made water storage tank in Velavadar Black Buck National Park, Fig. 3.16(i): A view of *P.juliflora*, middle aged bush in unmanaged conditions, Fig. 3.16(j): Interaction of EIA team with Velavadar Black Buck National Park warden.



Fig. 3.16 (k)



Fig. 3.16 (l)



Fig. 3.16 (m)



Fig. 3.16 (n)



Fig. 3.16 (o)



Figure 3.16 (p)

Figure 3.16(k): Intersection 1 near Pipli; Fig. 3.16(l): Intersection 2 near Vejalaka; Fig. 3.16(m): Initial spread of *P.juliflora* near intersection 3; Fig. 3.16(n): A view of wetland near intersection 2; Fig. 3.16(o): A view of vegetation near intersection 4 ; Fig. 3.16(p): A view of natural occurrence of sarus crane in a marshy wetland along the crop field near intersection 5.





Analysis of existing flora and fauna (as described hereunder) indicate presence of threatened and endangered species of animals. Local availability (based on field visits and interactions with the inhabitants) for **each species of plant and animal has been indicated in each checklist which is an indicative of abundance and dominance of the existing species.**

### 3.8.2 Forest and Grassland Types in the Project Area

The vast diversity of habitats has led to the existence of a wide variety of species in the project site. **The project area belongs to the Biogeographic Zone-4. The Semi-arid: Biotic Province-4B Gujarat – Rajwada (GEER Foundation 2001). It has two Sub-biotic Provinces/Land regions as given below:**

| <b><u>Sub-Biotic Province</u></b> | <b><u>Ecosystem types</u></b>  |
|-----------------------------------|--|
| 4B1-Saurashtra Plateau            | Tropical dry deciduous forest-<br>Dry teak, dry savannah, dry grassland, <i>Acacia nilotica</i> forest   |
| 4B2- <i>Bhal</i>                  | Depositional saline plains with grassland, Saline-alkaline scrubs, <i>Prosopis</i> shrub lands, Wetlands |

**Based on standard classification of Forest types of India by Champion and Seth (1968), the following forest types exist in the region:**

| <b><u>Sub-group 5A Southern Tropical Dry Deciduous Forests</u></b>   |
|--|
| i. <b><u>Type 5/DS1- Dry deciduous scrub: Tree and shrub growth stunted</u></b>  |
| ii. <b><u>Type 5/DS2-Dry savannah forest: Open type forest with tree standing apart singly or in small groups or less heavy grass.</u></b>   |
| iii. <b><u>Type 5/DS4- Dry grassland: Dominated by annual species chiefly <i>Aristida</i>, <i>Aeluropus</i>, <i>Chloris</i>, <i>Eragrostis</i> and <i>Heteropogon</i></u></b>  |
| iv. <b><u>Type 5/E8- Saline-alkaline scrub savannah: Occasionally dominated by single tree species in patches with low height. The dominant species are <i>Acacia nilotica</i> and <i>Salvadora persica</i>.</u></b> |

The grasscover of the project site belongs to ***Sehima-Dichanthium* type (Dabadghao and Shankarnarayan 1973)**. UNESCO/UNEP/FAO (1979) identified Steppe formations in semi-arid climate (rainfall <200 mm/yr) (dominant species are ***Aerva*, *Aristida*, *Calligonum* and *Eragrostis***) and Dry savannah under 500 mm rainfall/yr with dominance of ***Cenchrus ciliaris*, *C. setigerus*, *Dichanthium annulatum*, *Lasiurus indicus*, *Panicum antidotale* and *P. turgidum***. These grasslands serve as habitat to most of the wild fauna and breeding ground to birds in addition to supporting domesticated livestock for fodder and grazing needs, and livelihood needs of the human beings. These grasslands are edphic climax resulted from continued biotic influences, such as, deforestation, grazing and burning.

The ***bhal* area** which also exists in the Velavadar Black Buck National Park has been colonized by exotic species ***Prosopis juliflora***. Thick covers of *P. juliflora* do not permit the growth of other species. Due to degradation of grasslands by *P. juliflora* (under unmanaged conditions), the



grassland flora is depleting. It has so naturalized that *P.juliflora* stands now appear as major forest type in the area. **No other species can compete with it in the environment of the area.**

Fringe areas of the Velavadar Black Buck National Park and adjacent regions are saline which support saline shrubby vegetation. The dominant species are *Aeluropus lagopoides*, *Capparis aphylla*, *Cressa cretica*, *Prosopis juliflora*, *Salvadora persica* and *Suaeda fruticosa* and a variety of grasses (**see Table in the succeeding pages**). *P. juliflora* has invaded these areas by suppressing the local flora. Most of the fringe zones around the Park, grazing land and wastelands in the semi-urban and urban regions are now thickly covered by *P.juliflora*.

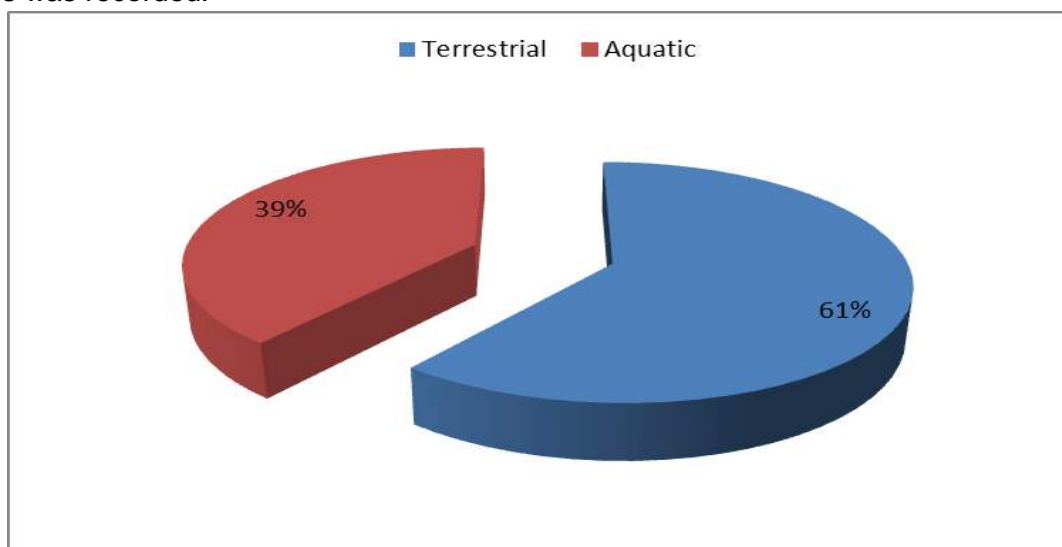
### 3.8.3 Wetlands along the study area

The inland wetlands in the area include ponds, canals, water-logged areas and lowlands like *Bhal*. These are solely fed by rain water and/or fresh water courses. The village ponds in addition to the above, mostly seasonal, play an important role in providing habitat to numerous resident and migratory birds/waterfowls. The list of the wetland along the Corridor of Impact and 500m from the proposed alignment on both sides along with the maps showing the wet land crossing the alignment are given in **Annexure II**. The tree growth at nearby these wetlands provides roosting and/or nesting sites to the resident waterfowls. Ponds and marshes in sub-urban and rural areas contribute as breeding site for the endangered **Indian sarus crane** (*Grus antigone*). *Digitaria*, *Nelumbo*, *Nymphaea*, *Panicum*, *Paspalum*, *Trapa* and *Typha* are the common aquatic plant species of these wetlands.

Reduction in aquatic area and aquatic vegetation has adversely affected the occurrence of the aquatic fauna in and around areas occurring in sub-urban and urban locations.

### 3.8.4 Taxonomic Diversity: Flora

During pre-monsoon season, while surveying the project specific area, no non-flowering plant species was recorded.



(Source: Field survey)

Figure 3.17: Taxonomic diversity of flora in the project area during pre-monsoon 2018



The life-form category-wise floral diversity of angiospermic species have been presented in **Table 3.18** to **Table 3.22** and **Figure 3.17** & **Figure 3.18**. Asteraceae, Fabaceae and Poaceae were recorded as dominant family. The floral angiospermic diversity (62 species) was dominated by grass species (27); the other species recorded are tree (13), shrub (09), herb (12) and parasitic angiosperm (01).

**Table 3.18: Tree species recorded in the study area during-pre-monsoon, 2018**

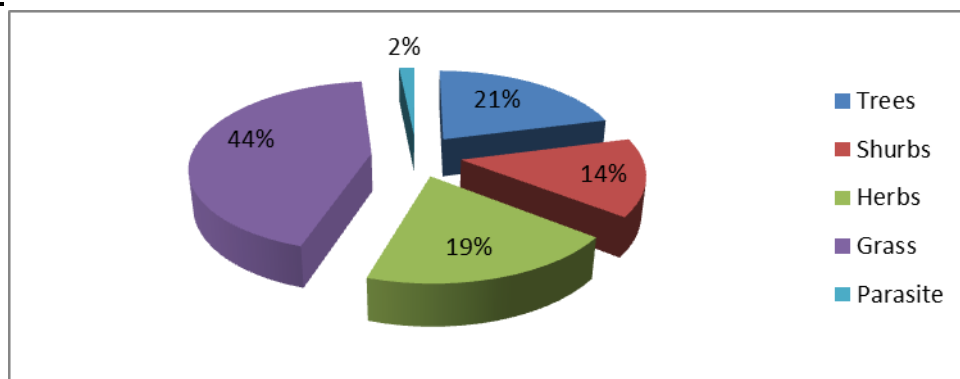
| Sl. No. | SCIENTIFIC NAME                                      | LOCAL/ENGLISH NAME | FAMILY         | LOCAL AVAILABILITY | IUCN CATEGORY |
|---------|--|--------------------|----------------|--------------------|---------------|
| 1.      | <i>Vachellia leucophloea</i>                         | Ronjh              | Fabaceae       | Abundant           | NA            |
| 2.      | <i>Acacia nilotica</i>                               | Babul              | Fabaceae       | Abundant           | NA            |
| 3.      | <i>Acacia tortilis</i> ( <i>Vachellia tortilis</i> ) | Babool             | Fabaceae       | Rare               | NA            |
| 4.      | <i>Ailanthus excelsa</i>                             | Maharukh           | Simaroubiaceae | Abundant           | NA            |
| 5.      | <i>Azadirachta indica</i>                            | Neem               | Meliaceae      | Common             | NA            |
| 6.      | <i>Phyllanthus emblica</i>                           | Amla               | Phyllanthaceae | Common             | NA            |
| 7.      | <i>Ficus benghalensis</i>                            | Bar                | Moraceae       | Rare               | NA            |
| 8.      | <i>Ficus religiosa</i>                               | Pipal              | Moraceae       | Common             | NA            |
| 9.      | <i>Tamarindus indica</i> (Planted)                   | Imli               | Fabaceae       | Common             | NA            |
| 10.     | <i>Tectona grandis</i> (Planted)                     | Sagaun             | Lamiaceae      | Very Common        | NA            |
| 11.     | <i>Terminalia chebula</i>                            | Harra              | Combretaceae   | Common             | NA            |
| 12.     | <i>Ziziphus sp</i>                                   | Ber                | Rhamnaceae     | Common             | NA            |
| 13.     | <i>Ziziphus xylopara</i>                             | Ghot               | Rhamnaceae     | Common             | NA            |

Source: Field survey

Rare=<20% of the total population, Common=20-50% of the total population, Abundant=50-70% of the total population, Very abundant=>70% of the total population

NA= not assessed yet for IUCN red list

**Note: The above listed species are not included in any schedule of Wild Life (Protection) Act, 1972.**



**Figure 3.18: Taxonomic diversity of flowering flora in the study area during pre-monsoon season, 2018**



Table 3.19: Shrub species recorded in the study area during pre-monsoon, 2018

| Sl. No. | SCIENTIFIC NAME           | LOCAL/ ENGLISH NAME | FAMILY        | LOCAL AVAILABILITY | IUCN STATUS |
|---------|---------------------------|---------------------|---------------|--------------------|-------------|
| 1.      | <i>Calotropis procera</i> | Madar               | Apocynaceae   | Very common        | NA          |
| 2.      | <i>Capparis aphylla</i>   | Tit                 | Capparaceae   | Common             | NA          |
| 3.      | <i>Cassia tora</i>        | Banar               | Fabaceae      | Abundant           | NA          |
| 4.      | <i>Lantana camara</i>     | Kur                 | Verbenaceae   | Abundant           | NA          |
| 5.      | <i>Prosopis juliflora</i> | Kikar               | Fabaceae      | Very Abundant      | NA          |
| 6.      | <i>Ricinus communis</i>   | Arandi              | Euphorbiaceae | Common             | NA          |
| 7.      | <i>Salvadora persica</i>  | Meswak              | Salvadoraceae | Common             | NA NF       |
| 8.      | <i>Suaeda fruticosa</i>   | -                   | Amaranthaceae | Common             | NA          |
| 9.      | <i>Zizyphus jujuba</i>    | Ber                 | Rhamnaceae    | Common             | NA          |

Source: Field survey

**Rare=<20% of the total population, Common=20-50% of the total population, Abundant=50-70% of the total population, Very abundant= >70% of the total population. NA= not assessed yet for IUCN red list; NA NF= Not assessed yet for IUCN Red List and not found in the catalogue of life**

**Note: The above listed species are not included in any schedule of Wild Life (Protection) Act, 1972.**

Table 3.20: Herb species recorded in the study area during pre-monsoon, 2018

| Sl. No. | SCIENTIFIC NAME                 | LOCAL/ ENGLISH NAME | FAMILY        | LOCAL AVAILABILITY | IUCN STATUS |
|---------|---------------------------------|---------------------|---------------|--------------------|-------------|
| 1.      | <i>Achyranthes aspera</i>       | Latjeera            | Amaranthaceae | Abundant           | NA          |
| 2.      | <i>Ageratum conyzoides</i>      | -                   | Asteraceae    | Very common        | NA          |
| 3.      | <i>Cyperus rotundus</i>         | Motha               | Cyperaceae    | Very common        | NA          |
| 4.      | <i>Datura stramonium</i>        | Datura              | Solanaceae    | Rare               | NA          |
| 5.      | <i>Euphorbia emodi</i>          | -                   | Euphorbiaceae | Common             | NA          |
| 6.      | <i>Euphorbia hirta</i>          | Dhwar               | Euphorbiaceae | Common             | NA          |
| 7.      | <i>Fimbristylis dichotoma</i>   | -                   | Cyperaceae    | Very common        | NA          |
| 8.      | <i>Medicago sp.</i>             | -                   | Fabaceae      | Common             | -           |
| 9.      | <i>Parthenium hysterophorus</i> | Gajar ghas          | Asteraceae    | Abundant           | NA          |
| 10.     | <i>Pycnus spp.</i>              | -                   | Cyperaceae    | Common             | -           |
| 11.     | <i>Sonchus asper</i>            | -                   | Asteraceae    | Very common        | NA          |
| 12.     | <i>Xanthium strumarium</i>      | Godhru              | Asteraceae    | Abundant           | NA          |

Source: Field survey

**Rare=<20% of the total population, Common=20-50% of the total population, Abundant=50-70% of the total population, Very abundant= >70% of the total population. NA= not assessed yet for IUCN red list**

**Note: The above listed species are not included in any schedule of Wild Life (Protection) Act, 1972.**



Table 3.21: Grass species recorded in the study area during pre-monsoon, 2018

| Sl. No. | SCIENTIFIC NAME                   | LOCAL/ ENGLISH NAME | FAMILY  | LOCAL AVAILABILITY | IUCN STATUS |
|---------|-----------------------------------|---------------------|---------|--------------------|-------------|
| 1.      | <i>Aeluropus lagopoides</i>       | Delo                | Poaceae | Common             | NA          |
| 2.      | <i>Agrostis spp.</i>              | -                   | Poaceae | Very common        | -           |
| 3.      | <i>Apluda mutica</i>              | Phuli               | Poaceae | Common             | NA          |
| 4.      | <i>Aristida setacea</i>           | Thani               | Poaceae | Rare               | NA          |
| 5.      | <i>Bothriochloa intermedia</i>    | -                   | Poaceae | Abundant           | NA          |
| 6.      | <i>Bothriochloa pertusa</i>       | -                   | Poaceae | Common             | NA          |
| 7.      | <i>Cenchrus ciliaris</i>          | -                   | Poaceae | Common             | NA          |
| 8.      | <i>Chloris virgata</i>            | Mindado             | Poaceae | Common             | NA          |
| 9.      | <i>Chrysopogon fulvus</i>         | Ghoriya             | Poaceae | Common             | NA          |
| 10.     | <i>Cynodon dactylon</i>           | Dub                 | Poaceae | Abundant           | NA          |
| 11.     | <i>Dactyloctenium aegyptium</i>   | Padu                | Poaceae | Very common        | NA          |
| 12.     | <i>Dichanthium annulatum</i>      | Kel/Jinjvo          | Poaceae | Very common        | NA          |
| 13.     | <i>Digitaria spp.</i>             | -                   | Poaceae | Very common        | -           |
| 14.     | <i>Eragrostis japonica</i>        | Dhundh              | Poaceae | Abundant           | NA          |
| 15.     | <i>Eragrostis tenella</i>         | Bhurbhuli           | Poaceae | Very common        | NA          |
| 16.     | <i>Heteropogon contortus</i>      | Kumariya            | Poaceae | Abundant           | NA          |
| 17.     | <i>Ischaemum rugosum</i>          | Ghavli              | Poaceae | Abundant           | NA          |
| 18.     | <i>Iseilema antheophoroides</i>   | Vardi               | Poaceae | Very common        | NA          |
| 19.     | <i>Iseilema laxum</i>             | Mushan              | Poaceae | Common             | NA          |
| 20.     | <i>Panicum spp.</i>               | -                   | Poaceae | Common             | -           |
| 21.     | <i>Saccharum spontaneum</i>       | Kans                | Poaceae | Common             | NA          |
| 22.     | <i>Setaria glauca</i>             | Kang                | Poaceae | Common             | NA          |
| 23.     | <i>Setaria parviflora</i>         | -                   | Poaceae | Common             | NA          |
| 24.     | <i>Sporobolus coromandelianus</i> | -                   | Poaceae | Common             | NA          |
| 25.     | <i>Sporobolus virginicus</i>      | Dharant             | Poaceae | Common             | NA          |
| 26.     | <i>Themeda quadrivalvis</i>       | -                   | Poaceae | Common             | NA          |
| 27.     | <i>Themeda triandra</i>           | Smeru               | Poaceae | Common             | NA          |

Source: Field survey

Rare=<20% of the total population, Common=20-50% of the total population, Abundant=50-70% of the total population, Very abundant= >70% of the total population  
NA= not assessed yet for IUCN red list

Note: The above listed species are not included in any schedule of Wild Life (Protection) Act, 1972.





Table 3.22: Parasitic species recorded in the study area during pre-monsoon, 2018

| SI. No. | SCIENTIFIC NAME        | LOCAL/ ENGLISH NAME | FAMILY         | LOCAL AVAILABILITY | IUCN STATUS |
|---------|------------------------|---------------------|----------------|--------------------|-------------|
| 1.      | <i>Cuscuta reflexa</i> | Amarbel             | Convolvulaceae | Common             | NA          |

Source: Field survey

Common=20-50% of the total population,

NA= not assessed yet for IUCN red list

**Note: The above listed species is not included in any schedule of Wild Life (Protection) Act, 1972.**

### 3.8.4.1 Economically-Important Plant Species

Extensive grasslands, locally called as *Bhal* and scrub forest are main habitats used by the wildlife and the local people for their socio-economic needs and domesticated animals. Dry deciduous and scrub forests consisting of thorny species of *Acacia*, *Prosopis* and *Zizyphus* intermixed with the grasslands have always made life easy for wildlife and the local people before the beginning of change in the land use pattern due to increased agricultural activities and economic development needs.

During the field survey, plant species of economic importance in the area, were recorded. These plants are used by local people for various purposes in their day to day life. These species include timber, firewood, fruit-yielding, fodder, medicinal and multi-purpose species.

A total of 15 species of economically-important plants were recorded in the project area. These include 09 tree species, 03 shrub species, 01 species of climber and 02 herbs which has been presented in **Table 3.23**. The percent contribution of these species is shown in **Figure 3.19**.

Table 3.23: Economically-important plant species recorded in the project area during pre-monsoon, 2018

| SI. No.                 | SCIENTIFIC NAME                | LOCAL/ENGLISH NAME | FAMILY         | ECONOMIC USE** |
|-------------------------|--------------------------------|--------------------|----------------|----------------|
| <b>(A) TREE SPECIES</b> |                                |                    |                |                |
| 1.                      | <i>Vachellia leucophloea</i>   | Ronjh              | Fabaceae       | FW             |
| 2.                      | <i>A. nilotica</i>             | Babul              | Fabaceae       | T,FW           |
| 3.                      | <i>Ailanthus excelsa</i>       | Maharukh           | Simaroubaceae  | FO             |
| 4.                      | <i>Azadirachta indica</i>      | Neem               | Meliaceae      | MP             |
| 5.                      | <i>Phyllanthus emblica</i>     | Amla               | Phyllanthaceae | FrE, Me        |
| 6.                      | <i>Eucalyptus tereticornis</i> | Eucalyptus         | Myrtaceae      | FW             |
| 7.                      | <i>Tectona grandis</i>         | Sagwan             | Verbenaceae    | T              |
| 8.                      | <i>Ficus benghalensis</i>      | Bad                | Moraceae       | Me             |
| 9.                      | <i>Terminalia chebula</i>      | Harra              | Combretaceae   | Me             |



| (B) SHURB SPECIES      |                             |          |                |     |
|------------------------|-----------------------------|----------|----------------|-----|
| 1.                     | <i>Calotropis procera</i>   | Aak      | Apocynaceae    | R   |
| 2.                     | <i>Salvadora persica</i>    | Meswak   | Salvadoraceae  | MP  |
| 3.                     | <i>Zizyphus jujuba</i>      | Ber      | Rhamnaceae     | FrE |
| (C) CLIMBER SPECIES    |                             |          |                |     |
| 1.                     | <i>Tinospora cordifolia</i> | Gurj     | Menispermaceae | Me  |
| (D) HERBACEOUS SPECIES |                             |          |                |     |
| 1.                     | <i>Achyranthes aspera</i>   | Gathiya  | Amranthaceae   | Me  |
| 2.                     | <i>Asparagus filicinus</i>  | Satavari | Asparagaceae   | Me  |

\*Source: Field survey

\*\*Economic Use: FW= Firewood, T=Timber, FO=Fodder, R= Religious, Me=Medicinal, FrE= Fruit edible, MP=Multi-purpose

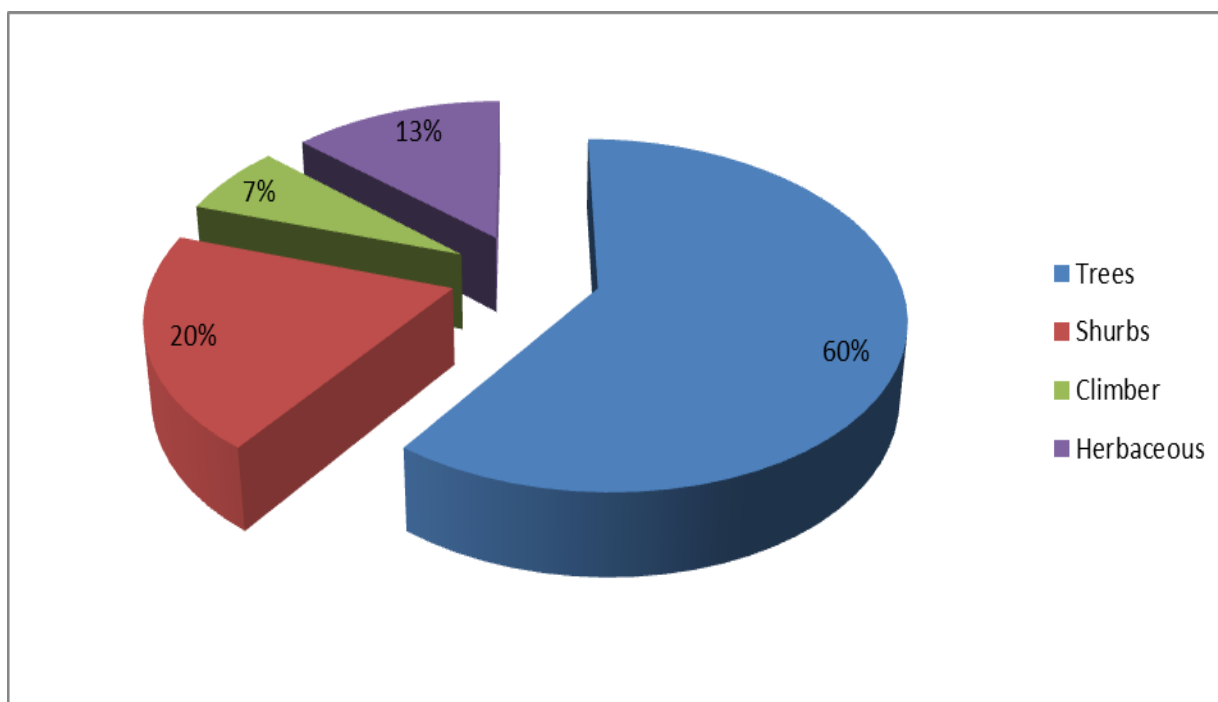
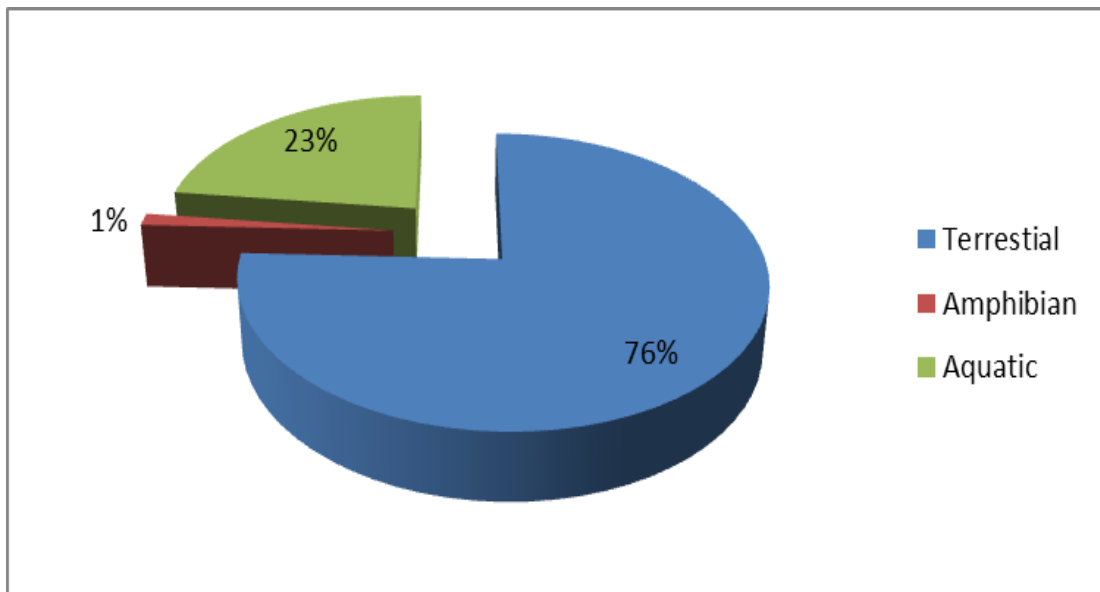


Figure 3.19: Taxonomic diversity of angiospermic economic species in the project area during pre-monsoon, 2018

### 3.8.5 Taxonomic Diversity: Fauna

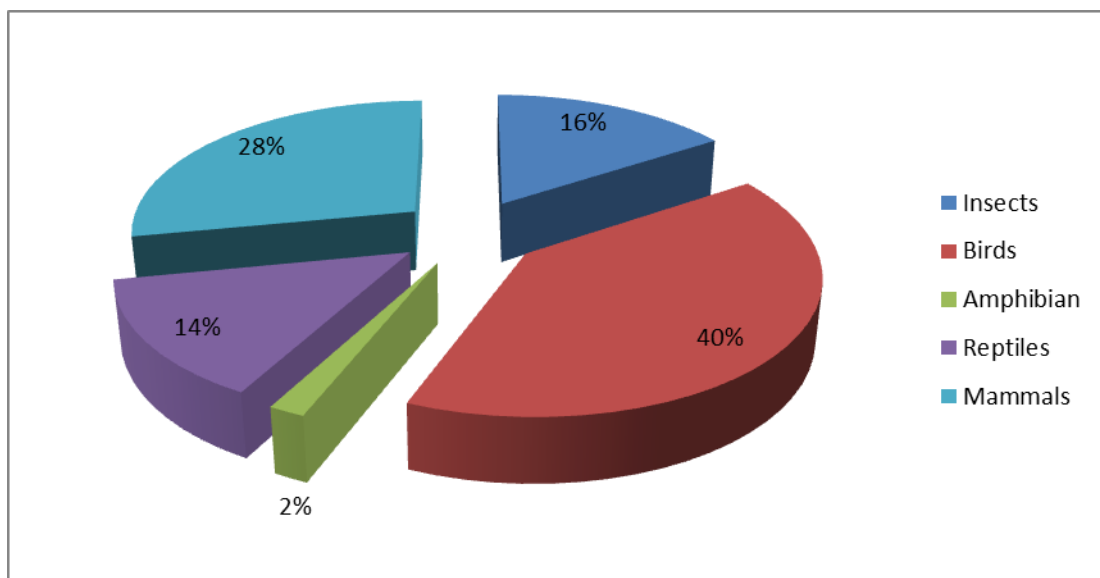
During pre-monsoon season, a total of 74 faunal species were reported in the project site. These include 56 terrestrial species, 01 amphibian and 17 aquatic species. **Figure 3.20** shows the percentage of the terrestrial, aquatic and amphibian species in the project area.



**Figure 3.20: Taxonomic diversity of total fauna in the project area during pre-monsoon, 2018**

The faunal species recorded in the project area include: insect 09 species, amphibian 01 species, reptile 08 species, avifauna 23 species and mammal (primate) 16 species which has been presented from **Table 3.24 to 3.27**.

The percentage contribution of different species dominated by birds, followed by mammals and reptiles, has been shown in **Figure 3.21**.



**Figure 3.21: Taxonomic diversity of terrestrial fauna during pre-monsoon, 2018**



Table 3.24: Insect fauna recorded in the project area during pre-monsoon, 2018

| Sl. No | LOCAL/ ENGLISH NAME | SCIENTIFIC NAME                | LOCAL AVAILABILITY | IUCN STATUS |
|--------|---------------------|--------------------------------|--------------------|-------------|
| 1.     | Grasshopper         | <i>Acrida sp.</i>              | Common             | NA          |
| 2.     | Giant honeybee      | <i>Apis dorsata</i>            | Common             | NA          |
| 3.     | Honey bee           | <i>Apis cerana indica</i>      | Common             | NA          |
| 4.     | Ant                 | <i>Camponotus sp.</i>          | Abundant           | NA          |
| 5.     | Locust              | <i>Gastrimargus marmoratus</i> | Common             | NA          |
| 6.     | Cricket             | <i>Gryllus domesticus</i>      | Rare               | NA          |
| 7.     | Spider              | <i>Pholcus phalangioides</i>   | Common             | NA          |
| 8.     | Moth                | <i>Spoladea recurvalis</i>     | Common             | NA          |
| 9.     | Scorpion            | <i>Hottentotta tamulus</i>     | Rare               | NA          |

Source: Field survey

Rare=<20% of the total population, Common=20-50% of the total population, Abundant=50-70% of the total population

Table 3.25: Avifauna (bird species) recorded in the project area during pre-monsoon, 2018

| Sl. No | LOCAL/ ENGLISH NAME   | SCIENTIFIC NAME                 | LOCAL AVAILABILITY | WLA SCHEDULE * | IUCN STATUS |
|--------|-----------------------|---------------------------------|--------------------|----------------|-------------|
| 1.     | Common Myna           | <i>Acridotheres tristis</i>     | Common             | IV             | LC          |
| 2.     | Common Kingfisher     | <i>Alcedo atthis</i>            | Rare               | -              | LC          |
| 3.     | Pale (Pallid) Harrier | <i>Circus macrourus</i>         | Common             | I              | NT          |
| 4.     | Montagu's Harrier     | <i>Circus pygargus</i>          | Common             | I              | LC          |
| 5.     | Western marsh Harrier | <i>Circus aeruginosus</i>       | Common             | I              | LC          |
| 6.     | Hen Harrier           | <i>Circus cyaneus</i>           | Common             | I              | LC          |
| 7.     | Blue Rock pigeon      | <i>Columba livia</i>            | Rare               | IV             | LC          |
| 8.     | Crow                  | <i>Corvus splendens</i>         | Common             | IV             | LC          |
| 9.     | Bagula                | <i>Egretta garzetta</i>         | Common             | IV             | LC          |
| 10.    | Koyal                 | <i>Eudynamys scolopaceus</i>    | Rare               | IV             | LC          |
| 11.    | Amur falcon           | <i>Falco amurensis</i>          | Common             | I              | LC          |
| 12.    | Falcon                | <i>Falco peregrinus</i>         | Common             | I – P - III    | LC          |
| 13.    | Titar                 | <i>Francolinus pondiceranus</i> | Rare               | IV             | LC          |
| 14.    | Jal murgi             | <i>Gallinus chloropus</i>       | Common             | IV             | NA          |
| 15.    | Sarus crane           | <i>Grus antigone</i>            | Common             | IV             | VU          |
| 16.    | Common crane          | <i>Grus grus</i>                | Rare               | IV             | LC          |
| 17.    | Cuckoo                | <i>Hierococcyx varius</i>       | Rare               | IV             | NA          |
| 18.    | Cheel (Black kite)    | <i>Milvus migrans</i>           | Rare               | I              | LC          |
| 19.    | Sparrow               | <i>Passer domesticus</i>        | Common             | IV             | LC          |
| 20.    | Bulbul                | <i>Pericrocotus cinnamomeus</i> | Common             | IV             | LC          |



|     |                 |                                       |        |           |    |
|-----|-----------------|---------------------------------------|--------|-----------|----|
| 21. | Baya            | <i>Ploceus philippinus</i>            | Common | IV        | LC |
| 22. | Parrot          | <i>Psittacula krameri manillensis</i> | Common | IV        | NA |
| 23. | Lesser Florican | <i>Sypheotides indicus</i>            | Common | I – P III | EN |

**Field survey**

NA=Not Assessed; NT=Near threatened; LC= Least Concern; VU=Vulnerable; EN=Endangered

Rare=<20% of the total population, Common=20-50% of the total population

**Table 3.26: Amphibian and reptiles recorded in the project area during pre-monsoon 2018**

| SI. No.              | LOCAL/ENGLISH NAME                     | SCIENTIFIC NAME               | LOCAL AVAILABILITY | WLA SCHEDULE | IUCN STATUS |
|----------------------|--|-------------------------------|--------------------|--------------|-------------|
| <b>(A) AMPHIBIAN</b> |  |                               |                    |              |             |
| 1.                   | Frog                                   | <i>Rana tigerina</i>          | Common             | IV           | LC          |
| <b>(B) REPTILES</b>  |  |                               |                    |              |             |
| 1.                   | Krait                                  | <i>Bungarus caeruleus</i>     | Common             | IV           | LC          |
| 2.                   | Garden lizard                          | <i>Calotes versicolor</i>     | Common             | II – P II    | NA          |
| 3.                   | Cobra                                  | <i>Naja naja</i>              | Common             | II           | VU          |
| 4.                   | Indian rat snake (Dhaman)              | <i>Ptyas mucosa</i>           | Common             | II – P II    | LC          |
| 5.                   | Common Lizard                          | <i>Hemidactylus frenatus</i>  | Abundant           | IV           | LC          |
| 6.                   | Pit viper                              | <i>Trimeresurus gramineus</i> | Rare               | IV           | LC          |
| 7.                   | Monitor lizard (Common Indian Monitor) | <i>Varanus bengalensis</i>    | Common             | II           | LC          |
| 8.                   | Indian mud turtle                      | <i>Lissemys punctata</i>      | Common             | IV           | LC          |

**\*Source: Field survey**

NA=Not Assessed; LC= Least Concern; VU=Vulnerable; CR = Critically endangered  
Rare=<20% of the total population, Common=20-50% of the total population, Abundant=50-70% of the total population

A list of Mammals either seen or known to occur in the project area is presented in **Table 4.27**.

**Table 3.27: Mammal species recorded in the project area during pre-monsoon 2018**

| SI. No. | LOCAL/ ENGLISH NAME | SCIENTIFIC NAME                | LOCAL AVAILABILITY | WLA Schedule* | IUCN STATUS |
|---------|---------------------|--------------------------------|--------------------|---------------|-------------|
| 1.      | Blackbuck           | <i>Antelope cervicapra</i>     | Common             | I - PI        | NT          |
| 2.      | Nilgai              | <i>Boselaphus tragocamelus</i> | Common             | III           | LC          |
| 3.      | Jackal              | <i>Canis aureus</i>            | Rare               | II - PI       | LC          |
| 4.      | Wolf                | <i>Canis lupus pallipes</i>    | Rare               | I - PI        | NA          |
| 5.      | Jungle cat          | <i>Felis chaus</i>             | Rare               | II            | LC          |
| 6.      | Desert cat          | <i>Felis lybica</i>            | Common             | I             | NA NF       |





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|     |   |                                 |          |           |       |
|-----|---|---------------------------------|----------|-----------|-------|
| 7.  | Five striped Khiscoli (Gilahari/squirrel) | <i>Funambulus pennantii</i>     | Abundant | IV        | LC    |
| 8.  | Nevla/mongoose                            | <i>Herpestes edwardsii</i>      | Common   | II – P II | LC    |
| 9.  | Stripped Hyena                            | <i>Hyaena hyaena</i>            | Rare     | III       | NA    |
| 10. | Desert hare                               | <i>Lepus nigricollis</i>        | Common   | IV        | LC    |
| 11. | Desert gerbil                             | <i>Meriones hurrianus</i>       | Common   | IV        | NA NF |
| 12. | Rat                                       | <i>Rattus rattus</i>            | Common   | V         | NA    |
| 13. | Chuchundar                                | <i>Suncus murinus sindensis</i> | Common   | -         | LC    |
| 14. | Wild boar                                 | <i>Sus scrofa</i>               | Common   | III       | LC    |
| 15. | Indian gerbil                             | <i>Tatera indica</i>            | Common   | -         | LC    |
| 16. | Indian Fox                                | <i>Vulpes bengalensis</i>       | Common   | II – P I  | LC    |

Source: Field survey

NA=Not Assessed; NF=Not Found in the IUCN catalogue; LC= Least Concern; VU=Vulnerable; EN=Endangered; NT = Near threatened  
Rare=<20% of the total population, Common=20-50% of the total population, Abundant=50-70% of the total population, Very abundant= >70% of the total population.

### 3.8.5.1 Aquatic Ecology

A total of 38 plant species were recorded inhabiting aquatic sites. These include 16 species of phytoplankton and 22 species of other plant species and have been presented in **Table 3.28**.

**Table 3.28: Aquatic plants and phytoplankton species reported during pre-monsoon, 2018**

| SI. No. | AQUATIC PLANT SPECIES          | LOCAL AVAILABILITY | S. No. | PHYTOPLANKTON SPECIES    |
|---------|--------------------------------|--------------------|--------|--------------------------|
| 1.      | <i>Acorus calamus</i>          | Common             | 1.     | <i>Anabaena</i> spp.     |
| 2.      | <i>Ammannia baccifera</i>      | Common             | 2.     | <i>Anacyustis</i> spp.   |
| 3.      | <i>Ceratophyllum</i> sp.       | Very Common        | 3.     | <i>Arthrospira</i> spp.  |
| 4.      | <i>Cyperus articulatus</i>     | Very common        | 4.     | <i>Bacillaria</i> spp.   |
| 5.      | <i>Cyperus</i> spp.            | Very Common        | 5.     | <i>Chara</i> spp.        |
| 6.      | <i>Digitaria</i> spp.          | Abundant           | 6.     | <i>Chlorella</i> spp.    |
| 7.      | <i>Eragrostis stenophylla</i>  | Abundant           | 7.     | <i>Chlorococcum</i> spp. |
| 8.      | <i>Eragrostiella nordoides</i> | Abundant           | 8.     | <i>Cladophora</i> spp.   |
| 9.      | <i>Hydrilla</i> sp.            | Abundant           | 9.     | <i>Cymbella</i> spp.     |
| 10.     | <i>Ipomoea</i> sp.             | Rare               | 10.    | <i>Desmidium</i> spp.    |
| 11.     | <i>Jussiaea</i> sp.            | Rare               | 11.    | <i>Diatoma</i> spp.      |
| 12.     | <i>Limnophila chinensis</i>    | Common             | 12.    | <i>Euglena</i> spp.      |
| 13.     | <i>Melastoma</i> spp.          | Common             | 13.    | <i>Fragilaria</i> spp.   |
| 14.     | <i>Nelumbo</i> sp.             | Rare               | 14.    | <i>Lelothrix</i> spp.    |
| 15.     | <i>Nymphaca</i> sp.            | Rare               | 15.    | <i>Nostoc</i> spp.       |
| 16.     | <i>Panicum humile</i>          | Abundant           | 16.    | <i>Oscillatoria</i> spp. |
| 17.     | <i>Paspalum</i> spp.           | Common             |        |                          |



|     |                               |        |  |  |
|-----|-------------------------------|--------|--|--|
| 18. | <i>Polygonum sp.</i>          | Common |  |  |
| 19. | <i>Potamogeton pectinatus</i> | Common |  |  |
| 20. | <i>Sesbania sp.</i>           | Rare   |  |  |
| 21. | <i>Trapa sp.</i>              | Rare   |  |  |
| 22. | <i>Typha angustifolia</i>     | Common |  |  |

Source: Field survey

The taxonomic diversity of fauna in the project area includes zooplanktons 07 species, annelid 01 species and fishes 9 species (Table 3.29 and Table 3.30).

**Table 3.29: Aquatic fauna recorded in the project area during pre-monsoon season, 2018**

| S. No. | GROUP       | SPECIES                    |
|--------|-------------|----------------------------|
| 1      | Zooplankton | <i>Bosmina</i> spp.        |
|        |             | <i>Cypris</i> spp.         |
|        |             | <i>Daphnia</i> spp.        |
|        |             | <i>Euglaena</i> spp.       |
|        |             | <i>Filinia</i> spp.        |
|        |             | <i>Paramecium caudatum</i> |
|        |             | <i>Vorticella</i> sp.      |
| 2.     | Annelida    | <i>Pheritima posthuma</i>  |

Source: Field Survey

Rare=<20% of the total population, Common=20-50% of the total population, Abundant=50- 70% of the total population

**Note: The above listed species are not included in any schedule of Wild Life (Protection) Act, 1972.**

### 3.8.5.1.1 Fish Diversity

The important commercial fish species in the water bodies are *Cirrhinus mrigala*, *Catla catla* and *Labeo rohita*. However, fishing is prohibited during rainy season due to breeding period of fishes.

**Table 3.30: Ichthyofauna (fish species) reported in the project area during pre-monsoon season 2018**

| Sl. No. | LOCAL/ ENGLISH NAME | SCIENTIFIC NAME           | LOCAL AVAILABILITY | IUCN STATUS |
|---------|---------------------|---------------------------|--------------------|-------------|
| 1.      | Catla               | <i>Catla catla</i>        | Common             | NA          |
| 2.      | Sol                 | <i>Channa striatus</i>    | Rare               | LC          |
| 3.      | Mrigal              | <i>Cirrhinus mrigala</i>  | Common             | NA          |
| 4.      | Magur               | <i>Clarias batrachus</i>  | Very common        | NA          |
| 5.      | Common Carp         | <i>Cyprinus carpio</i>    | Common             | VU          |
| 6.      | Rohu                | <i>Labeo rohita</i>       | Abundant           | LC          |
| 7.      | Chitala             | <i>Notopterus chitala</i> | Very Common        | NT          |
| 8.      | Kotra               | <i>Punctius sarana</i>    | Common             | NA          |
| 9.      | Kotri               | <i>Punctius sophore</i>   | Common             | NA          |

Source: Field Survey



Rare=<20% of the total population, Common=20-50% of the total population, Abundant=50- 70% of the total population

NA= not assessed yet for IUCN red list; LC= Least concern; VU=Vulnerable; NT=Near threatened.

**Note: The above listed species are not included in any schedule of Wild Life (Protection) Act, 1972.**

### 3.8.6 Tree Cutting

The proposed alignment is passing mainly through agricultural lands, yet some trees are falling under the proposed alignment. There are approximately 4478 no of trees recorded within RoW. The detailed tree inventory along with the species that are falling along the alignment has been attached as **Annexure IX**. The common trees/species along the alignment were *Vachellia leucophloea* (Ronjh), *Acacia nilotica* (Babul), *Acacia tortilis* (*Vachellia tortilis*) (Babool), *Ailanthus excels* (Maharukh), *Azadirachta indica* (Neem), *Phyllanthus emblica* (Amla) etc. The removal of these trees and the loss of vegetation cover will have some effect on local ecological balance, such as the disruption of habitat for small birds, mammals, etc., that will be forced to migrate to other areas. With the addition of trees and shrubs, following re-forestation, the short term impact of construction is expected to be reversed over the long term. There is no endangered species going to be affected by the project.

### 3.8.7 References (Literature Consulted)

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### 3.9 NATIONAL PARK/WILDLIFE SANCTUARY/ECO SENSITIVE ZONE

The proposed project does not pass through any notified National Park or Wild Life Sanctuary. Velavadar Black Buck National Park and its Eco- Sensitive Zone (ESZ) is away from the end point of the alignment (The letter from ACF regarding the distance from the alignment to the Velavadar National Park have been attached in **Annexure - XIII**).

#### 3.9.1 Brief about Velavadar Black Buck National Park

The Velavadar Black Buck National Park (VNP) is the only protected area for conservation of Blackbuck in India which represents tropical grassland prominently including reserved forest in adjoining areas, harbour the largest concentration of Blackbuck. It is now also recognized as habitat for largest population of diurnal migratory superhunter Harrier species in the world during winter season, and for one of the largest breeding populations of Lesser Floricane, an endangered bird, in monsoon. On the southern side, in semi-arid conditions, the inundation of sea - water during monsoon from the Gulf of Khambhat creates habitats, on which various fauna of the VNP depend. The VNP has been classified as 4B Gujarat- Rajwada biotic province of semi-arid bio-geographical zone.



The VNP has four distinct habitats- grassland, shrub land, saline and high tidal lands. *Prosopis juliflora* is the dominant shrubby growth in the Park. It has acquired the habit of under tree on account of pruning operations, thus, serves as shade species to Blackbuck. The Bluebull and Blackbuck feed on *P. juliflora* pods during winter and summer seasons, and disperse its seeds in the Park areas through drops. Thus, saline edaphic conditions together with biological dispersal of seeds facilitate spread and survival of *P. juliflora*.

The Park has diversity of tall and short grass species that support diversity of fauna. Blackbuck, Hyana, Wolf, Fox, Jackal, Jungle cat, Wild boar, Hare, Rodent, Harriers, Lesser florican, Sarus crane, Falcon, Locust, Snakes and Lizard are major fauna in the Park.

### 3.10 SOCIO-ECONOMIC PROFILE OF THE PROJECT AREAS

#### 3.10.1 Introduction

The primary purpose of socio-economic analysis is to provide an overview of the State's, socio-economic status and the relative status of the Project Influence Area (PIA) within the State

The project lies between chainage KM. 0.000 from the Sardar Patel ring road passing through the outskirts of Ahmedabad to chainage KM 109.019 at Adhelai village of Bhavnagar Districts of Gujarat State.

This section presents the socio economic profile of Gujarat, the Project Influence State, and Districts of Ahmedabad and Bhavnagar, which comprises the Project Influence Area (PIA) of the proposed expressway.

#### 3.10.2 Project Influence Districts

##### ➤ Ahmedabad District

Ahmedabad also known as Amdavad (Gujarati pronunciation) is the largest city and former capital of Gujarat, which is a state in India. It is the administrative headquarters of the Ahmedabad district and the seat of the Gujarat High Court. With a population of more than 6.3 million and an extended population of 7.8 million, it is the sixth largest city and seventh largest metropolitan area of India. Ahmedabad is located on the banks of the Sabarmati River, 30 km (19 mi) from the state capital Gandhinagar, which is its twin city.



Ahmedabad has emerged as an important economic and industrial hub in India. It is the second largest producer of cotton in India, and its stock exchange is the country's second oldest. Cricket is a popular sport in Ahmedabad, which houses the 54,000-seat Sardar Patel Stadium. The effects of liberalisation of the Indian economy have energised the city's economy towards tertiary sector activities such as commerce, communication and construction. Ahmedabad's increasing population has resulted in an increase in the construction and housing industries resulting in recent development of skyscrapers.





In 2010, it was ranked third in Forbes's list of fastest growing cities of the decade. In 2012, The Times of India chose Ahmedabad as the best city to live in in India

Ahmedabad has been selected as one of the hundred Indian cities to be developed as a smart city under PM Narendra Modi's flagship Smart Cities Mission.

### ➤ **Bhavnagar District**

Bhavnagar is a city in the Bhavnagar district of the Saurashtra region of the Gujarat state of India. It was founded in 1724 by Bhavsinhji Gohil (1703–1764). It was the capital of Bhavnagar State, which was a princely state before it was merged into the Indian Union in 1948. It is now the administrative headquarter of the Bhavnagar district. Bhavnagar is the fifth largest city of Gujarat state after Ahmedabad, Surat, Vadodara and Rajkot.

Bhavnagar is situated 198 km from the state capital Gandhinagar and to the west of the Gulf of Khambhat. It has always been an important city for trade with many large and small scale industries along with the world's largest ship breaking yard (Alang) located 50 km away. Palitana Jain temples, which are important holy places for Jains, are situated 56 km away, and Velavadar Black Buck National Park, home to endangered species of wolves, antelope, and blackbucks, is situated 42 km away.



As of 2011 India census, Bhavnagar had a population of 593,768. Bhavnagar has an average literacy rate of 86%, higher than the national average of 59.5%; with male literacy of 91% and female literacy of 80%.

### **3.10.3 Demographic and Socio Economic Characteristics**

#### **3.10.3.1 Population**

The population of Gujarat State was 60,383,628, according to the 2011 census data. The population density is 308 km<sup>-2</sup> (797.6/sq mi), lower than other Indian states. As per the census of 2011, the state has a sex ratio of 918 girls for every 1000 boys, one of the lowest (ranked 24) amongst the 29 states in India.

While Gujarati speakers constitute a majority of Gujarat's population, the metropolitan areas of Ahmedabad and Surat are cosmopolitan, with numerous other ethnic and language groups. Marwaris and Biharis compose large minorities of economic migrants; smaller communities of Nepalese, Portuguese, South Koreans, Tamils, Odias, Telugus, Assamese, Bengali, Anglo-



Indians, Armenians, Greeks, Jews, Tibetans, Maharashtrians, Kannadigas, Konkanis, Malayalees, Punjabis, and Parsis also live in the area [citation needed]. The South Korean community traditionally worked in the local tanning industry and ran restaurants. Sindhi presence is traditionally important here following the loss of their province post-Partition.

### 3.10.3.2 Socio-economic characteristics of the population area

The proposed project passes through two districts of Gujarat i.e. Ahmedabad and Bhavnagar. The demographic profile and socio economic status of the people in the project affected districts and state as per census 2011 have been presented in **Table 3.31**.

**Table 3.31: Demographic Profile**

|                                   | Gujarat    | Ahmedabad | Bhavnagar |
|-----------------------------------|------------|-----------|-----------|
| Total Population                  | 60,439,692 | 7,214,225 | 2,880,365 |
| Rural Population                  | 34694609   | 1151178   | 1697964   |
| Urban Population                  | 25745083   | 6063047   | 1182401   |
| Male                              | 31,491,260 | 3,788,051 | 1,490,201 |
| Female                            | 28,948,432 | 3,426,174 | 1,390,164 |
| Gender Ratio                      | 920        | 904       | 933       |
| SC Population                     | 4074447    | 759483    | 157034    |
| % SC                              | 6.74       | 10.53     | 5.45      |
| ST Population                     | 8917174    | 89138     | 9110      |
| % ST                              | 14.75      | 1.24      | 0.32      |
| Density of Population(per sq. Km) | 258        | 890       | 287       |

(Source: Census of India, 2011)

### 3.10.3.3 Population Growth and Urbanization

In the state, decadal growth of 19.20% in 2011 is more than the all-India average of 17.64%. Gujarat's population more than doubled between 1951 and 1991 by adding 25.05 million people to reach 41.3 million residents in 1991; the population stood at 60.38 million by 2011.

Urban population was about 14.24 million in 1991 and about 18.93 million in 2001 which constitutes about 37.36 per cent of the total population. The decadal growth of urban population was 32.94 per cent during 1991 – 2001. **Table 3.32** shows the population growth trends in Gujarat.

**Table 3.32: Population Growth in Gujarat**

| Census | Population | % + / - |
|--------|------------|---------|
| 1951   | 16,263,000 | -       |
| 1961   | 20,633,000 | 26.90%  |
| 1971   | 26,697,000 | 29.40%  |
| 1981   | 34,086,000 | 27.70%  |
| 1991   | 41,310,000 | 21.20%  |



|      |            |        |
|------|------------|--------|
| 2001 | 50,671,000 | 22.70% |
| 2011 | 60,383,628 | 19.20% |

Source: Census of India 2011

### 3.10.4 State's Economy

Gujarat is located on the western coast of India and has the longest coastline of 1,600 km in the country. Gujarat is one of the high growth states in the country. Average annual Gross State Domestic Product (GSDP) growth rate of Gujarat from 2004-05 to 2015-16 was 12.02 per cent. Gujarat has achieved the distinction of being one of the most industrially developed states and contributes about a quarter to India's goods exports.

There are 13 major industry groups that together account for around 82.05 per cent of total factories, 95.85 per cent of total fixed capital investment, 90.09 per cent of the value of output and 93.21 per cent of value addition in Gujarat's industrial economy.

Gujarat is a leader in industrial sectors such as chemicals, petrochemicals, dairy, drugs and pharmaceuticals, cement and ceramics, gems and jewellery, textiles and engineering. The industrial sector comprises over 800 large industries and more than 453,339 micro, small and medium industries. As of December 2015, Gujarat ranked second in the production of crude oil (onshore) in India. It accounts for around 72 per cent of the world's share of processed diamonds and more than 80 per cent of diamonds processed in India.

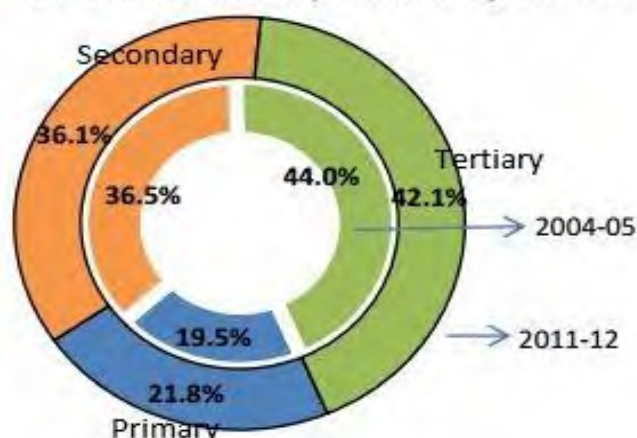
Gujarat has achieved the distinction of being one of the most industrially developed states. Accounting for five per cent of the total Indian population, contributing about a quarter to India's goods exports. The state ranks first in terms of total area covered under SEZs in India. It is also a leading SEZ state with the highest geographical area of 29,423.9 hectares under SEZ development after independence, the state was managed as a democratic socialist welfare economy. From the 1990s, liberalisation of the mixed economy allowed onerous restrictions against capitalism and foreign direct investment to be lightened, leading to economic expansion and an increase in employment. In the fiscal year 2007–2008, the nominal gross state domestic product (GSDP) was 1,624 billion (US\$24 billion).

#### 3.10.4.1 Sectoral Composition of State Income

Indian economy is classified in three sectors — Agriculture and allied, Industry and Services. Agriculture sector includes Agriculture (Agriculture proper & Livestock), Forestry & Logging, Fishing and related activities. Industry includes Manufacturing (Registered & Unregistered), Electricity, Gas, Water supply, and Construction. Services sector includes Trade, repair, hotels and restaurants, Transport, storage, communication & services related to broadcasting, Financial, real estate etc. At previous methodology, composition of Agriculture & allied, Industry, and Services sector was 51.81%, 14.16%, and 33.25%, respectively at current prices in 1950-51. Share of Agriculture & allied sector has declined at 18.20% in 2013-14. Share of Services sector has improved to 57.03%. Share of Industry sector has also increased to 24.77%. **Figure 3.22** shows the sectoral composition of State Income and trend line of NSDP growth.



Exhibit 1: Sectoral Composition of Gujarat GSDP



Source: Gujarat FRBM, 2013-14

Figure 3.22: Sectoral Composition of State Income

#### 3.10.4.2 The Per Capita Income

The Per Capita Income (i.e. Per Capita NSDP) at factor cost at constant (2004-05) prices has been estimated at Rs. 61220 in 2012-13 as against Rs. 57447 in 2011-12, registering a growth of 6.6 percent during the year. The Per Capita Income at current prices has been estimated at Rs. 96976 in 2012-13 as against Rs. 87175 in 2011-12, showing an increase of 11.2 percent during the year. Details of per capita income have been presented in **Table 3.33**.

Table 3.33: Per Capita Income

| Year    | Per Capita Income | Percentage change in Per Capita Income over previous year |
|---------|-------------------|---|
| 2011-12 | 87175             | -   |
| 2012-13 | 96976             | 11.2  |

#### 3.8.4.3 Growth Trends-State Income

Gujarat has recorded the highest trend growth rate of 8.2 per cent of per capita income (PCI) during 2004-2013 amid high income states, according to a recently concluded study by apex industry body ASSOCHAM.

With a median value of 12.02 per cent of nominal gross domestic product (GDP) between FY 2006 and FY 2012, Gujarat has emerged as a leader amid high income states, while national median value of nominal GDP remained at 8.37 per cent.

#### 3.10.4.4 Work Participation Ratio

**Table 3.34** indicates the total workers (main and marginal) in Gujarat according to Census 2011. Compared to 2001 Census, a decrease of 0.9% is observed in WPR. The highest WPR is Tapi (55.9%) and the lowest in Ahmedabad (36%). Among males the Work Participation rate is 57.2%. In 2001 the same was 54.9%. Highest Male Work Participation Rate is observed in Surat (63%) and the lowest in Banas Kantha 51.9%).



Among females the work participation rate is 23.4%. In 2001, the same was 27.9%. Highest Female Work Participation Rate is observed in Tapi (49.4%) and the lowest in Ahmedabad (13.6%).

**Table 3.34: Total Workers Main and Marginal**

| Total Working and Non-Working Population of Gujarat |              |                  |
|---|--------------|------------------|
| Total Workers                                       | Main Workers | Marginal Workers |
| 24767747  | 20365374     | 4402373          |

Source: Economic Survey 2011

### 3.10.4.5 Economic Classification of Workers

The broad categories of economic activities, also known as a four-fold classification of the workers are cultivators (CL), Agricultural Labours (AL), working in Household Industries (HHI) and other Workers (OW). The percentage Distribution of Total Workers by Broad Economic Classification has been presented in **Table 3.35**.

**Table 3.35: Percentage Distribution of Total Workers by Broad Economic Classification**

| Classification of Workers | Ahmedabad in Year 2011 (%) |
|---------------------------|----------------------------|
| Cultivators               | 22.0                       |
| Agricultural labour       | 27.6                       |
| Household Industries      | 1.4                        |
| Others                    | 49.0                       |
| Total                     | 100                        |
| <b>Total Workers</b>      | <b>24767747</b>            |

### 3.10.5 Agriculture and Allied Activities

Gujarat is the main producer of tobacco, cotton, and groundnuts in India. Other major crops produced are rice, wheat, jowar, bajra, maize, tur, and gram. Gujarat has an agricultural economy; the total crop area amounts to more than one-half of the total land area.

Animal husbandry and dairying have played a vital role in the rural economy of Gujarat. Dairy farming, primarily concerned with milk production, functions on a cooperative basis and has more than a million members. Gujarat is the largest processor of milk in India. Amul milk co-operative federation products are well known all over India and is Asia's biggest dairy.[8] Among livestock raised are buffalo and other cattle, sheep, and goats. As per the results of livestock census 1997, there were 209.70 lakh livestock in Gujarat state. As per the estimates of the survey of major livestock products, during the year 2002–03 the Gujarat produced 6.09 million tonnes of milk, 385 million eggs and 2.71 million kg of wool. Gujarat also contributes inputs to industries like textiles, oil and soap. The details of share of Agriculture and allied sectors in GDP at the National and State level (Base 2011-12) have been presented in **Table 3.36**.

**Table 3.36: Contribution of Agricultural sector to the State income in Gujarat**

| Years   | Share of Agriculture and Allied Sectors (India) | Share of Agriculture and Allied Sectors (Gujarat) |
|---------|---|---|
| 2011-12 | 18.4  | 14.38   |
| 2012-13 | 18.0  | 13.76   |
| 2013-14 | 18.0  | 12.9  |





|         |    |      |
|---------|----|------|
| 2014-15 | NA | 11.6 |
|---------|----|------|

*Source: Directorate of Economics and Statistics*

### 3.10.5.1 Agricultural Production

The main crops grown in the state are groundnut, millet (bajra) and oilseeds in terms of area under cultivation. In terms of total production, wheat and sugarcane are also very important (Ref. Table 3.7). Gujarat has an edge in the yield of bajra and cash crop while its productivity of rice and wheat, the major food staples is relatively low. The share of pulses in area has similarly increased from 7 percent to 10 percent, but share in total production has declined. There is a decline in the percentage of cultivated area and production of food grains mainly due to the decline in area. The share of oilseed in cultivated increased from 32percent to 41 percent during 1960-2000, though their total production declined. The cultivation of cash crops requires heavy investment in irrigation, which then has to be covered up through substantial returns. Gujarat has embarked on the path of economic growth right from its formulation in 1960-61. In the 1980s the joint share of the non-agricultural sectors in the NSDP became larger than the agricultural sector.

In 1990s, the agricultural sector developed a close relation with the secondary and tertiary sectors, after the 1980s the Gujarat economy has progressed to the second stage of economic growth. The integral relationship between the agricultural and non-agricultural still exists. **Table 3.37** represents production of principal crops in Gujarat:

**Table 3.37: Production of Principal Crops**

| Principal Crops | Production (Thousand Tonnes) |         | % Variation |
|-----------------|------------------------------|---------|-------------|
|                 | 2000-01                      | 2007-08 |             |
| Rice+Wheat      | 1403                         | 3896    | 177.69      |
| Coarse Grains   | 1485                         | 2046    | 37.77       |
| Cereals         | 2936                         | 7462    | 154.15      |
| Pulses          | 249                          | 744     | 198.79      |
| Food grain      | 3185                         | 8206    | 157.64      |
| Groundnut       | 740                          | 3299    | 345.81      |
| Oilseeds        | 1738                         | 4699    | 170.36      |
| Tobacco         | 260                          | 79      | -69.61      |

*Source: - Directorate of Agriculture, Gujarat State, Gandhinagar, 2010-11.*



### 3.10.6 Industry

One of India's most industrialized states, Gujarat maintains a variety of industries, the principal ones being general and electrical engineering and the manufacture of textiles, vegetable oils, chemicals, soda ash, and cement. New industries include the production of fertilizers and petrochemicals. Major resources produced by the state include cotton, peanuts, dates, sugarcane, and petrol. The state is rich in calcite, gypsum, manganese, lignite, bauxite, limestone, agate, feldspar and quartz sand and successful mining of these minerals is done in their specified areas. Gujarat gives the country about 66% of its national requirement of salt. Chemical Industries in Gujarat count for more than 35% of Indian Chemicals production.



It is one of India's most prosperous states, having a per-capita GDP significantly above India's average. Kalol Khambhat and Ankleshwar are today known for their oil and natural gas production. 'Dhuvaran' has a thermal power station, which uses coal, oil and gas. The Tarapur nuclear station in Maharashtra supplies the remaining power. Also on the Gulf of Khambhat, 50 kilometers southeast of Bhavnagar, is the Alang Ship Recycling Yard (the world's largest). General Motors produces the 'Astra' car at Halol near Vadodara. Jalalpur is a large town of Gujarat, where several small and large textile industrial units have been established. Surat, a city by the Gulf of Khambhat, is a hub of the global diamond trade.

During the period 1960–90, Gujarat established itself as a leader in various industrial sectors – textiles, engineering, chemicals, petrochemicals, drugs & pharmaceuticals, dairy, cement & ceramics, gems & jewellery, etc. Post-liberalization period saw Gujarat's state domestic product (SDP) rising at an average growth rate of 14% per annum in real terms (from 1994–2002).

Ahmedabad, Ankleshwar and Vapi are the hub of chemical industries in the state, having number of manufacturing units (private as well as state owned) manufacturing dyes, specialty chemicals, agrocutural chemicals, pesticides, pigments, colors, etc. Rajkot city is the hub of engineering manufacturing and has many companies manufacturing auto components, auto engines, CNC machines, forging & casting parts, etc. The state operating companies like GNFC, GSPC, GSFC, GMDC are a few among flagship companies of the state.

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Gujarat achieved as much as 35% of augmentation in its power generation capacity during the period 1995–96 and 2000–01. The producers (IPPs) have contributed significantly in this addition. As a matter of fact Gujarat is one of the first few states in India to have encouraged private sector investment and are already in operation. In addition the liquid cargo (chemicals) handling port at Dahej is also set up in joint sector and made operational. At an investor's summit entitled Vibrant Gujarat arranged between January 10, 2007 to January 13, 2007, at Science City, Ahmedabad, the state government signed 104 Memorandum of Understandings for Special Economic Zones totaling worth Rs 2.5 lakh crore. However, most of the investment was from domestic industry. The district wise registered Industrial Units (MSME) in Gujarat has been represented in **Table 3.38**.



**Table 3.38: District wise Registered MSME in Gujarat**

| Sr. No. | District Name | Unit          | No. of SSI Units(% Share) |
|---------|---------------|---------------|---------------------------|
| 1       | Ahmedabad     | 69014         | 26.36                     |
| 2       | Amreli        | 943           | 0.36                      |
| 3       | Anand         | 2511          | 0.95                      |
| 4       | Banaskantha   | 1370          | 0.52                      |
| 5       | Bharuch       | 5431          | 2.07                      |
| 6       | Bhavnagar     | 4389          | 1.67                      |
| 7       | Dahod         | 456           | 0.17                      |
| 8       | Dang          | 5             | 0.00                      |
| 9       | Gandhinagar   | 2862          | 1.09                      |
| 10      | Jamnagar      | 4966          | 1.89                      |
| 11      | Junagadh      | 1352          | 0.51                      |
| 12      | Kachchh       | 1636          | 0.62                      |
| 13      | Kheda         | 1053          | 0.40                      |
| 14      | Mehsana       | 2049          | 0.78                      |
| 15      | Narmada       | 754           | 0.28                      |
| 16      | Navsari       | 2475          | 0.94                      |
| 17      | Panchmahal    | 1207          | 0.46                      |
| 18      | Patan         | 611           | 0.23                      |
| 19      | Porbandar     | 628           | 0.23                      |
| 20      | Rajkot        | 20431         | 7.80                      |
| 21      | Sabarkantha   | 1987          | 0.75                      |
| 22      | Surat         | 116183        | 44.38                     |
| 23      | Surendranagar | 2116          | 0.80                      |
| 24      | Tapi          | 430           | 0.16                      |
| 25      | Vadodara      | 12312         | 4.70                      |
| 26      | valsad        | 4589          | 1.75                      |
|         | <b>Total</b>  | <b>261760</b> | <b>100</b>                |

### 3.10.6.1 Large Industries

Industrial units having investment exceeding Rs. 10 Crore in plant and machinery are classified as large industrial units. An Entrepreneur or a company desirous to set up a large project needed an approval in the form of industrial license from Government of India (GOI) under the provisions of Industries (Development and Regulations) Act, 1951. In July 1991, Government of India liberalized the licensing procedure and exempted almost all the industries from the purview of industrial licensing, except a few industries which are of strategic importance. As per the present licensing procedure, only two industries are reserved for public sector and four industries, which are of strategic importance, need an industrial license, on observing certain requirements with respect to location and environment.

The rest of industries are required to file Industrial Entrepreneur's Memorandum (IEM) with Secretariat for Industrial Approval, Ministry of Commerce & Industry, Government of India.

In the case of setting up of an Export Oriented Unit (EOU) or setting up a project in Special Economic Zone (SEZ), a Letter of Permission (LoP) is required to be obtained from the Development Commissioner of the Kandla Special Economic Zone, Gandhidham.



Thus, the procedure for setting up a large industrial unit would be either filing of IEM, obtaining Letter of Intent (LOI)/ Industrial License or obtaining Letter of Permission (LoP) in the case of 100% EOU or SEZ unit.

The filing of IEM with Secretariat of Industrial Approvals (SIA), GoI is considered as an important parameter to assess the degree of industrial development in a state. 12078 IEMs having an aggregate investment of Rs.13,10,231 Crores have been acknowledged for locations in Gujarat. In addition, the state has also received 1436 Letters of Intent entailing an investment of Rs. 68817 Crores between January 1983 to August 2016.

For setting up 100% EOUs, the state had also received 1595 Letters of Permission involving an investment of Rs.6,652 Crores between January 1983 to August 2016. The Government has put in place an effective mechanism for monitoring of all the industrial approvals, in order to know the status of these approvals and provide effective intervention in the speedy implementation of these projects.

6251 projects with an investment of Rs. 2,75,880 Crores have been Commissioned. In addition 4033 projects having investment of Rs.9,51,980 Crores are Under Implementation against above approvals.



## CHAPTER-4: ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

### 4.1 INTRODUCTION

The assessment of potential environmental impact consists of comparing the expected changes in the environment with or without the project. The analysis predicts the nature and significance of the expected impacts. The magnitude and duration (short-term or long-term) of impacts are also discussed.

In this chapter, impacts on each environmental component (like soil, water, air, noise, ecology) and socio-economic environmental component (like removal or property, land acquisition, etc.) will be discussed.

### 4.2 POTENTIAL IMPACTS ON SOIL

Soil is one of the most important components of the natural environment. For road development the soil is primarily needed for altered road embankment. The potential impacts due to project activities are listed below.

#### ➤ During Construction Phase

#### 4.2.1 Loss of Productive Soil

- Loss of productive soil due to site clearance and excavation as the proposed project will require 959.14 ha of land.
- The productivity of crops in the region will not be affected.
- The local economy is not going to be affected badly.

#### Compaction of Soil

- Soil compaction due to storage of quarry materials and other heavy equipment, movement of heavy vehicles at the site

#### 4.2.2 Erosion

The soil along the proposed expressway is sandy and clayey soil in nature. The two important eroding agents are, (i) the run-off water, and (ii) the wind. The run-off dynamics are affected by the degree of slope, extent of deforestation and the amount of water stored for irrigation. Grasses and other herbaceous plant limit the surface erosion effectively.

The potential impact includes:

- The ROW of the proposed expressway is mainly passing through agricultural land. The degree of soil erosion is noted to be less.
- Once trees along the proposed alignment are removed and the herbal cover is cleared on the proposed expressway, the problem of soil erosion during construction is going to be there. Some mitigation measures like:
  - (i) Cutting of trees in phases,





- (ii) Taking advantage of the period of monsoon,
- (iii) Developing not too high and steep slopes,
- (iv) Improving drainage,
- (v) Replantation of trees, and
- (vi) Turfing of the new embankment, should be adopted.

These steps will reduce the severity of the issue and by the time the road starts operating, the ecosystem will restore itself.

Excavations of soil borrow areas may lead to higher degree of erosion. However, care has been taken that (i) many borrow areas are located on raised lands, earth mounds and heaps, (ii) in some cases the owner or villagers want to develop the area into pond for rearing fishes, (iii) re-plantation borrow pit areas will minimize the soil erosion.

#### 4.2.3 Contamination of Soil

In the present project, contractor will use diesel, Bitumen, Emulsions etc during construction of expressway. However, at material storage site, interceptor / HDPE sheets will be provided to avoid any soil contamination. Hence, the contamination of the soil is negligible. **Table 4.1** describes the impacts of soil.

**Table-4.1: Impacts on Soil**

| Location                   | Type of Impact                         |                                     | Mitigation measures suggested  |
|----------------------------|--|-------------------------------------|--|
|                            | Loss of productive soil                | Erosion / Contamination             |  |
| Road side open stretches   | Loss                                   | Very less                           | <ul style="list-style-type: none"> <li>• More trees plantation to enhance environment and soil conservation.</li> <li>• Top soil should be removed &amp; stored separately during excavation.</li> <li>• Top soil may be used to Re-vegetate the disturbed slope as early as possible</li> </ul> |
| Market and congested areas | No Loss; Beneficial                    | No                                  | <ul style="list-style-type: none"> <li>• Not needed</li> </ul>   |
| Borrow Pit Area            | Loss of productive soil; Beneficial    | No                                  | <ul style="list-style-type: none"> <li>• Can be developed into pond for fisheries</li> </ul>   |
| Near Bridges               | No significant Loss of productive soil | Soil erosion due to high embankment | <ul style="list-style-type: none"> <li>• By turfing, slope should be gradual</li> </ul>  |

#### 4.3 IMPACTS ON WATER RESOURCES

Road development can lead to three types of modifications to the natural hydrological environment. These are:



#### **4.3.1 Modification of the Surface Water Flow**

The proposed project will no way alter the existing course of the surface water flow. However, the existing drainage problem will be mitigated in the proposed project.

The construction of new bridges/ widening of existing bridges, crossing rivers, irrigation canals and culverts in the proposed design in the project will be aligned with the construction of expressway. As such, the surface water flow in the rivers, streams and canals will be least affected.

#### **4.3.2 Modification of the Groundwater Flow**

The ground water table in the project area is very high at about 2 to 3m. However the water is contaminated with salt ingress. The source of drinking water is the ground water/piped supply. Since most part of the proposed project is elevated therefore the groundwater flow is not going to be affected.

#### **4.3.3 Rainwater Harvesting**

This is a green field alignment project. The proposed project will increase of surface run-off due to more paved road surface. It will have adverse impact on ground water recharging if measures are not taken during the design. Therefore, compensation is required to recharge ground water.

##### **Impacts:**

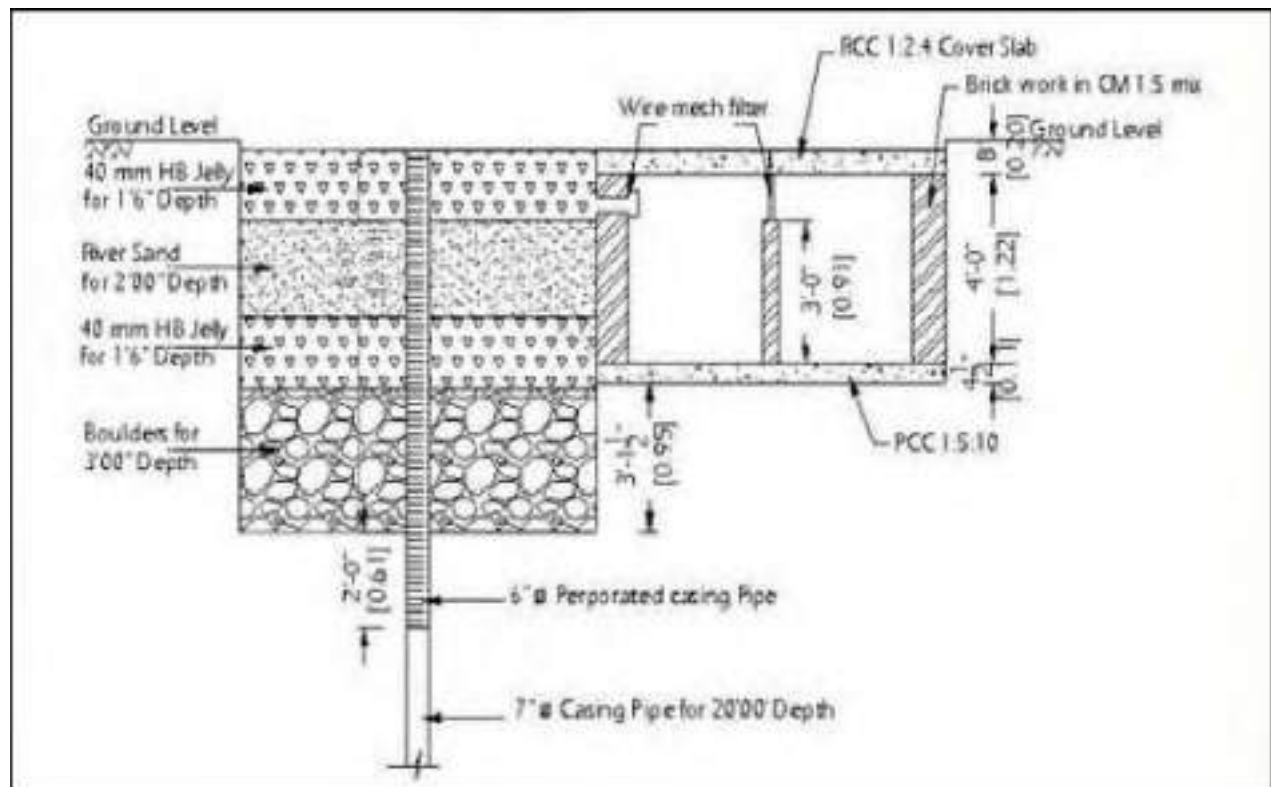
- Loss of ground water table due to withdrawal of ground water for construction.
- Increase of surface run-off due to more paved road surface

##### **Mitigation Measures:**

Detailed hydrological survey will be conducted and adequate drainage facilities provided to discharge the run-off to existing catchments area.

- Provision of recharge pits, in the design to recharge ground water, in the urban area.
- Longitudinal road-side drains on both sides of the expressway and out fall should be nearby culverts/ bridges on nalas/ rivers/ drains.
- All the construction preparatory activities for culverts, bridges and other structure will be carried out during dry seasons.
- Water for construction will be arranged by the contractor from the existing sources.
- Minimum use of water from existing sources for construction purpose will be ensured promoted at construction site/camps to minimize likely impacts on other users

Rainwater harvesting structures shall be provided near the disposal point of the side drains as prescribed by CGWB guidelines. The typical rain water harvesting structure has been shown in **Figure 4.1**.



**Figure 4-1: Typical rain water harvesting structure**

#### 4.3.4 Use of Local Water Supply

No local water supply will be used for construction purposes. Water will be taken from nearby surface water sources such as rivers, canals etc are available all along the highway. Underground water will be taken after permission of concerned authority at construction sites if required.

#### 4.3.5 Water Quality Degradation

Some important parameters like pH, Chlorides, alkalinity etc. were compared with the acceptable standard for drinking water. No direct impact on water quality is predicted.

#### 4.4 IMPACT ON AMBIENT AIR QUALITY

The ambient air quality in the project corridor is generally good and well within the national ambient air quality standards, 2009. Some important observations in the Ambient Air quality are:

- The emissions of individual vehicles, their monitoring and regular checks are important. The fuel composition, maintenance of engines, and engine temperature must be properly regulated for improved scenario.
- As there is no structure of archaeological importance going to be affected due to proposed alignment, the impact does not need an assessment from this point of view.
- By and large the pollution level with regard to Particulate Matter 2.5 (PM<sub>2.5</sub>) and Particle Matter 10 (PM<sub>10</sub>) at all study sites were within the limits. The other parameters of air quality measurements, namely, NO<sub>x</sub>, SO<sub>2</sub> and Carbon



Monoxide at all selected sites were also recorded to be within the prescribed limits.

- The mitigative measures suggested include the policies, regulation and enforcement programs covering vehicle standards and maintenance requirement, fuel quality and technology, management of traffic efficiency and removing the high-pollution vehicles besides plantation of tall, leafy, and dense vegetation to filter and adsorb some pollutants.
- Sensitive areas will be taken care of especially in this regard.

#### **4.4.1 Impacts During Construction Phase**

The project site impact on ambient air quality within the project site and nearby areas may be significant during the construction phases. The particulate matter will be the main pollutant due to the excavations, handling and transport of earth and construction material etc. at site. The other pollutants will be NO<sub>x</sub> due to the construction activities like operation of construction equipment and traffic movement.

Since the construction activities is a temporary activity and hence the increase in particulate matter and NO<sub>x</sub> will be for short duration and its impact will be felt close to the construction site only. Outside the boundary of project activities, the Impacts would be marginal or insignificant.

Generation of exhaust gases is likely due to movement of heavy machinery for clearance of the proposed ROW for construction. Toxic gases are released through the heating process during bitumen production. Although the impact will be much localized, it can spread downwind direction depending upon the wind speeds. The health effects of inhaling particulate matter have been widely studied in humans and animals and include asthma; lung cancer, cardiovascular issues, and premature death.

##### **4.4.1.1 Use of fly Ash**

Fly ash is available from Sabarmati Thermal Power Station, Ahmedabad (400MW) and Dhuvaran Thermal Power Station (220 MW) power plant which are close to the proposed project and is located within 300 km. The 1,73,82,226 m<sup>3</sup> amount of fly ash will be used for the construction of the proposed project.

##### **4.4.1.2 Borrow Area Soil**

Extensive survey was conducted to locate the potential sources of borrow area soils required for the construction of embankment and subgrade with in the reasonable lead distance. The location map of the borrow area has been shown in **Figure 4.2**. The details of collected borrow area locations have been presented in **Table 4.2**.

**Table 4.2: Details of Borrow Area Soils**

| Ref. No. | Nearest Existing Chainage (km) | Side (LHS/RHS) | LEAD (km) | Location Details |
|----------|--------------------------------|----------------|-----------|------------------|
| BA-1     | 3/500                          | LHS            | 7 Km      | Vishala Pur      |
| BA-2     | 4/000                          | LHS            | 3 km      | SH-4             |
| BA-3     | 20/000                         | RHS            | 100 Meter | -                |



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|       |         |            |           |   |
|-------|---------|------------|-----------|---|
| BA-4  | 28/500  | Both Sides | 1Km       | - |
| BA-5  | 33/500  | LHS        | 500 Meter | - |
| BA-6  | 50/000  | RHS        | 1 Km      | - |
| BA-7  | 55/000  | RHS        | 300 M     | - |
| BA-8  | 75/000  | RHS        | 50 M      | - |
| BA-9  | 77/000  | Both Sides | 50 M      | - |
| BA-10 | 80/000  | Both Sides | 50 M      | - |
| BA-11 | 82/000  | Both Sides | 500 Meter | - |
| BA-12 | 88/000  | Both Sides | 100 M     | - |
| BA-13 | 90/000  | Both Sides | 100 M     | - |
| BA-14 | 95/000  | Both Sides | 50 M      | - |
| BA-15 | 100/000 | Both Sides | 50 M      | - |
| BA-16 | 105/000 | Both Sides | 50 M      | - |
| BA-17 | 108/000 | Both Sides | 500 M     | - |
| BA-18 | 110/000 | Both Sides | 500 M     | - |
| BA-19 | 111/000 | Both Sides | 500 M     | - |

**BORROW AREA CHART**

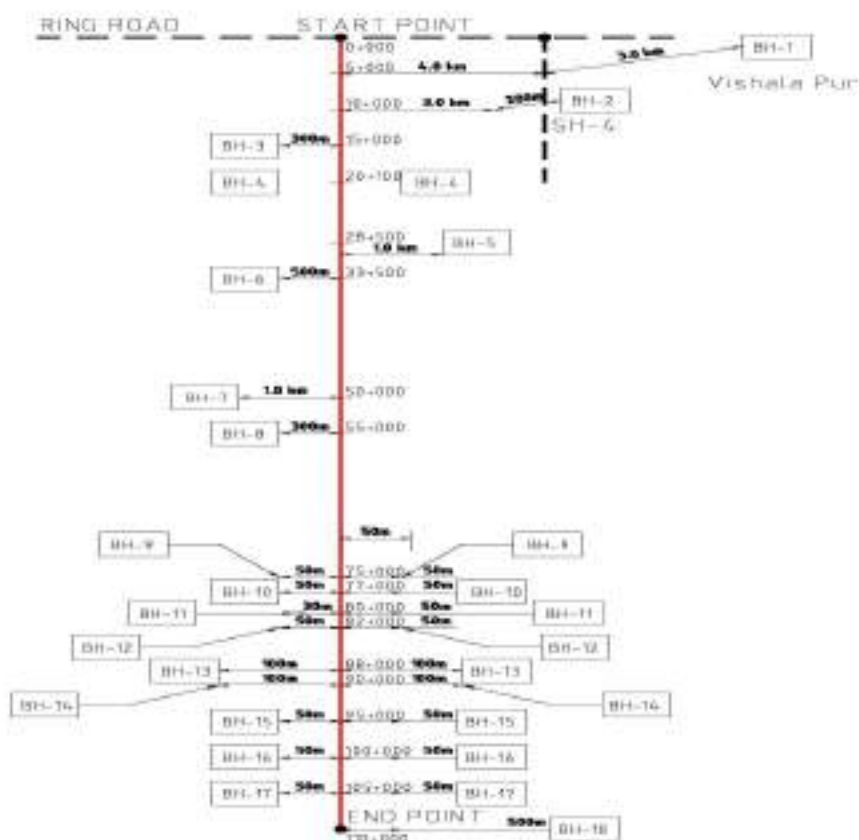


Figure 4.2: Location Map for Borrow Area



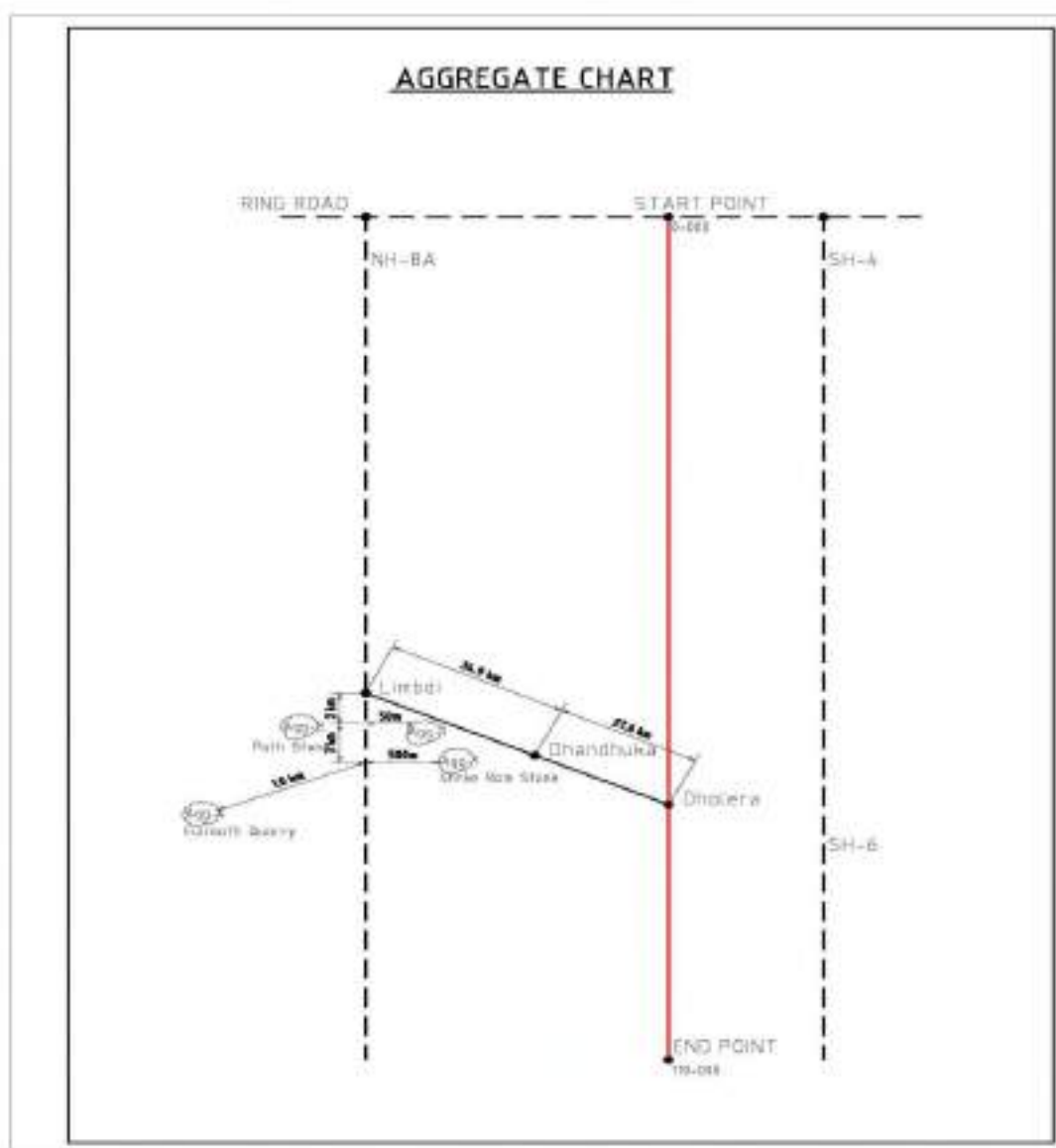


#### 4.4.1.3 Coarse aggregates (stone)

Four coarse aggregate sources are identified, and these sources are near to the proposed project. The details of collected coarse aggregate have been presented in **Table 4.3**. The location map of the aggregates has been shown in **Figure 4.3**.

**Table 4.3: Details of Coarse Aggregate (stone) Quarries**

| Quarry Ref. No. | Side (LHS/RHS) | Lead for Nearest Chainage (km) | Crusher Name             | Location |
|-----------------|----------------|--------------------------------|--------------------------|----------|
| AQ-2            | RHS            | 68.5                           | Fulnath Stone Industries | Limbdi   |
| AQ-3            | LHS            | 64.5                           | Patel Industries         | Limbdi   |
| AQ-4            | LHS            | 64.5                           | Path Stone Crushers      | Limbdi   |



**Figure 4.3: Location map of Aggregate**

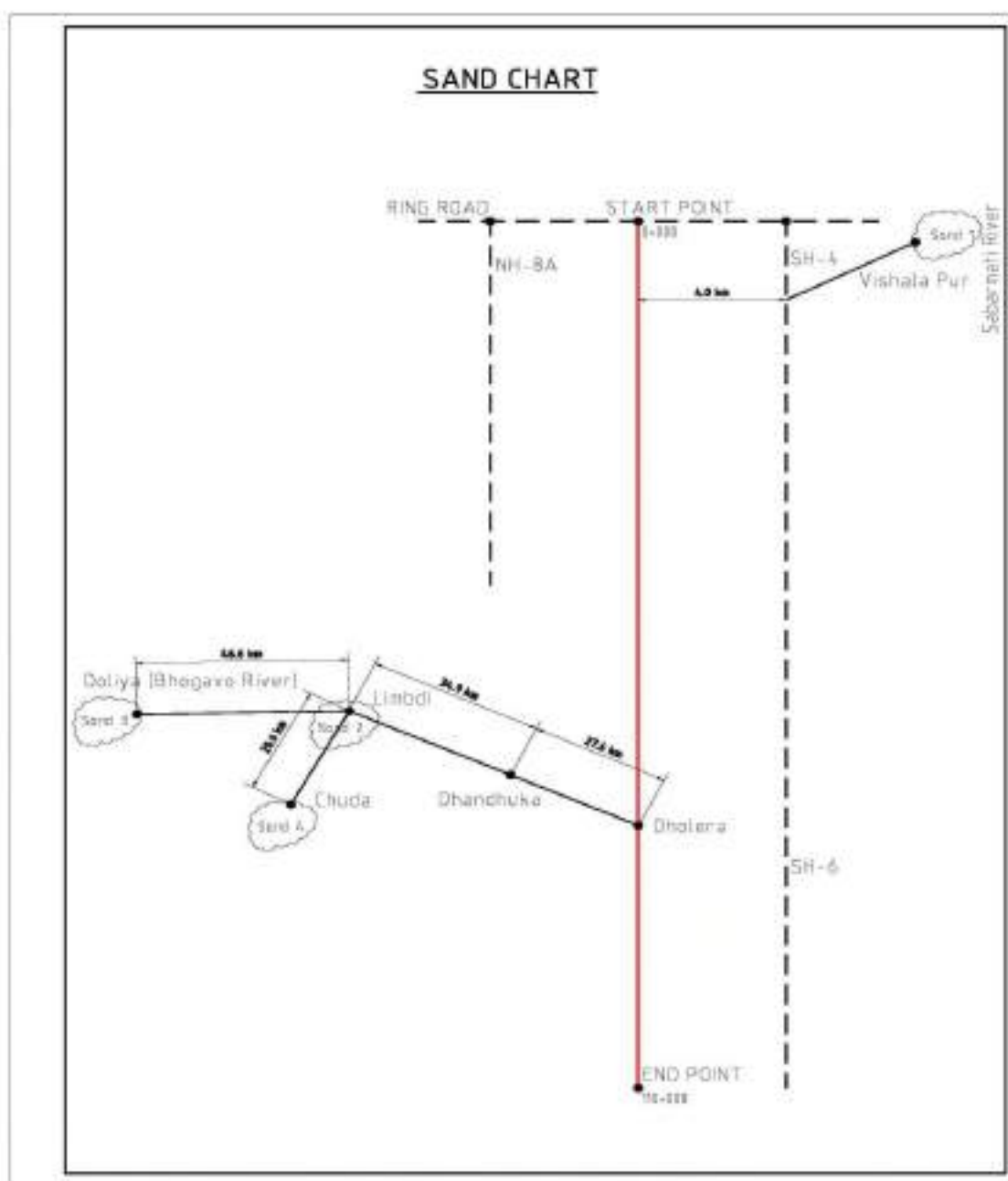


#### 4.4.1.4 Fine Aggregate (Sand) Materials

Four river sand samples were collected, and the details of source locations have been presented in **Table 4.4**. The location map of sand area has been shown in **Figure 4.4**.

**Table 4.4: Details of Fine aggregate (Sand) quarries**

| S Q. No. | Side (LHS/RHS) | Lead (km) | Source/ Crusher Name       |
|----------|----------------|-----------|----------------------------|
| SQ.2     | RHS            | 62.5      | M/S Bhagova Limbdi         |
| SQ.3     | RHS            | 92.1      | M/S Rampur                 |
| SQ.4     | RHS            | 109.019   | M/S Samdhiyar Chuda Taluka |



**Figure 4.4: Location map of sand**



#### 4.4.1.5 Change in Ambient air and GLC

The air pollution impact of excavation in ordinary earth and boulders and rock is directly dependent upon construction methodology, annual rate of excavation, mode of transport within the construction site, mode of screening and method of crushing. The air pollution sources at the proposed project site can be broadly classified into three categories, viz. area source, line source and instantaneous point source.

Excavation by various activities in project area is construed as an area source which includes excavation pit(s) and activities happening in the excavation area like digging, dozing, hauling and loading/unloading. The dust emission from these areas will be fugitive in nature. The excavator operations, loading/unloading operations will also cause dust emission though it will be confined to the area of operation of the machinery. The gaseous emission from their operation shall be minimal and limited within the project.

Transportation of excavated material from the project site to dumping sites area categorized as line source. Since the dumper movement on haul road will be within the project area, no adverse impact shall be felt in the settlement area.

#### Dust Dispersion Modeling for Excavation Operation

In the present study, United States Environmental Protection Agency (USEPA-42 series) approved mathematical equations have been used to predict concentrations for different operations in project including the material transportation. To predict the particulate emissions, Envirotrans AERMODCloud. (Air Dispersion Modeling Software) an interface based on ISCST3 – was used to predict changes in air quality i.e., maximum ground level concentration (GLC's) of Particulate Matter. Short term model options were opted for uniform emissions rates. The concentration of other gaseous pollutants i.e. SO<sub>2</sub> and NO<sub>x</sub> was found to be much lower than the threshold limit (80 µg/m<sup>3</sup>), the air modeling was restricted to determination of PM<sub>10</sub> and PM<sub>2.5</sub> in the present case for the monitoring locations where respective maximum value was identified. The emission factors adopted for various project operations are mentioned below:

Emission Factor for Excavation and Material Loading/unloading

For excavation and material handling the emission factor for PM<sub>10</sub> has been adopted as per USEPA – 42 series.

For Dozing Operation:

$$EFPM_{10} \text{ (kg/hr)} = 0.34 \times S^{1.5(\%)} / M^{1.4(\%)}$$

Where,

EFPM<sub>10</sub> (kg/hr) = emission factor in kg/hr

S = silt contents in percentage by weight

M = moisture content in percentage by weight

For Material Loading/unloading:

$$EFPM_{10} \text{ (kg/hr)} = 0.34 [0.119 / M^{0.9}]$$

Where,

EFPM<sub>10</sub> (kg/hr) = emission factor in kg/ton

M = moisture content in percentage by weight.



Emission Factor for Material Haulage within Project:

The emission rate is dependent on several factors which include soil properties, climatic conditions, vehicular traffic, wind forces and machinery operation. The Empirical equation for calculation of emission rate is as under.

$$E = k \cdot (1.7)^s \cdot (S/48) \cdot (W/2.7)^{0.7} \cdot (w/4)^{0.5} \cdot (365-p/365) \text{ g/VKT}$$

Where,

E=Emission Rate

K = Particle size multiplier

s=Silt Content of the Road surface material

S= Mean Vehicle Speed (km/hr)

W=Mean Vehicle Weight (tons)

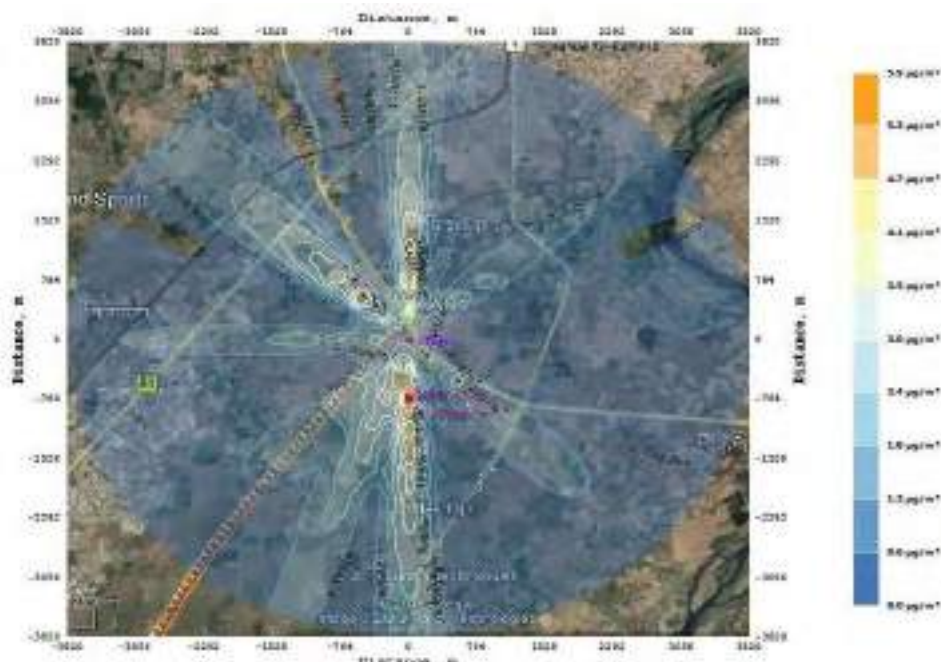
w=Mean number of wheels

p= Number of days with at least 0.254mm of precipitation per year

Note: The emission factor for PM<sub>2.5</sub> has been considered 60% of PM<sub>10</sub>. The Isopleth developed for PM<sub>10</sub> and PM<sub>2.5</sub> along the road alignment where monitored values are highest in receptor villages and is shown in **Figure 4.5 and 4.6 for PM<sub>10</sub> and PM<sub>2.5</sub>** respectively. The maximum GLC due to excavation, loading & unloading activities for PM<sub>10</sub> and PM<sub>2.5</sub> were found to be 5.9 µg/m<sup>3</sup> and 3.4 µg/m<sup>3</sup> respectively and has been shown in **Table 4.5**.

**Table 4.5: Maximum Concentration at receptors**

| Monitoring Location                                   | Pollutants        | N-Cord.   | E-Cord.   | GLC (µg/m <sup>3</sup> ) |
|---|-------------------|-----------|-----------|--------------------------|
| Starting Point near Sarkhej on Sardar Patel Ring Road | PM <sub>10</sub>  | 22.945623 | 72.484788 | 5.9                      |
| Starting Point near Sarkhej on Sardar Patel Ring Road | PM <sub>2.5</sub> | 22.945623 | 72.484788 | 3.4                      |



**Figure 4.5: Isopleth of Maximum Predicted 24 hourly Ground – Level Concentrations for PM<sub>10</sub>**

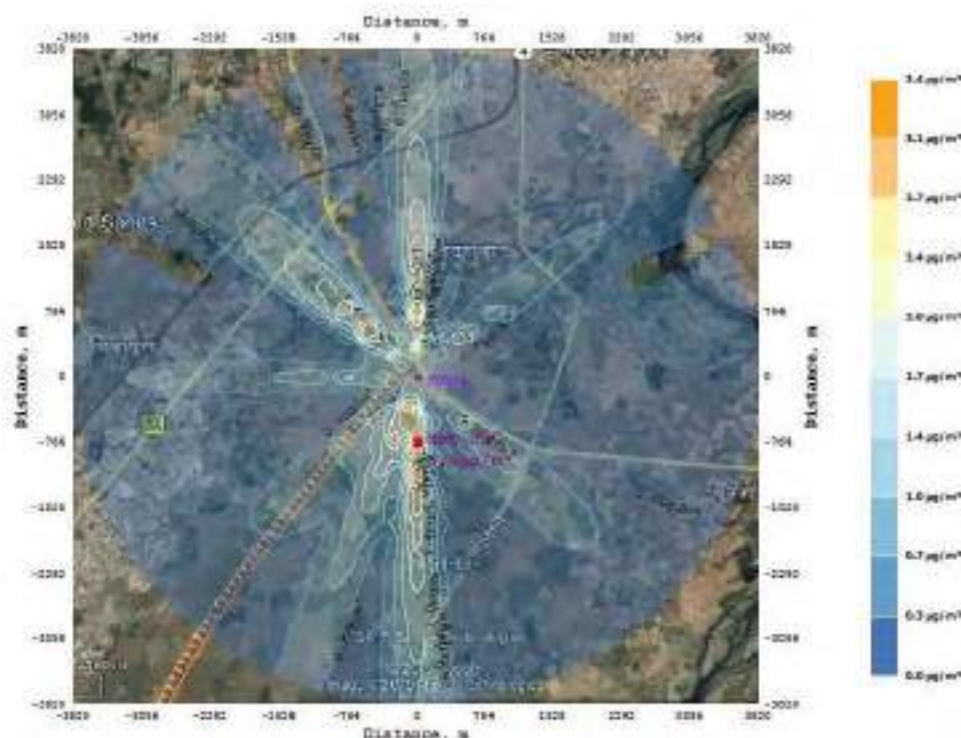


Figure 4.6: Isopleth of Maximum Predicted 24 hourly Ground – Level Concentrations for PM<sub>2.5</sub>

### Resultant Impact

The resultant impact due to construction activities (excavation and crushing) on the ambient air quality for PM<sub>10</sub> and PM<sub>2.5</sub> at “Starting Point near Sarkhej on Sardar Patel Ring Road” is presented in **Table 4.6 (a)** which shows that, the resultant concentration levels are above the prescribed limits of NAAQS whereas **Table 4.6 (b)** shows the resultant levels due to excavation and construction activities after taking Mitigation Measures (MM) as per EMP.

**Table 4.6 (a): Resultant levels due to excavation and construction activities**

| Monitoring Location                                   | Pollutants        | Sampling Station | Max. Conc. (µg/m <sup>3</sup> ) | Predicted GLC (µg/m <sup>3</sup> ) | Resultant concentration (µg/m <sup>3</sup> ) | NAAQS (µg/m <sup>3</sup> ) |
|---|-------------------|------------------|---------------------------------|------------------------------------|--|----------------------------|
| Starting Point near Sarkhej on Sardar Patel Ring Road | PM <sub>10</sub>  | AAQ 15           | 182.5                           | 5.9                                | 188.4  | 100                        |
| Starting Point near Sarkhej on Sardar Patel Ring Road | PM <sub>2.5</sub> | AAQ 15           | 70.4                            | 3.4                                | 73.8   | 60                         |





**Table 4.6 (b): Resultant levels due to excavation and construction activities after taking Mitigation Measures (MM) as per EMP**

| Monitoring Location                                   | Pollutants | Sampling Station | Max. Conc. ( $\mu\text{g}/\text{m}^3$ ) | Predicted GLC ( $\mu\text{g}/\text{m}^3$ ) | GLC after taking MM as per EMP ( $\mu\text{g}/\text{m}^3$ ) | Resultant concentration taking MM as per EMP ( $\mu\text{g}/\text{m}^3$ ) | NAAQS ( $\mu\text{g}/\text{m}^3$ ) |
|---|------------|------------------|---|--|---|---|------------------------------------|
| Starting Point near Sarkhej on Sardar Patel Ring Road | PM10       | AAQ 15           | 182.5                                   | 5.9  | 1.18  | 183.68  | 100                                |
| Starting Point near Sarkhej on Sardar Patel Ring Road | PM2.5      | AAQ 15           | 70.4                                    | 3.4  | 0.68  | 71.08   | 60                                 |

#### 4.4.2 Impacts During Operation Phase

This construction of expressway will naturally increase the traffic load on it after the construction is over and as predicted the traffic load will be increased. However, impact will be less as traffic density is not high.

##### 4.4.2.1 Prediction of Impact on Ambient Air Quality

To assess the impact on air quality of the project area during operation phase, air pollution dispersion modeling was carried out using future traffic projections. The modeling was carried out using CALINE-4, line source model developed by the California Transport Department. Carbon monoxide (CO) is the main component of the vehicular pollution. So, prediction of CO concentration is representative of the impacts of air pollution due to traffic movement.

#### CALINE - 4 Model

The air dispersion model used is **CL4 (A Graphical User Interface for CALINE4)** developed by the California Department of Transportation (Caltrans) for predicting air pollutant concentrations near roadways. CALINE4 is a simple line source Gaussian plume dispersion model.

CALINE4 is a model based on the Gaussian diffusion equation and employs a mixing zone concept to characterize pollutant dispersion over the roadway. The purpose of the model is to assess air quality impacts near transportation facilities. Given source strength, meteorology and site geometry, the model can predict pollutant concentrations for receptors located within 500 meters of the roadway. It also has special options for modeling air quality near intersections, street canyons and parking facilities.

CALINE4 divides individual highway sections into a series of elements from which incremental concentrations are computed and then summed to form a total concentration estimate for a particular receptor location. Downwind concentrations from the element are modelled using the crosswind FLS (Finite Line Source) Gaussian formulation, but  $\sigma_y$  and  $\sigma_z$  are modified to consider the mechanical turbulence created by moving vehicles and the thermal turbulence



created by hot vehicle exhaust in the region directly over the highway, region considered as a zone of uniform emissions and turbulence.

#### **Input Data Requirement:**

- **Emissions**

The emissions are provided by traffic volume (vehicles/h) and emission factor (gr/mile/vehicle) for each section

- **Meteorology**

Wind speed Wind direction Wind direction standard deviation Atmospheric stability Class Mixing Height Ambient Temperature.

The details of input parameters considered for the modeling exercises are presented in the following paragraphs.

- **Traffic Data**

The traffic surveys have been carried out along the corridor to establish base year traffic with reference to traffic movements. Average hourly traffic data has been considered for the present modeling exercises.

- **Meteorological Data**

“Worst case wind angle” run type was considered to predict the worst-case scenario. The met inputs entered were:

- Wind speed: 1.0m/s
- Stability Class: F
- Mixing Height: 50m
- Standard Deviation: 5°
- Ambient Air Temperature: 25°C

### **PRESENTATION OF RESULTS**

For One-hour simulations, the concentrations were estimated around 3 receptors to obtain an optimum description of variations in concentrations over the distance of 30m, 50m & 100m downwind from the centerline for the worst angles as identified by the model. Based on the observed traffic flows and reconnaissance surveys, the proposed project expressway has been divided into 4 homogenous traffic sections. The nearest receptor was considered to be at 30m from the centerline of Homogenous Sections. Air modeling results of all the four homogenous sections (Ahmedabad Dholka HS1, Dholka Vataman HS2, Vataman HS3 and Pipli – Bavliyari HS4) have been presented in **Table 4.7 (a) to 4.7 (d)**.



**Table 4.7 (a):- Air Modeling Results for Ahmedabad Dholka Homogenous Section (HS1)**  
(Predicted Conc. of CO)

| Predicted Maximum 1-hour Concentration of CO (ppm) |      |      |      |      |      |
|--|------|------|------|------|------|
| Receptor Distance from Center Line                 | 2022 | 2027 | 2032 | 2037 | 2042 |
| at 30 m  | 0.1  | 0.2  | 0.4  | 0.8  | 1.3  |
| at 50 m  | 0.1  | 0.2  | 0.4  | 0.7  | 1.1  |
| at 100 m   | 0.1  | 0.1  | 0.3  | 0.5  | 0.8  |

| Predicted Maximum 1-hour Concentration of CO (µg/m <sup>3</sup> ) |      |      |      |      |      |
|---|------|------|------|------|------|
| Receptor Distance from Center Line                                | 2022 | 2027 | 2032 | 2037 | 2042 |
| at 30 m   | 115  | 229  | 458  | 916  | 1489 |
| at 50 m   | 115  | 229  | 458  | 802  | 1260 |
| at 100 m  | 115  | 115  | 344  | 573  | 916  |

**Table 4.7 (b):- Air Modeling Results for Dholka Vataman Homogenous Section (HS2)**  
(Predicted Conc. of CO)

| Predicted Maximum 1-hour Concentration of CO (ppm) |      |      |      |      |      |
|--|------|------|------|------|------|
| Receptor Distance from Center Line                 | 2022 | 2027 | 2032 | 2037 | 2042 |
| at 30 m  | 0.3  | 0.5  | 0.9  | 1.4  | 2    |
| at 50 m  | 0.2  | 0.4  | 0.7  | 1.1  | 1.7  |
| at 100 m   | 0.2  | 0.3  | 0.5  | 0.9  | 1.3  |

| Predicted Maximum 1-hour Concentration of CO (µg/m <sup>3</sup> ) |      |      |      |      |      |
|---|------|------|------|------|------|
| Receptor Distance from Center Line                                | 2022 | 2027 | 2032 | 2037 | 2042 |
| at 30 m   | 344  | 573  | 1031 | 1603 | 2290 |
| at 50 m   | 229  | 458  | 802  | 1260 | 1947 |
| at 100 m  | 229  | 344  | 573  | 1031 | 1489 |

**Table 4.7 (c):- Air Modeling Results for Vataman Homogenous Section (HS3)**  
(Predicted Conc. of CO)

| Predicted Maximum 1-hour Concentration of CO (ppm) |      |      |      |      |      |
|--|------|------|------|------|------|
| Receptor Distance from Center Line                 | 2022 | 2027 | 2032 | 2037 | 2042 |
| at 30 m  | 0.3  | 0.5  | 1.1  | 1.8  | 2.7  |
| at 50 m  | 0.2  | 0.4  | 0.9  | 1.4  | 2.2  |
| at 100 m   | 0.2  | 0.3  | 0.7  | 1.1  | 1.7  |

| Predicted Maximum 1-hour Concentration of CO (µg/m <sup>3</sup> ) |      |      |      |      |      |
|---|------|------|------|------|------|
| Receptor Distance from Center Line                                | 2022 | 2027 | 2032 | 2037 | 2042 |
| at 30 m   | 344  | 573  | 1260 | 2061 | 3092 |
| at 50 m   | 229  | 458  | 1031 | 1603 | 2519 |
| at 100 m  | 229  | 344  | 802  | 1260 | 1947 |



**Table 4.7 (d):- Air Modeling Results for Pipli - Bavliyari Homogenous Section (HS4)  
(Predicted Conc. of CO)**

| Predicted Maximum 1-hour Concentration of CO (ppm) |      |      |      |      |      |
|--|------|------|------|------|------|
| Receptor Distance from Center Line                 | 2022 | 2027 | 2032 | 2037 | 2042 |
| at 30 m  | 0.4  | 0.7  | 1.5  | 2.5  | 3.9  |
| at 50 m  | 0.3  | 0.6  | 1.2  | 2.1  | 3.2  |
| at 100 m   | 0.2  | 0.4  | 0.9  | 1.6  | 2.5  |

| Predicted Maximum 1-hour Concentration of CO (µg/m <sup>3</sup> ) |      |      |      |      |      |
|---|------|------|------|------|------|
| Receptor Distance from Center Line                                | 2022 | 2027 | 2032 | 2037 | 2042 |
| at 30 m   | 458  | 802  | 1718 | 2863 | 4466 |
| at 50 m   | 344  | 687  | 1374 | 2405 | 3665 |
| at 100 m  | 229  | 458  | 1031 | 1832 | 2863 |

The predicted 1hr maximum concentration of CO after construction of the proposed project is found to be within 4000 µg/m<sup>3</sup> prescribed in National Ambient Air Quality Standards, 2009 for residential, rural and other areas except in 2042 year at 30 m the concentration of CO are beyond the prescribed standards where it is 4466 ug/m<sup>3</sup>.

#### 4.5 IMPACT ON NOISE LEVELS

The assessment of potential road noise impacts helps in understanding one of the most significant pollution, the noise pollution. Some salient features related to potential noise impact of a road development include: (i) the road noise impact is greatest where busy road passes through densely populated areas, townships and markets (ii) the range of noise level should be understood in relation to the habitation type also; for example, road noise in industrial area is not likely to be problematic but at sensitive location like schools and hospitals; its impact may be significant, (iii) mitigation of noise in urban areas is rather difficult, specially at the road intersections.

Environmental noise particularly highway traffic noise, is a complex phenomenon because its intensity and characteristics vary with time depending upon the frequency as well as type of vehicles on the road.

The impacts of noise due to the project will be of temporary significance locally in the construction phase and slight increase may occur during the operation stages. **Table 4.8** presents the source of noise pollution and the impact categorization.

**Table 4.8: Source of the Noise pollution and its impact**

| Sr. No. | Phase            | Source of Noise pollution   | Impact categorization   |
|---------|------------------|---|---|
| 1       | Pre-construction | <ul style="list-style-type: none"> <li>Man, material &amp; machinery movements</li> <li>establishment of labor</li> </ul> | <ul style="list-style-type: none"> <li>all activities will last for a short duration and also shall be localized in nature</li> </ul> |



| Sr. No. | Phase                     | Source of Noise pollution  | Impact categorization  |
|---------|---------------------------|--|--|
|         |                           | camps, onsite offices, stock yards and construction plants   |  |
| 2       | <b>Construction Phase</b> | <ul style="list-style-type: none"> <li>• <b>Plant Site</b><br/>stone crushing, asphalt production plant and batching plants, diesel generators etc</li> <li>• <b>Work zones</b><br/>Community residing near to the work zones</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Plant Site:</b> Impact will be significant within 500m.</li> <li>• <b>Work zones:</b> Such impacts again will be of temporary nature as the construction site will go on changing with the progress of the works.</li> </ul> |
| 3       | <b>Operation Phase</b>    | <ul style="list-style-type: none"> <li>• due to increase in traffic (due to improved facility)</li> </ul>  | <ul style="list-style-type: none"> <li>• will be compensated with the uninterrupted movement of heavy and light vehicles .</li> </ul>  |

Although the baseline day & night time noise levels monitored at ten locations along the proposed project are within permissible limits specified by the MoEF&CC except at Starting point (Sarkhej on Sardar Patel Ring Road) as the area is having high traffic where noise is a major area of concern, especially if sensitive receptors (schools, colleges and hospitals) have been located quite close to the project road. The highest Leq noise levels was recorded at start point of proposed expressway which is 64.6 dB(A) during daytime and 56.2 during night time. The Mathematical equation is used for noise prediction is  $L_2 = L_1 - 20 \log D_2/D_1$ .

#### 4.5.1 Prediction of Noise Impact on Noise level

A noise propagation modeling study has been conducted to find out the impact from the noise generated because of the estimated total traffic flow as well as the significance of these impacts. The noise modeling has been done taking into account the design speed at various stretches and the stretches with restricted speeds have also been considered. DhvaniPRO is a computer program developed to undertake construction, industrial and traffic noise propagation studies for noise assessment.

Different operative speeds have been used for various horizon years in the design life to get a realistic picture of the noise levels. DhvaniPRO is used for noise modeling and **Table 4.9** presents the results.





**Table 4.9: Noise level predictions for the receptors at the homogenous intersections**

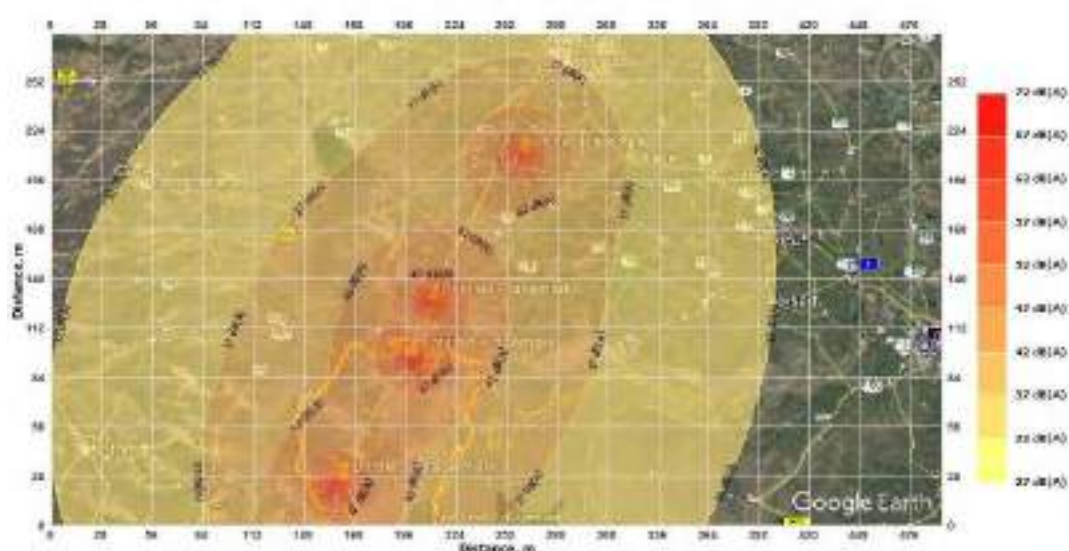
| Sl. No. | Name of Locations                                     | Category of the Area | Observed dB(A) 2018 | Observed dB(A) 2022 | Observed dB(A) 2026 | Observed dB(A) 2030 | Observed dB(A) 2034 |
|---------|---|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 1.      | Starting Point near Sarkhej on Sardar Patel Ring Road | Commercial           | 71                  | 70                  | 72                  | 73                  | 76                  |
| 2.      | Near Tajpur   | Residential          | 71                  | 70                  | 72                  | 73                  | 76                  |
| 3.      | Near Kavitha  | Commercial           | 71                  | 70                  | 72                  | 73                  | 76                  |
| 4.      | Near Sindhrej   | Residential          | 60                  | 59                  | 62                  | 63                  | 65                  |
| 5.      | Near Vejalaka   | Residential          | 61                  | 60                  | 62                  | 63                  | 66                  |
| 6.      | Near Bholad   | Residential          | 74                  | 72                  | 74                  | 75                  | 78                  |
| 7.      | Near Ambli  | Residential          | 64                  | 63                  | 65                  | 67                  | 69                  |
| 8.      | Near Dholera  | Commercial           | 60                  | 59                  | 61                  | 62                  | 65                  |
| 9.      | Near Sandhida   | Residential          | 59                  | 58                  | 61                  | 62                  | 64                  |
| 10.     | Near Adhelai  | Commercial           | 62                  | 62                  | 64                  | 65                  | 68                  |

#### 4.5.1.1 Outcome of the Noise level Modelling:

The outcome of the noise modeling is as follows:

- The predicted noise levels during both day and night time are exceeding the stipulated limits at every stretches (HS1- Ahmedabad Dholka, HS2- Dholka Wataman, HS3- Wataman and HS4- Pipli - Bavliyari) upto the end of design life of the project for all the land uses i.e., commercial, residential/rural and sensitive.

The Contour map showing noise levels due to total traffic outcome at the homogenous intersections from the period of 2018 – 2034 has been shown in **Figure 4.7 (a) to 4.7 (e)**.



**Figure 4.7 (a):- Contour map showing noise levels due to total traffic outcome at the homogenous intersections of 2018 year**



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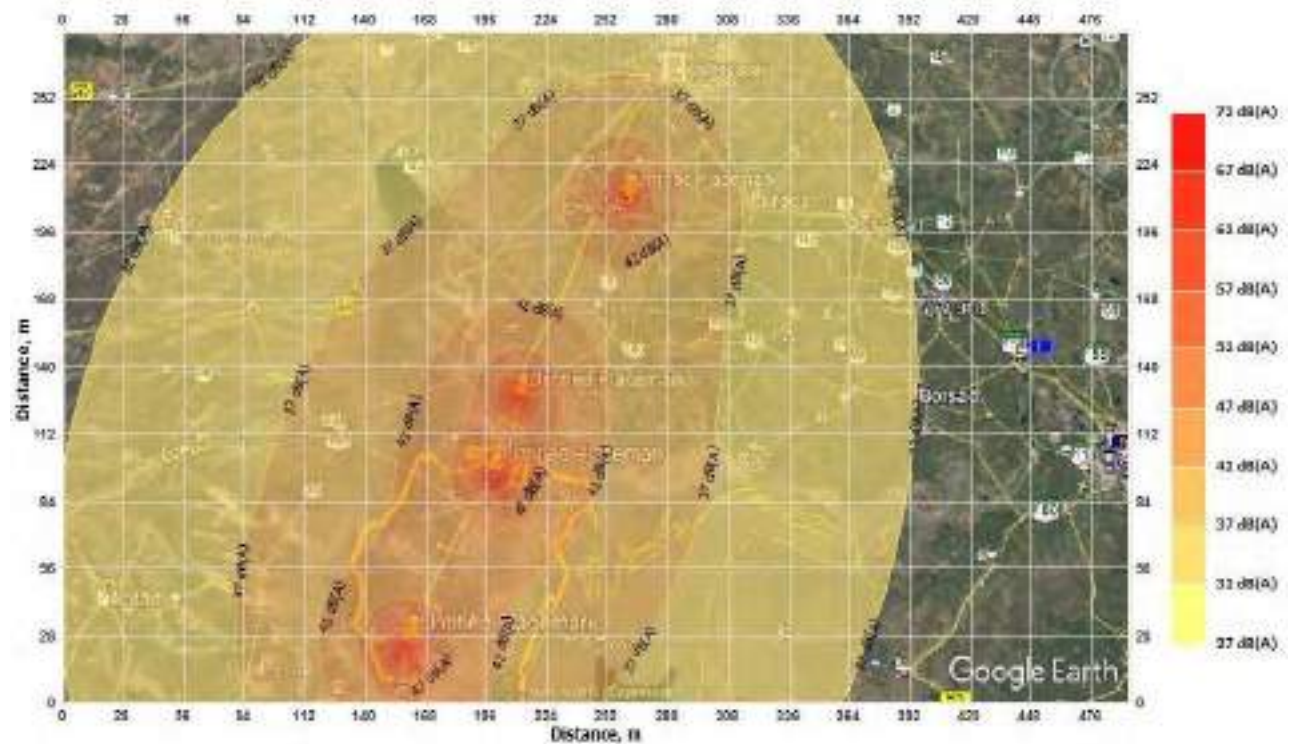


Figure 4.7 (b):- Contour map showing noise levels due to total traffic outcome at the homogenous intersections of 2022 year

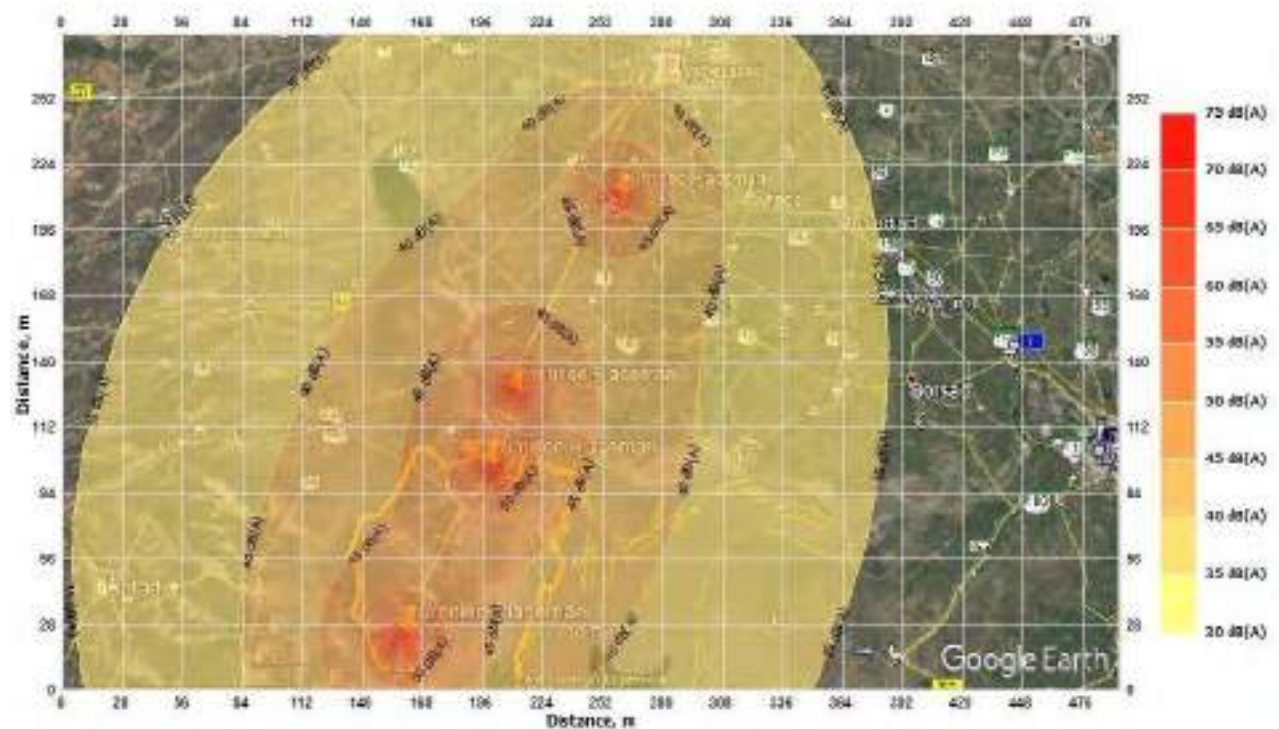
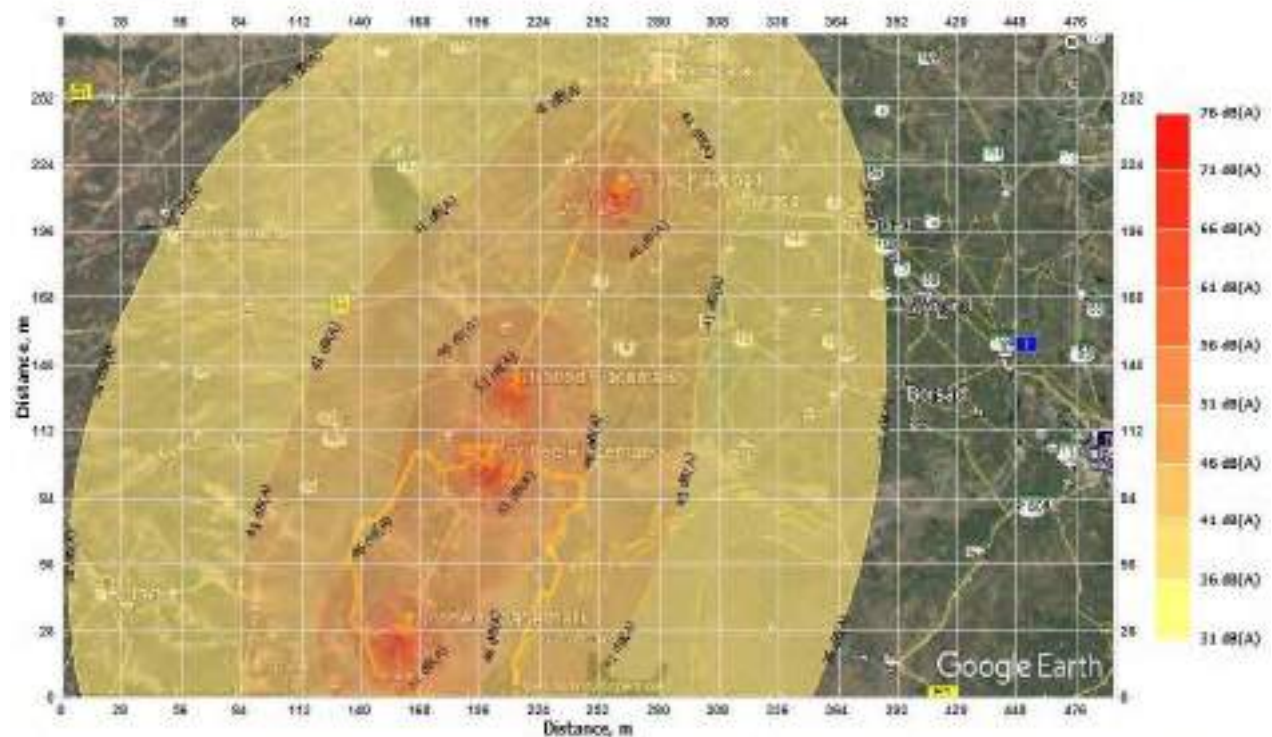


Figure 4.7 (c):- Contour map showing noise levels due to total traffic outcome at the homogenous intersections of 2026 year

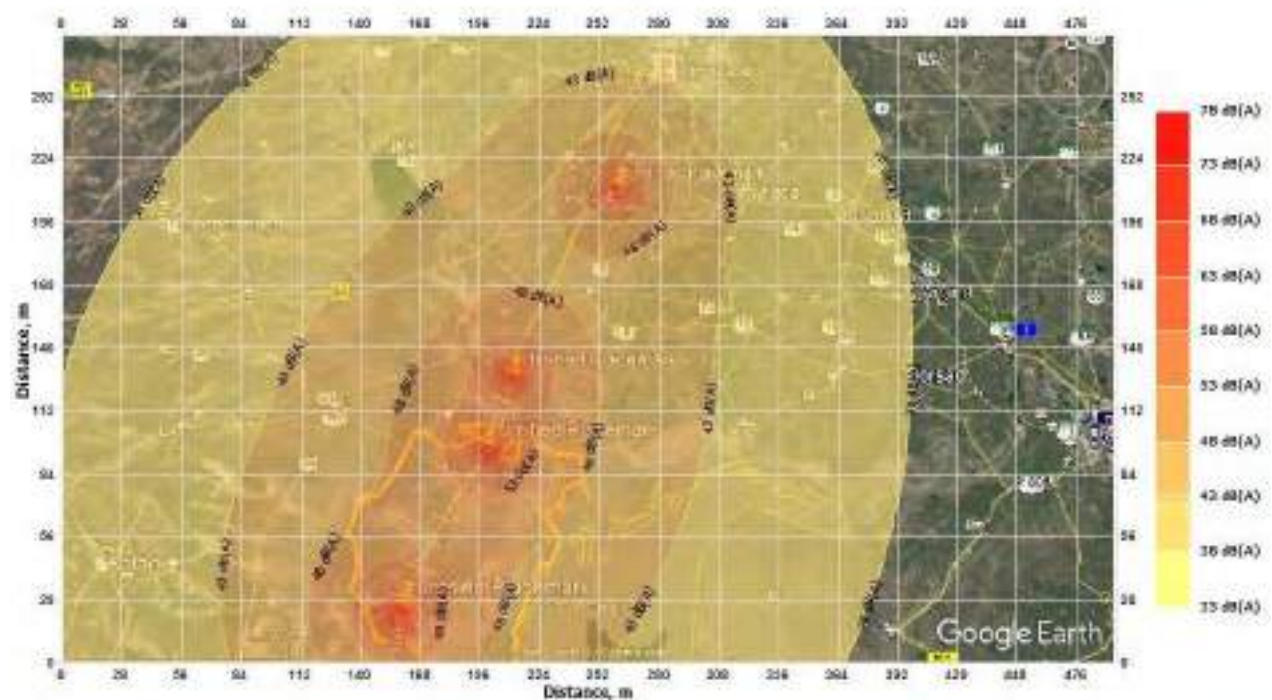




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**Figure 4.7 (d):- Contour map showing noise levels due to total traffic outcome at the homogenous intersections of 2030 year**



**Figure 4.7 (e):- Contour map showing noise levels due to total traffic outcome at the homogenous intersections of 2034 year**



#### **4.5.2 Mitigation measures to reduce Noise levels**

The following are the mitigation measures to reduce noise pollution:

- Noise standards will be strictly enforced for all vehicles, plants, equipment, and construction machinery. All construction equipment used for an 8-hour shift will conform to a standard of less than 90dB(A). If required, high noise producing generators such as concrete mixers, generators, graders, etc. must be provided with noise shields.
- Machinery and vehicles will be maintained regularly, with particular attention to silencers and mufflers, to keep construction noise levels to minimum.
- Workers in the vicinity of high noise levels will be provided earplugs, helmets and will be engaged in diversified activities to prevent prolonged exposure to noise levels of more than 90dB(A) per 8 hour shift.
- During construction vibratory compactors will be used sparingly within the urban areas. In case of complaints from roadside residents, the engineer will ask the site engineer to take suitable steps of restricting the work hours even further or use an alternative roller.
- Proposed tree and shrub plantations planned for avenue plantation especially close to settlements, may form an effective sound buffer during the operation stage.

#### **4.6 IMPACT ON FLORA, FAUNA AND ECOSYSTEM**

The cumulative impacts of the project activities on the habitat of wildlife, such as, Blackbuck, Lesser Lesser florican, Harrier roosting and foraging sites and on Sarus crane are as follows:

- Direct loss of habitat at intersection locations particularly on account of encroaching, clearing and damage to the existing vegetation due to construction activities and transport.
- Degradation of habitat quality or baseline environmental setting due to construction activities and construction camps, and human use of water resources.
- Elevated ambient noise levels due to operation of construction machineries and heavy transportation will interfere with the communication systems of the wildlife.
- Fragmentation in the grassland areas may reduce home range and cause isolation of the wildlife species, particularly Blackbuck.
- Decline in wildlife population, their flow and movement.
- Injury and accidents to a lesser extent as the project has largely elevated tracks leading to mortality of wildlife.
- Reduced access to summer and winter ranges of ungulates, breeding sites and nesting habitats of birds.
- Permeability to habitats.

##### **4.6.1 Cumulative Impact of Proposed Project on Blackbuck, Harrier, Lesser Florican and Sarus Crane**

The black buck is grazer and prefers open grasslands interrupted by bushes.

The harriers are migratory raptors. These are diurnal and feed on reptiles, birds and mammals. The Marsh Harrier prefers marshy areas and the other Harriers available in the area prefer grasslands.



The lesser florican prefers grasslands but also inhabits agricultural fields.

The sarus crane inhabits wetlands, lowlands especially around agricultural areas, grasslands and cultivated fields associated with areas where there is mixture of flooded and dry grounds.

All these wild animals and also the other major species of the area require contiguity of their habitat across the landscape. The proposed project activities may cause marginal and temporary habitat degradation near wetland area which is reversible. Thus, the normal life of wild animals, gene flow and migration will remain unaffected in long-run by vegetation on available RoW and on slopes after completion of construction.

The digging, trenching and temporary construction of camps may degrade habitat quality due to clearing of vegetation but it is a temporary in nature. The entire area of the camp site will be rehabilitated as per original vegetation.

The site clearing activities also will temporarily promote the growth of weeds and non-fodder species due to disturbance to the existing soil structure. The weedy species will get eliminated in long run as the site will get stabilized naturally. The species for roadside plantation will be chosen as per existing vegetation type. The slope will be stabilized with turfing (By engineering). The solid waste will be reused for construction of embankment. The liquid waste will be treated in camp site before its disposal in sewage canal.

The noise and antiglare barrier will be constructed in forest patches for conservation of habitat.

#### **4.6.2 Removal of Trees**

Approximately 4478 no. of trees recorded in Corridor of Impact. The impacts of tree cutting on the environmental quality will be as follows.

- The loss of trees will lead to higher degree of soil erosion. This has to be compensated by re-plantation of trees.
- The loss of trees will reduce the ambient air quality since trees act as adsorbent of air pollutants thereby improving the air quality.
- The reduction in number of trees, especially in or near congested market places will enhance the raising of noise level.
- The other benefits of such trees such as shade, availability of fruits etc. will be worst affected till the new trees grow up and compensate.

However, a careful and proper planning of re-plantation of trees right at the commencement of construction and the phase wise removal of existing trees will mitigate the negative impacts.

#### **4.6.3 Removal of Herbal Cover**

The removal of herbaceous plants may lead to soil erosion. However, the degree of erosion will be of smaller magnitude. Yet, the loss of soil by erosion could be mitigated by regular watering and re-plantation of herbal cover, i.e. turfing.

#### **4.6.4 Conservation and Mitigation Measures**

Assessment of habitat quality, extent and analysis of usage and problems are essential pre-requisite for Environmental Management Plan. Predicting barriers caused by local and state





activities is critical. The following **measures** could be essentially practiced for the **environmental and biodiversity conservation** in the project area:

1. **Management of Activities:** The conservation need be practiced following local people-centric decentralized participatory approach where bottom up approach for generation of information and practices for conservation need be given priority. A collaborative management approach involving the Forest department, Wildlife wing, Park personnel, local people and knowledge partners, such as, academia and research, and interface institutions like non-profit organizations and trusts would be appropriate for this purpose. Whenever possible, the Corporates may also be involved as stakeholder to perform their social responsibility in terms of their contribution as monetary support and technology for maintenance of wildlife habitat, habitat improvement and awareness generation. The establishment of industry must be discouraged in those areas nearby to Park and eco-sensitive zone.
2. **Awareness Generation:** The knowledge and technical skills are pre-requisite for human capital to perform in a desired manner. It is, therefore, suggested that the information in regard to species of plants and animals existing in the project site, importance of these species for human beings and conservation of food chain organisms and ecological processes essential for ecological balance at the site, threats for their survival and suitable package of practices for conservation of biodiversity need be made available to the local people and other stakeholders through print and electronic media, street plays (*nukkar natak*) and exhibitions. Local festivals and fairs (*mela*) can be better opportunities for awareness generation.  
Promotion of awareness with respect to Blackbuck particularly, about religious taboos of local communities (e.g., presence of Blackbuck in habitation and agricultural fields brings prosperity) and indigenous culture of biodiversity conservation (such as, Blackbuck as an animal of conveyance of *Vedic-Gods Chandra i.e., Moon, Vayu i.e., Air* and its association with classical Indian vocals- *Bhipalas* and *Todi*) to the school children, will facilitate biodiversity conservation for generations together.
3. **Promotion of Eco development and Ecotourism:** In order to reduce the dependency of local people on the forest, savannah, grassland and natural biodiversity for different socio-economic needs, such as, fire-wood, small timber, leaf fodder and medicinal species, etc., the eco-development programme focusing on the cultural and socio-economic and environmental dimensions specific to the project site need be encouraged utilizing local knowledge and practices. Wherever necessary the technology developed through scientific experiments and field experiences in regard to sustainable utilization of natural resources and organic agriculture including agro-forestry need be integrated with the traditional practices. Eco-development is now seen as a site- specific conservation-friendly measure for environmentally-compatible economic development.  
The existing Velavadar Black Buck National Park and development of expressway will further promote tourism activities in the area, therefore, the local people centric-ecotourism focusing on savannah, grasslands, wetland and organic-agriculture (agro-tourism), and rural life-style (rural-tourism) need be strengthened and popularized in order to promote availability of natural resources indigenously, employment opportunities and income of the local inhabitants at their own location. Such an activity will also



promote respect for local culture among the tourists and park visitors, besides supporting conservation through measures like zero-waste activities, organic farming, sustainable-harvest, green sanitation and green economy.

4. **Control of Population Influx around the Expressway:** The construction of proposed Expressway will lead to increase in human population from outside the project area also. This will adversely affect the carrying capacity of the project site (at least temporarily) as far as the space and livelihood needs are concerned. This needs to be regulated through development of well-managed habitation and growth centers accordingly.
5. **Aquaculture for Fishery:** Fish provides meat of white category that does not lead to cardio-vascular diseases and high blood pressure. Additionally, fish is among the most potential source of animal protein and vitamin-A. Although the consumption of meat is not a common practice in the state Gujarat, it is, therefore, suggested that **fish farming** as an aquaculture practice need be popularized in the project area to meet the **twin objective of fish harvest** and **fish conservation** in natural water bodies and wetlands. The pond-based fishery may be promoted in the project area. Suitable fish species, such as, Katla, Rohu, Mrigal, Silver carp, Grass carp and Common carp may get priority in this activity. Government of Gujarat should contribute as resource organization for fish seed and capacity building programmes.
6. **Promotion of Farm Forestry, Agro-Forestry and Silvo-Pasture:** The multi-species landuses, such as, agro-forestry and farm forestry in the farm land, horti-pastoral and silvo-pastoral practices on the barren lands and wasteland need be given priority to achieve soil conservation and to obtain economic goods, such as, fire-wood, small timber, fodder and fruits simultaneously. For this purpose, locally-preferred species should be considered on priority.
7. **Habitat Management for Wildlife:** Both regulatory (for human actions) and habitat management practices including engineering devices need be utilized for managing and improving habitats for wildlife. The landscape approach following decentralized collaborative management need be adapted for this purpose.  
The habitat management practices such as, road-side plantation, rain water harvesting, chain linked fencing along road-side habitats specially near the Velavadar Black Buck National Park. For birds, plantation of non-fruit bearing plants will be adopted from chainage 100+000 to chainage 109.019, so that birds will not be attracted to road. Mineral-rich deicing salts will not be used for median plantation for which birds may be attracted to ingest to satisfy mineral deficiencies or to aid in grinding food.

For good governance in the interest of wildlife conservation and sustainable economic development, the following regulatory measures need be practiced equitably in case of common citizens, authorities and very important persons:

- Wildlife (Protection) Act 1972 and amendments
- The Forest Conservation Act 1980
- The (Prevention and Control of Air Pollution) Act 1981
- The (Prevention and Control of Water Pollution) Act 1974
- The Environment (Protection) Act 1986



- The Biodiversity Act, 2002
- Discharge of effluents as per EPA, 1986
- Noise Pollution and Control Rules, 2000
- Construction and Demolition of Waste Management Rules, 2016
- Solid Waste Management Rules, 2016
- Plastic Waste Management Rules, 2016

#### 4.6.4.1 Integrated Eco-friendly designs

Mitigation measures such as wildlife warning signs, signages to reduce traffic volume and/or speed, animal detection systems, wildlife reflectors, wildlife repellents, modified road designs/viaducts/bridges, changes in road-verge management, wildlife fences, wildlife crosswalks, and wildlife crossing structures are some of the latest sustainable eco-friendly designs. Although wildlife crossing structures, combined with wildlife fences that prevent animals from accessing roads and that guide animals towards the crossing structures, are gaining attention by transportation agencies because they provide safe wildlife passages without affecting traffic flow. However, in the present scenarios, engineering structures, such as, underpasses, pipe culverts, and chain link fences has been established suitably at sensitive intersections and other locations promoting the wildlife survival and movement has been shown in **Figure 4.8** and **Figure 4.9**. At Chainage 107+840 a cattle underpass has been proposed to facilitate the livestock as well as wildlife movement beyond the park and Eco sensitive zone as illustrated in **Figure 4.10**. Although Blackbuck, Harriers, Lesser Florican and Sarus Crane are predominantly thrives in the Velavadar Black Buck National Park. These wild animals often may move outside the park due to their free-range habit, so developing such underpasses and culverts will overcome the road related incidence of injury or mortality and thereby reduce the man-animal conflict to considerable extent. The non-structural measures, such as speed limit signage/restriction related to speed control, pre-cautionary signages and warnings of animal crossings/RoW, posters for wildlife, etc., can add further to the wildlife conservation. The grass and herb plantations at the proposed bridge location of Lylka River (Ch. 101+830 km) are proposed to increase the green cover and habitat extent of small form of wildlife. Moreover, the chain link fence could further reduce the adversity of poaching and man animal interaction due to the proposed project development activity. In low lying areas near agricultural fields, the development of box culverts will facilitate movement of aquatic fauna and other amphibian/reptile faunal species.

Impact of proposed project on movement of wildlife up to 10 km radius of the Velavadar Black Buck National Park and its eco sensitive zone has also been taken into consideration in the impact assessment study



**Figure 4.8: Suggestive engineering devices for wildlife management (WII 2016)**  
**Top-underpass, Middle-Box culvert; Lower-Pipe culvert**





**Figure 4.9: Suggestive engineering devices for wildlife management (WII 2016)**  
**Top-fish passage; Bottom-fencing along roadside near eco-sensitive zone or National Park**





**Figure 4.10: Anticipated movement of Wild animals beyond Velavadar Black Buck National Park and Eco sensitive zone from Ch. 102+000km to 109+019 km (10 km radius from the area of Velavadar Black Buck National Park and its ESZ)**

#### **4.6.4.2 Impact of Noise, Light on Wild animals**

The noise, light and human activity pressure due to proposed project will adversely affect the existing wildlife. Interference of noise generated during construction and due to transport will influence adversely the communication systems of the wild animals. The artificial light will disturb breeding and foraging behaviour of wild animals. It may also cause temporary blindness especially in young ones. The head light glare will interfere with the movement of birds, disrupt horning behavior of wild animals, matting calls and disorient the migratory wild animals. The expressway will also cause fragmentation and degradation of habitat, obstruction to the movement of wild animals and sometimes accidental death.

##### **4.6.4.2.1 Mitigation Measures**

The noise attenuation measures and measures will be developed at proposed chainage 100+500 Km to 109+019 Km near Adhelai village during both construction and operation phase. During construction period, Pre-Painted Galvanized Iron (PPGI) insulated sheet will be used to minimize the effect of noise, light and heat to nearby wildlife. During operation phase Green Belt and Median Plantation will act as noise and light barrier. The use of sign boards, pictures regarding speed limits at key points like crossings and turnings could also facilitate to avoid noise and speed influences. The cost of the same has been included in EMP.



#### **4.6.5 Impacts on Velavadar Black Buck National Park**

The ESZ of Velavadar Black Buck National Park is away from the end point of proposed expressway in Bhavnagar district. There is no corridor of any fauna near the proposed expressway. Hence the proposed project will not have any impact on the Velavadar Black Buck National Park. However, precautionary measures will be taken to mitigate the likely impacts if any, on the wild life present in Velavadar Black Buck National Park. To formulate the mitigation measures for protection of wildlife, it is important to assess the possible impacts on the wildlife due to project activities. Hence, the likely impacts of proposed project are as follows:

**1. Direct Loss of Habitat**

The construction of new roads destroys or damages vegetation such as trees, shrubs and grasses, this vegetation may provide valuable habitat for wildlife.

**2. Degradation of Habitat quality**

The trenching and digging works and presence of construction camps may lead to invasion of exotic weeds, and pollution due to liquid, solid wastes or emissions. The heavy metals such as lead from motor vehicles and numerous chemicals elements arising from roads, vehicles, fuels, corrosion and wear and tear of vehicle components have detrimental effects on vegetation present in the area. This may result in degradation of habitat for wildlife and adversely affects the health and fertility of wild animals.

**3. Noise Induced Physiological and Behavioral Changes**

The loud noise from the traffic interferes with the communication systems of wild animals and brings out a “flight” or “fight” response and interferes with the behavior of both predator and prey. It is also reported that wild animals rely on auditory signals for their sustenance, defense and reproduction and loud noise may disturb this physiological conditions. The traffic noise also disturbs the communication among the birds. Hence, the effect of loud noise can have serious and significant impacts on wildlife.

**4. Habitat Loss and Defragmentation**

The construction of new roads dissects the contiguous habitat patches, resulting in smaller habitats and making them vulnerable to outside disturbance. The fragmentation of habitat is major cause for decline of biodiversity in any area. The fragmentation leads to shrinkage of habitat, which in turn leads to a progressive reduction in species diversity with isolation of species which may affect the reproduction of the species.

**5. Impacts of Headlights Glare on Wildlife**

The artificial lights may disturb the breeding and foraging behavior in birds, repel spiders and beetles and influence the behavior of nocturnal frogs. The flash of headlights may temporarily cause blindness to animals and increases their chances to collide with the vehicles while crossing the road.

The headlights glare can interfere with the flights of birds and bats. It can disrupt homing behavior and mating calls (croaking) of amphibians in wetland areas and influence navigational ability and decline in population of reptiles. The headlight glares may disorient the migrating and dispersing animals.



**6. Avoidance of Road**

The repeated disturbances along road may deter animals from using habitats in their vicinity. This may result in dispersal of animals leading to isolation and reduced viability of the affected population.

**7. Injury and Mortality**

The injuries and mortalities caused by road accidents are matter of great concern and it is the most acknowledged effect on wildlife. Kills ranging from snakes to small rodents to deer to large cats are very common view along the roadside. This situation generally increases with the increase in traffic, intensity, speed and animal activity and density.

**8. Reduce access to saltlicks and waterholes**

The construction of roads may reduce the accessibility of wild animals to saltlicks and waterholes in summer and winter ranges by ungulates, reduce access to wetland breeding sites by amphibians and to upland nesting habitat by turtles.

**9. Discontinuity of Canopy**

The removal of trees for road construction may break the connectivity of canopy which is essential for movement of arboreal species such as squirrels and monkeys.

**10. Disruption of Processes that maintain regional wildlife populations**

The alteration of landscape due to construction of road may affect ecological and evolutionary processes for wildlife. The alteration can change the fire or burning patterns and hydrological regimes and may introduce and enable the spread of invasive alien species and influence genetic drift. The isolation of smaller populations of animals due to habitat fragmentation may lead to inbreeding depression which may cause risk of extinction.

**11. Human – Wildlife Conflict**

The proposed project is away from ESZ and there is no contiguous forest patch on either side of the project road except revenue forests and protected forest (Cross road, canal crossing etc). However 04 nos of underpasses and box culverts are providing in the interval of 200 to 250m. These will be used for cattle and animal for passage.

**4.7 IMPACT ON PROTECTED MONUMENTS AND CULTURAL HERITAGE SITES**

It has been observed that no archaeological site or monument and cultural heritage site is coming along the proposed alignment. Therefore, there would not be any kind of significant impact on the cultural heritage sites.

**4.8 IMPACTS ON SOCIAL ENVIRONMENT**

The economic and social interaction of communities is going to be improved by the road projects. However, the construction of new road and new alignment will cause disruption to local interactions.

Some important observations during the field visits are:

1. The alignment is entirely Greenfield passing through mainly agricultural lands.



2. Public consultation reveals that people are aware of the proposed project and are willing to support the project. Still, in our opinion, how will they behave at the time of project implementation is difficult to assess.
3. One of the topmost priorities in designing the alignment was to save as many properties as possible.

#### 4.9 IMPACTS ON ROAD SAFETY AND HUMAN HEALTH

The planning and designing of the new expressway is in accordance with the improved safety measures and better health conditions. The chances of accidents could be minimized by (1) strengthening the pavements, (2) improving upon the curves in road geometrics, (3) fly-over and grade separators (4) proposing the service lanes in market places and near schools, etc (5) providing proper median, (6) improving upon road crossings (7) putting right signals and signboards, (8) new under passes.

The human diseases caused by the contamination of water, increase in air pollutants and noise may go up by 5-10% but proper mitigation can take care of the situation.

#### 4.10 MITIGATION MEASURES

The project is likely to bring some negative impacts on the environment and socio-economic structure of the region. While deciding the alignment from environment point of view, some negative potential impacts are unavoidable. In such cases, adoption of mitigation measures is the only solution. Mitigation should be focused on achieving goals within clear timeframes. Use of **SMART** approach is recommended to evaluate the likely effectiveness of alternative mitigation strategies or measures. The **SMART** refers to measures that are **Specific, Measurable, Achievable, Realistic and Timely**.

A brief description of the approach to mitigation measures on environmental issues is mentioned below:

##### 4.10.1 Soil

The potential impacts, their mitigation, and the phase of implementation to topographic and soil characteristics were assessed and presented below.

| Potential Impacts        | Mitigation  | Implementation Phase                        |
|--------------------------|---|---|
|                          | <ul style="list-style-type: none"> <li>Action confined within proposed ROW</li> </ul>   |   |
| A. Altered embankment    | <ul style="list-style-type: none"> <li>Good engineering &amp; construction practices</li> <li>Stabilization and turfing (revegetation)</li> </ul> | Pre-construction phase & construction phase |
| B. Borrow pit excavation | <ul style="list-style-type: none"> <li>IRC standards to be followed</li> <li>Borrow areas identified close to expressway.</li> </ul>              | Pre-construction phase & construction phase |



- Non-productive land will be used
- Good engineering & construction practices

#### 4.10.2 Water Resources

The potential impacts, their mitigation and the phase of implementation regarding water sources were assessed with regard to surface water bodies, like rivers, irrigation channels and underground water tables with reference to wells, tube wells and hand pumps.

| Potential Impacts       | Mitigation   | Implementation Phase   |
|-------------------------|--|--|
| A. Surface water bodies | <ul style="list-style-type: none"> <li>• Provision of proper drainage</li> <li>• Construction camps are properly located</li> <li>• Good engineering practices to be followed</li> </ul> | Pre-construction, construction, post-construction and operational phases |
| B. Underground water    | <ul style="list-style-type: none"> <li>• No appreciable impacts</li> <li>• Water to be used for construction should have separate source</li> </ul>                                      | Per-construction and construction phase                                  |

#### 4.10.3 Ambient Air Quality

| Potential Impacts  | Mitigation   | Implementation Phase  |
|--|--|---|
| Due to construction activities and transport of material | <ul style="list-style-type: none"> <li>• Machinery to be fitted with pollution control device</li> <li>• Asphalt plant will be equipped with dust collectors</li> <li>• Sensitive places like schools and hospitals to be avoided (at least 500 m away) for Asphalt plants and other generators</li> </ul> | Pre-construction, construction and post-construction phases |
| Due to additional traffic, specially in market places    | <ul style="list-style-type: none"> <li>• Plantation of pollutant adsorbing trees</li> </ul>  | Operational phase & construction phase                      |

#### 4.10.4 Noise Levels





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Noise particularly highway traffic noise, is a complex phenomenon because its intensity and characteristics vary with time depending upon the frequency as well as type of vehicles on the road.

| Sr. No. | Item                                     | Impact                        | Impact (Reason)  | Mitigation/Enhancement   |
|---------|--|-------------------------------|--|--|
| 1       | Sensitive receptors                      | Direct impact                 | Increase in noise pollution  | <ul style="list-style-type: none"> <li>Noise barrier to be provided</li> <li>Traffic calming devices to be used.</li> <li>NO Horn Zone sign Post will be placed.</li> </ul>  |
| 2a      | Noise Pollution (Pre-Construction Stage) | Direct impact, short duration | Man, material & machinery movements<br>Establishment of labor camps, onsite offices, stock yards and construction plants         | <ul style="list-style-type: none"> <li>Area specific and for short duration</li> <li>Machinery to be checked &amp; complied with noise pollution regulations.</li> <li>Camps to be setup away from the settlements, in the down wind direction.</li> </ul>                         |
| 2b      | Noise Pollution (Construction Stage)     | Marginal Impact               | stone crushing, asphalt production plant and batching plants, diesel generators etc<br>Community residing near to the work zones | <ul style="list-style-type: none"> <li>Camps to be setup away from the settlements, in the down wind direction.</li> <li>Noise pollution regulation to be monitored and enforced.</li> <li>Temporary as the work zones will be changing with completion of construction</li> </ul> |
| 2c      | Noise Pollution (Operation Stage)        | Marginal Impact               | due to increase in traffic (due to improved facility)  | <ul style="list-style-type: none"> <li>It will be compensated with the uninterrupted movement of heavy and light vehicles.</li> </ul>  |
| 3       | Noise Pollution Monitoring               |                               | Effectiveness / shortfall (if any)<br>Any unforeseen impact  | <ul style="list-style-type: none"> <li>Measures will be revised &amp; improved to mitigate/ enhance environment due to any unforeseen impact.</li> </ul>   |

#### 4.10.5 Human Health and Safety

Due to construction of new expressway, heterogeneous nature of traffic, congested market places, the accidents are not uncommon. Besides this the truck-drivers may carry contagious diseases, which might spread in the area if proper care is not taken.

##### Potential Impacts

##### Mitigation

##### Implementation Phase



|   |  |                                   |
|---|--|-----------------------------------|
| Accidental spots can be reduced by providing proper signs and warnings, improvement of junctions, new under pass, fly-over etc. | <ul style="list-style-type: none"> <li>• Proper provision of service roads, junctions, fly-over, under process to be provided at appropriate places</li> <li>• Truck parking places</li> <li>• Medical facility to be provided (an ambulance fitted with all medical equipments and a doctor)</li> </ul> | Construction and operation phases |
| Sexually transmission diseases (STDs)   | <ul style="list-style-type: none"> <li>• Detected diseased person to be carried to the nearest city hospital</li> <li>• Preventive measures should be taken to check the spreading of STDs</li> </ul>  | Operation phases                  |

#### 4.10.6 Measures Taken For Pedestrian Safety

The Provision of 47 new underpasses has been provided in proposed project for safety of pedestrian and as well as animals.

#### 4.11 BIOLOGICAL CHARACTERISTICS

The most important negative impact that the project will cause is the loss of number of trees, leading to (a) enhanced degree of soil erosion, (b) loss of shade, fruits, timbers and other economic activities, and (c) the ecosystem. However, if re-plantation scheme is launched vigorously, it will help in restoring the ecological balance, though slowly. The project will not affect any fauna, however, keeping in view the proximity of Velavadar Black Buck National Park, mitigation measures will be followed to avoid any likely impacts on wildlife.

The potential impacts and mitigation measures for biological Environment have been presented in **Table 4.10**.

**Table 4.10: Details of potential impacts and mitigation measures for biological Environment**

| Potential Impacts    | Mitigation Measures   |
|----------------------|---|
| <b>Loss of Trees</b> | <ul style="list-style-type: none"> <li>• A total of 97,195 trees have been proposed to be planted against 4478 plants recorded within RoW (excluding DSIR area).</li> </ul> |



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| Potential Impacts  | Mitigation Measures   |
|--|---|
| <b>Loss of Habitat and Defragmentation</b>   | <ul style="list-style-type: none"> <li>Plantation of 97195 trees will be done along the road sides to compensate the loss of vegetation</li> <li>The Provision of 47 new underpasses including cattle underpass has been provided in proposed project for safety of animals</li> </ul>  |
| <b>Degradation of Habitat Quality</b>  | <ul style="list-style-type: none"> <li>Precautions will be taken to avoid leakage of chemicals, any hazardous materials due to construction activities.</li> <li>Labour camps will be located far from habitat of any fauna</li> <li>Invasive alien species will be removed from time to time</li> </ul>  |
| <b>Noise Induced physiological and Behavioural Changes</b>                                   | <ul style="list-style-type: none"> <li>Dense vegetation along the road side may be provided for attenuation of noise.</li> <li>Silence zone will be marked and provided with sign boards to alert drivers</li> <li>Noise buffers using diversity of tree species, with a range of foliage shapes and sizes, combination of shrubs and trees and evergreen species will be provided.</li> <li>Noise wall will be provided</li> </ul>   |
| <b>Impacts of Headlights Glare on Wildlife</b>   | <ul style="list-style-type: none"> <li>Hedges along both sides of roads will be provided to lower the intensity of lights</li> </ul>  |
| <b>1. Avoidance of Road by Animals</b><br><b>2. To avoid Injury and Mortality of animals</b> | <ul style="list-style-type: none"> <li>The Provision of 47 new underpasses including cattle underpass has been provided in proposed project for passage of animals including herpetofauna, amphibians etc.</li> <li>Fences will be provided in combination with underpasses to direct animals away from the roads.</li> <li>Vegetation or other habitat features (rocks, fallen timber) will be placed, planted or allowed to regrow so that animals are directed to preferred crossing locations.</li> <li>The plantation and lighting systems along the roads should be made less attractive to birds to avoid collision of birds with vehicles.</li> </ul> |



| Potential Impacts  | Mitigation Measures   |
|--|---|
| <b>Reduce access to saltlicks and waterholes</b>                           | <ul style="list-style-type: none"> <li>• Creation or improvement of water bodies will be done in the borrow area over available community land / existing water bodies, so that the animals have access to water.</li> <li>• Plantation along the water body will be done to attract the animals towards it.</li> <li>• The saltlicks areas will be protected from reach of human beings nearby the proposed project road.</li> </ul> |
| <b>Discontinuity of Canopy</b>   | <ul style="list-style-type: none"> <li>• The Provision of 47 new underpasses including cattle underpass has been provided in proposed project for passage of animals</li> <li>• For Canopy Bridge, plantation with specific plant species can be done in the road area of National Park for movement of arboreal animals.</li> </ul>  |
| <b>Disruption of Processes that maintain regional wildlife populations</b> | <ul style="list-style-type: none"> <li>• The breeding sites of animals/amphibians, nesting sites of birds, thermoregulation surface sites of snakes will be avoided extent possible for any type of construction.</li> <li>• Creation or improvement of water bodies will be done in the borrow area over available community land / existing water bodies, to provide breeding sites to amphibians.</li> </ul>                       |
| <b>Increased Human Pressure and Human-Wildlife Conflict</b>                | <ul style="list-style-type: none"> <li>• The proposed expressway is access control and cattle underpass is proposed to cross the expressway by animals.</li> <li>• Caution signs will be provided to alert road users about wildlife.</li> </ul>  |

#### 4.12 SUMMARY OF ENVIRONMENTAL IMPACT ASSESSMENT

**Table 4.11** presents the summary of Environmental Impact Assessment along with the mitigation measures.



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**Table 4.11: Summary of Environmental Impact Assessment and its Mitigation Measures**

| S. No. | Parameters          | Potential Impact   | Mitigation Measures Suggested   |
|--------|---------------------|--|---|
| 1.     | Topography and Soil | • Cut and fill operations during road construction             | • The alignment passes through plain/rolling terrain and no substantial cut and fill operations are planned.  |
|        |                     | • Borrow earth   | • Borrow soil will be procure from approved quarry.<br>• IRC guidelines will be followed during excavation  |
|        |                     | • Quarries   | • Operational and government licensed quarry have been identified, which will be used to procure the material   |
| 2.     | Air environment     | • Generation of Dust   | • Sprinkling of water<br>• Earth handling site<br>• Borrow area<br>• Road construction site<br>• Air pollution control at stone crusher<br>• PPE for workers<br>• Stone crushing units environment compliance<br>• Regulation of construction timings near sensitive receptors and settlements  |
|        |                     | • Gaseous Pollution  | • Vehicles and machineries will be regularly maintained to conform to the emission standards.<br>• Asphalt mixing sites should be 1 km away from residential area and 10 km away from National Park.<br>• Asphalt plant will be equipped with pollution control equipment<br>• Use of PPE by workers engaged in construction and application of asphalt mix on road surface.<br>• Responsibility of contractors and supervising officers to ensure that the workers use the PPE |
| 3.     | Noise environment   | • Noise level may likely to increase during construction phase | • Properly maintained equipments to be used<br>• Noise levels of machineries used shall conform to relevant standard prescribed in Environment (Protection) Rules, 1986.<br>• Ear plugs and muffs will be used by workers as per requirement during construction activities.<br>• Regulation of timing of construction work generating noise pollution near the   |





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| S. No. | Parameters        | Potential Impact  | Mitigation Measures Suggested  |
|--------|-------------------|---|--|
|        |                   |   | residential areas  |
| 4.     | Water environment | <ul style="list-style-type: none"> <li>• Drainage pattern<br/>31 Pond, 30 water tanks and 19 well will be impacted due to the proposed expressway.</li> </ul> | <ul style="list-style-type: none"> <li>• Provision of proper drainage through culverts along the proposed expressway.</li> <li>• All the water bodies will be crossed by bridges and structures without affecting their original course and flow</li> <li>• Stabilization and turfing of slopes along the water bodies.</li> </ul>   |
|        |                   | <ul style="list-style-type: none"> <li>• Siltation of water bodies</li> </ul>   | <ul style="list-style-type: none"> <li>• Silt fencing around water bodies during construction to avoid silt laden runoff entering water body</li> <li>• Turfing or pitching of embankments of water bodies affected will be done where possible to prevent erosion that causes siltation.</li> <li>• No solid waste will be dumped in or near the water bodies or rivers.</li> </ul> |
|        |                   | <ul style="list-style-type: none"> <li>• Flooding due to siltation of drainages channel</li> </ul>  | <ul style="list-style-type: none"> <li>• Excavated earth and other construction materials should be stored away from water bodies</li> </ul>   |
|        |                   | <ul style="list-style-type: none"> <li>• Water for construction</li> </ul>  | <ul style="list-style-type: none"> <li>• Water source would be selected so that local availability is not affected</li> </ul>  |
|        |                   | <ul style="list-style-type: none"> <li>• Rainwater harvesting</li> </ul>  | <ul style="list-style-type: none"> <li>• Rainwater harvesting drains will be provided along the road side</li> </ul>   |
|        |                   | <ul style="list-style-type: none"> <li>• Contamination from wastes</li> </ul>   | <ul style="list-style-type: none"> <li>• Provision of septic tanks to prevent any untreated sewage discharge from construction workers camps</li> <li>• Oil interceptors at construction machine maintenance yards</li> </ul>  |
|        |                   | <ul style="list-style-type: none"> <li>• Contamination from fuel and wastes</li> </ul>  | <ul style="list-style-type: none"> <li>• Vehicle maintenance will be carried out in a confined area, away from water sources, and it will be ensured that used oil or lubricants are not disposed to water courses</li> </ul>  |
|        |                   | <ul style="list-style-type: none"> <li>• Sanitation and water use in construction camps</li> </ul>  | <ul style="list-style-type: none"> <li>• Construction camp will be organized in a planned manner.</li> <li>• Proper sanitation facilities will be provided including toilets.</li> <li>• Camps will have separate water supply facilities so that local water sources are not affected</li> </ul>  |
| 5.     | Land environment  | <ul style="list-style-type: none"> <li>• Loss of topsoil</li> </ul>   | <ul style="list-style-type: none"> <li>• Topsoil on stripping shall be removed and stockpiled on sides to be used on the side slopes, for top cover of borrow areas and for plantation in pits</li> </ul>  |
|        |                   | <ul style="list-style-type: none"> <li>• Loss of topsoil from borrowing</li> </ul>  | <ul style="list-style-type: none"> <li>• Arable lands will be avoided for earth borrowing. If needed, topsoil will be separated and refilled after excavation</li> </ul>   |
|        |                   | <ul style="list-style-type: none"> <li>• Borrowing of fill materials</li> </ul>   | <ul style="list-style-type: none"> <li>• Excavation from pre-selected locations. After excavation, the borrow pits will be dressed to match with the surrounding.</li> </ul>   |



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| S. No. | Parameters           | Potential Impact  | Mitigation Measures Suggested  |
|--------|----------------------|---|--|
|        |                      | <b>Loss of Land</b><br>• As per available data, it is observed that total land acquisition is 959.14 Ha.                                | The compensation to project affected persons will be paid as per the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, National Highways Act (NH Act), 1956 and relevant Acts and guidelines of Government of India. |
|        |                      | <b>Loss of structures</b><br>So far as the type of dwelling structures is concerned 72 nos. Structures coming under within alignment.   |  |
|        |                      | <b>Loss of Common Property Resources (CPRs)</b><br>A total of 113 CPRs (pond, well, temple, water tank) fall within proposed alignment. | Relocation of CPRs will be done in consultation with the locals and relocation will be completed first before dismantling the existing structures of CPRs.   |
| 6.     | Ecological resources | • Loss of trees   | Approx. 4478 no. of trees are likely to be felled.<br>Green belt development along proposed expressway. Plantation of about 97,195 trees (three row plantations along proposed expressway) proposed. Shrub plantation and grass carpeting in median is also proposed.          |
| 7.     | Impacts on wildlife  | • Loss of Habitat and Defragmentation   | • Plantation will be done along the road sides to compensate the loss of vegetation<br>• The strips of vegetation will be planted on either side of the linear clearing to provide attractive corridors for animals movement.  |
|        |                      | • Degradation of Habitat Quality  | • Precautions will be taken to avoid leakage of chemicals, any hazardous materials due to construction activities.<br>• Labour camps will be located far from habitat of any fauna<br>• Invasive alien species will be removed from time to time                               |



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| S. No. | Parameters | Potential Impact   | Mitigation Measures Suggested   |
|--------|------------|--|---|
|        |            | <ul style="list-style-type: none"> <li>Noise Induced physiological and Behavioural Changes</li> </ul>                            | <ul style="list-style-type: none"> <li>Dense vegetation along the road side may be provided for attenuation of noise.</li> <li>Silence zone will be marked and provided with sign boards to alert drivers.</li> <li>Noise buffers using diversity of tree species, with a range of foliage shapes and sizes, combination of shrubs and trees and evergreen species will be provided.</li> <li>Noise wall will be provided.</li> </ul>   |
|        |            | <ul style="list-style-type: none"> <li>Impacts of Headlights Glare on Wildlife</li> </ul>  | <ul style="list-style-type: none"> <li>Hedges along both sides of roads will be provided to lower the intensity of lights.</li> </ul>   |
|        |            | <ul style="list-style-type: none"> <li>Avoidance of Road by Animals</li> <li>To avoid Injury and Mortality of animals</li> </ul> | <ul style="list-style-type: none"> <li>Animal underpasses are proposed to be constructed for animals to cross the road.</li> <li>Different types of underpasses like Box culverts, pipe culverts, and culverts with furniture will be constructed for passage of herpetofauna, amphibians etc.</li> <li>Fences will be provided in combination with underpasses to direct animals away from the roads.</li> <li>Vegetation or other habitat features (rocks, fallen timber) will be placed, planted or allowed to regrow so that animals are directed to preferred crossing locations.</li> <li>The plantation and lighting systems along the roads should be made less attractive to birds to avoid collision of birds with vehicles.</li> </ul> |
|        |            | <ul style="list-style-type: none"> <li>Reduce access to saltlicks and waterholes</li> </ul>                                      | <ul style="list-style-type: none"> <li>Creation or improvement of water bodies will be done so that the animals have access to water.</li> <li>Plantation along the water body will be done to attract the animals towards it.</li> <li>The saltlicks areas will be protected from reach of human beings.</li> </ul>  |
|        |            | <ul style="list-style-type: none"> <li>Discontinuity of Canopy</li> </ul>  | <ul style="list-style-type: none"> <li>The Provision of 47 new underpasses including cattle underpass has been provided in proposed project for passage of animals</li> <li>For Canopy Bridge, plantation with specific plant species can be done in the road area of National Park for movement of arboreal animals.</li> </ul>  |
|        |            | <ul style="list-style-type: none"> <li>Disruption of Processes that maintain regional</li> </ul>                                 | <ul style="list-style-type: none"> <li>The breeding sites of animals/amphibians, nesting sites of birds, thermoregulation surface sites of snakes (if any) will be avoided extent possible for any type of</li> </ul>   |



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| S. No. | Parameters                            | Potential Impact                                       | Mitigation Measures Suggested  |
|--------|---------------------------------------|--|--|
|        |                                       | wildlife populations                                   | construction.<br>• Creation or improvement of water bodies will be done in the borrow area over available community land / existing water bodies, to provide breeding sites to amphibians. |
|        |                                       | • Increased Human Pressure and Human-Wildlife Conflict | • The proposed expressway is access control and cattle underpass is proposed to cross the expressway by animals.<br>• Caution signs will be provided to alert road users about wildlife.   |
| 8.     | Public health and occupational safety | • Safety to public                                     | • Signs will be posted on road before construction areas informing public about the work and safety provisions.  |
|        |                                       | • Restriction to Access                                | • Safe and convenient passage for vehicles, pedestrians and live stocks will be arranged during construction work  |
|        |                                       | • Occupational safety for workers                      | • Contractor will arrange all safety measures for workers as per factories act.  |
|        |                                       | • Occupational safety for asphalt plant workers        | • All worker employed on mixing asphaltic material, cement, lime mortars, concrete etc. will be provided with protective footwear and protective goggles                                   |



## CHAPTER -5: ANALYSIS OF ALTERNATIVES

### 5.1 SELECTION OF ALTERNATIVE

Alignment of Expressway is fixed in conformity with approved alignment of Mass Rapid Transit System (MRTS) project with the approval of State Government as well as Government of India. NHAI is the implementing authority of the fixed alignment. A meeting was held on 20th January 2017 under chairmanship of CEO & MD, DMICDC and it was decided to fix alignment of Expressway as per standards and in conformity with approved alignment of MRTS project included in JICA Rolling Plan to establish the technical, economic and financial viability of the project and prepare project report for six lane expressway configurations for DMICDC. The proposed expressway corridor is sited between two existing road routes to Bhavnagar; Amhedabad-Bagodara-Dhandhuka-Bhavnagar route at its west and Ahmedabad- Dholka-Vataman-Dholera-Bhavnagar route to its east. However, the proposed expressway merges with the later before Dholera and follows thereafter. The proposed alignment is presented in Figure 5.1.

### 5.2 WITH AND WITHOUT PROJECT SCENARIO

The proposed project will not only develop the surrounding area but will also provide smooth movement of traffic and linking with other roads of the country. Keeping in view, the site conditions and the scope of development of the area, the 'With' and 'Without' project scenarios has been studied. The details of the "With" and "Without" Project has been presented in **Table 5.1**.

**Table 5.1: 'With' and 'Without' Project Scenario**

| With Project   |   | Without Project  |   |
|--|---|--|---|
| Positive Impacts   | Negative Impacts  | Positive Impacts   | Negative Impacts  |
| <ul style="list-style-type: none"> <li>• The improvement of road surface and reduction of bottlenecks may reduce the traffic congestion and wastage of fuel.</li> <li>• Flourish in trade and Commerce and development of DSIR</li> <li>• Providing better level of service in terms of improved riding quality and smooth traffic flow.</li> <li>• Reduction in accident rate</li> <li>• Access to new</li> </ul> | <ul style="list-style-type: none"> <li>• The total land requirement for the project is 959.14 ha, out of which 886.26 ha is private, 72.88 ha is government land (including 1.530 ha Forest Land) and remaining around 685.97 ha land will be provided by DSIRDA (Dholera Special Investment Regional Development Authority).</li> <li>• Around 4478 trees (excluding DSIR area) will be cut down due to development of green field alignment.</li> </ul> | <ul style="list-style-type: none"> <li>• No acquisition of land or properties and hence no displacement of families.</li> <li>• No felling of existing trees and vegetation</li> </ul> | <ul style="list-style-type: none"> <li>• Travel time and fuel consumption level will be more due to bottlenecks</li> <li>• Increased air pollution in the close proximity of the existing roads due to slow moving traffic and congestion</li> <li>• Rise in noise levels due to more traffic congestion on the existing roads</li> <li>• Chances of accidents on existing transport infrastructure will be more in absence of the planned Expressway.</li> </ul> |





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|  |  |  |  |
|--|--|--|--|
|  | <ul style="list-style-type: none"> <li>• Increase of traffic will lead to air and noise pollution.</li> <li>• Removal of trees and vegetation due to widening and upgradation</li> <li>• Changes in land use pattern along the new green field alignment.</li> <li>• Increase in dust pollution and noise Pollution during Construction period. However, this will be for short term.</li> </ul> |  | <ul style="list-style-type: none"> <li>• Further deterioration of project road.</li> </ul> |
| <p>Employment Opportunities</p> <ul style="list-style-type: none"> <li>• Employment of local workers for the execution of project</li> <li>• Better access to health care and other social services</li> <li>• Improved quality of life of the local people</li> <li>• Better way side amenities and other facilities like bus bays/shelters, truck laybays and service roads</li> </ul> <p>Adequate underpasses flyovers for cross over</p> | <ul style="list-style-type: none"> <li>• Pollution and noise Pollution during Construction period. However, this will be for short term.</li> </ul>  |  | <ul style="list-style-type: none"> <li>• Further deterioration of project road.</li> </ul> |

Therefore, 'with' project scenario, with its insignificant adverse impacts is more acceptable than the 'without' project scenario, which would mean an aggravation of the existing problems. The potential benefits of the planned expressway are substantial and far reaching both in terms of the geographical spread and time. Hence, it is clear that the implementation of the project will be a definite advantage to Gujarat and especially Dholera region in order to achieve all-round development of their economy and progress for their people.

The potential impacts on different environmental components would be avoided through good engineering design practices. Appropriate mitigation measures have been suggested where avoidances are not possible in various sections of the environmental assessment report.





## CHAPTER-6: ENVIRONMENTAL MONITORING PROGRAMME

### 6.1 ENVIRONMENT MONITORING PROGRAMME

The Environmental Monitoring Programme provides such information on which management decisions may be taken during construction and operational phase. It provides basis for evaluating the efficiency of mitigation and enhancement measures, and suggested actions that need to be taken to achieve the desired effect. The monitoring includes:

- (i) Visual observation,
- (ii) Selection of environmental parameters at specific locations, and
- (iii) Sampling and regular testing of these parameters.

The objectives are:

- Evaluation of the efficiency of mitigation and enhancement measures
- Updating of the actions and impacts of baseline data
- Adoption of additional mitigation measures if the present measures are insufficient
- Generating the data which may be incorporated in the environmental management plan in future projects

#### 6.1.1 Ambient Air Quality (AAQ) Monitoring

The air quality is recommended for monitoring through an approved agency in the process of Construction of Ahmedabad-Dholera Expressway Road in the State of Gujarat. The monitoring of air sampling should be conducted at the location of Crusher plant, HMP, Stockyards Batching plant, Haul roads. In addition to these, air quality should also be monitored near the storage sites having aggregates, sands etc.

The parameters recommended for monitoring during construction are:

- Particulate Matter, PM<sub>10</sub>, PM<sub>2.5</sub>
- Sulphur Dioxide,
- Oxides of Nitrogen, and
- Carbon Monoxide

#### 6.1.2 Water Quality

Water quality and public health parameters should be monitored till the end of project and two years after the completion. Monitoring should be carried-out at quarterly basis, to cover seasonal variations, by any recognized agency. Water quality shall be analyzed by applying the standard technique. The parameters for monitoring are given below.

#### 6.1.3 Ambient Noise Monitoring

The monitoring of noise sampling should be conducted at the location of plant sites i.e crusher plant, HMP and construction sites etc. In addition to these, noise quality should also be monitored near the school, hospital, other sensitive sites and residential areas exist along the 40 meter to 50 meter distance of project road or at the designated locations fixed –up by the environmental expert.

The procedural details of monitoring of various components have been presented in **Table 6.1**.



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**Table 6.1: Environmental Monitoring Plan**

| Environmental Components         | Monitoring  |   |   | Location   | Frequency  | Institutional Responsibility                  |                         |
|----------------------------------|---|---|---|--|--|---|-------------------------|
|                                  | Parameters  | Special Guidance  | Standards   |  |  | Implementation                                | Supervision             |
| Air Quality                      | PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO                       | As per CPCB guidelines  | The Air (Prevention and Control of Pollution) Rules, CPCB, 1982 | At sites where, hot mix plant / batching plant is located  | <b>Construction period:</b> At 10 locations for three seasons in a year for 2 years<br><b>Operation period:</b> At 10 locations for three seasons for a year for 15 years  | Contractor through approved monitoring agency | IC, NHAI- PIU Ahmedabad |
| Ground and Surface Water Quality | pH, temperature, BOD, Total Hardness, COD, TDS, TSS, DO, Total coliform, Conductivity, Oil & Grease | Grab priority collected from source and analyze as per standard methods for examination of water and wastewater | Water quality standards by CPCB                                 | At baseline ground water monitoring locations and<br><br>At other ground water source used for construction, if any. | <b>Ground Water</b><br><b>Construction period:</b> At five location for three seasons in a year for 2 years.<br><b>Operation period:</b> At five locations for three seasons for a year for 15 years.<br><br><b>Surface Water:</b><br><b>Construction period:</b> At three location for three seasons in a year for 2 years<br>In source of surface water used | Contractor through approved monitoring agency | IC, NHAI- PIU Ahmedabad |



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| Environmental Components | Monitoring                                   |   |                             | Location  | Frequency   | Institutional Responsibility                  |                         |
|--------------------------|--|---|-----------------------------|---|---|---|-------------------------|
|                          | Parameters                                   | Special Guidance  | Standards                   |   |   | Implementation                                | Supervision             |
|                          |  |   |                             |   | construction of proposed project<br><b>Operation period:</b><br>At three location for three seasons for a year for 15 years<br>In source of surface water used construction of proposed project |   |                         |
| Noise Levels             | Noise level for day and night on dB(A) scale | In free field at 1m distance from the equipment to be monitored | Noise standard by CPCB      | At equipment yards, camp and villages along the alignment.  | <b>Construction period:</b><br><br>At 10 locations for three seasons in a year for 2 years<br><br><b>Operation period:</b><br>At 10 locations for three seasons for a year for 15 years         | Contractor through approved monitoring agency | IC, NHAI- PIU Ahmedabad |
| Soil quality             | Monitoring of NPK & heavy metals and grease  | -   | As per IRC code of practice | At baseline soil monitoring locations.<br><br>Ad-hoc if accident /spill locations involving bulk transport of | <b>Construction period:</b><br>At 3 locations for three seasons in a year for 2 years<br><b>Operation period:</b><br>At 3 locations for three seasons for a year for 30 years                   | PIU through an approved agency                | IC, NHAI- PIU Ahmedabad |





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| Environmental Components | Monitoring                                       |  |   | Location                                   | Frequency  | Institutional Responsibility      |  |
|--------------------------|--|--|---|--|--|-----------------------------------|--|
|                          | Parameters                                       | Special Guidance   | Standards   |  |  | Implementation                    | Supervision                                    |
|                          |  |  |   | carrying hazardous material                |  |                                   |  |
| Road side plantation     | Monitoring of felling of trees                   | It should be ensured that only marked trees are felled as per requirement                              | As given in the Detailed Design for the project                                     | All along the corridor                     | <b>Construction period:</b><br><br>During the felling of trees | Forest depart<br>Competent Agency | Developer to assist in co-ordination with NHAI |
|                          | Survival rate of trees, success of re-vegetation | The number of trees surviving during each visit should be compared with the number of saplings planted | The survival rate should be at- least 75% below which re- plantation should be done | At locations of compensatory afforestation | <b>Construction period:</b><br><br>Every year for 3 years      | PIU                               | Developer & Forest Department                  |



## 6.2 ENVIRONMENTAL MONITORING COST

The environmental monitoring cost is estimated on the basis of the length and existing environmental scenario of the proposed project. Environmental monitoring cost of **1,85,96,000/-** has been allocated for construction and operation stages. The details have been presented in **Table 6.2**.

**Table 6.2: Environmental Monitoring Cost**

| S. No. | Parameters/ Components  | Particular                       | Guidelines  | Unit Cost/Sample (Rs)   | Total Cost (Rs) |
|--------|---|----------------------------------|---|---|-----------------|
| 1      | <b>Ambient Air Monitoring:</b><br>At construction Stage:<br>At 10 locations for three season in a year for 2 years (twice a week)     | Monitoring at Construction sites | PM2.5 and Respirable dust samplers to be used and located 50 m from the construction site | 9,000   | 1,29,60,000     |
|        | At Operation Stage:<br>Continuous Air Monitoring sensor/station   | Ambient Air Quality Monitoring   | Continuous Air Monitoring   | Installation cost for 15 years for 4 numbers of units @ 50,000/unit | 2,00,000        |
|        |   |                                  |   | Operating cost for 15 years for 4 numbers of units @ 2,000/month    | 14,40,000       |
| 2      | <b>Ground Water Monitoring:</b><br>At Construction Stage:<br>At 5 locations for three season in a year for 2 years (once in a month)  | Ground water bodies              | Analyze as per the standard methods for examination of water and waste water              | 6,000   | 5,40,000        |
|        | At Operation Stage:<br>At 5 locations for three season for a year (once in a month)   | Ground water bodies              | Analyze as per the standard methods for examination of water and waste water              | 6,000   | 2,70,000        |
|        | <b>Surface Water Monitoring:</b><br>At Construction Stage:<br>At 3 locations for three season in a year for 2 years (Once in a month) | Surface water resources          | Analyze as per the standard methods for examination of water and waste water              | 6,000   | 3,24,000        |
|        | At Operation Stage:<br>At 3 locations for three season for a year (Once in a month)   | Surface water resources          | Analyze as per the standard methods for examination of water and waste water              | 6,000   | 1,62,000        |



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|                                  |  |  |   |       |                    |
|----------------------------------|--|--|---|-------|--------------------|
| 3                                | <b>Noise Monitoring:</b><br>At Construction Stage:<br>At 10 locations for three season in a year for 2 years (Once in a month) | At equipment yards/construction sites identified by IC | Using an integrated noise level meter kept at a distance of 15 m from the construction site | 3,000 | 5,40,000           |
|                                  | At Operation stage<br>At 10 locations for three season for a year (Once in a month)  | As directed by the Engineer                            | -   | 3,000 | 2,70,000           |
| 4                                | <b>Soil Monitoring:</b><br>At Construction Stage:<br>At 10 locations for three season in a year for 2 years (Once in a month)  | At productive agricultural land                        | -   | 7,000 | 12,60,000          |
|                                  | At Operation Stage:<br>At 10 locations where for three season for a year (Once in a month)                                     | At productive agricultural land                        | -   | 7,000 | 6,30,000           |
| <b>Total Monitoring Cost (A)</b> |  |  |   |       | <b>1,85,96,000</b> |



## CHAPTER-7: ADDITIONAL STUDIES

### 7.1 INTRODUCTION

As per the conditions of the Terms of Reference given by EAC for preparation of the EIA/EMP Report, several studies were to be conducted to provide a clear picture of the project area. The suggested studies/activities were:

- Public Consultation and Public Hearing
- Social Impact Assessment
- Road Safety Measures

### 7.2 PUBLIC CONSULTATION

#### 7.2.1 Introduction

Public involvement is one of the most important methods for the success of any project. It is useful for gathering environmental baseline data, understanding likely impacts, determining community and individual preferences, selecting the alternative and for designing sustainable mitigation and compensations plans.

The guiding principles include

- (i) Dissemination of information: - The information regarding the proposed project should be disseminated to the project affected people directly and indirectly.
- (ii) Soliciting information: - The basic information regarding various environmental and socio-economic issues is solicited.
- (iii) Consultation: - The consultation involves engaging people in dialogue. It is a religious process. There has to be a continuous dialogue between the components of the project and the public.
- (iv) Application of the gathered information: - The aforementioned three components of public involvement should be applied at various lines throughout the EIA process.

The public consultations are held at all the stages, namely, inception, screening, feasibility, and EIA preparation.

#### 7.2.2 Methodology Followed For Public Consultation

In order to make the project sustainable and effective, communication with the stake-holders, other affected people and interviews with individuals was made.

The methods used for public consultation were as follows: -

- The questionnaires regarding the amusements of various environmental impacts due to the project and suggestion on their mitigations were field tested by a group under the leadership of two supervisors. The data were recorded at the screening and feasibility stages.



### 7.2.3 Public Consultation Process

Consultation process was carried out at two different levels, viz.

- District, and
- Local or Village

**District Level consultations** were conducted to solicit public and PAPs inputs. Participants in District level consultations included District Magistrate, representatives of District level officials of Revenue departments, NGOs, PAPs and PAP representatives apart from NHAI /PIU staff and consultants.

The objectives of district level consultations were:

- To expand awareness of the project among the public, local government, peoples' representatives and non- government organisations.
- To identify social and environmental sensitivities and other concerns in affected districts that should be considered during project design and planning.
- To review potential impacts of the project to date; measure taken to avoid, identified in social and environmental assessments reduce or mitigate adverse impacts and minimise displacement; and provisions of project's
- To explain principles and procedures proposed for land acquisition, resettlement and relocation; and the compensation and assistance that will be provided to project affected persons, households and groups who may lose land or assets or suffer other losses.
- To introduce house-to-house surveys, asset verification, Photography, and village level consultations along project roads.
- Assure that local-level inputs are considered in project preparation

**Local Level Consultations:** The objectives of local level consultations were to inform the affected persons about the project, R&R policy of GOI, to incorporate their views in the design and mitigation measures as suggested by them. For organizing the local level consultations, Consultation team was framed-up which includes one Socio-Economic Analyst specialized in qualitative data collection, two women community organizers, two investigators and one moderator. Group discussions were carried out based on semi-structured guidelines. Efforts were made to cover all those villages having major problems viz., relocation of religious structures or big market or residential area getting affected, etc. Both small and big habitations were covered in order to get representation of all the segments of affected population. More than one-group discussions were held in every affected village. The size of group was restricted to 8 to 10 so that everybody gets the chance to express their views on the project. Apart from above Separate group meetings were also organized for women participation in affected villages.

The Local Level public consultations were carried out at (Visalpur, Tajpur, Bhat, Vasna chacharavadi, Kavitha, Chaloda, Juval-rupvati, Sindhraj, Lana, Jalalpur (godhneshwar), Sarandi, Kariyana, Rupgadh, Kesargadh, Vejalka, Saragwala, Bholad, Anandpur, Pipli, Valinda, Kadipur, Dholera, Mundi, Sandhida, Panchi, Hebatpur, Bavliyari and Adhelai during date from 13/8/2018 to 17/08/2018. The issues related to resettlement were also discussed during these





consultations and the outcomes of the consultations carried out at various stages presented in **Table 6.1** and **Table 6.2**.

#### **7.2.4 Key Issues**

- Majority of PAPs agreed that given the road condition and traffic volume, widening and strengthening is necessary.
- majority of the project affected persons in the stretch are poor non-titleholders and their concern was that whether the government would do something for their welfare as they do not have any alternative source for their livelihood;
- when would they be required to shift and where will they go as they do not have any alternative, their concern was that if they are relocated to places away from the highway, they would lose opportunities for small business what they get now as a result of the highway;
- Compensation was the major issue in every discussion. Most of the PAPs feared of low compensation because of past experience. However, consultants informed them about the procedure of calculating compensation and were also informed about R&R assistances to meet the replacement value. Cash compensation is more preferred by the PAPs.

#### **7.2.5 Consultations during Design**

Consultations were carried out at the design stages to identify:

- Location specific social and social issues to be addressed through designs;
- Socio-economic profile of community along the project route;
- Extent of likely social impact due to the project;
- Expectations and reservations of people towards project; and Resettlement and rehabilitation options.

#### **7.2.6 Consultation Sessions**

Consultations were done using various tools including, interviews with government officials, questionnaire-based information with stakeholders etc. The public consultation carried out at the Screening, Feasibility and Social Assessment stages of the project has been summarized.

The extent or the likely level of adverse impacts was one of the major criteria in deciding locations for public consultation sessions. A listing of the various consultation sessions conducted at different locations along the entire project corridor is presented. These community consultations were held during various times of the design period and were attended by the Consultant's Environmental and Social experts and local populace.



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**Table 7.1: Public Consultations issues**

| Sl.No | Location     | Existing Km Chainage | Date       | Participants | Issue Raise/Discussed  | Suggestion from Participants  | Mitigation Measures  |
|-------|--------------|----------------------|------------|--------------|--|---|--|
| 1.    | Lana Sherpur | 27+040               | 14/08/2018 | Villagers    | <ul style="list-style-type: none"> <li>• People Recommend for service road along the expressway.</li> <li>• Road crossing problem will arise for farmers to assess their agriculture fields.</li> <li>• Compensation issue.</li> <li>• Circle rate is very less</li> </ul> | <ul style="list-style-type: none"> <li>• Provide Vehicular underpass at every 500 m so that farmers can assess their field.</li> <li>• They recommend compensation at per New Act RFCTLARR-2013</li> <li>• Up gradation of circle rate</li> <li>• Provide access to the farmers so that the productivity did not reduce and it should not increase the cost of production.</li> </ul> | <ul style="list-style-type: none"> <li>• Provisions of circle rates as per adjoining developed area.</li> <li>• Give assess to their fields so that the cost of production did not increase.</li> <li>• Provisions of VUP and PUP at every 500m.</li> <li>• Compensation should be given by according to new act.</li> </ul> |
| 2.    | Visalpur     | 1.620                | 14/08/2018 | Villagers    | <ul style="list-style-type: none"> <li>• People Recommend for service road along the expressway.</li> <li>• Road crossing problem will arise for farmers to assess their agriculture fields.</li> <li>• Compensation issue.</li> <li>• Circle rate is very less</li> </ul> | <ul style="list-style-type: none"> <li>• Provide Vehicular underpass at every 500 m so that farmers can assess their field.</li> <li>• They recommend compensation at per New Act RFCTLARR-2013</li> <li>• Up gradation of circle rate</li> <li>• Provide access to the farmers so that the productivity did not reduce and it should not increase the cost of production.</li> </ul> | <ul style="list-style-type: none"> <li>• Provisions of circle rates as per adjoining developed area.</li> <li>• Give assess to their fields so that the cost of production did not increase.</li> <li>• Provisions of VUP and PUP at every 500m.</li> <li>• Compensation should be given by according to new act.</li> </ul> |



### 7.2.7 Continued Consultation

As part of the continued consultation program, the following actions are proposed:

- The NGO involved in implementation of the RAP will organize public meetings, and will appraise the communities about the progress in the implementation of R&R as required.
- The functions of Grievance Redressal Committees (GRCs) through which the project road traverses should be explained to the PAPs. The representatives of the PAPs will be associated with the committee.
- The resettlement sites, other amenities and facilities to be made available to the PAPs will be disclosed to them in consultation sessions.
- The NGO will organize public meetings to inform the community about the entitlements and provisions under the project. Regular update of the progress of resettlement component of the project (summary version of the report submitted by the NGO) will be placed for public display at PIU office.
- All monitoring and evaluation reports of the R&R components of the project will be disclosed in the same manner as suggested in this report.

**Table 7.2: Addressal of General Issues and Concerns under the Project**

| Issue / Concern  | Addressal under the project  |
|--|--|
| Enhancement of communities properties  | • Every effort should be made to minimize displacement of community properties   |
| Implementation of land acquisition plan  | • Land acquisition plan would be done as per LA act 1984   |
| Resettlement of residential people   | • The project Displaced families should be resettled in the village government land.   |
| Relocation of religious properties   | • Relocation of religious properties would be done in close consultation with community.   |
| Since non-titleholders would be assisted in the project; what are the mechanism to check further influx of illegal users ROW Division of compensation to all eligible families | • The informal dwellers would have some proof that they are residing on or before cut-off-date.  |
| Loss of Livelihood and income restoration option   | <ul style="list-style-type: none"> <li>• The PAPs will be compensated as per National R&amp;R policy</li> <li>• RAP to detail out the assistance programme to the needy</li> </ul> |
| Assistance to vulnerable groups  | • Special provisions have been made in the entitlement framework for assisting vulnerable groups to improve their quality of life.   |
| Employment of locals during construction   | • Locals will be given preference for employment during the project implementation   |

Some of the photographs during public Consultation have been shown in **Figure 7.1**.



**Public consultation at Lana**



**Public consultation at Lana**



**Public Consultation at Bhat**



**Public Consultation at Tajpur**



**Public Consultation at kavitha**



**Public Consultation at chaloda**





**Public consultation at Kavitha**



**Public Consultation at Kavitha**



**Public Consultation at Kavitha**



**Public Consultation at Kavitha**



**Public Consultation at Kavitha**



**Consultation at Kavitha**





|  |  |
|--|--|
|  |  |
| <b>Consultation at Jajalpur Roopavathi</b> | <b>Consultation at Sindraj</b>               |
|  |  |
| <b>Consultation at Kavitha Village</b>     | <b>Consultation Jalalpur Chainage 29.020</b> |
|  |  |
| <b>Public Consultation at Bablari</b>      | <b>Public Consultation Habatpur</b>          |

**Figure 7.1: Photographs during Public Consultation**



### **7.3 PUBLIC HEARING**

The public hearing has been successfully conducted on 13.11.2018 in Ahmedabad district and 16.11.2018 in Bhavnagar district as per the EIA Notification, 2006 and its subsequent amendment. The proceeding of the public hearing is enclosed as **Annexure IX (a)** and **Annexure IX (b)**.

### **7.4 SOCIAL IMPACT ASSESSMENT (SIA) STUDY IN THE PROJECT**

The Social Impact Assessment study of the project expressway has been carried out as per terms of reference of NHAI and guidelines given by the Govt. of India. The study methodology employs a simplistic approach in which the important receptors were identified. Based on the identification, secondary baseline data were collected and then analyzed to predict the impacts and quantify them. A detailed Social Assessment has been carried out to identify nature and characteristics of losses to individuals and local communities because of the proposed project interventions. The report prepared which gives detailed impacts of the project. A Census survey of Project-Affected Persons (PAPs) was carried out along with the land resource survey of the project area. To establish impacts on people and community a resource mapping on strip map and consultation with individuals, communities and other stakeholders were done. Based on the findings of this survey and consultation with project-affected persons and other stakeholders a social impact assessment report is prepared.

#### **7.4.1 Methodology**

##### **7.4.1.1 Approaches to Study**

The social assessment process generally commences with screening stage. At this stage, social analysis is made of the project area and steps are taken from the beginning so that plans / designs / alignments are finalized in such a way that to the extent possible, adverse impacts are avoided / reduced at the design stage itself to make these roads social and environment friendly. Wherever avoidance / reduction of the adverse social impact is not possible, those affected should be compensated, resettled and rehabilitated properly by adopting proper mitigation measures and the living condition of the people are improved. The key steps are:

- Avoiding / reducing the adverse social impacts at the design stage, especially while finalizing the alignments;
- Mitigating the unavoidable adverse impacts at planning, construction and implementation phase; and
- Compensating the affected people and common properties at replacement costs and by adopting appropriate rehabilitation and resettlement measures.
- Social Impact Assessment has been defined variously in different guidelines. For the study of this present project, the scope of work defined in the document (Term of Reference) prepared by the NHAI, Government of India, has been taken into consideration. The major issues and items identified in the scope in brief are:
  - Study of Background information on project and related policy and legal issues;
  - Collection of data from secondary sources;
  - Reconnaissance survey of the project impact zone, and
  - Analysis of data and Screening exercise



## **7.4.2 Policy, Legal and Administrative Framework**

### **7.4.2.1 Institutional Setting**

The project has been initiated and is being carried out by the NHAI. The primary responsibility of the project rests with the NHAI in providing encumbrance free ROW to the concessionaire who shall implement the project.

### **7.4.2.2 Policy, Legal and Administration Framework**

The social report of Six laning expressway from Ahmedabad to Dholera starts from (Km 0.000) and terminates at Dholera (Km 109.019)..The length of this stretch is 109.019 km. has been prepared considering the Central Government legislation & Acts for resettlement & rehabilitation. Wherever required, help was also taken from the guidelines of NHAI Act 1956 for Land Acquisition.

## **7.4.3 Project Profile**

### **7.4.3.1 Right of Way**

- (i) This is greenfield project and there is completely new acquisition;

### **7.4.3.2 Terrain & Land Use**

The project road traverses mainly through plain terrain. However, few stretch of proposed expressway traverses through rolling terrain. The land use pattern along the project road pre-dominated by agricultural land.

### **7.4.3.3 Settlement Section**

The proposed project expressway traverses through 30 settlements within the Corridor of Impact. This would result in physical displacement of families, loss of livelihood and impact on other resources. Thus, acquisition through the settlements will have considerable impact on people, property, and other resources.

The expressway passes through rural area and people has to assess their field and there would be need of provision of underpasses.

## **7.4.4 Project Affected Households (PAHs) & Project Affected Population (PAPs)**

A total of 1133 plots of land with approx. 3815 impacted land owners (including 180 land owners who are impacted due to loss of structure) has been recorded as per land acquisition notification.

## **7.4.5 Land Acquisition**

Based on the survey conducted, information on PRow and design, land acquisition is under process for 959.14 ha. (Private Land: 886.26 ha, Government Land: 72.88 ha including 1.530 ha Forest Land).

## **7.4.6 Public Consultation**

The public consultations were carried out in villages along the project corridors. These consultations were taken up by social and Environment expert.

Preliminary interactions with the impacted persons were sought to elicit their perceptions and apprehensions of the project. Interactions with the locals were carried out to discuss their



concerns specifically relating to safety, road widening, potential impacts to their properties and expected impacts. The concerns of most titleholders and also non-titleholders (shopkeepers, commercial and residential structures owners) were regarding design of PROW, loss of structure, any design scope to reduce impact on their structures and compensation norms to project affected persons.

Public consultations were also conducted with villagers along the project with major focus on Social and environment aspects. As per the findings of the same, the water quality is quite good in the project area of Gujarat.

Locals have appreciated the proposed development. Suggestions have also come on provision of underpasses. Villagers have also demanded adequate compensation to the project affected persons.

The concerns raised by the villagers have been addressed in the project design. Mitigation measures shall be undertaken as per EMP to mitigate environmental impacts in the area. The compensation to project affected persons will be paid as per Right to Fair Compensation and Transparency in Land Acquisition, Resettlement and Rehabilitation Act, 2013, National Highways Act (NH Act), 1956.

The main purposes of public consultations are to know the community's reaction to the perceived impact of proposed project on the people at individual and settlement level. The issues of the most concern are related to rehabilitation and resettlements. It is also generally felt that most of the people are aware about the project. The other prime concern is road safety problems. The issues have been duly incorporated in project design.

#### **7.4.7 Potential Impacts**

##### **7.4.7.1 Impact of Land Acquisition**

Brief analysis of impacts of land acquisition can be subdivided into the following subheads.

##### **7.4.7.2 Loss of Land**

Initiation of the project will have direct impact on village communities and other neighboring villages. The land to be acquired for the proposed project consists of agricultural land, mango trees, community land under Village Panchayats, various structures of public interest, residential structures and residential plots, public utilities and others. Further, there would be change in the land use pattern, as land use will be diverted from agricultural land to road construction activity. Quite a number of families would lose settled agricultural land. The livelihood of these families in most cases depends on the produce of their land.

##### **7.4.7.3 Loss of Farm Produce**

The proposed project stretch has relatively prosperous agricultural land. Acquisition of land will result in loss of crops. The owners will be able to cultivate some part of their land till construction time permits. They will be allowed to harvest produce.

##### **7.4.7.4 Loss of Residential and Commercial Structures**

The project requires the demolition of residential houses and commercial properties. These will be acquired and compensation paid before the start of project.





#### **7.4.7.5 Loss of Public Infrastructure**

Construction of road would entail shifting of public infrastructure. These include Temple, water tank, well etc. These will be relocated at new sites as per the community's requirement, subject to allotment of land by authorities before actual demolition begins.

#### **7.4.7.6 Loss of Income**

Those losing agricultural lands will lose income opportunity. However, this will be a permanent setback, unless provided with adequate compensation amount and / or training facilities for new trades with sufficient seed capital.

#### **7.4.7.7 Increase in Employment Opportunities**

Commencement of road project will benefit the community through generation of direct and indirect employment within the project areas due to construction activity, minor repairs and maintenance works. The project will require a good number of unskilled workers and they can form a cooperative, which will supply labourers to contractors whenever required. Up gradation of roads and community development programs in the project plan will benefit the communities at large.

#### **7.4.8 Mitigation and Enhancement Measures**

Most of the mitigation measures can be incorporated as good engineering practice during the design phase itself thus ensuring the mainstreaming of social concerns early in the project. Adherence to design drawing and specifications will reduce; to within acceptable levels, the adverse impacts during construction.

#### **7.4.9 R&R Budget**

A tentative estimate of cost for Rehabilitation & Resettlement has been worked out to **INR. 837.66 Crores** for which covers all components of compensation, assistance and entitlements.

#### **7.4.10 Project Impact Zone**

The population benefited / affected by the proposed project roads are mainly land and property owners. The majority of the direct beneficiaries of the project reside in the vicinity of the proposed road alignment, within proximity of 5 km radius.

In order to carry out SES and conduct FGDs for preparing Social Analysis, the project impact zone has been defined as:

1. Direct impact involves the habitations existing along the project road and
2. Indirect impacted habitations will involve those within 1 km on either of the project road.

##### **7.4.10.1 Socio-economic profiling**

The majority of the potentially affected / benefited persons living in the project influence zone frequently travel down the existing roads or proposed alignment of the subprojects. Their purpose of visit brings them generally to the prominent market places by the roadside or transport boarding points either side of the road. Other beneficiaries also pass through the important junctions of the feeder roads connecting the project roads / proposed alignment. These junction points served as the clusters from where sample households and D meetings were selected. Besides, administrative offices, places of worship, community structures, such as





Anganwadi centres, in the major settlements within the project impact zone were also taken into considerations for holding FGD / Key Informant Interview (KII).

The project influence area (PIA) of expressway covers parts of two districts –Ahmedabad and Bhavnagar District wise list of project influenced habitations falling under Direct and indirect influence zone is presented in **Table 7-3**.

**Table 7.3: Project Affected Villages falling Under Impact Zone**

| State   | District  | Project Affected Villages under Impact Zone   |
|---------|-----------|---|
| Gujarat | Ahmedabad | Fatevadi, Badrabad, Sanathal, Visalpur, Tajpur, Bhat, Vasna chacharavadi, Kavitha, Chaloda, Juval-rupvati , Sindhraj, Lana, Jalalpur (godhneshwar), Sarandi, Kariyana, Ruggadh, Kesargadh, Vejalka, Saragwala, Bholad, Anandpur, Pipli, Ambli, Kadipur, Dholera, Mundi, Sandhida, Panchi, Hebatpur, Bavliyari |
|         | Bhavnagar | Adhelai   |

#### 7.4.11 Conclusions

The proposed development will have overall positive impacts due to construction of expressway from Ahmedabad to Dholera. The major impacts of project include land acquisition (agricultural and forest land). Due consideration has been given to environmental and socio-economic issue during designing phase of the project. Some adverse environmental impacts have been identified which are likely to occur during construction phase. Those impacts will be temporary and short lived and can be mitigated effectively by implementing suggested mitigation measures. The project provides scope for environmental enhancement of the area. Plantations along the proposed project road has been incorporated which will serve screen for air and noise pollution generated due to vehicular traffic, but at the same time it will also enhance the overall environmental quality of adjacent areas all along the project corridor. In order to ease the passage of locals and cattle from one side of proposed project roads to other, sufficient numbers of underpasses have been provided for pedestrian and cattle movements as well as for local traffic. Based on the SIA study and surveys conducted for the proposed project, it can be concluded that, associated potential adverse impacts can be mitigated to an acceptable level by adequate implementation of the measures as stated in the SIA Report. Adequate provisions shall be made in the project to cover the mitigation and monitoring requirements, and their associated costs as suggested in the budget. The proposed project shall improve Road efficiency and bring economic growth. With the above approach to design, construction and operation the project will be socially feasible.

#### 7.5 CENSUS AND SOCIO-ECONOMIC SURVEY

The objective of the census and socio-economic survey were prepare the list of the project affected households and prepare the socio-economic profile of the project affected persons for evolving the entitlement framework

The cut-off date for eligibility for entitlements for non-title holders is the date of the commencement of census surveys for all the two districts of Four lane Green Field Expressway (NH-751). The date of publication of Notification under section 3A(I) of NH Act will be the cut-off date for the legal titleholders.



The study time frame can be broadly divided into two phases comprising of Phase I to include secondary data search, Reconnaissance survey, Social strip mapping; and Phase II to include census and socio-economic surveys for titleholders.

The analysis of the data has been presented in the following sections for the titleholders separately

## 7.5.1 Survey of Project Affected families

### 7.5.1.1 Project Affected Persons

The surveys for the Persons have been carried out under the three categories namely Farm House and Pump House, Commercial, Residential, Residential cum Commercial and Residential and Pump house and Farm house. The total project affected families are identified were 20, 12, 19, 2 and 3 respectively. The distribution of PAFs as per the district is given in **Table 7.4**.

**Table 7.4: Distribution of usage of structures**

| TEMPORARY STRUCTURE DETAILS |                      |       |            |      |               |      |     |         |       |         |          |               |           |
|-----------------------------|----------------------|-------|------------|------|---------------|------|-----|---------|-------|---------|----------|---------------|-----------|
| Sl No.                      | Village              | House | Water Tank | Well | Boundary wall | Bore | W/C | Temp le | Floor | Chimney | Industry | Burial Ground | Total No. |
| 1.                          | Vishalpur            | 5     | 7          | 1    | 1             |      | 1   | 2       | 1     |         |          |               | 18        |
| 2.                          | Tajpur               | 6     | 7          | 3    | 4             |      | 5   | 1       |       |         |          |               | 26        |
| 3.                          | Bhat                 | 3     | 3          | 1    | 1             |      |     | 1       |       | 1       |          |               | 10        |
| 4.                          | Vasana Chachravadi   | 2     |            |      |               |      |     | 1       |       |         |          |               | 3         |
| 5.                          | Kavita               | 21    | 5          | 6    | 1             | 3    | 1   | 2       |       |         |          |               | 39        |
| 6.                          | Chaloda              | 3     |            |      |               |      |     |         |       |         |          |               | 3         |
| 7.                          | Juval Rupavati       | 6     | 1          | 2    |               |      |     |         |       |         |          |               | 9         |
| 8.                          | Sindhrej             | 5     | 3          | 3    | 1             |      |     | 4       |       |         |          |               | 16        |
| 9.                          | Lana                 | 4     | 4          |      |               |      |     |         |       |         |          |               | 8         |
| 10.                         | Jalalpur Godhneshwar | 2     |            | 1    |               |      |     |         | 1     |         | 1        |               | 5         |
| 11.                         | Sarandhi             | 2     |            | 2    |               |      |     | 1       |       |         |          |               | 5         |
| 12.                         | Kariyana             | 1     |            |      |               |      |     |         |       |         |          |               | 1         |
| 13.                         | Rupgadh              |       |            |      |               |      |     |         |       |         |          | 1             | 1         |

**Source: Primary survey (2018)**

#### a. Location

The analysis of the data on the location of the structures in the entire project stretch reveals that all 144 structures are located within the proposed RoW.



## b. Classification of Families of Project Affected Structures

Table 7.5 presents the distribution of structures.

**Table 7.5: Classification of Families of Project Affected Structures**

| Sl. No | Type of Structure | Numbers    |            |
|--------|-------------------|------------|------------|
|        |                   | Number     | Total      |
| 1.     | Pucca             | 65         | 65         |
| 2.     | Semi-Pucca        | 96         | 96         |
| 3.     | Kutchha           | 19         | 19         |
|        | <b>Total</b>      | <b>180</b> | <b>180</b> |

Source: Primary survey (2018)

### 4.5.1.2 Ownership Category of Structures

The number of project affected households identified under these two categories i.e. Owners and Tenants are given in Table 7.6.

**Table 7.6: Ownership**

| Type of Family | Numbers    |
|----------------|------------|
| Owners         | 177        |
| Tenants        | 03         |
| <b>Total</b>   | <b>180</b> |

Source: Primary survey (2018)

## 7.5.2 Socio-Economic Characteristics PAFs and PAPs

The socio-economic characteristics of the titleholder PAFs have been analyzed district-wise with respect to the following characteristics:

- Type of Family
- Project Affected Families
- Educational Status
- Sex Ratio
- Religious status
- Marital Status
- Occupational Pattern
- Income Categories
- Social Vulnerability

### 7.5.2.1 Type of Family

Table 7.7 below presents the distribution of households as per the type of family i.e. nuclear, joint and extended.



**Table 7.7: Type of Family**

| Type of Family | Numbers    |
|----------------|------------|
| Nuclear        | 55         |
| Joint          | 115        |
| Extended       | 10         |
| <b>Total</b>   | <b>180</b> |

Source: Primary survey (2018)

### 7.5.2.2 Project affected families

Table 7.8 below present the district-wise distribution of PAFs and PAPs as per the number of projects affected using the definition of family as per the R&R policy.

**Table 7.8: Number of Project Affected Families**

| PAFs/PAPs      | Numbers |
|----------------|---------|
| Number of PAFs | 180     |
| Number of PAPs | 720     |

Source: Primary survey (2018)

### 7.5.3 Education Status

Table 7.9 below gives the distribution of total project affected population with respect to the educational status.

**Table 7.9: Educational Status of the titleholders PAFs**

| Education Level |          |          |                        |                         |           |             |            |
|-----------------|----------|----------|------------------------|-------------------------|-----------|-------------|------------|
| Illiterate      | Upto 5th | Upto 8th | 9 <sup>th</sup> & 10th | 11 <sup>th</sup> & 12th | Graduates | Engineering | Total      |
| 103             | 28       | 47       | 51                     | 6                       | 23        | 3           | <b>261</b> |

Source: Primary survey (2018)

### 7.5.4 Sex Ratio

Table 7.10 presents the sex ratio of Ahmedabad and Bhavnagar districts.

**Table 7.10: Sex Ratio of PAPs**

| Total Population | Male | Female     |
|------------------|------|------------|
| 438              | 282  | <b>720</b> |

Source: Primary survey (2018)

### 7.5.5 Religious Status

The district wise Religious status of the affected families getting affected due to project is presented in Table 7.11.

**Table 7.11: Religious Status of PAPs**

| Religion     | Numbers    |
|--------------|------------|
| Hindu        | 718        |
| Muslim       | 2          |
| <b>Total</b> | <b>720</b> |

Source: Primary survey (2018)



### 7.5.6 Occupational Pattern

The occupation pattern of the PAFs is given in **Table 7.12**.

**Table 7.12: Occupation of PAFs**

| Occupation          | Number of Persons |
|---------------------|-------------------|
| Agricultural Labour | 14                |
| Business            | 30                |
| Teacher             | 2                 |
| Tailor              | 2                 |
| Farmer              | 135               |
| Housewife           | 180               |
| Labour              | 36                |
| Private Job         | 9                 |
| Unemployed          | 121               |
| Service             | 11                |
| Shopkeeper          | 5                 |
| Student             | 146               |
| Child               | 19                |
| Factory Worker      | 3                 |
| Retired             | 5                 |
| <b>Total</b>        | <b>720</b>        |

Source: Primary survey (2018)

### 7.5.7 Income Category

The PAFs have been classified as per income slab given in **Table 7.13** below and the

**Table 7.13: District-wise Distribution of PAPs as per income slabs**

| Annually income Slab | Number of Households |
|----------------------|----------------------|
| <=50000              | 16                   |
| 50001-100000         | 35                   |
| 100001-200000        | 94                   |
| 200001-300000        | 13                   |
| 300001-500000        | 4                    |
| Above 500001         | 19                   |
| <b>Total</b>         | <b>180</b>           |

Source: Primary survey 2018

### 7.5.8 Common Property Resources

**Table 7.14: Common Property Details**

| S.No. | Common Property Resource (CPR) by type | Nos.      |
|-------|--|-----------|
| 1.    | Temple                                 | 10        |
| 2.    | Ponds                                  | 1         |
| 3.    | Water Tank                             | 3         |
| 4.    | Well                                   | 2         |
|       | <b>Total</b>                           | <b>16</b> |

Source: Primary survey 2018





## 7.5.9 Social Stratification

**Table 7.15** presents the analysis of data with respect to social stratification like OBC, Sc ST and General are covered.

**Table 7.15: Social Stratification**

| Vulnerability | Numbers   |
|---------------|-----------|
| OBC           | 25        |
| General       | 26        |
| SC            | 1         |
| ST            | 4         |
| <b>Total</b>  | <b>56</b> |

*Source: Primary survey (2018)*

## 7.5.10 Social Vulnerability

**Table 7.16** presents the analysis of data with respect to social stratification like OBC, SC, ST and General are covered.

**Table 7.16: Social Vulnerability**

| Vulnerability              | Numbers    |
|----------------------------|------------|
| BPL                        | 16         |
| Aged person (above 65 yrs) | 6          |
| SC                         | 4          |
| OBC                        | 79         |
| ST                         | 12         |
| <b>Total</b>               | <b>118</b> |

*Source: Primary survey (2018)*

## 7.6 LAND ACQUISITION

### 7.6.1 Introduction

This chapter assesses the nature, type and magnitude of the potential social impacts likely along the project corridor. For the assessment of impacts, the baseline information based on the field visits and the primary surveys were carried out. The description of the impacts on the individual components has been structured as per the discussion in Chapter 7: Project profile of this report.

This section identifies and assesses the probable impacts on different social issues due to the proposed development. After studying the existing scenario, reviewing the process and related statutory norms, the major impacts can be identified and shall be mitigated in the forthcoming phases. Most of the impacts though shall be perceived during construction and operation phase.

### 7.6.2 Land Acquisition: Legal Framework

The first attempt to legally acquire land was made in 1824, through Regulation 1 of 1824 applicable to immediate subject of presidency of Fort William. The rules empowered government to acquire immovable property for public purposes.



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- Provisions of 1824 were extended to Calcutta through Act I of 1850. Act XLII was brought to enable the provisions of regulation I of 1824 to be used for acquiring land for construction of railways
- Building Act XXVII of 1839, Act XX of 1852 was introduced to obviate the difficulties to particular cities of Bombay and Madras
- Act VI of 1857 was the first full enactment, which had application to the whole of British India. It repealed all previous enactment relating to acquisition and its object.
- Principle of Arbitration was introduced for the first time through Act VI of 1857, but procedure for making a reference to the arbitrator was found unsatisfactory and then came Act X of 1870. For the first time a detailed procedure for the acquisition of land were provided in 1870 Act. Rules were also framed for the determination of an amount of compensation

The provisions of the 1870 Act did not satisfy the needs of the day and eventually the Land Acquisition Act, 1894 (I of 1894) was enacted repealing the 1870 Act. In India, the land acquisition and its compensation are generally governed by the Land Acquisition Act (1894), which has been amended from time to time. However, for the purpose of maintenance, sustenance and management of National Highways, a Special act, The National Highways Act (NH Act), 1956 has been promulgated. This Act provides for acquiring the land through "competent authority" which means any person or authority authorized by the Central Govt. by notification in the official Gazette to perform functions of the competent authority for such areas as may be specified in the notifications. For LA, the Act defines the various procedures as follows: (I) section 3A – intention of Central Govt. to acquire land, (ii) 3B - power to enter for survey, (iii) 3C - hearing of objections (iv) 3D - declaration of acquisition, (v) 3E - power to take possession, (vi) 3F - power to enter into the land where land has vested in the central government, (vii) 3G - determination of compensation and (viii) 3F - deposit and payment of the amount.

The act requires that the processes must be completed within a year from 3A to 3D. Although NH act significantly reduces the timeframe for acquisition, the rules and principles of compensation have been derived from the LA Act of 1894. The Act covers only legal titleholders and provides for (i) market value of the land; (ii) additional amount for trees, crops, houses or other immovable.

Provision of direct purchase of land from landowners in case where additional land requirement is very less (minimal) may also be considered. However, resettlement and rehabilitation benefits available to affected persons whose land would be acquired under the statute shall also be available to those affected persons whose land would be acquired through direct purchase. Properties; (iii) damage due to severing of land, residence, place of business

### **7.6.3 Land Acquisition Planning For Subproject**

Based on outcome of the Feasibility Study, Social and Environmental Screening Exercise, the proposed alignment was finalized and geometric design of highway was completed accordingly. Initially, the numbers of affected villages were identified as per the alignment. All the village Sazara maps were collected from the local revenue offices. The village Sazara maps were thoroughly reviewed and verified in the field.



At by-pass location, realignment sections, ROB location the stacking of alignment was done by survey expert at site with the help of pegs and reference pillars. The stacked alignment was then transferred on Sazara maps with respect to ground survey by land acquisition team and rechecked for correctness. The Land Acquisition Plan (LAP) was prepared accordingly. Based on the identified land plots by land acquisition team, local revenue officials were consulted to collect the names of owners of each plot. The details are available under the LA Plan prepared for the purpose of this project as a separate document.

#### 7.6.4 Impact on Structures

Based on socio-economic survey, a total of 144 private structures lie within 120 meters RoW. The structures are residential, commercial or residential cum commercial in their nature.

#### 7.6.5 Type of Land Being Acquired For the Project

The land being acquired for the subproject is of various types such as Private land (861.25 Ha.), Government land (56.66 ha.) and Forest land (1.530 Ha.). Land Acquisition from Km 71.050 to Km 107.421 is not incorporated in the table which will be taken care by Dholera Special Investment Region (DSIR). The Area is presented in the **Table 7.17**. The proposed RoW is 120m in entire project stretch except Ch.71.060 to 107.300 where RoW is 90m.

**Table 7.17: Type of the Land Being Acquired for the Subproject**

| Sl.No | State        | Type of Land     | Area in Ha. | % Area     |
|-------|--------------|------------------|-------------|------------|
| 1     | Gujarat      | Private Land     | 886.26      | 92.40      |
| 2     |              | Government land  | 72.88       | 7.44       |
| 3     |              | Forest Diversion | 1.530       | 0.16       |
|       | <b>Total</b> |                  | 959.14      | <b>100</b> |

#### 7.6.6 Impact of Land Acquisition

The analysis of the impact of land acquisition can be categorized into following subheads:

- Loss of Land (Private and Government)
- Loss of farm produces (standing crops)
- Loss of Structures

##### 7.6.6.1 Loss of Land (Private and Government)

The project will involve the acquisition of agriculture land and other lands in the boundary of different villages of the project area. The initiation of the project will have direct impact on village communities and other neighboring villages. The land to be acquired for the proposed project consists of agricultural land, trees and community land under village panchayats, various structures of public interest, residential structures and residential plots, public utilities and others. Further, there would be change in the land use pattern, as land use will be diverted from agricultural land to road construction activity. Quite a number of families would lose settled agricultural land. The livelihood of these families in most cases depends on the produce of their land. The details of the land requirement for the project are given in **Table 7.18**. 959.14 ha, out of which 886.26 ha is private, 72.88 ha is government land (including 1.530 ha Forest Land) and remaining around 685.97 ha land.



**Table 7.18: Total Government & Private Land to Be Acquired**

| Sl. No | State   | District  | Forest Land (Ha.) | Govt. Land (Ha.) | Private Land (Ha.) | Total (Ha.)   |
|--------|---------|-----------|-------------------|------------------|--------------------|---------------|
| 1      | Gujarat | Ahmedabad | 1.530             | 56.03            | 879.51             | 937.07        |
| 2      |         | Bhavnagar | 0                 | 15.32            | 6.75               | 22.07         |
|        |         |           | <b>1.53</b>       | <b>71.35</b>     | <b>886.26</b>      | <b>957.61</b> |

#### 7.6.6.1.1 Loss of Farm Produce

The stretch has relatively prosperous Agricultural land on either side of the highway. Acquisition of land will result in loss of crops. As land will be acquired in a phased manner, the owners will be able to cultivate some part of their land till construction time permits. They will be allowed to harvest produce and cash compensation will be paid for crops acquired at a price fixed by the Government.

#### 7.6.6.1.2 Loss of Residential Houses

The project requires the demolition of residential houses and commercial properties. These will be acquired and compensation paid before the start of project.

#### 7.6.6.1.3 Loss of Income

Those losing agricultural lands will lose income opportunity. However, this will be a permanent setback, unless provided with adequate compensation amount and / or training facilities for new trades with sufficient seed capital.

### 7.7 MITIGATION & ENHANCEMENT MEASURES

#### 7.7.1 Introduction

Most of the mitigation measures can be incorporated as good engineering practice during the design phase itself thus ensuring the mainstreaming of social concerns early in the project. Adherence to design drawing and specifications will reduce; to within acceptable levels, the adverse impacts during construction.

#### 7.7.2 Mitigation Measures Proposed

The following considerations may be kept in view at the design stage:

- Construction and Up gradation of approach roads to the highway.
- Up gradation of the existing road.
- Ambulance service to transport serious cases to district hospital in case of accidents.

##### 7.7.2.1 General

- Underpasses have been proposed, so the farmers can assess their field frequent.
- Wherever possible, displacement shall be reduced or avoided altogether by sensitive design of civil works (e.g. alternative designs or modification to the design).



#### **7.7.2.2 Land Acquisition- Mitigation Measures**

Based on the survey conducted and information on PROW. The land within PROW includes agricultural, barren / fallow lands governmental and other lands under private ownership. Due to the ribbon development almost all throughout the area, care shall be taken to minimize land acquisition. In order to mitigate the ensuing negative impacts of the land acquisition a Resettlement and Rehabilitation (R&R) policy shall be prepared based on the RFCTLARR-2013. The salient features of the mitigation measures are:

- Where displacement is unavoidable, those displaced will have their living standard improved.
- PAPs will be compensated, at replacement cost, for assets lost. Adequate social and physical infrastructure will be provided.
- PAPs and lost community would be encouraged to participate in the implementation of RAP.

#### **7.7.3 Enhancement Opportunities**

Enhancements specifically refer to these positive actions to be taken up during the implementation of the project for the benefit of the road users and the communities living close to project road alignment. The following enhancement opportunities have been explored as part of the detailed project report:

- Wayside amenities.
- Introduction of ambulance services to transport serious accident cases.

The enhancements shall be carried out with the following objectives:

- To enhance the appeal of the project road considers to the users;
- To enhance visual quality along the highway; and
- To generate goodwill amongst the local community towards the project, by the enhancement of common property resources.

#### **7.7.4 Proposed Action Plan**

The proposed action plan for social assessment would include the following:

- A Census and Socio-Economic survey of the Project Affected Persons based on the Corridor of Impact and alignments provided by the design engineers.
- Analysis of the Primary and secondary data.
- Preparation of the Social impact Assessment (SIA).

#### **7.7.5 Implementation of RAP**

The implementation of Resettlement Action Plan (RAP) is primarily envisaged, as a participatory exercise where the consulting NGO is responsible for the implementation of RAP is expected to play a role of secondary stakeholder or in other words the implementing agency would be a partner in the whole exercise.

The role of the implementing NGO would be to mitigate the adverse effects of the project, both, from the NHAI perspective, to ensure timely completion of the road construction, and, from the perspective of affected people, to ensure that their rehabilitation process is taken up in a right





spirit with a comprehensive livelihood system and these people are able to take advantages of the options available. The prime responsibility of the implementing agency is to ensure that each and every eligible project affected person receive appropriate and due entitlement within the overall framework of R&R policy and entitlement matrix and the PAPs have improved (or at least restored) their previous standard of living by the end of the RAP implementation process.

#### **7.7.5.1 Stages of RAP Implementation: A Methodological Framework**

The objective of the project is to strengthen the existing road infrastructure aimed at economic and social development of the region. One of the key activities in the project cycle is the implementation of Resettlement Action Plan with an objective of minimizing the adverse impact of the project implementation on the lives of people living in the project area. The R&R policy envisages that the project-affected families (PAFs) are to be resettled and rehabilitated so that the adverse impact due to proposed improvement of the road gets minimized. The stepwise methodology for implementation of the RAP has been shown through a flow chart.

##### **7.7.5.1.1 Training and Capacity Building of Project Staff**

As a first step, it is essential to build the capacity of our staff i.e. Team Leader, Supervisors, Engineers, Village level workers etc. The aspects of training to be imparted would include social impact assessment survey, conducting focus group discussions, community participation, PRA/RRA, relocation of common property resources etc.

##### **7.7.5.1.2 Focus Group Discussion, Awareness Campaign and Dissemination of Information**

In order to make the RAP implementation process transparent as per NHAI guidelines, a series of FGDs/ meetings etc would be organised with all stakeholders for dissemination of information regarding rehabilitation process and entitlement framework. The RAP policy will be printed in Hindi language as well as English and the same will be distributed to the PAFs in order to make the process transparent.

##### **7.7.5.1.3 Rehabilitation of Affected Families and Restoration of Income and Livelihood**

Rehabilitation of all the PAFs is one of the critical tasks of the project implementation process in order to help the communities derive the maximum benefits out of the project without losing their livelihoods and the least impact on socio-cultural aspects of their lives. It includes livelihood analysis, preparation and implementation of a comprehensive livelihood support plan and development of a comprehensive livelihood support system. This process must result in improved or at least restored living standards, earning capacity or improve the quality of life of the people affected by the project. Accordingly, rehabilitation will be conceived and shall be implemented as a development programme with particular attention to the needs of women headed households and vulnerable groups.

The effort of the NGO shall be to improve the PAPs economic productive capacity and building up a permanent capacity for self-development. One of the key strategies could be to facilitate the process of forming Self-Help Groups through community mobilization efforts within the overall framework of the project. This could be done through a set of livelihood analysis on the basis of different indicators like backward and forward linkages, raw material, resources, credit, marketing linkages etc. The process will also take care of the convergence of other state and central government programmes for income generation etc.



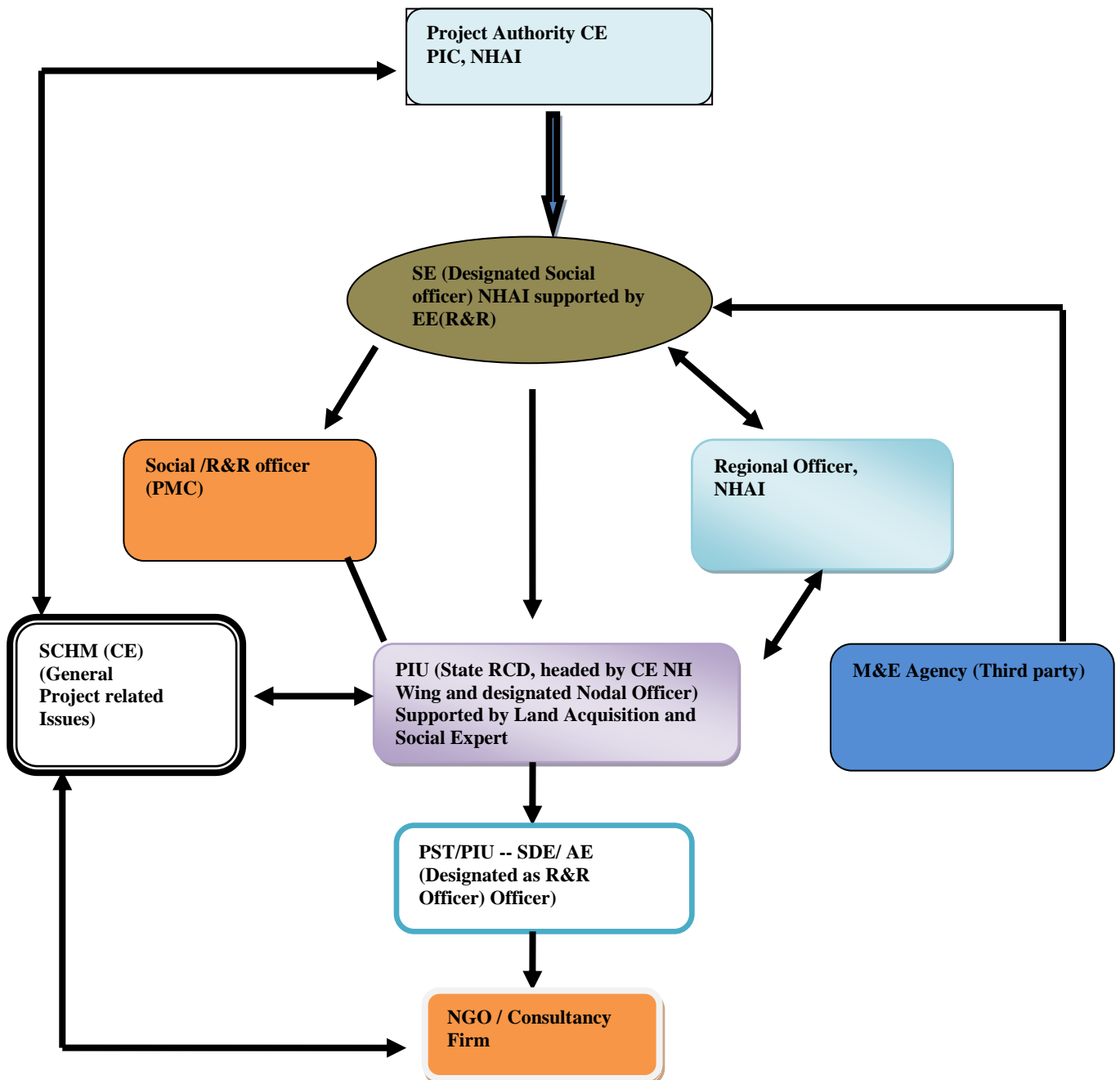
Organizing the economic activities would be according to the skills possessed by the affected families and in case such options are not economically viable, the corresponding skill up gradation support for the economic activities would be facilitated. The PAP will be free to choose to act as individuals or as informal groups like SHGs for accessing credit, Milk Producer Groups (MPGs), Agriculture Commodities (like vegetable, pulse, wheat) Processing Groups etc or as co-operatives, with their overall operating efficiency and viability of the livelihood options chosen by them.

In context of the socio-economic profile of the region, their existing activity base and the skills, efforts should also be made to ensure that the groups are resettled in a manner so that their backward and forward linkages in the activities performed by them are maintained and they are provided support in improving their income through support of other government sponsored programs also.

## **7.8 INSTITUTIONAL FRAMEWORK & GRIVENCE REDRESSAL MECHINASIM**

### **7.8.1 Introduction**

The institutional mechanism for the effective implementation of the project in general and R&R activities in particular is envisaged on partnership model whereby each and every agency/ institution proposed at various levels supplement and complement each other efforts. The key elements in designing these institutional mechanisms are transparency in operation, collaboration/ sharing of responsibilities with clearly defined roles, involvement of key stakeholders and vertical and horizontal linkages amongst various institutions/ agencies, as given in **Figure 7.2**.



**Figure 7.2: Institutional Arrangement for RAP Implementation**

The proposed Institutional Arrangements will be set up at three levels viz., (Central Govt.), State Level and Sub-Project Level.

### 7.8.2 Central Level Institutional Arrangement

At Central Level, the Chief Engineer (PIC), NH, Govt. of India will be overall responsible for the implementation of RAP. Chief Engineer (PIC) will have all delegated administrative and financial decisions with regard to implementation of the project as well as land acquisition, RAP implementation



Institutional arrangement at Central Level will include augmenting the capacity of NHAI with regard to resettlement and rehabilitation. A team comprising Superintending Engineer designated as Social Development Specialist (SDS) and a suitable number of Technical and Secretarial Staff will assist CE (PIC). The designated SDS will be directly involved in the implementation of RAP. The SDS will ensure that all resettlement and rehabilitation issues are complied with as per the RPF. The roles and responsibility of the SDS would broadly include the following:

- Assist technical team at Central Level in finalizing the RAP and Land Acquisition Plan.
- Guide and supervise in matters related to resettlement and rehabilitation to state and subproject level offices.
- Compile data related to resettlement and rehabilitation activities received from field offices and update reporting officer and suggest suitable measures to be taken.
- Interact with RAP implementation agency on a regular basis.
- Undertake field visits as and when required.
- Facilitate necessary help needed at site with regard to LA and R&R issues.
- Co-ordinate with state government department in matters related to implementation of R&R.
- Ensure budgetary provision for resettlement and rehabilitation of EPs and relocation, rehabilitation and reconstruction of common property resources (CPRs) and implementation of RAP.
- Ensure timely release of budget for implementation of RAP.
- Monitor implementation of RAP carried out by the agency through RRO.
- Perform other roles and responsibilities related to implementation of RAP as assigned by the CE (PIC) from time to time.
- Ensure free, prior and informed consultation with Tribal families along the project and also ensure that sufficient supporting documentation is maintained.

### **7.8.3 State Level Institutional Arrangement**

At State Level, a Land Acquisition cum Social Development Officer will be appointed to provide assistance to the designated Nodal Officer of PIU, Road Construction Department, and Government of Gujarat. The roles and responsibility of the LA cum SDO would broadly include the following:

- Facilitate land acquisition and RAP implementation,
- Guide and supervise RAP implementation at sub-project level,
- Interact with RAP implementation agency and undertake field visits for first-hand information,



- Compile data on LA progress and resettlement and rehabilitation activities received from field offices and update reporting officer and suggest suitable measures to be taken,
- Co-ordinate with various government departments in matters related to implementation of RAP,
- Check implementation of RAP carried out by the agency from time to time by undertaking site visits and consultations with PAPs,
- Perform other roles and responsibilities related to implementation of RAP as assigned by the Reporting Officer from time to time.

#### **7.8.4 Sub-Project Level Institutional Arrangements**

A Project Implementation Unit (PIU) comprising officials of State PWD will be constituted at subproject level headed by the Superintending Engineer/ Executive Engineer designated as Project Director. The PIU will be responsible for the project execution including RAP implementation. There will be a designated or appointed Resettlement & Rehabilitation Officer (RRO) at respective PIUs who will be responsible only for the implementation of RAP at site. No other roles and responsibilities will be assigned to RRO other than resettlement and rehabilitation. RRO will assist Project Director at PIU and RRS at Central Level in all matters related to resettlement and rehabilitation.

The roles and responsibilities of the Resettlement and Rehabilitation Officer are as under:

- Ensure RAP implementation with assistance from implementation agency as per the time line agreed upon.
- Interact with RAP implementation agency on a regular basis.
- Undertake field visits with implementation agency from time to time.
- Facilitate necessary help needed at site with regard to LA and R&R issues to implantation agency.
- Co-ordinate and district administration and other departments in matters related to implementation of R&R.
- Ensure distribution of Resettlement and Rehabilitation Policy to PAPs.
- Ensure and attend meetings organised by implementation agency on related to awareness and dissemination of information on resettlement and rehabilitation policy and entitlements.
- Ensure inclusion PAPs who could not be enumerated during census but have documentary evidence to be included in the list of EPs.
- Ensure timely preparation of micro-plan from RAP implementation agency and approval from Head Office.
- Ensure preparation of identity cards and distribution of the same to EPs.
- Ensure disbursement of resettlement and rehabilitation assistance in a transparent manner.
- Participate in meetings related to resettlement and rehabilitation issues.
- Facilitate in opening of joint account of EPs.





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- Prepare monthly progress report related to physical and financial progress of implementation of RAP & submit to Head Office.
- Ensure release of compensation and assistance before taking over the possession of land for start of construction work
- Assist and facilitate aggrieved PAPs (for compensation and assistance) by bringing their cases to GRC,
- Facilitate in opening of joint account of PAPs,
- Generate awareness about the alternative economic livelihood and enable PAPs to make informed choice,
- Consultations with PAPs regarding the choice of resettlement (i.e. self or assisted), development of resettlement site, participation of women, etc.
- Identify training needs of PAPs for income generation and institutions for imparting training,
- Consultations with local people and Panchayati Raj Institutions with regard to relocation, rehabilitation, reconstruction of affected CPRs as well as availability of new facilities under the project,
- Participate in various meetings,
- Submit monthly progress report, and
- Any other activities that may be required for the implementation of RAP.

### **7.8.5 Coordination with Other Agencies and Organizations**

R&R Cell will establish important networking relationships with many departments and organizations. The Revenue Department has an influencing role in Land Acquisition proceedings, and initiation of resettlement process. Unless the compensation process is prompt and efficient, implementation process will get delayed. R&R Cell will coordinate with the Project Land Acquisition Officer to expedite the land acquisition process.

Income restoration will be sole responsibility of the project authority. NGO will facilitate linkages to be established with the government poverty alleviation programs to restore the income of PAPs. Restoration of community assets such as hand pumps, bore wells, drainage facilities will require help from Jal Nigam. Where schools are affected, coordination will be required from the District Offices of Education Department.

Considering the above, NHAI will extensively work on developing lateral linkages for mobilization of resources to benefit the PAPs and to achieve the desired results expected from implementation of RAP.

### **7.8.6 Role of Other Agencies**

Various government department and public agencies, particularly the Revenue Department, Rural Development and Financial Institutions, have an important role in implementing the RAP. The Revenue Department is responsible for providing land records, acquiring land and other properties and handing them over to the proper authorities. The District Rural Development Agency (DRDA) will extend the RD and other developmental schemes to include the PAPs. The representative of these departments/agencies will be in contact with the R&R Cell, which will facilitate the integration of the various agencies, involved in the R&R process.



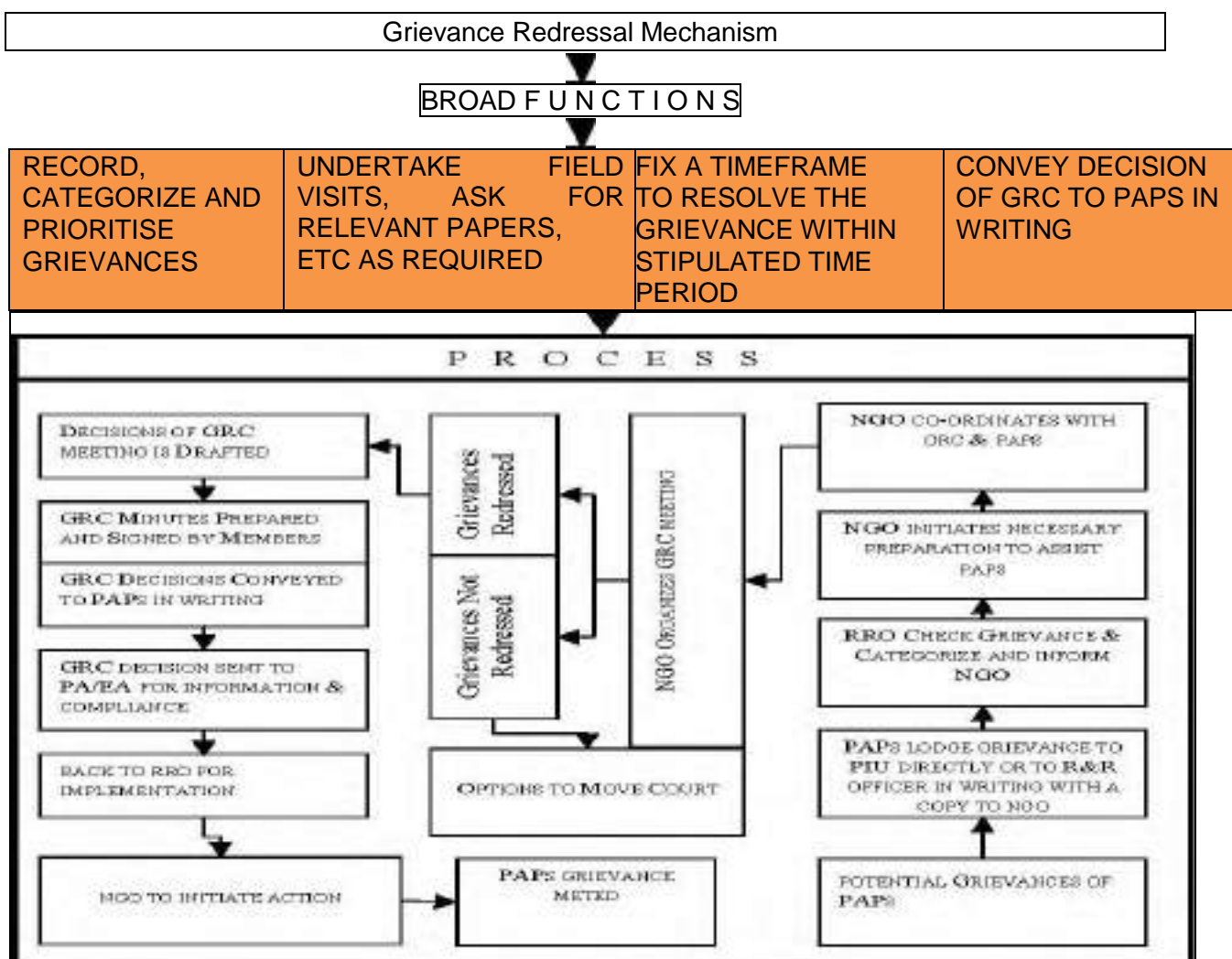
### **7.8.7 Grievance Redressal Mechanism (GRM)**

The RAP Provides for a mechanism to ensure that the benefits are effectively transferred to the beneficiaries. However, need also exists for an efficient grievance redressal mechanism which will assist the APs in resolving queries and complaints. Land Acquisition will take place according to NH Act 1956 (Amended 1988). Compensation and entitlements will be paid according to NPRR (2007). Any disputes or grievances will be addressed through the grievance redressal mechanism proposed here. Detailed Investigation will be undertaken which may involve field investigation with the concerned APs. The GRCs are expected to resolve the grievances of the eligible persons within a stipulated time. The decision of the GRCs is binding, unless vacated by court of law.

The GRC will be constituted by the Project Authority with the aim to settle as many disputes as possible through consultations. There will be one GRC for each PIU. The GRC will comprise five members headed by a retired Magistrate not below the rank of SDM. Other members of the GRC will include a retired PWD Officer (not below the rank of Executive Engineer), RRO, representative of PAPs and Sarpanch (Elected Head of Village) of the concerned village. Grievances of EPs in writing will be brought to GRC for redressal by the RAP implementation agency. The RAP implementation agency will provide all necessary help to PAPs in presenting his/her case before the GRC. The GRC will respond to the grievance within 15 days. The GRC will normally meet once in a month but may meet more frequently, if the situation so demands. A time period of 45 days will be available for redressing the grievance of EPs. The decision of the GRC will not be binding to EPs. This means the decision of the GRC does not debar EPs taking recourse to court of law, if he/she so desires. Broad functions of GRC are as under:

- Record the grievances of EPs, categorize and prioritize them and provide solution to their grievances related to resettlement and rehabilitation assistance.
- The GRC may undertake site visit, ask for relevant information from Project Authority and other government and non-government agencies, etc in order to resolve the grievances of EPs.
- Fix a time frame within the stipulated time period of 45 days for resolving the grievance.
- Inform EPs through implementation agency about the status of their case and their decision to EPs and Project Authority for compliance.

The GRC will be constituted within 3 months by an executive order from competent authority (centre/ state) from the date of mobilization of RAP implementation agency. The RRO will persuade the matter with assistance from implementation agency in identifying the suitable persons from the nearby area for the constitution of GRC. Secretarial assistance will be provided by the PIU as and when required.



**Figure 7.3: Grievance Redressal Mechanism**

### 7.8.8 Suggestions and Complaint Handling Mechanism (SCHM)

Being an inter-state project involving several states and large scale of civil works along with R&R and Environment issues, the project is likely to receive many suggestions, complaints, inquiries, etc through the project implementation period. The NHAI recognizes the importance of this and hence intends to establish a SCHM for the NH.

Though the Right to Information Act, 2005 an Act of the Parliament of India provides for setting out the practical regime of right to information for citizens. The Act applies to all States and Union Territories of India except the State of Jammu and Kashmir. Under the provisions of the Act, any citizen may request information from a "public authority" (a body of Government or "instrumentality of State") which is required to reply expeditiously or within thirty days. The Act also requires every public authority to computerize their records for wide dissemination and to pro-actively publish certain categories of information so that the citizens need minimum recourse to request for information formally.



In other words under the act, citizens have right to seek information from concerned agencies by following the set procedures. However, it is quite likely that many people may not use the provisions of this Act, only in limited cases covering serious concerns. Therefore, NHAI has agreed to establish SCHM as a good practice to address public concerns pertaining to various issues. Several communication channels viz., toll free phone number, dedicated email, mechanism for on line submission of suggestions/complaints/inquiries, provision of suggestion/complaint box (at site and project office), post and other suitable means shall be set up for suggestion and complaint handling.

Right from beginning of project implementation, the appointed NGO / consultancy firm shall disseminate the information regarding establishment of Suggestions and Complaint Handling Mechanism for this project among the Project affected / benefited peoples. The appointed NGO / consultancy firm will explain the process through various applicable mode to be followed / adopted by the peoples for filing complains & suggestion.

### **7.8.9 Information Campaign**

Attention of the PAPs will be invited to the proposed redressal system for a quick, inexpensive and amicable settlement of claims for enhanced compensation. They will also be advised to get their records of rights updated. All possible efforts will be put forth to motivate the affected landowners and structure owners for a voluntary and amicable settlement of their claims outside the court.

Most of the issues will be settled out of court as far as possible. Hand-outs will be distributed among all the affected persons highlighting the prospects of amicable settlement of dispute in question, outside the court, speedy and at lesser expense along with the timetable of inquiries and spots inspections of the committee. Besides, public announcements will be made in affected areas. Press notes will be released in local newspapers to aid publicity.

## **7.9 GENDER ISSUES AND WOMEN PARTICIPATION**

### **7.9.1 General**

There are two important aspects of project where gender issues are required to be addressed. It is expected that in development project, women are going to experience socio-economic impacts due to acquisition of land for the project as well as during the construction of the project.

Impacts on women due to land acquisition have been addressed in the following section. 'Women's Participation' deals with the aspects of the project on RAP and during the construction phase. Women as a vulnerable group, woman-headed households, livelihood and training for women, etc., feature in other Sections of the Report also.

Involvement of women in the project, even beyond the scope of RAP, has been foreseen, especially during the construction of the project highway. However, there is no consideration for addressing gender issues in the RAP for construction period. A try has been made here to bring this into the notice of the implementers. This has been done especially predicting the situation during the construction period.



This is to be noted here that post-project provisions as mentioned in the RAP has been done keeping in mind the well-being of mostly the affected women along with women of the host communities. Thus, these relate to resettlement and rehabilitation. Whereas, gender issues in the construction phase will mostly concern the women workers who will be engaged in the road construction activities. These women workers are expected to come from outside being engaged by the construction contractors and will be staying in the construction camps during the construction. There may be participation from local women also in the construction activities.

### **7.9.2 Impact on Women**

Women are neglected from the socio-economic development point of view. Socio-economic parameters like literacy, work force participation rate, and general health conditions etc. reveals that social status of women is very backward in the project area and thereby brought forward the scope of considering the households headed by women as vulnerable.

Women headed households are found to be less in number in the project area. The details of the affected women headed household have been presented in **Table 7.19**.

**Table 7.19: Affected Women Headed household**

| <b>Affected WHH Summary</b> | <b>Numbers</b> |
|-----------------------------|----------------|
| Titleholder                 | 9              |
| Total                       | <b>9</b>       |

Source: Primary survey (2018)

### **7.9.3 Participation of Women in Project**

The Gender-related Development Index (GDI) value for India is very low and the socio-economic profile of the project area shows lower socio-economic standing for women. It is imperative to bring the issue of women's development in the process of socio-economic uplift within the scope of the RAP for sub-project. For this a conscious effort should be made towards integrating the issue in the project.

### **7.9.4 Impact of Developmental Activities on Women**

Women as a vulnerable group has been addressed in the RAP but to give R&R a proper shape this group should be considered with special emphasis as they constitute half the society's population and they are found to be the worst affected in most of the developmental projects in our country.

Women are involved in the project anyway. However, most of the times, they are on the negatively impacted side. Following is the account of the ways women are affected and/or involved in the project

- The RAP reveals that 9 women headed households are affected by the project.
- Women face hardship and continue to suffer in silence during the transition period till the time the families are able to regain the previous living standard. The duration of this process is often lengthened, due to delays in payment of compensation, rehabilitation assistance and implementing the R&R, reconstructing the livelihood systems. Longer the transition period, more are the miseries.





As per the R&R Policy as well as looking into the need of the day, women are required to be involved in the process of sustainable development. They have to be integrated in the project as full-fledged participants taking part in all the stages of the project starting from planning through implementation and even in the post-project stages. Only then the process of development is going to help this section.

### **7.9.5 Women Involvement in Development Process through Empowerment**

The development experience of at least two decades shows that it is equally necessary to consult women and offer them choices in enabling them to make informed choices and decide for their own development.

Participation of women has been envisaged specifically in the following areas:

- In the pre-planning and planning stages participation from women could be sought through allowing them taking part in the consultation process. For this, the local level agencies of implementation, i.e. the NGOs have an important role to play.
- Each field team of the NGO shall include at least one women investigator/facilitator
- Compensation for land and assets lost being same for all the affected or displaced families, special care should be taken by the NGOs for women group while implementing the process of acquisition and compensation as well.
- It is imperative that the PIU ensures that the women are consulted and invited to participate in group based activities, to gain access and control over the resource as a part of the RAP, Additionally,
- The Monitoring team(s) shall constitute – 33% women.
- The Evaluation team shall constitute – 33% women.
- From the contractor's side – Woman inspector of works will be there.
- The NGOs should make sure that women are actually taking part in issuance of identity cards, opening accounts in the bank, receiving compensation amounts by cheques in their name or not, etc. This will further widen the perspective of participation by the women in the project implementation.
- Under the entitlement framework there is a number of provisions kept for compensation and assistances towards the losses incurred upon the impacted women headed households by the project. On the other, some provisions, mostly those of the assistances, have been created towards reducing the probable hardship to be experienced by them in the process side by side creating scope for their sustainable socio-economic development.
- The assistances to be provided to women as a vulnerable group is creating alternative livelihood for them to ensure their sustainable socio-economic upliftment.
- The implementing agencies should provide trainings for upgrading the skill in the alternative livelihoods and assist throughout till the beneficiaries start up with production and business.



- Women's participation should be initiated through Self-Help Group formation in each of the villages affected by the project. These groups can then be linked to various special development schemes of the State and Central Government.
- For monitoring and evaluation, there should be scope for women's participation. Monitoring of project inputs concerning benefit to women should involve their participation that will make the process more transparent to them.
- Women should be encouraged to evaluate the project outputs from their point of view and their useful suggestions should be noted for taking necessary actions for further modifications in the project creating better and congenial situation for increasing participation from women. All these done in a participatory way may bring fruit to this vulnerable group in an expected way.

All assistance would be paid in a joint account in the name of both the spouses; except in the case of women headed households and women wage earners.

#### **7.9.6 Involvement of Women in Construction Activities**

The construction works for widening and strengthening the project corridor will start after the R&R activities are over and the RoW is clear of any encroachment and land is temporarily acquired for borrow areas and construction camps. The construction contractors will set up their construction camps on identified locations where labour force required for the construction activities will be provided with temporary residential accommodation and other necessary infrastructure facilities.

The labour force required for the construction activities will be mostly of high-skill nature since a lot of machine work will be there in the construction of the highway. In addition, there will be requirement of unskilled labour where women will certainly contribute. Apart from this, women as family members of the skilled and semi-skilled labourers, will also stay in the construction camps and will be indirectly involved during the construction phase. The families of labourers will include their children also.

The construction contractors are expected to bring along their labour force. Thus, in most cases the labourers, both male and female, will be migratory labourers. But, the involvement of local labour force, especially for unskilled activities, cannot be fully ruled out. Moreover, the RAP suggests the provision of creation of man-days for local affected people. Hence, there will be involvement of local women also in the local labour force.

Foreseeing the involvement of women, both direct and indirect in the construction activities, certain measures are required to be taken towards welfare and well-being of women and children in particular during the construction phase.

#### **7.9.7 Specific Provisions in the Construction Camp for Women**

The provisions mentioned under this section will specifically help all the women and children living in the construction camp.

##### **7.9.7.1 Temporary Housing**

During the construction the families of labourers/workers should be provided with residential accommodation suitable to nuclear families.



#### **7.9.7.2 Health Centre**

Health problems of the workers should be taken care of by providing basic health care facilities through health centres temporarily set up for the construction camp. The health centre should have at least a doctor, nurses, GD staff, medicines and minimum medical facilities to tackle first-aid requirements or minor accidental cases, linkage with nearest higher order hospital to refer patients of major illnesses or critical cases. The health centre should have MCW (Mother and Child Welfare) units for treating mothers and children in the camp. Apart from this, the health centre should provide with regular vaccinations required for children.

#### **7.9.7.3 Day Crèche Facility**

It is expected that among the women workers there will be mothers with infants and small children. Provision of a day crèche may solve the problems of such women who can leave behind their children in such a crèche and work for the day in the construction activities.

The crèche should be provided with at least a trained ICDS (Integrated Child Development Scheme) worker with to look after the children. The ICDS worker, preferably woman, may take care of the children in a better way and can manage to provide nutritional food (as prescribed in ICDS and provided free of cost by the government) to them. In cases of emergency she, as being trained, can tackle the health problems of the children and can organise treatment linking the nearest health centre.

#### **7.9.7.4 Proper scheduling for Construction work**

Owing to the demand of a fast construction work it is expected that a 24 hour-long work-schedule would be in operation. Women, especially the mothers with infants should to be exempted from night shifts as far as possible. If unavoidable, crèche facilities in the construction camps must be extended to them in the night shifts too.

#### **7.9.7.5 Educational Facilities**

The construction workers are mainly mobile groups of people. They are found to move from one place to another taking along their families with them. Thus, there is a need for educating their children at the place of their work. For this at least primary schools are required to be planned in the construction camps. Wherever feasible, day crèche facilities could be extended with primary educational facilities.

#### **7.9.7.6 Special Measures for Controlling STD/AIDS**

Solitary adult males usually dominate the labour force of construction camps. They play a significant role in spreading sexually transmitted diseases. In the construction camps as well as in the neighbouring areas they are found to indulge in physical relations with different women. This unhealthy sexual behaviour gives rise to STDs and AIDS. While it is difficult to stop such activities,

It is wiser to make provisions for means of controlling the spread of such diseases. Awareness camps for the target people, both in the construction camp and neighbouring villages as well, and supply of condoms at concession rate to the male workers may help to large extent in this respect.



#### **7.9.7.7 Control on Child Labour**

Minors i.e., persons below the age of 15 years should be restricted from getting involved in the constructional activities. Measures should be taken to ensure that no child labourer is engaged in the activities.

Exploitation of young unmarried women is very common in these kinds of camps. A strong vigilance mechanism should be created to check this and ensure ceasing of such exploitation.

#### **7.9.7.8 Engaging woman Inspector of Works**

Contractors should engage a woman Inspector of Works not below the rank of a Senior Engineer to inspect the construction camps and any other component of work with respect to gender issues. She would assist the Resident Engineer (RE) in all aspects of gender and child-labour related activities. She would have a full-time tenure throughout the entire construction period. Her duties should include the preparation of monthly and quarterly reports and submit them to the RE with a copy to the RO, MoRT&H as well as PIU.

### **7.10 R&R BUDGET**

#### **7.10.1 Introduction**

A consolidated overview of the budget is provided and the cost estimates given below shall be viewed accordingly. The cost estimates for land and structures based on data collected during the survey and contingency provisions have been made to take into account variations from this data.

The compensation amount for the acquisition of land and structures will be determined by the competent Authority appointed under NH Act 1956. Over and above, the PAF will be entitled for R&R assistance as per the entitlement framework given in Para 7.2.2 (for Acquisition of long Stretches of land) of the Right to Fair Compensation and Transparency in Land Acquisition on Resettlement & Rehabilitation 2013 for project affected Families.

#### **7.10.2 Cost of Land and other Replacement Value**

The project requires about 959.14 ha of total land for construction of road, junction improvement, curve improvements, lanes taking into the account of revenue rate, market rate and stake holder's estimation, the market value of the land has been assumed during the primary survey. The cost of land, which includes compensation amount, (80% rural (4 times) + 20% Urban (2 times) as per RFCTLARR-2013 Schedule-1 on Land acquisition estimated to be **INR. 837.66 Crores.**

#### **7.10.3 Compensation for Structures**

For the loss of building structures, like commercial, residential and residential Cum Commercial, the titleholder will be compensated at replacement cost. A government approved value has



assessed the replacement cost.

The Replacement cost for the structure will be based on the updated Basic Schedule of Rates. Cost of Compensation of structures including cost for Assistance to PAFs is **INR. 16.938**.

#### 7.10.4 Provision for development of Community Structures

There is major religious structure located along the project road within the RoW. A lump sum amount of INR 0.84 Crores has been kept for relocation of religious structures. Break up cost of temple.

#### 7.10.5 Budget

Estimated land Acquisition cost for Rehabilitation & Resettlement has been worked out to INR. **837.66 Crores**. This covers all components of compensation, assistance and entitlements. The broad break up of R & R budget is given below in **Table 7.20**. The budget is based on assessment conducted by the consultant based on Circle Rates and consultation with Local Revenue Officers:

**Table 7.20: Estimated budget for R&R Activities**

| Sl. No. | Particulars  | Unit   | Quantity | Rate per unit (circle rate) | Crores INR    |
|---------|--|--------|----------|-----------------------------|---------------|
| 1       | <b>Land Acquisition</b>  |        |          |                             |               |
| 1.1     | Cost of Land Acquisition (80% rural (4 times) + 20% Urban (2 times)) | 743.07 | 743.07   | 743.07                      | 743.07        |
|         | <b>Total land Acquisition Cost</b>                                   |        |          |                             | <b>743.07</b> |
| 2       | <b>Replacement of Structures</b>                                     |        |          |                             |               |
| 2.1     | Residential area (506.66 Sq.)  | Sq. m  | 506.66   | 2500                        | 3.65          |
| 2.2     | Commercial Area (2338.21 Sq.)  | Sq. m  | 2338.21  | 3000                        | 7.86          |
| 2.3     | Residential cum commercial- area (216 Sq.)                           | Sq. m  | 216.59   | 2200                        | 0.06          |
| 2.4     | Relocation Grant for Large temples @INR 700000 (Lump sum)            | No.    | 18       | 700000                      | 0.84          |
| 2.5     | Relocation of Water tank @ 200000                                    | No.    | 44       | 200000                      | 0.6           |
| 2.6     | Relocation of Wells @ 300000   | No.    | 13       | 300000                      | 0.57          |
|         | <b>Total Cost for Replacement of Structures</b>                      |        |          |                             | <b>13.59</b>  |
| 3       | <b>C. Assistance for PAFs</b>  |        |          |                             |               |
| 3.1     | Resettlement Allowance   | Family | 144      | 50000                       | 0.9           |
| 3.2     | Assistance Allowance   | Family | 144      | 36000                       | 0.648         |
| 3.3     | Financial Assistance   | Family | 144      | 50000                       | 0.9           |
| 3.4     | Shifting Allowance   | Family | 144      | 50000                       | 0.9           |
|         | <b>Total cost for Assistance to PAFs</b>                             |        |          |                             | <b>3.348</b>  |
| 4       | <b>R&amp;R Implementation cost</b>                                   |        |          |                             |               |
| 4.1     | 0.5  | 0.5    | 0.5      | 0.5                         | 0.5           |





**NATIONAL HIGHWAYS AUTHORITY OF INDIA**  
(Ministry of Road Transport & Highways Government of India)

|  |     |     |     |     |               |
|--|-----|-----|-----|-----|---------------|
| <b>4.2</b>                                 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5           |
| <b>4.3</b>                                 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5           |
| <b>Total Cost for Construction Stage</b>   |     |     |     |     | <b>1.5</b>    |
| <b>Total Cost</b>                          |     |     |     |     | <b>761.51</b> |
| <b>Contingency (10% of the total cost)</b> |     |     |     |     | <b>76.15</b>  |
| <b>Grand Total</b>                         |     |     |     |     | <b>837.66</b> |

## 7.11 CONCLUSION

The report on social impact assessment has primarily tried to focus on the relevant legislations, potential impacts due to the proposed project and to propose mitigation measures at different phases of the project. Based on the findings during the study some measures have to be considered from the inception of the project, which will reduce the detrimental effects of project appreciably.

- The Greenfield project has been explored in order to find a suitable alignment that has minimum adverse impact on social aspects.
- The alignment for widening has been designed considering minimum land acquisition.
- The proposed project expressway tried to avoid schools, places of worships, public utilities and other common resources.
- An amicable solution with regard to shifting of religious structures (if required) shall be explored in consultation with community leaders, religious leaders and other prominent persons in the local area during implementation.
- It will be ensured that the likely affected common properties used by local people are suitably rehabilitated before the start of civil construction work and budgetary provision for the same has been made in the project estimates.

With the above approach to design, construction and operation the project will be socially feasible.

## 7.12 ROAD SIDE SAFETY MEASURES

Indian Road Congress (IRC) codes will be followed in proposing and designing road safety features. Pavement markings will be done for traffic lane line, edge lines and hatching. The marking will be with hot applied thermoplastics materials. The pavement markings will be reinforced with raised RR pavement markers and will be provided for median and shoulder edge longitudinal lines and hatch markings. Highway lightings including high masts will be provided at intersections in order to improve the night time visibility.

All the urban locations as well grade separated structure locations will be provided lighting arrangements



## **CHAPTER-8: PROJECT BENEFITS**

### **8.1 INTRODUCTION**

The proposed expressway is part of an exclusive transport corridor being planned between Ahmedabad and Bhavnagar by the Government of Gujarat, keeping the development of SIR around Dholera in centre. It is planned upto Dholera SIR. The proposed expressway corridor is sited between two existing road routes to Bhavnagar; Amhedabad-Bagodara-Dhandhuka-Bhavnagar route at its west and Ahmedabad- Dholka-Wataman-Dholera-Bhavnagar route to its east. However, the proposed expressway merges with the later before Dholera and follows thereafter.

The proposed access controlled expressway project with new alignment has been envisaged through an area which shall have the advantage of simultaneous development as well as shall result in a shorter distance to travel. The junctions with existing road will be planned in the form of interchanges and flyover to ensure uninterrupted flow of traffic.

The proposed project would act as the prime artery for the economic flow to this region. It will enhance economic development, provide employment opportunities to locals, strengthen tourist development, ensure road safety and provide better transportation facilities and other facilities such as way side amenities. Vehicle operating cost will also be reduced due to improved road quality. The compensatory plantation and road side plantation shall further improve the air quality of the region

### **8.2 ENVIRONMENTAL BENEFITS FROM THE PROJECT**

The environmental benefits from the proposed project have been described below:

- Better level of service in terms of improved riding quality and smooth traffic flow.
- Faster transportation will ultimately lead to massive savings in the form of reduced wear and tear of vehicles, reduced vehicle operating costs (VOCs) and total reduction in transportation costs etc.
- With the improvement of road surface, the traffic congestion due to obstructed movement of vehicles will be minimized and thus wastage of fuel emissions from the vehicles will be reduced.
- Increased road landscaping and safety features.
- Plantation of tree all along the proposed expressway will improve the tree density along the RoW which will improve aesthetics as well as trees will act as a pollution absorber.
- The compensatory plantation and road side plantation shall further improve the air quality of the region.
- Overall Environment improvement of the region.



### **8.3 SOCIO-ECONOMIC BENEFIT OF THE PROJECT**

The socio economic benefits from the proposed project have been described below:

- The proposed project would act as the prime artery for the economic flow to this region.
- Enhanced connectivity between rural & urban population which will benefit the all sections of the society like general population, small-medium-large scale industries, farmers, businessmen etc.
- Improved access to higher education facilities & modern health facilities.
- Strengthening of both rural & urban economies which in turn will improve economic scenario of the state and country.
- Faster transportation will strengthen tourist development in the area.
- Improved road connectivity helps in better implementation and management of government schemes.
- With improvement in economy, more generation of employment opportunities.

### **8.4 OTHER TANGIBLE BENEFITS**

- Enhanced connectivity between rural & urban population which will benefit the all sections of the society like general population, small-medium-large scale industries, farmers, businessmen etc.
- Improved access to higher education facilities & modern health facilities.
- Strengthening of both rural & urban economies which in turn will improve economic scenario of the state and country.
- Improved road connectivity helps in better implementation and management of government schemes.
- With improvement in economy, more generation of employment opportunities.

### **8.5 ROAD SAFETY**

The construction of green alignment of Ahmedabad to Dholera Expressway and widening/improvement of existing NHs will ensure smooth flow of the traffic. Installation of proper road safety system through signage, barricades, and crash barriers will add to be safety to the traffic. Bus bays, lay byes, rest areas, underpasses, service roads are proposed in the project, which shall enhance the road safety.



## **8.6 REDUCTION IN VEHICLE OPERATING COST**

Vehicle Operating Cost (VOC) will be reduced when the expressway is constructed. Fuel consumption, wear and tear of tyres, suspension will be benefited when a geometric of the road is improved. VOC consist of the following components.

- Fuel consumption
- Lubricating oil consumption
- Spare part consumption
- Tyre consumption
- Vehicle depreciation

## **8.7 INDIRECT BENEFITS**

In addition to the direct benefits, there are number of indirect benefit attributed to Highway project. Lowering transportation cost for users and improving access to goods and services enables new and increased economic and social activity.

The indirect benefits include changes in land use and development, changes in decision on residential area or colonies where land are less expensive or more desirable, changes in development of business in order to take advantage of improved speed and reliability in the transportation system. These benefits hence lead to increase property values, increased productivity, employment and economic growth.

The indirect benefit of the proposed expressway would work through the dynamic developmental externalities generated through the forward and backward linkages. A better connectivity between Ahmedabad and Dholera will increase the business, which will reflect in the changes in the pattern of economic activities, income generation, price evolution, and employment condition. There will be also increase in greater accessibility to market, health and educational facilities



## CHAPTER-9: ENVIRONMENTAL MANAGEMENT PLAN (EMP)

### 9.1 INTRODUCTION

Some additional measures needed to improve the environment are proposed to be undertaken during the project implementation. Such measures are known as environmental enhancements. These relate to improvement of natural, physical and aesthetic environment of roadside. The 'enhancement measures', in fact, differ from 'mitigation measures'. While the former aims at improving the already degraded or mundane ambience, the latter intends to reduce the negative impacts due to the project.

The objective of these measures include: -

- To enhance the appeal of the proposed project,
- To improve the environmental quality, and
- To generate goodwill amongst local community

To achieve these objectives, some suggested measures include:

1. Enhancement of roadside facilities (bus stops, rest areas, etc.)
2. Improvement of aesthetic qualities along the proposed expressway.
3. Improvement of the local natural resources for local population.
4. Enhancement of cultural properties and access to them.
5. Management of some existing problems.

### 9.2 ENHANCEMENT OF NATURAL ENVIRONMENT

The natural environment can be improved by plantation of ornamental and shade providing avenue trees on the roadside, the shrubs and some important herbs besides developing ponds and providing bore wells along the roadside.

#### 9.2.1 Plantation of Trees, Shrubs and Herbs along the proposed Expressway

The plantation of trees can be done in different densities depending on:

- Habitat and soil type
- Water table depth
- Availability of indigenous species
- Survival rate of plants and
- People's choice

The physical growth characteristics like the form and shape of canopy types, branching patterns, growth rate, colour of flowers, foliage and root characteristics were also the major criteria in the selection of plantation type and densities.

Since the natural forests of desired density are lacking in the region, the ecological importance of the roadside plantation becomes increasingly significant. But, what kind of tree species should be selected for such plantation has been a debated issue. The acute shortage of forest





products provided support to the view point that the strip plantation along the expressway should be managed primarily to meet the requirement of the local people and industries for various forest products. However the consideration of comfort to travelers was given the top priority.

### 9.2.2 Enhancement of Water Bodies

There are number of surface water bodies crossing the project corridor. In order to make these water bodies more accessible and enhance the waterfront landscape following measures has been suggested.

The water bodies are used for various purposes including bathing, washing, fishing, growing water-fruits, livestock drinking and often irrigating the agricultural fields. The landscape treatment includes

- Provision of stepped access to the edge of water
- Providing flat boulders for washing
- Stone pitching for slope stabilization towards roadside
- Plantation of trees and shrubs for stabilization of pond edge

### 9.3 CONSERVATION STATUS AND BIODIVERSITY MANAGEMENT

The project area does not fall within the **Eco sensitive zone** of Velavadar Black Buck National Park. The natural resource management cannot be successful without the participation of all the stakeholders utilizing the resource. So during the field visit to the project area, concerted attempts were made to consult and listen the stakeholders, such as, Park authorities and staff, some visitors and local inhabitants around the Park and Intersection sites to understand their perception, concern and knowledge. The analysis of flora and fauna of the project area indicates **Existence of Some Endemic and Ret Species**.

The species-wise status of RET category has been indicated in the **Tables** referred in the text as per Wildlife (Protection) Act, 1972. The Wildlife (Protection) Amendment Bill, 2013 - A bill further to amend the Wildlife (Protection) Act, 1972 (bill no. XXXI of 2013) and IUCN RED List Category particularly. The RED data books published by BSI and ZSI were also used for this purpose.

The tree, shrub and herb species recorded in the study area belong to **not assessed yet for IUCN Red List Category**. Similarly, the species of grasses and parasitic angiosperms **also belong to not assessed yet for IUCN Red List Category**. For fauna, 09 species belong to Wildlife Act **Schedule-I**, whereas 03 species of avifauna recorded in the project area belong to RET category of IUCN. Among reptiles, **no species** belong to **Wildlife Act Schedule-I**. Reptile species, viz., **Cobra** belong to **vulnerable** category of IUCN red list. Among mammals, **Wolf, Desert Cat** and **Blackbuck** belong to **Wildlife Act Schedule-I**. Among fishes, **Common carp** belongs to **vulnerable** category of IUCN red list.



### 9.3.1 THREATS TO BIODIVERSITY IN THE PROJECT SITE

The major threats are enumerated as follows:

- Fragmentation and gradual shrinkage of wildlife habitat due to expansion of agriculture and economic development activities
- Existence of altered habitats in patches or in continuity, such as, gregarious growth of *Prosopis juliflora* and further spread on account of changed environment due to climate change and anthropogenic activities
- Gradual increase in human and livestock population
- Limited waterholes
- Lack of herbaceous fodder during summer on account of nearly zero rainfall
- Unusual soil erosion on the fringes of Park and around wetlands
- Human and livestock activities, such as, burning, open grazing and seasonal flooding in the low-lying areas
- Exposure to diseases in case of wildlife (least at present) due to exposure to domestic cattle
- Damage to Sarus crane breeding sites existing near habitation due to competing utilization of wetland and marsh resources by the human beings

### 9.4 PHYSICAL ENVIRONMENT

#### 9.4.1 Construction of Bus Stops

Bus stops will be constructed for providing comfort to travelers. Following improvement in design of bus stops are suggested:

- Provision of bus bays to prevent the bus from stopping in the carriageway
- Provision of covered, semi-covered and open spaces with seating areas
- Plantation of shade trees to improve the microclimate
- The bus stop should be aesthetically pleasing
- Provision of adequate right distances

#### 9.4.2 Developing Truck Stoppage Complex

In view of the heavy truck parking activities in midsections, truck stoppage sites/ truck lay byes are suggested at the appropriate locations along the highway.

The requirements of truck stoppage complexes are:

- Acquisition of land for developing the complex
- Each complex should have some shops covering the repair shops, medicine shops, restaurants, and recreation
- The location of petrol pumps should be close to such complexes
- Ornamental and shade trees and shrubs to be planted in order to develop the area aesthetically.



#### **9.4.3 Enhancement of Major Road Intersections**

The road intersections are the main nodal spaces along the corridor. Proper landscaping of these areas by flowering trees and shrubs will improve the area aesthetically.

#### **9.4.4 Enhancement of Cultural Properties**

The cultural properties should be viewed as assets contributing towards meaningful and pleasurable traveling experience. These are the sites of community and individual sentiments. The landscape and design improvements include:

- Providing and improving access to cultural properties.
- The precincts of such properties should be defined or redefined.
- Provision of parking should be made to avoid haphazard parking activities.
- Seating space and rest areas around the cultural properties to be developed.
- Plantation of trees and shrubs for shade and aesthetics.

#### **9.4.5 Enhancement of Quarries and Borrow Areas**

The following enhancement measures will be undertaken for quarries:-

##### **Construction Stage**

Development of site: To minimize the adverse impact during excavation of material following measures are need to be undertaken:

- i) Adequate drainage system shall be provided to prevent the flooding of the excavated area
- ii) At the stockpiling locations, the Contractor shall construct sediment barriers to prevent the erosion of excavated material due to runoff
- iii) Construction of offices, laboratory, workshop and rest places shall be done in the up-wind of the plant to minimize the adverse impact due to dust and noise.
- iv) The access road to the plant shall be constructed taking into consideration the location of units and also slope of the ground to regulate the vehicle movement within the plant.
- v) Incase of storage of blasting material, all precautions shall be taken as per The Explosive Rules, 1983.

##### **Quarry Operations Including Safety**

- i) Overburden shall be removed and disposed on designated site
- ii) During excavation, slopes shall be flatter than 20 degrees to prevent their sliding. Incases where quarry strata are good and where chances of sliding are less this restriction can be ignored.
- iii) Incase of blasting, procedure and safety measures shall be taken as per The Explosive Rules, 1983.



- iv) The contractor shall ensure that all workers related safety measures shall be done as per guidelines for Workers and Safety.
- v) The Contractor shall ensure maintenance of crushers regularly as per manufacturer's recommendation.

Topsoil will be excavated and preserved during transportation of the material. Measures shall be taken to minimize the generation of dust and prevent accidents.

### **Borrow Areas Management**

Borrow areas will be finalized either from the list of locations recommended during EIA stage or new areas identified by contractor. The finalization of locations identified during EIA identified and may be finalized by contractor depends upon the formal agreement between landowners and contractor and its suitability from civil engineering as well as environmental consideration. Meeting the guidelines/notifications as stipulated from time to time by the Ministry of Environment, Forest and Climate Change, Government of India, and local bodies, as applicable shall be the sole responsibility of the contractor.

Besides this certain precautions have to be taken to restrict unauthorized borrowing by the contractor. No borrow area shall be opened without permission of the Engineer/EO. The engineer in addition to the established practices, rules and regulation will also consider following criteria before approving the Borrow areas.

To avoid any embankment slippage, the borrow areas will not be dug continuously, and the size and shape of borrow pits will be decided by the Engineer. Redevelopment of the borrow areas to mitigate the impacts will be the responsibility of the contractor. The contractor shall evolve site-specific redevelopment plans for each borrow area location, which shall be implemented after the approval of the Supervision Consultant.

To ensure that the spills, which might result from the transport of borrow and quarry materials do not impact the settlements, it will be ensured that the excavation and carrying of earth will be done during day-time only. The unpaved surfaces used for the haulage of borrow materials will be maintained properly.

Borrowing of earth shall be carried out at locations recommended as follows:

**Non-Cultivable Lands:** Borrowing of earth will be carried out upto a depth of 2.0 m from the existing ground level. Borrowing of earth shall not be done continuously. Ridges of not less than 8m width shall be left at intervals not exceeding 300 m. Small drains shall be cut through the ridges, if necessary, to facilitate drainage. Borrow pits shall have slopes not steeper than 1 vertical in 4 horizontal.

**Productive Lands:** Borrowing of earth shall be avoided on productive lands. However, in the event of borrowing from productive lands, under circumstances as described above, topsoil shall be preserved in stockpiles. The conservation of topsoil shall be carried out as described in section of this chapter. At such locations, the depth of borrow pits shall not exceed 45 cm and it may be dug out to a depth of not more than 30 cm after stripping the 15 cm top soil aside.

**Elevated Lands:** At locations where private owners desire their fields to be leveled, the borrowing shall be done to a depth of not more than 2 m or up to the level of surrounding fields.



**Borrow pits along Roadside:** Borrow pits shall be located 5m away from the toe of the embankment. Depth of the pit should be such that the bottom of the pit shall not fall within an imaginary line of slope 1 vertical to 4 horizontal projected from the edge of the final section of the bank. Borrow pits should not be dug continuously. Ridges of not less than 8 m width should be left at intervals not exceeding 300 m. Small drains should be cut through the ridges to facilitate drainage.

**Borrow pits on the riverside:** The borrow pit should be located not less than 15m from the toe of the bank, distance depending on the magnitude and duration of flood to be withstood.

**Community / Private Ponds:** Borrowing can be carried out at locations, where the private owners (or in some cases, the community) desire to develop lands (mostly low-lying areas) for pisciculture purposes and for use as fishponds.

**Borrow Areas near Settlements:** Borrow pit location shall be located at least 1.0 km from villages and settlements. If unavoidable, they should not be dug for more than 30 cm and should be drained.

After identification of borrow areas based on guidelines. Contractor will fill reporting format as under and submit the same for approval to the “Engineer” Once approved the contractor will adhere to the recommendation for borrow area to the satisfaction of Engineer.

- (1) In no case the depth of borrow area should exceed 2m from the existing ground level.
- (2) Borrow pits slope should be maintained, no steeper than 1 Vertical: 2 Horizontal.
- (3) Water pooling to be avoided/managed so that NO disease spread due to water stagnation.
- (4) Precautionary measures as the covering of vehicles will be taken to avoid spillage during transportation of borrow area.
- (5) The unpaved surfaces used for the haulage of borrow materials should be maintained properly for dust suppression.
- (6) Haulage of material to embankments or other areas of fill shall proceed only when sufficient spreading and compaction facility is operating at the place of deposition, to minimize dust pollution.
- (7) During rains appropriate measures to be taken to minimize soil erosion, silt fencing to be provided as directed by Engineer/EO.

The Contractor will keep record of photographs of various stages i.e., before using materials from the location (pre-project), for the period borrowing activities (construction Phase) and after rehabilitation (post development), to ascertain the pre and post borrowing status of the area.

## 9.5 ENVIRONMENT MANAGEMENT ACTION PLAN

The Environmental Management Action Plan is the synthesis of all proposed mitigation and monitoring actions, to be implemented within a time frame with specific responsibility assigned and follow-up actions defined. It contains all the information for the project proponents, the contractors and the regulatory agency to implement the project within a specified time frame.





- The EMP is a plan of action for avoidance, mitigation and management of the negative impacts of the project. The Environmental Enhancement is also an important component of EMP.
- The EMP refers to all implementable task at different stages of project, namely,
  - i. Design Phase
  - ii. Construction Phase, and
  - iii. Operation Phase
- The EMP includes a list of all project-related activities and impacts and a clear reporting schedule.
- The EMP is divided into two broad components, (i) dealing with natural environment, and (ii) dealing with action plan for resettlement and rehabilitation (RAP). While the mitigation measures of the natural environment and their management have been incorporated in the present volume, the management of issues related with resettlement and rehabilitation of human communities has been provided in Resettlement Action Plan.

The EMP has been presented in the **Table-9.1**.



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**Table 9.1: Environmental Management Action Plan**

| Environmental Issue/Component        | Impact Description  | Remedial Measure   |
|--------------------------------------|---|--|
| <b>PRE-CONSTRUCTION/DESIGN PHASE</b> |   |  |
| <b>1. ALIGNMENT</b>                  |   |  |
| Constricted sections / settlements   | <ul style="list-style-type: none"> <li>The local traffic will mix up with fast moving vehicles leading to accidents</li> <li>Communities on two sides in market are unable to cross the road easily</li> <li>Loss of property &amp; income source</li> <li>Increased traffic</li> </ul> | <ul style="list-style-type: none"> <li>Developing underpasses in markets</li> <li>Developing resettlement sites</li> <li>Modify designs to save settlements, trees and other environmental Components</li> <li>Construction of wide Road</li> </ul>  |
| <b>2. LAND</b>                       |   |  |
| Embankment slopes                    | <ul style="list-style-type: none"> <li>Some degree of soil erosion on newly constructed embankment</li> </ul>   | <ul style="list-style-type: none"> <li>Turfing of the slopes to check soil erosion with grasses, etc.</li> </ul>   |
| Borrow areas                         | <ul style="list-style-type: none"> <li>Soil and land use will be changed</li> </ul>   | <ul style="list-style-type: none"> <li>Borrow pits shall not be dug continuously. The location, shape and size of the designated borrow areas shall be as approved by the Engineer. No borrow area shall be opened without permission of the engineer.</li> <li>If borrow pits along the expressway is permitted by the Engineer, these shall not be dug continuously and shall confirm to MORTH specifications.</li> <li>Borrow pits shall be redeveloped as per MoEF&amp;CC guidelines. Spoils shall be dumped with an overlay of stockpiled topsoil in accordance with compliance requirements with respect to MoEF&amp;CC guidelines.</li> </ul> |
| <b>3. WATER</b>                      |   |  |
| Water source                         | <ul style="list-style-type: none"> <li>No appreciable impact on underground water sources</li> </ul>  | <ul style="list-style-type: none"> <li>Relocation of water sources like wells and hand pumps</li> </ul>  |



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| Environmental Issue/Component | Impact Description   | Remedial Measure  |
|-------------------------------|--|---|
|                               | <ul style="list-style-type: none"> <li>No loss of surface water bodies or canals</li> </ul>                                      |   |
| Drainage                      | <ul style="list-style-type: none"> <li>No significant impact as sufficient no. of CD works are available</li> </ul>              | <ul style="list-style-type: none"> <li>Raising the road level</li> <li>Provision for drainage on the side of expressway</li> </ul>  |
| <b>4. FLORA AND FAUNA</b>     |  |   |
| Protected forest              | <ul style="list-style-type: none"> <li>Loss of trees</li> </ul>  | <ul style="list-style-type: none"> <li>A total of 97,195 trees has been proposed to be planted against 4478 plants recorded within RoW (excluding DSIR area).</li> </ul>  |
| Wildlife                      | <ul style="list-style-type: none"> <li>Loss of Habitat and Defragmentation</li> </ul>  | <ul style="list-style-type: none"> <li>Plantation of 97195 will be done within the available land of RoW.</li> <li>The Provision of 47 new underpasses including cattle underpass has been provided in proposed project for safety of animals.</li> </ul>   |
|                               | <ul style="list-style-type: none"> <li>Degradation of Habitat Quality</li> </ul>   | <ul style="list-style-type: none"> <li>Precautions will be taken to avoid leakage of chemicals, any hazardous materials due to construction activities.</li> <li>Labour camps will be located far from habitat of any fauna</li> <li>Invasive alien species will be removed from time to time</li> </ul>  |
|                               | <ul style="list-style-type: none"> <li>Noise Induced physiological and Behavioural Changes</li> </ul>                            | <ul style="list-style-type: none"> <li>Dense vegetation along the road side may be provided for attenuation of noise.</li> <li>Silence zone will be marked and provided with sign boards to alert drivers</li> <li>Noise buffers using diversity of tree species, with a range of foliage shapes and sizes, combination of shrubs and trees and evergreen species will be provided.</li> <li>Noise wall will be provided</li> </ul> |
|                               | <ul style="list-style-type: none"> <li>Impacts of Headlights Glare on Wildlife</li> </ul>  | <ul style="list-style-type: none"> <li>Hedges along both sides of expressway will be provided to lower the intensity of lights</li> </ul>   |
|                               | <ul style="list-style-type: none"> <li>Avoidance of Road by Animals</li> <li>To avoid Injury and Mortality of animals</li> </ul> | <ul style="list-style-type: none"> <li>The Provision of 47 new underpasses including cattle underpass has been provided in proposed project for passage of animals including</li> </ul>   |



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| Environmental Issue/Component | Impact Description  | Remedial Measure   |
|-------------------------------|---|--|
|                               |   | <p>herpetofauna, amphibians etc.</p> <ul style="list-style-type: none"> <li>Fences will be provided in combination with underpasses to direct animals away from the roads.</li> <li>Vegetation or other habitat features (rocks, fallen timber) will be placed, planted or allowed to regrow so that animals are directed to preferred crossing locations.</li> <li>The plantation and lighting systems along the roads should be made less attractive to birds to avoid collision of birds with vehicles</li> </ul> |
|                               | <ul style="list-style-type: none"> <li>Reduce access to saltlicks and waterholes</li> </ul>                           | <ul style="list-style-type: none"> <li>Creation or improvement of water bodies will be done so that the animals have access to water.</li> <li>Plantation along the water body will be done to attract the animals towards it.</li> <li>The saltlicks areas will be protected from reach of human beings.</li> </ul>   |
|                               | <ul style="list-style-type: none"> <li>Discontinuity of Canopy</li> </ul>   | <ul style="list-style-type: none"> <li>The Provision of 47 new underpasses including cattle underpass has been provided in proposed project for passage of animals.</li> </ul> <p>For canopy bridge, plantation with specific plant species can be done in the road area of National Park for movement of arboreal animals..</p>   |
|                               | <ul style="list-style-type: none"> <li>Disruption of Processes that maintain regional wildlife populations</li> </ul> | <ul style="list-style-type: none"> <li>The breeding sites of animals/amphibians, nesting sites of birds, thermoregulation surface sites of snakes (if any) will be avoided extent possible for any type of construction.</li> <li>Creation or improvement of water bodies will be done in the borrow area over available community land / existing water bodies, to provide breeding sites to amphibians.</li> </ul>   |
|                               | <ul style="list-style-type: none"> <li>Increased Human Pressure and Human-Wildlife Conflict</li> </ul>                | <ul style="list-style-type: none"> <li>The proposed expressway is access control and cattle underpass is proposed to cross the expressway by animals.</li> <li>Caution signs will be provided to alert road users about wildlife</li> </ul>  |



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| Environmental Issue/Component                   | Impact Description   | Remedial Measure   |
|---|--|--|
| Private plantation                              | <ul style="list-style-type: none"> <li>Loss of trees leading to increase in air and noise pollution; the loss of ecological and economic activities</li> </ul>                                       | <ul style="list-style-type: none"> <li>Trees will be removed as per design with prior approval</li> </ul>  |
| <b>5. ENVIRONMENTAL QUALITY</b>                 |  |  |
| Air quality                                     | <ul style="list-style-type: none"> <li>There will be slight increase in the pollution level of the air in a few places</li> </ul>  | <ul style="list-style-type: none"> <li>Construction of the expressway will allow optimum speed of fast moving vehicles</li> <li>Tree plantation scheme will be implemented</li> </ul>  |
| Noise level                                     | <ul style="list-style-type: none"> <li>The noise level might be increased slightly in area due to machinery activities</li> </ul>  | <ul style="list-style-type: none"> <li>Construction of the expressway will allow optimum speed of fast moving vehicles</li> <li>Tree plantation scheme will be implemented</li> </ul>  |
| <b>6. UTILITIES</b>                             |  |  |
| Relocation of utility lines/community utilities | <ul style="list-style-type: none"> <li>Short time negative impact during transitory phase of shifting of utility lines</li> <li>No impact on shifting wells, hand-pumps etc.</li> </ul>              | <ul style="list-style-type: none"> <li>All utilities to be relocated with prior approval of the concerned agencies</li> <li>All community utilities such as sources of water to be relocated to suitable places</li> </ul>   |
| <b>7. CULTURAL HERITAGE</b>                     |  |  |
| Relocation of cultural properties               | <ul style="list-style-type: none"> <li>Most of the temples being small the issue is not a sensitive one</li> </ul>   | <ul style="list-style-type: none"> <li>Community meetings to be held before relocation or shifting</li> <li>Provision of enhancement of religious structures, and access road</li> </ul>   |
| <b>8. ENVIRONMENTAL SAFETY</b>                  |  |  |
| Accidents                                       | <ul style="list-style-type: none"> <li>Moving of fast moving &amp; slow moving vehicles in market places will enhance chances of accidents</li> <li>Poor visibility causes more accidents</li> </ul> | <ul style="list-style-type: none"> <li>Provision of wider median in rural stretches and plantation of shrubs/under trees in it to avoid the gear of vehicles moving in opposite direction</li> <li>Signals to be erected to reduce speed</li> <li>Proper light arrangement to be made</li> </ul> |





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| Environmental Issue/Component | Impact Description   | Remedial Measure   |
|-------------------------------|--|--|
| <b>CONSTRUCTION PHASE</b>     |  |  |
| <b>1. SOIL</b>                |  |  |
| Soil Erosion                  | <ul style="list-style-type: none"> <li>Removal and cleaning of tree line, herbaceous and shrubby covers from embankment will increase soil erosion</li> <li>Excavations of borrow pits will increase soil erosion</li> </ul> | <ul style="list-style-type: none"> <li>Turfing of road embankment slopes with herbs, shrubs and grasses</li> <li>In borrow pits, the depth of the pit should be regulated so that the sides of the excavation will have a slope not steeper than 1 vertical to 4 horizontal from the edge of the final section of bank</li> <li>The device for checking soil erosion include the formulation of sediment basins, slope drains etc. Such works and maintenance thereof will be deemed as accidental to the earthwork</li> <li>Cutting of trees in phases</li> </ul>   |
| Loss of top soil              | <ul style="list-style-type: none"> <li>The loss of top soil is considerable as the proposed alignment is passing through agricultural field.</li> </ul>  | <ul style="list-style-type: none"> <li>The borrow pit areas could be developed into ponds for fisheries</li> <li>Land taken for borrow area should be infertile</li> </ul>   |
| Compaction of soil            | <ul style="list-style-type: none"> <li>The excavations in borrow areas may lead to marginal loosening of soil</li> <li>The compaction of soil may not be affected largely</li> </ul>   | <ul style="list-style-type: none"> <li>It should be ensured that the stability of excavation of fills is maintained</li> <li>Construction vehicles, machinery and equipment shall move, or be stationed in the designated area</li> <li>If operating from temporarily hired land, it will be ensured that the topsoil for agriculture remains preserved &amp; not destroyed by storage, material handling or any other construction related activities</li> <li>The topsoil from all areas of cutting and all areas to be permanently covered shall be stripped to a specified depth of 150 mm and stored in stockpiles of height not exceeding 2 m</li> <li>Cut and fill should be equalized as per design</li> <li>Earth, if required, should be dumped in selected &amp; approved area by the engineers.</li> </ul> |



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| Environmental Issue/Component                  | Impact Description  | Remedial Measure   |
|--|---|--|
| Borrowing of earth                             | <ul style="list-style-type: none"> <li>Large quantities of earth is needed for raising the level of road, its expansion and embankment</li> </ul>               | <ul style="list-style-type: none"> <li>No earth should be borrowed from within the ROW</li> <li>If new borrow areas are selected, there should be no loss of productive soil, and environmental considerations are met with</li> <li>If vehicles are passing through some villages, the excavation and carrying of earth will be done during day time only</li> <li>The borrow areas should not be dug continuously, and the size and shape of borrow pits to be decided by the engineer</li> <li>Borrow pits should be redeveloped by dumping of spoils; by creating a pond for fisheries, etc. or by leveling an elevated, raised earth mounds.</li> </ul> |
| Contamination of soil from fuel and lubricants | <ul style="list-style-type: none"> <li>The impact will be negligible since the chemical nature of the soil will not change much</li> </ul>                      | <ul style="list-style-type: none"> <li>Vehicles and machines are maintained and refilled in such a fashion that diesel spillage does not contaminate the soil</li> <li>Fuel storage and refilling sites should be kept away from cross drainage structure and important water bodies</li> <li>spoils shall be disposed off as desired and the site shall be fully cleaned before handing over</li> </ul>   |
| Contamination of soil from construction wastes | <ul style="list-style-type: none"> <li>The impact will be marginal on the soil quality</li> <li>The growth of vegetation will be partially disturbed</li> </ul> | <ul style="list-style-type: none"> <li>The construction wastes should be dumped in selected pits, developed on infertile land</li> <li>Follow the norms of SPCB</li> <li>Borrow pits to be filled by such wastes</li> </ul>  |
| <b>2. WATER</b>                                |   |  |
| Water bodies                                   | <ul style="list-style-type: none"> <li>Effect on surface water.</li> </ul>  | <ul style="list-style-type: none"> <li>Any source of water for the community such as ponds, wells, tube-wells etc. lost incidentally shall be replaced immediately</li> <li>All desired measures will be taken to prevent temporary or permanent flooding</li> </ul>   |
| Other water sources                            | <ul style="list-style-type: none"> <li>The lost sources of water like wells and</li> </ul>  | <ul style="list-style-type: none"> <li>Any source of water for the community such as ponds, wells, tube-</li> </ul>  |



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| Environmental Issue/Component                       | Impact Description  | Remedial Measure  |
|---|---|---|
|   | tube-wells are going to affect the community adversely <ul style="list-style-type: none"> <li>Loss of source of irrigation</li> </ul>   | wells etc. lost incidentally shall be replaced immediately <ul style="list-style-type: none"> <li>All desired measures will be taken to prevent temporary or permanent flooding</li> </ul>  |
| Drainage and run-off water                          | <ul style="list-style-type: none"> <li>The flow of run off water will not be affected largely, excepting certain stretches where the drainage problem already exist</li> </ul>                        | <ul style="list-style-type: none"> <li>At cross drainage channels, etc. the earth, stone or any other construction material should be properly disposed of so as not to block the flow of water</li> <li>All necessary precaution shall be taken to construct temporary or permanent device to prevent water pollution (due to increased situation and turbidity)</li> </ul>                  |
| Contamination of water from construction waste      | <ul style="list-style-type: none"> <li>The construction wastes may increase the suspended matter and clay in stagnant water bodies</li> <li>There will be very little increase in toxicity</li> </ul> | <ul style="list-style-type: none"> <li>Construction work close to the streams or other water bodies shall be avoided, especially during monsoon period</li> <li>All waste arising from the project is to be disposed of, as per norms of SPCB</li> </ul>  |
| Contamination of water from fuel and lubricants     | <ul style="list-style-type: none"> <li>The fuel and lubricants may affect the both component of water bodies</li> <li>The community may be slightly affected</li> </ul>                               | <ul style="list-style-type: none"> <li>The slopes of embankment landing to water bodies should be modified and re-channelized so that contaminant may not enter the water body</li> <li>To avoid contamination from fuel and lubricants, the vehicles and equipment shall be properly maintained and refilled</li> </ul>  |
| Sanitation and waste disposal in construction camps | <ul style="list-style-type: none"> <li>The absence of sanitation may lead to many human diseases which are mostly water-borne</li> <li>No communicable diseases are going to be spread</li> </ul>     | <ul style="list-style-type: none"> <li>The construction laborers camp shall be located away from the habitation</li> <li>The sewage system for such camps shall be properly designed and built so that no water pollution takes place to any water-body or water course</li> <li>The workplace shall have proper medical approval by local medical health or municipal authorities</li> </ul> |
| Use of water for                                    | <ul style="list-style-type: none"> <li>The use of water from sources, already in</li> </ul>   | <ul style="list-style-type: none"> <li>Arrangement for supply and storage of water will be made by the</li> </ul>   |



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| Environmental Issue/Component                      | Impact Description  | Remedial Measure   |
|--|---|--|
| construction                                       | use by local community may cause scarcity of water for community <ul style="list-style-type: none"> <li>The easy availability of surface water will not affect the communities</li> </ul>   | contractor in such a way so that the water availability and supply to nearby communities remain unaffected. If a new tube-well is to be bored, proper sanction and approval by Underground Water Department is needed <ul style="list-style-type: none"> <li>The wastage of water during the construction should be minimized</li> </ul>   |
| <b>3. AIR</b>                                      |   |  |
| Emission from construction vehicles and machinery  | <ul style="list-style-type: none"> <li>Effect on human health</li> <li>Dust settled on leaves may reduce growth rate of the plants</li> <li>Crowded market places and construction sites will have higher degree of emission</li> </ul> | <ul style="list-style-type: none"> <li>All vehicles, equipment and machinery used for construction shall be regularly maintained to ensure that the pollution emissions levels are as per norms of SPCB</li> <li>Monitoring of suspended particulate matter to be conducted at least once a month at the sites where crushers are used</li> <li>The human settlements should be at least 500 m downward wind direction of asphalt mixing plant</li> </ul>  |
| Dust and its treatment                             | <ul style="list-style-type: none"> <li>The impact of dust at construction sites is rather adverse, but localized in nature</li> <li>No serious health problem is likely to be caused</li> </ul>   | <ul style="list-style-type: none"> <li>Precautions to reduce the level of dust emissions from the hot mix plants shall be taken.</li> <li>The hot-mix plants should be located at least 500 m from the nearest habitation. They should be fitted with dust extraction unit</li> <li>Water should be sprayed in the line and earth mixing sites, asphalt mixing site and service roads. In filling subgrade, water spraying is needed to solidify the material. After the impacting, water should be sprayed regularly to prevent dust</li> <li>Vehicles delivering material should be covered</li> </ul> |
| <b>4. NOISE LEVELS</b>                             |   |  |
| Noise from vehicles, asphalt plants and equipments | <ul style="list-style-type: none"> <li>The activities of using heavy machinery and equipments are localized and intermittent</li> </ul>   | <ul style="list-style-type: none"> <li>The parts and equipments used in construction shall strictly conform to CPCB noise standards</li> <li>Vehicles and equipments used should be fitted with silencer</li> </ul>  |



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| Environmental Issue/Component              | Impact Description   | Remedial Measure   |
|--|--|--|
|  | <ul style="list-style-type: none"> <li>No serious impact on human health like loss of hearing ability though some sleep disorders may result</li> </ul>  | <ul style="list-style-type: none"> <li>Noise standards or industrial enterprises will be strictly enforced to construction workers from damage</li> <li>In construction sites with 150 m where, there are human settlements, noisy construction should be stopped between 10:00 pm and 8:00 am</li> <li>Noise to be monitored at construction sites</li> </ul> |
| <b>5. BIOLOGICAL ENVIRONMENT</b>           |  |  |
| Loss of damage to vegetation               | <ul style="list-style-type: none"> <li>The loss of trees, shrubs and herbal cover may lead to higher degree of soil erosion</li> <li>The loss of shade and other benefits due to loss of trees</li> <li>The air quality may decline</li> <li>There will be no loss or damage to hydrophytes</li> </ul> | <ul style="list-style-type: none"> <li>Areas of tree plantation cleared will be replaced according to Compensatory Afforestation Policy under Forest Conservation Act-1980</li> <li>Trees should be removed in phases</li> </ul>   |
| Compaction of vegetation                   | <ul style="list-style-type: none"> <li>The effect on compaction will not be much severe</li> <li>There will be no loss of biodiversity</li> </ul>  | <ul style="list-style-type: none"> <li>The removal of vegetation is confined along the proposed project.</li> <li>Replantation of tree species along ROW</li> <li>Plantation of shrubs and under trees in the median</li> </ul>  |
| Loss, damage or disruption to fauna        | <ul style="list-style-type: none"> <li>There will be no loss, damage or disruption to fauna</li> </ul>   | <ul style="list-style-type: none"> <li>Construction workers should be educated not to disrupt or damage any fauna</li> <li>Hunting is strictly prohibited</li> </ul>   |
| <b>6. OTHERS ISSUES</b>                    |  |  |
| Accident risk from construction activities | <ul style="list-style-type: none"> <li>The type of accidental risks may be due to ill-maintained machines and vehicles, due to poor light conditions at the work place, or due to carelessness and poor</li> </ul>   | <ul style="list-style-type: none"> <li>To ensure safe construction in the temporary accesses during construction, lighting devices and safety signal devices shall be installed. Traffic rules and regulations to be strictly followed</li> <li>Safety of workers under various operations during construction</li> </ul>                                      |





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| Environmental Issue/Component         | Impact Description   | Remedial Measure   |
|---------------------------------------|--|--|
|                                       | management of the work involved  | should be ensured by providing them helmets, masks, safety goggles etc <ul style="list-style-type: none"> <li>The electrical equipment should be checked regularly to avoid risks to workers</li> </ul>  |
|                                       |  | <ul style="list-style-type: none"> <li>At every work place, a ready available first aid unit including an adequate supply of dressing materials, a mode of transport (ambulance), nursing staff and an attending doctor to be provided</li> <li>Lighting device and signals at workplace to be installed</li> </ul>  |
| Health issues                         | <ul style="list-style-type: none"> <li>The unhygienic conditions at work place of construction workers</li> <li>The non-availability of potable water</li> </ul> | <ul style="list-style-type: none"> <li>At every workplace, the potable, and sufficient water supply shall be maintained to avoid waterborne diseases and securing the health of workers</li> <li>Adequate drainage, sanitation and waste disposal to be provided at workplace</li> <li>Medical care to be provided to workers in case of medical requirements</li> </ul>   |
| Damage or loss of cultural properties | <ul style="list-style-type: none"> <li>No existence of archaeological sites in proposed alignment</li> <li>No monument exists in the corridor</li> </ul>         | <ul style="list-style-type: none"> <li>Relocation of cultural properties to be done after consultation</li> <li>All necessary and adequate care should be taken to minimize the impact on cultural properties</li> <li>If valuable or invaluable articles such as fabrics, coins, artifacts, structures or other geographic or archaeological rare discovered, the excavation should be stopped and archaeology department to be contacted</li> <li>Archaeologist will supervise the excavation to avoid any damage to the relics</li> </ul> |
| Roadside landscape development        | <ul style="list-style-type: none"> <li>The positive impact will be on bio-aesthetics and beauty</li> </ul>   | <ul style="list-style-type: none"> <li>Avenue plantation of foliage, shade trees mixed with flowering trees, scented plants to be done</li> </ul>  |



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| Environmental Issue/Component                          | Impact Description  | Remedial Measure   |
|--|---|--|
|  | <ul style="list-style-type: none"> <li>Landscaping and beautification of ponds, and access roads will improve aesthetic considerations</li> </ul>   |  |
| Roadside amenities                                     | <ul style="list-style-type: none"> <li>People will be largely benefitted by the comfort and use, provided by these amenities</li> </ul>   | <ul style="list-style-type: none"> <li>Construction of new / improvement of existing bus shelters, bus bays and truck stoppage sites</li> <li>Footpaths, railings, traffic signs, Underpasses, speed zone, signs etc. shall be provided</li> </ul>   |
| Cultural properties                                    | <ul style="list-style-type: none"> <li>The enhancement of cultural properties will bring harmony, goodwill and coherence amongst communities</li> </ul>   | <ul style="list-style-type: none"> <li>Enhancement of all cultural properties and access road shall be completed as per design</li> </ul>  |
| Contamination from spills due to traffic and accidents | <ul style="list-style-type: none"> <li>The chances of accidents are likely to be reduced with improved quality of the road. The contamination of soil and water due to spills will be minor</li> </ul>                  | <ul style="list-style-type: none"> <li>Cleaning of the spills at the accidental site by a workforce provided by state PWD The left over spill may be scrapped to a small nearby pit with ROW</li> </ul>  |
| Dust generation  | <ul style="list-style-type: none"> <li>Though dust is a common feature of tropical climate, yet the situation will be improved by developing vegetation cover</li> </ul>  | <ul style="list-style-type: none"> <li>Roadside tree plantation to be provided</li> <li>New sites (for example, gram panchayat land etc) near the road to be discovered for afforestation</li> </ul>   |
| Air pollution  | <ul style="list-style-type: none"> <li>The degree of air pollution is likely to be on a lower scale with improvement in road surface</li> </ul>   | <ul style="list-style-type: none"> <li>Vehicular emissions of SPM, RSPM, CO, SO<sub>2</sub>, NO<sub>x</sub> to be checked</li> <li>Roadside tree plantation to be done and maintained</li> <li>Atmospheric pollution to be managed and monitored</li> <li>Public awareness programme to be launched</li> </ul> |
| Water  | <ul style="list-style-type: none"> <li>Due to construction of expressway as per design, the water logging during monsoon will not take place</li> <li>Proper drainage will be provided for better water flow</li> </ul> | <ul style="list-style-type: none"> <li>The drainage system should be periodically cleared</li> <li>Public awareness programmes to be launched for maintaining clean drinking water</li> </ul>  |



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| Environmental Issue/Component           | Impact Description  | Remedial Measure   |
|---|---|--|
| Flora and Fauna (key stone species)     | <ul style="list-style-type: none"> <li>The loss of trees, shrubs and herbs will not affect the keystone species and bio-diversity</li> </ul>              | <ul style="list-style-type: none"> <li>The afforestation scheme, containing keystone species should be strictly implemented</li> <li>Improvement of density of vegetation by planting such species</li> </ul>  |
| Accidents involving hazardous materials | <ul style="list-style-type: none"> <li>The chances of such accidents will minimum, yet not unavoidable</li> </ul>   | <ul style="list-style-type: none"> <li>The rules as defined in Environmental (Protection) Act, 1986 should be compiled</li> <li>For delivery of hazardous substances, concerned license need to be taken</li> <li>Vehicles delivering hazardous substances will be printed with unified signs</li> <li>Public security, transportation and the firefighting departments will designate a special route for these vehicles</li> <li>The project hazardous substances will be administrated by highway management department registration system</li> <li>In case of spillage, the report to relevant department to be provided and instructions to be followed</li> </ul> |
| Traffic & Road Safety                   | <ul style="list-style-type: none"> <li>The chances of accidents will be less due to construction of expressway as compared to small width road</li> </ul> | <ul style="list-style-type: none"> <li>Traffic management plan to be developed, especially in congested locations</li> <li>Traffic control measures including speed limits to be enforced strictly</li> <li>Growth of encroachment and squatting on ROW to be discouraged</li> <li>Proposing service lanes in markets and near schools</li> <li>Providing proper median</li> <li>Putting warning signals and signboards</li> </ul>   |



## 9.6 GREEN BELT DEVELOPMENT PLAN

Certain species are listed in **Table 9.2** for developing green belt with the objective of pollution control, carbon sequestration and as source of food especially for birds and amenity purpose. The list is neither complete nor exhaustive. Depending upon the suitability, availability and desirability, other local species should also be considered. The work of green belt development should be taken up by the project proponents with guidance from the Forest Department of the Government of Gujarat, GEER Foundation and Gujarat Ecology Commission. Minimum 3 nos. of row, (@10 m distance) of trees either side of the proposed highway shall be planted and approx. 97195 no of tree will be proposed. It is stated that the indigenous species of local economic and ecological (soil and water conservation) importance need be given priority over commercial and non- native species.

**Table 9.2: Suitable plant species for green belt along the project**

| Sl. No.                | SCIENTIFIC NAME                     | LOCAL/ENGLISH NAME |
|------------------------|-------------------------------------|--------------------|
| <b>TREE SPECIES</b>    |                                     |                    |
| 1.                     | <i>Vachellia leucophloea</i>        | Ronjh              |
| 2.                     | <i>Acacia nilotica</i> (=A. indica) | Babul              |
| 3.                     | <i>Ailanthus excelsa</i>            | Maharukh           |
| 4.                     | <i>Azadirachta indica</i>           | Neem               |
| 5.                     | <i>Dalbergia sissoo</i>             | Shisham            |
| 6.                     | <i>Ficus religiosa</i>              | Pipal              |
| 7.                     | <i>Tamarindus indica</i>            | Imli               |
| 8.                     | <i>Tectona grandis</i>              | Sagaun             |
| 9.                     | <i>Terminalia arjuna</i>            | Koha               |
| 10.                    | <i>Zizyphus sp.</i>                 | Ber                |
| 11.                    | <i>Zizyphus xylopara</i>            | Ghot               |
| <b>SHRUB SPECIES</b>   |                                     |                    |
| 12.                    | <i>Adhatoda vasica</i>              | Adusa              |
| 13.                    | <i>Clerodendron serratum</i>        | Mamri              |
| 14.                    | <i>Salvadora persica</i>            | Meswak             |
| 15.                    | <i>Suaeda fruticosa</i>             | -                  |
| <b>HERB SPECIES</b>    |                                     |                    |
| 16.                    | <i>Achyranthes aspera</i>           | Latjeera           |
| 17.                    | <i>Acorus calamus</i>               | Bach               |
| <b>CLIMBER SPECIES</b> |                                     |                    |
| 18.                    | <i>Tinospora cordifolia</i>         | Giloi              |
| <b>GRASS SPECIES</b>   |                                     |                    |
| 19.                    | <i>Agrostis spp.</i>                | -                  |
| 20.                    | <i>Apluda mutica</i>                | Phuli              |
| 21.                    | <i>Bothriochloa pertusa</i>         | -                  |
| 22.                    | <i>Cenchrus ciliaris</i>            | -                  |
| 23.                    | <i>Cenchrus setigerus</i>           | -                  |
| 24.                    | <i>Chrysopogon fulvus</i>           | Ghoriya            |



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|     |                              |      |
|-----|------------------------------|------|
| 25. | <i>Cymbopogon martinii</i>   | Rusa |
| 26. | <i>Cynodon dactylon</i>      | Dub  |
| 27. | <i>Dichanthium annulatum</i> | Kel  |
| 28. | <i>Digitaria</i> spp.        | -    |
| 29. | <i>Eragrostis tenella</i>    | -    |
| 30. | <i>Iseilema laxum</i>        | -    |
| 31. | <i>Panicum</i> spp.          | -    |
| 32. | <i>Sporobolus</i> spp.       | -    |
| 33. | <i>Themeda triandra</i>      | -    |

### 9.6.1 Plantation operations and practices for Greenbelt and open space replantation

The plantation strategy should include operations, such as, Development of seedlings/saplings of the tree and shrub species, Land/site preparation for transplanting/seeding, Transplanting, and Post-transplanting maintenance under the guidance of a field -oriented botanist or agriculture professional or field staff of the Forest Department.

#### (a) Development of planting material

For tree and shrub species, the seedlings and saplings could be raised in nursery in poly bags of standard size or root trainer trays. The healthy certified seed material should be used for this purpose. These materials can also be arranged on demand from the nurseries owned by Forest Department or private organizations. Healthy and disease-free planting material is pre-requisite for success of the plantation.

#### (b) Site preparation

This activity need be undertaken well in advance before monsoon for rainy season species and during October -November for winter species. Thorny bushes and weeds need to be removed completely from the site. It should be followed by soil and water conservation work using physical measures, such as, surface rain water harvesting, trenches, stone bunds; engineering structures, such as, small check dams; and biological devices, such as, planting of fast spreading grass and leguminous species and bushy materials.

For planting seedling/sapling, pits of appropriate size (1x1x1m for tree species, 0.5x0.5x0.5 m for shrub species) need be prepared well in advance. The top soil of 30 cm depth need be kept aside for mixing with FYM to promote microbial growth for nutrient recycling.

After digging, the pit must be kept unfilled and uncovered so that sterilization through sun rays could occur. It should follow by filling stone -free soil (3 part) and well-decomposed weed-free compost or dump manure (1 part). For improving soil fertility, neem/castor/ground cake can be used. The basal dressing of urea, ammonium phosphate, potassium sulphate or DAP could be applied in morning hours at appropriate interval.

#### (c) Seeding and Transplanting

This operation must be done after rain showers. In case of grass and leguminous species, direct seeding could be practiced to establish a surface cover to check soil loss and grass growth for herbivores and nesting sites for birds.





The plantation should be done in rows following 5x5 spacing both row to row and plant to plant using healthy seedling/sapling. While planting, the poly bag should be moistened first. The poly bag should not be removed completely, only the bottom part of it should be removed by cutting it with a sharp blade without disturbing planting material. The planted material should be watered slowly to avoid soil disturbances.

**(d) Post-planting maintenance**

The transplanted material needs attentive care for complete one year at least, followed by care during stressful seasons particularly. The maintenance operations include watering, removal of weeds, prevention and control of diseases and pests using bio-pesticides preferably, and trimming, and fertilization. No specific amount could be mentioned for watering, etc., as it is selective to species, hence, based on field conditions, the maintenance activities should be done. The fertilization could be carried out at an interval of 30 days avoiding occurrence of rains. The gaps caused on account of mortality, should be filled by replanting the same species.

**Above all, the development of green space must get value similar to Expressway development.**

**9.7 ENVIRONMENTAL MANAGEMENT PLAN BUDGET**

The cost of environmental protection measures has been estimated Rs 45.50 crores as per the following details. Total cost estimate on environment for present Section has been presented in **Table 9.3.**



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Table 9.3: Environmental Management Plan Budget

| Component                  | Stage                             | Items   | Estimated Rate                       | Total Cost (Rs) |
|----------------------------|-----------------------------------|---|--------------------------------------|-----------------|
| Environmental Training     | Construction                      | -   | Lump Sum                             | 5,00,000        |
| Environmental Monitoring   | Construction and Operation Period | Monitoring of air, water, soil, noise and Soil (Refer Table 6.2)  | As per environmental monitoring plan | 1,85,96,000     |
| Air                        | Construction                      | Dust Suppression at the project site @ Rs 1500/trip x 10 trips/day x 365 days x 2 years                   | -                                    | 1,09,50,000     |
| Solid waste                | Construction                      | Demolition wastes and bituminous scrap disposal as per C& D rules 2016                                    | Lump Sum                             | 30,00,000       |
| Flora                      | Construction                      | Plantation of trees along the proposed expressway i.e 97,195 trees to be planted                          | Rs 1500/tree including tree guard    | 14,57,92,500    |
|                            |                                   | Maintenance for the period of 3 years including casualty replacement of tree                              | Rs 500/tree                          | 4,85,97,500     |
|                            |                                   | Ornamental Plantation on Cross Sections.  | Lump Sum                             | 50,00,000       |
|                            |                                   | Laying of grass in median and embankment slope @ Rs. 5 /sq ft   | Lump Sum                             | 16,22,32,174    |
| Wildlife                   | Construction                      | Signage for wildlife  | Lump Sum                             | 10,00,000       |
| Safety of Wildlife Animals | Construction                      | Pre-Painted Galvanised Iron (PPGI) insulated sheet (approx. 4 m height x 500 m length @ Rs.450 / sq m)    | Lump Sum                             | 10,00,000       |
| Safety                     | Construction                      | Demarcation of borrow areas clearly, using fencing if needed.   | Lump Sum                             | 10,00,000       |
|                            |                                   | Provision of Hoarding /Posters at construction camps and provision of health checks at construction sites | Lump Sum                             | 15,00,000       |
|                            |                                   | Provision for helmet, gumboots, jackets, goggles etc. to labours  | Lump Sum                             | 5,00,000        |
| Construction Camps         | Construction                      | Sanitary Facilities   | Lump Sum                             | 10,00,000       |
| Rain Water Harvesting      | Construction and operation        | Construction of RWH Structures @ every 500 mts (Approx. 220 structures)                                   | Rs 50000 per structure               | 1,10,00,000     |
|                            |                                   | Maintenance of Rain water Harvesting Structures for 15 years  | Rs. 500/unit/Year                    | 16,50,000       |
| Total                      |                                   |   |                                      | 41,33,18,174    |
| Contingency @ 10%          |                                   |   |                                      | 4,13,31,817     |
| Total                      |                                   |   |                                      | 45,46.49,991    |
| Say                        |                                   |   |                                      | 45.50 Cr        |



## CHAPTER: 10 - DISCLOSURE OF THE CONSULTANT

### 10.1 INTRODUCTION TO FIRM

**Enviro Infra Solutions Private Limited (EIS Pvt. Ltd.)** is an environmental consultancy organisation, led by Qualified Industry and Infrastructure Experts from 2013. The company has received accreditation from Quality Council of India (NABET-QCI) as an EIA Consultancy organisation in 2016.

The aim of the company is to promote engineered and environmentally sustainable solution to address infrastructural needs with ground check on balance between Ecological niche & ongoing development of the Infrastructure and Industrial projects.

We at Enviro Infra Solutions Pvt. Ltd. are committed to provide environmental consultancy to a wide range of Environmental Services to our clients for various projects and developments in sustainable manner by: -

- Review and commitment to comply with management system being followed and continuous improvement in standard of services delivered to customers.
- Achieving optimum customer satisfaction.
- Contemplating maximum environmental protection
- Comply with the statutory requirements and continually improve the effectiveness of Quality Management System.
- Reviewing the policy for continuing suitability

**The company has undertaken many EIA and other associated studies and clearances for Mining of Minerals (opencast only); River Valley Projects; Thermal Power Plants; Highways; Building and construction Projects.**

The Main objects of the company are as follows: -

- **Enviro Infra Solution (EIS)** provides comprehensive and strategic services to various Industries as well as government & extends its cutting-edge services with the help of its competent staff as well as through the association with proficient companies worldwide.
- To provide **Environmental Impact Assessment** Reports for Various Infrastructure and Industrial Projects as Per MoEF&CC / World Bank / ADB / JICA And Other Financial Institutes Guidelines.
- To provide Community Survey, **Socio-Economic Studies**, Preparation of Indigenous People Plan, Public Consultation And Focus Group Discussion Studies as per World Bank, JICA And ADB Guidelines.
- To undertake **Facility Audits** of Industrial Plants for Safety/ Accreditation Guidelines
- Main consulting sectors of the company are **River Valley Projects, Highway Projects, Township and area development Projects** etc.



## 10.2 AREA OF EXPERTISE

**Environmental Impact Assessment:** We have undertaken many EIA studies and clearances for Mining of Minerals (opencast only); River Valley Projects; Thermal Power Plants; Highways; Building and construction Projects. The areas of specialisation are as follows: -

- i. Mining of Minerals
- ii. Thermal Power Plants
- iii. Highway and Railways
- iv. Building and Construction Projects
- v. Cement Plants
- vi. Port & Harbors, Break Waters and Dredging
- vii. Township and Area Development Projects
- viii. Oil & Gas Transportation Pipeline (Crude and Refinery / Petrochemical Products), Passing Through National Parks / Sanctuaries /Coral Reefs / Ecologically Sensitive Areas Including LNG Terminal
- ix. Irrigation & Hydroelectric Projects
- x. Solid and Hazardous Waste Management Site.

## 10.3 BRIEF RESUME OF TEAM MEMBERS: -

EIS Pvt. Ltd. comprises a group of professionals from various development fields. The core members of EIS team hold experiences in Pollution Control (Air pollution, Water pollution, SHW), Ecology and Hydrology, Economic Analysis etc. The brief resume of the Environment Coordinator and the Functional Area Experts are discussed below:

### **Sanjeev Sharma (FAE - AP, AU, NP, SHW)**

Mr. Sharma has more than 20 Years of National and International Experience in EIA studies. He is a QCI/NABET approved EIA coordinator in Sectors – Mining of Minerals (Opencast), River Valley, Thermal power plants, Ports & Harbors, and Highways. He has in depth understanding of environment legislations applicable in India and has also undertaken an assessment of legislative framework on the development projects. He supervises the baseline data collection in respect of soil, water & noise and vibration parameters and provides guidance to field monitoring team.

### **Niranjan Prakash Melkania (FAE -Ecology and Biodiversity)**

Mr. Melkania has more than 30 years of experience in Ecology and Biodiversity & EIA studies and he is also QCI/NABET Functional Expert in the sector of Ecology and Biodiversity. He has Developed and Organized Management Development Programme on EIA & Environmental Auditing.

### **Mr. M L Sharma (FAE - SC)**

Mr. Sharma has more than 30 years of Experience in EIA studies. He is QCI/NABET Functional Expert in the sector of Soil Conservation. He has established Environmental monitoring sites for soil collection for EIA studies, Compliance of Environmental clearance Conditions for Various



projects. He also has experience in assessment of fertility and characterization of soil and assesses the impact of pollutants on soil in large and medium size projects.

**Mr. Anoop Kishore Mishra (EIA coordinator – HC & FAE -AP,SHW, WP)**

Mr. Mishra has more than 30 Years of experience in Environmental Studies, Risk Analysis & HAZOP. He is QCI /NABET approved EIA coordinator in Sectors – Metallurgical Industries (nonferrous) Synthetic organic chemicals industry and Isolated storage & handling of Hazardous chemicals and Function Area Expert for Air Pollution, Solid Hazardous Waste, Water Pollution. He has been a **Lead auditor** for ISO 9001, ISO 14001 & OHSAS 18001. He is responsible for entire operation of the plant including Planning, Organizing, and Control of the Production, Maintenance, Quality Control, Safety Health & Environment, Liaison with govt. Bodies, Marketing Project implementation, HR & Administration, Supply Chain Management and organizing various training sessions on different topics for plant personnel's for safe & efficient operations and to enhance their performance level.

**Mr. B.M. Sinha – (EIA Coordinator- Oil and Gas & FAE- Geology)**

Mr. Sinha has more than 30 years of National & International experience in Geology & EIA studies. He is QCI/NABET EIA Coordinator in the Sectors - Oil & Gas transportation pipelines and Offshore and Onshore Oil & Gas exploration and QCI/NABET Functional Expert in the sector of Geology. He studies the environmental aspects such as top soil preservation, waste dump management, reclamation/rehabilitation for EIA/EMP of mining projects and studies the environmental impacts on onshore exploration, exploitation of oil & Gas and post production stages including preparation of environmental management plans.

**Mr. Nitin Shitole – (FAE – SE)**

Mr. Shitole has more than 30 years of National & International experience in Socio Economics & EIA studies and he is QCI/NABET Functional Expert in the sector of Socio Economics. He has prepared many socio impact assessment report, R & R studies and resettlement action plan, preparation of indigenous people plans as per ADB Guidelines and also he has conducted stakeholder and community survey meetings.

#### **10.4 QCI/ NABET ACCREDITATION CERTIFICATE**

We are accredited under QCI-NABET scheme for accreditation of EIA consultants organizations vide certificate number: NABET/EIA/1619/IA 0018 and it is valid upto November,09 2019 for Mining of Minerals (Open Cast only), Offshore and onshore oil and gas exploration, development & production, River Valley Projects, Thermal Power Plants, Metallurgical Industries for both ferrous and non-ferrous only, Cement plants, Synthetic organic chemicals industry, Distilleries, Oil & gas transportation pipeline, Ports, harbours, break waters and dredging, Highways, Building and Construction projects and township and area development projects. The copy of the QCI/NABET accredited certificate has been attached as **Annexure IV**.





## 10.5 BRIEF ABOUT THE LABORATORY

Enviro Infra Solutions Pvt. Ltd. has entered into a MoU with Noida Testing Laboratories (NTL), a NABL and MoEF&CC accredited laboratory for carrying out measurement of various environmental parameters such as Ambient Air Quality, Noise, Water Quality of Surface and Ground water resources, Micro Metrological data collection and Soil Investigation. The copies of the NABL and MoEF&CC Certificate have been attached in **Annexure V**.

NTL is well equipped with sophisticated & versatile analytical instruments & having updated technology for various analytical applications in the field of environment. NTL provides a wide range of services including:-

- ❖ Monitoring and Analysis of Environmental Samples & Environmental Compliances Reports
- ❖ Sample Collection of Water Soil/ Sludge and Solid Waste.
- ❖ Field monitoring for ambient air, Indoor Air, stack, noise etc.
- ❖ Meteorological Monitoring.
- ❖ Water, Waste water, Ground Water, Raw Water, Drinking Water, Mineral Water, Construction Water, Boiler Water & Domestic Effluent etc. Testing as per CPCB Guidelines, EPA Act.
- ❖ Ambient & Work Zone Noise Monitoring.
- ❖ Facilities for bioassay of industrial effluents. Micro Biological analysis of water.
- ❖ Characterization of soil and its Fertility.
- ❖ Solid Waste Characterization, Identification & analysis

### 10.5.1 Lab Facilities

We have state-of-the-art lab facilities for carrying out the sampling, monitoring, analysis/testing and reporting in line with our quality policy. With an aim for comprehensive coverage of assessment and analysis, our testing infrastructure has wide range of instruments for testing parameters of water & soil samples, air monitoring and meteorological monitoring etc.

The classified lists of instruments used for environmental monitoring have presented below

| LIST OF LAB INSTRUMENTS   |                                 |
|---|---------------------------------|
| Analytical balance  | Depth sampler                   |
| pH meter  | Rotary shaker                   |
| Conductivity meter  | COD Digestion Apparatus         |
| Portable water analysis kit (for DO, pH, Temp., Conductivity Redox) | Flame Photometer                |
| Turbidity meter   | Fuming chamber                  |
| Water Bath  | Bottom sampler                  |
| Centrifuge  | Magnetic stirrer with Hot plate |
| Distillation Assembly   | Vacuum filtration pump          |
| Heating mantle  | Inoculation Hood                |
| Refrigerator  | Aquarium for bioassay & Aerator |
| Deep Freezer  | Water deionizer                 |
| BOD Incubator   | Water current meter             |
| Oven  | Dissolved oxygen meter          |
| Muffle Furnace  | Global Positioning system (GPS) |
|   | Flask shaker                    |



|   |   |
|---|---|
| Colorimeter<br><b>AIR</b><br>Respirable Dust Sampler PM <sub>10</sub><br>Fine particulate samplers PM <sub>2.5</sub><br>Carbon Monoxide Analyzer<br>Automatic weather monitoring station<br>Sound Level Meter | Flocculator<br>Hot plate<br><br>Indoor Air Sampler<br>Stack Sampling Kit<br>Handy Air Sampler |
|---|---|



### 10.6 DECLARATION BY EXPERTS CONTRIBUTING TO THE EIA: Construction of Ahmedabad-Dholera Expressway Road (110 km) (NHA/BM/21) in the State of Gujarat.

I, hereby certify that I was a part of the EIA team in the following capacity that developed the above EIA.

EIA coordinator:-

Name : Sanjeev Sharma

Signature and Date :

Period of Involvement : April 2018 – till date

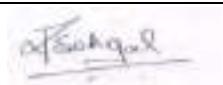
Contact Information : +91-9818922344

**Functional area experts:**

| S. No. | Functional Areas | Name of the experts       | Signature |
|--------|------------------|---------------------------|-----------|
| 1      | AP               | Sanjeev Sharma            |           |
| 2      | WP               | Anoop Kishore Misra       |           |
| 3      | SHW              | Sanjeev Sharma            |           |
| 4      | SE               | Nitin Shitole             |           |
| 5      | EB               | Niranjan Prakash Melkania |           |
| 6      | HG               | Ishan Jain                |           |
| 7      | GEO              | B. M. Sinha               |           |
| 8      | SC               | M.L Sharma                |           |
| 9      | AQ               | Sanjeev Sharma            |           |
| 10     | NV               | Sanjeev Sharma            |           |
| 11     | LU               | Yasir Ahmed               |           |
| 12     | RH               | Anoop Kishore Misra       |           |



**Functional Area Associate (FAA)**

|   |         |                |  |
|---|---------|----------------|--|
| 1 | AP & NV | Rishabh Sehgal |  |
|---|---------|----------------|--|

**Declaration of association in the EIA**

Declaration by the Head of the accredited consultant organization/ authorized person:

I, ML Sharma, Director, hereby, confirm that the above-mentioned experts prepared the EIA/EMP report for Construction of Ahmedabad-Dholera Expressway Road (110 km) (NHAI/BM/21) in the State of Gujarat. I also confirm that the consultant organization shall be fully accountable for any misleading information mentioned in this statement.



Signature :

Name : **ML Sharma**

Designation : **Director**

Name of the EIA consultant organization : **Enviro Infra Solutions Pvt. Ltd.**

NABET Certificate issued vide Letter No : **NABET/EIA/1922/RA 0157 dated  
March 16, 2020**

**ANNEXURE-I**  
**(Copy OF APPROVED TOR**  
**LETTER)**



**F. No. 10-9/2018-IA.III**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(Impact Assessment Division)**

Indira Paryavaran Bhawan,  
Jor Bagh Road, Aliganj  
New Delhi - 110 003

Dated: 11<sup>th</sup> June, 2018

To

**The General Manager (Tech) & Project Director**  
National Highways Authority of India,  
(Ministry of Road Transport and Highways),  
3A & 3B, 2<sup>nd</sup> Floor, Amul Building,  
Near Dena Bank, Vejalpur Road,  
Jivraj Park, Ahmedabad - 380 051

**Sub: 'Construction of Ahmedabad - Dholera Expressway Road (110 km) (NHA/BM/21) in the State of Gujarat by M/s National Highways Authority of India - Terms of Reference regarding.**

Sir,

This has reference to your letter No. NHA/PIU-Ahmedabad/NH-751/A'bad-Dholera Exp./2018/400 dated 8<sup>th</sup> February, 2018 submitting above mentioned proposal for seeking Terms of Reference (TOR) and subsequent clarifications vide letter dated 4<sup>th</sup> May, 2018, as per the provisions of the Environment Impact Assessment (EIA) Notification, 2006 and subsequent amendments under the Environment (Protection) Act, 1986.

2. The proposal for 'Construction of Ahmedabad - Dholera Expressway Road (110 km) (NHA/BM/21) in the State of Gujarat by M/s National Highways Authority of India was considered by the Expert Appraisal Committee (EAC) for Industrial Estate/Area, SEZ and Highways projects in its 187<sup>th</sup> meeting held on 26<sup>th</sup> March, 2018 and 189<sup>th</sup> meeting held on 7<sup>th</sup> May, 2018 in the Ministry of Environment, Forest and Climate Change, New Delhi

3. The project proponent along with EIA Consultant M/s Enviro Infra Solutions Pvt. Ltd., GZB, made a presentation and provided following information to the Committee.

- (i) The proposed Expressway from Ahmedabad to Dholera has a total length of 109.019 Km. Project road is entirely Greenfield alignment project and proposed for 6 lane expressway. The project road takes off from Sardar Patel

[Online Proposal No.: 1A/GJ/MIS/72899/2018 submitted online on 10<sup>th</sup> February, 2018]

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Ring Road near Sarkhej, southwest of Ahmedabad, 2 Km east of National Highway NH-8A. The corridor runs southerly towards Dholera between NH-8 (in the west) and SH-4, SH-6, Sabarmati river course / Gulf of Khambhat (on east side). It forms central spine of Dholera Special Investment Region

- (ii) The proposed expressway corridor is sited between two existing road routes to Bhavnagar, Ahmedabad-Bagodara-Dhandhuka-Bhavnagar route at its west and Ahmedabad-Dholka-Valaman-Dholera-Bhavnagar route to its east. However, the proposed expressway merges with the later before Dholera and follows thereafter.
- (iii) Justification of Selection of the site: The proposed expressway is part of an exclusive transport corridor between Ahmedabad and Bhavnagar by the Government of Gujarat, keeping the development of SIR around Dholera in centre. The proposed road would act as the prime artery for the economic flow to this region. It will enhance economic development, provide employment opportunities to locals, strengthen tourist development, ensure road safety, and provide better transportation facilities and wayside amenities.
- (iv) Water requirement, source, status of clearance: The Peak water requirement is 450KLD during construction stage and will be extracted from local surface water sources.
- (v) Connectivity to the site: The site is approachable by road from Ahmedabad district. The city is approx 5 km away from project site. The project starts at 0.00 km in Ahmedabad and ends at km 109.019 in Dholera, Bhavnagar
- (vi) ESZ: The project does not fall within Eco-Sensitive Zone of Velavadar National Park.
- (vii) Diversion of forest land: No
- (viii) Tree cutting, types, numbers, girth size etc.: The alignment will require cutting of approximately 4088 no. of trees.
- (ix) 1.375 km of elevated road will be built over Velavadar National Park to avoid the National Park.
- (x) Rehabilitation involved if any - The Project requires approx. 1500 ha land. Total 103 no. of structures are coming in the proposed RoW of the expressway. The land will be acquired as per procedure laid down in RECT LARR Act, 2013.
- (xi) Investment/Cost: Rs. 7451.77721 Crores.
- (xii) Court cases if any: Not Applicable.

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- (xiii) **Employment Potential:** There will be temporary influx of people to the area as other people who will be involved directly and indirectly during the construction will come for work. However, preference will be given to local people for employment.
- (xiv) **Benefits of the project:** The proposed road would act as the prime artery for the economic flow to this region. It will enhance economic development, provide employment opportunities to locals, strengthen tourist development, ensure road safety, and provide better transportation facilities and other facilities such as way side amenities. Vehicle operating cost will also be reduced due to improved road quality. The compensatory plantation and road side plantation shall further improve the air quality of the region.

4. Based on the deliberations in the meeting and information provided by the proponent in support of the project, the EAC, in its 189<sup>th</sup> meeting held on 7<sup>th</sup> May, 2018, recommended the said project for grant of TOR. As per the recommendation of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords TOR for 'Construction of Ahmedabad - Dholera Expressway Road (110 km) in the State of Gujarat' by M/s National Highways Authority of India and for preparation of EIA/EMP report with public consultations subject to compliance of all conditions as notified in the standard ToR applicable for highways and specific conditions, as mentioned below:

**A. Specific Conditions:** EAC recommended the following additional ToR to this project in addition to standard ToR:

- (i) Proponent should incorporate the integrated eco-friendly design for entire stretch on either side of Velavadar National Park as per the WII guidelines. Impact of proposed project on movement of wildlife up to 10 km radius of the park should also be taken into account in the impact assessment study.
- (ii) Proponent should explore the possibilities to find alternate alignment to avoid disturbance to the wildlife including Blackbuck and roosting and feeding sites for harriers and Lesser Florican.
- (iii) Furnish the authentic maps of all perennial and seasonal wetlands (based on Survey of India toposheets) along the proposed and alternate alignment. Also state the size of each wetland and distance from proposed and alternate alignment.
- (iv) Carry out the study of cumulative impact of proposed project on Sarus Crane, Harrier roosting and foraging sites, lesser florican and Blackbuck and other important wildlife species along the proposed and alternate alignment.

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- (v) Carry out detailed traffic study to assess inflow of traffic from adjoining areas like airport/urban cities.
- (vi) Furnish report on Acoustic and Light Proofing measures considering the WII manual and if any, other such documents. It should be conducted by the reputed institute having adequate experience for such study.
- (vii) Wildlife corridors mapped by the Wildlife Institute of India also need to be taken into account in project planning and requirement of suitable eco-friendly measures.
- (viii) CRZ clearance to be obtained by DSIR for the part of proposed alignment within the specified CRZ area
- (ix) Beyond DSIR area, CRZ clearance is to be obtained by NHAI, if applicable.

#### **B. General Conditions**

- (i) A brief description of the project, project name, nature, size, its importance to the region/state and the country shall be submitted.
- (ii) In case the project involves diversion of forests land, guidelines under OM dated 20.03.2013 shall be followed and necessary action be taken accordingly.
- (iii) Details of any litigation(s) pending against the project and/or any directions or orders passed by any court of law/any statutory authority against the project to be detailed out.
- (iv) Detailed alignment plan, with details such as nature of terrain (plain, rolling, hilly), land use pattern, habitation, cropping pattern, forest area, environmentally sensitive areas, mangroves, notified industrial areas, sand dunes, sea, rivers, lakes, details of villages, teshils, districts and states, latitude and longitude for important locations falling on the alignment by employing remote sensing techniques followed by "ground truthing" and also through secondary data sources shall be submitted.
- (v) Describe various alternatives considered, procedures and criteria adopted for selection of the final alternative with reasons.
- (vi) Land use map of the study area to a scale of 1: 25,000 based on recent satellite imagery delineating the crop lands (both single and double crop), agricultural plantations, fallow lands, waste lands, water bodies, built-up areas, forest area and other surface features such as railway tracks, ports, airports, roads, and major industries etc. alongwith detailed ground survey map on 1:2000 scale showing the existing features falling within the right of

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way namely trees, structures including archaeological & religious, monuments etc. if any, shall be submitted.

- (vii) If the proposed route is passing through any hilly area, the measures for ensuring stability of slopes and proposed measures to control soil erosion from embankment shall be examined and submitted.
- (viii) If the proposed route involves tunneling, the details of the tunnel and locations of tunneling with geological structural fraction should be provided. In case the road passes through a flood plain of a river, the details of micro-drainage, flood passages and information on flood periodicity at least of the last 50 years in the area shall be examined and submitted.
- (ix) If the project is passing through/located within the notified ecologically sensitive zone (ESZ) around a notified National Park/Wildlife Sanctuary or in the absence of notified ESZ, within 10 km from the boundary of notified National Park/Wildlife Sanctuary, the project proponent may simultaneously apply for the clearance for the standing committee of NBWL. The EC for such project would be subject to obtaining the clearance from the standing committee of NBWL.
- (x) Study regarding the animal bypasses/underpasses etc. across the habitation areas shall be carried out. Adequate cattle pass for the movement of agriculture material shall be provided at the stretches passing through habitation areas. Underpasses shall be provided for the movement of Wild animals.
- (xi) Study regarding in line with the recent guidelines prepared by Wildlife Institute of India for linear infrastructure with strong emphasis on animal movement and identifying crossing areas and mitigation measures to avoid wildlife mortality.
- (xii) The information shall be provided about the details of the trees to be cut including their species and whether it also involves any protected or endangered species. Measures taken to reduce the number of the trees to be removed should be explained in detail. The details of compensatory plantation shall be submitted. The possibilities of relocating the existing trees shall be explored.
- (xiii) Necessary green belt shall be provided on both sides of the highway with proper central verge and cost provision should be made for regular maintenance.
- (xiv) If the proposed route is passing through a city or town, with houses and human habitation on either side of the road, the necessity for provision of bypasses/diversions/under passes shall be examined and submitted. The

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proposal should also indicate the location of wayside amenities, which should include petrol stations/service centres, rest areas including public conveyance, etc.

- (xv) Details about measures taken for the pedestrian safety and construction of underpasses and foot-over bridges along with flyovers and interchanges shall be submitted.
- (xvi) The possibility that the proposed project will adversely affect road traffic in the surrounding areas (e.g. by causing increases in traffic congestion and traffic accidents) shall be addressed.
- (xvii) The details of use of fly ash in the road construction, if the project road is located within the 100 km from the Thermal Power Plant shall be examined and submitted.
- (xviii) The possibilities of utilizing debris/waste materials available in and around the project area shall be explored.
- (xix) The details on compliance with respect to Research Track Notification of Ministry of Road, Transport and Highways shall be submitted.
- (xx) The details of sand quarry and borrow area as per OM No.2-30/2012-IA-III dated 18.12.2012 on 'Rationalization of procedure for Environmental Clearance for Highway Projects involving borrow areas for soil and earth' as modified vide OM of even No. dated March 19, 2013, shall be examined and submitted.
- (xxi) Climate and meteorology (max and min temperature, relative humidity, rainfall, frequency of tropical cyclones and snow fall); the nearest IMD meteorological station from which climatological data have been obtained to be indicated.
- (xxii) The air quality monitoring shall be carried out as per the notification issued on 16<sup>th</sup> November, 2009. Input data used for Noise and Air quality modelling shall be clearly delineated.
- (xxiii) The project activities during construction and operation phases, which will affect the noise levels and the potential for increased noise resulting from this project shall be identified. Discuss the effect of noise levels on nearby habitations during the construction and operational phases of the proposed highway. Identify noise reduction measures and traffic management strategies to be deployed for reducing the negative impact if any. Prediction of noise levels shall be done by using mathematical modelling at different representative locations.



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- (xxiv) The impact during construction activities due to generation of fugitive dust from crusher units, air emissions from hot mix plants and vehicles used for transportation of materials and prediction of impact on ambient air quality using appropriate mathematical model, description of model, input requirement and reference of derivation, distribution of major pollutants and presentation in tabular form for easy interpretation shall be examined and carried out.
- (xxv) The details about the protection to existing habitations from dust, noise, odour etc. during construction stage shall be examined and submitted.
- (xxvi) If the proposed route involves cutting of earth, the details of area to be cut, depth of cut, locations, soil type, volume and quantity of earth and other materials to be removed with location of disposal/ dump sites along with necessary permission.
- (xxvii) If the proposed route is passing through low lying areas, details of filling materials and initial and final levels after filling above MSL, shall be examined and submitted.
- (xxviii) The water bodies including the seasonal ones within the corridor of impacts along with their status, volumetric capacity, quality and likely impacts on them due to the project along with the mitigation measures, shall be examined and submitted.
- (xxix) The details of water quantity required and source of water including water requirement during the construction stage with supporting data and also classification of ground water based on the CGWA classification, shall be examined and submitted.
- (xxx) The details of measures taken during constructions of bridges across rivers/ canals/major or minor drains keeping in view the flooding of the rivers and the life span of the existing bridges shall be examined and submitted. Provision of speed breakers, safety signals, service lanes and foot paths shall be examined at appropriate locations throughout the proposed road to avoid accidents.
- (xxxi) If there will be any change in the drainage pattern after the proposed activity, details of changes shall be examined and submitted.
- (xxxii) Rain water harvesting pit shall be at least 3 - 5 m above the highest ground water table. Provisions shall be made for oil and grease removal from surface runoff.
- (xxxiii) If there is a possibility that the construction/widening of road may cause an impact such as destruction of forest, poaching or reduction in wetland areas, examine the impact and submit details.



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- (xxxiv) The details of road safety, signage, service roads, vehicular under passes, accident prone zones and the mitigation measures, shall be submitted.
- (xxxv) IRC guidelines shall be followed for widening & upgradation of roads.
- (xxxvi) The details of social impact assessment due to the proposed construction of the road, shall be submitted.
- (xxxvii) Examine the road design standards, safety equipment specifications and Management System training to ensure that design details take account of safety concerns and submit the traffic management plan.
- (xxxviii) Accident data and geographic distribution shall be reviewed and analyzed to predict and identify trends - in case of expansion of the existing highway and provide Post accident emergency assistance and medical care to accident victims.
- (xxxix) If the proposed project involves any land reclamation, details shall be provided of the activity for which land is to be reclaimed and the area of land to be reclaimed.
- (xl) Details of the properties, houses, business activities etc likely to be effected by land acquisition and an estimation of their financial losses, shall be submitted.
- (xli) Detailed R&R plan with data on the existing socio-economic status of the population in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternative livelihood concerns/employment and rehabilitation of the displaced people, civil and housing amenities being offered, etc and the schedule of the implementation of the specific project, shall be submitted.
- (xlii) The environment management and monitoring plan for construction and operation phases of the project shall be submitted. A copy of your corporate policy on environment management and sustainable development, shall also be submitted.
- (xlili) Estimated cost of the project including that of environment management plan (both capital and recurring) and source of funding. Also, the mode of execution of the project, viz, EPC, BOT, etc, shall be submitted.
- (xliv) Fund allocation for Corporate Environment Responsibility (CER) shall be made as per Ministry's O.M. No. 22-65/2017-IA.III dated 1<sup>st</sup> May, 2018 for various activities therein. The details of fund allocation and activities for CER shall be incorporated in EIA/EMP report.

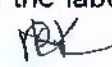


- (xiv) Details of blasting if any, methodology/technique adopted, applicable regulations/permissions, timing of blasting, mitigation measures proposed keeping in view mating season of wildlife.
- (xvi) In case of river/ creek crossing, details of the proposed bridges connecting on either banks, the design and traffic circulation at this junction with simulation studies.
- (xlvii) Details to ensure free flow of water in case the alignment passes through water bodies/river/streams etc.
- (xlviii) In case of bye passes, the details of access control from the nearby habitation/habitation which may come up after the establishment of road.
- (xlix) Bridge design in eco sensitive area /mountains be examined keeping in view the rock classification hydrology etc.
- (i) Details of litigation pending against the project, if any, with direction/order passed by any Court of Law against the Project should be given.
- (ii) The cost of the Project (capital cost and recurring cost) as well as the cost towards Implementation of EMP should be clearly spelt out.
- (iii) In case of alignment passing through coastal zones, following documents are required to be furnished along with EIA/EMP report:
  - a. Form-I (Annexure-IV of the CRZ Notification, 2011)
  - b. Rapid EIA Report including marine and terrestrial component,
  - c. Disaster Management Report, Risk Assessment Report and Management Plan,
  - d. CRZ map indicating HTL and LTL, demarcated by one of the authorized agency in 1:4000 scale,
  - e. Project layout superimposed on the above map,
  - f. CRZ map covering 7 km radius around the project site, and indicating the CRZ-I, II, III & IV areas including other notified ecologically sensitive areas,
  - g. NOC from the concerned SPCB/UT PCC for the projects involving discharge of effluents, solid wastes, sewage and the like.
- (iii) Any further clarification on carrying out the above studies including anticipated impacts due to the project and mitigative measure, project proponent can refer to the model ToR available on Ministry website "<http://moef.nic.in/Manual/Highways>"

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5. Following general guidelines shall be strictly adhered:
- (i) The EIA document shall be printed on both sides, as far as possible.
  - (ii) All documents should be properly indexed, page numbered.
  - (iii) Period/date of data collection should be clearly indicated.
  - (iv) Authenticated English translation of all material provided in Regional languages.
  - (v) The letter/application for EC should quote the MoEF&CC File No. and also attach a copy of the letter prescribing the TOR.
  - (vi) The copy of the letter received from the Ministry on the TOR prescribed for the project should be attached as an annexure to the final EIA-EMP Report.
  - (vii) The final EIA-EMP report submitted to the Ministry must incorporate the issues in TOR and that raised in Public Hearing. The index of the final EIA-EMP report, must indicate the specific chapter and page no. of the EIA-EMP Report where the specific TOR prescribed by Ministry and the issue raised in the P.H. have been incorporated. Questionnaire related to the project (posted on MoEF&CC website) with all sections duly filled in shall also be submitted at the time of applying for EC.
  - (viii) Grant of TOR does not mean grant of EC.
  - (ix) Grant of TOR/EC to the present project does not mean grant of approvals in other regulations such as the Forest (Conservation) Act 1980 or the Wildlife (Protection) Act, 1972.
  - (x) Grant of EC is also subject to Circulars and Office Memorandum issued under the EIA Notification 2006 and subsequent amendments, which are available on the MoEF&CC website: [www.envfor.nic.in](http://www.envfor.nic.in).
  - (xi) The status of accreditation of the EIA consultant with NABET/QCI shall be specifically mentioned. The consultant shall certify that his accreditation is for the sector for which this EIA is prepared.
  - (xii) On the front page of EIA/EMP reports, the name of the consultant/consultancy firm along with their complete details including their accreditation, if any shall be indicated. The consultant while submitting the EIA/EMP report shall give an undertaking to the effect that the prescribed TOR (TOR proposed by the project proponent and additional TOR given by the MoEF) have been complied with and the data submitted is factually correct (Refer MoEF office memorandum dated 4<sup>th</sup> August, 2009).
  - (xiii) While submitting the EIA/EMP reports, the name of the experts associated with/involvement in the preparation of these reports and the laboratories through



[Online Proposal No.: IA/GJ/MIS/72899/2018 submitted online on 10<sup>th</sup> February, 2018]



which the samples have been got analysed should be stated in the report. It shall clearly be indicated whether these laboratories are approved under the Environment (Protection) Act, 1986 and the rules made there under (Please refer MoEF office memorandum dated 4<sup>th</sup> August, 2009) The project Coordinator of the EIA study shall also be mentioned.

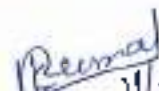
(xiv) All the TOR points as presented before EAC shall be covered.

6. A detailed draft EIA/EMP report shall be prepared in terms of the above additional TOR and should be submitted to the State Pollution Control Board for Public Hearing. Public Hearing to be conducted for the project in accordance with the provisions of Environmental Impact Assessment Notification, 2006 and the issues raised by the public should be addressed in the Environmental Management Plan. The Public Hearing shall be conducted based on the TOR letter issued by the Ministry and not on the basis of Minutes of the Meeting available on the website.

7. The project proponent shall submit the detailed final EIA/EMP report prepared as per TOR including Issues raised during Public Hearing to the Ministry for considering the proposal for environmental clearance within 3 years as per the MoEF&CC OM No J-11013/41/2006-IA-II(I) (Part) dated 29<sup>th</sup> August, 2017.

8. The consultants involved in preparation of EIA/EMP report after accreditation with Quality Council of India/National Accreditation Board of Education and Training (QCI/NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other Organization(s)/Laboratories including their status of approvals etc. vide notification of the MoEF dated 19<sup>th</sup> July, 2013

9. The prescribed TOR would be valid for a period of three years for submission of the EIA/EMP Reports.

  
(Raghu Kumar Kodali)  
Director/Scientist F

Copy to: The Member Secretary, Gujarat Pollution Control Board, Race Course Rd, Race Course, Sadar, Rajkot, Gujarat 360 001

  
(Raghu Kumar Kodali)  
Director/Scientist F

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**ANNEXURE-II**  
**(DETAILS OF WETLANDS**  
**ALONG WITH WETLANDS**  
**MARKED IN SOI**  
**TOPOSHEET)**

# LIST OF WATER BODIES CROSSING THE PROPOSED EXPRESSWAY

| Sl. No     | Chainage (km) | Falling within 120m ROW<br>(Proposed alignment) |        |      | Area (Sqm) | Remarks                               |
|------------|---------------|---|--------|------|------------|---------------------------------------|
|            |               | LHS   | Center | RHS  |            |                                       |
| 1          | 2+223         |   |        | Pond | 16202.63   |                                       |
| 2          | 6+407         |   | Pond   |      | 9203.28    |                                       |
| 3          | 6+920         |   | Pond   |      | 27128.71   |                                       |
| 4          | 13+760        | Pond  |        |      | 7478.38    |                                       |
| 5          | 16+416        |   |        | Pond | 14583.64   |                                       |
| 6          | 22+583        |   | Pond   |      | 13710.64   | Near Sidhraj Village                  |
| 7          | 24+515        | Pond  |        |      | 48908.83   |                                       |
| 8          | 26+910        | Pond  |        |      | 45297.21   | Near Sherpara Village                 |
| 9          | 31+700        |   |        | Pond | 4900.37    | Near Railway Crossing                 |
| 10         | 32+378        | Pond  |        |      | 11122.86   |                                       |
| 11         | 37+300        | Pond  |        |      | 7873.90    |                                       |
| 12         | 39+152        |   |        | Pond | 25057.24   | Near Rupgadh Village (Dudhesar Talav) |
| 13         | 41+544        |   |        | Pond | 4964.57    |                                       |
| 14         | 46+905        | Pond  |        |      | 3272.92    |                                       |
| 15         | 48+250        |   |        | Pond | 13466.03   |                                       |
| 16         | 50+000        | Pond  |        |      | 2907.83    |                                       |
| 17         | 50+215        |   |        | Pond | 2754.32    |                                       |
| 18         | 50+345        |   | Pond   |      | 5728.85    |                                       |
| 19         | 51+395        | Pond  |        |      | 3114.46    |                                       |
| 20         | 52+000        |   | Pond   |      | 4363.77    |                                       |
| 21         | 54+196        |   |        | Pond | 4469.94    |                                       |
| 22         | 58+050        | Pond  |        |      | 4402.22    | Near Bholad Village                   |
| 23         | 65+680        | Pond  |        |      | 5405.33    |                                       |
| 24         | 66+660        |   |        | Pond | 870.99     |                                       |
| 25         | 68+590        | Pond  |        |      | 19973.06   |                                       |
| 26         | 70+490        |   | Pond   |      | 9062.93    |                                       |
| 27         | 84+388        |   |        | Pond | 27744.72   | Near Dholera                          |
| 28         | 95+628        |   |        | Pond | 2801.41    |                                       |
| 29         | 96+074        |   |        | Pond | 3978.49    |                                       |
| 30         | 105+020       |   | Pond   |      | 12409.65   |                                       |
| 31         | 105+483       |   | Pond   |      | 19899.20   |                                       |
|            |               |   |        |      |            |                                       |
| Total Area |               |   |        |      | 383058.36  |                                       |

# **LIST OF WATER BODIES FALLING WITHIN 500 M FROM BOTH SIDES OF THE PROPOSED EXPRESSWAY**

| Sl. No | Chainage (km) | LHS  | RHS  | Distance from CL (m) | Area (Sqm) | Remarks                |
|--------|---------------|------|------|----------------------|------------|------------------------|
| 1      | 2+000         |      | Pond | 275.0                | 42017.10   |                        |
| 2      | 3+570         | Pond |      | 190.0                | 7897.48    |                        |
| 3      | 4+750         | Pond |      | 65.0                 | 12696.29   |                        |
| 4      | 6+680         |      | Pond | 641.0                | 47969.58   | Near Tajpur Village    |
| 5      | 7+138         | Pond |      | 337.0                | 12204.51   |                        |
| 6      | 8+765         |      | Pond | 345.0                | 50839.89   | Near Wasna Chacharawad |
| 7      | 11+400        | Pond |      | 186.0                | 7072.25    |                        |
| 8      | 12+539        | Pond |      | 370.0                | 14796.66   |                        |
| 9      | 15+395        |      | Pond | 123.0                | 7599.26    |                        |
| 10     | 19+500        | Pond |      | 110.0                | 45033.73   |                        |
| 11     | 19+825        | Pond |      | 434.0                | 16864.42   | Near Juwal Rupawati    |
| 12     | 20+817        |      | Pond | 383.0                | 6427.91    |                        |
| 13     | 21+894        |      | Pond | 215.0                | 14422.64   |                        |
| 14     | 22+694        | Pond |      | 380.0                | 85559.74   | In Sidhraj Village     |
| 15     | 26+000        |      | Pond | 400.0                | 16116.31   |                        |
| 16     | 27+835        |      | Pond | 358.0                | 5612.49    |                        |
| 17     | 31+160        |      | Pond | 192.5                | 7695.27    | Near Sarandi Village   |
| 18     | 31+162        | Pond |      | 269.0                | 42719.91   | Near Sarandi Village   |
| 19     | 36+000        | Pond |      | 229.0                | 18628.11   | Kanyana Village        |
| 20     | 37+100        |      | Pond | 468.0                | 12102.66   |                        |
| 21     | 47+000        | Pond |      | 487.0                | 11751.41   | Vejalka Village        |
| 22     | 47+300        | Pond |      | 255.0                | 29808.06   | Vejalka Village        |
| 23     | 48+100        | Pond |      | 70.0                 | 4054.00    |                        |
| 24     | 52+489        |      | Pond | 99.4                 | 4268.70    |                        |
| 25     | 52+569        | Pond |      | 109.0                | 2896.14    |                        |
| 26     | 53+284        |      | Pond | 492.0                | 6754.62    |                        |
| 27     | 54+939        | Pond |      | 95.0                 | 3538.84    |                        |
| 28     | 55+328        | Pond |      | 319.0                | 2694.18    |                        |
| 29     | 56+290        | Pond |      | 291.0                | 5234.01    |                        |
| 30     | 59+266        | Pond |      | 444.0                | 84897.75   | Near Bholad Village    |
| 31     | 64+908        | Pond |      | 81.0                 | 5552.61    |                        |
| 32     | 66+000        |      | Pond | 341.0                | 3876.14    |                        |
| 33     | 72+475        |      | Pond | 220.0                | 16301.57   | Near Sarasia Village   |

|                   |         |      |      |                  |          |               |
|-------------------|---------|------|------|------------------|----------|---------------|
| 34                | 83+435  | Pond |      | 411.0            | 18543.55 |               |
| 35                | 83+475  |      | Pond | 57.0             | 23102.26 |               |
| 36                | 85+164  | Pond |      | 295.0            | 19959.18 | After Dholera |
| 37                | 85+755  | Pond |      | 84.0             | 13458.86 | After Dholera |
| 38                | 88+795  | Pond |      | 205.0            | 28084.57 | Near Mundi    |
| 39                | 91+080  | Pond |      | 272.0            | 55172.43 | Near Sandhida |
| 40                | 97+134  | Pond |      | 365.0            | 24602.23 |               |
| 41                | 97+350  |      | Pond | 413.0            | 10890.94 | Mama Talav    |
| 42                | 103+709 |      | Pond | 135.0            | 9534.31  |               |
| 43                | 104+030 | Pond |      | 111.0            | 10302.74 |               |
| 44                | 106+400 | Pond |      | 94.0             | 18819.90 |               |
|                   |         |      |      |                  |          |               |
| <b>Total Area</b> |         |      |      | <b>888375.18</b> |          |               |

## **LIST OF CANALS/RIVERS CROSSING THE PROPOSED EXPRESSWAY**

| Sl. No | Chainage (km) | Type          | Remarks                                |
|--------|---------------|---------------|--|
| 1      | 0+980         | Narmada Canal | Crossing                               |
| 2      | 2+540         | Canal         | Crossing                               |
| 3      | 2+870         | Canal         | Crossing                               |
| 4      | 5+000         | Canal         | Crossing                               |
| 5      | 5+708         | Canal         | Crossing Near Tajpur Village           |
| 6      | 8+402         | Canal         | Crossing                               |
| 7      | 8+920         | Canal         | Crossing                               |
| 8      | 9+716         | Canal         | Crossing                               |
| 9      | 10+403        | Canal         | Crossing                               |
| 10     | 10+693        | Canal         | Crossing                               |
| 11     | 10+908        | Canal         | Crossing                               |
| 12     | 14+350        | Canal         | Crossing                               |
| 13     | 15+555        | Canal         | Crossing                               |
| 14     | 22+472        | Canal         | Crossing Near Sidhraj Village          |
| 15     | 24+858        | Canal         | Crossing                               |
| 16     | 30+798        | Canal         | Crossing Near Saran Village            |
| 17     | 32+894        | Canal         | Crossing                               |
| 18     | 34+285        | Canal         | Crossing                               |
| 19     | 35+966        | Canal         | Crossing Near Kariyana Village         |
| 20     | 39+000        | Canal         | Crossing Near Rupgadh Village          |
| 21     | 40+598        | Canal         | Crossing                               |
| 22     | 42+252        | Canal         | Crossing                               |
| 23     | 45+285        | Canal         | Crossing                               |
| 24     | 46+000        | Canal         | Crossing                               |
| 25     | 46+795        | Canal         | Crossing Near Vejalka Village on SH-08 |
| 26     | 47+382        | Canal         | Crossing Near Vejalka Village on SH-08 |
| 27     | 49+520        | Canal         | Crossing                               |
| 28     | 51+165        | Canal         | Crossing                               |
| 29     | 57+825        | Canal         | Crossing Near Bholad Village on SH-08  |
| 30     | 60+150        | Bogava River  | Crossing                               |
| 31     | 61+000        | Bogava River  | Crossing                               |
| 32     | 64+300        | Canal         | Crossing                               |
| 33     | 64+990        | Canal         | Crossing                               |



|    |         |              |  |
|----|---------|--------------|--|
| 34 | 69+315  | Ghelo Nadi   | Crossing   |
| 35 | 78+110  | Bhadar River | Crossing   |
| 36 | 81+440  | Adhiya River | Crossing   |
| 37 | 91+996  | Canal        | Start on Right side and end at 92+850 on SH-06   |
| 38 | 92+380  | Canal        | Start on Left side and fall in Vankol Khadi  |
| 39 | 93+195  | Vankol Khadi | Crossing   |
| 40 | 94+380  | Canal        | Crossing   |
| 41 | 94+910  | Canal        | Crossing   |
| 42 | 95+566  | Canal        | Crossing   |
| 43 | 95+190  | Canal        | After this chainage canal running parralel on both side of SH-06 upto 98+100 with Prop ROW |
| 44 | 101+850 | River        | Crossing   |
| 45 | 102+390 | Canal        | Crossing   |

# MAP SHOWING PERENNIAL AND SEASONAL WETLANDS CROSSING THE PROPOSED EXPRESSWAY



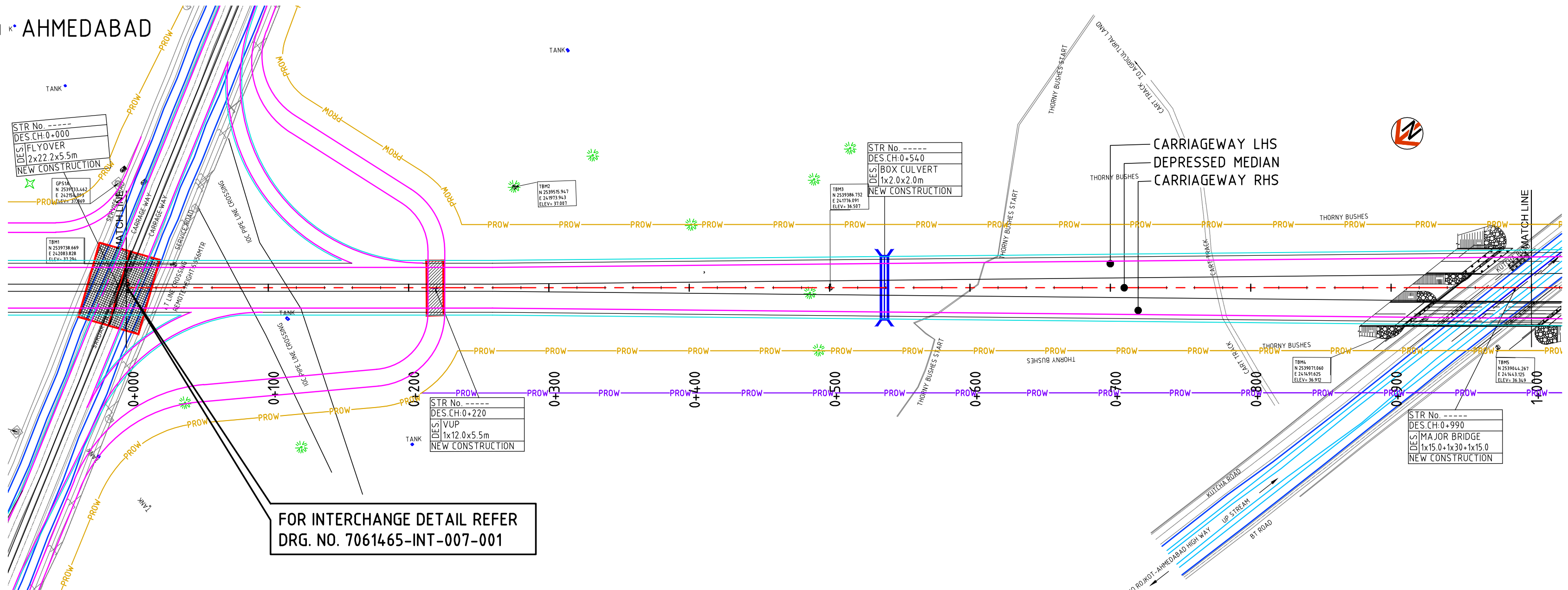
**ANNEXURE-III**  
**(DETAILED GROUND**  
**SURVEY MAP in 1:2000**  
**SCALE)**

## **PLAN & PROFILE**



← AHMEDABAD

DHOLERA →



#### LEGEND:-

##### EXISTING PLAN

- GPS
- Bench Mark
- Bore Hole
- Well
- Kilometer Stone
- NH Boundary Stone
- Electric Pole
- Electric Box
- Telephone Pole
- Telephone Box
- Lamp Post
- Transformer
- Hightension Tower
- OFC Pillar
- Tree-PTR1 Girth (0.300mm-0.600mm)
- Tree-PTR2 Girth (0.600mm-0.900mm)
- Tree-PTR3 Girth (0.900mm-1800mm)
- Tree-PTR4 Girth Above 1800mm
- Hand Pump
- Municipal Water Tap
- Manhole
- Name Board
- Temple
- Mosque
- Church
- Building Permanent/Temporary
- Compound Wall
- Retaining Wall
- Fence Line
- High Tension Line
- Railway Line
- Existing Road Centre Line
- Existing Road Paved/Unpaved
- Culvert/Bridge - Existing
- Drain
- River/Canal
- Pond

##### PROPOSED PLAN

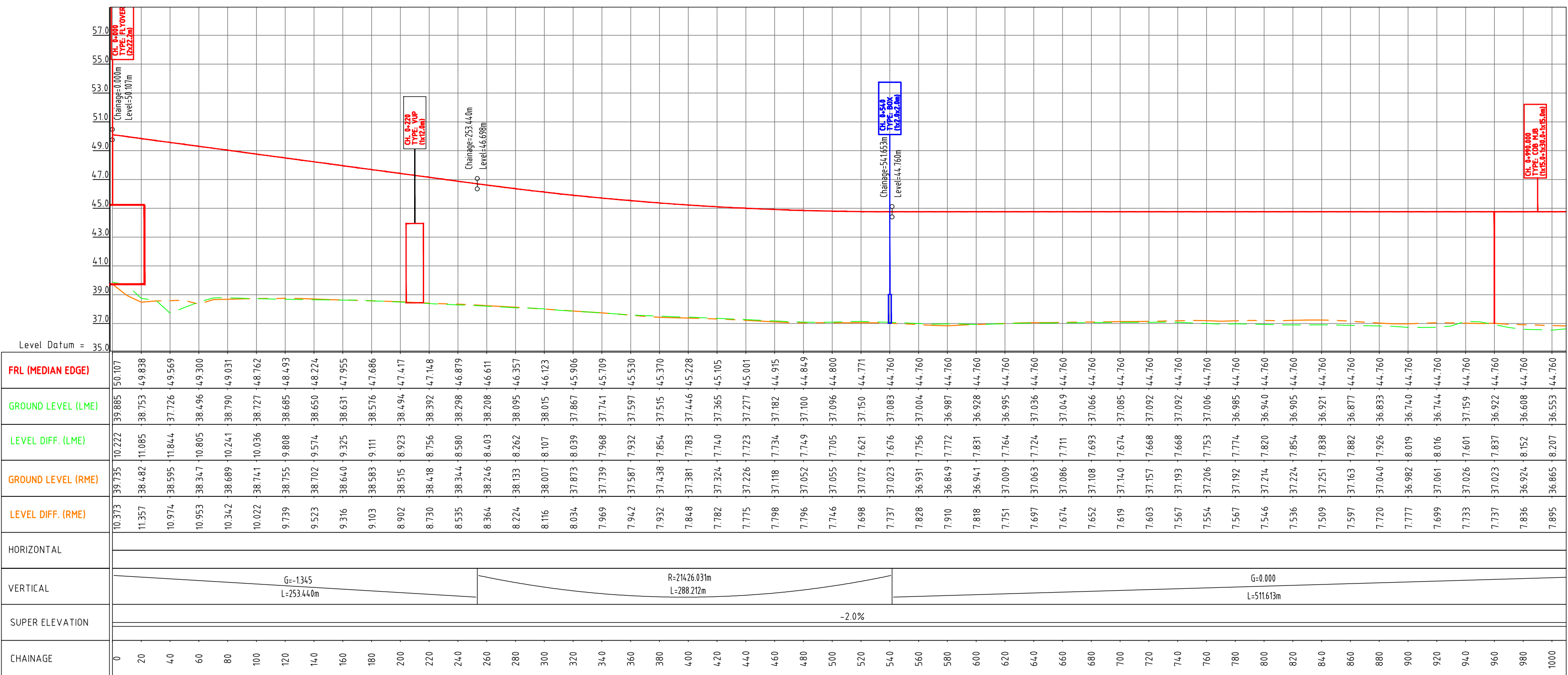
- Proposed Centre Line
- Proposed Median Edges
- Proposed Carriageway Edges
- Proposed Paved Shoulder
- Proposed Earthen Shoulder
- Proposed Right-of-Way
- Proposed Toe Line

##### PROPOSED PROFILE

- Proposed FRL (Median Edge)
- Proposed Ground LVL (LME)
- Proposed Ground LVL (RME)

##### ABBREVIATION

- TS-Tangent to Spiral
- SC-Spiral to Curve
- CS-Curve to Spiral
- ST-Spiral to Tangent
- PC-Point of Circular Curve (With Transition)
- PT-Point of Tangent (Without Transition)
- Tangent point end(m)
- PS-Paved Shoulder
- SS-Soft Shoulder
- CBS-Crash Barrier space
- GPS



| ISSUE | DATE       | AMENDMENT / ISSUE DESCRIPTION | APPROVAL |
|-------|------------|-------------------------------|----------|
| A     | 24.03.2017 | DRAFT                         | PJ       |
| B     | 08.03.2018 | FINAL FEASIBILITY             | PJ       |

SCALE AT A2 SIZE DRAWING

HORIZ. 1:2500 25 0 25 50 75 100 125m

VERT. 1:250 2.50 0 2.50 5.00 7.50 10.00 12.50m

CLIENT APPROVED

DATE

CONSULTANT SIGNATURE

DESIGNER  
SMEC  
Member of the  
Surbana Jurong Group  
387 Udyog Vihar, Phase-II  
Gurgaon - 122016 (Haryana)

DESIGN AID  
in association with  
DESIGN AID  
Plot No. 54, 2nd Floor (Front),  
Manasgaur Dairy Farm,  
Vasant Kunj, New Delhi-110070

CLIENT  
NATIONAL HIGHWAY AUTHORITY OF INDIA

PROJECT  
PREPARATION OF FEASIBILITY STUDY / DPR OF  
AHMEDABAD - DHOLERA EXPRESSWAY (110 KM)  
UNDER BHARAT MALA SCHEME (NHAI/BM/21)  
IN THE STATE OF GUJARAT

PROJECT TITLE  
PLAN & PROFILE  
FROM KM. 0+000 TO KM. 1+000

DRAWING STATUS  
FINAL FEASIBILITY

PROJECT / DRAWING NO.  
7061465-PP-004-001

ISSUE  
B

**ANNEXURE-IV**  
**(QCI/NABET CERTIFICATE)**





# Quality Council of India

## National Accreditation Board for Education & Training



### CERTIFICATE OF ACCREDITATION

**Enviro Infra Solutions Private Limited, Ghaziabad**

**301,302 & 305, SRBC, Plot No. INS - 12, Sector - 9, Vasundhara, Ghaziabad- 201012**

Accredited as Category - A organization under the QCI-NABET Scheme for Accreditation of EIA Consultant Organizations: Version 3 for preparing EIA-EMP reports in the following Sectors:

| S. No | Sector Description  | Sector (as per) |           | Cat. |
|-------|---|-----------------|-----------|------|
|       |   | NABET           | MoEFCC    |      |
| 1     | Mining of Minerals (open cast only)   | 1               | 1 (a) (i) | A    |
| 2     | Offshore and onshore oil and gas exploration, development & production  | 2               | 1 (b)     | A    |
| 3     | River Valley projects   | 3               | 1 (c)     | A    |
| 4     | Thermal power plants  | 4               | 1 (d)     | A    |
| 5     | Metallurgical industries (ferrous only)   | 8               | 3 (a)     | B    |
|       | Metallurgical industries (non ferrous only)   |                 |           | A    |
| 6     | Cement plants   | 9               | 3 (b)     | B    |
| 7     | Petroleum refining industry   | 10              | 4 (a)     | A    |
| 8     | Pesticides industry and pesticide specific intermediates (excluding formulations)   | 17              | 5 (b)     | A    |
| 9     | Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)  | 18              | 5 (c)     | A    |
| 10    | Synthetic organic chemicals industry  | 21              | 5 (f)     | A    |
| 11    | Distilleries  | 22              | 5 (g)     | A    |
| 12    | Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs / ecologically sensitive areas including LNG terminal | 27              | 6 (a)     | A    |
| 13    | Isolated storage & handling of Hazardous chemicals  | 28              | -         | B    |
| 14    | Airport   | 29              | 7 (a)     | A    |
| 15    | Ports, harbours, break waters and dredging  | 33              | 7 (c)     | A    |
| 16    | Highways  | 34              | 7 (f)     | A    |
| 17    | Building and construction projects  | 38              | 8 (a)     | B    |
| 18    | Townships and Area development projects   | 39              | 8 (b)     | B    |

*Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in RAAC minutes dated Feb 07, 2020 posted on QCI-NABET website.*

*The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no. QCI/NABET/ENV/ACC/20/2274 dated March 16, 2020. The accreditation needs to be renewed before the expiry date by Enviro Infra Solutions Private Limited, Ghaziabad following due process of assessment.*

**Sr. Director, NABET**  
**Dated: March 16, 2020**

**Certificate No.**  
**NABET/ EIA/1922/ RA 0157**

**Valid till**  
**Nov 13, 2022**

For the updated List of Accredited EIA Consultant Organizations with approved Sectors please refer to QCI-NABET website.



**National Accreditation Board  
for Education and Training**

(Member - International Accreditation Forum & Pacific Accreditation Corporation)



Jan 20, 2020

QCI/NABET/EIA/ACO/70/1210

**Enviro Infra Solutions Pvt. Ltd.**  
301-302 & 305 – SRBC Complex, Plot No. INS-12,  
Sector – 9, Vasundhra, Ghaziabad – 201012

**Sub: Validity of Accreditation**

Dear Sir/Madam,

This has reference to the accreditation of your organization under QCI-NABET EIA Scheme, the validity of Enviro Infra Solutions Pvt. Ltd, Ghaziabad is hereby extended till April 19, 2020 or completion of assessment process, whichever is earlier.

The above extension is subject to the submission of required information/documents related to assessment on time to NABET.

You are requested not to use this letter after expiry of the above stated date.

With best regards,

A.K Jha

Senior Director | NABET



## National Accreditation Board for Education and Training

(Member - International Accreditation Forum & Pacific Accreditation Cooperation)



November 14, 2019

QCI/NABET/EIA/ACO/19/1120

**Enviro Infra Solutions Private Limited**

301,302 & 305, SRBC, Plot No. INS - 12,

Sector - 9, Vasundhara, Ghaziabad, U.P - 201012

(Kind Attention: **Mr. Saurabh Sharma**)

### Sub: Validity of Accreditation

Dear Sir,

This has reference to the accreditation of your organization under QCI-NABET EIA Scheme, the validity of **Enviro Infra Solutions Private Limited, Ghaziabad** is hereby extended till February 13, 2020 or completion of assessment process, whichever is earlier.

The above extension is subject to the submission of required information/documents related to assessment on time to NABET.

You are requested not to use this letter after expiry of the above stated date.

With best regards,

A.K. Jha

Senior Director | NABET



# Quality Council of India

## National Accreditation Board for Education & Training



### CERTIFICATE OF ACCREDITATION

#### M/s Enviro Infra Solutions Pvt. Ltd, Ghaziabad

301,302 & 305, SRBC, Plot No. INS - 12, Sector - 9, Vasundhara, Ghaziabad - 201012

is accredited under the QCI-NABET Accreditation Scheme for EIA Consultant Organizations (Version3) for preparing EIA/EMP reports in the following sectors:

#### Scope of Accreditation:

| Sl. No. | Name of Sector  | Cat. |
|---------|---|------|
| 1.      | Mining of Minerals (opencast only)  | B    |
| 2.      | Offshore and onshore oil and gas exploration, development & production  | A    |
| 3.      | River Valley projects   | A    |
| 4.      | Thermal power plants  | A    |
| 5.      | Metallurgical industries (for ferrous only)   | B    |
|         | Metallurgical industries (for non ferrous only)   | A    |
| 6.      | Cement plants   | B    |
| 7.      | Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates) | A    |
| 8.      | Distilleries  | A    |
| 9.      | Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs / ecologically sensitive areas including LNG terminal                                       | A    |
| 10.     | Isolated storage & handling of Hazardous chemicals (As per threshold planning quantity indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)  | A    |
| 11.     | Ports, harbours, break waters and dredging  | B    |
| 12.     | Highways  | A    |
| 13.     | Building and construction projects  | B    |
| 14.     | Townships and Area development projects   | B    |

**Note:** Name of approved EIA Coordinators and Functional Area Experts are mentioned in IAAC minutes published on website dated Dec 16, 2016.

The Accreditation shall remain in force subject to continued compliance to the terms and conditions and on successful completion of Surveillance Assessment after 18 months. The renewal of accreditation shall be done through Re-accreditation process prior to expiry date of this certificate within 36 months

O.E.O

NABET

Certificate No.

NABET/ EIA/1619/ IA 0018

Valid up to

November 09, 2019

NABET is member of International Accreditation Forum (IAF) and Pacific Accreditation Cooperation (PAC).



**ANNEXURE-V**  
**(NABL CERTIFICATE)**





National Accreditation Board for  
Testing and Calibration Laboratories

**CERTIFICATE OF ACCREDITATION**

**NOIDA TESTING LABORATORIES**

has been assessed and accredited in accordance with the standard

**ISO/IEC 17025:2017**

**"General Requirements for the Competence of Testing &  
Calibration Laboratories"**

for its facilities at

GT - 20, SECTOR - 117, NOIDA, GAUTAM BUDDH NAGAR, UTTAR PRADESH, INDIA

in the field of

**TESTING**

Certificate Number: TC-6814

Issue Date: 05/12/2019

Valid Until:

02/12/2021

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website [www.nabl-india.org](http://www.nabl-india.org))

Signed for and on behalf of NABL



N. Venkateswaran  
Chief Executive Officer





**National Accreditation Board for  
Testing and Calibration Laboratories**  
(A Constituent Board of Quality Council of India)



## **CERTIFICATE OF ACCREDITATION**

### **NOIDA TESTING LABORATORIES**

has been assessed and accredited in accordance with the standard

**ISO/IEC 17025:2005**

**"General Requirements for the Competence of Testing & Calibration Laboratories"**

for its facilities at

GT-20, Sector-117, Noida, Gautam Budh Nagar, Uttar Pradesh

in the field of

**TESTING**

**Certificate Number** TC-6814 (in lieu of T-3871, T-2489)

**Issue Date** 03/12/2017

**Valid Until** 02/12/2019

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website [www.nabl-india.org](http://www.nabl-india.org))

Signed for and on behalf of NABL

Alok Jain  
Program Director



89076970100030001015

Anil Relia  
Chief Executive Officer



# भारत का राजपत्र The Gazette of India

असाधारण  
EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)  
PART II—Section 3—Sub-section (ii)

प्रधिकार से प्रकाशित  
PUBLISHED BY AUTHORITY

सं. 2487]  
No. 2487]

नई दिल्ली, बुधवार, अगस्त 31, 2017/भाद्र 9, 1939  
NEW DELHI, THURSDAY, AUGUST 31, 2017/BHADRA 9, 1939

## MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE NOTIFICATION

New Delhi, the 30th August, 2017

**S.O. 2836(E).**—In exercise of the powers conferred by clause (b) of sub-section (1) of section 12 and section 13 of the Environment (Protection) Act, 1986 (29 of 1986), read with rule 10 of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following further amendments in the notification of the Government of India in the erstwhile Ministry of Environment and Forests, number S.O. 1174(E), dated the 18<sup>th</sup> July, 2007, namely :—

In the said notification, in the Table, after serial number 156 and the entries relating thereto, the following serial numbers and entries shall be inserted, namely:—

| (1) | (2)  | (3)   | (4)  |
|-----|--|---|--|
| 157 | M/s. Devansh Testing & Research Laboratory Pvt. Ltd., 94, Shiv Ganga Industrial Estate, Lakeshore, Bhagwanpur-247661, Roorkee, Dist-Haridwar, Uttarakhand.                           | (i) Ms. Archana Singh<br>(ii) Shri. Arvind Kharkwal<br>(iii) Dr. H.S. Chauhan                     | 09.08.2017<br>to<br>08.08.2022               |
| 158 | M/s. NOIDA Testing Laboratories, GT-20, Sector-117, NOIDA-201304, Uttar Pradesh.   | (i) Shri. Gopal Das Verma<br>(ii) Shri. Pankaj Kumar Sharma<br>(iii) Shri. Rajesh Kumar Singh     | 09.08.2017<br>to<br>08.08.2022               |
| 159 | M/s. Sai Universal Mining Services Plot No. 15-DP2, KTAIDB, Sankalapura Industrial Area, Near Water Tank, Bellary Main Road, Hospet-583201, Dist. Bellary, Karnataka                 | (i) Shri. Pavan Kumar GVK<br>(ii) Shri. D. Sudharshan Reddy<br>(iii) Shri. A. Nagaraju            | 09.08.2017<br>to<br>08.08.2022               |
| 160 | M/s. B.S. Envi-Tech Pvt. Ltd., 12-13 1270/71/73, Amity Villa, 4 <sup>th</sup> Floor, St. Ann's Road, Funnaka, Secunderabad-500017, Telangana.  | (i) Shri. A.V. Hanumantha Rao<br>(ii) Ms. CH. V. Tulasi<br>(iii) Shri. B.S. Chandra Murthy        | 09.08.2017<br>to<br>08.08.2022               |
| 161 | M/s. Nichrome Testing Laboratory and Research Pvt. Ltd., 170, Judges Bunglow Road, Narayanpur, Dharwad-580008, Karnataka.  | (i) Shri Krishna Narayan Kulkarni<br>(ii) Shri Ambharish S. Sindagi<br>(iii) Dr. Manjula S. Patil | 09.08.2017<br>to<br>08.08.2022               |
| 162 | M/s. Go Green Mechanisms Pvt. Ltd. Dayal Estate, National Highway No. 8, Opp. APMC Market, Gate-1 (Deen Dayal Grain Market), Boreja Road, Jetalpur, Dist.-Ahmedabad-382426, Gujarat. | (i) Shri Anil Badlani<br>(ii) Shri Khambhat Cyrus Homang<br>(iii) Ms. Trypti Padhya               | 09.08.2017<br>to<br>08.08.2022 <sup>21</sup> |

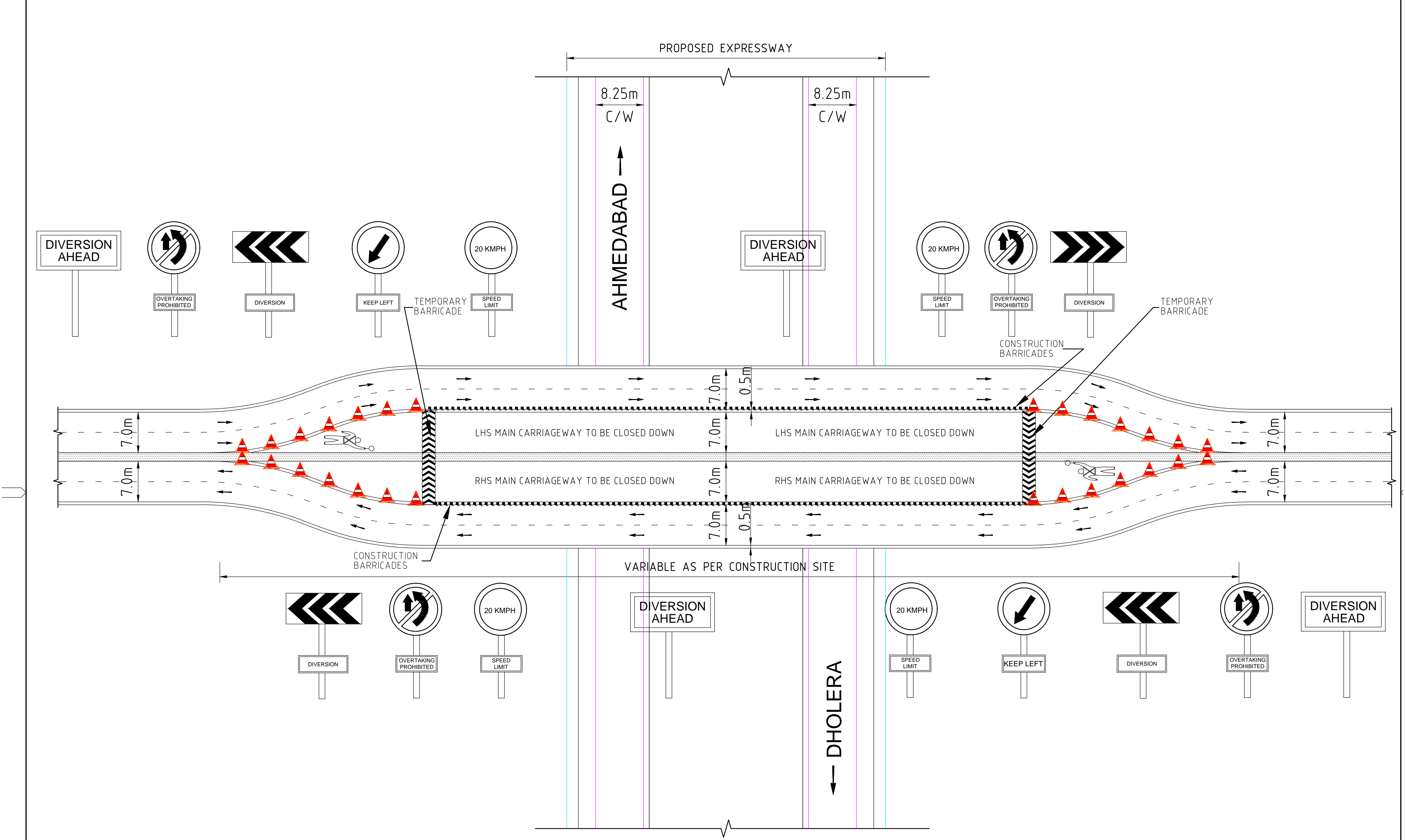
[F. No. Q. 15018/21/2017-CPW]

DR. MANORANJAN ROTA, Advisor

**Note.**—The principal notification was published in the Gazette of India, Extraordinary vide number S.O. 1174 (E), dated the 18<sup>th</sup> July, 2007 and subsequently amended vide notification numbers S.O. 1539 (E), dated the 13<sup>th</sup> September, 2007, S.O. 1811 (E), dated the 24<sup>th</sup> October, 2007, S.O. 35 (E), dated the 9<sup>th</sup> January, 2008, S.O. 428 (E), dated the 4<sup>th</sup> March, 2008, S.O. No. 865 (E), dated the 11<sup>th</sup> April, 2008, S.O. No. 1894 (E), dated the 31<sup>st</sup> July, 2008, S.O. No. 2728 (E), dated the 25<sup>th</sup> November, 2008, S.O. 1356 (E), dated the 27<sup>th</sup> May, 2009, S.O. No. 1802 (E), dated the 22<sup>nd</sup> July, 2009, S.O. No. 2399 (E), dated the 18<sup>th</sup> September, 2009, S.O. No. 3122 (E), dated the 7<sup>th</sup> December, 2009, S.O. No. 3123 (E), dated the 7<sup>th</sup> December, 2009, S.O. No. 142 (E), dated the 21<sup>st</sup> January, 2010, S.O. 619 (E), dated the 19<sup>th</sup> March, 2010, S.O. No. 1662 (E), dated the 13<sup>th</sup> July, 2010, S.O. No. 2399 (E), dated the 30<sup>th</sup> September, 2010, S.O. No. 2904 (E), dated the 8<sup>th</sup> December, 2010, S.O. No. 181 (E), dated the 28<sup>th</sup> January, 2011, S.O. No. 692 (E) dated the 5<sup>th</sup> April, 2011, S.O. No. 1754 (E), dated the 28<sup>th</sup> July, 2011, S.O. No. 2609, dated the 22<sup>nd</sup> November, 2011, S.O. No. 264 (E), dated the 13<sup>th</sup> February, 2012, S.O. No. 1150 (E) dated the 22<sup>nd</sup> May, 2012, S.O. No. 1295 (E), dated the 6<sup>th</sup> June, 2012, S.O. No. 2039 (E), dated the 8<sup>th</sup> September, 2012, S.O. No. 2850 (E), dated the 7<sup>th</sup> December, 2012, S.O. No. 592 (E), dated the 8<sup>th</sup> March, 2013, S.O. No. 945 (E), dated the 8<sup>th</sup> April, 2013, S.O. No. 2287 (E), dated the 26<sup>th</sup> July, 2013, S.O. No. 3489 (E) dated the 26<sup>th</sup> November, 2013, S.O. No. 21 (E), dated the 3<sup>rd</sup> January, 2014, S.O. No. 561 (E), dated the 26<sup>th</sup> February, 2014, S.O. No. 1190 (E), dated the 1<sup>st</sup> June, 2014, S.O. No. 2003 (E), dated the 9<sup>th</sup> August, 2014, S.O. No. 137 (E), dated the 12<sup>th</sup> January, 2015, S.O. No. 1783 (E), dated the 30<sup>th</sup> June, 2015, S.O. No. 2453 (E), dated the 7<sup>th</sup> September, 2015, S.O. No. 1953 (E), dated the 2<sup>nd</sup> June, 2016 and S.O. No. 388 (E), dated the 10<sup>th</sup> February, 2017.

## **ANNEXURE VI – TRAFFIC DIVERSION PLAN**





TYPICAL TRAFFIC DIVERSION PLAN AT FLYOVER, VUP/LVUP & INTERCHANGES CONSTRUCTION

NOTE:- LOCATION FOR FIXING OF TRAFFIC SIGNAGES SHALL CONFIRM TO IRC SP: 55

50  
40  
30  
20  
10  
0

| ISSUE | DATE       | AMENDMENT / ISSUE DESCRIPTION | APPROVAL |
|-------|------------|-------------------------------|----------|
| 0     | 15.12.2018 | DRAFT DPR                     | PJ       |
|       |            |                               |          |
|       |            |                               |          |
|       |            |                               |          |
|       |            |                               |          |

NOT TO SCALE

CLIENT APPROVED

DATE

CONSULTANT SIGNATURE

DESIGNER

Member of the  
Surbana Jurong Group  
387 Udyog Vihar, Phase-II  
Gurgaon - 120016 (Haryana)  
PLOT No. 54, 2nd Floor (Front),  
Masoodpur Dairy Farm,  
Vasant Kunj, New Delhi-110070

DESIGN AID

DESIGN AID

CLIENT

NATIONAL HIGHWAY AUTHORITY OF INDIA

PROJECT

PREPARATION OF FEASIBILITY STUDY / DPR OF  
AHMEDABAD - DHOLERA EXPRESSWAY (110 KM)  
UNDER BHARAT MALA SCHEME (NHAI/BM/21)  
IN THE STATE OF GUJARAT

PROJECT TITLE

TYPICAL TRAFFIC MANAGEMENT PLAN  
DETAILS FOR DIVIDED 4-LANE ROAD  
(Package-I)

DRAWING STATUS

DRAFT DPR

PROJECT / DRAWING No.

7061465-PI-SD-005-020

ISSUE

0

T:\Projects\7061465\_Ahmedabad Dholera Expressway\NH - Deliverables\H2 - Drawings\CAD\DWG\DWG\Package-I\005\_Standard\_Drawings\7061465-PI-SD-005-020\_01.dwg

26 Dec 2018 15:51:48





## TRAFFIC DIVERSION PLAN AT MAJOR BRIDGE CH – 22+557

|       |              |
|-------|--------------|
| TR No | CH-22+557-19 |
| DATE  | 10/10/2019   |
| BY    | 10/10/2019   |
| CHKD  | 10/10/2019   |
| APPD  | 10/10/2019   |





## TRAFFIC DIVERSION PLAN AT MAJOR BRIDGE CH – 78+110



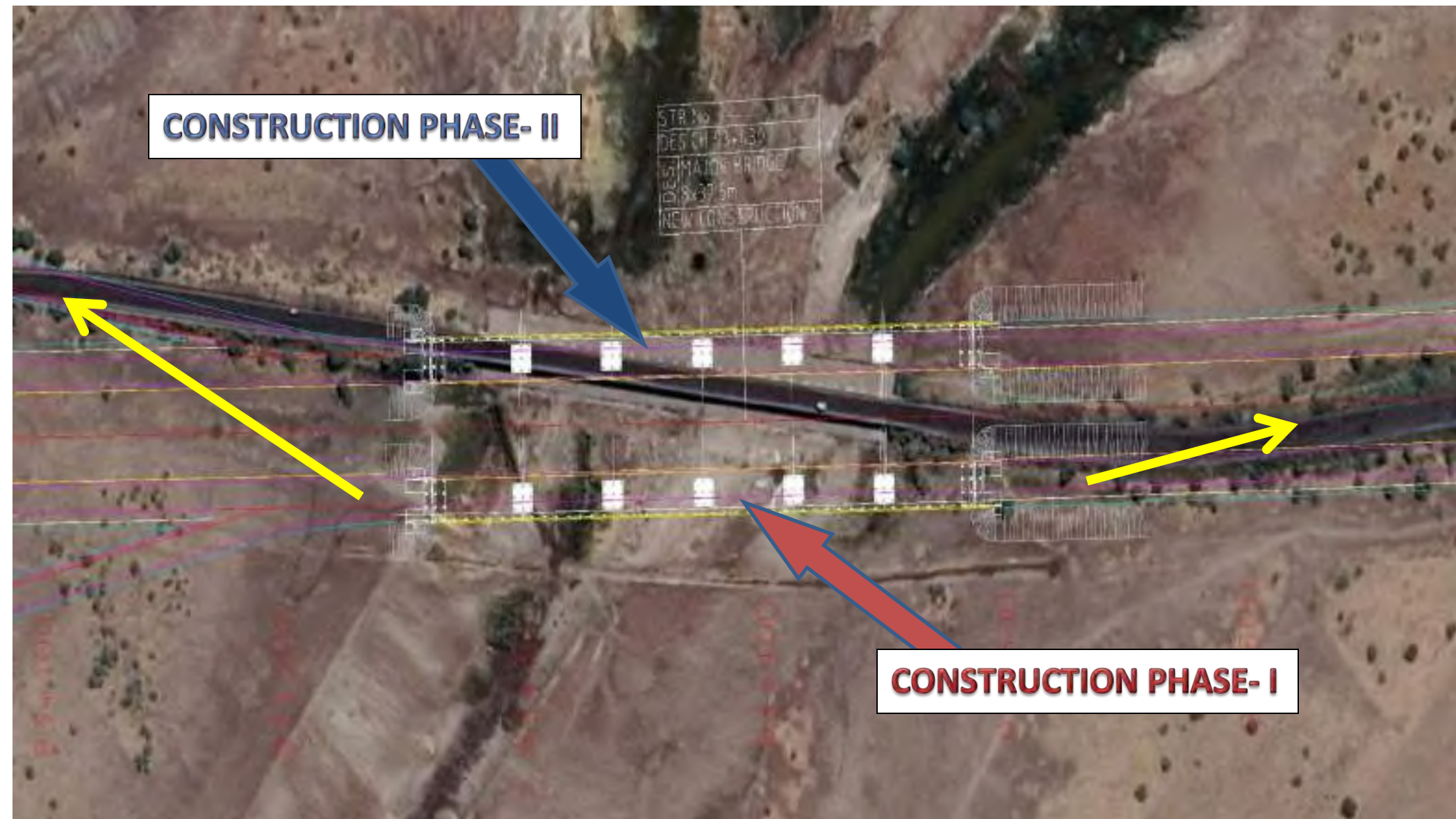


## TRAFFIC DIVERSION PLAN AT MAJOR BRIDGE CH – 93+430

**CONSTRUCTION PHASE- II**

STR 10  
DESIGN 10  
MAJOR BRIDGE  
12.8x37.5m  
NEW CONSTRUCTION

**CONSTRUCTION PHASE- I**



## TRAFFIC DIVERSION PLAN AT MAJOR BRIDGE CH – 101+830



**ANNEXURE – VII**  
**(LAND ACQUISITION COST)**

## Annexure-VII

**AHMEDABAD - DHOLERA EXPRESSWAY  
LAND ACQUISITION COST**

| Sr. no. | Competent authority | Name of village        | Start  | End    | length (km) | Av. cost (Rs.per Sq. Mts) | ROW | Area (Sq.m) | Av. cost (Rs. per Sq. Mts) | Total Cost  |
|---------|---------------------|------------------------|--------|--------|-------------|---------------------------|-----|-------------|----------------------------|-------------|
| 1       | CALA Ahmedabad      | Visalpur               | 0.000  | 3.750  | 3.75        | NA                        | 120 | 450,000     | 88                         | 39,600,000  |
| 2       | CALA Ahmedabad      | Tajpur                 | 3.750  | 6.450  | 2.7         | 88                        | 120 | 324,000     | 88                         | 28,512,000  |
| 3       | CALA Ahmedabad      | Bhat                   | 6.450  | 9.702  | 3.252       | 627                       | 120 | 390,240     | 627                        | 244,680,480 |
| 4       | CALA Ahmedabad      | Vasna chacharavadi     | 9.702  | 11.001 | 1.299       | 748                       | 120 | 155,880     | 748                        | 116,598,240 |
| 5       | CALA Ahmedabad      | Kavitha                | 11.001 | 15.401 | 4.4         | 227                       | 120 | 528,000     | 227                        | 119,856,000 |
| 6       | CALA Ahmedabad      | Chaloda                | 15.401 | 17.350 | 1.949       | 752                       | 120 | 233,880     | 752                        | 175,877,760 |
| 7       | CALA Ahmedabad      | Juval-rupvati          | 17.350 | 20.978 | 3.628       | 344                       | 120 | 435,360     | 344                        | 149,763,840 |
| 8       | CALA Ahmedabad      | Sindhraj               | 20.978 | 24.742 | 3.764       | 215                       | 120 | 451,680     | 215                        | 97,111,200  |
| 9       | CALA Ahmedabad      | Lana                   | 24.742 | 27.420 | 2.678       | 188                       | 120 | 321,360     | 188                        | 60,415,680  |
| 10      | CALA Ahmedabad      | Jalalpur (godhneshwar) | 27.420 | 29.705 | 2.285       | 382                       | 120 | 274,200     | 382                        | 104,744,400 |
| 11      | CALA Ahmedabad      | Sarandi                | 29.705 | 33.954 | 4.249       | 297                       | 120 | 509,880     | 297                        | 151,434,360 |



|    |                   |            |        |        |       |     |     |         |       |            |
|----|-------------------|------------|--------|--------|-------|-----|-----|---------|-------|------------|
| 12 | CALA<br>Ahmedabad | Kariyana   | 33.954 | 36.904 | 2.95  | NA  | 120 | 354,000 | 225.5 | 79,827,000 |
| 13 | CALA<br>Ahmedabad | Rupgadhd   | 36.904 | 41.750 | 4.846 | 154 | 120 | 581,520 | 154   | 89,554,080 |
| 14 | CALA<br>Ahmedabad | Kesargadhd | 41.750 | 45.274 | 3.524 | 205 | 120 | 422,880 | 205   | 86,690,400 |
| 15 | CALA<br>Ahmedabad | Vejalka    | 45.274 | 51.172 | 5.898 | 138 | 120 | 707,760 | 138   | 97,670,880 |
| 16 | CALA<br>Ahmedabad | Saragwala  | 51.172 | 55.034 | 3.862 | 125 | 120 | 463,440 | 125   | 57,930,000 |
| 17 | CALA<br>Ahmedabad | Bholad     | 55.034 | 60.500 | 5.466 | 131 | 120 | 655,920 | 131   | 85,925,520 |
| 18 | CALA<br>Ahmedabad | Anandpur   | 60.700 | 61.950 | 1.25  | 104 | 120 | 150,000 | 104   | 15,600,000 |
| 19 | CALA<br>Ahmedabad | Pipli      | 61.950 | 69.226 | 7.276 | 62  | 120 | 873,120 | 62    | 54,133,440 |
| 20 | CALA<br>Ahmedabad | Valinda    | 69.226 | 71.050 | 1.824 | 88  | 120 | 218,880 | 88    | 19,261,440 |
| 21 | CALA<br>Ahmedabad | Ambli      | 71.050 | 76.968 |       | 79  | 120 | -       | 79    | -          |
| 22 | CALA<br>Ahmedabad | Kadipur    | 76.968 | 81.850 |       | 198 | 120 | -       | 198   | -          |
| 23 | CALA<br>Ahmedabad | Dholera    | 81.850 | 88.976 |       | 160 | 120 | -       | 160   | -          |
| 24 | CALA<br>Ahmedabad | Mundi      | 88.976 | 90.595 |       | 180 | 120 | -       | 180   | -          |
| 25 | CALA<br>Ahmedabad | Sandhida   | 90.595 | 93.900 |       | 105 | 120 | -       | 105   | -          |
| 26 | CALA<br>Ahmedabad | Panchi     | 93.900 | 95.600 |       | 80  | 120 | -       | 80    | -          |

|           |                   |                      |                              |         |       |     |     |         |     |            |
|-----------|-------------------|----------------------|------------------------------|---------|-------|-----|-----|---------|-----|------------|
| 27        | CALA<br>Ahmedabad | Hebatpur             | 95.600                       | 107.421 |       | 67  | 120 | -       | 67  | -          |
| 28        | CALA<br>Ahmedabad | Bavliyari            | 101.881                      | 107.421 |       | 45  | 120 | -       | 45  | -          |
| 29        | CALA<br>Bhavnagar | Adhelai              | 107.421                      | 109.024 | 1.603 | 300 | 120 | 192,360 | 300 | 57,708,000 |
|           |                   |                      |                              |         |       |     |     |         |     |            |
| S.n<br>o. | <b>Chainage</b>   | <b>Structure</b>     | av. land<br>required<br>(ha) |         |       |     |     |         |     |            |
| 1         | 0+000             | Interchange          | 20                           |         |       |     |     | 200,000 | 88  | 17,600,000 |
| 2         | 28+900            | Interchange          | 20                           |         |       |     |     | 200,000 | 188 | 37,600,000 |
| 3         | 47+200            | Interchange          | 20                           |         |       |     |     | 200,000 | 138 | 27,600,000 |
| 4         | 67+200            | Interchange          | 20                           |         |       |     |     | 200,000 | 62  | 12,400,000 |
| 5         | 74+965            | Left-in Left-<br>out | 20                           |         |       |     |     | 200,000 | 79  | 15,800,000 |
| 6         | 80+570            | Left-in Left-<br>out | 20                           |         |       |     |     | 200,000 | 198 | 39,600,000 |
| 7         | 84+700            | Interchange          | 20                           |         |       |     |     | 200,000 | 160 | 32,000,000 |
| 8         | 88+469            | Interchange          | 20                           |         |       |     |     | 200,000 | 160 | 32,000,000 |
| 9         | 92+492            | Interchange          | 20                           |         |       |     |     | 200,000 | 105 | 21,000,000 |
| 10        | 96+495            | Interchange          | 20                           |         |       |     |     | 200,000 | 67  | 13,400,000 |
| 11        | 100+472           | Left-in Left-<br>out | 20                           |         |       |     |     | 200,000 | 45  | 9,000,000  |
| 12        | 9+420             | Toll plaza           | 1.8343                       |         |       |     |     | 18,343  | 627 | 11,501,061 |
| 13        | 70+725            | Toll plaza           |                              |         |       |     |     |         | 88  |            |

|    |         |            |        |  |  |  |          |                 |           |               |
|----|---------|------------|--------|--|--|--|----------|-----------------|-----------|---------------|
|    |         |            | 1.8343 |  |  |  |          | 18,343          |           | 1,614,184     |
| 14 | 108+093 | Toll plaza | 1.8343 |  |  |  |          | 18,343          | 300       | 5,502,900     |
| 15 | 35+000  | Rest Area  | 6.09   |  |  |  |          | 60,920          | 225.5     | 13,737,460    |
| 16 | 66+150  | Rest Area  | 5.60   |  |  |  |          | 55,965          | 62        | 3,469,830     |
|    |         |            |        |  |  |  | Total    | 11,066,274      |           | 2,226,720,155 |
|    |         |            |        |  |  | <b>Total</b>   | Say Hect | <b>1,106.63</b> | Rs .in Cr | <b>222.67</b> |
|    |         |            |        |  |  | Total Cost( 80% rural<br>(4 times)+ 20%<br>Urban(2 times)) |          |                 |           | 759.08        |

## **ANNEXURE VIII**

**Rapid EIA report including  
Marine and Terrestrial  
component & Disaster  
Management Plan of CRZ  
locations**

**For**

**Construction of Ahmedabad-  
Dholera Expressway Road  
(Approx.110 km)  
(NHAI/BM/21) in the state of  
Gujarat**

# **Rapid EIA report including Marine and Terrestrial component & Disaster Management Plan of CRZ locations For**

**Construction of Ahmedabad-Dholera Expressway Road (Approx.110 km) (NHAI/BM/21) in the state of Gujarat**



## **Project Proponent**



**NATIONAL HIGHWAYS AUTHORITY OF INDIA  
(Ministry of Road Transport & Highways, Government of India)**

## **CRZ Authorized Agency**



**National Centre for Sustainable Coastal Management (NCSCM),  
Chennai (Ministry of Environment, Forest & Climate Change,  
Government of India)**



Member of the Surbana Jurong Group



## **DPR Consultant**

**SMEC India Pvt. Ltd. in Association  
with Design Aid**

## **Environmental Consultant**



**ENVIRO INFRA SOLUTIONS PVT. LTD.**

**Accredited by NABET (Quality Council of India)  
for EIA studies as 'A' Category Consultant**





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**Rapid EIA report including Marine and Terrestrial component & Disaster Management Plan of CRZ locations for Construction of Ahmedabad-Dholera Expressway Road (110 km) (NHAI/BM/21) in the State of Gujarat**



**NATIONAL HIGHWAYS AUTHORITY OF INDIA**  
**(Ministry of Road Transport & Highways Government of India)**

|     |                            |    |
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## **1.1 Introduction**

Anthropological pressures and natural calamities put pressure on the existing ecosystem. Conservation efforts are being considered and taken up by various control mechanism. Coastal Regulation zone (CRZ)' (MoEF&CC, 2011 is one such mechanism where legislation to preserve, protect, develop and where possible, to restore or enhance, the resources of the Nation's coastal zone. The coastal eco-system is to be preserved for sustenance of the flora and fauna specific to that region and the local population that depend on it. Therefore, it is of national importance and economic value. The development of a nation and the sustenance of the eco-system is to be balanced for general prosperity by appropriate scrutiny of the prevailing eco system and proposed development plans.

Gujarat state has about 1600 km, long coastline in the country. It supports a variety of habitats such as mangroves, coral reefs, sea grass beds, algae / sea weeds, gulfs, estuaries, beaches etc. There are number of activities going on along the coast viz. salt industries, cement industries, import of oil & natural gas besides the pressure of growing population. This puts a tremendous pressure on the coastal zone and thus requires a proper Coastal Zone Management Plan.

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Gulf of Kachchh, the largest coastal habitat in the West coast of India in the state of Gujarat (20° 15' to 23° 35' N and 60° 05' to 70° 22' E) is encompassing over 1000 km long shoreline covering an area of 7350 km<sup>2</sup>. It is a shallow water body with depth extending from 60 m at the mouth to less than 20 m at the head of the Gulf. While the average depth is 30 m, the minimum depth is upto 5 m, around Lushington island. The Gulf is delimited in the north by the Kachchh region and in the south by the Saurashtra region. The Marine National Park and Marine Sanctuary are situated along the southern shore of Gulf from Okha (22°30'N, 69°00'E) and extends eastwards to the vicinity of Khijadia (22°30'N, 70°40'E). This include 42 islands and a complex of fringing reefs backed by mudflats and sandflats, coastal salt marsh and mangrove forests, sand and rocky beaches which support a great diversity of fauna and flora.





Geographically Gulf of Khambhat located between 20° 35'- 22° 20'N and 72° 05'-72° 55'E. An extensive is of estuarine habitats around the periphery of the Gulf of Khambhat. The Tapi, Narmada, Mahi, Sabarmati, and several other rivers have deposited alluvium over large areas as the marine recession has united Saurashtra with mainland of Gujarat. There are extensive areas of intertidal mud and sand flats, coastal salt marshes and degraded mangrove associations, particularly in the deltas of the Mahi and Sabarmati rivers. The Sabarmati is the principal river, which Sabarmati River originates from Aravalli Hills, Rajasthan and meets in Bay of Khambhat in Arabian Sea. Its length is 371 km. & total catchment area is 21,674 sq. km it touches the borders of Banaskantha, Sabarkantha and Mahesana districts. Subsequently, it enters the Gandhinagar district and then it enters the Ahmedabad district. On Sabarmati River Dharoi dam is situated at 80 km having 5475 sq km catchment area and at distance 202 km. The river Bhogavo originates near Chotila town of Surendranagar district. The entire length of the river is 157 km. It, however, flows only for 39 km in Dholka and Dhandhuka talukas of Ahmedabad district. In Dholka taluka it flows past Mithapur, Gundanpura, Dhingda, Uтелиya, Samani, Bholad and Moti-Boru villages. In Dhandhuka taluka, it touches Dhanala and Anandpur villages with a catchment area of 436 sq. km. It merges near Buranpur in the Sabarmati River. Coastal stretches of bays, estuaries, backwaters, seas, creeks etc., which are influenced by tidal actions. The land between the Low Tide Line (LTL) and the HTL has been declared as Coastal Regulation Zone by the Govt. of India. The coastal zone is the area of interaction between land and sea.

The proposed expressway Ahmedabad - Dholera is a part of an exclusive transport corridor being planned between Ahmedabad and Bhavnagar by the Government of Gujarat, keeping the development of Special Investment Region (SIR) around Dholera in centre. The proposed expressway corridor is sited between two existing road routes to Bhavnagar; (i) Ahmedabad - Bagodara- Dhandhuka-Bhavnagar route at its west and (ii) Ahmedabad- Dholka-Wataman-Dholera-Bhavnagar route to its east. The proposed expressway takes off from Sardar Patel Ring Road near Sarkhej between Santhal Junction and Bakrol Junction in southwest of Ahmedabad, 2 km east of National Highway NH-8A. The project road starts at Ch. 0.000 at Visalpur village of Ahmedabad district and the end of project Ch. is 109.019 at Adhelai village of Bhavnagar district. From Ch. 71.070. to Ch. 107.240 comes under DSIR. The project alignment from Ch. 107+240 to Ch. 109+020 (Total length = 1.780 km) passes from Adhelai village in Bhavnagar district.

The part of proposed Ahmedabad - Dholera expressway alignment crosses through **Bhogwa creek** and **Golsar creek**, which is under CRZ region.



## 1.2 Coastal Regulation Zone

The Ministry of Environment Forest and Climate Change have notified the regulation rules along the nation's coastline and the gist is presented below.

*Coastal regulation zone* is the boundary from the high tide line upto 500m in the land -ward side. Area between the low tide line and high tide line. In the case of rivers, creeks and backwaters, the distance from the high tide level shall apply to both sides and this distance shall not be less than 100 meters or the width of the creek, river or backwater whichever is less. (Ministry of Environment and Forests Notification, Feb 1994 & MoEF revised CRZ notification dated 06.01.11). There are four type of category in coastal regulation zone.

### Category - I (CRZ I)

Areas that is ecologically sensitive and important such as national parks, marine parks, sanctuaries, reserve forests, wildlife habitats, mangroves, corals/coral reefs, areas close to breeding and spawning grounds of fish and other marine life, areas of outstanding natural beauty. historically important and heritage areas, area rich in genetic diversity, areas likely to be inundated due to rise in sea level consequent upon global warming and such other areas as notified by government from time to time.

### Category - II (CRZ II)

Area that have already been developed up to or close to the shoreline. For this purpose ,developed area is referred to as area within the municipal limits or other legally designated urban areas which is already substantially build up ad which has been provided with drainage and approach roads and other infrastructure facilities such as water supply and sewerage lines.

### Category - III (CRZ III)

Area that are relatively undisturbed ad those which do not belong to either I or II. These will include coastal zone in the rural areas developed or undeveloped and also areas within municipal limits or in other legally designated urban areas which are not substantially built up

### Category - IV (CRZ IV)

The CRZ IV consists of the water area from the Low Tide Line to twelve nautical miles on the seaward side and the water area of the tidal influenced water body from the mouth of the water body at the sea upto the influence of tide which is measured as five parts per thousand during the driest season of the year.



## **Others**

Areas requiring special consideration for the purpose of protecting the critical coastal environment and difficulties faced by local communities namely CRZ area falling within municipal limits of Greater Mumbai, the CRZ areas of Kerala including the backwaters and backwater islands and CRZ areas of Goa.

As per the above categorization, the part of the proposed expressway falls in the extensive Inter Tidal Zone i.e CRZ-IB, CRZ III and I CRZ-IV areas. The HTL/LTL Map prepared in 1:4000 scale with Layout superimposed by the National Centre for Sustainable Coastal Management (NCSCM), Ministry of Environment, Forest & Climate Change, Government of India, Chennai has been attached as **Annexure I**.

### **1.3 Definitions**

The accepted definitions of the terminology used in the context of coastal zone regulation are necessary to aid the planners.

#### **i. High tide line**

The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

#### **ii. Mean High Water Line/Mark (MHWL)**

The line on the shore in tidal areas established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area.



### **iii. Tidal Wetland**

A tidal wetland is a wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channel ward of the high tide line (i.e., spring high tide line) and are inundated by tidal waters two times per lunar month, during spring high tides.

### **iv. Spring tide**

Burst of tide that happens two time during a lunar month due to the reinforced influences of Sun and moon when the sun, moon and earth are aligned. This tide happens around new moon and full moon days.

Govt. of India has issued a notification during January 2011 classifying the Coastal Regulation Zone in order to regulate the various activities in the coastal zone.

### **v. Mangroves**

Mangroves are salt-tolerant plants of tropical and subtropical intertidal regions of the world. The specific regions where these plants occur are termed as 'mangrove ecosystem'. These are highly productive but extremely sensitive and fragile. Besides mangroves, the ecosystem also harbors other plant and animal species. Experiences have proved that the presence of mangrove ecosystems on coastline save lives and property during natural hazards such as cyclones, storm surges and erosion. These ecosystems are also well known for their economic importance. They are breeding, feeding and nursery grounds for many estuarine and marine organisms. Hence, these areas are used for captive and culture fisheries. The ecosystem has a very large unexplored potential for natural products useful for medicinal purposes and also for salt production, apiculture, fuel and fodder, etc.

### **vi. Salt marshes**

Salt marshes are intertidal halophytic vegetations, distributed in mid to lower latitudes. They provide important ecosystem services, including transportation and remineralization of nutrients, habitat for coastal biota, coastal bio shield, bio filters and recreation and cultural benefits. In India, 15 salt marsh species so far have been reported, spread over 1600 km<sup>2</sup>. Salt marshes are known to adapt themselves to the changing environmental conditions fairly quickly by maintaining a balance between the existing pressures and the prevailing state.



#### 1.4 Objective

The objectives of carrying out the CRZ study are:

- Identification and demarcation of HTL and LTL for the proposed project area.
- Demarcation of Coastal Regulation Zones.
- CRZ categorization.
- Preparation detail description of CRZ

#### 1.5 Geoinformatics in CRZ

It is important to ascertain the geographical location of a land area to be developed for a specific purpose along the coastline by appropriate technology. Especially because of the escalated land values in recent times, a very accurate assessment of the spatial disposition of the land area in relation to the coastal eco system at a suitably larger scale is warranted. This involves two tasks namely

- a. Demarcation of the high tide lines accurately; and
- b. Referencing the land to be developed to the high tide line

The mean high tide line can be delineated by the conjunctive use of modern mapping equipment's like GPS capable of getting the accurate geographical locations, remote sensing images indicating the physical and associated tonal information on the stretches tidal influence along the coast and creek, field equipment's like salt meters to assess the insitu pH value as indicator of tidal influence and the closer field inspection. The strengths of these technologies are judiciously adopted by the expert survey team for a dependable demarcation of the coastal features. The strengths of tools used for HTL/LTL demarcation are explained below.

- i. **GPS:** The Global Positioning System (GPS) system of satellites in space orbit and the ground-based receivers used for finding out the position of a point anywhere on the unobstructed earth surface having sight of four or more GPS Satellites on continuous basis worldwide, day and night. Depending on the type of GPS receiver, it is possible to position a point with even sub cm accuracy.
- ii. **Remote Sensing:** This is space borne resource Satellite technology whereby it is possible to map the earth surface in various ranges of EMR spectrum thereby facilitating the picture reading of the earth surfaces in different ways at different intervals of time. The physical characteristics, natural impressions/ land cover





footprints and tonal/textural indications can be interpreted with these images for land cover mapping on factual basis.

M/s National Highway Authority of India has assigned National Centre for Sustainable Coastal Management (NCSCM), Ministry of Environment, Forest & Climate Change, Government of India, Chennai to prepare project level CRZ map demarcating the High Tide Line (HTL) and Low Tide Line (LTL) for the sites at Ahmedabad District of Valinda, Anandpur, Pipli, Bholad villages. Demarcation of the High Tide Line (HTL) and the Low Tide Line (LTL) and identification of Coastal Regulation Zones (CRZ) have been carried out in cadastral level to provide detailed information on the CRZ with respect to the proposed project site.

## **2.1 Description of the project and its environment with special reference to structures on CRZ areas**

The proposed Expressway passes through Valinda, Anandpur, Pipli and Bholad villages of Ahmedabad District in the state of Gujarat. The proposed Expressway passes through creek/river at two locations which has been shown in **Figure 1** below. The Latitude and Longitude of the two CRZ locations are 72°15'50.167" E 22°26'42.666" N and 72°15'4.815" E 22°21'52.805" N.

The construction site is devoid of mangroves and corals. The site is completely protected from waves and thus no significant sand movement in the Creek and no sand dune. The project site does not pass through any eco sensitive areas like National Parks, Wildlife Sanctuaries, Biosphere Reserves, etc. The baseline study of the project site has been incorporated in the EIA/EMP report. All plants identified in the area are very common in occurrence.

There is adequate buffer for the proposed Project in the physical, biological and edaphic environments of the study area.



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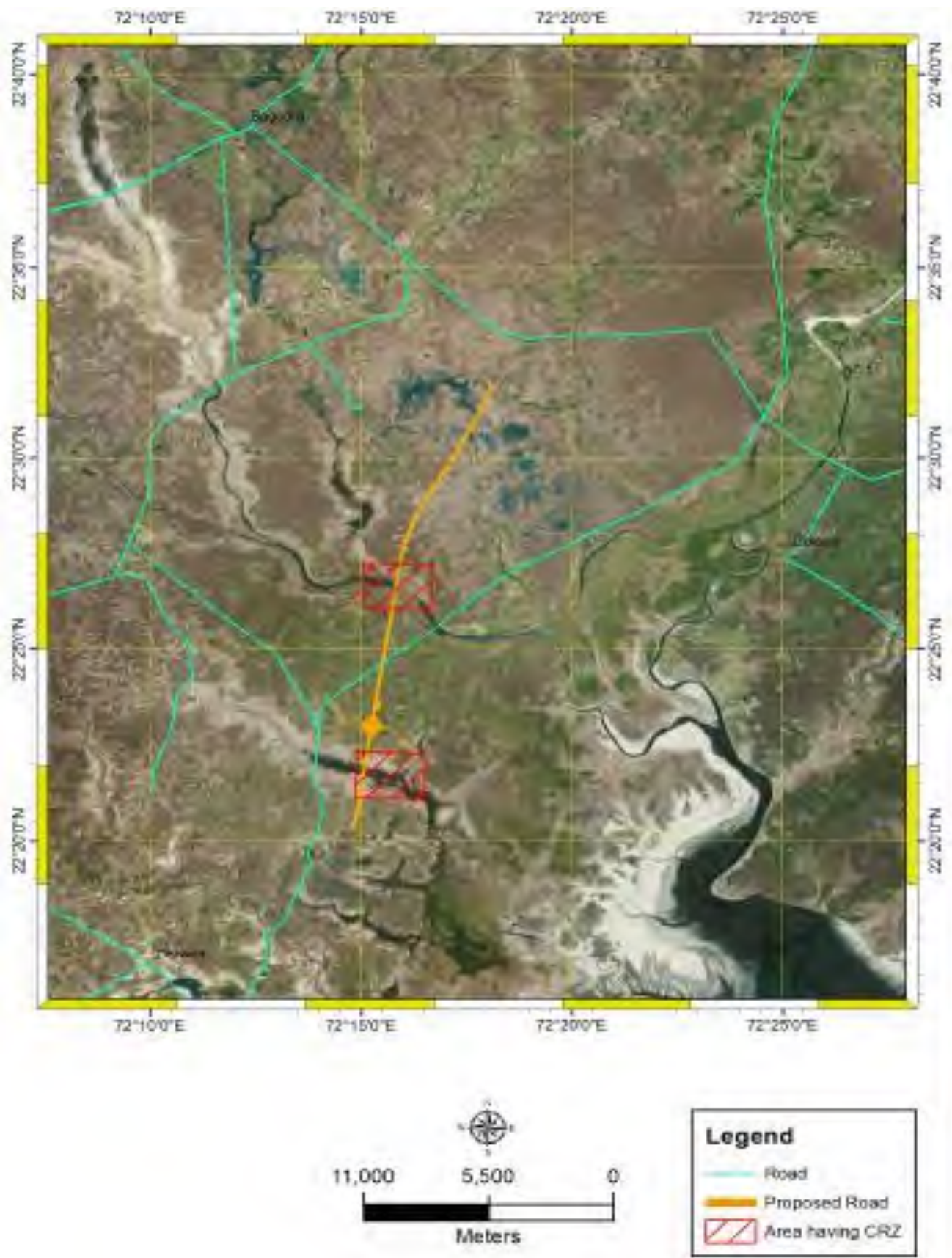


Figure 1: Location Map



## **2.2 Biological Environment**

Gujarat state has been bestowed with rich diversity of flora and fauna. The diversity of physiognomic and climatic conditions, long coastline and unique geographical location, have resulted in diverse habitat conditions supporting many unique species. Gujarat state harbors the longest coastline in the country and it has two gulfs, Gulf of Kachchh and Gulf of Khambhat. The latter is a large area where tidal amplitude is exceptionally high. The coast around the Gulf of Khambhat is indented by estuaries and consists of extensive mudflats and sporadic presence of beaches. It covers an area of about 3120 km<sup>2</sup> chiefly of mudflats with some rocky (sandstones) intertidal area and a volume of 62,400 million m<sup>3</sup>. The rocky beaches are common from Mahuva to Gopnath, reducing towards Ghogha and Bhavnagar. A few sandy patches are also observed intermittently. The Gulf is intercepted by several inlets of sea and creeks formed by confluence of major rivers such as Narmada, Tapi, Mahi, Sabarmati, Bhogwa, Shetrunji and many minor rivers. All the major rivers form estuaries and their inflow carries heavy load of suspended sediments into the Gulf.

The entire gulf is very shallow, with a maximum water depth of about 30 m. especially the most northern 100 Km of the gulf are characterized by very large tidal flats and a water depth lower than 10 m. The tidal range in the gulf is largest along the entire Indian coastline, peaking to more than 10 m during spring tide and resulting in strong tidal currents of more than 3 m/s. The large amount of fine sediments brought by the rivers, make the water always turbid with high suspended load.

### **2.2.1 Methodology for floral study**

Biological status of an area is an essential prerequisite for environmental impact assessment and can be evolved by selecting a few reliable parameters from a complex ecosystem. Whenever we consider assessment of the implications of environmental pollution, we must be aware of the fact that despite many changes it may cause in the physico-chemical properties of water body and seabed sediment, the ultimate consequences are inevitably of biological nature. A phased and consultative approach was followed to carry out the ecological assessment. The successive phases include:

- (i) Reconnaissance survey,
- (ii) On-site primary data collection for flora and fauna, and
- (iii) Secondary data collection through review of available literature and government documents.



Wherever necessary, the required information was collected through formal and informal discussions with the project staff, personnel of forest Department and local inhabitants and natural resource users. Both the terrestrial and aquatic ecosystems were studied. The primary data were collected through extensive field visits and using ecological methods as per requirements, as described in **Mishra (1968)**. In order to understand the composition of the vegetation, most of the plant species could be identified in the field itself whereas in case of the species that could not be identified, a herbarium specimen of the same were collected without uprooting the plant and in addition their photographs were also taken wherever necessary for identification later with the help of available published literature and flora of the region.

### 2.2.2 Study area

The proposed Expressway is entirely green field project and proposed for 6 lane expressways from Ahmedabad to Dholera having a total design length of 109.019 Kms. The proposed project passes through Ahmedabad and Bhavnagar districts in the state of Gujarat. The proposed expressway takes off from Sardar Patel Ring Road near Sarkhej between Santhal Junction and Bakrol Junction in southwest of Ahmedabad, 2 km east of National Highway NH-8A. The corridor runs southerly towards Dholera between NH-8 (in the west) and SH-4, SH-6, Sabarmati river course/Gulf of Khambat (on east side). The proposed Project expressway traverses at 22° 56' 46"N 72° 29' 06" E to 22° 02' 21"N 72° 05' 59" E. A 10 Km buffer area has been studied for the project as per ToR issued by the MoEF&CC. The coastal area comprises mainly of intertidal zones and mudflats. The high amount of silt load from Bhogawa and Sabarmati has led to excessive siltation and formation of this type of topography. **The study area receives water only during monsoon season, when water level becomes high**, causing mixing of saline ocean water and fresh water. The study area was surveyed during **February-June 2018** for collection of baseline data.



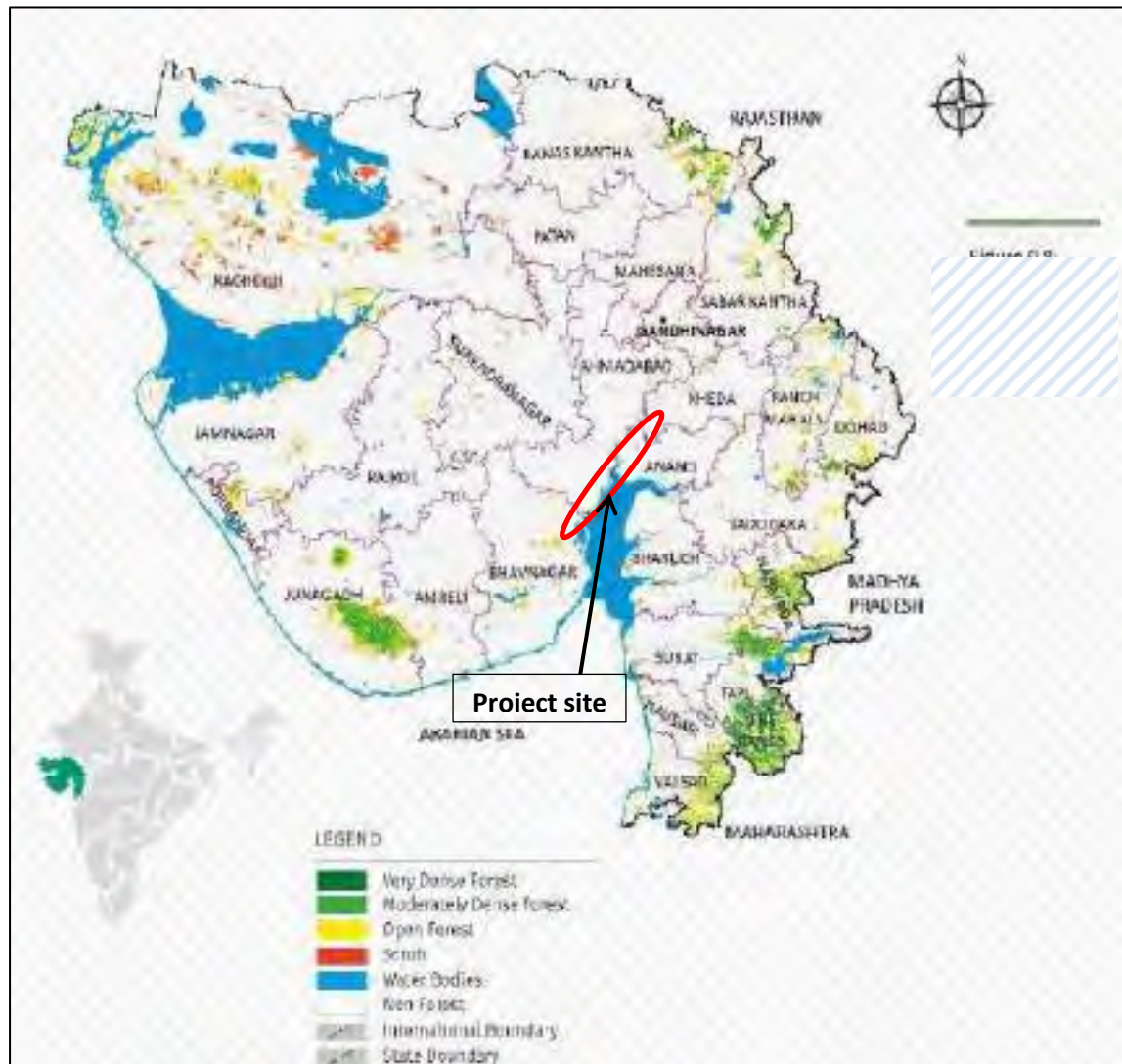


Figure 2: Forest cover map of Gujarat

### 2.2.3 Forest and grassland types

Floral diversity refers to the diversity of plants occurring in a specific region during particular era. It generally refers to the diversity of naturally occurring indigenous or native plants. The geographical area in the project comprises of mostly mudflats which harbours stunted and scrubby vegetation with average height less than 2 m. The height of the vegetation increases as one move towards permanent waterline.

***Dichanthium-Cenchrus-Lasiurus* Type grassland:** Spread over northern parts of Gujarat, Rajasthan, western Uttar Pradesh, Delhi and semi-arid Punjab, key species include





*Dichanthium annulatum*, *Cenchrus ciliaris*, *C. biflorus*, *Lasiurus indicus* and *Atylosia scarabaeoides*.

#### 2.2.4 Flora in the study area

The flora present in the study area comprises of *Accacia nilotica*, *Accacia Senegal*, *Azadirachta indica*, *Balanites aegyptiaca*, *Calotropis procera*, *Capparis decidua*, *Casuarina equisetifolia*, *Prosopis juliflora*, *Salvadora oleoides* and *Zizyphus jujube*. The most dominant tree species was found to be *Prosopis juliflora*, an invasive species.

The main ground vegetation is *Typha angustata*, *Ipomoea cornea*, *Commelina spp.*, *Cyperus sp.*, are the emergent vegetation. Submerged vegetation such as *Najas gracilens* and *N. marina* occupies the open water zone. Other aquatic plants found are *Hydrilla sp.* and *Vallisneria sp.* In puddles *Marselia sp.* was encountered. The overall detail of flora is present in EIA/EMP report. **The coastal region in study area is mainly covered by mudflat habitat during study period and no mangrove cover was observed within the study area.**

#### 2.2.5 Methodology for faunal study

Since it is a long process to observe the faunal composition in the field, a preliminary survey was limited to field visits and direct and indirect sightings of animals. A survey was carried out by our survey team by staying near to the project area. The presence of wildlife was also confirmed from the local inhabitants and the forest staffs. The list of fauna reported are based on primary survey (observations) and multiple sources of information including the working plans of the concerned forest divisions, published articles in scientific journals, publications of multiple sources of information such as the ZSI, printed books on fauna, wildlife of the region.

For mammalian survey direct sighting and indirect evidences search methods were adopted in which calls, signs and excreta (scat, dung, palates, etc.) of mammals were recorded along the survey routes. In addition, interviews of local villagers were carried out by showing the photographs of animals to document the mammalian species available in the study area.

For avifaunal survey, point counts and line-transect methods were adopted. The transects were visited by walk and by vehicle in morning and evening time during the study period. In some area where lying of transect was not possible point count method was adopted for the survey. During survey, birds were observed using 7 X 50 and 7 X 42 binoculars. High quality digital photographs of birds were also taken by using digital camera for further reference which has



been shown below. Identification and checklist were made on reference of **Grimmett et al. (2009)**.



**(a) Red-wattled lapwing**



**(b) Shikra**



**(c) Pied kingfisher**



**(d) Little cormorant**

#### Fauna in the study area

The most common terrestrial fauna included Blue bull (*Boselaphus tragocamelus*), striped squirrel (*Funambulus palmarum*), Common mongoose (*Herpestes edwardsi*), indian hare (*Lepus nigricollis*), indian porcupine (*Hystrix indica*), Indian striped hyena (*Hyaena hyaena*),



Jackal (*Canis aureus*) and jungle cat (*Felis chaus*). The detailed list of terrestrial fauna is covered in EIA/EMP report of the project.

## 2.2.6 Marine Fauna in the study area

The coastal areas represent different kind of marine ecosystems like mudflats and inter tidal zones. The coastal area is covered by mudflat habitat and **no mangroves cover was observed** in study area. The local people residing near the coasts use this region for different purposes like fodder for livestock, mudskipper and crab collection etc. (**Table 1**).

**Table 1: Checklist of Macro-benthic fauna present in the study area**

| S.No. | Species            |                                  |
|-------|--------------------|----------------------------------|
| 1.    | <b>Crustaceans</b> | <i>Uca</i> spp.                  |
| 2.    |                    | <i>Ashtoret lunaris</i>          |
| 3.    |                    | <i>Scylla serrate</i>            |
| 4.    |                    | <i>Parasesarma plicatum</i>      |
| 5.    |                    | <i>Macrothelms sp.</i>           |
| 6.    | <b>Mollusc</b>     | <i>Assimineia brevicula</i>      |
| 7.    |                    | <i>Cerithideopsis cingulate</i>  |
| 8.    |                    | <i>Peronia verruculata</i>       |
| 9.    |                    | <i>Cerithium sp.</i>             |
| 10.   | <b>Mudskippers</b> | <i>Boleophthalmus dussumieri</i> |
| 11.   |                    | <i>Periophthalmus waltoni</i>    |

A total of 40 species birds were recorded/documented from the study area. As per the IUCN Red List of Threatened Species 2018 ver. 3, most of the bird species belong to Least concern category for the status estimation. The mudflats and coastal swamplands offers feeding ground for the large numbers of shoreline birds like herons, egrets, storks, ibises, sandpipers, plovers, Gulls and turns (Table 2)



Table 2: Checklist of shoreline birds present in the study area

| S. No. | Scientific Name                | Common Name               | IUCN status <sup>1</sup> |
|--------|--------------------------------|---------------------------|--------------------------|
| 1.     | <i>Actitis hypoleucos</i>      | Common Sandpip            | LC                       |
| 2.     | <i>Alcedo atthis</i>           | Common Kingfisher         | LC                       |
| 3.     | <i>Ardea cinerea</i>           | Grey Heron                | LC                       |
| 4.     | <i>Ardeola grayii</i>          | Indian Pond Heron         | LC                       |
| 5.     | <i>Burhinus oedecnemus</i>     | Eurasian Thicknee         | LC                       |
| 6.     | <i>Calidris alba</i>           | Sanderling                | LC                       |
| 7.     | <i>Calidris alpina</i>         | Dunlin                    | LC                       |
| 8.     | <i>Calidris minuta</i>         | Little Stint              | LC                       |
| 9.     | <i>Casmerodius albus</i>       | Great Egreat              | LC                       |
| 10.    | <i>Ceryle rudis</i>            | Pied Kingfisher           | LC                       |
| 11.    | <i>Charadrius alexandrinus</i> | Kentish plover er         | LC                       |
| 12.    | <i>Charadrius dubius</i>       | Little ringed plover      | LC                       |
| 13.    | <i>Circus aeruginosus</i>      | Marsh Harrier             | LC                       |
| 14.    | <i>Dendronanthus indicus</i>   | Yellow Wagtail            | LC                       |
| 15.    | <i>Egretta garzetta</i>        | Little Egreat             | LC                       |
| 16.    | <i>Esacus Recurvirostris</i>   | Great Thicknee            | NT                       |
| 17.    | <i>Gelochelidon nilotica</i>   | Gull-Billed turn          | LC                       |
| 18.    | <i>Halcyon smyrnensis</i>      | White-Throated Kingfisher | LC                       |
| 19.    | <i>Haliastur Indus</i>         | Brahminy Kite             | LC                       |
| 20.    | <i>Himantopus himantopus</i>   | Black-winged Stilt        | LC                       |
| 21.    | <i>Larus minutus</i>           | Little Gull               | LC                       |
| 22.    | <i>Limosa limosa</i>           | Black Tailed godwit       | NT                       |
| 23.    | <i>Mesophoyx intermedia</i>    | Intermediate Egreat       | LC                       |



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|     |                                    |                     |    |
|-----|------------------------------------|---------------------|----|
| 24. | <i>Mycteria leucocephala</i>       | Painted stork       | LC |
| 25. | <i>Numenius arquata</i>            | Eurasian Curlew     | LC |
| 26. | <i>Numenius phaeopus</i>           | Whimbrel            | LC |
| 27. | <i>Phalacrocorax niger</i>         | Little Cormorant    | LC |
| 28. | <i>Phoenicopterus minor</i>        | Lesser flamingo     | NT |
| 29. | <i>Platalea leucorodia</i>         | Eurasian Spoonbill  | LC |
| 30. | <i>Pseudibis papillosa</i>         | Black Ibis          | LC |
| 31. | <i>Recurvirostra avosetta</i>      | Pied Avocet         | LC |
| 32. | <i>Sterna albifrons</i>            | Little Tern         | LC |
| 33. | <i>Sterna aurantia</i>             | River tern          | NT |
| 34. | <i>Sterna caspia</i>               | Caspian tern        | LC |
| 35. | <i>Sterna hirundo</i>              | Common tern         | LC |
| 36. | <i>Threskiornis melanocephalus</i> | White ibis          | NT |
| 37. | <i>Tringa nebularia</i>            | Common green shank  | LC |
| 38. | <i>Tringa ochropus</i>             | Green Sandpiper     | LC |
| 39. | <i>Tringa totanus</i>              | Common redshank     | LC |
| 40. | <i>Vanellus indicus</i>            | Red-wattled Lapwing | LC |

**Source: Field survey & Secondary data**

<sup>1</sup>Based on IUCN (2018): NT: Near threatened, LC: Least Concern; IUCN= International Union for Conservation of Nature

### 3.1 Approach & Methodology

The Government of India Notification [S.O.19 (E) dated 6.1.2011] under Section 3(1) and Section 3(2)(v) of the Environment (Protection) Act, 1986 and Rule 5(3)(d) of Environment (Protection) Rules, 1986 declares 'the coastal stretches of the country and the water area upto its territorial water limit as Coastal Regulation Zone (CRZ)' (MoEF&CC, 2011). All developmental activities in the CRZ are regulated through the CRZ Notification (MoEF&CC, 2011).

The CRZ consists of the following:

1. Land area from High Tide Line (HTL) to 500 m on the landward side along the sea front.





2. Land area from HTL to 100 m or width of the creek whichever is less on the landward side along the tidal influenced water bodies that are connected to the sea and the distance up to which development along such tidal influenced water bodies is to be regulated are governed by the distance upto which the tidal effects are experienced which is determined based on salinity concentration of 5 parts per thousand (ppt) measured during the driest period of the year and distance up to which tidal effects are experienced would be clearly identified and demarcated accordingly in the Coastal Zone Management Plans (CZMPs). Tidal influenced water bodies means the water bodies influenced by tidal effects from sea, in the bays, estuaries, rivers, creeks, backwaters, lagoons, ponds connected to the sea or creeks and the like.
3. Land area falling between the hazard line and 500 m from HTL on the landward side, in case of seafront and between the hazard line and 100 m line in case of tidal influenced water body. The word 'hazard line' denotes the line demarcated by Ministry of Environment and Forests & Climate Change (MoEF & CC) through the Survey of India (SOI) taking into account tides, waves, sea level rise and shoreline changes.
4. Land area between HTL and Low Tide Line (LTL) which will be termed as the intertidal zone.
5. The water and the bed area from the LTL to the territorial water limit (12 Nm) in case of sea and the water and the bed area from LTL at the bank to the LTL on the opposite side of the bank, of tidal influenced water bodies.

According to the CRZ Notification, 2011, the tidal influenced water body has been defined as bays, estuaries, rivers, creeks, backwaters, lagoons and ponds connected to the sea or creeks and the like. The distance from the HTL shall apply to both sides of the tidal influenced water body. The CRZ Notification categorizes Coastal Regulation Zones as CRZ I, CRZ II, CRZ III and CRZ IV based on whether the area is ecologically sensitive, developed, undeveloped or water body and its bed. Ecologically sensitive and important areas and the intertidal zone constitute CRZ I. Sensitive ecosystems such as mangroves, corals, turtle nesting grounds, salt marshes, mudflats, etc., are classified as CRZ IA. Intertidal zone is CRZ IB. The areas that have already been developed up to or close to the shoreline are categorized as CRZ II. Areas that are relatively undisturbed belong to CRZ III. The water area and the bed constitute CRZ IV.

The CRZ Notification of 2011 has also defined Critical Vulnerable Coastal Areas (CVCA), which includes Sunderbans, and other identified ecological important areas including Gulf of Khambhat and Gulf of Kachchh in Gujarat. It is to prepare Integrated Management Plans (IMPs)



for such CVCA keeping in view of the conservation and management of mangroves, needs of local communities such as, dispensaries, schools, public rain shelter, community toilets, bridges, roads, jetties, water supply, drainage, sewerage and the impact of sea level rise and other natural disasters. The IMPs will be prepared as per the guidelines of the MoEF&CC.

The Coastal Zone Management Plan (CZMP) prepared based on 1991 Notification and approved in 1996 remains valid for 2 years (from January 2011 when the CRZ 2011 was issued) or till a new CZMP is prepared and got approved (MoEF& CC, 2011).

### **3.1.1 Base map**

Digitized cadastral map of the project area was made available from the Gujarat Ecology Commission (GEC). There was a marginal mismatch of base maps with the control point data, which is mainly associated with duplication and reproduction. These problems were checked for its reliability in the field and necessary corrections made before transferring HTL and LTL to the base maps.

### **3.1.2 Data Source**

In addition to field investigation, data from a various source were used for compilation of the final CRZ map and preparation of the CRZ report. The principal data sources include:

- Hydrographic charts of Naval Hydrographic Office
- Toposheets of Survey of India
- Aerial Photos
- Satellite image
- Field investigation

### **3.1.3 Tide**

Coastal regulation zone is restricted to the seacoast and banks of water bodies influenced by tidal action. Tidal range is an important parameter that decides the landward extent of the reach of seawater into the land and the location of the HTL including the extent of CRZ. The distance up to which development along rivers, creeks and backwaters is regulated depends on the landward extent of tidal influence. Tidal range data with respect to Chart Datum pertaining to Bhavnagar as provided by Naval Hydrographic Office, Dehradun (NHO, 2005), is given as **Table 3.**



Table 3: Tidal range at Bhavnagar (Source NHO, 2005 Chart)

| S. No. | Tide Type              | Bhavnagar (m) |
|--------|------------------------|---------------|
| 1      | Mean High Water Spring | 10.2          |
| 2      | Mean High Water Neap   | 8.3           |
| 3      | Mean Sea Level         | 6.1           |
| 4      | Mean Low Water Neap    | 3.5           |
| 5      | Mean Low Water Spring  | 1.4           |

### 3.1.4 Field investigation

High Tide Line and Ecological Sensitive Areas were identified from field and collected data was cross verified with aerial photo based on geomorphologic features and other features such as embankments, landward boundaries of tidal flats (MoEF&CC, 2011). HTL was plotted with respect to reference points identified in the field and located in the cadastral map. An appraisal of existing land use / landform in the project area was also carried out. The distance and positions of HTL to control points which was extracted from the aerial photographs were verified in the field using high precision Trimble DGPS and transferred to cadastral map.

### 3.1.5 Land use

The land use mainly consists of existing residential areas, agricultural area, etc. It has extensive intertidal zone on the Creek/River. **Ecologically sensitive areas such as mangroves are not observed on the study area whereas; extensive intertidal zone and tidally influenced water bodies were observed along the river/creek where the proposed expressway passes at two locations.**

### 3.1.6 HTL/LTL with respect to the project site

The CRZ Notification defines the “HTL as the line on the land up to which the highest water line reaches during the spring tide”. The HTL/LTL has to be identified based on coastal geomorphologic signatures in the field/satellite imageries/aerial photographs following the guidelines given by MoEF&CC (2011). Delineation of the HTL, LTL and identification of Coastal Regulation Zones were carried out based on field investigations and the CZMP of Gujarat.

### 3.1.7 Coastal Regulation Zone for the site

The landward extent of CRZ is equal to the width of the creek/river subject to a maximum of 100 m in the case of creek and river. The water body part except the intertidal zones and mangroves



are CRZ IV. The intertidal zone without mangroves is CRZ IB. Mangroves, which are CRZ IA, are not present along the area where the proposed Expressway route.

The proposed Ahmedabad-Dholera expressway route passes through CRZ categories such as CRZ IB, CRZ III and CRZ IV. The categorization of CRZ in the approved CZMP may be followed for categorization of CRZ. The 7 km radius map has been attached as **Annexure II**.

### **3.1.8 Details of structures proposed over CRZ locations**

#### **(a) Major bridges**

The details of the major bridges proposed over CRZ locations have been shown in **Table 4 (a) and 4 (b)** below:



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**(a) Between Ch.59.700 – Ch.61.200**

**Table 4 (a): Details of major bridge over CRZ locations (Location 1)**

| S. No. | Proposed Ch. (km) | Location Name/Name of River | Bridge Category | Existing / Proposed / Under construction | Main Bridge – Proposed Span (m) | Total Length of Bridge (m) (excluding earth retaining structure) | Carriageway width (m) | Embankment height (m) |
|--------|-------------------|-----------------------------|-----------------|--|---------------------------------|--|-----------------------|-----------------------|
| 1      | 60+150            | Bhogavo River               | Major bridge    | Proposed                                 | 20x37.5                         | 750.0  | 2x16.5                | 6.0                   |
| 2      | 61+000            | Bhogavo River               | Major bridge    | Proposed                                 | 1x37.5+1x30.0+1x37.5            | 105.0  | 2x16.5                | 5.5                   |

**(b) Between Ch.68.800 – Ch.70.500**

**Table 4 (b): Details of major bridge over CRZ locations (Location 2)**

| S. No. | Proposed Ch. (km) | Location Name/Name of River | Bridge Category | Existing / Proposed / Under construction | Main Bridge – Proposed Span (m) | Total Length of Bridge (m) (excluding earth retaining structure) | Carriageway width (m) | Embankment height (m) |
|--------|-------------------|-----------------------------|-----------------|--|---------------------------------|--|-----------------------|-----------------------|
| 1      | 69+315            | Ghelo River                 | Major bridge    | Proposed                                 | 14x37.5                         | 525.0  | 2x16.5                | 5.0                   |





**(c) Culvers:**

The details of the culverts proposed over CRZ locations have been shown in **Table 5 (a)** and **Table 5 (b)**.

**i. Between Ch.59.700 – Ch.61.200**

**Table 5 (a): Details of culverts (Location 1)**

| S. No. | Design Chainage (km) | Chainage (Topo) | Nature of crossing | Structure Category (Legend) | Span Arrangement | Type of Structure | Embankment height |
|--------|----------------------|-----------------|--------------------|-----------------------------|------------------|-------------------|-------------------|
| 1      | 58.920               | 58.970          | Nala               | Culvert                     | 1x2x2            | Box               | 5.5 to 7.0        |
| 2      | 59.100               | 59.150          | Nala               | Culvert                     | 1x2x2            | Box               |                   |
| 3      | 59.280               | 59.330          | -                  | Culvert                     | 1x2x2            | Box               |                   |

**ii. Between Ch.68.800 – Ch.70.500**

**Table 5(b): Details of culverts (Location 2)**

| S. No. | Design Chainage (km) | Chainage (Topo) | Nature of crossing | Structure Category (Legend) | Span Arrangement | Type of Structure | Embankment height |
|--------|----------------------|-----------------|--------------------|-----------------------------|------------------|-------------------|-------------------|
| 1      | 68.900               | 68.950          | -                  | Culvert                     | 1x2x2            | Box               | 5.5 to 6.0        |
| 2      | 70.150               | 70.200          | Stream             | Culvert                     | 1x5x5            | Box               |                   |

**4.1 Impact Assessment and Mitigation Measures with Special Reference Structures on Crz Area**

The impacts of the project activities on the ecosystem are as follows:

- Direct loss of habitat at intersection locations particularly on account of damage to the existing vegetation due to construction activities and transport.
- Degradation of habitat quality due to construction activities and construction camps, and human use of water resources.
- Interference of noise generated due to construction and transport to the communication systems of the wildlife.
- Fragmentation in the grassland areas may reduce home range and cause isolation of the terrestrial wildlife species.
- Decline in wildlife population, their flow and movement.
- Injury and accidents to a lesser extent as the project has largely elevated tracks leading to mortality of wildlife.
- Reduced access to summer and winter ranges of ungulates, breeding sites and nesting habitats of birds.
- Permeability of wildlife to habitats, mates, food and water sources.



## 4.2 Conservation and Mitigation Measures

Assessment of habitat quality, extent and analysis of usage and problems are essential pre-requisite for Environmental Management Plan. Predicting barriers caused by local and state activities is critical. The following measures could be essentially practiced for the environmental and biodiversity conservation in the project area.

- **Management of Activities:** The conservation need be practiced following local people-centric decentralized participatory approach where bottom up approach for generation of information and practices for conservation need be given priority. A collaborative management approach involving the Forest department, local people and knowledge partners, such as, academia and research, and interface institutions like non-profit organizations and trusts would be appropriate for this purpose. Whenever possible, the Corporates may also be involved as stakeholder to perform their social responsibility in terms of their contribution as monetary support and technology for maintenance of wildlife habitat, habitat improvement and awareness generation. The establishment of industry must be discouraged in those areas nearby to coastal area.
- **Integrated Eco-friendly designs:** The engineering devices, such as, underpasses, pipe culverts, and chain link fences can be established suitably at intersections and other locations promoting the wildlife survival and movement. Although large species of mammals are generally present in the forest area, however, these wild species sometimes may move outside also due to their free-range habit. Development of underpasses and culverts will overcome the incidence of injury or mortality in such cases. The non-structural measures, such as messages, related to speed control, caution signs, posters, warning systems for wildlife, etc., can further reduce wildlife mortality by road accidents.
- **Promotion of Eco development:** In order to reduce the dependency of local people on the mudflats, forest, savannah, grassland and natural biodiversity for different socio-economic needs, such as, fishes, crabs, fire-wood, small timber, leaf fodder and medicinal species, etc., the eco-development programme focusing on the cultural and socio-economic and environmental dimensions specific to the project site need be encouraged utilizing local knowledge and practices. Wherever necessary the technology developed through scientific experiments and field experiences in regard to sustainable utilization of natural resources and organic agriculture including agro-forestry need be integrated with the traditional practices. Eco-development is now seen as a site- specific conservation-friendly measure for environmentally-compatible economic development.



- **Awareness Generation:** The knowledge and technical skills are pre-requisite for human capital to perform in a desired manner. It is, therefore, suggested that the information in regard to species of plants and animals existing in the project site, importance of these species for human beings and conservation of food chain organisms and ecological processes essential for ecological balance at the site, threats for their survival and suitable package of practices for conservation of biodiversity need be made available to the local people and other stakeholders through print and electronic media, street plays (*nukkar natak*) and exhibitions. Local festivals and fairs (*mela*) can be better opportunities for awareness generation.



### 4.3 Risk Matrix

| Sl. no. | Family      | Main Event                                  | Short Description/ Secondary Disaster  | Probability of occurrence  | Possible Actions  |
|---------|-------------|---|--|--|---|
| 1       | Geophysical | Earthquake/Mass movement of earth materials | <ul style="list-style-type: none"> <li>• Landslide following earthquake;</li> <li>• Urban fires triggered by earthquakes;</li> <li>• Liquefaction - the transformation of (partially) water-saturated soil from a solid state to a liquid state caused by an earthquake.</li> <li>• Mass movement of earth materials, usually down slopes.</li> <li>• Surface displacement of earthen materials due to ground shaking triggered by earthquakes.</li> </ul> | The proposed project expressway falls in Earthquake Zone III. Earthquakes have not been very frequent in the project district. | <ul style="list-style-type: none"> <li>• Structures will be designed considering the seismic provisions as per Coadal provisions.</li> <li>• Mock Drills.</li> <li>• Quick Evacuation of Site Workers and Staff.</li> <li>• Contact to be maintained with nearest hospitals and Fire Stations for taking casualties for treatment and for rescue operations.</li> </ul> |
|         |             | Tsunami                                     | A series of waves (with long wavelengths when traveling across the deep ocean) that are generated by a displacement of massive amounts of water through underwater earthquakes, volcanic eruptions or landslides. Tsunami waves travel at very high speed across the ocean but as they begin to reach shallow water, they slow down and the wave grows steeper.  | As such, the risk of a Tsunami striking is considered to be medium.  | <ul style="list-style-type: none"> <li>• Contact to be maintained with the regional office of IMD.</li> <li>• Early warnings to the project workers/staff to be given, when applicable.</li> <li>• Quick evacuation of Site Workers and staff.</li> </ul>   |



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|   |              |  |   |   |   |
|---|--------------|--|---|---|---|
| 2 | Hydrological | <ul style="list-style-type: none"> <li>Flood</li> <li>Landslides</li> <li>Wave Action</li> </ul> | <ul style="list-style-type: none"> <li>Coastal Erosion - The temporary or permanent loss of sediments or landmass in coastal margins due to the action of waves, winds, tides, or anthropogenic activities.</li> <li>Coastal flood - Higher-than-normal water levels along the coast caused by tidal changes or thunderstorms that result in flooding, which can last from days to weeks</li> <li>Flash Flood Hydrological - Heavy or excessive rainfall in a short period of time that produce immediate runoff, creating flooding conditions within minutes or a few hours during or after the rainfall.</li> </ul>           | <p><b>Coastal Erosion</b></p> <p>The probability of Coastal erosion occurring due to the Coastal Road construction is low. In fact, the Sea wall construction will offer protection against shore erosion.</p>  | <ul style="list-style-type: none"> <li>Contact to be maintained with the regional office of IMD.</li> <li>Early warnings to the project workers/staff to be given, when applicable.</li> <li>Quick evacuation of Site Workers and staff.</li> </ul> |
| 2 | Hydrological | <ul style="list-style-type: none"> <li>Flood</li> <li>Landslides</li> <li>Wave Action</li> </ul> | <ul style="list-style-type: none"> <li>Flood Hydrological - A general term for the overflow of water from a stream channel onto normally dry land in the floodplain (riverine flooding), higher-than normal levels along the coast and in lakes or reservoirs (coastal flooding) as well as ponding of water at or near the point where the rain fell. (flash floods)</li> <li>Wave Action: Wind-generated surface waves that can occur on the surface of any open body of water such as oceans, rivers and lakes, etc. The size of the wave depends on the strength of the wind and the travelled distance (fetch).</li> </ul> | <p><b>Flooding</b></p> <p>The Coastal Road level will generally, be higher than that of the existing road along the coast. As such, the probability of flooding of Coastal Road is perceived to be low.</p> <p>Infact, the Coastal Road will offer a good and safe evacuation passage for the public, in general.</p> <p><b>Landslides</b></p> <p>There is low probablity of landslides getting triggered due to earthquakes or floods.</p> |   |



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|   |                            |   |  |   |  |
|---|----------------------------|---|--|---|--|
| 3 | <b>Meteorological</b>      | Hazard caused by short-lived, micro- to meso-scale extreme weather and atmospheric conditions that may last for minutes to days.  | <ul style="list-style-type: none"> <li>• Cyclone, Storm Surge, Tornado, Convective Storm, Extratropical Storm, Wind Lightning, Heavy Rain</li> </ul>   | The coastline along the Arabian Sea is prone to Cyclones. | <ul style="list-style-type: none"> <li>• Contact to be maintained with the regional office of IMD</li> <li>• Early warnings to the project workers/staff to be given, when applicable.</li> <li>• Quick evacuation of Site Workers and staff</li> </ul>  |
| 4 | <b>Climatological</b>      | Unusual, extreme weather conditions related to long-lived, meso- to macro-scale atmospheric processes ranging from intra-seasonal to multi-decadal (long-term) climate variability. | <ul style="list-style-type: none"> <li>• Extreme hot/cold conditions</li> <li>• Subsidence</li> </ul>  | Low Probability   |  |
| 5 | <b>Biological</b>          | Exposure to germs and toxic substances  | <ul style="list-style-type: none"> <li>• Epidemics: viral, bacterial, parasitic, fungal, or prion infections</li> <li>• Insect infestations</li> </ul> | Low probability   | <ul style="list-style-type: none"> <li>• Proper hygiene to be maintained in the Worker's Camps, Canteens and Work areas.</li> <li>• Close co-ordination to be maintained with the City hospitals and Health Authorities.</li> </ul>  |
| 6 | <b>During Construction</b> | <b>Accidents</b>  | <ul style="list-style-type: none"> <li>• Accidents during construction of Road and Bridges/reclamation</li> </ul>                                      | Medium  | <ul style="list-style-type: none"> <li>• Formulation of Safety Policy and strict implementation of the same during construction phase.</li> <li>• Provision of First Aid at worksites</li> <li>• Arrangements with nearest hospitals for emergency treatment in case of accidents</li> <li>• Provision of Ambulances at the worksite.</li> </ul> |



## **5.1 Environment Monitoring Programme**

The Environmental Monitoring Programme provides such information on which management decisions may be taken during construction and operational phase. It provides basis for evaluating the efficiency of mitigation and enhancement measures, and suggested actions that need to be taken to achieve the desired effect. The monitoring includes:

- (i) Visual observation,
- (ii) Selection of environmental parameters at specific locations, and
- (iii) Sampling and regular testing of these parameters.

The objectives are:

- Evaluation of the efficiency of mitigation and enhancement measures
- Updating of the actions and impacts of baseline data
- Adoption of additional mitigation measures if the present measures are insufficient
- Generating the data which may be incorporated in the environmental management plan in future projects

### **5.1.1 Ambient Air Quality (AAQ) Monitoring**

The air quality is recommended for monitoring through an approved agency in the process of Construction of Ahmedabad-Dholera Expressway Road in the State of Gujarat. The monitoring of air sampling should be conducted at the location of Crusher plant, HMP, Stockyards Batching plant, Haul roads. In addition to these, air quality should also be monitored near the storage sites having aggregates, sands etc.

The parameters recommended for monitoring during construction are:

- Particulate Matter, PM10, PM2.5
- Sulphur Dioxide,
- Oxides of Nitrogen, and
- Carbon Monoxide

### **5.1.2 Water Quality**

Water quality and public health parameters should be monitored till the end of project and two years after the completion. Monitoring should be carried-out at quarterly basis, to cover seasonal variations, by any recognized agency. Water quality shall be analyzed by applying the standard technique.

### **5.1.3 Ambient Noise Monitoring**

The monitoring of noise sampling should be conducted at the location of plant sites i.e crusher plant, HMP and construction sites etc. In addition to these, noise quality should also be monitored near the school, hospital, other sensitive sites and residential areas exist along the 40 meter to 50 meter distance of project road or at the designated locations fixed –up by the environmental expert.

The procedural details of monitoring of various components have been presented below.

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| Environmental Components         | Monitoring  |  |   | Location  | Frequency   | Institutional Responsibility                  |  |
|----------------------------------|---|--|---|---|---|---|--|
|                                  | Parameters  | Special Guidance   | Standards   |   |   | Implementation                                | Supervision                                    |
| Air Quality                      | PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO | As per CPCB guidelines   | The Air (Prevention and Control of Pollution) Rules, CPCB 1982                    | At sites where hot mix plant / batching plant is located                      | Twice in a month till the end of the construction | Contractor through approved monitoring agency | IC, NHAI- PIU Ahmedabad                        |
| Ground and Surface Water Quality | pH, temperature, BOD, Total Hardness, COD, TDS, TSS, DO, Total coliform,      | Grab priority collected from source and analyze as per standard methods for examination of water and | Water quality standards by CPCB   | River tributaries, roadside ponds and ground water at construction camp sites | Once in a season till end of construction         | Contractor through approved monitoring agency | IC, NHAI- PIU Ahmedabad                        |
| Noise Levels                     | Noise level for day and night on dB(A) scale                                  | In free field at 1m distance from the equipment to be monitored                                      | Noise standard by CPCB  | At equipment yards, camp and villages along the alignment.                    | Once in a season till end of construction         | Contractor through approved monitoring agency | IC, NHAI- PIU Ahmedabad                        |
| Soil quality                     | Monitoring of NPK & heavy metals and grease                                   | -  | As per IRC code of practice   | Ad-hoc if accident /spill locations involving bulk transport of               | -   | PIU through an approved agency                | IC, NHAI- PIU Ahmedabad                        |
| Road side plantation             | Monitoring of felling of trees  | It should be ensured that only marked trees are felled   | As given in the detailed Design for the project                                   | All along the corridor  | During the felling of trees                       | Forest depart Competent Agency                | Developer to assist in co-ordination with NHAI |
|                                  | Survival rate of trees, success of re-vegetation                              | The number of trees surviving during each visit should be compared with the number of                | The survival rate should be at-least 75% below which re-plantation should be done | At locations of compensatory afforestation                                    | Every year for 3 years                            | PIU   | Developer & Forest Department                  |



## **6.0 Disaster Management Plan**

### **6.1 General**

The National Highways Authority of India (NHAI) has been entrusted by Ministry of Roads Transport & Highways, Government of India with the assignment of preparation of Feasibility study / Detailed Project Report and implementation of road stretches selected for DMICDC under Bharat Mala Scheme – Ahmedabad – Dholera Expressway (upto centre of DSIR) (110 Km) (BM/21) in the state of Gujarat.

Project road is mostly entirely green field alignment project and proposed for 6 lane expressway. The proposed expressway takes off from Sardar Patel Ring Road near Sarkhej between Santhal Junction and Bakrol Junction in southwest of Ahmedabad, 2 km east of National Highway NH-8A. The corridor runs southerly towards Dholera between NH-8A (in the west) and SH-4, SH-6, Sabarmati river course/Gulf of Khambhat (on east side). The proposed access-controlled expressway project has been envisaged through an area which shall have the advantage of simultaneous development as well as shall result in a shorter distance to travel. Project falls under category 'A' as per MoEF&CC Notification on EIA dated Sep. 14, 2006.

The proposed project expressway passes through the CRZ areas from Ch. 59+700 to Ch.61+200 and Ch.68+800 to Ch.70+500 over Bhogwa river at Ahmedabad District of Valinda, Anandpur, Pipli, Bholad villages.

It is therefore, important to formulate a project specific Risk Assessment & Disaster Management Plan in order to be in a state of preparedness to respond in a structured and systematic manner to the disasters when they occur, so that loss of human life is minimized, and recovery is possible within a short time after the disaster.

### **6.2 Definition of Disaster**

The UNISDR (2009) defines disaster as:

“A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.”

UNISDR considers disaster to be a result of the combination of many factors such as the exposure to hazards, the conditions of vulnerability that are present, and insufficient capacity or measures to reduce or cope with the potential negative consequences. Disaster impacts may include loss of life, injuries, disease and other negative effects on human physical, mental and social well-being, together with damage to property, destruction of assets, loss of services, social and economic disruption and environmental degradation.



The DM Act 2005 uses the following definition for disaster:

"Disaster" means a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or manmade causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area."

Since the scale of the disruptions due to disaster is beyond the ability of the affected community or society to cope using its own resources, it is obvious that in order to have an effective Disaster Management Plan for the project – during construction phase and operational phase, an effective interface has to be maintained at all times by the project personnel during the Construction Phase (by Contractor/Supervision Consultants) and in operations phase, with the State Disaster Management Unit which includes the Disaster Management Unit of the MCGM. In other words, the Disaster Management Plan for the project must integrate with and complement the Disaster Management Plan of GoG.

### **6.3 Objectives of Disaster Management Plan**

The broad objectives are:

- i. To protect and minimize the loss of lives and properties/infrastructure from disasters.
- ii. To minimize the suffering of people due to disasters.
- iii. To minimize the disaster risk and vulnerability of people and infrastructure.
- iv. Promote the culture of disaster risk prevention and mitigation at all levels.
- v. To enhance disaster preparedness for effective response.
- vi. Empower both local authorities and communities as partners to reduce and manage disaster risks.
- vii. To build the capacity of all stakeholders to effectively respond to disasters and promote community- based disaster management.
- viii. Facilitate the mainstreaming of disaster management concerns into the developmental planning and process.
- ix. Develop efficient disaster response/relief mechanism.
- x. To provide clarity on roles and responsibilities for all stakeholders concerned with disaster management.





- xi. To ensure co-ordination and promoting productive partnership with all other agencies related to disaster management.
- xii. Promote “Build Back Better” in recovery, rehabilitation and reconstruction.

#### **6.4 Scope**

This report describes the provisions which have been kept in the project components viz. roads and Bridges, in order to mitigate the effects of Disaster and also for providing an early warning system to the concerned authority/personnel on occurrence of accidents/impending disaster. In addition, it also describes, in general, the measures and actions which should be incorporated in the Disaster Management Plan for the Project during Construction Phase of Roads & Bridges and during the Operations Phase. It is imperative that the DMP for the Construction and Operation phases should be finalized and amended as required, after due consultation with all the stakeholders and agencies involved in Disaster Management. The document also gives the Standard Operating Procedures (SOPs) to be followed during the Construction Phase. These SOPs are based on the provisions of MORT&H Specifications & IRC Special Publication, which are commonly used for the construction of Expressway/Highway/Bridge Projects in India.

#### **6.5 Types of Disasters/Hazards**

Primarily disasters are triggered by natural hazards or human-induced, or result from a combination of both. In particular, human-induced factors can greatly aggravate the adverse impacts of a natural disaster. Even at a larger scale, globally, the UN Inter-Governmental Panel on Climate Change (IPCC) has shown that human-induced climate change has significantly increased both the frequency and intensity of extreme weather events. While heavy rains, cyclones, or earthquakes are all natural, the impacts may, and are usually, worsened by many factors related to human activity. The extensive industrialization and urbanization increases both the probability of human-induced disasters, and the extent of potential damage to life and property from both natural and human-induced disasters. The human society is also vulnerable to Chemical, Biological, Radiological, and Nuclear (CBRN) disasters.

##### **6.5.1 Natural Hazards**

The widely accepted classification system used by the Disaster Information Management System of DesInventar classifies disasters arising from natural hazards into five major categories (DesInventar2016):

- 1) **Geophysical:** Geological process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage. Hydro-meteorological factors are



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important contributors to some of these processes. Tsunamis are difficult to categorize; although they are triggered by undersea earthquakes, and other geological events, they are essentially an oceanic process that is manifested as a coastal water-related hazard.

- 2) **Hydrological:** Events caused by deviations in the normal water cycle and/or overflow of bodies of water caused by wind set-up
- 3) **Meteorological:** Events caused by short-lived/small to meso-scale atmospheric processes (in the spectrum from minutes to days)
- 4) **Climatological:** Events caused by long-lived meso- to macro-scale processes (in the spectrum from intra-seasonal to multi-decadal climate variability)
- 5) **Biological:** Process or phenomenon of organic origin or conveyed by biological vectors, including exposure to pathogenic micro-organisms, toxins and bioactive substances that may cause loss of life, injury, illness or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

A brief description of these five major categories of the disasters arising from natural factors with the sub-categories is given in **Table 6**. The below classification is not a water tight one. In real life situations, many disasters are a combination of different types of disasters. In addition, secondary disasters may occur after a disaster has occurred.

**Table 6: Categories of the disasters arising from natural factors with the sub-categories**

| S. No. | Family      | Main Event                                  | Short Description/ Secondary Disaster   |
|--------|-------------|---|---|
| 1      | Geophysical | Earthquake/Mass movement of earth materials | <ul style="list-style-type: none"> <li>• Landslide following earthquake;</li> <li>• Urban fires triggered by earthquakes;</li> <li>• Liquefaction - the transformation of (partially) water-saturated soil from a solid state to a liquid state caused by an earthquake.</li> <li>• Mass movement of earth materials, usually down slopes.</li> </ul> |
|        |             | Tsunami                                     | A series of waves (with long wavelengths when traveling across the deep ocean) that are generated by a displacement of massive amounts of water through underwater earthquakes, volcanic eruptions or landslides. Tsunami waves travel at very high speed across the ocean but as they begin to reach   |



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|    |                |   |   |
|----|----------------|---|---|
|    |                |   | shallow water, they slow down and the wave grows steeper.   |
| 2. | Hydrological   | <ul style="list-style-type: none"> <li>• Flood</li> <li>• Landslides</li> <li>• Wave action</li> </ul>                            | <ul style="list-style-type: none"> <li>• Coastal Erosion - The temporary or permanent loss of sediments or landmass in coastal margins due to the action of waves, winds, tides, or anthropogenic activities.</li> <li>• Coastal flood - Higher-than-normal water levels along the coast caused by tidal changes or thunderstorms that result in flooding, which can last from days to weeks Flash Flood Hydrological - Heavy or excessive rainfall in a short period of time that produce immediate runoff, creating flooding conditions within minutes or a few hours during or after the rainfall.</li> <li>• Flood Hydrological - A general term for the overflow of water from a stream channel onto normally dry land in the floodplain (riverine flooding), higher-than normal levels along the coast and in lakes or reservoirs (coastal flooding) as well as ponding of water at or near the point where the rain fell (flash floods).</li> <li>• Wave Action: Wind-generated surface waves that can occur on the surface of any open body of water such as oceans, rivers and lakes, etc. The size of the wave depends on the strength of the wind and the travelled distance (fetch).</li> </ul> |
| 3. | Meteorological | Hazard caused by short- lived, micro- to meso- scale extreme weather and atmospheric conditions that may last for minutes to days | <ul style="list-style-type: none"> <li>• Cyclone, Storm Surge, Tornado, Convective Storm, Extratropical Storm, Wind Lightning, Heavy Rain.</li> </ul>   |
| 4. | Climatological | Unusual, extreme weather conditions related to long-lived, meso- to macro-scale atmospheric processes ranging from intra-seasonal | <ul style="list-style-type: none"> <li>• Extreme hot/cold conditions</li> <li>• Subsidence</li> </ul>   |



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|   |            |  |  |
|---|------------|--|--|
|   |            | to multi-decadal (long-term) climate variability |  |
| 5 | Biological | Exposure to germs and toxic substances           | <ul style="list-style-type: none"> <li>• Epidemics: viral, bacterial, parasitic, fungal, or prion infections</li> <li>• Insect infestations</li> </ul> |

### 6.5.2 Human-Induced Disasters

The National Policy on Disaster Management (NPDM) notes that rise in population, rapid urbanization and industrialization, development within high-risk zones, environmental degradation, and climate change aggravates the vulnerabilities to various kinds of disasters. Due to inadequate disaster preparedness, communities, and animals are at increased risk from many kinds of human-induced hazards arising from accidents (industrial, road, air, rail, on river or sea, building collapse, fires, mine flooding, oil spills, etc.). Chemical, Biological, Radiological, and Nuclear (CBRN) hazards rank very high in among the human-induced risks. Terrorist activities and secondary incidents add to these risks and call for adequate preparedness and planning.

### 6.5.3 Levels of Disasters

The disaster management and its planning at various tiers must take into account the vulnerability of disaster-affected area, and the capacity of the authorities to deal with the situation. Using this approach, the High-Power Committee on Disaster Management, in its report of 2001, categorized disaster situations into three 'levels': L1, L2, and L3. The period of normalcy, L0, should be utilized for disaster risk reduction.

**Level-L1:** The level of disaster that can be managed within the capabilities and resources at the District level. However, the state authorities will remain in readiness to provide assistance if needed.

**Level-L2:** This signifies the disaster situations that require assistance and active mobilization of resources at the state level and deployment of state level agencies for disaster management. The central agencies must remain vigilant for immediate deployment if required by the state.

**Level-L3:** This corresponds to a nearly catastrophic situation or a very large-scale disaster that overwhelms the State and District authorities.

The categorization of disaster situations into levels L0 to L3 finds no mention in DM Act 2005. Further, the DM Act does not have any provision for notifying any disaster as a 'national calamity' or a 'national disaster'.



#### **6.5.4 Project Specific Provisions for Disaster Management Plan/provisions**

##### **6.5.4.1 Safety Measures during Construction of project**

Safety measures, as provided in NHAI safety manual that is unit 3 (pertaining to traffic safety, such as traffic control zone, advance warning zones, traffic control devices, regulatory and warning signs, cylindrical cones, drums, flag man, barricades, pedestrian safety, speed control etc.) and other safety guide lines and measures suggested in unit 4 (construction zone safety), Unit 5 (temporary structures safety), Unit 6 (workers and work zone safety), Unit 7 (electrical and mechanical safety) will be strictly implemented. All required illustrative plans for safety at construction sites keeping in view all situation highlighted in IRC: SP:55 & NHAI safety manual will be prepared and strictly implemented.

##### **6.5.4.2 Standard Operating Procedures to be followed during construction of Road**

Standard Operating Procedures (SOPs) as stipulated in MoRT&H Specifications - Revision 5, a document which is largely used in India for construction of Highways, shall be used during the Construction Phase. These also include precautions to be taken for safeguarding the environment. A summary of provisions is given below:

| <b>Sl. No.</b> | <b>Description</b>                                       | <b>Reference Clause No. of MoRT&amp;H Specification</b> |
|----------------|--|---|
| 1              | Borrow Pits for Embankment Construction                  | 111.2   |
| 2              | Quarry Operations  | 111.3   |
| 3              | Control of Soil Erosion, Sedimentation & Water Pollution | 111.4   |
| 4              | Pollution from Plants and Batching Plants                | 111.5   |
| 5              | Substances hazardous to health                           | 111.6   |
| 6              | Use of Nuclear Gauges                                    | 111.7   |
| 7              | Environment Protection                                   | 111.8   |
| 8              | Occupational Health and Safety of the Workforce          | 111.9   |
| 9              | Control & Disposal of Waste                              | 111.10  |
| 10             | Transport of hazardous materials                         | 111.11  |
| 11             | Emergency Response                                       | 111.12  |

It is expected that the Contractor will prepare an exhaustive Health & Safety manual before commencement of Construction activities and implement the same rigorously.

##### **6.5.4.3 Highway Traffic Management System (HTMS) during Operations Phase**

Highway Traffic Management System will control the traffic monitoring and movements on the project Road. The following outdoor units will be installed as a part of HTMS:





- a) Emergency Call Boxes
- b) Variable Message Signs
- c) Meteorological Data Systems
- d) Close Circuit TV Camera System
- e) Traffic Counting, & classification and transmission system

The system shall meet the following objectives:

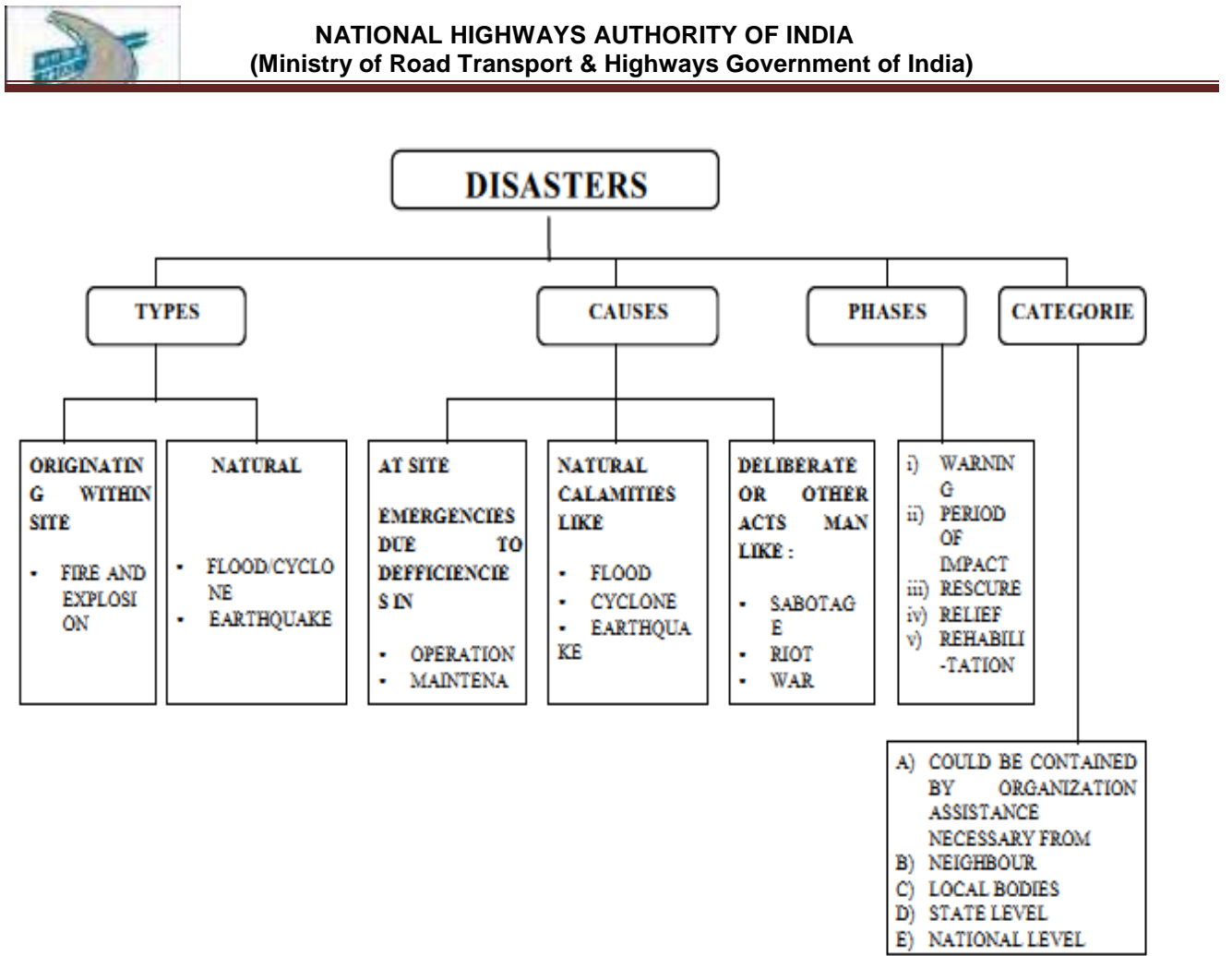
- 1) Smooth and uninterrupted Traffic flow
- 2) Enhanced Road Safety
- 3) Realtime information and guidance to road users
- 4) Round the clock emergency assistance
- 5) Alerts for abnormal road and weather conditions
- 6) Reduced journey time and reduced driving fatigue

#### 6.5.4 Approach to Disaster Management Plan

Environmental risks are inherent in design and operation of a complex project. Any major failure in the system could lead to a disaster resulting in loss of human life, loss to property and damage to ecology. **Figure 3** depicts the type, causes, phases and categories of disaster. Growing concern has resulted Risk Assessment as a mandatory requirement during project reviews of MoEF&CC.

Risk involves the occurrence or potential occurrence of some accidents consisting of an event or sequence of events. The conceptual activities involved in risk analysis studies are depicted in **Figure 4**.

Maximum Credible Accident (MCA) analysis, Hazard Analysis, Assessment and Evaluation, Disaster Management Plan (DMP) and Emergency Preparedness Plan (EPP).





#### 6.5.5 Maximum Credible Accident (MCA) Analysis

The word MCA stands for Maximum Credible Accident or in other words, an accident with a maximum damage distance, which believed to be probable. MCA analysis does not include quantification of the probability of occurrences of an accident. In practice the selection of accident scenarios for MCA analysis is carried out on the basis of engineering judgment and expertise in the field of risk analysis especially in accident analysis.

#### 6.5.6 Hazard Analysis

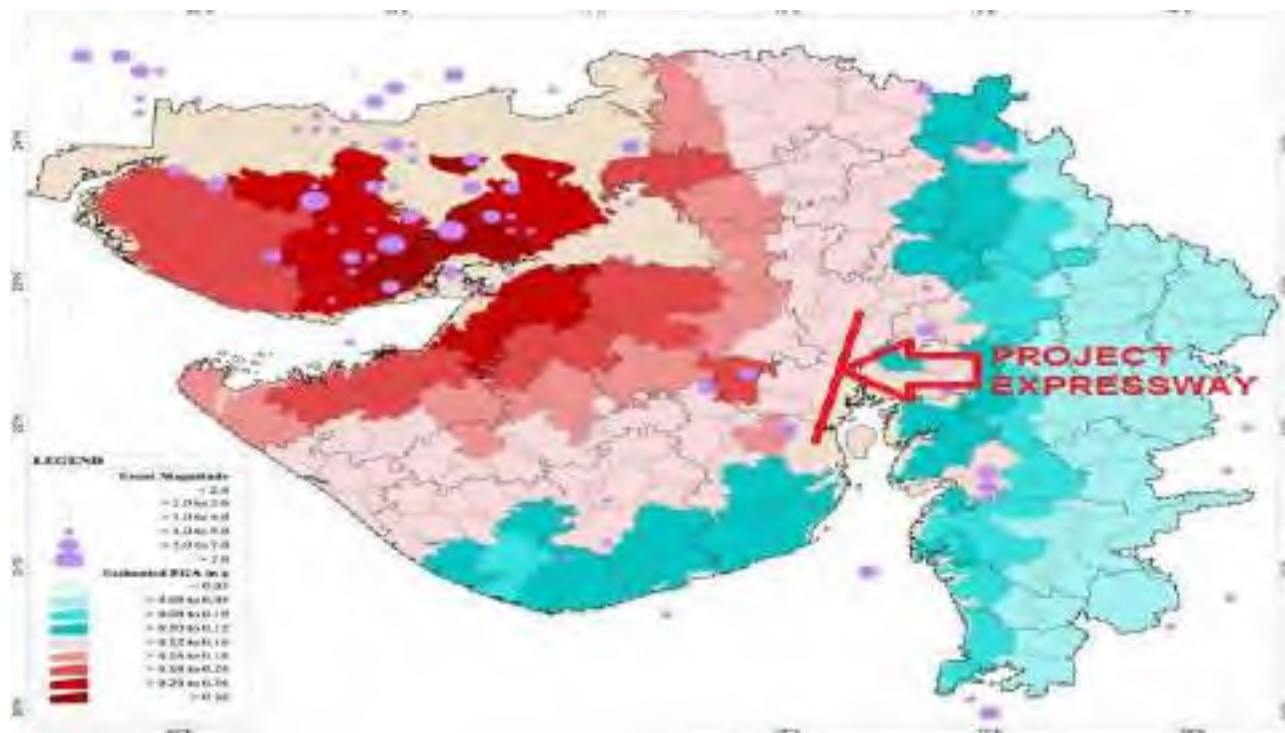
Owing to its geo-climatic, geological and physical features, Gujarat is vulnerable to all major natural hazards namely, drought, flood, cyclone, earthquake, tsunami etc. The State is also under constant threat of various human made hazards like that of industrial (chemical) hazards, transportation accidents, terror attacks, epidemic, road accidents, etc.

Gujarat State Disaster Management Authority (GSDMA) has developed Gujarat Hazard Risk & Vulnerability Atlas. This is the first geographically explicit Level 1 assessment of its kind outside the United States that integrates six hazards viz. earthquake, flood, cyclone, tsunami, drought and industrial (chemical) accidents, covering the whole State of Gujarat.

##### 6.5.6.1 Earthquake

As per Indian Seismic Zone Map, Gujarat region lies in three zones- Zone III, IV and V. Kachchh region (about 300km x 300km) lies in zone V where earthquakes of magnitude 8 can be expected. A belt of about 60-70km width around this zone covering areas of North Saurashtra and areas bordering Eastern part of Kachchh lie in zone IV where intensity VIII can be expected mainly due to earthquakes in Kachchh and some local earthquakes along North Kathiawar Fault in Northern Saurashtra. The rest of Gujarat lies in zone III where intensity VII earthquakes can be expected due to moderate local earthquakes or strong Kachchh earthquakes.

The estimated mean taluka earthquake peak ground acceleration (PGA) zonation for a 100-year return period is shown in the **Figure 4**. All of Kachchh, almost the entire coastline of northern Saurashtra that adjoins Kachchh and a small area in Patan district fall into the very severe intensity zone over a 100-year return period. The cities of Ahmedabad, Bharuch, Rajkot and Bhavnagar fall into the severe intensity zone, while Bhuj and Jamnagar fall in the very severe intensity zone over this time frame. The proposed project expressway falls into the severe intensity zone



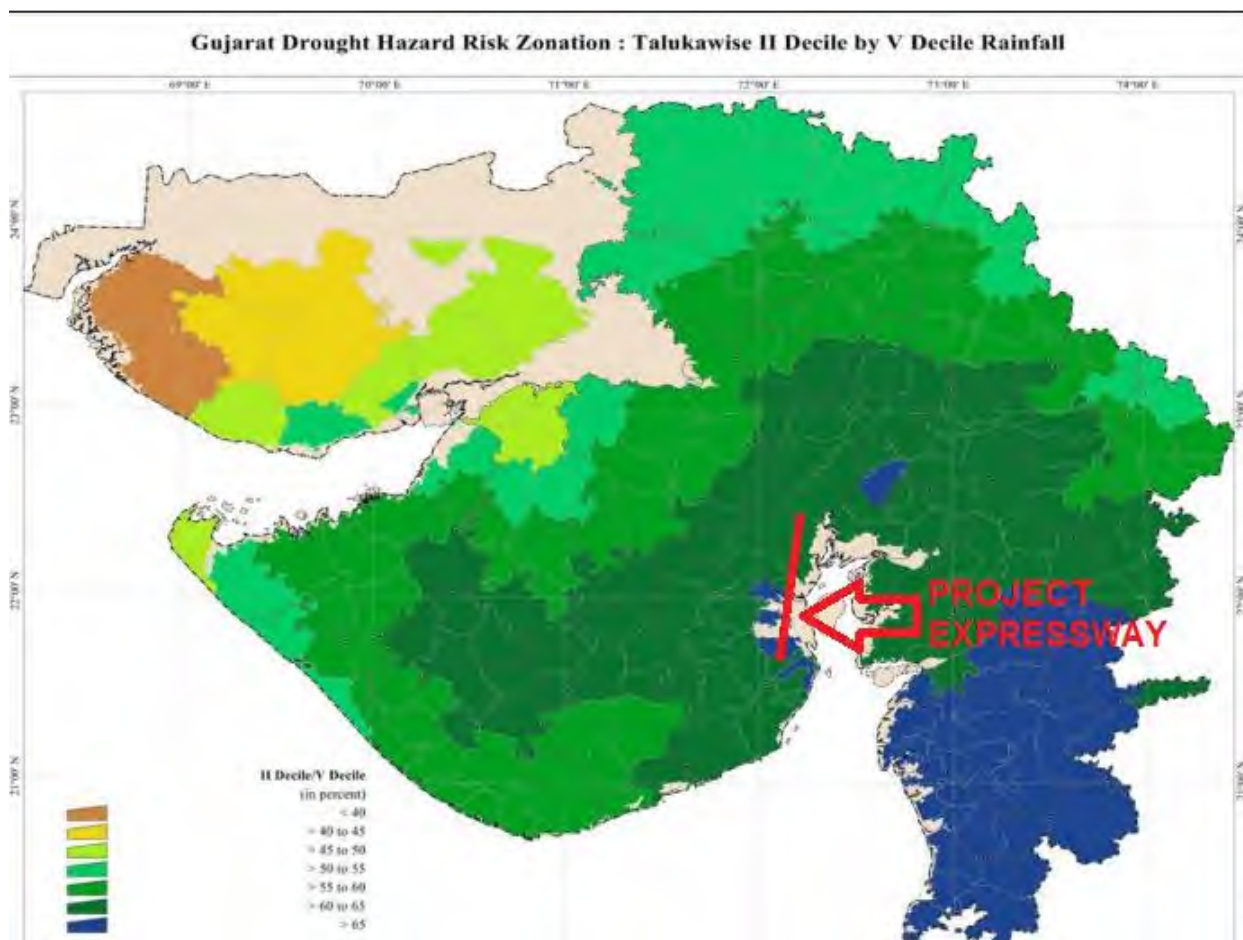


Figure 5: Gujarat Drought Hazard Risk Zonation Map showing project expressway

### 6.5.6.3 Cyclone

Gujarat falls in the region of tropical cyclone. With the longest coast line of 1600 km in the country, it is highly vulnerable to cyclone and its associated hazards such as floods, storm surges, etc. Most of the cyclones affecting the state are generated in the Arabian Sea. They move NorthEast and hit the coast particularly the Southern Kutch and Southern Saurashtra and the Western part of Gujarat.

Two cyclonic storm seasons are experienced in Gujarat: May to June (advancing southwest monsoon) and September to November (retreating monsoon).

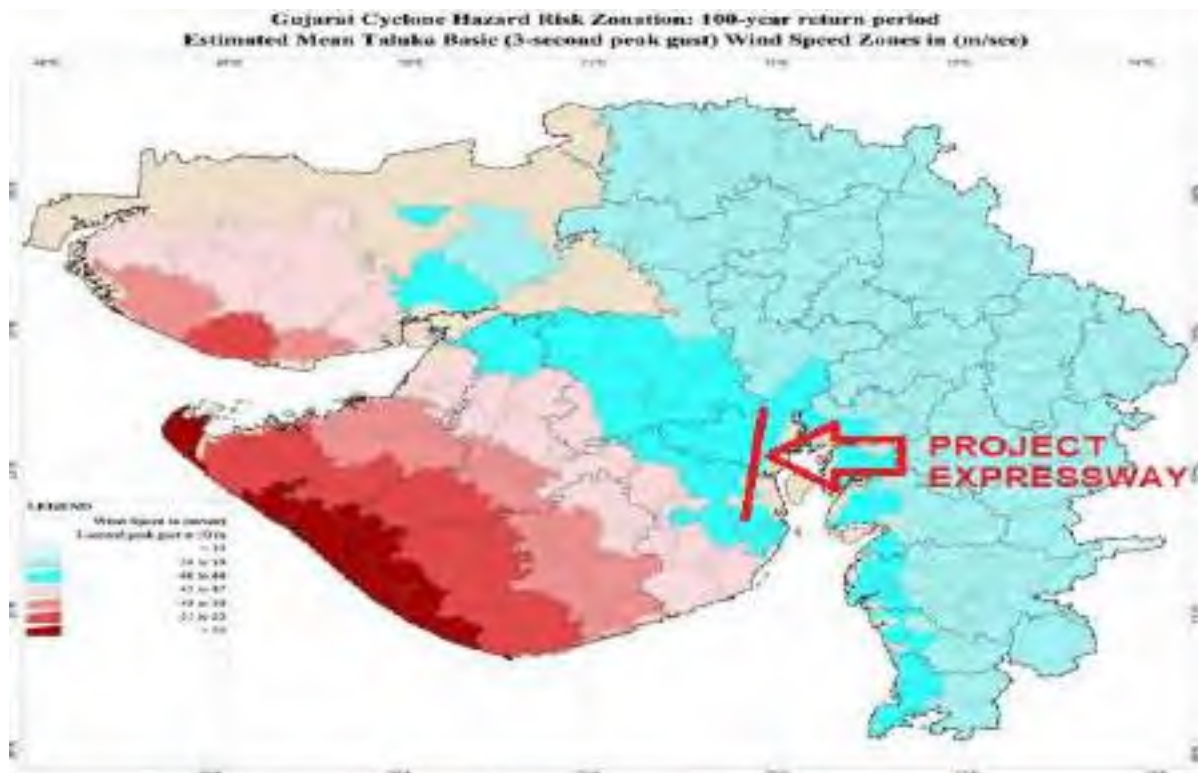
Over 120 cyclones originating in the Arabian Sea had passed through Gujarat over a period of 100 years. **Figure 6** shows a maximum wind speed class of more than 55 m/sec along the Saurashtra coast, specifically in Porbandar, Jamnagar and Junagadh districts, which are exposed to high intensity cyclonic and storm impact. The 51 to 55 m/sec class extends further inland to cover much of Jamnagar, part of Rajkot, Junagadh and Kutch districts. The 48 to 50 m/sec class extends to most of Rajkot, part of Amreli and Jamnagar districts including Jamnagar, Rajkot cities and parts of Kutch. The 45 to 47 m/sec class covers much of Saurashtra and all of Kutch. This is followed by the 40 to





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44 m/sec class that gets its swathe from Kutch through northern Saurashtra all the way to the coast of Gulf of Khambhat and southern Gujarat. The rest of the State falls into the 34 to 39 m/sec class.



**Figure 6: Gujarat Cyclone Hazard Risk Zonation Map showing project expressway**

#### 6.5.6.4 Flood

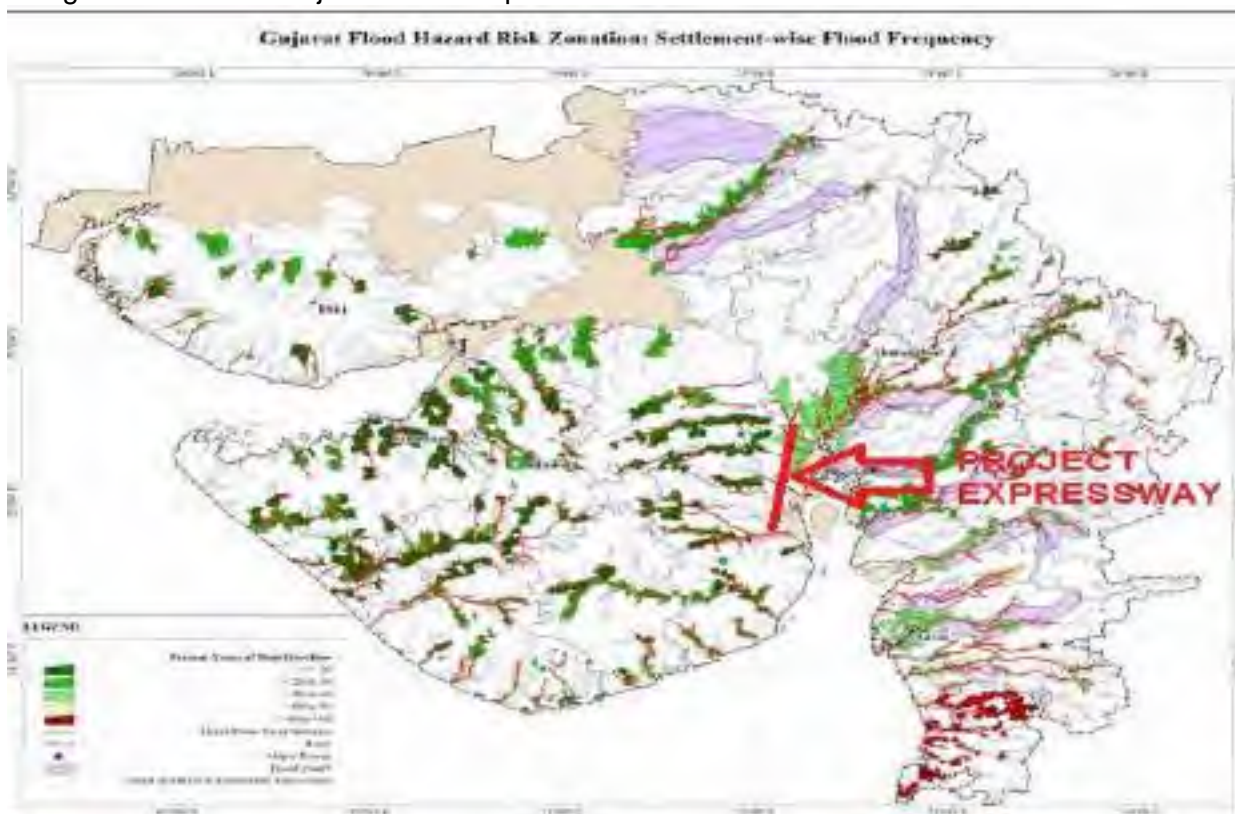
The climatology of Gujarat is influenced by the Arabian Sea in the West and three hill ranges along its Eastern border. A long coastline makes parts of arid Saurashtra and Kutch occasionally experience very high rainfall. These occasional heavy rainstorms are responsible for most of the floods in the State. While the Northern part of the State is mostly arid and semi-arid, the Southern part is humid to sub-humid. Extremes of climate, be it rainfall or temperatures are quite common in this region. All major rivers in the State pass through a wide stretch of the very flat terrain before reaching the sea. These flat lowlands of lower river basins are prone to flooding. Cities like Ahmedabad, Surat and Bharuch are located on the flat alluvial plains of large rivers.

Concentrated runoff resulted by heavy rainfall cause flash floods in the small river basin of Saurashtra and Kutch because of their fairly impervious catchments (rocky or black cotton soils) and steep sloping upper catchments. The flood prone river sections were identified from settlement level analysis. Flood prone river sections in Saurashtra extend to the upper basins due to the presence of dams which have to resort to emergency discharge during heavy rainstorms. Even small valleys in



Saurashtra are used for agriculture. Hence, flooding in these zones impacts both residents and settlements.

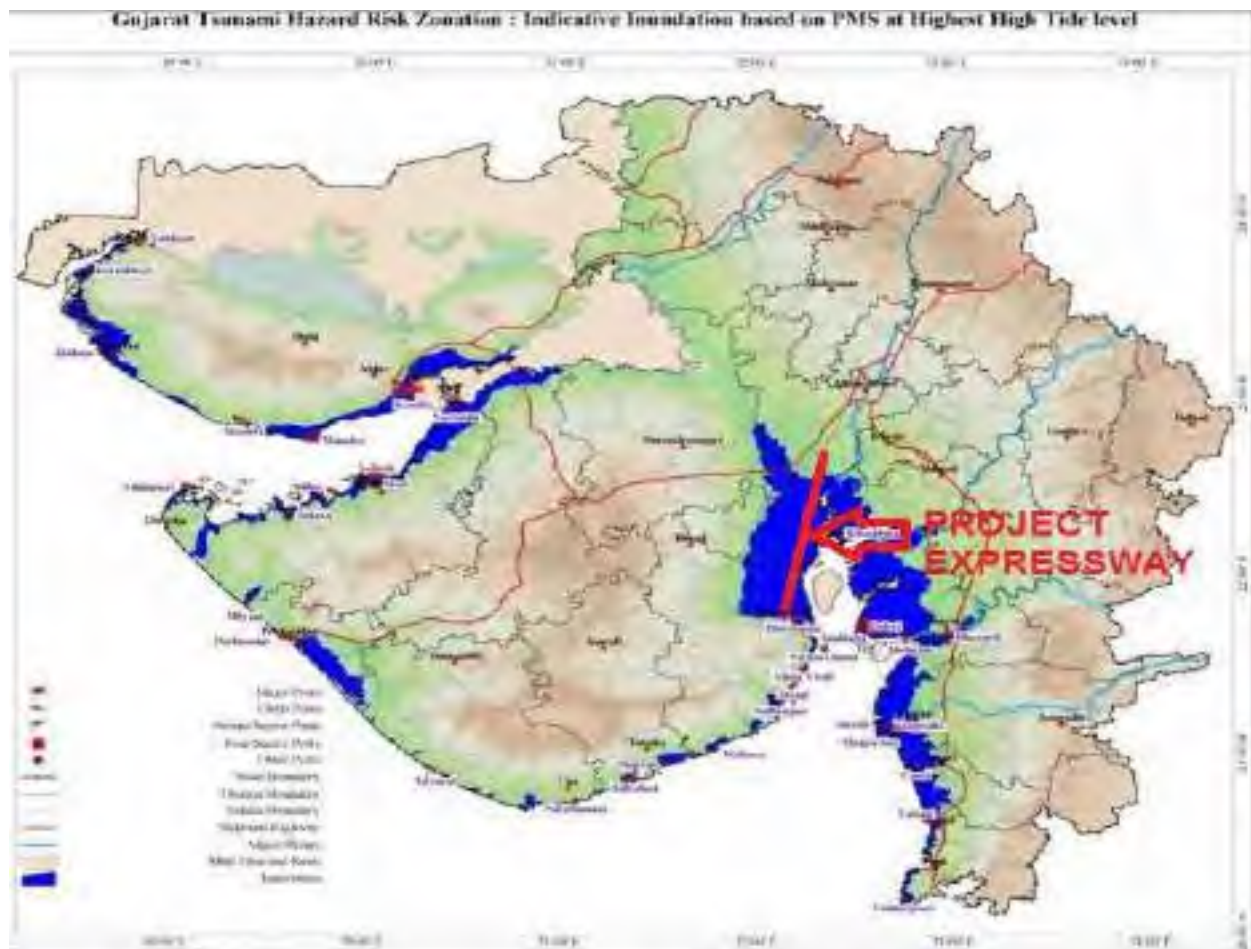
**Figure 7** shows the majority of the area of Gujarat, irrespective of the size of the catchment. The flood risk in Saurashtra is lower than that of the South Gujarat plains. The relatively flat plains in the lower basic areas with hilly catchments in upper parts of South Gujarat accentuate flood risks. Few villages in the North Gujarat are flood prone too.



**Figure 7: Gujarat Flood Hazard Risk Zonation showing project expressway**

#### 6.5.6.5 Tsunami

Gujarat is prone to tsunami risk due to its long coastline and probability of occurrence of near and offshore submarine earthquakes in the Arabian Sea. Makran Subduction Zone (MSZ) - South West of Karachi is an active fault area which may cause a high magnitude earthquake under the sea leading to a tsunami. In past, Kandla coast was hit by a Tsunami of 12 mtrs height in 1945, due to an earthquake in the Makran fault line. Tsunami prone areas in the State include coastal villages of Kutch, Jamnagar, Rajkot, Porbandar, Bhavnagar, Anand, Ahmedabad, Bharuch, Surat, Navsari and Valsad districts. The Hazard Risk and Vulnerability Atlas prepared by GSDMA shows the estimated inundation based on Probable Maximum Surge (PMS) at highest high tide level in **Figure 8**.



**Figure 8: Gujarat Tsunami Hazard Risk Zonation showing project expressway**

### **6.5.7 Disaster Management Plan (DMP) and Emergency Preparedness Plan (EPP)**

#### **6.5.7.1 Disaster or Emergency and its Possibility**

A disaster, and therefore an emergency, occurring as a result of a malfunction of the normal operating procedures or an intervention of an outside force such as a cyclone, flood or sabotage, that may affect several sections within it and/or may cause serious injuries, loss of lives, extensive damage to property or serious disruption outside the works.

Apart from earthquakes, cyclones, flood, arson and sabotage, serious, accidents may take place through explosion in Gas/Fuel Tankers, heavy leakage and subsequent fire in the oil storage tanks etc.

#### **6.5.7.2 Objective of Disaster Management Plan**

In order to be in a state of readiness to face any accident or disaster caused by the project operation, a Disaster Management Plan shall be prepared. Such a plan ought to cover possible





disaster, on and off-site emergency preparedness plan, establishment of Emergency Control Centers (ECC), location of emergency services, and duties of the officers/staff during emergency.

#### **6.5.7.3 Basic Contents of DMP**

Basically, the DMP will contain the following aspects:

- i) Description of the Site
- ii) On-site Emergency Plan
- iii) Off-site Emergency Plan

The details of the project are briefly given below:

##### **i) Description of the Site**

The proposed Ahmedabad- Dholera Expressway starts near Sarkhej on Sardar Patel Ring Road and ends after Dholera Special Investment Region (DSIR) and merging with SH-6 at end point. The corridor runs southerly towards Dholera between NH-8A (in the west) and SH-4, SH-6, Sabarmati river course/Gulf of Khambhat (on east side) Project falls under category 'A' as per MoEF&CC Notification on EIA dated Sep. 14, 2006.

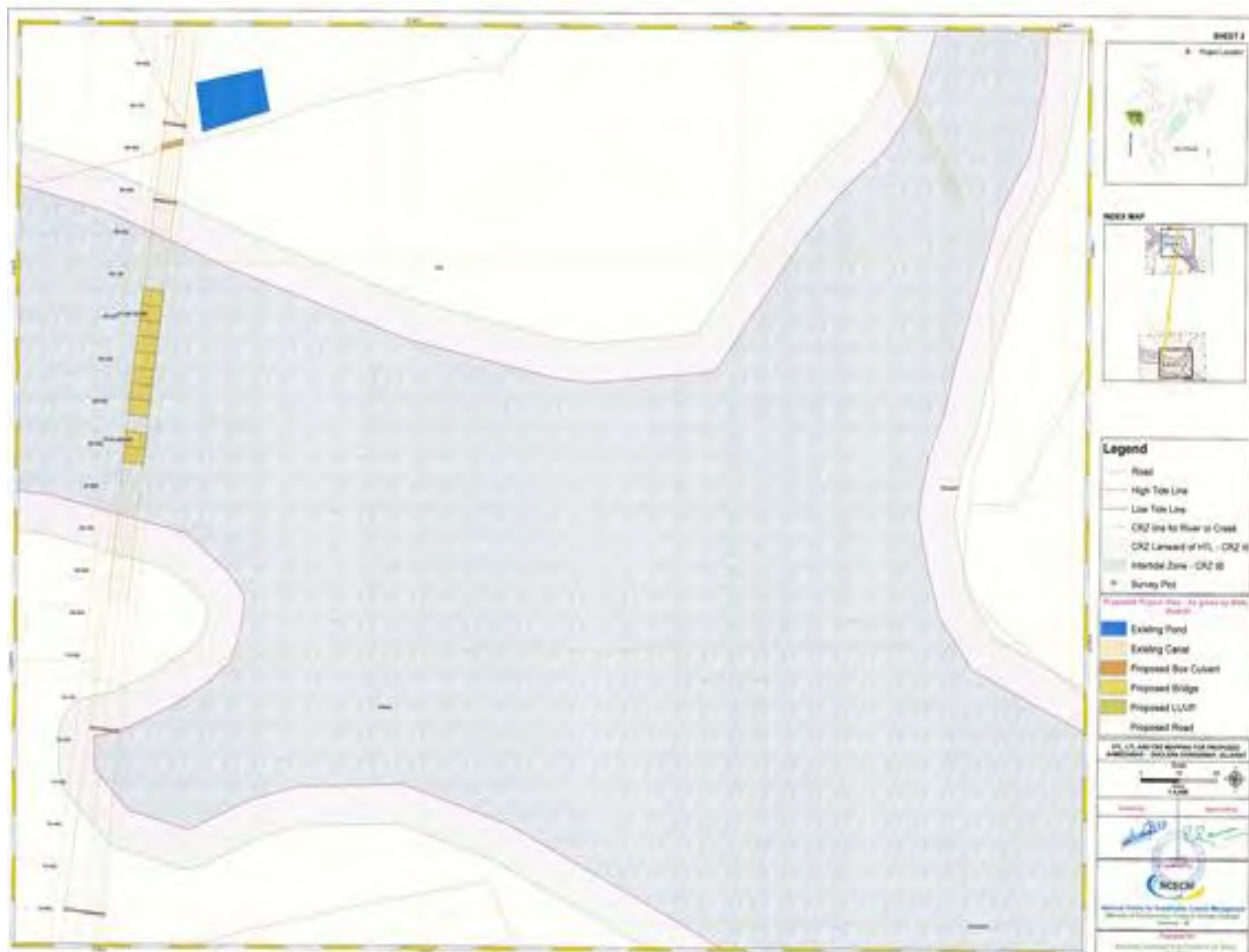
The Project road from Ch. 59+700 to Ch.61+200 and Ch.68+800 to Ch.70+500 falls in the Inter Tidal Zone; CRZ-IB, CRZ-III & CRZ-IV. CRZ map indicating HTL and LTL prepared in 1:4000 scale prepared by National Centre for Sustainable Coastal Management (NCSCM), Ministry of Environment, Forest & Climate Change, Government of India, Chennai is shown below in **figure 9 (a) and 9 (b)**.







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**Figure 9 (b): CRZ map indicating HTL and LTL from Ch.68+800 to Ch.70+500**

### 6.5.7.3.1 On-Site Emergency Plan

#### 6.5.7.3.1.1 Objective and Contents

The objective is to combat emergency caused by an accident, the effects of which are confined to the Site involving only the people working on the project. This section essentially consists of an action plan which includes identification of key personnel; defined responsibilities of key personnel; designated ECCs and assembly points; declaration of emergency; all clear signal; actions to be taken by non-key Personnel during emergency.

#### Appointment of Key Persons and their Role

##### 1. Site Controller (SC)

The General Manager (however called) or his nominated deputy will assume overall responsibility for the Site and its personnel.



## **2. Incident Controller (IC)**

A Production Manager or an Officer of similar rank will be nominated to act as the IC. Immediately on learning about an emergency, he will rush to the incident site and take overall charge and report to the SC.

## **3. Liaison Officer (LO)**

Personnel/Administrative Manager or his nominated Officer of deputy rank will work as LO and will be stationed at the Nodal Control Centres during emergency to handle Police, Press and other enquiries.

## **4. Forward Area Controller (FAC)**

Departmental Incharge of the concerned area will be the FAC to take care of the respective departments during emergency.

## **5. Team Leader (TL)**

As number of specified activities may have to be carried out, for which specific teams have to be formulated and their roles or duties defined, each of them will be headed by a TL. The following teams are suggested:

- i) Task Force
- ii) Repair Team
- iii) Fire Fighting Team
- iv) Communication Team
- v) Security Team
- vi) Manpower Team
- vii) Safety Team
- viii) Transport Team
- ix) Medical Team

## **Emergency Control Centre's (ECC)**

Emergency Control Room is to be set up and marked on the site plan for the knowledge of all concerned. ECC is the focal point and it should be well connected with internal and external telephones and furnished with list of personnel and their addresses.

## **Assembly Points**

Assembly points, the pre-determined safe places, where people will be directed after evaluation from the hazardous locality, have to be set up and marked on the site plan. Escape routes from assembly points have to be clearly defined and depicted.



## Alarms

Suitable sirens will be provided at Site, which could be operated from the Nodal Control Rooms. The coding of the siren should be as per the standards and well circulated within the facility.

## Tie Ups for Aid with Institutions (Hospitals, Wards, Police Stations etc.)

It is essential to have mutual aid arrangements among the industries in the neighborhood which would help in the case of a major disaster.

## Training and Mock Drills

Proper training of the key personnel and other non-key personnel, who will take part in case of an emergency, should be arranged. Mock drills will be performed to test the performance of the procedure laid.

### 7.1 Management Plan Budget

The Budget for the Environment Management Plan has been incorporated in Chapter 9 of the Draft Environmental Impact Assessment Report. However the statutory costing, if any for the CRZ areas will be borne by NHAI separately.

### 8.1 Summary And Conclusions

The summary and conclusion has been described below:

- The High Tide Line (HTL), Low Tide Line (LTL) and CRZ categories are presented in 1:4000 scale cadastral maps with survey plot information and have been attached as **Annexure I**.
- The HTL and LTL are demarcated from aerial photographs/satellite images by taking into consideration different signatures such as boundaries of embankments, vegetation and bunds as existed at the aerial photo/satellite image and verified in the field.
- The intertidal zone without mangroves is CRZ IB. Mangroves, which are CRZ IA, are not present along the area where the proposed Expressway passes.
- The proposed Ahmedabad - Dholera expressway route passes through CRZ areas at Valinda, Anandpur, Pipli and Bholad villages.
- The proposed Ahmedabad - Dholera expressway route passes through CRZ categories such as CRZ IB, CRZ III and CRZ IV.



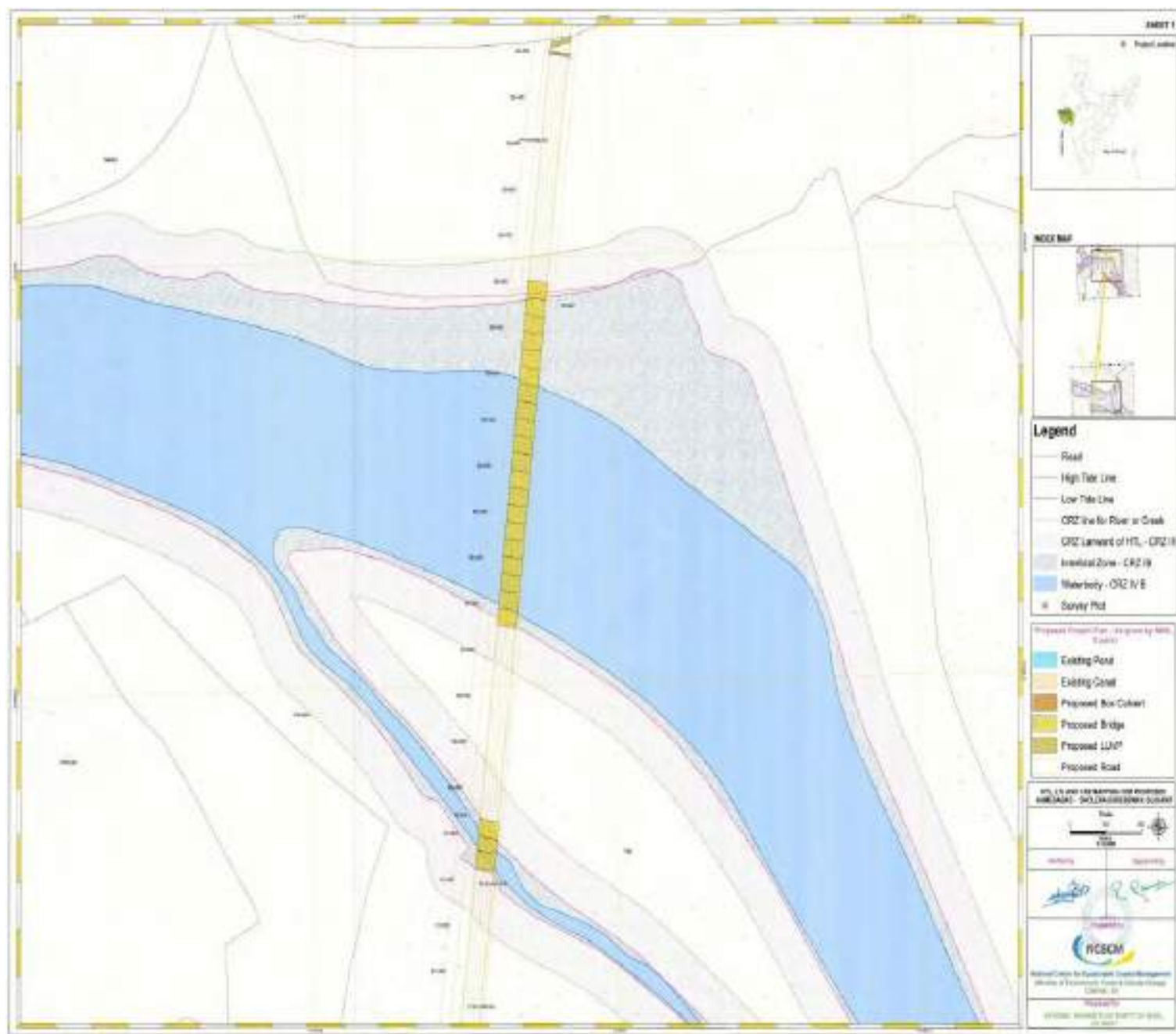
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- The categorization of CRZ in the approved CZMP may be followed for CRZ categorization.
- The impacts and its mitigation measures have been studied and presented in this report.

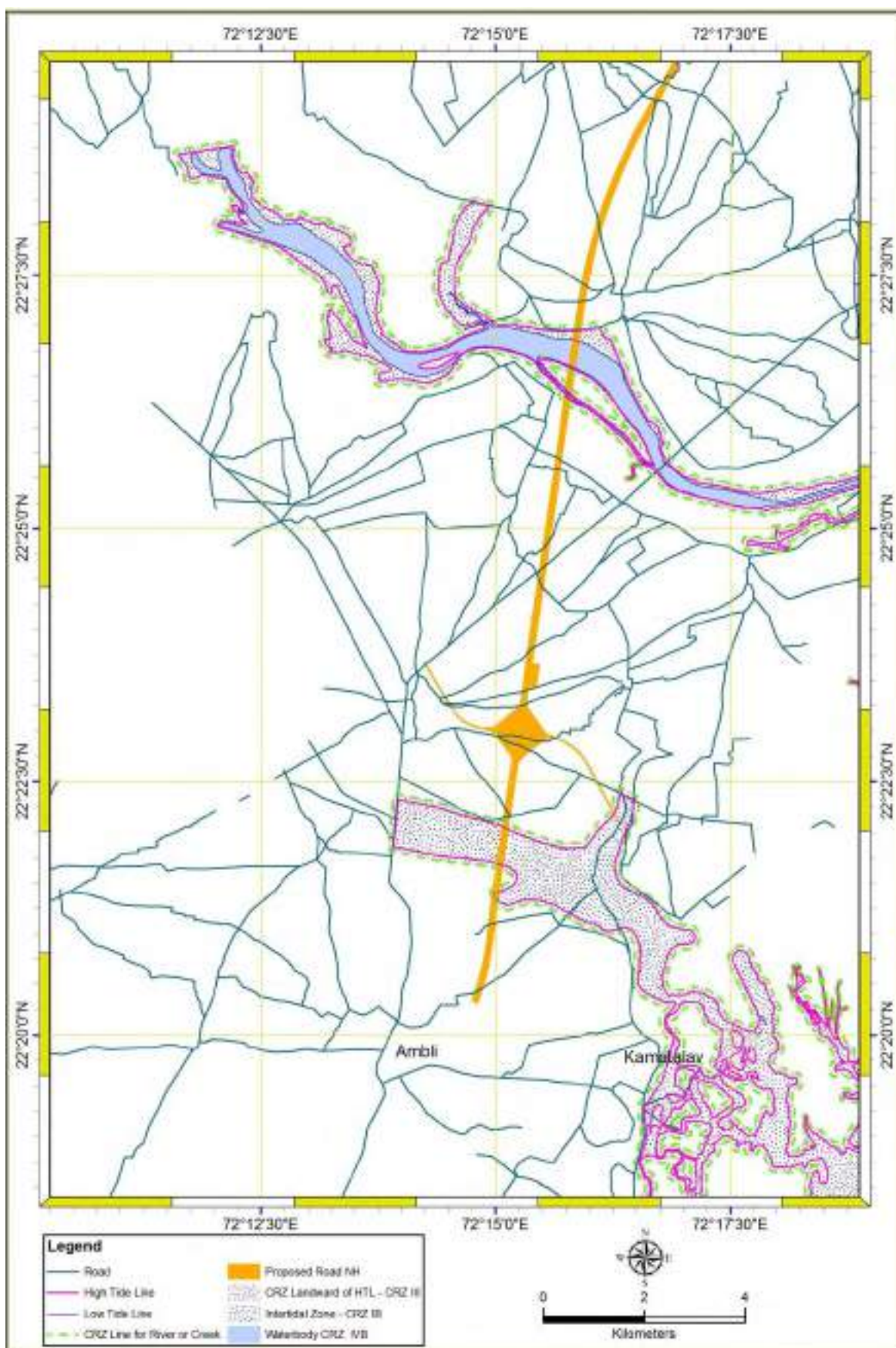
**APPENDIX I: A SCALED MAP (IN 1:4000) INDICATING LOW  
TIDE LINE & HIGH TIDE LINE AND CRZ AREA BY NATIONAL  
CENTRE FOR SUSTAINABLE COASTAL MANAGEMENT  
(NCSCM), CHENNAI MINISTRY OF ENVIRONMENT, FOREST  
& CLIMATE CHANGE, GOVERNMENT OF INDIA**







**APPENDIX II: 7 KM RADIUS MAP FROM THE CRZ  
LOCATIONS**



## **APPENDIX III: SUPERIMPOSITION OF THE CRZ MAP ON THE PROJECT SECTION**





edara

Dhanala

Bhopad

Nani Boru

Moti Boru

Anandpur

Pipali-Vataman Hwy

Kamiyala

Ratanpur

Pachchham

SH-40

Pipali

Buranpur

Mitali

Navagam

Gamph

5.37 km

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Image © 2019 DigitalGlobe  
Image © 2019 DigitalGlobe

Google Earth

**ANNEXURE IX: MINUTES OF MEETING OF PUBLIC HEARING  
OF AHMEDABAD AND BHAVNAGAR DISTRICTS**

**MINUTES OF MEETING OF PUBLIC HEARING OF  
AHMEDABAD DISTRICT**

**Gujarat Pollution Control Board**

Paryavaran Bhavan, Sector 10 A, Gandhinagar 382 010  
Tel : 079-23232152 Fax : 079-23222784 www.gpcb.gov.in

**Public Notice**

It is hereby informed that as per the Ministry of Environment, Forests & Climate Change, Government of India, New Delhi vide its Notification no. S.O. 1533 dated September 14, 2006, Public Hearing has been fixed for Construction of Ahmedabad-Dholera Expressway Road (116 km) (NHAI/BM/21) in the state of Gujarat by M/s. National Highways Authority of India, (Ministry of Road Transport and Highways), 3A & 3B, 2nd Floor, Amul Building, Near Dena Bank, Vajrapur Road, Jivraj Park, Ahmedabad-380051 (For part of Dist. Ahmedabad), covered under Category "A" as mentioned in their request application.

All local affected persons of the project are requested to remain present in the public hearing or send their response in writing to Member Secretary, Gujarat Pollution Control Board before the hearing date.

Other concerned persons having a plausible stake in environment aspects of the project or activity can submit their responses to Member Secretary, GPCB in writing before the hearing date.

It may be noted that, draft Environmental Impact Assessment report and the Executive Summary of Environment Impact Assessment Report of the project has been sent to the following authorities or offices to make it available for inspection to the public during normal office hours, till the Public Hearing is over.

1. The District Collector Office, Ahmedabad.
2. District Development Office, Ahmedabad.
3. District Industry Centre, Ahmedabad.
4. Taluka Development Office, Ta. Daskroi, Sanand, Bavala, Dholka, Dhandhuka and Dholera, Dist. Ahmedabad.
5. Additional Principal Chief Conservator of Forests (G), Ministry of Environment, Forests & Climate Change, Govt. Regional Office (West Zone), Kandriya Paryavaran Bhavan, E-5, Arera Nagar, Link Road 3, Ravishankar Nagar, Bhopal 462 016.
6. Regional Office, Gujarat Pollution Control Board, Ahmedabad (Rural), Sector-10A, Paryavaran Bhavan, Gandhinagar.

The District Magistrate / District Collector / Deputy Commissioner or his/her representative not below the rank of Additional District Magistrate shall supervise and preside over the written public hearing process.

The Public Hearing is scheduled to be held on 13/11/2018 at 13.30 hrs. Venue : Mukhi Mango Farm, Off Dholka-Chiyada Road, Village Sindhrej, Taluka Dholka, Dist. Ahmedabad.

Place : Gandhinagar  
Date : 09/10/2018

K.C. Mistry  
Member Secretary



# Annexure-D

મંગળવાર, તા. ૦૮ ઓક્ટોબર ૨૦૧૮

(અમદાવાદ આવૃત્તિ) મુજરાત સપ્તાહ ૧૧



## ગુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડ

પર્યાવરણ ભવન, સેક્ટર ૧૦ એ, ગાંધીનગર-૩૮૦૦૧૦  
ટે.નં. : ૦૭૯-૨૩૨૩૨૧૫૨, ફેક્સ : ૦૭૯-૨૩૨૩૨૧૫૨, www.gpcb.gov.in

### જાહેર સૂચના

ભારત સરકારના પર્યાવરણ, વન અને જળ વડુ પરિવર્તન મંત્રાલય, નવી દેહલીના જાહેરનામા ક્રમાંક : સે.ઓ. ૧૫૩૩ તારીખ ૧૪-૯-૨૦૦૭ અન્વયે જણાવવાનું કે, મેન્સ બેન્ડના કાર્બન ડાયોક્સાઇડ બોલ ઇન્ડેક્સ, (માર્ચ ૧૯૯૫ન અને કાર્બન મંત્રાલય) ૩એ અને ૨એ, સપ્તાહ, ભરુણ મિટરોન, દેના મેન્ડ લગુક, વેજગુકા રેડ, ક્રાયાજ પાર્ક, સમગ્રવાદ-૩૮૦૦૫૧ (સમગ્રવાદ કુટરવાલ સ્થળે), કાલ સમગ્રવાદ-ધોલેરા બેટમેન રોડ (૧૧૦ કી.મી.) (બેન્ડમેનબેન્ડાઈ /સીએમ/૧૧) મુજરાત સપ્તાહના બાંધકામ મહેલી વીરોજના (પ્રોજેક્ટ) હેમર્સ "કો" સોનર્ન તેઓની અલગ અલગ પર્સોનલિટી ધોલકુલાવણી આયોજીત કરવામાં આવેલ છે.

ધોલકુલાવણીની પ્રક્રિયાના ભાગરૂપે કાર્બન વચાનતા સ્થાનિક અસરકારકા ડોકીનું ઇમાન તેડીને સરકાર ધોલકુલાવણી દરમિયાન કાજર રહેવા અથવા તેઓની ટીકા-ટીપ્પણી તેમિતમાં પર્સોનલિટી મુલાવણીની ટાઈમ ખોલ સમય સચિવકર, મુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડને સોલવા વિનંતી છે. ૨૦૧ ઇમાનની સાન્ય બાકિતેઓને પણ તેઓની ટીકા-ટીપ્પણી પર્સોનલિટી મુલાવણીની ટાઈમ ખોલના તેમિતમાં સાન્ય સચિવકર, મુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડને સોલવા વિનંતી છે. અને કાર્બનમીક છે કે, પ્રોજેક્ટના સમાપ્તિ - (બેન્ડમેનબેન્ડાઈ કાર્બન મેટરોલોજી) અનેકાનના મુલાવણી પ્રત ટાકા બેન્ડમેનબેન્ડાઈ પ્રોજેક્ટ બેન્ડમેનબેન્ડાઈ સોલિન્ટ અનેકાનની પ્રત કોલે ઇમાન બેન્ડમેનબેન્ડાઈ/કાર્બનને ખોલે કાર્બનના કિપ્પણે દરમિયાન સોલ મુલાવણીના કિન કુર્તી મિટાની રાકાનો.

૧. મિટા કોલેક્ટર મીલી કપેરી, અમદાવાદ
૨. મિટા મિટા કાર્બનમીક કપેરી, અમદાવાદ
૩. મિટા મેન્ડમેન, અમદાવાદ
૪. ભરુણ મિટા કાર્બનમીક કપેરી, ટા. દાસબોઈ, સાધાર, વાવના, ધોલકા, કોલુકા, અને ધોલકા, મિ. અમદાવાદ.
૫. અધિક વચ મુલા વન કોલકરની (કો), પર્સોનલ, વન અને જળ વડુ પરિવર્તન મંત્રાલય ભાગના કાર્બનમીક કાર્બન કપેરી (અધિક કોલ), કેન્ડ્રીય પર્સોનલ સમય, ટ-૫, બેટમેન કોલકર, ધોલક રોડ-૩, સમિતીઅમદા, ભોપાલ-૪૬૧૦૧૩
૬. પ્રોજેક્ટ કપેરી, મુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડ, અમદાવાદ (કાન્ય), સેક્ટર-૧૦ એ, પર્સોનલ ભવન, ગાંધીનગર.

મિટા કપેર/મિટા મેટરોલ/કોલુકા કપેર અથવા તેઓના/કેન્ડ્રીયા પ્રોજેક્ટ, કે મેન્ડ કોલે અધિક કાર્બન મેટરોલની કિપ્પણી કરાનો ન કોલ, તેડી બાકિતે સરકાર ધોલકુલાવણીના કાર્બનમીક કાર્બન અને કાર્બન કરતી.

ધોલકુલાવણીની ટાઈમ ૧૩-૧૧-૨૦૧૮ ના રોજ ૧૩:૩૦ કાનો, સ્થળ : મુર્તી મિંકો કાર્ન, બોલ ધોલકા-ધોલકા રોડ, માન સોલિન્ટ, ભરુણ ધોલકા, કાર્બન અમદાવાદ ખોલે કાર્બનને અન્યથા છે.

સમય : ગાંધીનગર  
તારીખ : ૦૮-૧૦-૨૦૧૮

ડે.ઓ. મિટા  
સમય સચિવ



**SOME PHOTOGRAPHS DURING PUBLIC HEARING AT AHMEDABAD**



# GUJARAT POLLUTION CONTROL BOARD REGIONAL OFFICE-AHMEDABAD(Rural)



Room No 203, 204, 205, Old Building, Sector-10-A,  
"Paryavaran Bhavan", Gandhinagar-382010  
E-mail: [ro-gpcb-ahmr@gujarat.gov.in](mailto:ro-gpcb-ahmr@gujarat.gov.in)

## PUBLIC HEARING PROCEEDINGS

It is hereby informed that as per the Ministry of Environment and Forests & Climate Change, Government of India, New Delhi vide its Notification No. S.O. 1538 (E) dated 14<sup>th</sup> September 2006, and its subsequent amendments, Public Hearing is fixed for Construction of Ahmedabad-Dholera Expressway (110 km) (NHAI/BM/21) in the state of Gujarat, by M/s. National Highway Authority of India (Ministry of Road Transport and Highways), 3A & 3B, 2<sup>nd</sup> floor, Amul Building, Near Dena Bank, Vejalpur Road, Jivraj Park, Ahmedabad-380051 (for part of Dist. Ahmedabad) at Mukhi Mango Farm, Off Dholka-Chiyada Road, Village: Sindhrej, Taluka: Dholka, District: Ahmedabad, Gujarat covered under 'Category A' of the schedule 7(f).

A copy of the draft Environment Impact Assessment Report and the Executive Summary of Draft Environment Impact Assessment Report in English and Gujarati were sent to the following authorities or offices to make it available for inspection to the public during normal office hours till the Public Hearing is over:

1. The District Collector Office, Ahmedabad
2. District Development Office, Ahmedabad
3. District Industry Centre, Ahmedabad
4. Taluka Development Office, Tal. Sanand, Tal. Bavla, Tal. Dholka, Tal. Dhandhuka, Tal. Dholera & Tal. Daskroi Dist. Ahmedabad
5. Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forests & Climate Change, Government of India, Regional Office (West Zone), Kendriya Paryavaran Bhavan, E-5, Alera Colony, Link Road-3, Ravishanker Colony, Bhopal - 462016
6. Regional Office, Gujarat Pollution Control Board, Ahmedabad (Rural), G/o, "Paryavaran Bhavan", Sector 10-A, Gandhinagar-382010.

Other concerned persons having plausible stake in environmental aspects were requested to send their responses in writing to the concerned regulatory authorities.

The Public Hearing was scheduled on 13/11/2018 at 13.30 Hrs at Mukhi Mango Farm, Off Dholka-Chiyada Road, Village: Sindhrej, Taluka: Dholka, District: Ahmedabad, Gujarat.

An advertisement was published in Gujarati in "Gujarat Samachar" Ahmedabad edition and in English in "The Times of India" Ahmedabad edition, dated 09/10/2018.

Shri G. M. Trivedi (G.A.S), Additional Collector & Additional District Magistrate, Ahmedabad as a representative of District Collector and District Magistrate, Ahmedabad has presided over the entire Public Hearing process.

A statement showing participants present during the public hearing is enclosed as **Annexure-A**.

# GUJARAT POLLUTION CONTROL BOARD REGIONAL OFFICE-AHMEDABAD(Rural)





Room No 203, 204, 205, Old Building, Sector:10-A,  
"Paryavaran Bhavan", Gandhinagar-382010  
E-mail : [ro-gpcb-ahmr@gujarat.gov.in](mailto:ro-gpcb-ahmr@gujarat.gov.in)

A statement showing salient point highlighting issues raised by the participants and responses by the representative of the applicant during the Public Hearing in English language is enclosed as **Annexure-B** and in Gujarati language is enclosed as **Annexure-B1** respectively.

The copy of written representation submitted during public hearing are enclosed as Annexure B-Q-1 to B-Q-16 and the written replies from representative of NHAI are enclosed herewith as Annexure B-A-1 to B-A-16 respectively. Public notice for public hearing was published in English and Gujarati language newspaper is given in **Annexure-D**.

Place: Mukhi Mango Farm,  
Off Dholka-Chiyada Road,  
Village: Sindhrej,  
Tal: Dholka,  
District: Ahmedabad  
Date: 13/11/2018

  
C.A. Shah  
Regional Officer,  
GPCB, Ahmedabad (Rural),  
As a representative of  
Gujarat Pollution Control  
Board

  
C.M. Trivedi (G.A.S.)  
Additional Collector &  
Additional District Magistrate  
As a representative of  
Collector & District Magistrate,  
Ahmedabad

- Encl: 1. Annexure A, B, B1, B-Q-1 to B-Q-16, B-A-1 to B-A-16 and D as above  
2. Video CD of Public Hearing  
3. CD of Public Hearing Proceeding

# GUJARAT POLLUTION CONTROL BOARD REGIONAL OFFICE-AHMEDABAD(Rural)



Room No 203, 204, 205, Old Building, Sector:10-A,  
"Paryavaran Bhavan", Gandhinagar-382010  
E-mail : [gp-cb-ahmed@gujarat.gov.in](mailto:gp-cb-ahmed@gujarat.gov.in)

## Annexure-A

### A statement showing participants present during the public hearing

As per the Ministry of Environment, Forest & Climate Change, Government of India, New Delhi vide its Notification No. S.O. 1533(E) dated 14<sup>th</sup> September, 2006 and its subsequent amendment S.O. 3067(E) dated 1<sup>st</sup> December, 2009, Public Hearing is fixed for Construction of Ahmedabad-Dholera Expressway Road (110 km) (NHAI/BM/21) in the state of Gujarat, by M/s. National Highway Authority of India (Ministry of Road Transport and Highways) 3A & 3B, 2<sup>nd</sup> floor, Amul Building, Near Dena Bank, Vejalpur Road, Jivraj Park, Ahmedabad-380051 (for part of Dist. Ahmedabad) at Mukhi Mango Farm, Off Dholka-Chiyada Road, Village: Sindhrej, Taluka: Dholka, District: Ahmedabad, Gujarat covered under "Category A" of the schedule 7(f).

A statement showing participants present during the Public Hearing held on 13.11.2018, at 13:30 hrs. at Mukhi Mango Farm, Off Dholka-Chiyada Road, Village: Sindhrej, Taluka: Dholka, District: Ahmedabad, Gujarat is as under:

ભારત સરકારના પર્યાવરણ, વન અને જળવાયુ પરિવર્તન મંત્રાલય, નવી દિલ્હીના જાહેરનામા ક્રમાંક: એસ.ઓ. ૧૫૩૩(ઇ), તા. ૧૪-૦૯-૨૦૦૬ અને તેના પછીના સુધારા ક્રમાંક એસ.ઓ. ૩૦૬૭ (ઇ), તા. ૦૧-૧૨-૨૦૦૯ ના અનુસંધાને પ્રે. નેશનલ હાઈવે ઓથોરીટી ઓફ ઇન્ડિયા (માર્ગ પરિવહન અને હાઈવે મંત્રાલય) ૩એ અને ૩બી, બીજો માળ, અમુલ બિલ્ડીંગ, દેના બેન્ક નજીક, વેજલપુર રોડ, જીવરાજ પાર્ક, અમદાવાદ-૩૮૦૦૫૧ (અમદાવાદ જીલ્લાના ભાગરૂપે) દ્વારા અમદાવાદ-ધોલેરા એક્સપ્રેસવેય રોડ (૧૧૦ કીમી) (એનએચએઆઈ/બીએમ/૨૧) ગુજરાત રાજ્યના બાંધકામ માટેની શીડ્યુલ ૭(એફ), કેટેગરી 'એ' હેઠળ આવનારી સૂચિત પરિયોજનાની લોક સુનાવણી મુખી મેંગો ફાર્મ, ઓફ ધોળકા-ચિયાડા રોડ, ગામ. સીંધરેજ, તાલુકો. ધોળકા, જિલ્લો. અમદાવાદ, ગુજરાત ખાતે યોજવામાં આવેલ.

લોક સુનાવણી જે તા. ૧૩.૧૧.૨૦૧૮ ના રોજ બપોરે ૧૩:૩૦ કલાકે, મુખી મેંગો ફાર્મ, ઓફ ધોળકા-ચિયાડા રોડ, ગામ. સીંધરેજ, તાલુકો. ધોળકા, જિલ્લો. અમદાવાદ, ગુજરાત ખાતે રાખવામાં આવેલ તે દરમિયાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

| Sr. No.<br>ક્રમાંક | Name & Designation<br>નામ અને હોદ્દો | Organization/Village<br>સંસ્થા/ગામ | Signature<br>સહી              |
|--------------------|--------------------------------------|------------------------------------|-------------------------------|
| I                  | મહિંદ્રાસાહેબજીભાઈભાઈ                | સરંગવડા                            | મહિંદ્રાસાહેબજીભાઈ<br>સરંગવડા |

| Sr. No.<br>ક્રમ | Name & Designation<br>નામ અને હોદ્દો | Organization/Village<br>સંસ્થા/ગામ | Signature<br>સહી            |
|-----------------|--------------------------------------|------------------------------------|-----------------------------|
| ①               | શ્રીકે.કે.એલ.લાલભાઈ                  | સરગપાલી                            | ૯૭૧૪૮૪૮-૦૭૦                 |
| ②               | પરબલેડિભાઈજીભાઈકેડેભાઈ               | સરગપાલી                            | ૯૭૨૧૪૬૬૭૭૭                  |
| ૩               | જાંબુભાઈ ગાંધીસિંહજીભાઈ              | ભાવનપારી<br>ગા.ભાવન                | ૫૫૦૫૭૭૨૦૩<br>જાંબુભાઈ       |
| ૪               | કે.જી.ભાઈસિંહજીભાઈ                   | ભાવનપારી<br>ગા.ભાવન                | ૫૦૮૨૨૨૨૨૨<br>કે.જી.ભાઈ      |
| ૫               | સામંતભાઈસિંહજીભાઈ                    |                                    | ૫૭૭૩૨૨૨૨૨<br>સામંતભાઈ       |
| ૬               | ભાઈભાઈસિંહજીભાઈ                      |                                    | ૯૭૨૫૮૦<br>૩૦૦૮<br>ભાઈભાઈ    |
| ૭               | કે.જી.ભાઈસિંહજીભાઈ                   |                                    | ૯૮૨૫૦૨૧૮૨૫<br>કે.જી.ભાઈ     |
| ૮               | ભાઈભાઈસિંહજીભાઈ                      |                                    | ૯૮૦૮૮૮-<br>૯૭૮૭             |
| ૯               | કે.જી.ભાઈસિંહજીભાઈ                   |                                    | ૯૮૨૫૭૭૭<br>૭૭૩<br>કે.જી.ભાઈ |
| ૧૦              | કે.જી.ભાઈસિંહજીભાઈ                   |                                    | ૯૮૨૫૮૦૭૦૭૭<br>કે.જી.ભાઈ     |
| ૧૧              | કે.જી.ભાઈસિંહજીભાઈ                   |                                    | ૯૮૨૫૮૦૭૦૭૭<br>કે.જી.ભાઈ     |
| ૧૨              | કે.જી.ભાઈસિંહજીભાઈ                   |                                    | ૯૮૨૫૮૦૭૦૭૭<br>કે.જી.ભાઈ     |
| ૧૩              | કે.જી.ભાઈસિંહજીભાઈ                   |                                    | ૯૮૨૫૮૦૭૦૭૭<br>કે.જી.ભાઈ     |
| ૧૪              | કે.જી.ભાઈસિંહજીભાઈ                   |                                    | ૯૮૨૫૮૦૭૦૭૭<br>કે.જી.ભાઈ     |



| Sr. No.<br>ક્રમ | Name & Designation<br>નામ અને સ્થિતિ | Organization/Village<br>સંસ્થા/ગામ | Signature<br>સહી |
|-----------------|--------------------------------------|------------------------------------|------------------|
| 16              | પ્રમોદભાઈ રામસાહેબ<br>લાલભાઈ         | કુવાલ રૂપાવડી<br>તેમજી દીકરી       | દીકરી            |
| 17              | પરમાર રૂપાવડી                        | કુવાલ રૂપાવડી                      | પરમાર            |
| 18              | પરમાર રૂપાવડી                        | કુ. રૂપાવડી                        | રૂપાવડી          |
| 19              | પરમાર રૂપાવડી                        | કુવાલ રૂપાવડી                      | પરમાર રૂપાવડી    |
| 20              | પરમાર રૂપાવડી                        | કુવાલ રૂપાવડી                      | પરમાર રૂપાવડી    |
| 21              | પરમાર રૂપાવડી                        | કુવાલ રૂપાવડી                      | પરમાર રૂપાવડી    |
| 22              | પરમાર રૂપાવડી                        | કુવાલ રૂપાવડી                      | પરમાર રૂપાવડી    |
| 23              | પરમાર રૂપાવડી                        | કુવાલ રૂપાવડી                      | પરમાર રૂપાવડી    |
| 24              | પરમાર રૂપાવડી                        | કુવાલ રૂપાવડી                      | પરમાર રૂપાવડી    |
| 25              | પરમાર રૂપાવડી                        | કુવાલ રૂપાવડી                      | પરમાર રૂપાવડી    |
| 26              | પરમાર રૂપાવડી                        | કુવાલ રૂપાવડી                      | પરમાર રૂપાવડી    |
| 27              | પરમાર રૂપાવડી                        | કુવાલ રૂપાવડી                      | પરમાર રૂપાવડી    |
| 28              | પરમાર રૂપાવડી                        | કુવાલ રૂપાવડી                      | પરમાર રૂપાવડી    |
| 29              | પરમાર રૂપાવડી                        | કુવાલ રૂપાવડી                      | પરમાર રૂપાવડી    |

| Sr. No.<br>ક્રમ | Name & Designation<br>નામ અને હોદ્દો       | Organization/Village<br>સંસ્થા/ગામ | Signature<br>સહી |
|-----------------|--|------------------------------------|------------------|
| 30              | જી.ભા.વ.ભા.વ.ભા.વ.<br>ફા.ભા.વ.             | ભા.વ.વ.                            | જે.મ.પા.વ.12     |
| 31              | પરમાર જી.વિ.દે.ભા.વ.<br>ભા.વ.વ.વ.વ.વ.      | ભા.વ.વ.                            | જે.વે.વ.વ.વ.વ.વ. |
| 32              | કા.વ.વ.વ.વ.વ.વ.વ.<br>કા.વ.વ.વ.વ.વ.વ.       | ભા.વ.વ.                            | જે.વે.વ.વ.વ.વ.   |
| 33              | પરમાર ભા.વ.વ.વ.વ.<br>કા.વ.વ.વ.વ.વ.         | ભા.વ.વ.                            | B.P. Parmar      |
| 34              | પરમાર ભા.વ.વ.વ.વ.<br>કા.વ.વ.વ.વ.વ.         | ભા.વ.વ.                            | જે.વે.વ.વ.વ.     |
| 35              | પરમાર ભા.વ.વ.વ.વ.<br>કા.વ.વ.વ.વ.વ.         | ભા.વ.વ.                            | જે.વે.વ.વ.વ.     |
| 36              | પરમાર ભા.વ.વ.વ.વ.<br>કા.વ.વ.વ.વ.વ.         | ભા.વ.વ.                            | જે.વે.વ.વ.વ.     |
| 37              | Bhant Committee for<br>Project Coordinator | SMCC/SPV.UD                        | જે.વે.વ.વ.વ.     |
| 38              | Vijay. P. Mandari                          | N.H.A.T.<br>P.V.                   | જે.વે.વ.વ.વ.     |
| 39              | કિશોરભાઈ ભા.વ.વ.વ.<br>કા.વ.વ.વ.વ.વ.        | ભા.વ.વ.                            | K. B. DABU       |
| 40              | પરમાર ભા.વ.વ.વ.વ.<br>કા.વ.વ.વ.વ.વ.         | ભા.વ.વ.                            | જે.વે.વ.વ.વ.     |
| 41              | પરમાર કી.વિ.વિ.વ.વ.વ.                      | ભા.વ.વ.                            | જે.વે.વ.વ.વ.     |
| 42              | કિશોરભાઈ ભા.વ.વ.વ.                         | ભા.વ.વ.                            | H. L. Patel      |
| 43              | પરમાર ભા.વ.વ.વ.વ.<br>કા.વ.વ.વ.વ.વ.         | ભા.વ.વ.                            | જે.વે.વ.વ.વ.     |

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|-----------------|--------------------------------------|------------------------------------|-------------------------|
| 4-4             | ઈશ્વરભાઈ બરજનકમાર<br>મોડી            | સાપુર/રુપુર                        | ઈશ્વર ભોંડાર            |
| 4-5             | મનમથકુમાર કે. જાવલકર                 | સિંદરેજ                            | મનમથકુમાર               |
| 4-6             | ગણપતભાઈ ન. ઠાકર                      | સાપુર                              | ગણપતભાઈ<br>ન. ઠાકર      |
| 4-7             | બાલકૃષ્ણ ભોંડાર મીરા                 | બામોડ                              | બાલકૃષ્ણ<br>ભોંડાર મીરા |
| 4-8             | શંભુભાઈ ભોંડાર - ગમગર                | સિંદરેજ                            | શંભુભાઈ                 |
| 4-9             | મહેશકુમારભાઈ/કોંડેર                  | કાલીકા                             | મહેશકુમાર               |
| 50              | મહેશ ભોંડાર/ભાલકા                    | કાલીકા                             | S.R.T                   |
| 51              | કેતવ સરભાઈ/કા                        | કાલીકા                             | કેતવ                    |
| 52              | બુદ્ધાભાઈ/સાગમાર                     | સાવરેજ                             | બુદ્ધા                  |
| 53              | દિલાવર રેજે કો સાગર                  | સાવરેજ                             | ડોંગે                   |
| 54              | મહેશકુમાર મહેશ જમાર                  | સિંદરેજ                            | RS                      |
| 55              | મહેશભાઈ પાદેલા                       | ભાલ                                | M. P. P.                |
| 56              | ભાલભાઈ પાદેલા                        | ભાલ                                | ભાલભાઈ પાદેલા           |
| 57              | ચિરાગ પટેલ                           | ગોમુર                              | Chirag Patel            |

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|-----------------|--------------------------------------|------------------------------------|--------------------------|
| 58              | પ્રો. રાજેશભાઈ વાલજીભાઈ              | શહેરુર                             | પ્રો. રાજેશભાઈ           |
| 59              | પ્રમીલાબાઈ તાલુડાજી (સિ. દરેક)       |                                    | પ્રમીલાબાઈ               |
| 60              | દીપાભાઈ/સરખાભાઈ/ચરખાઈ (સિ. દરેક)     |                                    | દીપાભાઈ/સરખાભાઈ<br>ચરખાઈ |
| 61              | કે. જી. રામ<br>ગામગામ                | ગામગામ                             | કે. જી. રામ              |
| 62              | નરસિંહ કોમરસિંહ                      | પી. સી. રામ                        | ન. રામ                   |
| 63              | કે. જી. રામ                          | કે. જી. રામ                        | કે. જી. રામ              |
| 64              | બા. જી. રામ                          | બા. જી. રામ                        | બા. જી. રામ              |
| 65              | કા. જી. રામ                          | કા. જી. રામ                        | કા. જી. રામ              |
| 66              | સી. જી. રામ                          | સી. જી. રામ                        | સી. જી. રામ              |
| 67              | સી. જી. રામ                          | સી. જી. રામ                        | સી. જી. રામ              |
| 68              | સી. જી. રામ                          | સી. જી. રામ                        | સી. જી. રામ              |
| 69              | સી. જી. રામ                          | સી. જી. રામ                        | સી. જી. રામ              |
| 70              | સી. જી. રામ                          | સી. જી. રામ                        | સી. જી. રામ              |
| 71              | સી. જી. રામ                          | સી. જી. રામ                        | સી. જી. રામ              |

| Sr. No.<br>ક્રમ | Name & Designation<br>નામઅનેહોદ્દે | Organization/Village<br>સંસ્થા/ગામ | Signature<br>સહ.      |
|-----------------|------------------------------------|------------------------------------|-----------------------|
| 72              | મુસેજીભાઈ અલીમખાઈ<br>બાંકવા        | લેજલ.કા.                           |                       |
| 73              | અમીરભાઈભાઈભાઈભાઈ                   | (ગામ)                              |                       |
| 74              | મીનાભાઈબોમભાઈ                      | (ગામ)                              | મીનાભાઈબોમભાઈ         |
| 75              | અલિયાભાઈ/ રામજીભાઈ/રમે             | (ગામ)                              | પરેશ.વી.સો.           |
| 76              | દરબાજીભાઈ/ જહીરાભાઈ                | (ગામ)                              |                       |
| 77              | દરેશ. રામભાઈ ભાઈ                   | (ગામ)                              |                       |
| 78              | ભાગ્યભાઈ રામભાઈ                    | (ગામ)                              |                       |
| 79              | ગોવિંદભાઈ ભાઈ                      | (ગામ)                              | ગો.ભાઈ                |
| 80              | ગજાભાઈ ભાઈ                         | જામનગર(ગા.)                        | ગજાભાઈ<br>ભાઈ         |
| 81              | રામજીભાઈ. માવલજીભાઈ                | ભાઈ                                | રામજીભાઈ<br>માવલજીભાઈ |
| 82              | અમીરભાઈ અમીરભાઈ                    | ગુલામજીભાઈ                         | અમીરભાઈ અમીરભાઈ       |
| 83              | ગોવિંદજીભાઈ ભાઈ                    | ગુલામજીભાઈ                         | ગોવિંદજીભાઈ ભાઈ       |
| 84              | રમેશભાઈ ભાઈ                        | ગુલામજીભાઈ                         | રમેશભાઈ ભાઈ           |



# GUJARAT POLLUTION CONTROL BOARD REGIONAL OFFICE-AHMEDABAD(Rural)



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| Sr. No.<br>ક્રમ નં | Name & Designation<br>નામ અને હોદ્દો | Organization/Village<br>સંસ્થા/ગામ | Signature<br>સહી |
|--------------------|--------------------------------------|------------------------------------|------------------|
| 85                 | મુખ્ય મંત્રી                         | અમદાવાદ                            |                  |
| 86                 | મુખ્ય મંત્રી                         | અમદાવાદ                            |                  |
| 87                 | કા. કોમિશનર                          | અમદાવાદ                            |                  |
| 88                 | કોમિશનર                              | અમદાવાદ                            |                  |
| 89                 | કોમિશનર                              | અમદાવાદ                            |                  |
| 90                 | કોમિશનર                              | અમદાવાદ                            |                  |
| 91                 | કોમિશનર                              | અમદાવાદ                            |                  |
| 92                 | કોમિશનર                              | અમદાવાદ                            |                  |
| 93                 | કોમિશનર                              | અમદાવાદ                            |                  |
| 94                 | કોમિશનર                              | અમદાવાદ                            |                  |
| 95                 | કોમિશનર                              | અમદાવાદ                            |                  |
| 96                 | કોમિશનર                              | અમદાવાદ                            |                  |
| 97                 | કોમિશનર                              | અમદાવાદ                            |                  |
| 98                 | કોમિશનર                              | અમદાવાદ                            |                  |

# GUJARAT POLLUTION CONTROL BOARD REGIONAL OFFICE-AHMEDABAD(Rural)



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| Sr. No.<br>ક્રમકે | Name & Designation<br>નામ અને હોદ્દો               | Organization/Village<br>સંસ્થા/ગામ | Signature<br>સહી |
|-------------------|--|------------------------------------|------------------|
| 99                | મહાશી પ્રભાતી<br>ગાર (મનુષ્ય)                      | કારજી                              | P. N. Maheshi    |
| 100               | મહાશી પ્રભાતી<br>શ્રીમદ્ભગવાત                      | જીવપુરા<br>શ્રીમદ્ભગવાત            |                  |
| 101               | શ્રીમદ્ભગવાત શ્રીમદ્ભગવાત<br>કે.સી.સી. ભાગ્યેશ્વરી | કાચગુડા                            | SH. R. Patel     |
| 102               | ભાગ્યેશ્વરી મહાશી<br>અમીત કુમાર                    | કાચગુડા                            | P. Patel         |
| 103               | મહેશ્વરી મહાશી                                     | કે.સી.સી.                          | મહેશ્વરી મહાશી   |
| 104               | વિમલ કુમાર મહાશી<br>મહેશ્વરી                       | કે.સી.સી.                          | V. Patel         |
| 105               | કે.સી.સી. મહાશી                                    | કે.સી.સી.                          | કે.સી.સી.        |
| 106               | મહાશી મહાશી  | કે.સી.સી.                          | M. Patel         |
| 107               | મહેશ્વરી મહાશી<br>કે.સી.સી.                        | કે.સી.સી.                          | મહેશ્વરી મહાશી   |
| 108               | મહેશ્વરી મહાશી<br>કે.સી.સી.                        | કે.સી.સી.                          | K. Patel         |
| 109               | કે.સી.સી. મહાશી                                    | કે.સી.સી. (લા.કા.)                 | કે.સી.સી. મહાશી  |
| 110               | કે.સી.સી. મહાશી                                    | કે.સી.સી.                          | કે.સી.સી.        |
| 111               | મહેશ્વરી મહાશી<br>કે.સી.સી.                        | કે.સી.સી.                          |                  |
| 112               | મહેશ્વરી મહાશી<br>કે.સી.સી.                        | કે.સી.સી.                          | કે.સી.સી.        |

**GUJARAT POLLUTION CONTROL BOARD**  
**REGIONAL OFFICE-AHMEDABAD(Rural)**



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|-------------------|--------------------------------------|------------------------------------|------------------|
| 113               | પટેલ દિનેશ કે                        | જુવાલ રૂપાવટી                      |                  |
| 114               | પટેલ કૃપેશ એમ                        | જુવાલ રૂપાવટી                      |                  |
| 115               | પટેલ પ્રમીલ રમેશ                     | જુ. રૂપાવટી                        |                  |
| 116               | પટેલ રામચંદ્રભાઈ<br>રામચંદ્ર         | જુ. રૂપાવટી                        |                  |
| 117               | પટેલ રામચંદ્ર કે                     | જુ. રૂપાવટી                        |                  |
| 118               | પટેલ રમેશભાઈ જે                      | જુ. રૂપાવટી                        |                  |
| 119               | સમરાણી ચંદ્રસેન . પો. જા. દ.         | સમરાણી વડોદરા                      |                  |
| 120               | ભારદવાજી સી. મા. ભ. સી. દરજી         | ભારદવાજી                           |                  |
| 121               | દાસગાંધી ગણિયાઈ                      | સી. દરજી                           |                  |
| 122               | ડાંભાઈ રામદાસ                        | સી. દરજી                           |                  |
| 123               | ભાઈભાઈ રામદાસ                        | ભાઈભાઈ                             |                  |
| 124               | કાંભે. નંદલાલ મહીલાલ                 | કાંભે                              |                  |
| 125               | પ્રમીલાલ રામદાસ                      | પ્રમીલાલ                           |                  |
| 126               | દિ. (પુ. ભા. રામદાસ)                 | દિ. (પુ. ભા. રામદાસ)               |                  |

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[illegible]

| Sr. No.<br>ક્રમ | Name & Designation<br>નામ અને હોદ્દો | Organization/Village<br>સંસ્થા/ગામ | Signature<br>સહી  |
|-----------------|--------------------------------------|------------------------------------|-------------------|
| 136             | રાજીવ રાણા રાજીવ                     | રાજીવ રાણા                         | રાજીવ રાણા        |
| 137             | ગામપાલિકા અધ્યક્ષ                    | તોલકુર                             | ગામપાલિકા         |
| 138             | હાફીઝ અબ્દુલ અમીન                    | અમીન                               | હાફીઝ અબ્દુલ અમીન |
| 139             | રસીદાત્તી રામજી રામજી                | અમીન                               | રસીદાત્તી રામજી   |
| 140             | હાફીઝ રામજી રામજી                    | અમીન                               | હાફીઝ રામજી       |
| 141             | અમીન રામજી રામજી                     | અમીન                               | અમીન રામજી        |
| 142             | હાફીઝ રામજી રામજી                    | અમીન                               | હાફીઝ રામજી       |
| 143             | અમીન રામજી રામજી                     | અમીન                               | અમીન રામજી        |
| 144             | અમીન રામજી રામજી                     | અમીન                               | અમીન રામજી        |
| 145             | અમીન રામજી રામજી                     | અમીન                               | અમીન રામજી        |
| 146             | અમીન રામજી રામજી                     | અમીન                               | અમીન રામજી        |
| 147             | અમીન રામજી રામજી                     | અમીન                               | અમીન રામજી        |
| 148             | અમીન રામજી રામજી                     | અમીન                               | અમીન રામજી        |
| 149             | અમીન રામજી રામજી                     | અમીન                               | અમીન રામજી        |



**GUJARAT POLLUTION CONTROL BOARD**  
**REGIONAL OFFICE-AHMEDABAD(Rural)**



Room No 203, 204, 205, Old Building, Sector: 10-A,  
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| Sr. No.<br>ક્રમાંક | Name & Designation<br>નામ અને હોદ્દો | Organization/Village<br>સંસ્થા/ગામ | Signature<br>સહી |
|--------------------|--------------------------------------|------------------------------------|------------------|
| 150                | કાકર ગોવિંદભાઈ મહુરિયા               | ગામ. કાવિડા                        | ગ. રંગ. કાકર     |
| 151                | કાકર દાનંતી સોમાળ                    | ગામ કાવિડા                         |                  |
| 152                | કાકર અરુણભાઈ ગામ                     | ગામ                                |                  |
| 153                | કાકર વિરાગ પ્રધાનભાઈ                 | ગામ. કાવિડા                        | Prakod P.        |
| 154                | કાકર રામભાઈ રૂપરામ                   | ગામ કાવિડા                         | ક. ર. ર.         |
| 155                | કોપાલાઈ પુત્રાભાઈ                    | કાવિડા                             |                  |
| 156                | રમણભાઈ મુરખાભાઈ                      | કાવિડા                             | રમણભાઈ મુરખા     |
| 157                | ખડિયા જાવાળ મોરણ                     | કાવિડા                             | કે. એચ. મોરણ     |
| 158                | ભટ્ટનાથ કાનાલ પાણી                   | કાવિડા                             | B.K.C.           |
| 159                | મસુમદ મોહામદ                         | કાવિડા                             |                  |
| 160                | રામભાઈ ભટ્ટનાથ                       | કાવિડા                             |                  |
| 161                | રામભાઈ ભટ્ટનાથ                       | કાવિડા                             |                  |
| 162                | પ્રદીપ મોહા                          | કાવિડા                             |                  |
| 163                | ગોવિંદભાઈ મોરણ                       | કાવિડા                             | G. J. Moran      |

# GUJARAT POLLUTION CONTROL BOARD REGIONAL OFFICE-AHMEDABAD(Rural)



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| Sr. No.<br>ક્રમાંક | Name & Designation<br>નામ અને હોદ્દો | Organization/Village<br>સંસ્થા/ગામ | Signature<br>સહી |
|--------------------|--------------------------------------|------------------------------------|------------------|
| 164                | પટેલ વિનોદભાઈ<br>રમણભાઈ              | શોર પુરા                           | [Signature]      |
| 165                | પટેલ પદ્મજીભાઈ<br>ફાલગુભાઈ           | શોર પુરા                           | પદ્મજીભાઈ        |
| 166                | પટેલ પરમાણીભાઈ                       | શોર પુરા                           | પરમાણીભાઈ        |
| 167                | પટેલ રમેશભાઈ                         | શોર પુરા                           | [Signature]      |
| 168                | મગસોડાભાઈ રામજીભાઈ                   | કુશીપાડા                           | [Signature]      |
| 169                | જોશીભાઈ કરશનભાઈ                      | કુશીપાડા                           | [Signature]      |
| 170                | મોડીયાભાઈ કરશનભાઈ                    | કુશીપાડા                           | [Signature]      |
| 171                | મોડીયાભાઈ જીવનભાઈ                    | કુશીપાડા                           | મોડીયાભાઈ        |
| 172                | સરોજીભાઈ મ. પટેલ                     | Shevapada                          | [Signature]      |
| 173                | સરોજીભાઈ G. પટેલ                     | "                                  | [Signature]      |
| 174                | સુવિહારભાઈ કે. પટેલ                  | "                                  | [Signature]      |
| 175                | Rajeshb Surji Patel                  | Shevapada                          | [Signature]      |
| 176                | સુવિહારભાઈ કે. પટેલ                  | "                                  | [Signature]      |
| 177                | મોડીયાભાઈ કરશનભાઈ પટેલ               | Shevapada                          | N. Patel         |

# GUJARAT POLLUTION CONTROL BOARD REGIONAL OFFICE-AHMEDABAD(Rural)



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| Sr. No.<br>ક્રમ નં | Name & Designation<br>નામ અને હોદ્દો | Organization/Village<br>સંસ્થા/ગામ | Signature<br>સહી |
|--------------------|--------------------------------------|------------------------------------|------------------|
| 178                | પરિવર્તન કમિશનર                      | ચિત્રપુર                           |                  |
| 179                | અમદાવાદ જિલ્લાના પંચ                 | ચિત્રપુર                           |                  |
| 180                | અમદાવાદ જિલ્લાના પંચ                 | જાલપુર ગામ                         |                  |
| 181                | અમદાવાદ જિલ્લાના પંચ                 | જાલપુર ગામ                         |                  |
| 182                | અમદાવાદ જિલ્લાના પંચ                 | જાલપુર ગામ                         |                  |
| 183                | અમદાવાદ જિલ્લાના પંચ                 | જાલપુર ગામ                         |                  |
| 184                | અમદાવાદ જિલ્લાના પંચ                 | જાલપુર ગામ                         |                  |
| 185                | અમદાવાદ જિલ્લાના પંચ                 | જાલપુર ગામ                         |                  |
| 186                | અમદાવાદ જિલ્લાના પંચ                 | જાલપુર ગામ                         |                  |
| 187                | અમદાવાદ જિલ્લાના પંચ                 | જાલપુર ગામ                         |                  |
| 188                | અમદાવાદ જિલ્લાના પંચ                 | જાલપુર ગામ                         |                  |
| 189                | અમદાવાદ જિલ્લાના પંચ                 | જાલપુર ગામ                         |                  |
| 190                | અમદાવાદ જિલ્લાના પંચ                 | જાલપુર ગામ                         |                  |
| 191                | અમદાવાદ જિલ્લાના પંચ                 | જાલપુર ગામ                         |                  |

| Sr. No.<br>ક્રમ | Name & Designation<br>નામ અને હોદ્દો      | Organization/Village<br>સંસ્થા/ગામ | Signature<br>સહી  |
|-----------------|---|------------------------------------|-------------------|
| 132             | ચરેલ મોતજીભાઈ<br>જા. 016253979            | સરેડી                              |                   |
| 133             | ચરેલ બન 2 પામ<br>61-937983 (જી) જો. (પા.) | સરેડી                              | જી. S. P          |
| 134             | ચરેલ મોતજીભાઈ<br>જા. 016253979            | સરેડી                              |                   |
| 135             | રમેશભાઈ હાથિયાભાઈ<br>જા. 016253979        | સરેડી                              | ચારડી             |
| 136             | ધનરખાભાઈ હાથિયાભાઈ<br>જા. 016253979       | —                                  | ધનરખાભાઈ          |
| 137             | ગોપાલજી ભાસ્કર                            | લાડા,                              | ગોપાલજી ભાસ્કર    |
| 138             | ચાંલ જાગીર, નવે                           | લાડા,                              | જાગીર             |
| 139             | પરજી ભિક્ષુભાઈ                            | ભિક્ષુ                             | વે. જા. પરજી      |
| 200             | મોહન રામભાઈ<br>રામભાઈ                     | સિધેર                              | મો. રા. મોહન      |
| 201             | ભાસ્કર રમેશભાઈ<br>રામભાઈ                  | જા. ભાસ્કર (જા.)                   | ચા. ભાસ્કર        |
| 202             | કાળીભાઈ રા. કા. ભાઈ<br>જા. 016253979      | જા. ભાસ્કર (જા.)                   |                   |
| 203             | રામો મહેશભાઈ જા. ભાસ્કર                   | કા. ભાસ્કર                         | મહેશ જા. ભાસ્કર   |
| 204             | ભાસ્કરજીભાઈ જા. રમેશ                      | કા. ભાસ્કર                         | ભાસ્કરજી જા. રમેશ |
| 205             | પ્રજાપતિ રમેશભાઈ                          | કા. ભાસ્કર                         | પ્રજાપતિ રમેશ     |

[illegible]

# GUJARAT POLLUTION CONTROL BOARD REGIONAL OFFICE-AHMEDABAD(Rural)



Room No 203, 204, 205, Old Building, Sector:10-A,  
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## ANNEXURE – B (English)

### A statement showing issues raised by the Participants and responses by the representative of the applicant during the Public Hearing

It is hereby informed that as per the Ministry of Environment and Forests & Climate Change, Government of India, New Delhi vide its Notification No. S.O. 1533(E) dated 14<sup>th</sup> September 2006 and its subsequent amendment No. S.O. 3067(E) dated 1<sup>st</sup> December 2009, Public Hearing is fixed for Construction of Ahmedabad-Dholera Expressway (110 km) (NHAI/BM/21) in the state of Gujarat, by National Highway Authority of India (Ministry of Road Transport and Highways), 3A & 3B, 2<sup>nd</sup> floor, Amul Building, Near Dena Bank, Vejalpur Road, Jivraj Park, Ahmedabad-380051 (for part of Dist.-Ahmedabad) covered under 'Category A' of the schedule 7(f) at Mukhi Mango Farm, Off Dholka-Chiyada Road, Village: Sindhrej, Taluka: Dholka, District: Ahmedabad on 13-11-2018 at 13:30 Hrs.

**Shri C.M. Trivedi (G.A.S)**, Additional Collector & Additional District Magistrate, Ahmedabad, as a representative of District Collector and District Magistrate, Ahmedabad has presided over the entire Public Hearing process.

**Shri C. A. Shah**, Regional officer, GPCB Ahmedabad (Rural) welcomed all people present in the Public Hearing and with due permission of the Additional District Magistrate, Ahmedabad, initiated the procedure of the hearing. He outlined the various provisions of the Notification and briefed the procedural details for conducting this Public Hearing, including actions taken by GPCB for wide publicity of this Public Hearing. He mentioned the advertisement was given in English 'The Times of India' Ahmedabad edition dated 09/10/18 and in Gujarati 'Gujarat Samachar' Ahmedabad edition dated 09/10/2018. The publicity was also done by loudspeaker mounted on auto rickshaw in villages of study area on 11/11/2018 & 12/11/2018. He announced that as per the provision of Notification, locally affected persons will be allowed to represent in Public Hearing while others having plausible stake holders may give their representation in writing which would be included in the proceedings.

He then put the Public Hearing open after due permission from the Additional District Magistrate, Ahmedabad. He invited the project proponent to give their introduction and to make the presentation of their project in Gujarati Language.

Shri Dipak Maheta, technical representative of the project welcomed all present in public hearing and thereafter Power Point presentation in Gujarati Language, covering brief details of EIA, Outline of project, Technical details of proposed project, Evaluation of impact on environment along with proposed mitigation measures, Details about Coastal Regulation Zone, Benefits of the project, Environment Management Plan and details of budget for the same.

After the presentation by project proponent, Regional Officer, Gujarat Pollution Control Board, Ahmedabad (Rural) with due permission of the Additional District Magistrate, Ahmedabad, Opened the forum for representations/Suggestions/objections from the locally affected people.



# GUJARAT POLLUTION CONTROL BOARD

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The statement showing issues/suggestion/objection/opinion raised by the participants during public hearing and responded to by representative of project proponent during public hearing is as under:

| Sr. No | Name and Address  | Point Represented  | Replies by representative of project proponent   | Replies by concerned officer  |
|--------|---|--|--|---|
| 1      | Shri Ghanshyambhai Rathod,<br>Village: Kavitha,<br>Tal.: Bavla,<br>Dist.: Ahmedabad | <p>He informed that he has no objection to give land but there is large discrepancy in the rate of Jantri. Village Kavitha and Vasna- Chacharwadi are nearby to each other but there is difference in the rate of Jantri of both villages. Rate of Jantri of village Chaloda and Vasna- Chacharwadi are higher whereas rate of village Kavitha is lower. It is their representation that they should also be given compensation based on higher rate of Jantri.</p> <p>He again represented during public hearing that if all land of farmer is acquired during land acquisition, farmer lost their identity as farmer hence, permanent farmer certificate shall be given to them.</p> | <p>Shri S.P. Singh, GM (Tech.) &amp; Project Director, NHAI informed that as per rules &amp; regulations of Central Government, rate of Jantri of rural area and urban area are different. There is rules and regulations of Central Government for land acquisition. There is land valuation committee chaired by Collector who decides compensation hence, this committee can be approached. We will not reduce compensation admissible as per rules &amp; regulations. As per rules &amp; regulations, two to four times of Jantri are given as compensation.</p> | <p>At this juncture, Additional District Magistrate has informed that this representation is related to jurisdiction of collector office and there is provision for the same.</p> |
| 2      | Shri Aniruddhsinh Dabhi,  | He represented that there is major difference even if  | Shri S.P. Singh, GM (Tech.) & Project Director, NHAI informed  |   |

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| Sr. No | Name and Address  | Point Represented  | Replies by representative of project proponent  | Replies by concerned officer |
|--------|---|--|---|------------------------------|
|        | Village: Sindhrej,<br>Tal.: Dholka,<br>Dist.: Ahmedabad | <p>compensation is given four times of Jantri rate. There is difference between market rate and Jantri rate. Many villages have problem that Jantri rate of surrounding villages are higher and their jantri rate is lower which is not proper and it is loss to farmers. Farmers shall be consulted for compensation. Public hearing is conducted for Environment Clearance and in a same way hearing should be conducted for compensation.</p> <p>He further informed that presently compensation is allotted approximately 950 crore as per Jantri rate which is not acceptable to us.</p> <p>He further informed that presently total greenery is on 120 m</p> | <p>that as informed earlier, compensation is decided by Committee headed by District Magistrate and State Government. Representations of people are conveyed to the higher level (management) and compensation as per rules &amp; regulations will be given for this representation. We are with you and we will convey your representation to the management.</p> <p>Shri S.P. Singh, GM (Tech.) &amp; Project Director, NHAI replied that compensation of Rs. 986 crores is as per Central Government Policy. If this policy change and land valuation committee increase compensation, then compensation will be increased and there is no limit for the same.</p> <p>Shri Sandipan Das technical representative of NHAI informed that</p> |                              |

# GUJARAT POLLUTION CONTROL BOARD

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| Sr. No | Name and Address | Point Represented  | Replies by representative of project proponent   | Replies by concerned officer |
|--------|------------------|--|--|------------------------------|
|        |                  | <p>area. Grass grown on this area for 9 months out of 12 months. Hence, if expressway will be constructed, there will be harm to environment.</p> <p>He further represented that plantation shall be carried out on government barren land &amp; gauchar land of villages and shall be maintained for 10 years to develop forest for survival of local animals, birds and foreign birds are also migrate in this area so that there will be no difficulty.</p> <p>He further represented that Nilgai, Rabbit, Cow, Buffalo etc. animals migrate naturally in this region, if highway will be constructed then how these animals will migrate? In many villages highway is passing in between residential area and agriculture land so it will be difficult for the</p> | <p>120 m is ROW (Right of Way) and total greenery will not be removed, only 30% land will be utilized and greenery of 70% land will be remained as it is. We will grow more trees. 66,000 trees will be planted as shown in presentation.</p> <p>Shri S.K. Yadav, Manager (Technical), NHAI informed that from natural grass, 30% land will be removed and trees will be planted on median. He added that at the time of clearance, MoEF&amp;CC will decide separate fund and this fund will be utilized by forest department for plantation and four times plantation will be carried out.</p> <p>Shri S.P. Singh, GM (Tech.) &amp; Project Director, NHAI informed that crossings are provided above or below expressway for movement. The proposal for service road has been sent to MoRTH and it is under consideration and the decision of Government will be followed.</p> |                              |

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| Sr. No | Name and Address | Point Represented  | Replies by representative of project proponent  | Replies by concerned officer |
|--------|------------------|--|---|------------------------------|
|        |                  | <p>people in movements. It is our demand and request that service road shall be given for movement of the people to farmland. He added that if service road will not be provided then they will not give their land.</p> <p>He further represented that after land acquisition there will be small pieces of farms and in these pieces, crop cannot be grown. He requested to give compensation for these pieces as per land acquisition compensation rate of the land and requested to give total land compensation in one installment.</p> <p>He further represented that there is no entrance and exist in Bavla-Dholka four lane highway which is inconvenient to people and requested to provide entrance and exit.</p> <p>He further represented that villagers/farmers of affected 24 villages are not ready to pay</p> | <p>Shri S.P. Singh, GM (Tech.) &amp; Project Director, NHAI informed that Government will decide regarding this as it is policy level decision and decision of Government will be followed. Compensation is approved by competent authority and total compensation will be given in one installment.</p> <p>Shri S.P. Singh, GM (Tech.) &amp; Project Director, NHAI informed that second ring road is upcoming in Ahmedabad and at that time this representation will be considered.</p> <p>----</p> |                              |

# GUJARAT POLLUTION CONTROL BOARD REGIONAL OFFICE-AHMEDABAD(Rural)



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| Sr. No | Name and Address   | Point Represented  | Replies by representative of project proponent   | Replies by concerned officer   |
|--------|--|--|--|--|
|        |  | tall tax of proposed expressway so, tall tax shall not be collected from people of all these villages. He added that Jantri rate of village Kariyana is only 21 rupees which is example of discrepancy of Jantri rate.   |  |  |
| 3      | Shri Pradhyumansinh Chudasama, Sarpanch, Village Panchayat Bavaliyari, Ta: Dholera Dist: Ahmedabad | <p>He informed that Village: Sindhrej is far from his village and they face difficulty to reach this location due to lack of proper transportation facility. Separate hearing shall be conducted for Dholera taluka as surrounding 28 villages are affected.</p> <p>He asked that present highway was constructed by land acquisition from farmers then why this highway is not converted to four lanes? Instead of that why third highway will be constructed? For existing highway already land acquisition was done and new expressway from Dholera to Bavliyari will be constructed over this highway. There is no</p> | <p>Shri S.P. Singh, GM (Tech.) &amp; Project Director, NHAI informed that this public hearing is for Ahmedabad District only and separate public hearing will be conducted for Bhavnagar District. There is competent authority for CRZ and as per provisions of notification, work will be done and CRZ and all other clearance will be taken as per rules. Corridor is given by DSIR and lane will be developed in it and NHAI can not do any changes in it.</p> | <p>Additional District Magistrate informed to the people that if they have any difficulty, they can represent it and all representations will be taken in proceedings and video recording of this public hearing is also going on. If any points remained to be represented, it can be given in writing.</p> |

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|--------|------------------|---|--|------------------------------|
|        |                  | <p>any historical places located near Bavliyari village however 8 km long highway will be constructed near boundary of Bavliyari village then why this new highway can not be located on old highway.</p> <p>500 acre fertile agriculture land will be acquired for this new express way, then why new highway cannot be constructed over old highway? as done in other villages. Many questions will be resolved if existing highway will be converted to four lane. He further informed that our area falls under CRZ and our whole village falls in CRZ and without pre permission of competent authority, this expressway is planned and maps are prepared which is illegal. We have objection against this project.</p> <p>Shri Pradhyumansinh has submitted written representation during public hearing which is</p> |  |                              |



# GUJARAT POLLUTION CONTROL BOARD

## REGIONAL OFFICE-AHMEDABAD(Rural)



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| Sr. No | Name and Address  | Point Represented   | Replies by representative of project proponent   | Replies by concerned officer |
|--------|---|---|--|------------------------------|
|        |   | enclosed herewith as B-Q-1.   |  |                              |
| 4      | Shri Abdulbhai Abrahimbhai, Village: Ruggadh, Tal.:Dholka, Dist.: Ahmedabad.  | He informed that please keep in mind that we are simple people and farmers and requested to take care in the matter of compensation.                                | Shri S.P. Singh, GM (Tech.) & Project Director, NHAI informed that this is compensation related matter and answer of this question is already given earlier.   |                              |
| 5      | Shri Ghanshyambhai Patel, Village: Bholad, Tal.: Dholka, Dist.: Ahmedabad     | He asked that what will be compensation for land acquisition as expenditure of land acquisition compensation is not mentioned in expenditure shown in presentation. | Shri S.P. Singh, GM (Tech.) & Project Director, NHAI replied that 986 crore rupees will be expenditure for land acquisition. He further informed that as per guideline, 0.5% of project cost required to be allotted for Environment Management Plan (EMP) however they have allotted 39.5 crore (which is higher than 0.5% of project cost) and if project cost will be increased then expenditure of EMP will be increased accordingly as per guideline. |                              |
| 6      | Shri Naranbhai, Ex Sarpanch, Village:Juval Rupavati Ta: Bavla Dist: Ahmedabad | He asked that this expressway will be constructed near to village then noise pollution will be increase, what measures will be taken to control?                    | Shri S.P. Singh, GM (Tech.) & Project Director, NHAI informed that this expressway will be constructed 250 to 300m away from residential areas and plantation will be carried out to reduce noise pollution and further, noise barriers will be provided as per requirements.  |                              |

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| Sr. No | Name and Address   | Point Represented  | Replies by representative of project proponent  | Replies by concerned officer |
|--------|--|--|---|------------------------------|
| 7      | Shri Chandrakantbhai Prajapati, Village: Juval Rupavati, Ta: Bavla Dist: Ahmedabad | He asked that during land acquisition, how to know how much land is acquired with exact measurement and when it will be known to farmer? | Shri S.P. Singh, GM (Tech.) & Project Director, NHAI informed that survey of the same is conducted and notification is published regarding how much land area is acquired then field survey is carried out then after DLIR is certify the map and then final notification is published. However in case any question arises, necessary actions are to be taken. |                              |

Regional Officer, Gujarat Pollution Control Board informed the participants that total 16 written representations (from (1) Shri Pradhyumansinh Chudasama, Sarpanch, Village Panchayat Bavaliyari, Ta: Dholera, Dist: Ahmedabad (2) Shri A.D. Solanki, Sarpanch, Village Panchayat Saragavala, Ta: Dholka, Dist: Ahmedabad (3) Smt. Ranjan B Gohil, Sarpanch, Village Panchayat kariyana, Ta: Dholka, Dist: Ahmedabad (4) Shri G.U. Chauhan, Sarpanch, Village Panchayat Bholad, Ta: Dholka, Dist: Ahmedabad (5) Shri K.M. Bharavad, Sarpanch, Village Panchayat Sarandhi, Ta: Dholka, Dist: Ahmedabad (6) Shri Bhikhabhai Samabhai, Sarpanch, Village Panchayat Jalalapur Godhaneswar, Ta: Dholka, Dist: Ahmedabad (7) Shri J.M. Bharavad, Sarpanch, Village Panchayat Lana, Ta: Dholka, Dist: Ahmedabad (8) Village Panchayat Pipali, Ta: Dholka, Dist: Ahmedabad (9) Sarpanch, Village Panchayat Vejalaka, Ta: Dholka, Dist: Ahmedabad (10) Smt. Kamuben V. Sarpanch, Village Panchayat Keshargadh, Ta: Dholka, Dist: Ahmedabad (11) Sarpanch, Village Panchayat Sindhrej, Ta: Dholka, Dist: Ahmedabad (12) Smt. Puriben Babuji Thakor, Sarpanch, Village Panchayat Chaloda, Ta: Dholka, Dist: Ahmedabad (13) Shri Amrutbhai B. Chauhan, Member of Village Panchayat Tajpur, Ta: Sanand, Dist: Ahmedabad (14) Village Panchayat Vasana Chacharavadi, Ta: Sanand, Dist: Ahmedabad (15) Shri R.R. Thakor, Sarpanch Village Panchayat Bhat, Ta: Daskroi, Dist: Ahmedabad (16) Sarpanch, Village Panchayat Juval Rupavati, Ta: Dholka, Dist: Ahmedabad, Annexure B-Q-1 to B-Q-16 respectively ) has been received during public hearing and its written replies (Annexure B-A-1 to B-A-16) given by project proponent will be included in minutes and there is no written representation from plausible stake holder is received prior to conduct of public hearing.

Regional Officer, GPCB repeatedly requested the local affected people who remained present for any other representation; however no additional representation was raised

# GUJARAT POLLUTION CONTROL BOARD REGIONAL OFFICE-AHMEDABAD(Rural)

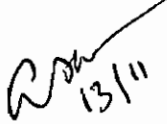



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Regional Officer, GPCB summarized the gist of the entire Public Hearing Proceeding to the Participants.

The Public Hearing is concluded with thanks to the Chair.

Place: Mukhi Mango Farm,  
Off Dholka-Chiyada Road,  
Village: Sindhrej  
Tal: Dholka  
District: Ahmedabad  
Date: 13/11/2018

  
C.A. Shah  
Regional Officer,  
GPCB, Ahmedabad (Rural),  
As a representative of  
Gujarat Pollution Control  
Board

  
C. M. Trivedi GAS,  
Additional Collector &  
Additional District Magistrate  
As a representative of  
Collector & District Magistrate,  
Ahmedabad

# GUJARAT POLLUTION CONTROL BOARD REGIONAL OFFICE-AHMEDABAD(Rural)



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## પરિશિષ્ટ-બી-૧ (ગુજરાતી)

લોક સુનાવણી દરમિયાન ફરિયાદો લોકો દ્વારા રજૂ કરવામાં આવેલ મુદ્દાઓ અને અરજદારના પ્રતિનિધિ દ્વારા  
આપવામાં આવેલ જવાબ

ભારત સરકારના પર્યાવરણ, વન અને જળવાયુ પરિવર્તન મંત્રાલય, નવી દિલ્હીના જાહેરનામા ક્રમાંક: એસ.ઓ. ૧૫૪૩, તા. ૧૪-૦૯-૨૦૦૬ અને તેના પછીના સુધારા ક્રમાંક એસ.ઓ. ૩૦૬૭ (ઈ), તા. ૦૧-૧૨-૨૦૦૬ ના અનુસંધાને એ. નેશનલ ફાઈવે ઓથોરીટી ઓફ ઇન્ડિયા (ખર્ચ પરીવહન અને ફાઈવે મંત્રાલય), ૩એ અને ૩બી, બીજો માળ, અમુલ બિલ્ડીંગ, દેના બેન્ક નજીક, વેજલપુર રોડ, જીવસજ પાર્ક, અમદાવાદ-૩૮૦૦૫૧ (અમદાવાદ જીલ્લાના ભાગરૂપે) દ્વારા અમદાવાદ-ધોલેરા એક્સપ્રેસવેય (૧૧૦ કીમી) (એનએચએઆઈ/બીએમ/૨૧), ગુજરાત રાજ્યના બાંધકામ માટેની સીડક્યુલ ડ્રોઈંગ, કેટેગરી "એ" ફેઝ બેઝ આવાસી સુચિત પરિયોજનાની લોક સુનાવણી મુખી મેંઓ ફર્મ, ઓફ ધોલકા-ચિયાડા રોડ, ગામ. સીધરેજ, તાલુકો. ધોલકા, જિલ્લો. અમદાવાદ ખાતે તા. ૧૩/૧૧/૨૦૧૮ ના રોજ ૧૩:૩૦ કલાકે યોજવામાં આવેલ.

જિલ્લા કલેક્ટર અને જિલ્લા મેજિસ્ટ્રેટશ્રી, અમદાવાદના પ્રતિનિધિ તરીકે અધિક કલેક્ટર અને અધિક જિલ્લા મેજિસ્ટ્રેટ શ્રી સી. એમ. ત્રિવેદી (જી.એ.એસ.) ની દેખરેખ અને અધ્યક્ષપદ્ધા ફેઝ સમગ્ર લોકસુનાવણીની કાર્યવાહી કરવામાં આવેલ.

ગુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડના પ્રતિનિધિ તરીકે શ્રી સી. એ. સાહ પ્રાદેસિક અધિકારી, અમદાવાદ (ગ્રામ્ય) એ લોક સુનાવણીમાં ઉપસ્થિત સીને આવકર્ષા અને અધિક જિલ્લા મેજિસ્ટ્રેટશ્રી, અમદાવાદની પરવાનગીથી લોક સુનાવણીની કાર્યવાહી શરૂ કરેલ. તેઓએ ઈ.આઈ.એ. નોટીફિકેશન અંતર્ગત વિવિધ જોગવાઈઓ અને લોક સુનાવણી પ્રક્રિયા બાબતે સંક્ષિપ્તમાં માહિતી આપેલ. તેમણે લોક સુનાવણીની બહેલી પ્રસિધ્ધિ અંગે ગુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડ કરેલ કાર્યવાહી અંગે માહિતી આપી અને દૈનિક વર્તમાન પત્ર અંગ્રેજી ભાષામાં "ધ ટાઈમ્સ ઓફ ઇન્ડિયા" તા. ૦૬/૧૦/૨૦૧૮ અમદાવાદ આવૃત્તિ અને ગુજરાતી ભાષામાં "ગુજરાત સમાચાર" અમદાવાદ આવૃત્તિ તા. ૦૬/૧૦/૨૦૧૮ ના રોજ આપવામાં આવેલ જાહેર ખબર વિષે જણાવેલ વધુમાં તેઓએ જણાવેલ કે લોક સુનાવણીની બહેલી પ્રસિધ્ધિ ઓટો રિફા દ્વારા અલ્પાસ વિસ્તારમાં આવેલ ગામોમાં તા. ૧૧/૧૧/૨૦૧૮ અને ૧૨/૧૧/૨૦૧૮ ના રોજ માઈક્રો એન્ટિસેપ્ટ દ્વારા કરવામાં આવેલ. તેમણે જણાવ્યું કે ઈ.આઈ.એ. નોટીફિકેશન જોગવાઈ પ્રમાણે સ્થાનિક અસરગ્રસ્ત લોકો, લોક સુનાવણીમાં ઔદ્યોગિક રજૂઆત કરી શકશે જ્યારે અન્ય કિત ધરાવતા વ્યક્તિઓ તેમની રજૂઆત લેખિતમાં કરી શકશે. જેને કાર્ય સૂચિમાં સમાવેશ કરવામાં આવશે.

ત્યારબાદ તેમણે અધિક જિલ્લા મેજિસ્ટ્રેટશ્રી, અમદાવાદની પરવાનગીથી લોક સુનાવણીનો પ્રારંભ કર્યો. તેઓએ પ્રોજેક્ટના પ્રતિનિધિને તેમના પરિચય આપીને સુચિત પરિયોજના વિષે ગુજરાતી ભાષામાં માહિતી રજૂ કરવા માટે જણાવેલ.

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પરિયોજનાના તકનીકી પ્રતિનિધિ શ્રી દિપક મહેતા એ લોક સુનાવણીમાં સ્થળ તમામ લોકોને જાણવડી.  
ત્યારબાદ તેઓ દ્વારા ઈઆઈએની સંક્ષીપ્ત માફિની, પ્રોજેક્ટની રૂપરેખા, સૂચિત પરિયોજનાની ટેકનીકલ માફિની,  
સૂચિત પરિયોજનાથી પર્ચાવરણ પર સત્તાર સંભવિત અસરોનું મુલ્યાંકન અને સૂચિત જિવારણ, કોસ્ટલ  
રેગ્યુલેશન ઝોનની વિગત, પ્રોજેક્ટના લાભો, પર્ચાવરણ વ્યવસ્થાપન યોજના અને તેના બજેટની વિગતો વિશે  
ગુજરાતી ભાષામાં દ્રશ્ય શ્રાવ્ય પ્રેઝન્ટેશન કરવામાં આવ્યું.

પરિયોજનાના પ્રતિનિધિ દ્વારા રજૂઆત પૂર્ણ થયા બાદ પ્રાટેક્ષિડ અધિકારી શ્રી, ગુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડ,  
અમદાવાદ(ગ્રામ્ય) દ્વારા અધિક જિલ્લા મેજિસ્ટ્રેટશ્રી અમદાવાદની પરવાનગીથી સ્થાનિક અસરગ્રસ્ત લોકોની  
રજૂઆતો/વાંચાઓ/સૂચનો માટે મંચ મુલ્લો મુકવામાં આવેલ.

લોક સુનાવણી દરમિયાન સ્થળ રહેલ લોકો દ્વારા રજૂ કરવામાં આવેલ રજૂઆતો/વાંચા/સૂચનો/અભિપ્રાયો તેમજ  
પરિયોજનાના પ્રતિનિધિ દ્વારા આપવામાં આવેલ જવાબો નીચે મુજબ છે:

| ક્રમ<br>નં. | નામ અને<br>સરનામું  | રજૂ કરવામાં આવેલ<br>મુદ્દાઓ  | પરિયોજના ના પ્રતિનિધિશ્રી દ્વારા<br>આપવામાં આવેલ જવાબ  | સંબંધિત અધિકારીશ્રી<br>દ્વારા આપવામાં<br>આવેલ જવાબ |
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| ૧           | શ્રી<br>ધનશ્યામભાઈ<br>સંઘેડ<br>ગ્રામ: કાવિઠા<br>તા: બાવળા,<br>જિ: અમદાવાદ | તેઓએ જણાવેલ છે,<br>તેઓને જમીન આપવામાં<br>કોઈ વાંધો નથી પરંતુ<br>જંત્રીમાં બહુ વિસંગતતા<br>છે. કાવિઠા અને વાસણા-<br>ચાચરવાડી ગ્રામ બાજુ-<br>બાજુમાં છે છતાં જંત્રીમાં<br>ફરક છે. ચલોડા-વાસણા-<br>ચાચરવાડીની જંત્રી ઉંચી<br>છે અને કાવિઠાની જંત્રી<br>નીચી છે તો તેઓને પણ<br>ઉંચી જંત્રી આપી વળતર<br>ઉંચું આપવામાં આવે<br>તેવી રજૂઆત છે. | NHAA ના જનરલ મેનેજર (ટેકનીકલ)<br>અને પ્રોજેક્ટ ડાયરેક્ટર શ્રી એસ.પી.<br>શિંદયાએ જણાવેલ છે, કેન્દ્ર સરકારશ્રીના<br>નિયમ મુજબ ગ્રામ્ય વિસ્તાર અને<br>સહેરી વિસ્તાર માટે જંત્રી અલગ હોય<br>છે જમીન સંપાદન માટે કેન્દ્ર<br>સરકારશ્રીનો નીયમ હોય છે<br>કોલેક્ટરશ્રીના અધ્યક્ષપણા હેઠળની<br>લેન્ડ વેલ્યુએશન કમીટી દ્વારા વળતર<br>નક્કી કરવામાં આવે છે જેથી<br>કોલેક્ટરશ્રીના અધ્યક્ષપણા હેઠળની<br>લેન્ડ વેલ્યુએશન કમીટીને રજૂઆત<br>કરી શકાય છે. નિયમ મુજબ જે<br>વળતર મળતું હશે તેમાં અમે કોઈ<br>ઘસાડો નહીં કરીએ, નિયમ અનુસાર |  |

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|   |   | તેમણે ફરીથી લોકસુનાવણીમાં રજુઆત કરતાં જણાવ્યું કે જમીન જતી રહે તો તે ખેડૂત નથી રહેતો જેથી તેને કાયમી ખેડૂતનું સર્ટીફિકેટ આપવામાં આવે.  | જંત્રીના બે વી ચાર ઘણું વળતર આપવામાં આવે છે.   | આ તબક્કે અધિક જિલ્લા પેક્ટસ્ટેટશીએ જણાવેલ કે, આ બાબત કલેક્ટરશ્રીની કચેરીને લગતી છે તથા આ પ્રકારનું પ્રોવીઝન છે. |
| ૨ | શ્રી અનિરુદ્ધસિંહ ડાહી<br>આમ: સિંધરેજ તા: ધોળકા જી: અમદાવાદ | તેઓએ રજુઆત કરેલ કે જંત્રી ચાર ગણી કરવામાં આવે તો પણ ઘણો તકાવત રહે છે બજાર ભાવ અને જંત્રીના ભાવમાં ઘણો તકાવત છે, ઘણા ગ્રામીનો પ્રશ્ન છે કે ખાકુ-બાકુના ગ્રામીની જંત્રી વધારે છે અને તેઓની જંત્રી બોલી છે તે યોગ્ય નથી અને ખેડૂતોને નુકસાન થાય છે. ખેડૂતોને પ્રશ્નને વળતરની વાત કરવી જોઈએ. પર્માવરણ મંજૂરી માટે લોક સુનાવણી કરવામાં આવે છે તે રીતે વળતર માટે | ભાગના જનરલ મેનેજર (ટેકનીકલ) અને પ્રોજેક્ટ ડાયરેક્ટર શ્રી બેસ.પી. સિંઘ એ જણાવેલ કે, અગાઉ જણાવ્યા પ્રમાણે વળતર જિલ્લા પેક્ટસ્ટેટશી ના અધ્યક્ષપણા હેઠળની કમીટી અને રાજ્ય સરકાર બરા નક્કી કરવામાં આવે છે. લોકો દ્વારા જે રજુઆત કરવામાં આવે છે તેની જાણ ઉપર સુધી (મેનેજમેન્ટ) કરવામાં આવે છે તથા આ રજુઆત અંગે નિયમ અનુસાર વળતર આપવામાં આવશે, અમે તમારી સાથે જ.છીએ અને આ વાતને પણ મેનેજમેન્ટ સુધી પહોંચાડીશું. |   |



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|  |  | <p>પણ સુનાવણી રાખવી જોઈએ.</p> <p>તેઓએ ફરીથી રજુઆત કરતાં જણાવેલ છે, ક્ષત્રમાં વાતર આસરે ૯૫૦ કોડ છે, જે જંગી પ્રમાણે છે તે અધારે લેવાનું નથી.</p> <p>તેઓએ ફરીથી રજુઆત કરતાં જણાવેલ છે, અત્યારે ૧૨૦ મીટર જગ્યા પર સંપૂર્ણ ઝીનરી છે. ઉપરાંત ૧૨ મહીનામાંથી ૯ મહીના સુધી ધાસ યાસ છે. જેથી એક્સપેક્ષ વે બનાવવામાં આવશે તો પર્યાવરણને નુકસાન થશે.</p> <p>તેઓએ ફરીથી રજુઆત કરેલ છે, અસરજ્ઞસ્ત ગામોની સરકારી પડતર</p> | <p>NHAI ના જનરલ મેનેજર (ટેકનીકલ) અને પ્રોજેક્ટ ડાયરેક્ટર શ્રી એસ.પી. શિંયા એ જણાવેલ છે, ભારત સરકારની પોલીસી પ્રમાણે આ ૨૭૫ ફ. ૯૮૬ કોડ છે. જો સરકારની પોલીસી બદલાશે તો તે વધશે તથા લેન્ડ વેન્યુએસન કમીટી વધારશે તો તે વધશે. તે અંગેની કોઈ મર્યાદા નથી.</p> <p>NHAI ના તકનિકી પ્રતિનિધી સંદિપનદાસ એ જણાવેલ છે, ૧૨૦ મીટરનો વિસ્તાર ROW (સાઈટ બોડ વે) છે તેમાંથી તમામ ઝીનરી દૂર કરવામાં નહીં આવે. ૩૦ % લેન્ડનો વપરાશ થશે તથા ૭૦% લેન્ડ પરની ઝીનરી એમજ રહેશે. અમે વધારે વૃક્ષો વાવવાના છીએ. પ્રોજેન્ટેશનમાં દર્શાવેલ છે તે પ્રમાણે ૬૬,૦૦૦ વૃક્ષો વાવવાના છીએ.</p> <p>NHAI ના મેનેજર(તકનિકી) એસ.કે. યાદવે જણાવેલ છે, ફરતી ધાસ છે તેમાંથી ફક્ત ૩૦% જસે અને વચમાં</p> |  |
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|  |  | <p>જમીન તથા ઝોનર જમીનો પર વૃક્ષો વાવો અને તેનું ૧૦ વર્ષ જતન કરીને જંગલ બનાવીને આપો, જેથી પશુ-પક્ષીઓને ખાવાનું પળી રહે અને આ વિસ્તાર માં વિદેશી પક્ષીઓ પણ આવે છે જેથી ઊંઠ તકલીફ ના પડે.</p> <p>તેઓ એ ફરીથી રજુઆત કરેલ છે, નીલગાય, સસલા, ગાય, ભેંસ વગેરે પ્રાણીઓ તથા પશુઓ આ વિસ્તારમાં કુદરતી માઈગ્રેશન કરે છે અને અહીંયા હાઈવે બની જશે તો તે કેવી રીતે માઈગ્રેશન કરશે? ઘણાં એવા ગામ છે જેમાં રહેણાંક વિસ્તાર અને ખેતીની જમીન વચ્ચેની હાઈવે નીકળે છે જેથી મનુષ્યને પણ આ હાઈવે થી તકલીફ પડશે. માણસોને ખેતરમાં આવવા-જવા માટે</p> | <p>(મિડિયન) ઝડ લગાવવામાં આવશે અને આ માટે મંજુરી આપવાના સમયે MoEF&amp;CC દ્વારા યત્ન ફેડ નક્કી કરવામાં આવશે અને ફોરેસ્ટ ડિપાર્ટમેન્ટ દ્વારા આ ફેડ પ્લેન્ટેશનમાં વાપરવામાં આવશે અને વૃક્ષારોપણ ચાર ઘણું કરવામાં આવશે.</p> <p>મમ્મના જનરલ મેનેજર (ટેકનીકલ) અને પ્રોજેક્ટ ડાયરેક્ટર શ્રી એસ.પી. સિંઘ એ જણાવેલ છે, એક્સપ્રેસ હાઈવે ઉપર અથવા નીચે થી અવર-જવર માટે કોર્સિંગ આપવામાં આવતા હોય છે. સર્વિસ રોડ માટેની કરખાસત MoSATA ને મોકલેલ છે અને તે વિચારણા ફેઝ છે અને તેઓના દ્વારા જે નિર્ણય આપવામાં આવશે તે પ્રમાણે કરીશું.</p> |  |
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|  | <p>સર્વિસ રોડ આપનો જોઈએ તેવી અમારી માંગણી છે અને વિનંતી કરવામાં આવે છે જો સર્વિસ રોડ નહીં આપવામાં આવે તો અમે જમીન આપીશું નહીં.</p>   |   |
|  | <p>તેઓએ ફરીથી રજુઆત કરેલ છે, જમીન સંપાદનમાં ખેતરના નાના ટુકડા કાઢી છે અને જમીન સંપાદન થયા પછી જમીનના નાના-નાના ટુકડા બચે છે તે ટુકડામાં ખેતી ન કરી શકે, તો તે ટુકડાઓનું પણ જે ભાવે જમીન સંપાદન કરવામાં આવે તે ભાવ પ્રમાણે સંપાદન કરી વળતર ચૂકવવામાં આવે અને જમીનનું વળતર એક સાથે આપવામાં આવે તેવી માંગણી છે.</p> | <p>NHAA ના જનરલ મેનેજર (ટેકનીકલ) અને પ્રોજેક્ટ ડાયરેક્ટર શ્રી એસ.પી. સિંઘ એ જણાવેલ છે, આ બાબત પોલીસી લેવલનો નિર્ણય હોય તે સરકારથી જ નક્કી કરશે અને સરકારથી જે નિર્ણય કરે તે પ્રમાણે કરીશું. વળતર સક્ષમ અધિકારીથી દ્વારા મંજૂર કરવામાં આવે છે અને તે એક સાથે આપવામાં આવશે.</p> |
|  | <p>તેઓએ ફરીથી રજુઆત કરેલ છે, જાવળા-ચોળા</p>  | <p>NHAA ના જનરલ મેનેજર (ટેકનીકલ) અને પ્રોજેક્ટ ડાયરેક્ટર શ્રી એસ.પી.</p>  |

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|   |  | <p>વચ્ચે આર લેન છે તેમાં એન્ટરન્સ અને એક્ઝીટ નથી તેથી લોકોને તકલીફ પડે છે જેથી એન્ટરન્સ અને એક્ઝીટ આપવું જોઈએ.</p> <p>તેઓ એ ફરીથી રજુઆત કરતાં જણાવેલ કે, તમામ ૨૪ અસરગ્રસ્ત ગ્રામોના ખેડૂતો/લોકો ટોલટેક્સ ભરવા રાજી નથી અને આ તમામ ગ્રામોના લોકો પાસેથી ટોલટેક્સ લેવી ન જોઈએ, તથા કરીયાણા ગ્રામની જત્રી માત્ર ૨૧ ફ. છે, જે જત્રીની વિસંગતતાનું ઉદાહરણ છે.</p> | <p>સિંધ એ જણાવેલ કે, અમદાવાદમાં બીજો રીંગ રોડ આવવાનો છે તે સમયે આ રજુઆત ધ્યાને લેવામાં આવશે.</p>   |   |
| ૩ | <p>શ્રી પ્રદુષનસિંહ યુડાસમા,<br/>અરખંચ ગ્રામ<br/>પંચાયત<br/>બાવળીચારી<br/>તા: ધોલેરા<br/>જી: અમદાવાદ</p> | <p>તેઓએ રજુઆત કરેલ કે તેઓના ગ્રામથી સિંધરેજ દૂર હોવાથી તથા વાહન વ્યવહારની યોગ્ય ઉપસ્થિતિ ન હોવાના કારણે તેમને સ્થળ પર પહોંચવામાં મુશ્કેલી પડેલ છે. ધોલેરા</p>  | <p>તમામ ના જનરલ મેનેજર (ટેકનીકલ) અને પ્રોજેક્ટ ડાયરેક્ટર શ્રી એસ.પી. સિંઘ એ જણાવેલ કે, ક્ષત્રમાં જે પબ્લિક ફિયરીંગ છે તે ક્ષત્ર અમદાવાદ જિલ્લા માટેનું છે અને ભાવનગર જિલ્લા માટે અક્ષત્ર પબ્લિક ફિયરીંગ રાખેલ છે. એસ્ટલ રેગ્યુલેશન ઓન (CRZ) માટે સક્ષમ</p> | <p>અધિક જિલ્લા મેજિસ્ટ્રેટશ્રી એ ઉપસ્થિત જનસમુદાય ને જણાવેલ કે લોકોને જે કોઈ મુશ્કેલી હોય તેની રજુઆત કરી શકે છે અને તમામ રજુઆતોને પ્રોસેડીંગમાં</p> |

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|  |  | <p>તાલુકાની મુનાવણી અલગથી સમવી જોઈએ કેમ કે આસપાસના ૨૮ ગ્રામ અસરગ્રસ્ત છે.</p> <p>તેમણે જણાવેલ કે, અત્યારે જે ફાઈવે છે તે ખેડૂતોની જમીન સંપાદન કરીને બનાવેલ છે તો તેને છા માટે ચાર લેન બનાવવામાં આવતી નથી? તેના સ્થાને ત્રીજો ફાઈવે છા માટે બનાવવામાં આવે છે?</p> <p>કથાત જુનો ફાઈવે છે તેની જમીન સંપાદન થઈ છે અને નવો એક્સપ્રેસ વે બોલેરા સી બાવળીચારી સુધી ફાલના જુના કથાત ફાઈવે ઉપર જ કરવાનો છે. બાવળીચારી ગ્રામ ની આસપાસ બેઈ એતિહાસીક સ્થળ નથી છતાં બાવળીચારી ગ્રામની હઠ પુરી થાય ત્યાં ૮ કિલોમીટર સુધી આ નવો ફાઈવે કરવાનો છે તો આ નવો ફાઈવે</p> | <p>ખોલોરીસી છે અને નોટીફિકેશનની જોગવાઈ પ્રમાણે જ શ્રમ કરવામાં આવશે તથા CRZ અને અન્ય બધા ફલીયરન્સ નિયમ મુજબ લેવામાં આવશે. ડીએસઆઈઆર હારા જે બેરીકેડ આપવામાં આવેલ છે તેમાં લેન બનાવવામાં આવશે અને અમે બેઈ ફેરફાર કરી શકીએ નહીં.</p> | <p>લેવામાં આવશે. આજની અર્થવાહીનું વિડિયો રેકોર્ડિંગ પણ કરવામાં આવી રહેલ છે અને બેઈ મુદ્દા રહી જતા હોય તો લેખીતમાં આપી સમે હો.</p> |
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|  |  | <p>જુના ફાઈવે પર કેમ ન થઈ શકે? ૫૦૦ એકર ફલદુપ જમીન આ નવા ફાઈવેમાં જાય છે. જેથી બીજા ગામમાં થયું તે પ્રમાણે જુના ફાઈવે પર આ નવો ફાઈવે શા માટે ન થઈ શકે? ક્યાત ફાઈવે છે તેને ચાર લેન કરવામાં આવેતો પણ પ્રશોનું નિતકરણ થઈ શકે. અમારો વિસ્તાર CMT માં આવેલ છે અને અમારું આખું ગામ CMT માં આવે છે અને CMT ની સહાય ઓથોરીટીની પૂર્વ પ્રજુરી વગર આ એક્સપ્રેસવેનું આયોજન અને નક્કા બનાવાયાં છે તે એક્સપ્રેસવે છે. અમારો આ પ્રોજેક્ટ શામે વાંધો નોંધાવીએ છીએ.</p> <p>શ્રી પ્રદુષનસિંક દ્વારા લોક સુનાવણી દરમ્યાન વિસ્તૃત લેખીત રજુઆત રજુ કરવામાં આવેલ. જેને</p> |  |
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# GUJARAT POLLUTION CONTROL BOARD REGIONAL OFFICE-AHMEDABAD(Rural)



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|   |  | નિમ્નણ બી-ક્યુ-૧ થી<br>સામેલ કરેલ છે.   |   |  |
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| ૪ | અબ્દુલ્લાહ<br>અબ્દુલ્લીમભાઈ,<br>ગામ: રૂપગઢ<br>તા: ધોળકા<br>જી: અમદાવાદ           | તેઓએ રજુઆત કરતાં<br>જણાવેલ કે, અમે મીઠા<br>સાદા પાણીથી છીએ અને<br>ખેડતો છીએ તે ધ્યાનમાં<br>રાખીને અને ખેડતોના<br>વ્યવસ્થાનો પ્રશ્ન આવે તો<br>તેનું ખાસ ધ્યાન રાખવા<br>ચિનતી છે. | MMAJ ના જનરલ મેનેજર (ટેકનીકલ)<br>અને પ્રોજેક્ટ ડાયરેક્ટર શ્રી એસ.પી.<br>સિંઘ એ જણાવેલ કે, આ બાબત<br>વ્યવસ્થાની છે અને તે બાબતે તેઓ<br>જવાબ અગાઉ આપેલ છે.  |  |
| ૫ | શ્રી<br>ધનશ્યામભાઈ<br>પટેલ<br>ગામ: લોળાદ<br>તા: ધોળકા<br>જી: અમદાવાદ             | તેઓ એ રજુઆત કરેલ<br>કે, પ્રોજેક્ટનામાં જે ખર્ચ<br>બજાવેલ છે તેમાં જમીન<br>વ્યવસ્થાનો ખર્ચ<br>બતાવવામાં આવેલ નથી<br>તો જમીન માટે કેટલું<br>વ્યવસ્થા આપવાના છે તે<br>જણાવો.       | MMAJ ના જનરલ મેનેજર (ટેકનીકલ)<br>અને પ્રોજેક્ટ ડાયરેક્ટર શ્રી એસ.પી.<br>સિંઘ એ જણાવેલ કે, રૂ. ૯૮૬ કરોડ<br>જમીન વ્યવસ્થા માટે ખર્ચ થશે.<br>તેઓએ વધુમાં જણાવેલ કે EIA માટે<br>પ્રોજેક્ટ કોસ્ટના ૦.૫% ગ્રાઉન્ડલાઈન<br>પ્રમાણે કોથ છે પરંતુ તેમણે ૩૯.૫<br>કરોડ રૂ. કાઢવેલ છે જે પ્રોજેક્ટ<br>કોસ્ટના ૦.૫% થી વધુ છે. જો<br>પ્રોજેક્ટ કોસ્ટ વધશે તો ગ્રાઉન્ડ લાઈન<br>પ્રમાણે EIA નો ફંડ પણ વધશે. |  |
| ૬ | શ્રી નારણભાઈ<br>માજુ-સરેપય,<br>ગામ: જુવાલ<br>રૂપાવટી<br>તા: બાવળા<br>જી: અમદાવાદ | તેઓએ રજુઆત કરેલ કે,<br>હાઈવે ગામની નજીકથી<br>નીકળે છે, તો અવાજનું<br>પ્રદૂષણ વધશે તો તેના<br>નિયંત્રણ માટે શું કરશો?  | MMAJ ના જનરલ મેનેજર (ટેકનીકલ)<br>અને પ્રોજેક્ટ ડાયરેક્ટર શ્રી એસ.પી.<br>સિંઘ એ જણાવેલ કે, રહેણાંક<br>વિસ્તારથી આસરે ૨૫૦ થી ૩૦૦<br>મીટર દુર હાઈવે સમવામાં આવશે<br>અને વૃક્ષારોપણથી પણ ધ્વનિ<br>પ્રદૂષણ ઘટાડવામાં આવશે, તે  |  |

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|  |  | ઉપરાંત જરૂર પ્રમાણે નોટીસ બેરીયર્સ<br>લગાવવામાં આવશે.  |  |
|--|--|--|--|
| તેઓ એ રજુઆત કરેલ છે. જમીન કપાય (સંપાદન કાચ) તો કેટલી જમીન કપાય તેનું ચોક્કસ માપ બેટુતને કેવી રીતે ખબર પડે અને ક્યારે ખબર પડશે? |  | ભાગના ના જનરલ મેનેજર (ટેકનીકલ) અને પ્રોજેક્ટ ડાયરેક્ટર શ્રી એસ.પી. સિંઘ એ જણાવેલ છે, તેનો સર્વે કરવામાં આવે છે, કેટલો એરીયા કપાય છે (સંપાદન કાચ છે) તેનું નોટીફિકેશન બહાર પાડવામાં આવે છે. ત્યાર બાદ ફીલ્ડમાં સર્વે કરવામાં આવે છે. ત્યાર બાદ DDA તેનો મેપ સર્ટીફાઇડ કરે છે. ત્યાર બાદ ફાઇનલ નોટીફિકેશન બહાર પાડવામાં આવે છે, તેમ છતાં કોઈ પ્રશ્ન આવે તો જરૂરી કાર્યવાહી કરવામાં આવે છે. |  |

ગાંધીજી અધિકારી, ગુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડ ઉપસ્થિતિ જન સમુદાયને જણાવેલ છે, આજ સેજ લોક સુનાવણી દરમિયાન કુલ ૧૬ લેખીત રજુઆતો (૧) શ્રી પ્રદુષનસિંહ ચુડાસમા, સરપંચશ્રી, ગ્રામ પંચાયત બાવલીયારી, તા: ધોળકા જી: અમદાવાદ (૨) શ્રી એડી સોલંકી, સરપંચ શ્રી, ગ્રામ પંચાયત સરજવાળા, તા: ધોળકા, જી: અમદાવાદ (૩) શ્રીમતી રંજન બી. ઝોશી, સરપંચ શ્રી, ગ્રામ પંચાયત કરીયાણા, તા: ધોળકા, જી: અમદાવાદ (૪) શ્રી જી.સુ. ચૌહાણ, સરપંચશ્રી, ગ્રામ પંચાયત લોભાદ, તા: ધોળકા, જી: અમદાવાદ (૫) શ્રી કે. એમ. ભરવાડ, સરપંચશ્રી, ગ્રામ પંચાયત સરંઢી, તા: ધોળકા, જી: અમદાવાદ (૬) શ્રી લીખાભાઈ સામાભાઈ, સરપંચશ્રી, ગ્રામ પંચાયત જલાલપુર ઝોધનેશ્વર, તા: ધોળકા, જી: અમદાવાદ (૭) શ્રી જે. એમ. ભરવાડ, સરપંચશ્રી, ગ્રામ પંચાયત લાણા, તા: ધોળકા, જી: અમદાવાદ (૮) પીપલી ગ્રામ પંચાયત, તા: ધોળકા, જી: અમદાવાદ (૯) સરપંચશ્રી, ગ્રામ પંચાયત વેજલકા, તા: ધોળકા, જી: અમદાવાદ (૧૦) શ્રીમતી કમુબેન વી. સરપંચશ્રી, ગ્રામ પંચાયત કેશરજક, તા: ધોળકા, જી: અમદાવાદ (૧૧) સરપંચશ્રી, ગ્રામ પંચાયત સિંધરેજ, તા: ધોળકા, જી: અમદાવાદ (૧૨) શ્રીમતી પુરીબેન બાબુજી કાશીર, સરપંચશ્રી, ગ્રામ પંચાયત યલોડા, તા: ધોળકા, જી: અમદાવાદ (૧૩) શ્રી ચમૂતભાઈ બી. ચૌહાણ, સભ્ય, ગ્રામ પંચાયત તાજપુર, તા: સાણંદ, જી: અમદાવાદ (૧૪) વાસણા ચાચરવાડી ગ્રામ પંચાયત, તા: સાણંદ, જી: અમદાવાદ (૧૫) શ્રી આર.આર. કાશીર, સરપંચશ્રી, ગ્રામ પંચાયત ભાત, તા: દહોઈ, જી: અમદાવાદ (૧૬) સરપંચશ્રી, ગ્રામ પંચાયત જલાલ કપાવટી, તા: બાવળા,

# GUJARAT POLLUTION CONTROL BOARD REGIONAL OFFICE-AHMEDABAD(Rural)



Room No 203, 204, 205, Old Building, Sector: 10-A,  
"Parvatan Gharan", Gandhinagar-382010  
E-mail : [gp-cb-ahmedabad@vsnl.net](mailto:gp-cb-ahmedabad@vsnl.net)

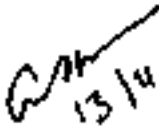
જી: અમદાવાદ તરફથી અનુક્રમે એનેક્સર બી-ક્યુ-૧ થી બી-ક્યુ-૧૬) મળેલ છે તથા તેના પરીચોજનાના પ્રતિનિધી દ્વારા આપવામાં આવેલ લેખીત જવાબો (એનેક્સર બી-એ-૧ થી બી-એ-૧૬)નો કાર્યસૂચિમાં સમાવેશ કરવામાં આવશે તથા લોક સુનાવણી અગાઉ ખત્મ હીત ધરાવતા વ્યક્તિ તરફથી કોરમને કોઈ લેખીત રજૂઆત મળેલ નથી.


પ્રાદેશિક અધિકારી, ગુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડ દ્વારા હાજર રહેલ સ્થાનિક અસરગ્રસ્ત લોકોને વારંવાર રજૂઆત કરવા વિનંતી કરી છતાં કોઈ વધુ રજૂઆત થયેલ નથી.

પ્રાદેશિક અધિકારી, ગુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડ દ્વારા સમગ્ર લોક સુનાવણીની કાર્યવાહીનો સારાંશ હપ્તિઓને જણાવવામાં આવેલ.

લોક સુનાવણીને અધ્યક્ષશ્રીના ખાસાર સહ સમાપ્ત અહેર કરવામાં આવેલ.

સ્થાન: મુખી મંજી શર્મા,  
ઓફ ધોળકા-ચિલાસ રોડ,  
ગામ: સિંધરેજ,  
તાલુકો: ધોળકા  
જિલ્લો: અમદાવાદ,  
તારીખ: ૧૩/૧૧/૨૦૧૮

  
શ્રી. એ. શાહ  
પ્રાદેશિક અધિકારી,  
જી.પી.સી.બી., અમદાવાદ(ગ્રામ્ય)  
ગુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડના  
પ્રતિનિધિ તરીકે

  
શ્રી. એમ. વિવેદી (જી.એ.એસ.)  
અધિક કલેક્ટર અને અધિક જિલ્લા  
મેજિસ્ટ્રેટશ્રી,  
જિલ્લા કલેક્ટર અને જિલ્લા મેજિસ્ટ્રેટશ્રી,  
અમદાવાદના પ્રતિનિધિ તરીકે

**English Translation of written representation submitted during public hearing by Chudasama Pradhyumansinh Ranubha.**

ChudasamaPradhyumansinh Ranubha,  
At & Po.: Bavaliyari,  
Ta: Dholera, Dist: Ahmedabad,  
Date: 13/11/2018  
Place: Public Hearing Site,  
Mukhi Mango Farm,  
Village: Sindhrej, Ta.: Dholka

To,  
Member Secretary,  
Gujarat Pollution Control Board,  
Gandhinagar.  
(Camp: Public Hearing Site, Village Sindhrej, Taluka Dholkha)

**Subject:-** Written objections and comments for Construction of Ahmedabad-Dholera Expressway Road (110 km) (NHAI/BM/21) project in public hearing.

**Reference:-** Public notice published in the name of Member Secretary-By GPCB, Dated 09/10/2018.

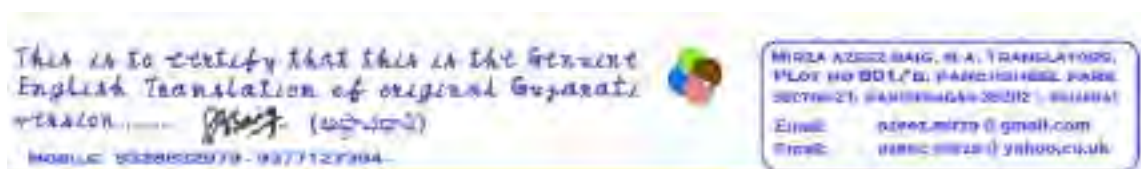
After Patriotic Greetings, with regard to the above-mentioned subject with reference to above-referred Public Notice, a Public Hearing has been held with regard to the construction project of Ahmedabad-Dholera Express Road (110 km). During the Public Hearing, as per the provisions of Rules and Regulations, I have raised my own objections and critical comments, which I am presenting here in my letter here. All my points, which are expressed during the Public Hearing, are sought to be included in the present relevant activity notes. Also, my special demand is to implement the needful holistic activities as per the provisions of applicable Rules and Regulations in this regard.

**Point No. 1**

Any publicity for local people's information about today's public hearings on dated 13/11/18 was not done. Gram panchayats were not informed in written except two gram panchayats. Document is not available at Dholera taluka level office as mentioned in serial no. 4 of dated 09/10/18 public notice of GPCB (as per reference) News paper advertisement was published in news paper of Ahmedabad city. It is my representation to cancel today's public hearing as rules are not followed.

**Point No. 2**

The Executive Summary prepared for this public hearing is absolutely incomplete. It seems that a detailed study of environmental impacts is not done meticulously. After the completion of the said project, they had not studied and not taken into consideration what would be the impact of natural forces on the present environment such as the flow of water in these areas, the ordinary geographical conditions, the aerogel effects, the noise pollution, hindrance to the present sanctuary, native bio-creation, the natural way of present seashores, the unhindered flow of rivers, the traits of Bhal Pradesh, existing



rainy season farming ways, the ongoing trade, business and commerce of the local people, and the local employment generated for the local citizens, animal husbandry, etc. For example, if the traditional kuccha roads would have to be closed down due to the completion of the said project, there would be the problem of water logging in the rainy season and the negative impact of water on the domestic and wild animals would be destructive. Consequently, in a way, the destruction of agriculture would be impending.

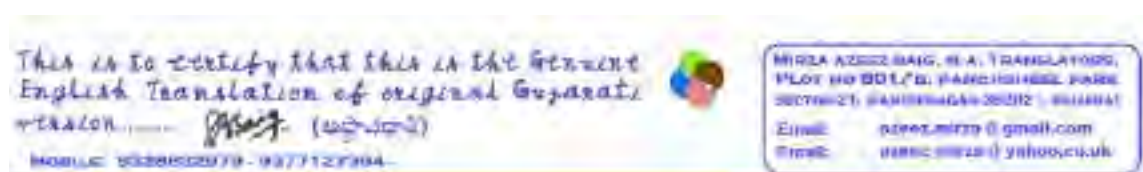
If we accept that the studies on the said project had been conducted properly, then, the adverse effects on the local area are not mentioned in 'The Executive Procedural Summary.' Even what proper measures would be taken to prevent the adverse effects after the completion of this project are not mentioned in the 'The Executive Procedural Summary.' 'The Executive Procedural Summary' is treated like an Elementary School Essay. It seems that The Ahmedabad-Dholera Express Road is written by a primary school student. There is no research, acuity, wisdom or learning in it. In this project, there is no study of the devastating effect on the farming / geographical situation of Bavaliyari village and its surrounding villages, which includes the environment of Bhal Pradesh. Low and water-bearing gulf of the Khambhat and many rivers are passing through the areas involved in the project. Presently, the water of Saurashtra mixes the water of Khambhat to flow to the Gulf of Khambhat. The present project proposes a wider and higher-level Road, which would certainly obstruct the flow of water along the coastal areas, in the direction of the western part of the Road (Across the area of Dholera, Dholkha taluka). No mention of what would be ruined in this 'The Executive Procedural Summary.' As per the opinion of the local experienced experts, the proposed Express Road is a non-practical and technically destructive of a large Bhal Pradesh. Hence, we appeal you to cancel this project and we request you to carry out a new study on the detailed environmental impacts at each village in this Express road separately by experts. Till then, you are requested to cancel the destructive plan of carrying out the said project.

### **Point No. 3**

This proposed project includes an Express-high way, a Road. The said Road is starting at Sarkhej-Ahmedabad. It is ending at village Bavaliyari of Taluka Dholera. By the side of this Road, there is a Velavadar Blackbuck sanctuary. Even a National Park is located at the Western boundary of village Bavaliyari at 110 km. From the boundary of this sanctuary towards village Bavaliyari is 10 km eco-sensitive Zone as per guiding instructions of Honourable Supreme Court.

Even though the Government has no authority and no right to act in such a way, the government has published eco-sensitive zone of Velavadar sanctuary from the boundary of the sanctuary, up to 500 metres away in revenue jurisdiction of village Bavaliyari. By forming a committee of four Honourable Ministers the Honourable Gujarat High Court has prohibited for finalization of 500 Mtr eco-sensitive zone by oral order on 19/04/2017 by considering writ petition P.I.L No-88 of 2017. That means, presently eco-sensitive zone of Velavadar sanctuary is in implementation within the boundary of village Bavaliyari from 10 km of the sanctuary (as per earlier conditions). Alignment of A'bad-Dholera Express Highway road for which hearing is being conducted and falling within the area of village Bavaliyari is only 2 km away from the boundaries of Velavadar sanctuary. this situation is a clear violation of the 10 km eco-sensitive zone directed by the Honourable Supreme Court. For the same reason, we are taking objection to the present only 2 km condition which violates the Orders of Honourable Supreme Court.

The violation of any provision of the E(P) Act is seriously punishable. There is provision in the law of the Environment (Protection) Act, 1986 (No-29 OF 1986) that if any



private company or government organization is doing prohibitory act against the rules in the eco-sensitive zone then there is a provision of punishment and fine to responsible Competent Officer.

The Preparation of plant and map for the proposed Express Highway by breaking rules (without getting prior permission of competent authority) in 10 km eco-sensitive zone of Velavadar sanctuary is a serious crime. As per the information gathered by us competent authority of Velavadar sanctuary is stating that they have not given permission or prior-permission to any person for this express Highway. Hence, this is being a clear violation of the E(P) Act, 1986, and we are filing an objection by informing the same to you. This is our demand that environment hearing presently being conducted for a new alignment of the 5 km length of Express Highway, passing from revenue boundary of village Bavaliyari, shall be cancelled. It should not be allowed till the Executive of the said project is able to get environment clearance for the eco-sensitive zone of the sanctuary. We demand Separate Hearing about the eco-sensitive zone with regard to the existing Sanctuary.

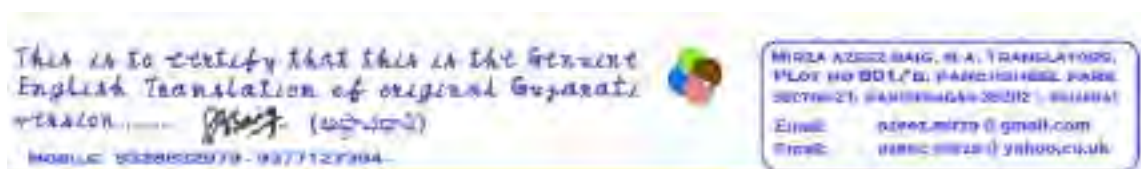
#### **Point No. 4**

When Environmental NOC is asked from Velavadar Sanctuary for Dholera SIR in revenue area of Bavaliyari Village, it is rejected. Because, animals, birds and living creatures of sanctuary roams in Adhelai, Bavaliyari, Hebatpur, Sonrai, Mer, Sodhi, Mahadevpura, Bhangadh and other nearby villages for their food, water, reproduction, mating. The timid animal like blackbuck and deer and many other animals of Schedule-F will be destroyed if huge Expressway would be constructed through limits of Bavaliyari village which is located at East direction of Velavadar Sanctuary. This point has been clearly mentioned in the Report of Sanctuary on 9/01/2014. Then the Authorities refused to give environmental clearance to carry out the Dholera SIR. So, you are informed that separate environmental study should have to be conducted before taking the decision of new alignment of Bavaliyari Village. This is our objection.

#### **Point No. 5**

The proposed Ahmedabad-Dholera Express Highway destroys the cultivation within the limits of Bavaliyari. The said Express Highway should be drawn away from the presently cultivated farms of Bavaliyari. At present, the Bhavnagar-Ahmedabad shortcut Highway is located from the last village of Ahmedabad District, Bavaliyari, to Ahmedabad. The Highway leads to Dholera passing through the revenue boundary of Bavaliyari village. In this proposed express highway, the new Express Highway from Dholera to Bavaliyari will be constructed on the existing old highway. Only the Bavaliyari village has a different "pathline" than the old highway which is 1 km parallel to the old highway in west direction. As a result, nearly all agriculture land of Bavaliyari village will be gone. Because Dholera SIR wants to make 250-meter-wide corridor here for the express highway. Due to this new line, a large amount of farmland goes to the deduction. All roads going from village to farms are closed. Farming cannot be done on all subcontinent land due to the obstruction of the rainwater flow and waterlogging. In this way only, farmers of Bavaliyari village are being treated unfairly. So, we demand to construct a new Express Highway on the existing old highway road like as other villages.

Old Highway Road passing by Bavaliyari is passing through the revenue boundary. There is no obstacle construction or historical building or any heritage building on this old highway. However, without any reason in Bavaliyari village, new Expressway will be





constructed approximately 500 Mtr to 1 km away from old Road, which will acquire 250 Mtr corridor land of Farmers. Hence, we are filing our objection to it. we demand you to change your plan and to choose to construct Express Highway on existing Highway, for which already 100 Mtr land acquired by acquiring additional land.

#### **Point No. 6**

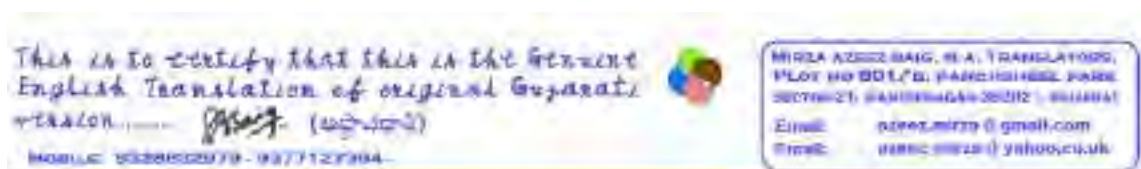
The proposal harms the right of a Farmer, which is unconstitutional in nature. This proposed Express Highway road is being constructed keeping the DMICDC and its underlying Dholera Special Investment Region. But Gujarat S.I.R. Act, 2009 is against the provisions of the constitution of the country. Against this Act, a P.I.L has been filed vide No-227/2014. In that case, the Honourable Court forbids any act to harm the right of the farmer. Hence, as per town planning of Dholera SIR 250 Mtr corridor is put up in revenue boundary of Bavaliyari village inside which proposal for construction of this Express Highway is a violation of the honourable High Court's order. Or in the name of the Express Highway, this is cunningness to overcome forbid order of Dholera SIR. So, it is informed you that you should stop it immediately, stop the construction activity of Express Highway of 250 Mtr wide corridor of Dholera SIR TP scheme in the revenue boundary of Bavaliyari village. Otherwise, it will be treated as a contempt of the order of Honourable High Court. Hereby you are warned that the authorised Officers, who would be conducting the Public Hearing will be held legally 'responsible' for the illegal act.

#### **Point No. 7**

Due to the completion of this project, during the rainy season, the disposal of water would be stopped within the limits of Bavaliyari. This would cause healthy loss to humans, animals, and cultivation. The existing highway road passing through the boundary of Bavaliyari village is coastal highway and considering the coastal environment, the height of this road from Bhavnagar to Dholkha is kept only 2 to 3 feet, So that, during the rainy season, the water of hypertension passes through this entire coastal road and water is not filled in the surrounding villages. As a result of it, the crop is not damaged. In the present design of the new express highway, it is planned for the construction of the road at a higher level from the ground level. Due to high-level Highway Express Road, the disposable water would be stored. Due to storage and stoppage of disposal of water rural life, domestic animals would suffer. The rural farming would be damaged. Recently, due to the National Highway in Ghed area of Saurashtra, the same sordid condition has happened. Hence, this is our representation to keep the height of this new road only 2 to 3 Mtr from the ground as old road. We are objecting to high-level Road within these limits.

#### **Point No-8**

The Third new Express Highway Road by acquiring new fertile lands is not commendable. Presently there are two Highway Roads in between Bhavnagar to Ahmedabad. One of them runs via Dhandhuka to Barvala. The Second Road runs via Sarkhej to Dholera on a shorter route. Presently this Road is being converted into four-laneway. Both the roads are at a distance of 30 to 40 km at different points. Now the Authorities are planning to construct a third Highway between these two Highways. By constructing a new Third Express Highway by acquiring the fertile lands of Thousands of Farmers, the Authorities are making the rural Farmers suffer. Instead of construction of a new Third Highway between them, the present two roads are converted into four-lane



roads, they would become more convenient to all. One of these two old roads should be made an Express Highway Road. This adjustment would save the fertile lands of Farmers and their commerce and trade. Moreover, the problem of water logging during the rainy season, the expenses of Crore of Rupees would be avoided. So, we are taking objection to the third new Expressway by acquiring new lands. We are appealing you to cancel the present proposal of Third new Express Highway Road.

#### **Point No-9**

Presently the Highway Road from Bhavnagar to Ahmedabad runs by the side Bavaliyari Village. There is an old Highway from Dholera to Bavaliyari Village. As per the new proposal, if a new Express Highway would be constructed on the old Highway Road of the Bhavnagar to Ahmedabad, the utility of the old Highway Road would be lost. The new Express Highway Road would not lead us to all surrounding villages as the old Highway Road does. We are not sure whether the new Express Highway would connect all surrounding villages or not. We are taking objection to the No-clarification of the route.

#### **Point No-10**

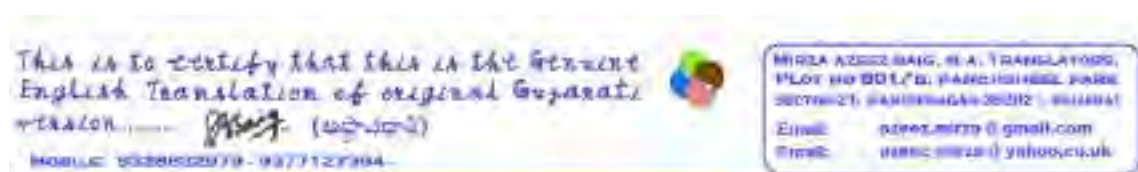
For the sake of current Public Hearing, 'The Executive Procedural Summary' has been declared to know the objections and opinions from the environmentalists and experts. We are believing that Depending on these objections and opinions, the discussions would be carried out today during the Public Hearing, But, in the present 'The Executive Procedural Summary.' However, in the present Executive Procedural Summary, no such suggestions or guidance for the above-mentioned project are given. No needful details about the said project are available. We are drawing your kind attention to the following points in relation to the above-mentioned Executive Procedural Summary. Please kindly -peruse the points from 10(A) up to (12).

#### **Point 10(A)**

During the perusal of the whole Executive Procedural Summary, we have found that no details about the environmental studies are given with regard the urban, rural and wild areas through which the said Express Highway would run. The types of lands, such as blackish land, slippery greasy land, the land that would not absorb water during the rainy season. Usually, the rainwater and the river water flows from Saurashtra would flow from these areas to the Gulf of Khambhat without any hindrance. The water would not stop at the villages to disturb the natural rural lives. Dams would be filled up during the rainy season of four months. The needful water available during the seasons would help the cultivation of qualitative chickpeas, cumin, wheat, etc. Here the agricultural areal conditions, the aerial movements, the coastal areas, and different environmental specialities have not been studied by the makers of the Executive Procedural Summary. They have not carried out any kind of study in this regard. Not a bit of information about these matters is given in the Executive Procedural Summary. Therefore, any kind of Hearing about the environmental questions is useless.

#### **Point 10(B)**

A Greenfield project is not relating to agricultural projects. We have come to know that the subject of the Point No-2 in the Executive Procedural Summary is 'the Green Field Projects'. Whereas after keen observation, we have come to know that the real purpose is



relating to DMICDC<sup>1</sup> and Dholera SIR, where a greenfield project is one that lacks constraints imposed by prior work. The analogy is to that of construction on greenfield land where there is no need to work within the constraints of existing buildings or infrastructure. It means new factories, buildings, airports etc in a new industrial city. As per our knowledge, the usage of a greenfield project is the ironical word. So, as rural persons, we are feeling that we have been cheated by the usage of this word.

**Point №-10(C).**

The suggested Express Highway Road would connect the two cities, namely Bhavnagar and Ahmedabad. so that the journey by vehicles in-between these two cities would become smarter, shorter and faster. There are many areas by the side of this Express Highway, in which many areas are wider and economically backward. The Bhal Pradesh is one of them. The proposed Express Highway in present form would not bring any economic progress for these areas. There would be no kind of benefit to such areas. There is a National Highway in Bhavnagar District. Suppose, instead of a new Express Highway, if the present Highway should be converted into four-lane Highway in the Bhavnagar District, in the same model the present Highway is converted into four-lane Highway in the Ahmedabad District, such conversions would bring a quicker progressive change in the financial and commercial conditions of Bhal Pradesh and in the surrounding areas. Instead of wasting the fertile lands of thousands of Farmers, for the construction of a new Express Highway for the residents of cities, if the existing normal Highways are to be converted into four-lane Highways, they would be holistically beneficial, fiscally and commercially. The wide and Backward areas, such as Bhal Pradesh, would become broad, bold and economically forward areas. But there is no hint of any such research work being carried out earlier to the declaration of the present Executive Procedural Summary. No soothing solutions are shown in the said Summary. In fact, while preparing the Executive Procedural Summary, the administration should have studied the difference in the expenditure of modified four-lane Highways and of a new Express Highway. It should have verified the profit and loss for its fiscal conditions. Then, it should have prepared the relevant Report and it should present it for Public discussion. Then only, the economic and environmental discussions could be carried out expressively and meaningfully.

**Point №-10(D).**

We have studied the Executive Procedural Summary about the proposal of the project. What we have come to know after deeply studying the said Summary that the existing simple Highways with some modifications are better than the new Express Highway. The new Express Highway would be beneficial to the vehicles travelling in between only two cities. Nothing beneficial to the local rural populated villages and towns which lives by the side of this Express Highway. Instead, the new Express Highway would gulp the fertile cultivable lands of Rural Areas. The rural normal conditions would be hurt. Many hurdles would be raised in the rural ways of travelling and transport. Only two cities may get a bit of better benefits and smarter and quicker transportation. For achieving this purpose, the administration should have to spend millions of Rupees, at the cost of sacrificing the basic benefits to so many rural Areas. The large expenses would not recover the equal weight in benefits. The benefits are within limits.

**Point №-10(E).**

It came to our Notice that on the Page №-3 of the Executive Procedural Summary, the subject of Land Acquisition (LA) and the Reattachment Action Plan (RAP) are



mentioned. But no details about these systems are mentioned within the Executive Procedural Summary. In this way, the said Summary is incomplete in providing the necessary details to us.

**Point No-10(F).**

We have observed in the project in the Point No-3 of the Executive Procedural Summary about the Analysis of options available. However, there are two Highway roads, in between Bhavnagar to Ahmedabad. Both the Highway roads are having two lanes each. In the said Summary, there is no mention of upgradation of these two-lane Highway Roads. Without making a comparative study on the expenses that would be incurred, the administration has chosen the highly cost incurring a new Express Highway Road in place of less expensive but more beneficial upgradation of existing Highway Roads. The said Summary has been submitted without proper study and Research. The whole project of a new Express Highway is unnecessary and superfluous.

**Point No-10(G).**

We know that The Delhi-Mumbai Industrial Corridor Project (DMICDC) is a planned industrial development project between India's capital, Delhi and its financial hub, Mumbai. It is completely different from Ahmedabad-Dholera Express Highway Road. The project of DMICDC is not crossed by any Railway line. No Gulf is involved in that project. The Dholera-Ahmedabad is involving the Railway line, Gulf of Khambhat and the special Bhal Pradesh. These things are not appropriate for the said project, as per the Rules and Regulations. The Rehabilitation and Resettlement Act, 2013 which is also called the Land Acquisition Act 2013, has been newly passed. Even according to this Act, the areas of Dholera are not suitably fit for the definition of the Industrial Corridor. But someone plotted to snatch the fertile lands of Dholera. So, the approaching Highway the Application of DMICDC is a Pre-planned fabricated pretext. So, instead of a new high glamorous Express Highway, a simple and normal national Highway should have to be in the District of Bhavnagar.

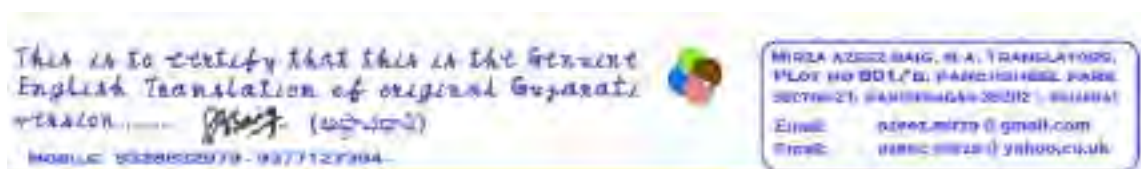
**Point No-10(H).**

We have observed in the Point No-4 of the Executive Procedural Summary, the mentioning of Environmental Vision. We have not found the meaning given by the writers and the editors of the said Summary, about the concept of Environmental Vision. There is no information on the Research on the Environmental Vision, about the definition of it, and how it will be implemented in practice in the said project.

**Point No-10(I).**

We have observed in the Point No-4 of the Executive Procedural Summary, various issues are mentioned in different chapters. As per the information is given in the said Summary, presently, air, noise, water, rivers, ponds are almost pure and they are nearly without pollutants. But, after the construction of an Express Highway Road, there is no mention of aftereffects of the said Express Highway Road. Therefore, such a project without a knowledge of the basic after effects is unworthy to be constructed by spending such a large amount. So, it would be a meaningless construction.

Presently one Highway is crossing through Bavaliyari village. There is almost nil noise pollution on the said Highway. The noise pollution is within the common standards. But, after the construction of the proposed new Express Highway, the noise pollutions would be increasing to so much high that the peaceful atmosphere of the blackbuck sanctuary, which would be just 2 km away from the Express Highway, would be highly





disturbed. The black bucks are wild but very mild animals. They would be easily disturbed by a bit of noise. The high noise pollutions raised by the heavy Traffic on the Express Highway would certainly cause the destructive disturbances in the natural life of these wild but mild animals, which would certainly lead to the total loss of the blackbuck generation from the sanctuary. Without a doubt, the proposal of a new Express Highway is just a call of death to the blackbuck generation. Even without the Express Highway, the black bucks are declared an endangered species. It is not wise to finish such a species with overwise planning of very noisy Express Highways near their sanctuaries. Either this new Express Highway should have to be cancelled with immediate effect or it should be laid much away from the present selected route, which very close to the sanctuary of the endangered species of black bucks. We take objection to the noise pollution, and we appeal you earnestly that the proposal of a new Express Highway should be cancelled.

**Point №-10(J).**

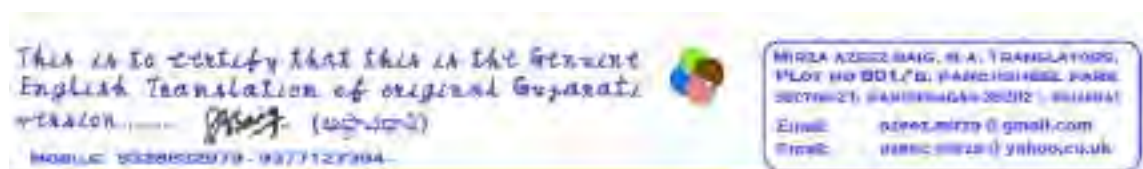
We have observed on the Page №-6 of the Executive Procedural Summary that some selected standards are mentioned in it. The basic standards of environmental subjects, such as the Earthen Environment, Ecological Environment, Economic and Social Environment, are not at all touched. They are not mentioned anywhere in the Executive Procedural Summary. No Research has been carried out in this direction earlier to publishing the said the Executive Procedural Summary. Such type of error and boo-boo is very serious. Without a high-level study and observation work on the important issues, the publication of the Executive Procedural Summary is done in haste, which becomes a waste of time. Half done is not done. A deep study should have been done in seriousness. Some important issues should have been kept in one's goal while studying the problems of a project. The outcomes should have been observed carefully. Only after that, the holistic Executive Procedural Summary should have been declared, so that a meaningful discussion could have been done on it for an environmental permission. Otherwise, the whole efforts on the part of the administrators are waste of time. So, our request is that the present Public Hearing on the said project should be treated as 'cancelled'

**Point №-10(K).**

We have observed on the Page №-7 of the Executive Procedural Summary that out of the points to be studied in details, one of the issues is social goals and their effects. The subject is inverted. The whole topic is given in a single sentence in a single line! It is presumed that no needful Research has been carried out in the direction of important issues. If the apt research has been carried out, then the Authorities have stood to shadow the facts from the Public. So, the present Public Hearing is worthy to be declared as 'cancelled.'

**Point №-10(L).**

We have observed that no details of the benefits of the construction of a new Express Highway in the Dholera region are expressively given. What we mean is instead of four-lane Highway Road, if a new Express Highway would be constructed, then what special benefits would be there for the Public and place of Dholera region. These points are not declared in the Executive Procedural Summary. Nothing is mentioned in this regard in the Executive Procedural Summary. The purpose of the project should have to be to provide needful benefits to the backward areas of the Dholera region. But we see it gives illicit gains and disadvantages to the region in question. Instead of a new Express Highway, a four-lane Highway would have been more beneficial to the said region. We are taking objection to a new Express Highway construction. Please do not venture to construct a new Express Highway in this region.



**Point №-10(M).**

We have observed on the Page №-(7)(17) of the Executive Procedural Summary that some solutions have been shown out on the Point №-10. But no reference to the source has been given to arrive at these solutions. It seems to be a mere imagination. For example, it is mentioned that the present project would not cause any loss to the special biology of the region. No rare plant would be damaged and no endangered animal species would be hurt negatively. But without a proper Research work how such statement has been made in the Executive Procedural Summary. How it can be said that the present project would not damage the special and rare species of medical shrubs and plants of Bhal Pradesh when a proper study is not carried out on such important subjects.

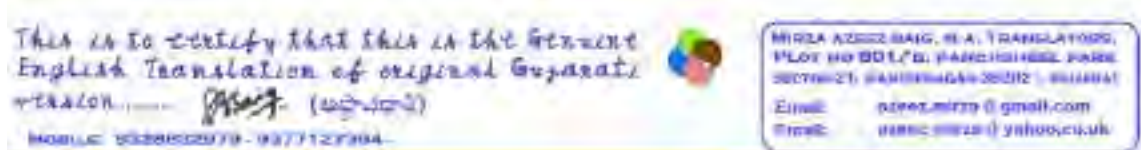
Moreover, the blackbuck is a rare animal belonging to an endangered species, which exists in these areas. The Government has declared Schedule 'F' for the purpose of protection of these species. The 'Only one' sanctuary for these species is existing in this region. The proposal of a new Express Highway would run nearby this special kind of sanctuary. The distance of the Express Highway may be 2 km only from the said sanctuary. How can a dangerous noise pollution generating Express Highway would be allowed in the sanctuary of endangered species? Such construction would certainly finish the said species forever from our earth. It seems to us, that the purpose of this project is only to destroy such species. Even then, it is mentioned under this point that no harm would come to such animals due to the present project. But no study examples have been shown in the Executive Procedural Summary about the existence of these species, the positive aftereffects of the present project on the lifestyle of these species, etc. it is not mentioned when the said studies on the said species have been carried out. It is not mentioned who the experts on such species have involved in the studies. Nothing is mentioned on this issue in the Executive Procedural Summary.

**Point №-10(N).**

We have observed on the Page №-17 at Sr.№-2 of the Executive Procedural Summary. The Blackbuck National Park/ Sanctuary at Velavadar is situated in the Bhavnagar District of Gujarat state, India. it is an Eco-sensitive Zone. An alignment of 500 metres is being maintained. This point is accepted but as a half-truth. In fact, the limitation of the hub of the Velavadar Blackbuck National Park and the limitation of the Eco-sensitive Zone is 10 Kms. Only a kilometre or less distance is parallelly maintained by the National Park and the Sanctuary. The negative effects of this situation are very destructive on the whole region of the Velavadar Sanctuary. The blackbucks that are living their natural lives in the said sanctuary are facing their end day by day. Thus, they end lifeless one day in the near future. Even this fact is well informed. Even then, why this fact is not accepted? Why a detail Research and study is not carried out in this regard? Why not the project planners have not obtained the necessary Environmental Non-Objection-Certificate from the Authorities of the Velavadar Blackbuck National Park/ Sanctuary? without obtaining an Environmental Non-Objection-Certificate from the authorised Authority, to proceed on the said project through the Public Hearing is an offence. Even after receiving this information, the Public Hearing is being carried out on the said project on some pretext. Why such unlawful Public Hearing is being held? We demand that our all above-mentioned objectives and the objections should be noted in the procedural notes of the said Public Hearing.

**Point №-11.**

At present, there are two Highway Roads are active between Bhavnagar-Ahmedabad. Even then, why the Third Express Highway is being planned? What is the necessity for such an Express Highway? No supportive Report on this matter has been





made Public. No Establishment Report in this regard is made yet public. No proper study has been carried out on the said project, if it is carried out; no such Report is put for the perusal of the Public. Under such circumstances, the said Public Hearing is an offence, unconstitutional, and incomplete. So, it should be worthy to be declared 'cancelled.' So, we demand it to be nullified.

**Point No-12.**

The present area in question, starting from the Bavaliyari Village, including the whole of Dholera Taluka, the adjacent Dholkha Taluka, and their Rural Areas, and the coastal areas of Khambhat are under the CRZ, the Coastal Regulation Zone. Our Village Bavaliyari is inclusive in this CRZ. So, without carrying out a proper study of the project and its aftereffects on the environmental conditions of our region, and without getting a Prior Permission from the Competent Authority of CRZ, your preparation of Map of the said project of "the Construction Project of 110 Kms long Ahmedabad-Dholera Expressway Road", your attempt to implement this project is a punishable offence. The Public Notice issued in the matter of Public Hearing on the environmental issues relating to this project is an unlawful thing, thus it is a punishable offence. So, the present Public Hearing is worthy to be declared 'cancelled.' The whole activity relating to the said project is worthy to be declared 'nullified.' With this solicitation, we demand you to Register our objections on this project in proper Record.

We also demand you to Note our above-mentioned suggestions, objective and objections, as per the provisions of the present Rules and Regulations, in your Records or the procedural Notes of the Public Hearing with regard to the present project, without fail.

**Yours faithfully,  
Chudasma Pradhyumansinh Ranubha,  
At & Post: Bavaliyari, Taluka-Dholera,  
Mobile No-8511863555**



# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(राष्ट्रक परिवहन और राजमार्ग मंत्रालय)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

कार्यालय: राजमार्ग उद्घाटन, दिल्ली-110075, अजमेर बिल्डिंग, जवाहर नगर, कोलकाता रोड, बंगलुरु-560001, चेन्नई-600002, पुणे-411004

PIU-3A & 3B, 2nd Floor Amal Building, Nr. Omera Bank, Vardapur Road, Jivraj Park, Ahmedabad-380 031

Tel : 079-26621062

26621063

E-mail : ahd@nhai.org

No. /NHA/PIU-Ahmedabad/A-D EXP./GPCB/2018/ 243

Date: 13/11/2018

To,  
The Sarpanch,  
Gram Panchayat Bavliyan,  
Village-Bavliyan,  
Tal. Dholera, Ahmedabad.

**Subject:** Consultancy Services for project preparation of Feasibility Study/Detailed Project Report of road stretches selected for DMICDC under Bharat Mala Scheme - Ahmedabad-Dholera Expressway (110 km.) (Package no. NHA/BM/21) under Bharatmala Panyojana: Reply to Sarpanch, Bavliyan Gram Panchayat, Village- Bavliyan, Taluka- Dholera, District - Ahmedabad received at Public Hearing dated 13-11-2018.

Sir,

The Environmental clearances (EC) for the DSIR Master plan has already been taken up by DMICDC vide Notification No. F.No. 21-20/2011 (IA,II) dated 19<sup>th</sup> September 2014.

The similar queries were raised during the public Hearing of EC of DSIR (S.No. 2, 4, 6, 14) and therefore this is presumed that those queries are already settled.

The present proposed alignment of Ahmedabad - Dholera Expressway in DSIR only follows the road corridor as shown in the Master plan of DSIR for which said EC is already obtained. The public hearing of the affected villages of DSIR has already taken place before issuing the Environmental Clearance for the affected villages in DSIR.

The list of villages falling in the DSIR is as follows:

| S. No. | Name of villages | St. Ch. | End Ch. | Total Length (m) |
|--------|------------------|---------|---------|------------------|
| 1      | Amli             | 71030   | 77000   | 5970             |
| 2      | Kadipur          | 77000   | 81900   | 4900             |
| 3      | Dholera          | 81900   | 89080   | 7180             |
| 4      | Mund             | 89080   | 90890   | 1810             |
| 5      | Sandha           | 90890   | 93900   | 3210             |
| 6      | Panchi           | 93900   | 95600   | 1700             |
| 7      | Habarpur         | 95600   | 101900  | 6300             |
| 8      | Bavliyan         | 101900  | 107240  | 5340             |

Bavliyan village is one of those villages falling in DSIR therefore the question of Mr. Pradhumanish, Sarpanch Bavliyan Village appears to be beyond the scope of the present Public Hearing.

Moreover the land for the use of Expressway is being provided by DSIR and NHA is not acquiring any land in DSIR region.

Thanking You

Yours Faithfully

General Manager (Technical) &  
Project Director, PIU Ahmedabad

Copy to:

1. The C.E.M. (T) & R.O., NHA Gandhinagar for kind information please.

## **Annexure B-Q-2**

**English Translation of written representation submitted during public hearing by A.D.Solanki.**

Applicant: Saragwala Gram Panchayat  
Village - Saragwala.  
Taluka - Dholka,  
District - Ahmedabad,  
Date - 07/11/2018  
Mobile -

To,  
Secretary / Member Secretary,  
Gujarat Pollution Control Board,  
Paryavaran Bhavan, Sector - 10/A,  
Gandhinagar - 382 910

**Subject:** - Protest Application pertaining to the Public Notice published on 11<sup>th</sup> page of Gujarat Samachar, dated 09/10/2018.

Respected Sir,

As per the Public Notice given by you on 11th page of Gujarat Samachar, dated 09/10/2018 pertaining to Ahmedabad-Dholera Express Road (110 KM), Public hearing is organized. We, as a representative of our village urge you, if road construction is done without taking into consideration our concerns then it will badly affect our people, cattle and birds. It will also immensely increase pollution and it is all likelihood that it will result in natural catastrophe. Thus, villagers have a strong objection against construction of road without considering laws pertaining to pollution control.

- (1) The lands which are to be retrenched for Ahmedabad-Dholera Express Highway, are agricultural land and ripple two or more crops a year so it remains green. And due to standing crop, air pollution remains quite low and villagers always get clean and fresh air.
- (2) Due to construction of Ahmedabad-Dholera Express Highway, air level will be highly damaged. There is no national or state level highway here. So, vehicle traffic is quite low. This results in clean and fresh air, full of oxygen. Further, noise pollution is quite negligible. The proposed road will pass adjoining to the village which will cause disturbance to the villager's sleep due to vehicle and horn noise. It is advisable to keep road alignment far from the village.
- (3) Animals and birds living around are used to live in peace and pass their night without any fear but if construction of Ahmedabad-Dholera Express Highway is done then it

should be “NO HORN ZONE” otherwise it will cause trouble for animals and birds initially. It is quite necessary to control noise on the road so animal and birds can live without any fear. Further, if cattle don't get proper rest then after a period their milking capacity will be affected which will result into less milk production.

- (4) Expressway is passing nearby our village and as per geographical situation of the village, rain water always flows towards NalSarovar and from north goes towards Boru-Vataman. Express Highway will be built from east to west, thus all the directions are different which will result in water logging and can cause epidemic. Further, land of south side will not get water and become unproductive, resulting in increased noise pollution along with worst effect on farming. Over the period of time, villagers will become unemployed. So, proper water management is needed. In absence of it, there will be increased air pollution. We would like to know about the plans pertaining to water management. Village has high objection on constructing the road without providing us detailed plan on the same.
- (5) Constructing Ahmedabad-Dholera Express Highway will result in higher traffic problems. Many Blue Cows, hogs, cows, buffaloes, deers, panthers, rabbits, goats and sheeps live within the border of the village. They usually pass by the village in day as well as night. So, if proper roads to village are not provided then there are maximum chances of accidents. Accident Prevention System should be formed and on every 15 to 20 kilometers, there should be facility of emergency vehicle and nursing centers. In absence of that, villagers have to remain stand by for the same and it will create fearful atmosphere. Express Highway should be built as underpass which will cause less air and noise pollution. Construction of Service Road is also necessary otherwise it will cause huge trouble for villagers to travel for daily activities. We highly object on construction of Highway without providing Service Road. We have already conveyed our objection to Acquisition Officer on constructing highway without providing Service Road.
- (6) Express Highway is quite near to village. Mechanism should be provided to prevent noise and air pollution. Lesser noise will help villagers to live with peace of mind.
- (7) Huge amount of agricultural land will be retrenched and it will result in cutting down the big trees and worst effect on farming. It will also affect fresh air level. Our demand is to establish 3 lines on both sides of the road and nurture the big trees like Nimb, Ficus religiosa, Banyan trees, Tamarind trees etc. The size of the trees should be big and the responsibility of nurturing them will be of Express Highway Authority. If these trees are not properly nurtured and grow to their normal size then any damage caused to village will be compensated by Express Highway Authority and the written bond regarding the same shall be provided by the Highway Authority. Further, we need confirmation from Express Authority for sowing and nurturing trees on the uncultivated land of the village so air pollution can be controlled and healthy atmosphere can be maintained.

(8) While filling up the land with the soil at the time of constructing Express Highway, particles of soil will spread in the air and it will hugely damage the nearby farms. Road Contractor has to give confirmation and submit it to Gram Panchayat assuring the safe doing of these things without damaging the nearby farms. And if any damage is caused due to the same, responsibility of such damage would be of Express Highway Authority.

As such, we request you to consider our above objections before granting the permission for construction.

.....  
A.D.Solanki, Sarpanch  
Gram Panchayat, Village-Saragwala  
Taluka – Dholka, District-Ahmedabad



Annexure - B A-E  
**भारतीय राष्ट्रीय राजमार्ग प्राधिकरण**  
 (सड़क परिवहन और राजमार्ग मंत्रालय)  
**National Highways Authority of India**  
 (Ministry of Road Transport & Highways)

एवाइ - 3A व 3B, टिनीय हल, अमूल बिल्डिंग, गैलरी टनल ईक, वैजपुर रोड, जिवराज पार्क, अहमदाबाद - 380 051  
 PU - 3A & 3B, 2nd Floor, Amul Building, Nl Dena Bank, Vajapur Road, Jivraj Park, Ahmedabad - 380 051

Tel : 079-26821062  
 26821063  
 E-mail: and@nhai.org

No. NHAI/PU/Ahmedabad/GPCB/A-D-Exp/2118 नं. 2118

Date: 13/11/2018

To,  
 A.D. Solanki, Sarpanch  
 Saragwala Gram Panchayat  
 Village: Saragwala  
 Tal: Dhruka District: Ahmedabad

Subject: Point wise reply of Sarpanch, Saragwala Gram Panchayat, Village: Saragwala, Taluka: Dhruka, District: Ahmedabad received at Public Hearing on dated: 13-11-2018

| S. No. | Name of stakeholder             | Reply   |
|--------|---------------------------------|---|
| 1      |                                 | Farmers and villagers will get the compensation rate as per the Government policy. All the vehicles plying on the Expressway will naturally be as per CPCB norms. Moreover to reduce air pollution further avenue plantation shall be done on both sides as well as median of the expressway.                                       |
| 2      |                                 | The construction of the proposed expressway has been proposed at a distance of 200 - 250 m at residential areas. Biological Noise barriers (such as tree plantation etc) shall be proposed to reduce noise pollution. For reducing air pollution avenue plantation shall be done on both sides as well as median of the expressway. |
| 3      | A.D. Solanki, Sarpanch          | Noise barriers shall be provided as per the scheme given in EIA report.   |
| 4      | Saragwala Gram Panchayat        | We are not reducing the present water way in the whole alignment. Sufficient no. of culverts/CO structures have been provided as per the study of hydrologist of consultant.  |
| 5      | Village: Saragwala              | As per the survey report we have provided Underpass (CUP) which will facilitate the animals. Moreover, other culverts will also facilitate the animals at least in dry season.  |
| 6      | Tal: Dhruka District: Ahmedabad | Question is repeated. Same as S. no. 1  |
| 7      |                                 | Total 6000 nos. of trees shall be planted on both sides of the expressway.<br>NHAI will deposit the compensatory cost towards CAMPA fund as per demand from forest department. Plantation may be done on government / barren land by State forest department from CAMPA fund.   |
| 8      |                                 | Sprinkling shall be done at the construction time by water tankers fitted with sprinklers to reduce dust emission. The provision has been included in the EMP budget.   |

Thanking you

Yours faithfully

General Manager (Technical) & Project Director

Copy to:

1. The CGM(Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please.

Head Office : G-5 & 6, Sector-10 Dwarka, New Delhi - 110075 website : <http://www.nhai.org>  
 मुख्यालय : जी-5 व 6, सेक्टर-10, द्वारका, नई दिल्ली - 110 075



## **Annexure B-Q-3**

### **English Translation of written representation submitted during public hearing by Ranjanben B Gohel.**

Applicant: Kariyana Gram Panchayat  
Village -Kariyana.  
Taluka - Dholka,  
District - Ahmedabad,  
Date - 07/11/2018  
Mobile -

To,  
Secretary / Member Secretary,  
Gujarat Pollution Control Board,  
Paryavaran Bhavan, Sector - 10/A,  
Gandhinagar - 382 910

**Subject:** - Protest Application pertaining to the Public Notice published on 11<sup>th</sup> page of Gujarat Samachar, dated 09/10/2018.

Respected Sir,

As per the Public Notice given by you on 11th page of Gujarat Samachar, dated 09/10/2018 pertaining to Ahmedabad-Dholera Express Road (110 KM), Public hearing is organized. We, as a representative of our village urge you, if road construction is done without taking into consideration our concerns then it will badly affect our people, cattle and birds. It will also immensely increase pollution and it is all likelihood that it will result in natural catastrophe. Thus, villagers have a strong objection against construction of road without considering laws pertaining to pollution control.

- (1) The lands which are to be retrenched for Ahmedabad-Dholera Express Highway, are agricultural land and ripple two or more crops a year so it remains green. And due to standing crop, air pollution remains quite low and villagers always get clean and fresh air.
- (2) Due to construction of Ahmedabad-Dholera Express Highway, air level will be highly damaged. There is no national or state level highway here. So, vehicle traffic is quite low. This results in clean and fresh air, full of oxygen. Further, noise pollution is quite negligible. The proposed road will pass adjoining to the village which will cause disturbance to the villager's sleep due to vehicle and horn noise. It is advisable to keep road alignment far from the village.
- (3) Animals and birds living around are used to live in peace and pass their night without any fear but if construction of Ahmedabad-Dholera Express Highway is done then it

should be “NO HORN ZONE” otherwise it will cause trouble for animals and birds initially. It is quite necessary to control noise on the road so animal and birds can live without any fear. Further, if cattle don't get proper rest then after a period their milking capacity will be affected which will result into less milk production.

- (4) Expressway is passing nearby our village and as per geographical situation of the village, rain water always flows towards NalSarovar and from north goes towards Boru-Vataman. Express Highway will be built from east to west, thus all the directions are different which will result in water logging and can cause epidemic. Further, land of south side will not get water and become unproductive, resulting in increased noise pollution along with worst effect on farming. Over the period of time, villagers will become unemployed. So, proper water management is needed. In absence of it, there will be increased air pollution. We would like to know about the plans pertaining to water management. Village has high objection on constructing the road without providing us detailed plan on the same.
- (5) Constructing Ahmedabad-Dholera Express Highway will result in higher traffic problems. Many Blue Cows, hogs, cows, buffaloes, deers, panthers, rabbits, goats and sheeps live within the border of the village. They usually pass by the village in day as well as night. So, if proper roads to village are not provided then there are maximum chances of accidents. Accident Prevention System should be formed and on every 15 to 20 kilometers, there should be facility of emergency vehicle and nursing centers. In absence of that, villagers have to remain stand by for the same and it will create fearful atmosphere. Express Highway should be built as underpass which will cause less air and noise pollution. Construction of Service Road is also necessary otherwise it will cause huge trouble for villagers to travel for daily activities. We highly object on construction of Highway without providing Service Road. We have already conveyed our objection to Acquisition Officer on constructing highway without providing Service Road.
- (6) Express Highway is quite near to village. Mechanism should be provided to prevent noise and air pollution. Lesser noise will help villagers to live with peace of mind.
- (7) Huge amount of agricultural land will be retrenched and it will result in cutting down the big trees and worst effect on farming. It will also affect fresh air level. Our demand is to establish 3 lines on both sides of the road and nurture the big trees like Nimb, Ficus religiosa, Banyan trees, Tamarind trees etc. The size of the trees should be big and the responsibility of nurturing them will be of Express Highway Authority. If these trees are not properly nurtured and grow to their normal size then any damage caused to village will be compensated by Express Highway Authority and the written bond regarding the same shall be provided by the Highway Authority. Further, we need confirmation from Express Authority for sowing and nurturing trees on the uncultivated land of the village so air pollution can be controlled and healthy atmosphere can be maintained.

(8) While filling up the land with the soil at the time of constructing Express Highway, particles of soil will spread in the air and it will hugely damage the nearby farms. Road Contractor has to give confirmation and submit it to Gram Panchayat assuring the safe doing of these things without damaging the nearby farms. And if any damage is caused due to the same, responsibility of such damage would be of Express Highway Authority.

As such, we request you to consider our above objections before granting the permission for construction.

.....  
Ranjan B Gohel, Sarpanch  
Gram Panchayat, Village- Kariyana,  
Taluka – Dholka, District-Ahmedabad



*Annexure B-A-9*

**भारतीय राष्ट्रीय राजमार्ग प्राधिकरण**  
(सड़क परिवहन और राजमार्ग मंत्रालय)  
**National Highways Authority of India**  
(Ministry of Road Transport & Highways)

एवाई - 34 व 36, टिना बिल्डिंग, नई एलिना बिल्डिंग, वेसापुर रोड, जयराज पार्क, अहमदाबाद - 380 051  
PIN - 34 & 36, 2nd Floor, Amul Building, NRI Elina Bldg, Vesapur Road, Jayraj Park, Ahmedabad - 380 051

Tel : 079-26621062  
26621063  
E-mail : ahd@nhai.org

No. NHAI/III/Ahmedabad/GPCB/E-D-Exp/2018- 2638

Date: 12-11-2018

To,  
Ranjan B. Goyal Sarpanch  
Karyana  
Gram Panchayat  
Village- Karyana  
Tal. Dholka, District- Ahmedabad

Subject: Point wise reply of Sarpanch, Karyana Gram Panchayat, Village- Karyana Taluka- Dholka, District - Ahmedabad received at Public Hearing on dated 13-11-2018

| S. No. | Name of stakeholder                 | Reply   |
|--------|-------------------------------------|---|
| 1      |                                     | Farmers and villagers will get the compensation rate as per the Government policy. All the vehicles plying on the Expressway will naturally be as per GPCB norms. Moreover to reduce air pollution further avenue plantation shall be done on both sides as well as median of the expressway.                                       |
| 2      |                                     | The construction of the proposed expressway has been proposed at a distance of 200 - 250 m at residential areas. Biological Noise barriers (such as tree plantation etc) shall be proposed to reduce noise pollution. For reducing air pollution avenue plantation shall be done on both sides as well as median of the expressway. |
| 3      |                                     | Noise barriers shall be provided as per the scheme given in EIA report.   |
| 4      | Ranjan B. Goyal,<br>Sarpanch        | We are not reducing the present water way in the whole alignment. Sufficient no. of culverts/CD structures have been provided as per the study of hydrologist of consultant.  |
| 5      | Karyana<br>Gram Panchayat           | As per the survey report we have provided Underpass (C.U.P) which will facilitate the animals. Moreover other culverts will also facilitate the animals at least in dry season.   |
| 6      | Village- Karyana                    | Question is repeated. Same as S No. 1   |
| 7      | Tal. Dholka, District-<br>Ahmedabad | Total 36000 nos. of trees shall be planted on both sides of the expressway. NHAI will deposit the compensatory cost towards CAMPA fund as per demand from forest department. Plantation may be done on government / barren land by State forest department from CAMPA fund.   |
| 8      |                                     | Sprinkling shall be done at the construction time by water tankers fitted with sprinklers to reduce dust emission. The provision has been included in the EMP budget.   |

Thanking you

Yours faithfully

General Manager (Technical) & Project Director

Copy to:-

1. The DGM(Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please.

## **Annexure B-Q-4**

**English Translation of written representation submitted during public hearing by G.U.Chauhan.**

Applicant: Bholad Gram Panchayat  
Village - Bholad.  
Taluka - Dholka,  
District - Ahmedabad,  
Date - 07/11/2018  
Mobile -

To,  
Secretary / Member Secretary,  
Gujarat Pollution Control Board,  
Paryavaran Bhavan, Sector - 10/A,  
Gandhinagar - 382 910

**Subject:** - Protest Application pertaining to the Public Notice published on 11<sup>th</sup> page of Gujarat Samachar, dated 09/10/2018.

Respected Sir,

As per the Public Notice given by you on 11th page of Gujarat Samachar, dated 09/10/2018 pertaining to Ahmedabad-Dholera Express Road (110 KM), Public hearing is organized. We, as a representative of our village urge you, if road construction is done without taking into consideration our concerns then it will badly affect our people, cattle and birds. It will also immensely increase pollution and it is all likelihood that it will result in natural catastrophe. Thus, villagers have a strong objection against construction of road without considering laws pertaining to pollution control.

- (1) The lands which are to be retrenched for Ahmedabad-Dholera Express Highway, are agricultural land and ripple two or more crops a year so it remains green. And due to standing crop, air pollution remains quite low and villagers always get clean and fresh air.
- (2) Due to construction of Ahmedabad-Dholera Express Highway, air level will be highly damaged. There is no national or state level highway here. So, vehicle traffic is quite low. This results in clean and fresh air, full of oxygen. Further, noise pollution is quite negligible. The proposed road will pass adjoining to the village which will cause disturbance to the villager's sleep due to vehicle and horn noise. It is advisable to keep road alignment far from the village.
- (3) Animals and birds living around are used to live in peace and pass their night without any fear but if construction of Ahmedabad-Dholera Express Highway is done then it

should be “NO HORN ZONE” otherwise it will cause trouble for animals and birds initially. It is quite necessary to control noise on the road so animal and birds can live without any fear. Further, if cattle don't get proper rest then after a period their milking capacity will be affected which will result into less milk production.

- (4) Expressway is passing nearby our village and as per geographical situation of the village, rain water always flows towards NalSarovar and from north goes towards Boru-Vataman. Express Highway will be built from east to west, thus all the directions are different which will result in water logging and can cause epidemic. Further, land of south side will not get water and become unproductive, resulting in increased noise pollution along with worst effect on farming. Over the period of time, villagers will become unemployed. So, proper water management is needed. In absence of it, there will be increased air pollution. We would like to know about the plans pertaining to water management. Village has high objection on constructing the road without providing us detailed plan on the same.
- (5) Constructing Ahmedabad-Dholera Express Highway will result in higher traffic problems. Many Blue Cows, hogs, cows, buffaloes, deers, panthers, rabbits, goats and sheeps live within the border of the village. They usually pass by the village in day as well as night. So, if proper roads to village are not provided then there are maximum chances of accidents. Accident Prevention System should be formed and on every 15 to 20 kilometers, there should be facility of emergency vehicle and nursing centers. In absence of that, villagers have to remain stand by for the same and it will create fearful atmosphere. Express Highway should be built as underpass which will cause less air and noise pollution. Construction of Service Road is also necessary otherwise it will cause huge trouble for villagers to travel for daily activities. We highly object on construction of Highway without providing Service Road. We have already conveyed our objection to Acquisition Officer on constructing highway without providing Service Road.
- (6) Express Highway is quite near to village. Mechanism should be provided to prevent noise and air pollution. Lesser noise will help villagers to live with peace of mind.
- (7) Huge amount of agricultural land will be retrenched and it will result in cutting down the big trees and worst effect on farming. It will also affect fresh air level. Our demand is to establish 3 lines on both sides of the road and nurture the big trees like Nimb, Ficus religiosa, Banyan trees, Tamarind trees etc. The size of the trees should be big and the responsibility of nurturing them will be of Express Highway Authority. If these trees are not properly nurtured and grow to their normal size then any damage caused to village will be compensated by Express Highway Authority and the written bond regarding the same shall be provided by the Highway Authority. Further, we need confirmation from Express Authority for sowing and nurturing trees on the uncultivated land of the village so air pollution can be controlled and healthy atmosphere can be maintained.



(8) While filling up the land with the soil at the time of constructing Express Highway, particles of soil will spread in the air and it will hugely damage the nearby farms. Road Contractor has to give confirmation and submit it to Gram Panchayat assuring the safe doing of these things without damaging the nearby farms. And if any damage is caused due to the same, responsibility of such damage would be of Express Highway Authority.

As such, we request you to consider our above objections before granting the permission for construction.

.....  
G.U. Chauhan, Sarpanch  
Gram Panchayat, Village-Bholad  
Taluka – Dholka, District-Ahmedabad



# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

संपादक : पी.एम. 343, द्वितीय मंज, अमृत विद्युत, निम्न वेतन वेतन, निम्नवेतन वेतन, निम्नवेतन वेतन - 380 051

F&I: 3A & 3B 2nd Floor Amul Building, M. T. Bank, Vajrapur Road, Vajrapur, Gandhinagar - 380 051

Tel: 079-26821062

26821063

E-mail: nhai@nhai.org

(NHAI/Flt-Ahmedabad/GPCBA-D-Exp/2018/313)

Date: 11/11/2018

To:

G.U. Chauhan, Sarpanch

Bholad

Gram Panchayat

Village- Bholad

Tal. Dholka District- Ahmedabad

Subject: Poiri were reply of Sarpanch, Bholad Gram Panchayat, Village- Bholad Taluka- Dholka, District - Ahmedabad received at Public Hearing on dated 13-11-2018

| S. No | Name of stakeholder  | Reply   |
|-------|--|---|
| 1     |  | Farmers and villagers will get the compensation rate as per the Government policy. All the vehicles plying on the Expressway will naturally be as per CPCB norms. Moreover to reduce air pollution further avenue plantation shall be done on both sides as well as median of the expressway.                                       |
| 2     |  | The construction of the proposed expressway has been proposed at a distance of 200 - 250 m at residential areas. Biological Noise barriers (such as tree plantation etc) shall be proposed to reduce noise pollution. For reducing air pollution avenue plantation shall be done on both sides as well as median of the expressway. |
| 3     |  | Noise barriers shall be provided as per the scheme given in EIA report.   |
| 4     | G.U. Chauhan,<br>Sarpanch<br>Bholad                                      | We are not reducing the present water way in the whole alignment. Sufficient no. of culverts/CD structures have been provided as per the study of hydrologist of consultant.  |
| 5     | Gram Panchayat<br>Village- Bholad<br>Tal. Dholka, District-<br>Ahmedabad | As per the survey report we have provided Underpass (CUP) which will facilitate the animals. Moreover, other culverts will also facilitate the animals at least in dry season.  |
| 6     |  | Question is repeated. Same as S.No. 1   |
| 7     |  | Total 65000 nos. of trees shall be planted on both sides of the expressway. NHAI will deposit the compensatory cost towards CAMPA fund as per demand from forest department. Plantation may be done on government / barren land by State forest department from CAMPA fund.   |
| 8     |  | Sprinkling shall be done at the construction time by water tankers fitted with sprinklers to reduce dust emission. This provision has been included in the EMP budget.  |

Thanking you.

Yours faithfully

General Manager (Technical)  
& Project Director

Copy to:

1. The GGM (Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar (G) kind information please.

Head Office : G-5 & 6, Sector-10 Dwarka, New Delhi - 110075 website : <http://www.nhai.org>

मुख्यालय : जी-5 व 6, सेक्टर-10, द्वारका, नई दिल्ली - 110 075

## **Annexure B-Q-5**

**English Translation of written representation submitted during public hearing by K.M.Bharvad.**

Applicant: Sarandhi Gram Panchayat

Village - Sarandhi.

Taluka - Dholka,

District - Ahmedabad,

Date - 07/11/2018

Mobile -

To,

Secretary / Member Secretary,

Gujarat Pollution Control Board,

Paryavaran Bhavan, Sector - 10/A,

Gandhinagar - 382 910

**Subject:** - Protest Application pertaining to the Public Notice published on 11<sup>th</sup> page of Gujarat Samachar, dated 09/10/2018.

Respected Sir,

As per the Public Notice given by you on 11th page of Gujarat Samachar, dated 09/10/2018 pertaining to Ahmedabad-Dholera Express Road (110 KM), Public hearing is organized. We, as a representative of our village urge you, if road construction is done without taking into consideration our concerns then it will badly affect our people, cattle and birds. It will also immensely increase pollution and it is all likelihood that it will result in natural catastrophe. Thus, villagers have a strong objection against construction of road without considering laws pertaining to pollution control.

- (1) The lands which are to be retrenched for Ahmedabad-Dholera Express Highway, are agricultural land and ripple two or more crops a year so it remains green. And due to standing crop, air pollution remains quite low and villagers always get clean and fresh air.
- (2) Due to construction of Ahmedabad-Dholera Express Highway, air level will be highly damaged. There is no national or state level highway here. So, vehicle traffic is quite low. This results in clean and fresh air, full of oxygen. Further, noise pollution is quite negligible. The proposed road will pass adjoining to the village which will cause disturbance to the villager's sleep due to vehicle and horn noise. It is advisable to keep road alignment far from the village.
- (3) Animals and birds living around are used to live in peace and pass their night without any fear but if construction of Ahmedabad-Dholera Express Highway is done then it should be "NO HORN ZONE" otherwise it will cause trouble for animals and birds

initially. It is quite necessary to control noise on the road so animal and birds can live without any fear. Further, if cattle don't get proper rest then after a period their milking capacity will be affected which will result into less milk production.

- (4) Expressway is passing nearby our village and as per geographical situation of the village, rain water always flows towards NalSarovar and from north goes towards Boru-Vataman. Express Highway will be built from east to west, thus all the directions are different which will result in water logging and can cause epidemic. Further, land of south side will not get water and become unproductive, resulting in increased noise pollution along with worst effect on farming. Over the period of time, villagers will become unemployed. So, proper water management is needed. In absence of it, there will be increased air pollution. We would like to know about the plans pertaining to water management. Village has high objection on constructing the road without providing us detailed plan on the same.
- (5) Constructing Ahmedabad-Dholera Express Highway will result in higher traffic problems. Many Blue Cows, hogs, cows, buffaloes, deers, panthers, rabbits, goats and sheeps live within the border of the village. They usually pass by the village in day as well as night. So, if proper roads to village are not provided then there are maximum chances of accidents. Accident Prevention System should be formed and on every 15 to 20 kilometers, there should be facility of emergency vehicle and nursing centers. In absence of that, villagers have to remain stand by for the same and it will create fearful atmosphere. Express Highway should be built as underpass which will cause less air and noise pollution. Construction of Service Road is also necessary otherwise it will cause huge trouble for villagers to travel for daily activities. We highly object on construction of Highway without providing Service Road. We have already conveyed our objection to Acquisition Officer on constructing highway without providing Service Road.
- (6) Express Highway is quite near to village. Mechanism should be provided to prevent noise and air pollution. Lesser noise will help villagers to live with peace of mind.
- (7) Huge amount of agricultural land will be retrenched and it will result in cutting down the big trees and worst effect on farming. It will also affect fresh air level. Our demand is to establish 3 lines on both sides of the road and nurture the big trees like Nimb, Ficus religiosa, Banyan trees, Tamarind trees etc. The size of the trees should be big and the responsibility of nurturing them will be of Express Highway Authority. If these trees are not properly nurtured and grow to their normal size then any damage caused to village will be compensated by Express Highway Authority and the written bond regarding the same shall be provided by the Highway Authority. Further, we need confirmation from Express Authority for sowing and nurturing trees on the uncultivated land of the village so air pollution can be controlled and healthy atmosphere can be maintained.

(8) While filling up the land with the soil at the time of constructing Express Highway, particles of soil will spread in the air and it will hugely damage the nearby farms. Road Contractor has to give confirmation and submit it to Gram Panchayat assuring the safe doing of these things without damaging the nearby farms. And if any damage is caused due to the same, responsibility of such damage would be of Express Highway Authority.

As such, we request you to consider our above objections before granting the permission for construction.

.....

K.M. Bharvad

Gram Panchayat, Village-Sarandhi  
Taluka – Dholka, District-Ahmedabad



Ameswre- B A S

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

National Highways Authority of India

(Ministry of Road Transport & Highways)

पता: 3A & 3B, 2nd Floor, Arjun Building, Near Dena Bank, Vajrapur Road, Jinku Park, Ahmedabad - 380 051

PU: 3A & 3B, 2nd Floor Arjun Building, Near Dena Bank, Vajrapur Road, Jinku Park, Ahmedabad - 380 051

Tel: 079-26821062

26821063

E-mail: ahd@nhai.org

No. NHAI/PU/Ahmedabad/EPCB-4-D-Exp/2018/3016

Date: 13/11/2018

To:  
K.M. Barvad  
Sarandh  
Gram Panchayat  
Village Sarandh  
Tal Dholka District Ahmedabad

Subject: Point wise reply of Sarpanch Sarandh Gram Panchayat, Village- Sarandh, Taluka- Dholka, District - Ahmedabad received at Public Hearing on dated 13/11/2018

| S No | Name of stakeholder                               | Reply   |
|------|---|---|
| 1    |   | Farmers and villagers will get the compensation rate as per the Government policy. All the vehicles plying on the Expressway will naturally be as per CPCB norms. Moreover to reduce air pollution further avenue plantation shall be done on both sides as well as median of the expressway.                                       |
| 2    |   | The construction of the proposed expressway has been proposed at a distance of 200 - 250 m at residential areas. Biological Noise barriers (such as tree plantation etc) shall be proposed to reduce noise pollution. For reducing air pollution avenue plantation shall be done on both sides as well as median of the expressway. |
| 3    |   | Noise barriers shall be provided as per the scheme given in EIA report.   |
| 4    | K.M. Barvad<br>Sarandh<br>Gram Panchayat          | We are not reducing the present water way in the whole alignment. Sufficient no. of culverts/CD structures have been provided as per the study of hydrologist of consultant.  |
| 5    | Village Sarandh<br>Tal Dholka, District Ahmedabad | As per the survey report we have provided Underpass (CUP) which will facilitate the animals. Moreover, other culverts will also facilitate the animals at least in dry season.  |
| 6    |   | Question is repeated. Same as S.No. 1   |
| 7    |   | Total 68000 nos. of trees shall be planted on both sides of the expressway. NHAI will deposit the compensatory cost towards CAMPA fund as per demand from forest department. Plantation may be done on government / barren land by State forest department from CAMPA fund.   |
| 8    |   | Sprinkling shall be done at the construction time by water tankers filled with sprinklers to reduce dust emission. This provision has been included in the EMP budget.  |

Thanking you,

Yours faithfully,

General Manager (Technical) & Project Director

Copy to:

The CGM(Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please.

Head Office: G-5 & 6, Sector-10 Dwarka, New Delhi - 110075 website: <http://www.nhai.org>

मुख्यालय: जी-5 & 6, सेक्टर-10, द्वारका, नई दिल्ली - 110 075



## **Annexure B-Q-6**

### **English Translation of written representation submitted during public hearing by Sarpanch :- Jalapur Godhneshwar Gram Panchayat**

Applicant: Jalapur Godhneshwar Gram Panchayat  
Village- Jalapur Godhneshwar.  
Taluka - Dholka,  
District - Ahmedabad,  
Date - 07/11/2018  
Mobile -

To,  
Secretary / Member Secretary,  
Gujarat Pollution Control Board,  
Paryavaran Bhavan, Sector - 10/A,  
Gandhinagar - 382 910

**Subject:** - Protest Application pertaining to the Public Notice published on 11<sup>th</sup> page of Gujarat Samachar, dated 09/10/2018.

Respected Sir,

As per the Public Notice given by you on 11th page of Gujarat Samachar, dated 09/10/2018 pertaining to Ahmedabad-Dholera Express Road (110 KM), Public hearing is organized. We, as a representative of our village urge you, if road construction is done without taking into consideration our concerns then it will badly affect our people, cattle and birds. It will also immensely increase pollution and it is all likelihood that it will result in natural catastrophe. Thus, villagers have a strong objection against construction of road without considering laws pertaining to pollution control.

- (1) The lands which are to be retrenched for Ahmedabad-Dholera Express Highway, are agricultural land and ripple two or more crops a year so it remains green. And due to standing crop, air pollution remains quite low and villagers always get clean and fresh air.
- (2) Due to construction of Ahmedabad-Dholera Express Highway, air level will be highly damaged. There is no national or state level highway here. So, vehicle traffic is quite low. This results in clean and fresh air, full of oxygen. Further, noise pollution is quite negligible. The proposed road will pass adjoining to the village which will cause disturbance to the villager's sleep due to vehicle and horn noise. It is advisable to keep road alignment far from the village.

- (3) Animals and birds living around are used to live in peace and pass their night without any fear but if construction of Ahmedabad-Dholera Express Highway is done then it should be "NO HORN ZONE" otherwise it will cause trouble for animals and birds initially. It is quite necessary to control noise on the road so animal and birds can live without any fear. Further, if cattle don't get proper rest then after a period their milking capacity will be affected which will result into less milk production.
- (4) Expressway is passing nearby our village and as per geographical situation of the village, rain water always flows towards NalSarovar and from north goes towards Boru-Vataman. Express Highway will be built from east to west, thus all the directions are different which will result in water logging and can cause epidemic. Further, land of south side will not get water and become unproductive, resulting in increased noise pollution along with worst effect on farming. Over the period of time, villagers will become unemployed. So, proper water management is needed. In absence of it, there will be increased air pollution. We would like to know about the plans pertaining to water management. Village has high objection on constructing the road without providing us detailed plan on the same.
- (5) Constructing Ahmedabad-Dholera Express Highway will result in higher traffic problems. Many Blue Cows, hogs, cows, buffaloes, deers, panthers, rabbits, goats and sheeps live within the border of the village. They usually pass by the village in day as well as night. So, if proper roads to village are not provided then there are maximum chances of accidents. Accident Prevention System should be formed and on every 15 to 20 kilometers, there should be facility of emergency vehicle and nursing centers. In absence of that, villagers have to remain stand by for the same and it will create fearful atmosphere. Express Highway should be built as underpass which will cause less air and noise pollution. Construction of Service Road is also necessary otherwise it will cause huge trouble for villagers to travel for daily activities. We highly object on construction of Highway without providing Service Road. We have already conveyed our objection to Acquisition Officer on constructing highway without providing Service Road.
- (6) Express Highway is quite near to village. Mechanism should be provided to prevent noise and air pollution. Lesser noise will help villagers to live with peace of mind.
- (7) Huge amount of agricultural land will be retrenched and it will result in cutting down the big trees and worst effect on farming. It will also affect fresh air level. Our demand is to establish 3 lines on both sides of the road and nurture the big trees like Nimb, Ficus religiosa, Banyan trees, Tamarind trees etc. The size of the trees should be big and the responsibility of nurturing them will be of Express Highway Authority. If these trees are not properly nurtured and grow to their normal size then any damage caused to village will be compensated by Express Highway Authority and the written bond regarding the same shall be provided by the Highway Authority. Further, we need confirmation from Express Authority for sowing and nurturing trees on the

uncultivated land of the village so air pollution can be controlled and healthy atmosphere can be maintained.

- (8) While filling up the land with the soil at the time of constructing Express Highway, particles of soil will spread in the air and it will hugely damage the nearby farms. Road Contractor has to give confirmation and submit it to Gram Panchayat assuring the safe doing of these things without damaging the nearby farms. And if any damage is caused due to the same, responsibility of such damage would be of Express Highway Authority.

As such, we request you to consider our above objections before granting the permission for construction.

.....  
Bhikhabhai Samabhai, Sarpanch,  
Village-Jalalpur Godhneshwar Gram Panchayat,  
Taluka – Dholka, District Ahmedabad



# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

प्लॉट - 37 व 38, इंदिरा पार्क, अहमद नगर, लिफ्ट रोड बेंक, वेङ्गड रोड, जवाहर पार्क, अहमदाबाद - 380 051

Plot - 37 & 38, 2nd Floor, Indira Park, Lift Road Bank, Vengal Road, Jawahar Park, Ahmedabad - 380 051

Tel : 079-26821062

26821063

E-mail: ahd@nhai.org

No: NHAI/PLD/Ahmedabad/GPGB/W/O-Exp/2018/2052

Date: 15/11/2018

To:

Bhikha bai, Sarpanch

Jalalpur Gondheshwar

Gram Panchayat

Village- Jalalpur Gondheshwar

Tal. Dholka District- Ahmedabad

Subject: Point wise reply of Sarpanch, Jalalpur Gondheshwar Gram Panchayat, Village- Jalalpur Gondheshwar, Taluk- Dholka, District- Ahmedabad received at Public Hearing on dated 13-11-2018

| S. No. | Name of stakeholder   | Reply   |
|--------|---|---|
| 1      |   | Farmers and villagers will get the compensation rate as per the Government policy. All the vehicles plying on the Expressway will naturally be as per CPMG norms. Moreover to reduce air pollution further avenue plantation shall be done on both sides as well as median of the expressway.                                       |
| 2      |   | The construction of the proposed expressway has been proposed at a distance of 300 - 250 m at residential areas. Biological Noise barriers (such as tree plantation etc) shall be proposed to reduce noise pollution. For reducing air pollution avenue plantation shall be done on both sides as well as median of the expressway. |
| 3      |   | Noise barriers shall be provided as per the scheme given in EIA report.   |
| 4      | Bhikha bai, Sarpanch<br>Jalalpur Gondheshwar<br>Gram Panchayat<br>Village- Jalalpur<br>Gondheshwar<br>Tal. Dholka, District-<br>Ahmedabad | We are not reducing the present water way in the whole alignment. Sufficient no. of culverts/CD structures have been provided as per the study of hydrologist of consultant.  |
| 5      |   | As per the survey report we have provided Underpass (CUP) which will facilitate the animals. Moreover other culverts will also facilitate the animals at least in dry season.   |
| 6      |   | Question is repeated. Same as S No. 1   |
| 7      |   | Total 66000 nos. of trees shall be planted on both sides of the expressway. NHAI will deposit the compensatory cost towards CAMPA fund as per demand from forest department. Plantation may be done on government / barren land by State forest department from CAMPA fund.   |
| 8      |   | Sprinkling shall be done at the construction time by water tankers fitted with sprinklers to reduce dust emission. The provision has been included in the EMP budget.   |

Thanking you,

Yours faithfully,

General Manager (Technical) & Project Director

Copy to:

1. The CGM(Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please.

Head Office: G-5 & 6, Sector-10 Dwarka, New Delhi - 110075. website: <http://www.nhai.org>

मुख्यालय: जी-5 व 6, सेक्टर-10, द्वारका, नई दिल्ली - 110 075

## **Annexure B-Q-7**

**English Translation of written representation submitted during public hearing by J.M. Bharvad.**

Applicant: Lana Gram Panchayat  
Village - Lana.  
Taluka - Dholka,  
District - Ahmedabad,  
Date - 07/11/2018  
Mobile -

To,  
Secretary / Member Secretary,  
Gujarat Pollution Control Board,  
Paryavaran Bhavan, Sector - 10/A,  
Gandhinagar - 382 910

**Subject:** - Protest Application pertaining to the Public Notice published on 11<sup>th</sup> page of Gujarat Samachar, dated 09/10/2018.

Respected Sir,

As per the Public Notice given by you on 11th page of Gujarat Samachar, dated 09/10/2018 pertaining to Ahmedabad-Dholera Express Road (110 KM), Public hearing is organized. We, as a representative of our village urge you, if road construction is done without taking into consideration our concerns then it will badly affect our people, cattle and birds. It will also immensely increase pollution and it is all likelihood that it will result in natural catastrophe. Thus, villagers have a strong objection against construction of road without considering laws pertaining to pollution control.

- (1) The lands which are to be retrenched for Ahmedabad-Dholera Express Highway, are agricultural land and ripple two or more crops a year so it remains green. And due to standing crop, air pollution remains quite low and villagers always get clean and fresh air.
- (2) Due to construction of Ahmedabad-Dholera Express Highway, air level will be highly damaged. There is no national or state level highway here. So, vehicle traffic is quite low. This results in clean and fresh air, full of oxygen. Further, noise pollution is quite negligible. The proposed road will pass adjoining to the village which will cause disturbance to the villager's sleep due to vehicle and horn noise. It is advisable to keep road alignment far from the village.
- (3) Animals and birds living around are used to live in peace and pass their night without any fear but if construction of Ahmedabad-Dholera Express Highway is done then it should be "NO HORN ZONE" otherwise it will cause trouble for animals and birds

initially. It is quite necessary to control noise on the road so animal and birds can live without any fear. Further, if cattle don't get proper rest then after a period their milking capacity will be affected which will result into less milk production.

- (4) Expressway is passing nearby our village and as per geographical situation of the village, rain water always flows towards NalSarovar and from north goes towards Boru-Vataman. Express Highway will be built from east to west, thus all the directions are different which will result in water logging and can cause epidemic. Further, land of south side will not get water and become unproductive, resulting in increased noise pollution along with worst effect on farming. Over the period of time, villagers will become unemployed. So, proper water management is needed. In absence of it, there will be increased air pollution. We would like to know about the plans pertaining to water management. Village has high objection on constructing the road without providing us detailed plan on the same.
- (5) Constructing Ahmedabad-Dholera Express Highway will result in higher traffic problems. Many Blue Cows, hogs, cows, buffaloes, deers, panthers, rabbits, goats and sheeps live within the border of the village. They usually pass by the village in day as well as night. So, if proper roads to village are not provided then there are maximum chances of accidents. Accident Prevention System should be formed and on every 15 to 20 kilometers, there should be facility of emergency vehicle and nursing centers. In absence of that, villagers have to remain stand by for the same and it will create fearful atmosphere. Express Highway should be built as underpass which will cause less air and noise pollution. Construction of Service Road is also necessary otherwise it will cause huge trouble for villagers to travel for daily activities. We highly object on construction of Highway without providing Service Road. We have already conveyed our objection to Acquisition Officer on constructing highway without providing Service Road.
- (6) Express Highway is quite near to village. Mechanism should be provided to prevent noise and air pollution. Lesser noise will help villagers to live with peace of mind.
- (7) Huge amount of agricultural land will be retrenched and it will result in cutting down the big trees and worst effect on farming. It will also affect fresh air level. Our demand is to establish 3 lines on both sides of the road and nurture the big trees like Nimb, Ficus religiosa, Banyan trees, Tamarind trees etc. The size of the trees should be big and the responsibility of nurturing them will be of Express Highway Authority. If these trees are not properly nurtured and grow to their normal size then any damage caused to village will be compensated by Express Highway Authority and the written bond regarding the same shall be provided by the Highway Authority. Further, we need confirmation from Express Authority for sowing and nurturing trees on the uncultivated land of the village so air pollution can be controlled and healthy atmosphere can be maintained.



(8) While filling up the land with the soil at the time of constructing Express Highway, particles of soil will spread in the air and it will hugely damage the nearby farms. Road Contractor has to give confirmation and submit it to Gram Panchayat assuring the safe doing of these things without damaging the nearby farms. And if any damage is caused due to the same, responsibility of such damage would be of Express Highway Authority.

As such, we request you to consider our above objections before granting the permission for construction.

.....  
J.M. Bharvad Sarpanch  
Gram Panchayat, Village-Lana  
Taluka – Dholka, District-Ahmedabad



# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

पता: 35 व 36, इंदिरा नगर, अमृत विशाल, नैट डेन बैंक, वेल्डर रोड, जयपुर पार्क, अहमदाबाद - 380 051

PU / 35 & 36, 2nd Floor, Amul Building, Nr. Dena Bank, Velasur Road, Jayaj Park, Ahmedabad - 380 051

Tel : 079-26821062

26821063

E-mail : nhai@nhai.org

No. NHAI/PU-Ahmedabad/GPCBA-D-Exp/2018/242

Date 13/1/2018

To,  
J.M. Bharvad, Sarpanch  
Lana Gram Panchayat,  
Village-Lana  
Tal-Dhola, District-Ahmedabad

Subject: Point wise reply of Sarpanch, Lana Gram Panchayat, Village-Lana, Taluka-Dhola, District-Ahmedabad received at Public Hearing on dated 13-11-2018

| S. No. | Name of stakeholder                             | Reply  |
|--------|---|--|
| 1      |   | Farmers and villagers will get the compensation rate as per the Government policy. All the vehicles plying on the Expressway will naturally be as per CPCB norms. Moreover to reduce air pollution further avenue plantation shall be done on both sides as well as median of the expressway.                                      |
| 2      |   | The construction of the proposed expressway has been proposed at a distance of 200-250 m. at residential areas. Biological Noise barriers (such as tree plantation etc) shall be proposed to reduce noise pollution. For reducing air pollution avenue plantation shall be done on both sides as well as median of the expressway. |
| 3      |   | Noise barriers shall be provided as per the scheme given in EIA report.  |
| 4      | J.M. Bharvad<br>Sarpanch<br>Lana Gram Panchayat | We are not reducing the present water way in the whole alignment. Sufficient no. of culverts/CD structures have been provided as per the study of hydrologist of consultant.   |
| 5      | Village-Lana<br>Tal-Dhola, District-Ahmedabad   | As per the survey report we have provided Underpass (CUP) which will facilitate the animals. Moreover other culverts will also facilitate the animals at least in dry season.  |
| 6      |   | Question is repeated. Same as S.No. 1  |
| 7      |   | Total 86000 nos. of trees shall be planted on both sides of the expressway.  |
| 8      |   | NHAI will deposit the compensatory cost towards CAMPA fund as per demand from forest department. Plantation may be done on government/ barren land by State forest department from CAMPA fund.   |
| 9      |   | Sprinkling shall be done at the construction time by water tankers fitted with sprinklers to reduce dust emission. The provision has been included in the EMP budget.  |

Thanking you,

Yours faithfully,

General Manager (Technical) & Project Director

Copy to:

1. The CGM(Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please.

## **Annexure B-Q-8**

### **English Translation of written representation submitted during public hearing by Sarpanch:- Pipli Gram Panchayat.**

Applicant: Pipli Gram Panchayat  
Village -Pipli.  
Taluka - Dholka,  
District - Ahmedabad,  
Date - 07/11/2018  
Mobile -

To,  
Secretary / Member Secretary,  
Gujarat Pollution Control Board,  
Paryavaran Bhavan, Sector - 10/A,  
Gandhinagar - 382 910

**Subject:** - Protest Application pertaining to the Public Notice published on 11<sup>th</sup> page of Gujarat Samachar, dated 09/10/2018.

Respected Sir,

As per the Public Notice given by you on 11th page of Gujarat Samachar, dated 09/10/2018 pertaining to Ahmedabad-Dholera Express Road (110 KM), Public hearing is organized. We, as a representative of our village urge you, if road construction is done without taking into consideration our concerns then it will badly affect our people, cattle and birds. It will also immensely increase pollution and it is all likelihood that it will result in natural catastrophe. Thus, villagers have a strong objection against construction of road without considering laws pertaining to pollution control.

- (1) The lands which are to be retrenched for Ahmedabad-Dholera Express Highway, are agricultural land and ripple two or more crops a year so it remains green. And due to standing crop, air pollution remains quite low and villagers always get clean and fresh air.
- (2) Due to construction of Ahmedabad-Dholera Express Highway, air level will be highly damaged. There is no national or state level highway here. So, vehicle traffic is quite low. This results in clean and fresh air, full of oxygen. Further, noise pollution is quite negligible. The proposed road will pass adjoining to the village which will cause disturbance to the villager's sleep due to vehicle and horn noise. It is advisable to keep road alignment far from the village.
- (3) Animals and birds living around are used to live in peace and pass their night without any fear but if construction of Ahmedabad-Dholera Express Highway is done then it should be "NO HORN ZONE" otherwise it will cause trouble for animals and birds

initially. It is quite necessary to control noise on the road so animal and birds can live without any fear. Further, if cattle don't get proper rest then after a period their milking capacity will be affected which will result into less milk production.

- (4) Expressway is passing nearby our village and as per geographical situation of the village, rain water always flows towards NalSarovar and from north goes towards Boru-Vataman. Express Highway will be built from east to west, thus all the directions are different which will result in water logging and can cause epidemic. Further, land of south side will not get water and become unproductive, resulting in increased noise pollution along with worst effect on farming. Over the period of time, villagers will become unemployed. So, proper water management is needed. In absence of it, there will be increased air pollution. We would like to know about the plans pertaining to water management. Village has high objection on constructing the road without providing us detailed plan on the same.
- (5) Constructing Ahmedabad-Dholera Express Highway will result in higher traffic problems. Many Blue Cows, hogs, cows, buffaloes, deers, panthers, rabbits, goats and sheeps live within the border of the village. They usually pass by the village in day as well as night. So, if proper roads to village are not provided then there are maximum chances of accidents. Accident Prevention System should be formed and on every 15 to 20 kilometers, there should be facility of emergency vehicle and nursing centers. In absence of that, villagers have to remain stand by for the same and it will create fearful atmosphere. Express Highway should be built as underpass which will cause less air and noise pollution. Construction of Service Road is also necessary otherwise it will cause huge trouble for villagers to travel for daily activities. We highly object on construction of Highway without providing Service Road. We have already conveyed our objection to Acquisition Officer on constructing highway without providing Service Road.
- (6) Express Highway is quite near to village. Mechanism should be provided to prevent noise and air pollution. Lesser noise will help villagers to live with peace of mind.
- (7) Huge amount of agricultural land will be retrenched and it will result in cutting down the big trees and worst effect on farming. It will also affect fresh air level. Our demand is to establish 3 lines on both sides of the road and nurture the big trees like Nimb, Ficus religiosa, Banyan trees, Tamarind trees etc. The size of the trees should be big and the responsibility of nurturing them will be of Express Highway Authority. If these trees are not properly nurtured and grow to their normal size then any damage caused to village will be compensated by Express Highway Authority and the written bond regarding the same shall be provided by the Highway Authority. Further, we need confirmation from Express Authority for sowing and nurturing trees on the uncultivated land of the village so air pollution can be controlled and healthy atmosphere can be maintained.

(8) While filling up the land with the soil at the time of constructing Express Highway, particles of soil will spread in the air and it will hugely damage the nearby farms. Road Contractor has to give confirmation and submit it to Gram Panchayat assuring the safe doing of these things without damaging the nearby farms. And if any damage is caused due to the same, responsibility of such damage would be of Express Highway Authority.

As such, we request you to consider our above objections before granting the permission for construction.

.....  
Sarpanch,  
Gram Panchayat, Village-Pipli  
Taluka – Dholka, District-Ahmedabad

Ahmedabad-B-A-8



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

National Highways Authority of India

(Ministry of Road Transport & Highways)

पता : 3A & 3B, 2nd Floor, Amul Building, Near Dana Bank, Vimala Road, Jyoti Park, Ahmedabad - 380 051

Ph: 3A & 3B, 2nd Floor, Amul Building, Near Dana Bank, Vimala Road, Jyoti Park, Ahmedabad - 380 051

Tel: 079-26621062

26621063

E-mail: nhai@nhai.org

No. NH/MPH/Ahmedabad/CPCB/MO Exp/2018/11/18

Date: 13/11/2018

To

Sarpanch

Pipli Gram Panchayat

Village: Pipli

Tal: Dhokra, District: Ahmedabad

Subject: Point wise reply of Sarpanch, Pipli Gram Panchayat, Village: pipli, Taluka: Dhokra, District - Ahmedabad involved in Public Hearing on dated 13-11-2018

| S. No. | Name of stakeholder  | Reply   |
|--------|--|---|
| 1      |  | Farmers and villagers will get the compensation rate as per the Government policy. All the vehicles plying on the Expressway will naturally be as per CPCB norms. Moreover to reduce air pollution further avenue plantation shall be done on both sides as well as median of the expressway.                                       |
| 2      |  | The construction of the proposed expressway has been proposed at a distance of 200 - 250 m at residential areas. Biological Noise barriers (such as tree plantation etc) shall be proposed to reduce noise pollution. For reducing air pollution avenue plantation shall be done on both sides as well as median of the expressway. |
| 3      |  | Noise barriers shall be provided as per the schema given in EIA report.   |
| 4      | Sarpanch<br>Pipli Gram Panchayat<br>Village- Pipli<br>Tal Dhokra District<br>Ahmedabad | We are not reducing the present water way in the whole alignment. Sufficient no. of culverts/CD structures have been provided as per the study of hydrologist of consultant.  |
| 5      |  | As per the survey report we have provided Underpass (CUP) which will facilitate the animals. Moreover other culverts will also facilitate the animals at least in dry season.   |
| 6      |  | Question is repeated. Same as S No. 1   |
| 7      |  | Total 80000 nos. of trees shall be planted on both sides of the expressway. NHAI will deposit the compensatory cost towards CAMPA fund as per demand from forest department. Plantation may be done on government barren land by State forest department from CAMPA fund.   |
| 8      |  | Sprinkling shall be done at the construction time by water tankers fitted with sprinklers to reduce dust emission. The provision has been included in the EMP budget.   |

Thanking you,

Yours faithfully,

General Manager (Tech) & Project Director

Copy to:

1. The CGM(Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please.



## **Annexure B-Q-9**

### **English Translation of written representation submitted during public hearing by Sarpanch:- Vejalka Gram Panchayat.**

Applicant: Vejalka Gram Panchayat  
Village - Vejalka.  
Taluka - Dholka,  
District - Ahmedabad,  
Date - 07/11/2018  
Mobile -

To,  
Secretary / Member Secretary,  
Gujarat Pollution Control Board,  
Paryavaran Bhavan, Sector - 10/A,  
Gandhinagar - 382 910

Subject: - Protest Application pertaining to the Public Notice published on 11<sup>th</sup> page  
of Gujarat Samachar, dated 09/10/2018.

Respected Sir,

As per the Public Notice given by you on 11th page of Gujarat Samachar, dated 09/10/2018 pertaining to Ahmedabad-Dholera Express Road (110 KM), Public hearing is organized. We, as a representative of our village urge you, if road construction is done without taking into consideration our concerns then it will badly affect our people, cattle and birds. It will also immensely increase pollution and it is all likelihood that it will result in natural catastrophe. Thus, villagers have a strong objection against construction of road without considering laws pertaining to pollution control.

- (1) The lands which are to be retrenched for Ahmedabad-Dholera Express Highway, are agricultural land and ripple two or more crops a year so it remains green. And due to standing crop, air pollution remains quite low and villagers always get clean and fresh air.
- (2) Due to construction of Ahmedabad-Dholera Express Highway, air level will be highly damaged. There is no national or state level highway here. So, vehicle traffic is quite low. This results in clean and fresh air, full of oxygen. Further, noise pollution is quite negligible. The proposed road will pass adjoining to the village which will cause disturbance to the villager's sleep due to vehicle and horn noise. It is advisable to keep road alignment far from the village.
- (3) Animals and birds living around are used to live in peace and pass their night without any fear but if construction of Ahmedabad-Dholera Express Highway is done then it

should be “NO HORN ZONE” otherwise it will cause trouble for animals and birds initially. It is quite necessary to control noise on the road so animal and birds can live without any fear. Further, if cattle don't get proper rest then after a period their milking capacity will be affected which will result into less milk production.

- (4) Expressway is passing nearby our village and as per geographical situation of the village, rain water always flows towards NalSarovar and from north goes towards Boru-Vataman. Express Highway will be built from east to west, thus all the directions are different which will result in water logging and can cause epidemic. Further, land of south side will not get water and become unproductive, resulting in increased noise pollution along with worst effect on farming. Over the period of time, villagers will become unemployed. So, proper water management is needed. In absence of it, there will be increased air pollution. We would like to know about the plans pertaining to water management. Village has high objection on constructing the road without providing us detailed plan on the same.
- (5) Constructing Ahmedabad-Dholera Express Highway will result in higher traffic problems. Many Blue Cows, hogs, cows, buffaloes, deers, panthers, rabbits, goats and sheeps live within the border of the village. They usually pass by the village in day as well as night. So, if proper roads to village are not provided then there are maximum chances of accidents. Accident Prevention System should be formed and on every 15 to 20 kilometers, there should be facility of emergency vehicle and nursing centers. In absence of that, villagers have to remain stand by for the same and it will create fearful atmosphere. Express Highway should be built as underpass which will cause less air and noise pollution. Construction of Service Road is also necessary otherwise it will cause huge trouble for villagers to travel for daily activities. We highly object on construction of Highway without providing Service Road. We have already conveyed our objection to Acquisition Officer on constructing highway without providing Service Road.
- (6) Express Highway is quite near to village. Mechanism should be provided to prevent noise and air pollution. Lesser noise will help villagers to live with peace of mind.
- (7) Huge amount of agricultural land will be retrenched and it will result in cutting down the big trees and worst effect on farming. It will also affect fresh air level. Our demand is to establish 3 lines on both sides of the road and nurture the big trees like Nimb, Ficus religiosa, Banyan trees, Tamarind trees etc. The size of the trees should be big and the responsibility of nurturing them will be of Express Highway Authority. If these trees are not properly nurtured and grow to their normal size then any damage caused to village will be compensated by Express Highway Authority and the written bond regarding the same shall be provided by the Highway Authority. Further, we need confirmation from Express Authority for sowing and nurturing trees on the uncultivated land of the village so air pollution can be controlled and healthy atmosphere can be maintained.

(8) While filling up the land with the soil at the time of constructing Express Highway, particles of soil will spread in the air and it will hugely damage the nearby farms. Road Contractor has to give confirmation and submit it to Gram Panchayat assuring the safe doing of these things without damaging the nearby farms. And if any damage is caused due to the same, responsibility of such damage would be of Express Highway Authority.

As such, we request you to consider our above objections before granting the permission for construction.

.....  
Sarpanch,  
Gram Panchayat, Village-Vejalka  
Taluka – Dholka, District-Ahmedabad



Annexure - B-A-3  
**भारतीय राष्ट्रीय राजमार्ग प्राधिकरण**  
 (सड़क परिवहन और राजमार्ग मंत्रालय)  
**National Highways Authority of India**  
 (Ministry of Road Transport & Highways)

Tel : 079-26621062  
 26621063  
 E-mail : [nha@nhai.org](mailto:nha@nhai.org)

उपस्थिति: 34 व 35, द्वितीय मं, अमल इमारत, निकट देवा बैंक, वेजापुर रोड, जिवराज पार्क, अहमदाबाद - 380 051  
 RAJ-34 & 35, 2nd Floor, Amul Building, Nr. Deva Bank, Vejalpur Road, Jivraj Park, Ahmedabad - 380 051

No: NHAI/PIU-Ahmedabad/GPCB/A-D-Exp/2018/30417

Date: 13/11/2018

To:  
 Sarpanch  
 Vejalika Gram Panchayat  
 Village-Vejalika, Taluka-Dholka, District - Ahmedabad

Subject: Point wise reply of Sarpanch, Vejalika Gram Panchayat Village- Vejalika Taluka- Dholka, District - Ahmedabad received at Public Hearing on dated 13-11-2018

| S. No | Name of stakeholder  | Reply   |
|-------|--|---|
| 1     |  | Farmers and villagers will get the compensation rate as per the Government policy. All the vehicles plying on the Expressway will naturally be as per CPCB norms. Moreover to reduce air pollution further avenue plantation shall be done on both sides as well as median of the expressway.                                       |
| 2     |  | The construction of the proposed expressway has been proposed at a distance of 200 - 250 m in residential areas. Biological Noise barriers (such as tree plantation etc) shall be proposed to reduce noise pollution. For reducing air pollution avenue plantation shall be done on both sides as well as median of the expressway. |
| 3     | Sarpanch<br>Vejalika Gram Panchayat<br>Village-Vejalika, Taluka-<br>Dholka, District - Ahmedabad | Noise barriers shall be provided as per the scheme given in EIA report.   |
| 4     |  | We are not reducing the present water way in the whole alignment. Sufficient no. of culverts/CD structures have been provided as per the study of hydrologist of consultant.  |
| 5     |  | As per the survey report we have provided Underpass (CUP) which will facilitate the animals. Moreover other culverts will also facilitate the animals at least in dry season.   |
| 6     |  | Question is repeated. Same as S.No. 1.  |
| 7     |  | Total 68000 nos. of trees shall be planted on both sides of the expressway. NHAI will deposit the compensatory cost towards CAMPA fund as per demand from forest department. Plantation may be done on government barren land by State forest department from CAMPA fund.   |
| 8     |  | Sprinkling shall be done at the construction time by water tankers fitted with sprinklers to reduce dust emission. The provision has been included in the EMP budget.   |

Thanking you,

Yours faithfully,

General Manager (Technical) & Project Director

Copy to:

1. (re CGM(Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please)

## **Annexure B-Q-10**

### **English Translation of written representation submitted during public hearing by Kamuben.**

Applicant: Kesargadh Gram Panchayat

Village - Kesargadh.

Taluka - Dholka,

District - Ahmedabad,

Date - 07/11/2018

Mobile -

To,  
Secretary / Member Secretary,  
Gujarat Pollution Control Board,  
Paryavaran Bhavan, Sector - 10/A,  
Gandhinagar - 382 910

**Subject:** - Protest Application pertaining to the Public Notice published on 11<sup>th</sup> page of Gujarat Samachar, dated 09/10/2018.

Respected Sir,

As per the Public Notice given by you on 11th page of Gujarat Samachar, dated 09/10/2018 pertaining to Ahmedabad-Dholera Express Road (110 KM), Public hearing is organized. We, as a representative of our village urge you, if road construction is done without taking into consideration our concerns then it will badly affect our people, cattle and birds. It will also immensely increase pollution and it is all likelihood that it will result in natural catastrophe. Thus, villagers have a strong objection against construction of road without considering laws pertaining to pollution control.

- (1) The lands which are to be retrenched for Ahmedabad-Dholera Express Highway, are agricultural land and ripple two or more crops a year so it remains green. And due to standing crop, air pollution remains quite low and villagers always get clean and fresh air.
- (2) Due to construction of Ahmedabad-Dholera Express Highway, air level will be highly damaged. There is no national or state level highway here. So, vehicle traffic is quite low. This results in clean and fresh air, full of oxygen. Further, noise pollution is quite negligible. The proposed road will pass adjoining to the village which will cause disturbance to the villager's sleep due to vehicle and horn noise. It is advisable to keep road alignment far from the village.
- (3) Animals and birds living around are used to live in peace and pass their night without any fear but if construction of Ahmedabad-Dholera Express Highway is done then it

should be “NO HORN ZONE” otherwise it will cause trouble for animals and birds initially. It is quite necessary to control noise on the road so animal and birds can live without any fear. Further, if cattle don't get proper rest then after a period their milking capacity will be affected which will result into less milk production.

- (4) Expressway is passing nearby our village and as per geographical situation of the village, rain water always flows towards NalSarovar and from north goes towards Boru-Vataman. Express Highway will be built from east to west, thus all the directions are different which will result in water logging and can cause epidemic. Further, land of south side will not get water and become unproductive, resulting in increased noise pollution along with worst effect on farming. Over the period of time, villagers will become unemployed. So, proper water management is needed. In absence of it, there will be increased air pollution. We would like to know about the plans pertaining to water management. Village has high objection on constructing the road without providing us detailed plan on the same.
- (5) Constructing Ahmedabad-Dholera Express Highway will result in higher traffic problems. Many Blue Cows, hogs, cows, buffaloes, deers, panthers, rabbits, goats and sheeps live within the border of the village. They usually pass by the village in day as well as night. So, if proper roads to village are not provided then there are maximum chances of accidents. Accident Prevention System should be formed and on every 15 to 20 kilometers, there should be facility of emergency vehicle and nursing centers. In absence of that, villagers have to remain stand by for the same and it will create fearful atmosphere. Express Highway should be built as underpass which will cause less air and noise pollution. Construction of Service Road is also necessary otherwise it will cause huge trouble for villagers to travel for daily activities. We highly object on construction of Highway without providing Service Road. We have already conveyed our objection to Acquisition Officer on constructing highway without providing Service Road.
- (6) Express Highway is quite near to village. Mechanism should be provided to prevent noise and air pollution. Lesser noise will help villagers to live with peace of mind.
- (7) Huge amount of agricultural land will be retrenched and it will result in cutting down the big trees and worst effect on farming. It will also affect fresh air level. Our demand is to establish 3 lines on both sides of the road and nurture the big trees like Nimb, Ficus religiosa, Banyan trees, Tamarind trees etc. The size of the trees should be big and the responsibility of nurturing them will be of Express Highway Authority. If these trees are not properly nurtured and grow to their normal size then any damage caused to village will be compensated by Express Highway Authority and the written bond regarding the same shall be provided by the Highway Authority. Further, we need confirmation from Express Authority for sowing and nurturing trees on the uncultivated land of the village so air pollution can be controlled and healthy atmosphere can be maintained.



(8) While filling up the land with the soil at the time of constructing Express Highway, particles of soil will spread in the air and it will hugely damage the nearby farms. Road Contractor has to give confirmation and submit it to Gram Panchayat assuring the safe doing of these things without damaging the nearby farms. And if any damage is caused due to the same, responsibility of such damage would be of Express Highway Authority.

As such, we request you to consider our above objections before granting the permission for construction.

.....  
Kamuben, Sarpanch  
Gram Panchayat, Village- Kesargadh  
Taluka – Dholka, District-Ahmedabad



# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

पता: 33 व 34, द्वितीय तल, अमूल भवन, निकट जवाहर नगर, वेल्डर रोड, जवाहर पार्क, अहमदाबाद - 380 051  
PIU - 34 & 36, 2nd Floor, Amul Building, Nr. Jhaveri Bazar, Velapur Road, Jhaveri Park, Ahmedabad - 380 051

Tel: 079-26821062

26821063

E-mail: aht@nhai.org

No. NHAI/PIU-Ahmedabad/GM/CB/A-D-Exp/2018/ 11/13

Date: 13/11/2018

To:  
Karmu Behan, Sarpanch  
Kesargadh  
Gram Panchayat  
Village- Kesargadh  
Tal. Dholka District Ahmedabad

Subject: Print with reply of Sarpanch Kesargadh Gram Panchayat, Village- Kesargadh, Taluka- Dholka, District - Ahmedabad received at Public Hearing on dated 13-11-2018

| S. No. | Name of stakeholder  | Reply  |
|--------|--|--|
| 1      |  | Farmers and villagers will get the compensation rate as per the Government policy. All the vehicles plying on the Expressway will naturally be as per CPCB norms. Moreover to reduce air pollution further avenue plantation shall be done on both sides as well as median of the expressway                                       |
| 2      |  | The construction of the proposed expressway has been proposed at a distance of 200 - 250 m at residential areas. Biological Noise barriers (such as tree plantation etc) shall be proposed to reduce noise pollution. For reducing air pollution avenue plantation shall be done on both sides as well as median of the expressway |
| 3      |  | Noise barriers shall be provided as per the scheme given in EIA report   |
| 4      | Karmu Behan,<br>Sarpanch<br>Kesargadh<br>Gram Panchayat<br>Village- Kesargadh<br>Tal. Dholka District<br>Ahmedabad | We are not reducing the present water way in the whole alignment. Sufficient no. of culverts/OD structures have been provided as per the study of hydrologist of consultant.   |
| 5      |  | As per the survey report we have provided Underpass (CUP) which will facilitate the animals. Moreover other culverts will also facilitate the animals at least in dry season.  |
| 6      |  | Question is repeated. Same as S. No. 1   |
| 7      |  | Total 60000 nos. of trees shall be planted on both sides of the expressway. NHAI will deposit the compensatory cost towards CAMPA fund as per demand from forest department. Plantation may be done on government / barren land by State forest department from CAMPA fund   |
| 8      |  | Sprinkling shall be done at the construction time by water tankers fitted with sprinklers to reduce dust emission. The provision has been included in the EMI budget.  |

Thanking you.

Yours faithfully

General Manager (Technical) & Project Director

Copy to:

1. The CGM(Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please.

Head Office : G-5 & 6, Sector-10 Dwarka, New Delhi - 110075 website : <http://www.nhai.org>

सुध्यालय : जी-5 व 6, सेक्टर-10, द्वारका, नई दिल्ली - 110 075

## **Annexure B-Q-11**

### **English Translation of written representation submitted during public hearing by Sarpanch:- Sindrej Gram Panchayat.**

Applicant: Sindhrej Gram Panchayat

Village - Sindhrej.

Taluka - Dholka,

District - Ahmedabad,

Date - 07/11/2018

Mobile -

To,  
Secretary / Member Secretary,  
Gujarat Pollution Control Board,  
Paryavaran Bhavan, Sector - 10/A,  
Gandhinagar - 382 910

**Subject:** - Protest Application pertaining to the Public Notice published on 11<sup>th</sup> page of Gujarat Samachar, dated 09/10/2018.

Respected Sir,

As per the Public Notice given by you on 11th page of Gujarat Samachar, dated 09/10/2018 pertaining to Ahmedabad-Dholera Express Road (110 KM), Public hearing is organized. We, as a representative of our village urge you, if road construction is done without taking into consideration our concerns then it will badly affect our people, cattle and birds. It will also immensely increase pollution and it is all likelihood that it will result in natural catastrophe. Thus, villagers have a strong objection against construction of road without considering laws pertaining to pollution control.

- (1) The lands which are to be retrenched for Ahmedabad-Dholera Express Highway, are agricultural land and ripple two or more crops a year so it remains green. And due to standing crop, air pollution remains quite low and villagers always get clean and fresh air.
- (2) Due to construction of Ahmedabad-Dholera Express Highway, air level will be highly damaged. There is no national or state level highway here. So, vehicle traffic is quite low. This results in clean and fresh air, full of oxygen. Further, noise pollution is quite negligible. The proposed road will pass adjoining to the village which will cause disturbance to the villager's sleep due to vehicle and horn noise. It is advisable to keep road alignment far from the village.
- (3) Animals and birds living around are used to live in peace and pass their night without any fear but if construction of Ahmedabad-Dholera Express Highway is done then it

should be “NO HORN ZONE” otherwise it will cause trouble for animals and birds initially. It is quite necessary to control noise on the road so animal and birds can live without any fear. Further, if cattle don't get proper rest then after a period their milking capacity will be affected which will result into less milk production.

- (4) Expressway is passing nearby our village and as per geographical situation of the village, rain water always flows towards NalSarovar and from north goes towards Boru-Vataman. Express Highway will be built from east to west, thus all the directions are different which will result in water logging and can cause epidemic. Further, land of south side will not get water and become unproductive, resulting in increased noise pollution along with worst effect on farming. Over the period of time, villagers will become unemployed. So, proper water management is needed. In absence of it, there will be increased air pollution. We would like to know about the plans pertaining to water management. Village has high objection on constructing the road without providing us detailed plan on the same.
- (5) Constructing Ahmedabad-Dholera Express Highway will result in higher traffic problems. Many Blue Cows, hogs, cows, buffaloes, deers, panthers, rabbits, goats and sheeps live within the border of the village. They usually pass by the village in day as well as night. So, if proper roads to village are not provided then there are maximum chances of accidents. Accident Prevention System should be formed and on every 15 to 20 kilometers, there should be facility of emergency vehicle and nursing centers. In absence of that, villagers have to remain stand by for the same and it will create fearful atmosphere. Express Highway should be built as underpass which will cause less air and noise pollution. Construction of Service Road is also necessary otherwise it will cause huge trouble for villagers to travel for daily activities. We highly object on construction of Highway without providing Service Road. We have already conveyed our objection to Acquisition Officer on constructing highway without providing Service Road.
- (6) Express Highway is quite near to village. Mechanism should be provided to prevent noise and air pollution. Lesser noise will help villagers to live with peace of mind.
- (7) Huge amount of agricultural land will be retrenched and it will result in cutting down the big trees and worst effect on farming. It will also affect fresh air level. Our demand is to establish 3 lines on both sides of the road and nurture the big trees like Nimb, Ficus religiosa, Banyan trees, Tamarind trees etc. The size of the trees should be big and the responsibility of nurturing them will be of Express Highway Authority. If these trees are not properly nurtured and grow to their normal size then any damage caused to village will be compensated by Express Highway Authority and the written bond regarding the same shall be provided by the Highway Authority. Further, we need confirmation from Express Authority for sowing and nurturing trees on the uncultivated land of the village so air pollution can be controlled and healthy atmosphere can be maintained.

(8) While filling up the land with the soil at the time of constructing Express Highway, particles of soil will spread in the air and it will hugely damage the nearby farms. Road Contractor has to give confirmation and submit it to Gram Panchayat assuring the safe doing of these things without damaging the nearby farms. And if any damage is caused due to the same, responsibility of such damage would be of Express Highway Authority.

As such, we request you to consider our above objections before granting the permission for construction.

.....

Sarpanch  
Gram Panchayat, Village-Sindhrej  
Taluka – Dholka, District-Ahmedabad



# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

पञ्चाई : 30 व 30बी, द्वितीय मं, अमूल बिल्डिंग, निकट देवा बैंक, मेजापुर रोड, जिनल पार्क, अहमदाबाद - 380 051

PKJ : 3A & 3B, 2nd Floor, Amul Building, Nr. Deva Bank, Mezapur Road, Jinral Park, Ahmedabad - 380 051

Tel : 079-26821062

26821063

E-mail: and@nhai.org

No. NHAI(FIU)-Ahmedabad/GPCB/A-D-Exp./2018 3004

Date: 13/11/2018

To

Sarpanch

Sindhrej Gram Panchayat

Village- Sindhrej

Tal. Dholka District- Ahmedabad

Subject: Point wise reply of Sarpanch Sindhrej (Gram Panchayat Village- Sindhrej) Taluka- Dholka, District - Ahmedabad received at Public Hearing on dated 13-11-2018

| S. No | Name of stakeholder              | Reply  |
|-------|----------------------------------|--|
| 1     |                                  | Farmers and villagers will get the compensation rate as per the Government policy. All the vehicles plying on the Expressway will naturally be as per GPCB norms. Moreover to reduce air pollution further avenue plantation shall be done on both sides as well as median of the expressway.  |
| 2     |                                  | The construction of the proposed expressway has been proposed at a distance of 200 - 250 m. in residential areas. Biological Noise barriers (such as tree plantation etc) shall be proposed to reduce noise pollution. For reducing air pollution avenue plantation shall be done on both sides as well as median of the expressway. |
| 3     | Sarpanch                         | Noise barriers shall be provided as per the scheme given in EIA report.  |
| 4     | Sindhrej Gram Panchayat          | We are not reducing the present water way in the whole alignment.  |
|       | Village- Sindhrej                | Sufficient no. of culverts/CD structures have been provided as per the study of hydrologist of consultant.   |
|       | Tal. Dholka, District- Ahmedabad | As per the survey report we have provided Underpass (GUP) which will facilitate the animals. Moreover other culverts will also facilitate the animals at least in dry season.  |
| 5     |                                  | Question is repeated. Same as S.No. 1  |
| 6     |                                  | Total 66000 nos. of trees shall be planted on both sides of the expressway.  |
| 7     |                                  | NHAI will deposit the compensatory cost towards CAMPA fund as per demand from forest department. Plantation may be done on government/ barren land by State forest department from CAMPA fund.   |
| 8     |                                  | Sprinkling shall be done at the construction time by water tankers fitted with sprinklers to reduce dust emission. The provision has been included in the EMP budget.  |

Thanking you,

Yours faithfully,

General Manager (Technical) & Project Director

Copy to:

1. The CGM(Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please.



## **Annexure B-Q-12**

### **English Translation of written representation submitted during public hearing by Puriben B Thakor.**

Applicant: Chaloda Gram Panchayat

Village –Chaloda,

Taluka - Dholka,

District - Ahmedabad,

Date - 07/11/2018

Mobile -

To,  
Secretary / Member Secretary,  
Gujarat Pollution Control Board,  
Paryavaran Bhavan, Sector - 10/A,  
Gandhinagar - 382 910

**Subject:** - Protest Application pertaining to the Public Notice published on 11<sup>th</sup> page of Gujarat Samachar, dated 09/10/2018.

Respected Sir,

As per the Public Notice given by you on 11th page of Gujarat Samachar, dated 09/10/2018 pertaining to Ahmedabad-Dholera Express Road (110 KM), Public hearing is organized. We, as a representative of our village urge you, if road construction is done without taking into consideration our concerns then it will badly affect our people, cattle and birds. It will also immensely increase pollution and it is all likelihood that it will result in natural catastrophe. Thus, villagers have a strong objection against construction of road without considering laws pertaining to pollution control.

- (1) The lands which are to be retrenched for Ahmedabad-Dholera Express Highway, are agricultural land and ripple two or more crops a year so it remains green. And due to standing crop, air pollution remains quite low and villagers always get clean and fresh air.
- (2) Due to construction of Ahmedabad-Dholera Express Highway, air level will be highly damaged. There is no national or state level highway here. So, vehicle traffic is quite low. This results in clean and fresh air, full of oxygen. Further, noise pollution is quite negligible. The proposed road will pass adjoining to the village which will cause disturbance to the villager's sleep due to vehicle and horn noise. It is advisable to keep road alignment far from the village.
- (3) Animals and birds living around are used to live in peace and pass their night without any fear but if construction of Ahmedabad-Dholera Express Highway is done then it

should be “NO HORN ZONE” otherwise it will cause trouble for animals and birds initially. It is quite necessary to control noise on the road so animal and birds can live without any fear. Further, if cattle don't get proper rest then after a period their milking capacity will be affected which will result into less milk production.

- (4) Expressway is passing nearby our village and as per geographical situation of the village, rain water always flows towards NalSarovar and from north goes towards Boru-Vataman. Express Highway will be built from east to west, thus all the directions are different which will result in water logging and can cause epidemic. Further, land of south side will not get water and become unproductive, resulting in increased noise pollution along with worst effect on farming. Over the period of time, villagers will become unemployed. So, proper water management is needed. In absence of it, there will be increased air pollution. We would like to know about the plans pertaining to water management. Village has high objection on constructing the road without providing us detailed plan on the same.
- (5) Constructing Ahmedabad-Dholera Express Highway will result in higher traffic problems. Many Blue Cows, hogs, cows, buffaloes, deers, panthers, rabbits, goats and sheeps live within the border of the village. They usually pass by the village in day as well as night. So, if proper roads to village are not provided then there are maximum chances of accidents. Accident Prevention System should be formed and on every 15 to 20 kilometers, there should be facility of emergency vehicle and nursing centers. In absence of that, villagers have to remain stand by for the same and it will create fearful atmosphere. Express Highway should be built as underpass which will cause less air and noise pollution. Construction of Service Road is also necessary otherwise it will cause huge trouble for villagers to travel for daily activities. We highly object on construction of Highway without providing Service Road. We have already conveyed our objection to Acquisition Officer on constructing highway without providing Service Road.
- (6) Express Highway is quite near to village. Mechanism should be provided to prevent noise and air pollution. Lesser noise will help villagers to live with peace of mind.
- (7) Huge amount of agricultural land will be retrenched and it will result in cutting down the big trees and worst effect on farming. It will also affect fresh air level. Our demand is to establish 3 lines on both sides of the road and nurture the big trees like Nimb, Ficus religiosa, Banyan trees, Tamarind trees etc. The size of the trees should be big and the responsibility of nurturing them will be of Express Highway Authority. If these trees are not properly nurtured and grow to their normal size then any damage caused to village will be compensated by Express Highway Authority and the written bond regarding the same shall be provided by the Highway Authority. Further, we need confirmation from Express Authority for sowing and nurturing trees on the uncultivated land of the village so air pollution can be controlled and healthy atmosphere can be maintained.

(8) While filling up the land with the soil at the time of constructing Express Highway, particles of soil will spread in the air and it will hugely damage the nearby farms. Road Contractor has to give confirmation and submit it to Gram Panchayat assuring the safe doing of these things without damaging the nearby farms. And if any damage is caused due to the same, responsibility of such damage would be of Express Highway Authority.

As such, we request you to consider our above objections before granting the permission for construction.

.....  
Puriben B Thakor Sarpanch,  
Village-Chaloda Gram Panchayat,  
Taluka-Dholka, District-Ahmedabad



# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

पता: जी-5 व 6, द्वारका रोड, नई दिल्ली, भारत-110075, फोन: 011-26821062, 26821063

PIU - 3A & 3B, 2nd Floor, Amul Building, Nr. Dena Bank, Vejalpur Road, Jyoti Park, Ahmedabad - 380 051

Tel. : 079-26821062

26821063

E-mail : [aha@nhai.org](mailto:aha@nhai.org)

No. NHAI/PIU-Ahmedabad/GPCB/W-D Exp/2018/554

Date: 13/11/2018

To,  
Ran Bahen B Thakur, Sarpanch  
Chaloda  
Gram Panchayat  
Village: Chaloda  
Tal: Dholka District: Ahmedabad

Subject: Point wise reply of Sarpanch Chaloda Gram Panchayat Village: Chaloda Taluka: Dholka District: Ahmedabad received at Public Hearing on dated 13-11-2018

| S. No. | Name of stakeholder   | Reply   |
|--------|---|---|
| 1      |   | Farmers and villagers will get the compensation rate as per the Government policy. All the vehicles plying on the Expressway will naturally be as per CPCB norms. Moreover to reduce air pollution further avenue plantation shall be done on both sides as well as median of the expressway.                                       |
| 2      |   | The construction of the proposed expressway has been proposed at a distance of 200 - 250 m at residential areas. Biological Noise Barriers (such as tree plantation etc) shall be proposed to reduce noise pollution. For reducing air pollution avenue plantation shall be done on both sides as well as median of the expressway. |
| 3      |   | Noise barriers shall be provided as per the scheme given in EIA report.   |
| 4      | Ran Bahen B Thakur, Sarpanch Chaloda                            | We are not reducing the present water way in the whole alignment. Sufficient no. of culverts/CD structures have been provided as per the study of hydrologist of consultant.  |
| 5      | Gram Panchayat Village: Chaloda Tal: Dholka District: Ahmedabad | As per the survey report we have provided Underpass (CUP) which will facilitate the animals. Moreover other culverts will also facilitate the animals at least in dry season.   |
| 6      |   | Question is repeated. Same as S.No. 1   |
| 7      |   | Total 66000 nos. of trees shall be planted on both sides of the expressway. NHAI will deposit the compensatory cost towards CAMPA fund as per demand from forest department. Plantation may be done on government / barren land by State forest department from CAMPA fund.   |
| 8      |   | Soaking shall be done at the construction time by water tankers fitted with sprinklers to reduce dust emission. The provision has been included in the EMF budget.  |

Thanking you,

Yours faithfully,

General Manager (Technical)  
& Project Director

13/11/18

Copy to:-

1. The CGM(Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please.

## **Annexure B-Q-13**

**English Translation of written representation submitted during public hearing by Amrumbhai B Chauhan.**

Applicant: Tajpur Gram Panchayat  
Village - Tajpur.  
Taluka - Sanand,  
District - Ahmedabad,  
Date - 07/11/2018  
Mobile -

To,  
Secretary / Member Secretary,  
Gujarat Pollution Control Board,  
Paryavaran Bhavan, Sector - 10/A,  
Gandhinagar - 382 910

**Subject:** - Protest Application pertaining to the Public Notice published on 11<sup>th</sup> page of Gujarat Samachar, dated 09/10/2018.

Respected Sir,

As per the Public Notice given by you on 11th page of Gujarat Samachar, dated 09/10/2018 pertaining to Ahmedabad-Dholera Express Road (110 KM), Public hearing is organized. We, as a representative of our village urge you, if road construction is done without taking into consideration our concerns then it will badly affect our people, cattle and birds. It will also immensely increase pollution and it is all likelihood that it will result in natural catastrophe. Thus, villagers have a strong objection against construction of road without considering laws pertaining to pollution control.

- (1) The lands which are to be retrenched for Ahmedabad-Dholera Express Highway, are agricultural land and ripple two or more crops a year so it remains green. And due to standing crop, air pollution remains quite low and villagers always get clean and fresh air.
- (2) Due to construction of Ahmedabad-Dholera Express Highway, air level will be highly damaged. There is no national or state level highway here. So, vehicle traffic is quite low. This results in clean and fresh air, full of oxygen. Further, noise pollution is quite negligible. The proposed road will pass adjoining to the village which will cause disturbance to the villager's sleep due to vehicle and horn noise. It is advisable to keep road alignment far from the village.
- (3) Animals and birds living around are used to live in peace and pass their night without any fear but if construction of Ahmedabad-Dholera Express Highway is done then it

should be “NO HORN ZONE” otherwise it will cause trouble for animals and birds initially. It is quite necessary to control noise on the road so animal and birds can live without any fear. Further, if cattle don't get proper rest then after a period their milking capacity will be affected which will result into less milk production.

- (4) Expressway is passing nearby our village and as per geographical situation of the village, rain water always flows towards NalSarovar and from north goes towards Boru-Vataman. Express Highway will be built from east to west, thus all the directions are different which will result in water logging and can cause epidemic. Further, land of south side will not get water and become unproductive, resulting in increased noise pollution along with worst effect on farming. Over the period of time, villagers will become unemployed. So, proper water management is needed. In absence of it, there will be increased air pollution. We would like to know about the plans pertaining to water management. Village has high objection on constructing the road without providing us detailed plan on the same.
- (5) Constructing Ahmedabad-Dholera Express Highway will result in higher traffic problems. Many Blue Cows, hogs, cows, buffaloes, deers, panthers, rabbits, goats and sheeps live within the border of the village. They usually pass by the village in day as well as night. So, if proper roads to village are not provided then there are maximum chances of accidents. Accident Prevention System should be formed and on every 15 to 20 kilometers, there should be facility of emergency vehicle and nursing centers. In absence of that, villagers have to remain stand by for the same and it will create fearful atmosphere. Express Highway should be built as underpass which will cause less air and noise pollution. Construction of Service Road is also necessary otherwise it will cause huge trouble for villagers to travel for daily activities. We highly object on construction of Highway without providing Service Road. We have already conveyed our objection to Acquisition Officer on constructing highway without providing Service Road.
- (6) Express Highway is quite near to village. Mechanism should be provided to prevent noise and air pollution. Lesser noise will help villagers to live with peace of mind.
- (7) Huge amount of agricultural land will be retrenched and it will result in cutting down the big trees and worst effect on farming. It will also affect fresh air level. Our demand is to establish 3 lines on both sides of the road and nurture the big trees like Nimb, Ficus religiosa, Banyan trees, Tamarind trees etc. The size of the trees should be big and the responsibility of nurturing them will be of Express Highway Authority. If these trees are not properly nurtured and grow to their normal size then any damage caused to village will be compensated by Express Highway Authority and the written bond regarding the same shall be provided by the Highway Authority. Further, we need confirmation from Express Authority for sowing and nurturing trees on the uncultivated land of the village so air pollution can be controlled and healthy atmosphere can be maintained.



(8) While filling up the land with the soil at the time of constructing Express Highway, particles of soil will spread in the air and it will hugely damage the nearby farms. Road Contractor has to give confirmation and submit it to Gram Panchayat assuring the safe doing of these things without damaging the nearby farms. And if any damage is caused due to the same, responsibility of such damage would be of Express Highway Authority.

As such, we request you to consider our above objections before granting the permission for construction.

.....  
Amrutbhai B Chauhan, Sarpanch  
Gram Panchayat,Village-Tajpur  
Taluka – Sanand, District-Ahmedabad



# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

पता: 35 व 36, द्वितीय तल, अमल बुल्डिंग, नया दारा रोड, कंदिवली रोड, नारायण पार्क, अहमदाबाद - 380 015

फोन: 33 & 38 (दूर फोन), अमल बुल्डिंग आर (दारा रोड) मोरारजी रोड, लिविंग फ्लोड अहमदाबाद - 338 051

Tel: 079-26821062

26821063

E-mail: nhai@nhai.org

No. NHAI/PIU/Ahmedabad/GPCB/A&D-Exp/2018/ 251

Date: 07/12/2018

To:  
Amit Bhai B. Chaudhan, Sarpanch  
Tajpur  
Gram Panchayat  
Village: Tajpur  
Tal: Sanand District: Ahmedabad

Subject: Point wise reply of Sarpanch, Tajpur Gram Panchayat, Village-Tajpur, Taluka-Sanand, District - Ahmedabad received at Public Hearing on dated 13-11-2018

| S. No. | Name of stakeholder  | Reply   |
|--------|--|---|
| 1      |  | Farmers and villagers will get the compensation rate as per the Government policy. All the vehicles plying on the Expressway will naturally be as per CPCB norms. Moreover to reduce air pollution further avenue plantation shall be done on both sides as well as median of the expressway.                                       |
| 2      |  | The construction of the proposed expressway has been proposed at a distance of 200 - 250 m in residential areas. Biological Noise barriers (such as tree plantation etc) shall be proposed to reduce noise pollution. For reducing air pollution avenue plantation shall be done on both sides as well as median of the expressway. |
| 3.     | Amit Bhai B. Chaudhan, Sarpanch Tajpur Gram Panchayat Village: Tajpur Tal: Sanand, District: Ahmedabad | Noise barriers shall be provided as per the scheme given in EIA report.   |
| 4      |  | We are not reducing the present water way in the whole alignment. Sufficient no. of culverts/CD structures have been provided as per the study of hydrologist of consultant.  |
| 5      |  | As per the survey report we have provided Underpass (GUP) which will facilitate the animals. Moreover, other culverts will also facilitate the animals at least in dry season.  |
| 6      |  | Question is repeated. Same as S. No. 1  |
| 7      |  | Total 66000 nos. of trees shall be planted on both sides of the expressway. NHAI will deposit the compensatory cost towards CAMPA fund as per demand from forest department. Plantation may be done on government barren land by State forest department from CAMPA fund.   |
| 8      |  | Sprinkling shall be done at the construction time by water tankers fitted with sprinklers to reduce dust emission. The provision has been included in the EMP budget.   |

Thanking you.

Yours faithfully

General Manager (Technical)  
& Project Director

Copy to:

1. The G.M. Tech & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please

Head Office: G-5 & 6, Sector-10 Dwarka, New Delhi - 110075 website: <http://www.nhai.org>

मुख्यालय: जी-5 & 6, सेक्टर-10, द्वारका, नई दिल्ली - 110 075

## **Annexure B-Q-14**

### **English Translation of written representation submitted during public hearing by Sarpanch:- Vasna Chacharwadi Gram Panchayat.**

Applicant: Vasna Chacharwadi Gram Panchayat

Village – Vasna Chacharwadi.

Taluka - Sanand,

District - Ahmedabad,

Date - 07/11/2018

Mobile -

To,

Secretary / Member Secretary,

Gujarat Pollution Control Board,

Paryavaran Bhavan, Sector - 10/A,

Gandhinagar - 382 910

**Subject:** - Protest Application pertaining to the Public Notice published on 11<sup>th</sup> page of Gujarat Samachar, dated 09/10/2018.

Respected Sir,

As per the Public Notice given by you on 11th page of Gujarat Samachar, dated 09/10/2018 pertaining to Ahmedabad-Dholera Express Road (110 KM), Public hearing is organized. We, as a representative of our village urge you, if road construction is done without taking into consideration our concerns then it will badly affect our people, cattle and birds. It will also immensely increase pollution and it is all likelihood that it will result in natural catastrophe. Thus, villagers have a strong objection against construction of road without considering laws pertaining to pollution control.

- (1) The lands which are to be retrenched for Ahmedabad-Dholera Express Highway, are agricultural land and ripple two or more crops a year so it remains green. And due to standing crop, air pollution remains quite low and villagers always get clean and fresh air.
- (2) Due to construction of Ahmedabad-Dholera Express Highway, air level will be highly damaged. There is no national or state level highway here. So, vehicle traffic is quite low. This results in clean and fresh air, full of oxygen. Further, noise pollution is quite negligible. The proposed road will pass adjoining to the village which will cause disturbance to the villager's sleep due to vehicle and horn noise. It is advisable to keep road alignment far from the village.
- (3) Animals and birds living around are used to live in peace and pass their night without any fear but if construction of Ahmedabad-Dholera Express Highway is done then it should be "NO HORN ZONE" otherwise it will cause trouble for animals and birds

initially. It is quite necessary to control noise on the road so animal and birds can live without any fear. Further, if cattle don't get proper rest then after a period their milking capacity will be affected which will result into less milk production.

- (4) Expressway is passing nearby our village and as per geographical situation of the village, rain water always flows towards NalSarovar and from north goes towards Boru-Vataman. Express Highway will be built from east to west, thus all the directions are different which will result in water logging and can cause epidemic. Further, land of south side will not get water and become unproductive, resulting in increased noise pollution along with worst effect on farming. Over the period of time, villagers will become unemployed. So, proper water management is needed. In absence of it, there will be increased air pollution. We would like to know about the plans pertaining to water management. Village has high objection on constructing the road without providing us detailed plan on the same.
- (5) Constructing Ahmedabad-Dholera Express Highway will result in higher traffic problems. Many Blue Cows, hogs, cows, buffaloes, deers, panthers, rabbits, goats and sheeps live within the border of the village. They usually pass by the village in day as well as night. So, if proper roads to village are not provided then there are maximum chances of accidents. Accident Prevention System should be formed and on every 15 to 20 kilometers, there should be facility of emergency vehicle and nursing centers. In absence of that, villagers have to remain stand by for the same and it will create fearful atmosphere. Express Highway should be built as underpass which will cause less air and noise pollution. Construction of Service Road is also necessary otherwise it will cause huge trouble for villagers to travel for daily activities. We highly object on construction of Highway without providing Service Road. We have already conveyed our objection to Acquisition Officer on constructing highway without providing Service Road.
- (6) Express Highway is quite near to village. Mechanism should be provided to prevent noise and air pollution. Lesser noise will help villagers to live with peace of mind.
- (7) Huge amount of agricultural land will be retrenched and it will result in cutting down the big trees and worst effect on farming. It will also affect fresh air level. Our demand is to establish 3 lines on both sides of the road and nurture the big trees like Nimb, Ficus religiosa, Banyan trees, Tamarind trees etc. The size of the trees should be big and the responsibility of nurturing them will be of Express Highway Authority. If these trees are not properly nurtured and grow to their normal size then any damage caused to village will be compensated by Express Highway Authority and the written bond regarding the same shall be provided by the Highway Authority. Further, we need confirmation from Express Authority for sowing and nurturing trees on the uncultivated land of the village so air pollution can be controlled and healthy atmosphere can be maintained.

(8) While filling up the land with the soil at the time of constructing Express Highway, particles of soil will spread in the air and it will hugely damage the nearby farms. Road Contractor has to give confirmation and submit it to Gram Panchayat assuring the safe doing of these things without damaging the nearby farms. And if any damage is caused due to the same, responsibility of such damage would be of Express Highway Authority.

As such, we request you to consider our above objections before granting the permission for construction.

.....  
Sarpanch  
Gram Panchayat, Village-Vasna Chacharwadi  
Taluka–Sanand, District-Ahmedabad



# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

एकता - 30 व 36, प्लॉट नं. 10, अमल बिल्डिंग, नैट डेरा बैंक, वसपुर रोड, सूर्य पार्क, अहमदाबाद - 380 051

PU - 35 & 38, 2nd Floor, Amul Building, Nr. Dera Bank, Vasapur Road, Surya Park, Ahmedabad - 380 051

Tel : 079-26821062

26821063

E-mail : and@nhai.org

No. NHAI/PU-Ahmedabad/GFCB/A-D-Exp/2018/363/8

Date: 13/11/2018

To  
Sarpanch  
Vasna Chachrawadi  
Gram Panchayat  
Village- Vasna Chachrawadi  
Tal. Sarand, District- Ahmedabad

Subject: Point wise reply of Sarpanch, Vasna Chachrawadi Gram Panchayat Village- Vasna Chachrawadi, Taluka- Sarand, District - Ahmedabad received at Public Hearing on dated 15-11-2018

| S. No | Name of stakeholder                             | Reply   |
|-------|---|---|
| 1     |   | Farmers and villagers will get the compensation rate as per the Government policy. All the vehicles plying on the Expressway will naturally be as per CPCIS norms. Moreover to reduce air pollution further avenue plantation shall be done on both sides as well as median of the expressway.  |
| 2     |   | The construction of the proposed expressway has been proposed at a distance of 200 - 250 m at residential areas. Biological Noise barriers (such as tree plantation etc) shall be proposed to reduce noise pollution. For reducing air pollution avenue plantation shall be done on both sides as well as median of the expressway. Noise barriers shall be provided as per the scheme given in EIA report. |
| 3     | Sarpanch<br>Vasna Chachrawadi<br>Gram Panchayat | We are not reducing the present water way in the whole alignment. Sufficient no. of culverts/CU structures have been provided as per the study of hydrologist of consultant.  |
| 4     | Village- Vasna<br>Chachrawadi                   | As per the survey report we have provided Underpass (CUP) which will facilitate the animals. Moreover, other culverts will also facilitate the animals at least in dry season.  |
| 5     | Tal. Sarand District-<br>Ahmedabad              | Question is repeated. Same as S.No. 4   |
| 6     |   | Total 66000 nos. of trees shall be planted on both sides of the expressway. NHAI will deposit the compensatory cost towards CAMPA fund as per demand from forest department. Plantation may be done on government / barren land by State forest department from CAMPA fund.   |
| 7     |   | Sprinkling shall be done at the construction time by water tankers fitted with sprinklers to reduce dust emission. The provision has been included in the EMP budget.   |
| 8     |   |   |

Thanking you

Yours faithfully

General Manager (Technical)  
& Project Director

Copy to:

- The GGM(Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please.



## **Annexure B-Q-15**

**English Translation of written representation submitted during public hearing by R.R.Thakor.**

Applicant: Bhat Gram Panchayat  
Village -Bhat.  
Taluka - Daskroi,  
District - Ahmedabad,  
Date - 07/11/2018  
Mobile -

To,  
Secretary / Member Secretary,  
Gujarat Pollution Control Board,  
Paryavaran Bhavan, Sector - 10/A,  
Gandhinagar - 382 910

**Subject:** - Protest Application pertaining to the Public Notice published on 11<sup>th</sup> page of Gujarat Samachar, dated 09/10/2018.

Respected Sir,

As per the Public Notice given by you on 11th page of Gujarat Samachar, dated 09/10/2018 pertaining to Ahmedabad-Dholera Express Road (110 KM), Public hearing is organized. We, as a representative of our village urge you, if road construction is done without taking into consideration our concerns then it will badly affect our people, cattle and birds. It will also immensely increase pollution and it is all likelihood that it will result in natural catastrophe. Thus, villagers have a strong objection against construction of road without considering laws pertaining to pollution control.

- (1) The lands which are to be retrenched for Ahmedabad-Dholera Express Highway, are agricultural land and ripple two or more crops a year so it remains green. And due to standing crop, air pollution remains quite low and villagers always get clean and fresh air.
- (2) Due to construction of Ahmedabad-Dholera Express Highway, air level will be highly damaged. There is no national or state level highway here. So, vehicle traffic is quite low. This results in clean and fresh air, full of oxygen. Further, noise pollution is quite negligible. The proposed road will pass adjoining to the village which will cause disturbance to the villager's sleep due to vehicle and horn noise. It is advisable to keep road alignment far from the village.
- (3) Animals and birds living around are used to live in peace and pass their night without any fear but if construction of Ahmedabad-Dholera Express Highway is done then it

should be “NO HORN ZONE” otherwise it will cause trouble for animals and birds initially. It is quite necessary to control noise on the road so animal and birds can live without any fear. Further, if cattle don't get proper rest then after a period their milking capacity will be affected which will result into less milk production.

- (4) Expressway is passing nearby our village and as per geographical situation of the village, rain water always flows towards NalSarovar and from north goes towards Boru-Vataman. Express Highway will be built from east to west, thus all the directions are different which will result in water logging and can cause epidemic. Further, land of south side will not get water and become unproductive, resulting in increased noise pollution along with worst effect on farming. Over the period of time, villagers will become unemployed. So, proper water management is needed. In absence of it, there will be increased air pollution. We would like to know about the plans pertaining to water management. Village has high objection on constructing the road without providing us detailed plan on the same.
- (5) Constructing Ahmedabad-Dholera Express Highway will result in higher traffic problems. Many Blue Cows, hogs, cows, buffaloes, deers, panthers, rabbits, goats and sheeps live within the border of the village. They usually pass by the village in day as well as night. So, if proper roads to village are not provided then there are maximum chances of accidents. Accident Prevention System should be formed and on every 15 to 20 kilometers, there should be facility of emergency vehicle and nursing centers. In absence of that, villagers have to remain stand by for the same and it will create fearful atmosphere. Express Highway should be built as underpass which will cause less air and noise pollution. Construction of Service Road is also necessary otherwise it will cause huge trouble for villagers to travel for daily activities. We highly object on construction of Highway without providing Service Road. We have already conveyed our objection to Acquisition Officer on constructing highway without providing Service Road.
- (6) Express Highway is quite near to village. Mechanism should be provided to prevent noise and air pollution. Lesser noise will help villagers to live with peace of mind.
- (7) Huge amount of agricultural land will be retrenched and it will result in cutting down the big trees and worst effect on farming. It will also affect fresh air level. Our demand is to establish 3 lines on both sides of the road and nurture the big trees like Nimb, Ficus religiosa, Banyan trees, Tamarind trees etc. The size of the trees should be big and the responsibility of nurturing them will be of Express Highway Authority. If these trees are not properly nurtured and grow to their normal size then any damage caused to village will be compensated by Express Highway Authority and the written bond regarding the same shall be provided by the Highway Authority. Further, we need confirmation from Express Authority for sowing and nurturing trees on the uncultivated land of the village so air pollution can be controlled and healthy atmosphere can be maintained.

(8) While filling up the land with the soil at the time of constructing Express Highway, particles of soil will spread in the air and it will hugely damage the nearby farms. Road Contractor has to give confirmation and submit it to Gram Panchayat assuring the safe doing of these things without damaging the nearby farms. And if any damage is caused due to the same, responsibility of such damage would be of Express Highway Authority.

As such, we request you to consider our above objections before granting the permission for construction.

.....  
R.R Thakor, Sarpanch,  
Village-Bhat, Gram Panchayat,  
Taluka-Dascroi, District-Ahmedabad



# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

पता: जी 5 व 6, द्वारका क्षेत्र, नई दिल्ली, पोस्टल कोड: 110075

Plt / 3A & 3B, 2nd Floor, Arsal Building, Nr. Dena Bank, Vejalpur Road, Jivraj Park, Ahmedabad - 380 051

Tel : 079 26821082

26821083

E-mail: and@nhai.org

No. NHAI/PLU-Ahmedabad/GPCR/A-0-Exp/2018/ 3.6/5

Date: 13/1/2018

To:

M.R. Thakur, Sarpanch

Bhat

Gram Panchayat

Village- Bhat

Tal. Dastroi, District- Ahmedabad

Subject: Point wise reply of Sarpanch Bhat Gram Panchayat Village- Bhat, Taluka- Dastroi District- Ahmedabad received at Public Hearing on dated 12-11-2018

| S. No. | Name of stakeholder   | Reply   |
|--------|---|---|
| 1      |   | Farmers and villagers will get the compensation rate as per the Government policy. All the vehicles plying on the Expressway will naturally be as per GPCR norms. Moreover to reduce air pollution further avenue plantation shall be done on both sides as well as median of the expressway.                                       |
| 2      |   | The construction of the proposed expressway has been proposed at a distance of 200 - 250 m a) residential areas. Biological noise barriers (such as tree plantation etc) shall be proposed to reduce noise pollution. For reducing air pollution avenue plantation shall be done on both sides as well as median of the expressway. |
| 3      |   | Noise barriers shall be provided as per the scheme given in EIA report.   |
| 4      | M.R. Thakur, Sarpanch Bhat                                    | We are not reducing the present water way in the whole alignment. Sufficient no. of culverts/CD structures have been provided as per the study of hydrologist of consultant.  |
| 5      | Gram Panchayat Village- Bhat Tal. Dastroi District- Ahmedabad | As per the survey report we have provided underpass (CUP) which will facilitate the animals. Moreover, other culverts will also facilitate the animals at least in dry season.  |
| 6      |   | Question is repeated. Same as S. No. 1  |
| 7      |   | Total 66000 nos. of trees shall be planted on both sides of the expressway. NHAI will deposit the compensatory cost towards CAMPA fund as per demand from forest department. Plantation may be done on government / barren land by State forest department from CAMPA fund.   |
| 8      |   | Sprinkling shall be done at the construction time by water tankers fitted with sprinklers to reduce dust emission. The provision has been included in the EMP budget.   |

Thanking you.

Yours faithfully,

General Manager (Technical) & Project Director

Copy to:

1. The CGM(Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please.

Head Office : G-5 & 6, Sector-10 Dwarka, New Delhi - 110075 website : <http://www.nhai.org>

मुख्यालय : जी-5 व 6, सेक्टर-10, द्वारका, नई दिल्ली - 110 075

## **Annexure B-Q-16**

**English Translation of written representation submitted during public hearing by Sarpanch:-**  
**Juval Rupavati Gram Panchayat.**

Applicant: Juval Rupavati Gram Panchayat  
Village - Juval Rupavati  
Taluka - Bavla,  
District - Ahmedabad,  
Date - 07/11/2018  
Mobile -

To,  
Secretary / Member Secretary,  
Gujarat Pollution Control Board,  
Paryavaran Bhavan, Sector - 10/A,  
Gandhinagar - 382 910

**Subject:** - Protest Application pertaining to the Public Notice published on 11<sup>th</sup> page of Gujarat Samachar, dated 09/10/2018.

Respected Sir,

As per the Public Notice given by you on 11th page of Gujarat Samachar, dated 09/10/2018 pertaining to Ahmedabad-Dholera Express Road (110 KM), Public hearing is organized. We, as a representative of our village urge you, if road construction is done without taking into consideration our concerns then it will badly affect our people, cattle and birds. It will also immensely increase pollution and it is all likelihood that it will result in natural catastrophe. Thus, villagers have a strong objection against construction of road without considering laws pertaining to pollution control.

- (1) The lands which are to be retrenched for Ahmedabad-Dholera Express Highway, are agricultural land and ripple two or more crops a year so it remains green. And due to standing crop, air pollution remains quite low and villagers always get clean and fresh air.
- (2) Due to construction of Ahmedabad-Dholera Express Highway, air level will be highly damaged. There is no national or state level highway here. So, vehicle traffic is quite low. This results in clean and fresh air, full of oxygen. Further, noise pollution is quite negligible. The proposed road will pass adjoining to the village which will cause disturbance to the villager's sleep due to vehicle and horn noise. It is advisable to keep road alignment far from the village.
- (3) Animals and birds living around are used to live in peace and pass their night without any fear but if construction of Ahmedabad-Dholera Express Highway is done then it

should be “NO HORN ZONE” otherwise it will cause trouble for animals and birds initially. It is quite necessary to control noise on the road so animal and birds can live without any fear. Further, if cattle don't get proper rest then after a period their milking capacity will be affected which will result into less milk production.

- (4) Expressway is passing nearby our village and as per geographical situation of the village, rain water always flows towards NalSarovar and from north goes towards Boru-Vataman. Express Highway will be built from east to west, thus all the directions are different which will result in water logging and can cause epidemic. Further, land of south side will not get water and become unproductive, resulting in increased noise pollution along with worst effect on farming. Over the period of time, villagers will become unemployed. So, proper water management is needed. In absence of it, there will be increased air pollution. We would like to know about the plans pertaining to water management. Village has high objection on constructing the road without providing us detailed plan on the same.
- (5) Constructing Ahmedabad-Dholera Express Highway will result in higher traffic problems. Many Blue Cows, hogs, cows, buffaloes, deers, panthers, rabbits, goats and sheeps live within the border of the village. They usually pass by the village in day as well as night. So, if proper roads to village are not provided then there are maximum chances of accidents. Accident Prevention System should be formed and on every 15 to 20 kilometers, there should be facility of emergency vehicle and nursing centers. In absence of that, villagers have to remain stand by for the same and it will create fearful atmosphere. Express Highway should be built as underpass which will cause less air and noise pollution. Construction of Service Road is also necessary otherwise it will cause huge trouble for villagers to travel for daily activities. We highly object on construction of Highway without providing Service Road. We have already conveyed our objection to Acquisition Officer on constructing highway without providing Service Road.
- (6) Express Highway is quite near to village. Mechanism should be provided to prevent noise and air pollution. Lesser noise will help villagers to live with peace of mind.
- (7) Huge amount of agricultural land will be retrenched and it will result in cutting down the big trees and worst effect on farming. It will also affect fresh air level. Our demand is to establish 3 lines on both sides of the road and nurture the big trees like Nimb, Ficus religiosa, Banyan trees, Tamarind trees etc. The size of the trees should be big and the responsibility of nurturing them will be of Express Highway Authority. If these trees are not properly nurtured and grow to their normal size then any damage caused to village will be compensated by Express Highway Authority and the written bond regarding the same shall be provided by the Highway Authority. Further, we need confirmation from Express Authority for sowing and nurturing trees on the uncultivated land of the village so air pollution can be controlled and healthy atmosphere can be maintained.



(8) While filling up the land with the soil at the time of constructing Express Highway, particles of soil will spread in the air and it will hugely damage the nearby farms. Road Contractor has to give confirmation and submit it to Gram Panchayat assuring the safe doing of these things without damaging the nearby farms. And if any damage is caused due to the same, responsibility of such damage would be of Express Highway Authority.

As such, we request you to consider our above objections before granting the permission for construction.

.....  
Sarpanch,  
Gram Panchayat, Village-Juval Rupavati  
Taluka – Bavla, District-Ahmedabad



*Ahmedabad 13-11-16*

**भारतीय राष्ट्रीय राजमार्ग प्राधिकरण**  
(सड़क परिवहन और राजमार्ग मंत्रालय)  
**National Highways Authority of India**  
(Ministry of Road Transport & Highways)

Tel: 011-26621062  
26621053  
E-mail: ahai@nhai.org

ऑफिस: जी-5 & 6, सेक्टर-10, द्वारका, नई दिल्ली, निकट सेन गेट, डेक्कन रोड, जीएमएच, अहमदाबाद - 388 051  
PH: 244 & 581, 5th Floor, Amul Building, Nr. Dena Bank, Vaidapur Road, Jyoti Park, Ahmedabad - 380 051

No: NHAI/PHU-Ahmedabad/GPCB/A-S-Exo/2018/ (3/11)

Date: 13/11/2018

To,  
Sarpanch  
Juval Rupavati Gram Panchayat  
Village- Juval Rupavati  
Taluka- Bavla, District - Ahmedabad

Subject: Point wise reply of Sarpanch, Juval Rupavati Gram Panchayat, Village- Juval Rupavati, Taluka- Bavla, District - Ahmedabad received at Public Hearing on dated 13-11-2018

| Q. No. | Name of stakeholder  | Reply   |
|--------|--|---|
| 1.     | Sarpanch<br>Juval Rupavati Gram Panchayat<br>Village- Juval Rupavati, Taluka-<br>Bavla, District - Ahmedabad | Farmers and villagers will get the compensation rate as per the Government policy. All the vehicles plying on the Expressway will naturally be as per CPCB norms. Moreover to reduce air pollution further avenue plantation shall be done on both sides as well as median of the expressway.                                       |
| 2.     |  | The construction of the proposed expressway has been proposed at a distance of 700 - 250 m at residential areas. Biological Noise barriers (such as tree plantation etc) shall be proposed to reduce noise pollution. For reducing air pollution avenue plantation shall be done on both sides as well as median of the expressway. |
| 3.     |  | Noise barriers shall be provided as per the scheme given in EIA report.   |
| 4.     |  | We are not reducing the present water way in the whole alignment. Sufficient no. of culverts/CD structures have been provided as per the study of hydrologist of consultant.  |
| 5.     |  | As per the survey report we have provided Underpass (CUP) which will facilitate the animals. Moreover, other culverts will also facilitate the animals at least in dry season.  |
| 6.     |  | Question is repeated. Same as S No. 1   |
| 7.     |  | Total 66000 nos. of trees shall be planted on both sides of the expressway. NHAI will deposit the compensatory cost towards CAMPA fund as per demand from forest department. Plantation may be done on government / barren land by State forest department from CAMPA fund.   |
| 8.     |  | Sprinkling shall be done at the construction time by water tankers fitted with sprinklers to reduce dust emission. The provision has been included in the EMP budget.   |

Thanking you,

Yours faithfully,

General Manager (Technical) 13/11/18  
& Project Director

Copy to:

1. The GEM (Tech) & Regional Officer (Gujarat) NHAI Gandhinagar for kind information please.



પર્યાવરણ ઉપર પડનાર અસરો - (જળ, વાતા, વાયુ, દુર્ગંધગ્રસ્ત  
 અવસ્થા, ઉષ્ણતા, દરિયાગરો, ગાંધિના ધ્વાજ, તાલપ્રેરણા  
 વિભિન્ન, જે પેલાઓ, ભૌતિક રીતે સેવાદાતા, વ્યુત્પન્ન, પંચકાળ  
 યજ્ઞ દાખા એવાઓ અને આ વિદ્યા તારણો જે હાલ થઈ પડેલી  
 તાલ વિદ્યાઓ સોમવાસ પડનારી જોઈ એ વ્યુત્પન્ન થઈ અને  
 પાણીના ભાગમાં જે મને પરિણમે થોડાં નાસ્ત્રા, જેને કોઈ  
 વિદ્યાર્થ અભ્યાસ થોડાં થઈ નોંધ થઈ ગયો નથી. અભ્યાસ થઈ ગયો  
 એ સ્વાસ્થ્ય ભાગે ઉપર પડનાર તેની વિભિન્ન અસરો અને તેને  
 વિષયભાવ રૂં જોઈને આ પ્રવેશના પ્રવાસમાં સમાવે છે, તેને કોઈ  
 પ્રેરણા આ સમયે અભ્યાસમાં નથી. પ્રાપ્તિ આપના ભાગે  
 આપના - દોષો, કોષ્ટકો રૂં વિશે વિદ્યાર્થ થઈ, તે ભાગે  
 આ સમયે સમાવે છે. તેને કોઈ પ્રવેશ કે અભ્યાસ થઈ, આ  
 કોષ્ટકો રૂં પ્રવેશની ભાગમાં ગાંધિના કોઈ / ભૌતિક વિદ્યા  
 અને વ્યુત્પન્નના ભાગે અભ્યાસ ભાગે વિદ્યાર્થના પર્યાવરણ ઉપર કોઈ  
 વિભિન્ન અસર થઈ તેને કોઈ અભ્યાસ થઈ. વિદ્યાર્થના ભાગે  
 આ ભાગે અને પાણીના ભાગે અભ્યાસ અને અભ્યાસ થઈ પડેલી  
 પાણીના અભ્યાસ કોષ્ટકો પાણીના ભાગે અભ્યાસ થઈ, તેને  
 દરિયાગરો અને અભ્યાસ થઈ પાણીના પ્રવાસમાં અભ્યાસ થઈ વિદ્યાર્થ  
 અને કોઈ કોષ્ટકો થઈ પાણીના કોષ્ટકો થઈ, તેને ભાગે  
 વિદ્યાર્થના અભ્યાસ અભ્યાસ થઈ પાણીના કોષ્ટકો થઈ વિદ્યાર્થ થઈ  
 તેને કોઈ કોષ્ટકો આ સમયે અભ્યાસ થઈ. વિદ્યાર્થના આ અભ્યાસ  
 અભ્યાસ ભાગે અભ્યાસ થઈ પ્રવાસમાં કોષ્ટકો રૂં વિદ્યાર્થના  
 અને કોષ્ટકો રૂં વિદ્યાર્થના ભાગે અભ્યાસ થઈ વિદ્યાર્થના ભાગે  
 આ કોષ્ટકો રૂં અભ્યાસ થઈ પાણીના કોષ્ટકો રૂં અભ્યાસ થઈ  
 (પર્યાવરણ) ના અભ્યાસ થઈ ગાંધિના વિદ્યાર્થના પર્યાવરણના અભ્યાસ  
 અને અભ્યાસના અભ્યાસ થઈ અને વિદ્યાર્થના કોષ્ટકો રૂં અભ્યાસ થઈ  
 અને કોષ્ટકો રૂં અભ્યાસ થઈ

### મુદ્દા નં-૩

આ કોષ્ટક - અભ્યાસના અભ્યાસ થઈ પાણીના ભાગે  
 ભાગે અભ્યાસ થઈ પાણીના ભાગે અભ્યાસ થઈ  
 આભ્યાસ થઈ પાણીના ભાગે અભ્યાસ થઈ અભ્યાસ થઈ  
 અને અભ્યાસ થઈ, આ અભ્યાસના ભાગે અભ્યાસ થઈ  
 રૂં થઈ. "પર્યાવરણના કોષ્ટકો" ના. મુદ્દાઓની અભ્યાસ થઈ



















૧૯(૨) કાર્યકર્તા સહકારીના ધારા ને-૬ થી ગુપ્તતા પ્રમાણેના  
ગ્રાંટી પદવિદ્યતા, ઇન્ફોર્મેશન પદવિદ્યતા, આમણિત અસહિત પદવિદ્યતા  
જેવી મુદત ૪ સપ્તાહની લેવાશે અને એવી ગણના કરાશે કે  
જાણી તેમ આરોગી નિયમના અનુસાર છે, આ ગ્રાંટના કારણે છે,  
આને ગણનામાં લેવાતી લેવાશે પદવિદ્યતા મુજબની ગણતરી  
લેવાશે પદવિદ્યતાની આ ગણતરી લેવાશેની ગણતરીની મુજબ  
અનુસાર પદવિદ્યતા લેવાશે ગણતરી ગણતરી ગણતરી કરી, તેથી  
મુદત ગણતરી કરી તેથી તેથી તેથી તેથી તેથી તેથી તેથી તેથી  
મુજબની ગણતરી કરી તેથી તેથી તેથી તેથી તેથી તેથી તેથી તેથી

[illegible][illegible]

Q.1) (a) Name the - 3 types of soil in India and their characteristics. Also, write the distribution of these soils in India.

[illegible][illegible]

[illegible]

(42) સામાજિક-આર્થિક ક્ષેત્રે જે સુધારે થશે તેને જોઈ જતાં સારા સંકેતો  
આપતાં એ જ સમાજ છે, જેને સમાજસર્જક કહેવામાં આવે છે. આ સમાજના  
જે સભ્યોને જોઈ તે સમાજના સભ્યોના આ સંકેતો માટે તેને  
સમાજિક-આર્થિક ક્ષેત્રે જે સુધારે થશે તેને જોઈ જતાં સારા સંકેતો

[illegible][illegible]

உயர்வு விவரம்  
 உயர்வு விவரம்  
 உயர்வு விவரம்  
 உயர்வு விவரம்





# ભારતીય રાષ્ટ્રીય રાજમાર્ગ પ્રાધિકરણ

(સડક પરિવહન ઓર રાજમાર્ગ મંત્રાલય)

**National Highways Authority of India**

(Ministry of Road Transport & Highways)

અધિકાર : ૩૫ વ ૩૬, દ્વિતીય કક્ક, અમલ બિલ્ડિંગ, ને. ડેના બેંક, વેજાલુર રોડ, જીવરાજ પાર્ક, અમદાવાદ - ૩૮૦ ૦૫૧

PLU : ૩૫ & ૩૬, 2nd Floor, Arul Building, Nr. Dena Bank, Vejalpur Road, Jivraj Park, Ahmedabad - 380 051

Tel : 079-26821062

26821063

E-mail: [and@nhai.org](mailto:and@nhai.org)

ના એનએચએઆઈ/પીઆઈયુ-અમદાવાદ/એ-ડી-ઈએસપી/જીપીસીબી/2018/ ૩૦૫૩

તારીખ - 13.11.2018

શ્રીમાન

સરપંચ સાહેબશ્રી,

ગ્રામ પંચાયત, બાવળિયારી.

ગામ - બાવળિયારી.

તાલુકો - ધોલેરા, અમદાવાદ.

વિષય ભારતમાળા પરિયોજના હેઠળ ભારતમાળા યોજના - અમદાવાદ-ધોલેરા એક્સપ્રેસવે (110 કિ.મી.) (પ્રોજેક્ટ નં. એનએચએઆઈ/બીએમ/21) હેઠળ ડીએસઆઈસીડીસી માટે માર્ગ બાંધકામના ફિઝિબિલિટી સ્ટડી/ વિગતવાર પ્રોજેક્ટ રિપોર્ટ તૈયાર કરવા માટે કન્સલ્ટન્ટની સર્વિસ 13-11-2018ના રોજ યોજાયેલી જાહેર સુનાવણીમાં સરપંચ, બાવળિયારી ગ્રામ પંચાયત, ગામ - બાવળિયારી, તાલુકો - ધોલેરા, જિલ્લો અમદાવાદના આવેદન પત્રનો જવાબ.

સાહેબશ્રી,

ડીએસઆઈસીડીસી દ્વારા ડીએસઆઈઆર માસ્ટર પ્લાન માટે પ્રયાવરણ મંજૂરીઓ 19મી સપ્ટેમ્બર 2018ના રોજ જાહેરનામા નં. એફ.નં. 21-20/2011-આઈએ.૩ મારફત મેળવી લેવાઈ છે.

ડીએસઆઈઆર (એસ.નં. 2, 4, 6, 14)ની ઈસીની જાહેર સુનાવણી દરમિયાન પણ સમાન પ્રશ્ન ઉપસ્થિત થવો ફાળો અને તેથી એમ માનવામાં આવે છે કે આ પ્રશ્નોના જવાબ મળી ગયા છે.

ડીએસઆઈઆરના માસ્ટર પ્લાનમાં દર્શાવ્યા મુજબ ડીએસઆઈઆરમાં અમદાવાદ-ધોલેરા એક્સપ્રેસવેના વર્તમાન સૂચિત માર્ગમાં માત્ર માગે કોરિડોરને અનુસરવામાં આવશે, જેના માટે પ્રયાવરણ મંજૂરી (ઈસી) મેળવી લેવામાં આવી છે. ડીએસઆઈઆરના અસરગ્રસ્ત ગામો માટે પ્રયાવરણ મંજૂરી જાહેર કરતા પહેલાં ડીએસઆઈઆરના અસરગ્રસ્ત ગામોની જાહેર સુનાવણી થઈ ગઈ છે.

સુધા

ડીએસઆઈઆરમાં આવતા ગામોની યાદી નીચે મુજબ છે. :-

| ક્રમ | ગામના નામ | ચેઈનેજ | ચેઈનેજ | કુલ લંબાઈ (મી.) |
|------|-----------|--------|--------|-----------------|
| 1    | આંબલી     | 71030  | 77000  | 5970            |
| 2    | કાદિપુર   | 77000  | 81900  | 4900            |
| 3    | ધોલેરા    | 81900  | 89080  | 7180            |
| 4    | મુંડી     | 89080  | 90690  | 1610            |
| 5    | સાંધિયા   | 90690  | 93900  | 3210            |
| 6    | પાંચી     | 93900  | 95600  | 1700            |
| 7    | ફેબતપુર   | 95600  | 101900 | 6300            |
| 8    | બાવળીયારી | 101900 | 107240 | 5340            |

બાવળીયારીનો ડીએસઆઈઆરમાં આવતા ગામોમાં સમાવેશ થાય છે, તેથી બાવળીયારીના સરપંચ શ્રી પ્રદુમ્નસિંહનો પ્રશ્ન વર્તમાન જાહેર સુનાવણીના કાર્યક્ષેત્રથી બહાર છે.

વધુમાં એક્સપ્રેસવેના ઉપયોગ માટે જમીન ડીએસઆઈઆર દ્વારા પૂરી પાડવામાં આવી છે અને ડીએસઆઈઆર ક્ષેત્રમાં એનએચએઆઈએ કોઈ જમીન હસ્તગત કરી નથી.

આભારસહ,

આપનો વિશ્વાસુ,

મુખ્ય ૧. કિ.

જનરલ મેનેજર (ટેકનિકલ) અને  
પ્રોજેક્ટ ડિરેક્ટર, પીઆઈયુ - અમદાવાદ

નકલ રવાના :

1. વધુ માહિતી માટે કૃપયા સી.જી.એમ.(ટી) અને આર.ઓ., એનએચએઆઈ ગાંધીનગરનો સંપર્ક કરવો.

અરજદાર:-

સરગવાળા ગ્રામ પંચાયત

મોજેગામ- સરગવાળા,

તા. ધોળકા, જી. અમદાવાદ

તા. ૦૭/૧૧/૨૦૧૮

(મો)

પ્રતિશ્રી,

સચિવશ્રી/સભ્ય સચિવશ્રી,

ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ,

પર્યાવરણ ભવન, સેક્ટર-૧૦/એ,

ગાંધીનગર-૩૮૨૮૧૦

વિષય: તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચાર દૈનિકમાં પાના નં. ૧૧ ઉપર આવેલ જાહેર સુચનાના અનુસંધાને વાંધા અરજી.

મેં, સાહેબશ્રી,

આપના દ્વારા તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચારના પાના નં. ૧૧ ઉપર અમદાવાદ-પોલેરા એક્સપ્રેસ રોડ (૧૧૦) કી.મી. ના બાંધકામના અનુસંધાને પર્યાવરણીય હોક સુનાવણી રાખવામાં આવેલ છે. તેના અનુસંધાને અમો અમારા ગામના પ્રતિનિધી તરીકે અમારી રજુઆત કરીએ છીએ જે બાંધકામના સિવાય રોડ બનાવવાની કામગીરી કરવામાં આવશે તો અમારા ગામના પ્રજાજન, પશુઓ, માછીઓ અને પક્ષીઓને ઘણું વધુ નુકશાન થાય તેમ છે. તેમજ તેના કારણે ઘણું મોટું પ્રદુષણ, કુદરતી આફત આવે તેવી પુરેપુરી સંભાવના હોવાથી પ્રદુષણ નિયંત્રણના કાયદા બાંધકામના સિવાય રોડ બનાવવા અંગે અમારા ગ્રામજનોનો સખ વાંધો છે.

(૧) અમદાવાદથી પોલેરા એક્સપ્રેસ હાઈવેમાં જે જમીનો કપાત થાય છે તે જમીનો ખેતીની આવેલી છે અને વર્ષમાં બે અથવા તેથી વધુ પાક થતા હોવાથી હંમેશા જમીન લીલી રહે છે તેમજ તે જમીનના ઉભા પાકને કારણે આજુબાજુ હવાનું પ્રદુષણ ખુબ જ નીચું છે અને ઓક્સીજન અને ઓક્સીજન વાળી હવા હંમેશા મળી રહે છે.

(૨) અમદાવાદથી પોલેરા એક્સપ્રેસ હાઈવે બનાવવામાં આવે જેથી હવાના સ્તરને ઘણું મોટું નુકશાન જાય તેમ છે હાલમાં એકપક્ષ નેશનલ કે રાષ્ટ્રીય હાઈવે ન હોવાથી વાહનોની

અવરજવર ઘણી જ ઓછી છે જેના કારણે હવાના સ્તરમાં હંમેશા ઓળખી અને ઓક્સીજન વાળી રહે છે. તેમજ ધ્વની પ્રદુષણ પણ નહીવત પ્રમાણમાં છે અને હાલમાં જે રોડ પસાર થાય છે તે ગામને અડીને આવતી હોવાથી હંમેશા વાહનોના અવાજ રહેશે જેના કારણે ગામની નજીક રાત્રીના સમયે સોર્નના અવાજ તેમજ ગાડીઓના અવાજ આવવાથી રાત્રીની ઉંઘ ભગે તેવા સંજોગો ઉભા થઈ શકે તેમ છે રોડનું એલાઈમેન્ટ ગામથી દુર રાખવું હિતાવસ છે.

(૩) અમદાવાદ થી ધોલેરા હાઈવે ગામની નજીક ભગતા આભાર સુધી ગામના પશુ, પ્રાણી, પક્ષીઓ નિર્ભય રીતે રાત્રી પસાર કરતા હતા અને તે રીતે હંમેશા ટેવાયેલ છે અને હવે પાછી રોડ બનાવવામાં આવે તો "NO HORN ZONE" બનાવવો પડે તેમ તે રીતે કરવામાં નહીં આવે તો શરૂઆતના સમયમાં પશુ, પક્ષીઓ પ્રાણીઓની રાત્રી દરમ્યાન ઘણી મુશ્કેલી ઉભી થાય તેમજ નિર્ભય રીતે જીવી શકે તેમ નથી જેથી રોડ ઉપર ધ્વની નિયંત્રણ ખુજબ જરૂરી છે. તેમજ દુધાળા પશુઓને યોગ્ય પ્રમાણમાં આરામ ન મળે તો સમય જતા દુધાળા પશુઓથી દુધ ખુજબ ઓછું આવે અને દુધ કિત્તાદન વટે તેમ છે.

(૪) અમારા ગામથી નજીકથી એક્સપ્રેસ રોડ પસાર થાય છે અને ગામની તેમજ ભૌગોલીક પરિસ્થિતિ ખુબજ વરસાદનું પાણી હંમેશા નળ સરોવર બાજુથી તેમજ ઉત્તર દિશાથી બોર-વટમણ બાજુ જાય છે અને એક્સપ્રેસ હાઈવે પુર્વ-પશ્ચિમ બનવાનો છે જેથી સારે દિશાઓ અલગ હોવાથી પાણીનો વહેણ અટકી પડે તેમ છે જો પાણીના વહેણ અટકી જાય તો પાણીનો ભરાવો થતા લાંબા ગાળે રોગચાળો ફાટી નિકળે તેમજ ગામમાં હંમેશા પાણી ભરાયેલ અને દક્ષિણદીશાની જમીન પાણી વગરની રહે બિનઉપજાઉ થઈ જાય જેના કારણે મલા પ્રદુષણ વધુ પડતું ઉત્પન્ન થાય તેમજ ખેતી નષ્ટ પામે તેમ છે. જેથી પીમે પીમે ગામજનો બેકાર થવા માંડે જેથી પાણીના નળ-પાણી-લાઈન તથા પાણી નિકાલ જો યોગ્ય કરવામાં ન આવે તો પાણી વાયુનું પ્રદુષણ વધી જાય આપના દ્વારા જે આયોજન કરવામાં આવેલ છે તેમાં અને રોડ એલાઈમેન્ટમાં ઘણા બધા તથાવો પણ આવે છે. જેના કારણે પાણીનો ભરાવો નિકાસની વ્યવસ્થા કયા પ્રકારે કરેલ છે કે કેમ? તેના નકશા અમો ગામમાં આપવામાં ન આવે ત્યાં સુધી અમારા ગામમાંથી પસાર થતો રોડ બનાવવો હિતાવસ નથી અને તે અગે ગામનો ખુબજ રાખો છે.

(૫) અમદાવાદ ધોલેરા હાઈવે ભગતા ટ્રાફીકની ઘણી સમસ્યા રહેશે ગામની સીમના નીલગાય, બુંડ, ગાય, ભેસો, હંદણ, દોપડા, કસલા, વેટા, બકરા તેવા બીજા પ્રાણીઓ

ખુબજ પ્રમાણમાં છે. જે હંમેશા ગામની સીમામાંથી અવર જવર દિવસ તેમજ રાત્રે કરતા હોય અને એક્સપ્રેસ હાઈવે ઉપરથી જો તે પસાર થયા અને ગામના રસ્તા રાખવામાં ન આવે તો એક્સ્પ્રેસનો ભય ખુબજ વધી જાય તેમ છે. જેથી એક્સ્પ્રેસ નિવારણ વ્યવસ્થા ઓઠવવી જોઈએ અને દર પંદરથી વીસ કિલોમીટરની જગ્યાએ ઈમરજન્સી બીકલ તથા સારવાર કેન્દ્ર રાખવા જોઈએ જેથી ટ્રાફિક સમસ્યા ઉભી ન થાય તેમજ એક્સ્પ્રેસ સમસ્યા ઉભી ન થાય તેમજ એક્સ્પ્રેસ થાય તો તાત્કાલીક સારવાર મળી રહે તેમ ન કરવામાં આવે તો વખતો વખત આપજનોને આવી વ્યવસ્થા કરવા ઉભા પડે રહેવું પડે અથવા ભયનો માહોલ ઉભો થાય તેમ છે એક્સપ્રેસ હાઈવેની નીચે થઈને પસાર થાય તેવી વ્યવસ્થા રાખવા વિનંતી જેના કારણે વાયુ પ્રદુષણ થવો પ્રદુષણ ઓછું થાય, અને આવા સમયે જો સર્વિસ રોડ ન હોય તો રોડની આજુબાજુના વિસ્તારમાં જવા-આવવા માટે ઘણી બધી મુશ્કેલી ઉભી થાય તેમ છે જેથી સર્વિસ રોડ પણ આપવો હિતાવહ અને જરૂરી છે અને જો સર્વિસ રોડ આપવામાં ન આવે તો એક્સપ્રેસ હાઈવેનું આયોજન કરવામાં અમારો સખત વાંધો છે તેવું અગાઉ પણ વાંધામાં એક્વીઝિશન ઓફીસરને જણાવેલ છે જેથી સર્વિસ રોડ અમારી પ્રાથમીકતા છે તે બાને લીધા સિવાય રોડ બનાવવા માટે અમારો વાંધા આપીએ છીએ.

(૬) એક્સપ્રેસ રોડની ઉપર આવતા ગામની નજીક તથા ગામમાં વાયુ પ્રદુષણ તથા થવો પ્રદુષણ ના થાય તેવી માંત્રીક વસ્તુઓ મુકવી જેથી તેવા તમામ પ્રકારના પ્રદુષણ ઉપર નિયંત્રણ કરી દુર કરે અને ગામની અદર ઘોર્ન તથા ગાડીઓના અવાજ ખુબજ ઓછા રહે.

(૭) ગામની ખેતીની ઘણી મોટી જમીન હતી હોવાથી પણ મોટા ઝાડ તથા શુષ્કી ખેતી નષ્ટ થવાને કારણે કુદરતી વાયુની સાર નીચું જાય તેમ હોવાથી રોડની બંને બાજુ જે ત્રણ જણની લાઈનો કરવામાં આવશે તેમાં મુખ્યત્વે લીમડ, પીપળા, વડ, આંબલી, વરખડી તથા જે વૃક્ષો અમારા ગામની બાજુથી જે એક્સપ્રેસ રોડ પસાર થાય છે તેની આજુબાજુમાં જે ઝાડ ઉછેરવાના છે તે પ્રથમથી મોટી સાઈઝના હોવા જોઈએ અને ઉછેર કરવાની જવાબદારી એક્સપ્રેસ હાઈવે ઓથોરીટીની રહેશે જે ઝાડ મોટા ના થાય તો આમજનો તથા ગામને થતું નુકશાન એક્સપ્રેસ હાઈવે ભરપાઈ કરી આપશે તેવા પ્રકારનો લેખીત બોન્ડ એક્સપ્રેસ હાઈવે તરફથી અમારા ગામને આપવાનો રહેશે તેમજ ગામની બીજી પડતર જમીનમાં પણ વૃક્ષ ઉછેર કરવા માટે એક્સપ્રેસ હાઈવે એ અમોને ખાતરી આપવાની રહેશે. જેથી વાયુ પ્રદુષણ ઓછું થાય અને કુદરતી પર્યાવરણ જળવાઈ રાશે.

(૮) એક્સપ્રેસ હાઈવેનું નિર્માણ જ્યારે ચાલુ કરવામાં આવે ત્યારે મોટી પુરાણ કરવામાં આવે તે સમયે માટીના કંડો બધામાં ખુબજ ફેલાઈ જાય તેમ છે અને જેથી માટી પુરાણ વખતે માટી

(૪)

ઉડે નહીં તેવી રીતે તેમજ માટી પુરાણથી આજુબાજુના ખેતરોને માટીથી નુકશાન ન થાય તે રીતે રોડ કોન્ટ્રાક્ટરની ખાત્રી લેવાની રહેશે. તેમજ તેવી ખાત્રી અમો ગ્રામ પંચાયતમાં જમા કરાવવાની રહેશે. અને જો કોઈપણ ખેતરને માટીની રજ કે રોડ કામના કારણે નુકશાન થશે તો તે તમામ જવાબદાર એક્સપ્રેસ હાઈવે ઓથોરિટીની રહેશે અને નુકશાન ના થાય તેવી રીતે કામગીરી કરવાની રહેશે.

આમ અમારા ઉપરોક્ત વાંધા ધ્યાને લીધા સિવાય એક્સપ્રેસ રોડ બનાવવા અંગેની પરવાનગી ન આપવા અમારી વિનંતી છે.

૨૦.૧૧.૨૦૧૯

સરખાણા ગ્રામ પંચાયત

.....વા. ધોળકા.....





# ભારતીય રાષ્ટ્રીય રાજમાર્ગ પ્રાધિકરણ

(સડક પરિવહન ઓફ રાજમાર્ગ મંત્રાલય)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

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તા.13/11/2018

પ્રતિ

એ.ડી.સોલંકી, સંરપચશ્રી,

સરગવાલા ગ્રામ પંચાયત,

ગામ - સરગવાલા,

તા.ધોળકા, જી-અમદાવાદ.

વિષય: અમદાવાદ જિલ્લામાં તા.13/11/2018 ના રોજ લોક સુનાવણીમાં સંરપચશ્રી સરગવાલા તા.

ધોળકા ગામ પંચાયતના આવેદન પત્રનો મુદ્દા પ્રમાણે વિગતવાર જવાબ

| ક્રમ નં. | અરજદારનું નામ તથા સરનામું  | જવાબ   |
|----------|--|--|
| 1        | એ.ડી.સોલંકી, સંરપચશ્રી,<br>સરગવાલા ગ્રામ પંચાયત<br>ગામ - સરગવાલા,<br>તા.ધોળકા, જી-અમદાવાદ. | સરકારી નિયમ અનુસાર બેક્ટોને સહાયરૂપ વળતર મળશે તથા જે પણ ગાડીઓ એક્સપ્રેસ વે પર ચાલશે તે સી.પી.સી.બી. ના નિયમાનુસાર ચાલશે. પુરુષણ નિયત્રણ માટે એક્સપ્રેસ હાઈવેની બન્ને બાજુ વૃક્ષારોપણ કરવામાં આવશે.   |
| 2        |  | અમદાવાદ ધોલેશ એક્સપ્રેસ વે ગામથી લગભગ 200 થી 250 મીટર દુરથી પસાર થાય છે. બાયોલોજિકલ "નોઈઝ બેરીયર" (sooty black plantation etc) જેથી ધ્વનિ પુરુષણ નહીવત રહેશે. ઓથોરીટી બસ રહેલાંક વિસ્તારમાં "નોઈઝ બેરીયર" ની વ્યવસ્થા કરવામાં આવશે. એક્સપ્રેસ વેની બન્ને બાજુ વૃક્ષારોપણ કરવાથી હવા પુરુષણ ઓછું થશે. |
| 3        |  | એક્સપ્રેસ વેની બન્ને બાજુ હાઈવે રીપોર્ટ મુજબ "નોઈઝ બેરીયર" લગાવાથી ધ્વનિ પુરુષણથી રાહત મળશે.   |
| 4        |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે, જેથી કોઈપણ પાણીના વહેણને કે જાણીતી નુકસાન ન થાય તે માટે  |

મુજબ

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|   |  | પુરતા પ્રમાણેમાં કલવટ અને સીડી સ્ટ્રેક્ચર બનાવવાની જોગવાઈ છે. જે ભુગર્ભ જળશાસ્ત્રીના રીપોર્ટ પ્રમાણે છે.  |
| 5 |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે. જેથી પશુ-પ્રાણીઓને અવર-જવરમાં કોઈ પણ તકલીફના પડે તે ધ્યાનમાં રાખીને અંડરપાસની (CUP) અને શુષ્ક ઋતુમાં કલવટ ની સુવિધા ઉપલબ્ધ કરાવવામાં આવશે.  |
| 6 |  | પ્રશ્ન ફરીથી રીપીટ થાય છે.  |
| 7 |  | પ્રસ્તાવિત પરિયોજનામાં કુલ 66000 વૃક્ષોની વાવણી કરવામાં આવશે. એનએચએઆઈ વૃક્ષો કાપવાની થતી કિંમત ફોરેસ્ટ ડિપાર્ટમેન્ટ ને કેમ્પા ફંડ ના નિયમાનુસાર આપશે. અને કેમ્પા ફંડમાંથી ખુલ્લી જગ્યા, બઝર જમીન અને સરકારી જમીન પર વૃક્ષો લગાવામાં આવશે. |
| 8 |  | પ્રસ્તાવિત પરિયોજનામાં બાંધકામ ના સમયમાં પાણીના ટેકર દ્વારા છંટકાવ કરવામાં આવશે. જેથી માટીના કણ વાયુમાં ન ભળે અને જનજીવનને નુકશાન ન થાય. તેની પુરી તંકેદારી રાખવામાં આવશે. જે પર્યાવરણ પ્રબંધન યોજનાની ફંડમાં સામેલ છે.                   |

આપનો આભારી,

આપનો વિશ્વાસુ,

**મુખ્ય મંત્રી**  
મહાપ્રબંધક (ટેકનીકલ) અને  
પ્રોજેક્ટ ડાયરેક્ટર, એનએચએઆઈ  
પીઆઈયુ અમદાવાદ

નકલ સર્વિનય રવાના:-

- 1) ચીફ જનરલ મેનેજર તથા રીજીયોનલ ઓફિસરશ્રી, નેશનલ હાઇવે ઓથોરીટી બોફ હન્ડીયા, ગાંધીનગર તરફ જાણ સારૂ.

અરજદાર:-

કરીયાણા ગ્રામ પંચાયત

મોજેગામ- કરીયાણા,

તા. મોળકા, જી. અમદાવાદ

તા. ૦૩/૧૧/૨૦૧૮

(મો)

પ્રતિશ્રી,

સચિવશ્રી/સભ્ય સચિવશ્રી,

ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ,

પર્યાવરણ ભવન, સેક્ટર-૧૦/એ,

ગાંધીનગર-૩૮૨૯૧૦

વિષય: તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચાર દૈનિકમાં પાના નં. ૧૧ ઉપર આવેલ જાહેર મુચનાના અનુસંધાને વાંધા અરજી.

મે. સાહેબશ્રી,

આપના દ્વારા તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચારના પાના નં. ૧૧ ઉપર અમદાવાદ-ધોલેરા એક્સપ્રેસ રોડ (૧૧૦) કી.મી. ના બાંધકામના અનુસંધાને પર્યાવરણીય લોક સુનાવણી રાખવામાં આવેલ છે. તેના અનુસંધાને અમો અમારા ગામના પ્રતિનિધી તરીકે અમારી રજુઆત કરીએ છીએ જે ધ્યાને લીધા સિવાય રોડ બનાવવાની કામગીરી કરવામાં આવશે તો અમારા ગામના પ્રજાજન, યશુઓ, પ્રાણીઓ અને પક્ષીઓને ઘણું ઘણું નુકશાન થાય તેમ છે. તેમજ તેના કારણે ઘણું મોટું પ્રદુષણ, કુદરતી આફત આવે તેવી પુરેપુરી સંભાવના હોવાથી પ્રદુષણ નિયંત્રણના કાયદા ધ્યાને લીધા સિવાય રોડ બનાવવા અંગે અમારા ગ્રામજનોનો સખ વાંધો છે.

(૧) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવેમાં જે જમીનો કપાત થાય છે તે જમીનો ખેતીની આવેલી છે અને વર્ષમાં બે અથવા તેથી વધુ પાક થતા હોવાથી હંમેશા જમીન લીલી રહે છે તેમજ તે જમીનના ઉભા પાકને કારણે આજુબાજુ હવાનું પ્રદુષણ ખુબ જનીયું છે અને ચોખ્ખી અને ઓક્સીજન વાળી હવા હંમેશા મળી રહે છે.

(૨) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવે બનાવવામાં આવે જેથી હવાના સ્તરને ઘણું મોટું નુકશાન જાય તેમ છે હાલમાં એકમણ નેશનલ કે રાષ્ટ્રીય હાઈવે ન હોવાથી વાહનોની

અવરજવર ઘણી જ ઓછી છે જેના કારણે હવાના સ્તરમાં હંમેશા ચોખ્ખી અને બોક્સીજ વાળી રહે છે. તેમજ ધ્વની પ્રદુષણ પણ નહીંવત પ્રમાણમાં છે અને હાલમાં જે રોડ પસાર થાય છે તે ગામને અડીને આવતો હોવાથી હંમેશા વાહનોના અવાજ રહેશે જેના કારણે ગામની નજીક રાત્રીના સમયે હોર્નના અવાજ તેમજ ગાડીઓના અવાજ આવવાથી રાત્રીની ઊંઘ બગડે તેવા સંજોગો ઊભા થઈ શકે તેમ છે રોડનું એલાઈમેન્ટ ગામથી દુર રાખવું ભિતાવલ છે.

(૩) અમદાવાદ થી પોલેરા હાઈવે ગામની નજીક બનતા અત્યાર સુધી ગામના પશુ, પ્રાણી, પક્ષીઓ નિર્ભય રીતે રાત્રી પસાર કરતા હતા અને તે રીતે હંમેશા ટેવાયેલ છે અને હવે પાછી રોડ બનાવવામાં આવે તો 'NO HORN ZONE' બનાવવો પડે તેમ તે રીતે ૧૨વામાં નહીં આવે તો શરૂઆતના સમયમાં પશુ, પક્ષીઓ પ્રાણીઓની રાત્રી દરમ્યાન ઘણી મુશ્કેલી ઊભી થાય તેમજ નિર્ભય રીતે જીવી શકે તેમ નથી જેથી રોડ ઉપર ધ્વની નિયંત્રણ ખુબ જરૂરી છે. તેમજ દુધાળા પશુઓને યોગ્ય પ્રમાણમાં આરામ ન મળે તો સમય જતાં દુધાળા પશુઓથી દુધ ખુબ ઓછું આવે અને દુધ કિત્યાદન થટે તેમ છે.

(૪) અમારા ગામથી નજીકથી એક્સપ્રેસ રોડ પસાર થાય છે અને ગામની તેમજ ભોગોલીક પરિસ્થિતી ખુબજ વરસાદનું પાણી હંમેશા નળ સરોવર બાજુથી તેમજ ઉત્તર દિશાથી ભોર-વટામણ બાજુ જાય છે અને એક્સપ્રેસ હાઈવે પુર્વ-પશ્ચિમ બનવાનો છે જેથી ચારે દિશાઓ અલગ હોવાથી પાણીનો વહેણ અટકી પડે તેમ છે જો પાણીના વહેણ અટકી જાય તો પાણીનો ભરાવો થતા લાંબા ગાળે રોગચાળો ફાટી નિકળે તેમજ ગામમાં હંમેશા પાણી ભરાયેલ અને દક્ષિણદિશાની જમીન પાણી વગરની રહે બિનઉપજાઉ થઈ જાય જેના કારણે હવા પ્રદુષણ વધુ પાતુ ઊંચુ થાય તેમજ ખેતી નષ્ટ પામે તેમ છે. જેથી ધીમે ધીમે ગામજનો બેકાર થવા માંડે જેથી પાણીના નળ-પાણી-હાઈવે તથા પાણી નિકાલ જો યોગ્ય કરવામાં ન આવે તો પાણી વાયુનું પ્રદુષણ વધી જાય આપના દ્વારા જે આયોજન કરવામાં આવેલ છે તેમાં અને રોડ એલાઈમેન્ટમાં ઘણા બધા તથાવો પાછા આવે છે. જેના કારણે પાણીનો ભરાવો નિકાસની વ્યવસ્થા ક્યા પ્રકારે કરેલ છે કે કેમ? તેના નકશા અમી ગામમાં આપવામાં ન આવે ત્યાં સુધી અમારા ગામમાંથી પસાર થતો રોડ બનાવવો ભિતાવલ નથી અને તે અંગે ગામનો ખુબજ નષો છે.

(૫) અમદાવાદ પોલેરા હાઈવે બનતા ટ્રાફીકની ઘણી સમસ્યા રહેશે ગામની સીમમાં નીલગાય, મુઠ, ગાય, ભેડો, હરણ, દીપડા, સસલા, વેટા, બકરા તેવા બીજા પ્રાણીઓ

ખુબજ પ્રમાણમાં છે, જે હંમેશા ગામની સીમામાંથી અવર જવર દિવસ તેમજ રાત્રે રેતા હોય અને એક્સપ્રેસ હાઈવે ઉપરથી જે તે પસાર થયા અને ગામના રસ્તા રાખવામાં ન આવે તો અકસ્માતનો ભય ખુબજ વધી જાય તેમ છે. જેથી અકસ્માત નિવારણ વ્યવસ્થા ઓઠાવવી જોઈએ અને દર પંદરથી વીસ કિલોમીટરની જગ્યાએ ઈમરજન્સી બીકલ તથા સારવાર કેન્દ્ર રાખવા જોઈએ જેથી ટ્રાફિક સમસ્યા ઉભી ન થાય તેમજ અકસ્માત સમસ્યા ઉભી ન થાય તેમજ અકસ્માત થાય તો તાત્કાલીક સારવાર મળી રહે તેમ ન કરવામાં આવે તો વખતો વખત ગ્રામજનોને આવી વ્યવસ્થા કરવા જેના પગે રહેવું પડે અથવા ભયનો માહોલ ઉભો થાય તેમ છે એક્સપ્રેસ હાઈવેની નીચે થઈને પસાર થાય તેવી વ્યવસ્થા રાખવા વિનંતી જેના કારણે વાયુ પ્રદુષણ થવો પ્રદુષણ ઓછું થાય, અને આવા સમયે જો સર્વિસ રોડ ન હોય તો રોડની આજુબાજુના વિસ્તારમાં જવા-આવવા માટે વણી ભપી મુશ્કેલી ઉભી થાય તેમ છે જેથી સર્વિસ રોડ પણ આપવો હિતાવહ અને જરૂરી છે અને જો સર્વિસ રોડ આપવામાં ન આવે તો એક્સપ્રેસ હાઈવેનું આયોજન કરવામાં અમારો સખત વાંધો છે તેવું અગાઉ પણ ચાંપામાં એકવીરેશન ઓફીસરને જણાવેલ છે જેથી સર્વિસ રોડ અમારી પ્રાથમીકતા છે તે બાને લીધા સિવાય રોડ બનાવવા માટે અમારો વાંધો આપીએ છીએ.

(દ) એક્સપ્રેસ રોડની ઉપર આવતા ગામની નજીક તથા ગામમાં વાયુ પ્રદુષણ તથા થવો પ્રદુષણ ના થાય તેવી ધાર્મિક વસ્તુઓ મુકવી જેથી તેવા તમામ પ્રકારના પ્રદુષણ ઉપર નિયંત્રણ કરી દુર કરે અને ગામની અંદર રોડ તથા ગાડીઓના અવાજ ખુબજ ઓછા રહે.

(૭) ગામની ખેતીની વસ્તી મોટી જમીન જતી હોવાથી વણા મોટા ઝાડ તથા કાયમી ખેતી નષ્ટ થવાને કારણે કુદરતી વાયુની સ્તર નીચું જાય તેમ હોવાથી રોડની બંને બાજુ જે તમામ જગ્યાની ઘાઈનો કરવામાં આપશે તેમાં મુખ્યત્વે લીમડા, પીપળા, વડ, આંબલી, વરખડો તથા જે વૃક્ષો અમારા ગામની બાજુથી જે એક્સપ્રેસ રોડ પસાર થાય છે તેની આજુબાજુમાં જે ઝાડ કિછેરવાના છે તે પ્રથમથી મોટી સાઈઝના હોવા જોઈએ અને કિછેર કરવાની જવાબદારી એક્સપ્રેસ હાઈવે ઓથોરીટીની રહેશે જે ઝાડ મોટા ના થાય તો ગ્રામજનો તથા ગામને શત્રુ મુકશાન એક્સપ્રેસ હાઈવે ભરપાઈ કરી આપશે તેવા પ્રકારનો લેખીત ઓર્ડર એક્સપ્રેસ હાઈવે નરહથી અમારા ગામને આપવાનો રહેશે તેમજ ગામની બીજા પડતર જમીનમાં પણ વૃક્ષ કિછેર કરવા માટે એક્સપ્રેસ હાઈવે એ અમોને ખાતરી આપવાની રહેશે. જેથી વાયુ પ્રદુષણ ઓછું થાય અને કુદરતી પર્યાવરણ જળવાઈ રહે.

(૮) એક્સપ્રેસ હાઈવેનું નિર્માણ જ્યારે ચાલુ કરવામાં આવે ત્યારે માટી પુરાણ કરવામાં આવે તે સમયે માટીના કચ્છો હવામાં ખુબજ ફેલાઈ જાય તેમ છે અને જેથી માટી પુરાણ વખતે સાટી







# ભારતીય રાષ્ટ્રીય રાજમાર્ગ પ્રાધિકરણ

(સડક પરિવહન ઓર રાજમાર્ગ મંત્રાલય)

**National Highways Authority of India**

(Ministry of Road Transport & Highways)

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તા. ૧૩/૧૧/૨૦૧૮

પ્રતિ,

રંજન બી ગોસ્વિલ, સંરખચશ્રી,

કરીયાણા ગ્રામ પંચાયત,

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તા. ધોળકા, જી-અમદાવાદ.

વિષય- અમદાવાદ જિલ્લામાં તા. ૧૩/૧૧/૨૦૧૮ ના રોજ લોક સુનાવણીમાં સંરખચશ્રી કરીયાણા

તા. ધોળકા ગ્રામ પંચાયતના આવેદન પત્રનો મુદ્દા પ્રમાણે વિગતવાર જણાવ

| ક્રમ નં. | અરજદારનું નામ તથા સરનામું   | જવાબ  |
|----------|---|---|
| ૧        | રંજન બી ગોસ્વિલ, સંરખચશ્રી,<br>કરીયાણા ગ્રામ પંચાયત,<br>ગામ- કરીયાણા,<br>તા. ધોળકા, જી-અમદાવાદ. | સરકારી નિયમ અનુસાર બેકુતોને સહાયરૂપ વળતર મળશે તથા જે પણ ગાડીઓ એક્સપ્રેસ વે પર ચાલશે તે સી પી સી.બી. ના નિયમાનુસાર ચાલશે. પ્રદુષણ નિયંત્રણ માટે એક્સપ્રેસ હાઈવેની બંને બાજુ વૃક્ષારોપણ કરવામાં આવશે.   |
| ૨        |   | અમદાવાદ ધોલરા એક્સપ્રેસ વે ગામથી લગભગ ૨૦૦ થી ૨૬૦ મીટર દુરથી પસાર થાય છે. બાયોલોજીકલ "નોઈઝ બેરીયર" (such as tree plantation etc) જેથી ધ્વનિ પ્રદુષણ નહીવત રહેશે. એથોરીટી દ્વારા રહેણાક વિસ્તારમાં "નોઈઝ બેરીયર" ની વ્યવસ્થા કરવામાં આવશે. એક્સપ્રેસ વેની બંને બાજુ વૃક્ષારોપણ કરવાથી હવા પ્રદુષણ ઓછું થશે. |
| ૩        |   | એક્સપ્રેસ વેની બંને બાજુ ઈઆઈએ રીપોર્ટ મુજબ "નોઈઝ બેરીયર" લગાવાથી ધ્વનિ પ્રદુષણથી રાહત મળશે.   |
| ૪        |   | પ્રસ્તાવિત પરિયોજનાની ડિઝાઇન એવી રીતે તૈયારવામાં આવી છે જેથી કોઈપણ ખાણીના વર્કશોપ કે જળસ્રોતને નુકશાન ન થાય તે માટે   |

અર્થાત

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|---|--|--|
|   |  | પુરતા પ્રમાણેમાં કલવર્ટ અને સીડી સ્ટ્રેક્ચર બનાવવાની જોગવાઈ છે, જે ભુગર્ભ જળાશયોના રીપોઈટ પ્રમાણે છે.  |
| 5 |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે, જેથી પશુ-પાણીઓને અવર-જવરમાં કોઈ પણ તકલીફના પડે તે ધ્યાનમાં રાખીને અંડરપાસની (CUP) અને શુષ્ક ઋતુમાં કલવર્ટ ની સુવિધા ઉપલબ્ધ કરાવવામાં આવશે.   |
| 6 |  | પ્રશ્ન ફરીથી રીપોઈટ થાય છે.  |
| 7 |  | પ્રસ્તાવિત પરિયોજનામાં કુલ 66000 વૃક્ષોની વાવણી કરવામાં આવશે, એનએચએઆઈ વૃક્ષો કાપવાની થતી કિંમત ફોરેસ્ટ ડિપાર્ટમેન્ટ ને કેમ્પા ફંડ ના નિયમાનુસાર આપશે. અને કેમ્પા ફંડમાંથી ખુલ્લી જગ્યા, બંડર જમીન અને સરકારી જમીન પર વૃક્ષો લગાવામાં આવશે. |
| 8 |  | પ્રસ્તાવિત પરિયોજનામાં બાંધકામ ના સમયમાં પાણીના ટેકર દ્વારા છંદકાવ કરવામાં આવશે. જેથી માટીના કણ વાયુમાં ન ભળે અને જનજીવનને નુકશાન ન થાય. તેની પુરી તકેદારી રાખવામાં આવશે. જે પર્યાવરણ પ્રબંધન યોજનાની ફંડમાં સામેલ છે.                     |

આપનો આભારી.

આપનો વિશ્વાસુ,

મુખ્ય ડૉ. સિદ્ધ

મહાપ્રબંધક (ટેકનીકલ) અને

પ્રોજેક્ટ ડાયરેક્ટર, એનએચએઆઈ

ચીઆઈયુ અમદાવાદ

નકલ સવિનય રવાના:-

- 1) ચીફ જનરલ મેનેજર તથા રીજીયોનલ ઓફિસરશ્રી, નેશનલ હાઇવે ઓથોરીટી ઓફ ઇન્ડિયા, ગાંધીનગર તરફ જાણ સારું.

અરજદાર:-

ભોળાદ ગ્રામ પંચાયત

મોજેગામ- ભોળાદ,

તા. પોળકા, જી. અમદાવાદ

તા. ૦૭/૧૧/૨૦૧૮

(મો)

પ્રતિશ્રી,

સચિવશ્રી/સભ્ય સચિવશ્રી,

ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ,

પર્યાવરણ ભવન, સેક્ટર-૧૦/એ,

ગાંધીનગર-૩૮૨૯૧૦

વિષય: તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચાર દૈનિકમાં પાના નં. ૧૧  
ઉપર આવેલ જાહેર સુચનાના અનુસંધાને વાંધા અરજી.

મે. સાહેબશ્રી,

આપના દ્વારા તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચારના પાના નં. ૧૧ ઉપર અમદાવાદ-ધોલેરા એક્સપ્રેસ રોડ (૧૧૦) કી. મી. ના બાંધકામના અનુસંધાને પર્યાવરણીય લોક સુનાવણી રાખવામાં આવેલ છે. તેના અનુસંધાને અમો અમારા ગામના પ્રતિનિધી તરીકે અમારી રજુઆત કરીએ છીએ જે ધ્યાને લીધા સિવાય રોડ બનાવવાની કામગીરી કરવામાં આવશે તો અમારા ગામના પ્રજાજન, પશુઓ, પ્રાણીઓ અને પક્ષીઓને ઘણું વધુ નુકશાન થાય તેમ છે. તેમજ તેના કારણે ઘણું મોટું પ્રદુષણ, કુદરતી આકત આવે તેવી પુરેપુરી સંભાવના હોવાથી પ્રદુષણ નિયંત્રણના કાયદા ધ્યાને લીધા સિવાય રોડ બનાવવા અંગે અમારા ગ્રામજનોનો સખ વાંધો છે.

(૧) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવેમાં જે જમીનો કપાત થાય છે તે જમીનો ખેતીની આવેલી છે અને વર્ષમાં બે અથવા તેથી વધુ પાક થતા હોવાથી સંમેશ જમીન લીલી રહે છે તેમજ તે જમીનના ઉભા પાકને કારણે આજુબાજુ હવાનું પ્રદુષણ ખુબ જ નીચું છે અને ચોખ્ખી અને ઓક્સીજન વાળી હવા સંમેશ મળી રહે છે.

(૨) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવે બનાવવામાં આવે જેથી હવાના સ્તરને ઘણું મોટું નુકશાન જાય તેમ છે હાલમાં એકપણ નેશનલ કે રાષ્ટ્રીય હાઈવે ન હોવાથી વાહનોની

અવરજવર ઘણી જ ઓછી છે જેના કારણે હવાના સ્તરમાં હંમેશા ઓગળી અને ઓકસીજન વાળી રહે છે. તેમજ ધ્વની પ્રદુષણ પણ નહીંવત પ્રમાણમાં છે અને હાલમાં જે રોડ પસાર થાય છે તે ગામને અડીને આવતો હોવાથી હંમેશા વાહનોના અવાજ રહેશે જેના કારણે ગામની નજીક રાત્રીના સમયે હોર્નના અવાજ તેમજ ગાડીઓના અવાજ આવવાથી રાત્રીની ઉંઘ બગડે તેવા સંજોગો ઉભા થઈ શકે તેમ છે રોડનું એલાઈમેન્ટ ગામથી દુર રાખવું હિતાવહ છે.

(૩) અમદાવાદ થી પોલેરા હાઈવે ગામની નજીક બનતા અત્યાર સુધી ગામના પશુ, પ્રાણી, પક્ષીઓ નિર્ભય રીતે રાત્રી પસાર કરતા હતા અને તે રીતે હંમેશા ટેવાયેલ છે અને હવે પછી રોડ બનાવવામાં આવે તો 'NO HORN ZONE' બનાવવો યોગ્ય તેમ તે રીતે કરવામાં નહીં આવે તો શરૂઆતના સમયમાં પશુ, પક્ષીઓ પ્રાણીઓની રાત્રી દરમ્યાન ઘણી મુશ્કેલી ઉભી થાય તેમજ નિર્ભય રીતે છૂલી શકે તેમ ત્રીજી જેથી રોડ ઉપર ધ્વની નિયંત્રણ ખુજબ જરૂરી છે. તેમજ દુધાળા પશુઓને યોગ્ય પ્રમાણમાં આરામ ન મળે તો સમય જતા દુધાળા પશુઓથી દુધ ખુજબ ઓછું આવે અને દુધ ઉત્પાદન ઘટે તેમ છે.

(૪) અમારા ગામમાં નજીકથી એક્સપ્રેસ રોડ પસાર થાય છે અને ગામની તેમજ ભોંગોલીક પરિસ્થિતી ખુબજ વરસાદનું પાણી હંમેશા નળ સરોવર બાજુથી તેમજ ઉત્તર દિશાથી બોર-વટામણ બાજુ જાય છે અને એક્સપ્રેસ હાઈવે પુર્વ-પશ્ચિમ બનવાનો છે જેથી ચારે દિશાઓ અલગ હોવાથી પાણીનો વહેણ અટકી પડે તેમ છે જો પાણીના વહેણ અટકી જાય તો પાણીનો ભરાવો થતા લાંબા ગાળે રોગચાળો ફાટી નિકળે તેમજ ગામમાં હંમેશા પાણી ભરાયેલ અને દલિલદીશાની જમીન પાણી વગરની રહે બિનઉપજાઉ થઈ જાય જેના કારણે હવા પ્રદુષણ વધુ પડતું ઉભું થાય તેમજ ખેતી નષ્ટ પામે તેમ છે. જેથી ધીમે ધીમે ગામજનો બેકાર થવા માંડે જેથી પાણીના નળ-પાણી-લાઈન તથા પાણી નિકાલ જો યોગ્ય કરવામાં ન આવે તો પાણી વધુનું પ્રદુષણ વધી જાય આપના દ્વારા જે આયોજન કરવામાં આવેલ છે તેમાં અને રોડ એલાઈમેન્ટમાં ઘણા બધા તથાવો પણ આવે છે, જેના કારણે પાણીનો ભરાવો નિકાસની બાવસ્થા કયા પ્રકારે કરેલ છે કે કેમ? તેના નકશા અમો ગામમાં આપવામાં ન આવે ત્યાં સુધી અમારા ગામમાંથી પસાર થતો રોડ બનાવવો હિતાવહ નથી અને તે અંગે ગામનો ખુબજ વાંધો છે.

(૫) અમદાવાદ પોલેરા હાઈવે બનતા દ્વાકીકની ઘણી સમસ્યા રહેશે ગામની સીમમાં નીલગાંધ, ભુડ, ગાય, ભિસો, હરણ, કોપડ, મસલા, ચેટા, બકરા તેના બીજા પ્રાણીઓ

પુખ્ત પ્રમાણમાં છે. જે હંમેશા ગામની સીમામાંથી અવર જવર દિવસ તેમજ રાત્રે કરતા હોય અને એક્સપ્રેસ હાઈવે ઉપરથી જો તે પસાર થયા અને ગામના રક્તા રાખવામાં ન આવે તો અકસ્માતનો ભય પુખ્ત વધી જાય તેમ છે. જેથી અકસ્માત નિવારણ વ્યવસ્થા ચોકસી જોઈએ અને દર પંદરથી વીસ કિલોમીટરની જગ્યાએ સ્ટેન્ડસ્ટોપ વીકલ તથા સારવાર કેન્દ્ર રાખવા જોઈએ જેથી ટ્રાફિક સમસ્યા ઊભી ન થાય તેમજ અકસ્માત સમસ્યા ઊભી ન થાય તેમજ અકસ્માત થાય તો તાત્કાલીક સારવાર મળી રહે તેમ ન કરવામાં આવે તો વખતો વખત ગ્રામજનોને આવી વ્યવસ્થા કરવા ઊભા પડે રહેવું પડે અથવા ભયનો માહોલ ઊભો થાય તેમ છે એક્સપ્રેસ હાઈવેની નીચે થઈને પસાર થાય તેવી વ્યવસ્થા રાખવા વિનંતી જેના કારણે વાયુ પ્રદુષણ પ્લેન પ્રદુષણ ઓછું થાય. અને અથવા સમયે જો સર્વિસ રોડ ન હોય તો રોડની આજુબાજુના વિસ્તારમાં જગ્યા-આવવા માટે વહી ભધી મુકેલી ઊભી થાય તેમ છે જેથી સર્વિસ રોડ પણ આપવો હિતાવહ અને જરૂરી છે અને જો સર્વિસ રોડ આપવામાં ન આવે તો એક્સપ્રેસ હાઈવેનું આયોજન કરવામાં અમારો સખત વાપો છે તેવું અગાઉ પણ લોકોમાં એકવીઝેશન ઓફીસરને જણાવેલ છે જેથી સર્વિસ રોડ અમારી પ્રાથમીકતા છે તે પ્લાને લીધા સિવાય રોડ બનાવવા માટે અમારો વાપો આપીએ છીએ.

(૬) એક્સપ્રેસ રોડની ઉપર આવતા ગામની નજીક તથા ગામમાં વાયુ પ્રદુષણ તથા પ્લેન પ્રદુષણ ના થાય તેવી યાંત્રિક વસ્તુઓ મુકવી જેથી તેવા તમામ પ્રકારના પ્રદુષણ ઉપર નિયંત્રણ કરી દુર કરે અને ગામની અંદર હોર્ન તથા ગાડીઓના અવાજ પુખ્ત ઓછા રહે.

(૭) ગામની બેતીની વહી મોટી જમીન જતી હોવાથી થતા મોટા ઝાડ તથા કાચમી બેતી નષ્ટ થવાને કારણે કુદરતી વાયુની સાર નીચું જાય તેમ હોવાથી રોડની બંને બાજુ જે ત્રણ જણની લાઈનો કરવામાં આવશે તેમાં મુખ્યત્વે લીમડા, પીપળા, વડ, આંબલી, વરખડો તથા જે વૃક્ષો અમારા ગામની બાજુથી જે એક્સપ્રેસ રોડ પસાર થાય છે તેની આજુબાજુમાં જે ઝાડ ઉછેરવાના છે તે પ્રથમથી મોટી સાઈઝના હોવા જોઈએ અને ઉછેર કરવાની જવાબદારી એક્સપ્રેસ હાઈવે ઓથોરિટીની રહેશે જે ઝાડ મોટા ના થાય તો ગ્રામજનો તથા ગામને થતું નુકશાન એક્સપ્રેસ હાઈવે ભરપાઈ કરી આપશે તેવા પ્રકારનો લેખીત બોન્ડ એક્સપ્રેસ હાઈવે તરફથી અમારા ગામને આપવાનો રહેશે તેમજ ગામની બીજી પડતર જમીનમાં પણ વૃક્ષ ઉછેર કરવા માટે એક્સપ્રેસ હાઈવે એ અસોને ખાતી આપવાની રહેશે. જેથી વાયુ પ્રદુષણ ઓછું થાય અને કુદરતી પર્યાવરણ જળવાઈ રહે.

(૮) એક્સપ્રેસ હાઈવેનું નિર્માણ જ્યારે ચાલુ કરવામાં આવે ત્યારે ગાદી પુરાણ કરવામાં આવે તે સમયે માટીના કણો કાવામાં પુખ્ત કેવાઈ જાય તેમ છે અને જેથી માટી પુરાણ વખતે માટી

(૪)

ઉડે નહીં તેવી રીતે તેમજ માટી પુરાણથી આજુબાજુના ખેતરોને માટીથી નુકશાન ન થાય તે રીતે રોડ કોન્ટ્રાક્ટરની ખાત્રી લેવાની રહેશે. તેમજ તેવી ખાત્રી અમો ગ્રામ પંચાયતમાં જમા કરાવવાની રહેશે. અને જો કોઈપણ ખેતરને માટીની રજ કે રોડ કામના કારણે નુકશાન થશે તો તે તમામ જવાબદાર એક્સપ્રેસ હાઈવે ઓથોરિટીની રહેશે અને નુકશાન ના થાય તેવી રીતે કામગીરી કરવાની રહેશે.

આમ અમારા ઉપરોક્ત વાંધા ધ્યાને લીધા સિવાય એક્સપ્રેસ રોડ બનાવવા અંગેની પરવાનગી ન આપવા અમારી વિનંતી છે.

સત્યજી  
પ્રમોદ ક. ગાંધી ગ્રામીણ  
તા. લોખણ.

.....  
ગ. રૂ. સોહિડા





# ભારતીય રાષ્ટ્રીય રાજમાર્ગ પ્રાધિકરણ

(સડક પરિવહન ઓર રાજમાર્ગ મંત્રાલય)

**National Highways Authority of India**

(Ministry of Road Transport & Highways)

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નંબર, એનએચએઆઈ/પીઆઈઆઈ/અમદાવાદ/જી.પી.સી.બી./2018 ૩૮૩૩

તા. 13/11/2018

પ્રતિ,

જી.યુ.સી.હાણ, સંરંધંચશ્રી,

ભોલાદ ગ્રામ પંચાયત,

ગામ- ભોલાદ,

તા. ધોળકા, જી-અમદાવાદ.

વિષય- અમદાવાદ જિલ્લામાં તા. 13/11/2018 ના રોજ લોક સુનાવણીમાં સંરંધંચશ્રી ભોલાદ તા. ધોળકા ગ્રામ પંચાયતના આવેદન પરની મુદ્દા પ્રમાણે વિગતવાર જવાબ

| ક્રમ નં. | અરજદારનું નામ તથા સરનામું  | જવાબ  |
|----------|--|---|
| 1        | જી.યુ.સી.હાણ, સંરંધંચશ્રી,<br>ભોલાદ ગ્રામ પંચાયત,<br>ગામ- ભોલાદ,<br>તા. ધોળકા, જી-અમદાવાદ. | સરકારી નિયમ અનુસાર એક્ટોને સહાયરૂપ વળતર મળશે તથા જે પણ ઝાડીઓ એક્સપ્રેસ વે પર ચાલશે તે સી.વી.સી.બી. ના નિયમાનુસાર ચાલશે. પ્રદુષણ નિયંત્રણ માટે એક્સપ્રેસ હઈવેની બન્ને બાજુ વૃક્ષારોપણ કરવામાં આવશે.  |
| 2        |  | અમદાવાદ ધોલેરા એક્સપ્રેસ વે ગામથી લગભગ 200 થી 250 મીટર દુરથી પસાર થાય છે, બાયોલોજીકલ "નોઈઝ બેરીયર" (biological plantation etc) જેથી ધ્વનિ પ્રદુષણ બહીષ્કાર રહેશે. ઓથોરીટી દ્વારા રહેણાંક વિસ્તારમાં "નોઈઝ બેરીયર" ની વ્યવસ્થા કરવામાં આવશે. એક્સપ્રેસ વેની બન્ને બાજુ વૃક્ષારોપણ કરવાથી ફવા પ્રદુષણ ઓછું થશે. |
| 3        |  | એક્સપ્રેસ વેની બન્ને બાજુ ઈઆઈઓ રીપોર્ટ મુજબ "નોઈઝ બેરીયર" લગાવાથી ધ્વનિ પ્રદુષણથી રાહત મળશે.  |
| 4        |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે. જેથી કોઈપણ પાણીના વહેણને કે જળસ્રોતને નુકશાન ન થાય તે માટે  |

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|   |  |  |
|---|--|--|
|   |  | પુરતા પ્રમાણેમાં કલવટ અને સીડી સ્ટેક્ચર બનાવવાની જોગવાઈ છે, જે ભુગર્ભ જળશાસ્ત્રીના રીપોર્ટ પ્રમાણે છે.   |
| 5 |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે, જેથી પ્રશુ-પ્રાણીઓને અવર-જવરમાં કોઈ પણ તકલીફના પકે તે ધ્યાનમાં રાખીને અંડરપાસની (CUP) અને શુષ્ક ઋતુમાં કલવટ ની સુવિધા ઉપલબ્ધ કરાવવામાં આવશે.   |
| 6 |  | પ્રશ્ન ફરીથી રીપીટ થાય છે.   |
| 7 |  | પ્રસ્તાવિત પરિયોજનામાં કુલ 66000 વૃક્ષોની વાવણી કરવામાં આવશે, એનએચએઆઈ વૃક્ષો ક્રૂપવાની થતી કિંમત ફોરેસ્ટ ડિપાર્ટમેન્ટ ને કેમ્પા ફંડ ના નિયમાનુસાર આપશે, અને કેમ્પા ફંડમાંથી ખુલ્લી જગ્યા, બંજર જમીન અને સરકારી જમીન પર વૃક્ષો લગાવામાં આવશે. |
| 8 |  | પ્રસ્તાવિત પરિયોજનામાં બાંધકામ ના સમયમાં પાણીના ટેકર દ્વારા છંટકાવ કરવામાં આવશે, જેથી માટીના કણ વાયુમાં ન ભળે અને જનજીવનને નુકશાન ન થાય. તેની પુરી તકેદારી રાખવામાં આવશે, જે પર્્યાવરણ પ્રેબંધન યોજનાની ફંડમાં સામેલ છે.                     |

આપનો આભારી,

આપનો વિશ્વાસુ,

**મુ. વ. મિ.**

મહાપ્રબંધક (ટેકનીકલ) અને

પ્રોજેક્ટ ડાયરેક્ટર, એનએચએઆઈ

પીઆઈટી અમદાવાદ

નકલ સવિનય રવાના:-

- 1) ચીફ જનરલ મેનેજર તથા રીજીયોનલ ઓફિસરશ્રી, નેશનલ હાઇવે ઓથોરીટી ઓફ ઇન્ડિયા, ગાંધીનગર તરફ જાણ સારું.

અરજદાર:-

સરંઢી પંચાયત

મોજેગામ- સરંઢી,

તા. ધોળકા, જી. અમદાવાદ

તા. ૦૭/૧૧/૨૦૧૮

(મો)

પ્રતિશ્રી,  
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ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ,  
પર્યાવરણ ભવન, સેક્ટર-૧૦/એ,  
ગાંધીનગર-૩૮૨૯૧૦

વિષય: તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચાર દૈનિકમાં પાના નં. ૧૧  
ઉપર આવેલ જાહેર સુચનાના અનુસંધાને વાંધા અરજી.

મે, સાહેબશ્રી,

આપના દ્વારા તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચારના પાના નં. ૧૧ ઉપર અમદાવાદ-ધોલેરા એક્સપ્રેસ રોડ (૧૧૦) કી.મી. ના બાંધકામના અનુસંધાને પર્યાવરણીય લોક સુનાવણી રાખવામાં આવેલ છે. તેના અનુસંધાને અમો અમારા ગામના પ્રતિનિધી તરીકે અમારી રજુઆત કરીએ છીએ જે ધ્યાને લીધા સિવાય રોડ બનાવવાની કામગીરી કરવામાં આવશે તો અમારા ગામના પ્રજાજન, પશુઓ, માછીઓ અને પક્ષીઓને ઘણું વધુ નુકશાન થાય તેમ છે. તેમજ તેના કારણે ઘણું મોટું પ્રદુષણ, કુદરતી આકૃત આવે તેવી પુરેપુરી સંભાવના હોવાથી પ્રદુષણ નિયંત્રણના કાયદા ધ્યાને લીધા સિવાય રોડ બનાવવા અંગે અમારા ગ્રામજનોનો સખ વાંધો છે.

(૧) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવેમાં જે જમીનો કપાત થાય છે તે જમીનો ખેતીની આવેલી છે અને વર્ષમાં બે અથવા તેથી વધુ પાક થતા હોવાથી હંમેશા જમીન લીલી રહે છે તેમજ તે જમીનના ઊભા પાકને કારણે આજુબાજુ હવાનું પ્રદુષણ ખુબ જ નીચું છે અને ચોખ્ખી અને ઓક્સીજન વાળી હવા હંમેશા મળી રહે છે.

(૨) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવે બનાવવામાં આવે જેથી હવાના સ્તરને ઘણું મોટું નુકશાન થાય તેમ છે હાલમાં એકમણ નેશનલ કે રાષ્ટ્રીય હાઈવે ન હોવાથી રાહનોની

અવરજવર ઘણી જ ઓછી છે જેના કારણે હવાના ઠારમાં હંમેશા ઓખી અને ઓકસીજ વાળી રહે છે. તેમજ ધ્વની પ્રદુષણ પણ નહીવત પ્રમાણમાં છે અને હાલમાં જે રોડ પસાર થાય છે તે ગામને અડીને આવતો હોવાથી હંમેશા વાહનોના અવાજ રહેશે જેના કારણે ગામની નજીક રાત્રીના સમયે ઊંઘના અવાજ તેમજ ગાડીઓના અવાજ આવવાથી રાત્રીની ઉંઘ બગડે તેવા સંજોગો ઊભા થઈ શકે તેમ છે રોડનું એલાઈમેન્ટ ગામથી દુર રાખવું હિતાવહ છે.

(૩) અમદાવાદ થી ધોલેરા હાઈવે ગામની નજીક બનતા અત્યાર સુધી ગામના પશુ, પ્રાણી, પક્ષીઓ નિર્ભય રીતે રાત્રી પસાર કરતા હતા અને તે રીતે હંમેશા ટેવાયેલ છે અને હવે પાણી રોડ બનાવવામાં આવે તો "NO HORN ZONE" બનાવવો પડે તેમ તે રીતે કરવામાં નહીં આવે તો શરૂઆતના સમયમાં પશુ, પક્ષીઓ પ્રાણીઓની રાત્રી દરમ્યાન ઘણી મુશ્કેલી ઊભી થાય તેમજ નિર્ભય રીતે જીવી શકે તેમ નથી જેથી રોડ ઉપર ધ્વની નિયંત્રણ ખુજબ જરૂરી છે. તેમજ દુધાળા પશુઓને યોગ્ય પ્રમાણમાં આરામ ન મળે તો સમય જતાં દુધાળા પશુઓથી દુધ ખુજબ ઓછું આવે અને દુધ ઉત્પાદન વટે તેમ છે.

(૪) અમારા ગામથી નજીકથી એક્સપ્રેસ રોડ પસાર થાય છે અને ગામની તેમજ ભીંગોલીક પરિસ્થિતિ ખુબજ વરસાદનું પાણી હંમેશા નળ સરોવર બાજુથી તેમજ ઉત્તર દિશાથી બોર-વટામણ બાજુ જાય છે અને એક્સપ્રેસ હાઈવે મુર્વ-પશ્ચિમ બનવાનો છે જેથી ચારે દિશાઓ અલગ હોવાથી પાણીનો વહેણ અટકી પડે તેમ છે જો પાણીના વહેણ અટકી જાય તો પાણીનો ભરાવો થતા લાંબા ગાળે રોગચાળો ફાટી નિકળે તેમજ ગામમાં હંમેશા પાણી ભરાયેલ અને દક્ષિણદીશાની જમીન પાણી વગરની રહે બિનઉપજાઉ થઈ જાય જેના કારણે હવા પ્રદુષણ વધુ પડતું ઉભુ થાય તેમજ ખેતી નષ્ટ પામે તેમ છે. જેથી ધીમે ધીમે ગામજનો બેઠાર થવા માટે જેથી પાણીના નળ-પાણી-ચાઈન તથા પાણી નિકાલ જો યોગ્ય કરવામાં ન આવે તો પાણી વાયુનું પ્રદુષણ વધી જાય આપના દ્વારા જે આયોજન કરવામાં આવેલ છે તેમાં અને રોડ એલાઈમેન્ટમાં ઘણા બધા તથાવો પક્ષ આવે છે. જેના કારણે પાણીનો ભરાવો વિકાસની વ્યવસ્થા ક્યા પ્રકારે કરેલ છે કે કેમ? તેના નક્કશા અંગે ગામમાં આપવામાં ન આવે ત્યાં સુધી અમારા ગામમાંથી પસાર થતો રોડ બનાવવો હિતાવહ નથી અને તે અંગે ગામનો ખુબજ વાંધો છે.

(૫) અમદાવાદ ધોલેરા હાઈવે બનતા ટ્રાફિકની ઘણી સમસ્યા રહેશે ગામની સીમમાં નીલગાય, સુંઠ, ગાય, ભેંસો, કરજી, દોપડા, સસલા, વેટા, બકરા તેવા બીજા પ્રાણીઓ

મુળજ પ્રમાણમાં છે. જે હમેશા ગામની સીમામાંથી અવર જવર દિવસ તેમજ રાત્રે કરતા ઘોય અને એક્સપ્રેસ હાઈવે ઉપરથી જો તે પસાર થયા અને ગામના રસ્તા રાખવામાં ન આવે તો એક્સપ્રેસનો ભય મુળજ વધી જાય તેમ છે. જેથી એક્સપ્રેસ નિવારણ અવસ્થા ગોકવલી જોડે અને દર પંદરથી વીસ કિલોમીટરની જગ્યાએ હેમરજન્ટની પ્લીકલ તથા સારવાર કેન્દ્ર રાખવા જોઈએ જેથી ટ્રાફિક સમસ્યા ઉભી ન થાય તેમજ એક્સપ્રેસ સમસ્યા ઉભી ન થાય તેમજ એક્સપ્રેસ થાય તો તાત્કાલીક સારવાર મળી રહે તેમ ન કરવામાં આવે તો વખતો વખત ગ્રામજનોને આવી અવસ્થા કરવા ઉભા પડે રહેતું પડે અથવા ભયનો માહોલ ઉભો થાય તેમ છે એક્સપ્રેસ હાઈવેની નીચે થઈને પસાર થાય તેવી વ્યવસ્થા રાખવા વિનંતી જેના કારણે વાયુ પ્રદુષણ પાનિ પ્રદુષણ ઓછું થાય. અને આવા સમયે જો સર્વિસ રોડ ન હોય તો રોડની આજુબાજુના વિસ્તારમાં જવા-આવવા માટે પક્ષી બધી મુશ્કેલી ઉભી થાય તેમ છે જેથી સર્વિસ રોડ પણ આપવો હિતાવહ અને જરૂરી છે અને જો સર્વિસ રોડ આપવામાં ન આવે તો એક્સપ્રેસ હાઈવેનું આયોજન કરવામાં અમારો સખત વાંધો છે તેનું અગાઉ પણ વાંધામાં એકવીડેયોન ઓફીસરને જણાવેલ છે જેથી સર્વિસ રોડ અમારી માથમીકતા છે તે ધ્યાને લીધા સિવાય રોડ બનાવવા માટે અમારો વાંધો આપીએ છીએ.

(૧) એક્સપ્રેસ રોડની ઉપર આવતા ગામની નજીક તથા ગામમાં વાયુ પ્રદુષણ તથા પાનિ પ્રદુષણ ના થાય તેવી યાત્રીક વસ્તુઓ મુકવી જેથી તેવા તમામ પ્રકારના પ્રદુષણ ઉપર નિયંત્રણ કરી દુર કરે અને ગામની અંદર હોર્ન તથા ગાડીઓના અવાજ મુળજ ઓછા રહે.

(૨) ગામની ખેતીની બહી મોટી જમીન જતી હોવાથી પણ મોટા ઝાડ તથા ઝાંખા ખેતી નષ્ટ થવાને કારણે કુદરતી વાયુની સ્તર નીચું જાય તેમ હોવાથી રોડની બંને બાજુ જે ત્રણ જણની હાઈવે કરવામાં આવશે તેના મુખ્ય ચેલીમડા, પીપળા, વડા, આંબલી, વરખડે તથા જે વૃક્ષો અમારા ગામની બાજુથી જે એક્સપ્રેસ રોડ પસાર થાય છે તેની આજુબાજુમાં જે ઝાડ ઉછેરવાના છે તે પ્રથમથી મોટી સાઈઝના હોવા જોઈએ અને ઉછેર કરવાની જવાબદારી એક્સપ્રેસ હાઈવે ઓધીરીટીની રહેશે જે ઝાડ મોટા ના થાય તો ગ્રામજનો તથા ગામને થતું નુકશાન એક્સપ્રેસ હાઈવે ભરપાઈ કરી આપશે તેવા પ્રકારનો લેખીત બોન્ડ એક્સપ્રેસ હાઈવે તરફથી અમારા ગામને આપવાનો રહેશે તેમજ ગામની બીજી પડતર જમીનમાં પણ વૃક્ષ ઉછેર કરવા માટે એક્સપ્રેસ હાઈવે એ અમોને ખાતરી આપવાની રહેશે. જેથી વાયુ પ્રદુષણ ઓછું થાય અને કુદરતી પર્યાવરણ જળવાઈ રહે.

(૮) એક્સપ્રેસ હાઈવેનું નિર્માણ જ્યારે ચાલુ કરવામાં આવે ત્યારે માટી પુરણ કરવામાં આવે તે સમયે માટીના કણો હવામાં મુળજ ફેલાઈ જાય તેમ છે અને જેથી માટી પુરણ વખતે માટી

(૪)

ઉઠે નહીં તેવી રીતે તેમજ માટી પુરાણથી આજુબાજુના ખેતરોને માટીથી નુકશાન ન થાય તે રીતે રોડ કોન્ટ્રાક્ટરની ખાત્રી લેવાની રહેશે. તેમજ તેવી ખાત્રી અમો ગ્રામ પંચાયતમાં જમા કરાવવાની રહેશે. અને જો કોઈપણ ખેતરને માટીની રજ કે રોડ કામના કારણે નુકશાન થશે તો તે તમામ જવાબદાર એક્સપ્રેસ હાઈવે ઓર્થોરીટીની રહેશે અને નુકશાન ના થાય તેવી રીતે કામગીરી કરવાની રહેશે.

આમ અમારા ઉપરોક્ત વાંધા ધ્યાને લીધા સિવાય એક્સપ્રેસ રોડ બનાવવા અંગેની પરવાનગી ન આપવા અમારી વિનંતી છે.

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ગ્રામ પંચાયત સરકાર  
તા. હોળકા, જિ. અમદાવાદ  
ભરવાડ કનુભાઈ એમ.





# ભારતીય રાષ્ટ્રીય રાજમાર્ગ પ્રાધિકરણ

(સડક પરિવહન ઓર રાજમાર્ગ મંત્રાલય)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

પ્લોટ નં. 3A & 3B, 2nd Floor, Amul Building, Near Dena Bank, Vejalpur Road, Jivraj Park, Ahmedabad - 380 051

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નંબર: રોનએસએચ/પીઆઈથુ/અમદાવાદ/જી.પી.સી.બી./2018 3036

તા.13/11/2018

પ્રતિ,

કે.એમ.ભરવાડ, સંરખંચશ્રી,

સંરાધી ગ્રામ પંચાયત,

ગામ- સંરાધી

તા.ધોળકા, જી-અમદાવાદ,

વિષય- અમદાવાદ જિલ્લામાં તા.13/11/2018 ના રોજ લોક સુનાવણીમાં સરખંચશ્રી સંરાધી તા.ધોળકા ગ્રામ પંચાયતના આવેદન પત્રનો મુદ્દા પ્રમાણે વિગતવાર જવાબ

| ક્રમ નં. | અરજદારનું નામ તથા સરનામું  | જવાબ  |
|----------|--|---|
| 1        | કે.એમ.ભરવાડ, સંરખંચશ્રી,<br>સંરાધી ગ્રામ પંચાયત,<br>ગામ- સંરાધી<br>તા.ધોળકા, જી-અમદાવાદ. | સરકારી નિયમ અનુસાર ખેડૂતોને સહાયરૂપ વળતર મળશે તથા જે પણ ગાડીઓ એક્સપ્રેસ વે પર ચાલશે તે સી.પી.સી.બી. ના નિયમાનુસાર ચાલશે, પ્રદુષણ નિયંત્રણ માટે એક્સપ્રેસ ડ્રાઇવેલી બંને બાજુ વૃક્ષારોપણ કરવામાં આવશે.   |
| 2        |  | અમદાવાદ મોબેસ એક્સપ્રેસ વે ગામથી લગભગ 200 થી 250 મીટર દુરથી પસાર થાય છે, બાયોલોજીકલ "નોઈઝ બેરીયર" (such as tree plantation etc) જેથી ધ્વનિ પ્રદુષણ નહીવત રહેશે. ઓશોરીટી દ્વારા રહેઠાણ વિસ્તારમાં "નોઈઝ બેરીયર" ની વ્યવસ્થા કરવામાં આવશે. એક્સપ્રેસ વેની બંને બાજુ વૃક્ષારોપણ કરવાથી હવા પ્રદુષણ ઓછું થશે. |
| 3        |  | એક્સપ્રેસ વેની બંને બાજુ ઈમારતો રીપેટ મુજબ "નોઈઝ બેરીયર" લગાવાથી ધ્વનિ પ્રદુષણથી રાફત મળશે.   |
| 4        |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઇન એવી રીતે બનાવવામાં આવી છે, જેથી કોઈપણ પાણીના વહેણને કે જગત્સોતને નુકશાન ન થાય તે માટે  |

મુદ્રા

|   |  |   |
|---|--|---|
|   |  | પુરતા પ્રમાણેમાં કલવઠે અને સીડી સ્ટ્રેક્ચર બનાવવાની જોગવાઈ છે. જે ભુગર્ભ જળશાસ્ત્રીના રીપોર્ટ પ્રમાણે છે.   |
| 5 |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે, જેથી પશુ-પ્રાણીઓને અવર-જવરમાં કોઈ પણ તકલીફના પડે તે ધ્યાનમાં રાખીને અંડરપાસની (CUP) અને શુષ્ક ઋતુમાં કલવઠે ની સુવિધા ઉપલબ્ધ કરાવવામાં આવશે.                                       |
| 6 |  | પૂત્ર ફરીથી રીપીટ થાય છે.   |
| 7 |  | પ્રસ્તાવિત પરિયોજનામાં કુલ 66000 વૃક્ષોની વાવણી કરવામાં આવશે. એનએચએઆઈ વૃક્ષો કાપવાની થતી કિંમત ફોરેસ્ટ ડિપાર્ટમેન્ટ ને કેમ્પા ફંડ ના નિયમાનુસાર આપશે. અને કેમ્પા ફંડમાંથી ખુલ્લી જમીન, બંડર જમીન અને સરકારી જમીન પર વૃક્ષો લગાવામાં આવશે. |
| 8 |  | પ્રસ્તાવિત પરિયોજનામાં બાંધકામ ના સમયમાં પાણીના ટેંકર દ્વારા છંટકાવ કરવામાં આવશે, જેથી માટીના કણ વાયુમાં ન ભળે અને જનજીવનને નુકશાન ન થાય. તેની પુરી તકેદારી રાખવામાં આવશે. જે પર્યાવરણ પ્રબંધન યોજનાની ફંડમાં સામેલ છે.                   |

આપનો આભારી,

આપનો વિચારુ,

**મુખ્ય મંત્રી**

મહાપ્રબંધક (ટેકનીકલ) અને

પ્રોજેક્ટ ડાયરેક્ટર, એનએચએઆઈ

પીઆઈયુ અમદાવાદ

નકલ સવિનય રવાના:-

- 1) ચીફ જનરલ મેનેજર તથા રીજીયોનલ ઓફિસરશ્રી, નેશનલ હાઇવે ઓથોરીટી ઓફ ઇન્ડિયા.  
ગાંધીનગર તરફ જાણ સારૂ.

અરજદાર:-

જલાલપુર ગોધનેશ્વર ગ્રામ પંચાયત  
મોજેગામ-જલાલપુર ગોધનેશ્વર,  
તા. ધોળકા, જી. અમદાવાદ  
તા. ૦૭/૧૧/૨૦૧૮  
(મો)

પ્રતિશ્રી,  
સચિવશ્રી/સભ્ય સચિવશ્રી,  
ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ,  
પર્યાવરણ ભવન, સેક્ટર-૧૦/એ,  
ગાંધીનગર-૩૮૨૯૧૦

વિષય: તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચાર દૈનિકમાં પાના નં. ૧૧  
ઉપર આવેલ જાહેર સુચનાના અનુસંધાને વાંધા અરજી.

મે. સાહેબશ્રી,

આપના દ્વારા તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચારના પાના નં. ૧૧ ઉપર અમદાવાદ-ધોળકા એક્સપ્રેસ રોડ (૧૧૦) કી.મી. ના બાંધકામના અનુસંધાને પર્યાવરણીય લોક સુનાવણી રાખવામાં આવેલ છે. તેના અનુસંધાને અમો અમારા ગામના પ્રતિનિધી તરીકે અમારી રજૂઆત કરીએ છીએ જે ધ્યાને લીધા સિવાય રોડ બનાવવાની કામગીરી કરવામાં આવશે તો અમારા ગામના પ્રજાજન, પશુઓ, પ્રાણીઓ અને પક્ષીઓને ઘણું વધુ નુકશાન થાય તેમ છે. તેમજ તેના કારણે ઘણું મોટું પ્રદુષણ, કુદરતી આકત આવે તેવી પુરેપુરી સંભાવના હોવાથી પ્રદુષણ નિયંત્રણના કાયદા ધ્યાને લીધા સિવાય રોડ બનાવવા અંગે અમારા ગ્રામજનોનો સખ વાંધો છે.

(૧) અમદાવાદથી ધોળકા એક્સપ્રેસ હાઈવેમાં જે જમીનો કપાત થાય છે તે જમીનો ખેતીની આવેલી છે અને વર્ષમાં બે અથવા તેથી વધુ પાક થતા હોવાથી હંમેશા જમીન હીલી રહે છે તેમજ તે જમીનના ઉભા પાકને કારણે આજુબાજુ હવાનું પ્રદુષણ ખુબ જ નીચું છે અને ચોખ્ખી અને ઓક્સીજન વાળી હવા હંમેશા મળી રહે છે.

(૨) અમદાવાદથી ધોળકા એક્સપ્રેસ હાઈવે બનાવવામાં આવે જેથી હવાના સ્તરને ઘણું મોટું નુકશાન જાય તેમ છે હાલમાં એકપક્ષ નેશનલ કે રાષ્ટ્રીય હાઈવે ન હોવાથી વાહનોની

અવરજવર ઘણી જ ઓછી છે જેના કારણે હવાના સ્તરમાં હંમેશા ચોખ્ખી અને ઓકસીજન વાળી રહે છે. તેમજ ખેતી પ્રદુષણ પણ નહીંવત પ્રમાણમાં છે અને હાલમાં જે રોડ પસાર થાય છે તે ગામને અડીને આવતો હોવાથી હંમેશા વાહનોના અવાજ રહેશે જેના કારણે ગામની નજીક રાત્રીના સમયે હોર્નના અવાજ તેમજ ગાડીઓના અવાજ આવવાથી રાત્રીની ઉંઘ બગડે તેવા સંજોગો ઊભા થઈ શકે તેમ છે રોડનું એલાઈમેન્ટ ગામથી દુર રાખવું હિતાવહ છે.

(૩) અમદાવાદ થી પોલેરા હાઈવે ગામની નજીક બનતા અત્યાર સુધી ગામના પશુ, માણી, પક્ષીઓ નિર્ભય રીતે રાત્રી પસાર કરતા હતા અને તે રીતે હંમેશા ટેવાયેલ છે અને હવે પછી રોડ બનાવવામાં આવે તો "NO HORN ZONE" બનાવવો પડે તો તે રીતે કરવામાં નહીં આવે તો શરૂઆતના સમયમાં પશુ, પક્ષીઓ માણીઓની રાત્રી દરમ્યાન ઘણી મુશ્કેલી ઊભી થાય તેમજ નિર્ભય રીતે જીવી શકે તેમ નથી જેથી રોડ ઉપર ખેતી નિયંત્રણ ખુજબ જરૂરી છે. તેમજ દુધાળા પશુઓને યોગ્ય પ્રમાણમાં આરામ ન મળે તો સમય જતા દુધાળા પશુઓથી દુધ ખુજબ ઓછું આવે અને દુધ ઉત્પાદન ઘટે તેમ છે.

(૪) અમારા ગામથી નજીકથી એકસપ્રેસ રોડ પસાર થાય છે અને ગામની તેમજ ભોળાંલીક પરિસ્થિતી ખુબજ વરસાદનું પાણી હંમેશા નળ સરોવર બાજુથી તેમજ ઉત્તર દિશાથી ભોરૂ-વટામણ બાજુ જાય છે અને એકસપ્રેસ હાઈવે પુર્વ-પાશ્ચિમ બનવાનો છે જેથી ચારે દિશાઓ અલગ સોવાથી પાણીનો વહેણ અટકી પડે તેમ છે જો પાણીના વહેણ અટકી જાય તો પાણીનો ભરાવો થતા લાંબા ગાળે રોગચાળો ફાટી નિકળે તેમજ ગામમાં હંમેશા પાણી ભરાયેલ અને દક્ષિણદીશાની જમીન પાણી વગરની રહે બિનઉપજાઉ થઈ જાય જેના કારણે હવા પ્રદુષણ વધુ પડતું ઊભું થાય તેમજ ખેતી નષ્ટ પામે તેમ છે. જેથી થીમે થીમે ગામજનો ભેંકાર નવા માંડે જેથી પાણીના નળ-પાણી-લાઈન તથા પાણી નિકાલ જો યોગ્ય કરવામાં ન આવે તો પાણી વાપુનું પ્રદુષણ વધી જાય આપના દ્વારા જે આયોજન કરવામાં આવેલ છે તેમાં અને રોડ એલાઈમેન્ટમાં ઘણા બધા તથાવો પણ આવે છે. જેના કારણે પાણીનો ભરાવો નિકાસની બવસ્થા ક્યા પ્રકારે કરેલ છે કે કેમ? તેના નક્કશા અગો ગામમાં આપવામાં ન આવે ત્યાં સુધી અમારા ગામમાંથી પસાર થતો રોડ બનાવવો હિતાવહ નથી અને તે અંગે ગામનો ખુબજ વાંચો છે.

(૫) અમદાવાદ પોલેરા હાઈવે બનતા ટ્રાફીકની ઘણી સમસ્યા રહેશે ગામની સીમમાં નીલગાય, ભુઝ, ગામ, ભેંસાં, હરણ, હાંપણ, સસલા, ઘેટા, બકરા તેવા બીજા પાણીઓ

ખુબજ પ્રમાણમાં છે. જે હંમેશા ગામની સીમામાંથી અવર જવર દિવસ તેમજ રાત્રે કરતા હાંથ અને એક્સપ્રેસ હાઈવે ઉપરથી જો તે પસાર થયા અને ગામના રસ્તા રાખવામાં ન આવે તો અક્સ્માતની ભય ખુબજ વધી જાય તેમ છે. જેથી અક્સ્માત નિવારણ વ્યવસ્થા ગોઠવવી જોઈએ અને દર પદરથી વીસ કિલોમીટરની જગ્યાએ ઈમરજન્સી વીકલ તથા સારવાર કેન્દ્ર રાખવા જોઈએ જેથી ટ્રાફિક સમસ્યા ઊભી ન થાય તેમજ અક્સ્માત સમસ્યા ઊભી ન થાય તેમજ અક્સ્માત થાય તો તાત્કાલીક સારવાર મળી રહે તેમ ન કરવામાં આવે તો વખતો વખત મામજનોને આવી વ્યવસ્થા કરવા ઊભા પડે રહેતું પડે અથવા ભયની માહોલ ઊભો થાય તેમ છે એક્સપ્રેસ હાઈવેની તીર્થે થઈને પસાર થાય તેવી વ્યવસ્થા રાખવા વિનંતી જેના કારણે વાયુ પ્રદુષણ ધ્વનિ પ્રદુષણ ઓછું થાય. અને આવા સમયે જો સર્વિસ રોડ ન મોઢ તો રોડની આજુબાજુના વિસ્તારમાં જવા-આવવા માટે ઘણી જમીન મુશ્કેલી ઊભી થાય તેમ છે જેથી સર્વિસ રોડ પણ આપવો હિતાવહ અને જરૂરી છે અને જો સર્વિસ રોડ આપવામાં ન આવે તો એક્સપ્રેસ હાઈવેનું આયોજન કરવામાં અમારી સખત રાંધો છે તેવું અગાઉ પણ વાંધામાં એકવીઝેશન ઓફીસરને જણાવેલ છે જેથી સર્વિસ રોડ અમારી માથમીકતા છે તે ખ્યાને લીધા સિવાય રોડ બનાવવા માટે અમારો વાધો આપીએ છીએ.

(૬) એક્સપ્રેસ રોડની ઉપર આવતા ગામની નજીક તથા ગામમાં વાયુ પ્રદુષણ તથા ધ્વનિ પ્રદુષણ ના થાય તેવી યાંત્રીક વસ્તુઓ મુકવી જેથી તેવા તમામ પ્રકારના પ્રદુષણ ઉપર નિયંત્રણ કરી દુર કરે અને ગામની અંદર હોર્ન તથા ગાડીઓના અવાજ ખુબજ ઓછા રહે.

(૭) ગામની બેતીની ઘણી મોટી જમીન જાતી હોવાથી ઘણા મોટા ઝાડ તથા કાપમાં ખેતી નષ્ટ થવાને કારણે કુદરતી વાયુની સ્તર નીચું જાય તેમ હોવાથી રોડની બંને બાજુ જે ત્રણ જણની લાઈની કરવામાં આવશે તેમાં મુખ્યત્વે લીમડા, પીપળા, વડ, આંબલી, વરખડો તથા જે વૃક્ષો અમારા ગામની બાજુથી જે એક્સપ્રેસ રોડ પસાર થાય છે તેની આજુબાજુમાં જે ઝાડ ઉછેરવાના છે તે માથમથી મોટી સાઈઝના હોવા જોઈએ અને ઉછેર કરવાની જવાબદારી એક્સપ્રેસ હાઈવે ઓથોરીટીની રહેશે જે ઝાડ મોટા ના થાય તો મામજનો તથા ગામને મળુ નુકસાન એક્સપ્રેસ હાઈવે ભરપાઈ કરી આપશે તેવા પ્રકારનો સંખીત બોન્ડ એક્સપ્રેસ હાઈવે તરફથી અમારા ગામને આપવાનો રહેશે તેમજ ગામની બીજી પાસર જમીનમાં પણ વૃક્ષ ઉછેર કરવા માટે એક્સપ્રેસ હાઈવે એ અમીને ખાતી આપવાની રહેશે જેથી વાયુ પ્રદુષણ ઓછું થાય અને કુદરતી પર્યાવરણ જળવાઈ રહે.

(૮) એક્સપ્રેસ હાઈવેનું નિર્માણ ક્યારે ચાલુ કરવામાં આવે ત્યારે માટી પુરાજ કરવામાં આવે તે સમયે માટીના કાણો સવામાં ખુબજ કૈલાઈ જાય તેમ છે અને જેથી માટી પુરાજ વખતે માટી

(૪)

ઉડે નહીં તેવી રીતે તેમજ માટી પુરાણથી આજુબાજુના ખેતરોને માટીથી નુકશાન ન થાય તે રીતે રોડ કોન્ટ્રાક્ટરની ખાત્રી લેવાની રહેશે. તેમજ તેવી ખાત્રી અમો ગ્રામ પંચાયતમાં જમા કરાવવાની રહેશે. અને જો કોઈપણ ખેતરને માટીની રજ કે રોડ કામના કારણે નુકશાન થશે તો તે તમામ જવાબદાર એક્સપ્રેસ હાઈવે ઓથોરિટીની રહેશે અને નુકશાન ના થાય તેવી રીતે કામગીરી કરવાની રહેશે.

આમ અમારા ઉપરોક્ત વાંધા ધ્યાને લીધા સિવાય એક્સપ્રેસ રોડ બનાવવા અંગેની પરવાનગી ન આપવા અમારી વિનંતી છે.

સરપંચશ્રી  
મુ. જવાલપુર ગો. રોડ  
જી. અમદાવાદ  
૨૧.૨.૫૨  
આમાલખર્ડ ૧૧ ૬૧ ૬૧ ના  
જેનું કા નું નીચા





# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

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તા.13/11/2018

પ્રતિ,

ભીખાભાઈ, સંરપચશ્રી,

જલાલપુર ગોધનેશ્વર ગ્રામ પંચાયત,

ગામ- જલાલપુર ગોધનેશ્વર,

તા.ધોળકા, જી-અમરાવતી.

વિષય- અમરાવતી જિલ્લામાં તા.13/11/2018 ના રોજ લીક સુનાવણીમાં સંરપચશ્રી જલાલપુર ગોધનેશ્વર તા.ધોળકા ગ્રામ પંચાયતના આવેદન પત્રનો મુદ્દા પ્રમાણે વિગતવાર જવાબ

| ક્રમ નં. | અરજદારનું નામ તથા સરનામું  | જવાબ  |
|----------|--|---|
| 1        | ભીખાભાઈ, સંરપચશ્રી,<br>જલાલપુર ગોધનેશ્વર ગ્રામ પંચાયત,<br>ગામ- જલાલપુર ગોધનેશ્વર,<br>તા.ધોળકા, જી-અમરાવતી. | સરકારી નિયમ અનુસાર બેડુતોને સગવડપૂર્ણ વજતર મળશે તથા જે પણ ગાડીઓ એક્સપ્રેસ વે પર ચાલશે તે સી.પી.સી.બી ના નિયમાનુસાર ચાલશે. પ્રકૃષ્ઠ નિયત્રણ માટે એક્સપ્રેસ ગઈવેળી બંને બાજુ વૃક્ષારોપણ કરવામાં આવશે.   |
| 2        |  | અમરાવતી પોલિસ એક્સપ્રેસ વે ગામથી લગભગ 200 થી 250 મીટર દુરથી પસાર થાય છે. બાંધોલોજીકલ "નોઈઝ બેરીયર" (noise barrier plantation) લઈ જેથી ક્વનિ પ્રકૃષ્ઠા નહીવત રહેશે. ઓથોરીટી દ્વારા રહેણાંક વિસ્તારમાં "નોઈઝ બેરીયર" ની વ્યવસ્થા કરવામાં આવશે. એક્સપ્રેસ વેની બંને બાજુ વૃક્ષારોપણ કરવાથી ક્વનિ પ્રકૃષ્ઠા ઓછું થશે. |
| 3        |  | એક્સપ્રેસ વેની બંને બાજુ ઈઆઈએ સીવોટ મુજબ "નોઈઝ બેરીયર" લગાવાથી ક્વનિ પ્રકૃષ્ઠાથી રાહત મળશે.   |
| 4        |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે. જેથી કોઈપણ પાણીના વહેણને કે જળસ્રોતને નુકશાન ન થાય તે માટે  |

કુલ ૪

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|   | પુરતા પ્રમાણેમાં કલવર્ટ અને સીડી સ્ટ્રેકચર બનાવવાની જોગવાઈ છે. જે ભુગર્ભ જળશાસ્ત્રીના રીપોર્ટ પ્રમાણે છે.   |
| 5 | પ્રસ્તાવિત પરિયોજનાની ડિઝાઇન એવી રીતે બનાવવામાં આવી છે. જેથી પશુ-પાણીઓને અવર-જવરમાં કોઈ પણ તકલીફના પડે તે ધ્યાનમાં રાખીને અંડરપાસની (CPM) અને થુષ્ક ઋતુમાં કલવર્ટ ની સુવિધા ઉપલબ્ધ કરાવવામાં આવશે.  |
| 6 | પ્રશ્ન ફરીથી રીપીટ થાય છે.  |
| 7 | પ્રસ્તાવિત પરિયોજનામાં કુલ 66000 વૃક્ષોની વાવણી કરવામાં આવશે. એનએચએઆઈ વૃક્ષો ગ્રાપવાની થતી કિંમત ફોરેસ્ટ ડિપાર્ટમેન્ટ ને કેમ્પા ફંડ ના નિયમાનુસાર આપશે અને કેમ્પા ફંડમાંથી ખુલ્લી જગ્યા, બંઝર જમીન અને સરકારી જમીન પર વૃક્ષો લગાવામાં આવશે. |
| 8 | પ્રસ્તાવિત પરિયોજનામાં બાંધકામ ના સમયમાં પાણીના ટેકર દ્વારા છંટકાવ કરવામાં આવશે. જેથી માટીના કણ વાયુમાં ન ભળે અને જનજીવનને નુકશાન ન થાય તેની પુરી તકેદારી રાખવામાં આવશે. જે પર્યાવરણ પૂર્વબંધન યોજનાની ફંડમાં સામેલ છે.                     |

આપનો આભારી,

આપનો વિશ્વાસુ,

**મુમત જ. સિંઘ**

મહાપ્રબંધક (ટેકનીકલ) અને

પ્રોજેક્ટ ડાયરેક્ટર, એનએચએઆઈ

પીઆઈયુ અમદાવાદ

નકલ સવિનય રવાના:-

- 1) ચીફ જનરલ મેનેજર તથા રીજીયોનલ ઓફિસરશ્રી, નેશનલ હાઇવે ઓથોરીટી ઓફ ઇન્ડિયા, ગાંધીનગર તરફ જાણ સારું.

અરજદાર:-

લાણા ગ્રામ પંચાયત

મોજેગામ- લાણા,

તા. પોળકા, જી. અમદાવાદ

તા. ૦૭/૧૧/૨૦૧૮

(મો)

પ્રતિશ્રી,  
સચિવશ્રી/સભ્ય સચિવશ્રી,  
ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ,  
પર્યાવરણ ભવન, સેક્ટર-૧૦/એ,  
ગાંધીનગર-૩૮૨૯૧૦

વિષય: તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચાર દૈનિકમાં પાના નં. ૧૧  
ઉપર આવેલ જાહેર સુચનાના અનુસંધાને વાંધા અરજી.

મે. સાહેબશ્રી,

આપના દ્વારા તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચારના પાના નં. ૧૧ ઉપર અમદાવાદ-ધોલેરા એક્સપ્રેસ રોડ (૧૧૦) કી. મી. ના બોપક્રમના અનુસંધાને પર્યાવરણીય લોક સુનાવણી સભવામાં આવેલ છે. તેના અનુસંધાને અમો અમારા ગામના પ્રતિનિધી તરીકે અમારી રજૂઆત કરીએ છીએ જે ધ્યાને લીધા સિવાય રોડ બનાવવાની કામગીરી કરવામાં આવશે તો અમારા ગામના પ્રજાજન, પશુઓ, માછલીઓ અને પક્ષીઓને ઘણું વધુ નુકશાન થાય તેમ છે. તેમજ તેના કારણે ઘણું મોટું પ્રદુષણ, કુદરતી આફત આવે તેવી પુરેપુરી સંભાવના હોવાથી પ્રદુષણ નિયંત્રણના કાયદા ધ્યાને લીધા સિવાય રોડ બનાવવા અંગે અમારા ગ્રામજનોનો સજ વાંધો છે.

(૧) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવેમાં જે જમીનો કપાત થાય છે તે જમીનો ખેતીની આવેલી છે અને વર્ષમાં બે અથવા તેથી વધુ પાક થતા હોવાથી હંમેશા જમીન લીલી રહે છે તેમજ તે જમીનના ઊભા પાકને કારણે આજુબાજુ હવાનું પ્રદુષણ ખુબ જ નીચું છે અને ચોખ્ખી અને ઓકસીજન વાળી હવા હંમેશા મળી રહે છે.

(૨) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવે બનાવવામાં આવે જેથી હવાના સ્તરને ઘણું મોટું નુકશાન જાય તેમ છે હાલમાં એકપક્ષ નેશનલ કે રાષ્ટ્રીય હાઈવે ન હોવાથી વાહનોની

તા. ૦૭/૧૧/૨૦૧૮

(૨)

અવરજવર વધી જ ઓછી છે જેના કારણે હવાના સ્તરમાં હંમેશા ચોખ્ખી અને ઓડસીજ વાળી રહે છે. તેમજ ખેતી પ્રદુષણ પણ નહીવત પ્રમાણમાં છે અને હાલમાં જે રોડ પસાર થાય છે તે ગામને અડીને આવતો હોવાથી હંમેશા વાહનોના અવાજ રહેશે જેના કારણે ગામની નજીક રાત્રીના સમયે હોર્નના અવાજ તેમજ ગાડીઓના અવાજ આવવાથી રાત્રીની ઉંઘ અગરે તેવા સંજોગો ઉભા થઈ શકે તેમ છે રોડનું એલાઈમેન્ટ ગામથી દુર રાખવું સિતાવહ છે.

(૩) અમદાવાદ થી થોડેરા દુર આવે ગામની નજીક બનતા અત્યાર સુધી ગામના પશુ, પ્રાણી, પક્ષીઓ નિર્ભય રીતે રાત્રી પસાર કરતા હતા અને તે રીતે હંમેશા ટેવાયેલ છે અને હવે પાછી રોડ બનાવવામાં આવે તો "NO HORN ZONE" બનાવવો પડે તેમ તે રીતે કરવામાં નહીં આવે તો શરૂઆતના સમયમાં પશુ, પ્રાણીઓ પ્રાણીઓની રાત્રી દરમ્યાન ધક્કા મુકેલી રીતે થાય તેમજ નિર્ભય રીતે જીવી શકે તેમ નથી જેથી રોડ ઉપર ખેતી નિયંત્રણ ખુજબ જરૂરી છે. તેમજ દુધાળા પશુઓને યોગ્ય પ્રમાણમાં આરામ ન મળે તો સમય જતા દુધાળા પશુઓથી દુધ ખુજબ ઓછું આવે અને દુધ ઉત્પાદન ઘટે તેમ છે.

(૪) અમારા ગામથી નજીકથી એક્સપ્રેસ રોડ પસાર થાય છે અને ગામની તેમજ ભીંડોલીક પરિસ્થિતી ખુબજ વરસાદનું પાણી હંમેશા નળ સરોવર બાજુથી તેમજ બિનર દિશાથી બોર-વચામજ બાજુ જાય છે અને એક્સપ્રેસ છાઈવે પુર્વ-પશ્ચિમ બનવાનો છે જેથી ચારે દિશાઓ અલગ હોવાથી પાણીનો વહેણ અટકી પડે તેમ છે જો પાણીના વહેણ અટકી જાય તો પાણીનો ભરાવો થતા લાંબા ગાળે રોગચાળો ફાટી નિકળે તેમજ ગામમાં હંમેશા પાણી ભરાયેલ અને દક્ષિણદીશાની જમીન પાણી વગરની રહે બિનઉપજીત થઈ જાય જેના કારણે હવા પ્રદુષણ વધુ પડતું ઉભું થાય તેમજ ખેતી નષ્ટ પામે તેમ છે. જેથી પીને પીને ગામજનો બેકાર થવા માંડે જેથી પાણીના નળ-પાણી-લાઈન તથા પાણી નિકાલ જો યોગ્ય કરવામાં ન આવે તો પાણી વાધુનું પ્રદુષણ વધી જાય આપના દારા જે આયોજન કરવામાં આવેલ છે તેમાં અને રોડ એલાઈમેન્ટમાં ઘણા બધા તથાવો પણ આવે છે. જેના કારણે પાણીનો ભરાવો નિકાસની અવસ્થા ક્યા પ્રકારે કરેલ છે કે કેમ? તેના નકશા અમો ગામમાં આપવામાં ન આવે ત્યાં સુધી અમારા ગામમાંથી પસાર થતો રોડ બનાવવો સિતાવહ નથી અને તે અંગે ગામનો ખુબજ વાંધો છે.

(૫) અમદાવાદ થોડેરા દુર આવે બનતા ટ્રાફિકની ઘણી સમસ્યા રહેશે ગામની સીમમાં નીલગાય, ભુઠા, ગાય, ભેંસો, હરણ, હીપડા, સસલા, ઘેટા, બકરા તેવા બીજા પ્રાણીઓ

ખુબજ મમાજાયા છે. જે હંમેશા ગામની તીમામાંથી અવર જવર દિવસ તેમજ રાત્રે કરતા હોય અને એક્સપ્રેસ હાઈવે ઉપરથી એ તે પસાર થયા અને ગામના રસ્તા રાખવામાં ન આવે તો અકસ્માતનો ભય ખુબજ વધી જાય તેમ છે. જેથી અકસ્માત નિવારણ વ્યવસ્થા ચોંટવડી જોઈએ અને દર પંદરથી વીસ કિલોમીટરની જગ્યાએ ઈંગરજન્ટરી ચીકલ તથા સારવાર કેન્દ્ર રાખવા જોઈએ જેથી ટ્રાફીક સમસ્યા ઉભી ન થાય તેમજ અકસ્માત સમસ્યા ઉભી ન થાય તેમજ અકસ્માત થાય તો તાત્કાલીક સારવાર મળી રહે તેમ ન કરવામાં આવે તો વખતો વખત ગ્રામજનોને આવી વ્યવસ્થા કરવા ઉભા પડે રહેવું પડે અથવા ભયનો માલોલ ઉભો થાય તેમ છે એક્સપ્રેસ હાઈવેની નીચે જઈને પસાર થાય તેવી વ્યવસ્થા રાખવા વિનંતી જેના કારણે વાયુ પ્રદુષણ ધ્વનિ પ્રદુષણ ઓછું થાય. અને આવા સમયે જો સર્વિસ રોડ ન હોય તો રોડની આજુબાજુના વિસ્તારમાં જવા-આવવા માટે ઘણી બધી મુશ્કેલી ઉભી થાય તેમ છે જેથી સર્વિસ રોડ પણ આપવો હિતાવહ અને જરૂરી છે અને જો સર્વિસ રોડ આપવામાં ન આવે તો એક્સપ્રેસ હાઈવેનું આયોજન કરવામાં અમારો સખત વાંધો છે તેવું અગાઉ પણ માથામાં એકવીએશન ઓફીસરને જણાવેલ છે જેથી સર્વિસ રોડ અમારી પ્રાથમીકતા છે તે બાને લીધા મિયાન રોડ બનાવવા માટે અમારો વાંધો આપીએ છીએ.

(૬) એક્સપ્રેસ રોડની ઉપર આવતા ગામની નજીક તથા ગામમાં વાયુ પ્રદુષણ તથા ધ્વનિ પ્રદુષણ ના થાય તેવી પાત્રીક વસ્તુઓ મુકવી જેથી તેવા તમામ પ્રકારના પ્રદુષણ ઉપર નિયંત્રણ કરી દુર કરે અને ગામની અંદર હોર્ન તથા માડીઓના અવાજ ખુબજ ઓછા રહે.

(૭) ગામની ખેતીની ઘણી મોટી જમીન જતી હોવાથી ઘણા મોટા ઝાડ તથા કાચમી ખેતી નષ્ટ થવાને કારણે કુદરતી વાયુની સ્તર નીચું જાય તેમ હોવાથી રોડની બંને બાજુ જે તણ જણાની હાઈવો કરવામાં આવશે તેમાં મુખ્યત્વે લીમડા, પીપળા, વડા, આંબલી, વરપડો તથા જે વૃક્ષો અમારા ગામની બાજુથી જે એક્સપ્રેસ રોડ પસાર થાય છે તેની આજુબાજુમાં જે ઝાડ ઉછેરવાના છે તે પ્રથમથી મોટી સાઈઝના હોવા જોઈએ અને ઉછેર કરવાની જવાબદારી એક્સપ્રેસ હાઈવે ઓધીરીટીની રહેશે જે ઝાડ મોટા ના થાય તો ગ્રામજનો તથા ગામને થતું નુકસાન એક્સપ્રેસ હાઈવે ભરપાઈ કરી આપશે તેવા પ્રકારનો લેખીત બોન્ડ એક્સપ્રેસ હાઈવે તરફથી અમારા ગામને આપવાનો રહેશે તેમજ ગામની બીજી પડતર જમીનમાં પણ વૃક્ષ ઉછેર કરવા માટે એક્સપ્રેસ હાઈવે એ અમોને પાત્રી આપવાની રહેશે જેથી વાયુ પ્રદુષણ ઓછું થાય અને કુદરતી પર્યાવરણ જાળવાઈ રહે.

(૮) એક્સપ્રેસ હાઈવેનું નિર્માણ જ્યારે ચાલુ કરવામાં આવે ત્યારે માટી પુરાણ કરવામાં આવે તે સમયે માટીના કણો હવામાં ખુબજ ફેલાઈ જાય તેમ છે અને જેથી માટી પુરાણ વખતે માટી

(૪)

ઉડે નહીં તેવી રીતે તેમજ માટી પુરાણથી આજુબાજુના ખેતરોને માટીથી નુકશાન ન થાય તે રીતે રોડ કોન્ટ્રાક્ટરની ખાત્રી લેવાની રહેશે. તેમજ તેવી ખાત્રી અમો આમ પંચાયતમાં જમા કરાવવાની રહેશે. અને જો કોઈપણ ખેતરને માટીની રજ કે રોડ કામના કારણે નુકશાન થશે તો તે તમામ જવાબદાર એક્સપ્રેસ હાઈવે ઓથોરિટીની રહેશે અને નુકશાન ના થાય તેવી રીતે કામગીરી કરવાની રહેશે.

આમ અમારા ઉપરોક્ત વાંધા ધ્યાને લીધા સિવાય એક્સપ્રેસ રોડ બનાવવા અંગેની પરવાનગી ન આપવા અમારી વિનંતી છે.

જે.એમ. ૧૨૫૫  
સરપંચ  
.....લાદાં ચાંદ પંચાયત.....  
તા. ધોળકા.





# ભારતીય રાષ્ટ્રીય રાજમાર્ગ પ્રાધિકરણ

(સડક પરિવહન ઓર રાજમાર્ગ મંત્રાલય)

**National Highways Authority of India**

(Ministry of Road Transport & Highways)

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તા.૧૩/૧૧/૨૦૧૮

પ્રતિ,

જે.એમ.ભરવાડ, સરપંચશ્રી,

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ગામ- લાણા,

તા.ધોળકા, જી-અમદાવાદ.

વિષય- અમદાવાદ જિલ્લામાં તા.૧૩/૧૧/૨૦૧૮ ના રોજ લોક સુનાવણીમાં સરપંચશ્રી લાણા તા.ધોળકા ગામ પંચાયતના અવિદન પત્રનો મુદ્દા પ્રમાણે વિગતવાર જણાવ

| ક્રમ નં. | અરજદારનું નામ તથા સરનામું  | જવાબ  |
|----------|--|---|
| ૧        | જે.એમ.ભરવાડ, સરપંચશ્રી,<br>લાણા ગામ પંચાયત,<br>ગામ- લાણા,<br>તા.ધોળકા, જી-અમદાવાદ. | સરકારી નિયમ અનુસાર ખેડૂતોને સહાયરૂપ વજાતર મળશે તથા જે પણ ગાડીઓ એક્સપ્રેસ વે પર ચાલશે તે સી.પી.સી.બી. ના નિયમાનુસાર ચાલશે. પ્રદુષણ નિયંત્રણ માટે એક્સપ્રેસ ફાઈવેની બન્ને બાજુ વૃક્ષરોપણ કરવામાં આવશે.  |
| ૨        |  | અમદાવાદ ધોલકા એક્સપ્રેસ વે ગામથી લગભગ ૨૦૦ થી ૨૫૦ મીટર દુરથી પસાર થાય છે બાયોલોજીકલ "નોઈઝ બેરીયર" (such as tree plantation etc) જેથી ધ્વનિ પ્રદુષણ નહીવત રહેશે. ચોથોરીટી દ્વારા રહેણાંક વિસ્તારમાં "નોઈઝ બેરીયર" ની વ્યવસ્થા કરવામાં આવશે એક્સપ્રેસ વેની બન્ને બાજુ વૃક્ષરોપણ કરવાથી હવા પ્રદુષણ ઓછું થશે. |
| ૩        |  | એક્સપ્રેસ વેની બન્ને બાજુ ઈઆઈએ સીપોર્ટ મુજબ "નોઈઝ બેરીયર" લગાવાથી ધ્વનિ પ્રદુષણથી રાહત મળશે.  |
| ૪        |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે, જેથી કોઈપણ પાણીના વહેણને કે જળસ્રોતને નુકસાન ન થાય તે માટે  |

મુખ્ય ૧.

|   |  |  |
|---|--|--|
|   |  | પુરતા પ્રમાણેમાં કલવર્ટ અને સીડી સ્ટ્રેક્ચર બનાવવાની જોગવાઈ છે. જે ભુગર્ભ જળાશયોના રીપોર્ટ પ્રમાણે છે.   |
| 5 |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે. જેથી પશુ-પાણીઓને અવર-જવરમાં કોઈ પણ તકલીફના પડે તે ધ્યાનમાં રાખીને અંડરપાસની (CUP) અને શુષ્ક ઋતુમાં કલવર્ટ ની સુવિધા ઉપલબ્ધ કરાવવામાં આવશે.   |
| 6 |  | પ્રજ ફરીથી રીપીટ થાય છે.   |
| 7 |  | પ્રસ્તાવિત પરિયોજનામાં કુલ 66000 વૃક્ષોની વાવણી કરવામાં આવશે. એનએચએઆઈ વૃક્ષો કાપવાની થતી કિંમત ફોરેસ્ટ ડિપાર્ટમેન્ટ ને કેમ્પા ફંડ ના નિયમાનુસાર આપશે. અને કેમ્પા ફંડમાંથી ખુલ્લી જગ્યા, બંજર જમીન અને સરકારી જમીન પર વૃક્ષો લગાવામાં આવશે. |
| 8 |  | પ્રસ્તાવિત પરિયોજનામાં બાંધકામ ના સમયમાં પાણીના ટેંકર દ્વારા છંટકાવ કરવામાં આવશે. જેથી માટીના કણ વાયુમાં ન ભળે અને જનજીવનને નુકશાન ન થાય. તેની પુરી તકેદારી રાખવામાં આવશે. જે પર્યાવરણ પ્રબંધન યોજનાની કંડમાં સામેલ છે.                    |

આપનો આભારી,

આપનો વિશ્વાસુ,

**મુમિન જી સિફ**

મહાપ્રબંધક (ટેકનીકલ) અને

પ્રોજેક્ટ ડાયરેક્ટર, એનએચએઆઈ

પીઆઈયુ અમદાવાદ

નકલ સવિનય રવાના:-

- 1) ચીફ જનરલ મેનેજર તથા રીજીયોનલ ઓફિસરશ્રી, નેશનલ હાઇવે ઓથોરિટી ઓફ ઇન્ડિયા, ગાંધીનગર તરફ જાણ સારૂ.

અરજદાર:-

પીપળી ગ્રામ પંચાયત

મોજેગામ- પીપળી,

તા. ધોળકા, જી. અમદાવાદ

તા. ૦૭/૧૧/૨૦૧૮

(મો)

પ્રતિશ્રી,

સચિવશ્રી/સામ્ય સચિવશ્રી,

ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ,

પર્યાવરણ ભવન, સેક્ટર-૧૦/એ,

ગાંધીનગર-૩૮૨૯૧૦

**વિષય:** તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચાર દૈનિકમાં પાના નં. ૧૧ ઉપર આવેલ જાહેર સુચનાના અનુસંધાને વાંધા અરજી.

મે. સાહેબશ્રી,

આપના દ્વારા તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચારના પાના નં. ૧૧ ઉપર અમદાવાદ-ધોલેરા એક્સપ્રેસ રોડ (૧૧૦) કી. મી. ના બાંધકામના અનુસંધાને પર્યાવરણીય લોક સુનાવણી રાખવામાં આવેલ છે, તેના અનુસંધાને અમો અમારા ગામના પ્રતિનિધી તરીકે અમારી રજુઆત કરીએ છીએ જે ધ્યાને લીધા સિવાય રોડ બનાવવાની કામગીરી કરવામાં આવશે તો અમારા ગામના પ્રજાજન, પશુઓ, માણીઓ અને પક્ષીઓને ઘણુ વધુ નુકશાન થાય તેમ છે. તેમજ તેના કારણે ઘણુ મોટું પ્રદુષણ, કુદરતી આફત આવે તેવી પુરેપુરી સંભાવના હોવાથી પ્રદુષણ નિયંત્રણના કાયદા ધ્યાને લીધા સિવાય રોડ બનાવવા અંગે અમારા ગ્રામજનોનો સખ વાંધો છે.

(૧) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવેમાં જે જમીનો કપાત થાય છે તે જમીનો ખેતીની આવેલી છે અને વર્ષમાં બે અથવા તેથી વધુ પાક થતા હોવાથી હંમેશા જમીન લીલી રહે છે તેમજ તે જમીનના ઊભા પાકને કારણે આજુબાજુ હવાનુ પ્રદુષણ ખુબ જ નીચુ છે અને ચોખ્ખી અને ઓકસીજન વાળી હવા હંમેશા મળી રહે છે.

(૨) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવે બનાવવામાં આવે જેથી હવાના સારને ઘણુ મોટું નુકશાન જાય તેમ છે હાલમાં એકપણ નેશનલ કે રાષ્ટ્રીય હાઈવે ન હોવાથી વાહનોની

અવરજવર થણી જે ઝોલી છે જેના કારણે હવાના સ્તરમાં હંમેશા ઓગ્ગી અને ઓઠમીજ વાળી રહે છે. તેમજ ધ્વની પ્રદુષણ પણ નહીવત પ્રમાણમાં છે અને હાલમાં જે રોડ પસાર થાય છે તે ગામને ઝડીને આવતો હોવાથી હંમેશા વાહનોના અવાજ રહેશે જેના કારણે ગામની નજીક રાત્રીના સમયે હોર્નના અવાજ તેમજ ગાડીઓના અવાજ આવવાથી રાત્રીની વિધિ અગો તેવા સંજોગો ઊભા થઈ શકે તેમ છે રોડનું એલાઈમેન્ટ ગામથી દુર રાખવું હિતાવહ છે.

(૩) અમદાવાદ થી પોલેરા હાઈવે ગામની નજીક બનતા અત્યાર સુધી ગામના પશુ, પ્રાણી, પક્ષીઓ નિર્ભય રીતે રાત્રી પસાર કરતા હતા અને તે રીતે હંમેશા ટેવાયેલ છે અને હવે પક્ષી રોડ બનાવવામાં આવે તો 'NO HORN ZONE' બનાવવો પડે તેમ તે રીતે કરવામાં નહી આવે તો શરૂઆતના સમયમાં પશુ, પક્ષીઓ પ્રાણીઓની રાત્રી દરમ્યાન થણી મુશ્કેલી ઊભી થાય તેમજ નિર્ભય રીતે જીવી શકે તેમ નથી જેથી રોડ ઉપર ધ્વની નિયંત્રણ ખુબ જરૂરી છે. તેમજ દુધાળા પશુઓને યોગ્ય પ્રમાણમાં આરામ ન મળે તો સમય જતા દુધાળા પશુઓથી દુધ ખુબજ ઓછુ આવે અને દુધ ઉત્પાદન ઘટે તેમ છે.

(૪) અમારા ગામથી નજીકથી એક્સપ્રેસ રોડ પસાર થાય છે અને ગામની તેમજ ભૌગોલીક પરિસ્થિતી ખુબજ વરસાદનું પાણી હંમેશા નળ સરોવર બાજુથી તેમજ ઉત્તર દિશાથી બોર-વટામણ બાજુ જાય છે અને એક્સપ્રેસ હાઈવે પુર્વ-પશ્ચિમ બનવાની છે જેથી ચારે દિશાનો અલગ હોવાથી પાણીનો વહેણ અટકી પડે તેમ છે જો પાણીના વહેણ અટકી જાય તો પાણીનો ભરાવો થતા લાંબા ગાળે રોગચાળો ફાટી નિકળે તેમજ ગામમાં હંમેશા પાણી ભરાયેલ અને દક્ષિણદિશાની જમીન પાણી વચરતી રહે બિનઉપજાઉ થઈ જાય જેના કારણે હવા પ્રદુષણ વધુ પડતું ઊંચુ થાય તેમજ ભેતી નષ્ટ પામે તેમ છે. જેથી ધીમે ધીમે ગામજનો બેકાર થવા માડે જેથી પાણીના નળ-પાણી-હાઈવે તથા પાણી નિકાલ જો યોગ્ય કરવામાં ન આવે તો પાણી વાયુનું પ્રદુષણ વધી જાય આપના દ્વારા જે આયોજન કરવામાં આવેલ છે તેમાં અને રોડ એલાઈમેન્ટમાં થણા બધા તળાવો પણ આવે છે. જેના કારણે પાણીનો ભરાવો નિકાસની વ્યવસ્થા કયા પ્રકારે કરેલ છે કે કેમ? તેના નકશા અમી ગામમાં આપવામાં ન આવે ત્યાં સુધી અમારા ગામમાંથી પસાર થતો રોડ બનાવવો હિતાવહ નથી અને તે અંગે ગામનો ખુબજ વાંધો છે.

(૫) અમદાવાદ પોલેરા હાઈવે બનતા ટ્રાફિકની થણી સમસ્યા દસેશે ગામની સીમમાં નીકળાય ખુડ, ગાય, ભેંસો, હરણ, કોપરા, સસલા, વેટ, બકરા તેવા બીજા પ્રાણીઓ

ખુબજ પ્રમાણમાં છે. જે હંમેશા ગામની સીમામાંથી અવર કવર દિવસ તેમજ રાત્રે કરતા હોય અને એક્સપ્રેસ છાઈવે ઉપરથી જો તે પસાર થયા અને ગામના રસ્તા રાખવામાં ન આવે તો અકસ્માતનો ભય ખુબજ વધી જાય તેમ છે. જેથી અકસ્માત નિવારણ વ્યવસ્થા ગોઠવવી જોઈએ અને દર પંદરથી વીસ કિલોમીટરની જગ્યાએ ઈમરજન્સી બીકલ તથા સારવાર કેન્દ્ર રાખવા જોઈએ જેથી ટ્રાફિક સમસ્યા ઊભી ન થાય તેમજ અકસ્માત સમસ્યા ઊભી ન થાય તેમજ અકસ્માત થાય તો તાત્કાલીક સારવાર મળી રહે તેમ ન કરવામાં આવે તો વખતે વખત ગ્રામજનોને આવી વ્યવસ્થા કરવા ઊભા પડે રહેવું પડે અથવા ભયનો માહોલ ઊભો થાય તેમ છે એક્સપ્રેસ છાઈવેની નીચે થઈને પસાર થાય તેવી વ્યવસ્થા રાખવા વિનંતી જેના કારણે વાયુ પ્રદુષણ ખવિ પ્રદુષણ ઓછું થાય. અને આવા સમયે જો સર્વિસ રોડ ન હોય તો રોડની આજુબાજુના વિસ્તારમાં જવા-આવવા માટે ઘણી બધી મુશ્કેલી ઊભી થાય તેમ છે જેથી સર્વિસ રોડ પણ આપવો હિતાવહ અને જરૂરી છે અને જો સર્વિસ રોડ આપવામાં ન આવે તો એક્સપ્રેસ છાઈવેનું આધીજન કરવામાં અમારો સખ્તા વાંધો છે તેવું અગાઉ પણ વાંખમાં બેકવીઝેશન ગોડાસરને જણાવેલ છે જેથી સર્વિસ રોડ અમારી પ્રાથમીકતા છે તે ખ્યાને લીધા સિવાય રોડ બનાવવા માટે અમારો વાંધો આપીએ છીએ.

(૬) એક્સપ્રેસ રોડની ઉપર આવતા ગામની નજીક તથા ગામમાં વાયુ પ્રદુષણ તથા ખવિ પ્રદુષણ ના થાય તેવી યાંત્રીક વસ્તુઓ મુકવી જેથી તેવા તમામ પ્રકારના પ્રદુષણ ઉપર નિયંત્રણ કરી દૂર કરે અને ગામની અંદર હોર્ન તથા ગાડીઓના અવાજ ખુબજ ઓછા રહે.

(૭) ગામની ખેતીની ઘણી મોટી જમીન જેતી હોવાથી ઘણા મોટા ઝાડ તથા કાપમાં ખેતી તથા થવાને કારણે કુદરતી વાયુની સ્તર નીચું જાય તેમ હોવાથી રોડની બંને બાજુ જે તમામ જગ્યાની લાઈની કરવામાં આવશે તેમાં મુખ્યત્વે લીમડા, પીપળા, વડ, આંબલી, વરખડો તથા જે વૃક્ષો અમારા ગામની બાજુથી જે એક્સપ્રેસ રોડ પસાર થાય છે તેની આજુબાજુમાં જે ઝાડ ઉછેરવાના છે તે પ્રથમથી મોટી સાઈઝના હોવા જોઈએ અને ઉછેર કરવાની જવાબદારી એક્સપ્રેસ છાઈવે ઓધીરીટોની રહેશે જે ઝાડ મોટા ના થાય તો ગ્રામજનો તથા ગામને થતું નુકસાન એક્સપ્રેસ છાઈવે ભરપાઈ કરી આપશે તેવા પ્રકારના લેખીત ઓળખ એક્સપ્રેસ છાઈવે તરફથી અમારા ગામને આપવાનો રહેશે તેમજ ગામની બીજા પડતર જમીનમાં પણ વૃક્ષ ઉછેર કરવા માટે એક્સપ્રેસ છાઈવે એ અગોને ખાતી આપવાની રહેશે જેથી વાયુ પ્રદુષણ ઓછું થાય અને કુદરતી પર્યાવરણ જાળવાઈ રહે.

(૮) એક્સપ્રેસ છાઈવેનું નિર્માણ જ્યારે બાજુ કરવામાં આવે ત્યારે માટી પુરાણ કરવામાં આવે તે સમયે માટીના કણો હવામાં ખુબજ ફેલાઈ જાય તેમ છે અને જેથી માટી પુરાણ થતે માટી

(૪)

ઉડે નહીં તેવી રીતે તેમજ માટી પુરાણથી આજુબાજુના ખેતરોને માટીથી નુકશાન ન થાય તે રીતે રોડ કોન્ટ્રાક્ટરની ખાત્રી લેવાની રહેશે. તેમજ તેવી ખાત્રી અમો ગ્રામ પંચાયતમાં જમા કરાવવાની રહેશે. અને જો કોઈપણ ખેતરને માટીની રજ કે રોડ કામના કારણે નુકશાન થશે તો તે તમામ જવાબદાર એક્સપ્રેસ હાઈવે ઓથોરિટીની રહેશે અને નુકશાન ના થાય તેવી રીતે કામગીરી કરવાની રહેશે.

આમ અમારા ઉપરોક્ત વાંધા ધ્યાને લીધા સિવાય એક્સપ્રેસ રોડ બનાવવા અંગેની પરવાનગી ન આપવા અમારી વિનંતી છે.

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ભારતીય રાષ્ટ્રીય રાજમાર્ગ પ્રાધિકરણ

(સડક પરિવહન ઓર રાજમાર્ગ મંત્રાલય)

**National Highways Authority of India**

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નંબર: એનએચએઆઈ/પીઆઈયુ/અમદાવાદ/જી.પી.સી.બી./2018 3136

તા.13/11/2018

પ્રતિ,

સંરપચશ્રી,

પીપલી ગ્રામ પંચાયત

ગામ- પીપલી,

તા.ધોળકા, જી-અમદાવાદ.

વિષય- અમદાવાદ જિલ્લામાં તા.13/11/2018 ના રોજ લોક સુનાવણીમાં સંરપચશ્રી પીપલી તા.ધોળકા ગામ પંચાયતના આવેદન પત્રનો મુદ્દા પ્રમાણે વિગતવાર જવાબ

| ક્રમ નં. | અરજદારનું નામ તથા સરનામું   | જવાબ  |
|----------|---|---|
| 1        | સંરપચશ્રી,<br>પીપલી ગ્રામ પંચાયત,<br>ગામ- પીપલી,<br>તા.ધોળકા, જી-અમદાવાદ. | સરકારી નિયમ અનુસાર એકતીને મહાયજ્ઞ વળતર મળશે તથા જે પણ ગાડીઓ એક્સપ્રેસ વે પર ચાલશે તે સી.પી.સી.બી. ના નિયમાનુસાર ચાલશે. પ્રદુષણ નિયંત્રણ માટે એક્સપ્રેસ હાઈવેની બન્ને બાજુ વૃક્ષારોપણ કરવામાં આવશે.  |
| 2        |   | અમદાવાદ ધોલેરા એક્સપ્રેસ વે ગામથી લગભગ 200 થી 250 મીટર દુરથી પસાર થાય છે. બાયોલોજીકલ "નોઈઝ બેરીયર" (such as tree plantation etc) જેથી ધ્વનિ પ્રદુષણ નહીવત રહેશે. ઓથોરીટી દ્વારા રહેણાંક વિસ્તારમાં "નોઈઝ બેરીયર" ની વ્યવસ્થા કરવામાં આવશે એક્સપ્રેસ વેની બન્ને બાજુ વૃક્ષારોપણ કરવાથી હવા પ્રદુષણ ઓછું થશે. |
| 3        |   | એક્સપ્રેસ વેની બન્ને બાજુ ઈઆઈબે રીપોર્ટ મુજબ "નોઈઝ બેરીયર" લગાવાથી ધ્વનિ પ્રદુષણથી રાહત મળશે.   |
| 4        |   | પ્રસ્તાવિત પરિયોજનાની ડિઝાઇન એવી રીતે બસાવવામાં આવી છે જેથી કોઈપણ ધાણીના વહેણને કે જળસંચયને નુકશાન ન થાય તે માટે  |

મુખ્ય

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|---|--|--|
|   |  | પુરતા પ્રમાણેમાં કલવટ અને સીડી સ્ટેક્સર બનાવવાની જોગવાઈ છે. જે ભુગર્ભ જળશાસ્ત્રીના રીપોર્ટ પ્રમાણે છે.   |
| 5 |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે, જેથી પશુ-પાણીઓને અવર-જવરમાં કોઈ પણ તકલીફના પડે તે ધ્યાનમાં રાખીને અડરપાસની (CUP) અને શુષ્ક ઋતુમાં કલવટ ની સુવિધા ઉપલબ્ધ કરાવવામાં આવશે.  |
| 6 |  | પ્રશ્ન ફરીથી રીપીટ થાય છે.   |
| 7 |  | પ્રસ્તાવિત પરિયોજનામાં કુલ 66000 વૃક્ષોની વાવણી કરવામાં આવશે. એનએચએઆઈ વૃક્ષો કાપવાની થતી કિંમત બ્રેસ્ટ ડિપાર્ટમેન્ટ ને કેમ્પા ફંડ ના નિયમાનુસાર આપશે. અને કેમ્પા ફંડમાંથી ખુલ્લી જગ્યા, બંડર જમીન અને સરકારી જમીન પર વૃક્ષો લગાવામાં આવશે. |
| 8 |  | પ્રસ્તાવિત પરિયોજનામાં બાંધકામ ના સમયમાં પાણીના ટેંકર દ્વારા છંટકાવ કરવામાં આવશે. જેથી માટીના કણ વાયુમાં ન ભળે અને જનજીવનને નુકશાન ન થાય. તેની પુરી તકેદારી રાખવામાં આવશે. જે પર્વાવરણ પ્રબંધન યોજનાની ફંડમાં સામેલ છે.                    |

આપનો આભારી.

આપનો વિશ્વાસુ,

**મુમ્તઝ ૧૦ સિંઘ**

મહાપ્રબંધક (ટેકનીકલ) અને

પ્રોજેક્ટ ડાયરેક્ટર, એનએચએઆઈ

પીઆઈથુ અમદાવાદ

નકલ સવિનય રવાના:-

- 1) ચીફ જનરલ મેનેજર તથા રીજીયોનલ ઓફિસરશ્રી, નેશનલ બ્રહ્મવે ઓથોરીટી ઓફ ઇન્ડીયા, ગાંધીનગર તરફ જાણ સારું.

અરજદાર:-

વેજલકા ગ્રામ પંચાયત

મોજેગામ- વેજલકા,

તા. ધોળકા, જી. અમદાવાદ

તા. ૦૭/૧૧/૨૦૧૮

(મો)

પ્રતિશ્રી,

સચિવશ્રી/સભ્ય સચિવશ્રી,

ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ,

પર્યાવરણ ભવન, સેક્ટર-૧૦/એ,

ગાંધીનગર-૩૮૨૯૧૦

**વિષય:** તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચાર દૈનિકમાં પાના નં. ૧૧ ઉપર આવેલ જાહેર સુચનાના અનુસંધાને વાંધા અરજી.

મે. સાહેબશ્રી,

આપના દ્વારા તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચારના પાના નં. ૧૧ ઉપર અમદાવાદ-ધોલેરા એક્સપ્રેસ રોડ (૧૧૦) કી. મી. ના બાંધકામના અનુસંધાને પર્યાવરણીય લોક સુનાવણી રાખવામાં આવેલ છે. તેના અનુસંધાને અમો અમારા ગામના પ્રતિનિધી તરીકે અમારી રજુઆત કરીએ છીએ જે ધ્યાને લીધા સિવાય રોડ બનાવવાની કામગીરી કરવામાં આવશે તો અમારા ગામના પ્રજાજન, પશુઓ, પ્રાણીઓ અને પક્ષીઓને ઘણું વધુ નુકશાન થાય તેમ છે. તેમજ તેના કારણે ઘણું મોટું પ્રદુષણ, કુદરતી આકત આવે તેવી પુરંપુરી સંભાવના હોવાથી પ્રદુષણ નિયંત્રણના કાયદા ધ્યાને લીધા સિવાય રોડ બનાવવા અંગે અમારા ગ્રામજનોનો સખ વાંધો છે.

(૧) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવેમાં જે જમીનો કપાત થાય છે તે જમીનો ખેતીની આવેલી છે અને વર્ષમાં બે અથવા તેથી વધુ પાક થતા હોવાથી હંમેશા જમીન લીલી રહે છે તેમજ તે જમીનના ઉભા પાકને કારણે આજુબાજુ હવાનું પ્રદુષણ ખુબ જ નીચું છે અને ચોખ્ખી અને ઓક્સીજન વાળી હવા હંમેશા મળી રહે છે.

(૨) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવે બનાવવામાં આવે જેથી હવાના સ્તરને ઘણું મોટું નુકશાન જાય તેમ છે હાલમાં એકપક્ષ નેશનલ કે રાષ્ટ્રીય હાઈવે ન હોવાથી વાહનોની

અવરજવર ઘણી જ ઓછી છે જેના કારણે હવાના સ્તરમાં હંમેશા ચોખ્ખી અને ઓકસીજન વાળી રહે છે. તેમજ પ્વની પ્રદુષણ પણ નહીંવત પ્રમાણમાં છે અને હાલમાં જે રોડ પસાર થાય છે તે ગામને અડીને આવતો હોવાથી હંમેશા વાહનોના અવાજ રહેશે જેના કારણે ગામની નજીક રાત્રીના સમયે હોર્નના અવાજ તેમજ વાડીઓના અવાજ આવવાથી રાત્રીની ઊંઘ બગડે તેવા સંજોગો ઉભા થઈ શકે તેમ છે રોડનું એલાઈમેન્ટ ગામથી દુર રાખવું હિતાવસ છે.

(૩) અમદાવાદ થી પોલેરા હાઈવે ગામની નજીક બનતા અત્યાર સુધી ગામના પશુ, પ્રાણી, પ્રજાતિઓ નિર્ભય રીતે રાત્રી પસાર કરતા સતા અને તે રીતે હંમેશા ટેવાયેલ છે અને હવે પછી રોડ બનાવવામાં આવે તો " NO HORN ZONE " બનાવવો પડે તેમ તે રીતે કરવામાં નહીં આવે તો શરૂઆતના સમયમાં પશુ, પક્ષીઓ પ્રાણીઓની રાત્રી દરમ્યાન ઘણી મુશ્કેલી ઉભી થાય તેમજ નિર્ભય રીતે જીવી શકે તેમ નથી જેથી રોડ ઉપર પ્વની નિયંત્રણ ખુબ જરૂરી છે. તેમજ દુધાળા પશુઓને યોગ્ય પ્રમાણમાં આરામ ન મળે તો સમય જતા દુધાળા પશુઓથી દુધ ખુબજ ઓછું આવે અને દુધ ઉત્પાદન ઘટે તેમ છે.

(૪) અમારા ગામથી નજીકથી એક્સપ્રેસ રોડ પસાર થાય છે અને ગામની તેમજ ભૌગોલીક પરિસ્થિતિ ખુબજ વરસાદનું પાણી હંમેશા નળ સરોવર બાજુથી તેમજ ઉત્તર દિશાથી બોરું વટામણ બાજુ જાય છે અને એક્સપ્રેસ હાઈવે પુર્વ-પશ્ચિમ બનવાનો છે જેથી ચારે દિશાઓ અલગ હોવાથી પાણીનો વહેણ અટકી પડે તેમ છે જે પાણીના વહેણ અટકી જાય તો પાણીનો ભરાવો થતા લાંબા ગાળે રોગચાળો કાઢી નિકળે તેમજ ગામમાં હંમેશા પાણી ભરાયેલ અને દબિલદીશાની જમીન પાણી વગરની રહે બિનઉપજાઉ થઈ જાય જેના કારણે હવા પ્રદુષણ વધુ પડતું ઉભુ થાય તેમજ ખેતી નષ્ટ પામે તેમ છે, જેથી પોંચે ધીમે ધીમે ગામજનો બેકાર થવા માંડે જેથી પાણીના નળ-પાણી-હાઈવે તથા પાણી નિકાલ જે યોગ્ય કરવામાં ન આવે તો પાણી વાવુનું પ્રદુષણ તથી જાય આપના દ્વારા જે આયોજન કરવામાં આવેલ છે તેમાં અને રોડ એલાઈમેન્ટમાં ધણા બધા તથાવો પણ આવે છે, જેના કારણે પાણીનો ભરાવો નિકાસની વ્યવસ્થા કયા પ્રકારે કરેલ છે કે કેમ? તેના નકશા અમો ગામમાં આપવામાં ન આવે ત્યાં સુધી અમારા ગામમાંથી પસાર થતો રોડ બનાવવો હિતાવસ નથી અને તે અંગે ગામનો ખુબજ ચાંપો છે.

(૫) અમદાવાદ પોલેરા હાઈવે બનતા દ્રાઈકની ઘણી સમસ્યા રહેશે ગામની સીમમાં નીલગાય, બુંડ, ગાય, બેસો, હરણ, દીપા, મસલા, વેદા, બકરા તેવા નીજ પ્રાણીઓ

ખુબજ પ્રયાસમાં છે, જે હંમેશા ગામની સીમામાંથી બહાર જવર દિવસ તેમજ રાત્રી કરતા હોય અને એક્સપ્રેસ હાઈવે ઉપરથી જો તે પસાર થયા અને ગામના રસ્તા રાખવામાં ન આવે તો એક્સ્માતનો ભય ખુબજ વધી જાય તેમ છે. જેથી એક્સ્માત નિવારણ વ્યવસ્થા જોડવાની જોઈએ અને દર પંદરથી ત્રીસ કિલોમીટરની ક્રમમાં ઈમરજન્સી વ્હીકલ તથા સારવાર કેન્દ્ર રાખવા જોઈએ જેથી ટ્રાફિક સમસ્યા ઉભી ન થાય તેમજ એક્સ્માત સમસ્યા ઉભી ન થાય તેમજ એક્સ્માત થાય તો તાત્કાલીક સારવાર મળી રહે તેમ ન કરવામાં આવે તો વખતો વખત આમજનોને આવી વ્યવસ્થા કરવા ઉભા પગે રહેવું પડે અથવા ભાગનો માહોલ ઉભો થાય તેમ છે એક્સપ્રેસ હાઈવેની નીચે થઈને પસાર થાય તેવી વ્યવસ્થા રાખવા વિનંતી જેના કારણે વાયુ પ્રદુષણ વ્યવસ્થા પ્રદુષણ ઓછું થાય. અને આવા સમયે જો સર્વિસ રોડ ન હોય તો રોડની આજુબાજુના વિસ્તારમાં જવા-આવવા માટે ઘસી બપી મુરહેલી ઉભી થાય તેમ છે જેથી સર્વિસ રોડ પણ આપવી હિતાવહ અને જરૂરી છે અને જો સર્વિસ રોડ આપવામાં ન આવે તો એક્સપ્રેસ હાઈવેનું આયોજન કરવામાં અમારો સખત વાંધો છે તેવું અગાઉ પણ વાંધામાં એકવીરેશન ઓફીસરને જણાવેલ છે જેથી સર્વિસ રોડ અમારી માથમીકતા છે તે આને કીધા સિવાય રોડ બનાવવા માટે અમારો વાંધો આપીએ છીએ.

(દ) એક્સપ્રેસ રોડની ઉપર આવતા ગામની નજીક તથા ગામમાં વાયુ પ્રદુષણ તથા વ્યવસ્થા પ્રદુષણ ના થાય તેવી વાંચીક વસ્તુઓ મુકવી જેથી તેવા તમામ પ્રકારના પ્રદુષણ ઉપર નિયંત્રણ કરી દુર કરે અને ગામની અંદર હોર્ન તથા ગાડીઓના અવાજ ખુબજ ઓછા રહે.

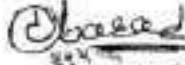
(૩) ગામની ખેતીની બધી મોટી જમીન જતી હોવાથી પણ મોટા ઝાડ તથા કાચમી ખેતી નષ્ટ થવાને કારણે કુદરતી વાયુની સ્તર નીચું જાય તેમ હોવાથી રોડની બંને બાજુ જે ત્રણ જણની હાઈવે કરવામાં આવશે તેમાં મુખ્યત્વે લીમડા, પીપળા, વડ, આંબલી, વરખડો તથા જે વૃક્ષો આમારા ગામની બાજુથી જે એક્સપ્રેસ રોડ પસાર થાય છે તેની આજુબાજુમાં જે ઝાડ ઉછેરવાલા છે તે પ્રથમથી મોટી સાર્બજના હોવા જોઈએ અને ઉછેર કરવાની જવાબદારી એક્સપ્રેસ હાઈવે ઓથોરીટીની રહેશે જે ઝાડ મોટા ના થાય તો આમજનો તથા ગામને થતું નુકશાન એક્સપ્રેસ હાઈવે ભરપાઈ કરી આપશે તેવા પ્રકારની લેખીત બાંન્ડ એક્સપ્રેસ હાઈવે તરફથી અમારા ગામને આપવાનો રહેશે તેમજ ગામની બીજા પડતર જમીનમાં પણ વૃક્ષ ઉછેર કરવા માટે એક્સપ્રેસ હાઈવે એ અમોને ખાતરી આપવાની રહેશે જેથી વાયુ પ્રદુષણ ઓછું થાય અને કુદરતી પર્યાવરણ જળવાઈ રહે.

(૮) એક્સપ્રેસ હાઈવેનું નિર્માણ જ્યારે થાકુ કરવામાં આવે ત્યારે માટી પુરાણ કરવામાં આવે તે સમયે માટીના કણો હવામાં ખુબજ કેલારી જાય તેમ છે અને જેથી માટી પુરાણ વખતે માટી

(૪)

ઉડે નહીં તેવી રીતે તેમજ માટી પુરાણથી આજુબાજુના ખેતરોને માટીથી નુકશાન ન થાય તે રીતે રોડ કોન્ટ્રાક્ટરની ખાત્રી લેવાની રહેશે. તેમજ તેવી ખાત્રી અમો ગ્રામ પંચાયતમાં જમા કરાવવાની રહેશે. અને જો કોઈપણ ખેતરને માટીની રજ કે રોડ કામના કારણે નુકશાન થશે તો તે તમામ જવાબદાર એક્સપ્રેસ હાઈવે ઓથોરિટીની રહેશે અને નુકશાન ના થાય તેવી રીતે કામગીરી કરવાની રહેશે.

આમ અમારા ઉપરોક્ત વાંધા ધ્યાને લીધા સિવાય એક્સપ્રેસ રોડ બનાવવા અંગેની પરવાનગી ન આપવા અમારી વિનંતી છે.

  
D. B. Patel  
સહાયક મુખ્ય મંત્રી  
ગુજરાત સરકાર

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# ભારતીય રાષ્ટ્રીય રાજમાર્ગ પ્રાધિકરણ

(સડક પરિવહન ઓર રાજમાર્ગ મંત્રાલય)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

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નંબર, એનએચએઆઈ/પીઆઈયુ/અમદાવાદ/જી.પી.સી.બી./2018 3044

તા.13/11/2018

પ્રતિ,

સંરખંચશ્રી,

વેજલકા ગ્રામ પંચાયત,

ગામ- વેજલકા,

તા.ધોળકા, જી-અમદાવાદ.

વિષય અમદાવાદ જિલ્લામાં તા.13/11/2018 ના રોજ લોક મુલાવાશીમાં સંરખંચશ્રી વેજલકા તા.ધોળકા ગ્રામ પંચાયતના આવેદન પત્રનો મુદ્દા પ્રમાણે વિગતવાર જવાબ

| ક્રમ નં. | અરજદારનું નામ તથા સરનામું   | જવાબ  |
|----------|---|---|
| 1        | સંરખંચશ્રી,<br>વેજલકા ગ્રામ પંચાયત,<br>ગામ- વેજલકા,<br>તા.ધોળકા, જી-અમદાવાદ | સરકારી નિયમ અનુસાર ખેડૂતોને સહાયરૂપ વળતર મળશે તથા જે પણ ગાડીઓ એક્સપ્રેસ લે થર ચાલશે તે સી પી.સી.બી. ના નિયમાનુસાર ચાલશે. પ્રદુષણ નિયંત્રણ માટે એક્સપ્રેસ હાઈવેની બન્ને બાજુ વૃક્ષારોપણ કરવામાં આવશે.  |
| 2        |   | અમદાવાદ ધોળકા એક્સપ્રેસ લે ગામથી લગભગ 200 થી 250 મીટર દુરથી પસાર થાય છે. બાયોલોકલ "નોઈઝ બેરીયર" (such as tree plantation etc) જેથી ધ્વનિ પ્રદુષણ નહીવત રહેશે. ઓશીરીટી દ્વારા રહેણાંક વિસ્તારમાં "નોઈઝ બેરીયર" ની વ્યવસ્થા કરવામાં આવશે. એક્સપ્રેસ લેની બન્ને બાજુ વૃક્ષારોપણ કરવાથી હવા પ્રદુષણ ઓછું થશે. |
| 3        |   | એક્સપ્રેસ લેની બન્ને બાજુ હાઈવેના રીપોર્ટ મુજબ "નોઈઝ બેરીયર" લગાવાથી ધ્વનિ પ્રદુષણથી રાહત મળશે.   |
| 4        |   | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે. જેથી કોઈપણ પાણીના વહેણને કે જળસ્રોતને નુકશાન ન થાય તે માટે  |

મુજબ

|   |  |  |
|---|--|--|
|   |  | પુરતા પ્રમાણેમાં કલવર્ટ અને સીડી સ્ટ્રેક્સર બનાવવાની જોગવાઈ છે. જે ભુગર્ભ જળશાસ્ત્રીના રીપોર્ટ પ્રમાણે છે.   |
| 5 |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે. જેથી પશુ-પ્રાણીઓને અવર-જવરમાં કોઈ પણ તકલીફના પડે તે ધ્યાનમાં રાખીને અંડરપાસની (CUP) અને શુષ્ક ઋતુમાં કલવર્ટ ની સુવિધા ઉપલબ્ધ કરાવવામાં આવશે.                                       |
| 6 |  | પ્રજ્ઞ ફરીથી રીપીટ થાય છે.   |
| 7 |  | પ્રસ્તાવિત પરિયોજનામાં કુલ 66000 વૃક્ષોની વાવણી કરવામાં આવશે. એનએચએઆઈ વૃક્ષો કાપવાની થતી કિંમત ફોરેસ્ટ ડિપાર્ટમેન્ટ ને કેમ્પા ફંડ ના નિયમાનુસાર આપશે. અને કેમ્પા ફંડમાંથી ખુલ્લી જગ્યા, બંઝર જમીન અને સરકારી જમીન પર વૃક્ષો લગાવામાં આવશે. |
| 8 |  | પ્રસ્તાવિત પરિયોજનામાં બાંધકામ ના સમયમાં પ્રાણીના ટેકર દ્વારા છંટકાવ કરવામાં આવશે. જેથી માટીના કણ વાયુમાં ન ભળે અને જનજીવનને નુકશાન ન થાય. તેની પુરી તકેદારી રાખવામાં આવશે. જે પર્યાવરણ પ્રબંધન યોજનાની ફંડમાં સામેલ છે.                   |

આપનો આભારી,

આપનો વિશ્વાસુ,

**મુક્ત કુમાર સિંઘ**

મહાપ્રબંધક (ટેકનીકલ) અને

પ્રોજેક્ટ ડાયરેક્ટર, એનએચએઆઈ

પીઆઈડી અમદાવાદ

નકલ સવિનય રવાના:

- 1) ચીફ જનરલ મેનેજર તથા રીજીયોનલ ઓફિસરશ્રી, નેશનલ હાઇવે ઓથોરીટી ઓફ ઇન્ડિયા, ગાંધીનગર તરફ જાણ સારું.

સરના,  
સચિવશ્રી/સભ્ય સચિવશ્રી,  
ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ,  
પર્યાવરણ ભવન, સેક્ટર-૧૦/એ,  
ગાંધીનગર-૩૮૨૯૧૦

અરજદાર:-  
કેશરગઢ ગ્રામ પંચાયત  
મોજેગામ- કેશરગઢ,  
તા. ધોળકા, જી. અમદાવાદ  
તા. ૦૭/૧૧/૨૦૧૮  
(મો)

પ્રતિશ્રી,  
સચિવશ્રી/સભ્ય સચિવશ્રી,  
ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ,  
પર્યાવરણ ભવન, સેક્ટર-૧૦/એ,  
ગાંધીનગર-૩૮૨૯૧૦

વિષય: તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચાર દૈનિકમાં પાના નં. ૧૧  
ઉપર આવેલ જાહેર સુચનાના અનુસંધાને વાંધા અરજી.

મે. સાહેબશ્રી,

આપના દ્વારા તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચારના પાના નં. ૧૧ ઉપર અમદાવાદ-ધોલેરા એક્સપ્રેસ રોડ (૧૧૦) કી. મી. ના બાંધકામના અનુસંધાને પર્યાવરણીય લોક સુનાવણી રાખવામાં આવેલ છે. તેના અનુસંધાને અમો અમારા ગામના પ્રતિનિધી તરીકે અમારી રજૂઆત કરીએ છીએ જે ધ્યાને લીધા સિવાય રોડ બનાવવાની કામગીરી કરવામાં આવશે તો અમારા ગામના પ્રજાજન, પશુઓ, પ્રાણીઓ અને પક્ષીઓને ઘણું વધુ નુકશાન થાય તેમ છે. તેમજ તેના કારણે ઘણું મોટું પ્રદુષણ, કુદરતી આકત આવે તેવી પુરેપુરી સંભાવના હોવાથી પ્રદુષણ નિયંત્રણના કાયદા ધ્યાને લીધા સિવાય રોડ બનાવવા અંગે અમારા ગ્રામજનોનો સખ વાંધો છે.

(૧) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવેમાં જે જમીનો કપાત થાય છે તે જમીનો ખેતીની આવેલી છે અને વર્ષમાં બે અથવા તેથી વધુ પાક થતા હોવાથી હંમેશા જમીન લીલી રહે છે તેમજ તે જમીનના ઉભા પાકને કારણે આજુબાજુ હવાનું પ્રદુષણ ખુબ જ નીચું છે અને ચીખ્ખી અને ઓક્સીજન વાળી હવા હંમેશા મળી રહે છે.

(૨) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવે બનાવવામાં આવે જેથી હવાના સ્તરને ઘણું મોટું નુકશાન થાય તેમ છે હાલમાં એકપણ નેશનલ કે રાષ્ટ્રીય હાઈવે ન હોવાથી વાહનોની

આવરજવર ઘણી જ ઓછી છે જેના કારણે હવાના સ્તરમાં હંમેશા ચોખ્ખી અને ઓક્સીજન વાળી રહે છે. તેમજ ખેતી પ્રદુષણ પણ નહીવત પ્રમાણમાં છે અને હાલમાં જે રોડ પસાર થાય છે તે ગામને અડીને આવતો હોવાથી હંમેશા વાહનોના અવાજ રહેશે જેના કારણે ગામની નજીક રાત્રીના સમયે સ્પર્શના અવાજ તેમજ ગાડીઓના અવાજ આવવાથી રાત્રીની ઊંચ અગડે તેવા સંજોગો ઊભા થઈ શકે તેમ છે રોડનું એલાઈમેન્ટ ગામથી દુર રાખવું હિતાવહ છે.

(૩) અમદાવાદ થી પોલેરા હાઈવે ગામની નજીક બનતા અત્યાર સુધી ગામના પશુ, પ્રાણી, પક્ષીઓ નિર્ભય રીતે રાત્રી પસાર કરતા હતા અને તે રીતે હંમેશા ટેવાયેલ છે અને હવે પક્ષી રોડ બનાવવામાં આવે તો "NO HORN ZONE" બનાવવો પડે તેમ તે રીતે કરવામાં નહીં આવે તો રોડઆતના સમયમાં પશુ, પક્ષીઓ પ્રાણીઓની રાત્રી દરમ્યાન ઘણી મુશ્કેલી ઊભી થાય તેમજ નિર્ભય રીતે જીવી શકે તેમ નથી જેથી રોડ ઉપર ખેતી નિર્મજાજ ખુજાન જરૂરી છે. તેમજ દુધાળા પશુઓને યોગ્ય પ્રમાણમાં આરામ ન મળે તો સમય જતા દુધાળા પશુઓથી દુધ ખુજાજ ઓછું આવે અને દુધ ઉત્પાદન ઘટે તેમ છે.

(૪) અમારા ગામથી નજીકથી એક્સપ્રેસ રોડ પસાર થાય છે અને ગામની તેમજ ભોગોલીક પરિસ્થિતિ ખુબજ વરસાદનું પાણી હંમેશા નળ સરોવર બાજુથી તેમજ ઉત્તર દિશાથી બોટ-વટામણ બાજુ જાય છે અને એક્સપ્રેસ હાઈવે પુર્વ-પશ્ચિમ બનવાનો છે જેથી ચારે દિશાઓ અલગ સ્ત્રોતથી પાણીનો વહેણ અટકી પડે તેમ છે જો પાણીના વહેણ અટકી જાય તો પાણીનો ભરાવો થતા લાંબા ગાળે રોજયાળો ફાટી નિકળે તેમજ ગામમાં હંમેશા પાણી ભરાયેલ અને દક્ષિણદીશાની જમીન પાણી વગરની રહે બિનઉપજાઉ થઈ જાય જેના કારણે હવા પ્રદુષણ વધુ પડતું ઊંચુ થાય તેમજ ખેતી નષ્ટ પામે તેમ છે, જેથી ખીમે ખીમે ગામજનો બેકાર થતા મોડે જેથી પાણીના નળ-પાણી-લાઈન તથા પાણી નિકાલ શ્રે યોગ્ય કરવામાં ન આવે તો પાણી વાધુનું પ્રદુષણ વધી જાય આપના દ્વારા જે આયોજન કરવામાં આવેલ છે તેમાં અને રોડ એલાઈમેન્ટમાં ઘણા બધા તળાવો પણ આવે છે. જેના કારણે પાણીનો ભરાવો નિકાસની અવસ્થા ક્યા પ્રકારે કરેલ છે કે કેમ? તેના નકશા અમો ગામમાં આપવામાં ન આવે ત્યાં સુધી અમારા ગામમાંથી પસાર થતો રોડ બનાવવો હિતાવહ નથી અને તે અંગે ગામનાં ખુબજ વાંધો છે.

(૫) અમદાવાદ પોલેરા હાઈવે બનતા ટ્રાફીકની ઘણી સમસ્યા રહેશે ગામની સીમમાં તીલબાય, મુંડા, ગાય, ભેંસો, હરણ, દીપણ, સસલા, વેટા, બકરા તેવા બીજા પ્રાણીઓ

ખુબજ પ્રમાણમાં છે. જે હમેશા ગામની સીમામાંથી અવર જવર દિવસ તેમજ રાત્રે કરતા હોય અને એક્સપ્રેસ હાઈવે ઉપરથી જો તે પસાર થયા અને ગામના રસ્તા રાખવામાં ન આવે તો અકસ્માતમાં ભય ખુબજ વધી જાય તેમ છે. જેથી અકસ્માત નિવારણ વ્યવસ્થા ગોઠવવી જોઈએ અને દર પંદરથી વીસ કિલોમીટરની જગ્યાએ ઈમરજન્સી વીકલ તથા સારવાર કેન્દ્ર રાખવા જોઈએ જેથી ટ્રાફિક સમસ્યા ઊભી ન થાય તેમજ અકસ્માત સમસ્યા ઊભી ન થાય તેમજ અકસ્માત થાય તો તાત્કાલીક સારવાર મળી રહે તેમ ન કરવામાં આવે તો વખતો વખત ગ્રામજનોને આવી વ્યવસ્થા કરવા ઊભા પડે રહેલું પડે અથવા ભયનો માહોલ ઊભો થાય તેમ છે એક્સપ્રેસ હાઈવેની નીચે કાંઈને પસાર થાય તેવી વ્યવસ્થા રાખવા વિનંતી જેના કારણે વાયુ પ્રદુષણ વ્યવસ્થા પ્રદુષણ ઓછું થાય. અને આવા સમયે જો સર્વિસ રોડ ન હોય તો રોડની આજુબાજુના વિસ્તારમાં જવા-આવવા માટે થપ્પી બધી મુશ્કેલી ઊભી થાય તેમ છે જેથી સર્વિસ રોડ પણ ગાપવો હિતાવહ અને જરૂરી છે અને જો સર્વિસ રોડ આપવામાં ન આવે તો એક્સપ્રેસ હાઈવેનું આયોજન કરવામાં અમારો સખત વાંધો છે તેવું અગાઉ પણ રાખામાં એકવીજેશન ઓફીસરને જણાવેલ છે જેથી સર્વિસ રોડ અમારી પ્રાથમિકતા છે તે બાબતે લીધા સિવાય રોડ બતાવવા માટે અમારો વાંધો આપીએ છીએ.

(૬) એક્સપ્રેસ રોડની ઉપર આવતા ગામની નજીક તથા ગામમાં વાયુ પ્રદુષણ તથા વ્યવસ્થા પ્રદુષણ ના થાય તેવી યાંત્રિક વસ્તુઓ મુકવી જેથી તેવા તમામ પ્રકારના પ્રદુષણ ઉપર નિયંત્રણ કરી દુર કરે અને ગામની અંદર હોર્ન તથા ગાડીઓના અવાજ ખુબજ ઓછા રહે.

(૭) ગામની ખેતીની થપ્પી મોટી જમીન જતી હોવાથી પણ મોટા ઝાડ તથા કાંચમી ખેતી નષ્ટ થવાને કારણે કુદરતી વાયુની સ્તર નીચું જાય તેમ હોવાથી રોડની બંને બાજુ જે ત્રણ જણની હાઈવો કરવામાં આવશે તેમાં મુખ્યત્વે લીમડા, પીપળા, વડા, ઓળવી, વરણડો તથા જે વૃક્ષો અમારા ગામની બાજુથી જે એક્સપ્રેસ રોડ પસાર થાય છે તેની આજુબાજુમાં જે ઝાડ છોરવાના છે તે પ્રજાગથી મોટી સાઈઝના હોવા જોઈએ અને છોર કરવાની જવાબદારી એક્સપ્રેસ હાઈવે ઓપીરીટીની રહેશે જે ઝાડ મોટા ના વાય તો ગ્રામજનો તથા ગામને થતું નુકશાન એક્સપ્રેસ હાઈવે ભરપાઈ કરી આપશે તેવા પ્રકારનો લેખીત બોન્ડ એક્સપ્રેસ હાઈવે તરફથી અમારા ગામને આપવાનો રહેશે તેમજ ગામની બીજી પડતર જમીનમાં પણ વૃક્ષો છોર કરવા માટે એક્સપ્રેસ હાઈવે એ અમોને ખાતરી આપવાની રહેશે. જેથી વાયુ પ્રદુષણ ઓછું થાય અને કુદરતી પર્યાવરણ જળવાઈ રહે.

(૮) એક્સપ્રેસ હાઈવેનું નિર્માણ જપારે ચાલુ કરવામાં આવે ત્યારે માટી પુરાણ કરવામાં આવે તે સમયે માટીના ક્ષણો હવામાં ખુબજ ફેલાઈ જાય તેમ છે અને જેથી માટી પુરાણ થતે માટી

(૪)

ઉડે નહીં તેવી રીતે તેમજ માટી પુરાણથી આજુબાજુના ખેતરોને માટીથી નુકશાન ન થાય તે રીતે રોડ કોન્ટ્રાક્ટરની ખાત્રી લેવાની રહેશે. તેમજ તેવી ખાત્રી અમો ગ્રામ પંચાયતમાં જમા કરાવવાની રહેશે. અને જો કોઈપણ ખેતરને માટીની રજ કે રોડ કામના કારણે નુકશાન થશે તો તે તમામ જવાબદાર એક્સપ્રેસ હાઈવે ઓથોરિટીની રહેશે અને નુકશાન ના થાય તેવી રીતે કામગીરી કરવાની રહેશે.

આમ અમારા ઉપરોક્ત વાંધા ધ્યાને લીધા સિવાય એક્સપ્રેસ રોડ બનાવવા અંગેની પરવાનગી ન આપવા અમારી વિનંતી છે.

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તા. વાળાડા.





# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

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તા.13/11/2018

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વિષય- અમદાવાદ જિલ્લામાં તા.13/11/2018 ના રોજ લોક સુનાવણીમાં સંરખંચશ્રી કેસરગઢ તા.ધોળકા ગ્રામ પંચાયતના આવેદન પત્રનો મુદ્દા પ્રમાણે વિગતવાર જવાબ

| ક્રમ નં. | અરજદારનું નામ તથા સરનામું  | જવાબ  |
|----------|--|---|
| 1        | કમુ બહેન, સંરખંચશ્રી,<br>કેસરગઢ ગ્રામ પંચાયત,<br>ગામ- કેસરગઢ,<br>તા.ધોળકા, જી-અમદાવાદ. | સરકારી નિયમ અનુસાર બેડુતોને સફાયરૂપ વળતર મળશે તથા જે પણ ગાડીઓ એક્સપ્રેસ વે પર ચાલશે તે સી.પી.સી.બી. ના નિયમાનુસાર ચાલશે પ્રદુષણ નિયંત્રણ માટે એક્સપ્રેસ લઈવેની બન્ને બાજુ વૃક્ષારોપણ કરવામાં આવશે.  |
| 2        |  | અમદાવાદ પોલેરા એક્સપ્રેસ વે ગામથી લગભગ 200 થી 250 મીટર દૂરથી પસાર થાય છે. બાયોલોજીકલ "નોઈઝ બેરીયર" (such as tree plantation etc) જેથી ધ્વનિ પ્રદુષણ નહીવત રહેશે. ઓથોરીટી દ્વારા રહેણાંક વિસ્તારમાં "નોઈઝ બેરીયર" ની વ્યવસ્થા કરવામાં આવશે એક્સપ્રેસ વેની બન્ને બાજુ વૃક્ષારોપણ કરવાથી હવા પ્રદુષણ ઓછું થશે. |
| 3        |  | એક્સપ્રેસ વેની બન્ને બાજુ ઈઆઈએ રીપોર્ટ મુજબ "નોઈઝ બેરીયર" લગાવાથી ધ્વનિ પ્રદુષણથી રાહત મળશે.  |
| 4        |  | પ્રસ્તાવિત પરિવોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે, જેથી કોઈપણ પાણીના વહેણને કે જળસ્ત્રોતને નુકસાન ન થાય તે માટે  |

મુખ્ય

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|   |  | પુરતા પ્રમાણેમાં કલવઈ અને સીડી સ્ટ્રેક્ચર બનાવવાની જોગવાઈ છે. જે ભુગર્ભ જળાશાસ્ત્રીના રીપોર્ટ પ્રમાણે છે.  |
| 5 |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે. જેથી પ્રશુ-પ્રાણીઓને અવર-જવરમાં કોઈ પણ તકલીફના પડે તે ધ્યાનમાં રાખીને અંડરપાસની (DAP) અને શુષ્ક ઋતુમાં કલવઈ ની સુવિધા ઉપલબ્ધ કરાવવામાં આવશે.                                       |
| 6 |  | પ્રશ્ન ફરીથી રીપીટ થાય છે.   |
| 7 |  | પ્રસ્તાવિત પરિયોજનામાં કુલ ૬૬૦૦૦ વૃક્ષોની વાવણી કરવામાં આવશે. એનએચએઆઈ વૃક્ષો કાપવાની થતી કિંમત ફોરેસ્ટ ડિપાર્ટમેન્ટ ને કેમ્પા ફંડ ના નિયમાનુસાર આપશે. અને કેમ્પા ફંડમાંથી ખુલ્લી જમીન, બંડર જમીન અને સરકારી જમીન પર વૃક્ષો લગાવવામાં આવશે. |
| 8 |  | પ્રસ્તાવિત પરિયોજનામાં બાંધકામ ના સમયમાં પ્રાણીના ટૅંકર દ્વારા છંટકાવ કરવામાં આવશે. જેથી માટીના કણ વાયુમાં ન ભળે અને જનજીવનને નુકશાન ન થાય તેની પુરી તકેદારી રાખવામાં આવશે. જે પર્યાવરણ પ્રબંધન યોજનાની ફંડમાં સામેલ છે.                   |

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આપનો વિશ્વાસુ,

મુખ્ય ડ- સિડ.

મહાપ્રબંધક (ટેકનીકલ) અને

પ્રોજેક્ટ ડાયરેક્ટર, એનએચએઆઈ

પીઆઈયુ અમદાવાદ

નકલ સવિનય રવાના:-

- 1) ચીફ જનરલ મેનેજર તથા રીજીયોનલ ઓફિસરશ્રી, નેશનલ હાઇવે ઓથોરીટી ઓફ ઇન્ડિયા, ગાંધીનગર તરફ જાણ સારું.



અરજદાર:-

સિંધરેજ ગ્રામ પંચાયત

મોજેગામ- સિંધરેજ, તા. પોળકા,

જી. અમદાવાદ

તા. ૦૭/૧૧/૨૦૧૮

(મો)

પ્રતિશ્રી,  
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પર્યાવરણ ભવન, સેક્ટર-૧૦/એ,  
ગાંધીનગર-૩૮૨૯૧૦

**વિષય:** તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચાર દૈનિકમાં પાના નં. ૧૧  
ઉપર આવેલ જાહેર સુચનાના અનુસંધાને વાંધા અરજી.

મે. સાહેબશ્રી,

આપના દ્વારા તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચારના પાના નં. ૧૧ ઉપર  
અમદાવાદ-ધોલેરા એક્સપ્રેસ રોડ (૧૧૦) કી.મી. ના બાંધકામના અનુસંધાને પર્યાવરણીય  
લોક સુનાવણી રાખવામાં આવેલ છે. તેના અનુસંધાને અમો અમારા ગામના પ્રતિનિધી  
તરીકે અમારી રજુઆત કરીએ છીએ જે બાને લીધા સિવાય રોડ બનાવવાની કામગીરી  
કરવામાં આવશે તો અમારા ગામના પ્રજાજન, પર્યુઓ, પ્રાણીઓ અને પક્ષીઓને ઘણું વધુ  
નુકશાન થાય તેમ છે. તેમજ તેના કારણે ઘણું મોટું પ્રદુષણ, કુદરતી આફત આવે તેવી પુરેપુરી  
સંભાવના હોવાથી પ્રદુષણ નિયંત્રણના કાયદા બાને લીધા સિવાય રોડ બનાવવા અંગે  
અમારા ગ્રામજનોનો સખ વાંધો છે.

(૧) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવેમાં જે જમીનો કપાત થાય છે તે જમીનો ખેતીની  
આવેલી છે અને વર્ષમાં બે અથવા તેથી વધુ પાક થતા હોવાથી હંમેશા જમીન લીલી રહે છે  
તેમજ તે જમીનના ઉભા પાકને કારણે આજુબાજુ હવાનું પ્રદુષણ ખુબ જ નીચું છે અને ચોખ્ખી  
અને ઓક્સીજન વાળી હવા હંમેશા મળી રહે છે.

(૨) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવે બનાવવામાં આવે જેથી હવાના સ્તરને ઘણું મોટું  
નુકશાન થાય તેમ છે હાલમાં એકપણ નેશનલ કે રાષ્ટ્રીય હાઈવે ન હોવાથી વાહનોની



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અવરજવર ઘણી જ ઓછી છે જેના કારણે હવાના સ્તરમાં હંમેશા ચોખ્ખી અને ઓફસીજ વાળી રહે છે. તેમજ ખેતી પ્રદુષણ પણ નહીંવત પ્રમાણમાં છે અને હાલમાં જે રોડ પસાર થાય છે તે ગામને અડીને આવતો હોવાથી હંમેશા વાહનોના અવાજ રહેશે જેના કારણે ગામની નજીક રાત્રીના સમયે હોર્નના અવાજ તમજ ગાડીઓના અવાજ આવવાથી રાત્રીની શિથિ બગો તેવા સંજોગો ઊભા થઈ શકે તેમ છે રોડનું એલાઈમેન્ટ ગામથી દુર રાખવું હિતાવશ છે.

(૩) અમદાવાદ થી ધોલેરા હાઈવે ગામની નજીક બનતા અત્યાર સુધી ગામના પશુ, પ્રાણી, પક્ષીઓ નિર્ભય રીતે રાત્રી પસાર કરતા હતા અને તે રીતે હંમેશા ટેવાયેલ છે અને હવે પછી રોડ બનાવવામાં આવે તો "NO HORN ZONE" બનાવવો પડે તેમ તે રીતે કરવામાં નહીં આવે તો શરૂઆતના સમયમાં પશુ, પક્ષીઓ પ્રાણીઓની રાત્રી દરમિયાન ઘણી મુશ્કેલી ઊભી થાય તેમજ નિર્ભય રીતે જીવી શકે તેમ નથી જેથી રોડ ઉપર ખેતી નિર્ધનજી ખુજળ જરૂરી છે. તેમજ દુધાળા પશુઓને ધોગ્ય પ્રમાણમાં આરામ ન મળે તો સમય જતા દુધાળા પશુઓથી દુધ ખુજળ ઓછું આવે અને દુધ ઉત્પાદન ઘટે તેમ છે.

(૪) અમારા ગામથી નજીકથી એક્સપ્રેસ રોડ પસાર થાય છે અને ગામની તેમજ બોનોલીક પરિસ્થિતી ખુબજ વરસાદનું પાણી હંમેશા નળ સરોવર બાજુથી તેમજ ઉત્તર દિશાથી ઓડ વટાવણ બાજુ જાય છે અને એક્સપ્રેસ હાઈવે પુર્વ-પાશ્ચિમ બનવાનો છે જેથી ચારે દિશાઓ અલગ હોવાથી પાણીનો વહેણ અટકી પડે તેમ છે જો પાણીના વહેણ અટકી જાય તો પાણીનો ભરાવો થતા લાંબા ગાળે રોગચાળો ફાટી નિકળે તેમજ ગામમાં હંમેશા પાણી ભરાયેલ અને દક્ષિણદિશાની જમીન પાણી વગરની રહે બિના(પ્રજાઉ થઈ જાય જેના કારણે હવા પ્રદુષણ વધુ પડતું ઊભુ થાય તેમજ ખેતી નાષ્ટ પામે તેમ છે. જેથી થીમે થીમે ગામજનો બેકાર થવા માટે જેથી પાણીના નળ-પાણી-લાઈન તથા પાણી નિકાલ જો ધોગ્ય કરવામાં ન આવે તો પાણી વાસુનું પ્રદુષણ વધી જાય આવના હારા જે આયોજન કરવામાં આવેલ છે તેમાં અને રોડ એલાઈમેન્ટમાં ઘણા બધા તથાવો પણ આવે છે. જેના કારણે પાણીનો ભરાવો નિકાસની વ્યવસ્થા કયા પ્રકારે કરેલ છે કે કેમ? તેના નકશા અમો ગામમાં આપવામાં ન આવે ત્યાં સુધી અમારા ગામમાંથી પસાર થતો રોડ બનાવવો હિતાવશ નથી અને તે અંગે ગામનો ખુબજ વાંધો છે.

(૫) અમદાવાદ ધોલેરા હાઈવે બનતા દોહીડની ઘણી સમસ્યા રહેશે ગામની સીમમાં બીલગામ, ભૂંડ, ગાય, બેસો, હરણ, દીપડા, સસલા, બેટા, બકરા તેવા ખીજા પ્રાણીઓ



(૩)

ખુબજ પ્રમાણમાં છે. જે હંમેશા ગામની સીમામાંથી અવર જવર દિવસ નેમજ રાત્રે કરતા હોય અને એક્સપ્રેસ હાઈવે ઉપરથી જો તે પ્રસાર થયા અને ગામના રસ્તા રાખવામાં ન આવે તો અકસ્માતનો ભય ખુબજ વધી જાય તેમ છે. જેથી અકસ્માત નિવારણ અવસ્થા ગોઠવવી જોઈએ અને દર પંદરથી વીસ કિલોમીટરની જગ્યાએ ઈમરજન્સી વ્હીકલ તથા સારવાર કેન્દ્ર રાખવા જોઈએ જેથી ટ્રાફિક સમસ્યા જિમી ન થાય તેમજ અકસ્માત સમસ્યા ઊભી ન થાય તેમજ અકસ્માત થાય તો તાત્કાલીક સારવાર મળી રહે તેમ ન કરવામાં આવે તો વળતો સખત ગ્રામજનોને આવી અવસ્થા કરવા ઊભા પડે રહેતું પડે અથવા ભયનો માહોલ ઊભો થાય તેમ છે એક્સપ્રેસ હાઈવેની નીચે થઈને પ્રસાર થાય તેવી અવસ્થા રાખવા વિનંતી જેના કારણે વાયુ પ્રદુષણ થવો પ્રદુષણ ઓછું થાય. અને આવા સમયે જો સર્વિસ રોડ ન હોય તો રોડની આજુબાજુના વિસ્તારમાં જવા-આવવા માટે ઘણી બધી મુશ્કેલી ઊભી થાય તેમ છે જેથી સર્વિસ રોડ પણ આપવો હિતાવહ અને જરૂરી છે અને જો સર્વિસ રોડ આપવામાં ન આવે તો એક્સપ્રેસ હાઈવેનું આયોજન કરવામાં અમારો સખત વાંધો છે તેવું અગાઉ પણ વાંધામાં એકવીઝેશન મોકીસરને જણાવેલ છે જેથી સર્વિસ રોડ અમારી ગ્રામીણતા છે તે જાને લીધા સિવાય રોડ બનાવવા માટે અમારો વાંધો આપીએ છીએ.

(દ) એક્સપ્રેસ રોડની ઉપર આવતા ગામની નજીક તથા ગામમાં વાયુ પ્રદુષણ તથા ધ્વનિ પ્રદુષણ ના થાય તેવી ધાર્મિક વસ્તુઓ મુકવી જેથી તેવા તમામ પ્રકારના પ્રદુષણ ઉપર નિયંત્રણ કરી દુર કરે અને ગામની અંદર હોર્ન તથા બાઈઓના અવાજ ખુબજ ઓછા રહે.

(ક) ગામની ખેતીનો ઘણો મોટો જમીન જતી હોવાથી ઘણા મોટા ઝાડ તથા કાચની ખેતી નષ્ટ થવાને કારણે કુદરતી વાયુની સ્તર નીચું જાય તેમ છોવાથી રોડની બંને બાજુ જે રસ જાણની લાઈનો કરવામાં આવશે તેમાં મુખ્યત્વે લીમડા, પીંપળા, વડ, આંબલી, ગરબડો તથા જે વૃક્ષો અમારા ગામની બાજુથી જે એક્સપ્રેસ રોડ પ્રસાર થાય છે તેની આજુબાજુમાં જે ઝાડ ઉછેરવાના છે તે પ્રથમથી મોટી સાઈઝના હોવા જોઈએ અને ઉછેર કરવાની જવાબદારી એક્સપ્રેસ હાઈવે ઓથોરીટીની રહેશે જે ઝાડ મોટા ના થાય તો ગ્રામજનો તથા ગામને થતું નુકશાન એક્સપ્રેસ હાઈવે ભરખાઈ કરી આપશે તેવા પ્રકારનો લેખીત બોન્ડ એક્સપ્રેસ હાઈવે તરફથી અમારા ગામને આપવાની રહેશે તેમજ ગામની બીજી પહોર જમીનમાં પણ વૃક્ષ ઉછેર કરવા માટે એક્સપ્રેસ હાઈવે એ અમોને ખાત્રી આપવાની રહેશે, જેથી વાયુ પ્રદુષણ ઓછું થાય અને કુદરતી પર્યાવરણ જાળવાઈ રહે.

(ઈ) એક્સપ્રેસ હાઈવેનું નિર્માણ તથા રે તાલુ કરવામાં આવે ત્યારે માટી પુરાણ કરવામાં આવે તે સમયે માટીના કાણો સવામાં ખુબજ ફેલાઈ જાય તેમ છે અને જેથી માટી પુરાણ વખતે માટી

ઉડે નહીં તેવી રીતે તેમજ માટી પુરાણથી આજુબાજુના ખેતરોને માટીથી નુકશાન ન થાય તે રીતે રોડ કોન્ટ્રાક્ટરની ખાત્રી લેવાની રહેશે. તેમજ તેવી ખાત્રી અમો ગ્રામ પંચાયતમાં જમા કરાવવાની રહેશે. અને જો કોઈપણ ખેતરને માટીની રજ કે રોડ કામના કારણે નુકશાન થશે તો તે તમામ જવાબદાર એક્સપ્રેસ હાઈવે ઓથોરિટીની રહેશે અને નુકશાન ના થાય તેવી રીતે કામગીરી કરવાની રહેશે.

સરખેય  
શિખરેજ ગામ પંચાયત  
તા. ધોલકા, જી. અમદાવાદ.





# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

प्लॉट नं. 3A & 3B, 2nd Floor, Amul Building, Near Dana Bank, Vajrapur Road, Jivraj Park, Ahmedabad - 380 051

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નંબર.એનએચએઆઈ/પીઆઈયુ/અમદાવાદ/જી.પી.સી.બી./2018/1429

તા.13/11/2018

પ્રતિ,

સરપંચશ્રી,

સીધરેજ ગ્રામ પંચાયત.

ગામ. સીધરેજ.

તા.ધોળકા જી.અમદાવાદ.

વિષય- અમદાવાદ જિલ્લામાં તા.13/11/2018 ના રોજ લોક સુનાવાણીમાં સરપંચશ્રી સીધરેજ

તા.ધોળકા ગ્રામ પંચાયતના આવેદન પત્રનો મુદ્દા પ્રમાણે વિજ્ઞાપના જવાબ

| ક્રમ નં. | અરજદારનું નામ તથા સરનામું   | જવાબ  |
|----------|---|---|
| 1        | સરપંચશ્રી,<br>સીધરેજ ગ્રામ પંચાયત,<br>ગામ. સીધરેજ,<br>તા.ધોળકા, જી.અમદાવાદ. | સરકારી નિયમ અનુસાર ખેડૂતોને સહાયકૃષિ વળાંતર મળશે તથા જે પણ ગ્રાડીયો એક્સપ્રેસ વે પર ચાલશે તે સી.પી.સી.બી. ના નિયમાનુસાર ચાલશે. પ્રદુષણ નિયંત્રણ માટે એક્સપ્રેસ લાઈવેલી બન્ને બાજુ વૃક્ષારોપણ કરવામાં આવશે.  |
| 2        |   | અમદાવાદ ધોળકા એક્સપ્રેસ વે ગામથી લગભગ 200 થી 250 મીટર દુરથી પસાર થાવ છે. બાયોલીંગ્વલ "નોઈઝ બેરીયર" (such as tree plantation etc) જેથી ધ્વનિ પ્રદુષણ નહીવત રહેશે. ઓથોરીટી દ્વારા રહેણાંક વિસ્તારમાં "નોઈઝ બેરીયર" ની વ્યવસ્થા કરવામાં આવશે એક્સપ્રેસ વેની બન્ને બાજુ વૃક્ષારોપણ કરવાથી ફવા પ્રદુષણ ઓછું થશે. |
| 3        |   | એક્સપ્રેસ વેની બન્ને બાજુ ઈઆઈએ રીપોર્ટ મુજબ "નોઈઝ બેરીયર" લગાવાથી ધ્વનિ પ્રદુષણથી રાહત મળશે.  |
| 4        |   | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે જેથી કોઈપણ પાણીના વહેણને કે જળસ્રોતને નુકશાન ન થાય તે માટે   |

મુ.પ્ર. ક. સિંઘ

|   |  |   |
|---|--|---|
|   |  | પુરતા પ્રમાણેમાં કલવર્ટ અને સીડી સ્ટ્રેક્ચર બનાવવાની જોગવાઈ છે. જે ભુગર્ભ જળશાસ્ત્રીના રીપોર્ટ પ્રમાણે છે.  |
| 5 |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે, જેથી પશુ-પાણીઓને અવર-જવરમાં કોઈ પણ તકલીફના પ્રડે તે ધ્યાનમાં રાખીને અંકરખાસની (CUP) અને શુષ્ક ઋતુમાં કલવર્ટ ની સુવિધા ઉપલબ્ધ કરાવવામાં આવશે.                                      |
| 6 |  | પ્રશ્ન ફરીથી રીપીટ થાય છે.  |
| 7 |  | પ્રસ્તાવિત પરિયોજનામાં કુલ 66000 વૃક્ષોની વાવણી કરવામાં આવશે. એનએચએઆઈ વૃક્ષો કાપવાની થતી કિંમત ફોરેસ્ટ ડિપાર્ટમેન્ટ ને કેમ્પા ફંડ ના નિયમાનુસાર આપશે, અને કેમ્પા ફંડમાથી ખુલ્લી જગ્યા, બંઝર જમીન અને સરકારી જમીન પર વૃક્ષો લગાવામાં આવશે. |
| 8 |  | પ્રસ્તાવિત પરિયોજનામાં બાંધકામ ના સમયમાં પાણીના ટેકર દ્વારા છંટકાવ કરવામાં આવશે. જેથી માટીના કણ વાયુમાં ન ભળે અને જનજીવનને નુકશાન ન થાય. તેની પુરી તકેદારી રાખવામાં આવશે, જે પર્યાવરણ પ્રબંધન યોજનાની ફંડમાં સામેલ છે.                    |

આપનો આભારી,

આપનો વિશ્વાસુ,

**મુજી. ડી. સિંહ**

મહાપ્રબંધક (ટેકનીકલ) અને

પ્રોજેક્ટ ડાયરેક્ટર, એનએચએઆઈ

પીઆઈવુ અમદાવાદ

નકલ સવિનય રવાના:-

- 1) ચીફ જનરલ મેનેજર તથા રીજીયોનલ ઓફિસરશ્રી, નેશનલ હાઇવે ઓથોરીટી ઓફ ઇન્ડિયા, ગાંધીનગર તરફ જાણ સારું.

અરજદાર:-

ચલોડા ગ્રામ પંચાયત

મોજેગામ- ચલોડા,

તા. ધોળકા, જી. અમદાવાદ

તા. ૦૭/૧૧/૨૦૧૮

(મો)

પ્રતિશ્રી,  
સચિવશ્રી/સભ્ય સચિવશ્રી,  
ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ,  
પર્યાવરણ ભવન, સેક્ટર-૧૦/એ,  
ગાંધીનગર-૩૮૨૮૧૦

**વિષય:** તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચાર દૈનિકમાં પાના નં. ૧૧  
ઉપર આવેલ જાહેર સુચનાના અનુસંધાને વાંધા અરજી.

મે. સાહેબશ્રી,

આપના દ્વારા તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચારના પાના નં. ૧૧ ઉપર  
અમદાવાદ-ધોલેરા એક્સપ્રેસ રોડ (૧૧૦) કી.મી. ના બાંધકામના અનુસંધાને પર્યાવરણીય  
લોક સુનાવણી રાખવામાં આવેલ છે. તેના અનુસંધાને અમો અમારા ગામના પ્રતિનિધી  
તરીકે અમારી રજુઆત કરીએ છીએ જે ધ્યાને લીધા સિવાય રોડ બનાવવાની કામગીરી  
કરવામાં આવશે તો અમારા ગામના પ્રજાજન, પશુઓ, પ્રાણીઓ અને પક્ષીઓને ઘણું વધુ  
નુકશાન થાય તેમ છે. તેમજ તેના કારણે ઘણું મોટું પ્રદુષણ, કુદરતી આફત આવે તેવી પુરેપુરી  
સંભાવના હોવાથી પ્રદુષણ નિયંત્રણના કાયદા ધ્યાને લીધા સિવાય રોડ બનાવવા અંગે  
અમારા ગ્રામજનોનો સખ વાંધો છે.

(૧) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવેમાં જે જમીનો કપાત થાય છે તે જમીનો ખેતીની  
આવેલી છે અને વર્ષમાં બે અથવા તેથી વધુ પાક થતા હોવાથી હંમેશા જમીન બીલી રહે છે  
તેમજ તે જમીનના ઊભા પાકને કારણે આજુબાજુ હવાનું પ્રદુષણ ખુબ જ નીચું છે અને ચોખ્ખી  
અને ઓક્સીજન વાળી હવા હંમેશા મળી રહે છે.

(૨) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવે બનાવવામાં આવે જેથી હવાના સ્તરને ઘણું મોટું  
નુકશાન જાય તેમ છે હાલમાં એકપક્ષ નેશનલ કે રાષ્ટ્રીય હાઈવે ન હોવાથી વાહનોની

પુરી ખેતી બાધરૂઠા હોઈ

અવરજવર વહી જ ઓછી છે જેના કારણે હવાના સારમાં હંમેશા ચોખ્ખી અને ઓડસીજ વાળી રહે છે. તેમજ ખેતી પ્રદુષણ પણ નહીંવત પ્રમાણમાં છે અને હાલમાં જે રોડ પસાર થાય છે તે ગામને અડીને આવતો હોવાથી હંમેશા વાહનોના અવાજ રહેશે જેના કારણે ગામની નજીક રાત્રીના સમયે ધોર્નના અવાજ તેમજ ગાડીઓના અવાજ આવવાથી રાત્રીની ઊંઘ ભગડે તેવા સંજોગો ઊભા થઈ શકે તેમ છે રોડનું એલાઈમેન્ટ ગામથી દુર રાખવું હિતાવસ છે.

(૩) અમદાવાદ થી ખોલેરા હાઈવે ગામની નજીક બનતા અત્યાર સુધી ગામના પશુ, માણી, પક્ષીઓ નિર્ભય રીતે રાત્રી પસાર કરતા હતા અને તે રીતે હંમેશા ટેવાયેલ છે અને હવે પછી રોડ બનાવવામાં આવે તો 'NO HORN ZONE' બનાવવો પડે તેમ તે રીતે કરવામાં નહીં આવે તો શરૂઆતના સમયમાં પશુ, પક્ષીઓ માણીઓની રાત્રી દરમ્યાન ઘણી મુશ્કેલી ઊભી થાય તેમજ નિર્ભય રીતે જીવી શકે તેમ નથી જેથી રોડ ઉપર ખેતી નિયંત્રણ ખુબ જ જરૂરી છે. તેમજ દુધાળા પશુઓને ધોળા પ્રમાણમાં આરામ ન મળે તો સમય જતા દુધાળા પશુઓથી દુધ ખુબ ઓછું આવે અને દુધ ઉત્પાદન ઘટે તેમ છે.

(૪) અમારા ગામથી નજીકથી એક્સપ્રેસ રોડ પસાર થાય છે અને ગામની તેમજ ભૌગોલીક પરિસ્થિતિ ખુબજ વરસાદનું પાણી હંમેશા નળ સરોવર બાજુથી તેમજ ઉત્તર દિશાથી ભોડુ-વટામણ બાજુ જાય છે અને એક્સપ્રેસ હાઈવે પુર્વ-પશ્ચિમ બનવાનો છે જેથી ચારે દિશાઓ તરફ હોવાથી પાણીનો વહેણ અટકી પડે તેમ છે જો પાણીના વહેણ અટકી જાય તો પાણીનો ભરાવો થતા લાંબા ગાળે રોગચાળો ફાટી નિકળે તેમજ ગામમાં હંમેશા પાણી ભરાયેલ અને ક્ષિપ્રદીશાની જેમીન પાણી વગરની રહે બિનઉપજાઉ થઈ જાય જેના કારણે હવા પ્રદુષણ વધુ પડતું ઊંચુ થાય તેમજ ખેતી નષ્ટ પામે તેમ છે. જેથી પીમે પીમે ગામજનો બેઝર થવા માંડે જેથી પાણીના નળ-પાણી-લાઈન તથા પાણી નિકાલ જે ધોળા કરવામાં ન આવે તો પાણી ગામનું પ્રદુષણ વધી જાય આપના દ્વારા જે આયોજન કરવાનાં આવેલ છે તેમાં અને રોડ એલાઈમેન્ટમાં વધારા બધા તથાવો પણ આવે છે. જેના કારણે પાણીનો ભરાવો નિકાસની અવસ્થા ક્યા પ્રકારે કરેલ છે કે કેમ ? તેના નકશા અમો ગામમાં આપવામાં ન આવે ત્યાં સુધી અમારા ગામમાંથી પસાર થતો રોડ બનાવવો હિતાવસ નથી અને તે અંગે ગામનો ખુબજ વાંચો છે.

(૫) અમદાવાદ થી ખોલેરા હાઈવે બનતા ટ્રાફીકની ઘણી સમસ્યા રહેશે ગામની સીમનાં નીકળાય, ખુંડ, ગાય, ભેંસો, હરણ, દીપડા, સસલા, વેટા, બકરા તેવા બીજા પ્રાણીઓ

ખુબજ પ્રમાણમાં છે. જે હંમેશા ગામની સીમામાંથી અવર જવર દિવસ તેમજ રાત્રે કરતા હોમ અને એક્સપ્રેસ હાઈવે ઉપરથી જો તે પસાર થયા અને ગામના રસ્તા રાખવામાં ન આવે તો એક્સ્પ્રેસનો ભય ખુબજ વધી જાય તેમ છે. જેથી એક્સ્પ્રેસ નિવારણ વ્યવસ્થા ગોઠવવી જોઈએ અને દર પંદરથી વીસ કિલોમીટરની જગ્યાએ ઈમરજન્સી વ્હીકલ તથા સારવાર કેન્દ્ર રાખવા જોઈએ જેથી ટ્રાફિક સમસ્યા ઈથી ન થાય તેમજ એક્સ્પ્રેસ સમસ્યા ઈથી ન થાય તેમજ એક્સ્પ્રેસ થાય તો તાત્કાલીક સારવાર મળી રહે તેમ ન કરવામાં આવે તો વખતો વખત ગ્રામજનોને આવી વ્યવસ્થા કરવા ઈલા પગે રહેતુ પડે અથવા ભયનો માહોલ ઈવો થાય તેમ છે એક્સપ્રેસ હાઈવેની નીચે થઈને પસાર થાય તેવી વ્યવસ્થા રાખવા વિનંતી જેવા કારણો વાયુ પ્રદુષણ વનિ પ્રદુષણ ઓછુ થાય. અને આવા સમયે જો સર્વિસ રોડ ન હોય તો રોડની આજુબાજુના વિસ્તારમાં જવા-આવવા માટે વણી બપી મુહેલી ઈથી થાય તેમ છે જેથી સર્વિસ રોડ પણ આપવી હિતાવહ અને જરૂરી છે અને જો સર્વિસ રોડ આપવામાં ન આવે તો એક્સપ્રેસ હાઈવેનું આયોજન કરવામાં અમારો સખત વાંધો છે તેવુ અગાઉ પણ વાંધામાં એક્વીઝિશન ઓફીસરને જણાવેલ છે જેથી સર્વિસ રોડ અમારી પ્રાથમીકતા છે તે ખાતે લીધા સિવાય રોડ બનાવવા માટે અમારો વાંધો આપીએ છીએ.

(દ) એક્સપ્રેસ રોડની ઉપર આવતા ગામની નજીક તથા ગામમાં વાયુ પ્રદુષણ તથા વનિ પ્રદુષણ ના થાય તેવી યાંત્રીક વસ્તુઓ મુકવી જેથી તેવા તથામ પ્રકારના પ્રદુષણ ઉપર નિયંત્રણ કરી દુર કરે અને ગામની અંદર હોર્ન તથા ગાડીઓના અવાજ ખુબજ ઓછા રહે.

(ઈ) ગામની ખેતીની વણી મોટી જમીન જતી હોવાથી ઘણા મોટા ઝાડ તથા કાચમી ખેતી તપ્ત થવાને કારણે કુદરતી વાયુની સ્તર નીચુ જાય તેમ હોવાથી રોડની બંને બાજુ જે રણ જણની લાઈનો કરવામાં આવશે તેમાં મુખ્યત્વે લીમડા, પીપળા, વડ, આંબલી, વરખડો તથા જે વૃક્ષો અમારા ગામની બાજુથી જે એક્સપ્રેસ રોડ પસાર થાય છે તેની બાજુબાજુમાં જે ઝાડ ઉછેરવાના છે તે પ્રથમથી મોટી સાઈઝના હોવા જોઈએ અને ઉછેર કરવાની જવાબદારી એક્સપ્રેસ હાઈવે ઓથોરીટીની રહેશે જે ઝાડ મોટા ના થાય તો ગ્રામજનો તથા ગામને થતુ મુકશાન એક્સપ્રેસ હાઈવે ભરપાઈ કરી આપશે તેવા પ્રકારની લેખીત બાંન્ડ એક્સપ્રેસ હાઈવે તરફથી અમારા ગામને આપવાનો રહેશે તેમજ ગામની બીજી પડતર જમીનમાં પણ વૃક્ષ ઉછેર કરવા માટે એક્સપ્રેસ હાઈવે એ અમોને ખાત્રી આપવાની રહેશે, જેથી વાયુ પ્રદુષણ ઓછુ થાય અને કુદરતી પર્યાવરણ જળવાઈ રહે.

(ઈ) એક્સપ્રેસ હાઈવેનું નિર્માણ જ્યારે ચાલુ કરવામાં આવે ત્યારે માટી પુરણ કરવામાં આવે તે સમયે માટીના કચો હવામાં ખુબજ ફેલાઈ જાય તેમ છે અને જેથી માટી પુરણ વખતે માટી પુરણી ના થાય તેવી રીતે

ઉંડે નહીં તેવી રીતે તેમજ માટી પુરાણથી આજુબાજુના ખેતરોને માટીથી નુકશાન ન થાય તે રીતે રોડ કોન્ટ્રાક્ટરની ખાત્રી લેવાની રહેશે. તેમજ તેવી ખાત્રી અમો ગ્રામ પંચાયતમાં જમા કરાવવાની રહેશે. અને જો કોઈપણ ખેતરને માટીની રજ કે રોડ કામના કારણે નુકશાન થશે તો તે તમામ જવાબદાર એક્સપ્રેસ હાઈવે ઓર્થોરીટીની રહેશે અને નુકશાન ના થાય તેવી રીતે કામગીરી કરવાની રહેશે.

ਪ੍ਰਤੀਯੋਗ ਪਾਠਸ਼ਾਲਾ

[illegible]





# ભારતીય રાષ્ટ્રીય રાજમાર્ગ પ્રાધિકરણ

(સડક પરિવહન ઓર રાજમાર્ગ મંત્રાલય)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

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તા.૧૩/૧૧/૨૦૧૮

પ્રતિ,

પુરી બહેન બી. સરપંચશ્રી

ચલોડા ગ્રામ પંચાયત,

ગામ - ચલોડા,

તા.ધોળકા, જી.અમદાવાદ

વિષય - અમદાવાદ જિલ્લામાં તા.૧૩/૧૧/૨૦૧૮ ના રોજ લોક સુનાવણીમાં સરપંચશ્રી ચલોડા તા.ધોળકા ગ્રામ પંચાયતના આવેદન પત્રનો મુક્કા પ્રમાણે વિગતવાર જવાબ

| ક્રમ નં. | અરજદારનું નામ તથા સરનામું  | જવાબ  |
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| ૧        | પુરી બહેન બી. સરપંચશ્રી.<br>ચલોડા ગ્રામ પંચાયત.<br>ગામ - ચલોડા,<br>તા.ધોળકા, જી.અમદાવાદ. | સરકારી નિયમ અનુસાર બેડુતોને સફાવરૂપ વળતર મળશે તથા જે પણ ગાડીઓ એક્સપ્રેસ વે પર ચાલશે તે સી.પી.સી.બી. ના નિયમાનુસાર ચાલશે. પ્રદુષણ નિયંત્રણ માટે એક્સપ્રેસ હાઈવેની બન્ને બાજુ વૃક્ષારોપણ કરવામાં આવશે.  |
| ૨        |  | અમદાવાદ ધોલેરા એક્સપ્રેસ વે ગામથી લગભગ ૨૦૦ થી ૨૫૦ મીટર દુરથી પસાર થાય છે. બાવીસોજીડલ "નોઈંગ બેરીયર" (such as tree plantation etc) જેથી ધ્વનિ પ્રદુષણ નહીવત રહેશે. બોધોરીટી દ્વારા રહેણાંક વિસ્તારમાં "નોઈંગ બેરીયર" ની વ્યવસ્થા કરવામાં આવશે. એક્સપ્રેસ વેની બન્ને બાજુ વૃક્ષારોપણ કરવાથી હવા પ્રદુષણ ઓછું થશે. |
| ૩        |  | એક્સપ્રેસ વેની બન્ને બાજુ હિમાઈએ રીપોર્ટ મુજબ "નોઈંગ બેરીયર" લગાવાથી ધ્વનિ પ્રદુષણથી રાહત મળશે.   |
| ૪        |  | પ્રસ્તાવિત પરિયોજનાની કિઝર્ફન એવી રીતે બનાવવામાં આવી છે. જેથી કોઈપણ પાણીના વહેણને કે જળસ્રોતને નુકસાન ન થાય તે માટે   |

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|   |  | પુરતા પ્રમાણેમાં કલવર્ટ અને સીડી સ્ટ્રેક્ચર બનાવવાની જોગવાઈ છે, જે ભુગલ જળશાસ્ત્રીના રીપોર્ટ પ્રમાણે છે.  |
| 5 |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે, જેથી પશુ-પ્રાણીઓને અવર-જવરમાં કોઈ પણ તકલીફના પડે તે ધ્યાનમાં રાખીને અંકરવાસની (CWP) અને શુષ્ક ઋતુમાં કલવર્ટ ની સુવિધા ઉપલબ્ધ કરાવવામાં આવશે.  |
| 6 |  | પ્રજ્ઞ ફરીથી રીપીટ થાય છે.  |
| 7 |  | પ્રસ્તાવિત પરિયોજનામાં કુલ 66000 વૃક્ષોની વાવણી કરવામાં આવશે. એનએચએઆઈ વૃક્ષો કાપવાની થતી કિંમત ફોરેસ્ટ ડિપાર્ટમેન્ટ ને કેમ્પા ફંડ ના નિયમાનુસાર આપશે. અને કેમ્પા ફંડમાંથી ખુલ્લી જગ્યા, બંડર જમીન અને સરકારી જમીન પર વૃક્ષો લગાવવામાં આવશે. |
| 8 |  | પ્રસ્તાવિત પરિયોજનામાં બાંધકામ ના સમયમાં ખાણીના ટેકર દ્વારા છંટકાવ કરવામાં આવશે, જેથી માટીના કણ વાયુમાં ન ભળે અને જનજીવનને નુકશાન ન થાય. તેની પુરી તકેદારી રાખવામાં આવશે. જે પર્યાવરણ પંબંધન યોજનાની ફંડમાં સામેલ છે.                       |

આપનો આભારી,

આપનો વિશ્વાસુ,

મુખ્ય ડૉ. જિન

મહાપ્રબંધક (ટેકનીકલ) અને

પ્રોજેક્ટ ડાયરેક્ટર, એનએચએઆઈ

પીઆઈયુ અમદાવાદ

નકલ સવિનય રવાના:-

- 1) ચીફ જનરલ મેનેજર તથા રીજીયોનલ ઓફિસરશ્રી, નેશનલ હાઇવે ઓથોરીટી ઓફ ઇન્ડિયા, ગાંધીનગર તરફ જાણ સારું.



અરજદાર:-

તાજપુર ગ્રામ પંચાયત

મોજંગામ- તાજપુર, તા. સાબંદ,

જી. અમદાવાદ

તા. ૦૭/૧૧/૨૦૧૮

(મો)

પ્રતિશ્રી,  
સચિવશ્રી/સામ્ય સચિવશ્રી,  
ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ,  
પર્યાવરણ ભવન, સેક્ટર-૧૦/એ,  
ગાંધીનગર-૩૮૨૯૧૦

**વિષય:** તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચાર દૈનિકમાં પાના નં. ૧૧  
ઉપર આવેલ જાહેર સુચનાના અનુસંધાને વાંધા અરજી.

મે. સાહેબશ્રી,

આપના દ્વારા તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચારના પાના નં. ૧૧ ઉપર અમદાવાદ-પોલેરા એક્સપ્રેસ રોડ (૧૧૦) કી. મી. ના બાંધકામના અનુસંધાને પર્યાવરણીય લોક સુનાવણી રાખવામાં આવેલ છે. તેના અનુસંધાને અમો અમારા ગામના પ્રતિનિધી તરીકે અમારી રજુઆત કરીએ છીએ જે ધ્યાને લીધા સિવાય રોડ બનાવવાની કામગીરી કરવામાં આવશે તો અમારા ગામના પ્રજાજન, પશુઓ, પ્રાણીઓ અને પક્ષીઓને ઘણુ વધુ નુકશાન થાય તેમ છે. તેમજ તેના કારણે ઘણુ મોટું પ્રદુષણ, કુદરતી આફત આવે તેવી પુરેપુરી સંભાવના હોવાથી પ્રદુષણ નિયંત્રણના કાયદા ધ્યાને લીધા સિવાય રોડ બનાવવા અંગે અમારા ગ્રામજનોનો સખ વાંધો છે.

(૧) અમદાવાદથી પોલેરા એક્સપ્રેસ હાઈવેમાં જે જમીનો કપાત થાય છે તે જમીનો ખેતીની આવેલી છે અને વર્ષમાં બે અથવા તેથી વધુ પાક થતા હોવાથી હંમેશા જમીન લીલી રહે છે તેમજ તે જમીનના ઉભા પાકને કારણે આજુબાજુ હવાનુ પ્રદુષણ ખુબ જ નીચુ છે અને ચોખ્ખી અને ઓકસીજન લાભી હવા હંમેશા મળી રહે છે.

(૨) અમદાવાદથી પોલેરા એક્સપ્રેસ હાઈવે બનાવવામાં આવે જેથી હવાના સ્તરને ઘણુ મોટું નુકશાન જાય તેમ છે હાલમાં એકપક્ષ નેશનલ કે રાષ્ટ્રીય હાઈવે ન હોવાથી વાહનોની

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ደብዳቤ በሐላፊነት ሆኖ በሰነድ ተጽባብሮ በጽሑፍ ላይ በሚጻፍበት ጊዜ ለሕግ ተቀባይነት የሚያስፈልግ የሆኑትን ሰነዶች ማቅረብ አለበት፡፡ ለዚህም ምሳሌ ለጽሑፍ ላይ በሚጻፍበት ጊዜ ለሕግ ተቀባይነት የሚያስፈልግ የሆኑትን ሰነዶች ማቅረብ አለበት፡፡ ለዚህም ምሳሌ ለጽሑፍ ላይ በሚጻፍበት ጊዜ ለሕግ ተቀባይነት የሚያስፈልግ የሆኑትን ሰነዶች ማቅረብ አለበት፡፡

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[illegible]

(c)



ખુબજ પ્રમાણમાં છે. જે હંમેશા ગામની સીમામાંથી અવર જવર દિવસ તેમજ રાત્રે કરતા હોય અને એક્સપ્રેસ હાઈવે ઉપરથી જો તે પસાર થયા અને ગામના રસ્તા રાખવામાં ન આવે તો અકસ્માતનો ભય ખુબજ વધી જાય તેમ છે. જેથી અકસ્માત નિવારણ અવસ્થા ચોક્કસથી જોઈએ અને દરેક પંદરથી વીસ કિલોમીટરની જગ્યાએ ઈમરજન્સી બીકલ તથા સારવાર કેન્દ્ર રાખવા જોઈએ જેથી ટ્રાફિક સમસ્યા ઊભી ન થાય તેમજ અકસ્માત સમસ્યા ઊભી ન થાય તેમજ અકસ્માત થાય તો તાત્કાલીક સારવાર મળી રહે તેમ ન કરવામાં આવે તો વાળતો વળતા ગ્રામજનોને આવી અવસ્થા કરવા કિચ્કા પણ રહેવું પડે અથવા ભયનો માહોલ ઊભો થાય તેમ છે એક્સપ્રેસ હાઈવેની નીચે થઈને પસાર થાય તેવી અવસ્થા રાખવા વિનંતી જેના કારણે વાયુ પ્રદુષણ ખનિ પ્રદુષણ ઓછું થાય. અને આવા સમયે જો સર્વિસ રોડ ન હોય તો રોડની આજુબાજુના વિસ્તારમાં જવા આવવા માટે બસી બપી મુકેલી ઊભી થાય તેમ છે જેથી સર્વિસ રોડ પણ આપવી હિતાવેલ અને જરૂરી છે અને જો સર્વિસ રોડ આપવામાં ન આવે તો એક્સપ્રેસ હાઈવેનું આપી જન કરવામાં અમારો સખત વાંધો છે તેવું અગાઉ પણ વાંધામાં એક્વીઝિશન આફીસરને જણાવેલ છે જેથી સર્વિસ રોડ અમારી પ્રાથમીકતા છે તે ધ્યાને લીધા સિવાય રોડ બનાવવા માટે અમારો વાંધો આપીએ છીએ.

(૬) એક્સપ્રેસ રોડની ઉપર આવતા ગામની નજીક તથા ગામમાં વાયુ પ્રદુષણ તથા ખનિ પ્રદુષણ ના થાય તેવી યાંત્રીક વસ્તુઓ મુકવી જેથી તેવા તમામ પ્રકારના પ્રદુષણ ઉપર નિયંત્રણ કરી દુર કરે અને ગામની અંદર હોત તથા ગાડીઓના અવાજ ખુબજ ઓછા રહે.

(૭) ગામની ખેતીની બસી મોટી જમીન જતી હોવાથી બસા મોટા ઝાડ તથા કાચમી ખેતી નફર થવાને કારણે કુદરતી વાયુની સ્તર નીચું જાય તેમ હોવાથી રોડની અંતે બાજુ જે તજ જણની બાઈનો કરવામાં આવશે તેમાં મુખ્યત્વે લીમડા, પીપળા, વડ, આંબળી, વરખડો તથા જે વૃક્ષો અમારા ગામની બાજુથી જે એક્સપ્રેસ રોડ પસાર થાય છે તેની આજુબાજુમાં જે ઝાડ ઉછેરવાના છે તે પ્રથમથી મોટી સાઈઝના હોવા જોઈએ અને ઉછેર કરવાની જવાબદારી એક્સપ્રેસ હાઈવે ઓળીરોટીની રહેશે જે ઝાડ મોટા ના થાય તો ગ્રામજનો તથા ગામન થતુ નુકશાન એક્સપ્રેસ હાઈવે ભરપાઈ કરી આપશે તેવા પ્રકારનો લેખીત બોન્ડ એક્સપ્રેસ હાઈવે તરફથી અમારા ગામને આપવાનો રહેશે તેમજ ગામની બીજી પડતર જમીનમાં પણ વૃક્ષ ઉછેર કરવા માટે એક્સપ્રેસ હાઈવે એ અમોને ખાત્રી આપવાની રહેશે, જેથી વાયુ પ્રદુષણ ઓછું થાય અને કુદરતી પર્યાવરણ જળવાઈ રહે.

(૮) એક્સપ્રેસ હાઈવેનું નિર્માણ જ્યારે ચાલુ કરવામાં આવે ત્યારે માટી પુરાણ કરવાનાં આવે તે સમયે માટીના કંકો હવામાં ખુબજ ફેલાઈ જાય તેમ છે અને જેથી માટી પુરાણ વખતે માટી

(૪)

ઉડે નહીં તેવી રીતે તેમજ માટી પુરાણથી આજુબાજુના ખેતરોને માટીથી નુકશાન ન થાય તે રીતે રોડ કોન્ટ્રાક્ટરની ખાત્રી લેવાની રહેશે. તેમજ તેવી ખાત્રી અમો આમ પંચાયતમાં જમા કરાવવાની રહેશે. અને જો કોઈપણ ખેતરને માટીની રજ કે રોડ કામના કારણે નુકશાન થશે તો તે તમામ જવાબદાર એક્સપ્રેસ હાઈવે ઓથોરિટીની રહેશે અને નુકશાન ના થાય તેવી રીતે કામગીરી કરવાની રહેશે.

આમ અમારા ઉપરોક્ત વાંધા ધ્યાને લીધા સિવાય એક્સપ્રેસ રોડ બનાવવા અંગેની પરવાનગી ન આપવા અમારી વિનંતી છે.

Amul  
ગાંધી રામ પંચાયત  
સામયી. અમુતમાલ લી માર્કેટ







# ભારતીય રાષ્ટ્રીય રાજમાર્ગ પ્રાધિકરણ

(સડક પરિવહન ઓર રાજમાર્ગ મંત્રાલય)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

પંજાઈ : 3A & 3B, 2nd Floor, Amul Building, N. Dena Bank, Vejalpur Road, Jivraj Park, Ahmedabad - 380 051

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બંબર, બેનબેચએઆઈ/પીઆઈથુ/અમદાવાદ/જી.પી.સી.બી./2018 3042

તા. 13/11/2018

પ્રતિ

અમરીતભાઈ બી.ચૌહાણ, સંરંપંચશ્રી,

તાજપુર ગ્રામ પંચાયત,

ગામ : તાજપુર,

તા.સાંશદ, જી-અમદાવાદ

વિષય- અમદાવાદ જિલ્લામાં તા.13/11/2018 ના રોજ લોક સુનાવણીમાં સરંપંચશ્રી તાજપુર તા.સાંશદ ગ્રામ પંચાયતના આવેદન પત્રનો મુદ્દા પ્રમાણે વિચિતવાર જવાબ

| ક્રમ નં. | અરજદારનું નામ તથા સરનામું  | જવાબ  |
|----------|--|---|
| 1        | અમરીતભાઈ બી.ચૌહાણ, સંરંપંચશ્રી,<br>તાજપુર ગ્રામ પંચાયત,<br>ગામ : તાજપુર,<br>તા.સાંશદ, જી-અમદાવાદ | સરકારી નિયમ અનુસાર ખેડૂતોને સહાયરૂપ વળતર મળશે તથા જે પણ ગાદીઓ એક્સપ્રેસ વે પર ચાલશે તે સી.પી.સી.બી. ના નિયમાનુસાર ચાલશે. પ્રદુષણ નિયંત્રણ માટે એક્સપ્રેસ હાઈવેની બન્ને બાજુ વૃક્ષારોપણ કરવામાં આવશે.  |
| 2        |  | અમદાવાદ ધોલેરા એક્સપ્રેસ વે ગામથી લગભગ 200 થી 250 મીટર દુરથી પસાર થાય છે. બાયોલોજીકલ "નોઈઝ બેરીયર" (shrub plantation etc) જેથી ધ્વનિ પ્રદુષણ નહીવત રહેશે. ઓથોરીટી દ્વારા રહેણાંક વિસ્તારમાં "નોઈઝ બેરીયર" ની વ્યવસ્થા કરવામાં આવશે. એક્સપ્રેસ વેની બન્ને બાજુ વૃક્ષારોપણ કરવાથી હવા પ્રદુષણ ઓછું થશે. |
| 3        |  | એક્સપ્રેસ વેની બન્ને બાજુ ઈઆઈએ સીપોર્ટ મુજબ "નોઈઝ બેરીયર" લગાવાથી ધ્વનિ પ્રદુષણથી સહન મળશે.   |
| 4        |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે, જેથી ડોઈપણ પાણીના વહેણને કે જળસ્રોતને નુકશાન ન થાય તે માટે  |

મુજબ

|   |  |  |
|---|--|--|
|   |  | પુરતા પ્રમાણેમાં કલવર્ટ અને સીડી સ્ટ્રેક્ચર બનાવવાની જોગવાઈ છે. જે ભુગર્ભ જળશાસ્ત્રીના રીપોર્ટ પ્રમાણે છે.   |
| 5 |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે. જેથી પશુ-પાણીઓને અવર-જવરમાં કોઈ પણ તકલીફના પડે તે ધ્યાનમાં રાખીને અંડરપાસની (CUP) અને શુષ્ક કનુમાં કલવર્ટ ની સુવિધા ઉપલબ્ધ કરાવવામાં આવશે.   |
| 6 |  | પ્રશ્ન ફરીથી રીપીટ થાય છે.   |
| 7 |  | પ્રસ્તાવિત પરિયોજનામાં કુલ 66000 વૃક્ષોની વાવણી કરવામાં આવશે. એનએચએઆઈ વૃક્ષો કાપવાની થતી કિંમત ક્રોસ્ટ ડિપાર્ટમેન્ટ ને કેમ્પા ફંડ ના નિયમાનુસાર આપશે. અને કેમ્પા ફંડમાંથી ખુલ્લી જગ્યા, બંગ્લર જમીન અને સરકારી જમીન પર વૃક્ષો લગાવામાં આવશે. |
| 8 |  | પ્રસ્તાવિત પરિયોજનામાં બાધકામ ના સમયમાં પાણીના ટેકર દ્વારા છંટકાવ કરવામાં આવશે. જેથી માટીના કણ વાયુમાં ન ભળે અને જનજીવનને નુકશાન ન થાય. તેની પુરી તકેદારી રાખવામાં આવશે. જે પર્યાવરણ પ્રબંધન યોજનાની ફંડમાં સામેલ છે.                        |

આપનો આભારી.

આપનો વિશ્વાસુ,

**મુનમ ર. સિંહ**

મહાપ્રબંધક (ટેકનીકલ) અને

પ્રોજેક્ટ ડાયરેક્ટર, એનએચએઆઈ

પીઆઈથુ અમદાવાદ

નકલ સંવેનય રવાના:-

- 1) ચીફ જનરલ મેનેજર તથા રીજીયોનલ ઓફિસરશ્રી, નેશનલ હાઇવે ઓથોરીટી ઓફ ઇન્ડિયા, ગાંધીનગર તરફ જાણ સારૂ.

અરજદાર:-

વાસણા ચાચરવાડી ગ્રામ પંચાયત  
મોજેગામ- વાસણા ચાચરવાડી,  
તા. સાણંદ, જી. અમદાવાદ  
તા. ૦૭/૧૧/૨૦૧૮  
(મો)

પ્રતિશ્રી,  
સચિવશ્રી/સામ્ય સચિવશ્રી,  
ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ,  
પર્યાવરણ ભવન, સેક્ટર-૧૦/એ,  
ગાંધીનગર-૩૮૨૬૧૦

વિષય: તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચાર દૈનિકમાં પાના નં. ૧૧  
ઉપર આવેલ જાહેર સુચનાના અનુસંધાને વાંધા અરજી.

મે. સાહેબશ્રી,

આપના દ્વારા તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચારના પાના નં. ૧૧ ઉપર અમદાવાદ ધોલેરા એક્સપ્રેસ રોડ (૧૧૦) કી. મી. ના બાંધકામના અનુસંધાને પર્યાવરણીય લોક સુનાવણી રાખવામાં આવેલ છે. તેના અનુસંધાને અમો અમારા ગામના પ્રતિનિધી તરીકે અમારી રજુઆત કરીએ છીએ જે ધ્યાને લીધા સિવાય રોડ બનાવવાની કામગીરી કરવામાં આવશે તો અમારા ગામના પ્રજાજન, પશુઓ, પ્રાણીઓ અને પક્ષીઓને ઘણું વધુ નુકશાન થાય તેમ છે. તેમજ તેના કારણે ઘણું મોટું પ્રદુષણ, કુદરતી આફત આવે તેવી પુરેપુરી સંભાવના હોવાથી પ્રદુષણ નિયંત્રણ કાયદા ધ્યાને લીધા સિવાય રોડ બનાવવા અંગે અમારા ગ્રામજનોનો સખ વાંધો છે.

(૧) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવેમાં જે જમીનો કપાત થાય છે તે જમીનો ખેતીની આવેલી છે અને વર્ષમાં બે અથવા તેથી વધુ પાક થતા હોવાથી હંમેશા જમીન લીલી રહે છે તેમજ તે જમીનના ઉભા પાકને કારણે આજુબાજુ હવાનું પ્રદુષણ ખુબ જ નીચું છે અને ચોખ્ખી અને ઓક્સીજન વાળી હવા હંમેશા મળી રહે છે.

(૨) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવે બનાવવામાં આવે જેથી હવાના સ્તરને ઘણું મોટું નુકશાન જાય તેમ છે હાલમાં એકપણ નેશનલ કે રાષ્ટ્રીય હાઈવે ન હોવાથી વાહનોની



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અવરજવર પક્ષી જે ઓછી છે જેના કારણે હવાના સ્તરમાં હંમેશા ચોખ્ખી અને ઓક્સીજન વાળી રહે છે. તેમજ પ્વની પ્રદુષણ પણ નહીવત પ્રમાણમાં છે અને હાલમાં જે રોડ પસાર થાય છે તે ગામને અડીને આવતો હોવાથી હંમેશા વાહનોના અવાજ રહેશે જેના કારણે ગામની નજીક રાત્રીના સમયે હોર્નના અવાજ તેમજ ગાડીઓના અવાજ આવવાથી રાત્રીની ઉંઘ બગડે તેવા સંજોગો ઉભા થઈ શકે તેમ છે રોડનું એલાઈમેન્ટ ગામથી દુર રાખવું હિતાવસ છે.

(૩) અમદાવાદ થી પોલેરા હાઈવે ગામની નજીક બનતા અત્યાર સુધી ગામના પશુ, પાણી, પક્ષીઓ નિર્ભય રીતે રાત્રી પસાર કરતા હતા અને તે રીતે હંમેશા ટેવાયેલ છે અને હવે પછી રોડ બનાવવામાં આવે તો 'NO HORN ZONE' બનાવવો પડે તેમ તે રીતે કરવામાં નહીં આવે તો શરૂઆતના સમયમાં પશુ, પક્ષીઓ પાણીઓની રાત્રી દરમ્યાન વધી પુશ્કેલી ઉભી થાય તેમજ નિર્ભય રીતે જીવી શકે તેમ નથી જેથી રોડ ઉપર પ્વની નિર્વજણ ખુજબ જરૂરી છે. તેમજ દુધાળા પશુઓને યોગ્ય પ્રમાણમાં આરામ ન મળે તો સમય જતા દુધાળા પશુઓથી દુધ ખુજબ ઓછું આવે અને દુધ ઉત્પાદન ઘટે તેમ છે.

(૪) અમારા ગામથી નજીકથી એક્સપ્રેસ રોડ પસાર થાય છે અને ગામની તેમજ ભૌગોલીક પરિસ્થિતી ખુબજ વરસાદનું પાણી હંમેશા નળ સરોવર બાજુથી તેમજ (તર દિશાથી બોરું-વટામણ બાજુ જાય છે અને એક્સપ્રેસ હાઈવે પુર્વ-પશ્ચિમ બનવાનો છે જેથી ગારે દિશાઓ અલગ હોવાથી પાણીનો વહેણ અટકી પડે તેમ છે જો પાણીના વહેણ અટકી જાય તો પાણીનો ભરાવો થતા હાંબા ગાળે રોગચાળો ફાટી નિકળે તેમજ ગામમાં હંમેશા પાણી ભરાયેલ અને ઠંડિજદીશાની જમીન પાણી વગરની રહે બિનઉપજાઉં થઈ જાય જેના કારણે હવા પ્રદુષણ વધુ પડતું ઉભુ થાય તેમજ ખેતી તથા પામે તેમ છે. જેથી પીમે પીમે ગામજનો બેકાર થવા માંડે જેથી પાણીના નળ-પાણી-હાઈવે તથા પાણી નિકાલ જો યોગ્ય કરવામાં ન આવે તો પાણી વાલુંનું પ્રદુષણ તથા જાય આપના દ્વારા જે આયોજન કરવામાં આવેલ છે તેમાં બને રોડ એલાઈમેન્ટમાં ઘણા બધા તથાવો પણ આવે છે. જેના કારણે પાણીનો ભરાવો નિકાલની વ્યવસ્થા ક્યા પ્રકારે ફરેલ છે કે કેમ? તેના નકશા અમાં ગામમાં આપવામાં ન આવે ત્યાં સુધી અમારા ગામનાથી પસાર થતો રોડ બનાવવો હિતાવસ નથી અને તે અંગે ગામનો ખુબજ ચાંપો છે.

(૫) અમદાવાદ પોલેરા હાઈવે બનતા ટ્રાફિકની વધી સમસ્યા રહેશે ગામની સીમમાં નીલગાય, ભુંડ, ગાય, ભેંસો, હરણ, દીપડા, સસલા, બેટા, બકરા તેવા બીજા શાલીઓ

પ્રબળ પ્રમાણમાં છે. જે હંમેશા ગામની સીમામાંથી અવર જવર દિવસ તેમજ રાત્રે કરતા હોય અને એક્સપ્રેસ હાઈવે ઉપરથી જો તે પસાર થયા અને ગામના રસ્તા રાખવામાં ન આવે તો એક્સ્પ્રેસનો ભય પ્રબળ વધી જાય તેમ છે. જેથી એક્સ્પ્રેસ નિવારણ વ્યવસ્થા ગોઠવવી જોઈએ અને દર પંદરથી વીસ કિલોમીટરની જગ્યાએ ઈમરજન્સી બીકલ તથા સારવાર કેન્દ્ર રાખવા જોઈએ જેથી ટ્રાફિક સમસ્યા ઉભી ન થાય તેમજ એક્સ્પ્રેસ સમસ્યા ઉભી ન થાય તેમજ એક્સ્પ્રેસ થાય તો તાત્કાલીક સારવાર મળી રહે તેમ ન કરવામાં આવે તો વખતો વખત ગ્રામજનોને આવી વ્યવસ્થા કરવા કિત્તા પગે રહેવું પડે અથવા વખતો માહોલ ઉભો થાય તેમ છે એક્સપ્રેસ હાઈવેની નીચે માર્ગને પસાર થાય તેવી વ્યવસ્થા રાખવા વિનંતી જેના કારણે વાયુ પ્રદુષણ ખાનિ પ્રદુષણ ઓછું થાય. અને આવા સમયે જો સર્વિસ રોડ ન હોય તો રોડની આજુબાજુના વિસ્તારમાં જવા-આવવા માટે વહી બધી પુરેલી ઉભી થાય તેમ છે જેથી સર્વિસ રોડ પણ આવવો હિતાવહ અને જરૂરી છે અને જો સર્વિસ રોડ આપવામાં ન આવે તો એક્સપ્રેસ હાઈવેનું આયોજન કરવામાં અમારો સખત વધો છે તેવું અગાઉ પણ વાંધામાં એકવીઝેશન ઓફીસરને જણાવેલ છે જેથી સર્વિસ રોડ અમારી પ્રાથમીકતા છે તે બાને લીધે સિવાય રોડ બનાવવા માટે અમારો વાંધો આપીએ છીએ.

(દ) એક્સપ્રેસ રોડની ઉપર આવતા ગામની નજીક તથા ગામમાં વાયુ પ્રદુષણ તથા ખાનિ પ્રદુષણ ના થાય તેવી ધોતીક વસ્તુઓ મુકવી જેથી તેવા તમામ પ્રકારના પ્રદુષણ ઉપર નિયંત્રણ કરી દુર કરે અને ગામની અંદર હોર્ન તથા ગાડીઓના અવાજ પ્રબળ ઓછા રહે.

(ક) ગામની ખેતીની વાળી મોટી જમીન જતી હોવાથી ઘણા પોટા ઝાડ તથા કાચમી ખેતી મજા થવાને કારણે કુદરતી વાયુની કાર નીચું જાય તેમ હોવાથી રોડની બંને બાજુ જ તરફ જમીન બાંધવી કરવામાં આવશે તેમાં મુખ્યત્વે લીમડા, પીપળા, વડ, આંબલી, વરમગ્ગે તથા જે વૃક્ષો અમારા ગામની બાજુથી જે એક્સપ્રેસ રોડ પસાર થાય છે તેની આજુબાજુમાં જે ઝાડ ઉછેરવાના છે તે પ્રથમથી મોટી સાઈઝના હોવા જોઈએ અને ઉછેર કરવાની જવાબદારી એક્સપ્રેસ હાઈવે ઓથોરીટીની રહેશે જે ઝાડ મોટા ના થાય તો ગ્રામજનો તથા ગામને થતું નુકસાન એક્સપ્રેસ હાઈવે ભરપાઈ કરી આપશે તેવા પ્રકારનો લેખીત બોન્ડ એક્સપ્રેસ હાઈવે તરફથી અમારા ગામને આપવાનો રહેશે તેમજ ગામની બીજી ધડતર જમીનમાં પણ વૃક્ષ ઉછેર કરવા માટે એક્સપ્રેસ હાઈવે એ અમોને ખાતરી આપવાની રહેશે. જેથી વાયુ પ્રદુષણ ઓછું થાય અને કુદરતી પર્યાવરણ જળવાઈ રહે.

(ઈ) એક્સપ્રેસ હાઈવેનું નિર્માણ જ્યારે ચાલુ કરવામાં આવે ત્યારે માટી પુરાણ કરવામાં આવે તે સમયે માટીના કણો છવાયા પ્રબળ કેલાઈ જાય તેમ છે અને જેથી માટી પુરાણ થતે માટી

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ઉડે નહીં તેવી રીતે તેમજ માટી પુરાણથી આજુબાજુના ખેતરોને માટીથી નુકશાન ન થાય તે રીતે રોડ કોન્ટ્રાક્ટરની ખાત્રી લેવાની રહેશે. તેમજ તેવી ખાત્રી અમો ગ્રામ પંચાયતમાં જમા કરાવવાની રહેશે. અને જો કોઈપણ ખેતરને માટીની રજ કે રોડ કામના કારણે નુકશાન થશે તો તે તમામ જવાબદાર એક્સપ્રેસ હાઈવે ઓર્થોરીટીની રહેશે અને નુકશાન ના થાય તેવી રીતે કામગીરી કરવાની રહેશે.

આમ અમારા ઉપરોક્ત વાંધા પ્યાને લીધા સિવાય એક્સપ્રેસ રોડ બનાવવા અંગેની પરવાનગી ન આપવા અમારી વિનંતી છે.







# ભાસ્તીય રાષ્ટ્રીય રાજમાર્ગ પ્રાધિકરણ

(સડક પરિવહન ઓર રાજમાર્ગ મંત્રાલય)

**National Highways Authority of India**

(Ministry of Road Transport & Highways)

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તા. ૧૩/૧૧/૨૦૧૮

પ્રતિ,

સંરખંચશ્રી,

વાસણ ચાચણવાડી ગ્રામ પંચાયત,

ગામ- વાસણ ચાચણવાડી,

તા. સાંણદ, જી-અમદાવાદ.

વિષય- અમદાવાદ જિલ્લામાં તા. ૧૩/૧૧/૨૦૧૮ ના રોજ લોક સુનાવણીમાં સંરખંચશ્રી વાસણ ચાચણવાડી તા. સાંણદ ગ્રામ પંચાયતના આવેદન પત્રનો મુદ્દા પ્રમાણે વિગતવાર જવાબ

| ક્રમ નં. | અરજદારનું નામ તથા સરનામું   | જવાબ  |
|----------|---|---|
| 1        | સંરખંચશ્રી,<br>વાસણ ચાચણવાડી ગ્રામ પંચાયત,<br>ગામ- વાસણ ચાચણવાડી,<br>તા. સાંણદ, જી-અમદાવાદ. | સરકારી નિયમ અનુસાર ખેડૂતોને સહાયરૂપ બળતર મળશે તથા જે પણ ગાડીઓ એક્સપ્રેસ લે પર ચાલશે તે સી.પી.સી.બી. ના નિયમાનુસાર ચાલશે. પ્રદુષણ નિયંત્રણ માટે એક્સપ્રેસ કાર્ડબેની બજે બાજુ વૃક્ષ રોપણ કરવામાં આવશે.  |
| 2        |   | અમદાવાદ ધોલેરા એક્સપ્રેસ લે ગામથી લગભગ 200 થી 250 મીટર દુરથી પસાર થાય છે બાયોલોજીકલ "નોઈઝ બેરીયર" (such as tree plantation etc) જેથી ધ્વનિ પ્રદુષણ નહીવત રહેશે. ઓથોરીટી દ્વારા રહેણાંક વિસ્તારમાં "નોઈઝ બેરીયર" ની વ્યવસ્થા કરવામાં આવશે. એક્સપ્રેસ લેની બજે બાજુ વૃક્ષ રોપણ કરવાથી હવા પ્રદુષણ ઓછું થશે. |
| 3        |   | એક્સપ્રેસ લેની બજે બાજુ ઈઆઈએ સીપોટ મુજબ "નોઈઝ બેરીયર" લગાવાથી ધ્વનિ પ્રદુષણથી રાહત મળશે.  |
| 4        |   | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે. જેથી કોઈપણ પાણીના વહેણને કે જળસ્ત્રોતને નુકશાન ન થાય તે માટે  |

મુન

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|---|---|
|   | પુરતા પ્રમાણેમાં કલવર્ટ અને સીડી સ્ટ્રેક્સર બનાવવાની જોગવાઈ છે. જે ભુગર્ભ જળશાસ્ત્રીના રીપોર્ટ પ્રમાણે છે.  |
| 5 | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે. જેથી પશુ-પ્રાણીઓને અવર-જવરમાં કોઈ પણ તકલીફના પડે તે ધ્યાનમાં રાખીને અડરપાસની (CUP) અને શુષ્ક ઋતુમાં કલવર્ટ ની સુવિધા ઉપલબ્ધ કરાવવામાં આવશે.   |
| 6 | પ્રશ્ન ફરીથી રીપીટ થાય છે.  |
| 7 | પ્રસ્તાવિત પરિયોજનામાં કુલ 66000 વૃક્ષોની વાવણી કરવામાં આવશે. એનએચએઆઈ વૃક્ષો કાપવાની થતી કિંમત કોરેસ્ટ ડિપાર્ટમેન્ટ ને કેમ્પા ફંડ ના નિયમાનુસાર આપશે, અને કેમ્પા ફંડમાંથી ખુલ્લી જગ્યા, બંજર જમીન અને સરકારી જમીન પર વૃક્ષો લગાવવામાં આવશે. |
| 8 | પ્રસ્તાવિત પરિયોજનામાં બાંધકામ ના સમયમાં પ્રાણીના ઠેકર દ્વારા છંટકાવ કરવામાં આવશે. જેથી માટીના કણ વાયુમાં ન ભળે અને જનજીવનને નુકશાન ન થાય. તેની પુરી તકેદારી રાખવામાં આવશે. જે પર્યાવરણ પ્રબંધન યોજનાની ફંડમાં સામેલ છે.                    |

આપનો આભારી

આપનો વિશ્વાસુ,

મુમુ ૬૪ પ્રિન્સ

મહાપ્રબંધક (ટેકનીકલ) અને

પ્રોજેક્ટ ડાયરેક્ટર, એનએચએઆઈ

પીઆઈટી અમદાવાદ

નકલ સવિનય રવાના:-

- 1) ચીફ જનરલ મેનેજર તથા રીજીયોનલ ઓફિસરશ્રી, નેશનલ હાઇવે ઓથોરીટી ઓફ ઇન્ડિયા, ગાંધીનગર તરફ જાણ સારું.



અરજદાર:-

ભાત ગ્રામ પંચાયત

મોજંગામ- ભાત, તા. દરકોઈ,

જી.અમદાવાદ

તા. ૦૭/૧૧/૨૦૧૮

(મો)

પ્રતિશ્રી,

સચિવશ્રી/સભ્ય સચિવશ્રી,

ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ,

પર્યાવરણ ભવન, સેક્ટર-૧૦/એ,

ગાંધીનગર-૩૮૨૯૧૦

**વિષય:** તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચાર દૈનિકમાં પાના નં. ૧૧ ઉપર આવેલ જાહેર સુચનાના અનુસંધાને વાંધા અરજી.

મે. સાહેબશ્રી,

આપના દ્વારા તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચારના પાના નં. ૧૧ ઉપર અમદાવાદ-ધોલેરા એક્સપ્રેસ રોડ (૧૧૦) કી.મી. ના બામકામના અનુસંધાને પર્યાવરણીય હોક સુનાવણી રાખવામાં આવેલ છે. તેના અનુસંધાને અમો અમારા ગામના પ્રતિનિધી તરીકે અમારી રજૂઆત કરીએ છીએ જે ધ્યાને લીધા સિવાય રોડ બનાવવાની કામગીરી કરવામાં આવશે તો અમારા ગામના પ્રજાજન, પશુઓ, પ્રાણીઓ અને પક્ષીઓને ઘણું વધુ નુકશાન થાય તેમ છે. તેમજ તેના કારણે ઘણું મોટું પ્રદુષણ, કુદરતી આફત આવે તેવી પુરેપુરી સંભાવના હોવાથી પ્રદુષણ નિયંત્રણ કાયદા ધ્યાને લીધા સિવાય રોડ બનાવવા અંગે અમારા ગ્રામજનોનો સખ વાંધો છે.

(૧) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવેમાં જે જમીનો કપાત પામ છે તે જમીનો ખેતીની આવેલી છે અને વર્ષમાં બે અથવા તેથી વધુ પાક થતા હોવાથી હંમેશા જમીન લીલી રહે છે તેમજ તે જમીનના ઊભા પાકને કારણે આજુબાજુ હવાનું પ્રદુષણ ખુબ જ નીચું છે અને ચોખ્ખી અને ઓક્સીજન વાળી હવા હંમેશા મળી રહે છે.

(૨) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવે બનાવવામાં આવે જેથી હવાના સ્તરને ઘણું મોટું નુકશાન થાય તેમ છે હાલમાં એકપક્ષ નેશનલ કે રાષ્ટ્રીય હાઈવે ન હોવાથી વાહનોની



(૨)

અવરજવર ઘણી જ ઓછી છે જેના કારણે હવાના સ્તરમાં હંમેશા ચોખ્ખી અને ઓકરીજ વાળી રહે છે. તેમજ ખેતી પ્રદુષણ પણ નહીંવત પ્રમાણમાં છે અને સાલમાં જે રોડ પસાર થાય છે તે ગામને આડીને આવતો હોવાથી હંમેશા વાહનોના અવાજ રહેશે જેના કારણે ગામની નજીક રાત્રીના સમયે હોર્નના અવાજ તેમજ ગાડીઓના અવાજ આવવાથી રાત્રીની કિંચ બગડે તેવા સજોગો કિંમત થઈ શકે તેમ છે રોડનું એલાર્દમેન્ટ ગામથી દુર રાખવું હિતાવહ છે.

(૩) અમદાવાદ થી ધોલેરા હાઈવે ગામની નજીક બનતા આશર સુધી ગામના પશુ, માણી, પક્ષીઓ નિર્ભય રીતે રાત્રી પસાર કરતા હતા અને તે રીતે હંમેશા ટેવાયેલ છે અને હવે પછી રોડ બનાવવામાં આવે તો 'NO HORN ZONE' બનાવવો પડે તેમ તે રીતે કરવામાં નહીં આવે તો શરૂઆતના સમયમાં પશુ, પક્ષીઓ માણીઓની રાત્રી દરમ્યાન ઘણી મુશ્કેલી ઊભી થાય તેમજ નિર્ભય રીતે જીવી શકે તેમ નથી જેથી રોડ ઉપર ખેતી નિર્ભયજી ખુજબ જરૂરી છે. તેમજ દુપાળા પશુઓને યોગ્ય પ્રમાણમાં આરામ ન મળે તો સમય જતા દુપાળા પશુઓથી દુધ ખુજબ ઓછુ આવે અને દુધ ઉત્પાદન ઘટે તેમ છે.

(૪) અમારા ગામથી નજીકથી એક્સપ્રેસ રોડ પસાર થાય છે અને ગામની તેમજ જોગોલી પરિસ્થિતી ખુબજ વરસાદનું પાણી હંમેશા નળ સરોવર બાજુથી તેમજ ઉત્તર દિશાથી બોરૂ-વઢામણ બાજુ જાય છે અને એક્સપ્રેસ હાઈવે પુર્વ-પશ્ચિમ બનવાનો છે જેથી ચારે દિશાએ અલગ હોવાથી પાણીનો વહેણ અટકી પડે તેમ છે જો પાણીના વહેણ અટકી જાય તો પાણીનો ભરાવો થતા હાંબા ગાળે રોગચાળો કાટી નિકળે તેમજ ગામમાં હંમેશા પાણી ભરાયેલ અને દક્ષિણદીશાની જમીન પાણી વગરની રહે બિનઉપજાઉ વઈ જાય જેના કારણે હવે પ્રદુષણ વધુ પડતું હિંમુ થાય તેમજ બેતી નષ્ટ પામે તેમ છે. જેથી બીમે બીમે ગામજનો એકાર થયા માટે જેથી પાણીના નળ-પાણી-લાઈન તથા પાણી નિકાલ જો યોગ્ય કરવામાં ન આવે તો પાણી વાવુનું પ્રદુષણ વધી જાય આપના દ્વારા જે આયોજન કરવામાં આવેલ છે તેમાં અને રોડ એલાર્દમેન્ટમાં વજા બધા તથાવો પણ આવે છે. જેના કારણે પાણીનો ભરાવો નિકાસની વ્યવસ્થા ક્યાં કરેલ છે કે કેમ? તેના નક્કશા અમો ગામમાં આપવામાં ન આવે ત્યાં સુધી અમારા ગામમાંથી પસાર થતો રોડ બનાવવો હિતાવહ નથી અને તે અંગે ગામના ખુબજ વાંધો છે.

(૫) અમદાવાદ ધોલેરા હાઈવે બનતા દોકીકની વહી સમસ્યા રહેશે ગામની સીમમાં નીલગાય, ભૂંડા, ગાય, ભેસો, ઘરણ, હાંપડા, સસલા, વેટા, બકરા તેવા બીજા માણીઓ



(૩)

ખુબજ પ્રમાણમાં છે. જે હંમેશા ગામની સીમામાંથી આવર જવર દિવસ તેમજ રાત્રે કરતા હોય અને એક્સપ્રેસ હાઈવે ઉપરથી જો તે પસાર થયા અને ગામના રસ્તા રાખવામાં ન આવે તો અકસ્માતનો ભય ખુબજ વધી જાય તેમ છે. જેથી અકસ્માત નિવારણ વ્યવસ્થા ગોઠવવી જોઈએ અને દર પંદરથી વીસ કિલો મીટરની જગ્યાએ ઈમરજન્સી વ્હીકલ તથા સારવાર કેન્દ્ર રાખવા જોઈએ જેથી ટ્રાફિક સમસ્યા ઉભી ન થાય તેમજ અકસ્માત સમસ્યા ઉભી ન થાય તેમજ અકસ્માત થાય તો તાત્કાલીક સારવાર મળી રહે તેમ ન કરવામાં આવે તો વખતો વખત ગામજનોને આવી વ્યવસ્થા કરવા ઉભા પડે રહેવું પડે અથવા ભયનો માહોલ ઉભો થાય તેમ છે એક્સપ્રેસ હાઈવેની નીચે થઈને પસાર થાય તેવી વ્યવસ્થા રાખવા વિનંતી જેના કારણે વાયુ પ્રદુષણ ખવિ પ્રદુષણ ઓછું થાય અને આવા સમયે જો સર્વિસ રોડ ન હોય તો રોડની આજુબાજુના વિસ્તારમાં જવા-આવવા માટે વણી બધી મુશ્કેલી ઉભી થાય તેમ છે જેથી સર્વિસ રોડ પણ આપવો જિતાવડ અને જરૂરી છે અને જો સર્વિસ રોડ આપવામાં ન આવે તો એક્સપ્રેસ હાઈવેનું આયોજન કરવામાં અમારો સખત વાંધો છે તેવું અમારે પણ વાયામાં એકવીઝેશન ઓફીસરને જણાવેલ છે જેથી સર્વિસ રોડ અમારી માથમીકતા છે તે બાને ટીપા સિવાય રોડ બનાવવા માટે અમારો વાંધો આપીએ છીએ.

(૬) એક્સપ્રેસ રોડની ઉપર આવતા ગામની નજીક તથા ગામમાં વાયુ પ્રદુષણ તથા ખવિ પ્રદુષણ ના થાય તેવી પાંતીક વસ્તુઓ મુકવી જેથી તેવા તથામ પ્રકારના પ્રદુષણ ઉપર નિયંત્રણ કરી દુર કરે અને ગામની અંદર હોર્ન તથા ગાડીઓના અવાજ ખુબજ ઓછા રહે.

(૭) ગામની ખેતીની વણી મોટી જમીન હતી હોવાથી જણા ખોટા ઝાડ તથા કામમી ખેતી નષ્ટ થવાને કારણે દુદરતી વાયુની સ્તર નીચું જાય તેમ હોવાથી રોડની બંને બાજુ જે વણ જણની વાઈન્ટો કરવામાં આવશે તેમાં મુખ્યાત્વે લીમડા, પીપળા, વડ, આંબલી, વરગડી તથા જે વૃક્ષો અમારા ગામની બાજુથી જે એક્સપ્રેસ રોડ પસાર થાય છે તેની આજુબાજુમાં જે ઝાડ ઉછેરવાના છે તે પ્રથમથી મોટી સાઈઝના હોવા જોઈએ અને ઉછેર કરવાની જવાબદારી એક્સપ્રેસ હાઈવે ઓથોરિટીની રહેશે જે ઝાડ મોટા ના થાય તો ગામજનો તથા ગામને થતું નુકશાન એક્સપ્રેસ હાઈવે ભરપાઈ કરી આપશે તેવા પ્રકારનો લેખીત બોન્ડ એક્સપ્રેસ હાઈવે તરફથી અમારા ગામને આપવાનો રહેશે તેમજ ગામની બીજી પડતર જમીનમાં પણ વૃક્ષ ઉછેર કરવા માટે એક્સપ્રેસ હાઈવે એ અમોને ખાતરી આપવાની રહેશે, જેથી વાયુ પ્રદુષણ ઓછું થાય અને દુદરતી પર્યાવરણ જળવાઈ રહે.

(૮) એક્સપ્રેસ હાઈવેનું નિર્માણ જપાદે ચાલુ કરવામાં આવે ત્યારે માટી પુરાણ કરવામાં આવે તે સમયે માટીના કણો હવામાં ખુબજ ફેલાઈ જાય તેમ છે અને જેથી માટી પુરાણ વખતે માટી



(૪)

ઉડે નહીં તેવી રીતે તેમજ માટી પુરાણથી આજુબાજુના ખેતરોને માટીથી નુકશાન ન થાય તે રીતે રોડ કોન્ટ્રાક્ટરની ખાત્રી લેવાની રહેશે. તેમજ તેવી ખાત્રી અમો ગ્રામ પંચાયતમાં જમા કરાવવાની રહેશે. અને જો કોઈપણ ખેતરને માટીની રજ કે રોડ કામના કારણે નુકશાન થશે તો તે તમામ જવાબદાર એક્સપ્રેસ હાઈવે ઓથોરિટીની રહેશે અને નુકશાન ના થાય તેવી રીતે કામગીરી કરવાની રહેશે.

આમ અમારા ઉપરોક્ત વાંધા ધ્યાને લીધા સિવાય એક્સપ્રેસ રોડ બનાવવા અંગેની પરવાનગી ન આપવા અમારી વિનંતી છે.

૨૧/૧૨/૨૦૧૮  
સરપંચ.....  
ભાત ગ્રામ પંચાયત  
તા. શાકોદ જિ. અમદાવાદ.





# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

## National Highways Authority of India

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જાહેર, એનએચએચઆઈ / પીઆઈયુ / અમદાવાદ / જી.પી.સી.બી. / 2018 નં. 239,

તા. 13/11/2018

પ્રતિ,

આર.આર.ઠાકુર, સરપંચશ્રી,

ભાટ ગ્રામ પંચાયત,

ગામ- ભાટ,

તા. દસકોઈ, જી-અમદાવાદ.

વિષય- અમદાવાદ જિલ્લામાં તા. 13/11/2018 ના રોજ લોક સુનાવણીમાં સરપંચશ્રી ભાટગા.દસકોઈ ગ્રામ પંચાયતના આવેદન પત્રનો મુદ્દા પૂર્વાર્ધે વિગતવાર જવાબ

| ક્રમ નં. | અરજદારનું નામ તથા સરનામું  | જવાબ  |
|----------|--|---|
| 1        | આર.આર.ઠાકુર, સરપંચશ્રી<br>ભાટ ગ્રામ પંચાયત<br>ગામ- ભાટ<br>તા. દસકોઈ, જી-અમદાવાદ. | સરકારી નિયમ અનુસાર બેડુતોને સહાયક તરીકે વળતર મળશે તથા જે પાછા ગાડીઓ એક્સપ્રેસ વે પર ચાલશે તે સી.પી.સી.બી. ના નિયમાનુસાર ચાલશે. પ્રદુષણ નિયંત્રણ માટે એક્સપ્રેસ બેડુતોની બન્ને બાજુ વૃક્ષારોપણ કરવામાં આવશે.   |
| 2        |  | અમદાવાદ ઘોડેરા એક્સપ્રેસ વે ગામથી લગભગ 200 થી 250 મીટર દુરથી પસાર થાય છે. બાયોલોજીકલ "નોઈઝ બેરીયર" (biological barrier) જેથી ધ્વનિ પ્રદુષણ નહીવત રહેશે એથીરીટી દ્વારા રહેણાંક વિસ્તારમાં બાયોલોજીકલ બેરીયર ની વ્યવસ્થા કરવામાં આવેલી એક્સપ્રેસ વેની બન્ને બાજુ વૃક્ષારોપણ કરવાથી કંવા પ્રદુષણ ઓછું થશે. |
| 3        |  | એક્સપ્રેસ વેની બન્ને બાજુ ઈઆઈએ રીપોર્ટ મુજબ "બાયોલોજીકલ બેરીયર" લગાવાથી ધ્વનિ પ્રદુષણથી રાહત મળશે.  |
| 4        |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઇન એવી રીતે બનાવવામાં આવી છે, જેથી કોઈપણ પાણીના વહેણને કે જળસ્ત્રોતને નુકસાન ન થાય તે માટે  |

મુદત

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|   | પુરતા પ્રમાણેમાં કલવર્ટ અને સીડી સ્ટ્રેક્ચર બનાવવાની જોગવાઈ છે. જે ભુગર્ભ જળશાસ્ત્રીના રીપોર્ટ પ્રમાણે છે.   |
| 5 | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે. જેથી પશુ-પ્રાણીઓને શ્રવર-જવરમાં કોઈ પણ તકલીફના પડે તે ધ્યાનમાં રાખીને અંડરપાસની (CUP) અને શુષ્ક ઋતુમાં કલવર્ટ ની સુવિધા ઉપલબ્ધ કરાવવામાં આવશે.                                     |
| 6 | પ્રજ્ઞ ફરીથી રીવીઝ થાય છે.   |
| 7 | પ્રસ્તાવિત પરિયોજનામાં કુલ 66000 વૃક્ષોની વાવણી કરવામાં આવશે. એનએચએઆઈ વૃક્ષો કાપવાની થતી કિંમત ફોરેસ્ટ ડિપાર્ટમેન્ટ ને કેમ્પા ફંડ ના નિયમાનુસાર આપશે, અને કેમ્પા ફંડમાંથી ખુલ્લી જગ્યા, બંજર જમીન અને સરકારી જમીન પર વૃક્ષો લગાવામાં આવશે. |
| 8 | પ્રસ્તાવિત પરિયોજનામાં બાંધકામ ના સમયમાં પાણીના ટૅંકર દ્વારા છંટકાવ કરવામાં આવશે. જેથી માટીના કણ વાયુમાં ન ભળે અને જનજીવનને નુકશાન ન થાય. તેની પુરી તકેદારી રાખવામાં આવશે. જે પર્યાવરણ પ્રબંધન યોજનાની ફંડમાં સામેલ છે.                    |

આપનો આભારી,

આપનો વિશ્વાસુ,

મુ. ૭. સિદ્ધ-  
મહાપ્રબંધક (ટેકનીકલ) અને  
પ્રોજેક્ટ ડાયરેક્ટર, એનએચએઆઈ  
પીઆઈયુ અમદાવાદ

નકલ સવિનય રવાના:-

- 1) ચીફ જનરલ મેનેજર તથા રીજીયોનલ ઓફિસરશ્રી, નેશનલ હાઇવે ઓથોરીટી ઓફ ઇન્ડિયા, ગાંધીનગર તરફ જાણ સારું.

અરજદાર:-

જુવાલ રૂપાવટી ગ્રામ પંચાયત

મોજેગામ- જુવાલ રૂપાવટી,

તા.આવળા, જી.અમદાવાદ

તા. ૦૭/૧૧/૨૦૧૮

(મો)

પ્રતિશ્રી,

સચિવશ્રી/સભ્ય સચિવશ્રી,

ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ,

પર્યાવરણ ભવન, સેક્ટર-૧૦/એ,

ગાંધીનગર-૩૮૨૯૧૦

**વિષય:** તા.૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચાર દૈનિકમાં પાના નં. ૧૧ ઉપર આવેલ જાહેર સુચનાના અનુસંધાને વાંધા અરજી.

મે. સાહેબશ્રી,

આપના દ્વારા તા. ૦૮/૧૦/૨૦૧૮ ના રોજ ગુજરાત સમાચારના પાના નં. ૧૧ ઉપર અમદાવાદ-ધોલેરા એક્સપ્રેસ રોડ (૧૧૦) કી.મી. ના બાંધકામના અનુસંધાને પર્યાવરણીય લોક સુનાવણી રાખવામાં આવેલ છે. તેના અનુસંધાને અમો અમારા ગામના પ્રતિનિધી તરીકે અમારી રજુઆત કરીએ છીએ જે ધ્યાને લીધા સિવાય રોડ બનાવવાની કામગીરી કરવામાં આવશે તો અમારા ગામના પ્રજાજન, પશુઓ, પ્રાણીઓ અને પક્ષીઓને ઘણું વધુ નુકશાન થાય તેમ છે. તેમજ તેના કારણે ઘણું મોટું પ્રદુષણ, કુદરતી આકત આવે તેવી પુરેપુરી સંભાવના હોવાથી પ્રદુષણ નિયંત્રણના કાયદા ધ્યાને લીધા સિવાય રોડ બનાવવા અંગે અમારા ગ્રામજનોનો સજ્જ વાંધા છે.

(૧) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવેમાં જે જમીનો કપાત થાય છે તે જમીનો ખેતીની આવેલી છે અને વર્ષમાં બે અથવા તેથી વધુ પાક થતા હોવાથી હંમેશા જમીન લીલી રહે છે તેમજ તે જમીનના ઉત્તમ પાકને કારણે આજુબાજુ સવાનું પ્રદુષણ ખુબ જ નીચું છે અને ચોખ્ખી અને ઓક્સીજન વાળી હવા હંમેશા મળી રહે છે.

(૨) અમદાવાદથી ધોલેરા એક્સપ્રેસ હાઈવે બનાવવામાં આવે જેથી હવાના સ્તરને ઘણું મોટું નુકશાન થાય તેમ છે હાલમાં એકપક્ષ નેશનલ કે રાષ્ટ્રીય હાઈવે ન હોવાથી વાહનોની

અવરજવર ઘણી જ ઓછી છે જેના કારણે હવાના સ્તરમાં હંમેશા ચોખ્ખી અને ઓંકસીજ ગાળી રહે છે. તેમજ ધ્વની મદુષણ પણ નહીવત પ્રમાણમાં છે અને માલમાં જે રોડ પસાર થાય છે તે ગામને અડીને આવતો હોવાથી હંમેશા વાહનોના અવાજ રહેશે જેના કારણે ગામની નજીક રાત્રીના સમયે હોર્નના અવાજ તેમજ ગાડીઓના અવાજ આવવાથી રાત્રીની ઊંઘ બગડે તેવા સંજોગો ઉભા થઈ શકે તેમ છે રોડનું એકાઈમેન્ટ ગામથી દુર રાખવું હિતાવશ છે.

(૩) અમદાવાદ થી પોલેરા હાઈવે ગામની નજીક બનતા અત્યાર સુધી ગામના પશુ, પ્રાણી, પક્ષીઓ નિર્ભય રીતે રાત્રી પસાર કરતા હતા અને તે રીતે હંમેશા ટેવાયેલ છે અને હવે પછી રોડ બનાવવામાં આવે તો 'NO HORN ZONE' બનાવવો પડે તેમ તે રીતે કરવામાં નહીં આવે તો શંકુઆતના સમયમાં પશુ, પક્ષીઓ પ્રાણીઓની રાત્રી દરમ્યાન ઘણી મુશ્કેલી ઊભી થાય તેમજ નિર્ભય રીતે જીવી શકે તેમ નથી જેથી રોડ ઉપર ધ્વની નિયંત્રણ ખુજાવ જરૂરી છે. તેમજ દુધાળા પશુઓને યોગ્ય પ્રમાણમાં આરામ ન મળે તો સમય જતા દુધાળા પશુઓથી દુધ ખુજામ ઓછું આવે અને દુધ ઉત્પાદન ઘટે તેમ છે.

(૪) અમારા ગામથી નજીકથી એક્સપ્રેસ રોડ પસાર થાય છે અને ગામની તેમજ ખીંગોલીક પરિસ્થિતી ખુબજ વરસાદનું પાણી હંમેશા નળ સરોવર બાજુથી તેમજ ઉત્તર દિશાથી ભોજ-વટામજ બાજુ જાય છે અને એક્સપ્રેસ હાઈવે પુર્વ-પશ્ચિમ ગતવાનો છે જેથી ચારે દિશાઓ અલગ હોવાથી પાણીનો વહેણ અટકી પડે તેમ છે જો પાણીના વહેણ અટકી જાય તો પાણીનો ભરાવો થતા લાંબા ગાળે રોગચાળો ફાટી નિકળે તેમજ ગામમાં હંમેશા પાણી ભરાયેલ અને દક્ષિણદિશાની જમીન પાણી વગરની રહે બિનઉપજાઉ થઈ જાય જેના કારણે હવા મદુષણ વધુ પડતું ઊંચુ થાય તેમજ ખેતી નષ્ટ પામે તેમ છે. જેથી પાંચે ધીમે ગામજનો બેકાર થવા માંડે જેથી પાણીના નળ-પાણી-હાઈવે તથા પાણી નિકાલ જો યોગ્ય કરવામાં ન આવે તો પાણી વાયુનું મદુષણ વધી જાય આપના દારા જે આયોજન કરવામાં આવે છે તેમાં અને રોડ એલાઈમેન્ટમાં ઘણા બધા તળાવો પણ આવે છે. જેના કારણે પાણીનો ભરાવો નિકાસની અવસ્થા ક્યા પ્રકારે કરેલ છે કે કેમ? તેના નકશા અગો ગામમાં આપવામાં ન આવે ત્યાં સુધી અમારા ગામમાંથી પસાર થતો રોડ બનાવવો હિતાવશ નથી અને તે અંગે ગામનો ખુબજ વાંધો છે.

(૫) અમદાવાદ પોલેરા હાઈવે બનતા દ્રાકીકની ઘણી સમસ્યા રહેશે ગામની સીમમાં નીલગામ, ભુંડ, ગાય, ઈસી, હરેલ, દીપડા, સસલા, વેટા, બડરા તેવા બીજા પ્રાણીઓ

ખુબજ પ્રમાણમાં છે. જે હંમેશા ગામની સીમામાંથી અવર જવર દિવસ તેમજ રાત્રે કરતા હોય અને એક્સપ્રેસ હાઈવે ઉપરથી જો તે પસાર થયા અને ગામના રસ્તા રાખવામાં ન આવે તો અકસ્માતનો ભય ખુબજ વધી જાય તેમ છે. જેથી અકસ્માત નિવારણ વ્યવસ્થા ગોઠવવી જોઈએ અને દર પંદરથી વીસ કિલોમીટરની જગ્યાએ ઈમરજન્સી વ્હીકલ તથા સારવાર કેન્દ્ર રાખવા જોઈએ જેથી ટ્રાફિક સમસ્યા ઊભી ન થાય તેમજ અકસ્માત સમસ્યા ઊભી ન થાય તેમજ અકસ્માત થાય તો તાત્કાલિક સારવાર મળી રહે તેમ ન કરવામાં આવે તો વખતો વખત ગામજનોને આવી વ્યવસ્થા કરવા ઊભા પડે તો પડે અથવા ભયનો માહોલ ઊભો થાય તેમ છે એક્સપ્રેસ હાઈવેની નીચે મઈને પસાર થાય તેવી વ્યવસ્થા રાખવા વિનંતી જેના કારણે વાયુ પ્રદુષણ પ્વનિ પ્રદુષણ ઓછું થાય. અને આવા સમયે જો સર્વિસ રોડ ન હોય તો રોડની આજુબાજુના વિસ્તારમાં જવા-આવવા માટે થઈ ગયેલી અધી મુશ્કેલી ઊભી થાય તેમ છે જેથી સર્વિસ રોડ પણ આપવો હિતાવશ અને જરૂરી છે અને જો સર્વિસ રોડ આપવામાં ન આવે તો એક્સપ્રેસ હાઈવેનું આધીન કરવામાં અમારો સખત વાંધો છે તેવું અગાઉ પણ વર્ણનમાં એક્વીઝિશન ઓફીસરને જણાવેલ છે જેથી સર્વિસ રોડ અમારી માથમીકતા છે તે ખાતે ખાતે સિવાય રોડ બનાવવા માટે અમારો વાંધો આપીએ છીએ.

(૬) એક્સપ્રેસ રોડની ઉપર આવતા ગામની નજીક તથા ગામમાં વાયુ પ્રદુષણ તથા પ્વનિ પ્રદુષણ ના થાય તેવી પાંચીક વસ્તુઓ મુકવી જેથી તેવા તમામ પ્રકારના પ્રદુષણ ઉપર નિયંત્રણ કરી દુર કરે અને ગામની અંદર હોર્ન તથા ગાડીઓના અવાજ ખુબજ ઓછા રહે.

(૭) ગામની બેતીની થઈ મોટી જમીન જતી હોવાથી થતા મોટા ઝાડ તથા કાપતી બેતી તથા થવાને કારણે કુદરતી વાયુની સ્તર નીચું જાય તેમ હોવાથી રોડની બંને બાજુ જં ત્રણ જણની લાઈનો કરવામાં આવશે તેમાં મુખ્યત્વે લીમડા, થીપળા, વડ, આંબલી, વરખડો તથા જે વૃક્ષો અમારા ગામની બાજુથી જે એક્સપ્રેસ રોડ પસાર થાય છે તેની આજુબાજુમાં જે ઝાડ ઉછેરવાના છે તે પ્રથમથી મોટી સાઈઝના હોવા જોઈએ અને ઉછેર કરવાની જવાબદારી એક્સપ્રેસ હાઈવે આંબીરીટીની રહેશે જે ઝાડ મોટા ના થાય તો ગામજનો તથા ગામને યત્ન નુકશાન એક્સપ્રેસ હાઈવે ભરપાઈ કરી આપશે તેવા પ્રકારનો લેખીત બોન્ડ એક્સપ્રેસ હાઈવે તરફથી અમારા ગામને આપવાનો રહેશે તેમજ ગામની બીજી પડતર જમીનમાં પણ વૃક્ષ ઉછેર કરવા માટે એક્સપ્રેસ હાઈવે એ અમીને ખાતી આપવાની રહેશે. જેથી વાયુ પ્રદુષણ ઓછું થાય અને કુદરતી પર્યાવરણ જળવાઈ રહે.

(૮) એક્સપ્રેસ હાઈવેનું નિર્માણ જ્યારે ચાલુ કરવામાં આવે ત્યારે માટી પુરાણ કરવામાં આવે તે સમયે માટીના કામો હવામાં ખુબજ કેલાઈ જાય તેમ છે અને જેથી માટી પુરાણ વખતે માટી

ઉંડે નહીં તેવી રીતે તેમજ માટી પુરાણથી આજુબાજુના ખેતરોને માટીથી નુકશાન ન થાય તે રીતે રોડ કોન્ટ્રાક્ટરની ખાત્રી લેવાની રહેશે. તેમજ તેવી ખાત્રી અમો ગ્રામ પંચાયતમાં જમા કરાવવાની રહેશે. અને જો કોઈપણ ખેતરને માટીની રજ કે રોડ કામના કારણે નુકશાન થશે તો તે તમામ જવાબદાર એક્સપ્રેસ હાઈવે ઓથોરિટીની રહેશે અને નુકશાન ના થાય તેવી રીતે કામગીરી કરવાની રહેશે.

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Ta-Boku City, Amnoshima





ફાઈલ નં 2 (મ - ડે - દ)  
**ભારતીય રાષ્ટ્રીય રાજમાર્ગ પ્રાધિકરણ**  
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પ્લાઈ : 3A & 3B, ફિલીપ હાલ, અમુલ બિલ્ડિંગ, નિકેટ દેના બેંક, વેજાબુર રોડ, જિવરાજ પાર્ક, અમદાવાદ - 380 051  
 Plot : 3A & 3B, 2nd Floor, Amul Building, N. Dena Bank, Vejabur Road, Jivraj Park, Ahmedabad - 380 051

નંબર એનએચએઆઈ/પીઆઈયુ/અમદાવાદ/જી.પી.સી.બી./2018/૧૮૫

તા.13/11/2018

પ્રતિ,  
 સંરપચક્ષી,  
 જુવાલ-રૂપવટી ગ્રામ પંચાયત,  
 ગામ-જુવાલ-રૂપવટી,  
 તા.બાવળા, જી-અમદાવાદ.

વિષય- અમદાવાદ જિલ્લામાં તા.13/11/2018 ના રોજ લોક સુનાવણીમાં સંરપચક્ષી જુવાલ-રૂપવટી તા.બાવળા ગ્રામ પંચાયતના આવેદન પત્રનો મુદ્દા પ્રમાણે વિગતવાર જવાબ

| ક્રમ નં. | અરજદારનું નામ તથા સરનામું  | જવાબ  |
|----------|--|---|
| 1        | સંરપચક્ષી,<br>જુવાલ-રૂપવટી ગ્રામ પંચાયત,<br>ગામ-જુવાલ-રૂપવટી,<br>તા.બાવળા, જી-અમદાવાદ. | સરકારી નિયમ અનુસાર પ્રેક્ટીકલ સહાયરૂપ વળતર મળશે તથા જે પણ ગાડીઓ એક્સપ્રેસ વે માર ચાલશે તે સી પી.સી.બી. ના નિયમાનુસાર ચાલશે. પ્રદુષણ નિયંત્રણ માટે એક્સપ્રેસ હઈવેની બંને બાજુ વૃક્ષારોપણ કરવામાં આવશે.   |
| 2        |  | અમદાવાદ ધોલેરા એક્સપ્રેસ વે ગામથી લગભગ 200 થી 250 મીટર દુરથી પસાર થાય છે. બાયોલોજીકલ "નોઈઝ બેરીયર" (bio barrier plantation etc) જેથી ધ્વનિ પ્રદુષણ નહીવત રહેશે. ઓથોરીટી દ્વારા રહેણાંક વિસ્તારમાં "નોઈઝ બેરીયર" ની વ્યવસ્થા કરવામાં આવશે. એક્સપ્રેસ વેની બંને બાજુ વૃક્ષારોપણ કરવાથી કંવા પ્રદુષણ ઓછું થશે. |
| 3        |  | એક્સપ્રેસ વેની બંને બાજુ હાઈવાઈવે રીપોર્ટ મુજબ "ઓઈઝ બેરીયર" લગાવાથી ધ્વનિ પ્રદુષણથી રાહત મળશે.  |
| 4        |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે. જેથી કોઈપણ પાણીના વહેણને કે જળસ્રોતને નુકશાન ન થાય તે માટે  |

સુખ

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|---|--|--|
|   |  | પુરતા પ્રમાણે મા કલવટ અને સીડી સ્ટ્રેકચર બનાવવાની જોગવાઈ છે. જે સુગર્ભ જળશાસ્ત્રીના રીપોર્ટ પ્રમાણે છે.  |
| 5 |  | પ્રસ્તાવિત પરિયોજનાની ડિઝાઈન એવી રીતે બનાવવામાં આવી છે, જેથી પશુ-પ્રાણીઓને અવર-જવરમાં કોઈ પણ તકલીફના પડે તે ધ્યાનમાં રાખીને અંડરપાસની (CUP) અને શુષ્ક ઋતુમાં કલવટ ની સુવિધા ઉપલબ્ધ કરાવવામાં આવશે.   |
| 6 |  | પ્રશ્ન ફરીથી રીપીટ થાય છે.   |
| 7 |  | પ્રસ્તાવિત પરિયોજનામાં કુલ 66000 વૃક્ષોની વાવણી કરવામાં આવશે. એનએચએઆઈ વૃક્ષો કાપવાની થતી કિંમત ફોરેસ્ટ ડિપાર્ટમેન્ટ ને કેમ્પા ફંડ ના નિયમાનુસાર આપશે. અને કેમ્પા ફંડમાંથી ખુલ્લી જગ્યા, બંજર જમીન અને સરકારી જમીન પર વૃક્ષો લગાવામાં આવશે. |
| 8 |  | પ્રસ્તાવિત પરિયોજનામાં બાંધકામ ના સમયમાં પાણીના ટૅંકર દ્વારા છંટકાવ કરવામાં આવશે. જેથી માટીના કણ વાયુમાં ન ભળે અને જનજીવનને નુકશાન ન થાય. તેની પુરી તકેદારી રાખવામાં આવશે. જે પર્યાવરણ પૂર્ણધન યોજનાની ફંડમાં સામેલ છે.                    |

આપનો આભારી

આપનો વિશ્વાસુ

**મુકેશ જી સિંહ**

મહાપ્રબંધક (ટેકનીકલ) અને

પ્રોજેક્ટ કોઓર્ડિનેટર, એનએચએઆઈ

પીઆઈયુ અમદાવાદ

નકલ સવિનય રવાના:-

- 1) ચીફ જનરલ મેનેજર તથા રીજીયોનલ ઓફિસરશ્રી, નેશનલ કાઇલે ઓથોરીટી ઓફ ઇન્ડિયા, ગાંધીનગર તરફ જાણ સારું.



## Gujarat Pollution Control Board

Paryavaran Bhavan, Sector 10 A, Gandhinagar 382 010  
Tel : 079-23222152 Fax : 079-23222784 www.gpcb.gov.in

### Public Notice

It is hereby informed that as per the Ministry of Environment, Forests & Climate Change, Government of India, New Delhi vide its Notification no. S.O. 1533 dated September 14, 2006, Public Hearing has been fixed for Construction of Ahmedabad-Dholera Expressway Road (110 km) (NHAI/BM/21) in the state of Gujarat by M/s. National Highways Authority of India, (Ministry of Road Transport and Highways), 2A & 3B, 2nd Floor, Amal Building, Near Dana Bank, Vajapur Road, Jyoti Park, Ahmedabad-380001 (For part of Dist. Ahmedabad), covered under Category "A" as mentioned in their request application.

All local affected persons of the project are requested to remain present in the public hearing or send their response in writing to Member Secretary, Gujarat Pollution Control Board before the hearing date.

Other concerned persons having a plausible claim in environmental aspects of the project or activity can submit their responses to Member Secretary, GPCB in writing before the hearing date.

It may be noted that draft Environmental Impact Assessment report and the Executive Summary of Environmental Impact Assessment Report of the project has been sent to the following authorities or officers to make it available for inspection to the public during normal office hours till the Public Hearing is over:

1. The District Collector Office, Ahmedabad.
2. District Development Office, Ahmedabad.
3. District Industry Centre, Ahmedabad.
4. Taluka Development Office, Tal. Daskroi, Sanand, Bavla, Dholka, Dhandhuka and Dholera, Dist. Ahmedabad.
5. Additional Principal Chief Commissioner of Forests & Ministry of Environment, Forests & Climate Change, Gok. Regional Office (West Zone), Kanchiya Paryavaran Bhavan, E-3, Anna Nagar, Lal Road 2, Paryavaran Nagar, Bhopal-462 016.
6. Regional Office, Gujarat Pollution Control Board, Ahmedabad (Rural), Sector-10A, Paryavaran Bhavan, Gandhinagar.

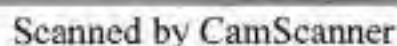
The District Magistrate / District Collector / Deputy Commissioner or their representative not below the rank of Additional District Magistrate shall supervise and preside over the entire public hearing process.

The Public Hearing is scheduled to be held on 12/10/2016 at 10.30 hrs. Venue : Mukhi Shriya Park, 107 Dholka-Chhapda Road, Village Shriya, Taluka Dholka, Dist. Ahmedabad.

Place: Gandhinagar  
Date: 04/10/2016

S.G. Khatri  
Member Secretary

(અમદાવાદ આવૃત્તિ) મુદ્રણ સંવત્ ૧૧



**MINUTES OF MEETING OF PUBLIC HEARING OF  
BHAVNAGAR DISTRICT**





# ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ

પર્યાવરણ ભવન, સેક્ટર ૧૦ એ, ગાંધીનગર - ૩૮૨૦૧૦  
ટેલી. ૦૭૯-૨૩૨૩૨૧૫૨, ફેક્સ ૦૭૯-૨૩૨૨૨૭૮૪ | www.gpcb.gov.in

## જાહેર સુચના

ભારત સરકારના પર્યાવરણ, વન અને જળ વાયુ પરિવર્તન મંત્રાલય, નવી દિલ્હીના જાહેરનામા ક્રમાંક: એસ.ઓ. ૧૫૩૩ તા. ૧૪.૦૯.૨૦૦૬ અન્વયે જણાવવાનું કે, મેસર્સ નેશનલ હાઈવે ઓથોરીટી ઓફ ઈન્ડિયા (માર્ગ પરિવહન અને હાઈવે મંત્રાલય) ૩એ અને ૩બી, ૨જો માળ, અમુલ બિલ્ડિંગ, દેના બેંક નજીક, વેજલપુર રોડ, જીવરાજ પાર્ક, અમદાવાદ-૩૮૦ ૦૫૧ (ભાવનગર જીલ્લાના ભાગરૂપે) દ્વારા અમદાવાદ - ધોલેરા એક્સપ્રેસ રોડ (૧૧૦ કીમી) (એનએચએઆઈ/બીએમ/૨૧) ગુજરાત રાજ્યના બાંધકામ માટેની પ્રોજેક્ટ કેટેગરી “એ” અંતર્ગત તેઓની અરજી અન્વયે પર્યાવરણીય લોક સુનાવણી આયોજિત કરવામાં આવેલ છે.

લોક સુનાવણીની પ્રક્રિયાના ભાગરૂપે લાગતાવળગતા સ્થાનિક અસરગ્રસ્ત લોકોનું ધ્યાન દોરીને તેઓને સદર લોક સુનાવણી દરમિયાન હાજર રહેવા અથવા તેઓની ટીકા - ટિપ્પણી લેખિતમાં સભ્ય સચિવશ્રી, ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડને મોકલવા વિનંતી છે.

રસ ધરાવતી અન્ય વ્યક્તિઓને પણ તેઓની ટીકા - ટિપ્પણી લેખિતમાં પર્યાવરણ સુનાવણીની તારીખ પહેલા લેખિતમાં સભ્ય સચિવશ્રી ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડને મોકલવા વિનંતી છે.

અત્રે ઉલ્લેખનીય છે કે, પ્રોજેક્ટના ઈઆઈએ - (એન્વિરોમેન્ટ ઈમ્પેક્ટ એસેસમેન્ટ) અહેવાલના મુસદ્દાની પ્રત તથા એન્વિરોમેન્ટ ઈમ્પેક્ટ એસેસમેન્ટનો સંક્ષિપ્ત અહેવાલની પ્રત નીચે દર્શાવેલ ઓથોરીટી / કાર્યાલયો ખાતે કામકાજના દિવસો દરમિયાન લોક સુનાવણીના દિન સુધી નિહાળી શકાશે.

૧. જિલ્લા કલેક્ટરશ્રીની કચેરી, ભાવનગર.

૨. જિલ્લા વિકાસ અધિકારીની કચેરી, ભાવનગર.

૩. જિલ્લા ઉદ્યોગ કેન્દ્ર, ભાવનગર.

૪. તાલુકા વિકાસ અધિકારીની કચેરી, તા. ભાવનગર, જી. ભાવનગર.

૫. અધિક અગ્ર મુખ્ય વન સંરક્ષકશ્રી (સી), પર્યાવરણ, વન અને જળ પરિવર્તન મંત્રાલય ભારત સરકારની પ્રાદેશિક કચેરી (પશ્ચિમ ઝોન) કેન્દ્રીય પર્યાવરણ ભવન, ઈ-૫, એરેરા કોલોની, લીન્ક રોડ-૩, રવીશંકર નગર, ભોપાલ - ૪૬૨૦૧૬.

૬. ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ, પ્રાદેશિક કચેરી, ભાવનગર.

સ્વસ્તિક કોમ્પ્લેક્સ, પહેલો માળ, પ્લોટ નં. ૧૬૧૬ / ૧૬૧૭,

વીર મોખડાજી સર્કલ પાસે, ધોધા રોડ, ભાવનગર - ૩૬૪ ૦૦૧

જિલ્લા કલેક્ટર / જિલ્લા મેજિસ્ટ્રેટ / ડેપુટી કમિશનર અથવા તેઓના / તેણીના પ્રતિનિધિ, કે જેનો હોદ્દો અધિક જિલ્લા મેજિસ્ટ્રેટ થી ઉતરતી કક્ષાનો ન હોય, તેવી વ્યક્તિ સદર લોક સુનાવણીની કામગીરીનું દેખરેખ અને સંચાલન કરશે.

લોકસુનાવણીની તારીખ ૧૬.૧૧.૨૦૧૮ ના રોજ ૧૧.૦૦ કલાકે, સ્થળ: અધેલાઈ પ્રાઈમરી સ્કૂલ, ગામ અધેલાઈ, તા. અને જી.ભાવનગર ખાતે યોજવામાં આવેલ છે.

સ્થળ : ગાંધીનગર

તા. ૧૪.૧૦.૨૦૧૮

કે. સી. મિસ્ત્રી

સભ્ય સચિવ





# GUJARAT POLLUTION CONTROL BOARD

Paryavaran Bhavan, Sector 10 A, Gandhinagar - 382010  
Tel: 079-23232152 Fax: 079-23222784 | [www.gpcb.gov.in](http://www.gpcb.gov.in)

## PUBLIC NOTICE

It is hereby informed that as per the Ministry of Environment, Forests & Climate change, Government of India, New Delhi vide its Notification no. S.O. 1533 dated September 14, 2006 Public Hearing has been fixed for Construction of Ahmedabad - Dholera Expressway Road (110 km) (NHAI/BM/21) in the State of Gujarat, by M/s National Highways Authority of India, (Ministry of Road Transport and Highways), 3A & 3B, 2nd Floor, Amul Building, Near Dena Bank, Vejalpur Road, Jivraj Park, Ahmedabad-380 051 (For part of Dist. Bhavnagar), Covered under Category "A", as mentioned in their request application.

All local affected persons of the project are requested to remain present in the public hearing or send their response in-writing to Member Secretary, Gujarat Pollution Control Board before the hearing date.

Other concerned persons having a plausible stake in environment aspects of the project or activity can submit their responses to Member Secretary, GPCB in writing before the hearing date.

It may be noted that, draft Environmental Impact Assessment report and the Executive Summary of Environment Impact Assessment report of the project has been sent to the following authorities or offices to make it available for inspection to the public during normal office hours, till the Public Hearing is Over.

1. The District Collector Office, **Bhavnagar.**
2. District Development Office, **Bhavnagar**
3. District Industry Centre, **Bhavnagar**
4. Taluka Development Office, **Ta. Bhavnagar, Dist. Bhavnagar.**
5. Additional Principal Chief Conservator of Forest(C),  
Ministry of Environment, Forest & Climate Change, Gol,  
Regional Office (West Zone), Kendriya Paryavaran Bhavan, E-5, Arera  
Colony, Link Road 3, Ravishankar Nagar, Bhopal 462016
6. **Regional Office, GPCB Bhavnagar,**  
**Swastik Complex, First Floor, Plot No. 1616/1617, Near Vir**  
**Mokhdaji Circle, Ghogha Road, Bhavnagar 364 001**

The District Magistrate / District Collector / Deputy Commissioner or his / her representative not below the rank of Additional District Magistrate shall supervise and preside over the entire public hearing process.

**The Public Hearing is scheduled to be held on 16/11/2018 at 11.00 hrs.,**  
**Venue: Adhelal Primary School, Vill. Adhelal, Ta & Dist. Bhavnagar.**

Place : Gandhinagar

Date: 14.10.2018

K. C. Mistry  
Member Secretary





# ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ

પર્યાવરણ ભવન, સેક્ટર ૧૦ એ, ગાંધીનગર - ૩૮૨૦૧૦  
ટેલી. ૦૭૯-૨૩૨૩૨૧૫૨, ફેક્સ ૦૭૯-૨૩૨૨૨૭૮૪ | [www.gpcb.gov.in](http://www.gpcb.gov.in)

## જાહેર સુચના

ભારત સરકારના પર્યાવરણ, વન અને જળ વાયુ પરિવર્તન મંત્રાલય, નવી દિલ્હીના જાહેરનામા ક્રમાંક: એસ.ઓ. ૧૫૩૩ તા. ૧૪.૦૯.૨૦૦૬ અન્વયે જણાવવાનું કે, મેસર્સ નેશનલ હાઈવે ઓથોરીટી ઓફ ઈન્ડિયા (માર્ગ પરિવહન અને હાઈવે મંત્રાલય) ડાહ્યા અને ડાહ્યા, રજો માળ, અમુલ બિલ્ડીંગ, દેના બેંક નજીક, વેજલપુર રોડ, જીવરાજ પાર્ક, અમદાવાદ-૩૮૦ ૦૫૧ (ભાવનગર જિલ્લાના ભાગરૂપે) દ્વારા અમદાવાદ - ઘોલેરા એક્સપ્રેસ રોડ (૧૧૦ કીમી) (એનએચએઆઈ/બીએમ/૨૧) ગુજરાત રાજ્યના બાંધકામ માટેની પ્રોજેક્ટ કેટેગરી "એ" અંતર્ગત તેઓની અરજી અન્વયે પર્યાવરણીય લોક સુનાવણી આયોજિત કરવામાં આવેલ છે.

લોક સુનાવણીની પ્રક્રિયાના ભાગરૂપે લાગતાવળગતા સ્થાનિક અસરગ્રસ્ત લોકોનું ધ્યાન દોરીને તેઓને સદર લોક સુનાવણી દરમિયાન હાજર રહેવા અથવા તેઓની ટીકા - ટિપ્પણી લેખિતમાં સભ્ય સચિવશ્રી, ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડને મોકલવા વિનંતી છે.

રસ ધરાવતી અન્ય વ્યક્તિઓને પણ તેઓની ટીકા - ટિપ્પણી લેખિતમાં પર્યાવરણ સુનાવણીની તારીખ પહેલા લેખિતમાં સભ્ય સચિવશ્રી ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડને મોકલવા વિનંતી છે.

અત્રે ઉલ્લેખનીય છે કે, પ્રોજેક્ટના ઈઆઈએ - (એન્વિરોમેન્ટ ઈમ્પેક્ટ એસેસમેન્ટ) અહેવાલના મુસદ્દાની પ્રત તથા એન્વિરોમેન્ટ ઈમ્પેક્ટ એસેસમેન્ટનો સંક્ષિપ્ત અહેવાલની પ્રત નીચે દર્શાવેલ ઓથોરીટી / કાર્યાલયો ખાતે કામકાજના દિવસો દરમિયાન લોક સુનાવણીના દિન સુધી નિહાળી શકાશે.

૧. જિલ્લા કલેક્ટરશ્રીની કચેરી, ભાવનગર.

૨. જિલ્લા વિકાસ અધિકારીની કચેરી, ભાવનગર.

૩. જિલ્લા ઉદ્યોગ કેન્દ્ર, ભાવનગર.

૪. તાલુકા વિકાસ અધિકારીની કચેરી, તા. ભાવનગર, જી. ભાવનગર

૫. અધિક અગ્ર મુખ્ય વન સંરક્ષકશ્રી (સી), પર્યાવરણ, વન અને જળ પરિવર્તન મંત્રાલય ભારત સરકારની પ્રાદેશિક કચેરી (પશ્ચિમ ઝોન) કેન્દ્રીય પર્યાવરણ ભવન, ઈ-૫, એટેરા કોલોની, લીન્ક રોડ-૩, રવીશંકર નગર, ભોપાલ - ૪૬૨૦૧૬.

૬. ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ, પ્રાદેશિક કચેરી, ભાવનગર.

સ્વસ્તિક કોમ્પ્લેક્સ, પહેલો માળ, પ્લોટ નં. ૧૭૧૬ / ૧૭૧૭,

વીર મોખડાજી સર્કલ પાસે, ઘોઘા રોડ, ભાવનગર - ૩૬૪ ૦૦૧

જિલ્લા કલેક્ટર / જિલ્લા મેજિસ્ટ્રેટ / ડેપુટી કમિશનર અથવા તેઓના / તેણીના પ્રતિનિધિ, કે જેનો હોદ્દો અધિક જિલ્લા મેજિસ્ટ્રેટ થી ઉતરતી કક્ષાનો ન હોય, તેવી વ્યક્તિ સદર લોક સુનાવણીની કામગીરીનું દેખરેખ અને સંચાલન કરશે.

લોકસુનાવણીની તારીખ ૧૬.૧૧.૨૦૧૮ ના રોજ ૧૧.૦૦ કલાકે, સ્થળ: અધેલાઈ પ્રાઈમરી સ્કૂલ, ગામ અધેલાઈ, તા. અને જી. ભાવનગર ખાતે યોજવામાં આવેલ છે.

સ્થળ : ગાંધીનગર

તા. ૧૪.૧૦.૨૦૧૮

કે. સી. મિસ્ત્રી

સભ્ય સચિવ



**SOME PHOTOGRAPHS DURING PUBLIC HEARING AT BHAVNAGAR**



**GUJARAT POLLUTION CONTROL BOARD**

PLOT NO: 1616/1617, SWASTIK COMPLEX, NR- VEER MOKHDAJI  
CIRCLE,  
GHOGHA ROAD, BHAVNAGAR-364 001  
PHONE: 2566108

**PUBLIC HEARING PROCEEDINGS**

It is hereby informed that as per the Ministry of Environment and Forests & Climate Change, Government of India, New Delhi vide its notification no. S.O. 1533(E) dated 14/09/2006 and its subsequent amendment S.O. 948(F) dated 12/06/2007, Ministry of Environment, Forests and Climate Change, Government of India. Public Hearing is arranged for M/s. National Highways Authority of India, Proposes the Construction of Ahmedabad-Dholera Expressway Road (110 km) (NHAI/8M/21) in the state of Gujarat covered under category "A" as mentioned in their request application.

A copy of the draft Environment Impact Assessment Report and the Summary of Environment Impact Assessment Report was sent to the following authorities or offices to make available the draft EIA report for inspection to the public during normal office hours, till the Public Hearing is over.

1. The District Collector Office, Bhavnagar
2. District Development Office, Bhavnagar
3. District Industry Centre, Bhavnagar
4. Taluka Development Office, Bhavnagar
5. The Chief Conservator of Forest,

Ministry of Environment and Forest, GOI, Regional Office (West Zone), Kendriya Parvavaran Bhavan, E-5, Arera Colony, Link Road-3, Ravisankar Colony, Bhopal - 462016.

6. Regional Office, Gujarat Pollution Control Board, Plot No. - 1616/1617 1<sup>st</sup> floor, Swastik Complex, Ne. Veer Mokhdaji Circle, Ghogha Road, Bhavnagar - 364001.

Other concerned persons having plausible stake in environmental aspects were requested to send their responses in writing to the concerned regulatory authorities

The Public Hearing for the aforesaid project was held on 16/11/2018 at Shri Adhelai Primary School, Vit: Adhelai, Ta, Dist: Bhavnagar, Gujarat. The proceeding of the Public Hearing held on 16/11/2018 is annexed herewith.

An advertisement regarding the Public Hearing held on 14/10/2018 was published in English in "The Daily News Analysis", in Gujarat in "Sandesh" dated 14/10/2018 and "Saurashtra Samachar" dated 14/10/2018.

Shri Umesh Vyas (IAS), Additional District Collector and Additional District Magistrate, Bhavnagar presided over and supervised the entire public hearing process.

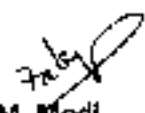
A statement showing participants present during the public hearing is enclosed as **Annexure A**.


A statement highlighting issues raised by the participants and responded to by the representative of the applicant during the public hearing in English and Gujarati Languages is enclosed as **Annexure B and B1** respectively.

A copies of responses received in writing from other persons having plausible stake and written representation received during Public Hearing in environmental aspects are enclosed herewith collectively as **Annexure C-1 to C-6**, the replies by applicant to the same are enclosed herewith collectively as **Annexure D-1 to D-6**.

Place: Shri Adhelai Primary School, Vill:  
Adhelai, Ta, Dist: Bhavnagar,  
Gujarat

Date: 16/11/2018

  
F. M. Modi  
Regional Officer  
Gujarat Pollution Control  
Board,  
Regional Officer, Bhavnagar

  
Umesh Vyas (IAS)  
Additional District  
Collector and Additional  
District Magistrate,  
Bhavnagar

- Encl: 1 Annexure A, B, B1, C 1 to C-6, D-1 to D-6 as above  
2 Video CD of public hearing

## Annexure-A

### A Statement showing participants present during the Public Hearing

As per the Ministry of Environment & Forest, Government of India, New Delhi vide its Notification no. S.O. 1533 dated Sept.14, 2006; and its subsequent amendment S.O. 948(E) dated 12/06/2007, Ministry of Environment, Forests and Climate Change, Government of India and Order No. ENV/10.2006/176/P Dt: 25/07/2007 of Department of Environment and Forest of Government of Gujarat, a Public Hearing is arranged for M/s. National Highways Authority of India, Proposes the Construction of Ahmedabad-Dholera Expressway Road (110 km) (NHAI/EM/21) in the state of Gujarat covered under category "A", as mentioned in their request application. The Public Hearing held on 16/11/2016 at 11:00 am at Shri Adhelai Primary School, Vill: Adhelai, Ta, Dist: Bhavnagar, Gujarat.

The list showing participants present during the Public Hearing is as follows:

ભારત સરકારના પર્યાવરણ અને વન મંત્રાલય, નવી દિલ્હીના જાહેરનામા ક્રમાંક : S.O. 1533 તા: 14/09/2006 અને તેના પછીના સુધારા ક્રમાંક એસ.ઓ. ૯૪૮ (ઇ), તા: 12/06/2007 તેમજ વન અને પર્યાવરણ વિભાગના ઠરાવ ક્રમાંક : ઇએનવી/૧૦.૨૦૦૬/૧૭૬/પી તા: ૨૫/૦૭/૨૦૦૭ ના બાજુસંધાને મેસર્સ મેક્લેન્ડ કમ્પેન્ડે ઓલોરીટી એન્ડ ઇન્ડિયા હાઇ પ્રોજેક્ટ ડેવલપર્સ - "એ" માં સમાવિષ્ટ સહાયતા અને પર્યાવરણીય સુસંગત રીતે ગુજરાત સરકારમાં અમદાવાદ થી દોલરા સુધીના ૧૧૦ કિમીના એક્સપ્રેસ રોડ (NHAI/EM/21)ના બાંધકામ માટેની પરિચોજના રાજી કરવાની સુચિત યોજના માટેની લોકસુનાવણી થી બધેલકદ પ્રાથમિક સાબા આમ બધેલકદ, તા:- ભાવનગર, જિ:- ભાવનગર- ૩૬૨૦૬૦, ગુજરાત ખાતે તારીખ ૧૬/૧૧/૨૦૧૮ ના રોજ, કલરે ૧૧:૦૦ કલાકે રાખવામાં આવેલ.

લોક સુનાવણી દરમિયાન હાજર રહેલ લોકોની યાદી નીચે મુજબ છે.

| Sr No<br>ક્રમક્રમાંક નં | Name & Address<br>નામ અને સરનામું | Signature<br>ચહી    |
|-------------------------|-----------------------------------|---------------------|
| 1                       | કીનજીભાઈ દોરજીભાઈ દુનકોટીયા       | કીનજીભાઈ દોરજીભાઈ   |
| 2                       | ગોવિંદભાઈ ગોપાલભાઈ                | ગોવિંદભાઈ ગોપાલભાઈ  |
| 3                       | વિપુલ એન                          | વિપુલભાઈ દુમાકિયા   |
| 4                       | નિલકાંતભાઈ લોન્ગનાડ               | નિલકાંતભાઈ લોન્ગનાડ |
| 5                       | નિલકાંત એન                        | —                   |



તા: ૧૬/૧૪/૨૦૧૮ના રોજ ભાવનગર જિલ્લાના અધિવાસી ગ્રામે ચોજાવેલ નેત્રનજા ફાઇવે ઓથોરીટી ઓફ ઇન્ડિયાની અમદાવાદ થી ધોતેલ સુધીના ૧૧૦ કિમીના એક્સપ્રેસ રોડ (NH-48/21)ના બાંધકામ માટેની પરીશોજના માટેની લોકસુનાવણીમાં ફાજર રહેલા લોકોની યાદી:

| Sl No<br>અનુક્રમિક નં | Name & Address<br>નામ અને સરનામું         | Signature<br>સહી |
|-----------------------|---|------------------|
| 6                     | મહાશયી ડી.જી.ભાઈ (અગ્રણી)                 | મહાશયી           |
| 7                     | કાલિદાસ H. પિત્રાઈ Kethel                 | કાલિદાસ          |
| 8                     | ગાંધીલાલ પરશોત્તમભાઈ લાડેયા               | ગાંધીલાલ         |
| 9                     | રામજીભાઈ શાહભાઈ મહુવાળા                   |                  |
| 10                    | કુમલેશભાઈ ગોવિંદભાઈ મજાણી                 |                  |
| 11                    | અમીનભાઈ રામચંદ્રભાઈ દુમારીયા              |                  |
| 12                    | રસીકભાઈ પરમભાઈ દુમારીયા                   |                  |
| 13                    | રામચંદ્રભાઈ ભાઈભાઈ દુમારીયા               |                  |
| 14                    | રમણભાઈ રામભાઈ ભાઈ. ૬૧૬૧                   |                  |
| 15                    | Chakrabarti Mahesh Bhanushali             | Chakrabarti      |
| 16                    | કિશોરભાઈ જગદીશભાઈ રહેવા                   |                  |
| 17                    | સુખદિભાઈ રમણભાઈ ગોવિંદ                    |                  |
| 18                    | ભાવણી મીન                                 |                  |
| 19                    | પ્રેમજીભાઈ મેઘા                           |                  |
| 20                    | મણીભાઈ ગિરજાભાઈ મજાણી                     |                  |
| 21                    | મોરો ઉભય ગોવિંદભાઈ                        |                  |
| 22                    | મોરો જયેશ. સી.                            |                  |
| 23                    | રેવેશ પાણી                                |                  |
| 24                    | બાંધેલા ટ્રિપીકાલા પરજાતસિંહ (ભાગી-કાંચા) | પરજાતસિંહ        |
|                       |   |                  |
|                       |   |                  |
|                       |   |                  |
|                       |   |                  |

**ANNEXURE - B (ENGLISH)**

**A statement showing issues raised by the participants and responses by the representatives of the applicant during the public hearing**

As per the provision of notification no.: S.O.1533, dated 14/09/2006 and its subsequent amendment S.O. 948(E) dated 12/06/2007, Ministry of Environment, Forests and Climate Change, Government of India, proposed project by National Highways Authority of India for the Construction of Ahmedabad-Dholera Expressway Road (110 km) (NHAI/UM/21) in the state of Gujarat is covered under schedule category "A", of above referred notification. Public hearing was conducted on 16/11/2018 at 11:00 Hours at Shri Adhelai Primary School, Vil: Adhelai, Ta: Dist: Bhavnagar, Gujarat, under the chairmanship of Shri Umesh Vyas (IAS), Additional District Collector and Additional District Magistrate, Bhavnagar.

Shri F. M. Modi, Regional Officer, Gujarat Pollution Control Board, Bhavnagar, welcomed all present to the Public Hearing. He outlined the various provisions of the notification and briefed about the procedural details for conducting this public hearing and the advertisement published in local daily newspaper. He announced that as per the notification only locally affected persons will be allowed to make their representation in the public hearing while having plausible stake may submit their representation in writing which would be included in proceedings, he made it clear that all the representations / questions raised during public hearing will be included in the proceedings of the hearing.

He then opened the public hearing with the due permission of the Chairman and invited the Project Proponent to start their presentation in Gujarati language.

Representative of National Highways Authority of India presented information about the proposed project in detail including technical information, Environmental Management System, Effects of the proposed project on environment and control measures proposed and social responsibility of the authority in Gujarati through power point presentation.

After the presentation, with due permission of the chair, the representative of GPCB opened the forum for representations / objections or questions from the locally affected people.

The statement showing issues raised by the participants and response made by the representative of the applicant during public hearing are as under.

| Sr. No. | Name and address   | Points represented   | Reply from the Project Proponent  | Remarks |
|---------|--|--|---|---------|
| 1       | Shri Pradyumansinh Chudasama, Village-Adhelai, Bhavnagar | This highway is vital to cope up with recent traffic, it will help becoming spine of Bhal Vistar, and hence, we welcome this project. But our representation is that, if this road is being constructed over old present road from Bhavnagar to Adhelai and from Bavaliyari to Dholera, then, why just for 9 km road of Adhelai to Bavaliyari is being newly aligned at 200 meters to 1 km on West side from old | The total length of this highway is 109 km, in which, starting from Ahmedabad and up to 71 km it is green field, and after 71 km, starting from Dholera to Bavaliyari is Special Investment Region, and the road to be constructed over there is as per DSIR master plan. After that the road will newly aligned at Adhelai to Bhavnagar from old present road. As per DSIR master plan, the road to be constructed |         |

| Sr. No. | Name and address | Points represented   | Reply from the Project Proponent  | Remarks |
|---------|------------------|--|---|---------|
|         |                  | <p>present road?</p> <p>Here, the fertile land is very limited area, and the lands are being acquired in this new alignment, these are fertile lands, which are in command area of Narmada river canal. Last year Narmada Nigam has spent 1000 Crore rupees to lay the pipeline in this area. If the highway or railway comes at 10 km on the East side of the village, where it is salty lands, then we have no any objection. So here, if this highway is being constructed on old present road over throughout area then by what reason, just for our these two villages it is being newly aligned? Even there are no any historical places on the old present road that can create any obstruction, then why this required?</p> <p>This road is 100 meters wide from Bhavnagar to Adhelai, then, why in way to Adhelai it is being widened up to 250 meters? If from Ahmedabad to Bhavnagar, this road is 110 meters wide, then, by what reason it is being widened over here only?</p> <p>As per direction of Hon. Supreme Court, Eco sensitive Zone shall be up to 10 km area from the boundary line of National Park, while the government made a new gazette notification in which they limited this</p> | <p>will be 250 meters wide. In which, the centre part will be for express way and at both sides it is reserved for special investment region. And that is proposed by state government; hence, National Highway Authority India cannot propose a further change in it.</p> <p>This new alignment is proposed due to technical reasons. And as the change cannot be made in the road of DSIR project, due to technical reasons, this new alignment is proposed.</p> <p>Moreover, this whole procedure will be carried out as per prescribed rules.</p> |         |

| Sr. No. | Name and address | Points represented   | Reply from the Project Proponent   | Remarks   |
|---------|------------------|--|--|---|
|         |                  | <p>criteria to 500 meters, on which we brought stay order from court, because Government of Gujarat or sub-committee of its ministers cannot make new notification over this.</p> <p>3 to 4 meters high bund will be constructed over this road, due to which salt water intrusion will take place in our fertile lands, already it has been occurred due to "seemrakshak bund" and "gaamrakshak bund".</p> <p>Moreover, Adhelai village falls in to CRZ area, as during high tide in to sea, the tide water crosses the bridge over the road.</p> <p>The lands were acquired 3 times at different places of this village since 1978, why?</p> <p>Whether this National highway of Bhavnagar is being constructed as Simple national highway or Express national highway?</p> <p>Blackbucks in here are not only located in to Blackbuck National Park, but this seacoast is the place for their roaming and reproduction. If this highway is constructed on West side, the issues related to environment will arise. So for the betterment of farmers and environment, It is a request to construct the new highway over the old present highway.</p> | <p>This matter has been taken care of; no any cross drainage is being blocked at any place.</p> <p>This road will be constructed as Express highway.</p> | <p>The representative of Gujarat Pollution Control Board suggested to project proponent that to obtain information about CRZ clearance.</p> |

| Sr. No. | Name and address  | Points represented   | Reply from the Project Proponent | Remarks   |
|---------|---|--|----------------------------------|---|
| 2       | Shri Pushprajsinh Chudasama, Village-Adhelai, Bhavnagar | <p>As per the report of CAG, only 15% of official lands remained of Velavadar National Park, the rest of the land of Eco sensitive zone has been destructed, we have submitted this report to the high court and high court has denied to notify any new notification regarding the same, and its further hearing is held on upcoming date - 27<sup>th</sup>.</p> <p>In the pond of this village, deers, Neeigal antelopes, birds and animals come to drink water, so if this highway is constructed at East direction then due to catchment area is over East side, you should construct over bridge instead of straight highway.</p> <p>Due to this road, water of river Narmada will not reach up to farmers and they will be deprived of livelihood.</p> <p>How the land of same village can be acquired three times for this road project? As per the Constitution of India, the land of a person cannot be acquired three times within 100 years, then how come this happened?</p> <p>It is a request that, do not correlate DSIR to Adhelai and construct the highway over the old alignment.</p> <p>The limit of 10 km from boundary line of National Park is defined by</p> |                                  | <p>The representative of Gujarat Pollution Control Board suggested the person representing that if you are having the CAG report with you then you can submit it here as a representation and he further told that, as per your written representation, eco sensitive zone was earlier up to 10 km and in new notification it has been reduced; this representation will be compiled in the proceedings and will be forwarded to competent authority.</p> <p>Hon. Chairman told the person representing that, you can submit the copy of stay order of High Court over the notification, if you are having it now, for which the further hearing is held on date 27<sup>th</sup>, of which you are saying, we will compile it in the proceedings.</p> |

| Sr. No. | Name and address            | Points represented  | Reply from the Project Proponent  | Remarks  |
|---------|-----------------------------|---|---|--|
|         |                             | Hon. Supreme Court, which cannot be changed, hence this highway being constructed is unconstitutional.  |   |  |
| 3       | Dr. Indra Gadhwi, Bhavnagar | <p>Better highways are necessity, but development with destruction should be avoided, and should adopt sustainable development</p> <p>Wildlife of our region is very rare and endangered. My representation is that, when this road will be constructed, the road will be heightened and issue of water logging will arise and the second issue is that when the traffic will increase, this natural wildlife habitat will get severely affected and provision of underpass for roaming of animals in to EIA report is not mentioned, this area is habitat of approximately 10 Schedule - 1 species, so if the underpass is constructed, this habitat can be saved.</p> <p>As per the survey of Gujarat Ecology Commission and GEF Foundation, agencies of government, some Schedule -1 and Critically Endangered Species lives in this area, so this is a request that planning should be done in such way that no harm done to those species.</p> <p>This report is not prepared by carrying out survey of Natural Drainage System, here the natural drainage</p> | There is one Elevated Corridor of 1.375 km is proposed between Adhelai To Bhavnagar and there is no any widening will be done in the same. The road will be constructed over that Moreover, there has been no any change proposed in to any water body, hence, no issue of water logging is suppose to arise. | <p>The representative of Gujarat Pollution Control Board told the person representing that, this</p> |



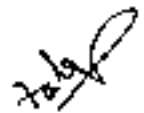
| Sr. No. | Name and address   | Points represented  | Reply from the Project Proponent | Remarks   |
|---------|--|---|----------------------------------|---|
|         |  | system is seaward side, hence if the road is constructed in between, the water logging issue on one side will arise.<br>Project Proponent recently informed us is about road of Adhelai to Bhavnagar and the distance of 1.375 km they described is the area passing nearby National Park, there is nothing can be done in this area; thus, underpass will solve the issue of water logging and roaming of animals. |                                  | is a draft EIA report, if any lacuna is observed in it, after proper technical study, it shall have to be rectified in the Final EIA report by the project proponent. |
| 4       | Shri Vipulbhai Laljibhai Dumadhya, Sarpanch, Village- Adhelai, Bhavnagar | We have objection in construction of this express highway, while we have no objection if it is constructed over old present road  |                                  |   |


Before the public hearing, total two (2) written representation were received, of (1) Shri Pushparajsinh Pradyumansinh Chudasama, Village- Adhelai, Bhavnagar and (2) Shri Krishnakant Chauhan, Surat were obtained. Also, during the public hearing, 4 (four) written representations from (1) Shri Ramdevsinh B. Chudasama, Village- Adhelai, Bhavnagar, (2) Shri Pushparajsinh Pradyumansinh Chudasama, Village- Adhelai, Bhavnagar, (3) Dr. I. R. Gadhvi, Bhavnagar, (4) Shri Laljibhai Veljibhai and other villagers of village Adhelai, Bhavnagar, were received. These representations as Annexure C1 to C6 and their replies by the applicant as Annexure D1 to D6 will be included as the part of the Minutes of Meeting

At last, Shri F. M. Modi, Regional Officer, GPCB, summarized the proceedings and with due permission of Chairman, concluded the Public Hearing.

Place: Shri Adhelai Primary School, Vi: Adhelai, Ta, Dist: Bhavnagar, Gujarat

Date: 16/11/2018

  
F. M. Modi  
Regional Officer,  
Gujarat Pollution Control Board,  
Bhavnagar

  
Umesh Vyas (GAS)  
Additional District Collector and  
Additional District Magistrate,  
Bhavnagar

લોક સુનાવણી દરમિયાન હાજર લોકો દ્વારા રજૂ કરવામાં આવેલ મુદ્દાઓ અને અરજદારના પ્રતિનિધિ દ્વારા

આપવામાં આવેલ જવાબ

ભારત સરકારના વન અને પર્યાવરણ મંત્રાલય, નવી દિલ્હીના જાહેરનામા ક્રમાંક: એસ.ઓ. ૧૫૩૩, તા. ૧૪/૦૯/૨૦૦૬ અને તેના પછીના સુધારાક્રમાંક એસ.ઓ. ૨૪૮ (ઇ), તા. ૧૨/૦૬/૨૦૦૭ ના અનુસંધાને નેશનલ હાઇ-વે ઓથોરીટી ઓફ ઇન્ડિયા દ્વારા, અમદાવાદ થી ધોલેરા સુધીના ૧૧૦ કિમીના એક્સપ્રેસ રોડ (NHAI/BM/21) ના બાંધકામ માટેની પરિયોજના કેટેગરી "એ" માં આવરી લેવાયેલ છે, જે માટેની લોક સુનાવણી તા: ૧૬/૧૧/૨૦૧૮ ના રોજ સવારે ૧૧:૦૦ કલાકે શ્રી અધેલાઇ પ્રાથમિક શાળા, ગામ: અધેલાઇ, તા:- ભાવનગર, જિ:- ભાવનગર- ૩૬૪૦૬૦, ગુજરાત ખાતે અધિક જીલ્લા કલેક્ટરશ્રી અને અધિક જિલ્લા મેજિસ્ટ્રેટશ્રી ઉમેશ વ્યાસ (જી.એ.એસ.), ભાવનગરની અધ્યક્ષતા હેઠળ રાખવામાં આવેલ.

શ્રી એફ એમ. મોદી, પ્રાદેશિક અધિકારી, ગુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડ, ભાવનગર દ્વારા લોક સુનાવણીમાં ઉપસ્થિત સૌને આવકારવા અને ઇ.આઇ.એ. નોટીફિકેશન અંતર્ગત વિવિધ જોગવાઇઓ અને લોક સુનાવણી પ્રક્રિયા અંગે માહિતી આપી. તેમણે બોર્ડ દ્વારા આ લોક સુનાવણીની બહોળી પ્રસિદ્ધિ માટે લેવાયેલ જુદા જુદા પગલાં બાબતે સૌને માહિતગાર કર્યા. તેઓએ સ્થાનિક દૈનિક વર્તમાન પત્રોમાં જાહેર ખબર આપીને કરવામાં આવેલ જાહેરાત અંગે પણ માહિતી આપી. વધુમાં તેઓએ જાહેરાત કરી કે સદર નોટિફિકેશનની જોગવાઇ અનુસાર સ્થાનિક અસરગ્રસ્ત લોકો સૌપ્રથમ આ સુનાવણીમાં મૌખિક રજૂઆત કરી શકશે, જ્યારે વ્યાજબી હિત ધરાવતા અન્ય વ્યક્તિઓ તેઓની રજૂઆત લેખિતમાં કરી શકશે જેનો કાર્યવાહી નોંધમાં સમાવેશ કરવામાં આવશે. તેઓએ સ્પષ્ટતા કરી કે આ લોક સુનાવણી સમિતિ, સુનાવણી દરમિયાન રજૂ થયેલ બાબતોને આવરી લઇને કાર્યનોંધમાં સમાવેશ કરવામાં આવશે.

ત્યારબાદ તેમને અધ્યક્ષશ્રીની પરવાનગીથી લોક સુનાવણીનો પ્રારંભ કર્યો. તેઓએ પરિયોજનાકારને તેમની સુચિત પરિયોજના વિષે સ્થાનિક ભાષામાં માહિતી રજૂ કરવા જણાવેલ.

પરિયોજનાકારના પ્રતિનિધિ દ્વારા પ્રાયોજક વિષેની માહિતી, પરિયોજનાની માહિતી, ઉત્પાદન અંગેની માહિતી, સલામતીના પગલાં, પરિયોજનાની ટેકનીકલ માહિતી, પર્યાવરણીય વ્યવસ્થાપન પદ્ધતિ તેની અસરો અને મુચિત નિયંત્રણો, ઉપાયો તથા સામાજિક જવાબદારી પરત્વેની કામગીરી અંગે ગુજરાતી ભાષામાં પ્રેઝન્ટેશન કરવામાં આવ્યું.

પરિયોજનાકારના પ્રતિનિધિ દ્વારા રજૂઆત પૂર્ણ થયા બાદ ગુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડના પ્રતિનિધિ દ્વારા અધ્યક્ષશ્રીની પરવાનગીથી સ્થાનિક અસરગ્રસ્ત લોકોની રજૂઆતો/વાંધાઓ/સૂચનો માટે મંચ ખુલ્લો મુકવામાં આવ્યો.

લોક સુનાવણી દરમિયાન હાજર રહેલ લોકો દ્વારા મૌખિકમાં રજૂ કરવામાં આવેલ પ્રશ્નો/વાંધા/સૂચનો/મંતવ્ય તેમજ અરજદારના પ્રતિનિધિ દ્વારા આપવામાં આવેલ પ્રત્યુત્તરો નીચે મુજબ છે:

| ક્રમ | મુદો રજુ કરનારનું નામ અને સરનામું               | રજુઆત કરેલ મુદ્દાઓ   | કંપનીના પ્રતિનિધિ દ્વારા અપાયેલ પ્રત્યુત્તર   | રીમાર્ક્સ |
|------|---|--|---|-----------|
| ૧    | શ્રી પ્રદ્યુમ્નસિંહ યુડાસમા, ગામ-અધેલાઇ, ભાવનગર | અત્યારના ટ્રાફિકને જોતાં આ હાઇવેની ખુબ જ જરૂરિયાત છે, તે ભાલ વિસ્તારની કોરોડરજી સમાન બની રહેશે, બાથી આ પ્રોજેક્ટને આવકારીએ છીએ. પરંતુ રજૂઆત એ છે કે, આ રસ્તો ભાવનગરથી શરૂ કરી અધેલાઇ સુધી અને બાવલીયારી બાદ ધોલેરા સુધી જૂનાં હયાત રસ્તા પર બનાવવાનો છે. તો અધેલાઇથી બાવલીયારી ના ૬ કીમીનો રસ્તો જૂના રસ્તા પર બનાવવાની જગ્યાએ જૂના રસ્તાથી ૨૦૦ મીટર થી ૧ કીમી જેટલો પશ્ચિમ બાજુએ નવી એલાઇનમેન્ટથી બનાવવામાં આવનાર છે, એવું કેમ? | આ રસ્તાની કુલ લંબાઇ ૧૦૯ કીમી જેટલી છે, જેમાં અમદાવાદથી શરૂ કરી ૭૧ કીમી સુધી ગ્રીન ફીલ્ડ છે. અને ત્યારબાદ ૩૮ કીમી પછીથી ધોલેરાથી બાવલીયારી સુધી તે સ્પેશ્યલ ઇન્વેસ્ટમેન્ટ રીજીયન છે, જેમાં DSA નાં માસ્ટર પ્લાન મુજબ રસ્તો બનાવવામાં આવનાર છે, ત્યારબાદ ફક્ત અધેલાઇ થી આ રસ્તો થોડો જૂના રસ્તાથી બહાર નીકળી ભાવનગર સુધી બનાવવામાં આવનાર છે. જેમાં DSA નાં માસ્ટર પ્લાન મુજબ તે રસ્તો ૨૫૦ મીટર પહોળાઇનો બનાવવામાં આવનાર છે. જેમાં વચ્ચેનાં ભાગમાં એક્સપ્રેસ વે અને બંને બાજુ સ્પેશ્યલ ઇન્વેસ્ટમેન્ટ રીજીયન માટે અન્યમત સાબવામાં આવેલ છે. જે રાજ્ય સરકાર દ્વારા સુચિત કરવામાં આવેલ હોવાથી નેશનલ હાઇવે ઓથોરીટી ઇન્ડીયા તરફથી ફેરફાર થઇ શકે તેમ નથી. |           |
|      |   | અહીં ખેતીવાડીની જમીન મર્યાદિત છે. જેમાં સારીસારી જમીનો આ નવી એલાઇનમેન્ટમાં આવે છે, જે ફળદ્રુપ જમીનો છે, જે નર્મદા નદીનાં કમાન્ડ એરિયામાં છે. ગયા વર્ષે નર્મદા નિગમે અહીં નર્મદા પાઇપલાઇન માટે ૧૦૦૦ કરોડ રૂપિયા ખર્ચ્યા છે. તો ગામથી પૂર્વ ભાગમાં દરેક કીમી દૂર દરિયાનાં  | આ નવું એલાઇનમેન્ટ તકનિકી કારણોસર કરવામાં આવેલ છે. જેમાં DSA પ્રોજેક્ટનાં રસ્તામાં ફેરફાર શક્ય ન હોવાનાં કારણે   |           |

| ક્રમ | મુદો કરનારનું અને સરનામું | રજૂઆત કરેલ મુદ્દાઓ  | કંપનીના પ્રતિનિધિ દ્વારા અપાયેલ પ્રત્યુત્તર   | રીમાર્ક્સ |
|------|---------------------------|---|---|-----------|
|      |                           | <p>ખારા પટમાં આવતી જમીનો છે, જો ત્યાં હાઇવે કે રેલવે ભાડન નાખવામાં આવે તો અમને કોઇ વાંધો નથી, આમ, જો આ હાઇવે ભાવનગર થી ધોલેરા સુધી તમામ જગ્યાએ જૂના રસ્તા પર જ બનવાનો છે તો એવી શું જરૂરિયાત પડી કે અમારા આ બે ગ્રામ પૂરતો જ આ રસ્તો નીચે ઉતારવો પડ્યો? અહીં જૂના હાઇવે પર કોઇ એવા ઐતિહાસિક સ્થળો નથી જેથી ત્યાં રસ્તો બનાવવામાં સમસ્યા ન આવે, તો આવું કેમ?</p> <p>આ રસ્તો ભાવનગર થી અંધેલાઇ સુધી ૧૧૦ મીટર પહોળો છે પરંતુ અંધેલાઇ આવતાં તે રસ્તો ૨૫૦ મીટર પહોળો કેમ કરવામાં આવનાર છે? જો અમદાવાદથી ભાવનગર સુધી ૧૧૦ મીટર પહોળાઇનો રસ્તો બની શકે તો અહીંયા જ કઇ પરિસ્થિતિના લીધે તે પહોળો કરવામાં આવનાર છે?</p> <p>નામદાર સુપ્રીમ કોર્ટના હુકમ મુજબ નેશનલ પાર્કની બોર્ડરથી ૧૦</p> | <p>તકનિહી જરૂરીયાતનાં લીધે આ નવું અલાઇનમેન્ટ કરવામાં આવેલ છે, આ ઉપરાંત, નિયમોનુસાર તમામ કામગીરી કરવામાં આવશે.</p> |           |

| ક્રમ | મુદો કરનારનું નામ અને સરનામું | રજુઆત કરેલ મુદ્દાઓ  | કંપનીના પ્રતિનિધિ દ્વારા અપાયેલ પ્રત્યુત્તર   | રીમાર્ક્સ  |
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|      |                               | <p>કીમી સુધી ઇકો સેન્સીટીવ ઝોન છે, જ્યારે સરકારે નવું ગેઝેટ બનાવી તેને ૫૦૦ મીટર સુધીની સીમા નક્કી કરી છે, જેનાં પર અમે કોર્ટનો સ્ટે લાવ્યા છીએ, કેમ કે આવું ગુજરાત સરકાર કે તેની પ્રધાન મંડળની પેટા સમિતિ કરી શકે નહિ.</p> <p>આ રસ્તા પર જ્યારે ૩ થી ૪ મીટર જેટલો ઉંચો પાળો બનવાનો છે, જેમાં અમારી સારી જમીનમાં દરિયાનાં પાણીની ખારાશ આવી જશે. જે અગાઉ સીમરક્ષક પાળો અને ગામરક્ષક પાળાથી ખારાશ આવી હતી.</p> <p>આ ઉપરાંત, અધેલાઇ સીઆરઝેડમાં આવે છે, દરિયાની મહત્તમ ભરતી વખતે રોડ પરનાં પુલને દરિયાનું પાણી પાર કરી જાય છે.</p> <p>આ હાઇવે માટે ૧૯૭૮ થી શાલથી આજ સુધી આ જામની ત્રણ વખત અલગ અલગ વિસ્તારમાં જમીન અધિગ્રહણ કરવામાં આવેલ છે, એનું શું કારણ?</p> | <p>આ બાબતનું ધ્યાન રાખવામાં આવેલ છે, કોઇ પણ જગ્યાએ કોસ ટુનેજ બંધ કરવામાં આવનાર નથી.</p> | <p>ગુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડના પ્રતિનિધિ દ્વારા પ્રોજેક્ટ પ્રપોઝન્ટને સીઆરઝેડ ડલીવરન્સ બાબતે બારીકાઇથી જાણકારી મેળવવા અનુરોધ કરેલ.</p> |

| ક્રમ | મુદો કરનારનું નામ અને સરનામું                | રજૂઆત કરેલ મુદ્દાઓ  | કંપનીના પ્રતિનિધિ દ્વારા અપાવેલ પ્રત્યુત્તર | રીમાર્ક્સ   |
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|      |  | <p>આ જે ભાવનગરનો નેશનલ હાઇવે બનવાનો છે તે સાથે નેશનલ હાઇવે છે કે એક્સપ્રેસ હાઇવે બનવાનો છે?</p> <p>કાળિયાર હરણ ફક્ત વેળાવદર બસઘાટસ્થમાં રહે છે તેવું નથી, પરંતુ હરવાફરવાં તેમજ પ્રજાનન-સંવનનનું સ્થળ આ દરિયાકાંઠો છે, આટલો મોટો હાઇવે પશ્ચિમ બાજુએ બનાવવામાં આવે તો પર્યાવરણને ભગતા પ્રશ્નો ઊભા થશે, આથી ખેડૂતો અને પર્યાવરણનાં ભલા માટે જૂના હાઇવે પર જ નવો હાઇવે બનાવવા માટે વિનંતી છે.</p> | આ રસ્તો એક્સપ્રેસ વે બનવાનો છે.             |   |
| ૨    | શ્રી પુષ્પરજસિંહ ચુડાસમા, ગામ-અધેલાઇ, ભાવનગર | <p>વેળાવદર નેશનલ પાર્ક માં CAG નો અહેવાલ મુજબ ફક્ત ૧૫ ટકા જ કાયદેસર જગ્યા બચી છે, બાકીની તમામ ઇકો સેન્સીટીવ ઝોનની જગ્યાનો વિનાશ કરવામાં આવેલ છે, અમે આ અહેવાલ હાઇ કોર્ટમાં રજૂ કરેલ છે અને હાઇ કોર્ટ આ અંગે કોઇ પણ નવો નિયમ બહાર પાડવા પર મનાઇ ફકમ કરમાવેલ છે. જેની ૨૭ તારીખનાં રોજ સુનાવણી થનાર છે.</p>  |   | <p>ગુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડના પ્રતિનિધિ દ્વારા રજૂઆત કરનારને CAG નો અહેવાલ અત્યારે સાથે હોય તો રજૂ કરવા અને રજૂઆતમાં સામેલ કરાવવા અનુરોધ કરેલ. તેમણે જણાવેલ કે આપની લેખિત રજૂઆત કે જે મુજબ પહેલાં ઇકો સેન્સીટીવ ઝોન ૧૦ કીમી હતો અને હવે નવા નિયમ મુજબ તે</p> |



| ક્રમ | મુદો<br>કરનારનું<br>અને સરનામું | રજુ<br>નામ | રજુઆત કરેલ મુદ્દાઓ   | કંપનીના પ્રતિનિધિ દ્વારા<br>અપાયેલ પ્રત્યુત્તર | રીમાર્ક્સ   |
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|      |                                 |            | <p>આ ગામમાં જે પાણી તળાવમાં આવે છે ત્યાં હરણો, નીલગાય, પક્ષીઓ, પ્રાણીઓ આ પાણી પીવે છે, આથી જો આપ આ રોડ પૂર્વ દિશા બાજુ બનાવો તો આ બધું પાણી પૂર્વ દિશામાં જ હોવાથી સીધો રોડ નહિ પરંતુ ઓવરબ્રીજ બનાવવો પડે.</p> <p>આ રોડનાં લીધે અમારું નર્મદાનું પાણી ખેડૂતોને નહિં પહોંચે અને ખેડૂતોની આજીવિકા રૂંધાઈ જશે.</p> <p>એક જ પોજેક્ટ માટે કોઈ એક ગામની જમીન ત્રણ વખત રોડ માટે કાઢી રીતે અધિગ્રહણ થઈ શકે તે જણાવો? ભારતનાં બંધારણ મુજબ કોઈ પ્રોજેક્ટ માટે ૧૦૦ વર્ષ સુધીમાં કોઈ માનવીની જમીન ત્રણ વખત અધિગ્રહણ ન થઈ શકે તો આવું કેમ?</p> <p>આપ D518 ને અધેલાઈ સાથે ના સરખાવતા હાલની જૂની એલાઈનમેન્ટ મુજબ રોડ બનાવો તેવી રજુઆત છે. છંદ્રે સેન્સીટીવ ઝોનની ૧૦ કીમીની હદ માન. સુપ્રીમ કોર્ટ દ્વારા નક્કી કરવામાં</p> |  | <p>ઘટાડવામાં આવ્યો છે તેને પણ આ કાર્યવાહીમાં સામેલ કરવામાં આવશે અને સક્ષમ સત્તાધીશ સુધી મોકલવામાં આવશે.</p> <p>માનનીય અધ્યક્ષશ્રી દ્વારા જણાવવામાં આવેલ કે આપ હાઇ કોર્ટનો જે નોટીફિકેશન પરનો મનાઈ હુકમ લઈ આવેલ છો કે જે અંગેની રજૂ તારીખે સુનાવણી થનાર છે તે મનાઈ હુકમની નકલ રજૂ કરી શકો છો તેને કાર્યવાહીમાં સામેલ કરીશું.</p> |

| ક્રમ | મુદ્દો કરનારનું અને સરનામું | રજૂનાત કરેલ મુદ્દાઓ  | કંપનીના પ્રતિનિધિ દ્વારા અપાયેલ પ્રત્યુત્તર  | રીમાર્ક્સ |
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|      |                             | આવેલ છે, જેને કોઈ બદલી શકે નહિં આથી આ રસ્તો બની રહ્યો છે તે ગેરબધારણીય છે.   |  |           |
| ૩    | ડૉ. ઇન્દ્ર ગઢવી, ભાવનગર     | <p>સારા રસ્તા જરૂરી છે, પરંતુ વિકાસ સાથે વિનાશ ન થાય તેવો ટકાઉ વિકાસનો રસ્તો અપનાવવો જરૂરી છે.</p> <p>આપણા વિસ્તારની જે વાઇલ્ડલાઇફ છે તે ખુબ જ અલગ્ય અને સંકટમાં છે. મારી રજૂઆત એ છે કે જ્યારે આ રોડ બનશે ત્યારે આ રસ્તો ઉંચો કરવામાં આવશે અને પાણી ભરાવાની સમસ્યા થશે અને બીજો મુદ્દો એ છે કે ટ્રાફિક વધવાને કારણે ભાલ વિસ્તારનું જે કુદરતી રહેઠાણ છે તે ભાંગી પડશે, અને આ FIA report માં કોઈ પણ જગ્યાએ પ્રાણીઓની અવરજવર માટે અન્ડરપાસ આપવામાં આવેલ નથી, આથી જે વિસ્તારમાં શેડ્યુલ - ૧ વાઇલ્ડલાઇફ છે જેમાં દસેક પ્રજાતિઓ છે, તો વ્યાપક વિસ્તારોમાં અન્ડરપાસ બનાવવામાં આવે તો આ રહેઠાણ ભાંગી પડતું બચશે.</p> | <p>અધિવાસી થી ભાવનગર સુધીનો જે રસ્તો બનાવવામાં આવનાર છે તે એક ૧૩૭૫ કીમીનો elevated corridor છે કે જેમાં જેમાં કોઈ વાઇલ્ડનાઈગ કરવામાં આવનાર નથી, તે જગ્યાએ રસ્તો ઉપરથી જ બનશે, આ ઉપરાંત આ વિસ્તારમાં કોઈ પણ જાતની વોટર બોડીને ફેરફાર કરવામાં આવનાર નથી, જેથી વોટર લોગીંગ/પ્રાણીનો ભરાવો થનાર નથી.</p> |           |

| ક્રમ | મુદો કરનારનું નામ અને સરનામું | રજૂઆત કરેલ મુદ્દાઓ  | કંપનીના પ્રતિનિધિ દ્વારા અપાયેલ પ્રત્યુત્તર | રીમાર્ક્સ   |
|------|-------------------------------|---|---|---|
|      |                               | <p>Commission અને GEER Foundation કે જે બંને સરકારની જ એજન્સીઓ છે તેમનાં સર્વે મુજબ આ વિસ્તારમાં કેટલીક શિક્ષ્યુલ - 1 ની અને કેટલીક Critically Endangered Species વસે છે, જેને કોઈ પણ જાતની હાનિ ન પહોંચે તે રીતેનું પ્લાનિંગ કરવામાં આવે તેવી રજૂઆત છે.</p> <p>આ રીપોર્ટ નેચરલ ડ્રેનેજ સિસ્ટમનો અભ્યાસ કરીને બનાવેલ નથી, અહીં નેચરલ ડ્રેનેજ સિસ્ટમ દરિયા તરફની છે, જેમાં વચ્ચે રસ્તો આવવાથી એક સાઇડ પર ચોક્કસપણે પાણી ભરાવાની સમસ્યા થશે.</p> <p>પ્રોજેક્ટ પ્રપોનન્ટ દ્વારા જે હમણા જણાવવામાં આવ્યું છે તે અચેલાઇ થી ભાવનગરનાં રસ્તાની વાત છે અને જે અંતર જણાવવામાં આવ્યું છે તે રસ્તો ૧.૩૭૫ કીમી એ નેશનલ પાક પાસેથી પસાર થતો વિસ્તાર છે, જેમાં કંઈ થઈ શકે તેમ નથી, આમ, અન્ડરપાસ બનાવવાથી પાણી ભરાવાની સમસ્યા અને વન્ય પ્રાણીઓની</p> |   | <p>ગુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડના પ્રતિનિધિએ જણાવેલ કે આ ડ્રાફ્ટ ઇમાઇએ રીપોર્ટ છે, જેમાં કંઈ પણ ઇણપ ધ્યાને આવે તેનો પૂરતો તકનિકી અભ્યાસ કરી ફાઇનલ ઇમાઇએ રીપોર્ટમાં પ્રોજેક્ટ પ્રપોનન્ટ દ્વારા સામેલ કરવાનો થતો હોય છે.</p> |

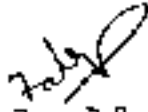
| ક્રમ | મુદો રજુ કરનારનું નામ અને સરનામું                          | રજુઆત કરેલ મુદાઓ   | કંપનીના પ્રતિનિધિ દ્વારા અપાયેલ પ્રત્યુત્તર | રીમાર્ક્સ |
|------|--|--|---|-----------|
| ૪    | શ્રી વિપુલભાઈ લાલજીભાઈ દુમાધિયા, સરપંચ ગામ- અધેલાઈ, ભાવનગર | અવરજવરની સમસ્યા હલ થઈ જશે.<br>આ જે એક્સપ્રેસ હાઈવે બને છે તેમાં અમને વાંધો છે કે અને જ્યાં અત્યારે હાલમાં રસ્તો છે ત્યાં બને તો કોઈ વાંધો નથી. |   |           |


લોક સુનાવણી અગાઉ કુલ ૨ (બે) લેખિત રજુઆત મળેલ છે. જે (૧) શ્રી પુષ્પરાજસિંહ પ્રદુમનસિંહ યુડાસમા, ગામ- અધેલાઈ, ભાવનગર અને (૨) શ્રી કિષ્કાન્ત ચૌહાણ, સુરત તરફથી મળેલ છે. તેમજ લોક સુનાવણી દરમિયાન ૪ (ચાર) લેખિત રજુઆત - (૧) શ્રી રામદેવસિંહ બી. યુડાસમા, ગામ- બાવલીયારી, ભાવનગર, (૨) શ્રી પુષ્પરાજસિંહ પ્રદુમનસિંહ યુડાસમા, ગામ- અધેલાઈ, ભાવનગર, (૩) ડૉ. આઈ. આર. જઢવી, ભાવનગર, (૪) શ્રી લાલજીભાઈ વેલજીભાઈ અને અધેલાઈ ગામના ગ્રામજનો, ગામ- અધેલાઈ, ભાવનગર તરફથી મળેલ છે. આ રજુઆતોને એનેક્સર સી-૧ થી સી-૬ અને તેનાં પ્રત્યુત્તરને એનેક્સર ડી-૧ થી ડી-૬ તરીકે કાર્યવાહી નોંધમાં સમાવેશ કરવામાં આવશે.

અંતમાં શ્રી, એફ. એમ. મોદી, ગુ. પ્ર. નિ. બોર્ડના પ્રતિનિધિ દ્વારા કાર્યવાહીનો સારાંશ રજુ કરી અધ્યક્ષશ્રીની પરવાનગી લઈ આભાર સહ લોકસુનાવણી પૂર્ણ થયેલ જાહેર કરવામાં આવેલ.

સ્થળ: શ્રી અધેલાઈ પ્રાથમિક શાળા,  
ગામ: અધેલાઈ, તા:- ભાવનગર, જિ:-  
ભાવનગર- ૩૬૪૦૬૦, ગુજરાત

તારીખ : ૧૬/૧૧/૨૦૧૮

  
એફ. એમ. મોદી  
પ્રાદેશિક અધિકારી  
ગુ.પ્ર.નિ.બોર્ડ, ભાવનગર

  
કમ્પેશ બાસ (જી.એ.એસ.),  
અધિક જીલ્લા કલેક્ટરશ્રી અને  
અધિક જિલ્લા મેજિસ્ટ્રેટશ્રી,  
ભાવનગર

# Annexure –C

C-1

Chudasma Pushparajsinh Pradhumansinh  
Village Adhelai  
Taluka & District Bhavnagar  
Date: 10/11/2018

To,  
Sabhya Sachiv Shri,  
Gujarat Pollution Control Board,  
Regional Office, Swastik Complex,  
1<sup>st</sup> Floor, Plot no. 1616/1617,  
Near Veer Mokhdaji Circle,  
Chogha Road, Bhavnagar.

**Sub: Regarding Submission of Objection for Bhavnagar-Dholera NH (Bhavnagar part) environment hearing dated 16/11/2018 at Adhelai Village.**

Sir,

This is to inform that we are submitting objections regarding advertisement published by you in newspaper regarding environmental permission of Bhavnagar-Dholera National Highway at Adhelai village dated 16/11/2018.

**Objection:**

Ahmedabad-Bhavnagar road already passes through the revenue boundary of Adhelai village. It has been found that the new alignment of road mentioned in your advertisement passes at 1-2 km distance from the existing highway, to the west of Adhelai village. In this regard, we are informing you through an objection that Velavadar National Park and Blackbuck Sanctuary are lying to the west of Adhelai village. Keeping this in mind the ESZ of the sanctuary was kept at 10 km from the boundary of the sanctuary.

Recently, Govt. of Gujarat reduced this existing boundary from 10 km to 0.5-1 km. A writ petition no. 88 of 2017 was filed in the High Court of Gujarat against this decision of Govt. In this case, Hon'ble High Court of Gujarat vide order dated 01/04/2017 has refused to the changes in the ESZ done by the Govt. and to implemented the Court order.

The alignment of the project whose hearing has been scheduled passes through this prohibited ESZ. Therefore, this new alignment and map for this project is punishable offence under Environment Protection Act 1976.

The responsibility of this entire proceeding is of GPCB and NHAI officials personally. Thus, consider and record our objection in the hearing as per the rules.

I am a farmer of Adhelai village.

Yours trustworthy,

Pushparajsinh P Chudasma



C-3

સુડાસના પુખ્તશાજિંગે પ્રધુઅનસિંહ  
મુ.અધેબાઈ  
તા.ભાવનગર, જી.ભાવનગર  
તા:૧૦/૧૧/૨૦૧૮

પ્રતિ,  
સભ્ય સચિવશ્રી  
ગુજરાત પ્રદૂષણ નિયંત્રણ બોર્ડ  
કે.પ્રાદેશિક કચેરી  
સ્થાપિત કોમ્પ્લેક્સ પહેલા માળે,  
પ્લોટ નં.૧૩૧૩/૧૩૧૩  
વીર મોજડાલ સર્કલ પાસે,  
પોધાસોડ ભાવનગર.

વિષય:- ભાવનગર-ધોલેરા નેશનલ હાઇવે (ભાવનગર નિલ્લાનો ભાગ) ની  
પર્યાવરણીય સુભાવણી તા.૧૩/૧૧/૨૦૧૮ મુ.અધેબાઈ વાંધા  
નોંધાવવા બાબત.

શ્રે.શ્રાહેબ,

સચિવશ્રી જણાવવાનું કે વર્તમાનપત્રમાં આપની જાહેરાત મુજબ  
ભાવનગર-ધોલેરા-નેશનલ હાઇવે માટે પર્યાવરણીય મંજુરી માટે જાહેર સૂનાવણી  
અધેબાઈ મુકામે તા.૧૩/૧૧/૨૦૧૮ ના રોજ રાખેલ છે, તે અંગે આ અશ્લેષી  
અમારા જીએના વાંધો નોંધાવીએ છીએ.

વાંધો:-

અધેબાઈ ગામની રેવન્યુ સીમમાંથી હાલનો હયાત અમદાવાદ-ભાવનગર  
હાઇવે રોડ પસાર થાય છે. તેની બાજુના અધેબાઈ-ગામથી પશ્ચિમ દિશાએ  
હયાત જુના રોડથી ૧ કિ.મી થી ૨ કિમી દુર આપની જાહેરાત મુજબનો  
સૂચિત નવો નેશનલ હાઇવેની પથરેખા બનાવવામાં આવી છે. અને તેની  
પર્યાવરણીય જાહેર સૂનાવણી રાખેલ છે. તે સંબંધે વાંધો લેતા જણાવવાનું કે  
અધેબાઈ ગામની પશ્ચિમ હદ ઉપર વેળાવદર નેશનલ પાર્ક અને કાળીચાર  
અભ્યારણ આવેલું છે. તેના ઇકો-સેન્સેટીવ ઝોન અગાઉ ૧૦ કિ.મી.  
અભ્યારણની હદથી હતો, તેમાં તાજેતરમાં ગુજરાત સરકારે ઘરાડો કરીને

|             |          |
|-------------|----------|
| Received by | 11800    |
| Date        | 13/11/18 |
| Signature   |          |

અભ્યારણની હદથી ૫૦૦ મીટર થી ૧ કી.મી. કરી લાખ્યો છે. આ કાર્યવાહી (મિર્સચ) સામે બા.ગુજરાત હાઇકોર્ટ માં રીટ-પીટીશન (પી.એલ) નં.૮૮ OF ૨૦૧૭ દાખલ કરવામાં આવી છે. અને આ કેસમાં બા.ગુજરાત હાઇકોર્ટ તરફથી તા.૦૧/૦૪/૨૦૧૭ બા રોજ હુકમ કરીને ઇકોસેન્સેટીવ ઝોનમાં કચેલ દેવદાર સામે અને તેના જાહેરનામા સો મનાઇ ફરમાવેલ છે. અને તે અંગેનો હુકમ અત્યારે અમલમાં છે. તેથી જેવી સૂચનાવણી થઇ રહી છે તે નેક્સનલ હાઇવે ચોડની પસરેના જુના (અત્યારે અમલમાં છે) તે પ્રતિબંધિત ઇકો-સેન્સેટીવ ઝોનમાંથી પસાર થઇ રહે છે. આ નવી પસરેના તેના બકસા પગેરે બનાવવાની તમામ કાર્ય પર્યાવરણ સંરક્ષણ ધારો-વલજ્જ મુજબ સજા અને દંડપાત્ર મુન્હો બને છે. તેવી જવાબદારી આવી કાર્યવાહી હાલ ચાલી રહી છે તે મુજબ પ્રદુષણ વિચંત્રણ બોર્ડ અને મે.નેક્સનલ હાઇવે ઓથોરીટીના જવાબદાર અધિકારીઓની અગત રીતે રહે છે. તેવી જાણ કરવામાં આવે છે. અને અમારા આ વાંધાની નોંધ પર્યાવરણ સૂચનાવણીમાં જિનમ પ્રમાણે લેવા માંગણી છે.

હું અધેનાઇ ગામનો ખાતેદાર ખેડુત છું

આપનો વિશ્વાસુ

P. P. Chudasama

(પુખ્તરાજસિંહ.પી.ચુડાસમા)

## IN THE HIGH COURT OF GUJARAT AT AHMEDABAD

WRIT PETITION (PIL) NO. 88 of 2017

BIREN RAMESHCHANDRA PADHYA...Applicant(s)

Versus

UNION OF INDIA &amp; 3...Opponent(s)

Appearance:

ABHISST K THAKER...Counsel for the Applicant(s) No. 1

ADVANCE COPY SUBMITTED TO GPPF for the Opponent(s) No. 2

CORAM: HONOURABLE THE CHIEF JUSTICE MR. R. SUBHASH  
REDDY

and

HONOURABLE MR. JUSTICE VIPUL M. PANCHOLI

Date: 19/04/2017

ORAL ORDER

(PER : HONOURABLE THE CHIEF JUSTICE MR. R. SUBHASH REDDY)

Notice returnable on 3.5.2017.

It is the case of the petitioner that the Ministry of Environment, Forest and Climate Change has issued preliminary notification dated 25.10.2016 for notifying the eco-sensitive zone under the provisions of the Environment (Protection) Act, 1986. It is the allegation of the petitioner that such notification is issued based on the proposal sent by the State Government as per which eco-sensitive zone was covering the area to the extent of 3,32,881

hectares. It is submitted that after preliminary notification was issued by the Union of India, further proposals are sent by limiting the area to the extent of distance from sanctuary only to the extent of 500 mtrs. and reducing the covered area to an extent of 1,14,000 hectares only. In view of such allegations made and further as the learned Assistant Commissioner seeks time to obtain instructions in the matter, till further orders, no final notification shall be issued pursuant to preliminary notification dated 25.10.2015 issued by the Ministry of Environment, Forest and Climate Change.

(R. SUBHASH REDDY, C.J.)

(VIPUL M. PANCHOLI, J.)

Encl:-

THE HON'BLE JUDGE  
OF COURTS

# **भारत का राजपत्र** **The Gazette of India**

असाधारण  
EXTRAORDINARY

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| No. 1915] | NEW DELHI, THURSDAY, JULY 6, 2017/ASADHA 15, 1939 |

**पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय**

**अधिसूचना**

नई दिल्ली, 6 जुलाई, 2017

**का.अ. 2149 (अ).—**प्राकृष अधिसूचना भारत सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय की अधिसूचना सं. का.अ. 67 तारीख 22 दिसंबर, 2015 द्वारा भारत के राजपत्र, असाधारण का भाग II, खंड 3, उपखंड (ii) तारीख 8 जनवरी, 2016 को प्रकाशित की गई थी जिसमें उन सभी व्यक्तियों से, जिनके उससे प्रभावित होने की संभावना थी, उस तारीख से, जिसको उक्त अधिसूचना की राजपत्र की प्रतियां जनता को उपलब्ध करा दी गई थी, सात दिन की अवधि के भीतर, आक्षेप और सुझाव आमंत्रित किए गए थे;

और, उक्त प्राकृष अधिसूचना उक्त राजपत्र की प्रतियां जनता को 22 दिसम्बर, 2015 को उपलब्ध करा दी गई थी;

और, उक्त प्राकृष अधिसूचना के प्रत्युत्तर में व्यक्तियों और पणधारियों से कोई टीका टिप्पणियां/आक्षेप और सुझाव प्राप्त नहीं हुए थे;

और, बेलासेदार ब्लैक एक राष्ट्रीय उद्यान गुजरात के भाव नगर जिले में स्थित 39.34 वर्ग किलोमीटर क्षेत्र में फैला हुआ है और गुजरात राज्य में भावनगर जिले के भावनगर तालुका/तहसील के उत्तरी भाग में अक्षांश

21°56' देशांतर 70°10' के बीच स्थित है और काले हिरण तथा दुर्लभ और संकटापन्न जैव विविधता के दीर्घावधि बचाव और संरक्षण के मुख्य उद्देश्य से अधिसूचित किया गया है।

और, आरक्षित वन, तटीय घासस्थल पारिस्थितिक प्रणाली के रूप में वर्गीकृत किया है, राजवाड़ा जैव-भौगोलिक प्रांत और विभिन्न प्रकार के स्तनियों, सरीसृप, कीड़े और पक्षी जीवजंतुओं की जैव-विविधता से भरपूर है।

और, राष्ट्रीय उद्यान में प्रमुख वनस्पतियां हैं: चिन्चो (*दिचीधुबुमानुलेटम*), धरणट (*स्पेरोबोलुसविर्जिनिकस*), मोति धरणट (*स्पेरोबोलुसमात्रपैटेंसिस*), चाकिमाकी (*स्पेरोबोलुसकोमैडेनियानम*), मिंडडो (*क्नोरिस वर्गटा*), डेल, डेलो (*एयूरोपूस्लोयोपाइड*), कांग (*सेडरियासोमका*), धंध (*एरसास्टिस जापानोनिका*), स्मेरु (*थिमेदचित्र*), घवनी (*इसामेमुगोसुम*), पाडू (*श्रीरटाइसोक्टेनियमसाइजिकीकुन*), वडी (*इसेइनामाथाहोफोराइडस*) आदि;

और, राष्ट्रीय उद्यान में प्रमुख जीवजंतु जैसे रूफस पुष्प खरगोश (*सिपस एनआईजीरिकोलिसिफोडाडेनस*), रेगिस्तान खरगोश (*सिपस एनआईजीरिकोलिसडेनस*), भेड़िया (*कैनिम ल्यूपस पल्तिप्स*), सियार (*कैनिम ऑरियस*), भारतीय भेड़िया (*कुलप्सबैगलैसिस*), सामान्य नेवला (*हेर्स्टेसंडेडस*), ब्लैक बेक (*एन्टीपेकरबीकरपा*), ब्लू बुल (*बोसेलाफन्टुगोकेमलस*), भारतीय बनेला सूअर (*सस्कोरोफा*), पांच धारीदार ख्कोनी (*किनमबुलुसपेननाई*), डेजर्ट गेरबिल (*टेस्टेरेमडिका*), जंगल बिल्ली (*फेलिस*), ग्रे कस्तूरी कर्कश (*सनस्कुसमुरिनस*), डेजर्ट बिल्ली (*फेलिसलिक्का*) आदि हैं;

और, ब्लैक बक राष्ट्रीय उद्यान की संपूर्ण प्राकृतिक इकाई, जिसके अंतर्गत अवशेष तटीय घास स्थल पारिस्थितिकी प्रणाली और इसके सहयोगी बायोटा जिसके अंतर्गत उच्च सुसंपन्न प्रजातियों के लिए सतत संरक्षण प्रवास भी है।

और, वेलावेदार ब्लैक बक राष्ट्रीय उद्यान के चारों ओर के क्षेत्र को, जिसका विस्तार और सीमाएं इस अधिसूचना के पैरा 1 में चिनिदिष्ट हैं, पर्यावरण की दृष्टि से पारिस्थितिक संवेदी जोन के रूप में सुरक्षित और संरक्षित करना तथा उक्त पारिस्थितिक संवेदी जोन में आनुवंशिक संसाधनों को बनाए रखने और प्रजनन कार्यक्रमों के माध्यम से स्थानीय प्रजातियों के पुनर्वास, पर्यावरण शिक्षा और पारिस्थितिक अनुसंधान को बढ़ावा देने और उद्योगों या उद्योगों के वर्गों के प्रवासन तथा प्रसंस्करण प्रतिषिद्ध करना आवश्यक है;

अतः, अब, केन्द्रीय सरकार, पर्यावरण (संरक्षण) नियम, 1986 के नियम 5 के उपनियम (3) के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3 की उपधारा (1), उपधारा (2) के खंड (v) और खंड (xiv) और उप-धारा (3) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, गुजरात राज्य में वेलावेदार ब्लैक बक राष्ट्रीय उद्यान की सीमा के चारों ओर 1.0 किलोमीटर से 3.70 किलोमीटर तक के विस्तारित क्षेत्र को वेलावेदार ब्लैक बक राष्ट्रीय उद्यान पारिस्थितिक संवेदी जोन (जिसे इसमें इसके पश्चात् पारिस्थितिक संवेदी जोन कहा गया है) के रूप में अधिसूचित करती है, जिसका विवरण निम्नांकित है, अर्थात् :-

1. पारिस्थितिक संवेदी जोन का विस्तार और उसकी सीमाएं- (1) वेलावेदार ब्लैक बक राष्ट्रीय उद्यान के पारिस्थितिक संवेदी जोन का विस्तार 1.0 किलोमीटर से 3.70 किलोमीटर तक है और इसका क्षेत्र 43.57 वर्ग किलोमीटर में फैला हुआ है।



(2) वेलावेदार लोक तक राष्ट्रीय उद्यान और उसके पारिस्थितिक संवेदी जोन तथा अधोश और देशांतर के साथ का मानचित्र उपाबंध I ब और उपाबंध I-ख के रूप में उपाबंध है।

(3) राष्ट्रीय उद्यान और इसका पारिस्थितिक संवेदी जोन के साथ सीमा व्यापक उपाबंध II के रूप में उपाबंध है।

(4) संरक्षित क्षेत्र के भू-निर्देशांक और पारिस्थितिक संवेदी जोन के भू-निर्देशांक उपाबंध III के रूप में उपाबंध है।

(5) पारिस्थितिक संवेदी जोन में आने वाले ग्रामों की सूची उपाबंध IV के रूप में उपाबंध है।

**2. पारिस्थितिक संवेदी जोन के लिए आंचलिक महायोजना -** (1) राज्य सरकार, पारिस्थितिक संवेदी जोन के प्रयोजन के लिए राजपत्र में इस अधिसूचना के प्रकाशन की तारीख से दो वर्ष की अवधि के भीतर, स्थानीय व्यक्तियों के परामर्श में और इस अधिसूचना में दिए गए अनुबंधों का पालन करके आंचलिक महायोजना तैयार करेगी।

(2) आंचलिक महायोजना राज्य सरकार में सक्षम प्राधिकारी द्वारा अनुमोदित होगी।

(3) पारिस्थितिक संवेदी जोन के लिए आंचलिक महायोजना, राज्य सरकार द्वारा इस अधिसूचना में विनिर्दिष्ट रूप में ऐसी रीति में तथा सुसंगत केंद्रीय और राज्य विधियों के अनुरूप भी तथा केंद्रीय सरकार द्वारा जारी मार्गनिर्देश, यदि कोई हों, द्वारा तैयार होगी।

(4) आंचलिक महायोजना, उक्त योजना में पर्यावरणीय और पारिस्थितिक बातों को समाकलित करने के लिए राज्य के निम्नलिखित विभागों के परामर्श से तैयार होगी, अर्थात्:-

- (i) पर्यावरण;
- (ii) वन और वन्यजीव;
- (iii) कृषि;
- (iv) राजस्व;
- (v) नगर विकास;
- (vi) पर्यटन;
- (vii) ग्रामीण विकास;
- (viii) सिंचाई और बाढ़ नियंत्रण;
- (ix) नगरपालिका;
- (x) पंचायती राज; और
- (xi) लोक निर्माण विभाग।

(5) उक्त महायोजना में जब तक इस अधिसूचना में ऐसा विनिर्दिष्ट न हो जब तक अनुमोदित विद्यमान भू-उपयोग, व्यवस्थापना और क्रियाकलापों पर कोई निर्बंधन अधिरोपित नहीं किया जाएगा और आंचलिक महायोजना सभी अवसंरचना के सुधार और अधिक दक्ष तथा पारिस्थितिकी अनुकूल होने वाले क्रियाकलाप इस प्रकार विनिर्दिष्ट न हो।

(6) आंचलिक महायोजना में अनाच्छादित क्षेत्रों के जीर्णोद्धार, विद्यमान जल निकासों के संरक्षण, आवाह क्षेत्रों के प्रबंधन, जल-संभरों के प्रबंधन, भू-जल के प्रबंधन, मृदा और नदी संरक्षण, स्थानीय समुदायों की आवश्यकताओं तथा पारिस्थितिक और पर्यावरण से संबंधित ऐसे अन्य पहलुओं, विन पर ध्यान देना आवश्यक है, के लिए उपबंध होंगे।

(7) आंचलिक महायोजना सभी विद्यमान पूजा स्थलों, ग्रामों और नगरीय बंदोबस्तों, बनों के प्रकार और किस्मों, कृषि क्षेत्रों, ऊपजाऊ भूमि, हरित क्षेत्र जैसे उद्यान और उसी प्रकार के स्थान, उद्यान कृषि क्षेत्र, आर्किडों, झीलों और अन्य जल निकासों का अभ्यर्जन करेगी।

(8) आंचलिक महायोजना पारिस्थितिक संवेदी जोन में विकास को विनियमित करेगी जिससे पारिस्थितिक अनुकूल विकास स्थानीय समुदायों की जीवकोपार्जन सुरक्षा के लिए सुनिश्चित किया जा सके।

(9) ऐसी अनुमोदित आंचलिक महायोजना इस अधिसूचना में दिए गए उपबंधों के अनुसार अपने कृत्यों का पालन करने के लिए मानीटरी समिति के लिए एक संदर्भ दस्तावेज होगी।

3. राज्य सरकार द्वारा किए जाने वाले उपाय—राज्य सरकार इस अधिसूचना के उपबंधों को प्रभावी करने के लिए निम्नलिखित उपाय करेगी, अर्थात्:—

(1) भू-उपयोग- पारिस्थितिक संवेदी जोन में आमोद-प्रमोद के प्रयोजन के लिए चिह्नित किए गए हैं बनों, उद्यान-कृषि क्षेत्रों, कृषि क्षेत्रों, पार्कों और खुले स्थानों का वाणिज्यिक और औद्योगिक संबद्ध विकास क्रियाकलापों के लिए उपयोग या संपरिवर्तन नहीं होगा।

परंतु पारिस्थितिक संवेदी जोन के भीतर कृषि भूमि का संपरिवर्तन, मानीटरी समिति की सिफारिश पर और राज्य सरकार के पूर्व अनुमोदन से, स्थानीय निवासियों की अवासीय जरूरतों को पूरा करने के लिए अनुज्ञात होंगे, अर्थात्:—

(i) विद्यमान सड़कों को चौड़ा करना और उनका सुवृद्धीकरण करना और नई सड़कों का संनिर्माण,

(ii) बुनियादी ढांचों और नागरिक सुविधाओं का संनिर्माण और नवीकरण;

(iii) प्रदूषण उत्पन्न न करने वाले सघु उद्योग;

(iv) कुटीर उद्योगों जिनके अंतर्गत ग्रामीण उद्योग सुविधा भण्डार और स्थानीय सुविधाएँ और जिसके अंतर्गत गृहाय पारिस्थितिक पर्यटन भी है तथा जिसके अंतर्गत गृह वास भी है; और

(v) पैरा 7 के अधीन संबंधित क्रियाकलाप में दिये गए हैं।

परंतु यह और कि राज्य सरकार के पूर्व अनुमोदन तथा संविधान के अनुच्छेद 244 या तत्समग्र प्रवृत्त विधि के उपबंधों के अनुपालन के बिना, जिसके अंतर्गत अनुसूचित जनजाति और अन्य परंपरागत वन निवासी (वन अधिकारों की मान्यता) अधिनियम, 2006 (2007 का 2) भी है, वाणिज्यिक या उद्योग विकास क्रियाकलापों के लिए जनजातीय भूमि का उपयोग अनुज्ञात नहीं होगा।

परंतु यह और भी कि पारिस्थितिक संवेदी जोन के भीतर भू-अभिलेखों में उपसंज्ञात कोई भुटि, मानीटरी समिति के विचार प्राप्त करने के पश्चात् राज्य सरकार द्वारा प्रत्येक मामले में एक बार संशोधित होगी और उक्त भुटि के संशोधन की सूचना केंद्रीय सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय को देनी होगी :

परंतु यह और भी कि उपर्युक्त भुटि के संशोधन में इस उप-धारा के अधीन यथा-उपबंधित के सिवाय किसी भी दशा में भू-उपयोग का परिवर्तन सम्मिलित नहीं होगा।

(ख) वनीकरण तथा वारा जीर्णोद्धार क्रियाकलापों सहित अनप्रयुक्त या अनुत्पादक कृषि क्षेत्रों में पुनः वनीकरण करने के प्रयास किए जाएंगे।

(2) प्राकृतिक जल स्रोत - आंचलिक महायोजना में सभी प्राकृतिक जल स्रोतों के अबाध क्षेत्रों की जाएगी और उनके संरक्षण और नवीनीकरण के लिए योजना सम्मिलित होगी राज्य सरकार द्वारा इन क्षेत्रों पर या उनके निकट विकास क्रियाकलापों, जो ऐसे क्षेत्रों के लिए हानिकारक है, को प्रतिबिद्ध करने के लिए ऐसी रीति से मार्गनिर्देश तैयार करेगा।

(3) पर्यटन/पारिस्थितिक पर्यटन - (क) पारिस्थितिक संवेदी जोन के भीतर सभी नए पारिस्थितिक पर्यटन क्रियाकलाप या विद्यमान पर्यटन क्रियाकलापों का विस्तार पर्यटन महायोजना के अनुसार पारिस्थितिक संवेदी जोन के लिए होगा।

(ख) पर्यटन महायोजना, पर्यटन विभाग, द्वारा राज्य पर्यावरण और वन विभाग के परामर्श से तैयार होगी।

(ग) पर्यटन महायोजना आंचलिक महायोजना का भाग रूप में होगी।

(घ) पारिस्थितिक पर्यटन संबंधी क्रियाकलाप निम्नानुसार विनियमित होंगे, अर्थात् :-

(i) केलावेदार ब्लैक एक राष्ट्रीय पार्क की सीमा से एक किलोमीटर के भीतर या पारिस्थितिक संवेदी जोन के विस्तार तक, इनमें जो भी निकट है, नये वाणिज्यिक होटल और रिसोर्ट अनुज्ञात नहीं होंगे। उक्त पार्क की सीमा से एक किलोमीटर की दूरी से परे केवल पारिस्थितिक संवेदी जोन के विस्तार तक होटलों और सैरगाहों की स्थापना पूर्व परिभाषित पदार्थित क्षेत्रों में पर्यटन महायोजना के अनुसार पारिस्थितिक पर्यटन सुविधाओं के लिए ही अनुज्ञात की जाएगी;

(ii) पारिस्थितिक संवेदी जोन के भीतर सभी नए पर्यटन क्रियाकलापों या विद्यमान पर्यटन क्रियाकलापों का विस्तार केंद्रीय सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय द्वारा मार्गदर्शक सिद्धांतों तथा द्वारा जारी पारिस्थितिक पर्यटन (समय-समय पर यथा-संशोधित) मार्गदर्शक सिद्धांतों के अनुसार, पारिस्थितिक पर्यटन, को महत्व देते होगा;

(iii) आंचलिक महायोजना का अनुमोदन किए जाने तक, पर्यटन के लिए विकास और विद्यमान पर्यटन क्रियाकलापों के विस्तार को वास्तविक स्थल विनिर्दिष्ट संवीक्षा तथा मानीटरी समिति की सिफारिश पर आधारित संबंधित विनियामक प्राधिकरणों द्वारा अनुज्ञात किया जाएगा और पारिस्थितिक संवेदी जोन में किसी नए होटल/सैरगाह या वाणिज्यिक स्थापन के संनिर्माण को अनुज्ञात नहीं किया जाएगा।

(4) नैसर्गिक विरासत - पारिस्थितिक संवेदी जोन में महत्वपूर्ण नैसर्गिक विरासत के सभी स्थलों जैसे सभी जीव कोश आरक्षित क्षेत्र, शैल विरचनाएं, जल प्रपातों, झरनों, घाटी मार्गों, उपजनों, गुफाएं, स्थलों, भ्रमण, अंधारोहण, प्रपातों आदि की पहचान की जाएगी और विरासत संरक्षण योजना आंचलिक महायोजना के भाग के रूप में उनके परिरक्षण तथा संरक्षण के लिए तैयार की जाएगी।

(5) मानव निर्मित विरासत स्थल - पारिस्थितिक संवेदी जोन में प्रयनों, संरचनाओं, शिल्प-तथ्य, ऐतिहासिक, कलात्मक और सांस्कृतिक महत्व के क्षेत्रों की पहचान भी होनी और उनके संरक्षण के लिए विरासत संरक्षण योजना आंचलिक महायोजना के भाग के रूप में तैयार की जाएगी।

(6) ध्वनि प्रदूषण -- पर्यावरण (संरक्षण) अधिनियम 1986 और उसके संशोधनों के अधीन ध्वनि प्रदूषण (विनियमन और नियंत्रण) नियम, 2000 के अनुसार पारिस्थितिक संवेदी जोन में ध्वनि प्रदूषण को कार्यान्वित किया जाएगा।

(7) वायु प्रदूषण -- पारिस्थितिक संवेदी जोन में, वायु प्रदूषण के निवारण और नियंत्रण का वायु (प्रदूषण निवारण और नियंत्रण) अधिनियम, 1981 (1981 का 14) और उसके अधीन बनाए गए नियमों और उसके संशोधनों के अनुसार कार्यान्वित किया जाएगा।

(8) बहिष्काव का निस्सारण - पारिस्थितिक संवेदी जोन में उपचारित बहिष्काव का निस्सारण पर्यावरणीय (संरक्षण) अधिनियम, 1986 और उसके अधीन बनाए गए नियमों के या राज्य सरकार द्वारा नियत मानकों के अन्तर्गत आने वाले पर्यावरणीय प्रदूषण तत्वों के निस्सारण के लिए सामान्य मानकों, जो भी अधिक कठोर हों के उपबंधों के अनुसार होगा।

(9) ठोस अपशिष्ट -- ठोस अपशिष्टों का निपटान और प्रबंधन निम्नलिखित रूप में होगा—

- (i) पारिस्थितिक संवेदी जोन में ठोस अपशिष्ट निपटान तथा प्रबंधन ठोस अपशिष्ट प्रबंधन नियम, 2016, जो भारत सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय की अधिसूचना सं. का.आ. 1357(अ) तारीख 8 अप्रैल, 2016 समय - समय पर यथा-संशोधित, द्वारा प्रकाशित किए गए थे, के उपबंधों के अनुसार किया जाएगा;
- (ii) अकार्बनिक सामग्री का निपटान पारिस्थितिक संवेदी जोन के बाहर पहचान किए गए स्थल पर किसी पर्यावरणीय स्वीकृत रीति में होगा;
- (iii) पारिस्थितिक संवेदी जोन में ठोस अपशिष्टों को जलाना या भस्मीकरण और भूमि मराव के स्थापनों को अनुज्ञात नहीं किया जाएगा।

(10) जैव चिकित्सीय अपशिष्ट - जैव चिकित्सीय अपशिष्ट प्रबंधन निम्नलिखित रूप में होगा—

- (i) पारिस्थितिक संवेदी जोन में जैव चिकित्सीय अपशिष्टों का निपटान भारत सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय की अधिसूचना सं.का.नि 343 (अ) तारीख 28 मार्च 2016 समय - समय पर यथा-संशोधित, द्वारा प्रकाशित जैव चिकित्सीय अपशिष्ट प्रबंधन नियम, 2016 के उपबंधों के अनुसार किया जाएगा।
- (ii) पारिस्थितिक संवेदी जोन में कोई सामान्य उपचार सुविधा या भस्मीकरण अनुज्ञात नहीं किया जाएगा।

(11) यानीय परिवहन: - परिवहन की यानीय गतिविधियां आवास के अनुकूल रीति में विनियमित होंगी और इस संबंध में आंचलिक महायोजना में विनिर्दिष्ट उपबंध समाविष्ट किए जाएंगे और आंचलिक महायोजना के तैयार होने और राज्य सरकार के सक्षम प्राधिकारी द्वारा अनुमोदित होने तक, मार्गीटरी समिति प्रवृत्त नियमों और विनियमों के अनुसार यानीय गतिविधियों के अनुपालन को मानीटर करेगी।

(12) यानीय प्रदूषण:- लागू विधियों के अनुसार वाहन प्रदूषण की रोकथाम और नियंत्रण का अनुपालन किया जाएगा और स्वच्छ ईंधन के उपयोग के लिए किए जाने वाले प्रयास किए जाएंगे हैं।

- (13) **प्लास्टिक अपशिष्ट प्रबंधन:** - पारिस्थितिक संवेदी जोन में प्लास्टिक अपशिष्ट प्रबंध भारत सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय की अधिसूचना सं.क.नि 340(अ), तारीख 18 मार्च, 2016 समय - समय पर यथा-संशोधित, द्वारा प्रकाशित प्लास्टिक अपशिष्ट प्रबंधन नियम 2016 के उपबंधों के अनुसार किया जाएगा।
- (14) **संनिर्माण और विध्वंस अपशिष्ट प्रबंधन:** - पारिस्थितिक संवेदी जोन में संनिर्माण और विध्वंस अपशिष्ट प्रबंध भारत सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय की अधिसूचना सं.क.नि 317(अ), तारीख 29 मार्च, 2016 समय - समय पर यथा-संशोधित, द्वारा प्रकाशित संनिर्माण और विध्वंस प्रबंधन नियम, 2016 के उपबंधों के अनुसार किया जाएगा।
- (15) **ई-अपशिष्ट:** - पारिस्थितिक संवेदी जोन में ई-अपशिष्ट प्रबंध भारत सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय द्वारा प्रकाशित ई-अपशिष्ट प्रबंध नियम, 2016 समय - समय पर यथा संशोधित, उपबंधों के अनुसार किया जाएगा।
- (16) **औद्योगिक ईकाइयां:** - (i) पारिस्थितिक संवेदी जोन के भीतर कोई नए प्रदूषणकारी उद्योगों की स्थापना की अनुमति नहीं दी जाएगी।
- (ii) पारिस्थितिक संवेदी जोन के भीतर केंद्रीय प्रदूषण नियंत्रण बोर्ड द्वारा जारी विशालिखेंओं में फरवरी, 2016 में गैर- प्रदूषणकारी उद्योगों को उद्योगों के बर्गीकरण के अनुसार अनुमति तब तक नहीं दी जाएगी, जब तक कि इस अधिसूचना में ऐसी विनिर्दिष्ट न किया जाए।
- (17) **पहाड़ी ढलानों को संरक्षण:** - पहाड़ी ढलानों का संरक्षण निम्नानुसार होगा:
- (क) आंचलिक महायोजना पहाड़ी ढलानों पर उन क्षेत्रों को उपवर्णित करेगी जहां किमी भी संनिर्माण को अनुमति नहीं दी जाएगी।
- (ख) विद्यमान छोटी पहाड़ी ढलानों या ढलानों पर जिनमें कटव के एक उच्च डिग्री है, के संनिर्माण की अनुमति नहीं दी जाएगी।
- (18) केंद्रीय सरकार और राज्य सरकार, यदि यह आवश्यक समझती है, इस अधिसूचना के उपबंधों को प्रभावी करने में अन्य उपाय विनिर्दिष्ट करेगी।

**4. प्रतिषिद्ध और विनियमित संबंधित किए जाने वाले क्रियाकलापों की सूची -** पारिस्थितिक संवेदी जोन में सभी क्रियाकलाप पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) के उपबंधों तथा तदासीन बनाए गए नियमों जिनमें तटीय विनियमन जोन (सीआरजेड), 2011 और पर्यावरणीय संघात निर्धारण (ईआईए) अधिसूचना, 2006 भी हैं और अन्य लागू विधियां जिनमें वन (संरक्षण) अधिनियम, 1980 (1980 के 69), भारतीय वन अधिनियम, 1927 (1927 के 16), कृषि (संरक्षण) अधिनियम, 1972 (1972 के 53) तथा उनमें किए गए संशोधन भी हैं द्वारा नीचे दी गई तालिका में विनिर्दिष्ट रीति से विनियमित होंगे, अर्थात् :-

| सारणी                    |                |   |
|--------------------------|----------------|---|
| क्रम सं.                 | क्रियाकलाप     | टीका-टिप्पणी  |
| (1)                      | (2)            | (3)   |
| क. प्रतिषिद्ध क्रियाकलाप |                |   |
| 1.                       | वाणिज्यिक खनन। | (क) सभी प्रकार के नए और विद्यमान खनन (लघु और बृहत्) |

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|    |   | <p>खनिज), पत्थर की चार्ज और उनकी तोड़ने की इकाइयां वास्तविक स्थानीय निवासियों की घरेलू आवश्यकताओं जिसमें निजी उपयोग के लिए मकानों के संनिर्माण या परम्पत के लिए घरों को छोड़ना और मकान बनाने के लिए देशी टाइल्स या ईंटों का निर्माण करना भी सम्मिलित है, के सिवाय नहीं होंगी :</p> <p>(ख) खनन सक्रियाएं, माननीय उच्चतम न्यायालय की रिट याचिका (सिविल) सं. 1995 का 202 टी.एन. गौडाबर्मन विरुद्ध भारत सरकार के मामले में आदेश तारीख 4 अगस्त, 2006 और रिट याचिका (सी) सं. 2012 का 435 गोवा फाउंडेशन बनाम भारत सरकार के मामले में तारीख 21 अप्रैल, 2014 के अंतरिम आदेश के अनुसरण में सर्वदा प्रचालन होगा।</p> |
| 2. | जल, वायु, मृदा, ध्वनि प्रदूषण कारित करने वाले उद्योगों की स्थापना।                                      | <p>(क) पारिस्थितिक संवेदी जोन में किसी नए या प्रदूषण फैलाने वाले उद्योगों के विस्तार की अनुमति दी जाएगी।</p> <p>(ख) पारिस्थितिक संवेदी जोन के भीतर, केंद्रीय प्रदूषण नियंत्रण बोर्ड द्वारा जारी दिशानिर्देशों फरवरी 2016 के द्वारा गैर - प्रदूषणकारी वर्गीकरण के अनुसार केवल उद्योगों को अनुमति दी जा सकेगी जब तक कि इस अधिसूचना में अन्यथा विनिर्दिष्ट न किया गया हो।</p>  |
| 3. | बृहत जल विद्युत परियोजना परियोजना की स्थापना।   | सागू विधियों के अनुसार प्रतिषिद्ध (अन्यथा उपबंधित के सिवाय) होंगे।  |
| 4. | किसी परिसंकटग्रय पदार्थों का उपयोग या उत्पादन या प्रसंस्करण।  | सागू विधियों के अनुसार प्रतिषिद्ध (अन्यथा उपबंधित के सिवाय) होंगे।  |
| 5. | प्रकृतिक जल निकासों या क्षेत्र सतही में अनुपचारित बहिर्स्राव का निस्सारण।                               | सागू विधियों के अनुसार प्रतिषिद्ध (अन्यथा उपबंधित के सिवाय) होंगे।  |
| 6. | डोस अपशिष्ट निपटान स्थल की स्थापना और डोस और जैव चिकित्सा अपशिष्ट के लिए भस्मीकरण की सुविधा।            | पारिस्थितिक संवेदी जोन में डोस अपशिष्ट निपटान की कोई नई डोस अपशिष्ट निपटान स्थल और अपशिष्ट उपचारित/प्रसंस्करण सुविधा अनुज्ञात नहीं होगी। औद्योगिक प्रक्रिया और स्वास्थ्य स्थापनों/अस्पतालों आदि से उत्पन्न किसी भी प्रकार के डोस अपशिष्ट के उपचार के लिए सामान्य या व्यक्तिगत भस्मीकरण की सुविधा का अतिरिक्त संस्थापन प्रतिषिद्ध हो।  |
| 7. | फार्मों, कॉर्पोरेट, कंपनियों द्वारा बड़े पैमाने पर वाणिज्यिक पशुधन संपदा और कुक्कुट फार्मों की स्थापना। | स्थानीय जरूरतों को पूरा करने के लिए सागू विधियों के अनुसार प्रतिषिद्ध (अन्यथा उपबंधित के सिवाय) होंगे।  |
| 8. | नई आरा मिनलों की स्थापना।   | पारिस्थितिक संवेदी जोन के भीतर नई और विद्यमान आरा मिनलों का विस्तार अनुज्ञात नहीं होगा।   |
| 9. | ईट भट्टों की स्थापना करना।  | सागू विधियों के अनुसार प्रतिषिद्ध (अन्यथा उपबंधित के सिवाय) होंगे।  |



**ख. विनियमित क्रियाकलाप**

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| 10. | होटलों और रिमोटों की स्थापना। | <p>पारिस्थितिक अनुकूल पर्यटन क्रियाकलापों से संबंधित पर्यटकों के अस्थायी अधिभोग के लिए आवास के सिवाय संरक्षित क्षेत्र की सीमा से 1 किलोमीटर के भीतर या पारिस्थितिक संवेदी जोन नए वाणिज्यिक होटलों और विश्रामस्थलों की अनुज्ञा नहीं दी जाएगी।</p> <p>तथापि एक किलोमीटर से परे और पारिस्थितिक संवेदी जोन के विस्तार तक सभी नए पर्यटन क्रियाकलापों का विस्तार पर्यटन महायोजना और राष्ट्रीय बाघ संरक्षण प्राधिकरण के मार्गदर्शक सिद्धांतों के अनुरूप होगा।</p>   |
| 11. | संनिर्माण क्रियाकलाप।         | <p>(क) संरक्षित क्षेत्र या पारिस्थितिक संवेदी जोन जो भी निकट हो, की सीमा से एक किलोमीटर के भीतर किसी भी प्रकार का वाणिज्यिक संनिर्माण अनुज्ञात नहीं किया जाएगा:</p> <p>परंतु स्थानीय लोगों को पैरा 3 के उप-पैरा (1) में सूचीबद्ध क्रियाकलाप भी है जिसके अंतर्गत ऐसे स्थानीय निवासियों को उस रूप में आवासीय आवश्यकताओं के लिए निर्माण उपविधियों के अनुसार अनुज्ञात होगा, जैसे:</p> <p>(i) विद्यमान सड़कों को चौड़ा करना और उन्हें सुदृढ़ करना तथा नई सड़कों का संनिर्माण;</p> <p>(ii) बुनियादी ढांचों और नागरिक सुविधाओं का संनिर्माण और नवीकरण;</p> <p>(iii) केंद्रीय प्रदूषण नियंत्रण बोर्ड द्वारा जारी दिशानिर्देशों में फरवरी, 2016 के भीतर सिर्फ बैर- प्रदूषित उद्योगों की स्थापना के वर्गीकरण;</p> <p>(iv) कुटीर उद्योगों जिसके अंतर्गत ग्रामीण उद्योग हैं: सुविधाजनक भण्डार और स्थानीय सुख सुविधाएं जो पारिस्थितिक पर्यटन, जिस में गृह बास भी है में सहायता देती हो और</p> <p>(v) इस अधिसूचना में सूचीबद्ध संबंधित क्रियाकलाप:</p> <p>(ख) ऐसे सघु उद्योग जो प्रदूषण कारित नहीं करते हैं, से संबंधित संनिर्माण क्रियाकलाप विनियमित किए जाएंगे और लागू नियमों और विनियमों, यदि कोई हों, के अनुसार सक्षम प्राधिकारी की पूर्व अनुज्ञा से ही न्यूनतम पर रखे जाएंगे।</p> <p>(ग) एक किलोमीटर से परे आंचलिक महायोजना की अनुसार</p> |

|     |   | विनियमित होंगे।   |
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| 12. | प्रदूषण करित नहीं करने वाले लघु उद्योग।   | फरवरी, 2016 में केन्द्रीय प्रदूषण निंत्रण बोर्ड द्वारा जारी उद्योगों के वर्गीकरण के अनुसार गैर-प्रदूषणकारी उद्योग और अपरिसंकट, लघु और सेवा उद्योग, कृषि, पुष्प कृषि, उद्यान कृषि या पारिस्थितिक संवेदी जोन से देशी सामग्री में उत्पादों को उत्पन्न करने वाले कृषि आधारित उद्योग सक्षम प्राधिकारी द्वारा अनुज्ञात होंगे। |
| 13. | वृक्षों की कटाई।  | (क) राज्य सरकार में सक्षम प्राधिकारी की पूर्ण अनुमति के बिना घन, सरकारी या राजस्व या निजी भूमि पर वृक्षों की कोई कटाई नहीं होगी।<br>(ख) वृक्षों की कटाई संबंधित केन्द्रीय या राज्य अधिनियम या उसके अधीन बनाए गए नियमों के उपबंध के अनुसार विनियमित होगी।  |
| 14. | घन उत्पादों और गैर काष्ठ घन उत्पादों का संग्रहण (एनटीएफपी)।   | लागू विधियों के अधीन विनियमित होंगे।  |
| 15. | विद्युत और दूरसंचार टावरों का परिनिर्माण और केवल विद्याना और अन्य सुनिवादी हांचे।   | लागू विधियों के अधीन विनियमित होंगे। (भूमिगत केवल विद्याए जाने को बढ़ावा दिया जा सकेगा।)  |
| 16. | नागरिक सुख सुविधाओं विमके अन्तर्गत सुनिवादी हांचे भी है।  | लागू विधियों के अनुसार न्यूनीकरण उपायों नियम और विधियों और उपलब्ध विशानिर्देशों के साथ किए जाएंगे।  |
| 17. | विद्यमान सड़कों को चौड़ा करना और उन्हें सुदृढ़ करना।  | लागू विधियों के अनुसार न्यूनीकरण उपायों, नियमों और विनियमों तथा उपलब्ध विशानिर्देशों के साथ किए जाएंगे।   |
| 18. | पर्यटन से संबंधित अन्य क्रियाकलाप जैसे गर्म वायु गुब्बारे, हेलीकाप्टर, ड्रोन, गाइकोसाइट्स आदि द्वारा पारिस्थितिक संवेदी जोन क्षेत्र के ऊपर से उड़ना जैसे क्रियाकलाप करना। | लागू विधियों के अधीन विनियमित होंगे।  |
| 19. | पहाड़ी ढालों और नदी तटों का संरक्षण।  | लागू विधियों के अधीन विनियमित होंगे।  |
| 20. | रात्रि में यानिक यातायात का संचलन।  | लागू विधियों के अधीन वाणिज्यिक प्रयोजन के लिए विनियमित होंगे।   |
| 21. | स्थानीय समुदायों द्वारा चल रही कृषि और बागवानी प्रथाओं के साथ पशुपालन, पशुपालन कृषि और मछली पालन।   | स्थानीय लोगों के उपयोग के लिए लागू विधियों के अधीन अनुज्ञात होंगे।  |
| 22. | प्राकृतिक जल निकासों या सतही क्षेत्र में उपचारित बहिर्वाहों या अपशिष्ट जल का निस्सारण।  | जल निकासों में प्रवेश करने के लिए अपशिष्ट जल/ बहिर्वाह उपचारित उत्सर्जन रोकेगा। पुन:चक्रण और अपशिष्ट जल उपचारित पुन: उपयोग के लिए प्रयास किए जाएंगे अन्यथा  |

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|                              |  | अपशिष्ट जल/ बहिष्कार उत्सर्जन लागू विधि के अनुसार विनियमित किया जाएगा।  |
| 23.                          | सतह और भूजल का वाणिज्यिक निष्कर्षण।                            | लागू विधियों के अधीन विनियमित होंगे।  |
| 24.                          | सुले कुँआ, बोर कुँआ, आदि के लिए कृषि और अन्य उपयोग।            | लागू विधियों के अधीन विनियमित होंगे और क्रियाकलाप संबंधित प्राधिकारी द्वारा मानीटरी किए जाएंगे।   |
| 25.                          | ठोस अपशिष्ट प्रबंधन।   | लागू विधियों के अधीन विनियमित होंगे।  |
| 26.                          | विवेकी प्रजातियों को लाना।                                     | लागू विधियों के अधीन विनियमित होंगे।  |
| 27.                          | पारिस्थितिक पर्यटन।  | लागू विधियों के अधीन विनियमित होंगे।  |
| 28.                          | प्लास्टिक बैग का उपयोग।  | पारिस्थितिक संवेदी जोन के भीतर विशेष आवश्यकता के आधार पर पॉलिथीन बैग का उपयोग के लिए अनुमति दिया जा सकेगा। तथापि यह लागू विधियों के अधीन विनियमित किया जाएगा। |
| 29.                          | वाणिज्यिक साइनबोर्ड और होर्डिंगें।                             | लागू विधियों के अधीन विनियमित होंगे।  |
| <b>ग.संवर्धित क्रियाकलाप</b> |  |   |
| 30.                          | वर्षा जल संचयन।  | सक्रिय रूप से बढ़ावा दिया जाएगा।  |
| 31.                          | जैविक खेती।  | सक्रिय रूप से बढ़ावा दिया जाएगा।  |
| 32.                          | सभी क्रियाकलापों के लिए हरित प्रौद्योगिकी को प्रोत्साहित करना। | सक्रिय रूप से बढ़ावा दिया जाएगा।  |
| 33.                          | कुटीर उद्योग जिसके अंतर्गत शर्मिण कारीगर भी हैं।               | सक्रिय रूप से बढ़ावा दिया जाएगा।  |
| 34.                          | नवीकरणीय ऊर्जा स्रोत और ईंधन का उपयोग।                         | आयोगीत, सौर प्रकाश इत्यादि को सक्रिय रूप से बढ़ावा दिया जाएगा।  |
| 35.                          | कृषि शक्ति।  | सक्रिय रूप से बढ़ावा दिया जाएगा।  |
| 36.                          | पारिस्थितिक अनुकूल परिवहन का उपयोग।                            | सक्रिय रूप से बढ़ावा दिया जाएगा।  |
| 37.                          | कौशल विकास।  | सक्रिय रूप से बढ़ावा दिया जाएगा।  |
| 38.                          | निर्भीकृत भूमि या जल या का जीर्णोद्धार।                        | सक्रिय रूप से बढ़ावा दिया जाएगा।  |
| 39.                          | पर्यावरणीय जागरूकता।   | सक्रिय रूप से बढ़ावा दिया जाएगा।  |

5. मानीटरी समिति- केंद्रीय सरकार, पर्यावरण (संरक्षण) अधिनियम, 1986 की धारा 3 की उप-धारा (3) के अधीन इस अधिसूचना के उपबंधों को प्रभावी रूप से मानीटरी करने के लिए एक मानीटरी समिति का गठन करती है, जो निम्नलिखित से मिलकर बनेगी, अर्थात्:-

- |     |   |          |
|-----|---|----------|
| (क) | कलेक्टर, भावनगर-  | अध्यक्ष; |
| (ख) | क्षेत्रीय अधिकारी, गुजरात राज्य प्रदूषण नियंत्रण बोर्ड, भावनगर- | सदस्य;   |
| (ग) | क्षेत्र का वरिष्ठ नगर योजनाकार-                                 | सदस्य;   |

- |  |                 |
|--|-----------------|
| (घ) गुजरात सरकार के वन और पर्यावरण विभाग का कोई प्रतिनिधि-                       | सदस्य;          |
| (ङ) गुजरात सरकार द्वारा नामनिर्दिष्ट प्रत्येक मामले में तीन वर्ष की अवधि के लिए, | सदस्य;          |
| (च) सदस्य राज्य जैव विविधता बोर्ड  | सदस्य;          |
| (छ) सहायक वन संरक्षक (ब्लॉक वन राष्ट्रीय उद्यान का प्रभारी), भावनगर-             | सदस्य-<br>सचिव। |

## 6. निर्वहण नियंत्रण

(1) मानीटरी समिति इस अधिसूचना के उपाबंध का अनुपालन मानीटरी समिति करेगी।

(2) मानीटरी समिति की अवधि इस अधिसूचना के प्रकाशन की तारीख से तीन वर्ष होगा।

(3) पारिस्थितिक संवेदी जोन में भारत सरकार के तत्कालीन पर्यावरण और वन मंत्रालय की अधिसूचना सं. का.आ. 1533(अ), तारीख 14 सितंबर, 2006 की अनुसूची के अधीन सम्मिलित क्रियाकलापों और इस अधिसूचना के पैरा 4 के अधीन सारणी में विनिर्दिष्ट प्रतिषिद्ध गतिविधियों के सिवाय आने वाले ऐसे क्रियाकलापों की दशा में वास्तविक विनिर्दिष्ट स्थानीय दशाओं पर आधारित मानीटरी समिति द्वारा संवीक्षा की जाएगी और उक्त अधिसूचना के उपबंधों के अधीन पूर्व पर्यावरण के लिए केन्द्रीय सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय को निर्दिष्ट की जाएगी।

(4) इस अधिसूचना के पैरा 4 के अधीन यथा विनिर्दिष्ट प्रतिषिद्ध क्रियाकलापों के सिवाय, भारत सरकार के तत्कालीन पर्यावरण और वन मंत्रालय की अधिसूचना संख्यांक का.आ. 1533(अ), तारीख 14 सितंबर, 2006 की अधिसूचना के अनुसूची के अधीन ऐसे क्रियाकलापों, जिन्हें सम्मिलित नहीं किया गया है, परंतु पारिस्थितिक संवेदी जोन में आते हैं, ऐसे क्रियाकलापों की वास्तविक विनिर्दिष्ट स्थानीय दशाओं पर आधारित मानीटरी समिति द्वारा संवीक्षा की जाएगी और उसे संबद्ध विनियामक प्राधिकरणों को निर्दिष्ट किया जाएगा।

(5) मानीटरी समिति का सदस्य-सचिव या संबद्ध क्लर्क या संबंधित उद्यान उप वन संरक्षक ऐसे व्यक्ति के विरुद्ध जो इस अधिसूचना के किसी उपबंध का उल्लंघन करता है, पर्यावरण (सं.क्षण) अधिनियम, 1986 की धारा 19 के अधीन परिवाद फाइल करने के लिए सक्षम होगा।

(6) मानीटरी समिति मुद्दा बर मुद्दा के आधार पर अपेक्षाओं पर निर्भर रहते हुए संबद्ध विभागों के प्रतिनिधियों या विशेषज्ञों, औद्योगिक संघों या संबद्ध पणधारियों के प्रतिनिधियों या विशेषज्ञों को अपने विचार-विमर्श में सहायता के लिए आमंत्रित कर सकेगी।

(7) मानीटरी समिति प्रत्येक वर्ष की 31 मार्च तक राज्य के मुख्य प्रशासक कार्यालय को अपने क्रियाकलापों की अपनी

उ. (ग.प.स.) अधिनियम

(1) मानीटरी समिति इस अधिसूचना के उपाबंध का अनुपालन मानीटरी समिति करेगी।

(2) मानीटरी समिति की अवधि इस अधिसूचना के प्रकाशन की तारीख से तीन वर्ष होगा।

(3) पारिस्थितिक संवेदी जोन में भारत सरकार के तत्कालीन पर्यावरण और वन मंत्रालय की अधिसूचना सं. का.आ. 1533(अ), तारीख 14 सितंबर, 2006 की अनुसूची के अधीन सम्मिलित क्रियाकलापों और इस अधिसूचना के पैरा 4 के अधीन सारणी में विनिर्दिष्ट प्रतिषिद्ध गतिविधियों के सिवाय आने वाले ऐसे क्रियाकलापों की दशा में वास्तविक विनिर्दिष्ट स्थानीय दशाओं पर आधारित मानीटरी समिति द्वारा संवीक्षा की जाएगी और उक्त अधिसूचना के उपबंधों के अधीन पूर्व पर्यावरण के लिए केन्द्रीय सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय को निर्दिष्ट की जाएगी।

(4) इस अधिसूचना के पैरा 4 के अधीन यथा विनिर्दिष्ट प्रतिषिद्ध क्रियाकलापों के सिवाय, भारत सरकार के तत्कालीन पर्यावरण और वन मंत्रालय की अधिसूचना संख्यांक का.आ. 1533(अ), तारीख 14 सितंबर, 2006 की अधिसूचना के



उपाखण्ड 1-ख

पारिस्थितिक संवेदी क्षेत्र के साथ बेलाबेदार ब्लैक रॉक राष्ट्रीय उद्यान का मानचित्र





## उपाबंध II

## क. ब्लैक बक राष्ट्रीय उद्यान, बेलावेदार की सीमा का नियरण

ब्लैक बक राष्ट्रीय उद्यान, बेलावेदार भावनगर तालुका का भाग है, यह तालुका उत्तरी सीमा पर स्थित है, जो जिला सीमा है। ग्राम क्षेत्र में बेलावेदार, कनतालाव, मीठापुर, राजगढ़, मेवासा, भादभीद, अश्वेलाई, बवलियारी और कोतदा सम्मिलित हैं। वर्गीय यह सीमाएं नीचे दी गई हैं:

उत्तर: कनतालाव ग्रामों की राजस्व सर्वेक्षण संख्या।

उत्तर-पूर्व: कनतालाव और बवलियारी की राजस्व सर्वेक्षण संख्या।

दक्षिण: राजगढ़, मेवासा, बेलावेदार और भादभीद ग्रामों की राजस्व सर्वेक्षण संख्या।

दक्षिण-पश्चिम: राजगढ़, मेवासा और मोतीधराई ग्रामों की राजस्व सर्वेक्षण संख्या।

पूर्व: कोतदा की क्रिक और भादभीद ग्रामों की राजस्व सर्वेक्षण संख्या।

दक्षिण-पूर्व: कोतदा, बसवंतपुर ग्रामों की राजस्व अपशिष्ट भूमि और कीचड़ समग्रुमि।

पश्चिम: मीठापुर, राजगढ़ और बेलावेदार ग्रामों की राजस्व सर्वेक्षण संख्या।

उत्तर-पश्चिम: मीठापुर और कनतालाव ग्रामों की राजस्व सर्वेक्षण संख्या।

## ख ब्लैक बक राष्ट्रीय उद्यान, बेलावेदार की पारिस्थितिक संवेदी जोन की सीमा का विवरण

पारिस्थितिक संवेदी जोन -I के अंतर्गत ब्लैक बक राष्ट्रीय उद्यान, बेलावेदार (संरक्षित क्षेत्र) और 9 ग्रामों का 39.2448 वर्ग किलोमीटर क्षेत्र है।

यह 9 ग्राम भावनगर जिला के भावनगर तालुका और बल्लाभीपुर तालुका के अंतर्गत आते हैं और अहमदाबाद जिला के धोलेरा तालुका के अंतर्गत बवलियारी ग्राम आते हैं। पारिस्थितिक संवेदी जोन लगभग 21°57'30" उ से 21°7'30" और देशांतर 72°0'0" पू से 72°7'30" के बीच स्थित है।

मानचित्र में पारिस्थितिक संवेदी जोन के सीमा के देशांतर एवं अक्षांश बिन्दुओं के विवरण को दर्शाया गया है।

## उपाबंध III

सारणी क: बेलावेदार ब्लैक बक राष्ट्रीय उद्यान की सीमा के साथ प्रमुख स्थिति के भू-निर्देशांक

| क्र.सं. | अक्षांश          | देशांतर           |
|---------|------------------|-------------------|
| 1       | 22° 4' 47.214" उ | 72° 1' 58.487" पू |
| 2       | 22° 3' 38.385" उ | 72° 3' 59.594" पू |
| 3       | 22° 2' 19.280" उ | 72° 4' 42.142" पू |

|    |                   |                   |
|----|-------------------|-------------------|
| 4  | 22° 0' 43.483" उ  | 72° 6' 18.671" पू |
| 5  | 22° 0' 20.184" उ  | 72° 6' 48.594" पू |
| 6  | 21° 59' 46.592" उ | 72° 8' 24.842" पू |
| 7  | 22° 1' 11.449" उ  | 72° 4' 38.349" पू |
| 8  | 22° 1' 13.509" उ  | 72° 3' 47.588" पू |
| 9  | 22° 1' 40.117" उ  | 72° 3' 9.568" पू  |
| 10 | 22° 1' 1.246" उ   | 72° 1' 57.205" पू |
| 11 | 22° 1' 16.405" उ  | 72° 1' 37.430" पू |
| 12 | 22° 2' 45.817" उ  | 72° 0' 54.232" पू |
| 13 | 22° 3' 4.218" उ   | 72° 0' 55.559" पू |
| 14 | 22° 4' 11.824" उ  | 72° 1' 18.794" पू |

सारणी ख: बेलाबेदार ब्लॉक वरु राष्ट्रीय उद्यान के पारिस्थितिक संवेदी जोन की सीमा के साथ प्रमुख स्थिति के मू-निर्देशांक

| क्र.सं. | अक्षांश           | देशांतर           |
|---------|-------------------|-------------------|
| 1       | 22° 5' 7.624" उ   | 72° 2' 26.633" पू |
| 2       | 22° 4' 44.136" उ  | 72° 2' 52.069" पू |
| 3       | 22° 4' 28.358" उ  | 72° 3' 19.819" पू |
| 4       | 22° 2' 37.356" उ  | 72° 5' 17.116" पू |
| 5       | 22° 0' 57.832" उ  | 72° 6' 50.365" पू |
| 6       | 21° 59' 15.840" उ | 72° 6' 13.503" पू |
| 7       | 22° 0' 44.915" उ  | 72° 4' 4.613" पू  |
| 8       | 22° 1' 1.097" उ   | 72° 3' 7.158" पू  |
| 9       | 22° 0' 29.806" उ  | 72° 2' 6.113" पू  |
| 10      | 22° 2' 39.554" उ  | 72° 0' 19.830" पू |
| 11      | 22° 2' 56.347" उ  | 72° 0' 21.070" पू |

|    |                   |                    |
|----|-------------------|--------------------|
| 12 | 22° 3' 59.987" उ  | 72° 0' 39.717" पू  |
| 13 | 22° 4' 44.353" उ  | 72° 0' 56.982" पू  |
| 14 | 22° 1' 4.063" उ   | 72° 1' 5.164" पू   |
| 15 | 21° 58' 54.324" उ | 72° 0' 32.239" पू  |
| 16 | 21° 59' 26.740" उ | 71° 58' 14.298" पू |
| 17 | 22° 0' 11.729" उ  | 71° 58' 27.619" पू |
| 18 | 22° 1' 2.795" उ   | 71° 59' 11.447" पू |
| 19 | 22° 1' 15.518" उ  | 71° 59' 55.620" पू |

## उपाखण्ड IV

भू-निर्देशांकों के साथ बेलारबेदार ब्लैक बक राष्ट्रीय उद्यान के पारिस्थितिक संवेदी जोन के अंतर्गत आने वाले गावों की सूची

| क्र.सं. | जिला     | तालुका    | ग्राम      | अक्षांश           | देशांतर            |
|---------|----------|-----------|------------|-------------------|--------------------|
| 1       | भावनगर   | भावनगर    | कोटप       | 21° 58' 10.736" उ | 72° 8' 37.948" पू  |
| 2       | भावनगर   | बल्लभीपुर | मेवासा     | 21° 58' 50.150" उ | 71° 59' 6.450" पू  |
| 3       | भावनगर   | भावनगर    | भड़भीड़    | 22° 0' 15.720" उ  | 72° 4' 4.390" पू   |
| 4       | भावनगर   | भावनगर    | राजगढ़     | 22° 1' 48.856" उ  | 71° 56' 28.567" पू |
| 5       | भावनगर   | भावनगर    | बेलारबेदार | 22° 2' 51.589" उ  | 72° 0' 57.160" पू  |
| 6       | भावनगर   | भावनगर    | अंधेलाई    | 22° 2' 57.749" उ  | 72° 6' 44.442" पू  |
| 7       | भावनगर   | भावनगर    | सीठापर     | 22° 4' 41.805" उ  | 71° 58' 48.209" पू |
| 8       | भावनगर   | भावनगर    | कानातलव    | 22° 5' 6.190" उ   | 72° 2' 14.535" पू  |
| 9       | अहमदाबाद | छोलेरा    | बवजीयारी   | 22° 4' 27.300" उ  | 72° 7' 1.800" पू   |

## उपाबंध V

## पारिस्थितिक संवेदी जोन मानीटरी समिति - की गई कार्रवाई की रिपोर्ट का रूप विधान

1. बैठकों की संख्या और तिथि ।
2. बैठकों का कार्यवृत्त : कृपया मुख्य उल्लेखनीय बिंदुओं का वर्णन करें । बैठक के कार्यवृत्त को एक पृथक अनुबंध में उपाबद्ध करें ।
3. आंचलिक महायोजना की तैयारी की प्रास्थिति जिसके अंतर्गत पर्यटन महायोजना।
4. शू-अ भलेख में राष्ट्रिय त्रुटियों के सुधार के लए ब्यौहार कए गए मामलों का सारांश ।
5. पर्यावरण समाघात निर्धारण अधिसूचना, 2006 के अधीन आने वाली गति व धर्यों की संवक्षा के मामलों का सारांश । ब्यौरे एक पृथक् उपाबंध के रूप में उपाबद्ध कए जा सकते हैं ।
6. पर्यावरण समाघात निर्धारण अधिसूचना, 2006 के अधीन न आने वाली गति व धर्यों की संवक्षा के मामलों का सारांश । ब्यौरे एक पृथक् उपाबंध के रूप में उपाबद्ध कए जा सकते हैं ।
7. पर्यावरण ( संरक्षण ) अधिनियम, 1986 की धारा 19 के अधीन दर्ज की गई शिकायतों का सारांश ।
8. कोई अन्य महत्वपूर्ण वषय ।

## MINISTRY OF ENVIRONMENT, FORESTS AND CLIMATE CHANGE

## NOTIFICATION

New Delhi, the 6th July, 2017

**S.O. 2149(E).** - WHEREAS, a draft notification was published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section(ii), dated the 8<sup>th</sup> January, 2016, vide notification of the Government of the India in the Ministry of Environment, Forest and Climate Change number S.O. 67, dated the 22<sup>nd</sup> December, 2015, inviting objections and suggestions from all persons likely to be affected thereby within the period of sixty days from date on which copies of the Gazette containing the said notification were made available to the public,

**AND WHEREAS,** copies of the Gazette containing the said draft notification were made available to the public on the 22<sup>nd</sup> December, 2015,

**AND WHEREAS,** no objections and suggestions were received from persons and stakeholders in response to the draft notification;

**AND WHEREAS,** the Vemader Black Buck National Park spread is over an area of 29.34 square kilometers and located between latitude 21°56' longitude 70°10', in the Northern part of Taluka/tehsil of Bhavnagar of Bhavnagar District in the State of Gujarat and notified with the prime aim of long-term protection and conservation of Black Buck and the rare and endangered biological diversity,

**AND WHEREAS,** Reserve Forest categorised as Coastal Grassland Ecosystem and Rajwada Bio-geographical Province supports rich biodiversity, and also a variety of mammals, reptiles, insects and avifauna;

AND WHEREAS, major flora in the said National Park are Juiya (*Droseranthium indicum*), Dharani (*Sporobolus virginicus*), Mori Dharani (*Sporobolus madraspatensis*), Chakimaki (*Sporobolus carinatus*), Minchadi (*Chloris virgata*), Dale, Dala (*Aeluropus lagopusoides*), Kang (*Setaria glauca*), Dhundh (*Eragrostis japonica*), Smeta (*Themodarionia*), Ghavli (*Ischaemum rugosum*), Palla (*Dactyloctenium aegyptium*), Vardi (*Ischaemum indicum*), etc.,

AND WHEREAS, major fauna in the aforesaid National Park are Rufous tailed hare (*Lepus nigricollis*), Desert hare (*Lepus nigricollis indicus*), Wolf (*Canis lupus pallipes*), Jackal (*Canis aureus*), Indian Fox (*Vulpes bengalensis*), Common mongoose (*Herpestes urva*), Black buck (*Antelope cervicapra*), Bluebull (*Boselaphus tragopan*), Indian wild bear (*Selenarctos*), Five striped khisoli (*Felis tigris*), Desert gerbille (*Meriones persicus*), Indian gerbille (*Taomys*), Jungle cat (*Felis chaus*), Grey musk shrew (*Suncus murina*), Desert cat (*Felis libyca*), etc ;

AND WHEREAS, the whole natural entity of the Velavedar Black Buck National Park, including the relic coastal grassland ecosystem and its associate biota including the highly endangered species, call for sustained conservation efforts;

AND WHEREAS, it is necessary to conserve and protect the area, the extent and boundaries of which are specified in paragraph 1 of this notification, around the protected area of Velavedar Black Buck National Park as Eco-sensitive Zone from ecological and environmental point of view by habitat management aiming at improving and preserving the genetic resources of Velavedar Black Buck National Park, reintroduction and rehabilitation of local species through breeding programmes, promote environmental education and ecological research and to prohibit industries or class of industries and their operations and processes in the said Eco-sensitive Zone;

NOW THEREFORE, in exercise of the power conferred by sub-section (1) and clauses (v) and (xiv) of sub-section (2) and sub-section (3) of section 3 of the Environment (Protection) Act 1986 (29 of 1986), read with sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby notifies an area to an extent varying from 1.0 Kilometer to 3.70 Kilometers around the boundary of Velavedar Black Buck National Park in the State of Gujarat as the Velavedar Black Buck National Park Eco-sensitive Zone (hereinafter referred to as the Eco-sensitive Zone) details of which are as under, namely:-

1. **Extent and boundaries of Eco-sensitive Zone:-** (1) The Eco-sensitive Zone shall be with a peripheral area 43.52 square kilometer with an extent varying from 1.0 kilometer to 3.70 kilometers around the boundary of Velavedar Black Buck National Park.

(2) The map Velavedar Black Buck National Park along with its of the Eco-sensitive Zone and latitudes and longitudes is appended as Annexure-IA and Annexure-IB.

(3) The boundary details of the said National Park and its Eco-sensitive Zone are given in Annexure-II.

(4) Geo-coordinates of Protected Area and Geo-coordinates of Eco-sensitive Zone are appended on Annexure III.

(5) The list of villages falling in Eco-sensitive Zone is appended as Annexure-IV.

2. **Zonal Master Plan for Eco-sensitive Zone -** (1) The State Government shall, for the purpose of the Eco-sensitive Zone prepare, a Zonal Master Plan, within a period of two years from the date of publication of this notification in the Official Gazette, in consultation with local people and adhering to the stipulations given in this notification.

(2) The Zonal Master Plan shall be approved by the Competent Authority in the State Government.

(3) The Zonal Master Plan for the Eco-sensitive Zone shall be prepared by the State Government in such manner as is specified in this notification and also in consonance with the relevant Central and State laws and the guidelines issued by the Central Government, if any.

(4) The Zonal Master Plan shall be prepared in consultation with the following State Departments, for incorporating the ecological and environmental considerations into the said Plan -

- (i) Environment;
- (ii) Forest and Wildlife;
- (iii) Agriculture;
- (iv) Revenue;
- (v) Urban Development;
- (vi) Tourism;
- (vii) Rural Development;
- (viii) Irrigation and Flood Control;
- (ix) Municipal;
- (x) Panchayat Raj; and
- (xi) Public Works Department.

(5) The Zonal Master Plan shall not impose any restriction on the approved existing land use, infrastructure and activities, unless so specified in this notification and the Zonal Master Plan shall factor in improvement of all infrastructure and activities to be more efficient and eco-friendly.

(6) The Zonal Master plan shall provide for restoration of degraded areas, conservation of existing water bodies, management of catchment areas, watershed management, groundwater management, soil and moisture conservation, needs of local community and such other aspects of the ecology and environment that need attention.

(7) The Zonal Master Plan shall demarcate all the existing worshipping places, village and urban settlements, types and kinds of forests, agricultural areas, fertile lands, green area, such as, parks and like places, horticultural areas, orchards, lakes and other water bodies.

(8) The Zonal Master Plan shall regulate development in Eco-sensitive Zone so as to ensure Eco-friendly development and livelihood security of local communities.

(9) The Zonal Master Plan so approved shall be the reference document for the Monitoring Committee for carrying out its functions of monitoring in accordance with the provisions of this notification.

3. **Measures to be taken by State Government.**—The State Government shall take the following measures for giving effect to the provisions of this notification, namely:—

(1) **Landuse.**— (a) Forests, horticulture areas, agricultural areas, parks and open spaces earmarked for recreational purposes in the Eco-sensitive Zone shall not be used or converted into areas for commercial or residential complex or industrial activities:

Provided that the conversion of agricultural and other lands within the Eco-sensitive Zone may be permitted on the recommendation of the Monitoring Committee, and with the prior approval of the State Government to meet the residential needs of the local residents, and for the activities such as—

- (i) widening and strengthening of existing roads and construction of new roads;
- (ii) construction and renovation of infrastructure and civic amenities;
- (iii) small scale industries not causing pollution;
- (iv) cottage industries including village industries, convenience stores and local amenities supporting eco-tourism including home stay; and
- (v) promoted activities given in paragraph 4.

Provided further that no use of tribal land shall be permitted for commercial and industrial development activities without the prior approval of State Government and without compliance of the provisions of article 244 of the Constitution or the law for the time being in force, including the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (2 of 2007).

Provided also that any error appearing in the land records within the Eco-sensitive Zone shall be corrected by the State Government, after obtaining the views of Monitoring Committee, once in each case and the correction of said error shall be intimated to the Central Government in the Ministry of Environment, Forest and Climate Change.

Provided also that the above correction of error shall not include change of land use in any case except as provided under this sub-paragraph.

(b) Efforts shall be made to reforest the unused or unproductive agricultural areas with afforestation and habitat restoration activities.

(2) **Natural springs.**—The catchment areas of all natural springs shall be identified and plans for their conservation and rejuvenation shall be incorporated in the Zonal Master Plan and the guidelines shall be drawn up by the State Government in such a manner as to prohibit development activities at or near these areas which are detrimental to such areas.

(3) **Tourism/ Eco-tourism.**— (a) All new eco-tourism activities or expansion of existing tourism activities within the Eco-Sensitive Zone shall be as per the Tourism Master Plan for the Eco-sensitive Zone.

(b) The Eco-Tourism Master Plan shall be prepared by Department of Tourism in consultation with State Departments of Environment and Forests.

(c) The Tourism Master Plan shall form a component of the Zonal Master Plan.

(d) The activities of eco-tourism shall be regulated as under, namely:—

(i) no new construction of hotels and resorts shall be allowed within one kilometer from the boundary of the Velavedar Black Buck National Park or upto the extent of the Eco-sensitive Zone whichever is nearer. However, beyond the distance of one kilometer from the boundary of the said park till the extent of the Eco-sensitive Zone, the establishment of new hotels and resorts shall be allowed only in pre-defined and designated areas for eco-tourism facilities as per Tourism Master Plan.



- (ii) all new tourism activities or expansion of existing tourism activities within the Eco-sensitive Zone shall be in accordance with the guidelines issued by the Central Government in the Ministry of Environment, Forest and Climate Change and the eco-tourism guidelines issued by National Tiger Conservation Authority (as amended from time to time) with emphasis on eco-tourism;
- (iii) till the Zonal Master Plan is approved, development for tourism and expansion of existing tourism activities shall be permitted by the concerned regulatory authorities based on the actual site specific scrutiny and recommendation of the Monitoring Committee and no new hotel/resort or commercial establishment construction is permitted within ESZ area.
- (4) **Natural Heritage- Natural Heritage-** All sites of valuable natural heritage in the Eco-sensitive Zone, such as the gene pool reserve areas, rock formations, waterfalls, springs, gorges, groves, caves, points, walks, rides, cliffs, etc. shall be identified and a heritage conservation plan shall be drawn up for their preservation and conservation as a part of the Zonal Master Plan.
- (5) **Man-made heritage sites-** Buildings, structures, artefacts, areas and precincts of historical, architectural, aesthetic, and cultural significance shall be identified in the Eco-sensitive Zone and heritage conservation plan for their conservation shall be prepared as part Zonal Master Plan.
- (6) **Noise pollution-** Prevention and Control of noise pollution in the Eco-sensitive Zone shall be carried out in accordance with Noise Pollution (Regulation And Control) Rules, 2010 under the Environment (Protection) Act, 1986 and amendments thereto.
- (7) **Air pollution-** Prevention and control of air pollution in the Eco-sensitive Zone shall be carried out in accordance with the provisions of the Air (Prevention and Control of Pollution) Act, 1987 (14 of 1987) and rules made thereunder and amendments thereto.
- (8) **Discharge of effluents-** Discharge of treated effluent in Eco-sensitive Zone shall be in accordance with the provisions of the General Standards for Discharge of Environmental Pollutants covered under the Environmental (Protection) Act, 1986 and rules made thereunder or standards stipulated by State Government whichever is more stringent.
- (9) **Solid wastes. -** Disposal and management of solid wastes shall be as under:-
- the solid waste disposal and management in Eco-sensitive Zone shall be carried out in accordance with the Solid Waste Management Rules, 2016, published by the Government of India in the Ministry of Environment, Forests and Climate Change vide notification number S.O. 1357 (E), dated 8th April, 2016 as amended from time to time;
  - the inorganic material may be disposed in an environmental acceptable manner at site identified outside the Eco-sensitive Zone;
  - no burning or incineration of solid wastes and establishment of landfills shall be permitted in the Eco-sensitive Zone.
- (10) **Bio-medical waste.-** Bio-medical waste management shall be as under:
- the bio-medical waste disposal in the Eco-sensitive Zone shall be carried out in accordance with the Bio-Medical Waste Management Rules, 2016 published by the Government of India in the Ministry of Environment, Forest and Climate Change vide notification number GSR 343 (E), dated the 28th March, 2016 as amended from time to time.
  - no common treatment facility or incineration shall be permitted within the Eco Sensitive Zone.
- (11) **Vehicular traffic. -** The vehicular movement of traffic shall be regulated in a habitat friendly manner and specific provisions at this regard shall be incorporated in the Zonal Master Plan and till such time as the Zonal Master plan is prepared and approved by the Competent authority in the State Government, the Monitoring Committee shall monitor compliance of vehicular movement under the relevant Acts and the rules and regulations made thereunder.
- (12) **Vehicular pollution.-** Prevention and control of vehicular pollution shall be carried out in accordance with applicable laws and efforts shall be made for use of cleaner fuel for example CNG, etc.
- (13) **Plastic waste management.-** The plastic waste management in the Eco-sensitive Zone shall be carried out as per the provisions of the Plastic Waste Management Rules, 2016 published by the Government of India in the Ministry of Environment, Forest and Climate Change vide notification number G.S.R. 340(E), dated the 18th March, 2016 as amended from time to time.
- (14) **Construction and demolition waste management.-** The construction and demolition waste management in the Eco-sensitive Zone shall be carried out as per the provisions of the Construction and Demolition Waste Management Rules, 2016, published by the Government of India in the Ministry of Environment, Forest and Climate Change vide notification number G.S.R. 317(E), dated the 29th March, 2016, as amended from time to time.
- (15) **E-waste.-** The E- Waste management in the Eco-sensitive Zone shall be carried out as per the provisions of the E-Waste Management Rules, 2016, published by the Government of India in the Ministry of Environment, Forest and Climate Change and as amended from time to time.
- (16) **Industrial Units.-** (i) No new polluting industries shall be permitted to be set up within the Eco-sensitive Zone.

(ii) Only non-polluting industries may be permitted within the Eco-sensitive Zone as per classification of Industries in the guidelines issued by the Central Pollution Control Board in February 2016, unless otherwise specified in this notification.

**(17) Protection of hill slopes.**— The protection of hill slopes shall be as under:—

- (a) the Zonal Master Plan shall indicate areas on hill slopes where no construction shall be permitted,
- (b) no construction on existing steep hill slopes or slopes with a high degree of erosion shall be permitted;

(18) The Central Government and the State Government shall specify other measures, if it considers necessary, in giving effect to the provisions of this notification.

#### 4. Prohibited, regulated and promoted activities

All activities in the Eco sensitive Zone shall be governed by the provisions of the Environment (Protection) Act, 1986 (29 of 1986) and the rules made there under including the Coastal Regulation Zone (CRZ), 2011 and the Environmental Impact Assessment (EIA) Notification, 2006 and other applicable laws including the Forest (Conservation) Act, 1980 (69 of 1980), the Indian Forest Act, 1927 (16 of 1927), the Wildlife (Protection) Act 1972 (53 of 1972), and amendments made thereto and be regulated in the manner specified in the Table below, namely:—

**TABLE**

| S No                            | Activity  | Description  |
|---------------------------------|---|--|
| (1)                             | (2)   | (3)  |
| <b>A. Prohibited Activities</b> |   |  |
| 1                               | Commercial mining, stone quarrying and crushing units   | (a) All new and existing (minor and major minerals), stone quarrying and crushing units shall be prohibited except for meeting the domestic needs of bare life local residents including digging of earth for construction or repair of houses and for manufacture of country tiles or bricks for housing and for personal consumption.<br><br>(b) The mining operations shall be carried out in accordance with the order of the Hon'ble Supreme Court dated the 04 August, 2006 in the matter of T.N. Godavarman Thirumulpad Vs. UOI in W.P.(C) No.202 of 1995 and dated the 21 April, 2014 in the matter of Goa Foundation Vs. UOI in W.P.(C) No.433 of 2012. |
| 2.                              | Setting of industries causing pollution (water, air, soil, noise, etc.)                                     | (a) No new industries and expansion of existing polluting industries in the Eco-sensitive zone shall be permitted.<br>(b) Only non-polluting industries may be permitted within Eco sensitive Zone as per classification of Industries in the guidelines issued by the Central Pollution Control Board in February 2016, unless otherwise specified in this notification.  |
| 3.                              | Establishment of major hydroelectric project.   | Prohibited (except as otherwise provided) as per applicable laws.  |
| 4.                              | Use or production or processing of any hazardous substances.  | Prohibited (except as otherwise provided) as per applicable laws.  |
| 5                               | Discharge of untreated effluents in natural water bodies or land area.                                      | Prohibited (except as otherwise provided) as per applicable laws.  |
| 6                               | Establishment of solid waste disposal site and common incineration facility for solid and biomedical waste. | No new solid waste disposal site and waste treatment or processing facility of solid waste shall be permitted within Eco-sensitive zone and installation of common or individual incineration facility for treatment of any form of solid waste generated from industrial process and health establishment, hospitals, etc. shall be prohibited.   |

|                                |   |   |
|--------------------------------|---|---|
| 7.                             | Establishment of large-scale commercial livestock and poultry farms by firms, companies, etc.   | Prohibited (except as otherwise provided) as per applicable laws except for meeting local needs.  |
| 8.                             | Setting of saw mills.   | No new or expansion of existing saw mills shall be permitted within the Eco-sensitive Zone.   |
| 9.                             | Setting up of brick kilns.  | Prohibited (except as otherwise provided) as per applicable laws.   |
| <b>B. Regulated Activities</b> |   |   |
| 10.                            | Commercial establishment of hotels and resorts.   | No new commercial hotels and resorts shall be permitted within one kilometre of the boundary of the Protected Area or upto the extent of Eco-sensitive Area, whichever is nearer, except for small temporary structures for eco-tourism activities:<br>Provided that, beyond one kilometre from the boundary of the Protected Area or upto the extent of Eco-sensitive Zone, whichever is nearer, all new tourist activities or expansion of existing activities shall be in conformity with the Tourism Master Plan and guidelines as applicable.  |
| 11.                            | Construction activities   | (a) No new commercial construction of any kind shall be permitted within one kilometre from the boundary of the Protected Area or upto extent of the Eco-sensitive Zone whichever is nearer:<br>Provided that, local people shall be permitted to undertake construction in their land for their use including the activities listed in sub-paragraph (1) of paragraph 3 as per building by-laws to meet the residential needs of the local residents such as:-<br>(i) Widening and strengthening of existing roads and construction of new roads;<br>(ii) Construction and renovation of infrastructure and civic amenities;<br>(iii) Small scale industries not causing pollution termed as per Classification done by Central Pollution Control Board of February 2016;<br>(iv) Cottage industries including village industries, convenience stores and local amenities supporting eco-tourism including homestays; and<br>(v) Promoted activities listed in this Notification.<br>(b) The construction activity related to small scale industries not causing pollution shall be regulated and kept at the minimum, with the prior permission from the competent authority as per applicable rules and regulations, if any.<br>(c) Beyond one kilometre it shall be regulated as per the Zonal Master Plan. |
| 12.                            | Small scale non-polluting industries.   | Non polluting industries as per classification of industries issued by the Central Pollution Control Board in February 2016 and non-hazardous, small-scale and service industry, agriculture, floriculture, horticulture or agro-based industry producing products from indigenous materials from the Eco-sensitive Zone shall be permitted by the competent authority.   |
| 13.                            | Felling of trees  | (a) There shall be no felling of trees on the forest or Government or revenue or private lands without prior permission of the competent authority or the State Government.<br>(b) The felling of trees shall be regulated in accordance with the provisions of the concerned Central or State Acts and the rules made thereunder.  |
| 14.                            | Collection of Forest Produce or Non-Timber Forest Produce (NTFP).                               | Regulated under applicable laws.  |
| 15.                            | Erection of electrical and communication towers and laying of cables and other infrastructures. | Regulated under applicable law (underground cabling may be promoted).   |

|                               |  |  |
|-------------------------------|--|--|
| 16.                           | Infrastructure including civic amenities.  | Shall be done with mitigation measures, as per applicable laws, rules and regulations and available guidelines.  |
| 17.                           | Widening and strengthening of existing roads and construction of new roads.  | Shall be done with mitigation measures, as per applicable laws, rules and regulation and available guidelines.   |
| 18.                           | Under taking other activities related to tourism like over flying the Eco-sensitive Zone area by hot air balloon, helicopter, drones, Microlites, etc. | Regulated under applicable laws.   |
| 19.                           | Protection of hill slopes and river banks.   | Regulated under applicable laws.   |
| 20.                           | Movement of vehicular traffic at night.  | Regulated for commercial purpose under applicable laws.  |
| 21.                           | Ongoing agriculture and horticulture practices by local communities along with dairies, dairy farming, aquaculture and fisheries.                      | Permitted under applicable laws for use of locals.   |
| 22.                           | Discharge of treated waste water or effluents in natural water bodies or land area.  | The discharge of treated waste water or effluents shall be avoided to enter into the water bodies and efforts shall be made for recycle and reuse of treated waste water and the discharge of treated waste water or effluent shall be regulated as per applicable laws. |
| 23.                           | Commercial extraction of surface and ground water.   | Regulated under applicable laws.   |
| 24.                           | Open well, bore well etc. for agriculture or other usage.  | Regulated under applicable laws and the activity shall be monitored by the concerned authority.  |
| 25.                           | Solid waste management.  | Regulated under applicable laws.   |
| 26.                           | Introduction of exotic species.  | Regulated under applicable laws.   |
| 27.                           | Eco-tourism.   | Regulated under applicable laws.   |
| 28.                           | Use of polythene bags.   | Use of polythene bags may be permitted within the Eco Sensitive Zone, however, based on specific requirement, it shall be regulated under applicable laws.   |
| 29.                           | Commercial sign boards and hoardings.  | Regulated under applicable laws.   |
| <b>C. Promoted Activities</b> |  |  |
| 30.                           | Rain water harvesting.   | Shall be actively promoted.  |
| 31.                           | Organic farming.   | Shall be actively promoted.  |
| 32.                           | Adoption of green technology for all activities.   | Shall be actively promoted.  |
| 33.                           | Cottage industries including village artisans, etc.  | Shall be actively promoted.  |
| 34.                           | Use of renewable energy and fuels.   | Bio gas, solar light, etc. shall be actively promoted.   |
| 35.                           | Agro-forestry.   | Shall be actively promoted.  |

|     |   |                             |
|-----|---|-----------------------------|
| 36. | Use of eco-friendly transport.                  | Shall be actively promoted. |
| 37. | Skill development.                              | Shall be actively promoted. |
| 38. | Restoration of degraded land/ forests/ habitat. | Shall be actively promoted. |
| 39. | Environmental awareness.                        | Shall be actively promoted. |

#### 5. Monitoring Committee:-

The Central Government hereby constitutes a Monitoring Committee, for effective monitoring of the provisions of this Notification under sub-section (3) of section 3 of the Environment (Protection) Act, 1986 comprising of the following, namely:-

|     |   |                   |
|-----|---|-------------------|
| (a) | Collector, Bhavnagar  | Chairperson;      |
| (b) | Regional Officer, Gujarat State Pollution Control Board, Bhavnagar  | Member;           |
| (c) | Senior Town Planner of the area   | Member;           |
| (d) | A representative of the Department of Forests and Environment, Government of Gujarat  | Member;           |
| (e) | One expert in the area of Ecology and Environment to be nominated by the State Government for a period of three year in each case | Member;           |
| (g) | Member State Biodiversity Board   | Member;           |
| (h) | Assistant Conservator of Forests (In-Charge of the Veladar Black Buck National Park), Bhavnagar                                   | Member Secretary. |

6. **Terms of reference:-** (1) The Monitoring Committee shall monitor the compliance of the provisions of this notification.

(2) The tenure of the monitoring committee shall be for three years from date of publication of this notification in the official Gazette.

(3) The activities that are covered in the Schedule to the notification of the Government of India in the erstwhile Ministry of Environment and Forests number S.O. 1533 (E), dated the 14<sup>th</sup> September, 2006, and are falling in the Eco-sensitive Zone, except for the prohibited activities as specified in the Table under paragraph 4 thereof, shall be scrutinised by the Monitoring Committee based on the actual site-specific conditions and referred to the Central Government in the Ministry of Environment, Forests and Climate Change for prior environmental clearances under the provisions of the said notification.

(4) The activities that are not covered in the Schedule to the notification of the Government of India in the erstwhile Ministry of Environment and Forests number S.O. 1533 (E), dated the 14<sup>th</sup> September, 2006 and are falling in the Eco-sensitive Zone, except for the prohibited activities as specified in the Table under paragraph 4 thereof, shall be scrutinised by the Monitoring Committee based on the actual site-specific conditions and referred to the concerned Regulatory Authorities.

(5) The Member Secretary of the Monitoring Committee or the concerned Collector

(s) or the concerned park Deputy Conservator of Forests shall be competent to file complaints under section 19 of the Environment (Protection) Act, 1986 against any person who contravenes the provisions of this notification.

(6) The Monitoring Committee may invite representatives or experts from concerned Departments, representatives from Industry Associations or concerned stakeholders to assist in its deliberations depending on the requirements on issue to issue basis.

(7) The Monitoring Committee shall submit the annual action taken report of its activities as on 31<sup>st</sup> March of every year by 30<sup>th</sup> June of that year to the Chief Wildlife Warden of the State as per pro-forma appended as Annexure-V.

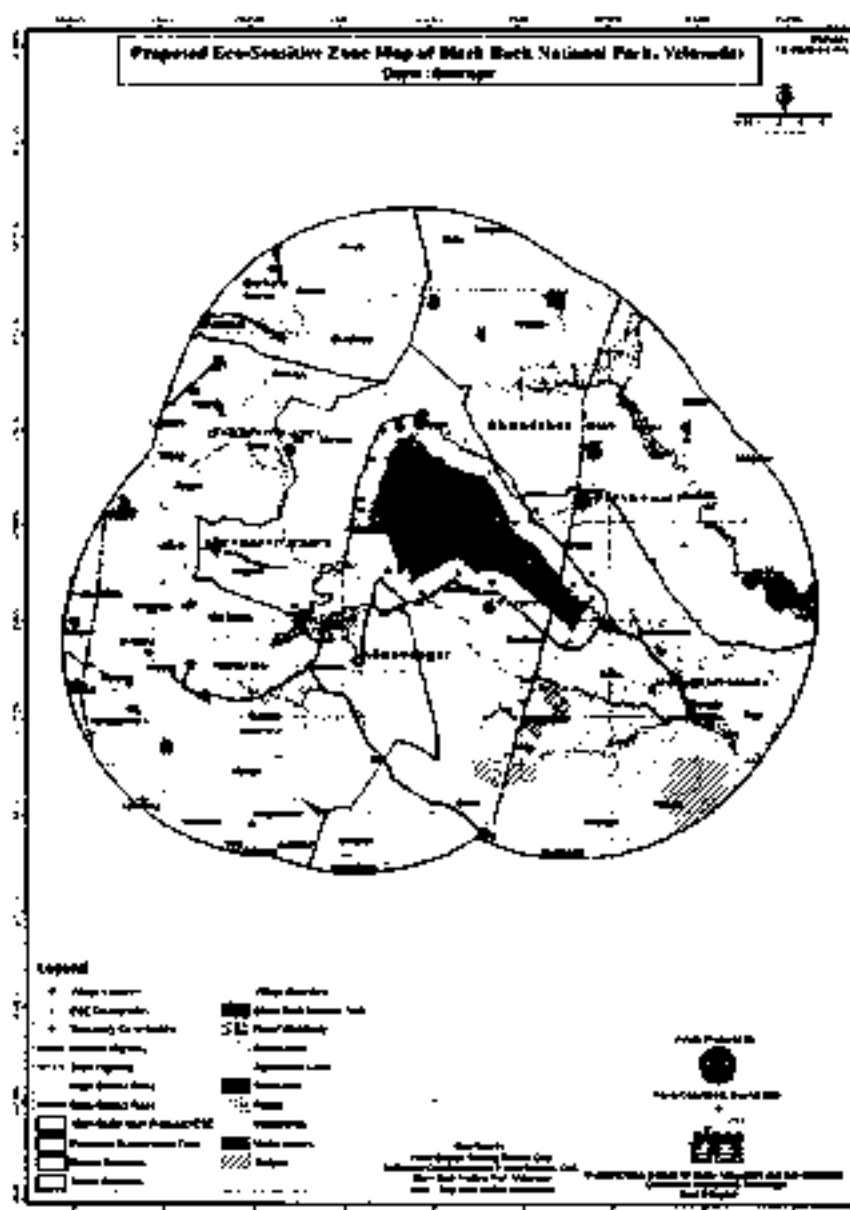
- (8) The Central Government in the Ministry of Environment, Forests and Climate Change may give such directions, as it deems fit, to the Monitoring Committee for effective discharge of its functions.
7. The Central Government and State Government may specify additional measures, if any, for giving effect to provisions of this notification.
8. The provisions of this notification shall be subject to the orders, if any, passed, or to be passed, by the Hon'ble Supreme Court of India or the High Court or the National Green Tribunal.

[F.No.25/87/2015-ESZ-RE]

LALIT KAPUR, Scientist 'G'

## ANNEXURE- I-A

## MAP OF VELVADAR BLACK BUCK NATIONAL PARK ALONG WITH ITS ECO-SENSITIVE ZONE







## Annexure-II

**A. Boundary description of Velavadar Black Buck National Park**

Black buck National Park, Velavadar is part of Bhavnagar Taluka. It is situated on Northern boundary of Taluka, which is district boundary too. The village area of Velavadar, Kanatalav, Mithapur, Rajgad, Mevasa, Bhadbhid, Adhelas, Bavaliyar and Korda have been included. The boundaries are shown below:

**North** : Revenue Survey numbers of Kanatalav villages

**North-East**: Revenue survey numbers of Kanatalav and Bavaliyar

**South** : Revenue survey number of Rajgad, Mevasa, Velavadar and Bhadbhid villages

**South-West**: Revenue survey numbers of Rajgad, Mevasa and Motidhera villages

**East**: Crick of Korda and revenue of Bhadbhid village.

**South-East**: Revenue wasteland and mudflat of Korda, Jasavanpur villages.

**West**: Revenue survey number of Mithapur, Rajgad and Velavadar Village

**North-West**: Revenue survey numbers of Mithapur and Kanatalav villages

**B. Boundary description of Eco-Sensitive Zone of Velavadar Black Buck National Park**

Eco-sensitive Zone-I consists of Black buck National Park, Velavadar (protected area) and 9 villages having area of 39.2448 sq.kms.

These 9 villages fall under Bhavnagar Taluka and Vallabhipur Taluka of Bhavnagar District and Bavaliyar village falls in Dholera Taluka of Ahmedabad District. This proposed Eco-sensitive Zone located between latitude 21°57'30" North to 22°7'30" and Longitude 72°0'0" East to 72°7'30" East.

Detailed longitude and latitude readings of boundary of Eco-sensitive Zone are shown on the Map.

## Annexure-III

TABLE A: Geo Coordinates of Prominent Locations along the boundary of Velavadar Black Buck National Park

| Sr.No. | Latitude          | Longitude        |
|--------|-------------------|------------------|
| 1      | 22° 4' 47.214" N  | 72° 1' 38.487" E |
| 2      | 22° 3' 33.385" N  | 72° 3' 59.594" E |
| 3      | 22° 2' 19.280" N  | 72° 4' 42.142" E |
| 4      | 22° 0' 43.483" N  | 72° 6' 13.671" E |
| 5      | 22° 0' 20.184" N  | 72° 6' 48.594" E |
| 6      | 21° 59' 46.593" N | 72° 6' 24.842" E |
| 7      | 22° 1' 11.449" N  | 72° 4' 38.349" E |
| 8      | 22° 1' 13.509" N  | 72° 3' 47.586" E |
| 9      | 22° 1' 40.117" N  | 72° 3' 9.358" E  |
| 10     | 22° 1' 1.246" N   | 72° 1' 57.205" E |
| 11     | 22° 1' 16.405" N  | 72° 1' 37.420" E |
| 12     | 22° 2' 45.817" N  | 72° 0' 54.232" E |
| 13     | 22° 3' 4.218" N   | 72° 0' 35.559" E |
| 14     | 22° 4' 11.824" N  | 72° 1' 18.794" E |

Table B: Geo Coordinates of Prominent Locations along the boundary of Eco-sensitive Zone of Velavadar Black Buck National Park

| Sr.No. | Latitude          | Longitude         |
|--------|-------------------|-------------------|
| 1      | 22° 5' 7.524" N   | 72° 2' 26.833" E  |
| 2      | 22° 4' 44.136" N  | 72° 2' 52.060" E  |
| 3      | 22° 4' 28.358" N  | 72° 3' 19.819" E  |
| 4      | 22° 2' 37.356" N  | 72° 5' 17.116" E  |
| 5      | 22° 0' 57.832" N  | 72° 6' 50.365" E  |
| 6      | 21° 59' 15.840" N | 72° 6' 13.503" E  |
| 7      | 22° 0' 44.915" N  | 72° 4' 4.613" E   |
| 8      | 22° 1' 1.097" N   | 72° 3' 1.158" E   |
| 9      | 22° 0' 29.806" N  | 72° 2' 6.113" E   |
| 10     | 22° 2' 39.554" N  | 72° 0' 19.830" E  |
| 11     | 22° 1' 56.347" N  | 72° 0' 21.070" E  |
| 12     | 22° 1' 59.987" N  | 72° 0' 39.717" E  |
| 13     | 22° 4' 44.353" N  | 72° 0' 56.982" E  |
| 14     | 22° 1' 4.063" N   | 72° 1' 3.164" E   |
| 15     | 21° 58' 54.324" N | 72° 0' 32.239" E  |
| 16     | 21° 59' 26.740" N | 71° 58' 14.298" E |
| 17     | 22° 0' 11.729" N  | 71° 58' 27.619" E |
| 18     | 22° 1' 2.795" N   | 71° 59' 11.447" E |
| 19     | 22° 1' 13.518" N  | 71° 59' 55.620" E |

## ANNEXURE-IV

## List of villages falling within the Eco-sensitive Zone of Velavadar Black Buck National Park along with Geo-coordinates

| Sr. No. | District  | Taluka      | Village   | Latitude          | Longitude         |
|---------|-----------|-------------|-----------|-------------------|-------------------|
| 1       | Bhavnagar | Bhavnagar   | Karda     | 21° 58' 10.736" N | 72° 8' 37.948" E  |
| 2       | Bhavnagar | Vallabhipur | Mevasa    | 21° 58' 50.150" N | 71° 59' 6.450" E  |
| 3       | Bhavnagar | Bhavnagar   | Bhadbhid  | 22° 0' 19.720" N  | 72° 4' 4.350" E   |
| 4       | Bhavnagar | Bhavnagar   | Rajgadh   | 22° 1' 48.850" N  | 71° 56' 28.567" E |
| 5       | Bhavnagar | Bhavnagar   | Velavadar | 22° 2' 51.589" N  | 72° 0' 57.160" E  |
| 6       | Bhavnagar | Bhavnagar   | Adhela    | 22° 2' 57.749" N  | 72° 6' 44.443" E  |
| 7       | Bhavnagar | Bhavnagar   | Mintapur  | 22° 4' 41.805" N  | 71° 58' 48.209" E |
| 8       | Bhavnagar | Bhavnagar   | Kanatalav | 22° 5' 6.150" N   | 72° 2' 14.535" E  |
| 9       | Ahmedabad | Dholera     | Bavaliyan | 22° 4' 27.300" N  | 72° 7' 1.800" E   |

## Annexure -V

## Performa of Action Taken Report: - Eco-sensitive Zone Monitoring Committee.-

1. Number and date of meetings
2. Minutes of the meetings. Mention main noteworthy points. Attach minutes of the meeting as separate Annexure
3. Status of preparation of Zonal master Plan, including Tourism master Plan.
4. Summary of cases dealt for rectification of error apparent on face of land record (Eco-sensitive Zone wise)  
Details may be attached as Annexure
5. Summary of cases scrutinised for activities covered under the Environment Impact Assessment Notification, 2006.  
Details may be attached as separate Annexure
6. Summary of cases scrutinised for activities not covered under the Environment Impact Assessment Notification, 2006.  
Details may be attached as separate Annexure.
7. Summary of complaints lodged under section 19 of the Environment (Protection) Act, 1986
8. Any other matter of importance.

C-2

**KRISHNAKANT CHAUDHAN**  
H-102, Sai Darshan Residency,  
Dindoli – Kharwasa Road, Dindoli,  
Surat – 394210. Ph: 9426608075  
Email: tokrishnakant@gmail.com

Date. 15-11-2018

To,

1. The Chairperson Environmental Public Hearing  
& The Collector, Bhavnagar District.
2. The Regional Officer  
Gujarat Pollution Control Board  
Bhavnagar

**Subject: Environmental Public Hearing for Ahmedabad – Dholera Expressway**

Dear Sirs

This is with regard to the Environmental Public Hearing (EPH) for the proposed Expressway from Ahmedabad to Dholera. The EPH is being conducted as per the Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India, Notification S. O. 1533 dated September 14, 2006 (EIA Notification 2006).

The EIA Notification 2006, prescribes that the Public be made aware about the likely impacts on the environment due to a certain project. And for this purpose EIA study has to be conducted and the complete study be made available to the public well in advance before the EPH.

In this regard clarification is solicited at the outset:

1. Which authority is responsible for implementation of the EIA Notification 2006 in conducting of EPH?
2. Who is responsible to ensure that the complete EIA reports are made available to the public through various offices and also the website of the GPCB and due procedures are followed in accordance with the EIA Notification 2006?
3. What is the mechanism within the GPCB for basic scrutiny of the EIA studies submitted by the project proponent, in this case National Highway Authority of India (NHA)?
4. What actions are taken in cases where due procedures are violated for conducting of EPH?

The copy of the EIA for the Ahmedabad Dholera Expressway project uploaded on the GPCB website fails on several counts and the uploaded copy is partial. Important annexures and studies forming part of the EIA study are missing

- a) Annexure 1 is the screenshot of the GPCB website showing links for the EIA studies for the above project.
- b) Annexure 2 and Annexure 2A is the screenshot of the first and last page of the uploaded EIA1 as per GPCB website.
- c) Annexure 3 and Annexure 3A is the screenshot of the first and last page of the uploaded EIA2 as per GPCB website.
- d) Annexure 4 and Annexure 4A is the screenshot of the first and last page of the uploaded EIA3 as per GPCB website.
- e) Annexure 5 and Annexure 5A is the screenshot of the first and last page of the uploaded EIA3 as per GPCB website.

Kindly clarify the following issues:

- 1. Kindly provide all the annexures to the EIA as mentioned on page 14 in the copy of the EIA.
- 2. The EIA fails to mention that litigations are pending before the Hon'ble High Court of Gujarat regarding the Dholera SIR. A major part of the proposed Expressway is passing through the Dholera SIR.
- 3. Between a stretch of 109 kms there are several waterbodies including ponds and lakes affected, however surface water sampling is done only in three locations. Kindly provide reasons why no water samples are drawn from the affected waterbodies like lakes or ponds.
- 4. Ground water samples are drawn on from very few locations. Why only one sample is drawn from with the affected areas falling within the Dholera SIR. Kindly give reason.
- 5. No photographs or the dates or GPS locations of the sampling points are provided in the EIA. Kindly give details of the same.
- 6. The proposed alignment falls within the Eco-sensitive zone of the Velavadar Black Buck National Sanctuary. No proper studies are mentioned or annexed to the EIA report regarding impact on the Black Buck and other wild species due to the proposed expressway.
- 7. There is also an ongoing litigation regarding the extent of Eco-sensitive zone of the Velavadar Black Buck Sanctuary. There is no mention of the same.
- 8. While the study was prepared in the period March to May 2018, the meteorological data for the rainfall is for the year 2014. Why such an old data? Kindly provide the latest data.



9. Chapter 10.4 at page 10-3 mentions of accreditation certificate for the EIA consultant as being annexed at Annexure IV. There is no annexure provided in the EIA copies available. Kindly provide the accreditation certificate for the EIA consultant.
10. There is no accreditation certificate provided at Annexure V as mentioned in the chapter 10.5 at page 10-4 for the Noida Testing Laboratories where all the samples were tested. Kindly provide a copy of the same.
11. The EIA fails to consider the alternative alignment in within the Dholera SIR. Give reasons why no such study were taken up.
12. The land acquisition cost for land falling within the Dholera SIR is not mentioned. Has the NHAI initiated any Land Acquisition proceedings for land falling within the Dholera SIR. Give details of the same.
13. The EIA also fails to mention that a EPH for the same project was scheduled in July 2013 and was later postponed for reasons unknown. Give reasons for the same.
14. Today we are into an era of Climate Change. The areas through which the proposed alignment passes is a drainage for the excess water and several river/rivulets from the districts falling in the saurashtra region. The area has a peculiar geography and is known for water logging during rainy season. Why no study regarding the impact on the drainage of rain water is taken up. Kindly provide reasons for the same.

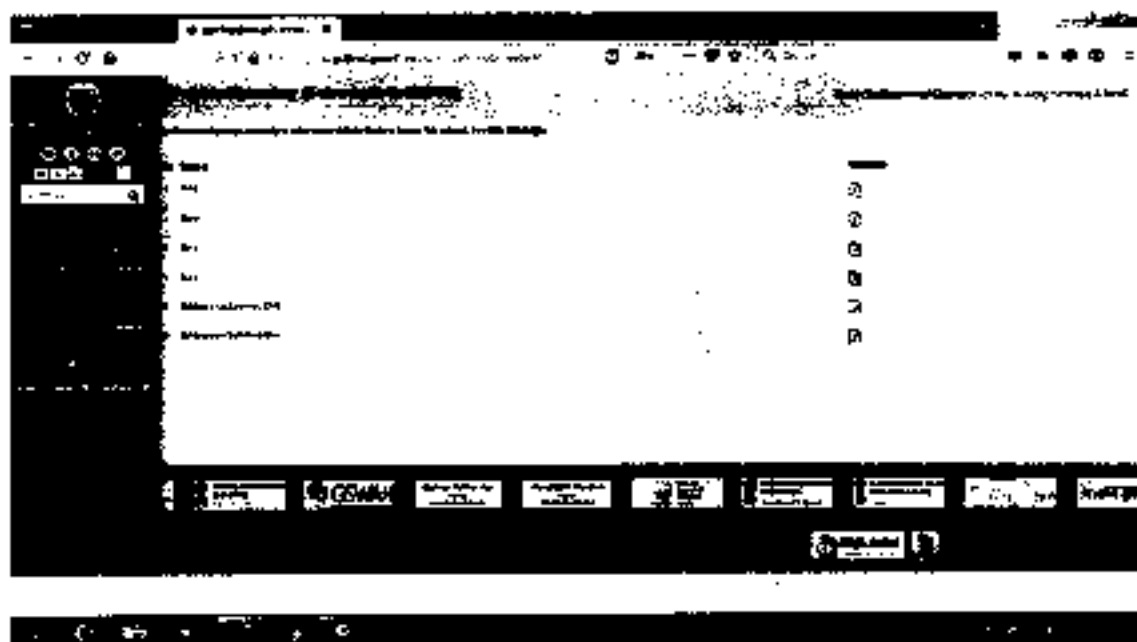
Yours Faithfully,



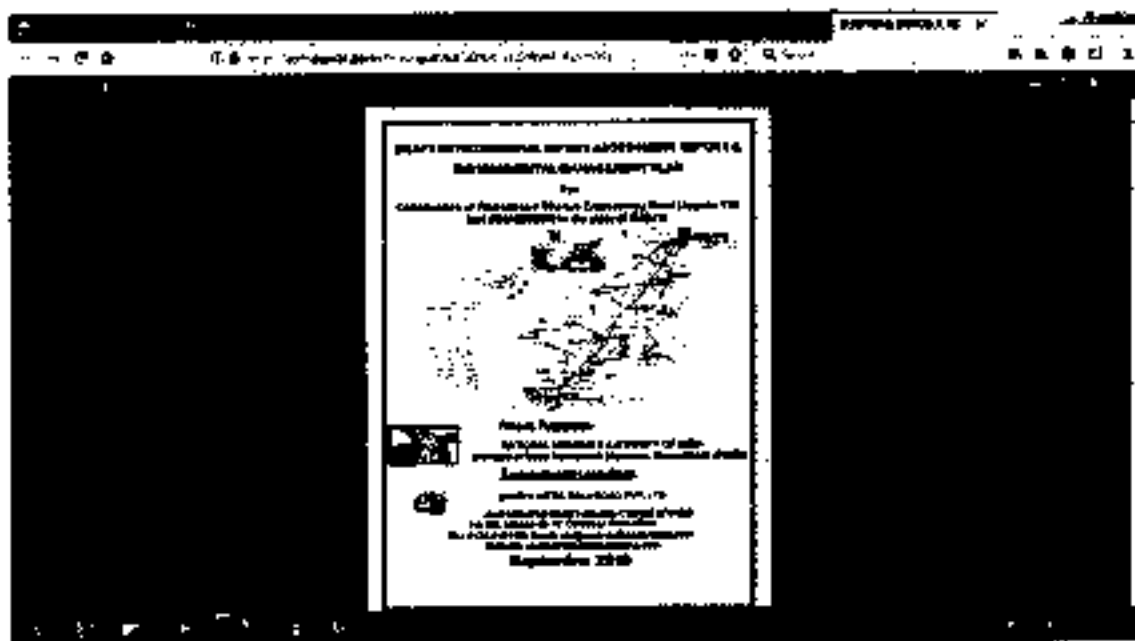
(Krishnakant Chauhan)

Activist, Paryavarah Suraksha Samiti

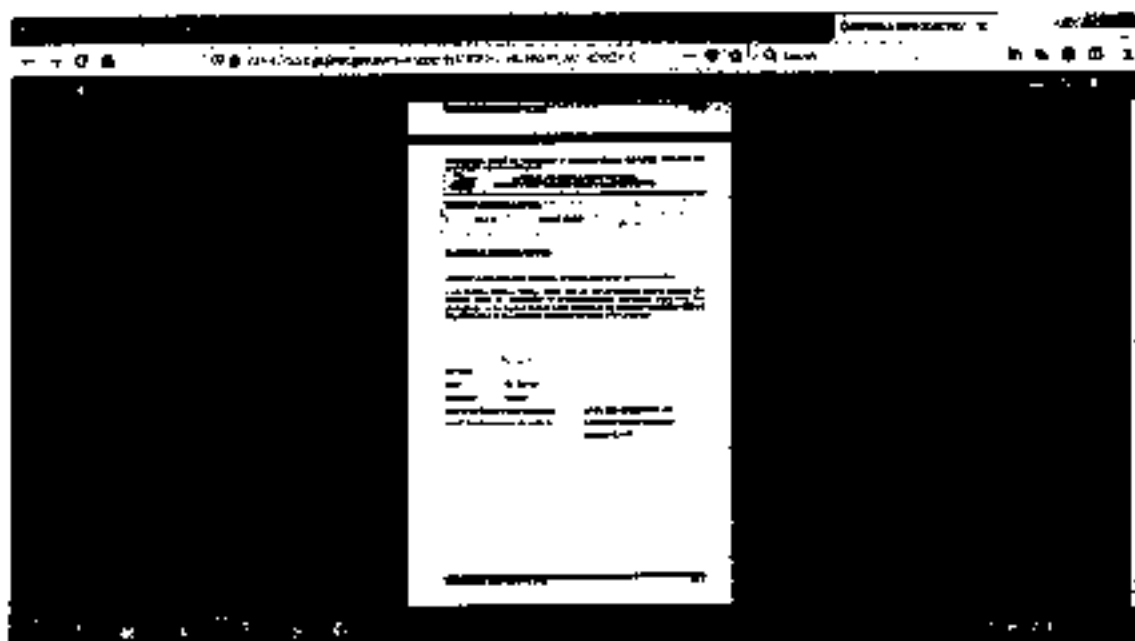
## ANNEXURE 1



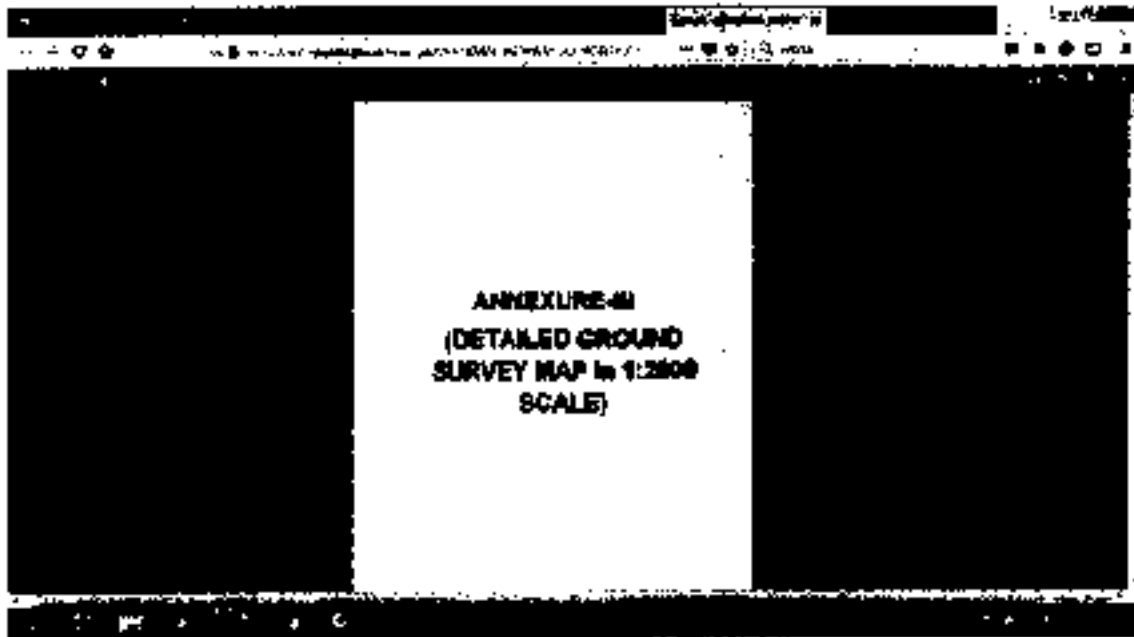
## ANNEXURE 2



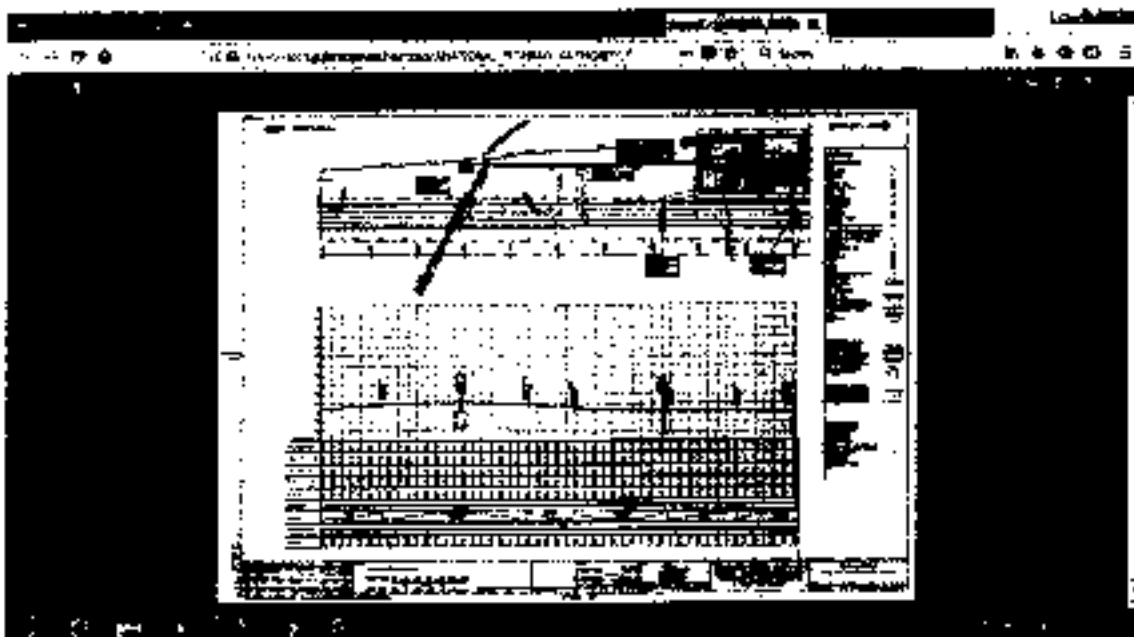
## ANNEXURE 2A



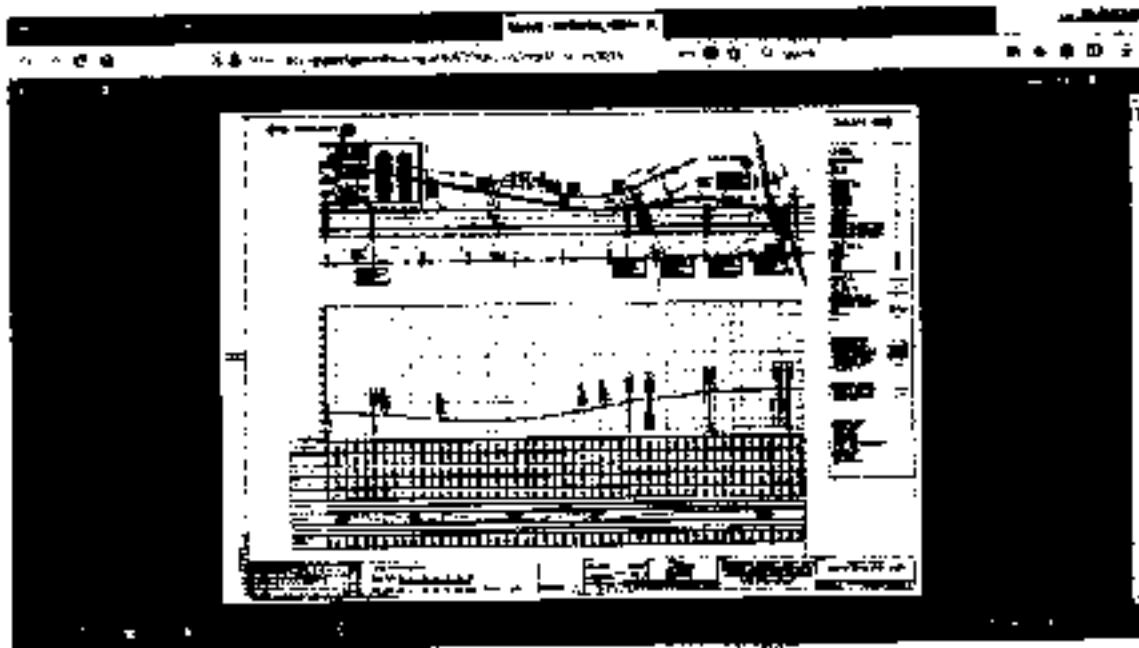
### ANNEXURE 3



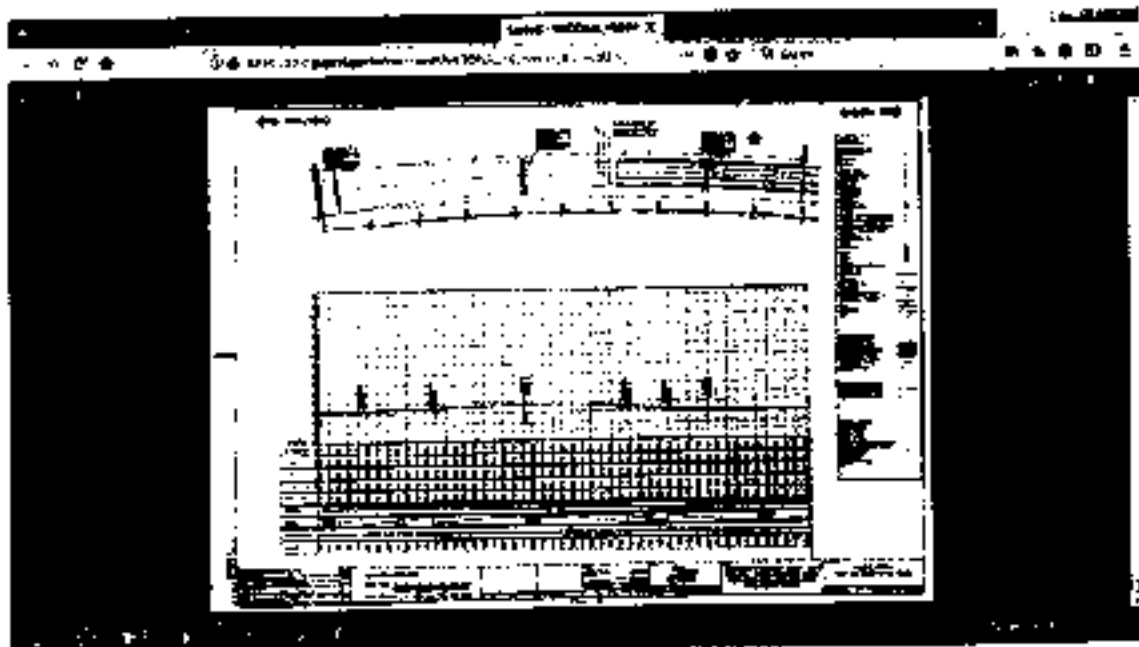
### ANNEXURE 3A



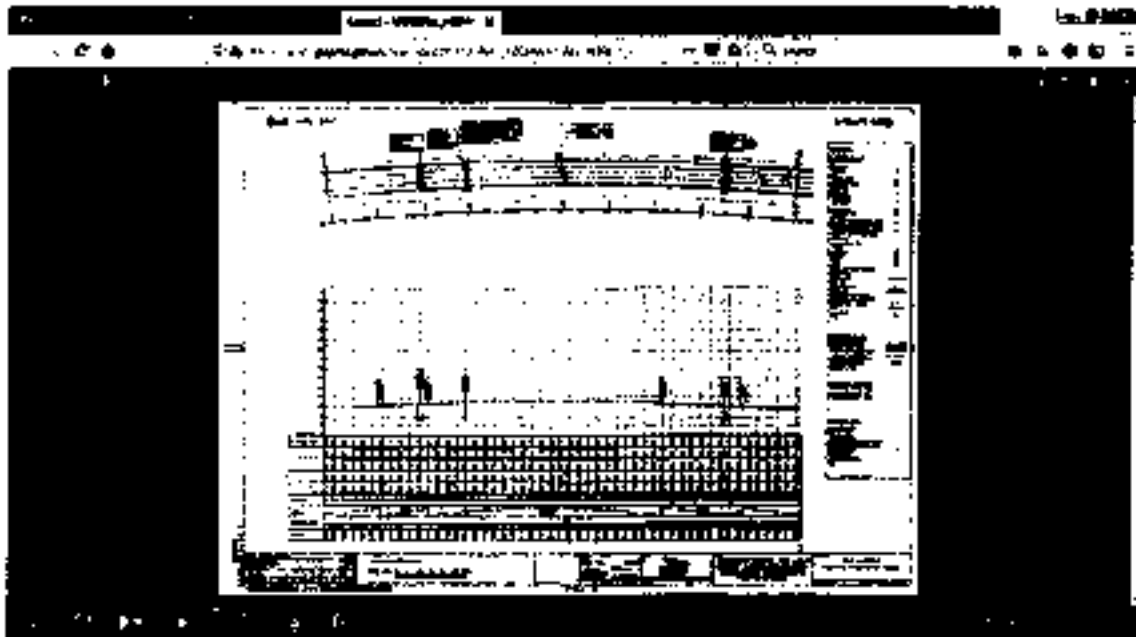
## ANNEXURE 4



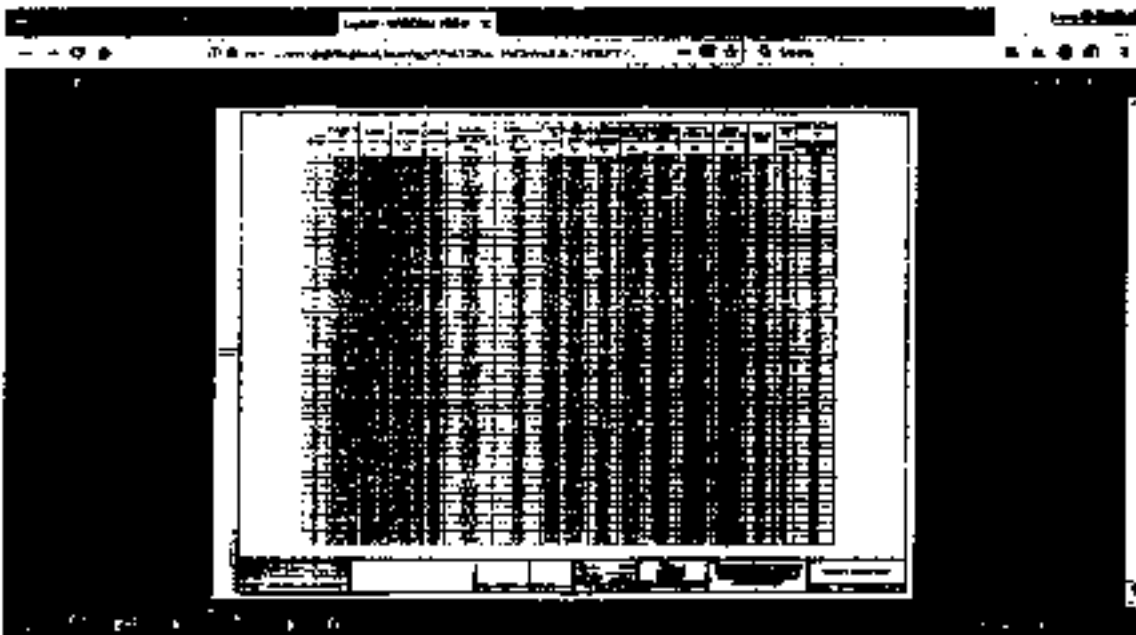
## ANNEXURE 4A



## ANNEXURE 8

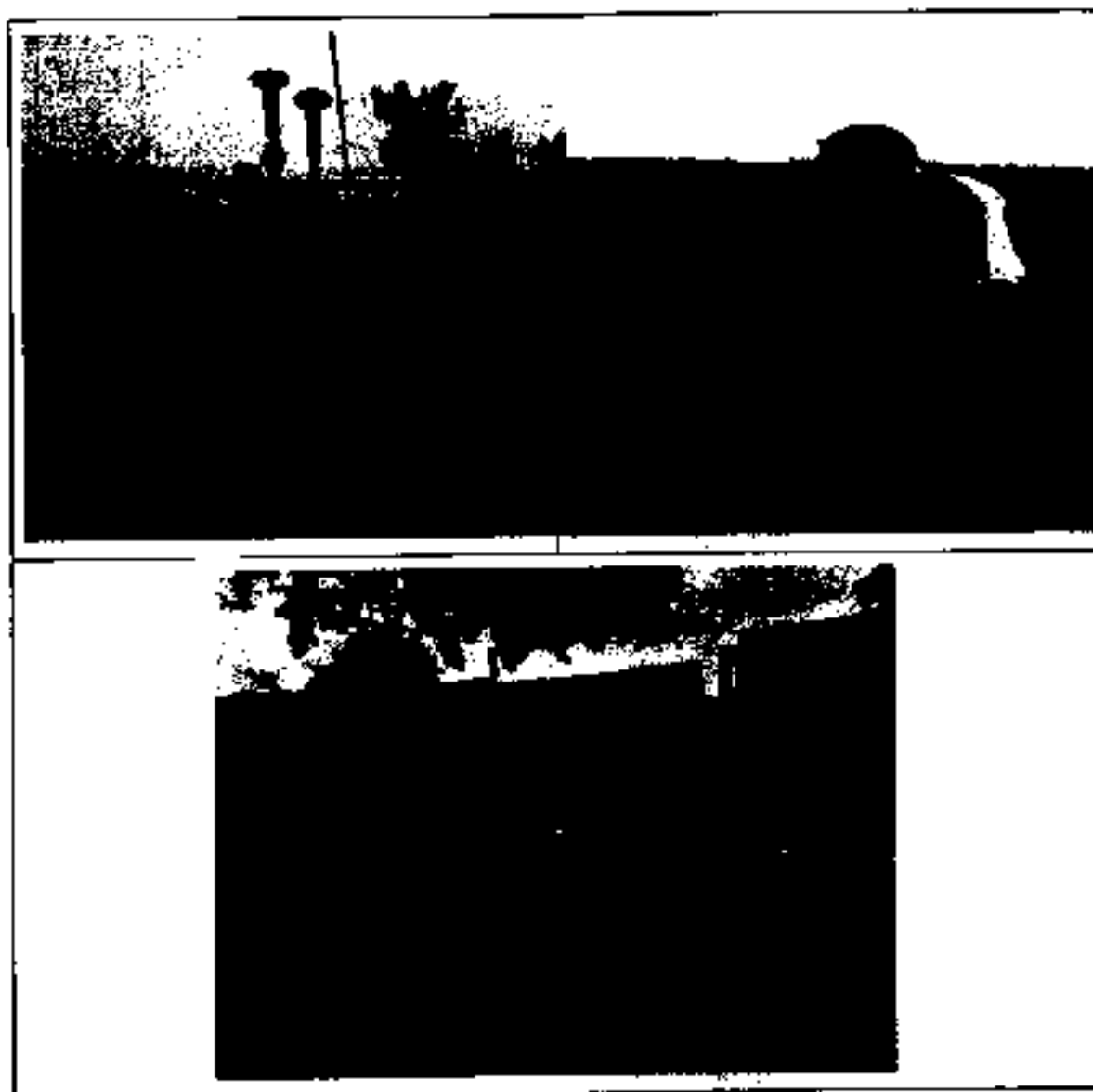


## ANNEXURE 5A



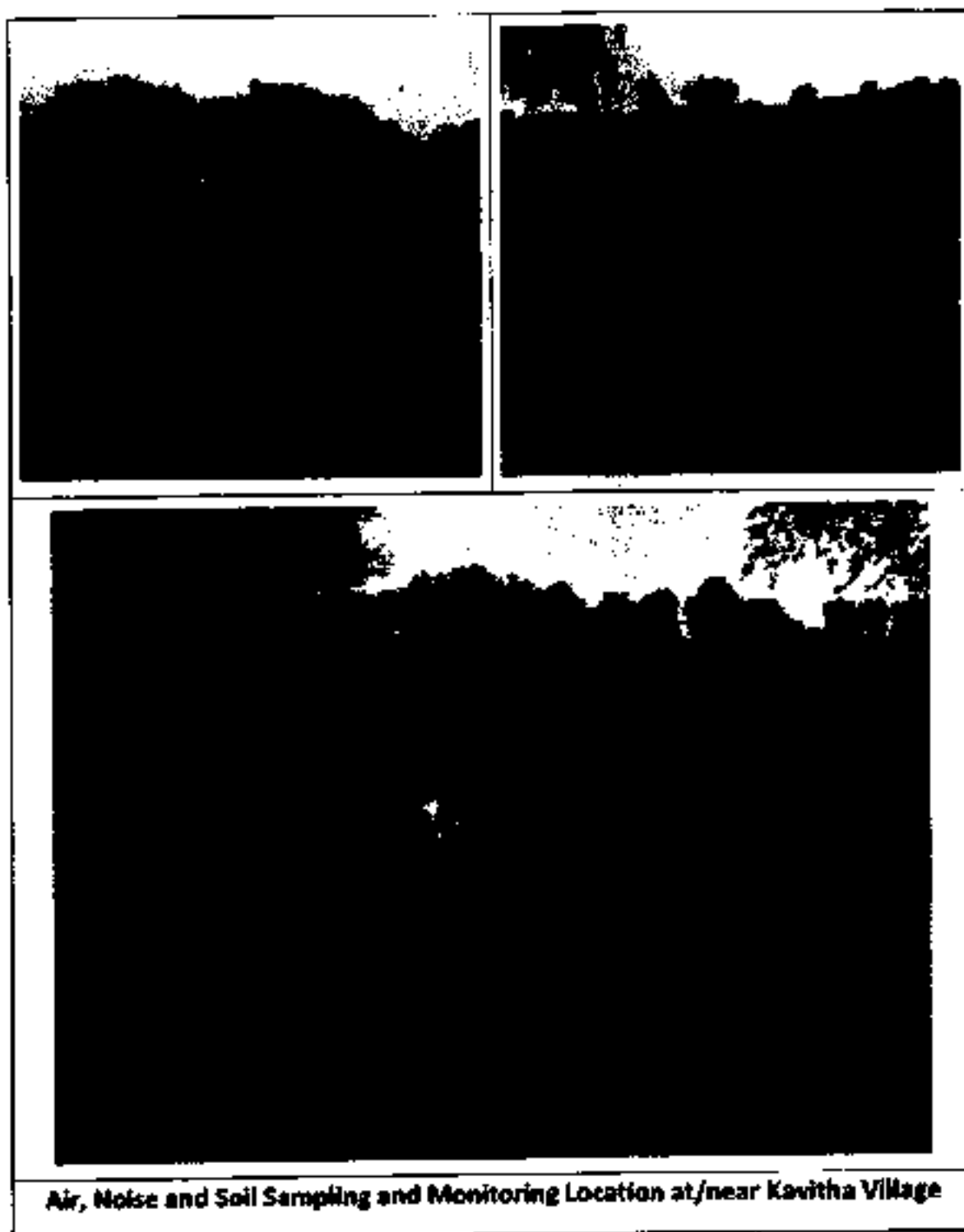


## ANNEXURE - I

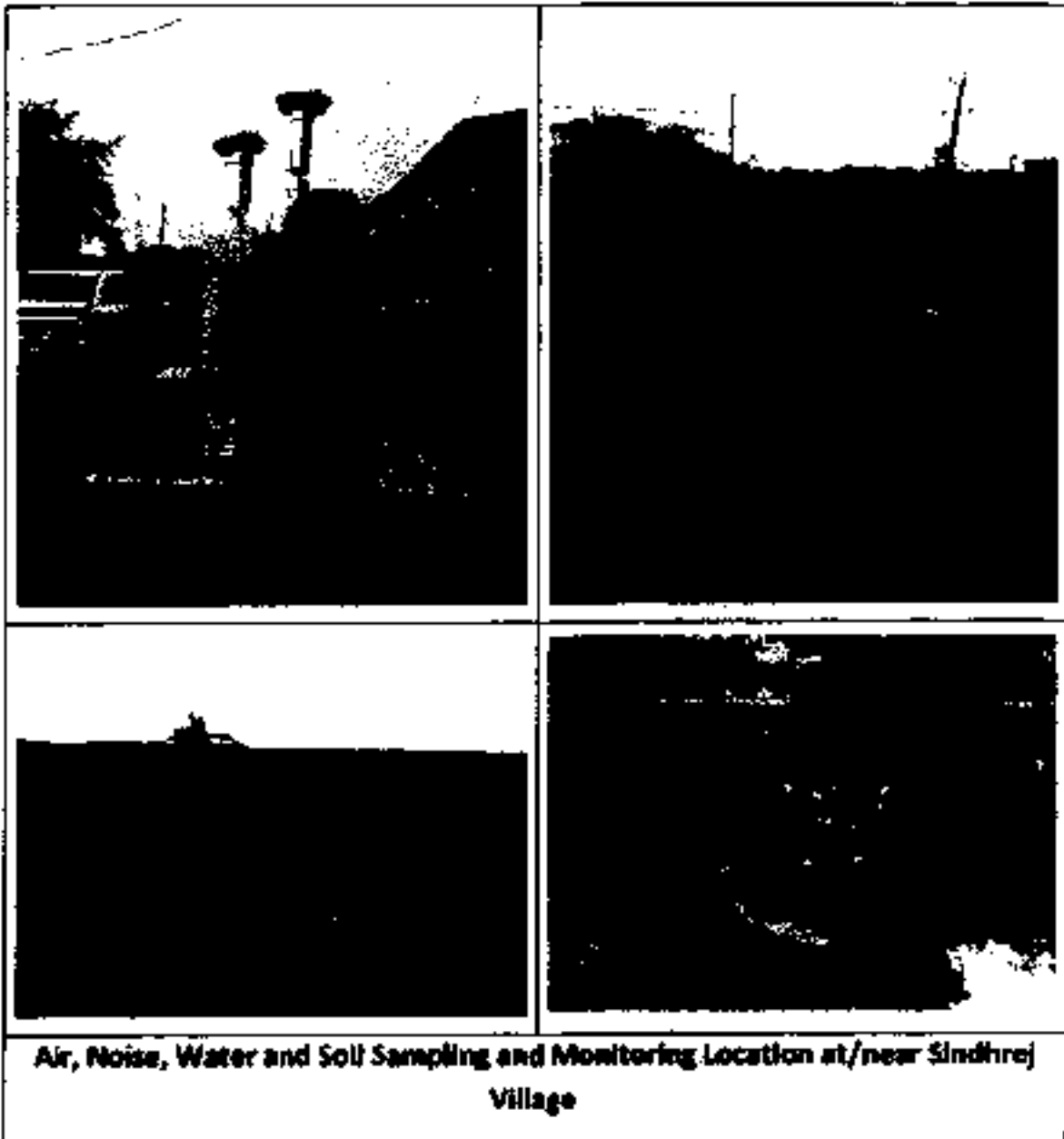


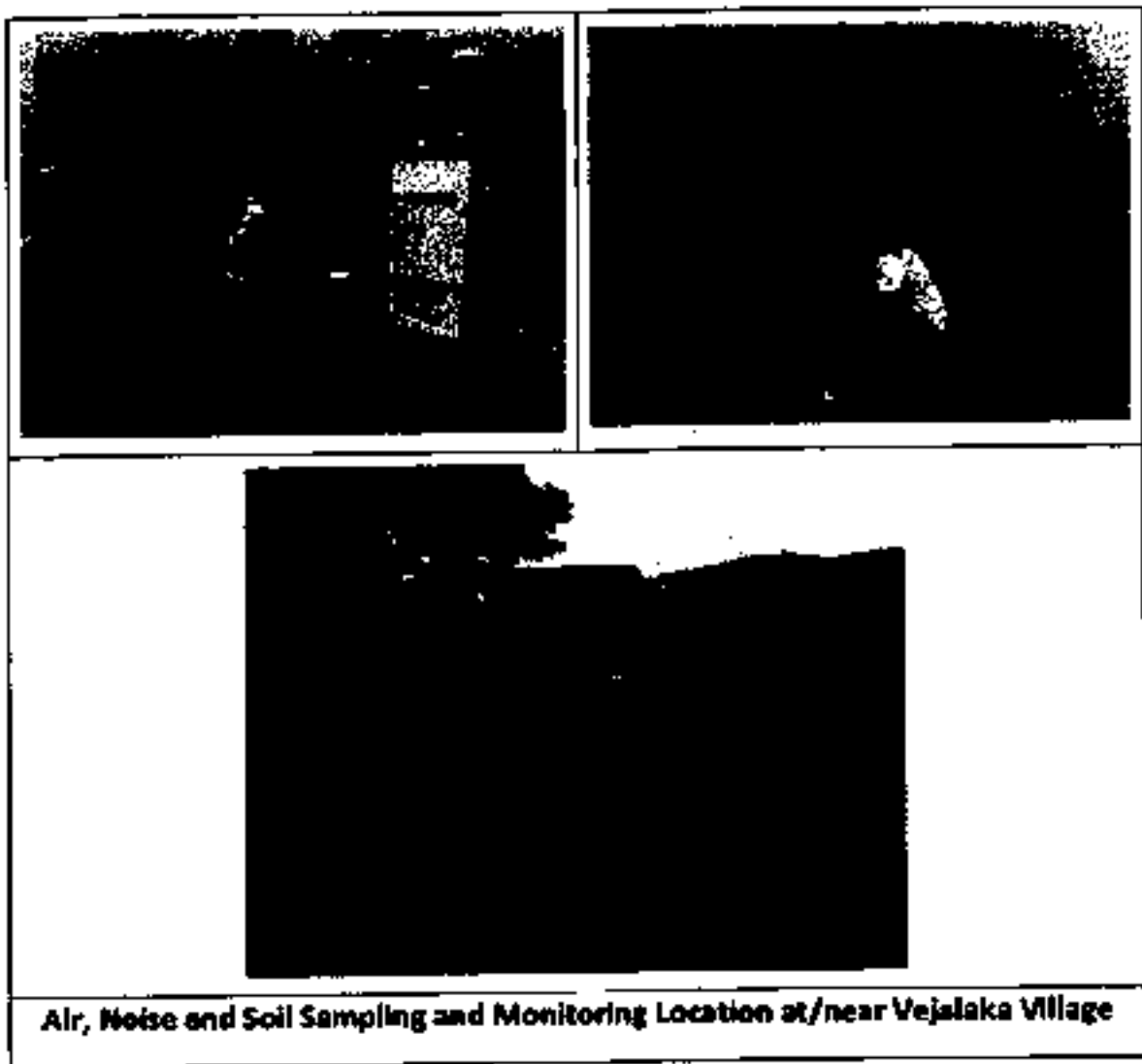
**Air, Noise and Soil Sampling and Monitoring Location at/ near Starting Point**



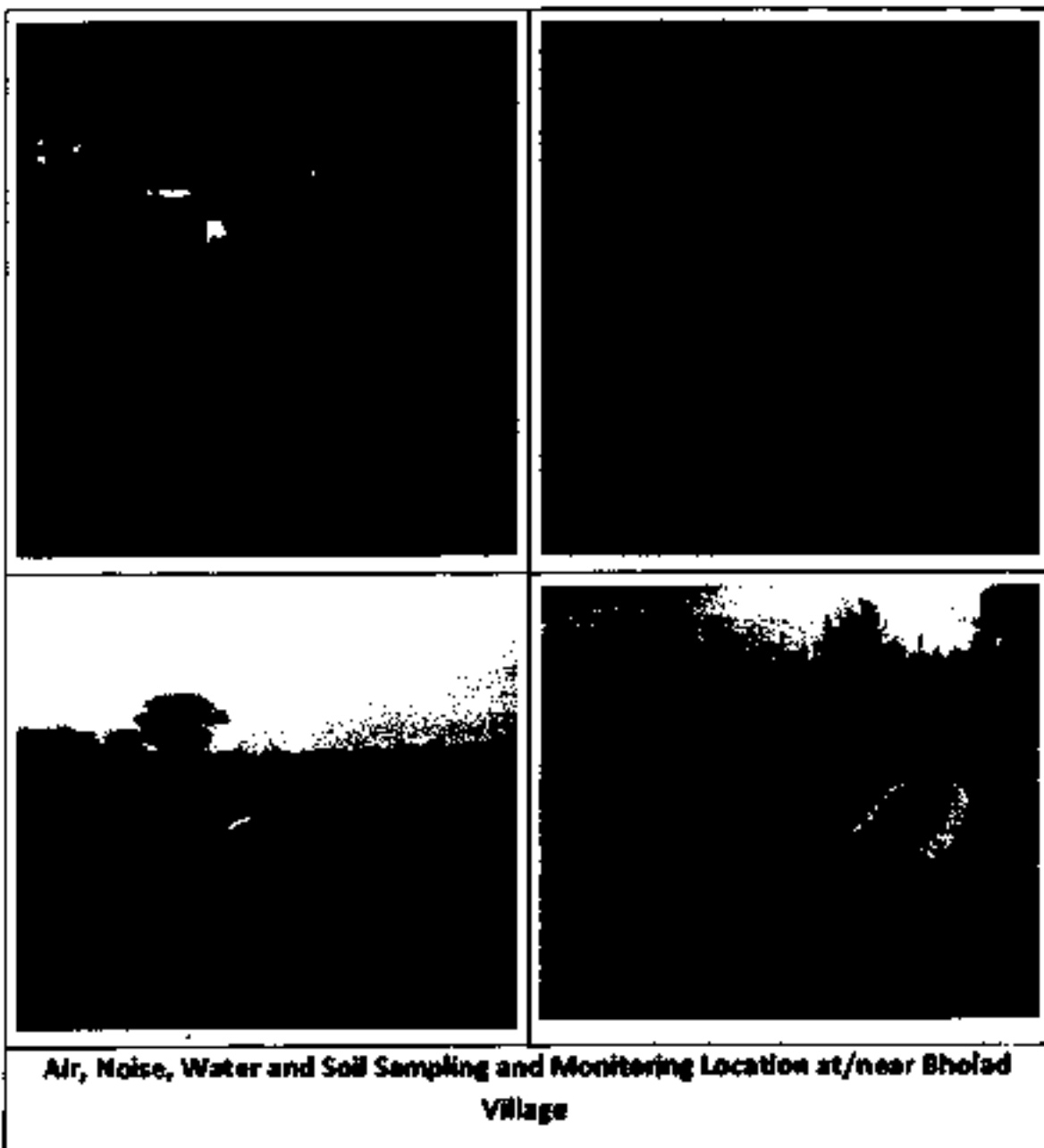


**Air, Noise and Soil Sampling and Monitoring Location at/near Kavitha Village**

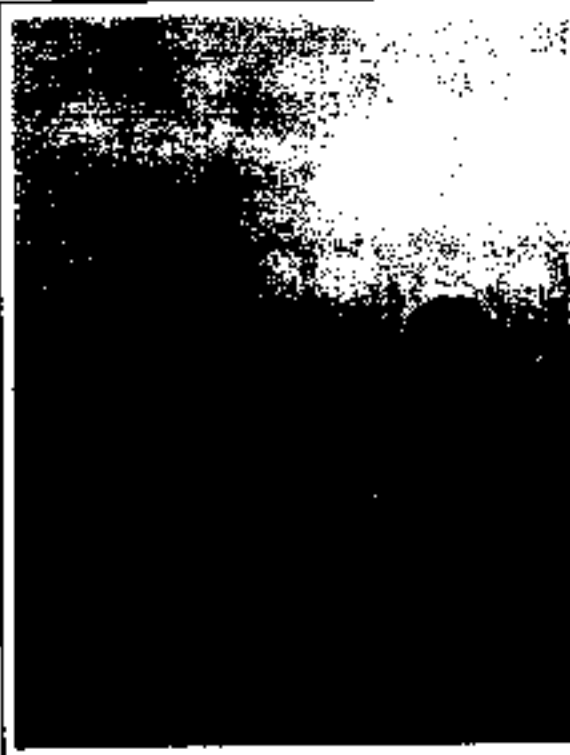




**Air, Noise and Soil Sampling and Monitoring Location at/near Vejalaka Village**



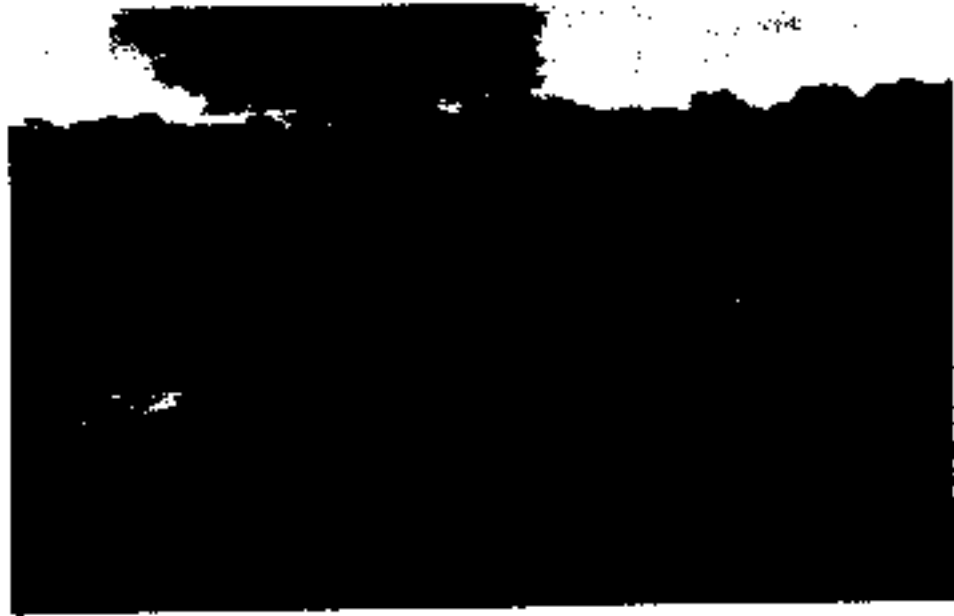
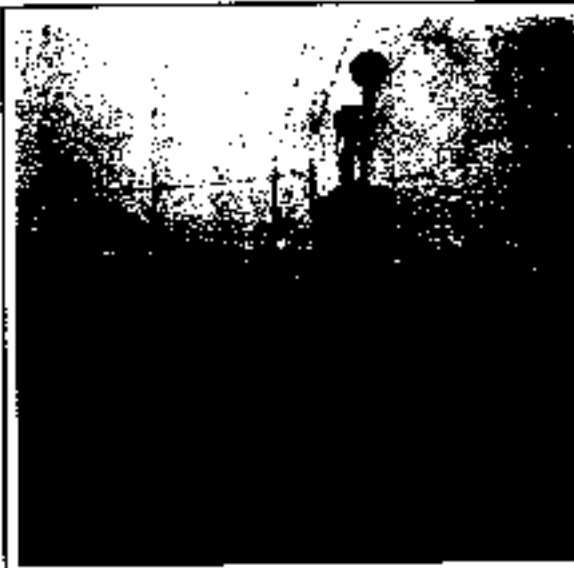




**Air, Noise and Soil Sampling and Monitoring Location at/near Ambli Village**



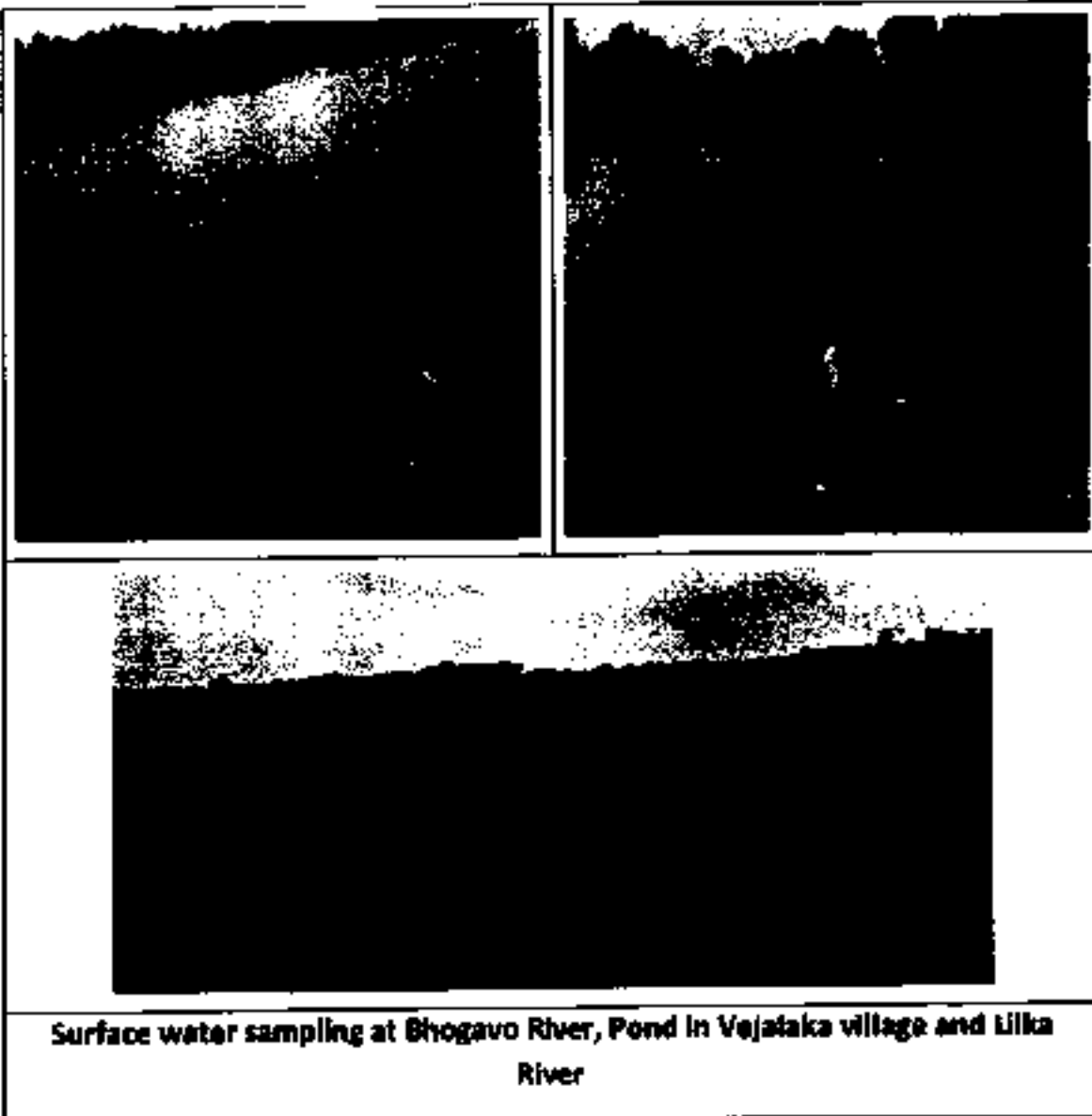
**Air, Noise, Water and Soil Sampling and Monitoring Location at/near Dholera Village**



**Air, Noise and Soil Sampling and Monitoring Location at/near Sandhida Village**



**Air, Noise, Water and Soil Sampling and Monitoring Location at/near Adhejai Village**



# ANNEXURE-II



**Quality Council of India**

**National Accreditation Board for  
Education & Training**



## CERTIFICATE OF ACCREDITATION

**M/s Enviro Infra Solutions Pvt. Ltd. Ghaziabad**

309,302 & 305, SRBC, Plot No. 185 - 12, Sector - 9, Vasundhara, Ghaziabad - 201012

is accredited under the QCI-NABET Accreditation Scheme for EIA Consultant Organizations (Version 3) for preparing EIA/EMP reports in the following sectors.

### Scope of Accreditation:

| Sl. No. | Name of Sector  | Cat. |
|---------|---|------|
| 1.      | Mining of Minerals (opencast only)  | B    |
| 2.      | Offshore and onshore oil and gas exploration, development & production  | A    |
| 3.      | River Valley projects   | A    |
| 4.      | Thermal power plants  | A    |
| 5.      | Metallurgical industries (for ferrous only)   | B    |
|         | Metallurgical industries (for non ferrous only)   | A    |
| 6.      | Cement plants   | B    |
| 7.      | Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals; other synthetic organic chemicals and chemical intermediates) | A    |
| 8.      | Distilleries  | A    |
| 9.      | Oil & gas transportation pipeline (crude and refined petroleum products), passing through national parks/ sanctuaries/ coral reefs / ecologically sensitive areas including LNG terminal  | A    |
| 10.     | Isolated storage & handling of Hazardous chemicals (As per threshold planning quantity indicated in column 3 of schedule 2 & 3 of MSHC Rules 1989 amended 2000)   | A    |
| 11.     | Ports, harbours, break waters and dredging  | B    |
| 12.     | Highways  | A    |
| 13.     | Building and construction projects  | B    |
| 14.     | Townships and Area development projects   | B    |

**Note:** Name of approved EIA Coordinators and Functional Area Experts are mentioned in BAC minutes published on website dated Dec 18, 2016.

The Accreditation shall remain in force subject to continued compliance to the terms and conditions and on successful completion of Surveillance Assessment after 18 months. The renewal of accreditation shall be done through Re-accreditation process prior to expiry date of this certificate within 36 months.

NABET

**Certificate No.**

**NABET/ EIA/1619/ 1A 0018**

**Valid up to**

**November 09, 2019**

NABET is member of International Accreditation Forum (IAF) and Pacific Accreditation Cooperation (PAC).







**National Accreditation Board for  
Testing and Calibration Laboratories**  
(A Constituent Board of Quality Council of India)



**CERTIFICATE OF ACCREDITATION**

**NOIDA TESTING LABORATORIES**

has been assessed and accredited in accordance with the standard

**ISO/IEC 17025:2005**

**"General Requirements for the Competence of Testing & Calibration Laboratories"**

for its facilities at

GT-20, Sector-117, Noida, Gautam Budh Nagar, Uttar Pradesh

in the field of

**TESTING**

Certificate Number TC-6814 (in lieu of T-3871, T-2489)

Issue Date 03/12/2017

Valid Until 02/12/2019

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website [www.nabl-india.org](http://www.nabl-india.org))

Signed for and on behalf of NABL

Alok Jain  
Program Director



49074870180930001013

Anil Relia  
Chief Executive Officer



C-3

RamdevSinh B. Chudasama  
Post: Bavaliyar  
Ta.DholeraDist.Ahmedabad  
Date.16-11-2018

To,  
Member Secretary,  
Gujarat Pollution Control Board- Gandhinagar,  
Camp: Environmental Public Hearing (National Highway)  
Primary school, Adhelai.

Subject: presenting objection/suggestions in writing during the Environmental public hearing on Construction of Ahmedabad-Dholera Express Road (110 kms.) within Bhavanagar District.

With Jay bharat, I, hereby, present the below mentioned important environmental issue in writing, in today's environmental hearing which may be noted in today's hearing & request to consider it in the next proceeding according to the rule.

The report of the Comptroller and Auditor General (CAG) of India has been presented in the last session of the Gujarat Assembly. On page nos 41 to 48 of the Ministry of Environment, forest & climate change, by taking detailed audit observations on the procedure followed by the Government of Gujarat to modify the eco-sensitive zone of VelavaderKaliyar Sanctuary and National Park for shortening it, has been declared illegal. It is our representation that The National Highways Authority of India & The Gujarat Pollution control Board may study this report & implement the same while fixing the alignment in Adhelai&bavaliyar village for which this hearing is going on. It is very important to take care of the audit report of "CAG". The present new Alignment passing through the limits of Adhelai&Bavaliyar villages is passing through the Eco sensitive zone violates the Environmental rules. Therefore we are presenting our objection that the new road must be constructed on old highway after cancelling the new alignment.

Yours faithfully,

RamdevSinhBatukSinhChudasama



Chudasama Pushparajsinh Pradumanensinh  
At Adhelai  
Taluka. dist : Bhavnagar,  
Place: Hearing on Environmental Impact,

Primary school, Adhelai,  
Date: 16-11-2018

To,  
Member Secretary,  
Gujarat Pollution Control Board-Gandhinagar  
Camp: Environmental Public Hearing (National High-Way)  
Primary school Adhelai Ta. Dist. Bhavnagar

Subject: To issue objection and comments in Environmental public-Hearing for the construction project of Ahmedabad Dholera Expressway Road (110 km) (NHAI / BM / 21) within the Bhavnagar district.

Coordination: Public instruction on dated 14-10-2018 in the newspaper "Saurashtra News" in the name of The Gujarat Pollution Control Board-Member Secretary of Gandhinagar.

It is to state with "Jai Bharat" that according to the Public Instruction as mentioned above, for the Construction of Ahmedabad-Dholera Expressway Road (part of the Bhavnagar district) up to km-110 (NHAI / BM /21) ,Construction Project in Gujarat State's, During an environmental hearing, I hereby present my objection, criticism & Suggestions in writing. I request to include all the points included in this letter in today's proceedings of the public hearing and all the further proceeding may be carried out as per rules for all the demands & proposals made in the letter. I am a farmer in Adhelai village.

Point No. 1: The costly land of the Farmers has been unnecessarily acquired for the Alignment of this proposed road within the revenue boundaries of Adhelai village, from Adhelai village Boundary to Bavaliyari village Boundary

For the road for which this public hearing is being done, in the 60 km stretches of road from Dholera to Bhavnagar, the Alignment is on the old existing Highway length. This is a good thing. However while going to Adhelai from Dholera the Alignment of the proposed Highway, i.e. in 8.0 km of Bavaliyari village & 5.0 km of Adhelai village is shifted towards west of the existing Highway by 0.5 to 1.0 km. from Dholera to Bhavnagar, by fixing the Alignment on land of only these two villages which is their livelihood an injustice has been done to the farmers of these 2 villages. We people of the village / farmers strongly object to this scheme of snatching away the livelihood of the farmers by untimely acquiring huge quantities of this land of the Narmada project. We register our objection with a proposal of cancelling the new alignment of the new road & re-aligning the new Express way on the alignment of the old highway road in the village boundary of Bavaliyari and Adhelai villages.

(2) If a new road is constructed, then 200 bigha land of Adhelai village and 2 lakh sq.m. Agricultural land of Bavaliyari village will go in the road construction & therefore the livelihood of these farmers of 2 villages will be snatched away. Apart from this, there is no problem in road construction on old Highway alignment. There is no historical place or no other obstacle here. So the question of land acquisition, the cost, the income of the farmers is protected. Therefore, we suggest constructing the new Highway on the old alignment in the boundaries of

Adhelai&Bavaliyari villages, instead of separate alignment & registering our objection in this regard.

(3) VelavadarKaliyar (Blackbuck) Sanctuary and National Park is situated on the west and south of the Adhelai village. The existing highway passes through the sanctuary. As well as proposed new Alignment, is passing at a distance of 500 meters from the boundary of eco-sensitive zone of Velavadar Sanctuary. This is clearly stated in the official summary published by you on page.

In the Gazette of Government of India dated 6-7-2017, the Ministry of Environment, Forest and climate Change, it has been notified in the gazette, there is a clear provision in point number 11 (S) on page 9 that in the protected 1.0 km of area or eco-sensitive zone border Any kind of construction is prohibited in restricted area. So the expressway also comes under this restriction. Therefore, this project of Construction of expressway within the boundary of Adhelai&Bavaliyari villages & within 500 m of Eco-Sensitive zone is illegal.

As per the clear provision of 'Environment Protection Act-1986', it is a crime to prepare the plans & Drawings in such prohibited areas without the prior approval of the Competent Authority. And there is a clear provision of fine and imprisonment to the responsible employees of the private industry and the responsible government officers for such crimes. So in this matter, special attention of the competent authority of the National Highway Authority, as well as the competent authority of Gujarat Pollution Control Board and the representative of the Collector, is drawn to the fact that there is a crime under the Environment Protection Act, and it must be immediately stopped. By keeping our rights to complain reserved in this regard, we hereby register our objection in this public hearing.

(4) On challenging the Notification of shortening of the eco-sensitive zone of VelavadarKaliyar (Blackbuck) Sanctuary has been challenged in the Honourable Gujarat High Court vide writ petition (PL) no: 88 of 2017 the court has stayed the finalization of this Notification on 19-04-17, Which is still in force today. Even though an Environmental hearing is being carried out considering the finalization of this notification which is a violation of The Honourable Court's order, Because the order of not to finalize the government shortening of the eco-sensitive zone of Velavadar Sanctuary. The provision of old eco-sensitive zones 10 km from the extent of the sanctuary to 31-km total still holds. In spite of this legal position, all this action without the prior permission of VelavadarKaliyar (Blackbuck) Sanctuary, and the 'National Board for Wildlife', all these proceedings are illegal and are penal offenses. So register our objection while informing of the legal position.

(5) If the National Highway and Expressway Highway will be built according to the new alignment, then this road will obstruct the flow of water in the flat areas of the road area. So, due to flooding of rain water in thousands of acres of farming land, will be destroyed and the road to the farmers' land boundary will be closed. Roads of wildlife sanctuaries and animals will be closed. Its sound pollution will be destroy the timidnatured of a wild Kaliyar (Blackbuck) deer-like which is included in the Schedule 'F' the species going extinct & needing protection shall be destroyed forever. The Velavadar Sanctuary which has a name for the world of Blackbuck, will be completely destroyed, which is very much clear indication.



(6) Prior sanction of "National Board for Wildlife" is inevitable before planning and making maps of National Highway and Expressway Highway Project with Six Lane at a distance of only 500 meters from the extent of the Velavadar Sanctuary limits and its Eco-Sensitive Extension.

As mentioned in page no.09, point no. 11 of the Gazette of Govt. Of India, dated 6-7-2 017, According to the provision of sub-section (3) of the Central Government, Environment (Conservation) Act-1986, the approval of the Monitoring Committee is inevitable. A pre-approval of this provision for the National Highway and Expressway Road or "approval" has not been taken. So today's Public hearing is liable to cancellation. The Public hearing may be conducted after receiving all the approvals. We register this objection on this ground & demand for cancellation of today's proceedings.

(7) for the present Ahmedabad – Bhavnagar short rout road, the land on large scale was acquired for our Adhelai village in 1980, but due to non-construction of bridge it was cancelled & the farmers lost their land, after that, for this present Highway which was constructed after 1981, the farmers land was acquired in large scale, after this, for the present Expressway project, the lands of these farmers due to the acquired for the third time which is totally unfair. Therefor to protect the interest of the farmers, we suggest constructing the new Highway on the present old Highway like other villages & registering our objection in this regard.

(8) For fixing new alignment instead of the old highway in the village of Adhelai. The National Highways Authority of India gives the reason that from end of village boundary of Adhelai to the boundary of Dholera Special Development Region starts, in the DSIR a 250m wide Expressway corridor is proposed & therefore in the Bavaliyari village, the new Expressway shall be constructed in this corridor only and for connecting it, it is inevitable to provide a new alignment in 5km Adhelai village.

All the above facts are full of errors are ignoring the facts on examining the present legal status of Dholera SIR. In the PIL writ petition no. 227 of 2014 Honourable High Court has given Injunction order to conduct all the proceedings that are harmful to the right of the farmers, which is in force even today. Therefore legally looking, there is a court injunction on Dholera SIR town planning scheme, more over the legality of Gujarat SIR act 2009 is challenged in their writ petition because it is unconstitutional. For such a sub-joined matter & with Court Injunction Order, it will be like ignoring the core point of Honourable High Court order, grab thousands of acres of lands of Adhelai village & Bavliary village by deciding a new alignment in the name of Dholera SIR & keeping the environmental public hearing for the same. This matter is directly related to the rights of the Farmers of Bavliary villages and the National Highways Authority of India is intentionally doing this act in coordination of the Dholera SIR or Dholera SIR, even after knowing about the High court's Injunction order is persuading National Highway Authority of India, so that it ignores the court order and concealing the fact of courts Injunction order or else both the Authorities collectively, intentionally ignoring the Honourable Courts order. This all amounts to contempt of Court and for your information we shall go to the court for necessary solution to this. At the same time, we demand to cancel the new alignment of 5km for the Adhelai villages in the courts Injunction area and construct the Expressway alignment on the existing old Highway Alignment and register this objection.

(9) On 11.11.2011, the environmental public hearing of Ahmedabad Dholera Express Highway (110 km) passing through Ahmedabad district was kept in the village of Sindhrej in

Dholkataluka, in the Mukhi mango farm. In this hearing, the competent authority of the present National Highway Authority, Mr. Singh Saheb publicly declared that Dholera SIR Authority has clearly stated that the certificate of "environmental clearance" has been received. Therefore, environmental approvals are not required for the proposed express highway. Therefore, they do not want to answer the people of the villages and farmers of Dholera SIR Area.

All the above facts are far from the truth, the DholeraSIR Authority has received the Environmental Clearance Certificate from the Ministry of Environment, Forest and Climate Change on 19.09.2014, on page 3 of the various conditions of this certificate, It is clearly mentioned in the condition no. 2 that prior clearance from National Board for Wildlife is required to be obtained for the project in the Sanctuary area near Eco sensitive Zone. Dholera SIR has not obtained any such clearance certificate. It is mandatory to get it, so to say that the National Highway Authority for the village of DholeraSIR is no longer required to get environmental clearance, is wrong. And the pre-approval of the National Monitor of the National Life of Wildlife and Bhavnagar District Collector for Velavadar Sanctuary is required to get the pre-approval of the 'Monitoring Committee' for the National Highway and Express Highway passing through the Adhelai and Bavaliyari villages Which has not been received till date. So today's environmental hearings are illegal, and should be canceled. And we file hereby a objection for this.

(10) Difficulties arising from the Express highway:

- The existing old highway road connects Bhavnagar to Ahmedabad with fast transportation, and it is the main road of Bhavnagar district and Ahmedabad district to the vast area of Bhal area. Dividing it in to two parts ,Bhavanagar to Adhelia simple Highwat& from Adhelai to Ahmedabad Express Highway , this entire plan of the express highway will be very uncomfortable and costly,. Time will get spoiled due to the toll tax stamp and it will be a major hindrance to the existing and continuous transport of Ahmedabad to Bhavanagar we register our objection & demand for Bhavnagar-Ahmedabad simple highway.
- This project is planned to build an express highway from Dholera to Bavaliyari on existing Highway Road, so that the entire project is not available in the nearby villages and other alternate roads to the cities, hence the entire plan is to illegal and seizing the rights of local people.

Running on the old highway. Buses offer fewer rentals to local people. After Express high is constructed, the Bus, ST The bus fares will increase only because of the current STs. Bus is collecting tax from the passengers. Thus, the basic accommodation of poor people will be very costly due to this express highway which is for the convenience of rich people. The Basic requirement of poor people will become costly & the poor people will become poorer.

The people of the village have got the vehicle facility only after the existing old highway road of Dholera, Bhavnagar to Ahmedabad, in 1981. The Express Highway is being built for two big cities and its rich and rich men. Many villagers from a vast area will not get the benefit of this. Apart from this, all the disadvantages of land and roads and pollution will be suffered by these local people. Roads for farming in the farm Boundaries, roads of animals, the flow of rain water will stop and the farming will be destroyed.

- As the height of the road due to the express highway, noise pollution will increase from the present silent region to the far side and due to passing on the other side of the Velavadar Sanctuary; the timid animal kaliyar will be destroyed. The high -way authority has not done any studies through Experts in this regard.

-Express Highway Road will pass through land of villages of Adhelai&Bavaliyari, which is a cultivated and fertile land as well as irrigated area of the Narmada project so that drainage of rain water will be stopped. Not only this, the saltwater saline water will enter the farmland.

Highway Authority has not done any studies of even one foot high land from the center of Bhal Pradesh. As a result, Agriculture of Adhelai & Bavaliyar villages and paddy fields will be completely destroyed. This expressway is also disgust for other villages of highway.

For the development of backward areas such as Bhal Pradesh, There is a need for such a road which is useful & serviceable to all villages, where every vehicle which includes agricultural Tankers, bullock carts cycles and motor cycle, are allowed to ply & there is no toll tax or fee for the use of it. This facility is provided by the existing old Highway, therefore taking away this facility & Constructing new Express way is not reasonable. It is a constitutional duty of the Government to give Transportation Facilities. It is a violation of constitution to take away this facility from villages. Discrimination in the matter of roads between villages & cities in the name of Express way is a violation of the fundamental rights. The Government can not discriminate like this.

(11) No permission from CRZ has been received.

- Approximately 70 Km of road in Dholera Taluka from Pipli village to Bhavanagar falls under CRZ. The road from Adhelai to Bavaliyar passes through the Coastal Tidal waters. No permission in this regard has been obtained by Highway Authorities. The matter is a crime environmentally. Officers including the Highway Authority are intentionally doing this crime. We hereby inform you in this regard.

All the above points & Construction of Express way by the National Highways Authority is having serious impact & damage on Environment & Public living standard. The project proponent & The Authority organizing this public hearing have not carried out any studies on Environmental Impact, included in the points presented by us on environmental questions, through experts. For example e.g. Velavadar Sanctuary its Schedule 'F' animals & its speciality, migratory birds & likely effect on them, laws & regulations of Eco Sensitive zone, required approvals & pre Approvals, Land becoming a waste land due to water logging, effects on farming due to high bank of exp. Way, fencing, obstruction to rain water, difficulties to local people due to closure of conventional roads, violation of Coastal regulation Zone (CRZ) rules, seizure of Narmada irrigation lands in the name of construction of Express way, Study of pollution due to Exp. Way on pollution free land of Bhal, etc proper study or thinking is not done by Authorities preparing the Project.

We therefore, oppose the whole project of the Express highway road. We demand the construction of simple Highway as constructed in Bhavanagar District up to Ahmedabad for 110 km & object to the construction of Express Highway.

Due to the Construction of the proposed Exp. Highway 4 lakh square meter of fertile land in Adhelai & Bavaliyar which is a part of irrigation area of Narmada Project goes in to the road cutting (Acquisition). The Entire public of Bhal Area including these two villages shall go on agitation on the concept guided by Gandhi Ideology, if the new alignment road is not closed & a simple National Highway is not built on the existing old road & go to proper Courts & other authorities including Green Tribunal for getting the appropriate legal protection & if the whole project is scrapped or jeopardized due to this it will be the responsibility of the crude & illegal project proponent.

I am a resident farmer of Adhelai Village. This is for your information.

Yours faithfully,

Pushparajsinh Chudasama,

શ્રી. અધિભાઈ  
શ્રી. જી. ભાઈભાઈ.

સ્થળ:- પશ્ચિમ બેંગાળ સુભાષી  
અધિભાઈ; અધિભાઈ.  
તા. 25/12/1981

શ્રી. અધિભાઈ;  
શ્રી. અધિભાઈ;  
પ્રત્યક્ષ પદ્ધતિ વિશેષ હોઈ-ગાંધીનગર  
કેમ:- પશ્ચિમ બેંગાળ સુભાષી (નિયમ 100)  
અધિભાઈ; અધિભાઈ તા. જી. ભાઈભાઈ.

વિષય:- (ભાઈભાઈ ગુજરાત ભાઈભાઈ) અધિભાઈ-બેંગાળ સુભાષી  
(1981-82) (એન. એ. એ. 100/100/100/100) તા. ભાઈભાઈ  
અધિભાઈ અધિભાઈ પશ્ચિમ બેંગાળ સુભાષીમાં બેંગાળ  
ગાંધી-ગાંધી ભેટમાં હુ જી. ભાઈભાઈ.

કેમ:- ગુજરાત પદ્ધતિ વિશેષ હોઈ-ગાંધીનગર અધિભાઈ  
અધિભાઈ 'સુભાષી અધિભાઈ' તા. 25/12/1981 તા. જી. ભાઈભાઈ.

જી. ભાઈભાઈ ગુજરાત પદ્ધતિ વિશેષ હોઈ-ગાંધીનગર અધિભાઈ  
અધિભાઈ ગુજરાત અધિભાઈ (જી. ભાઈભાઈ ગુજરાત અધિભાઈ-બેંગાળ સુભાષી  
25/12/1981 વિશેષ હોઈ-ગાંધીનગર) તા. 1981 (એન. એ. એ. 100/100/100/100)  
અધિભાઈ અધિભાઈ અધિભાઈ પશ્ચિમ બેંગાળ સુભાષીમાં બેંગાળ  
ગાંધી-ગાંધી ભેટમાં હુ જી. ભાઈભાઈ. અને જી. ભાઈભાઈ  
અધિભાઈ અધિભાઈ ગાંધીનગર અધિભાઈ પશ્ચિમ બેંગાળ સુભાષીમાં  
અધિભાઈ અધિભાઈ ગાંધીનગર અધિભાઈ પશ્ચિમ બેંગાળ સુભાષીમાં  
અધિભાઈ અધિભાઈ ગાંધીનગર અધિભાઈ પશ્ચિમ બેંગાળ સુભાષીમાં  
અધિભાઈ અધિભાઈ ગાંધીનગર અધિભાઈ પશ્ચિમ બેંગાળ સુભાષીમાં

મુદ્દા-1-2 : અધિભાઈ ગાંધીનગર અધિભાઈ પશ્ચિમ બેંગાળ સુભાષીમાં  
અધિભાઈ અધિભાઈ ગાંધીનગર અધિભાઈ પશ્ચિમ બેંગાળ સુભાષીમાં  
અધિભાઈ અધિભાઈ ગાંધીનગર અધિભાઈ પશ્ચિમ બેંગાળ સુભાષીમાં

જે નેંગાળ હાઈ-લે ની પશ્ચિમ બેંગાળ સુભાષી અધિભાઈ અને જી. ભાઈભાઈ  
ભાઈભાઈ ગાંધીનગર-બેંગાળ પી. જી. ભાઈભાઈ ભાઈભાઈ ગાંધીનગર અધિભાઈ  
50 તા. ભાઈભાઈ ગાંધીનગર ભાઈભાઈ ગાંધીનગર અધિભાઈ ગાંધીનગર અધિભાઈ  
જી. ભાઈભાઈ ગાંધીનગર અધિભાઈ ગાંધીનગર અધિભાઈ ગાંધીનગર અધિભાઈ  
અધિભાઈ ગાંધીનગર અધિભાઈ ગાંધીનગર અધિભાઈ ગાંધીનગર અધિભાઈ  
અધિભાઈ ગાંધીનગર અધિભાઈ ગાંધીનગર અધિભાઈ ગાંધીનગર અધિભાઈ  
અધિભાઈ ગાંધીનગર અધિભાઈ ગાંધીનગર અધિભાઈ ગાંધીનગર અધિભાઈ  
અધિભાઈ ગાંધીનગર અધિભાઈ ગાંધીનગર અધિભાઈ ગાંધીનગર અધિભાઈ

૨-૦૦ ટીકા જેટલી દૂર, તબીબશાસ્ત્ર - જુના રીડર વર્કશીપ ડિપાર્ટમેન્ટ  
 બનાવવામાં આવે છે. દોરેલા થી બાલનગર મુકામ સુધી  
 અંદાજ ૩૦. બાલનગરની ગામની અંદાજે ૩૦ અંતરિયા સમાન  
 ખેતીની જમીનમાં આ "પરિયોજના" જમીન હોય, આ બે ગામના  
 અંદાજે ૩૦ અંતરિયા જમીનમાં આવે છે. અંદાજે ૩૦ અંતરિયા આ જમીન  
 મુલ ૪ મોટા જમીન ટુકડા સુધી ભાગે છે. અંદાજે ૩૦ અંતરિયા વિસ્તાર  
 બાલનગરની આ અંતરિયાને માત્ર બેઠે / બેઠે અને આને સરખા  
 વિસ્તાર જમીન હોય. અંદાજે ૩૦ બાલનગરની ગામની હદમાં  
 નવી પરિયોજના ૨૮ કમીને જુના સરખા રીડર ૪ મુકામ નવો  
 અંદાજે ૩૦ અંતરિયા હોય બાલનગરની જમીન આને આ બેઠે  
 બેઠે હોય

(૧) જો નવી પરિયોજના બાલનગરમાં આવે તો અંદાજે ૩૦ ગામની ૨૦૦ બેઠે  
 જમીન અને બાલનગરની ગામની ૨ બેઠે અંતરિયા ~~જમીન~~ બેઠે  
 જમીન રીડર જમીનમાં આવે છે. તેથી આ બેઠે ગામના બેઠે  
 અંતરિયા અંતરિયા જમીન. ટાકરો જુના સરખા ટાકર રીડર બાલનગરની  
 કીડર જમીન નથી. આને નવી કીડર જમીન રીડર ૨૫૫ ૨ નવો કીડર  
 રીડર હોય. તેથી જમીન રીડર જમીન ૨૫૫, ૨૫૫, ૨૫૫ અને ૨૫૫  
 બેઠે બેઠે બેઠે આવે છે. તેથી જમીન પરિયોજનાને બેઠે ~~જમીન~~  
 અંદાજે ૩૦ બાલનગરની ગામની હદમાં જુના સરખા રીડર ૪  
 રીડર જમીન તેથી નવો બેઠે બેઠે બેઠે બાલનગરની જમીન હોય  
 આ બેઠે બેઠે હોય

(૩) અંદાજે ૩૦ ગામની પરિયોજના અને કીડર રીડર બેઠે બેઠે  
 અંતરિયા અને બેઠે બેઠે રીડર જમીન તેથી જમીન રીડર અંતરિયા  
 અંદાજે ૨૫૫ રીડર જમીન હોય તેથી જમીન નવી પરિયોજના બેઠે  
 અંતરિયા બેઠે-રિડરોને બેઠે બેઠે ૫૦૦ મેટર અને  
 રીડર જમીન હોય તેથી આપના રીડર, અંતરિયા જમીનમાં આવેલા  
કીડરની આરોગ્યના જમીન ને ટાકર ૨૫૫ જમીન હોય

ભારત સરકારના સારીય-૬/૩/૨૦૧૭ ના ૨૧૪૫માં

બેઠે-રિડર અંતરિયા અને ભારત સરકારના સારીય, જમીન અને  
 જમીન-રિડર. પરિયોજના ~~અંતરિયા~~ અંતરિયાની અંતરિયા બેઠે

કચ્છમાં આવેલ છે, તેના પાના નં-૬ ઉપર ~~જુમ નં-૯૨ માં~~ ✓  
 સ્પષ્ટ જોવાય છે કે કોરોના રોગ અથવા ઈન્ફો-એન્ડોથેલિયોસિસ નથી  
 આપેલી - ૧-૦૦ રીમ. ગુજરાત વિજ્ઞાનમાં કોઈપણ પ્રકારના કોરોના  
 રોગ પ્રતિકાર કે તેના સંકેતો હોયે પણ આ પ્રતિબંધમાં આવેલા છે  
 તેથી સંકેત-ભૂત-ભૂત-ભૂત હતાં ઈન્ફો-એન્ડોથેલિયોસિસ ૧૦૦ માર્ક હેર  
 સંકેતો ~~જુમ નં-૯૨~~ હોયે તે આ સંકેતો અન્યોત ગેર-સાચી છે

તેમજ ૧૫/૧૨/૨૦૨૦ સંજોગે હાલ-૨૦૨૦ ની સ્પષ્ટ જોવાયેલ  
 જુમ આપે પ્રતિબંધિત વિજ્ઞાનમાં સક્ષમ સંકેતોની 'ગ્રીડ મેપ'  
 સિવાય અથવા રૂબ-રૂબના ભાગમાં, પ્રતિ/૧૨ મળે તે ~~જુમ~~  
 જુમો છે તે છે અને સાચો જુમો કરનાર માનવી જોવામાં આવેલ  
 આપેલમાં અને કરનારી પાનામાં જાણીતી સંકેતોને '૬'  
 અને તેના અથવા જોવાયેલ છે સંકેત-ભૂત-ભૂત-ભૂત જાણીતી જાણ  
 હતા ૧૦૦ માં મળે સંકેત-૧૫-૫૦ જે અન્યોત, જાણીતી મળે  
 પાંચવરના સંકેતો આ જાણીતીની ગણવાયેલ આ જુમો હતા  
 રૂબો છે તેના ને જાણીતી મળે. તેજામાં હાલ સંકેતોની ના સક્ષમ  
 સંકેતોની, તેમજ જાણીતી જુમો સંકેતોની સક્ષમ સંકેતોની  
 તેમજ સંકેતોની પ્રતિબંધિત જાણ હતા હોવામાં આવે છે કે  
 આને જાણીતી સંકેતો હોવા માટે જુમો હતા રૂબો છે, અને તે  
 જાણીતી ૨૦૨૦માં. આ જાણીતી હોવા હોવાને, તે જાણીતી  
 કરનાર કરનાર અમારા સંકેતોની સંકેતોની સંકેતોની સંકેતોની  
 અમારા જાણીતીમાં સંકેતો નોંધવામાં હોયે.

- (૪) બેચાલર મળ્યા આપેલમાં ઈન્ફો-એન્ડોથેલિયોસિસ જુમોની  
 જુમો કરી જાણીતી કરેલામાં ના. જુમોની હોવામાં ~~જુમ નં-૯૨~~  
 જા. જાણીતી (PL) No ૭૪ of ૨૦૧૭ હાલ જાણીતી ના મળે મળે  
 હાલ ના. ૧૬/૧૨/૨૦ ના જોય ૨-૧ કરેલામાં આવેલી જાણીતી  
 આપેલની કોઈ ગણવાયેલ અને પ્રતિબંધિત કરનારો છે કે જાણીતી  
 પણ મળે છે. તેમ જાણીતી આ કરેલામાં આવેલી જાણીતી  
 તે જાણીતી આપેલમાં જાણીતી ગણવાયેલ કરનારો જાણીતી  
 જાણીતીની જાણીતીમાં પણ હોય છે, તેનામાં ના. આપેલમાં  
 જાણીતીની જાણીતી પણ રૂબો છે જાણીતી ૨ બેચાલર મળ્યામાં  
 ઈન્ફો-એન્ડોથેલિયોસિસ જુમોની જાણીતી કરેલામાં



કાચી ન સચવાતું પુસ્તકે મારાં આગમણની લેખી છે. ૧૦.૧૨  
 સરના ૩૨-૧૨ મુદ્દાના જુદા પો-સેમેન્ટ જોનની જેવાય  
 યાન આદ્ય સમાન છે. કાચીના આ પાંચેલી ભાગે સેમેન્ટ  
 એવાર કાચાના આગમણની આગ સેમેન્ટની ભેગ નોંધાવ  
નોંધે સેર વાઈસ ભાઈ ની રૂપ મુદ્દી વાદ થઈ રહેલ આ ભાગે  
 સેમેન્ટની એવારે છે મને આ મેં હેવાન જુદા છે. તેથી  
 હોની થઈ ~~સેમેન્ટ~~ સેમેન્ટ આદ્ય આ વાંધે નોંધાવ્યો હોય

(૫) જો ભાઈ સેમેન્ટને મારાં સેમેન્ટ ભાગે અને સેમેન્ટ થઈ  
 ભાઈનાં સમાન હો આ થઈ ભાઈ સેમેન્ટની કાચ નાનામાં  
 પાણી મેલામાં અગાઉ કરો. તેથી હજારે વીધા જાનામાં પરજીવ  
 થાવી ભાગે થઈ જાણ થઈ મેલામાં સમાન થઈ જાના  
 રજામાં થઈ સેમેન્ટ આગમણની લેખી મેં મારામાં  
 રજામાં થઈ થઈ ભાઈ મેલામાં આ સમાન થઈ  
 થઈ સમાન થઈ જાણ અને ભાઈ મારા મેં થઈ સમાન થઈ  
 ભાઈ મેં થઈ થઈ અને સેમેન્ટની જરૂર થાવી મારામાં  
 સેમેન્ટ મેં થઈ થઈ. સેમેન્ટ આગમણ મેં મેં સમાન  
 થઈ મેં સમાન થઈ થઈ થઈ છે, તેનો સેમેન્ટ નાના  
 થઈ થઈ મેં થઈ થઈ થઈ થઈ છે.

(૬) સેમેન્ટ આગમણની લેખી મેં ભાઈ સેમેન્ટની લેખી  
 જુદા થઈ મારામાં મારાં સેમેન્ટ ભાઈ થઈ સેમેન્ટ થઈ મેં  
 સેમેન્ટ થઈ સેમેન્ટ મેં થઈ મેં થઈ અને સમાન થઈ થઈ  
 'સેમેન્ટ' નોંધાવ નોંધે થઈ થઈ થઈ ની રૂપ મુદ્દી મારા છે.

સેમેન્ટ ભાઈ સમાન થઈ ૬.૧૨.૧૯૫૨ ની થાઈ મેં - ૬ ના થઈ  
 ૧૦-૧૧ મેં થાઈ થાઈ, આ ૨૧.૫.૫૨ ના થાઈ ૧૦-૧૧ ના થઈ  
 ૧-૫ થાઈ મેં થઈ થઈ, થાઈ થાઈ (સેમેન્ટ) સેમેન્ટ-૧૯૬૩ ની  
 ૧૦-૧૧ ૩) ની થાઈ થાઈ સેમેન્ટ થાઈ ની - મેં થાઈ થાઈ  
 થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ  
 મેં આ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ  
 થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ  
 થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ  
 થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ  
 થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ થાઈ





રાણેશ અમોરોડીના અર્ધજન અધિકારી ક્ષેત્રે આરોપ  
અનુચિતમાં જાહેરમાં જણાવેલ કે દોષી STAR અંતર્ગત  
અરજ જણાવેલ છે કે દોષી STAR ને 'પ્રાઈવટ' ગ્રુપી ૫ નું  
અમાલખ મળી ગયેલ છે, તેથી પાલન સુધારા કોમિટીને  
પાલન મળે, એ પ્રાઈવટ ગ્રુપી લેવાની રહેતી નથી. તેથી  
દોષી STAR વિનાશના મામાના લોકો અને વિદેશી કોમિટીના  
અનુચિતમાં લોકો જમણા આપવા માંગતા નથી.

જોવાની નમોન પ્રકાર અમારો લોકો છે. દોષી STAR  
અંતર્ગતના ભારત સરકારના મિનિસ્ટ્રી અને કોમિશનર,  
ફોરેન અને ડાયરેક્ટર ઓફ નેશનલ મિ-સ્ટ્રી ૨૦૨૪ ના રીપ  
કોમિશનર કમિશનર અર્ધજન મળે છે. તેમ પાલ નં-૩ થી  
અને અર્ધજનની ગુપ્ત ગુપ્ત સુધી જણાવે છે, તેમ સાર નં-૨ ની  
અરજ જણાવે છે કે નેશનલ લોર્ડ સેર વાઈસ લોર્ડ નું PABO લા-  
-અનુચિત અમાલખ વિનાશના લો-અનુચિત કોમિટીના ગ્રુપી  
અને કોમિશનર રહેશે. દોષી STAR અંતર્ગતના આગ્ર સીડ  
કમિશનર અર્ધજન મળેલ નથી જે કોમિટી તેમ મળે રાજ્યના છે  
તેથી એક જણાવેલ કે કોમિટી સાર ના ગામના મળે કોમિટીના પાલ  
અંતર્ગતના એ પ્રાઈવટ ગ્રુપી મળેલી જરૂરી નથી, તે સાર  
કમિટી મળે છે. અને અર્ધજન ના લાવવાના રાજ્યના પાલ  
અને રીપ નેશનલ પાલ અને કોમિટીના પાલ મળે છે. કોમિટીના  
અમાલખ અને નેશનલ લોર્ડ અને વાઈસ લોર્ડ અને કોમિટીના પાલ  
કોમિટીના અમાલખના 'કોમિટી કોમિટી' ની રીપ ગ્રુપી મળેલી  
જરૂરી છે. જે આગ્ર મળેલી નથી. તેથી આગ્ર પ્રાઈવટ  
કોમિટીના ગ્રુપી-અનુચિત છે, અને રીપ સારી કોમિટી, અને સાર  
લોકો કોમિટીના કોમિટી.

(૭) - કોમિટીના પાલને આ રીતના પાલની મુશ્કેલી છે :-

- પાલને આગ્ર મળે પાલ-લે કોમિટીના પાલનાર આગ્રનાર  
અનુચિત પાલનાર પાલનાર જો છે, અને અનુચિતનાર  
વિદેશી અને અમાલખ વિદેશી-પાલ વિદેશીના વિદેશી  
અનુચિત ને મુશ્કેલી મળે છે. તેમ છે રીપ, અને અમાલખ  
અર્ધજન મળે પાલ અને કોમિટીના અમાલખ મળેલી  
અર્ધજન મળેલી ની આગ્ર કોમિટીના પાલનાર.

પૂર્ણ ૪ અગાઉથી અને પાછળ ઉભાને જુદા રીત-રીત ના  
 નાઈ ને કરાવે તેમ જાણશે અને ભાવનાર ને મિલકત  
 સુધારા દાખવા સારું અને સારા બરાબર બધાને મોટા  
 અમરોદે ઉભા કરશે. તેથી ભાવનાર ના અગાઉ જુદા  
 સારું રસને સારું રાખવું જાણના મને મોટાના મને  
 મિલકત આ પિયરે મોકલનાર હશે

— હાલના જુદા રાજ-પે એકે ઉર કોઈના થી ભાવનારની જુદા  
 એકાએક રાજ-પે ભાવનારની આ કોઈનામાં અમરોદે છે  
 તેથી સ્થાનિક ભાવને ગુજરાત અમરો અને રાજકોમાં જ્યા  
 મને અમરો કોઈના રીતની મેં જોવામાં આવી રહેલી  
 ન હોય. આ અમરો કોઈના મોટા-મધ્યે અને સ્થાનિક  
 ભાવનાર રાજ-પેના ભાવનાર છે

— હાલના જુદા રાજ-પે ૫૨ માલની કોઈના ભાવને સ્થાનિક  
 ભાવને કોઈના કોઈ કોઈ અમરો. અમરોના રાજ-પે રાજ  
 રાજી કોઈના ભાવને ભાવ જુદા ૪ વધારા જોઈ કરાવે છે  
 રાજી કોઈના ભાવ રીત રીતની રાજી પેનાર પાલેલી  
 ઉભા છે. આમ જાણ પેનાર ભાવનાર અગાઉ  
 મને આ કોઈના રાજ-પે ને કરાવે ગુજરાત ભાવને  
 મુજબના અગાઉ જુદા ૪ માલના ભાવ જોઈ. તે ભાવના  
 ભાવના રાજીના ભાવને ભાવ ગરીબ ભાવનાર છે

— ભાવનાર ના અમરોના ભાવ; કોઈનાને હાલના જુદા રાજ-પે  
 એકે રાજમાં ભાવ રાજી ૪ ભાવના ભાવને માલ ભાવનાર  
 અગાઉ મારી છે. કોઈના રાજ-પે ને મોટા રાજકોના  
 અને ભાવ અમરો અને પેનાર માલનારે ભાવના  
 રાજ-પે ભાવનાર મને ભાવ રાજી છે. ભાવનાર પિયરના  
 પિયરના અને માલના ભાવને ભાવ ભાવનાર  
 નાઈ. ભાવનાર અમરો રાજા અને પેનારના  
 ભાવના મોટા-મધ્યે આ સ્થાનિક ભાવને ભાવનારના  
 અમરો. આમના પેનાર મારના રાજા, પેનારના આ  
 ભાવનાર ભાવનાર પાલના પાલ ભાવ રાજી રાજીના  
 ભાવનાર ભાવ જોઈ

(e)

- સોશીયલ ક્લાસ-લે ના માર્ગે રહેના જીમ્સ વર્લ્ડવોર્થના જીમ્સ અને  
સુભાગ શાંત પ્રેરે. ભાગમાં હું હું જુદા દુર્ભાગ્ય મહાન  
વ્યક્તિ. અને જોવાલે સમાજનાની ભાગ્યુત ભુગુમોના પગલ  
પગલા મારે કામગીરી મારા મારા મારે અને મારે  
કામ-લે સોશીયલિસ્ટ કોર્પોરેશનને અને સમાજ મારે નથી
- સોશીયલ ક્લાસ લે સમાજ રીધા પશ્ચિમ ભુગુ મારે અને સમાજનાની  
માનની જે વધી જોના ભાગ અને મારુત નેમ નેમી મારે  
જિમ્સ પિયારની જાના છે, જોનાની મારે, અને મારે સમાજના મારે  
જિમ્સ ભાગ્યુત કોર્પોરેશન અને મારે રીધિમાના મારે મારે  
જિમ્સ જાનાની જુમી મારે-મારે. અને મારે ક્લાસ-સોશીયલિસ્ટ  
મારે પ્રેરેની રીધિમાનાની મારે રીધિમાનાની મારે મારે  
સમાજના જિમ્સને મારે મારે નથી. પશ્ચિમ સોશીયલ અને  
સમાજનાની મારેની જોનાની મારે-મારે અને મારે સમાજના  
મારે સમાજના અને સમાજના મારે અને સમાજનાની મારે
- મારે પ્રેરે, જોના પશ્ચિમ પિયારના પિયારના મારે મારે સમાજના મારે  
મારે અને સમાજનાની મારે મારે મારે સમાજના મારે, જોનાની  
મારે પ્રેરે, ભાગ મારે અને સમાજના મારે-મારે અને  
મારે અને મારે મારે સમાજનાની મારે અને, જોના સમાજના મારે  
મારે પ્રેરે અને મારે મારે સમાજનાની મારે પ્રેરે અને સમાજના  
મારે જોના મારે મારે મારે મારે. સમાજના મારે પ્રેરે  
મારે અને સમાજનાની મારે સમાજના મારે, ને સમાજનાની  
મારે સમાજના મારે છે. સમાજના મારે મારે ને સમાજના  
મારેની મારેની મારે, ને સમાજનાની મારે છે. સમાજના મારે પ્રેરે  
મારે સમાજના મારેની મારે પ્રેરે ને સમાજનાની મારે પ્રેરે  
મારે છે. સમાજના મારે સમાજના મારે પ્રેરે

(21) CRZ ମା ହିଁସି ନିହାରି ମା

(૨૬) CRZ ની નીચી કક્ષામાંથી  
જુદા જુદા ભાગોમાં પાસ ૫૭ કમિટીમાં જમાન લાગતો  
૭૦ કી.મી. જેટલો ક્ષેત્ર CRZ નો પો છે. આ કમિટી  
એ ભાગલામાં ગામડાંની પાસ અને રેલવે સ્ટેશનમાંથી પાસ  
પાસ જેટલો પાસ લાગે છે. આ માટે CRZ કમિટીની આ નીચી  
૧૫-૨૦ કમિટીમાં લાગે છે. આ ભાગ લાગેલાં કમિટીમાં  
અને રેલવે કમિટીમાં, કમિટીમાં અને રેલવે કમિટીમાં





Important audit findings that emerged from the test check of transactions of the Departments of the Government of Gujarat in the Economic Sector are included in this Chapter.

Wildlife refers to living organisms in their natural habitats. Protected Areas (PAs) are natural habitat of wildlife which is a national resource that helps in maintaining the ecological balance. Over the years many species of flora and fauna have been pronounced extinct and several others are at the verge of extinction. Deforestation, illegal hunting, habitat reduction and its degradation, etc., are a threat to the PAs, therefore, their regulation is a necessity for conservation and protection of wildlife.

Protected Areas are constituted and governed under the provisions of Wildlife (Protection) Act, 1972 (WPA). The WPA empowers the State Governments to declare any area of adequate ecological, faunal and floral, geomorphological, natural or zoological significance as a Wildlife Sanctuary (WLS) and National Park (NP) for the purpose of protecting, propagating or developing wildlife or its environment. Section 36(A) of the WPA empowers the State Government to declare any area, particularly the areas adjacent to NP and WLS and those which link one protected area with another, as Conservation Reserves (CR) for protecting landscape, seascapes, flora and fauna and their habitats.

The WLS, NP and CR are called Protected Areas (PA).

In Gujarat, there are 28 PAs<sup>1</sup> (Appendix V). Total area of PAs in Gujarat is 17,099.93 square kilometres (sq km) but only 4,640.58 sq km (27.14 per cent) is forest land and remaining is non-forest ecosystems. Further, the geographical area of Gujarat is only 5.90 per cent of the total area of India but 11.37 per cent of total PA of the country is located in Gujarat.

Gujarat has diverse geo-physical and eco-climatic features, with the longest coastline. Due to the diverse eco-systems, Gujarat has rich biological diversity consisting of 14 per cent of marine, 18 per cent of reptiles, 37 per cent of avifauna and 25 per cent of the mammal species of India. Further, Gujarat falls en route the trans-continental annual migration of avian species and is also the only habitat of the Asiatic Lion and Indian Wild Ass.

<sup>1</sup> 22 WLS, four NPs and one CR.

The map showing indicative locations of the Wildlife Sanctuaries and National Parks in Gujarat is given below

Map showing Indicative locations of Wildlife Sanctuaries and National Parks in Gujarat



(Source: from mapsofindia.com)

Regulation of the activities in the PAs is governed by the WPA, which is further complemented by Forest Conservation Act (FCA), 1980 and Environment Protection Act (EPA), 1986. The following authorities have important role in compliance with the provisions of the above Acts.

**State Board of Wildlife (SBWL):** It was constituted under Section 6 of WPA and is headed by the Chief Minister of the State as Chairman. The duty of SBWL is to advise the State Government in selection of areas to be declared as PA, deciding line of action for protection of PA and wildlife, etc

**National Board of Wildlife (NBWL):** It is a statutory Board constituted under Section 5 of the WPA. The role of NBWL, *inter alia* includes to make recommendations on the matters relating to restriction of activities in the PA.

**Central Empowered Committee (CEC):** It was constituted by the Hon'ble Supreme Court of India (SCI). Matters relating to implementation of WPA and FCA, including rules, regulations and guidelines framed there under on which the SCI has passed orders from time to time are referred to the CEC for recommendation to the SCI

Additional Chief Secretary, Government of Gujarat (GoG) is the head of the Forests and Environment Department (F&ED) who is assisted by two Principal Chief Conservators of Forests. The Principal Chief Conservator of Forests (Head of the Forest Force) is the functional head of the Forest Department.

To control, manage and maintain the PAs, the Principal Chief Conservator of Forests (PCCF) (Wildlife) is appointed under Section 4 of the WPA, 1972 who also acts as the Chief Wildlife Warden of the State. The Deputy Conservator of Forests (DCF) of the respective sanctuary acts as the Sanctuary Superintendent.

Audit examined the functioning of the Forests Department with regard to discharge of responsibilities for the protection of the PAs during the period 2012-13 to 2016-17. The scope of audit was limited to assess whether adequate measures were taken for conservation of Wildlife *vis-a-vis* protecting their habitat and, whether the activities within the Protected Areas were in compliance with WPA/ FCA and extant orders in this regard.

Based on the examination of the records relating to activities undertaken in PAs during 2012-17, the audit findings are discussed in succeeding paragraphs.

Section 3 of the EPA, 1986 gives power to the Government of India (GoI) to take all measures that it feels necessary for protecting and improving the quality of the environment and preventing & controlling environmental pollution. Eco-Sensitive Zone (ESZ) is notified around a PA under Section 3 of the EPA, 1986 to regulate activities in the ESZ. An ESZ creates some kind of "Shock absorber" around PAs and acts as a transition zone from areas of high protection to areas involving lesser protection. The National Wildlife Action Plan<sup>2</sup> (2002-2016) provided for declaring identified areas around PA and corridors as ecologically fragile under the EPA, 1986, wherever necessary.

#### Process for notification of Eco-Sensitive Zones:

The notification of an ESZ goes through the following stages:

- The proposal for an ESZ around a PA is submitted by the State Government which is scrutinized by the MoEF&CC in consultation with the Wildlife Institute of India.

<sup>2</sup> National Wildlife Action Plan 2002-2016 as adopted by Indian Board of Wildlife (now NBWL) in 2002 was implemented by the MoEF&CC

- The draft notification is finalized by the MoEF&CC and placed in public domain for 60 days seeking views of public.
- The views/ comments/ activities recommended by the public are compiled and considered by the Expert Committee of the MoEF&CC before finalizing the notification to be issued under the EPA, 1986.
- Final notification for an ESZ is to be issued within a period of 545 days for those proposals for which comments have been received from the public after the publication of draft notification.

#### **Status of declaration of ESZ in Gujarat**

As of July 2017, out of 23 WLS and four NPs, draft notifications for declaration of ESZ around the areas of 17 WLS and four NPs have been issued. Out of these, MoEF&CC has issued final ESZ notifications in respect of 10 WLS and three NPs. Proposals for issue of draft ESZ notification for six WLS was under consideration at different stages (Appendix VI).

Audit examined the records relating to proposal for ESZ notification and observations in respect of four PAs<sup>4</sup> are as under:

##### **3.1.6.1 Unjustified exclusion of Forest and Government waste land from ESZ**

In December 2016, eight draft notifications of ESZ around 11 PAs<sup>4</sup> were in public domain for inviting representations of the public. Audit observed (April 2017) from the records that a meeting was held on 28 November 2016 between the group of Ministers of State Government, District representatives and affected persons to get objections on the eight draft ESZ notifications. In the meeting, a decision was taken to finalize the area of the ESZ based on representations of the stakeholders. Accordingly, the PCCF (WL) issued an internal circular on 07 December 2016 and directed its field officials to prepare revised proposals for these eight draft notifications based on specific criteria of distance from the boundary of the protected area and exclusion of certain villages.

Audit test checked three proposals (Velavadar Black Buck NP, Nalsarovar Bird sanctuary and Hingolghadh Nature Education Sanctuary) for final ESZ notification. Details of ESZ area as per draft/ initial proposal and as per proposal for final ESZ notification in respect of these three PAs are given in Table 1 below.

<sup>4</sup> (1) Velavadar Black Buck National Park, (2) Nalsarovar Bird Sanctuary, (3) Hingolghadh Nature Education Sanctuary and (4) Narsayan Sarovar Wildlife Sanctuary.  
<sup>5</sup> (1) Gir PA (Gir NP, Gir WLS, Panna WLS and Mithiyala WLS), (2) Barda WLS, (3) Velavadar Black Buck National Park, (4) Nalsarovar Bird sanctuary, (5) Khijadiya WLS, (6) Gaga WT Sanctuary, (7) Porbandar Bird Sanctuary and (8) Hingolghadh Nature Education Sanctuary.

Table 1: ESZ area as per proposal for draft and final ESZ notification

|   |   |          |           |           |          |
|---|---|----------|-----------|-----------|----------|
| Nalsarovat Bird Sanctuary<br>(Final notification issued in June 2017)             | Draft notification (December 2015)              | 358.63   | 35,376.33 | 30,216.02 | 65.951   |
|   | Proposal for final notification (December 2016) | 35.47    | 31,756.53 | 0.00      | 31.792   |
|   | Reduction in percentage                         | 90       | 10.23     | 100       | 51.79    |
| Hingolgarh Nature Education Sanctuary<br>(Final notification issued in June 2017) | Draft notification (December 2015)              | 2,071.53 | 2,101.44  | 1,474.99  | 69.0796  |
|   | Proposal for final notification (December 2016) | 379.86   | 1,610.19  | 1,176.72  | 3,166.77 |
|   | Reduction in percentage                         | 87.22    | 23.38     | 8.00      | 51.34    |
| Velavadar Black Buck National Park<br>(Final notification issued in July 2017)    | Draft notification (December 2015)              | 63,760   | 41,834    | 24,558    | 72.168   |
|   | Proposal for final notification (February 2017) | 633      |           | 3,724     | 4.357    |
|   | Reduction in percentage                         | 99       |           | 94.39     | 94.01    |

As seen from the Table 1, there were reductions in the areas in the final notification for ESZ ranging from 51 to 94 per cent. Audit noticed that the proposals of draft ESZ notification were based on the MoEF&CC guidelines. These proposals were prepared keeping in view the detailed and scientific studies of habitats and corridor of wildlife. It was further observed that the areas of forest land was reduced from 87 to 99 per cent in the above cases. Since forest areas are already regulated under FCA, 1980 reduction in the same lacked justification.

Audit further revealed that no representation was received for reduction in ESZ area for forest land and government waste land because the Government itself was its custodian. It was also noticed that MoEF&CC while issuing final ESZ notification stated that there was no objection/representation from stake holders in case of above ESZ. Despite this, in the final ESZ notification, forest land and government waste land was reduced.

Audit is of the view that shrinking of the ESZ area consisting mainly of the government waste land and forest land, may jeopardise the long term efforts for wildlife conservation and in turn adversely impact environment as regulation of environment affecting activity would not be possible in areas excluded from ESZ.

Reply of the PCCF (WL) was awaited (December 2017).



### **3.1.6.2 Non-compliance with conditions of final ESZ notification**

The MoEF&CC issued final ESZ notification in May 2012 for the Narayan Sarovar Wildlife Sanctuary (NSWS). As per the conditions of the notification, the State Government had to prepare a Zonal Master Plan within two years of the notification. Further, in the notification, MoEF&CC also provided framework for constitution of a Monitoring Committee (MC) having not more than 10 members. The District Collector was responsible for compliance of the conditions of the ESZ notification.

Audit scrutiny (May 2017) revealed that even after five years of ESZ notification, the Zonal Master Plan had not been prepared and MC was not constituted. The DCF, Kachchh (West) suggested three NGOs in March 2017 for appointment as members of the proposed MC but their approval from the F&ED was awaited (May 2017). Further, it was also observed that though the GoG had instructed (October 2012) the Collector, Bhuj to take cognizance of the terms and conditions of the ESZ notification, instructions in this context were passed on to the Deputy Collectors only in September 2015 by the Collector, Bhuj. Non-preparation of Zonal Master Plan and non-constitution of the MC may lead to non-regulation of the activities in the notified ESZ area.

Reply of the PCCF (WL) was awaited (December 2017)

**3.1.6.3 Population of Asiatic Lions in Gir PA has increased and pressure on the habitat is increasing.**

The population of Asiatic Lions has increased from 295 in 1979 to 523 in 2015. Further, the number of lions within the Gir PA was 308 in 2011 which increased to 356 in 2015 (15.6 per cent). This increase exerts pressure on the Gir PA, which is the home to these lions. Further, lions being territorial animals, their increasing population have led them to discover and adopt new habitats outside the Gir PA<sup>1</sup>. It is evident from the fact that the number of lions outside the Gir PA was 108 in 2011, which increased to 167 (54.6 per cent) in 2015.

The proposal submitted (March 2016) for draft Eco Sensitive Zone (ESZ) notification for Gir PA also reports that the latest census should be taken as a sign of warning as nearly one-third i.e., 32 per cent of the lions have their habitat outside the Gir PA, risking human lives, livestock as well as the safety of the lions themselves.

In view of the rising population and high instances of death of lions<sup>2</sup> outside the Gir PA during 2012-13 to 2016-17, creation of new PAs was one of the available options with the F&ED. Audit examined the efforts made by F&ED in expanding the PA for Asiatic Lions.

As part of plans to identify new PA/ CR in Gujarat, the CCF (WL), Junagadh proposed (November 2005) to declare 30,152.32 ha of villages of Palirana, Mahuva, Talaja, Khamba and Savarkundla talukas of Bhavnagar and Amreli

<sup>1</sup> Girnar, Gel, Patiya and Mitiyala Sanctuaries and Gir National Park.

<sup>2</sup> Death due to natural reason within the Gir PA-175 and outside the Gir PA-106 and death due to unnatural reasons within the Gir PA-2 and outside the Gir PA-21

district as a "Sir Dharam Kumar Singh Ji Wildlife Sanctuary" to provide a safe corridor for the lions moving out of the Gir PAs.

After deliberations with the PCCF (WL), the proposal was modified (August 2006) and it was decided to declare the areas as a CR. Revised proposal for reduced area of 11,155.18 ha was submitted (June 2007) which was further reduced (October 2010) to 10,953 ha. The F&ED informed (November 2010) the PCCF (WL) that the proposal of declaring the CR was under consideration and further directed to initiate the procedure of transferring 4,811.51 ha government waste land of Amreli district in favour of the F&ED.

Audit observed (May 2017) that the Revenue Department was approached (November 2010) for transfer of government waste land in favour of F&ED. Despite protracted correspondence between F&ED and the Revenue Department, the same has not been transferred (May 2017). Thus, the declaration of the lion habitat area as CR is pending despite lapse of more than 11 years.

The fact remained that the last extension of habitat for lion was approved by the MoEF&CC in 2008 viz., Girnar WLS (area of 178.87 sq km). Despite increase in population of lion during 2011-15 by 54.60 per cent outside the Gir PA and high instances of death of lions, no new protected habitat for lions has been approved.

Introduction of modern technology for the conservation of Asiatic Lion was part of the Management Plan of the Gir PA. After the poaching of seven lions in March 2007, the F&ED constituted (May 2007) a Task Force<sup>1</sup> to explore the use of modern technology to stop recurrence of such incidents. The Task Force proposed (November 2007) following integrated solutions for enhancing conservation efficiency by incorporating modern technology.

1. GPS based tracking of surveillance, animal and vehicles in Gir PA.
2. Automated Sensor Grid (Magnetic Sensor and Movement Sensor).
3. Genome Mapping and Conservation (establishment of gene pool population and genetic laboratory and cryopreservation of genetic material) of the Asiatic Lion.
4. Night Vision Capability Enhancement.

Audit's observations on implementation of projects for introduction of modern technology for conservation of Asiatic Lion are discussed below.

<sup>1</sup> Consisting members from Wildlife Institute of India, Dehradun, Professor from DA-MCT, Director, BISOA, PCCF (WL), CCF (WL), Junagadh and CCF (Research).

### **3.1.8.1 Slow implementation of LEOGEN Project**

One of the recommendations of the task force was launching of a project for Genome Mapping and Conservation of Asiatic Lion. The Task force also suggested setting up a laboratory that would have facilities for cryopreservation, DNA sequencing etc. It also recommended development of specification for such laboratory in consultation with Gujarat State Bio Technology Mission (GSBTM)<sup>8</sup> and other organisations<sup>9</sup>.

F&ED constituted (December 2009) Gujarat Wildlife Genomics and DNA Banking Facility and signed (January 2010) a Memorandum of Understanding (MoU) with GSBTM. However, project actually commenced only from May 2014. Within a year of commencement of the project, the F&ED cancelled (May 2015) the MoU entered with GSBTM and entrusted (May 2015) the implementation of the project to the Gujarat Forestry Research Foundation (GFRF)<sup>10</sup> and renamed the project as "Wildlife Genomics Research Project (LEOGEN)".

Audit observations relating to the project are as under:

- Since commencement of the project (May 2014), work on only two out of six activities had been attempted (July 2017). Work on diagnostic core was not started though the incubator for this purpose was purchased in November 2013. The project had, therefore, been restricted to genetic data sampling.
- Specifications for laboratory were also not prepared.
- Despite the fact that the GFRF did not have expertise in the field of scientific research on genomics which was the core requirement of the project, the project was transferred to the GFRF.
- There was no permanent technical staff in GFRF to run the project.
- To run the Project, the F&ED was to re-constitute four functional committees which were not constituted till June 2017.

The Director, GFRF justified (May 2017) transfer of the project from GSBTM on the grounds that it made collection of samples easy in the WLS and NPs. However, the justification was not tenable as the collection of sample was not the objective of the project. However, Audit observed that the Director, GFRF himself reported (November 2015) to the F&ED that the project had come to a standstill.

Thus the progress of the project was slow despite availability of funds for the reasons stated above.

<sup>8</sup> An Institute under the aegis of the Science and Technology Department, GoG  
<sup>9</sup> Veterinary College, Anand and Centre for Cellular & Molecular Biology Hyderabad.  
<sup>10</sup> An Autonomous Body under the Forests and Environment Department.

### 3.1.8.2 Wasteful expenditure on purchase of Forensic Mobile unit

The GSLCS purchased (June 2008) a Forensic Mobile Unit (the Unit) for forensic science investigation at a cost of ₹ 0.25 crore and placed it under the control of the Deputy Director, Forensic Science, Junagadh upto 2009-10. Due to lack of necessary staff required for operating it, the Unit was shifted (April 2010) to the Sakkarbaug Zoo. Later on, it was shifted (April 2014) to the Wildlife Division, Sasan-Gir, Junagadh and remained there (July 2017). Between January 2010 and August 2014, the Unit was used on 37 occasions only and that too for non-forensic use. A later decision (July 2015) to shift it to Deputy Director, Forensic Science, Junagadh was not accepted by that office.

Audit observed (January 2017) that the Unit could not be utilized for forensic science due to its size which was detrimental to its mobility in the inner area. The forensic equipment has been kept in veterinary hospital at Sasan-Gir. As there was no utility of the Unit, contract of one technical officer and attendant was not renewed (June 2015).

The MS, GSLCS stated (February 2017) that the Unit was being used for training in forensic crime at site, rescue and care of the wildlife in Devahiya Interpretation Park.

The fact remained that the Unit was purchased without proper assessment of its utility.

### 3.1.8.3 Construction of chain link fencing along railway tracks

Three railway tracks (Section A, B and C)<sup>11</sup> pass through the areas inhabited by the lions in Amreli district. During 2012-14, there were five cases of lion casualty on the above tracks. To control the accidental death of lions on the tracks, it was decided (October 2014) by the Railway authorities and the P&ED to take long term and short term measures. Short term measures included deployment of trackers and long term measures included construction of underpasses and fencing of entire railway track on both sides to ensure that the Asiatic Lions are not able to reach the railway tracks. To implement the long term measures, an expenditure of ₹ 25.35 crore was incurred upto June 2017 on fencing. The work in Section 'A' was completed in March 2016 and works of Sections 'B' and 'C' were at various stages of completion (March 2017).

Audit scrutiny (March 2017) revealed that the DCF, Social Forestry, Amreli and CCF, Social Forestry, Rajkot reported (September 2016) to the PCCF (WL) that lions entered fenced area on eight occasions and raised doubts over its effectiveness in controlling the movement of lions on railway tracks. Thus, fencing of the railway tracks, though a major step for conservation of wildlife, had not succeeded in preventing movement of lions on track.

<sup>11</sup> Section A: Pipavav, 4.5kms; Section B: Rajkot, 16 Kms; Section C: Rajkot - Mahuva; 17 Kilometers.

To,  
Collector,  
Ahmedabad District,  
Ahmedabad

Subject Regarding Security arrangements for wildlife on the Ahmedabad-Dholera Express Highway

Respected Sir

With Jalbharat in reference to the public hearing on above mentioned topic I present my suggestions as follows:

(1) Good Roads is the first requirement for the development of the state & the nation which saves Time & saves us from accidents. We congratulate you for this.

(2) There is much rare wildlife dwelling on both the sides of the proposed Ahmedabad - Dholera which has also been mentioned in the EIA. Vehicular traffic will increase due to construction road which will cause life risk for wildlife. Wildlife is a natural property & our cultural it is our Duty to save it. Here are my suggestions for getting good roads which are also safe for wildlife.

A. An underpass should be constructed at every 15 kms distance so that the animals will not have to cross the road & there is no water logging in monsoon.

B. Provide the sign board and speed breaker at the right distance.

If the above mentioned issues are taken care of there will be reduction in Road accidents as well as the wild animals will be protected.

Thanks

Copy with respect submitted to:

- (1) Regional Officers GPCB, Ahmedabad.
- (2) Additional chief conservator of forest, Gandhinagar.
- (3) Chairman, Gujarat Ecology Commission.
- (4) Deputy Conservator of Forest, Ahmedabad.

Assistant conservator of Forest, Shrikaliyar national sanctuary, Velavadar

Dr. I.R. Gadhvi

Department of Marine Science,  
M.K. Bhavnagar University Science.



**Dr. I.R. Gadhvi**

C-5

Department of Marine Science,

M.K. Bhavnagar University, Bhavnagar

Member: Advisory Committee, Blackbuck

National Park, Velavadar

Member: District level Environment Impact

Assessment Authority

Member: NCSCM Chennai

૧૬-૧૧-૨૦૧૮

પ્રતિ

કલેક્ટર શ્રી

અમદાવાદ જિલ્લો

અમદાવાદ

વિષય: અમદાવાદ ધોલેરા એક્સપ્રેસ હાઇવે ઉપર વન્ય જીવો માટે સુરક્ષા વ્યવસ્થા બાબત

માનનીય સાહેબશ્રી

જયભારત સમગ્ર ઉપરોક્ત વિષયે જણાવવાનુંકે આજરોજ ના ઉપરોક્ત બાબત ના પબ્લિક હિયારિંગ માં મારા સૂચનો નીચે મુજબ રજૂ કરું છું.

૧. રાજ્યના અને રાષ્ટ્રના વિકાસ માટે સારા રસ્તાઓ એ પહેલી આવશ્યકતા છે જે સમય શક્તિ અને અકસ્માત થી બચાવે છે. આથી આ બાબતે આપને અભિનંદન.

૨. અમદાવાદ ધોલેરા વચે બની રહેલા આ રસ્તા ની આજુબાજુના વિસ્તાર માં અનેક દુર્લભ વન્ય જીવો વસે છે જેનો ઉલ્લેખ ઇચ્છાઈએ માં પણ કરવામાં આવેલ છે. રસ્તો બનતા વાહન વ્યવહાર વધશે જેના લીધે વન્ય જીવો માટે જીવનું જોખમ ઊભું થશે. વન્યજીવો એ કુદરતી સંપત્તિ છે આપણી સાંસ્કૃતિક ધરોહર છે જેને બચાવવી આપણાં સૌની ફરજ છે. આથી સારા રસ્તાઓ પણ મળે અને વન્ય જીવો માટે સુરક્ષા પણ હોય તે અંગે મારા સૂચનો આ મુજબ છે.

અ. દર ૧.૫ કિમી અંતરે પ્લાણીઓ માટે ઘંડરપાસ રાખવા જોઈએ જેથી વન્ય જીવો ને રસ્તા ઓળંગવો ના પડે અને યોગ્યસામ્ય પ્લાણીનો ભરવો ન થાય.

બ. યોગ્ય અંતરે સાઇન બોર્ડ અને સ્પીડ બ્રેકર રાખવા.

ઉપરોક્ત બાબતોનું ધ્યાન રાખવાથી રોડ એક્સિડેન્ટ પણ અટકશે અને વન્ય પ્લાણીઓનું રક્ષણ થશે આભાર સહ

નકલ સવિનય જાણ અને જરૂરી કાર્યવાહી માટે રવાના:

- 1 રિજીયનલ અધિકારીશ્રી, જીપીસીબી અમદાવાદ
- 2 અગ્ર મુખ્ય વન સંરક્ષક શ્રી વન્ય પ્લાણી ગાંધીનગર
- 3 ડેરમેન શ્રી ગુજરાત ઇકોલોજી કમિશન ગાંધીનગર
- 4 નાયબ વન સંરક્ષક શ્રી. અમદાવાદ
- 5 મદદનીશ વન સંરક્ષક શ્રી કાળિયાર સહૈય વિધ્યાન વેળાવદર

*I. R. Gadhvi*  
16.11.18

**Dr. I. R. Gadhvi**  
Head  
Dept. of Marine Science  
M. K. B. University  
Bhavnagar.



Villagers of adhelai village

At :Adhelai

Ta. Dist. Bhavnagar

Date. 16-11-2018

To,  
Member Secretary,  
Gujarat Pollution Control Board, Gandhinagar  
Camp: - place of Environmental Public hearing  
Pvt. School, Adhelai.

Subject: Public Objections /suggestions during Environmental Public hearing Ahmedabad-Dholera Expressway-km.110  
In reference to your public hearing we present the following. in regard of the environmental issues of Adhelai village

- (1) In the old cancelled highway in 1979, the lands of the farmers of the Adhelai village was acquired which has now become useless due to cancellation of the old Highway.

Thereafter, the land of the farmers in large scale was acquired in 1980 for the present existing road.

Now due to new alignment in new place in Adhelai village, new land of farmers is being acquired. The people of Adhelai village are opposed to it, it is our representation that the new the new proposed Highway may be constructed in the limits of Adhelai village, Bhavnagar district & Ahmedabad District

Yours faithfully

ગું-અધિભાઈ

તા. વિ. ભાવનગર

તા. 25/22/2025

હાઈ

અમારું અધિભાઈ,

ગુજરાત પ્રદેશ સિવિલ કોર્ટ, ભાવનગર

કેસ:- પર્મિટરની અપીલનો અર્થ

સી.આઈ. અધિભાઈ

પ્રશ્ન:- આ અપીલમાં - કોર્ટે આ કેસને કે- (સી.આઈ. ૧૯૦)

ની જગ્યાએ પર્મિટરની અપીલનો અર્થ

અમારું અધિભાઈ બાંધ - અમારું અધિભાઈ

અમારું અધિભાઈ ગુજરાત પ્રદેશ સિવિલ કોર્ટ

અમારું અધિભાઈ ભામણી પર્મિટરની અપીલનો અર્થ અમારું અધિભાઈ

(૧) અમારું અધિભાઈ ભામણી ગુજરાત પ્રદેશ સિવિલ કોર્ટ

સી.આઈ. ૧૯૦૬ વર્ષે ગુની ૨૬ થી ૨૮ સુધી કોર્ટમાં મોકલવામાં

પરિણત થઈ ગઈ છે. જે કોર્ટ ૨૮ થી ૨૯ સુધી ૨૯ થી ૩૦ સુધી

સી.આઈ. ૧૯૦૬ - ૨૯૦૬ નો અર્થ અમારું અધિભાઈ

અમારું અધિભાઈ પરિણત થઈ ગઈ છે.

અમારું અધિભાઈ ભામણી સી.આઈ. ૧૯૦૬

અમારું અધિભાઈ અમારું અધિભાઈ સી.આઈ. ૧૯૦૬

અમારું અધિભાઈ અમારું અધિભાઈ સી.આઈ. ૧૯૦૬

અમારું અધિભાઈ અમારું અધિભાઈ સી.આઈ. ૧૯૦૬

અમારું અધિભાઈ અમારું અધિભાઈ સી.આઈ. ૧૯૦૬

અમારું અધિભાઈ અમારું અધિભાઈ સી.આઈ. ૧૯૦૬

અમારું અધિભાઈ અમારું અધિભાઈ સી.આઈ. ૧૯૦૬

અમારું અધિભાઈ

પરિણત થઈ ગઈ

સરખંથ

અધિભાઈ પ્રામ પંચાયત

સામાજિક સંસ્થા

સામાજિક સંસ્થા

સામાજિક સંસ્થા

સામાજિક સંસ્થા

સામાજિક સંસ્થા

સામાજિક સંસ્થા

સામાજિક સંસ્થા

સામાજિક સંસ્થા

સામાજિક સંસ્થા

સામાજિક સંસ્થા

સામાજિક સંસ્થા

સામાજિક સંસ્થા

# Annexure –D



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

National Highways Authority of India

(Ministry of Road Transport & Highways)

पता : 3ए व 3बी, द्वितीय तल, अमूल बिल्डिंग, गिफ्ट देव बैंक, वेजपुर रोड, जवाहर पार्क, अहमदाबाद - 380 051

PIU : 3A & 3B, 2nd Floor, Amul Building, Nr. Dana Bank, Vejapur Road, Jawahar Park, Ahmedabad - 380 051.

Tel : 079-26821062  
26821063  
E-mail : ahd@nhai.org

No : NHAI/PIU-Ahmedabad/GPCB./2018/ 315

Date: 16/11/2018

To,  
Chudasma Pushparaajsinh Pradhumansinh,  
Village Adhelai,  
Taluka & District Bhavnagar.

**Subject:** Consultancy services for project preparation of Feasibility study/Detailed Project Report of road stretches selected for DMICDC under Bharat Mala Scheme - Ahmedabad - Dholera Expressway (110 km) (Package No. NHAI/BM/21) under Bharatmala Pariyojana:

**Ref:** Your application dated 10/11/2018 sent to RO-GPCB, Bhavnagar.

Sir,

The final MoEF&CC Notification has been published on 6<sup>th</sup> July 2017 regarding the boundary of the protected area and its eco sensitive zone of Velavadar Blackbuck National Park. However the end point of the proposed alignment is approximately 500 m away from the eco sensitive zone of Velavadar Blackbuck National Park.

Therefore, we are not violating the Environmental Rules. Moreover, the NOC /certification regarding applicability of NBWL with respect to Velavadar Black Buck National Park from Principle Chief Conservator of forest (PCCF Wildlife) is in progress and we will follow the recommendations/ suggestions given by them.

Thanking you,

Yours faithfully,

(S. P. Singh) 16/11/18  
General Manager (Technical)  
& Project Director

Copy to:

1. The CGM(Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please.



ભાસ્તીય રાષ્ટ્રીય રાજમાર્ગ પ્રાધિકરણ D-4

(સડક પરિવહન ઓર રાજમાર્ગ મંત્રાલય)

**National Highways Authority of India**

(Ministry of Road Transport & Highways)

ફાઈલ : 3A & 3B, 2nd Floor, Anna Building, Nr. Dana Bank, Vaidya Park, Ahmedabad - 380 051

PHU : 3A & 3B, 2nd Floor, Anna Building, Nr. Dana Bank, Vaidya Park, Ahmedabad - 380 051

Tel : 079-26821062

26821063

E-mail : ahd@nhai.org

નંબર.એનએચએઆઈ/પીઆઈયુ/ ભાવનગર/જી પી સી બી./2018 255

તા.16/11/2018

પ્રતિ,

ચક્રાસમા પુષ્પરાજસિંહ પ્રદ્યુમ્નસિંહ,

મ. અધ્યાપક,

તા.જી. ભાવનગર.

વિષય ભારતમાલા પરિયોજના હેઠળ ભારતમાળા યોજના - અમદાવાદ-ધોલેશ એક્સપ્રેસવે (110 કિ.મી.) (પ્રોજેક્ટ નં. એનએચએઆઈ/બીએમ/21) હેઠળ ડીએમઆઈસીડીસી માટે માર્ગ ભાંધકામના ડિઝિબિલિટી સ્ટડી/ વિઝતવાર પ્રોજેક્ટ રિપોર્ટ તૈયાર કરવા માટે કન્સલ્ટન્ટ્સ સર્વિસ :

સંદર્ભ - આપની તારીખ 10/11/2018 ની ધરજી જે ધારઓ જી.પી.સી.બી. ભાવનગર ને મોકલવામાં આવી હતી

સાહેબશ્રી,

અંતિમ એમઆઈએફ અને સીસી સૂચન 6 જુલાઈ 2017 ના રોજ સંરક્ષિત વિસ્તારની સીમા અને વેળાવદર બ્લોક બગ નેશનલ પાર્કના ઇકો સેન્સિટિવ ઝોન સંબંધિત પ્રક્રિયા કરવામાં આવ્યું છે. જે કે. સંરક્ષણનો અંતિમ મુદ્દો વેળાવદર બ્લોકબેઝ રાષ્ટ્રીય ઉદ્યાનના ઇકો સેન્સિટિવ ઝોનથી લગભગ 300 મીટર દૂર છે

તેથી, અમે પર્યાવરણીય નિયમોનું ઉલ્લંઘન કરી રહ્યા નથી. વધુમાં એન.બી.ડબલ્યુ.એલ. ની કાર્યક્ષમતાને લગતી એન.ઓ.સી. : પ્રમાણપત્ર જંગલના ડિવિઝનલ ચીફ કન્ઝર્વેટર ઓફ વેલ્વાડર બ્લોક બગ રાષ્ટ્રીય ઉદ્યાનના સદર્ભમાં (પીસીસીઓફ વન્યજીવન) પ્રગતિમાં છે અને અમે તેમનો ભલામણો સૂચનોનું પાલન કરીશું.

આભારસહ,

આપનો વિશ્વાસુ,

નુમ. ૩. હિદ્

(એસ પી સિંહ)

જનરલ મેનેજર (ટેકનિકલ) અને

પ્રોજેક્ટ ડિરેક્ટર, પીઆઈયુ - અમદાવાદ

નકલ રવાના.

1 વધુ માહિતી માટે કૃપયા સી.જી.એમ.(ટી) અને આર.ઓ., એનએચએઆઈ ગાંધીનગરનો સંપર્ક

કરવો

Head Office : G-5 & 6, Sector-10 Dwarka, New Delhi - 110075 website : <http://www.nhai.org>

મુકાબલો : જી-5 & 6, સેક્ટર-10, દ્વારકા, નવું દિલ્લી - 110 075





# भास्तीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

पता: 34 व 35, द्वितीय तल, अमल भवन, न. देवा बैंक, मजिस्ट्रेट रोड, जयपुर पार्क, अहमदाबाद - 380 051

Ph: 3A & 3B, 2nd Floor, Amal Building, Mr. Dena Bank, Magister Road, Jyoti Park, Ahmedabad - 380 051

Tel: 079-26821062

26821063

E-mail: [ahd@nhai.org](mailto:ahd@nhai.org)

D-2

No. : NHAI/PIU-Ahmedabad/GPCB./2018/ 3516

Date: 16/11/2018

To,  
Shri Krishnakant Chauhan  
H-102, Sai Darshan Residency,  
Dindoli - Kharwasa Road, Dindoli,  
Surat - 394210. Ph: 9426508075  
Email: [10krishnakant@gmail.com](mailto:10krishnakant@gmail.com)

**Subject:** Consultancy services for project preparation of Feasibility study/Detailed Project Report of road stretches selected for DMICDC under Bharat Mala Scheme - Ahmedabad - Dholera Expressway (110 km) (Package No. NHAI/BM/21) under Bharatmala Pariyojana.

Your application dated 15/11/2018 sent to MO-GPCB, Bhavnagar.

Sir,

Please find the reply to queries as under in serial:-

| S.NO.                          | Reply to queries  |
|--------------------------------|---|
| 1.                             | This question Relates to GPCB / MoEF&CC.  |
| 2.                             | This question Relates to GPCB / MoEF&CC.  |
| 3.                             | This question Relates to GPCB / MoEF&CC.  |
| 4.                             | This question Relates to GPCB / MoEF&CC.  |
| <b>Reply for Clarification</b> |   |
| 1.                             | All Annexures have been submitted in the EIA report and the copy of the EIA report is available at GPCB office, Bhavnagar.  |
| 2.                             | Matter will be reviewed and will be suitably addressed in the Final EIA report as per rules / documents / records available in this regard.   |
| 3.                             | The most of the affected water bodies like lakes and ponds are seasonal and at the time of sampling the water bodies were dry. However as per MoEF&CC guidelines we have followed / selected the monitoring locations.  |
| 4.                             | We have followed the MoEF&CC guidelines for the selection of sampling locations. However three locations were drawn in the Dholera SIR (Ambli, Dholera and Sandhidha). Kindly refer the EIA report for the same.  |
| 5.                             | The monitoring photographs have been attached as Annexure I for your reference.   |
| 6.                             | As per Final MoEF&CC Notification No S.O. 2149 (E) dated 6th July 2017 regarding eco sensitive zone of Velavadar Black Buck National Sanctuary, the end point of the project alignment is approx. 500 m away from its eco sensitive. The impacts and its mitigation measures have been presented in |

Head Office : G-5 & 6, Sector-10 Dwarka, New Delhi - 110075 website : <http://www.nhai.org>

मुख्यालय : जी-5 व 6, सेक्टर-10, द्वारका, नई दिल्ली - 110 075

|     |  |
|-----|--|
| 7.  | Chapter 5 of the EIA report. Kindly refer to <del>Chapter 5</del> Chapter for the same. The issue will be addressed in Final EIA/EMP report as per rules / document / records available in this regard.  |
| 8.  | It has been noted and will provide in the final EIA/EMP report.  |
| 9.  | The accreditation certificate of Enviro Infra Solutions Pvt. Ltd. has been attached in the EIA/EMP report as Annexure IV and the copy of the EIA/EMP report is available at GPCB, Bhavnagar office. However the certificate has been attached as Annexure II.  |
| 10. | The copy of the accreditation certificate of <del>Enviro</del> Testing Laboratories has been attached in the EIA/EMP report as Annexure IV and the copy of the EIA/EMP report is available at GPCB, Bhavnagar office. However the certificate has been attached as Annexure III.   |
| 11. | Alignment of Expressway is fixed in conformity with approved alignment of Mass Rapid Transit System (MRTS) project with the approval of State Government as well as Government of India. NHAI is the implementing authority of the fixed alignment. A meeting was held on 20th January 2017 under chairmanship of CEO & MD, DMICDC and it was decided to fix alignment of Expressway as per standards and in conformity with approved alignment of MRTS project included in JICA Rolling Plan to establish the technical, economic and financial viability of the project and prepare project report for six lane expressway configurations for DMICDC. (This statement has also been justified in Chapter 3, Analysis of alternatives). |
| 12. | NHAI is not initiating any land acquisition in Dholera SIR. We are only following the fixed alignment that has been proposed in the master plan of DSIR.   |
| 13. | At that time the project proponent was different.  |
| 14. | We are not reducing the present water <del>level</del> in the whole alignment. Sufficient no. of culverts/CD structures have been provided as per the study of hydrologist of consultant.  |

Thanking you,

Yours faithfully,

(S.P. Singh)

General Manager (Technical)  
& Project Director

Copy to:

1. The CGM(Tech) & Regional Officer (Gujarat) NHAI, Gandhinagar for kind information please.



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण 0-3

(सड़क परिवहन और राजमार्ग मंत्रालय)

**National Highways Authority of India**

(Ministry of Road Transport & Highways)

पता : 3ए व 3बी, द्वितीय तल, अमूल मिलडिंग, निवर्त वेन रोड, वेजलपुर रोड, जवाहर पार्क, अहमदाबाद - 380 051

PIU : 3A & 3B, 2nd Floor, Amul Building, Nr. Datta Bank, Vesalpur Road, Jyoti Park, Ahmedabad - 380 051

Tel. : 079-26821062

26821063

E-mail : ahd@nhai.org

No. : NHA/PIU-Ahmedabad/GPCB./2018/1002

Date 16/11/2018

To,  
Ramdevsinh B. Chuadasma,  
Post: Bavaliya, Taluk- Dholera,  
Dist. Ahmedabad

**Subject:** Consultancy services for project preparation of Feasibility study/Detailed Project Report of road stretches selected for DMICDC under Bharat Mala Scheme Ahmedabad Dholera Expressway (110 km) (Package No. NHA/BM/21) under Bharatmala Pariyojana: **Reply to Queries received at Public Hearing dated 16-11-2018.**

Sir,

As per MoEF&CC final Gazette Notification S.O. 2149 (E) dated 6<sup>th</sup> July 2017 regarding the eco sensitive zone of Blackbuck National Park, the end point of the proposed alignment is approx. 500 m away from the eco sensitive zone of Blackbuck National Park. Therefore, we are not violating the Environmental Rules. Moreover, the NOC /certification regarding applicability of NBWL with respect to Velavadar Black Buck National Park from Principle Chief Conservator of forest (PCCF Wildlife) is in progress and we will follow the recommendations/ suggestions given by them.

Thanking you,

Yours faithfully,

General Manager (Technical) & Project Director

Copy to:

1. The CGM(Tech) & Regional Officer (Gujarat), NHA, Gandhinagar for kind information please.



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण D-3

(सड़क परिवहन और राजमार्ग मंत्रालय)

National Highways Authority of India

(Ministry of Road Transport & Highways)

पता : 3A & 3B, द्वितीय मं, अणुल भिन्दी, रिफ्ट बैंक, वेजपुर रोड, जवाहर पार्क, अहमदाबाद - 380 051  
PIN : 3A & 3B, 2nd Floor, Anul Building, Mr. Dena Bank, Vejalpur Road, Jawahar Park, Ahmedabad - 380 051.

Tel : 079-26821062  
26821063  
E-mail : and@nhai.org

નંબર, એન.એચ.એ.આઈ/પીઆઈયુ/આવનગર/જી.પી.સી.બી./2018 3002

તા.16/11/2018

પ્રતિ,

રામદેવસિંહ બી. ચુડાસમા,

પોસ્ટ : બાવળીયારી, તાલુકા - ધોલેરા,

જિ. અમદાવાદ

વિષય ભારતમાતા પરિયોજના ફેઝ ભારતમાતા યોજના - અમદાવાદ-ધોલેરા એક્સપ્રેસવે (110 કિ.મી.) (પ્રોજેક્ટ નં. એન.એચ.એ.આઈ/પીઆઈયુ/21) ફેઝ ડીએમઆઈસીડીસી માટે માર્ગ બાંધકામના ડિઝિબિલિટી સ્ટડી વિગતવાર પ્રોજેક્ટ રિપોર્ટ તૈયાર કરવા માટે કન્સલ્ટન્સી સર્વિસ. 16-11-2018ના રોજ યોજાયેલી જાહેર સુનાવણીમાં રામદેવસિંહ બી. ચુડાસમા, ગ્રામ - બાવળીયારી, તાલુકો - ધોલેરા, જિલ્લો અમદાવાદના આવેદન પત્રનો જવાબ

સાહેબશ્રી,

પ્રસ્તાવિત પરિયોજનાની એમ.એઈ.એફ અને સીસીના અંતિમ એડેટ સૂચના એસ.ઓ. 21.09.18 તારીખ ન કી જુલાઈ 2017 ના બ્લોકબેક નેશનલ પાર્કના ઇકો સેન્સિટિવ ઝોનના સંબંધમાં સૂચિત સંરેખાઓ અંતિમ મુદ્દો આધારે છે. બ્લોકબેક નેશનલ પાર્કના ઇકો સંવેદનશીલ ઝોનથી 500 મીટર દૂર છે તેથી, અમે પર્વાચરણીય નિયમોનું ઉલ્લંઘન કરી રહ્યા નથી, વધુમાં, એન.બી.ડબલ્યુ.એલ. ની કાર્યક્ષમતાને લગતી એન.ઓ.સી પ્રમાણપત્ર જંગલના પ્રિન્સિપાલ યીફ કન્ઝર્વેટર ઓફ વેલ્ફાર બ્લેક બક રાષ્ટ્રીય ઉદ્યાનના સંદર્ભમાં (પીસીસીએફ વન્યજીવન) પ્રગતિમાં છે અને અમે તેમની ભલામણો સૂચનોનું પાલન કરીશું.

આભારસહ,

આપનો વિશ્વાસુ

જનરલ મેનેજર (ટેકનિકલ) અને 16/11/18

પ્રોજેક્ટ ડિરેક્ટર, પીઆઈયુ - અમદાવાદ

નકલ રવાના :

1. વધુ માહિતી માટે કૃપયા સી.જી.એમ.(ટી) અને આર.ઓ., એન.એચ.એ.આઈ ગાંધીનગરનો સંપર્ક કરવો.



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

National Highways Authority of India

(Ministry of Road Transport & Highways)

पता: ए व 3बी, द्वितीय तल, अमूल बिल्डिंग, निकट देवा बैंक, वज्रपुर रोड, जमरा पार्क, अहमदाबाद - 380 051

PIU - 3A & 3B, 2nd Floor, Amul Building, Nr. Deva Bank, Vajrapur Road, Jmrta Park, Ahmedabad - 380 051.

Tel: 079-26821062

26821063

E-mail: nhai@nhai.org

No. : NHAT/PIU-Ahmedabad/GPCB./2018/1254

Date: 16/11/2018

To,  
Shri Chudasama Pushparajsinh Pradumansinh  
At Adhelai  
Taluk & Dist : Bhavnagar,  
Place: Hearing on Environmental Impact,  
Primary school, Adhelai.

Subject: Consultancy services for project preparation of Feasibility study/Detailed Project Report of road stretches selected for DMICDC under Bharat Mala Scheme - Ahmedabad - Dholera Expressway (110 km) (Package No. NHAI/BM/21) under Bharatmala Pariyojana  
**Reply to Shri Pushparajsinh Pradumansinh Chudasama, Village - Adhelai, Taluka & District - Bhavnagar received at Public Hearing dated 16-11-2018.**

Sir,

Please find the reply to queries as under

**S. No. Reply to queries**

1. Alignment of Expressway is fixed in conformity with approved alignment of Mass Rapid Transit System (MRTS) project with the approval of State Government as well as Government of India. NHAI is the implementing authority of the fixed alignment. A meeting was held on 20th January 2017 under chairmanship of CEO & MD, DMICDC and it was decided to fix alignment of Expressway as per standards and in conformity with approved alignment of MRTS project included in JICA Rolling Plan to establish the technical, economic and financial viability of the project and prepare project report for six lane expressway configurations for DMICDC.

The present proposed alignment of Ahmedabad - Dholera Expressway in DSIR only follows the road corridor as shown in the Master plan of DSIR.

2. Alignment of Expressway is fixed in conformity with approved alignment of Mass Rapid Transit System (MRTS) project with the approval of State Government as well as Government of India. NHAI is the implementing authority of the fixed alignment. A meeting was held on 20th January 2017 under chairmanship of CEO & MD, DMICDC and it was decided to fix alignment of Expressway as per standards and in conformity with approved alignment of MRTS project included in JICA Rolling Plan to establish the technical, economic and financial viability of the project and prepare project report for six lane expressway configurations for DMICDC.

The present proposed alignment of Ahmedabad - Dholera Expressway in DSIR only follows the road corridor as shown in the Master plan of DSIR.

Moreover, the land for the use of Expressway is being provided by DSIR and NHAI is not acquiring any land in DSIR region.

Head Office : G-5 & 8, Sector-10 Dwarka, New Delhi - 110075 website : <http://www.nhai.org>

मुख्यालय : जी-5 व 8, सेक्टर-10, द्वारका, नई दिल्ली - 110 075

|    |  |
|----|--|
| 3. | As per MoEF&CC final Gazette Notification S.O. 2149 (E) dated 6 <sup>th</sup> July 2017 regarding the eco sensitive zone of Blackbuck National Park, the end point of the proposed alignment is approx. 500 m away from the eco sensitive zone of Blackbuck National Park. Therefore, we are not violating the Environmental Rules. Moreover the NOC /certification regarding applicability of NBWL with respect to Velavadar Black Buck National Park from Principle Chief Conservator of forest (PCCF Wildlife) is in progress and we will follow the recommendations/ suggestions given by them.  |
| 4. | The final MoEF&CC Notification has been published on 6 <sup>th</sup> July 2017 regarding the boundary of the protected area and its eco sensitive zone of Velavadar Blackbuck National Park.<br><br>However, the end point of the alignment is approximately 500m away from the eco sensitive zone of the Velavadar Blackbuck National Park.   |
| 5. | We are not reducing the present flow of water in the whole alignment. Sufficient numbers of culverts/CD structures have been provided as per the study of hydrologist of the consultant.<br><br>As per the survey report we have provided Underpass (CUP) which will facilitate the animals. Moreover, other culverts will also facilitate the animals at least in dry season.   |
| 6. | The end point of the alignment does not fall in the eco sensitive zone of the Velavadar Blackbuck National Park as per the MoEF&CC Gazette Notification No. 2149 (E) dated 6 <sup>th</sup> July 2017. Therefore, the approval from Monitoring Committee is not required.<br><br>Moreover, the NOC /certification regarding applicability of NBWL with respect to Velavadar Black Buck National Park from Principle Chief Conservator of forest (PCCF Wildlife) is in progress.<br><br>Suggestions/Recommendations from Velavadar Blackbuck National Park authorities shall be taken into consider at the time of the construction.   |
| 7. | Alignment of Expressway is fixed in conformity with approved alignment of Mass Rapid Transit System (MRTS) project with the approval of State Government as well as Government of India. NHAI is the implementing authority of the fixed alignment. A meeting was held on 20 <sup>th</sup> January 2017 under chairmanship of CEO & MD, DMICDC and it was decided to fix alignment of Expressway as per standards and in conformity with approved alignment of MRTS project included in JICA Rolling Plan to establish the technical, economic and financial viability of the project and prepare project report for six lane expressway configurations for DMICDC.<br><br>The present proposed alignment of Ahmedabad – Dholera Expressway in DSIR only follows the road corridor as shown in the Master plan of DSIR.<br><br>Moreover, the land for the use of Expressway is being provided by DSIR and NHAI is not acquiring any land in DSIR region. |
| 8. | Alignment of Expressway is fixed in conformity with approved alignment of Mass Rapid Transit System (MRTS) project with the approval of State Government as well as Government of India. NHAI is the implementing authority of the fixed alignment. A meeting was held on 20 <sup>th</sup> January 2017 under chairmanship of CEO & MD, DMICDC and it was decided to fix alignment of Expressway as per standards and in conformity with approved alignment of MRTS project included in JICA Rolling Plan to establish the technical, economic and financial viability of the project and prepare project report for six lane expressway configurations for DMICDC.<br><br>The present proposed alignment of Ahmedabad – Dholera Expressway in DSIR only follows the road corridor as shown in the Master plan of DSIR.<br>Moreover, the land for the use of Expressway is being provided by DSIR and NHAI is not acquiring any land in DSIR region.     |





9 The Environmental clearances (EC) for the DSIR Master plan has already been taken up by DMICDC vide Notification No F No 21-20/2011-4A.III dated 19<sup>th</sup> September 2014. The condition given to EC shall be fulfill by DSIR.

10.  
(a) Alignment of Expressway is fixed in conformity with approved alignment of Mass Rapid Transit System (MRTS) project with the approval of State Government as well as Government of India. NHAI is the implementing authority of the fixed alignment. A meeting was held on 20th January 2017 under chairmanship of CEO & MD, DMICDC and it was decided to fix alignment of Expressway as per standards and in conformity with approved alignment of MRTS project included in JICA Rolling Plan to establish the technical, economic and financial viability of the project and prepare project report for six lane expressway configurations for DMICDC.

The present proposed alignment of Ahmedabad – Dholera Expressway in DSIR only follows the road corridor as shown in the Master plan of DSIR.

Moreover, the land for the use of Expressway is being provided by DSIR and NHAI is not acquiring any land in DSIR region.

(b) Alignment of Expressway is fixed in conformity with approved alignment of Mass Rapid Transit System (MRTS) project with the approval of State Government as well as Government of India. NHAI is the implementing authority of the fixed alignment. A meeting was held on 20th January 2017 under chairmanship of CEO & MD, DMICDC and it was decided to fix alignment of Expressway as per standards and in conformity with approved alignment of MRTS project included in JICA Rolling Plan to establish the technical, economic and financial viability of the project and prepare project report for six lane expressway configurations for DMICDC.

The present proposed alignment of Ahmedabad – Dholera Expressway in DSIR only follows the road corridor as shown in the Master plan of DSIR.

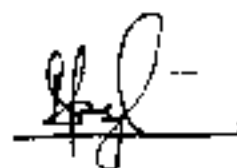
Moreover, the land for the use of Expressway is being provided by DSIR and NHAI is not acquiring any land in DSIR region.

(c) The impacts and mitigation measures for the same has been incorporated in the EIA report. Kindly refer the same.

(d) Alignment of Expressway is fixed in conformity with approved alignment of Mass Rapid Transit System (MRTS) project with the approval of State Government as well as Government of India. NHAI is the implementing authority of the fixed alignment. A meeting was held on 20th January 2017 under chairmanship of CEO & MD, DMICDC and it was decided to fix alignment of Expressway as per standards and in conformity with approved alignment of MRTS project included in JICA Rolling Plan to establish the technical, economic and financial viability of the project and prepare project report for six lane expressway configurations for DMICDC.

The present proposed alignment of Ahmedabad – Dholera Expressway in DSIR only follows the road corridor as shown in the Master plan of DSIR.


Moreover, the land for the use of Expressway is being provided by DSIR and NHAI is not acquiring any land in DSIR region.



- 11 | The proposal for the CRZ recommendation from the GCZMA has been submitted and is under process for the project. In Dholera SIR section CRZ recommendation has been taken by DSIRDA
- 

Thanking you,

Yours faithfully,

  
General Manager (Technical) 16/11/18  
& Project Director

Copy to:

1. The CGM(Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please



# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

**National Highways Authority of India**

(Ministry of Road Transport & Highways)

पत्ता : 3ए व 3बी, द्वितीय तल, अमूल बिल्डिंग, निस्त वेक बैंक, वेङ्कटपुर रोड, जीकराज पार्क, अहमदाबाद - 380 061  
PHU : 3A & 3B, 2nd Floor, Amul Building, Nr Dena Bank, Vengalpur Road, Jhraj Park, Ahmedabad - 380 061

Tel : 079-26821062  
26821063  
E-mail : nhai@nhai.org

नंबर.येनयेचयेआई/पीआईएच/ भावनगर/क्र.पी.सी.बी./2018 3694

તા.16/11/2018

પ્રતિ,  
યુડાસમા મુખ્યરાજસિંહ પ્રદ્યુમનસિંહ  
મ. અધેનાઈ  
તા.જી, ભાવનગર,

વિષય ભારતમાલા પરિયોજના હેઠળ ભારતમાલા યોજના - અમદાવાદ-ધોલેરા એક્સપ્રેસવે (110 કિ.મી.)  
(પ્રોજેક્ટ નં. એનએચએઆઈ/બીએમટી) હેઠળ ડીએમઆઈસીડીસી માટે માર્ગ આંધ્રમના કિન્નિબિલિટી સ્ટડી  
વિગતવાર પ્રોજેક્ટ રિપોર્ટ તૈયાર કરવા માટે ડન્સલટન્સી સર્વિસ 16-11-2018ના રોજ યોજાયેલી જાહેર  
મુલાવણીમાં યુડાસમા મુખ્યરાજસિંહ પ્રદ્યુમનસિંહ, આમ - અધેનાઈ, તાલુકો - ભાવનગર, જિલ્લો  
ભાવનગર ના આવેદન પત્રનો જવાબ

સાહેબશ્રી,

આવેદન પત્રનો મુદ્દા પમાડે વિગતવાર જવાબ નીચે મુજબ

| S. No. | Reply to queries   |
|--------|--|
| 1      | પ્રસ્તાવિત પરિયોજનાની સંરેખણ. રાજ્ય સરકાર તેમજ ભારત સરકારની મંજૂરી સાથે માસ રેપિડ ટ્રાન્ઝિટ સિસ્ટમ (એમઆરટીએસ) પ્રોજેક્ટની મંજૂરી સંરેખણ સાથે સુસંગત છે. એનએચએઆઈ નિશ્ચિત સંરેખણનું અમલીકરણ ઓછોરીટી છે. 20 મી જાન્યુઆરી, 2017 ના રોજ સીઇઓ અને એમ.ડી. ડીએમઆઈસીડીસીની અધ્યક્ષતા હેઠળ એડ મીટિંગ યોજાઈ હતી અને ધોરણ મુજબ એક્સપ્રેસવેન. સંરેખણને ઠીક કરવાનો નિર્ણય લેવામાં આવ્યો હતો અને જેઆઈસીએ રેલિંગ પ્લાનમાં સમાવિષ્ટ એમઆરટીએસ પ્રોજેક્ટની મંજૂર સંરેખણ સાથે સુસંગત. ટેકનિકલ. ઓર્થોગ અને નાણાકીય પ્રોજેક્ટનો કાર્યક્ષમતા અને ડીએમઆઈસીડીસી માટે ઇ લેન એક્સપ્રેસવે રૂપરેખાકનો માટે પ્રોજેક્ટ રિપોર્ટ તૈયાર કરવાની સૂચના મળેલ.<br><br>અમદાવાદની કાલની પ્રસ્તાવિત સંરેખણ - ડીએમઆઈઆરમાં ધોલેરા એક્સપ્રેસવે માત્ર ડીએમઆઈઆરના માસ્ટર પ્લાનમાં દર્શાવ્યા પમાડે રોડ કોરિડોરને અનુસરે છે. |
| 2.     | પ્રસ્તાવિત પરિયોજનાની સંરેખણ. રાજ્ય સરકાર તેમજ ભારત સરકારની મંજૂરી સાથે માસ રેપિડ ટ્રાન્ઝિટ સિસ્ટમ (એમઆરટીએસ) પ્રોજેક્ટની મંજૂરી સંરેખણ સાથે સુસંગત છે. એનએચએઆઈ નિશ્ચિત સંરેખણનું  |

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|   | <p>અમલીકરણ ઓશોસીટી છે. 20 મી જાન્યુઆરી, 2017 ના રોજ સીઇઓ અને એમડી. ડીએમઆઈસીડીસીની અધ્યક્ષતા હેઠળ એક મીટિંગ યોજાઈ હતી અને ધોરણ મુજબ એક્સપ્રેસવેના સંરેખણને ઠીક કરવાનો નિર્ણય લેવામાં આવ્યો. હતો અને જેઆઈસીએ રોલિંગ પ્લાનમાં સમાવેષ્ટ એમઆરટીએસ પ્રોજેક્ટની મંજૂર સંરેખણ સાથે સુસંગત, ટેકનિકલ, થાઈક અને નાણાકીય પ્રોજેક્ટની કાર્યક્ષમતા અને ડીએમઆઈસીડીસી માટે ૯ લેન એક્સપ્રેસવે ફપરેખાંકનો માટે પ્રોજેક્ટ રિપોર્ટ તૈયાર કરવાની સૂચના મળેલ.</p> <p>અમદાવાદની ફાલની પ્રસ્તાવિત સંરેખણ - ડીએસઆઈઆરમાં ઘોલેરા એક્સપ્રેસવે માત્ર ડીએસઆઈઆરના માસ્ટર પ્લાનમાં દર્શાવ્યા પ્રમાણે રોડ કોરિડોરને અનુસરે છે.</p> <p>વધુમાં, એક્સપ્રેસવેના ઉપયોગ માટે જમીન ડીએસઆઈઆર દ્વારા પૂરી પાડવામાં આવી રહી છે અને એનએચએઆઇ ડીએસઆઈઆર સેક્ટમાં કોઈ ખરે જમીન હસ્તગત કરી રહી નથી.</p> |
| 3 | <p>પ્રસ્તાવિત પરિયોજનાની એમઓઈએફ અને સીસીના અંતિમ ગ્રેઝેટ સૂચના એસ.ઓ. 2149 (૬) તારીખ 6 ફી જુલાઈ 2017 ના બ્લેકબેક નેશનલ પાર્કના ઇકો સેન્સિટિવ ઝોનના સંબંધમાં, સૂચિત સંરેખણનો અંતિમ મુદ્દો આશરે છે. બ્લેકબેક નેશનલ પાર્કના ઇકો સંવેદનશીલ ઝોનથી 500 મીટર દૂર છે. તેથી, અમે પર્યાવરણીય નિયમોનું ઉલ્લંઘન કરી રહ્યા નથી. વધુમાં, એન.બી.ડબલ્યુ.એલ. ની કાર્યક્ષમતાને લગતી એન.ઓ.સી. પ્રમાણપત્ર જંગલના પ્રિન્સિપાલ ચીફ કન્ઝર્વેટર ઓફ વેલ્વાઈર બ્લેક બક રાષ્ટ્રીય ઉદ્યાનના સંદર્ભમાં (પીસીસીએફ વન્યજીવન) પ્રગતિમાં છે અને અમે તેમની ભલામણો / સૂચનોનું પાલન કરીશું.</p>   |
| 4 | <p>અંતિમ એમઓઈએફ અને સીસી સુચન 6 જુલાઈ 2017 ના રોજ સંરક્ષિત વિસ્તારની સીમા અને વેલ્વાઈર બ્લેકબેક નેશનલ પાર્કના ઇકો સેન્સિટિવ ઝોન સંબંધિત પ્રકાશિત કરવામાં આવ્યું છે.</p>  |
| 5 | <p>જો કે, સંરેખણનો અંતિમ મુદ્દો વેલ્વાઈર બ્લેકબેક રાષ્ટ્રીય ઉદ્યાનના ઇકો સેન્સિટિવ ઝોનથી લગભગ 500 મીટર દૂર છે અમે સમગ્ર સંરેખણમાં પાણીનો વર્તમાન પ્રવાહ ઘટાડતા નથી કન્સલ્ટન્ટના ફાઇટીનોજિસ્ટના અભ્યાસ મુજબ કલ્ચટર્સ સીડી મજાખામોની પૂરતી સંખ્યા પરાંત કરવામાં આવી છે.</p>  |
| 6 | <p>સર્વેક્ષક: અદેવાલ મુજબ અમે અંકરપાસ (સી.પી.પી.) પૂરા પાડ્યા છે જે પ્રાણીઓને સરળ બનાવશે. તદુપરાંત, એન.કલ્ચટર્સ ઓછામાં ઓછા મુક્ત મોસમમાં પ્રાણીઓને પણ સુવિધા આપશે.</p> <p>સંરેખણનો અંતિમ મુદ્દો 6 જુલાઈ 2017 ના રોજ અનુદા અને સીસી ગ્રેઝેટ સૂચના નંબર 2149 (૬) મુજબ વેલ્વાઈર બ્લેકબેક રાષ્ટ્રીય ઉદ્યાનનો ઇકો સંવેદનશીલ ઝોનમાં પડતો નથી. તેથી, મોનિટરીંગ સમિતિની મજૂરીનો આવશ્યકતા નથી.</p> <p>તદુપરાંત, એન.સી.ડબલ્યુ.એલ. ના ઉપયોગ, પાત્રતાને લગતા એન.ઓ.સી. / પ્રમાણપત્ર જંગલના પ્રિન્સિપાલ ચીફ કન્ઝર્વેટર ફોર વેલ્વાઈર બ્લેક બક નેશનલ પાર્ક (પીસીસીએફ વન્યજીવન) ના સંદર્ભમાં પ્રગતિમાં છે.</p>  |



સામાજિક કાર્ય વિભાગના નેશનલ પાક સત્તાવાળાઓ તરફથી સૂચનો : અભ્યાસો બાંધકામ સમયે ધ્યાનમાં લેવામાં આવશે.

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પ્રસ્તાવિત પરિયોજનાની સંરેખણ. રાજ્ય સરકાર તેમજ ભારત સરકારની મંજૂરી સાથે માસ રેપિડ ટ્રાન્ઝિટ સિસ્ટમ (એમઆરટીએસ) પ્રોજેક્ટની મંજૂરી સંરેખણ સાથે સુસંગત છે. એનએચએઆઇ નિધિત સંરેખણનું અમલીકરણ ઓથોરીટી છે. 20 મી જાન્યુઆરી, 2017 ના રોજ સીઇઓ અને એમડી, ડીએમઆઈસીડીસીની અધ્યક્ષતા હેઠળ એક મીટિંગ યોજાઈ હતી અને ધોરણ મુજબ એક્સપ્રેસવેના સંરેખણને ઠીક કરવાનો નિર્ણય લેવામાં આવ્યો હતો અને જેઆઈસીએ રોલિંગ પ્લાનમાં સમાવિષ્ટ એમઆરટીએસ પ્રોજેક્ટની મંજૂર સંરેખણ સાથે સુસંગત, ટેકનિકલ, આર્થિક અને નાણાકીય પ્રોજેક્ટની કાર્યક્ષમતા અને ડીએમઆઈસીડીસી માટે ૭ લેન એક્સપ્રેસવે રૂપરેખાકનો માટે પ્રોજેક્ટ રિપોર્ટ તૈયાર કરવાની સૂચના મળેલ.

અમદાવાદની હાલની પ્રસ્તાવિત સંરેખણ - ડીએસઆઈઆરમાં ધોલેરા એક્સપ્રેસવે માત્ર ડીએસઆઈઆરના માસ્ટર પ્લાનમાં દર્શાવ્યા પ્રમાણે રોડ કોરિડોરને અનુસરે છે.

વધુમાં, એક્સપ્રેસવેના ઉપયોગ માટે જમીન ડીએસઆઈઆર દ્વારા પૂરી પાડવામાં આવી રહી છે અને એનએચએઆઇ ડીએસઆઈઆર ક્ષેત્રમાં કોઈ પણ જમીન હસ્તગત કરી રહી નથી.

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પ્રસ્તાવિત પરિયોજનાની સંરેખણ. રાજ્ય સરકાર તેમજ ભારત સરકારની મંજૂરી સાથે માસ રેપિડ ટ્રાન્ઝિટ સિસ્ટમ (એમઆરટીએસ) પ્રોજેક્ટની મંજૂરી સંરેખણ સાથે સુસંગત છે. એનએચએઆઇ નિધિત સંરેખણનું અમલીકરણ ઓથોરીટી છે. 20 મી જાન્યુઆરી, 2017 ના રોજ સીઇઓ અને એમડી, ડીએમઆઈસીડીસીની અધ્યક્ષતા હેઠળ એક મીટિંગ યોજાઈ હતી અને ધોરણ મુજબ એક્સપ્રેસવેના સંરેખણને ઠીક કરવાનો નિર્ણય લેવામાં આવ્યો હતો અને જેઆઈસીએ રોલિંગ પ્લાનમાં સમાવિષ્ટ એમઆરટીએસ પ્રોજેક્ટની મંજૂર સંરેખણ સાથે સુસંગત, ટેકનિકલ, આર્થિક અને નાણાકીય પ્રોજેક્ટની કાર્યક્ષમતા અને ડીએમઆઈસીડીસી માટે ૭ લેન એક્સપ્રેસવે રૂપરેખાકનો માટે પ્રોજેક્ટ રિપોર્ટ તૈયાર કરવાની સૂચના મળેલ.

અમદાવાદની હાલની પ્રસ્તાવિત સંરેખણ - ડીએસઆઈઆરમાં ધોલેરા એક્સપ્રેસવે માત્ર ડીએસઆઈઆરના માસ્ટર પ્લાનમાં દર્શાવ્યા પ્રમાણે રોડ કોરિડોરને અનુસરે છે.

વધુમાં, એક્સપ્રેસવેના ઉપયોગ માટે જમીન ડીએસઆઈઆર દ્વારા પૂરી પાડવામાં આવી રહી છે અને એનએચએઆઇ ડીએસઆઈઆર ક્ષેત્રમાં કોઈ પણ જમીન હસ્તગત કરી રહી નથી.

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ડીએસઆઈઆર માસ્ટર પ્લાન માટેના પરીવરણીય મંજૂરીઓ (ઇસી) પહેલાથી જ ડીએમઆઈસીડીસી દ્વારા સૂચન નંબર એક એન દ્વારા લેવામાં આવી છે. 21-26 / 2011-આઇ.એ.આઈ.આઈ.આઇ.આઇ. 19 મી સપ્ટેમ્બર 2011 ઇસી.એ

10

- (અ) પ્રસ્તાવિત પરિયોજનાની સંરેખણ સહ્ય સરકાર તેમજ ભારત સરકારની મંજૂરી સાથે માસ રેપિડ ટ્રાન્ઝિટ સિસ્ટમ (એમઆરટીએસ) પ્રોજેક્ટની મંજૂરી સંરેખણ સાથે સુસંગત છે. એનએચએઆઈ નિશ્ચિત સંરેખણનું અમલીકરણ ઓશોરીટી છે. 20 મી જાન્યુઆરી, 2017 ના રોજ સીઇઓ અને એમડી, ડીએમઆઈસીડીસીની અધ્યક્ષતા હેઠળ એક મીટિંગ યોજાઈ હતી અને ધોરણ મુજબ એક્સપ્રેસવેના સંરેખણને ઠીક કરવાનો નિર્ણય લેવામાં આવ્યો હતો અને જેઆઈસીએ રેલિંગ પ્લાનમાં સમાવિષ્ટ એમઆરટીએસ પ્રોજેક્ટની મંજૂર સંરેખણ સાથે સુસંગત ટેકનિકલ, આર્થિક અને નાણાકીય પ્રોજેક્ટનો કાર્યક્ષમતા અને ડીએમઆઈસીડીસી માટે ૭ લેન એક્સપ્રેસવે રૂપરેખાંકનો માટે પ્રોજેક્ટ રિપોર્ટ તૈયાર કરવાની સૂચના મળેલ.

અમદાવાદની હાલની પ્રસ્તાવિત સંરેખણ - ડીએસઆઈઆરમાં ધોલેરા એક્સપ્રેસવે માત્ર ડીએસઆઈઆરના માસ્ટર પ્લાનમાં દર્શાવ્યા પ્રમાણે રોડ કોરિડોરને અનુસરે છે.

વધુમાં, એક્સપ્રેસવેના ઉપયોગ માટે જમીન ડીએસઆઈઆર દ્વારા પૂરી પાડવામાં આવી રહી છે અને એનએચએઆઈ ડીએસઆઈઆર ક્ષેત્રમાં કોઈ પણ જમીન હસ્તગત કરી રહી નથી.

- (બ) પ્રસ્તાવિત પરિયોજનાની સંરેખણ સહ્ય સરકાર તેમજ ભારત સરકારની મંજૂરી સાથે માસ રેપિડ ટ્રાન્ઝિટ સિસ્ટમ (એમઆરટીએસ) પ્રોજેક્ટની મંજૂરી સંરેખણ સાથે સુસંગત છે. એનએચએઆઈ નિશ્ચિત સંરેખણનું અમલીકરણ ઓશોરીટી છે. 20 મી જાન્યુઆરી, 2017 ના રોજ સીઇઓ અને એમડી, ડીએમઆઈસીડીસીની અધ્યક્ષતા હેઠળ એક મીટિંગ યોજાઈ હતી અને ધોરણ મુજબ એક્સપ્રેસવેના સંરેખણને ઠીક કરવાનો નિર્ણય લેવામાં આવ્યો હતો અને જેઆઈસીએ રેલિંગ પ્લાનમાં સમાવિષ્ટ એમઆરટીએસ પ્રોજેક્ટની મંજૂર સંરેખણ સાથે સુસંગત, ટેકનિકલ, આર્થિક અને નાણાકીય પ્રોજેક્ટનો કાર્યક્ષમતા અને ડીએમઆઈસીડીસી માટે ૭ લેન એક્સપ્રેસવે રૂપરેખાંકનો માટે પ્રોજેક્ટ રિપોર્ટ તૈયાર કરવાની સૂચના મળેલ.

અમદાવાદની હાલની પ્રસ્તાવિત સંરેખણ - ડીએસઆઈઆરમાં ધોલેરા એક્સપ્રેસવે માત્ર ડીએસઆઈઆરના માસ્ટર પ્લાનમાં દર્શાવ્યા પ્રમાણે રોડ કોરિડોરને અનુસરે છે.

વધુમાં, એક્સપ્રેસવેના ઉપયોગ માટે જમીન ડીએસઆઈઆર દ્વારા પૂરી પાડવામાં આવી રહી છે અને એનએચએઆઈ ડીએસઆઈઆર ક્ષેત્રમાં કોઈ પણ જમીન હસ્તગત કરી રહી નથી.


- (ક) તેના માટે અસર અને નિવારણ પગલાં FIA અદેવાલયા સામેલ કરવામાં આવ્યા છે. કૃપયા તેનો સંદર્ભ લો.



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| (૮) | <p>પ્રસ્તાવિત પરિયોજનાની સંરેખણ. રાજ્ય સરકાર લેમજ ભારત સરકારની મંજૂરી સાથે માસ રેપિડ ટ્રાન્ઝિટ સિસ્ટમ (એમઆરટીએસ) પ્રોજેક્ટની મંજૂરી સંરેખણ સાથે સુસંગત છે. એનએચએઆઈ નિશ્ચિત સંરેખણનું અમલીકરણ ઓથોરીટી છે. 20 મી જાન્યુઆરી. 2017 ના રોજ શીઠઓ અને એમડી, ડીએમઆઈસીડીઈની અધ્યક્ષતા હેઠળ એક મીટિંગ ડોજાઈ હતી અને ધોરણ મુજબ એક્સપ્રેસવેના સંરેખણને ઠીક કરવાનો નિર્ણય લેવામાં આવ્યો હતો અને જેઆઈસીએ રોલિંગ પ્લાનમાં સમાવિષ્ટ એમઆરટીએસ પ્રોજેક્ટની મંજૂર સંરેખણ સાથે સુસંગત. ટેકનિકલ, આર્થિક અને નાણાકીય પ્રોજેક્ટની કાર્યક્ષમતા અને ડીએમઆઈસીડીસી માટે ૭ લેન એક્સપ્રેસવે રૂપરેખાંકનો માટે પ્રોજેક્ટ રિપોર્ટ તૈયાર કરવાની સૂચના મળેલ.</p> |
|     | <p>અમદાવાદની હાલની પ્રસ્તાવિત સંરેખણ - ડીએસઆઈઆરમાં ધોલેરા એક્સપ્રેસવે માત્ર ડીએસઆઈઆરના માસ્ટર પ્લાનમાં દર્શાવ્યા પ્રમાણે રોડ કોરિડોરને અનુસરે છે.</p> <p>વધુમાં, એક્સપ્રેસવેના ઉપયોગ માટે જમીન ડીએસઆઈઆર દ્વારા પૂરી પાડવામાં આવી રહી છે અને એનએચએઆઈ ડીએસઆઈઆર ક્ષેત્રમાં કોઈ પણ જમીન હસ્તગત કરી રહી નથી.</p>  |
| 11. | <p>જીસીએમએ પાસેથી સીઆરએડ ભલામણ માટે દરખાસ્ત રજૂ કરવામાં આવી છે અને પ્રોજેક્ટ માટે પ્રક્રિયા હેઠળ છે. ધોલેરા એસઆઈઆર વિભાગમાં સીઆરએડની ભલામણ ડીએસઆઈઆરડીએ દ્વારા કરવામાં આવી છે.</p>  |

અ.ભ. રસેઈ,

આપનો વિશ્વસુ,

  
પ્રોજેક્ટ ડિરેક્ટર,

એન એચ એ આઈ.

પીઆઈસુ - અમદાવાદ.

નકલ રવાના -

1. વધુ માહિતી માટે કૃપયા સી.જી.એમ.(ટી) અને આર.ઓ., એનએચએઆઈ ગાંધીનગરનો સંપર્ક કરવો.





भारतीय राष्ट्रीय राजमार्ग प्राधिकरण  
(सड़क परिवहन और राजमार्ग मंत्रालय)

Tel : 079-26821062  
26821063  
E-mail : ahd@nhai.org

**National Highways Authority of India**  
(Ministry of Road Transport & Highways)

एकाई - 3A & 3B, द्वितीय मं, अमूल बिल्डिंग, निकट वेनू बैंक, वंगलपुर रोड, जीवराज पार्क, भावनगर - 380 051  
PIU - 3A & 3B, 2nd Floor, Amul Building, Nr. Dena Bank, Vajrapur Road, Jivraj Park, Ahmedabad - 380 051

No. NHAI/PIU-Ahmedabad/GPCB/2018/2463

Date: 16/11/2018

**To,**  
Dr. I.R. Gadhvi,  
Department of Marine Science,  
M.K. Bhavnagar University Science,  
Bhavnagar

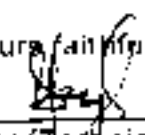
**Subject:** Consultancy services for project preparation of Feasibility study/Detailed Project Report of road stretches selected for DMICDC under Bharat Mala Scheme - Ahmedabad - Dholera Expressway (110 km) (Package No. NHAI/BM/71) under Bharatmala Pariyojana: **Reply to Dr. I.R. Gadhvi, Taluka & District - Bhavnagar received at Public Hearing dated 16-11-2018.**

Sir,

With reference to your queries, regarding security arrangements for wildlife on the Ahmedabad - Dholera Express Highway, cattle underpass (CUP) as per requirement has been taken into consideration for free movements of animals, sufficient numbers of culverts/CD structures have been provided as per the study of hydrologist of the consultant to avoid water logging in monsoon. The details of the culverts/CD structures have been provided in the EIA report. Sign boards, speed breakers and fencing will be provided for the safety of the animals and the provision of the same has been incorporated under section 5.6.4 in Chapter 5 of the EIA report.

Thanking you,

Yours faithfully,

  
General Manager (Technical) & Project Director

Copy to:

1. The CGM(Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please.



**भारतीय राष्ट्रीय राजमार्ग प्राधिकरण**

(सड़क परिवहन और राजमार्ग मंत्रालय)

**National Highways Authority of India**

(Ministry of Road Transport & Highways)

पता : 34 व 35, द्वितीय तल, अक्षय भिन्दीन, निगम देवा बैंक, केजपुर रोड, जीवाज पार्क, अहमदाबाद - 380 051  
 P.O. : 34 & 35, 2nd Floor, Arul Building, hr. Dena Bank, Vajapur Road, Jinnaj Park, Ahmedabad - 380 051.

D-5

Tel. : 079-26821062

26821063

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નંબર.એનએચએઆઈ/પીઆઈયુ/ભાવનગર/જી.પી.સી.બી./2018 3063

તા.16/11/2018

પ્રતિ,

ડૉ આઈ આર ગઢવી.

દરિયાઈ વિજ્ઞાન વિભાગ,

એમ.કે. ભાવનગર યુનિવર્સિટી સાયન્સ,

ભાવનગર

વિષય : ભારતભાગ્ય પરિયોજના હેઠળ ભારતભાગ્ય યોજના - અમદાવાદ-ધોલેરા એક્સપ્રેસવે (110 કિ.મી.) (પ્રોજેક્ટ નં. એનએચએઆઈ/બીએમ/ટા) હેઠળ ડીએમઆઈસીડીસી માટે માર્ગ બાંધકામના ક્રિઝિબિલિટી સ્ટડી વિગતવાર પ્રોજેક્ટ રિપોર્ટ તૈયાર કરવા માટે કન્સલ્ટન્ટની સર્વિસ : 16-11-2018ના રોજ યોજાયેલી જાહેર સુનાવણીમાં ડૉ. આઈ. આર. ગઢવી, જિલ્લો, ભાવનગર ના આવેદન પત્રનો જવાબ

સાહેબશ્રી,

અમદાવાદ-ધોલેરા એક્સપ્રેસ હાઇવે પર વન્યજીવનની સલામતી વ્યવસ્થા વિશે આપના પ્રશ્નોના સંદર્ભમાં પ્રાણીઓની ગતિવિધિઓને ધ્યાનમાં રાખીને, હાઈડ્રોલોજિસ્ટના અભ્યાસ મુજબ પૂરતી સંખ્યામાં કલ્કલ્સ / સીડી માળખામાં અને પથ્થુ માટેના અંકગણના પૂરા પાડવામાં આવ્યાં છે. ચોમાસામાં પ્રાણીના પ્રવેશને ટાળવા માટે સલાહકારની. સૂચન : પ્રમાણે કલ્કલ્સ / સીડી માળખાઓની વિગતો હાથાઈએ અહેવાલમાં પૂરી પાડવામાં આવી છે. પ્રાણીઓની સલામતી માટે સહન બોર્ડ, સ્પીડ બ્રેકર્સ અને ફેન્સીંગ પૂરું પાડવામાં આવશે અને તેનું જોગવાઈ હાથાઈએ અહેવાલના અધ્યાય : માં વિભાગ 5.6.4 હેઠળ સામેલ કરવામાં આવ્યું છે.

આભાર સહ,

આમનો વિશ્વાસુ

જનરલ મેનેજર (ટકવિહાર) પીઆઈયુ

પ્રોજેક્ટ ડિરેક્ટર. પીઆઈયુ - અમદાવાદ

નકલ રવાના :

1. વધુ માહિતી માટે કૃપયા સી.જી.એમ.(ટી) અને આર.ઓ., એનએચએઆઈ આંધ્રાપ્રદેશનો સંપર્ક કરવો.



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण (1) - 4

(सड़क परिवहन और राजमार्ग मंत्रालय)

National Highways Authority of India

(Ministry of Road Transport & Highways)

पता : 3A & 3B, 2nd Floor, Amul Building, Near Dena Bank, Vajrapur Road, Jyoti Park, Ahmedabad - 380 051

Ph : 3A & 3B, 2nd Floor, Amul Building, Near Dena Bank, Vajrapur Road, Jyoti Park, Ahmedabad - 380 051.

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No. : NHAI/PIU Ahmedabad/GPCR./2018/3111

Date: 16/11/2018

To,  
The Sarpanch,  
Gram Panchayat Adhelai,  
Village - Adhelai,  
Taluk & Dist. - Bhavnagar

**Subject:** Consultancy services for project preparation of Feasibility study/Detailed Project Report of road stretches selected for DMICDC Under Bharat Mala Scheme - Ahmedabad - Dholera Expressway (110 km) (Package No. NHAI/BM/21) under Bharatmala Pariyojana: **Reply to Sarpanch , Adhelai Gram Panchayat Village - Baviliyari, Taluka & District - Bhavnagar received at Public Hearing dated 16-11-2018.**

Sir,

Alignment of Expressway is fixed in conformity with approved alignment of Mass Rapid Transit System (MRTS) project with the approval of State Government as well as Government of India. NHAI is the implementing authority of the fixed alignment. A meeting was held on 20th January 2017 under chairmanship of CEO & MD, DMICDC and it was decided to fix alignment of Expressway as per standards and in conformity with approved alignment of MRTS project included in JICA Rolling Plan to establish the technical, economic and financial viability of the project and prepare project report for six lane expressway configurations for DMICDC.

The present proposed alignment of Ahmedabad - Dholera Expressway in DSIR only follows the road corridor as shown in the Master plan of DSIR for which said EC is already obtained.

Thanking you,

Yours faithfully,

General Manager (Technical)  
& Project Director

Copy to:

- The CGM(Tech) & Regional Officer (Gujarat), NHAI, Gandhinagar for kind information please.



ભારતીય રાષ્ટ્રીય રાજમાર્ગ પ્રાધિકરણ D-6

(સડક પરિવહન ઓર રાજમાર્ગ મંત્રાલય)

**National Highways Authority of India**

(Ministry of Road Transport & Highways)

વત્કાઈ : ૩૯ વ ૩૧, દ્વિતીય તલ, અમુલ બિલ્ડીંગ, ડેન્ડા બેંક પાસે, વેસ્ટપુર રોડ, ઝીવરાજ પાર્ક, અમદાવાદ - ૩૮૦ ૦૫૧

PAJ - ૩૪ & ૩૬, 2nd Floor, Amul Building, Nr. Dena Bank, Westpur Road, Zivraj Park, Ahmedabad - 380 051.

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નંબર. એનએચએઆઈ/ધીઆઈયુ/ભાવનગર/જી.પી.સી.બી./૨૦૧૮ મુલતી

તા 16/11/2018

પ્રતિ

સરપંચ,

ગ્રામ પંચાયત મુ. અધેળાઈ,

ગામ - અધેળાઈ,

તાલુકા અને જિ. ભાવનગર

વિષય : ભારતમાલા પરિયોજના હેઠળ ભારતમાલા યોજના - અમદાવાદ-ધોલેશ એક્સપ્રેસવે (110 કિ.મી.) (પ્રોજેક્ટ નં. એનએચએઆઈ/બીએમ/21) હેઠળ ડીએમઆઈસીડીસી માટે માર્ગ બાંધકામના ફિઝિબિલિટી સ્ટડી વિગતવાર પ્રોજેક્ટ રિપોર્ટ તૈયાર કરવા માટે કન્સલ્ટન્ટ્સ સર્વિસ : 16-11-2018ના રોજ યોજાયેલી અહેર સુનાવણીમાં સરપંચ, ગ્રામ - અધેળાઈ, તાલુકો - ભાવનગર, જિલ્લો ભાવનગર ના આવેદન પત્રનો જવાબ

સાહેબશ્રી,

પુસ્તાવિત પરિયોજનાની સંરેખણ રાજ્ય સરકાર તેમજ ભારત સરકારની મંજૂરી સાથે માસ રેપિડ ટ્રાન્ઝિટ સિસ્ટમ (એમઆરટીએસ) પ્રોજેક્ટની મંજૂરી સંરેખણ સાથે સુમંગલ છે એનએચએઆઈ નિશ્ચિત સંરેખણનું અમલીકરણ ઓથોરીટી છે. 20 મી જાન્યુઆરી, 2017 ના રોજ સીઇઓ અને એમડી, ડીએમઆઈસીડીસીની અધ્યક્ષતા હેઠળ એક મીટિંગ યોજાઈ હતી અને ધોરણ મુજબ એક્સપ્રેસવેના સંરેખણને ઠીક કરવાનો નિર્ણય લેવામાં આવ્યો હતો અને જેઆઈસીએ રેલિંગ પ્લાનમાં સમાવિષ્ટ એમઆરટીએસ પ્રોજેક્ટની મંજૂર સંરેખણ સાથે સુસંગત, ટેકનિકલ, આર્થિક અને નાણાકીય પ્રોજેક્ટની ગર્વક્ષમતા અને ડીએમઆઈસીડીસી માટે છ લેન એક્સપ્રેસવે રૂપરેખાંકનો માટે પ્રોજેક્ટ રિપોર્ટ તૈયાર કરવાની સૂચના મળેલ.

અમદાવાદના વર્તમાન પુસ્તાવિત સંરેખણ - ડીએમઆઈઆરમા ધોલેશ એક્સપ્રેસવે માત્ર ડીએમઆઈઆરના માસ્ટર પ્લાનમાં દર્શાવ્યા મુજબ રોડ કોરિડોરને અનુસરે છે, જેના માટે કસી સૂચનો પહેલેથી જ પ્રાપ્ત થઈ છે.

આભારભર,

ગાંધીનગર, ૧૬/૧૧/૨૦૧૮

જનરલ મેનેજર (ટેકનિકલ) અને

પ્રોજેક્ટ ડિરેક્ટર, ધીઆઈયુ - અમદાવાદ

નકલ રવાના :

1. વધુ માહિતી માટે રૂપરેખા સી.જી.એમ.(ટી) અને આર.ઓ. એનએચએઆઈ ગાંધીનગરનો સંપર્ક કરવો.

**ANNEXURE-X**  
**(DETAILED TREE**  
**INVENTORY)**

| Village Name | Survey No | Chainage  | Side | Girth Size | Height (in) | Tree Name | Tree Name | Number | Total   | Remarks                          |
|--------------|-----------|-----------|------|------------|-------------|-----------|-----------|--------|---------|----------------------------------|
| Sanathal     | 327 p     | At Rotary | LHS  | Nil        | Nil         | Nil       | Nil       | Nil    | Nil     | No tree                          |
|              | 948       | 0+400     | LHS  | 300        | 5           | Vakhudi   | Vakhudi   | 1      | Total-1 |                                  |
|              | 945       | 0+040     | RHS  | 170        | 5           | Khijdo    | Khijdo    | 1      | Total-1 |                                  |
|              |           | 0+485     | RHS  | 250        | 5           | Vakhadi   | Vakhadi   | 2      | Total-2 |                                  |
|              |           | 0+495     | RHS  | 270        | 3           | Vakhadi   | Vakhadi   |        |         | Baval jadi- 200 (less than 0+1 c |
|              | 928       | 1+010     | RHS  | 40         | 3           | Ambali    | Ambali    | 1      | Total-1 |                                  |
|              | 882       | 1+205     | RHS  | 120        | 7           | Nim       | Nim       | 1      | Total-1 |                                  |
|              | 825       | 1+270     | RHS  | 100        | 5           | Nim       | Nim       | 1      | Total-1 |                                  |
|              | 872       | 1+280     | RHS  | 130        | 4           | Nim       | Nim       | 5      |         |                                  |
|              |           | 1+285     | RHS  | 120        | 2           | Nim       | Baval     | 2      | Total-7 |                                  |
|              |           | 1+289     | RHS  | 150        | 5           | Nim       |           |        |         |                                  |
|              |           | 1+305     | LHS  | 40         | 5           | Nim       |           |        |         |                                  |
|              |           | 1+325     | LHS  | 200        | 5           | Baval     |           |        |         |                                  |
|              |           | 1+330     | LHS  | 30         | 4           | Nim       |           |        |         |                                  |
|              | 878       | 1+330     | LHS  | 100        | 3           | Baval     |           |        |         |                                  |
|              |           | 1+330     | LHS  | 100        | 4           | Baval     | Baval     | 1      |         |                                  |
|              |           | 1+330     | LHS  | 100        | 4           | Nim       | Nim       | 2      | Total-3 |                                  |
|              |           | 1+330     | LHS  | 70         | 3           | Nim       |           |        |         |                                  |
|              | 875       | 1+335     | LHS  | 200        | 7           | Baval     | Baval     | 2      | Total-2 |                                  |
|              |           | 1+335     | LHS  | 50         | 4           | Baval     |           |        |         |                                  |
|              | 873       | 1+500     | LHS  | 180        | 7           | Guda      | Guda      | 1      | Total-1 |                                  |
|              | 870       | 1+500     | RHS  | 170        | 3           | Nim       | Nim       | 1      | Total-1 |                                  |
|              | 825       | 1+500     | RHS  | 180        | 4           | Nim       | Nim       | 6      |         |                                  |
|              |           | 1+500     | RHS  | 200        | 7           | Nim       | Jabun     | 1      |         |                                  |
|              |           | 1+595     | RHS  | 150        | 5           | Nim       | Gudo      | 1      | Total-8 |                                  |
|              |           | 1+600     | RHS  | 900        | 4           | Nim       |           |        |         |                                  |
|              |           | 1+590     | RHS  | 70         | 4           | Nim       |           |        |         |                                  |
|              |           | 1+600     | RHS  | 90         | 5           | Nim       |           |        |         |                                  |
|              |           | 1+600     | RHS  | 170        | 10          | Jabun     |           |        |         |                                  |
|              |           | 1+600     | RHS  | 200        | 7           | Gudo      |           |        |         |                                  |
|              | 820       | 1+500     | RHS  | 150        | 6           | Baval     | Baval     | 1      |         |                                  |
|              |           | 1+500     | RHS  | 190        | 5           | Nim       | Nim       | 2      | Total-3 |                                  |

|      |       |     |     |            |          |  |  |             |                             |
|------|-------|-----|-----|------------|----------|--|--|-------------|-----------------------------|
| 817  | 1+580 | RHS | 100 | 5 Nim      |          |  |  | 3 Total- 3  |                             |
|      | 1+500 | RHS | 70  | 2 Nim      | Nim      |  |  |             |                             |
|      | 1+500 | RHS | 150 | 6 Nim      |          |  |  |             |                             |
|      | 1+880 | RHS | 160 | 6 Nim      |          |  |  |             |                             |
| 826  | 1+590 | RHS | 200 | 7 Nim      | Nim      |  |  | 1 Total- 1  |                             |
|      | 1+605 | RHS | 50  | 5 Nim      | Nim      |  |  | 4           |                             |
|      | 1+607 | RHS | 70  | 4 Nim      | Gulmohar |  |  | 1           |                             |
|      | 1+610 | RHS | 50  | 2 Gulmohar | Kanjo    |  |  | 1 Total- 6  |                             |
| 822  | 1+612 | RHS | 50  | 1 Kanjo    |          |  |  |             |                             |
|      | 1+650 | LHS | 270 | 7 Nim      |          |  |  |             |                             |
|      | 1+600 | RHS | 270 | 7 Nim      |          |  |  |             |                             |
|      | 1+720 | RHS | 100 | 10 Nim     | Nim      |  |  | 1 Total- 1  |                             |
| 1793 | 1+725 | RHS | 200 | 8 Jabun    | Jabun    |  |  | 2           |                             |
|      | 1+725 | RHS | 100 | 5 Jabun    | Nim      |  |  | 2           |                             |
|      | 1+660 | RHS | 100 | 5 Nim      | Vakhadi  |  |  | 1 Total- 5  |                             |
|      | 1+740 | LHS | 100 | 5 Nim      |          |  |  |             | 20 Babul Jadi (less than 0+ |
| 816  | 1+800 | RHS | 350 | 6 Vakhadi  |          |  |  |             |                             |
|      | 1+875 | RHS | 170 | 5 Jabun    | Jabun    |  |  | 1           |                             |
|      | 1+902 | RHS | 200 | 6 Nim      | Nim      |  |  | 1           |                             |
|      | 1+960 | RHS | 70  | 3 Baval    | Baval    |  |  | 1 Total- 3  |                             |
| 815  | 1+200 | RHS | 100 | 5 Khido    | Khido    |  |  | 1 Total- 1  |                             |
|      | 2+000 | RHS | 40  | 2 Vakhadi  | Vakhadi  |  |  | 1 Total- 1  |                             |
|      | 2+400 | LHS | 170 | 5 Guda     | Guda     |  |  | 4           |                             |
|      | 2+480 | LHS | 160 | 10 Nim     | Nim      |  |  | 3           |                             |
| 712  | 2+470 | LHS | 170 | 3 Nim      | Baval    |  |  | 1           |                             |
|      | 2+472 | LHS | 130 | 2 Guda     | Bor      |  |  | 2           |                             |
|      | 2+475 | LHS | 330 | 15 Guda    | AAM      |  |  | 1           |                             |
|      | 2+480 | LHS | 150 | 7 Baval    | Kul      |  |  | 1           |                             |
|      | 2+485 | LHS | 120 | 2 Bor      | Jabun    |  |  | 1 Total- 13 |                             |
|      | 2+490 | LHS | 200 | 5 Nim      |          |  |  |             |                             |
|      | 2+492 | LHS | 20  | 2 AAM      |          |  |  |             | 4 Nos+ (less than 0+1 cm)   |
|      | 2+492 | LHS | 20  | 3 Kul      |          |  |  |             |                             |
|      | 2+492 | LHS | 70  | 4 Jabun    |          |  |  |             |                             |
|      |       |     |     |            |          |  |  |             |                             |
|      |       |     |     |            |          |  |  |             |                             |
|      |       |     |     |            |          |  |  |             |                             |

Visalpur



|     |       |     |     |            |          |  |   |          |  |                             |
|-----|-------|-----|-----|------------|----------|--|---|----------|--|-----------------------------|
| 707 | 2+490 | LHS | 30  | 5 Bor      |          |  |   |          |  |                             |
|     | 2+492 | LHS | 90  | 6 Guda     |          |  |   |          |  |                             |
|     | 2+500 | RHS | 150 | 4 Gudo     | Gudo     |  | 1 |          |  | 200 Baval Jadi (less than 0 |
|     | 2+512 | RHS | 100 | 3 Gulmohar | Gulmohar |  | 1 |          |  |                             |
|     | 2+513 | RHS | 50  | 2 Khijdo   | Khijdo   |  | 1 |          |  |                             |
|     | 2+512 | RHS | 50  | 1 Lilgiri  | Lilgiri  |  | 2 |          |  |                             |
|     | 2+512 | RHS | 100 | 3 Lilgiri  | Nim      |  | 3 |          |  |                             |
|     | 2+513 | RHS | 200 | 5 Nim      | Baval    |  | 1 | Total- 9 |  |                             |
|     | 2+513 | RHS | 50  | 1 Baval    |          |  |   |          |  |                             |
|     | 2+512 | RHS | 250 | 7 Nim      |          |  |   |          |  |                             |
| 407 | 2+512 | RHS | 200 | 10 Nim     |          |  |   |          |  |                             |
|     | 2+555 | LHS | 90  | 5 Nim      | Nim      |  | 2 | Total- 2 |  |                             |
|     | 2+555 | LHS | 60  | 2 Nim      |          |  |   |          |  |                             |
|     | 2+590 | RHS | 100 | 3 Vakhadi  | Vakhadi  |  | 4 |          |  |                             |
|     | 2+590 | RHS | 300 | 5 Vakhadi  | Gudo     |  | 2 |          |  |                             |
|     | 2+590 | RHS | 200 | 3 Vakhadi  | Bor      |  | 2 | Total- 8 |  |                             |
|     | 2+590 | RHS | 150 | 4 Vakhadi  |          |  |   |          |  |                             |
|     | 2+715 | RHS | 120 | 5 Bor      |          |  |   |          |  |                             |
|     | 2+715 | RHS | 100 | 3 Bor      |          |  |   |          |  |                             |
|     | 2+655 | RHS | 40  | 1+5 Gudo   |          |  |   |          |  |                             |
| 627 | 2+680 | RHS | 170 | 10 Gudo    |          |  |   |          |  |                             |
|     | 3+000 | RHS | 120 | 5 Guda     | Guda     |  | 3 |          |  |                             |
|     | 3+010 | RHS | 200 | 7 Guda     | Nilgiri  |  | 1 |          |  |                             |
|     | 3+150 | LHS | 200 | 12 Nilgiri | Gulmohar |  | 4 | Total- 8 |  |                             |
|     | 3+200 | RHS | 130 | 6 Guda     |          |  |   |          |  |                             |
|     | 3+380 | LHS | 100 | 5 Gulmohar |          |  |   |          |  |                             |
|     | 3+340 | LHS | 160 | 5 Gulmohar |          |  |   |          |  |                             |
|     | 3+340 | LHS | 120 | 5 Gulmohar |          |  |   |          |  |                             |
|     | 3+340 | LHS | 120 | 5 Gulmohar |          |  |   |          |  |                             |
|     | 3+475 | LHS | 110 | 3 Guda     | Guda     |  | 1 | Total- 1 |  |                             |
| 219 | 3+810 | LHS | 150 | 4 Guda     | Guda     |  | 5 | Total- 5 |  |                             |
|     | 3+810 | LHS | 120 | 4 Guda     |          |  |   |          |  |                             |
|     | 3+810 | LHS | 120 | 4 Guda     |          |  |   |          |  |                             |

|     |       |     |     |    |           |           |  |   |                             |
|-----|-------|-----|-----|----|-----------|-----------|--|---|-----------------------------|
| 214 | 4+050 | RHS | 120 | 5  | Guda      |           |  |   |                             |
|     | 4+050 | RHS | 100 | 4  | Guda      |           |  |   |                             |
|     | 4+600 | LHS | 200 | 15 | Nilgiri   | Nilgiri   |  | 2 | Total- 5                    |
|     | 4+620 | LHS | 200 | 5  | Nilgiri   | Nilgiri   |  | 6 |                             |
|     | 4+666 | LHS | 60  | 3  | Nilgiri   | Jabun     |  | 3 |                             |
|     | 4+665 | LHS | 70  | 5  | Jabun     | Nim       |  | 2 |                             |
|     | 4+666 | LHS | 100 | 3  | Nim       | Guda      |  | 1 |                             |
|     | 4+667 | LHS | 120 | 5  | Jabun     | Khajur    |  | 1 |                             |
|     | 4+668 | LHS | 90  | 3  | Jabun     | Bor       |  | 1 |                             |
|     | 4+669 | LHS | 60  | 3  | Guda      | Gulmohar  |  | 3 |                             |
| 215 | 4+676 | LHS | 50  | 3  | Khajur    | Baval     |  | 4 |                             |
|     | 4+671 | LHS | 70  | 2  | Bor       | Gorasabal |  | 1 | Total-22                    |
|     | 4+710 | LHS | 100 | 5  | Gulmohar  |           |  |   |                             |
|     | 4+715 | LHS | 50  | 5  | Gulmohar  |           |  |   |                             |
|     | 4+720 | LHS | 60  | 4  | Gulmohar  |           |  |   |                             |
|     | 4+730 | LHS | 50  | 2  | Nim       |           |  |   |                             |
|     | 4+740 | LHS | 90  | 4  | Baval     |           |  |   |                             |
|     | 4+760 | LHS | 30  | 5  | Baval     |           |  |   |                             |
|     | 4+800 | LHS | 40  | 3  | Baval     |           |  |   |                             |
|     | 4+830 | LHS | 120 | 3  | Baval     |           |  |   | 10 Nos+ Babul Jadi (less th |
| 165 | 4+875 | LHS | 150 | 5  | Nilgiri   |           |  |   |                             |
|     | 4+880 | LHS | 130 | 5  | Nilgiri   |           |  |   |                             |
|     | 4+900 | RHS | 100 | 3  | Gorasabal |           |  |   |                             |
|     | 4+910 | RHS | 150 | 5  | Nilgiri   |           |  |   |                             |
|     | 4+920 | RHS | 200 | 5  | Nilgiri   |           |  |   |                             |
|     | 5+020 | RHS | 100 | 2  | Guda      | Guda      |  | 4 |                             |
|     | 5+025 | RHS | 150 | 15 | Nilgiri   | Nilgiri   |  | 1 |                             |
|     | 5+025 | RHS | 150 | 2  | Babul     | Babul     |  | 2 |                             |
|     | 5+070 | RHS | 200 | 5  | Guda      | Nim       |  | 1 | Total-8                     |
|     | 5+060 | RHS | 100 | 5  | Babul     |           |  |   |                             |
|     | 5+140 | RHS | 100 | 5  | Nim       |           |  |   |                             |
|     | 5+145 | RHS | 80  | 5  | Guda      |           |  |   |                             |
|     | 5+156 | RHS | 100 | 4  | Guda      |           |  |   |                             |
|     |       |     |     |    |           |           |  |   |                             |

|     |       |     |     |           |         |    |          |
|-----|-------|-----|-----|-----------|---------|----|----------|
| 187 | 5+320 | RHS | 150 | 5 Baval   | Baval   | 2  |          |
|     | 5+325 | RHS | 100 | 5 Baval   | Bor     | 1  |          |
|     | 5+325 | RHS | 100 | 4 Bor     | Nim     | 2  |          |
|     | 5+325 | RHS | 130 | 7 Nim     | Khijido | 1  |          |
|     | 5+380 | LHS | 350 | 15 Guda   | Guda    | 1  |          |
|     | 5+380 | LHS | 70  | 5 Nim     | Bor     | 1  | Total-8  |
|     | 5+385 | LHS | 60  | 4 Bor     |         |    |          |
|     | 5+390 | LHS | 40  | 3 Khijado |         |    |          |
| 188 | 5+440 | LHS | 60  | 3 Guda    | Guda    | 3  | Total-3  |
|     | 5+450 | LHS | 50  | 5 Guda    | Guda    |    |          |
|     | 5+440 | LHS | 60  | 3 Guda    | Guda    |    |          |
|     | 5+170 | RHS | 120 | 3 Bor     | Guda    | 2  |          |
|     | 5+171 | RHS | 120 | 3 Bor     | Bor     | 4  |          |
| 185 | 5+172 | RHS | 120 | 3 Bor     | Khijido | 2  |          |
|     | 5+380 | LHS | 500 | 15 Guda   | Jabun   | 1  | Total-9  |
|     | 5+440 | LHS | 100 | 5 Bor     |         |    |          |
|     | 5+340 | RHS | 100 | 4 Khijido |         |    |          |
|     | 5+350 | RHS | 100 | 5 Khijido |         |    |          |
|     | 5+500 | RHS | 100 | 5 Guda    |         |    |          |
|     | 5+510 | RHS | 100 | 3 Jabun   |         |    |          |
|     | 5+490 | LHS | 100 | 5 Nim     | Nim     | 1  |          |
| 194 | 5+490 | LHS | 100 | 7 Jabun   | Jabun   | 1  | Total-2  |
|     | 5+590 | LHS | 120 | 8 Nim     | Nim     | 5  |          |
| 195 | 5+595 | LHS | 100 | 7 Jabun   | Jabun   | 3  |          |
|     | 5+595 | LHS | 110 | 7 Jabun   | Baval   | 2  | Total-10 |
|     | 5+595 | LHS | 100 | 3 Baval   |         |    |          |
|     | 5+595 | LHS | 200 | 10 Jabun  |         |    |          |
|     | 5+596 | LHS | 100 | 7 Nim     |         |    |          |
|     | 5+597 | LHS | 200 | 10 Baval  |         |    |          |
|     | 5+597 | LHS | 200 | 10 Nim    |         |    |          |
|     | 5+641 | LHS | 80  | 7 Nim     |         |    |          |
|     | 5+642 | LHS | 100 | 5 Nim     |         |    |          |
|     | 5+520 | LHS | 100 | 7 Nim     | Nim     | 36 |          |

|       |     |     |             |           |   |          |                            |
|-------|-----|-----|-------------|-----------|---|----------|----------------------------|
| 5+520 | LHS | 200 | 5 Nim       | Bor       | 4 |          |                            |
| 5+530 | LHS | 50  | 5 Nim       | Aam       | 1 |          |                            |
| 5+540 | LHS | 60  | 5 Nim       | Jabun     | 3 |          | 5 Nos+ (less than 0+1 cm)  |
| 5+580 | RHS | 50  | 3 Bor       | Guda      | 2 |          |                            |
| 5+580 | RHS | 100 | 5 Nim       | Gorasabal | 1 |          |                            |
| 5+580 | RHS | 200 | 5 Aam       | Baval     | 2 |          |                            |
| 5+590 | RHS | 50  | 4 Bor       | Subaul    | 4 | Total-53 |                            |
| 5+600 | RHS | 150 | 7 Nim       |           |   |          |                            |
| 5+600 | RHS | 100 | 5 Nim       |           |   |          |                            |
| 5+605 | RHS | 200 | 7 Jabun     |           |   |          |                            |
| 5+605 | RHS | 100 | 5 Nim       |           |   |          |                            |
| 5+605 | RHS | 200 | 7 Nim       |           |   |          |                            |
| 5+610 | RHS | 40  | 3 Bor       |           |   |          |                            |
| 5+610 | RHS | 100 | 10 Nim      |           |   |          |                            |
| 5+610 | RHS | 100 | 5 Nim       |           |   |          |                            |
| 5+610 | RHS | 50  | 7 Nim       |           |   |          |                            |
| 5+610 | RHS | 92  | 5 Nim       |           |   |          |                            |
| 5+615 | RHS | 100 | 3 Bor       |           |   |          |                            |
| 5+615 | RHS | 200 | 5 Nim       |           |   |          |                            |
| 5+620 | RHS | 100 | 3 Jabun     |           |   |          |                            |
| 5+620 | RHS | 250 | 7 Jabun     |           |   |          |                            |
| 5+640 | RHS | 150 | 7 Nim       |           |   |          |                            |
| 5+640 | RHS | 80  | 3 Nim       |           |   |          |                            |
| 5+640 | RHS | 50  | 5 Nim       |           |   |          |                            |
| 5+641 | RHS | 100 | 7 Guda      |           |   |          |                            |
| 5+640 | RHS | 120 | 5 Gorasabal |           |   |          |                            |
| 5+641 | RHS | 100 | 5 Nim       |           |   |          |                            |
| 5+641 | RHS | 150 | 7 Baval     |           |   |          |                            |
| 5+643 | LHS | 150 | 6 Nim       |           |   |          |                            |
| 5+641 | LHS | 100 | 5 Nim       |           |   |          |                            |
| 5+644 | LHS | 120 | 7 Nim       |           |   |          |                            |
| 5+645 | LHS | 200 | 9 Nim       |           |   |          |                            |
| 5+645 | LHS | 20  | 1 Nim       |           |   |          | 10 Nos+ (less than 0+1 cm) |



[illegible]

|  |     |     |               |             |            |  |  |
|--|-----|-----|---------------|-------------|------------|--|--|
|  | RHS | 100 | 7 Nim         |             |            |  |  |
|  | RHS | 60  | 7 Nim         |             |            |  |  |
|  | RHS | 50  | 7 Nim         |             |            |  |  |
|  | RHS | 100 | 3 Guda        |             |            |  |  |
|  | RHS | 250 | 10 Kothi      |             |            |  |  |
|  | RHS | 100 | 5 Nim         |             |            |  |  |
|  | RHS | 100 | 7 Nim         |             |            |  |  |
|  | RHS | 60  | 4 Nim         | Nim         | 12         |  |  |
|  | RHS | 75  | 7 Nim         | Vakhadi     | 1          |  |  |
|  | RHS | 100 | 5 Nim         | Ambali      | 1          |  |  |
|  | RHS | 100 | 4 Nim         | Gulmohar    | 1          |  |  |
|  | RHS | 200 | 5 Vakhadi     | Guda        | 3          |  |  |
|  | RHS | 100 | 7 Nim         | Baval       | 2 Total-20 |  |  |
|  | RHS | 150 | 8+5 Nim       |             |            |  |  |
|  | RHS | 200 | 7 Ambali      |             |            |  |  |
|  | RHS | 100 | 5 Nim         |             |            |  |  |
|  | RHS | 150 | 10 Nim        |             |            |  |  |
|  | RHS | 200 | 7 Nim         |             |            |  |  |
|  | RHS | 60  | 3 Gulmohar    |             |            |  |  |
|  | RHS | 10  | 1 Nim         |             |            |  |  |
|  | RHS | 60  | 5 Guda        |             |            |  |  |
|  | RHS | 100 | 7 Guda        |             |            |  |  |
|  | RHS | 110 | 3 Guda        |             |            |  |  |
|  | RHS | 200 | 7 Nim         |             |            |  |  |
|  | RHS | 100 | 5 Nim         |             |            |  |  |
|  | RHS | 100 | 5 Baval       |             |            |  |  |
|  | RHS | 200 | 5 Baval       |             |            |  |  |
|  | LHS | 60  | 5 Guda        | Guda        | 16         |  |  |
|  | LHS | 100 | 6 Gora Sabali | Gora Sabali | 1          |  |  |
|  | LHS | 120 | 5 Guda        | Nim         | 19         |  |  |
|  | LHS | 200 | 7 Nim         | Jabun       | 4          |  |  |
|  | LHS | 150 | 5 Jabun       | Gulmohar    | 4          |  |  |
|  | LHS | 200 | 7 Guda        | Budum       | 1          |  |  |

|       |     |     |             |           |   |          |  |
|-------|-----|-----|-------------|-----------|---|----------|--|
|       | LHS | 150 | 5 Guda      | Babul     | 2 |          |  |
|       | LHS | 100 | 7 Gulmohar  | Aam       | 5 |          |  |
|       | LHS | 60  | 5 Gulmohar  | Gorasabal | 1 |          |  |
|       | LHS | 100 | 7 Guda      | Vakhadi   | 1 |          |  |
|       | LHS | 200 | 10 Gulmohar | Baval     | 1 |          |  |
| 5+910 | LHS | 170 | 7 Guda      | Pipali    | 1 |          |  |
| 5+915 | LHS | 60  | 6 Gulmohar  | Abali     | 1 | Total-57 |  |
| 5+916 | LHS | 50  | 3 Budum     |           |   |          |  |
| 5+917 | LHS | 150 | 7 Nim       |           |   |          |  |
|       | LHS | 150 | 7 Nim       |           |   |          |  |
|       | LHS | 80  | 7 Nim       |           |   |          |  |
|       | LHS | 100 | 5 Babul     |           |   |          |  |
|       | LHS | 100 | 7 Nim       |           |   |          |  |
|       | LHS | 60  | 10 Nim      |           |   |          |  |
|       | LHS | 60  | 5 Babul     |           |   |          |  |
|       | LHS | 100 | 7 Nim       |           |   |          |  |
|       | LHS | 200 | 8 Nim       |           |   |          |  |
|       | LHS | 200 | 5 Guda      |           |   |          |  |
| 5+800 | RHS | 60  | 7 Aam       |           |   |          |  |
| 5+810 | RHS | 80  | 7 Aam       |           |   |          |  |
| 5+815 | RHS | 100 | 6 Aam       |           |   |          |  |
| 8+820 | RHS | 100 | 10 Aam      |           |   |          |  |
| 5+825 | RHS | 200 | 10 Guda     |           |   |          |  |
| 5+830 | RHS | 80  | 5 Guda      |           |   |          |  |
| 5+835 | RHS | 100 | 5 Aam       |           |   |          |  |
| 5+840 | RHS | 100 | 7 Guda      |           |   |          |  |
| 5+845 | RHS | 120 | 5 Jabun     |           |   |          |  |
| 5+850 | RHS | 60  | 7 Nim       |           |   |          |  |
| 5+855 | RHS | 200 | 10 Guda     |           |   |          |  |
| 5+860 | RHS | 100 | 7 Gorasabal |           |   |          |  |
| 5+865 | RHS | 60  | 3 Guda      |           |   |          |  |
| 5+870 | RHS | 70  | 7 Nim       |           |   |          |  |
| 5+871 | RHS | 100 | 7 Nim       |           |   |          |  |



|                   |     |     |           |        |    |            |  |
|-------------------|-----|-----|-----------|--------|----|------------|--|
| 5+872             | RHS | 100 | 3 Vakhadi |        |    |            |  |
| 5+875             | RHS | 250 | 10 Nim    |        |    |            |  |
| 5+878             | RHS | 70  | 5 Nim     |        |    |            |  |
| 5+880             | RHS | 80  | 6 Guda    |        |    |            |  |
| 5+882             | RHS | 250 | 10 Guda   |        |    |            |  |
| 5+885             | RHS | 100 | 5 Guda    |        |    |            |  |
| 5+887             | RHS | 100 | 6 Baval   |        |    |            |  |
| 5+889             | RHS | 250 | 15 Pipali |        |    |            |  |
| 5+890 to<br>5+900 | RHS | 100 | 7 Nim     |        |    |            |  |
|                   | RHS | 100 | 10 Guda   |        |    |            |  |
|                   | RHS | 110 | 10 Nim    |        |    |            |  |
|                   | RHS | 100 | 8 Nim     |        |    |            |  |
|                   | RHS | 80  | 5 Jabun   |        |    |            |  |
|                   | RHS | 80  | 5 Jabun   |        |    |            |  |
|                   | RHS | 150 | 7 Nim     |        |    |            |  |
|                   | RHS | 200 | 7 Nim     |        |    |            |  |
|                   | RHS | 100 | 10 Abali  |        |    |            |  |
|                   | RHS | 170 | 7 Nim     |        |    |            |  |
|                   | LHS | 120 | 7 Kanjo   | Kanjo  | 6  |            |  |
|                   | LHS | 200 | 5 Nim     | Nim    | 2  |            |  |
|                   | LHS | 20  | 4 Guda    | Guda   | 13 |            |  |
|                   | LHS | 200 | 7 Guda    | Aam    | 5  |            |  |
|                   | LHS | 100 | 4 Nim     | Jabun  | 1  |            |  |
|                   | LHS | 100 | 4 Aam     | Pipal  | 1  |            |  |
|                   | LHS | 100 | 5 Aam     | Bor    | 2  |            |  |
|                   | LHS | 60  | 4 Aam     | Abali  | 3  |            |  |
|                   | LHS | 200 | 7 Aam     | Ambali | 1  | Total - 34 |  |
|                   | LHS | 150 | 5 Aam     |        |    |            |  |
|                   | LHS | 60  | 4 Guda    |        |    |            |  |
|                   | LHS | 100 | 5 Jabun   |        |    |            |  |
|                   | LHS | 100 | 5 Kanjo   |        |    |            |  |
|                   | LHS | 60  | 7 Kanjo   |        |    |            |  |
|                   | LHS | 50  | 10 Kanjo  |        |    |            |  |

|     |                   |     |                   |            |           |        |   |           |
|-----|-------------------|-----|-------------------|------------|-----------|--------|---|-----------|
| 325 | 5+800 to<br>5+910 | LHS | 70                | 8 Kanjo    |           |        |   |           |
|     |                   | LHS | 120               | 5 Kanjo    |           |        |   |           |
|     |                   | LHS | 100               | 5 Guda     |           |        |   |           |
|     |                   | LHS | 100               | 7 Guda     |           |        |   |           |
|     |                   | LHS | 60                | 4 Guda     |           |        |   |           |
|     |                   | LHS | 100               | 5 Guda     |           |        |   |           |
|     |                   | LHS | 120               | 5 Guda     |           |        |   |           |
|     |                   | LHS | 100               | 4 Guda     |           |        |   |           |
|     |                   | RHS | 100               | 5 Guda     |           |        |   |           |
|     |                   | RHS | 60                | 5 Pipal    |           |        |   |           |
|     |                   | RHS | 30                | 4 Bor      |           |        |   |           |
|     |                   | RHS | 60                | 5 Bor      |           |        |   |           |
|     |                   | RHS | 100               | 6 Abali    |           |        |   |           |
|     |                   | RHS | 30                | 5 Abali    |           |        |   |           |
|     |                   | RHS | 40                | 7 Abali    |           |        |   |           |
|     |                   | RHS | 50                | 5 Guda     |           |        |   |           |
|     |                   | RHS | 100               | 7 Guda     |           |        |   |           |
|     |                   | 327 | 5+920 to<br>5+970 | RHS        | 120       | 3 Guda |   |           |
| RHS | 40                |     |                   | 3 Ambali   |           |        |   |           |
| LHS | 100               |     |                   | 5 Jabun    | Jabun     |        | 1 |           |
| LHS | 100               |     |                   | 7 Aam      | Aam       |        | 2 |           |
| LHS | 60                |     |                   | 3 Gulmohar | Gulmohar  |        | 5 |           |
| LHS | 150               |     |                   | 5 Nilgiri  | Nilgiri   |        | 4 |           |
| LHS | 80                |     |                   | 4 Gulmohar | Nim       |        | 5 |           |
| LHS | 100               |     |                   | 5 Aam      | Guda      |        | 3 |           |
| LHS | 200               |     |                   | 7 Nim      | Pipal     |        | 1 |           |
| LHS | 200               |     |                   | 10 Nilgiri | Badam     |        | 1 |           |
| LHS | 200               |     |                   | 10 Nilgiri | Ambli     |        | 1 |           |
| LHS | 150               |     |                   | 5 Nim      | Badam     |        | 1 |           |
| LHS | 200               |     |                   | 9 Nilgiri  | Aasopalav |        | 1 | Total -25 |
| LHS | 100               |     |                   | 5 Nim      |           |        |   |           |
| LHS | 100               |     |                   | 7 Guda     |           |        | 1 |           |
| LHS | 50                |     |                   | 5 Gulmohar |           |        |   |           |

|     |                |     |     |             |          |  |   |            |  |
|-----|----------------|-----|-----|-------------|----------|--|---|------------|--|
| 345 | 5+970 to 5+975 | LHS | 200 | 3 Pipal     |          |  |   |            |  |
|     |                | LHS | 50  | 4 Badam     |          |  |   |            |  |
|     |                | LHS | 100 | 5 Ambli     |          |  |   |            |  |
|     |                | LHS | 200 | 7 Guda      |          |  |   |            |  |
|     |                | LHS | 100 | 5 Nim       |          |  |   |            |  |
|     | 5+975          | LHS | 120 | 7 Badam     |          |  |   |            |  |
|     | 5+979          | LHS | 80  | 7 Nim       |          |  |   |            |  |
|     | 5+978          | LHS | 75  | 5 Guda      |          |  |   |            |  |
|     | 5+979          | LHS | 35  | 7 Aasopalav |          |  |   |            |  |
|     | 5+980          | LHS | 100 | 5 Gulmohar  |          |  |   |            |  |
| 346 | 5+982          | LHS | 120 | 7 Gulmohar  |          |  |   |            |  |
|     | 5+985          | LHS | 100 | 6 Jabun     | Jabun    |  | 5 |            |  |
|     | 5+992          | LHS | 100 | 7 Jabun     | Nim      |  | 9 |            |  |
|     | 5+991          | LHS | 100 | 6 Jabun     | Gulmohar |  | 4 |            |  |
|     | 5+992          | LHS | 60  | 7 Nim       | Guda     |  | 2 | Total - 20 |  |
|     | 6+002          | LHS | 70  | 10 Nim      |          |  |   |            |  |
|     | 6+003          | LHS | 100 | 7 Nim       |          |  |   |            |  |
|     | 6+004          | LHS | 100 | 5 Nim       |          |  |   |            |  |
|     | 6+005          | LHS | 70  | 7 Gulmohar  |          |  |   |            |  |
|     | 6+006          | LHS | 100 | 3 Gulmohar  |          |  |   |            |  |
|     | 6+007          | LHS | 200 | 10 Gulmohar |          |  |   |            |  |
|     | 6+006          | LHS | 150 | 7 Nim       |          |  |   |            |  |
|     | 6+007          | LHS | 100 | 5 Nim       |          |  |   |            |  |
|     | 6+008          | LHS | 200 | 10 Jabun    |          |  |   |            |  |
|     | 6+009          | LHS | 80  | 5 Nim       |          |  |   |            |  |
|     | 6+010          | LHS | 80  | 5 Nim       |          |  |   |            |  |
|     | 6+015          | LHS | 100 | 7 Nim       |          |  |   |            |  |
|     | 6+019          | LHS | 200 | 5 Guda      |          |  |   |            |  |
|     | 6+020          | RHS | 100 | 5 Gulmohar  |          |  |   |            |  |
|     | 6+021 to 6+080 | RHS | 150 | 3 Jabun     |          |  |   |            |  |
|     |                | RHS | 70  | 5 Guda      |          |  |   |            |  |
|     | 6+001          | LHS | 20  | 1 Babul     | Babul    |  | 1 | Total - 1  |  |

|     |                   |     |     |              |            |   |           |
|-----|-------------------|-----|-----|--------------|------------|---|-----------|
| 350 | 5+900 to<br>6+020 | RHS | 200 | 7 Nim        | Nim        | 4 |           |
|     |                   | RHS | 150 | 5 Nim        | Gulmohar   | 2 | Total -6  |
|     |                   | RHS | 50  | 4 Gulmohar   |            |   |           |
|     |                   | RHS | 50  | 5 Gulmohar   |            |   |           |
|     |                   | RHS | 50  | 4 Nim        |            |   |           |
| 349 |                   | RHS | 70  | 7 Nim        |            |   |           |
|     |                   | RHS | 100 | 7 Khijdo     | Khijdo     | 3 |           |
|     |                   | RHS | 100 | 5 Nim        | Nim        | 3 |           |
|     |                   | RHS | 150 | 7 Khijdo     | Bawal      | 1 | Total -7  |
|     |                   | RHS | 70  | 5 Nim        |            |   |           |
| 344 |                   | RHS | 80  | 4 Nim        |            |   |           |
|     |                   | RHS | 100 | 7 Khijdo     |            |   |           |
|     |                   | RHS | 70  | 5 Bawal      |            |   |           |
|     |                   | LHS | 100 | 5 Babul      | Babul      | 5 |           |
|     |                   | LHS | 100 | 5 Babul      | Asopulav   | 1 |           |
| 341 |                   | LHS | 120 | 7 Babul      | Gorasabali | 1 |           |
|     |                   | LHS | 120 | 6 Babul      | Nim        | 2 |           |
|     |                   | LHS | 60  | 6 Asopulav   | Gulmohar   | 1 |           |
|     |                   | LHS | 80  | 3 Gorasabali | Badam      | 1 |           |
|     |                   | LHS | 100 | 5 Nim        | Guda       | 1 | Total -12 |
| 343 |                   | LHS | 150 | 7 Babul      |            |   |           |
|     |                   | LHS | 100 | 10 Gulmohar  |            |   |           |
|     |                   | LHS | 80  | 5 Badam      |            |   |           |
|     |                   | LHS | 10  | 2 Nim        |            |   |           |
|     |                   | LHS | 60  | 4 Guda       |            |   |           |
| 343 |                   | RHS | 60  | 5 Suryvo     | Suryvo     | 1 |           |
|     |                   | RHS | 50  | 5 Nim        | Nim        | 1 |           |
|     |                   | RHS | 80  | 3 Jadi       | Jadi       | 1 | Total -3  |
|     |                   | LHS | 130 | 7 Nim        | Nim        | 3 |           |
|     |                   | LHS | 75  | 5 Guda       | Guda       | 1 |           |
|     | 6+021             | RHS | 100 | 5 Bor        | Bor        | 2 | Total -6  |
|     |                   | RHS | 60  | 2 Bor        |            |   |           |
|     |                   |     |     |              |            |   |           |
|     |                   |     |     |              |            |   |           |
|     |                   |     |     |              |            |   |           |

10 nos+ Babul Jadi (less th.



|       |     |     |            |          |              |  |  |  |                                   |
|-------|-----|-----|------------|----------|--------------|--|--|--|-----------------------------------|
|       | RHS | 100 | 5 Nim      |          |              |  |  |  |                                   |
| 6+137 | RHS | 50  | 3 Nim      |          |              |  |  |  |                                   |
| 6+139 | LHS | 40  | 4 Guda     |          |              |  |  |  |                                   |
| 6+14  | LHS | 50  | 7 Gulmohor | Gulmohor | 4            |  |  |  |                                   |
| 6+141 | LHS | 100 | 5 Asopulav | Asopulav | 2            |  |  |  |                                   |
| 6+142 | LHS | 120 | 7 Asopulav | Sevun    | 1            |  |  |  |                                   |
| 6+143 | LHS | 100 | 4 Sevun    | Nim      | 20           |  |  |  |                                   |
| 6+144 | LHS | 100 | 5 Nim      | Jabu     | 4            |  |  |  |                                   |
| 6+145 | LHS | 80  | 5 Nim      | Rayan    | 1            |  |  |  |                                   |
| 6+146 | LHS | 150 | 3 Nim      | Baval    | 12           |  |  |  |                                   |
| 6+15  | LHS | 90  | 4 Nim      | Saragavo | 1            |  |  |  |                                   |
| 6+155 | LHS | 80  | 2 Nim      | Abali    | 1            |  |  |  |                                   |
| 6+16  | LHS | 90  | 3 Nim      | Jasud    | 1            |  |  |  |                                   |
| 6+162 | LHS | 100 | 4 Jabu     |          | 1 Total - 49 |  |  |  |                                   |
| 6+163 | LHS | 90  | 5 Rayan    |          |              |  |  |  |                                   |
| 6+166 | LHS | 50  | 2 Nim      |          |              |  |  |  |                                   |
| 6+17  | LHS | 100 | 2 Baval    |          |              |  |  |  |                                   |
| 6+175 | LHS | 60  | 4 Gulmohor |          |              |  |  |  | 5 nos+ Babul Jadi (less than 50)  |
| 6+18  | LHS | 30  | 2 Jabu     |          |              |  |  |  |                                   |
| 6+185 | LHS | 80  | 1 Nim      |          |              |  |  |  |                                   |
| 6+19  | LHS | 100 | 1 Gulmohor |          |              |  |  |  |                                   |
| 6+195 | LHS | 90  | 7 Nim      |          |              |  |  |  |                                   |
| 6+197 | LHS | 50  | 5 Nim      |          |              |  |  |  |                                   |
| 6+199 | LHS | 70  | 7 Nim      |          |              |  |  |  |                                   |
| 6+2   | LHS | 100 | 1 Baval    |          |              |  |  |  |                                   |
| 6+204 | LHS | 120 | 5 Baval    |          |              |  |  |  |                                   |
| 6+207 | LHS | 90  | 6 Nim      |          |              |  |  |  | 50 nos+ Babul Jadi (less than 50) |
| 6+208 | LHS | 100 | 4 Nim      |          |              |  |  |  |                                   |
| 6+21  | LHS | 100 | 5 Saragavo |          |              |  |  |  |                                   |
| 6+213 | LHS | 100 | 4 Gulmohor |          |              |  |  |  |                                   |
| 6+219 | LHS | 10  | 6 Baval    |          |              |  |  |  |                                   |
| 6+22  | LHS | 90  | 2 Baval    |          |              |  |  |  |                                   |
| 6+225 | LHS | 100 | 4 Baval    |          |              |  |  |  |                                   |

|  |       |     |     |     |  |  |  |         |       |    |           |                             |
|--|-------|-----|-----|-----|--|--|--|---------|-------|----|-----------|-----------------------------|
|  | 6+23  | LHS | 50  |     |  |  |  | 6 Baval |       |    |           |                             |
|  | 6+235 | LHS | 80  |     |  |  |  | 3 Baval |       |    |           |                             |
|  | 6+24  | LHS | 90  |     |  |  |  | 5 Baval |       |    |           |                             |
|  | 6+244 | LHS | 90  |     |  |  |  | 4 Nim   |       |    |           |                             |
|  | 6+245 | LHS | 100 |     |  |  |  | 2 Baval |       |    |           |                             |
|  | 6+253 | LHS | 200 |     |  |  |  | 3 Baval |       |    |           |                             |
|  | 6+257 | LHS | 100 |     |  |  |  | 4 Baval |       |    |           |                             |
|  | 6+26  | LHS | 90  |     |  |  |  | 6 Nim   |       |    |           |                             |
|  | 6+267 | LHS | 50  |     |  |  |  | 3 Nim   |       |    |           |                             |
|  | 6+27  | LHS | 200 |     |  |  |  | 2 Nim   |       |    |           |                             |
|  | 6+275 | LHS | 40  |     |  |  |  | 3 Nim   |       |    |           | 20 nos+ Babul Jadi (less th |
|  | 6+278 | LHS | 50  |     |  |  |  | 1 Jabu  |       |    |           | 20 nos+ Babul Jadi (less th |
|  | 6+28  | LHS | 80  |     |  |  |  | 2 Nim   |       |    |           |                             |
|  | 6+283 | LHS | 90  |     |  |  |  | 3 Abali |       |    |           |                             |
|  | 6+287 | LHS | 70  |     |  |  |  | 2 Nim   |       |    |           |                             |
|  | 6+29  | LHS | 90  |     |  |  |  | 3 Jabu  |       |    |           |                             |
|  | 6+295 | LHS | 40  | 0+5 |  |  |  | Jasud   |       |    |           |                             |
|  | 6+24  | LHS | 100 |     |  |  |  | 3 Baval |       |    |           |                             |
|  | 6+245 | LHS | 150 |     |  |  |  | 4 Baval | Baval | 14 |           |                             |
|  | 6+25  | LHS | 150 |     |  |  |  | 3 Baval | Bavul | 1  | Total- 15 |                             |
|  | 6+252 | LHS | 60  |     |  |  |  | 2 Baval |       |    |           |                             |
|  | 6+3   | LHS | 40  |     |  |  |  | 3 Baval |       |    |           |                             |
|  | 6+31  | LHS | 50  |     |  |  |  | 2 Baval |       |    |           |                             |
|  | 6+315 | LHS | 90  |     |  |  |  | 3 Baval |       |    |           |                             |
|  | 6+317 | LHS | 80  |     |  |  |  | 2 Baval |       |    |           |                             |
|  | 6+318 | LHS | 90  |     |  |  |  | 3 Baval |       |    |           |                             |
|  | 6+319 | LHS | 70  |     |  |  |  | 4 Baval |       |    |           |                             |
|  | 6+32  | LHS | 100 |     |  |  |  | 3 Baval |       |    |           |                             |
|  | 6+322 | LHS | 60  |     |  |  |  | 2 Baval |       |    |           |                             |
|  | 6+322 | LHS | 60  | 1+5 |  |  |  | Baval   |       |    |           |                             |
|  | 6+322 | LHS | 70  |     |  |  |  | 3 Baval |       |    |           |                             |
|  | 6+242 | RHS | 90  |     |  |  |  | 2 Bavul |       |    |           |                             |
|  | 6+25  | RHS | 200 |     |  |  |  | 3 Nim   | Nim   | 1  |           |                             |

|     |       |     |     |            |          |   |            |                              |
|-----|-------|-----|-----|------------|----------|---|------------|------------------------------|
| 57  | 6+254 | RHS | 80  | 3 Khijado  | Khijado  | 2 |            |                              |
|     | 6+257 | RHS | 90  | 2 Khijado  | Bavul    | 3 | Total - 6  | 150 nos+ Babul Jadi (less t) |
|     | 6+32  | RHS | 200 | 5 Bavul    |          |   |            |                              |
|     | 6+34  | RHS | 100 | 7 Bavul    |          |   |            |                              |
|     | 6+35  | RHS | 100 | 8 Bavul    |          |   |            |                              |
| 297 | 6+42  | LHS | 150 | 10 Nim     | Nim      | 2 | Total - 2  |                              |
|     | 6+482 | LHS | 150 | 5 Nim      |          |   |            |                              |
|     | 6+65  | LHS | 200 | 5 Guda     | Guda     | 1 | Total - 1  |                              |
|     | 6+51  | RHS | 200 | 10 Babul   | Babul    | 1 | Total - 1  |                              |
|     | 6+653 | LHS | 150 | 6 Nim      | Nim      | 1 |            |                              |
| 302 | 6+654 | LHS | 70  | 7 Babul    | Babul    | 1 |            |                              |
|     | 6+655 | LHS | 20  | 10 Vekhdi  | Vekhdi   | 1 | Total - 3  |                              |
|     | 6+85  | RHS | 100 | 8 Khijado  | Khijado  | 1 | Total - 1  |                              |
|     | 6+57  | RHS | 100 | 5 Babul    | Babul    | 6 |            |                              |
|     | 6+8   | RHS | 300 | 5 Nim      | Nim      | 8 |            |                              |
| 306 | 6+8   | LHS | 100 | 7 Ambuhi   | Ambali   | 1 |            |                              |
|     | 6+801 | LHS | 30  | 2 Khesor   | Shru     | 1 |            |                              |
|     | 6+802 | LHS | 60  | 5 Nim      | Melundi  | 1 |            |                              |
|     | 6+805 | RHS | 300 | 5 Nim      | Bavul    | 1 |            | 200 nos+ Babul Jadi (less t) |
|     | 6+805 | LHS | 50  | 5 Gulmohor | Ambuhl   | 1 |            |                              |
|     | 6+806 | RHS | 100 | 5 Nim      | Khesor   | 1 |            |                              |
|     | 6+807 | LHS | 100 | 7 Babul    | Gulmohor | 1 |            |                              |
|     | 6+81  | LHS | 60  | 5 Babul    | Babul    | 5 |            |                              |
|     | 6+81  | LHS | 60  | 5 Babul    | Nilgiri  | 1 |            |                              |
|     | 6+811 | LHS | 50  | 7 Babul    | Khijado  | 1 | Total - 28 |                              |
|     | 6+812 | LHS | 20  | 2 Babul    |          |   |            |                              |
|     | 6+815 | LHS | 70  | 8 Nilgiri  |          |   |            |                              |
|     | 6+816 | LHS | 100 | 7 Nim      |          |   |            |                              |
|     | 6+82  | LHS | 100 | 5 Khijado  |          |   |            |                              |
|     | 6+82  | RHS | 100 | 10 Babul   |          |   |            |                              |
|     | 6+82  | RHS | 70  | 5 Nim      |          |   |            |                              |
|     | 6+821 | RHS | 200 | 10 Ambali  |          |   |            |                              |
|     | 6+822 | RHS | 100 | 7 Babul    |          |   |            |                              |



|     |       |     |     |    |         |         |  |   |          |  |                              |                             |
|-----|-------|-----|-----|----|---------|---------|--|---|----------|--|------------------------------|-----------------------------|
|     | 6+823 | RHS | 100 | 7  | Babul   |         |  |   |          |  |                              |                             |
|     | 6+824 | RHS | 60  | 5  | Nim     |         |  |   |          |  |                              |                             |
|     | 6+825 | RHS | 60  | 3  | Babul   |         |  |   |          |  |                              |                             |
|     | 6+826 | RHS | 30  | 2  | Shru    |         |  |   |          |  |                              |                             |
|     | 6+827 | RHS | 30  | 1  | Melundi |         |  |   |          |  |                              | 20 nos+ Babul Jadi (less th |
|     | 6+828 | RHS | 100 | 7  | Bavul   |         |  |   |          |  |                              |                             |
|     | 6+83  | RHS | 100 | 6  | Nim     |         |  |   |          |  |                              |                             |
|     | 6+831 | RHS | 100 | 7  | Babul   |         |  |   |          |  |                              |                             |
|     | 7+08  | RHS | 100 | 7  | Bavul   |         |  |   |          |  |                              |                             |
| 523 | 7+11  | RHS | 100 | 5  | Bavul   |         |  |   |          |  |                              |                             |
|     | 7+159 | RHS | 100 | 7  | Bavul   |         |  |   |          |  |                              |                             |
|     | 7+92  | RHS | 100 | 7  | Bavul   | Bavul   |  | 3 | Total -3 |  | 5 nos+ Babul Jadi (less thar |                             |
| 404 | 8+1   | RHS | 100 | 7  | Khijudo | Khijudo |  | 1 | Total -2 |  |                              |                             |
|     | 7+82  | RHS | 100 | 7  | Nilgiri | Nilgiri |  | 1 | Total -1 |  |                              |                             |
| 414 | 7+25  | RHS | 250 | 5  | Khijudo | Khijudo |  | 1 | Total -1 |  |                              |                             |
| 505 | 7+3   | RHS | 100 | 7  | Guda    | Guda    |  | 1 | Total -1 |  |                              |                             |
| 466 | 7+4   | RHS | 100 | 5  | Guda    | Guda    |  | 1 |          |  |                              |                             |
|     | 7+76  | LHS | 150 | 5  | Nim     | Nim     |  | 1 |          |  |                              |                             |
| 416 | 7+761 | LHS | 60  | 7  | Khijudo | Khijudo |  | 1 |          |  |                              |                             |
|     | 7+762 | LHS | 100 | 8  | Ruin    | Ruin    |  | 1 | Total -3 |  |                              |                             |
| 396 | 8+15  | RHS | 150 | 5  | Nim     | Nim     |  | 1 | Total -1 |  |                              |                             |
|     | 8+187 | RHS | 300 | 10 | Duda    | Duda    |  | 1 |          |  |                              |                             |
|     | 8+24  | RHS | 100 | 7  | Bavul   | Bavul   |  | 6 |          |  |                              |                             |
|     | 8+241 | RHS | 100 | 5  | Bavul   | Babul   |  | 1 | Total -8 |  |                              |                             |
| 395 | 8+245 | RHS | 60  | 7  | Bavul   |         |  |   |          |  |                              |                             |
|     | 8+246 | RHS | 70  | 5  | Bavul   |         |  |   |          |  |                              |                             |
|     | 8+247 | RHS | 70  | 5  | Bavul   |         |  |   |          |  |                              |                             |
|     | 8+248 | RHS | 100 | 4  | Bavul   |         |  |   |          |  |                              |                             |
|     | 8+248 | RHS | 70  | 4  | Babul   |         |  |   |          |  |                              |                             |
|     | 8+26  | RHS | 60  | 5  | Nim     | Nim     |  | 2 |          |  |                              |                             |
|     | 8+26  | RHS | 80  | 7  | Pipul   | Pipul   |  | 3 |          |  |                              |                             |
|     | 8+261 | RHS | 100 | 5  | Babul   | Babul   |  | 1 |          |  |                              |                             |
| 394 | 8+35  | RHS | 100 | 5  | Nim     | Amuli   |  | 1 | Total -7 |  |                              |                             |

|     |       |     |     |    |         |         |   |           |  |                              |
|-----|-------|-----|-----|----|---------|---------|---|-----------|--|------------------------------|
| 668 | 8+325 | RHS | 60  | 5  | Amuli   |         |   |           |  |                              |
|     | 8+326 | RHS | 100 | 7  | Pipul   |         |   |           |  |                              |
|     | 8+327 | RHS | 100 | 5  | Pipul   |         |   |           |  |                              |
|     | 8+328 | RHS | 60  | 5  | Amuli   | Amuli   | 1 |           |  |                              |
|     | 8+329 | RHS | 50  | 7  | Bor     | Bor     | 1 |           |  |                              |
|     | 8+33  | RHS | 60  | 5  | Babul   | Babul   | 4 |           |  |                              |
|     | 8+331 | RHS | 70  | 5  | Babul   | Nim     | 2 |           |  |                              |
|     | 8+332 | RHS | 80  | 7  | Babul   | Bor     | 2 | Total -10 |  |                              |
|     | 8+333 | RHS | 100 | 5  | Nim     |         |   |           |  |                              |
|     | 8+334 | RHS | 100 | 5  | Nim     |         |   |           |  | 25 nos+ Babul Jaldi (less th |
| 669 | 8+335 | RHS | 70  | 5  | Bor     |         |   |           |  |                              |
|     | 8+336 | RHS | 100 | 7  | Bor     |         |   |           |  |                              |
|     | 8+35  | RHS | 80  | 7  | Babul   |         |   |           |  |                              |
|     | 8+4   | LHS | 100 | 5  | Babul   | Babul   | 9 |           |  |                              |
|     | 8+4   | RHS | 70  | 5  | Babul   | Bor     | 1 |           |  |                              |
|     | 8+401 | LHS | 200 | 5  | Babul   | Nim     | 2 | Total -12 |  |                              |
|     | 8+401 | RHS | 100 | 5  | Babul   |         |   |           |  |                              |
|     | 8+402 | LHS | 60  | 7  | Bor     |         |   |           |  |                              |
|     | 8+402 | RHS | 100 | 7  | Babul   |         |   |           |  |                              |
|     | 8+403 | RHS | 60  | 5  | Babul   |         |   |           |  |                              |
| 371 | 8+404 | RHS | 70  | 4  | Babul   |         |   |           |  |                              |
|     | 8+405 | RHS | 100 | 3  | Babul   |         |   |           |  |                              |
|     | 8+42  | LHS | 100 | 5  | Babul   |         |   |           |  |                              |
|     | 8+425 | LHS | 200 | 7  | Nim     |         |   |           |  |                              |
|     | 8+44  | LHS | 100 | 5  | Nim     |         |   |           |  |                              |
|     | 8+49  | LHS | 100 | 7  | Nim     | Nim     | 1 | Total -1  |  |                              |
|     | 8+495 | LHS | 200 | 10 | Guda    | Guda    | 1 | Total -1  |  |                              |
|     | 8+45  | LHS | 100 | 5  | Guda    | Guda    | 1 | Total -1  |  |                              |
|     | 8+82  | LHS | 300 | 20 | Nim     | Nim     | 6 |           |  |                              |
|     | 8+821 | LHS | 130 | 5  | Nim     | Melundi | 1 |           |  |                              |
| 746 | 8+823 | LHS | 100 | 10 | Nim     | Khajur  | 1 |           |  |                              |
|     | 8+824 | LHS | 80  | 10 | Nim     | Khijudo | 1 | Total -9  |  |                              |
|     | 8+825 | LHS | 80  | 7  | Melundi |         |   |           |  |                              |

|     |       |     |     |           |         |   |          |  |
|-----|-------|-----|-----|-----------|---------|---|----------|--|
| 747 | 8+26  | LHS | 80  | 7 Khajur  |         |   |          |  |
|     | 8+7   | LHS | 200 | 7 Nim     |         |   |          |  |
|     | 8+72  | RHS | 100 | 7 Khijudo |         |   |          |  |
|     | 8+79  | LHS | 250 | 7 Nim     |         |   |          |  |
|     | 8+805 | LHS | 100 | 5 Nim     | Nim     | 1 | Total -1 |  |
| 786 | 8+88  | LHS | 70  | 5 Bor     | Bor     | 1 |          |  |
|     | 8+88  | RHS | 100 | 5 Nim     | Nim     | 1 | Total -2 |  |
| 790 | 9+09  | LHS | 230 | 15 Guda   | Guda    | 1 |          |  |
|     | 9+135 | RHS | 80  | 5 Nim     | Nim     | 3 |          |  |
|     | 9+14  | RHS | 100 | 7 Bor     | Bor     | 2 |          |  |
|     | 9+142 | RHS | 100 | 5 Amuli   | Amuli   | 1 |          |  |
|     | 9+15  | LHS | 60  | 5 Guda    | Guda    | 1 | Total -8 |  |
|     | 9+15  | LHS | 50  | 5 Nim     |         |   |          |  |
|     | 9+15  | LHS | 70  | 7 Nim     |         |   |          |  |
|     | 9+155 | LHS | 60  | 6 Bor     |         |   |          |  |
|     | 9+28  | LHS | 100 | 7 Nim     | Nim     | 3 |          |  |
|     | 9+28  | LHS | 120 | 9 Vudeuli | Vudeuli | 1 | Total -4 |  |
| 795 | 9+282 | LHS | 180 | 5 Nim     |         |   |          |  |
|     | 9+283 | LHS | 100 | 5 Nim     |         |   |          |  |
| 800 | 9+28  | RHS | 100 | 7 Nim     | Nim     | 1 | Total -1 |  |
|     | 9+325 | LHS | 60  | 5 Vudeuli | Vudeuli | 2 |          |  |
| 802 | 9+326 | LHS | 100 | 5 Vudeuli | Nim     | 1 | Total -3 |  |
|     | 9+45  | RHS | 170 | 7 Nim     |         |   |          |  |
| 805 | 9+7   | LHS | 150 | 7 Nim     | Nim     | 1 |          |  |
|     | 9+7   | RHS | 100 | 4 Khijudo | Khijudo | 1 |          |  |
| 806 | 9+7   | RHS | 300 | 5 Guda    | Guda    | 1 | Total -3 |  |
|     | 9+525 | RHS | 210 | 7 Nim     | Nim     | 1 | Total -1 |  |
| 807 | 9+28  | RHS | 100 | 10 Nim    | Nim     | 2 |          |  |
|     | 9+32  | RHS | 300 | 10 Nim    | Khijudo | 1 |          |  |
|     | 9+65  | LHS | 200 | 6 Khijudo | Ruin    | 1 | Total -4 |  |
|     | 9+71  | LHS | 200 | 10 Ruin   |         |   |          |  |
|     | 9+61  | RHS | 400 | 6 Ruin    | Ruin    | 1 |          |  |
|     | 9+425 | LHS | 100 | 7 Bor     | Bor     | 2 |          |  |

|     |       |     |     |            |         |   |          |
|-----|-------|-----|-----|------------|---------|---|----------|
| 808 | 9+48  | LHS | 100 | 10 Bor     | Nim     | 1 |          |
|     | 9+481 | LHS | 180 | 7 Nim      | Veduli  | 1 | Total -5 |
|     | 9+48  | RHS | 160 | 5 Veduli   |         |   |          |
| 809 | 9+42  | LHS | 100 | 7 Nim      | Nim     | 1 |          |
|     | 9+55  | LHS | 130 | 5 Guda     | Guda    | 2 | Total -3 |
|     | 9+551 | LHS | 130 | 7 Guda     | Guda    |   |          |
| 668 | 8+356 | RHS | 20  | 7 Nim      | Nim     | 2 |          |
|     | 8+365 | RHS | 70  | 5 Babul    | Babul   | 2 |          |
|     | 8+73  | RHS | 80  | 7 Babul    | Khijudo | 1 |          |
|     | 8+8   | RHS | 20  | 10 Nim     | Amuli   | 1 | Total -6 |
|     | 8+9   | RHS | 100 | 15 Khijudo |         |   |          |
|     | 8+97  | RHS | 40  | 2 Amuli    |         |   |          |



| Village Name | Survey No. | Chainage | Side | Girth Size<br>(in cm) | Height (in<br>m) | Tree Name  | Tree Name  | Number | Total      | Remarks |
|--------------|------------|----------|------|-----------------------|------------------|------------|------------|--------|------------|---------|
|              | 751(965)   | 9+985    | LHS  | 170                   | 7                | Khejadi    | Khejadi    | 2      |            |         |
|              | 721(934)   | 10+400   | LHS  | 300                   | 7                | Khejadi    | Babul      | 4      |            |         |
|              | 721(934)   | 10+400   | LHS  | 60                    | 7                | Babul      | Gokessuban | 1      |            |         |
|              | 721(934)   | 10+425   | LHS  | 40                    | 5                | Babul      | Nim        | 3      | Total = 10 |         |
|              | 721(934)   | 10+450   | LHS  | 10                    | 7                | Gokessuban |            |        |            |         |
|              | 721(934)   | 10+450   | LHS  | 50                    | 5                | Nim        |            |        |            |         |
|              | 721(934)   | 10+450   | LHS  | 60                    | 5                | Nim        |            |        |            |         |
|              | 721(934)   | 10+450   | LHS  | 70                    | 7                | Babul      |            |        |            |         |
|              | 721(934)   | 10+450   | LHS  | 60                    | 3                | Nim        |            |        |            |         |
|              | 721(934)   | 10+400   | RHS  | 60                    | 7                | Babul      |            |        |            |         |
|              | 703(913)   | 10+480   | LHS  | 150                   | 7                | Nim        | Nim        | 1      | Total=1    |         |
|              | 702(912)   | 10+481   | LHS  | 60                    | 3                | Guda       | Guda       | 1      |            |         |
|              | 702(912)   | 10+480   | RHS  | 60                    | 7                | Nilgiri    | Nilgiri    | 3      | Total =4   |         |
|              | 702(912)   | 10+481   | RHS  | 60                    | 7                | Nilgiri    |            |        |            |         |
|              | 702(912)   | 10+482   | RHS  | 60                    | 7                | Nilgiri    |            |        |            |         |
|              | 689(899)   | 10+720   | LHS  | 10                    | 5                | Bor        | Bor        | 1      |            |         |
|              | 689(899)   | 10+721   | LHS  | 50                    | 4                | Nim        | Nim        | 8      |            |         |
|              | 689(899)   | 10+722   | LHS  | 60                    | 5                | Nim        | Babul      | 5      |            |         |
|              | 689(899)   | 10+723   | LHS  | 70                    | 5                | Babul      | Peepal     | 1      |            |         |
|              | 689(899)   | 10+724   | LHS  | 90                    | 7                | Nim        | Kagun      | 1      |            |         |
|              | 689(899)   | 10+725   | LHS  | 90                    | 5                | Nim        | Amuli      | 1      |            |         |
|              | 689(899)   | 10+726   | LHS  | 50                    | 3                | Babul      | Vakhudi    | 1      |            |         |
|              | 689(899)   | 10+727   | LHS  | 40                    | 4                | Nim        | Guda       | 1      | Total =19  |         |
|              | 689(899)   | 10+278   | LHS  | 100                   | 5                | Nim        |            |        |            |         |
|              | 689(899)   | 10+729   | LHS  | 130                   | 7                | Nim        |            |        |            |         |
|              | 689(899)   | 10+729   | LHS  | 100                   | 6                | Peepal     |            |        |            |         |
|              | 689(899)   | 10+730   | LHS  | 50                    | 3                | Kagun      |            |        |            |         |
|              | 689(899)   | 10+740   | LHS  | 100                   | 7                | Babul      |            |        |            |         |
|              | 689(899)   | 10+745   | LHS  | 60                    | 5                | Babul      |            |        |            |         |
|              | 689(899)   | 10+750   | LHS  | 70                    | 5                | Babul      |            |        |            |         |
|              | 689(899)   | 10+760   | LHS  | 170                   | 7                | Amuli      |            |        |            |         |

|          |        |     |         |    |            |            |    |           |  |
|----------|--------|-----|---------|----|------------|------------|----|-----------|--|
| 689(899) | 10+760 | LHS | 100     | 7  | Nim        |            |    |           |  |
| 689(899) | 10+760 | LHS | 200     | 5  | Vakhudi    |            |    |           |  |
| 689(899) | 10+760 | LHS | 60      | 7  | Guda       |            |    |           |  |
| 690(900) | 10+761 | LHS | 100     | 5  | Babul      | Babul      | 2  |           |  |
| 690(900) | 10+763 | LHS | 120     | 7  | Babul      | Nim        | 2  | Total=4   |  |
| 690(900) | 10+763 | LHS | 100     | 6  | Nim        |            |    |           |  |
| 690(900) | 10+764 | LHS | 110     | 15 | Nim        |            |    |           |  |
| 691(901) | 10+765 | LHS | 100     | 7  | Nim        | Nim        | 4  |           |  |
| 691(901) | 10+810 | LHS | 120     | 8  | Khejadi    | Khejadi    | 3  | Total = 7 |  |
| 691(901) | 10+750 | RHS | 60      | 3  | Khejadi    |            |    |           |  |
| 691(901) | 10+755 | RHS | 50      | 5  | Khejadi    |            |    |           |  |
| 691(901) | 10+775 | RHS | 50      | 3  | Nim        |            |    |           |  |
| 691(901) | 10+776 | RHS | 50      | 3  | Nim        |            |    |           |  |
| 691(901) | 10+777 | RHS | 50      | 3  | Nim        |            |    |           |  |
| 659(866) | 10+840 | LHS | 100     | 7  | Nim        | Nim        | 8  |           |  |
| 659(866) | 10+841 | LHS | 120     | 5  | Nim        | Guda       | 1  |           |  |
| 659(866) | 10+842 | LHS | #VALUE! | -  | Guda       | Gokessuban | 1  | Total= 10 |  |
| 659(866) | 10+843 | LHS | #VALUE! | -  | Gokessuban |            |    |           |  |
| 659(866) | 10+840 | RHS | 100     | 7  | Nim        |            |    |           |  |
| 659(866) | 10+830 | RHS | 120     | 7  | Nim        |            |    |           |  |
| 659(866) | 10+820 | RHS | 200     | 7  | Nim        |            |    |           |  |
| 659(866) | 10+825 | RHS | 100     | 5  | Nim        |            |    |           |  |
| 659(866) | 10+825 | RHS | 100     | 7  | Nim        |            |    |           |  |
| 659(866) | 10+825 | RHS | 250     | 7  | Nim        |            |    |           |  |
| 663(817) | 10+843 | LHS | 90      | 7  | Nim        | Nim        | 2  | Total =2  |  |
| 663(817) | 10+845 | LHS | 90      | 5  | Nim        |            |    |           |  |
| 661(888) | 10+942 | LHS | 200     | 7  | Pipali     | Pipali     | 1  |           |  |
| 661(888) | 10+943 | LHS | 250     | 10 | Khido      | Khido      | 1  |           |  |
| 661(888) | 10+943 | LHS | 50      | 3  | Babul      | Babul      | 1  |           |  |
| 661(888) | 10+944 | LHS | 120     | 10 | Nim        | Nim        | 15 |           |  |
| 661(888) | 10+945 | LHS | 150     | 5  | Nim        | Sag        | 2  |           |  |
| 661(888) | 10+946 | LHS | 200     | 10 | Nim        | Pipali     | 1  |           |  |
| 661(888) | 10+950 | LHS | 100     | 7  | Sag        | Guda       | 1  |           |  |

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|          |        |     |     |    |         |         |   |            |
|----------|--------|-----|-----|----|---------|---------|---|------------|
| 661(888) | 10+951 | LHS | 150 | 10 | Sag     | Jabun   | 3 | Total = 25 |
| 661(888) | 10+952 | LHS | 100 | 7  | Nim     |         |   |            |
| 661(888) | 10+953 | LHS | 120 | 5  | Nim     |         |   |            |
| 661(888) | 10+954 | LHS | 100 | 7  | Nim     |         |   |            |
| 661(888) | 10+955 | LHS | 120 | 5  | Nim     |         |   |            |
| 661(888) | 10+956 | LHS | 270 | 10 | Pipali  |         |   |            |
| 661(888) | 10+957 | LHS | 100 | 7  | Nim     |         |   |            |
| 661(888) | 10+958 | LHS | 200 | 8  | Nim     |         |   |            |
| 661(868) | 10+940 | RHS | 100 | 5  | Nim     |         |   |            |
| 661(868) | 10+941 | RHS | 100 | 5  | Nim     |         |   |            |
| 661(868) | 10+942 | RHS | 100 | 10 | Guda    |         |   |            |
| 661(868) | 10+943 | RHS | 120 | 10 | Nim     |         |   |            |
| 661(868) | 10+944 | RHS | 80  | 5  | Nim     |         |   |            |
| 661(868) | 10+950 | RHS | 100 | 5  | Nim     |         |   |            |
| 661(868) | 10+951 | RHS | 120 | 7  | Jabun   |         |   |            |
| 661(868) | 10+952 | RHS | 150 | 9  | Jabun   |         |   |            |
| 661(868) | 10+953 | RHS | 120 | 5  | Nim     |         |   |            |
| 661(868) | 10+960 | RHS | 200 | 10 | Jabun   |         |   |            |
| 753      | 9+720  | RHS | 150 | 5  | Khejadi | Khejadi | 1 | Total = 25 |
| 753      | 9+880  | RHS | 200 | 7  | Ruin    | Ruin    | 1 | Total = 1  |
| 738(951) | 10+050 | RHS | 150 | 7  | Nim     | Nim     | 1 | Total = 2  |
| 745(958) | 10+100 | RHS | 100 | 5  | Babul   | Babul   | 2 |            |
| 700(910) | 10+520 | RHS | 180 | 5  | Peepal  | Peepal  | 1 |            |
| 700(910) | 10+520 | RHS | 60  | 7  | Babul   | Babul   | 1 |            |
| 700(910) | 10+520 | RHS | 50  | 5  | Amuli   | Amuli   | 1 |            |
| 700(910) | 10+440 | RHS | 100 | 5  | Khejadi | Khejadi | 1 | Total = 4  |
| 702(912) | 10+483 | RHS | 60  | 7  | Nilgiri | Nilgiri | 1 | Total = 1  |
| 692(902) | 10+720 | RHS | 90  | 5  | Nim     | Nim     | 2 |            |
| 692(902) | 10+745 | RHS | 140 | 7  | Nim     | Amuli   | 1 | Total = 3  |
| 692(902) | 10+760 | RHS | 190 | 7  | Amuli   |         |   |            |
| 658(865) | 10+850 | RHS | 160 | 7  | Nim     | Nim     | 1 |            |
| 658(865) | 10+851 | RHS | 100 | 5  | Peepal  | Peepal  | 2 | Total = 3  |
| 658(865) | 10+855 | RHS | 60  | 7  | Peepal  | Peepal  |   |            |



|          |         |     |     |   |     |     |    |            |  |
|----------|---------|-----|-----|---|-----|-----|----|------------|--|
| 660(867) | 10+860  | RHS | 60  | 5 | Nim | Nim | 14 | Total = 14 |  |
| 660(867) | 10+861  | RHS | 60  | 5 | Nim |     |    |            |  |
| 660(867) | 10+862  | RHS | 70  | 7 | Nim |     |    |            |  |
| 660(867) | 10+863  | RHS | 80  | 7 | Nim |     |    |            |  |
| 660(867) | 10+864  | RHS | 90  | 5 | Nim |     |    |            |  |
| 660(867) | 10+880  | RHS | 90  | 7 | Nim |     |    |            |  |
| 660(867) | 10+881  | RHS | 80  | 5 | Nim |     |    |            |  |
| 660(867) | 100+882 | RHS | 100 | 5 | Nim |     |    |            |  |
| 660(867) | 10+883  | RHS | 100 | 7 | Nim |     |    |            |  |
| 660(867) | 10+884  | RHS | 100 | 4 | Nim |     |    |            |  |
| 660(867) | 10+920  | RHS | 100 | 5 | Nim |     |    |            |  |
| 660(867) | 10+920  | RHS | 100 | 5 | Nim |     |    |            |  |
| 660(867) | 10+921  | RHS | 150 | 7 | Nim |     |    |            |  |
| 660(867) | 10+921  | RHS | 150 | 7 | Nim |     |    |            |  |
| 654(860) | 10+960  | RHS | 250 | 7 | Nim | Nim | 1  | Total = 1  |  |
| 652(860) | 10+960  | RHS | 100 | 7 | Nim | Nim | 4  | Total = 4  |  |
| 652(860) | 10+965  | RHS | 150 | 7 | Nim |     |    |            |  |
| 652(860) | 10+965  | RHS | 200 | 9 | Nim |     |    |            |  |
| 652(860) | 10+966  | RHS | 150 | 7 | Nim |     |    |            |  |

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[illegible]

| Village Name | Survey/ Plot No. | Design Chainage | Side | Girth (BGH) in cm | Approx. High (m) | Tree Name | Tree Name | Number | Total    | Remarks |
|--------------|------------------|-----------------|------|-------------------|------------------|-----------|-----------|--------|----------|---------|
| Adhelai      | 134/1            | 107+240         | RHS  | 80                | 6                | KISAJO    | KISAJO    | 15     |          |         |
| Adhelai      | 134/1            | 107+250         | RHS  | 60                | 5                | KISAJO    | KISAJO    |        | Total=15 |         |
| Adhelai      | 134/1            | 107+275         | RHS  | 50                | 4                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 134/1            | 107+300         | RHS  | 40                | 3                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 134/1            | 107+315         | RHS  | 50                | 3                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 134/1            | 107+325         | RHS  | 40                | 3                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 134/1            | 107+350         | RHS  | 60                | 5                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 134/1            | 107+375         | RHS  | 40                | 4                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 134/1            | 107+400         | RHS  | 70                | 6                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 134/1            | 107+415         | RHS  | 50                | 4                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 134/1            | 107+430         | RHS  | 40                | 3                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 134/1            | 107+450         | RHS  | 60                | 4                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 134/1            | 107+460         | RHS  | 50                | 3                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 134/1            | 107+470         | RHS  | 40                | 3                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 134/1            | 107+480         | RHS  | 60                | 4                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 134/2            | 107+490         | RHS  | 60                | 4                | KISAJO    | KISAJO    | 5      |          |         |
| Adhelai      | 134/2            | 107+490         | RHS  | 40                | 3                | KISAJO    | KISAJO    |        | Total=6  |         |
| Adhelai      | 134/2            | 107+500         | RHS  | 50                | 3                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 134/2            | 107+505         | RHS  | 40                | 3                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 134/2            | 107+510         | RHS  | 50                | 4                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 134/2            | 107+520         | RHS  | 50                | 4                | KISAJO    | KISAJO    |        |          |         |
| Adhelai      | 104              | 108+310         | RHS  | 60                | 5                | KISAJO    | KISAJO    | 1      |          |         |
| Adhelai      | 105              | 108+570         | RHS  | 90                | 6                | NIM       | NIM       | 1      | Total=2  |         |
|              |                  |                 |      |                   |                  |           |           |        |          |         |
|              |                  |                 |      |                   |                  |           |           |        |          |         |
|              |                  |                 |      |                   |                  |           |           |        |          |         |
|              |                  |                 |      |                   |                  |           |           |        |          |         |
|              |                  |                 |      |                   |                  |           |           |        |          |         |
|              |                  |                 |      |                   |                  |           |           |        |          |         |
|              |                  |                 |      |                   |                  |           |           |        |          |         |

| Village Name | Survey/<br>Plot No. | Chainage | Side | Girth<br>(BGH) in<br>cm | Height<br>(m) | Tree Name | Tree Name | Number | Total    | Remarks |
|--------------|---------------------|----------|------|-------------------------|---------------|-----------|-----------|--------|----------|---------|
| RUPGADH      | 91                  | 36+890   | RHS  | 40                      | 5             | BABUL     | BABUL     | 2      |          |         |
| RUPGADH      |                     | 36+890   | RHS  | 40                      | 5             | BABUL     |           |        | Total-2  |         |
| RUPGADH      | 56                  | 38+100   | RHS  | 80                      | 4             | NIM       | NIM       | 1      |          |         |
| RUPGADH      |                     | 38+320   | RHS  | 100                     | 7             | KISADAO   | KISADAO   | 1      | Total-2  |         |
| RUPGADH      | 437                 | 38+760   | RHS  | 100                     | 5             | GUDDO     | GUDDO     | 1      | Total-1  |         |
| RUPGADH      |                     | 39+100   | RHS  | 60                      | 5             | NIM       | NIM       | 1      |          |         |
| RUPGADH      | 8                   | 39+100   | RHS  | 100                     | 5             | VAKHANDI  | VAKHANDI  | 3      |          |         |
| RUPGADH      |                     | 39+110   | RHS  | 100                     | 3             | VAKHANDI  | KISADAO   | 1      |          |         |
| RUPGADH      |                     | 39+150   | RHS  | 100                     | 3             | VAKHANDI  |           |        | Total-5  |         |
| RUPGADH      |                     | 39+150   | RHS  | 60                      | 2             | KISADAO   |           |        |          |         |
| RUPGADH      |                     | 39+180   | RHS  | 60                      | 2             | KISADAO   | KISADAO   | 1      |          |         |
| RUPGADH      | 7                   | 39+180   | RHS  | 100                     | 3             | NIM       | NIM       | 1      |          |         |
| RUPGADH      |                     | 39+210   | RHS  | 40                      | 5             | GULMOHAR  | GULMOHAR  | 8      | Total-10 |         |
| RUPGADH      |                     | 39+125   | RHS  | 40                      | 7             | GULMOHAR  |           |        |          |         |
| RUPGADH      |                     | 39+215   | RHS  | 60                      | 8             | GULMOHAR  |           |        |          |         |
| RUPGADH      |                     | 39+220   | RHS  | 40                      | 6             | GULMOHAR  |           |        |          |         |
| RUPGADH      |                     | 39+217   | RHS  | 50                      | 8             | GULMOHAR  |           |        |          |         |
| RUPGADH      |                     | 34+218   | RHS  | 70                      | 7             | GULMOHAR  |           |        |          |         |
| RUPGADH      |                     | 34+220   | RHS  | 80                      | 6             | GULMOHAR  |           |        |          |         |
| RUPGADH      |                     | 39+225   | RHS  | 30                      | 4             | GULMOHAR  |           |        |          |         |
| RUPGADH      |                     | 34+245   | RHS  | 30                      | 0.3           | NILGIRI   | NILGIRI   | 2      |          |         |
| RUPGADH      | 797                 | 34+245   | RHS  | 40                      | 7             | NILGIRI   |           |        | Total-2  |         |
| RUPGADH      | 791                 | 39+600   | RHS  | 80                      | 7             | BABUL     | BABUL     | 1      | Total-1  |         |
| RUPGADH      | 794                 | 39+880   | RHS  | 120                     | 7             | KISADAO   | KISADAO   | 1      | Total-1  |         |
| RUPGADH      | 745                 | 40+080   | RHS  | 90                      | 3             | KISADAO   | KISADAO   | 1      | Total-1  |         |
| RUPGADH      | 7451                | 40+680   | RHS  | 150                     | 10            | KISADAO   | KISADAO   | 1      | Total-1  |         |
| RUPGADH      | 621                 | 41+560   | RHS  | 90                      | 7             | BABUL     | BABUL     | 3      |          |         |
| RUPGADH      |                     | 41+560   | RHS  | 100                     | 5             | BABUL     |           |        | Total-3  |         |
| RUPGADH      |                     | 41+560   | RHS  | 100                     | 5             | BABUL     |           |        |          |         |
|              |                     |          |      |                         |               |           |           |        |          |         |
|              |                     |          |      |                         |               |           |           |        |          |         |



| Village name | Survey/ Plot No. | Chainage | Side | Girth (BGH) in Cm | Height (in m) | Tree Name | Tree Name | Number | Total   | Remarks | Remarks |
|--------------|------------------|----------|------|-------------------|---------------|-----------|-----------|--------|---------|---------|---------|
| Chaloda      | 1100             | 15+550   | LHS  | 100               | 7             | Kesudo    | Kesudo    | 4      |         |         |         |
|              |                  | 15+550   | LHS  | 80                | 5             | Kesudo    |           |        | Total=4 |         |         |
|              |                  | 15+550   | LHS  | 40                | 4             | Kesudo    |           |        |         |         |         |
|              |                  | 15+550   | LHS  | 50                | 4             | Kesudo    |           |        |         |         |         |
|              | 1088             | 15+750   | LHS  | 40                | 5             | Gulmohar  | Gulmohar  | 1      |         |         |         |
|              |                  | 15+750   | LHS  | 40                | 5             | Pipal     | Pipal     | 1      |         |         |         |
|              |                  | 15+810   | LHS  | 80                | 2             | Babul     | Babul     | 1      |         |         |         |
|              |                  | 15+313   | LHS  | 90                | 3             | Nim       | Nim       | 1      | Total=4 |         |         |
|              | 1038             | 16+370   | LHS  | 80                | 5             | Guda      | Guda      | 1      |         |         |         |
|              |                  | 16+370   | LHS  | 90                | 6             | Nim       | Nim       | 3      |         |         |         |
|              |                  | 16+370   | LHS  | 70                | 5             | Nim       |           |        | Total=4 |         |         |
|              |                  | 16+370   | LHS  | 40                | 4             | Nim       |           |        |         |         |         |
|              | 1032             | 16+370   | LHS  | 100               | 6             | Nim       | Nim       | 1      | Total=1 |         |         |
|              | 999              | 16+600   | LHS  | 80                | 4             | Kesudo    | Kesudo    | 1      | Total=1 |         |         |
|              |                  | 16+850   | LHS  | 90                | 6             | Abali     | Abali     | 4      |         |         |         |
|              |                  | 16+900   | LHS  | 80                | 4             | Boradi    | Boradi    | 1      |         |         |         |
|              |                  | 16+910   | LHS  | 90                | 6             | Kesudo    | Kesudo    | 1      |         |         |         |
|              | 1019             | 16+920   | LHS  | 60                | 5             | Abali     |           |        | Total=6 |         |         |
|              |                  | 16+930   | LHS  | 70                | 4             | Abali     |           |        |         |         |         |
|              |                  | 16+940   | LHS  | 40                | 3             | Abali     |           |        |         |         |         |
|              |                  | 17+060   | LHS  | 80                | 5             | Nim       | Nim       | 1      | Total=1 |         |         |

| Village name | Survey/<br>Plot No. | Chainage | Side | Girth<br>(BGH) in<br>Cm | Height (In<br>m) | Tree<br>Name | Tree<br>Name | Number | Total      | Remarks |
|--------------|---------------------|----------|------|-------------------------|------------------|--------------|--------------|--------|------------|---------|
|              | 1083                | 15+540   | RHS  | 200                     | 10               | Pipal        | Pipal        | 1      |            |         |
|              |                     | 15+540   | RHS  | 90                      | 7                | Nim          | Nim          | 2      |            |         |
|              |                     | 15+555   | RHS  | 100                     | 10               | NIM          |              |        | Total=3    |         |
|              | 1100                | 15+550   | RHS  | 120                     | 7                | Nim          | Nim          | 1      |            |         |
|              |                     | 15+550   | RHS  | 40                      | 5                | Kisado       | Kisado       | 1      |            |         |
|              |                     | 15+550   | RHS  | 100                     | 7                | Guda         | Guda         | 1      | Total=3    |         |
|              | 1087                | 15+570   | RHS  | 40                      | 10               | Pipal        | Pipal        | 1      | Total=1    |         |
|              | 1088                | 15+580   | RHS  | 40                      | 5                | Gulmhor      |              |        |            |         |
|              | 1081                | 15+750   | RHS  | 100                     | 7                | Kisado       | Kisado       | 1      | Total=1    |         |
|              | 1039                | 15+810   | RHS  | 150                     | 10               | Kisado       | Kisado       | 1      | Total=1    |         |
|              | 1038                | 15+880   | RHS  | 100                     | 7                | Nim          | Nim          | 7      |            |         |
|              |                     | 16+170   | RHS  | 40                      | 5                | Nim          | Pipal        | 3      |            |         |
|              |                     | 16+175   | RHS  | 100                     | 7                | Nim          | Gulmhor      | 1      |            |         |
|              |                     | 16+175   | RHS  | 200                     | 10               | Pipal        | Nim          |        | Total=11   |         |
|              |                     | 16+180   | RHS  | 150                     | 7                | Pipal        | Nim          |        |            |         |
|              |                     | 16+200   | RHS  | 500                     | 10               | Pipal        | Nim          |        |            |         |
|              |                     | 16+200   | RHS  | 90                      | 5                | Nim          |              |        |            |         |
|              |                     | 16+200   | RHS  | 100                     | 10               | Gulmhor      |              |        |            |         |
|              |                     | 16+410   | RHS  | 100                     | 5                | Nim          |              |        |            |         |
|              |                     | 16+410   | RHS  | 120                     | 7                | Nim          |              |        |            |         |
|              |                     | 16+400   | RHS  | 100                     | 10               | Nim          |              |        |            |         |
|              |                     | 16+300   | RHS  | 100                     | 7                | Nim          | Nim          | 27     |            |         |
|              |                     | 16+310   | RHS  | 150                     | 10               | Nim          | Bor          | 1      |            |         |
|              |                     | 16+315   | RHS  | 100                     | 7                | Nim          | Kisado       | 2      |            |         |
|              |                     | 16+315   | RHS  | 1.5                     | 5                | Nim          | Pipal        | 5      |            |         |
|              |                     | 16+320   | RHS  | 90                      | 7                | Nim          | vukudi       | 1      |            |         |
|              |                     | 16+325   | RHS  | 100                     | 5                | Nim          | Gulmhor      | 1      |            |         |
|              |                     | 16+330   | RHS  | 100                     | 5                | Nim          |              |        | Total = 37 |         |
|              |                     | 16+350   | RHS  | 90                      | 7                | Nim          |              |        |            |         |

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|      |        |     |     |           |       |  |   |         |  |
|------|--------|-----|-----|-----------|-------|--|---|---------|--|
| 1039 | 16+350 | RHS | 90  | 5 Nim     |       |  |   |         |  |
|      | 16+350 | RHS | 100 | 7 Nim     |       |  |   |         |  |
|      | 16+350 | RHS | 100 | 5 Bor     |       |  |   |         |  |
|      | 16+350 | RHS | 200 | 10 Nim    |       |  |   |         |  |
|      | 16+350 | RHS | 80  | 5 Nim     |       |  |   |         |  |
|      | 16+350 | RHS | 20  | 7 Kisado  |       |  |   |         |  |
|      | 16+380 | RHS | 60  | 5 Nim     |       |  |   |         |  |
|      | 16+380 | RHS | 90  | 4 Nim     |       |  |   |         |  |
|      | 16+380 | RHS | 100 | 10 Pipal  |       |  |   |         |  |
|      | 16+380 | RHS | 120 | 7 Kisado  |       |  |   |         |  |
|      | 16+380 | RHS | 90  | 5 Pipal   |       |  |   |         |  |
|      | 16+390 | RHS | 100 | 6 Nim     |       |  |   |         |  |
|      | 16+390 | RHS | 100 | 5 Nim     |       |  |   |         |  |
|      | 16+390 | RHS | 90  | 5 Nim     |       |  |   |         |  |
|      | 16+390 | RHS | 80  | 7 Nim     |       |  |   |         |  |
|      | 16+390 | RHS | 100 | 7 Nim     |       |  |   |         |  |
|      | 16+390 | RHS | 100 | 10 Nim    |       |  |   |         |  |
|      | 16+390 | RHS | 200 | 1 Nim     |       |  |   |         |  |
|      | 16+390 | RHS | 100 | 10 vukudi |       |  |   |         |  |
|      | 16+390 | RHS | 90  | 7 Nim     |       |  |   |         |  |
|      | 16+390 | RHS | 90  | 5 Nim     |       |  |   |         |  |
|      | 16+400 | RHS | 100 | 7 Pipal   |       |  |   |         |  |
|      | 16+400 | RHS | 100 | 5 Pipal   |       |  |   |         |  |
|      | 16+400 | RHS | 90  | 5 Pipal   |       |  |   |         |  |
|      | 16+400 | RHS | 90  | 7 Gulmhor |       |  |   |         |  |
|      | 16+400 | RHS | 100 | 5 Nim     |       |  |   |         |  |
|      | 16+400 | RHS | 150 | 5 Nim     |       |  |   |         |  |
|      | 16+400 | RHS | 90  | 7 Nim     |       |  |   |         |  |
|      | 16+400 | RHS | 150 | 7 Nim     |       |  |   |         |  |
| 1032 | 16+420 | RHS | 100 | 7 babul   | Babul |  | 1 |         |  |
|      | 16+420 | RHS | 100 | 5 Pipal   | Pipal |  | 1 |         |  |
|      | 16+420 | RHS | 200 | 10 Jabun  | Jabun |  | 1 |         |  |
|      | 16+420 | RHS | 90  | 10 Nim    | Nim   |  | 1 | Total=4 |  |

Chaloda

|      |        |     |     |   |        |        |   |         |  |
|------|--------|-----|-----|---|--------|--------|---|---------|--|
| 1024 | 16+850 | RHS | 90  | 7 | Kisado | Kisado | 3 | Total=3 |  |
|      | 16+850 | RHS | 100 | 5 | Kisado |        |   |         |  |
|      | 16+850 | RHS | 150 | 7 | Kisado |        |   |         |  |

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| Village Name | Survey/ Plot No. | Chainage | Side | Girth (BGH) in cm | Height (in m) | Tree Name | Tree Name | Number | Total      | Remarks |
|--------------|------------------|----------|------|-------------------|---------------|-----------|-----------|--------|------------|---------|
|              | 303              | 27+166   | LHS  | 200               | 5m            | Vakhudi   | Vakhudi   | 1      | Total = 1  |         |
|              | 288              | 27+160   | LHS  | 80                | 3m            | Babul     | Babul     | 1      |            |         |
|              |                  | 27+166   | LHS  | 120               | 3m            | Nim       | Nim       | 4      |            |         |
|              |                  | 28+030   | LHS  | 120               | 5m            | Nim       | Nim       |        | Total = 5  |         |
|              | 286              | 28+036   | LHS  | 100               | 3m            | Nim       | Nim       |        |            |         |
|              |                  | 28+030   | LHS  | 200               | 5m            | Nim       | Nim       |        |            |         |
|              |                  | 28+088   | LHS  | 120               | 5m            | Nim       | Nim       | 10     |            |         |
|              |                  | 28+150   | LHS  | 200               | 10m           | Nim       | Kesudo    | 3      |            |         |
|              |                  | 28+152   | LHS  | 150               | 7m            | Kesudo    | Babul     | 1      |            |         |
|              |                  | 28+158   | LHS  | 90                | 5m            | Kesudo    |           |        | Total = 14 |         |
|              |                  | 28+160   | LHS  | 100               | 7m            | Nim       |           |        |            |         |
|              |                  | 28+170   | LHS  | 150               | 10m           | Nim       |           |        |            |         |
|              |                  | 28+175   | LHS  | 100               | 5m            | Babul     |           |        |            |         |
|              |                  | 28+180   | LHS  | 150               | 7m            | Nim       |           |        |            |         |
|              | 261              | 28+200   | LHS  | 150               | 8m            | Nim       |           |        |            |         |
|              |                  | 28+250   | LHS  | 60                | 5m            | Nim       |           |        |            |         |
|              |                  | 28+255   | LHS  | 60                | 3m            | Kesudo    |           |        |            |         |
|              |                  | 28+255   | LHS  | 270               | 12m           | Nim       |           |        |            |         |
|              |                  | 28+255   | LHS  | 60                | 7m            | Nim       |           |        |            |         |
|              |                  | 28+260   | LHS  | 100               | 5m            | Nim       |           |        |            |         |
|              |                  | 28+260   | LHS  | 200               | 5m            | Nim       | Nim       | 1      | Total = 1  |         |
|              |                  | 28+260   | LHS  | 200               | 5m            | Vakhudi   | Vakhudi   | 1      |            |         |
|              | 260              | 28+265   | LHS  | 90                | 7m            | Nim       | Nim       | 1      | Total = 2  |         |
|              |                  | 28+350   | LHS  | 120               | 7m            | Kesudo    | Kesudo    | 1      |            |         |
|              |                  | 28+355   | LHS  | 50                | 5m            | baval     | baval     | 2      |            |         |
|              |                  | 28+360   | LHS  | 30                | 5m            | baval     | kizdo     | 1      |            |         |
|              |                  | 28+360   | LHS  | 40                | 5m            | kizdo     |           |        | Total = 4  |         |
|              |                  | 28+400   | LHS  | 80                | 6m            | babul     | babul     | 1      | Total = 1  |         |
|              |                  | 28+400   | LHS  | 60                | 5m            | babul     | babul     | 2      |            |         |

|     |        |     |     |     |          |          |    |            |
|-----|--------|-----|-----|-----|----------|----------|----|------------|
| 248 | 28+410 | LHS | 150 | 8m  | Nim      | Nim      | 10 |            |
|     | 28+415 | LHS | 120 | 8m  | Nim      | kanjdo   | 1  |            |
|     | 28+425 | LHS | 40  | 5m  | Nim      | Vakhudi  | 1  |            |
|     | 28+430 | LHS | 70  | 5m  | Nim      |          |    | Total = 14 |
|     | 28+430 | LHS | 90  | 8m  | Nim      |          |    |            |
|     | 28+430 | LHS | 80  | 8m  | Nim      |          |    |            |
|     | 28+435 | LHS | 80  | 5m  | Nim      |          |    |            |
|     | 28+440 | LHS | 80  | 5m  | Nim      |          |    |            |
|     | 28+435 | LHS | 60  | 7m  | Nim      |          |    |            |
|     | 28+440 | LHS | 100 | 8m  | babul    |          |    |            |
| 245 | 28+440 | LHS | 90  | 8m  | kanjdo   |          |    |            |
|     | 28+445 | LHS | 250 | 10m | Nim      |          |    |            |
|     | 28+445 | LHS | 90  | 5m  | Vakhudi  |          |    |            |
|     | 28+650 | LHS | 150 | 7m  | Nim      | Nim      | 2  | Total = 2  |
| 251 | 28+650 | LHS | 200 | 10m | Nim      |          |    |            |
|     | 28+750 | LHS | 400 | 15m | Nim      | Nim      | 1  | Total = 2  |
|     | 28+755 | LHS | 90  | 5m  | kizdo    | kizdo    | 1  |            |
|     | 28+810 | LHS | 60  | 3m  | Nim      | Nim      | 3  | Total = 3  |
| 244 | 28+810 | LHS | 100 | 7m  | Nim      |          |    |            |
|     | 28+810 | LHS | 90  | 5m  | Nim      |          |    |            |
|     | 28+710 | LHS | 90  | 7m  | Nim      | Nim      | 1  | Total = 1  |
|     | 28+720 | LHS | 500 | 10m | jakhado  | jakhado  | 1  |            |
| 246 | 28+723 | LHS | 80  | 7m  | Gulmohar | Gulmohar | 1  | Total = 2  |
|     | 28+710 | LHS | 100 | 10m | Nim      | Nim      | 9  |            |
|     | 28+710 | LHS | 90  | 5m  | Nim      | Babul    | 2  |            |
|     | 28+710 | LHS | 80  | 5m  | Nim      |          |    | Total = 11 |
|     | 28+720 | LHS | 200 | 10m | Nim      |          |    |            |
|     | 28+720 | LHS | 150 | 12m | Nim      |          |    |            |
|     | 28+723 | LHS | 30  | 3m  | Nim      |          |    |            |
|     | 28+710 | LHS | 150 | 15m | Nim      |          |    |            |
|     | 28+710 | LHS | 80  | 7m  | Nim      |          |    |            |
|     | 28+710 | LHS | 70  | 5m  | Nim      |          |    |            |
|     | 28+810 | LHS | 90  | 5m  | Babul    |          |    |            |

|     |        |     |     |      |          |          |    |  |            |
|-----|--------|-----|-----|------|----------|----------|----|--|------------|
| 244 | 28+810 | LHS | 40  | 5m   | Babul    |          |    |  |            |
|     | 28+850 | LHS | 80  | 3m   | guda     | guda     | 4  |  |            |
|     | 28+850 | LHS | 80  | 5m   | guda     |          |    |  | Total = 4  |
|     | 28+850 | LHS | 150 | 10m  | guda     |          |    |  |            |
|     | 28+850 | LHS | 90  | 7m   | guda     |          |    |  |            |
| 177 | 28+900 | LHS | 90  | 5m   | Nim      | Nim      | 8  |  |            |
|     | 28+905 | LHS | 80  | 5m   | Nim      | Vakhudi  | 4  |  |            |
|     | 28+910 | LHS | 200 | 7m   | Vakhudi  | Gulmohar | 1  |  |            |
|     | 28+910 | LHS | 90  | 5m   | Nim      | kizdo    | 1  |  |            |
|     | 28+911 | LHS | 100 | 5m   | Nim      |          |    |  | Total = 14 |
|     | 28+915 | LHS | 40  | 5m   | Nim      |          |    |  |            |
|     | 28+915 | LHS | 100 | 5m   | Nim      |          |    |  |            |
|     | 28+920 | LHS | 40  | 5m   | Nim      |          |    |  |            |
|     | 28+920 | LHS | 90  | 3m   | Vakhudi  |          |    |  |            |
|     | 28+925 | LHS | 80  | 3m   | Vakhudi  |          |    |  |            |
| 171 | 28+925 | LHS | 80  | 3m   | Vakhudi  |          |    |  |            |
|     | 28+926 | LHS | 90  | 7m   | Gulmohar |          |    |  |            |
|     | 29+050 | LHS | 80  | 7m   | Nim      |          |    |  |            |
|     | 29+010 | LHS | 100 | 7m   | kizdo    |          |    |  |            |
|     | 29+010 | LHS | 60  | 5m   | babul    | babul    | 1  |  |            |
|     | 29+010 | LHS | 90  | 5m   | Nim      | Nim      | 4  |  |            |
|     | 29+010 | LHS | 80  | 5m   | Nim      | Guda     | 1  |  |            |
|     | 29+010 | LHS | 120 | 7m   | Nim      | Kesudo   | 1  |  |            |
|     | 29+010 | LHS | 90  | 5m   | Guda     |          |    |  | Total = 7  |
|     | 29+010 | LHS | 90  | 7m   | Kesudo   |          |    |  |            |
| 170 | 29+010 | LHS | 100 | 3m   | Nim      |          |    |  |            |
|     | 29+100 | LHS | 90  | 10m  | Nim      | Nim      | 2  |  |            |
|     | 29+100 | LHS | 90  | 10m  | Nim      | Vakhudi  | 2  |  |            |
|     | 29+100 | LHS | 200 | 100m | Vakhudi  |          |    |  |            |
|     | 29+100 | LHS | 300 | 10m  | Vakhudi  |          |    |  |            |
|     | 29+050 | LHS | 80  | 7m   | Nim      | Nim      | 15 |  |            |
|     | 29+050 | LHS | 120 | 10m  | Vakhudi  | Vakhudi  | 2  |  |            |
|     | 29+050 | LHS | 70  | 5m   | Vakhudi  | Kesudo   | 5  |  |            |

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|     |        |     |     |     |        |         |    |            |
|-----|--------|-----|-----|-----|--------|---------|----|------------|
| 171 | 29+050 | LHS | 80  | 7m  | Nim    |         |    | Total = 22 |
|     | 29+100 | LHS | 80  | 5m  | Nim    |         |    |            |
|     | 29+100 | LHS | 40  | 5m  | Kesudo |         |    |            |
|     | 29+100 | LHS | 100 | 7m  | Nim    |         |    |            |
|     | 29+100 | LHS | 120 | 10m | Kesudo |         |    |            |
|     | 29+250 | LHS | 80  | 5m  | Nim    |         |    |            |
|     | 29+250 | LHS | 70  | 5m  | Nim    |         |    |            |
|     | 29+250 | LHS | 100 | 7m  | Kesudo |         |    |            |
|     | 29+250 | LHS | 90  | 5m  | Kesudo |         |    |            |
|     | 29+250 | LHS | 60  | 5m  | Nim    |         |    |            |
|     | 29+250 | LHS | 60  | 50m | Nim    |         |    |            |
|     | 29+250 | LHS | 90  | 70m | Kesudo |         |    |            |
|     | 29+250 | LHS | 60  | 5m  | Nim    |         |    |            |
|     | 29+250 | LHS | 40  | 5m  | Nim    |         |    |            |
|     | 29+250 | LHS | 50  | 7m  | Nim    |         |    |            |
|     | 29+250 | LHS | 90  | 7m  | Nim    |         |    |            |
| 184 | 29+250 | LHS | 80  | 5m  | Nim    |         |    |            |
|     | 29+250 | LHS | 300 | 15m | Nim    |         |    |            |
|     | 29+325 | LHS | 110 | 7m  | Nim    | Nim     | 1  | Total = 1  |
|     | 29+330 | LHS | 40  | 5m  | Nim    | Nim     | 1  | Total = 1  |
| 184 | 29+340 | LHS | 150 | 7m  | Nim    | Nim     | 1  | Total = 2  |
|     | 29+350 | LHS | 40  | 5m  | Kesudo | Kesudo  | 1  | Total = 2  |
|     | 29+530 | LHS | 110 | 10m | Nim    | Nim     | 3  | Total = 3  |
|     | 29+530 | LHS | 100 | 10m | Nim    | Nim     |    | Total = 3  |
| 168 | 29+530 | LHS | 180 | 10m | Nim    | Nim     |    |            |
|     | 29+350 | LHS | 50  | 5m  | Nim    | Nim     | 25 |            |
|     | 29+350 | LHS | 70  | 5m  | Nim    | Vakhudi | 2  |            |
|     | 29+350 | LHS | 90  | 7m  | Nim    | Guda    | 1  |            |
|     | 29+350 | LHS | 50  | 7m  | Nim    | Jakhado | 1  |            |
|     | 29+373 | LHS | 80  | 7m  | Nim    | Kesudo  | 1  |            |
|     | 29+375 | LHS | 100 | 5m  | Nim    |         |    | Total = 30 |
|     | 29+376 | LHS | 90  | 5m  | Nim    |         |    |            |



|        |     |         |     |         |     |    |            |
|--------|-----|---------|-----|---------|-----|----|------------|
| 29+377 | LHS | 80      | 7m  | Nim     |     |    |            |
| 29+378 | LHS | 70      | 5m  | Nim     |     |    |            |
| 29+380 | LHS | 80      | 7m  | Nim     |     |    |            |
| 29+380 | LHS | 200     | 10m | Nim     |     |    |            |
| 29+380 | LHS | 40      | 5m  | Nim     |     |    |            |
| 29+389 | LHS | 50      | 7m  | Nim     |     |    |            |
| 29+390 | LHS | 90      | 7m  | Nim     |     |    |            |
| 29+410 | LHS | 90      | 5m  | Nim     |     |    |            |
| 29+430 | LHS | 100     | 7m  | Nim     |     |    |            |
| 29+430 | LHS | 90      | 10m | Nim     |     |    |            |
| 29+435 | LHS | 100     | 5m  | Nim     |     |    |            |
| 29+436 | LHS | 120     | 7m  | Nim     |     |    |            |
| 29+535 | LHS | 50      | 5m  | Nim     |     |    |            |
| 29+436 | LHS | 200     | 10m | Vakhudi |     |    |            |
| 29+500 | LHS | 60      | 7m  | Nim     |     |    |            |
| 29+500 | LHS | 60      | 7m  | Nim     |     |    |            |
| 29+510 | LHS | 80      | 7m  | Guda    |     |    |            |
| 29+510 | LHS | 250     | 15m | Nim     |     |    |            |
| 29+510 | LHS | 150     | 10m | Nim     |     |    |            |
| 29+515 | LHS | 370     | 15m | Vakhudi |     |    |            |
| 29+515 | LHS | 60      | 5m  | Nim     |     |    |            |
| 29+520 | LHS | #VALUE! | 3m  | jakhado |     |    |            |
| 29+520 | LHS | 80      | 7m  | Kesudo  |     |    |            |
| 29+350 | LHS | 90      | 5m  | Nim     | Nim | 51 |            |
| 29+350 | LHS | 100     | 15m | Nim     |     |    | Total = 51 |
| 29+350 | LHS | 60      | 3m  | Nim     |     |    |            |
| 29+350 | LHS | 100     | 7m  | Nim     |     |    |            |
| 29+350 | LHS | 150     | 10m | Kesudo  |     |    |            |
| 29+350 | LHS | 40      | 5m  | Nim     |     |    |            |
| 29+366 | LHS | 50      | 7m  | Nim     |     |    |            |
| 29+367 | LHS | 60      | 5m  | Nim     |     |    |            |
| 29+368 | LHS | 100     | 7m  | Nim     |     |    |            |
| 29+369 | LHS | 40      | 5m  | Nim     |     |    |            |

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|        |     |     |     |     |  |  |  |  |
|--------|-----|-----|-----|-----|--|--|--|--|
| 29+370 | LHS | 90  | 7m  | Nim |  |  |  |  |
| 29+371 | LHS | 150 | 10m | Nim |  |  |  |  |
| 29+300 | LHS | 90  | 7m  | Nim |  |  |  |  |
| 29+305 | LHS | 40  | 7m  | Nim |  |  |  |  |
| 29+305 | LHS | 100 | 10m | Nim |  |  |  |  |
| 29+300 | LHS | 120 | 7m  | Nim |  |  |  |  |
| 29+300 | LHS | 100 | 8m  | Nim |  |  |  |  |
| 29+290 | LHS | 50  | 7m  | Nim |  |  |  |  |
| 29+290 | LHS | 100 | 10m | Nim |  |  |  |  |
| 29+285 | LHS | 90  | 7m  | Nim |  |  |  |  |
| 29+285 | LHS | 100 | 7m  | Nim |  |  |  |  |
| 29+286 | LHS | 60  | 10m | Nim |  |  |  |  |
| 29+285 | LHS | 60  | 5m  | Nim |  |  |  |  |
| 29+285 | LHS | 50  | 7m  | Nim |  |  |  |  |
| 29+282 | LHS | 40  | 7m  | Nim |  |  |  |  |
| 29+275 | LHS | 90  | 5m  | Nim |  |  |  |  |
| 29+275 | LHS | 60  | 4m  | Nim |  |  |  |  |
| 29+280 | LHS | 70  | 5m  | Nim |  |  |  |  |
| 29+285 | LHS | 100 | 7m  | Nim |  |  |  |  |
| 29+285 | LHS | 60  | 5m  | Nim |  |  |  |  |
| 29+286 | LHS | 40  | 7m  | Nim |  |  |  |  |
| 29+290 | LHS | 50  | 5m  | Nim |  |  |  |  |
| 29+290 | LHS | 80  | 7m  | Nim |  |  |  |  |
| 29+291 | LHS | 70  | 5m  | Nim |  |  |  |  |
| 29+292 | LHS | 90  | 7m  | Nim |  |  |  |  |
| 29+293 | LHS | 120 | 5m  | Nim |  |  |  |  |
| 29+295 | LHS | 60  | 4m  | Nim |  |  |  |  |
| 29+300 | LHS | 90  | 7m  | Nim |  |  |  |  |
| 29+300 | LHS | 100 | 5m  | Nim |  |  |  |  |
| 29+300 | LHS | 60  | 5m  | Nim |  |  |  |  |
| 29+310 | LHS | 90  | 7m  | Nim |  |  |  |  |
| 29+310 | LHS | 100 | 5m  | Nim |  |  |  |  |
| 29+310 | LHS | 70  | 5m  | Nim |  |  |  |  |

|     |        |     |     |    |       |       |   |           |
|-----|--------|-----|-----|----|-------|-------|---|-----------|
| 592 | 29+320 | LHS | 80  | 7m | Nim   |       |   |           |
|     | 29+325 | LHS | 60  | 7m | Nim   |       |   |           |
|     | 29+325 | LHS | 70  | 5m | Nim   |       |   |           |
|     | 29+325 | LHS | 90  | 8m | Nim   |       |   |           |
|     | 29+330 | LHS | 100 | 7m | Nim   |       |   |           |
|     | 29+330 | LHS | 70  | 5m | Nim   |       |   |           |
|     | 29+340 | LHS | 90  | 7m | Nim   |       |   |           |
|     | 29+340 | LHS | 100 | 7m | nim   |       |   |           |
|     | 29+340 | LHS | 60  | 7m | Nim   | Nim   | 8 |           |
|     | 29+340 | LHS | 80  | 7m | Nim   | piPal | 1 |           |
|     | 29+350 | LHS | 100 | 7m | Nim   |       |   | Total = 9 |
|     | 29+350 | LHS | 40  | 5m | Nim   |       |   |           |
|     | 29+350 | LHS | 50  | 5m | Nim   |       |   |           |
|     | 29+355 | LHS | 200 | 7m | piPal |       |   |           |
|     | 29+355 | LHS | 90  | 5m | Nim   |       |   |           |
|     | 29+360 | LHS | 80  | 7m | Nim   |       |   |           |
|     | 29+360 | LHS | 100 | 5m | Nim   |       |   |           |

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| Village Name | Sulvey/<br>Plot No. | Chainage | Side | Girth<br>(BGH) in<br>cm | Height (in<br>m) | Tree<br>Name | Tlee<br>Name | Number | Total   | Remarks |
|--------------|---------------------|----------|------|-------------------------|------------------|--------------|--------------|--------|---------|---------|
| Rupavati     | 147                 | 17+650   | RHS  | 100                     | 7                | Nim          | Nim          | 2      | TOTAL=5 |         |
| Rupavati     | 147                 | 17+655   | RHS  | 90                      | 5                | aam          | aam          | 3      |         |         |
| Rupavati     | 147                 | 17+655   | RHS  | 100                     | 7                | aam          |              |        |         |         |
| Rupavati     | 147                 | 17+660   | RHS  | 90                      | 5                | aam          |              |        |         |         |
| Rupavati     | 147                 | 17+720   | RHS  | 150                     | 5                | Nim          |              |        |         |         |
| Rupavati     | 166                 | 17+150   | RHS  | 150                     | 5                | Guda         | Guda         | 1      | TOTAL=1 |         |
| Rupavati     | 176                 | 18+530   | RHS  | 100                     | 7                | Nim          |              |        |         |         |
| Rupavati     | 176                 | 18+540   | RHS  | 60                      | 5                | Nim          |              |        |         |         |
| Rupavati     | 176                 | 18+540   | RHS  | 90                      | 5                | Nim          |              |        |         |         |
| Rupavati     | 176                 | 18+550   | RHS  | 200                     | 10               | Nim          |              |        |         |         |
| Rupavati     | 181                 | 18+720   | RHS  | 150                     | 7                | Nim          |              |        |         |         |
| Rupavati     | 181                 | 18+720   | RHS  | 60                      | 5                | Guda         |              |        |         |         |
| Rupavati     | 181                 | 18+720   | RHS  | 90                      | 5                | Guda         |              |        |         |         |
| Rupavati     | 181                 | 18+720   | RHS  | 100                     | 7                | Nim          |              |        |         |         |
| Rupavati     | 181                 | 18+720   | RHS  | 90                      | 5                | Nim          |              |        |         |         |
| Rupavati     | 181                 | 18+720   | RHS  | 80                      | 5                | Nim          |              |        |         |         |
| Rupavati     | 181                 | 18+720   | RHS  | 150                     | 5                | Nim          |              |        |         |         |
| Rupavati     | 181                 | 18+720   | RHS  | 90                      | 7                | Nim          |              |        |         |         |
| Rupavati     | 181                 | 18+720   | RHS  | 100                     | 7                | Nim          |              |        |         |         |
| Rupavati     | 181                 | 18+720   | RHS  | 100                     | 8                | Nim          |              |        |         |         |
| Rupavati     | 83                  | 18+725   | RHS  | 100                     | 7                | Nim          | Nim          | 5      | TOTAL=5 |         |
| Rupavati     | 83                  | 18+725   | RHS  | 500                     | 10               | Nim          |              |        |         |         |
| Rupavati     | 83                  | 18+725   | RHS  | 90                      | 5                | Nim          |              |        |         |         |
| Rupavati     | 83                  | 18+725   | RHS  | 120                     | 10               | Nim          |              |        |         |         |
| Rupavati     | 83                  | 18+725   | RHS  | 200                     | 11               | Nim          |              |        |         |         |
| Rupavati     | 6                   | 18+800   | RHS  | 120                     | 10               | Nim          | Nim          | 5      | TOTAL=5 |         |
| Rupavati     | 6                   | 18+900   | RHS  | 200                     | 7                | Nim          |              |        |         |         |
| Rupavati     | 6                   | 18+900   | RHS  | 100                     | 5                | Nim          |              |        |         |         |
| Rupavati     | 6                   | 18+900   | RHS  | 90                      | 5                | Nim          |              |        |         |         |
| Rupavati     | 6                   | 18+900   | RHS  | 100                     | 5                | Nim          |              |        |         |         |
| Rupavati     | 54                  | 18+920   | RHS  | 90                      | 7                | Nim          |              |        |         |         |



|          |     |        |     |     |    |        |       |    |         |
|----------|-----|--------|-----|-----|----|--------|-------|----|---------|
| Rupavati | 54  | 18+950 | RHS | 100 | 7  | kesdao |       |    |         |
| Rupavati | 5   | 18+950 | RHS | 100 | 5  | Nim    | Nim   | 1  | TOTAL=1 |
| Rupavati | 464 | 19+065 | RHS | 150 | 7  | Nim    | Nim   | 2  | TOTAL=2 |
| Rupavati | 464 | 19+065 | RHS | 100 | 8  | Nim    |       |    |         |
| Rupavati | 468 | 19+100 | RHS | 100 | 7  | Nim    | Nim   | 8  | TOTAL=8 |
| Rupavati | 468 | 19+100 | RHS | 90  | 8  | Nim    |       |    |         |
| Rupavati | 468 | 19+100 | RHS | 60  | 7  | Nim    |       |    |         |
| Rupavati | 468 | 19+100 | RHS | 80  | 5  | Nim    |       |    |         |
| Rupavati | 468 | 19+100 | RHS | 100 | 7  | Nim    |       |    |         |
| Rupavati | 468 | 19+100 | RHS | 100 | 7  | nim    |       |    |         |
| Rupavati | 468 | 19+150 | RHS | 60  | 5  | nim    |       |    |         |
| Rupavati | 468 | 19+150 | RHS | 40  | 5  | nim    |       |    |         |
| Rupavati | 462 | 19+100 | RHS | 100 | 7  | Nim    |       |    |         |
| Rupavati | 462 | 19+100 | RHS | 90  | 5  | Nim    |       |    |         |
| Rupavati | 462 | 19+100 | RHS | 90  | 5  | Nim    |       |    |         |
| Rupavati | 462 | 19+100 | RHS | 100 | 7  | Nim    |       |    |         |
| Rupavati | 456 | 19+160 | RHS | 100 | 7  | sagun  | sagun | 3  |         |
| Rupavati | 456 | 19+160 | RHS | 60  | 5  | sagun  |       |    |         |
| Rupavati | 456 | 19+170 | RHS | 70  | 7  | sagun  |       |    |         |
| Rupavati | 456 | 19+170 | RHS | 200 | 10 | guda   | guda  | 1  |         |
| Rupavati | 456 | 19+170 | RHS | 60  | 5  | Nim    | Nim   | 19 |         |
| Rupavati | 456 | 19+170 | RHS | 70  | 7  | Nim    |       |    |         |
| Rupavati | 456 | 19+170 | RHS | 120 | 5  | Nim    |       |    |         |
| Rupavati | 456 | 19+175 | RHS | 100 | 7  | Nim    |       |    |         |
| Rupavati | 456 | 19+175 | RHS | 150 | 10 | Nim    |       |    |         |
| Rupavati | 456 | 19+180 | RHS | 100 | 7  | Nim    |       |    |         |
| Rupavati | 456 | 19+181 | RHS | 90  | 5  | Nim    |       |    |         |
| Rupavati | 456 | 19+182 | RHS | 80  | 7  | Nim    |       |    |         |
| Rupavati | 456 | 19+183 | RHS | 40  | 5  | Nim    |       |    |         |
| Rupavati | 456 | 19+180 | RHS | 100 | 10 | Nim    |       |    |         |
| Rupavati | 456 | 19+185 | RHS | 90  | 7  | Nim    |       |    |         |
| Rupavati | 456 | 19+185 | RHS | 100 | 7  | Nim    |       |    |         |
| Rupavati | 456 | 19+190 | RHS | 80  | 5  | Nim    |       |    |         |
| Rupavati | 456 | 19+195 | RHS | 100 | 7  | Nim    |       |    |         |
| Rupavati | 456 | 19+195 | RHS | 90  | 5  | Nim    |       |    |         |

|          |     |        |     |     |    |        |        |    |         |
|----------|-----|--------|-----|-----|----|--------|--------|----|---------|
| Rupavati | 456 | 19+195 | RHS | 80  | 7  | kesdao | kesdao | 1  |         |
| Rupavati | 456 | 19+195 | RHS | 200 | 10 | Nim    |        |    |         |
| Rupavati | 456 | 19+310 | RHS | 200 | 7  | Nim    |        |    |         |
| Rupavati | 456 | 19+320 | RHS | 100 | 5  | Nim    |        |    |         |
| Rupavati | 456 | 19+320 | RHS | 90  | 5  | Nim    |        |    |         |
| Rupavati | 470 | 19+320 | RHS | 100 | 9  | Nim    | Nim    | 4  | TOTAL=5 |
| Rupavati | 470 | 19+380 | RHS | 150 | 7  | Nim    |        |    |         |
| Rupavati | 470 | 19+380 | RHS | 190 | 7  | Nim    |        |    |         |
| Rupavati | 470 | 19+380 | RHS | 100 | 8  | Nim    |        |    |         |
| Rupavati | 470 | 19+390 | RHS | 80  | 5  | pipal  | pipal  | 1  |         |
| Rupavati | 474 | 19+460 | RHS | 150 | 10 | Nim    | Nim    | 2  | TOTAL=2 |
| Rupavati | 474 | 19+560 | RHS | 90  | 7  | Nim    |        |    |         |
| Rupavati | 359 | 19+710 | RHS | 120 | 7  | Nim    |        |    |         |
| Rupavati | 359 | 19+710 | RHS | 100 | 5  | Nim    |        |    |         |
| Rupavati | 357 | 19+750 | RHS | 100 | 7  | Nim    | Nim    | 7  | TOTAL=8 |
| Rupavati | 357 | 19+750 | RHS | 120 | 5  | Nim    |        |    |         |
| Rupavati | 357 | 19+750 | RHS | 90  | 7  | Nim    |        |    |         |
| Rupavati | 357 | 19+750 | RHS | 100 | 8  | Nim    |        |    |         |
| Rupavati | 357 | 19+750 | RHS | 90  | 5  | Nim    |        |    |         |
| Rupavati | 357 | 19+750 | RHS | 100 | 7  | Nim    |        |    |         |
| Rupavati | 357 | 19+750 | RHS | 200 | 10 | Nim    |        |    |         |
| Rupavati | 357 | 19+750 | RHS | 100 | 7  | kesdao | kesdao | 1  |         |
| Rupavati | 416 | 19+750 | RHS | 120 | 10 | jabon  | jabon  | 11 |         |
| Rupavati | 416 | 19+751 | RHS | 100 | 5  | jabon  |        |    |         |
| Rupavati | 416 | 19+752 | RHS | 90  | 7  | jabon  |        |    |         |
| Rupavati | 416 | 19+753 | RHS | 100 | 7  | jabon  |        |    |         |
| Rupavati | 416 | 19+754 | RHS | 60  | 5  | jabon  |        |    |         |
| Rupavati | 416 | 19+800 | RHS | 100 | 6  | jabon  |        |    |         |
| Rupavati | 416 | 19+800 | RHS | 100 | 5  | Nim    | Nim    | 37 |         |
| Rupavati | 416 | 19+801 | RHS | 100 | 7  | Nim    |        |    |         |
| Rupavati | 416 | 19+810 | RHS | 100 | 7  | pipal  | pipal  | 6  |         |
| Rupavati | 416 | 19+810 | RHS | 90  | 5  | pipal  |        |    |         |
| Rupavati | 416 | 19+810 | RHS | 100 | 9  | pipal  |        |    |         |
| Rupavati | 416 | 19+810 | RHS | 100 | 8  | pipal  |        |    |         |
| Rupavati | 416 | 19+810 | RHS | 100 | 70 | jabon  |        |    |         |

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|          |     |        |     |     |    |         |        |    |
|----------|-----|--------|-----|-----|----|---------|--------|----|
| Rupavati | 416 | 20+350 | RHS | 90  | 5  | jaban   |        |    |
| Rupavati | 416 | 20+350 | RHS | 100 | 5  | jaban   |        |    |
| Rupavati | 416 | 20+350 | RHS | 100 | 5  | Gulmohr |        |    |
| Rupavati | 416 | 20+350 | RHS | 60  | 7  | nim     |        |    |
| Rupavati | 416 | 20+350 | RHS | 60  | 7  | nim     |        |    |
| Rupavati | 416 | 20+350 | RHS | 90  | 6  | nim     |        |    |
| Rupavati | 416 | 20+350 | RHS | 50  | 6  | nim     |        |    |
| Rupavati | 416 | 20+350 | RHS | 100 | 5  | nim     |        |    |
| Rupavati | 416 | 20+420 | RHS | 100 | 7  | nim     |        |    |
| Rupavati | 416 | 20+430 | RHS | 200 | 10 | nim     |        |    |
| Rupavati | 416 | 20+430 | RHS | 100 | 5  | nim     |        |    |
| Rupavati | 416 | 20+430 | RHS | 60  | 7  | kesdao  | kesdao | 2  |
| Rupavati | 416 | 20+430 | RHS | 200 | 7  | pipal   |        |    |
| Rupavati | 416 | 20+450 | RHS | 90  | 5  | nim     |        |    |
| Rupavati | 416 | 20+450 | RHS | 200 | 5  |         |        |    |
| Rupavati | 416 | 20+455 | RHS | 90  | 5  |         |        |    |
| Rupavati | 416 | 20+480 | RHS | 100 | 7  |         |        |    |
| Rupavati | 416 | 20+480 | RHS | 90  | 5  | kesdao  |        |    |
| Rupavati | 416 | 20+480 | RHS | 100 | 7  | nim     |        |    |
| Rupavati | 416 | 20+480 | RHS | 120 | 5  | babul   | babul  | 2  |
| Rupavati | 416 | 20+500 | RHS | 90  | 6  | babul   |        |    |
| Rupavati | 416 | 20+500 | RHS | 100 | 7  | Nim     |        |    |
| Rupavati | 416 | 20+700 | RHS | 90  | 6  | Nim     |        |    |
| Rupavati | 416 | 20+700 | RHS | 100 | 7  | Nim     |        |    |
| Rupavati | 416 | 20+700 | RHS | 90  | 5  | Nim     |        |    |
| Rupavati | 416 | 20+720 | RHS | 100 | 7  | guda    |        |    |
| Rupavati | 416 | 20+750 | RHS | 120 | 5  | nim     |        |    |
| Rupavati | 416 | 20+756 | RHS | 90  | 7  | nim     |        |    |
| Rupavati | 384 | 20+780 | RHS | 100 | 10 | nim     | nim    | 16 |
| Rupavati | 384 | 20+780 | RHS | 90  | 5  | nim     |        |    |
| Rupavati | 384 | 20+780 | RHS | 100 | 7  | nim     |        |    |
| Rupavati | 384 | 20+780 | RHS | 90  | 5  | nim     |        |    |
| Rupavati | 384 | 20+780 | RHS | 100 | 7  | nim     |        |    |
| Rupavati | 384 | 20+780 | RHS | 150 | 10 | nim     |        |    |
| Rupavati | 384 | 20+880 | RHS | 80  | 5  | nim     |        |    |

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|          |     |        |     |     |    |       |       |   |  |
|----------|-----|--------|-----|-----|----|-------|-------|---|--|
| Rupavati | 384 | 20-890 | RHS | 90  | 5  | nim   |       |   |  |
| Rupavati | 384 | 20-891 | RHS | 100 | 7  | nim   |       |   |  |
| Rupavati | 384 | 20-892 | RHS | 100 | 5  | nim   |       |   |  |
| Rupavati | 384 | 20-893 | RHS | 150 | 10 | nim   |       |   |  |
| Rupavati | 384 | 20-894 | RHS | 90  | 10 | nim   |       |   |  |
| Rupavati | 384 | 20-895 | RHS | 90  | 10 | nim   |       |   |  |
| Rupavati | 384 | 20-896 | RHS | 150 | 10 | kunda | kundo | 1 |  |
| Rupavati | 384 | 20-897 | RHS | 100 | 10 | nim   |       |   |  |
| Rupavati | 384 | 20-898 | RHS | 100 | 7  | nim   |       |   |  |
| Rupavati | 384 | 20-899 | RHS | 120 | 5  | nim   |       |   |  |
| Rupavati | 135 | 20-890 | RHS | 100 | 7  | nim   |       |   |  |
| Rupavati | 135 | 20-890 | RHS | 90  | 7  | nim   |       |   |  |
| Rupavati | 135 | 20-890 | RHS | 100 | 9  | nim   |       |   |  |
| Rupavati | 135 | 20-890 | RHS | 90  | 5  | nim   |       |   |  |
| Rupavati | 135 | 20-890 | RHS | 100 | 7  | nim   |       |   |  |
| Rupavati | 135 | 20-890 | RHS | 100 | 10 | nim   |       |   |  |

TOTAL=17

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| Village Name | Survey/ Plot No. | Chainage | Side | Girth (BGH) in cm | Height (m) | Tree Name | Tlee Name | Number | Total   | Remarks |
|--------------|------------------|----------|------|-------------------|------------|-----------|-----------|--------|---------|---------|
| Rupavati     | 152              | 17+400   | LHS  | 60                | 4          | abali     | abali     | 2      | TOTAL=2 |         |
| Rupavati     | 152              | 17+400   | LHS  | 70                | 4          | abali     |           |        |         |         |
| Rupavati     | 151              | 17+400   | LHS  | 50                | 4          | abali     | abali     | 1      | TOTAL=2 |         |
| Rupavati     | 151              | 17+420   | LHS  | 200               | 7          | Nim       | Nim       | 1      |         |         |
| Rupavati     | 148              | 17+620   | LHS  | 150               | 5          | pipal     | pipal     | 2      | TOTAL=2 |         |
| Rupavati     | 148              | 17+620   | LHS  | 120               | 7          | pipal     |           |        |         |         |
| Rupavati     | 161              | 17+620   | LHS  | 80                | 5          | pipal     | pipal     | 3      | TOTAL=4 |         |
| Rupavati     | 161              | 17+900   | LHS  | 80                | 6          | pipal     |           |        |         |         |
| Rupavati     | 161              | 17+900   | LHS  | 90                | 7          | pipal     |           |        |         |         |
| Rupavati     | 161              | 17+900   | LHS  | 100               | 8          | abali     | abali     | 1      |         |         |
| Rupavati     | 172              | 18+240   | LHS  | 60                | 4          | Khejadi   | Khejadi   | 2      | TOTAL=5 |         |
| Rupavati     | 172              | 18+400   | LHS  | 90                | 5          | Khejadi   |           |        |         |         |
| Rupavati     | 172              | 18+415   | LHS  | 80                | 6          | Nim       | Nim       | 2      |         |         |
| Rupavati     | 172              | 18+420   | LHS  | 130               | 8          | Nim       |           |        |         |         |
| Rupavati     | 172              | 18+525   | LHS  | 200               | 5          | Vakhudi   | Vakhudi   | 1      |         |         |
| Rupavati     | 179              | 18+410   | LHS  | 100               | 6          | nim       |           |        |         |         |
| Rupavati     | 179              | 18+420   | LHS  | 100               | 6          |           |           |        |         |         |
| Rupavati     | 179              | 18+415   | LHS  | 90                | 7          | Nim       |           |        |         |         |
| Rupavati     | 179              | 18+415   | LHS  | 80                | 6          | Nim       |           |        |         |         |
| Rupavati     | 179              | 18+415   | LHS  | 70                | 6          | khijado   |           |        |         |         |
| Rupavati     | 181              | 18+710   | LHS  | 80                | 5          | gudo      |           |        |         |         |
| Rupavati     | 181              | 18+710   | LHS  | 60                | 5          | Nim       |           |        |         |         |
| Rupavati     | 182              | 18+715   | LHS  | 70                | 5          | Nim       |           |        |         |         |
| Rupavati     | 82               | 18+750   | LHS  | 60                | 8          | Vakhudi   | Vakhudi   | 4      |         |         |
| Rupavati     | 82               | 18+750   | LHS  | 60                | 7          | Vakhudi   |           |        |         |         |
| Rupavati     | 82               | 18+750   | LHS  | 70                | 9          | Vakhudi   |           |        |         |         |
| Rupavati     | 82               | 18+750   | LHS  | 70                | 6          | Vakhudi   |           |        |         |         |
| Rupavati     | 82               | 18+750   | LHS  | 100               | 7          | Nim       | Nim       | 11     |         |         |
| Rupavati     | 82               | 18+750   | LHS  | 90                | 5          | Nim       |           |        |         |         |
| Rupavati     | 82               | 18+760   | LHS  | 40                | 6          | Nim       |           |        |         |         |

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|          |     |        |     |     |   |          |          |   |          |
|----------|-----|--------|-----|-----|---|----------|----------|---|----------|
| Rupavati | 82  | 18+760 | LHS | 70  | 6 | Nim      |          |   | TOTAL=15 |
| Rupavati | 82  | 18+760 | LHS | 40  | 8 | Nim      |          |   |          |
| Rupavati | 82  | 18+760 | LHS | 100 | 9 | Nim      |          |   |          |
| Rupavati | 82  | 18+800 | LHS | 40  | 8 | Nim      |          |   |          |
| Rupavati | 82  | 18+810 | LHS | 50  | 4 | Nim      |          |   |          |
| Rupavati | 82  | 18+810 | LHS | 40  | 7 | Nim      |          |   |          |
| Rupavati | 82  | 18+820 | LHS | 60  | 7 | Nim      |          |   |          |
| Rupavati | 82  | 18+850 | LHS | 50  | 7 | Nim      |          |   |          |
| Rupavati | 83  | 18+750 | LHS | 60  | 5 | Nim      | Nim      | 4 | TOTAL=4  |
| Rupavati | 83  | 18+750 | LHS | 70  | 7 | Nim      |          |   |          |
| Rupavati | 83  | 18+750 | LHS | 80  | 6 | Nim      |          |   |          |
| Rupavati | 83  | 18+750 | LHS | 40  | 8 | Nim      |          |   |          |
| Rupavati | 7   | 18+850 | LHS | 60  | 7 | khljado  | khljado  | 4 | TOTAL=5  |
| Rupavati | 7   | 18+860 | LHS | 40  | 6 | khljado  |          |   |          |
| Rupavati | 7   | 18+860 | LHS | 80  | 7 | khljado  |          |   |          |
| Rupavati | 7   | 18+860 | LHS | 40  | 6 | Nim      | Nim      | 1 |          |
| Rupavati | 7   | 18+860 | LHS | 40  | 8 | khljado  |          |   |          |
| Rupavati | 6   | 18+900 | LHS | 100 | 8 | Nim      | Nim      | 1 | TOTAL=1  |
| Rupavati | 464 | 18-925 | LHS | 50  | 6 | Nim      | Nim      | 5 |          |
| Rupavati | 464 | 18-925 | LHS | 60  | 4 | Nim      |          |   |          |
| Rupavati | 464 | 18+925 | LHS | 80  | 5 | Nim      |          |   |          |
| Rupavati | 464 | 18+925 | LHS | 50  | 4 | Nim      |          |   |          |
| Rupavati | 464 | 19+025 | LHS | 80  | 6 | Kesudo   | Kesudo   | 2 | TOTAL=7  |
| Rupavati | 464 | 19+040 | LHS | 90  | 4 | Nim      |          |   |          |
| Rupavati | 464 | 19+100 | LHS | 100 | 7 | Kesudo   |          |   |          |
| Rupavati | 468 | 19+100 | LHS | 100 | 6 | Nim      | Nim      | 1 | TOTAL=2  |
| Rupavati | 468 | 19+100 | LHS | 120 | 7 | Kesudo   | Kesudo   | 1 |          |
| Rupavati | 469 | 19+100 | LHS | 70  | 6 | Kesudo   | Kesudo   | 3 |          |
| Rupavati | 469 | 19+100 | LHS | 40  | 8 | Kesudo   |          |   |          |
| Rupavati | 469 | 19+100 | LHS | 50  | 6 | Kesudo   |          |   |          |
| Rupavati | 469 | 19+105 | LHS | 40  | 6 | gulmohar | gulmohar | 1 | TOTAL=6  |
| Rupavati | 469 | 19+110 | LHS | 60  | 4 | Nim      | Nim      | 1 |          |
| Rupavati | 469 | 19+125 | LHS | 70  | 6 | khljado  | khljado  | 1 |          |

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|----------|-----|--------|-----|-----|----|---------|---------|---|---------|--|
| Rupavati | 455 | 19+230 | LHS | 400 | 7  | Vakhudi | Vakhudi | 1 | TOTAL=2 |  |
| Rupavati | 455 | 19+240 | LHS | 60  | 4  | khilado | khilado | 1 |         |  |
| Rupavati | 445 | 19+240 | LHS | 70  | 5  | khilado | khilado | 1 | TOTAL=1 |  |
| Rupavati | 470 | 19+300 | LHS | 40  | 7  | Nim     | Nim     | 3 |         |  |
| Rupavati | 470 | 19+360 | LHS | 80  | 4  | Nim     | Nim     |   | TOTAL=3 |  |
| Rupavati | 470 | 19+365 | LHS | 60  | 4  | Nim     | Nim     |   |         |  |
| Rupavati | 473 | 19+370 | LHS | 50  | 5  | Nim     | Nim     | 4 |         |  |
| Rupavati | 473 | 19+540 | LHS | 80  | 8  | Nim     | Nim     |   | TOTAL=4 |  |
| Rupavati | 473 | 19+540 | LHS | 90  | 5  | Nim     | Nim     |   |         |  |
| Rupavati | 473 | 19+540 | LHS | 100 | 4  | Nim     | Nim     |   |         |  |
| Rupavati | 359 | 19+640 | LHS | 120 | 6  | Nim     | Nim     | 1 | Total=1 |  |
| Rupavati | 328 | 19+640 | LHS | 130 | 5  | Nim     | Nim     | 2 |         |  |
| Rupavati | 328 | 19+640 | LHS | 40  | 4  | gudo    | gudo    | 3 |         |  |
| Rupavati | 328 | 19+640 | LHS | 100 | 8  | Nim     | Nim     |   | TOTAL=6 |  |
| Rupavati | 328 | 19+640 | LHS | 100 | 6  | pipal   | pipal   | 1 |         |  |
| Rupavati | 328 | 19+640 | LHS | 80  | 4  | gudo    | gudo    |   |         |  |
| Rupavati | 328 | 19+640 | LHS | 70  | 4  | gudo    | gudo    |   |         |  |
| Rupavati | 358 | 20+100 | LHS | 100 | 7  | pipal   | pipal   | 1 | TOTAL=1 |  |
| Rupavati | 357 | 20+180 | LHS | 100 | 10 | Nim     | Nim     | 2 | TOTAL=2 |  |
| Rupavati | 357 | 20+180 | LHS | 200 | 7  | Nim     | Nim     |   |         |  |
| Rupavati | 361 | 20+200 | LHS | 40  | 5  | Nim     | Nim     | 1 | TOTAL=1 |  |
| Rupavati | 414 | 20+400 | LHS | 180 | 7  | Nim     | Nim     | 1 |         |  |
| Rupavati | 414 | 20+380 | LHS | 80  | 8  | babul   | babul   | 1 | Tota=2  |  |
| Rupavati | 363 | 20+390 | LHS | 60  | 7  | Nim     | Nim     | 2 |         |  |
| Rupavati | 363 | 20+395 | LHS | 80  | 6  | Vakhudi | Vakhudi | 3 |         |  |
| Rupavati | 363 | 20+400 | LHS | 90  | 5  | Nim     | Nim     |   |         |  |
| Rupavati | 363 | 20+405 | LHS | 60  | 7  | Vakhudi | Vakhudi |   | TOTAL=7 |  |
| Rupavati | 363 | 20+430 | LHS | 90  | 6  | Vakhudi | Vakhudi |   |         |  |
| Rupavati | 363 | 20+720 | LHS | 90  | 5  | Guda    | Guda    | 1 |         |  |
| Rupavati | 363 | 20+720 | LHS | 50  | 7  | Kesudo  | Kesudo  | 1 |         |  |
| Rupavati | 384 | 20+720 | LHS | 100 | 5  | pipal   | pipal   | 1 |         |  |
| Rupavati | 384 | 20+720 | LHS | 80  | 5  | babul   | babul   | 1 |         |  |
| Rupavati | 384 | 20+720 | LHS | 120 | 5  | Kesudo  | Kesudo  | 3 | TOTAL=5 |  |

|          |     |        |     |     |   |        |  |  |  |
|----------|-----|--------|-----|-----|---|--------|--|--|--|
| Rupavati | 384 | 20+860 | LHS | 100 | 5 | Kesudo |  |  |  |
| Rupavati | 384 | 20+825 | LHS | 100 | 7 | Kesudo |  |  |  |

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| Village Name | Survey/<br>Plot No. | Chainage | Side | Girth<br>(BGH) in<br>cm | Height (in<br>m) | Tree<br>Name | Tree<br>Name | Number | Total     | Remarks |
|--------------|---------------------|----------|------|-------------------------|------------------|--------------|--------------|--------|-----------|---------|
|              | 212                 | 34+080   | LHS  | 100                     | 10m              | nilgiri      | nilgiri      | 4      | Total -4  |         |
|              |                     | 34+080   | LHS  | 70                      | 10m              | nilgiri      | nilgiri      |        |           |         |
|              |                     | 34+080   | LHS  | 80                      | 10m              | nilgiri      | nilgiri      |        |           |         |
|              |                     | 34+080   | LHS  | 90                      | 10m              | nilgiri      | nilgiri      |        |           |         |
|              | 220                 | 34+400   | LHS  | 1500                    | 10m              | nim          | nim          | 2      | Total -5  |         |
|              |                     | 34+350   | RHS  | 90                      | 5m               | kesado       | kesado       | 3      |           |         |
|              |                     | 34+350   | RHS  | 40                      | 3m               | kesado       | kesado       |        |           |         |
|              |                     | 34+350   | RHS  | 90                      | 7m               | kesado       | kesado       |        |           |         |
|              | 222                 | 34+350   | RHS  | 80                      | 5m               | nim          | nim          |        | Total -8  |         |
|              |                     | 34+320   | LHS  | 200                     | 10m              | guda         | guda         | 1      |           |         |
|              |                     | 34+320   | LHS  | 100                     | 7m               | nim          | nim          | 7      |           |         |
|              |                     | 34+320   | LHS  | 90                      | 5m               | nim          | nim          |        |           |         |
|              |                     | 34+325   | LHS  | 80                      | 5m               | nim          | nim          |        |           |         |
|              |                     | 34+325   | LHS  | 40                      | 7m               | nim          | nim          |        |           |         |
|              |                     | 34+330   | LHS  | 100                     | 5m               | nim          | nim          |        |           |         |
|              |                     | 34+330   | LHS  | 80                      | 5m               | nim          | nim          |        |           |         |
|              | 233                 | 34+335   | LHS  | 40                      | 5m               | nim          | nim          |        | Total -3  |         |
|              |                     | 34+820   | LHS  | 60                      | 5m               | nim          | nim          | 3      |           |         |
|              |                     | 34+820   | LHS  | 70                      | 5m               | nim          | nim          |        |           |         |
|              |                     | 34+820   | LHS  | 80                      | 5m               | nim          | nim          |        |           |         |
|              | 279                 | 35+100   | LHS  | 150                     | 10m              | nim          | nim          | 1      | Total -1  |         |
|              |                     | 35+180   | LHS  | 100                     | 7m               | Kesado       | kesado       | 2      |           |         |
|              | 299                 | 34+450   | RHS  | 90                      | 5m               | nim          | nim          | 1      | Total -3  |         |
|              |                     | 35+100   | RHS  | 80                      | 7m               | kesado       | kesado       |        |           |         |
|              |                     | 35+350   | LHS  | 40                      | 7m               | nim          | nim          | 2      |           |         |
|              | 300                 | 35+650   | LHS  | 50                      | 7m               | Nim          | Nim          |        | Total -2  |         |
|              |                     | 35+800   | RHS  | 90                      | 7m               | nim          | nim          | 1      |           |         |
|              | 310                 | 35+650   | LHS  | 40                      | 5m               | Nim          | Nim          | 7      | Total -10 |         |
|              |                     | 35+650   | LHS  | 60                      | 5m               | Nim          | kesado       | 3      |           |         |
|              |                     | 35+650   | LHS  | 90                      | 5m               | Nim          | Nim          |        |           |         |
|              |                     | 35+680   | LHS  | 30                      | 3m               | Nim          | Nim          |        |           |         |

|     |        |     |     |     |         |         |   |         |  |
|-----|--------|-----|-----|-----|---------|---------|---|---------|--|
| 324 | 35+680 | LHS | 60  | 5m  | Nim     |         |   |         |  |
|     | 35+680 | LHS | 50  | 5m  | Nim     |         |   |         |  |
|     | 35+680 | LHS | 100 | 5m  | kesudo  |         |   |         |  |
|     | 35+740 | LHS | 90  | 7m  | kesudo  |         |   |         |  |
|     | 35+740 | LHS | 60  | 5m  | kesudo  |         |   |         |  |
| 336 | 35+280 | RHS | 90  | 5m  | nim     |         |   |         |  |
|     | 35+850 | RHS | 80  | 7m  | nim     | nim     | 1 | Total-1 |  |
| 337 | 35+190 | LHS | 90  | 5m  | Kesudo  | kesudo  | 1 |         |  |
|     | 34+450 | RHS | 100 | 7m  | nim     | nim     | 1 | Total-2 |  |
| 342 | 34+850 | LHS | 90  | 5m  | nim     | nim     | 2 |         |  |
|     | 34+900 | LHS | 90  | 7m  | nim     |         |   | Total-2 |  |
| 344 | 34+350 | RHS | 120 | 7m  | kesado  | kesado  | 1 | Total-1 |  |
|     | 34+490 | LHS | 200 | 10m | Kesudo  | kesudo  | 1 |         |  |
| 355 | 34+490 | LHS | 90  | 5m  | nim     | nim     | 2 |         |  |
|     | 34+490 | LHS | 60  | 7m  | nim     | vakhudi | 1 |         |  |
|     | 34+800 | LHS | 700 | 15m | Vakhudi |         |   | Total-4 |  |
| 515 | 35+740 | LHS | 80  | 7m  | kesudo  | kesudo  | 4 |         |  |
|     | 35+740 | LHS | 80  | 7m  | kesudo  | nim     | 4 |         |  |
|     | 35+740 | LHS | 75  | 5m  | kesudo  |         |   | Total-8 |  |
|     | 35+740 | LHS | 40  | 5m  | kesudo  |         |   |         |  |
|     | 35+300 | RHS | 60  | 7m  | nim     |         |   |         |  |
|     | 35+300 | RHS | 100 | 10m | nim     |         |   |         |  |
|     | 35+710 | RHS | 30  | 7m  | nim     |         |   |         |  |
| 515 | 35+710 | RHS | 40  | 5m  | nim     |         |   |         |  |
|     | 35+950 | LHS | 100 | 7   | nim     | nim     | 2 | Total=2 |  |

kariyana

|     |        |     |     |     |     |        |   |         |
|-----|--------|-----|-----|-----|-----|--------|---|---------|
| 536 | 35+950 | LHS | 90  | 5   | nim | kesado | 1 | Total-1 |
|     | 35+450 | RHS | 90  | 5m  |     |        |   |         |
| 538 | 35+560 | RHS | 100 | 7m  | nim | nim    | 2 |         |
|     | 35+560 | RHS | 60  | 5m  | nim |        |   | Total-2 |
| 957 | 34+350 | RHS | 200 | 10m | nim | nim    | 2 |         |
|     | 34+350 | RHS | 80  | 7m  | nim |        |   | Total-2 |



| Village Name | Survey/<br>Plot No. | Chainage | Side | Girth<br>(BGH) in<br>cm | Height (in<br>m) | Tree<br>Name | Tree Name | Number | Total    | Remarks |
|--------------|---------------------|----------|------|-------------------------|------------------|--------------|-----------|--------|----------|---------|
|              | 1820                | 12+620   | LHS  | 200                     | 15m              | Nim          | Nim       | 3      |          |         |
|              |                     | 12+620   | LHS  | 200                     | 15m              | Nim          | Nim       |        | Total=3  |         |
|              |                     | 12+620   | LHS  | 100                     | 50m              | Nim          | Nim       |        |          |         |
|              | 1821                | 12+625   | LHS  | 200                     | 12m              | Nim          | Nim       | 3      |          |         |
|              |                     | 12+625   | LHS  | 100                     | 10m              | guda         | guda      | 2      |          |         |
|              |                     | 12+625   | LHS  | 90                      | 7m               | guda         | guda      |        | Total=5  |         |
|              |                     | 12+625   | LHS  | 250                     | 10m              | Nim          | Nim       |        |          |         |
|              |                     | 12+625   | LHS  | 100                     | 7m               | Nim          | Nim       |        |          |         |
|              | 1847                | 12+750   | LHS  | 100                     | 5m               | Nim          | Nim       | 4      |          |         |
|              |                     | 12+750   | LHS  | 90                      | 7m               | Nim          | Nim       | 3      |          |         |
|              |                     | 12+750   | LHS  | 100                     | 5m               | Nim          | Nim       |        | Total=7  |         |
|              |                     | 12+755   | LHS  | 100                     | 7m               | bor          | bor       |        |          |         |
|              |                     | 12+755   | LHS  | 90                      | 5m               | bor          | bor       |        |          |         |
|              |                     | 12+755   | LHS  | 100                     | 5m               | bor          | bor       |        |          |         |
|              | 1835                | 12+760   | LHS  | 200                     | 10m              | Nim          | Nim       |        |          |         |
|              |                     | 12+950   | LHS  | 200                     | 15m              | kesado       | kesado    | 3      |          |         |
|              |                     | 12+950   | LHS  | 100                     | 10m              | kesado       | kesado    |        | Total=3  |         |
|              | 1762                | 12+950   | LHS  | 150                     | 10m              | kesado       | kesado    |        |          |         |
|              |                     | 13+000   | LHS  | 500                     | 7m               | kesado       | kesado    | 3      |          |         |
|              |                     | 13+050   | LHS  | 700                     | 5m               | kesado       | kesado    |        | Total=3  |         |
|              |                     | 13+050   | LHS  | 500                     | 7m               | kesado       | kesado    |        |          |         |
|              | 1640                | 13+540   | LHS  | 90                      | 7m               | Nim          | Nim       | 3      |          |         |
|              |                     | 13+540   | LHS  | 100                     | 5m               | Nim          | Nim       |        | Total=3  |         |
|              |                     | 16+540   | LHS  | 200                     | 10m              | Nim          | Nim       |        |          |         |
|              |                     | 13+700   | LHS  | 100                     | 5m               | Nim          | Nim       | 10     |          |         |
|              |                     | 13+700   | LHS  | 90                      | 7m               | Nim          | Nim       |        | Total=10 |         |
|              |                     | 13+700   | LHS  | 40                      | 5m               | Nim          | Nim       |        |          |         |
|              |                     | 13+700   | LHS  | 50                      | 5m               | Nim          | Nim       |        |          |         |
|              |                     | 13+700   | LHS  | 90                      | 5m               | Nim          | Nim       |        |          |         |



|        |     |     |    |       |        |   |  |  |  |
|--------|-----|-----|----|-------|--------|---|--|--|--|
| 13+700 | LHS | 100 | 5m | bor   |        |   |  |  |  |
| 13+700 | LHS | 90  | 7m | bor   |        |   |  |  |  |
| 13+700 | LHS | 100 | 7m | Nim   |        |   |  |  |  |
| 13+700 | LHS | 50  | 7m | Nim   |        |   |  |  |  |
| 13+660 | LHS | 100 | 5m | Nim   |        |   |  |  |  |
| 13+660 | LHS | 70  | 5m | Nim   |        |   |  |  |  |
| 13+660 | LHS | 90  | 5m | gudi  |        |   |  |  |  |
| 13+660 | LHS | 100 | 5m | gudi  |        |   |  |  |  |
| 13+660 | LHS | 90  | 5m | gudi  |        |   |  |  |  |
| 13+660 | LHS | 100 | 5m | gudi  |        |   |  |  |  |
| 13+660 | LHS | 40  | 5m | jub,N |        |   |  |  |  |
| 13+600 | LHS | 60  | 5m | Nim   |        |   |  |  |  |
| 13+600 | LHS | 100 | 5m | Nim   |        |   |  |  |  |
| 13+660 | LHS | 100 | 5m | Nim   |        |   |  |  |  |
| 13+670 | LHS | 90  | 7m | Nim   |        |   |  |  |  |
| 13+680 | LHS | 100 | 7m | Nim   |        |   |  |  |  |
| 13+685 | LHS | 90  | 5m | Nim   |        |   |  |  |  |
| 13+690 | LHS | 50  | 5m | Nim   |        |   |  |  |  |
| 13+695 | LHS | 100 | 7m | Nim   |        |   |  |  |  |
| 13+700 | LHS | 40  | 5m | Nim   |        |   |  |  |  |
| 13+700 | LHS | 100 | 5m | Nim   |        |   |  |  |  |
| 13+700 | LHS | 90  | 5m | Nim   | Nim    | 8 |  |  |  |
| 13+700 | LHS | 100 | 5m | bor   | bor    | 1 |  |  |  |
| 13+720 | LHS | 100 | 7m | Nim   |        |   |  |  |  |
| 13+720 | LHS | 90  | 5m | Nim   |        |   |  |  |  |
| 13+725 | LHS | 100 | 5  | Nim   |        |   |  |  |  |
| 13+730 | LHS | 200 | 5  | Nim   |        |   |  |  |  |
| 13+735 | LHS | 40  | 7  | Nim   |        |   |  |  |  |
| 13+740 | LHS | 200 | 5  | Nim   |        |   |  |  |  |
| 13+740 | LHS |     |    | Nim   |        |   |  |  |  |
| 13+740 | LHS | 200 | 5  | Nim   | Nim    | 5 |  |  |  |
| 13+750 | LHS | 40  | 5  | Nim   | Nilgri | 2 |  |  |  |
| 13+750 | LHS | 200 | 5  | Nim   | bor    | 1 |  |  |  |

|        |     |     |    |       |        |   |  |  |  |
|--------|-----|-----|----|-------|--------|---|--|--|--|
| 13+700 | LHS | 100 | 5m | bor   |        |   |  |  |  |
| 13+700 | LHS | 90  | 7m | bor   |        |   |  |  |  |
| 13+700 | LHS | 100 | 7m | Nim   |        |   |  |  |  |
| 13+700 | LHS | 50  | 7m | Nim   |        |   |  |  |  |
| 13+660 | LHS | 100 | 5m | Nim   |        |   |  |  |  |
| 13+660 | LHS | 70  | 5m | Nim   |        |   |  |  |  |
| 13+660 | LHS | 90  | 5m | gudi  |        |   |  |  |  |
| 13+660 | LHS | 100 | 5m | gudi  |        |   |  |  |  |
| 13+660 | LHS | 90  | 5m | gudi  |        |   |  |  |  |
| 13+660 | LHS | 100 | 5m | gudi  |        |   |  |  |  |
| 13+660 | LHS | 40  | 5m | jub,N |        |   |  |  |  |
| 13+600 | LHS | 60  | 5m | Nim   |        |   |  |  |  |
| 13+600 | LHS | 100 | 5m | Nim   |        |   |  |  |  |
| 13+660 | LHS | 100 | 5m | Nim   |        |   |  |  |  |
| 13+670 | LHS | 90  | 7m | Nim   |        |   |  |  |  |
| 13+680 | LHS | 100 | 7m | Nim   |        |   |  |  |  |
| 13+685 | LHS | 90  | 5m | Nim   |        |   |  |  |  |
| 13+690 | LHS | 50  | 5m | Nim   |        |   |  |  |  |
| 13+695 | LHS | 100 | 7m | Nim   |        |   |  |  |  |
| 13+700 | LHS | 40  | 5m | Nim   |        |   |  |  |  |
| 13+700 | LHS | 100 | 5m | Nim   |        |   |  |  |  |
| 13+700 | LHS | 90  | 5m | Nim   | Nim    | 8 |  |  |  |
| 13+700 | LHS | 100 | 5m | bor   | bor    | 1 |  |  |  |
| 13+720 | LHS | 100 | 7m | Nim   |        |   |  |  |  |
| 13+720 | LHS | 90  | 5m | Nim   |        |   |  |  |  |
| 13+725 | LHS | 100 | 5  | Nim   |        |   |  |  |  |
| 13+730 | LHS | 200 | 5  | Nim   |        |   |  |  |  |
| 13+735 | LHS | 40  | 7  | Nim   |        |   |  |  |  |
| 13+740 | LHS | 200 | 5  | Nim   |        |   |  |  |  |
| 13+740 | LHS |     |    | Nim   |        |   |  |  |  |
| 13+740 | LHS | 200 | 5  | Nim   | Nim    | 5 |  |  |  |
| 13+750 | LHS | 40  | 5  | Nim   | Nilgri | 2 |  |  |  |
| 13+750 | LHS | 200 | 5  | Nim   | bor    | 1 |  |  |  |

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|      |        |     |     |    |          |          |   |          |  |
|------|--------|-----|-----|----|----------|----------|---|----------|--|
| 1627 | 13+750 | LHS | 90  | 7  | Nim      | aam      | 3 |          |  |
|      | 13+820 | LHS | 100 | 10 | Nilgri   | jabul    | 1 |          |  |
|      | 13+821 | LHS | 40  | 5  | Nilgri   | babul    | 5 |          |  |
|      | 13+820 | LHS | 80  | 5  | bor      |          |   | Total=17 |  |
|      | 13+820 | LHS | 100 | 7  | aam      |          |   |          |  |
|      | 13+820 | LHS | 100 | 5  | aam      |          |   |          |  |
|      | 13+820 | LHS | 100 | 5  | jabul    |          |   |          |  |
|      | 13+820 | LHS | 90  | 7  | Nim      |          |   |          |  |
|      | 13+820 | LHS | 100 | 7  | aam      |          |   |          |  |
|      | 13+850 | LHS | 90  | 5  | babul    |          |   |          |  |
|      | 13+850 | LHS | 100 | 7  | babul    |          |   |          |  |
|      | 13+850 | LHS | 100 | 10 | babul    |          |   |          |  |
|      | 13+850 | LHS | 150 | 7  | babul    |          |   |          |  |
|      | 13+850 | LHS | 90  | 5  | babul    |          |   |          |  |
|      | 13+820 | LHS | 100 | 7  | babul    | babul    | 3 |          |  |
| 1620 | 13+820 | LHS | 90  | 54 | babul    | gulmohar | 4 |          |  |
|      | 13+820 | LHS | 80  | 5  | babul    |          |   | Total=7  |  |
|      | 13+820 | LHS | 100 | 5  | gulmohar |          |   |          |  |
|      | 13+820 | LHS | 60  | 7  | gulmohar |          |   |          |  |
|      | 13+820 | LHS | 60  | 7  | gulmohar |          |   |          |  |
|      | 13+820 | LHS | 50  | 7  | gulmohar |          |   |          |  |
|      | 13+900 | LHS | 200 | 10 | Nim      | Nim      | 2 |          |  |
| 1612 | 13+900 | LHS | 90  | 10 | Nim      | kesado   | 1 |          |  |
|      | 13+900 | LHS | 100 | 5  | kesado   |          |   | Total=3  |  |
| 1609 | 13+000 | LHS | 100 | 7  | jabuN    | jabuN    | 4 |          |  |
|      | 13+000 | LHS | 90  | 7  | jabuN    |          |   | Total=4  |  |
|      | 13+000 | LHS | 100 | 5  | jabuN    |          |   |          |  |
|      | 13+000 | LHS | 150 | 5  | jabuN    |          |   |          |  |
|      | 13+000 | LHS | 200 | 10 | guda     | guda     | 2 |          |  |
|      | 13+000 | LHS | 100 | 5  | guda     | jabuN    | 5 |          |  |
|      | 13+080 | LHS | 60  | 7  | jabuN    | Nim      | 6 |          |  |
|      | 13+080 | LHS | 70  | 5  | jabuN    | bor      | 1 |          |  |
|      | 13+080 | LHS | 80  | 5  | jabuN    | kesado   | 2 |          |  |

kavita

|      |         |     |     |    |          |          |  |           |          |  |  |
|------|---------|-----|-----|----|----------|----------|--|-----------|----------|--|--|
| 1608 | 13+080  | LHS | 100 | 7  | jubuN    |          |  |           | Total=16 |  |  |
|      | 13+080  | LHS | 100 | 5  | Nim      |          |  |           |          |  |  |
|      | 13+080  | LHS | 120 | 7  | Nim      |          |  |           |          |  |  |
|      | 13+080  | LHS | 100 | 5  | Nim      |          |  |           |          |  |  |
|      | 13+080  | LHS | 90  | 7  | bor      |          |  |           |          |  |  |
|      | 13+080  | LHS | 100 | 5  | Nim      |          |  |           |          |  |  |
|      | 13+080  | LHS | 100 | 5  | Nim      |          |  |           |          |  |  |
|      | 13+080  | LHS | 90  | 7  | Nim      |          |  |           |          |  |  |
|      | 141+000 | LHS | 200 | 10 | kesado   |          |  |           |          |  |  |
|      | 141+000 | LHS | 100 | 7  | jubuN    |          |  |           |          |  |  |
| 1566 | 14+050  | LHS | 92  | 5  | kesado   |          |  |           |          |  |  |
|      | 14+300  | LHS | 200 | 10 | Nim      | Nim      |  | 2         |          |  |  |
|      | 14+300  | LHS | 100 | 9  | Nim      |          |  | Total=2   |          |  |  |
|      | 14+310  | LHS | 120 | 10 | babul    | babul    |  | 1         |          |  |  |
| 1579 | 14+310  | LHS | 100 | 7  | Nim      | Nim      |  | 5         |          |  |  |
|      | 14+310  | LHS | 90  | 5  | Nim      |          |  | Total = 6 |          |  |  |
|      | 14+310  | LHS | 80  | 5  | Nim      |          |  |           |          |  |  |
|      | 14+310  | LHS | 120 | 7  | Nim      |          |  |           |          |  |  |
|      | 14+310  | LHS | 120 | 11 | Nim      |          |  |           |          |  |  |
|      | 14+350  | LHS | 100 | 7  | gorasara | gorasara |  | 1         | Total=1  |  |  |
| 1580 | 14+400  | LHS | 250 | 10 | Nim      | Nim      |  | 7         |          |  |  |
|      | 14+400  | LHS | 150 | 7  | kesado   | kesado   |  | 1         | Total=8  |  |  |
|      | 14+400  | LHS | 100 | 5  | Nim      |          |  |           |          |  |  |
|      | 14+400  | LHS | 150 | 7  | Nim      |          |  |           |          |  |  |
|      | 14+400  | LHS | 120 | 10 | Nim      |          |  |           |          |  |  |
|      | 14+400  | LHS | 100 | 7  | Nim      |          |  |           |          |  |  |
|      | 14+400  | LHS | 90  | 8  | Nim      |          |  |           |          |  |  |
|      | 14+400  | LHS | 200 | 10 | Nim      |          |  |           |          |  |  |
| 1556 | 14+480  | LHS | 200 | 10 | Nim      | Nim      |  | 1         | Total=1  |  |  |
|      | 14+480  | LHS | 150 | 7  | Nim      | Nim      |  | 5         |          |  |  |
|      | 14+480  | LHS | 130 | 10 | Nim      | kesado   |  | 1         |          |  |  |
|      | 14+480  | LHS | 150 | 7  | Nim      |          |  | Total=5   |          |  |  |
| 1546 | 14+590  | LHS | 200 | 10 | Nim      | Nim      |  | 1         |          |  |  |

|      |        |     |     |    |        |        |   |           |  |
|------|--------|-----|-----|----|--------|--------|---|-----------|--|
| 1532 | 14+600 | LHS | 100 | 11 | rain   | rain   | 1 | Total = 2 |  |
|      | 14+630 | LHS | 200 | 15 | kesado |        |   |           |  |
|      | 14+510 | LHS | 200 | 10 | Nim    |        |   |           |  |
|      | 14+510 | LHS | 150 | 15 | Nim    |        |   |           |  |
|      | 14+600 | LHS | 200 | 10 | Nim    | Nim    | 2 |           |  |
|      | 14+600 | LHS | 150 | 15 | Nilgri | Nilgri | 2 |           |  |
|      | 14+600 | LHS | 100 | 10 | Nilgri |        |   | Total = 4 |  |
|      | 14+600 | LHS | 200 | 7  | Nim    |        |   |           |  |
|      | 14+850 | LHS | 100 | 10 | Nim    | Nim    | 2 |           |  |
|      | 14+850 | LHS | 90  | 15 | Nim    |        |   | Total = 2 |  |
| 1531 | 14+950 | LHS | 100 | 10 | Nim    | Nim    | 6 | Total = 6 |  |
|      | 14+955 | LHS | 90  | 5  | Nim    |        |   |           |  |
|      | 14+960 | LHS | 80  | 5  | Nim    |        |   |           |  |
|      | 14+960 | LHS | 100 | 5  | Nim    |        |   |           |  |
|      | 14+960 | LHS | 100 | 7  | Nim    |        |   |           |  |
|      | 14+960 | LHS | 600 | 5  | Nim    |        |   |           |  |
| 1521 | 15+080 | LHS | 100 | 10 | kesado | kesado | 2 | Total = 2 |  |
|      | 15+060 | LHS | 60  | 7  | kesado |        |   |           |  |
| 1522 | 15+150 | LHS | 300 | 15 | Nim    | Nim    | 1 | Total = 1 |  |
|      | 15+250 | LHS | 200 | 10 | pipal  | pipal  | 1 | Total = 1 |  |



| Village Name | Survey/ Plot No. | Chainage | Side | Girth (BGH) in cm | Height (m) | Tree Name | Tlee Name | Number | Total   | Remarks |
|--------------|------------------|----------|------|-------------------|------------|-----------|-----------|--------|---------|---------|
| kavita       | 1821             | 12+630   | RHS  | 100               | 10         | Nim       | Nim       | 6      | TOTAL=7 |         |
| kavita       | 1821             | 12+630   | RHS  | 90                | 7          | Nim       |           |        |         |         |
| kavita       | 1821             | 12+630   | RHS  | 80                | 5          | Nim       |           |        |         |         |
| kavita       | 1821             | 12+650   | RHS  | 40                | 5          | Nim       |           |        |         |         |
| kavita       | 1821             | 12+650   | RHS  | 100               | 7          | Nim       |           |        |         |         |
| kavita       | 1821             | 12+650   | RHS  | 200               | 10         | Aam       | Aam       | 1      |         |         |
| kavita       | 1821             | 12+650   | RHS  | 200               | 10         | Nim       |           |        |         |         |
| kavita       | 1822             | 12+660   | RHS  | 100               | 7          | babun     | babun     | 2      | TOTAL=9 |         |
| kavita       | 1822             | 12+680   | RHS  | 90                | 7          | babun     |           |        |         |         |
| kavita       | 1822             | 12+680   | RHS  | 100               | 5          | nim       | nim       | 7      |         |         |
| kavita       | 1822             | 12+680   | RHS  | 80                | 7          | nim       |           |        |         |         |
| kavita       | 1822             | 12+680   | RHS  | 100               | 5          | nim       |           |        |         |         |
| kavita       | 1822             | 12+680   | RHS  | 90                | 7          | nim       |           |        |         |         |
| kavita       | 1822             | 12+681   | RHS  | 100               | 5          | nim       |           |        |         |         |
| kavita       | 1822             | 12+680   | RHS  | 80                | 7          | nim       |           |        | TOTAL=4 |         |
| kavita       | 1822             | 12+680   | RHS  | 200               | 5          | nim       |           |        |         |         |
| kavita       | 1826             | 12+150   | RHS  | 200               | 7          | jabun     | jabun     | 2      |         |         |
| kavita       | 1826             | 12+750   | RHS  | 100               | 7          | jabun     |           |        |         |         |
| kavita       | 1826             | 12+750   | RHS  | 100               | 5          | Nim       | Nim       | 2      | TOTAL=2 |         |
| kavita       | 1826             | 12+755   | RHS  | 90                | 5          | Nim       |           |        |         |         |
| kavita       | 1824             | 12+755   | RHS  | 90                | 7          | Nim       | Nim       | 1      |         |         |
| kavita       | 1824             | 12+755   | RHS  | 200               | 10         | vakhndi   | vakhndi   | 1      |         |         |
| kavita       | 1827             | 12+800   | RHS  | 100               | 7          | Nim       | Nim       | 1      | TOTAL=4 |         |
| kavita       | 1827             | 12+800   | RHS  | 200               | 10         | guda      | guda      | 1      |         |         |
| kavita       | 1827             | 12+850   | RHS  | 100               | 7          | Nim       | Nim       | 2      |         |         |
| kavita       | 1827             | 12+850   | RHS  | 80                | 5          | Nim       |           |        |         |         |
| kavita       | 1828             | 12+810   | RHS  | 100               | 7          | Nim       | Nim       | 2      | TOTAL=2 |         |
| kavita       | 1828             | 12+810   | RHS  | 90                | 7          | Nim       |           |        |         |         |
| kavita       | 1833             | 12+850   | RHS  | 90                | 5          | babul     | babul     | 2      | TOTAL=3 |         |
| kavita       | 1833             | 12+850   | RHS  | 100               | 5          | babul     |           |        |         |         |

|        |      |        |     |     |    |       |       |   |         |
|--------|------|--------|-----|-----|----|-------|-------|---|---------|
| kavita | 1833 | 12+850 | RHS | 90  | 7  | Nim   | Nim   | 1 |         |
| kavita | 1834 | 12+810 | RHS | 90  | 7  | guda  | guda  | 1 |         |
| kavita | 1834 | 12+810 | RHS | 100 | 5  | Nim   | Nim   | 2 | TOTAL=3 |
| kavita | 1834 | 12+810 | RHS | 90  | 7  | Nim   |       |   |         |
| kavita | 1831 | 12+950 | RHS | 100 | 10 | Aam   | Aam   | 1 |         |
| kavita | 1831 | 12+940 | RHS | 100 | 7  | Nim   | Nim   | 4 |         |
| kavita | 1831 | 12+940 | RHS | 90  | 5  | Nim   |       |   | TOTAL=5 |
| kavita | 1831 | 12+940 | RHS | 90  | 5  | Nim   |       |   |         |
| kavita | 1831 | 12+940 | RHS | 100 | 5  | Nim   |       |   |         |
| kavita | 1832 | 12+906 | RHS | 200 | 10 | Nim   | Nim   | 3 |         |
| kavita | 1832 | 12+900 | RHS | 100 | 7  | pipal | pipal | 1 |         |
| kavita | 1832 | 12+876 | RHS | 100 | 7  | Nim   |       |   | TOTAL=7 |
| kavita | 1832 | 12+875 | RHS | 90  | 5  | guda  | guda  | 1 |         |
| kavita | 1832 | 12+872 | RHS | 100 | 5  | gor   | gor   | 1 |         |
| kavita | 1832 | 12+800 | RHS | 200 | 15 | nim   |       |   |         |
| kavita | 1832 | 12+900 | RHS | 100 | 10 | babul | babul | 1 |         |
| kavita | 1829 | 12+940 | RHS | 90  | 7  | Nim   | Nim   | 5 |         |
| kavita | 1829 | 12+940 | RHS | 80  | 5  | Nim   |       |   |         |
| kavita | 1829 | 12+940 | RHS | 100 | 7  | Nim   |       |   |         |
| kavita | 1829 | 12+940 | RHS | 90  | 7  | Nim   |       |   | TOTAL=7 |
| kavita | 1829 | 12+940 | RHS | 80  | 5  | Nim   |       |   |         |
| kavita | 1829 | 12+950 | RHS | 90  | 5  | pipal | pipal | 2 |         |
| kavita | 1829 | 12+950 | RHS | 200 | 10 | pipal |       |   |         |
| kavita | 1830 | 12+980 | RHS | 100 | 10 | pipal | pipal | 3 |         |
| kavita | 1830 | 12+980 | RHS | 90  | 7  | pipal |       |   | TOTAL=3 |
| kavita | 1830 | 12+980 | RHS | 100 | 7  | pipal |       |   |         |
| kavita | 1777 | 12+800 | RHS | 100 | 5  | pipal | pipal | 2 |         |
| kavita | 1777 | 12+800 | RHS | 90  | 5  | pipal |       |   | TOTAL=2 |
| kavita | 1762 | 12+890 | RHS | 100 | 7  | pipal | pipal | 2 |         |
| kavita | 1762 | 12+890 | RHS | 100 | 7  | pipal |       |   | TOTAL=2 |
| kavita | 1761 | 13+050 | RHS | 90  | 10 | pipal | pipal | 1 |         |
| kavita | 1761 | 13+650 | RHS | 250 | 15 | nim   | nim   | 2 |         |
| kavita | 1761 | 13+065 | RHS | 100 | 10 | nim   |       |   | TOTAL=5 |

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|        |      |        |     |     |    |         |         |   |  |
|--------|------|--------|-----|-----|----|---------|---------|---|--|
| kavita | 1761 | 23+180 | RHS | 90  | 5  | boa     | boa     | 1 |  |
| kavita | 1761 | 13+200 | RHS | 100 | 8  | kisado  | kisado  | 1 |  |
| kavita | 1736 | 13+210 | RHS | 200 | 7  | kisado  | kisado  | 5 |  |
| kavita | 1736 | 13+220 | RHS | 100 | 7  | kisado  |         |   |  |
| kavita | 1736 | 13+220 | RHS | 100 | 10 | kisado  |         |   |  |
| kavita | 1736 | 13+220 | RHS | 200 | 9  | kisado  |         |   |  |
| kavita | 1736 | 13+220 | RHS | 100 | 5  | kisado  |         |   |  |
| kavita | 1736 | 13+220 | RHS | 200 | 7  | Nim     | Nim     | 3 |  |
| kavita | 1736 | 23+225 | RHS | 90  | 8  | Nim     |         |   |  |
| kavita | 1736 | 23+250 | RHS | 100 | 10 | Nim     |         |   |  |
| kavita | 1734 | 23+300 | RHS | 100 | 7  | babul   | babul   | 1 |  |
| kavita | 1654 | 23+470 | RHS | 150 | 5  | nim     | nim     | 1 |  |
| kavita | 1652 | 23+550 | RHS | 200 | 7  | nim     | nim     | 2 |  |
| kavita | 1652 | 23+550 | RHS | 200 | 10 | nim     |         |   |  |
| kavita | 1652 | 23+550 | RHS | 90  | 10 | nilgiri | nilgiri | 1 |  |
| kavita | 1653 | 23+550 | RHS | 500 | 10 | nilgiri | nilgiri | 3 |  |
| kavita | 1653 | 23+550 | RHS | 100 | 7  | nilgiri |         |   |  |
| kavita | 1653 | 23+550 | RHS | 200 | 10 | nilgiri |         |   |  |
| kavita | 1640 | 13+600 | RHS | 250 | 10 | nim     | nim     | 1 |  |
| kavita | 1640 | 13+600 | RHS | 100 | 7  | boa     | boa     | 1 |  |
| kavita | 1640 | 13+600 | RHS | 100 | 5  | jabun   | jabun   | 1 |  |
| kavita | 1640 | 13+600 | RHS | 40  | 10 | gor     | gor     | 1 |  |
| kavita | 1627 | 13+850 | RHS | 100 | 7  | aam     | aam     | 1 |  |
| kavita | 1627 | 13+850 | RHS | 100 | 7  | nilgiri | nilgiri | 1 |  |
| kavita | 1627 | 13+850 | RHS | 90  | 5  | bor     | bor     | 2 |  |
| kavita | 1627 | 13+850 | RHS | 80  | 5  | bor     |         |   |  |
| kavita | 1627 | 13+850 | RHS | 90  | 5  | nim     | nim     | 2 |  |
| kavita | 1627 | 13+850 | RHS | 150 | 5  | nim     |         |   |  |
| kavita | 1627 | 13+890 | RHS | 150 | 7  | bor     | bor     | 1 |  |
| kavita | 1627 | 13+890 | RHS | 90  | 10 | jabun   | jabun   | 1 |  |
| kavita | 1618 | 17+850 | RHS | 90  | 7  | gor     | gor     | 1 |  |
| kavita | 1603 | 17+850 | RHS | 200 | 5  | nim     | nim     | 1 |  |
| kavita | 1603 | 13+890 | RHS | 90  | 7  | babul   | babul   | 6 |  |



|        |      |         |     |     |    |         |         |   |          |
|--------|------|---------|-----|-----|----|---------|---------|---|----------|
| kavita | 1611 | 14+020  | RHS | 100 | 10 | jabon   | jabon   | 1 | TOTAL=18 |
| kavita | 1611 | 14+020  | RHS | 150 | 7  | jabon   |         |   |          |
| kavita | 1611 | 14+020  | RHS | 100 | 5  | gudi    | gudi    | 2 |          |
| kavita | 1611 | 14+020  | RHS | 100 | 5  | nim     | nim     | 1 |          |
| kavita | 1611 | 14+010  | RHS | 90  | 7  | jabon   | jabon   | 1 | TOTAL=8  |
| kavita | 1611 | 14+010  | RHS | 100 | 9  | nilgiri | nilgiri | 4 |          |
| kavita | 1611 | 14+010  | RHS | 100 | 10 | nilgiri |         |   |          |
| kavita | 1611 | 14+010  | RHS | 80  | 5  | jabon   |         |   |          |
| kavita | 1611 | 14+010  | RHS | 200 | 5  | jabon   |         |   | TOTAL=12 |
| kavita | 1611 | 24+050  | RHS | 200 | 7  | nim     | nim     | 1 |          |
| kavita | 1609 | 14+1000 | RHS | 90  | 6  | nim     | nim     | 4 |          |
| kavita | 1609 | 14+1000 | RHS | 90  | 6  | nim     |         |   |          |
| kavita | 1609 | 14+1000 | RHS | 200 | 10 | gudi    | gudi    | 2 | TOTAL=4  |
| kavita | 1609 | 14+1000 | RHS | 150 | 7  | gudi    |         |   |          |
| kavita | 1609 | 14+010  | RHS | 100 | 5  | nim     |         |   |          |
| kavita | 1609 | 14+010  | RHS | 90  | 6  | nim     |         |   |          |
| kavita | 1609 | 14+010  | RHS | 200 | 10 | jabon   | jabon   | 2 | TOTAL=12 |
| kavita | 1609 | 14+010  | RHS | 100 | 7  | jabon   |         |   |          |
| kavita | 1608 | 14+030  | RHS | 200 | 7  | pipal   | pipal   | 1 |          |
| kavita | 1608 | 14+030  | RHS | 100 | 10 | nim     | nim     | 5 |          |
| kavita | 1608 | 14+030  | RHS | 200 | 7  | nim     |         |   | TOTAL=4  |
| kavita | 1608 | 14+030  | RHS | 150 | 10 | nim     |         |   |          |
| kavita | 1608 | 14+030  | RHS | 200 | 10 | nim     |         |   |          |
| kavita | 1608 | 14+030  | RHS | 90  | 5  | nim     |         |   |          |
| kavita | 1608 | 14+030  | RHS | 80  | 7  | rain    | rain    | 1 | TOTAL=12 |
| kavita | 1608 | 14+010  | RHS | 200 | 10 | nim     | nim     | 1 |          |
| kavita | 1608 | 14+010  | RHS | 100 | 5  | jabon   | jabon   | 1 |          |
| kavita | 1608 | 24+050  | RHS | 200 | 5  | nim     | nim     | 3 |          |
| kavita | 1608 | 24+050  | RHS | 120 | 5  | nim     |         |   | TOTAL=4  |
| kavita | 1608 | 24+050  | RHS | 100 | 7  | nim     |         |   |          |
| kavita | 1607 | 14+150  | RHS | 200 | 10 | nim     | nim     | 4 |          |
| kavita | 1607 | 14+150  | RHS | 200 | 15 | nim     |         |   |          |
| kavita | 1607 | 14+150  | RHS | 100 | 10 | nim     |         |   |          |



|        |       |        |     |     |     |       |       |    |          |
|--------|-------|--------|-----|-----|-----|-------|-------|----|----------|
| kavita | 1607  | 14+150 | RHS | 200 | 7   | nim   | nim   | 1  |          |
| kavita | 15936 | 14+200 | RHS | 200 | 10  | nim   | nim   | 1  | TOTAL=2  |
| kavita | 15936 | 14+200 | RHS | 150 | 7   | bor   | bor   | 1  |          |
| kavita | 1591  | 14+210 | RHS | 80  | 5   | nim   | nim   | 2  | TOTAL=2  |
| kavita | 1591  | 14+210 | RHS | 90  | 5   | nim,  |       |    |          |
| kavita | 1580  | 14+220 | RHS | 100 | 7   | bor   | bor   | 3  | TOTAL=3  |
| kavita | 1580  | 14+220 | RHS | 100 | 5   | bor   |       |    |          |
| kavita | 1580  | 14+220 | RHS | 90  | 5   | bor   |       |    |          |
| kavita | 1581  | 14+350 | RHS | 200 | 10  | bor   | bor   | 1  |          |
| kavita | 1581  | 14+350 | RHS | 100 | 7   | nim   | nim   | 2  | TOTAL=3  |
| kavita | 1581  | 14+350 | RHS | 200 | 10  | nim   |       |    |          |
| kavita | 1558  | 14+390 | RHS | 120 | 7   | nim   | nim   | 3  | TOTAL=3  |
| kavita | 1558  | 14+390 | RHS | 200 | 10  | nim   |       |    |          |
| kavita | 1558  | 14+390 | RHS | 300 | 15  | nim   |       |    |          |
| kavita | 1556  | 14+400 | RHS | 250 | 10  | aam   | aam   | 1  |          |
| kavita | 1556  | 14+400 | RHS | 200 | 10  | nim   | nim   | 12 |          |
| kavita | 1556  | 14+400 | RHS | 200 | 15  | nim   |       |    |          |
| kavita | 1556  | 14+410 | RHS | 250 | 10  | nim   |       |    |          |
| kavita | 1556  | 14+410 | RHS | 120 | 7   | nim   |       |    |          |
| kavita | 1556  | 14+415 | RHS | 200 | 10  | nim   |       |    |          |
| kavita | 1556  | 14+415 | RHS | 300 | 15  | pipal | pipal | 1  | TOTAL=14 |
| kavita | 1556  | 14+420 | RHS | 120 | 10  | nim   |       |    |          |
| kavita | 1556  | 14+430 | RHS | 200 | 10  | nim   |       |    |          |
| kavita | 1556  | 14+480 | RHS | 150 | 5   | aam   |       |    |          |
| kavita | 1556  | 14+500 | RHS | 130 | 7   | nim   |       |    |          |
| kavita | 1556  | 14+480 | RHS | 200 | 5   | nim   |       |    |          |
| kavita | 1556  | 14+485 | RHS | 90  | 7   | nim   |       |    |          |
| kavita | 1556  | 14+489 | RHS | 100 | 2   | nim   |       |    |          |
| kavita | 1546  | 14+490 | RHS | 150 | 0.9 | nim   | nim   | 9  |          |
| kavita | 1546  | 14+500 | RHS | 200 | 1   | nim   |       |    |          |
| kavita | 1546  | 14+510 | RHS | 150 | 1.5 | nim   |       |    |          |
| kavita | 1546  | 14+510 | RHS | 130 | 2   | nim   |       |    |          |
| kavita | 1546  | 14+550 | RHS | 200 | 2.5 | nim   |       |    | TOTAL=10 |

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|        |      |        |     |     |     |         |         |   |  |          |
|--------|------|--------|-----|-----|-----|---------|---------|---|--|----------|
| kavita | 1546 | 14+550 | RHS | 100 | 1.3 | nim     |         |   |  | TOTAL=49 |
| kavita | 1546 | 14+550 | RHS | 100 | 2   | nim     |         |   |  |          |
| kavita | 1546 | 14+560 | RHS | 200 | 1   | kisado  | kisado  | 1 |  |          |
| kavita | 1546 | 14+560 | RHS | 200 | 1   | nim     |         |   |  |          |
| kavita | 1546 | 14+690 | RHS | 90  | 10  | nim     |         |   |  |          |
| kavita | 1545 | 14+700 | RHS | 200 | 7   | aam     | aam     | 1 |  |          |
| kavita | 1545 | 14+700 | RHS | 90  | 5   | nim     | nim     | 2 |  | TOTAL=4  |
| kavita | 1545 | 14+700 | RHS | 90  | 10  | nim     |         |   |  |          |
| kavita | 1545 | 14+700 | RHS | 100 | 15  | nilgiri | nilgiri | 1 |  |          |
| kavita | 1544 | 14+710 | RHS | 90  | 15  | nilgiri | nilgiri | 4 |  |          |
| kavita | 1544 | 14+715 | RHS | 80  | 15  | nilgiri |         |   |  | TOTAL=6  |
| kavita | 1544 | 14+716 | RHS | 200 | 15  | nilgiri |         |   |  |          |
| kavita | 1544 | 14+720 | RHS | 150 | 17  | nilgiri |         |   |  |          |
| kavita | 1544 | 14+730 | RHS | 150 | 10  | nim     | nim     | 2 |  |          |
| kavita | 1544 | 14+725 | RHS | 250 | 7   | nim     |         |   |  |          |
| kavita | 1543 | 14+750 | RHS | 200 | 10  | nim     | nim     | 3 |  |          |
| kavita | 1543 | 14+750 | RHS | 150 | 10  | nim     |         |   |  |          |
| kavita | 1543 | 14+750 | RHS | 200 | 7   | nim     |         |   |  |          |
| kavita | 1543 | 14+755 | RHS | 100 | 7   | nim     | nim     | 5 |  |          |
| kavita | 1543 | 14+755 | RHS | 150 | 10  | nim     |         |   |  | TOTAL=10 |
| kavita | 1543 | 14+760 | RHS | 200 | 10  | nim     |         |   |  |          |
| kavita | 1543 | 14+765 | RHS | 200 | 15  | nim     |         |   |  |          |
| kavita | 1543 | 14+780 | RHS | 90  | 15  | nim     |         |   |  |          |
| kavita | 1543 | 14+850 | RHS | 200 | 7   | nim     | nim     | 2 |  |          |
| kavita | 1543 | 14+850 | RHS | 90  | 7   | nim     |         |   |  |          |
| kavita | 1542 | 14+750 | RHS | 120 | 10  | nim     | nim     | 1 |  |          |
| kavita | 1542 | 14+800 | RHS | 80  | 5   | nim     | nim     | 4 |  |          |
| kavita | 1542 | 14+800 | RHS | 200 | 5   | nim     |         |   |  | TOTAL=5  |
| kavita | 1542 | 14+800 | RHS | 200 | 7   | nim     |         |   |  |          |
| kavita | 1542 | 14+800 | RHS | 150 | 7   | nim     |         |   |  |          |
| kavita | 1534 | 14+800 | RHS | 200 | 7   | nim     | nim     | 4 |  |          |
| kavita | 1534 | 14+815 | RHS | 90  | 10  | nim     |         |   |  | TOTAL=4  |
| kavita | 1534 | 14+820 | RHS | 150 | 9   | nim     |         |   |  |          |

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|        |      |        |     |     |    |          |          |   |         |
|--------|------|--------|-----|-----|----|----------|----------|---|---------|
| kavita | 1534 | 14+750 | RHS | 150 | 6  | nim      |          |   |         |
| kavita | 1506 | 14+810 | RHS | 90  | 10 | aam      | aam      | 2 | TOTAL=2 |
| kavita | 1506 | 14+810 | RHS | 100 | 5  | aam      |          |   |         |
| kavita | 1532 | 14+950 | RHS | 100 | 5  | kisado   | kisado   | 1 | TOTAL=1 |
| kavita | 1509 | 15+080 | RHS | 200 | 7  | nim      | nim      | 2 |         |
| kavita | 1509 | 15+080 | RHS | 100 | 10 | nim      |          |   | TOTAL=3 |
| kavita | 1509 | 15+080 | RHS | 100 | 5  | gulmohar | gulmohar | 1 |         |
| kavita | 1522 | 15+150 | RHS | 100 | 10 | kisado   | kisado   | 2 |         |
| kavita | 1522 | 15+150 | RHS | 90  | 15 | kisado   |          |   | TOTAL=3 |
| kavita | 1522 | 15+150 | RHS | 100 | 10 | nim      | nim      | 1 |         |
| kavita | 1523 | 15+100 | RHS | 60  | 7  | nim      | nim      | 1 | TOTAL=1 |
| kavita | 1521 | 15+250 | RHS | 100 | 7  | bor      | bor      | 1 | TOTAL=1 |

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| Sl.No. | Village Name | Survey/<br>Plot No. | Chainage | Side | Girth<br>(BGH) in<br>cm | Height<br>(m) | Tree<br>Name | Tlee<br>Name | Number | Total   | Remarks |
|--------|--------------|---------------------|----------|------|-------------------------|---------------|--------------|--------------|--------|---------|---------|
| 1      | Kesargarh    | 528                 | 43+290   | LHS  | 120                     | 7             | Kesudo       | Kesudo       | 1      | TOTAL=1 |         |
| 2      | Kesargarh    | 630                 | 44+630   | LHS  | 90                      | 5             | Babul        | Babul        | 3      |         |         |
| 3      | Kesargarh    | 630                 | 44+650   | LHS  | 80                      | 3             | Babul        |              |        | TOTAL=3 |         |
| 4      | Kesargarh    | 630                 | 44+650   | LHS  | 100                     | 7             | Babul        |              |        |         |         |

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| Sl.No. | Village Name | Sulvey/<br>Plot No. | Chainage | Side | Girth<br>(BGH) in<br>cm | Height<br>(m) | Tree<br>Name | Tlee<br>Name | Number | Total   | Remarks |
|--------|--------------|---------------------|----------|------|-------------------------|---------------|--------------|--------------|--------|---------|---------|
| 1      | Kesargarh    | 487                 | 41+808   | RHS  | 400                     | 10            | Nim          | Nim          | 2      | TOTAL=2 |         |
| 2      | Kesargarh    | 487                 | 41+800   | RHS  | 100                     | 4             | Nim          |              |        |         |         |
| 3      | Kesargarh    | 491                 | 41+900   | RHS  | 80                      | 3             | Kesudo       | Kesudo       | 5      | TOTAL=8 |         |
| 4      | Kesargarh    | 491                 | 41+910   | RHS  | 80                      | 5             | Kesudo       |              |        |         |         |
| 5      | Kesargarh    | 491                 | 41+920   | RHS  | 100                     | 5             | Kesudo       |              |        |         |         |
| 6      | Kesargarh    | 491                 | 42+930   | RHS  | 40                      | 5             | Kesudo       |              |        |         |         |
| 7      | Kesargarh    | 491                 | 42+940   | RHS  | 60                      | 5             | Babul        | Babul        | 3      |         |         |
| 8      | Kesargarh    | 491                 | 42+940   | RHS  | 300                     | 7             | Babul        |              |        | TOTAL=1 |         |
| 9      | Kesargarh    | 491                 | 42+950   | RHS  | 100                     | 5             | Babul        |              |        |         |         |
| 10     | Kesargarh    | 491                 | 42+950   | RHS  | 40                      | 3             | Kesudo       |              |        |         |         |
| 11     | Kesargarh    | 490                 | 41+960   | RHS  | 100                     | 5             | Kesudo       |              |        | TOTAL=3 |         |
| 12     | Kesargarh    | 532                 | 42+720   | RHS  | 80                      | 3             | Kesudo       | Kesudo       | 1      |         |         |
| 13     | Kesargarh    | 531                 | 42+760   | RHS  | 400                     | 5             | Babul        | Babul        | 1      | TOTAL=1 |         |
| 14     | Kesargarh    | 531                 | 42+760   | RHS  | 80                      | 5             | Kesudo       | Kesudo       | 2      |         |         |
| 15     | Kesargarh    | 531                 | 42+760   | RHS  | 200                     | 7             | Kesudo       |              |        | TOTAL=1 |         |
| 16     | Kesargarh    | 530                 | 42+980   | RHS  | 100                     | 7             | Kesudo       | Kesudo       | 1      |         |         |
| 17     | Kesargarh    | 392                 | 43+350   | RHS  | 400                     | 3             | Kesudo       | Kesudo       | 1      | TOTAL=1 |         |
| 18     | Kesargarh    | 634                 | 44+300   | RHS  | 60                      | 3             | Kesudo       |              |        |         |         |
| 19     | Kesargarh    | 634                 | 44+450   | RHS  | 80                      | 5             | Kesudo       |              |        | TOTAL=3 |         |
| 20     | Kesargarh    | 634                 | 44+450   | RHS  | 70                      | 5             | Kesudo       |              |        |         |         |
| 21     | Kesargarh    | 630                 | 44+530   | RHS  | 80                      | 3             | Kesudo       | Kesudo       | 3      |         |         |
| 22     | Kesargarh    | 630                 | 44+530   | RHS  | 80                      | 3             | Kesudo       |              |        | TOTAL=3 |         |
| 23     | Kesargarh    | 630                 | 44+600   | RHS  | 80                      | 5             | Kesudo       |              |        |         |         |

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| Village Name | Survey/<br>Plot No. | Chainage | Side | Girth<br>(BGH) in<br>cm | Height (in<br>m) | Tree<br>Name | Tree Name | Number   | Total    | Remarks |
|--------------|---------------------|----------|------|-------------------------|------------------|--------------|-----------|----------|----------|---------|
| Lana         | 666                 | 24+600   | LHS  | 60                      | 5                | nim          | nim       | 5        |          |         |
|              |                     | 24+680   | LHS  | 80                      | 3                | nim          | vakhudi   | 3        |          |         |
|              |                     | 24+680   | LHS  | 90                      | 7                | nim          | Guda      | 1        |          |         |
|              |                     | 24+600   | LHS  | 90                      | 5                | nim          |           |          | Total-8  |         |
|              |                     | 24+600   | LHS  | 100                     | 7                | Vakhudi      |           |          |          |         |
|              |                     | 24+610   | LHS  | 120                     | 4                | nim          |           |          |          |         |
|              |                     | 24+611   | LHS  | 80                      | 4                | Vakhudi      |           |          |          |         |
|              |                     | 24+650   | LHS  | 80                      | 5                | Vakhudi      |           |          |          |         |
|              |                     | 25+110   | LHS  | 100                     | 5                | Guda         |           |          |          |         |
|              |                     | 25+780   | LHS  | 60                      | 3                | nim          | nim       | 1        | Total-1  |         |
|              | 638                 | 28+781   | LHS  | 70                      | 7                | nim          | nim       | 9        | Total -9 |         |
|              |                     | 25+782   | LHS  | 100                     | 7                | nim          |           |          |          |         |
|              |                     | 25+785   | LHS  | 120                     | 5                | nim          |           |          |          |         |
|              |                     | 25+790   | LHS  | 90                      | 5                | nim          |           |          |          |         |
|              |                     | 25+790   | LHS  | 80                      | 7                | nim          |           |          |          |         |
|              |                     | 25+790   | LHS  | 90                      | 3                | nim          |           |          |          |         |
|              |                     | 25+791   | LHS  | 60                      | 5                | nim          |           |          |          |         |
|              |                     | 25+792   | LHS  | 120                     | 7                | nim          |           |          |          |         |
|              |                     | 25+792   | LHS  | 60                      | 5                | nim          |           |          |          |         |
|              |                     | 25+791   | LHS  | 90                      | 5                | nim          | nim       | 10       |          |         |
| 639          | 25+795              | LHS      | 80   | 3                       | nim              | kesudo       | 3         |          |          |         |
|              | 25+795              | LHS      | 80   | 3                       | nim              | guda         | 1         | Total-14 |          |         |
|              | 25+795              | LHS      | 90   | 5                       | nim              |              |           |          |          |         |
|              | 25+798              | LHS      | 100  | 7                       | nim              |              |           |          |          |         |
|              | 25+799              | LHS      | 60   | 3                       | nim              |              |           |          |          |         |
|              | 25+800              | LHS      | 140  | 7                       | nim              |              |           |          |          |         |
|              | 25+780              | LHS      | 60   | 3                       | nim              |              |           |          |          |         |
|              | 25+780              | LHS      | 60   | 3                       | nim              |              |           |          |          |         |
|              | 25+780              | LHS      | 70   | 5                       | Kesudo           |              |           |          |          |         |

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|     |        |     |     |    |        |        |   |         |  |
|-----|--------|-----|-----|----|--------|--------|---|---------|--|
|     | 25+780 | LHS | 80  | 5  | Kesudo |        |   |         |  |
|     | 25+780 | LHS | 90  | 7  | Kesudo |        |   |         |  |
|     | 25+785 | LHS | 100 | 5  | guda   |        |   |         |  |
|     | 25+785 | LHS | 200 | 7  | nim    |        |   |         |  |
| 635 | 25+870 | LHS | 100 | 5  | nim    | nim    | 2 |         |  |
|     | 25+870 | LHS | 90  | 5  | nim    |        |   | Total-2 |  |
|     | 25+870 | LHS | 90  | 3  | nim    | nim    | 2 |         |  |
| 637 | 25+870 | LHS | 80  | 5  | nim    | kesudo | 2 |         |  |
|     | 25+875 | LHS | 30  | 5  | Kesudo |        |   | Total-4 |  |
|     | 25+880 | LHS | 40  | 3  | Kesudo |        |   |         |  |
| 488 | 25+875 | LHS | 90  | 5  | nim    | nim    | 2 |         |  |
|     | 25+875 | LHS | 80  | 4  | nim    |        |   | Total-2 |  |
| 417 | 25+970 | LHS | 400 | 10 | nim    | nim    | 1 | Total-1 |  |
|     | 26+230 | LHS | 100 | 7  | aam    | aam    | 2 |         |  |
|     | 26+235 | LHS | 120 | 5  | aam    | jabun  | 1 |         |  |
|     | 26+240 | LHS | 100 | 7  | jabun  | sag    | 2 |         |  |
|     | 26+240 | LHS | 200 | 7  | sag    |        |   | Total-5 |  |
| 322 | 26+240 | LHS | 100 | 5  | sag    |        |   |         |  |
|     | 27+080 | LHS | 60  | 7  | sag    | sag    | 1 |         |  |
|     | 27+080 | LHS | 120 | 10 | nim    | nim    | 1 | Total-2 |  |
| 319 | 27+080 | LHS | 150 | 7  | nim    | nim    | 1 | Total-1 |  |

| Village Name | Survey/<br>Plot No. | Chainage | Side | Girth<br>(BGH) in<br>cm | Height (in<br>m) | Tree<br>Name | Tree<br>Name | Number | Total    | Remarks |
|--------------|---------------------|----------|------|-------------------------|------------------|--------------|--------------|--------|----------|---------|
| LANA         | 664                 | 24+690   | RHS  | 100                     | 5                | nim          | nim          | 3      |          |         |
|              |                     | 24+680   | RHS  | 150                     | 7                | nim          | vakhndi      | 1      |          |         |
|              |                     | 24+880   | RHS  | 100                     | 4                | vakhndi      |              |        | Total-4  |         |
|              |                     | 24+680   | RHS  | 100                     | 5                | nim          |              |        |          |         |
|              | 666                 | 24+670   | RHS  | 60                      | 5                | babul        | babul        | 3      |          |         |
|              |                     | 24+670   | RHS  | 80                      | 3                | babul        | nim          | 1      |          |         |
|              |                     | 24+670   | RHS  | 90                      | 5                | babul        |              |        | Total-4  |         |
|              |                     | 24+670   | RHS  | 120                     | 7                | nim          |              |        |          |         |
|              | 737                 | 25+120   | RHS  | 120                     | 5                | kijado       | kijado       | 1      | Total-1  |         |
|              | 640                 | 25+480   | RHS  | 160                     | 15               | kijado       | kijado       | 2      |          |         |
|              |                     | 25+510   | RHS  | 150                     | 7                | kijado       |              |        | Total-2  |         |
|              | 643                 | 25+660   | RHS  | 150                     | 5                | vakhndi      | vakhndi      | 1      |          |         |
|              |                     | 25+660   | RHS  | 100                     | 3                | nim          | nim          | 1      |          |         |
|              |                     | 25+810   | RHS  | 200                     | 10               | kijado       | kijado       | 1      | Total-3  |         |
|              |                     | 25+810   | RHS  | 250                     | 15               | nim          | nim          | 10     |          |         |
|              | 635                 | 25+810   | RHS  | 100                     | 7                | nim          | kijado       | 3      |          |         |
|              |                     | 25+815   | RHS  | 100                     | 5                | nim          | vakhndi      | 4      |          |         |
|              |                     | 25+550   | RHS  | 120                     | 7                | nim          | babul        | 1      |          |         |
|              |                     | 25+500   | RHS  | 100                     | 5                | nim          |              |        | Total-18 |         |
|              |                     | 25+550   | RHS  | 90                      | 5                | kijado       |              |        |          |         |
|              |                     | 25+550   | RHS  | 80                      | 6                | vakhndi      |              |        |          |         |
|              |                     | 25+551   | RHS  | 90                      | 6                | babul        |              |        |          |         |
|              |                     | 25+532   | RHS  | 60                      | 4                | nim          |              |        |          |         |
|              |                     | 2+553    | RHS  | 400                     | 15               | nim          |              |        |          |         |
|              |                     | 25+554   | RHS  | 60                      | 4                | nim          |              |        |          |         |
|              |                     | 25+555   | RHS  | 90                      | 3                | vakhndi      |              |        |          |         |
|              |                     | 25+880   | RHS  | 80                      | 5                | vakhndi      |              |        |          |         |
|              |                     | 25+890   | RHS  | 80                      | 5                | vakhndi      |              |        |          |         |
|              |                     | 25+890   | RHS  | 90                      | 5                | vakhndi      |              |        |          |         |

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|     |        |     |     |    |         |         |   |          |  |
|-----|--------|-----|-----|----|---------|---------|---|----------|--|
| 485 | 25+890 | RHS | 80  | 7  | vakhndi |         |   |          |  |
|     | 25+890 | RHS | 90  | 3  | vakhndi |         |   |          |  |
|     | 25+895 | RHS | 200 | 3  | vakhndi |         |   |          |  |
|     | 25+900 | RHS | 80  | 5  | kijado  |         |   |          |  |
|     | 25+900 | RHS | 120 | 7  | kijado  |         |   |          |  |
|     | 25+900 | RHS | 100 | 5  | nim     |         |   |          |  |
|     | 25+900 | RHS | 200 | 7  | nim     |         |   |          |  |
|     | 26+150 | RHS | 60  | 4  | nim     | nim     | 1 | Total -1 |  |
|     | 26+190 | RHS | 90  | 5  | rain    | rain    | 1 |          |  |
|     | 26+190 | RHS | 80  | 4  | chikudi | chikudi | 2 |          |  |
| 417 | 26+190 | RHS | 100 | 7  | chikudi | jabun   | 1 |          |  |
|     | 26+190 | RHS | 120 | 10 | jabun   | nim     | 4 |          |  |
|     | 26+240 | RHS | 60  | 5  | nim     | kijado  | 4 |          |  |
|     | 26+240 | RHS | 80  | 4  | kijado  |         |   | Total-12 |  |
|     | 26+250 | RHS | 80  | 4  | kijado  |         |   |          |  |
|     | 26+300 | RHS | 60  | 3  | kijado  |         |   |          |  |
|     | 26+310 | RHS | 30  | 2  | kijado  |         |   |          |  |
|     | 36+320 | RHS | 100 | 5  | nim     |         |   |          |  |
|     | 26+340 | RHS | 60  | 5  | nim     |         |   |          |  |
|     | 26+950 | RHS | 200 | 10 | nim     |         |   |          |  |
| 323 | 27+040 | RHS | 100 | 8  | nim     | nim     | 1 | Total -1 |  |

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| Village name | Survey/<br>Plot No. | Chainage | Side | Girth<br>(BGH) In<br>Cm | HIEGHT<br>(in m) | Tree<br>Name | Tree<br>Name | Number | Total   | Remarks |
|--------------|---------------------|----------|------|-------------------------|------------------|--------------|--------------|--------|---------|---------|
| Rupgadh      | 81                  | 37+200   | LHS  | 100                     | 5                | Nim          | Nim          | 2      |         |         |
|              |                     | 37+200   | LHS  | 80                      | 4                | Nim          | Nim          |        | Total=2 |         |
|              | 835                 | 38+450   | LHS  | 100                     | 5                | Kesudo       | Kesudo       | 2      |         |         |
|              | 835                 | 38+450   | LHS  | 100                     | 5                | Kesudo       | Kesudo       |        | Total=2 |         |
|              | 745                 | 40+680   | LHS  | 80                      | 4                | Kesudo       | Kesudo       | 1      | Total=1 |         |

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| Village name | Survey/<br>Plot No. | Chainage | Side | Girth<br>(BGH) in<br>Cm | HIEGHT<br>(in m) | Tree Name | Tree Name | Number | Total    | Remarks |
|--------------|---------------------|----------|------|-------------------------|------------------|-----------|-----------|--------|----------|---------|
| Rupgadh      | 91                  | 36+890   | RHS  | 40                      | 5                | Babul     | Babul     | 2      |          |         |
|              |                     | 36+890   | RHS  | 40                      | 5                | Babul     | Babul     |        | Total=2  |         |
|              | 56                  | 38+100   | RHS  | 80                      | 4                | Nim       | Nim       | 1      |          |         |
|              |                     | 38+320   | RHS  | 100                     | 7                | Kesudo    | Kesudo    | 1      | Total=2  |         |
|              | 434                 | 38+760   | RHS  | 100                     | 5                | Guda      | Guda      | 1      | Total=1  |         |
|              | 8                   | 39+100   | RHS  | 60                      | 5                | Nim       | Nim       | 1      |          |         |
|              |                     | 39+100   | RHS  | 100                     | 5                | Vakhudi   | Vakhudi   | 3      |          |         |
|              |                     | 39+110   | RHS  | 100                     | 3                | Vakhudi   | Kesudo    | 2      |          |         |
|              |                     | 39+158   | RHS  | 100                     | 3                | Vakhudi   |           |        | Total=6  |         |
|              |                     | 39+550   | RHS  | 60                      | 2                | Kesudo    |           |        |          |         |
|              |                     | 39+180   | RHS  | 60                      | 2                | Kesudo    |           |        |          |         |
|              |                     | 39+180   | RHS  | 100                     | 3                | Nim       | Nim       | 1      |          |         |
|              | 7                   | 39+210   | RHS  | 40                      | 5                | Gulmohar  | Gulmohar  | 8      |          |         |
|              |                     | 39+215   | RHS  | 40                      | 7                | Gulmohar  | Nilgiri   | 2      |          |         |
|              |                     | 39+215   | RHS  | 60                      | 8                | Gulmohar  |           |        | Total=11 |         |
|              |                     | 39+220   | RHS  | 40                      | 6                | Gulmohar  |           |        |          |         |
|              |                     | 39+217   | RHS  | 50                      | 8                | Gulmohar  |           |        |          |         |
|              |                     | 34+218   | RHS  | 50                      | 7                | Gulmohar  |           |        |          |         |
|              |                     | 34+220   | RHS  | 70                      | 6                | Gulmohar  |           |        |          |         |
|              |                     | 39+225   | RHS  | 80                      | 9                | Gulmohar  |           |        |          |         |
|              |                     | 34+245   | RHS  | 30                      | 7                | Nilgiri   |           |        |          |         |
|              |                     | 34+245   | RHS  | 40                      | 6                | Nilgiri   |           |        |          |         |
|              | 797                 | 39+600   | RHS  | 80                      | 7                | Babul     | Babul     | 1      | Total=1  |         |
|              | 791                 | 39+880   | RHS  | 120                     | 7                | Kesudo    | Kesudo    | 1      | Total=1  |         |
|              | 794                 | 40+080   | RHS  | 90                      | 3                | Kesudo    | Kesudo    | 1      | Total=1  |         |
|              | 745                 | 40+680   | RHS  | 150                     | 10               | Kesudo    | Kesudo    | 1      | Total=1  |         |
|              | 621                 | 41+560   | RHS  | 90                      | 7                | Babul     | Babul     | 3      |          |         |
|              |                     | 41+560   | RHS  | 100                     | 5                | Babul     |           |        | Total=3  |         |
|              |                     | 41+560   | RHS  | 100                     | 5                | Babul     |           |        |          |         |

| Village Name | Survey No. | Chainage | Side | Girth (BGH) in Cm | Height (in Tree Name) | Tree Name | Tree Name | Number | Total    | Remarks |
|--------------|------------|----------|------|-------------------|-----------------------|-----------|-----------|--------|----------|---------|
| Sarandhi     | 601        | 29+700   | LHS  | 80                | 7                     | nim       | nim       | 2      |          |         |
|              | 618        | 30+010   | LHS  | 90                | 7                     | nim       | Vakhudi   | 1      |          |         |
|              | 639        | 30+120   | LHS  | 110               | 5                     | Vakhudi   | jabon     | 1      | Total=4  |         |
|              | 543        | 30+960   | LHS  | 90                | 5                     | jabon     |           |        |          |         |
|              | 543        | 30+960   | LHS  | 60                | 5                     | aam       | aam       | 1      |          |         |
|              | 113        | 31+650   | LHS  | 100               | 7                     | kijado    | kijado    | 1      | Total=2  |         |
|              | 114        | 31+420   | LHS  | 80                | 5                     | nim       | nim       | 9      |          |         |
|              | 114        | 31+420   | LHS  | 100               | 7                     | nim       | kijado    | 3      | Total=12 |         |
|              | 114        | 31+420   | LHS  | 90                | 7                     | nim       |           |        |          |         |
|              | 114        | 31+420   | LHS  | 40                | 5                     | nim       |           |        |          |         |
|              | 114        | 31+420   | LHS  | 40                | 5                     | nim       |           |        |          |         |
|              | 114        | 31+420   | LHS  | 100               | 7                     | kijado    |           |        |          |         |
|              | 114        | 31+420   | LHS  | 90                | 10                    | kijado    |           |        |          |         |
|              | 114        | 31+420   | LHS  | 80                | 7                     | kijado    |           |        |          |         |
|              | 114        | 31+450   | LHS  | 80                | 5                     | Nim       |           |        |          |         |
|              | 114        | 31+475   | LHS  | 90                | 7                     | Nim       |           |        |          |         |
|              | 114        | 31+495   | LHS  | 80                | 5                     | Nim       |           |        |          |         |
|              | 114        | 31+420   | LHS  | 40                | 5                     | nim       |           |        |          |         |
|              | 114        | 31+420   | LHS  | 90                | 7                     | kijado    | kijado    | 1      | Total=1  |         |
|              | 77         | 31+420   | LHS  | 100               | 5                     | nilgiri   | nilgiri   | 3      | Total=3  |         |
|              | 77         | 31+420   | LHS  | 90                | 5                     | nilgiri   |           |        |          |         |
|              | 77         | 31+420   | LHS  | 80                | 5                     | nilgiri   |           |        |          |         |
|              | 113        | 31+580   | LHS  | 60                | 2                     | Vakhudi   | Vakhudi   | 1      |          |         |
|              | 113        | 31+580   | LHS  | 150               | 10                    | jabon     | jabon     | 1      |          |         |
|              | 113        | 31+580   | LHS  | 200               | 15                    | aam       | aam       | 1      |          |         |
|              | 113        | 31+590   | LHS  | 90                | 7                     | kijado    | kijado    | 1      | Total=10 |         |
|              | 151        | 32+700   | LHS  | 90                | 5                     | nim       | nim       | 2      | Total=2  |         |
|              | 151        | 32+700   | LHS  | 80                | 7                     | nim       |           |        |          |         |
|              | 152        | 32+725   | LHS  | 90                | 5                     | nim       | nim       | 3      | Total=3  |         |
|              | 152        | 32+725   | LHS  | 80                | 5                     | nim       |           |        |          |         |

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|     |        |     |     |           |         |   |         |
|-----|--------|-----|-----|-----------|---------|---|---------|
| 152 | 32+820 | LHS | 100 | 7 nim     |         |   |         |
| 186 | 33+690 | LHS | 100 | 5 kijado  | kijado  | 4 |         |
| 186 | 33+695 | LHS | 100 | 7 kijado  | nim     | 1 |         |
| 186 | 33+700 | LHS | 90  | 5 kijado  | nilgiri | 3 | Total=8 |
| 186 | 33+700 | LHS | 100 | 7 nim     |         |   |         |
| 186 | 33+700 | LHS | 90  | 5 kijado  |         |   |         |
| 186 | 33+890 | LHS | 80  | 7 nilgiri |         |   |         |
| 186 | 33+890 | LHS | 80  | 7 nilgiri |         |   |         |
| 186 | 33+890 | LHS | 80  | 7 nilgiri |         |   |         |

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| Village Name | Sulvey/<br>Plot No. | Chainage | Side | Girth<br>(BGH) in<br>cm | Height<br>(m) | Tree<br>Name | Tlee<br>Name | Number | Total    | Remarks |
|--------------|---------------------|----------|------|-------------------------|---------------|--------------|--------------|--------|----------|---------|
| Sarandhi     | 603                 | 29+900   | RHS  | 60                      | 5             | kijado       | kijado       | 1      | TOTAL=1  |         |
| Sarandhi     | 543                 | 30+830   | RHS  | 100                     | 7             | Babul        | Babul        | 1      | TOTAL=1  |         |
| Sarandhi     | 544                 | 30+950   | RHS  | 60                      | 5             | nim          | nim          | 6      | TOTAL=6  |         |
| Sarandhi     | 544                 | 30+960   | RHS  | 110                     | 10            | nim          |              |        |          |         |
| Sarandhi     | 544                 | 30+970   | RHS  | 90                      | 5             | nim          |              |        |          |         |
| Sarandhi     | 544                 | 30+980   | RHS  | 60                      | 3             | nim          |              |        |          |         |
| Sarandhi     | 544                 | 31+135   | RHS  | 150                     | 10            | nim          |              |        | TOTAL=1  |         |
| Sarandhi     | 544                 | 31+135   | RHS  | 100                     | 5             | nim          |              |        |          |         |
| Sarandhi     | 536                 | 31+100   | RHS  | 70                      | 5             | nim          | nim          | 1      |          |         |
| Sarandhi     | 519                 | 31+380   | RHS  | 80                      | 7             | nim          | nim          | 8      |          |         |
| Sarandhi     | 519                 | 31+380   | RHS  | 100                     | 10            | nim          |              |        | TOTAL=10 |         |
| Sarandhi     | 519                 | 31+390   | RHS  | 80                      | 5             | nim          |              |        |          |         |
| Sarandhi     | 519                 | 31+380   | RHS  | 90                      | 7             | babul        | babul        | 2      |          |         |
| Sarandhi     | 519                 | 31+390   | RHS  | 100                     | 10            | nim          |              |        |          |         |
| Sarandhi     | 519                 | 31+450   | RHS  | 90                      | 10            | babul        |              |        | Tota=3   |         |
| Sarandhi     | 519                 | 31+450   | RHS  | 80                      | 5             | nim          |              |        |          |         |
| Sarandhi     | 519                 | 31+455   | RHS  | 80                      | 5             | nim          |              |        |          |         |
| Sarandhi     | 519                 | 31+460   | RHS  | 90                      | 7             | nim          |              |        |          |         |
| Sarandhi     | 519                 | 31+470   | RHS  | 80                      | 5             | nim          |              |        | Tota=3   |         |
| Sarandhi     | 77                  | 31+450   | RHS  | 100                     | 7             | babul        | babul        | 3      |          |         |
| Sarandhi     | 77                  | 31+450   | RHS  | 90                      | 5             | babul        |              |        |          |         |
| Sarandhi     | 77                  | 31+380   | RHS  | 60                      | 3             | babul        |              |        |          |         |
| Sarandhi     | 113                 | 31+600   | RHS  | 0.9                     | 7             | Babul        | Babul        | 3      | Tota=3   |         |
| Sarandhi     | 113                 | 31+650   | RHS  | 0.8                     | 5             | Babul        |              |        | Tota=3   |         |
| Sarandhi     | 113                 | 31+650   | RHS  | 1                       | 5             | Babul        |              |        |          |         |
| Sarandhi     | 128                 | 31+600   | RHS  | 2                       | 10            | Babul        | Babul        | 3      |          |         |
| Sarandhi     | 128                 | 31+660   | RHS  | 1                       | 7             | Babul        |              |        |          |         |
| Sarandhi     | 128                 | 31+660   | RHS  | 0.9                     | 5             | Babul        |              |        | Tota=7   |         |
| Sarandhi     | 129                 | 31+670   | RHS  | 0.8                     | 7             | Babul        | Babul        | 7      |          |         |
| Sarandhi     | 129                 | 31+675   | RHS  | 1                       | 5             | Babul        |              |        |          |         |



|          |     |        |     |     |    |        |        |   |         |  |
|----------|-----|--------|-----|-----|----|--------|--------|---|---------|--|
| Sarandhi | 129 | 31+675 | RHS | 1.5 | 7  | Babul  |        |   |         |  |
| Sarandhi | 129 | 31+680 | RHS | 0.9 | 5  | Babul  |        |   |         |  |
| Sarandhi | 129 | 31+680 | RHS | 0.8 | 7  | Babul  |        |   |         |  |
| Sarandhi | 129 | 31+685 | RHS | 0.6 | 5  | Babul  |        |   |         |  |
| Sarandhi | 129 | 31+685 | RHS | 0.4 | 7  | Babul  |        |   |         |  |
| Sarandhi | 128 | 31+690 | RHS | 0.5 | 5  | Babul  |        |   |         |  |
| Sarandhi | 128 | 31+690 | RHS | 0.9 | 7  | Babul  |        |   |         |  |
| Sarandhi | 147 | 32+450 | RHS | 1   | 10 | Babul  | Babul  | 1 | Total=1 |  |
| Sarandhi | 148 | 32+340 | RHS | 0.4 | 7  | Gada   | Gada   | 4 | Total=4 |  |
| Sarandhi | 148 | 32+340 | RHS | 0.4 | 7  | Gada   |        |   |         |  |
| Sarandhi | 148 | 32+340 | RHS | 0.5 | 7  | Gada   |        |   |         |  |
| Sarandhi | 148 | 32+340 | RHS | 0.5 | 7  | Gada   |        |   |         |  |
| Sarandhi | 152 | 32+820 | RHS | 0.8 | 5  | NIM    | NIM    | 2 | Total=2 |  |
| Sarandhi | 152 | 32+230 | RHS | 0.9 | 7  | NIM    |        |   |         |  |
| Sarandhi | 191 | 32+230 | RHS | 0.8 | 5  | KISAJO | KISAJO | 1 |         |  |
| Sarandhi | 191 | 33+390 | RHS | 0.8 | 5  | NIM    | NIM    | 4 | Total=5 |  |
| Sarandhi | 191 | 33+390 | RHS | 1   | 7  | NIM    |        |   |         |  |
| Sarandhi | 191 | 33+390 | RHS | 0.9 | 5  | NIM    |        |   |         |  |
| Sarandhi | 191 | 33+490 | RHS | 0.8 | 5  | NIM    |        |   |         |  |
| Sarandhi | 232 | 33+525 | RHS | 0.9 | 7  | NIM    | NIM    | 3 | Total=3 |  |
| Sarandhi | 232 | 33+525 | RHS | 1   | 5  | NIM    |        |   |         |  |
| Sarandhi | 232 | 33+540 | RHS | 0.7 | 7  | NIM    |        |   |         |  |
| Sarandhi | 187 | 33+700 | RHS | 0.8 | 5  | Babul  | Babul  | 2 | Total=2 |  |
| Sarandhi | 187 | 33+700 | RHS | 1   | 5  | Babul  |        |   |         |  |

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| Village Name | Survey/<br>Plot No. | Chainage | Side | Girth<br>(BGH) in<br>cm | Height (in<br>m) | Tree<br>Name | Tree<br>Name | Number | Total    | Remarks |
|--------------|---------------------|----------|------|-------------------------|------------------|--------------|--------------|--------|----------|---------|
| 102          |                     | 27+100   | LHS  | 150                     | 7                | vakhndi      | vakhndi      | 2      |          |         |
|              |                     | 27+100   | LHS  | 40                      | 5                | kisado       | kisado       | 1      |          |         |
|              |                     | 27+100   | LHS  | 100                     | 10               | nim          | nim          | 1      |          |         |
|              |                     | 27+100   | LHS  | 90                      | 7                | vakhndi      |              |        | Total-4  |         |
|              |                     | 21+150   | LHS  | 100                     | 7                | nim          | nim          | 8      |          |         |
|              |                     | 21+150   | LHS  | 150                     | 10               | nim          | vakhndi      | 3      |          |         |
|              |                     | 21+150   | LHS  | 100                     | 9                | nim          |              |        | Total-11 |         |
|              |                     | 21+150   | LHS  | 150                     | 5                | vakhndi      |              |        |          |         |
|              |                     | 21+150   | LHS  | 150                     | 7                | vakhndi      |              |        |          |         |
|              |                     | 21+150   | LHS  | 250                     | 10               | nim          |              |        |          |         |
| 103          |                     | 21+150   | LHS  | 200                     | 5                | nim          |              |        |          |         |
|              |                     | 21+150   | LHS  | 90                      | 7                | vakhndi      |              |        |          |         |
|              |                     | 21+150   | LHS  | 100                     | 5                | nim          |              |        |          |         |
|              |                     | 21+150   | LHS  | 90                      | 7                | nim          |              |        |          |         |
|              |                     | 21+300   | LHS  | 100                     | 5                | nim          |              |        |          |         |
|              |                     | 21+300   | LHS  | 80                      | 5                | nim          | nim          | 10     |          |         |
|              |                     | 21+300   | LHS  | 90                      | 7                | nim          | babul        | 3      |          |         |
|              |                     | 21+300   | LHS  | 150                     | 7                | babul        | pipal        | 1      |          |         |
|              |                     | 21+300   | LHS  | 90                      | 8                | babul        | vakhndi      | 5      |          |         |
|              |                     | 21+300   | LHS  | 90                      | 7                | babul        | kisado       | 1      |          |         |
| 104          |                     | 21+300   | LHS  | 90                      | 7                | babul        | amla         | 1      |          |         |
|              |                     | 21+310   | LHS  | 150                     | 7                | pipal        |              |        | Total-21 |         |
|              |                     | 21+310   | LHS  | 90                      | 5                | nim          |              |        |          |         |
|              |                     | 21+310   | LHS  | 100                     | 5                | nim          |              |        |          |         |
|              |                     | 21+315   | LHS  | 200                     | 7                | nim          |              |        |          |         |
|              |                     | 21+320   | LHS  | 80                      | 5                | nim          |              |        |          |         |
|              |                     | 21+321   | LHS  | 100                     | 7                | nim          |              |        |          |         |
|              |                     | 21+322   | LHS  | 100                     | 5                | nim          |              |        |          |         |
|              |                     | 21+323   | LHS  | 90                      | 5                | nim          |              |        |          |         |
|              |                     |          |      |                         |                  |              |              |        |          |         |

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|        |     |     |    |         |         |    |          |  |
|--------|-----|-----|----|---------|---------|----|----------|--|
| 21+324 | LHS | 100 | 7  | vakhndi |         |    |          |  |
| 21+325 | LHS | 200 | 7  | kisado  |         |    |          |  |
| 21+330 | LHS | 200 | 5  | vakhndi |         |    |          |  |
| 21+350 | LHS | 90  | 7  | vakhndi |         |    |          |  |
| 21+420 | LHS | 100 | 7  | vakhndi |         |    |          |  |
| 21+421 | LHS | 80  | 5  | vakhndi |         |    |          |  |
| 21+422 | LHS | 90  | 10 | amla    |         |    |          |  |
| 21+435 | LHS | 100 | 7  | nim     | nim     | 5  |          |  |
| 21+421 | LHS | 200 | 5  | nim     |         |    | Total -5 |  |
| 21+422 | LHS | 90  | 7  | nim     |         |    |          |  |
| 21+435 | LHS | 80  | 7  | nim     |         |    |          |  |
| 21+420 | LHS | 90  | 5  | nim     |         |    |          |  |
| 21+400 | LHS | 80  | 5  | nim     | nim     | 10 |          |  |
| 21+405 | LHS | 100 | 7  | nim     | kisado  | 2  |          |  |
| 21+415 | LHS | 80  | 5  | nim     | pipal   | 1  |          |  |
| 21+520 | LHS | 90  | 5  | nim     | vakhndi | 2  |          |  |
| 21+520 | LHS | 100 | 7  | nim     |         |    | Total-15 |  |
| 21+520 | LHS | 70  | 5  | nim     |         |    |          |  |
| 21+525 | LHS | 60  | 5  | kisado  |         |    |          |  |
| 21+510 | LHS | 50  | 7  | kisado  |         |    |          |  |
| 21+720 | LHS | 260 | 10 | nim     |         |    |          |  |
| 21+725 | LHS | 150 | 10 | pipal   |         |    |          |  |
| 21+730 | LHS | 200 | 10 | vakhndi |         |    |          |  |
| 21+730 | LHS | 200 | 7  | vakhndi |         |    |          |  |
| 21+730 | LHS | 100 | 5  | nim     |         |    |          |  |
| 21+730 | LHS | 70  | 3  | nim     |         |    |          |  |
| 21+730 | LHS | 60  | 7  | nim     |         |    |          |  |
| 21+730 | LHS | 100 | 7  | nim     | nim     | 35 |          |  |
| 21+730 | LHS | 150 | 10 | nim     | guda    | 7  |          |  |
| 21+730 | LHS | 100 | 7  | nim     | pipal   | 1  |          |  |
| 21+730 | LHS | 100 | 8  | nim     | vakhndi | 5  |          |  |
| 21+730 | LHS | 100 | 10 | nim     |         |    | Total-48 |  |
| 21+730 | LHS | 200 | 5  | nim     |         |    |          |  |

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|        |     |     |    |         |  |  |  |  |  |
|--------|-----|-----|----|---------|--|--|--|--|--|
| 21+735 | LHS | 70  | 7  | nim     |  |  |  |  |  |
| 21+750 | LHS | 70  | 5  | guda    |  |  |  |  |  |
| 21+750 | LHS | 100 | 5  | guda    |  |  |  |  |  |
| 21+751 | LHS | 100 | 10 | guda    |  |  |  |  |  |
| 21+752 | LHS | 100 | 10 | guda    |  |  |  |  |  |
| 21+153 | LHS | 90  | 7  | guda    |  |  |  |  |  |
| 21+154 | LHS | 100 | 8  | guda    |  |  |  |  |  |
| 21+154 | LHS | 100 | 7  | nim     |  |  |  |  |  |
| 21+160 | LHS | 200 | 8  | nim     |  |  |  |  |  |
| 21+165 | LHS | 100 | 10 | guda    |  |  |  |  |  |
| 21+170 | LHS | 90  | 5  | nim     |  |  |  |  |  |
| 21+172 | LHS | 90  | 5  | nim     |  |  |  |  |  |
| 21+175 | LHS | 60  | 4  | nim     |  |  |  |  |  |
| 21+176 | LHS | 200 | 7  | pipal   |  |  |  |  |  |
| 21+177 | LHS | 100 | 8  | nim     |  |  |  |  |  |
| 21+180 | LHS | 90  | 7  | nim     |  |  |  |  |  |
| 21+180 | LHS | 100 | 8  | nim     |  |  |  |  |  |
| 21+850 | LHS | 100 | 5  | nim     |  |  |  |  |  |
| 21+850 | LHS | 100 | 7  | nim     |  |  |  |  |  |
| 21+850 | LHS | 90  | 7  | vakhndi |  |  |  |  |  |
| 21+690 | LHS | 100 | 7  | vakhndi |  |  |  |  |  |
| 21+870 | LHS | 100 | 5  | vakhndi |  |  |  |  |  |
| 21+870 | LHS | 90  | 5  | nim     |  |  |  |  |  |
| 21+870 | LHS | 100 | 7  | vakhndi |  |  |  |  |  |
| 21+875 | LHS | 90  | 7  | vakhndi |  |  |  |  |  |
| 21+875 | LHS | 600 | 5  | nim     |  |  |  |  |  |
| 21+875 | LHS | 50  | 7  | nim     |  |  |  |  |  |
| 21+880 | LHS | 100 | 5  | nim     |  |  |  |  |  |
| 21+880 | LHS | 200 | 10 | nim     |  |  |  |  |  |
| 21+880 | LHS | 90  | 5  | nim     |  |  |  |  |  |
| 21+880 | LHS | 100 | 7  | nim     |  |  |  |  |  |
| 21+885 | LHS | 90  | 8  | nim     |  |  |  |  |  |
| 21+885 | LHS | 90  | 7  | nim     |  |  |  |  |  |

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|        |     |     |    |         |         |    |          |  |  |
|--------|-----|-----|----|---------|---------|----|----------|--|--|
| 21+885 | LHS | 100 | 9  | nim     |         |    |          |  |  |
| 21+885 | LHS | 200 | 7  | nim     |         |    |          |  |  |
| 21+890 | LHS | 90  | 10 | nim     |         |    |          |  |  |
| 21+890 | LHS | 100 | 10 | nim     |         |    |          |  |  |
| 21+895 | LHS | 100 | 10 | nim     |         |    |          |  |  |
| 21+895 | LHS | 100 | 7  | nim     |         |    |          |  |  |
| 21+896 | LHS | 90  | 8  | nim     |         |    |          |  |  |
| 21+897 | LHS | 150 | 10 | nim     |         |    |          |  |  |
| 21+897 | LHS | 90  | 5  | nim     |         |    |          |  |  |
| 21+890 | LHS | 60  | 5  | nim     | nim     | 19 |          |  |  |
| 21+900 | LHS | 100 | 7  | nim     | vakhndi | 2  |          |  |  |
| 21+900 | LHS | 80  | 10 | nim     | guda    | 4  |          |  |  |
| 21+910 | LHS | 90  | 7  | nim     | kisado  | 1  |          |  |  |
| 21+910 | LHS | 100 | 10 | nim     |         |    | Total-26 |  |  |
| 21+910 | LHS | 80  | 5  | nim     |         |    |          |  |  |
| 21+910 | LHS | 110 | 7  | vakhndi |         |    |          |  |  |
| 21+910 | LHS | 90  | 5  | vakhndi |         |    |          |  |  |
| 21+915 | LHS | 200 | 10 | nim     |         |    |          |  |  |
| 21+920 | LHS | 100 | 7  | nim     |         |    |          |  |  |
| 21+920 | LHS | 90  | 7  | nim     |         |    |          |  |  |
| 21+920 | LHS | 200 | 7  | nim     |         |    |          |  |  |
| 21+920 | LHS | 90  | 5  | guda    |         |    |          |  |  |
| 21+900 | LHS | 80  | 5  | guda    |         |    |          |  |  |
| 21+900 | LHS | 70  | 5  | guda    |         |    |          |  |  |
| 21+945 | LHS | 100 | 7  | kisado  |         |    |          |  |  |
| 21+940 | LHS | 200 | 10 | nim     |         |    |          |  |  |
| 21+950 | LHS | 150 | 7  | nim     |         |    |          |  |  |
| 21+950 | LHS | 100 | 5  | nim     |         |    |          |  |  |
| 21+950 | LHS | 90  | 7  | nim     |         |    |          |  |  |
| 21+960 | LHS | 200 | 10 | nim     |         |    |          |  |  |
| 21+970 | LHS | 100 | 7  | nim     |         |    |          |  |  |
| 21+970 | LHS | 90  | 10 | nim     |         |    |          |  |  |

|     |        |     |     |    |         |         |   |          |  |
|-----|--------|-----|-----|----|---------|---------|---|----------|--|
| 91  | 21+010 | LHS | 100 | 7  | nim     |         |   |          |  |
|     | 21+010 | LHS | 170 | 5  | nim     |         |   |          |  |
|     | 21+015 | LHS | 100 | 7  | nim     | nim     | 7 |          |  |
|     | 21+015 | LHS | 90  | 5  | nim     | kisado  | 1 |          |  |
|     | 22+020 | LHS | 80  | 7  | kisado  |         |   | Total-8  |  |
|     | 22+020 | LHS | 100 | 5  | nim     |         |   |          |  |
|     | 22+030 | LHS | 90  | 7  | nim     |         |   |          |  |
|     | 22+100 | LHS | 100 | 5  | nim     |         |   |          |  |
|     | 22+500 | LHS | 80  | 7  | nim     |         |   |          |  |
|     | 22+550 | LHS | 100 | 7  | nim     |         |   |          |  |
| 81  | 22+825 | LHS | 100 | 7  | nim     | nim     | 1 | Total-1  |  |
|     | 22+550 | LHS | 80  | 7  | nim     | nim     | 5 |          |  |
|     | 22+550 | LHS | 100 | 5  | nim     |         |   | Total-5  |  |
|     | 22+650 | LHS | 100 | 7  | nim     |         |   |          |  |
|     | 23+060 | LHS | 110 | 10 | nim     |         |   |          |  |
| 971 | 23+060 | LHS | 200 | 10 | nim     |         |   |          |  |
|     | 23+120 | LHS | 150 | 7  | nim     | nim     | 1 | Total-1  |  |
|     | 23+125 | LHS | 200 | 10 | nim     | nim     | 2 |          |  |
| 921 | 23+130 | LHS | 200 | 7  | nim     |         |   | TOTAL-2  |  |
| 626 | 23+135 | LHS | 150 | 10 | nim     | nim     | 3 |          |  |
|     | 23+090 | LHS | 200 | 5  | nim     |         |   | Total-3  |  |
|     | 23+090 | LHS | 90  | 7  | nim     |         |   |          |  |
|     | 23+095 | LHS | 80  | 10 | nim     | nim     | 7 |          |  |
|     | 23+090 | LHS | 200 | 7  | vakhndi | vakhndi | 3 |          |  |
| 920 | 23+085 | LHS | 200 | 10 | vakhndi |         |   | Total-10 |  |
|     | 23+090 | LHS | 100 | 7  | vakhndi |         |   |          |  |
|     | 23+090 | LHS | 200 | 10 | nim     |         |   |          |  |
|     | 23+090 | LHS | 90  | 10 | nim     |         |   |          |  |
|     | 23+085 | LHS | 100 | 5  | nim     |         |   |          |  |
|     | 23+090 | LHS | 90  | 5  | nim     |         |   |          |  |
|     | 23+090 | LHS | 80  | 7  | nim     |         |   |          |  |
|     | 23+090 | LHS | 90  | 7  | nim     |         |   |          |  |
|     | 23+090 | LHS | 90  | 7  | nim     |         |   |          |  |
|     | 23+090 | LHS | 90  | 7  | nim     |         |   |          |  |

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| Village Name | Survey/<br>Plot No. | Chainage | SIDE | Girth<br>(BGH) in<br>cm | Height<br>(m) | Tree Name | Tree Name | Number | Total   | Remarks |
|--------------|---------------------|----------|------|-------------------------|---------------|-----------|-----------|--------|---------|---------|
|              | 920                 | 23+090   | LHS  | 100                     | 7             | nim       | nim       | 6      |         |         |
|              |                     | 23+090   | LHS  | 200                     | 10            | nim       | vakhndi   | 1      |         |         |
|              |                     | 23+100   | LHS  | 200                     | 15            | vakhndi   |           |        | Total-7 |         |
|              |                     | 23+100   | LHS  | 100                     | 10            | nim       |           |        |         |         |
|              |                     | 23+100   | LHS  | 100                     | 10            | nim       |           |        |         |         |
|              |                     | 23+100   | LHS  | 200                     | 10            | nim       |           |        |         |         |
|              | 626                 | 23+180   | LHS  | 200                     | 5             | nim       |           |        |         |         |
|              |                     | 23+185   | LHS  | 200                     | 5             | nim       | nim       | 5      |         |         |
|              |                     | 23+186   | LHS  | 90                      | 7             | aam       | aam       | 1      |         |         |
|              |                     | 23+187   | LHS  | 80                      | 10            | nim       |           |        | Total-6 |         |
|              |                     | 23+188   | LHS  | 200                     | 10            | nim       |           |        |         |         |
|              |                     | 23+190   | LHS  | 100                     | 7             | nim       |           |        |         |         |
|              | 627                 | 23+190   | LHS  | 100                     | 5             | nim       |           |        |         |         |
|              |                     | 23+190   | LHS  | 200                     | 5             | nim       | nim       | 7      |         |         |
|              |                     | 23+190   | LHS  | 90                      | 7             | nim       |           |        | Total-7 |         |
|              |                     | 23+190   | LHS  | 80                      | 6             | nim       |           |        |         |         |
|              |                     | 23+190   | LHS  | 100                     | 7             | nim       |           |        |         |         |
|              |                     | 23+190   | LHS  | 90                      | 8             | nim       |           |        |         |         |
|              | 649                 | 23+550   | LHS  | 100                     | 7             | nim       |           |        |         |         |
|              |                     | 23+550   | LHS  | 90                      | 5             | nim       |           |        |         |         |
|              |                     | 23+550   | LHS  | 80                      | 5             | nim       |           | 3      |         |         |
|              |                     | 23+550   | LHS  | 100                     | 5             | nim       |           |        | Total-3 |         |
|              | 648                 | 23+560   | LHS  | 200                     | 7             | nim       |           |        |         |         |
|              |                     | 23+600   | LHS  | 40                      | 5             | nim       | nim       | 1      |         |         |
|              |                     | 23+650   | LHS  | 80                      | 7             | aam       | aam       | 3      |         |         |
|              |                     | 23+650   | LHS  | 80                      | 7             | aam       |           |        | Total-4 |         |
|              |                     | 23+650   | LHS  | 90                      | 0.9           | aam       |           |        |         |         |
|              |                     | 23+680   | LHS  | 80                      | 2             | aam       | aam       | 2      |         |         |



|        |     |     |     |      |      |    |          |
|--------|-----|-----|-----|------|------|----|----------|
| 23+850 | LHS | 100 | 0.9 | aam  | nim  | 12 |          |
| 23+850 | LHS | 200 | 1   | nim  | guda | 2  | Total-16 |
| 23+850 | LHS | 200 | 10  | guda |      |    |          |
| 23+880 | LHS | 100 | 7   | guda |      |    |          |
| 23+905 | LHS | 200 | 1   | nim  |      |    |          |
| 23+905 | LHS | 100 | 7   | nim  |      |    |          |
| 23+950 | LHS | 150 | 5   | nim  |      |    |          |
| 23+950 | LHS | 200 | 10  | nim  |      |    |          |
| 23+950 | LHS | 100 | 10  | nim  |      |    |          |
| 23+000 | LHS | 200 | 10  | nim  |      |    |          |
| 23+060 | LHS | 150 | 5   | nim  |      |    |          |
| 23+060 | LHS | 250 | 15  | nim  |      |    |          |
| 23+100 | LHS | 200 | 10  | nim  |      |    |          |
| 23+100 | LHS | 300 | 15  | nim  |      |    |          |
| 24+120 | LHS | 300 | 10  | nim  |      |    |          |
| 24+160 | LHS | 200 | 10  | nim  | nim  | 17 | Total-17 |
| 24+170 | LHS | 200 | 9   | nim  |      |    |          |
| 24+200 | LHS | 150 | 10  | nim  |      |    |          |
| 24+200 | LHS | 100 | 10  | nim  |      |    |          |
| 24+200 | LHS | 400 | 15  | nim  |      |    |          |
| 24+200 | LHS | 300 | 10  | nim  |      |    |          |
| 24+200 | LHS | 200 | 7   | nim  |      |    |          |
| 24+200 | LHS | 150 | 5   | nim  |      |    |          |
| 24+200 | LHS | 300 | 10  | nim  |      |    |          |
| 24+200 | LHS | 200 | 5   | nim  |      |    |          |
| 24+200 | LHS | 200 | 10  | nim  |      |    |          |
| 24+200 | LHS | 100 | 10  | nim  |      |    |          |
| 24+250 | LHS | 200 | 5   | nim  |      |    |          |
| 24+250 | LHS | 90  | 7   | nim  |      |    |          |
| 24+255 | LHS | 80  | 7   | nim  |      |    |          |
| 24+260 | LHS | 900 | 6   | nim  |      |    |          |
| 24+285 | LHS | 200 | 10  | nim  |      |    |          |
| 24+290 | LHS | 100 | 7   | nim  | nim  | 29 |          |
| 24+350 | LHS |     |     |      |      |    |          |

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|        |     |     |    |        |        |   |          |
|--------|-----|-----|----|--------|--------|---|----------|
| 24+350 | LHS | 150 | 7  | nim    | kisado | 1 |          |
| 24+350 | LHS | 200 | 16 | nim    | babul  | 2 |          |
| 24+350 | LHS | 100 | 7  | nim    | goro   | 1 |          |
| 24+350 | LHS | 150 | 10 | nim    |        |   | Total-33 |
| 24+350 | LHS | 200 | 15 | kisado |        |   |          |
| 24+350 | LHS | 200 | 10 | nim    |        |   |          |
| 24+350 | LHS | 200 | 15 | nim    |        |   |          |
| 24+350 | LHS | 200 | 10 | nim    |        |   |          |
| 24+350 | LHS | 250 | 15 | nim    |        |   |          |
| 24+350 | LHS | 100 | 10 | babul  |        |   |          |
| 24+350 | LHS | 150 | 10 | babul  |        |   |          |
| 24+350 | LHS | 100 | 7  | nim    |        |   |          |
| 24+350 | LHS | 100 | 10 | nim    |        |   |          |
| 24+350 | LHS | 200 | 10 | nim    |        |   |          |
| 24+350 | LHS | 100 | 7  | nim    |        |   |          |
| 24+350 | LHS | 200 | 7  | nim    |        |   |          |
| 24+350 | LHS | 150 | 8  | nim    |        |   |          |
| 24+380 | LHS | 100 | 7  | nim    |        |   |          |
| 24+450 | LHS | 90  | 5  | nim    |        |   |          |
| 24+450 | LHS | 90  | 7  | goro   |        |   |          |
| 24+450 | LHS | 40  | 5  | nim    |        |   |          |
| 24+450 | LHS | 40  | 5  | nim    |        |   |          |
| 24+450 | LHS | 90  | 7  | nim    |        |   |          |
| 24+450 | LHS | 100 | 5  | nim    |        |   |          |
| 24+450 | LHS | 150 | 5  | nim    |        |   |          |
| 24+450 | LHS | 700 | 5  | nim    |        |   |          |
| 24+450 | LHS | 90  | 4  | nim    |        |   |          |
| 24+450 | LHS | 80  | 5  | nim    |        |   |          |
| 24+450 | LHS | 100 | 5  | nim    |        |   |          |
| 24+450 | LHS | 90  | 5  | nim    |        |   |          |
| 24+450 | LHS | 80  | 5  | nim    |        |   |          |
| 24+450 | LHS | 90  | 5  | nim    |        |   |          |
| 24+450 | LHS | 90  | 5  | nim    |        |   |          |

| Village name | Survey/<br>Plot No. | Chainage | Side | Girth<br>(BGH) in<br>Cm | HIEGHT<br>(in m) | Tree Name | Tree Name | Number | Total    | Remarks |
|--------------|---------------------|----------|------|-------------------------|------------------|-----------|-----------|--------|----------|---------|
| 119          |                     | 21+300   | RHS  | 130                     | 7                | jabon     | jabon     | 2      |          |         |
|              |                     | 21+300   | RHS  | 100                     | 5                | jabon     | nim       | 1      |          |         |
|              |                     | 21+300   | RHS  | 130                     | 7                | nim       | jabun     | 1      |          |         |
|              |                     | 21+300   | RHS  | 110                     | 5                | jabun     | aam       | 2      | Total-6  |         |
|              |                     | 21+300   | RHS  | 130                     | 5                | aam       |           |        |          |         |
|              |                     | 21+300   | RHS  | 50                      | 7                | aam       |           |        |          |         |
|              |                     | 21+100   | RHS  | 90                      | 7                | nim       | nim       | 21     |          |         |
|              |                     | 21+101   | RHS  | 110                     | 7                | nim       | guda      | 12     |          |         |
|              |                     | 21+101   | RHS  | 90                      | 8                | guda      | vakhndi   | 8      |          |         |
|              |                     | 21+102   | RHS  | 100                     | 7                | guda      |           |        | Total-41 |         |
|              |                     | 21+103   | RHS  | 80                      | 5                | guda      |           |        |          |         |
|              |                     | 21+105   | RHS  | 100                     | 7                | nim       |           |        |          |         |
|              |                     | 21+101   | RHS  | 130                     | 10               | nim       |           |        |          |         |
|              |                     | 21+108   | RHS  | 80                      | 7                | nim       |           |        |          |         |
|              |                     | 21+109   | RHS  | 120                     | 5                | nim       |           |        |          |         |
|              |                     | 21+108   | RHS  | 123                     | 7                | nim       |           |        |          |         |
|              |                     | 21+110   | RHS  | 80                      | 5                | guda      |           |        |          |         |
|              |                     | 21+110   | RHS  | 90                      | 7                | guda      |           |        |          |         |
|              |                     | 21+112   | RHS  | 100                     | 7                | guda      |           |        |          |         |
|              |                     | 21+112   | RHS  | 100                     | 5                | vakhndi   |           |        |          |         |
|              |                     | 21+115   | RHS  | 200                     | 8                | nim       |           |        |          |         |
|              |                     | 21+116   | RHS  | 100                     | 8                | nim       |           |        |          |         |
|              |                     | 21+117   | RHS  | 90                      | 7                | guda      |           |        |          |         |
|              |                     | 21+118   | RHS  | 100                     | 7                | vakhndi   |           |        |          |         |
|              |                     | 21+115   | RHS  | 100                     | 5                | vakhndi   |           |        |          |         |
|              |                     | 21+720   | RHS  | 90                      | 7                | vakhndi   |           |        |          |         |
|              |                     | 21+720   | RHS  | 80                      | 7                | vakhndi   |           |        |          |         |
|              |                     | 21+720   | RHS  | 100                     | 5                | nim       |           |        |          |         |
|              |                     | 21+720   | RHS  | 200                     | 5                | nim       |           |        |          |         |
| 102          |                     |          |      |                         |                  |           |           |        |          |         |
|              |                     |          |      |                         |                  |           |           |        |          |         |

|     |        |     |     |    |         |         |   |          |  |
|-----|--------|-----|-----|----|---------|---------|---|----------|--|
|     | 21+720 | RHS | 100 | 7  | nim     |         |   |          |  |
|     | 21+720 | RHS | 100 | 7  | nim     |         |   |          |  |
|     | 21+720 | RHS | 90  | 7  | nim     |         |   |          |  |
|     | 21+730 | RHS | 80  | 5  | guda    |         |   |          |  |
|     | 21+731 | RHS | 80  | 5  | guda    |         |   |          |  |
|     | 21+732 | RHS | 70  | 5  | guda    |         |   |          |  |
|     | 21+733 | RHS | 120 | 10 | nim     |         |   |          |  |
|     | 21+734 | RHS | 70  | 5  | nim     |         |   |          |  |
|     | 21+735 | RHS | 80  | 5  | nim     |         |   |          |  |
|     | 21+736 | RHS | 90  | 7  | vakhndi |         |   |          |  |
|     | 21+736 | RHS | 35  | 5  | vakhndi |         |   |          |  |
|     | 21+230 | RHS | 60  | 5  | vakhndi |         |   |          |  |
|     | 21+131 | RHS | 50  | 5  | babul   |         |   |          |  |
|     | 21+133 | RHS | 200 | 10 | babul   |         |   |          |  |
|     | 21+135 | RHS | 100 | 7  | nim     |         |   |          |  |
|     | 21+336 | RHS | 90  | 5  | guda    |         |   |          |  |
|     | 21+337 | RHS | 100 | 7  | guda    |         |   |          |  |
|     | 21+338 | RHS | 80  | 5  | NIM     |         |   |          |  |
|     | 21+339 | RHS | 150 | 10 | NIM     |         |   |          |  |
|     | 21+100 | RHS | 40  | 7  | NIM     |         |   |          |  |
|     | 21+150 | RHS | 100 | 5  | NIM     | NIM     | 2 |          |  |
|     | 21+150 | RHS | 90  | 7  | GUDA    | GUDA    | 1 |          |  |
|     | 21+150 | RHS | 80  | 5  | NIM     | KIADO   | 1 |          |  |
|     | 21+170 | RHS | 100 | 10 | KIADO   |         |   | TOTAL-4  |  |
|     | 21+170 | RHS | 100 | 10 | NIM     | NIM     | 3 |          |  |
|     | 21+250 | RHS | 170 | 7  | KIADO   | KIADO   | 5 |          |  |
|     | 21+200 | RHS | 200 | 5  | NIM     | vakhndi | 2 |          |  |
|     | 21+200 | RHS | 90  | 5  | KIADO   |         |   | TOTAL-10 |  |
|     | 21+210 | RHS | 100 | 7  | KIADO   |         |   |          |  |
|     | 21+215 | RHS | 90  | 7  | KIADO   |         |   |          |  |
|     | 21+216 | RHS | 200 | 5  | KIADO   |         |   |          |  |
|     | 21+180 | RHS | 90  | 5  | NIM     |         |   |          |  |
|     | 21+180 | RHS | 90  | 7  | vakhndi |         |   |          |  |
| 120 |        |     |     |    |         |         |   |          |  |
| 103 |        |     |     |    |         |         |   |          |  |



|        |     |     |    |         |         |    |          |  |
|--------|-----|-----|----|---------|---------|----|----------|--|
| 21+180 | RHS | 100 | 8  | nim     |         |    |          |  |
| 21+180 | RHS | 200 | 7  | vakhndi |         |    |          |  |
| 21+400 | RHS | 90  | 10 | vakhndi | vakhndi | 1  |          |  |
| 24+405 | RHS | 100 | 7  | nim     | NIM     | 19 |          |  |
| 21+405 | RHS | 200 | 5  | nim     | KUADO   | 3  |          |  |
| 21+420 | RHS | 200 | 5  | nim     |         |    | TOTAL-23 |  |
| 21+420 | RHS | 150 | 7  | nim     |         |    |          |  |
| 21+420 | RHS | 90  | 5  | nim     |         |    |          |  |
| 21+500 | RHS | 60  | 5  | nim     |         |    |          |  |
| 21+501 | RHS | 80  | 7  | nim     |         |    |          |  |
| 21+570 | RHS | 90  | 5  | nim     |         |    |          |  |
| 21+515 | RHS | 100 | 7  | nim     |         |    |          |  |
| 21+515 | RHS | 100 | 10 | KUADO   |         |    |          |  |
| 21+520 | RHS | 200 | 10 | nim     |         |    |          |  |
| 21+528 | RHS | 30  | 5  | nim     |         |    |          |  |
| 21+520 | RHS | 40  | 5  | nim     |         |    |          |  |
| 21+520 | RHS | 40  | 7  | nim     |         |    |          |  |
| 21+520 | RHS | 100 | 7  | NIM     |         |    |          |  |
| 21+520 | RHS | 90  | 5  | nim     |         |    |          |  |
| 21+520 | RHS | 100 | 7  | nim     |         |    |          |  |
| 21+520 | RHS | 100 | 8  | nim     |         |    |          |  |
| 21+520 | RHS | 90  | 8  | KUADO   |         |    |          |  |
| 21+520 | RHS | 60  | 7  | KUADO   |         |    |          |  |
| 21+520 | RHS | 90  | 5  | nim     |         |    |          |  |
| 21+520 | RHS | 120 | 7  | nim     |         |    |          |  |
| 21+580 | RHS | 90  | 5  | nim     | nim     | 3  |          |  |
| 21+580 | RHS | 100 | 5  | nim     | KUADO   | 1  |          |  |
| 21+580 | RHS | 80  | 7  | nim     | pipal   | 1  |          |  |
| 21+580 | RHS | 100 | 5  | KUADO   | vakhndi | 1  | Total -6 |  |

|     |        |     |     |    |         |         |   |          |  |
|-----|--------|-----|-----|----|---------|---------|---|----------|--|
| 117 | 21+650 | RHS | 200 | 7  | PIPAL   |         |   |          |  |
|     | 21+655 | RHS | 100 | 5  | vakhndi |         |   |          |  |
|     | 21+655 | RHS | 80  | 7  | vakhndi | vakhndi | 6 |          |  |
|     | 21+656 | RHS | 90  | 5  | vakhndi | JABUN   | 1 |          |  |
|     | 21+670 | RHS | 80  | 7  | vakhndi |         |   | TOTAL-7  |  |
|     | 27+680 | RHS | 200 | 7  | vakhndi |         |   |          |  |
|     | 27+680 | RHS | 100 | 5  | vakhndi |         |   |          |  |
|     | 27+680 | RHS | 400 | 10 | vakhndi |         |   |          |  |
|     | 21+830 | RHS | 80  | 7  | JABUN   |         |   |          |  |
|     | 21+835 | RHS | 40  | 5  | AAM     | aam     | 2 |          |  |
| 111 | 21+840 | RHS | 100 | 7  | JABUN   | JABUN   | 9 |          |  |
|     | 21+845 | RHS | 90  | 5  | JABUN   | GUDA    | 1 |          |  |
|     | 21+845 | RHS | 100 | 7  | JABUN   | NIM     | 6 |          |  |
|     | 21+850 | RHS | 90  | 4  | JABUN   |         |   | TOTAL-18 |  |
|     | 21+850 | RHS | 200 | 7  | JABUN   |         |   |          |  |
|     | 21+855 | RHS | 100 | 5  | JABUN   |         |   |          |  |
|     | 21+855 | RHS | 100 | 7  | JABUN   |         |   |          |  |
|     |        |     |     |    |         |         |   |          |  |
|     |        |     |     |    |         |         |   |          |  |
|     |        |     |     |    |         |         |   |          |  |



|     |          |     |     |    |         |  |  |  |  |  |
|-----|----------|-----|-----|----|---------|--|--|--|--|--|
| 110 | 21+860   | RHS | 60  | 5  | JABUN   |  |  |  |  |  |
|     | 21+866   | RHS | 100 | 7  | JABUN   |  |  |  |  |  |
|     | 21+860   | RHS | 60  | 5  | AAM     |  |  |  |  |  |
|     | 21+860   | RHS | 90  | 7  | GUDA    |  |  |  |  |  |
|     | 21+866   | RHS | 90  | 5  | nim     |  |  |  |  |  |
|     | 21+950   | RHS | 100 | 7  | nim     |  |  |  |  |  |
|     | 21+950   | RHS | 200 | 10 | nim     |  |  |  |  |  |
|     | 21+950   | RHS | 100 | 7  | nim     |  |  |  |  |  |
|     | 21+950   | RHS | 100 | 7  | nim     |  |  |  |  |  |
|     | 21+960   | RHS | 200 | 10 | nim     |  |  |  |  |  |
|     | 21+960   | RHS | 110 | 7  | nim     |  |  |  |  |  |
|     | 21+970   | RHS | 100 | 10 | nim     |  |  |  |  |  |
|     | 21+970   | RHS | 100 | 5  | JABUN   |  |  |  |  |  |
|     | 21+970   | RHS | 90  | 7  | JABUN   |  |  |  |  |  |
|     | 21+970   | RHS | 100 | 5  | JABUN   |  |  |  |  |  |
|     | 21+925   | RHS | 90  | 7  | JABUN   |  |  |  |  |  |
|     | 21+970   | RHS | 90  | 5  | NIM     |  |  |  |  |  |
|     | 21+971   | RHS | 100 | 7  | NIM     |  |  |  |  |  |
|     | 21+972   | RHS | 90  | 5  | NIM     |  |  |  |  |  |
|     | 21+973   | RHS | 80  | 7  | NIM     |  |  |  |  |  |
|     | 21+974   | RHS | 70  | 8  | NIM     |  |  |  |  |  |
|     | 21+975   | RHS | 100 | 7  | NIM     |  |  |  |  |  |
|     | 21+976   | RHS | 200 | 10 | NIM     |  |  |  |  |  |
|     | 21+977   | RHS | 200 | 5  | vakhndi |  |  |  |  |  |
|     | 21+978   | RHS | 100 | 7  | vakhndi |  |  |  |  |  |
|     | 21+979   | RHS | 200 | 5  | vakhndi |  |  |  |  |  |
|     | 21+980   | RHS | 150 | 5  | vakhndi |  |  |  |  |  |
|     | 21+981   | RHS | 60  | 5  | vakhndi |  |  |  |  |  |
|     | 21+982   | RHS | 100 | 7  | GUDA    |  |  |  |  |  |
|     | 21+983   | RHS | 100 | 7  | GUDA    |  |  |  |  |  |
|     | 21+984   | RHS | 100 | 10 | NIM     |  |  |  |  |  |
| 91  | TOTAL-44 |     |     |    |         |  |  |  |  |  |

|        |     |     |    |           |       |   |  |  |          |
|--------|-----|-----|----|-----------|-------|---|--|--|----------|
| 21+985 | RHS | 90  | 5  | NIM       |       |   |  |  |          |
| 21+986 | RHS | 80  | 7  | NIM       |       |   |  |  |          |
| 21+987 | RHS | 90  | 8  | NIM       |       |   |  |  |          |
| 21+988 | RHS | 70  | 6  | NIM       |       |   |  |  |          |
| 21+989 | RHS | 80  | 7  | NIM       |       |   |  |  |          |
| 21+990 | RHS | 90  | 5  | NIM       |       |   |  |  |          |
| 21+991 | RHS | 100 | 7  | NIM       |       |   |  |  |          |
| 21+992 | RHS | 90  | 5  | GURASABUI |       |   |  |  |          |
| 21+993 | RHS | 100 | 5  | GURASABUI |       |   |  |  |          |
| 21+994 | RHS | 100 | 7  | GURASABUI |       |   |  |  |          |
| 21+995 | RHS | 700 | 7  | GURASABUI |       |   |  |  |          |
| 21+996 | RHS | 90  | 7  | GURASABUI |       |   |  |  |          |
| 22+997 | RHS | 80  | 10 | GURASABUI |       |   |  |  |          |
| 22+998 | RHS | 80  | 10 | GURASABUI |       |   |  |  |          |
| 22+999 | RHS | 90  | 10 | GURASABUI |       |   |  |  |          |
| 22+000 | RHS | 70  | 10 | GURASABUI |       |   |  |  |          |
| 22+050 | RHS | 80  | 7  | GURASABUI |       |   |  |  |          |
| 22+050 | RHS | 100 | 10 | KUADO     |       |   |  |  |          |
| 22+050 | RHS | 90  | 5  | nim       |       |   |  |  |          |
| 22+150 | RHS | 40  | 7  | nim       |       |   |  |  |          |
| 22+150 | RHS | 150 | 10 | nim       |       |   |  |  |          |
| 22+100 | RHS | 100 | 7  | KUADO     | KUADO | 2 |  |  |          |
| 22+150 | RHS | 100 | 5  | KUADO     | GUDA  | 3 |  |  |          |
| 22+155 | RHS | 200 | 7  | GUDA      | nim   | 5 |  |  |          |
| 22+155 | RHS | 100 | 7  | GUDA      |       |   |  |  | TOTAL-10 |
| 22+160 | RHS | 200 | 10 | GUDA      |       |   |  |  |          |
| 22+162 | RHS | 100 | 5  | NIM       |       |   |  |  |          |
| 22+165 | RHS | 80  | 7  | NIM       |       |   |  |  |          |
| 22+120 | RHS | 90  | 8  | NIM       |       |   |  |  |          |
| 22+150 | RHS | 90  | 5  | NIM       |       |   |  |  |          |
| 22+150 | RHS | 80  | 5  | NIM       |       |   |  |  |          |
| 22+160 | RHS | 100 | 7  | NIM       | NIM   | 4 |  |  |          |
| 22+160 | RHS | 100 | 7  | NIM       |       |   |  |  | TOTAL-4  |

|     |        |     |     |    |         |         |  |    |          |  |
|-----|--------|-----|-----|----|---------|---------|--|----|----------|--|
| uv  | 22+220 | RHS | 60  | 5  | NIM     |         |  |    |          |  |
|     | 22+220 | RHS | 70  | 5  | NIM     |         |  |    |          |  |
|     | 22+250 | RHS | 60  | 7  | NIM     | NIM     |  | 8  |          |  |
|     | 22+250 | RHS | 70  | 7  | NIM     | NILGIRI |  | 5  |          |  |
|     | 22+280 | RHS | 60  | 5  | NIM     | KIJADO  |  | 1  |          |  |
|     | 22+280 | RHS | 100 | 5  | NIM     |         |  |    | TOTAL-14 |  |
|     | 22+285 | RHS | 90  | 7  | NIM     |         |  |    |          |  |
|     | 22+285 | RHS | 90  | 7  | NILGIRI |         |  |    |          |  |
|     | 22+286 | RHS | 50  | 7  | NILGIRI |         |  |    |          |  |
|     | 22+287 | RHS | 50  | 5  | NILGIRI |         |  |    |          |  |
|     | 22+288 | RHS | 50  | 7  | NILGIRI |         |  |    |          |  |
|     | 22+290 | RHS | 80  | 7  | NILGIRI |         |  |    |          |  |
|     | 22+290 | RHS | 60  | 5  | NIM     |         |  |    |          |  |
|     | 22+290 | RHS | 90  | 7  | NIM     |         |  |    |          |  |
|     | 22+292 | RHS | 60  | 7  | NIM     |         |  |    |          |  |
|     | 22+295 | RHS | 100 | 7  | KIJADO  |         |  |    |          |  |
|     | 22+295 | RHS | 100 | 10 | NIM     | NIM     |  | 8  |          |  |
|     | 22+295 | RHS | 90  | 7  | NIM     | BABUN   |  | 4  |          |  |
|     | 22+295 | RHS | 80  | 5  | BABUN   | vakhndi |  | 1  |          |  |
|     | 22+296 | RHS | 80  | 5  | BABUN   |         |  |    | TOTAL-13 |  |
|     | 22+297 | RHS | 80  | 7  | BABUN   |         |  |    |          |  |
|     | 22+298 | RHS | 100 | 7  | BABUN   |         |  |    |          |  |
|     | 22+299 | RHS | 100 | 10 | NIM     |         |  |    |          |  |
|     | 22+300 | RHS | 90  | 10 | NIM     |         |  |    |          |  |
|     | 22+350 | RHS | 100 | 7  | NIM     |         |  |    |          |  |
|     | 22+350 | RHS | 60  | 7  | NIM     |         |  |    |          |  |
|     | 22+350 | RHS | 90  | 5  | NIM     |         |  |    |          |  |
|     | 22+410 | RHS | 90  | 4  | NIM     |         |  |    |          |  |
|     | 22+410 | RHS | 200 | 7  | vakhndi |         |  |    |          |  |
| 840 | 22+415 | RHS | 90  | 5  | NIM     | NIM     |  | 1  | TOTAL-1  |  |
|     | 22+415 | RHS | 200 | 7  | NIM     | NIM     |  | 15 |          |  |
|     | 22+420 | RHS | 90  | 5  | NIM     |         |  |    | TOTAL-15 |  |
|     | 22+420 | RHS | 80  | 7  | NIM     |         |  |    |          |  |

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|     |        |     |     |    |       |       |    |          |  |
|-----|--------|-----|-----|----|-------|-------|----|----------|--|
| 81  | 22+430 | RHS | 100 | 5  | NIM   |       |    |          |  |
|     | 22+440 | RHS | 90  | 7  | NIM   |       |    |          |  |
|     | 22+440 | RHS | 100 | 5  | NIM   |       |    |          |  |
|     | 22+445 | RHS | 90  | 3  | NIM   |       |    |          |  |
|     | 22+445 | RHS | 60  | 7  | NIM   |       |    |          |  |
|     | 22+450 | RHS | 60  | 5  | NIM   |       |    |          |  |
|     | 22+450 | RHS | 80  | 7  | NIM   |       |    |          |  |
|     | 22+450 | RHS | 90  | 5  | NIM   |       |    |          |  |
|     | 22+460 | RHS | 100 | 7  | NIM   |       |    |          |  |
|     | 22+470 | RHS | 90  | 7  | NIM   |       |    |          |  |
| 839 | 22+490 | RHS | 100 | 10 | NIM   |       |    |          |  |
|     | 22+491 | RHS | 200 | 15 | NIM   |       |    |          |  |
|     | 22+492 | RHS | 200 | 7  | NIM   | NIM   | 9  |          |  |
|     | 22+560 | RHS | 90  | 7  | NIM   |       |    | TOTAL-9  |  |
|     | 22+560 | RHS | 60  | 5  | NIM   |       |    |          |  |
|     | 22+600 | RHS | 90  | 7  | NIM   |       |    |          |  |
|     | 22+600 | RHS | 60  | 5  | NIM   |       |    |          |  |
|     | 22+600 | RHS | 80  | 5  | NIM   |       |    |          |  |
|     | 22+600 | RHS | 100 | 7  | NIM   |       |    |          |  |
|     | 22+600 | RHS | 700 | 5  | NIM   |       |    |          |  |
| 937 | 22+650 | RHS | 90  | 7  | NIM   |       |    |          |  |
|     | 22+650 | RHS | 200 | 10 | KIADO | KIADO | 3  |          |  |
|     | 22+650 | RHS | 100 | 7  | KIADO |       |    | TOTAL-3  |  |
|     | 22+700 | RHS | 100 | 7  | KIADO |       |    |          |  |
| 941 | 23+090 | RHS | 200 | 7  | NIM   | NIM   | 2  |          |  |
|     | 23+080 | RHS | 100 | 5  | NIM   |       |    | TOTAL-2  |  |
|     | 23+080 | RHS | 90  | 7  | NIM   | NIM   | 1  | TOTAL-1  |  |
| 921 | 23+080 | RHS | 80  | 7  | NIM   | NIM   | 2  |          |  |
|     | 23+080 | RHS | 100 | 10 | NIM   |       |    | TOTAL-2  |  |
|     | 23+150 | RHS | 200 | 7  | NIM   | NIM   | 11 |          |  |
| 923 | 23+160 | RHS | 90  | 7  | NIM   |       |    | TOTAL-11 |  |



|     |        |     |     |    |     |          |    |          |  |
|-----|--------|-----|-----|----|-----|----------|----|----------|--|
| 925 | 23+160 | RHS | 100 | 18 | NIM |          |    |          |  |
|     | 23+160 | RHS | 100 | 10 | NIM |          |    |          |  |
|     | 23+165 | RHS | 200 | 10 | NIM |          |    |          |  |
|     | 23+165 | RHS | 90  | 5  | NIM |          |    |          |  |
|     | 23+165 | RHS | 80  | 7  | NIM |          |    |          |  |
|     | 23+160 | RHS | 90  | 5  | NIM |          |    |          |  |
|     | 23+160 | RHS | 100 | 7  | NIM |          |    |          |  |
|     | 23+150 | RHS | 200 | 10 | NIM |          |    |          |  |
|     | 23+150 | RHS | 200 | 7  | NIM |          |    |          |  |
|     | 23+190 | RHS | 90  | 5  | NIM | NIM      | 9  |          |  |
| 226 | 23+185 | RHS | 80  | 7  | NIM |          |    | TOTAL-9  |  |
|     | 23+180 | RHS | 100 | 10 | NIM |          |    |          |  |
|     | 23+180 | RHS | 90  | 7  | NIM |          |    |          |  |
|     | 23+180 | RHS | 80  | 5  | NIM |          |    |          |  |
|     | 23+180 | RHS | 100 | 7  | NIM |          |    |          |  |
|     | 23+170 | RHS | 100 | 7  | NIM |          |    |          |  |
|     | 23+170 | RHS | 100 | 10 | NIM |          |    |          |  |
|     | 23+170 | RHS | 90  | 5  | NIM |          |    |          |  |
|     | 23+380 | RHS | 100 | 7  | NIM | NIM      | 25 |          |  |
|     | 23+390 | RHS | 90  | 5  | NIM | vakhandi | 1  |          |  |
|     | 23+390 | RHS | 100 | 5  | NIM |          |    | TOTAL-26 |  |
|     | 23+395 | RHS | 90  | 5  | NIM |          |    |          |  |
|     | 23+395 | RHS | 200 | 10 | NIM |          |    |          |  |
|     | 23+400 | RHS | 200 | 10 | NIM |          |    |          |  |
|     | 23+400 | RHS | 90  | 7  | NIM |          |    |          |  |
|     | 23+400 | RHS | 100 | 5  | NIM |          |    |          |  |
|     | 23+400 | RHS | 90  | 7  | NIM |          |    |          |  |
|     | 23+410 | RHS | 200 | 5  | NIM |          |    |          |  |
|     | 23+410 | RHS | 90  | 5  | NIM |          |    |          |  |
|     | 23+415 | RHS | 150 | 7  | NIM |          |    |          |  |
|     | 23+420 | RHS | 80  | 7  | NIM |          |    |          |  |
|     | 23+420 | RHS | 90  | 5  | NIM |          |    |          |  |
|     | 23+420 | RHS | 60  | 7  | NIM |          |    |          |  |

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|        |     |     |    |         |  |  |  |  |
|--------|-----|-----|----|---------|--|--|--|--|
| 23+420 | RHS | 100 | 5  | NIM     |  |  |  |  |
| 23+425 | RHS | 200 | 10 | NIM     |  |  |  |  |
| 23+425 | RHS | 100 | 7  | NIM     |  |  |  |  |
| 23+430 | RHS | 90  | 7  | NIM     |  |  |  |  |
| 23+435 | RHS | 80  | 7  | NIM     |  |  |  |  |
| 23+170 | RHS | 200 | 7  | NIM     |  |  |  |  |
| 23+170 | RHS | 200 | 15 | NIM     |  |  |  |  |
| 23+170 | RHS | 200 | 15 | NIM     |  |  |  |  |
| 23+170 | RHS | 150 | 10 | NIM     |  |  |  |  |
| 23+170 | RHS | 200 | 12 | NIM     |  |  |  |  |
| 23+170 | RHS | 200 | 15 | NIM     |  |  |  |  |
| 23+190 | RHS | 100 | 10 | NIM     |  |  |  |  |
| 23+190 | RHS | 90  | 7  | NIM     |  |  |  |  |
| 23+190 | RHS | 100 | 10 | NIM     |  |  |  |  |
| 23+190 | RHS | 90  | 7  | NIM     |  |  |  |  |
| 23+190 | RHS | 100 | 5  | NIM     |  |  |  |  |
| 23+190 | RHS | 200 | 10 | JANUN   |  |  |  |  |
| 23+190 | RHS | 100 | 10 | NIM     |  |  |  |  |
| 23+190 | RHS | 150 | 7  | NIM     |  |  |  |  |
| 23+380 | RHS | 90  | 5  | NIM     |  |  |  |  |
| 23+380 | RHS | 190 | 7  | NIM     |  |  |  |  |
| 23+380 | RHS | 90  | 7  | NIM     |  |  |  |  |
| 23+380 | RHS | 200 | 5  | NIM     |  |  |  |  |
| 23+380 | RHS | 200 | 7  | vakhndi |  |  |  |  |
| 23+380 | RHS | 200 | 10 | NIM     |  |  |  |  |



| Village Name | Survey/ Plot No. | Chainage | Side | Girth (BGH) in cm | Height (in m) | Tree Name | Tree Name | Number | Total     | Remarks |
|--------------|------------------|----------|------|-------------------|---------------|-----------|-----------|--------|-----------|---------|
| 627          |                  | 23+430   | RHS  | 90                | 5             | nim       | nim       | 10     |           |         |
|              |                  | 23+440   | RHS  | 80                | 7             | nim       | vakandli  | 3      |           |         |
|              |                  | 23+445   | RHS  | 200               | 10            | nim       |           |        | Total -13 |         |
|              |                  | 23+450   | RHS  | 100               | 5             | nim       |           |        |           |         |
|              |                  | 23+450   | RHS  | 200               | 10            | nim       |           |        |           |         |
|              |                  | 23+450   | RHS  | 200               | 10            | nim       |           |        |           |         |
|              |                  | 23+500   | RHS  | 100               | 5             | vakandli  |           |        |           |         |
|              |                  | 23+570   | RHS  | 90                | 7             | vakandli  |           |        |           |         |
|              |                  | 23+570   | RHS  | 80                | 7             | vakandli  |           |        |           |         |
|              |                  | 23+575   | RHS  | 100               | 7             | nim       |           |        |           |         |
|              |                  | 23+516   | RHS  | 200               | 5             | nim       |           |        |           |         |
|              |                  | 23+520   | RHS  | 90                | 5             | nim       |           |        |           |         |
|              |                  | 23+520   | RHS  | 80                | 6             | nim       |           |        |           |         |
|              |                  | 23+600   | RHS  | 90                | 5             | nim       | nim       | 6      |           |         |
|              |                  | 23+600   | RHS  | 100               | 7             | nim       | aam       | 217    |           |         |
|              |                  | 23+600   | RHS  | 80                | 5             | nim       |           |        | TOTAL-223 |         |
|              |                  | 23+600   | RHS  | 80                | 5             | nim       |           |        |           |         |
|              |                  | 23+600   | RHS  | 80                | 5             | nim       |           |        |           |         |
|              |                  | 23+600   | RHS  | 70                | 7             | nim       |           |        |           |         |
|              |                  | 23+600   | RHS  | 90                | 5             | AAm       |           |        |           |         |
|              |                  | 23+600   | RHS  | 70                | 7             | AAm       |           |        |           |         |
|              |                  | 23+601   | RHS  | 50                | 5             | AAm       |           |        |           |         |
|              |                  | 23+602   | RHS  | 100               | 5             | AAm       |           |        |           |         |
|              |                  | 23+603   | RHS  | 70                | 5             | AAm       |           |        |           |         |
|              |                  | 23+605   | RHS  | 80                | 5             | AAm       |           |        |           |         |
|              |                  | 23+605   | RHS  | 70                | 7             | AAm       |           |        |           |         |
|              |                  | 23+605   | RHS  | 80                | 7             | AAm       |           |        |           |         |
|              |                  | 23+605   | RHS  | 90                | 5             | AAm       |           |        |           |         |
|              |                  | 23+610   | RHS  | 100               | 5             | AAm       |           |        |           |         |

|        |     |     |   |     |  |  |  |  |  |
|--------|-----|-----|---|-----|--|--|--|--|--|
| 23+610 | RHS | 90  | 5 | AAm |  |  |  |  |  |
| 23+615 | RHS | 90  | 5 | AAm |  |  |  |  |  |
| 23+620 | RHS | 80  | 5 | AAm |  |  |  |  |  |
| 23+630 | RHS | 90  | 5 | AAm |  |  |  |  |  |
| 23+650 | RHS | 60  | 5 | AAm |  |  |  |  |  |
| 23+650 | RHS | 60  | 5 | AAm |  |  |  |  |  |
| 23+650 | RHS | 60  | 5 | AAm |  |  |  |  |  |
| 23+650 | RHS | 80  | 7 | AAm |  |  |  |  |  |
| 23+655 | RHS | 100 | 7 | AAm |  |  |  |  |  |
| 23+655 | RHS | 80  | 5 | AAm |  |  |  |  |  |
| 23+690 | RHS | 80  | 5 | AAm |  |  |  |  |  |
| 23+695 | RHS | 80  | 5 | AAm |  |  |  |  |  |
| 23+700 | RHS | 60  | 5 | AAm |  |  |  |  |  |
| 23+700 | RHS | 60  | 5 | AAm |  |  |  |  |  |
| 23+700 | RHS | 70  | 7 | AAm |  |  |  |  |  |
| 23+700 | RHS | 70  | 7 | AAm |  |  |  |  |  |
| 23+700 | RHS | 80  | 7 | AAm |  |  |  |  |  |
| 23+700 | RHS | 80  | 5 | AAm |  |  |  |  |  |
| 23+700 | RHS | 70  | 7 | AAm |  |  |  |  |  |
| 23+700 | RHS | 70  | 7 | AAm |  |  |  |  |  |
| 23+700 | RHS | 80  | 5 | AAm |  |  |  |  |  |
| 23+700 | RHS | 60  | 5 | AAm |  |  |  |  |  |
| 23+715 | RHS | 50  | 5 | AAm |  |  |  |  |  |
| 23+715 | RHS | 40  | 7 | AAm |  |  |  |  |  |
| 23+720 | RHS | 39  | 7 | AAm |  |  |  |  |  |
| 23+725 | RHS | 100 | 7 | AAm |  |  |  |  |  |
| 23+726 | RHS | 90  | 7 | AAm |  |  |  |  |  |
| 23+750 | RHS | 80  | 7 | AAm |  |  |  |  |  |
| 23+780 | RHS | 80  | 7 | AAm |  |  |  |  |  |
| 23+780 | RHS | 80  | 7 | AAm |  |  |  |  |  |
| 23+650 | RHS | 50  | 5 | AAm |  |  |  |  |  |
| 23+650 | RHS | 50  | 5 | AAm |  |  |  |  |  |
| 23+655 | RHS | 50  | 5 | AAm |  |  |  |  |  |

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|        |     |     |   |     |  |  |  |  |  |
|--------|-----|-----|---|-----|--|--|--|--|--|
| 23+655 | RHS | 40  | 5 | AAm |  |  |  |  |  |
| 23+655 | RHS | 40  | 7 | AAm |  |  |  |  |  |
| 23+660 | RHS | 50  | 7 | AAm |  |  |  |  |  |
| 23+670 | RHS | 50  | 5 | AAm |  |  |  |  |  |
| 23+680 | RHS | 90  | 5 | AAm |  |  |  |  |  |
| 23+690 | RHS | 90  | 5 | AAm |  |  |  |  |  |
| 23+695 | RHS | 80  | 7 | AAm |  |  |  |  |  |
| 23+695 | RHS | 90  | 7 | AAm |  |  |  |  |  |
| 23+700 | RHS | 40  | 5 | AAm |  |  |  |  |  |
| 23+715 | RHS | 40  | 4 | AAm |  |  |  |  |  |
| 23+720 | RHS | 50  | 4 | AAm |  |  |  |  |  |
| 23+730 | RHS | 50  | 4 | AAm |  |  |  |  |  |
| 23+740 | RHS | 60  | 5 | AAm |  |  |  |  |  |
| 23+740 | RHS | 70  | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 80  | 5 | AAm |  |  |  |  |  |
| 23+760 | RHS | 80  | 4 | AAm |  |  |  |  |  |
| 23+780 | RHS | 40  | 4 | AAm |  |  |  |  |  |
| 23+600 | RHS | 50  | 5 | AAm |  |  |  |  |  |
| 23+610 | RHS | 50  | 5 | AAm |  |  |  |  |  |
| 23+610 | RHS | 40  | 5 | AAm |  |  |  |  |  |
| 23+620 | RHS | 50  | 7 | AAm |  |  |  |  |  |
| 23+620 | RHS | 50  | 7 | AAm |  |  |  |  |  |
| 23+650 | RHS | 50  | 5 | AAm |  |  |  |  |  |
| 23+650 | RHS | 50  | 5 | AAm |  |  |  |  |  |
| 23+680 | RHS | 40  | 5 | AAm |  |  |  |  |  |
| 23+680 | RHS | 40  | 5 | AAm |  |  |  |  |  |
| 23+680 | RHS | 40  | 5 | AAm |  |  |  |  |  |
| 23+680 | RHS | 40  | 5 | AAm |  |  |  |  |  |
| 23+690 | RHS | 80  | 5 | AAm |  |  |  |  |  |
| 23+690 | RHS | 100 | 5 | AAm |  |  |  |  |  |
| 23+700 | RHS | 80  | 5 | AAm |  |  |  |  |  |
| 23+710 | RHS | 40  | 5 | AAm |  |  |  |  |  |
| 23+710 | RHS | 50  | 5 | AAm |  |  |  |  |  |

|        |     |     |   |     |  |  |  |  |  |
|--------|-----|-----|---|-----|--|--|--|--|--|
| 23+715 | RHS | 50  | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 50  | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 90  | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 90  | 5 | AAm |  |  |  |  |  |
| 23+650 | RHS | 80  | 6 | AAm |  |  |  |  |  |
| 23+652 | RHS | 80  | 6 | AAm |  |  |  |  |  |
| 23+655 | RHS | 40  | 6 | AAm |  |  |  |  |  |
| 23+680 | RHS | 40  | 6 | AAm |  |  |  |  |  |
| 23+682 | RHS | 40  | 6 | AAm |  |  |  |  |  |
| 23+685 | RHS | 50  | 7 | AAm |  |  |  |  |  |
| 23+690 | RHS | 50  | 5 | AAm |  |  |  |  |  |
| 23+690 | RHS | 50  | 5 | AAm |  |  |  |  |  |
| 23+700 | RHS | 40  | 5 | AAm |  |  |  |  |  |
| 23+700 | RHS | 40  | 5 | AAm |  |  |  |  |  |
| 23+710 | RHS | 80  | 7 | AAm |  |  |  |  |  |
| 23+720 | RHS | 80  | 7 | AAm |  |  |  |  |  |
| 23+720 | RHS | 80  | 7 | AAm |  |  |  |  |  |
| 23+722 | RHS | 70  | 5 | AAm |  |  |  |  |  |
| 23+725 | RHS | 40  | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 80  | 4 | AAm |  |  |  |  |  |
| 23+760 | RHS | 70  | 5 | AAm |  |  |  |  |  |
| 23+770 | RHS | 80  | 5 | AAm |  |  |  |  |  |
| 23+780 | RHS | 80  | 5 | AAm |  |  |  |  |  |
| 23+780 | RHS | 40  | 5 | AAm |  |  |  |  |  |
| 23+600 | RHS | 40  | 5 | AAm |  |  |  |  |  |
| 23+650 | RHS | 40  | 5 | AAm |  |  |  |  |  |
| 23+650 | RHS | 40  | 5 | AAm |  |  |  |  |  |
| 23+655 | RHS | 50  | 5 | AAm |  |  |  |  |  |
| 23+650 | RHS | 50  | 5 | AAm |  |  |  |  |  |
| 23+680 | RHS | 60  | 5 | AAm |  |  |  |  |  |
| 23+690 | RHS | 80  | 5 | AAm |  |  |  |  |  |
| 23+700 | RHS | 40  | 5 | AAm |  |  |  |  |  |
| 23+706 | RHS | 100 | 5 | AAm |  |  |  |  |  |

Sindhrei

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|        |     |     |    |     |  |  |  |  |
|--------|-----|-----|----|-----|--|--|--|--|
| 23+710 | RHS | 100 | 5  | AAm |  |  |  |  |
| 23+750 | RHS | 100 | 5  | AAm |  |  |  |  |
| 23+715 | RHS | 40  | 5  | AAm |  |  |  |  |
| 23+720 | RHS | 40  | 5  | AAm |  |  |  |  |
| 23+725 | RHS | 50  | 5  | AAm |  |  |  |  |
| 23+750 | RHS | 50  | 5  | AAm |  |  |  |  |
| 23+750 | RHS | 60  | 5  | AAm |  |  |  |  |
| 23+755 | RHS | 70  | 5  | AAm |  |  |  |  |
| 23+780 | RHS | 40  | 5  | AAm |  |  |  |  |
| 23+780 | RHS | 40  | 5  | AAm |  |  |  |  |
| 23+780 | RHS | 40  | 5  | AAm |  |  |  |  |
| 23+600 | RHS | 80  | 5  | AAm |  |  |  |  |
| 23+620 | RHS | 50  | 5  | AAm |  |  |  |  |
| 23+680 | RHS | 50  | 5  | AAm |  |  |  |  |
| 23+680 | RHS | 80  | 5  | AAm |  |  |  |  |
| 23+680 | RHS | 90  | 5  | AAm |  |  |  |  |
| 23+690 | RHS | 100 | 5  | AAm |  |  |  |  |
| 23+700 | RHS | 50  | 5  | AAm |  |  |  |  |
| 23+710 | RHS | 50  | 5  | AAm |  |  |  |  |
| 23+710 | RHS | 50  | 7  | AAm |  |  |  |  |
| 23+710 | RHS | 50  | 2  | AAm |  |  |  |  |
| 23+710 | RHS | 50  | 5  | AAm |  |  |  |  |
| 23+750 | RHS | 40  | 5  | AAm |  |  |  |  |
| 23+750 | RHS | 50  | 5  | AAm |  |  |  |  |
| 23+780 | RHS | 40  | 5  | AAm |  |  |  |  |
| 23+780 | RHS | 100 | 7  | AAm |  |  |  |  |
| 23+780 | RHS | 200 | 7  | AAm |  |  |  |  |
| 23+780 | RHS | 200 | 10 | AAm |  |  |  |  |
| 23+781 | RHS | 40  | 5  | AAm |  |  |  |  |
| 23+780 | RHS | 30  | 5  | AAm |  |  |  |  |
| 23+781 | RHS | 80  | 5  | AAm |  |  |  |  |
| 23+710 | RHS | 40  | 5  | AAm |  |  |  |  |
| 23+710 | RHS | 50  | 5  | AAm |  |  |  |  |

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|        |     |    |   |     |  |  |  |  |  |
|--------|-----|----|---|-----|--|--|--|--|--|
| 23+710 | RHS | 50 | 5 | AAm |  |  |  |  |  |
| 23+710 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+710 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+710 | RHS | 40 | 6 | AAm |  |  |  |  |  |
| 23+710 | RHS | 50 | 5 | AAm |  |  |  |  |  |
| 23+710 | RHS | 50 | 5 | AAm |  |  |  |  |  |
| 23+710 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+710 | RHS | 40 | 7 | AAm |  |  |  |  |  |
| 23+750 | RHS | 50 | 7 | AAm |  |  |  |  |  |
| 23+750 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 50 | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 40 | 6 | AAm |  |  |  |  |  |
| 23+750 | RHS | 50 | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 50 | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 50 | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 60 | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 80 | 4 | AAm |  |  |  |  |  |
| 23+750 | RHS | 90 | 4 | AAm |  |  |  |  |  |
| 23+750 | RHS | 80 | 4 | AAm |  |  |  |  |  |
| 23+750 | RHS | 80 | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 80 | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 50 | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 50 | 7 | AAm |  |  |  |  |  |
| 23+750 | RHS | 40 | 7 | AAm |  |  |  |  |  |
| 23+750 | RHS | 40 | 5 | AAm |  |  |  |  |  |



|        |     |    |   |     |  |  |  |  |  |
|--------|-----|----|---|-----|--|--|--|--|--|
| 23+750 | RHS | 30 | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 30 | 5 | AAm |  |  |  |  |  |
| 23+750 | RHS | 30 | 7 | AAm |  |  |  |  |  |
| 23+750 | RHS | 30 | 7 | AAm |  |  |  |  |  |
| 23+650 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+650 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+650 | RHS | 50 | 5 | AAm |  |  |  |  |  |
| 23+650 | RHS | 50 | 7 | AAm |  |  |  |  |  |
| 23+690 | RHS | 50 | 7 | AAm |  |  |  |  |  |
| 23+690 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+700 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+700 | RHS | 30 | 4 | AAm |  |  |  |  |  |
| 23+710 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+725 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+710 | RHS | 80 | 7 | AAm |  |  |  |  |  |
| 23+710 | RHS | 90 | 5 | AAm |  |  |  |  |  |
| 23+710 | RHS | 90 | 7 | AAm |  |  |  |  |  |
| 23+780 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+780 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+785 | RHS | 50 | 5 | AAm |  |  |  |  |  |
| 23+786 | RHS | 50 | 5 | AAm |  |  |  |  |  |
| 23+780 | RHS | 40 | 7 | AAm |  |  |  |  |  |
| 23+785 | RHS | 80 | 7 | AAm |  |  |  |  |  |
| 23+790 | RHS | 90 | 8 | AAm |  |  |  |  |  |
| 23+680 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+682 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+685 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+686 | RHS | 40 | 5 | AAm |  |  |  |  |  |
| 23+690 | RHS | 50 | 5 | AAm |  |  |  |  |  |
| 23+690 | RHS | 50 | 5 | AAm |  |  |  |  |  |
| 23+690 | RHS | 60 | 7 | AAm |  |  |  |  |  |
| 23+700 | RHS | 60 | 7 | AAm |  |  |  |  |  |
| 23+700 | RHS | 60 | 7 | AAm |  |  |  |  |  |

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|        |     |     |   |     |  |  |  |
|--------|-----|-----|---|-----|--|--|--|
| 23+700 | RHS | 80  | 5 | AAm |  |  |  |
| 23+710 | RHS | 100 | 5 | AAm |  |  |  |
| 23+720 | RHS | 90  | 5 | AAm |  |  |  |
| 23+725 | RHS | 40  | 6 | AAm |  |  |  |
| 23+730 | RHS | 40  | 6 | AAm |  |  |  |
| 23+740 | RHS | 40  | 5 | AAm |  |  |  |
| 23+750 | RHS | 50  | 5 | AAm |  |  |  |
| 23+780 | RHS | 50  | 5 | AAm |  |  |  |
| 23+780 | RHS | 50  | 5 | AAm |  |  |  |

| Village Name | Survey/<br>Plot No. | Chainage | Side | Girth<br>(BGH) in<br>cm | Height (in<br>m) | Tree Name | Tree Name | Number | Total     | Remarks |
|--------------|---------------------|----------|------|-------------------------|------------------|-----------|-----------|--------|-----------|---------|
|              |                     | 23+710   | RHS  | 40                      | 5                | hindkundi | hindkundi | 10     |           |         |
|              |                     | 23+710   | RHS  | 80                      | 5                | hindkundi | aam       | 131    |           |         |
|              |                     | 23+710   | RHS  | 80                      | 7                | hindkundi | badam     | 2      |           |         |
|              |                     | 23+710   | RHS  | 80                      | 9                | hindkundi | asopalu   | 1      |           |         |
|              |                     | 23+710   | RHS  | 80                      | 5                | hindkundi | nim       | 15     |           |         |
|              |                     | 23+710   | RHS  | 100                     | 5                | hindkundi | guda      | 6      |           |         |
|              |                     | 23+720   | RHS  | 40                      | 5                | hindkundi | pipal     | 2      |           |         |
|              |                     | 23+720   | RHS  | 40                      | 6                | hindkundi | gorasada  | 1      |           |         |
|              |                     | 23+720   | RHS  | 50                      | 5                | hindkundi |           |        | Total-168 |         |
|              |                     | 23+720   | RHS  | 50                      | 5                | hindkundi |           |        |           |         |
|              |                     | 23+720   | RHS  | 50                      | 6                | aam       |           |        |           |         |
|              |                     | 23+710   | RHS  | 50                      | 5                | aam       |           |        |           |         |
|              |                     | 23+750   | RHS  | 50                      | 5                | aam       |           |        |           |         |
|              |                     | 23+750   | RHS  | 50                      | 5                | aam       |           |        |           |         |
|              |                     | 23+750   | RHS  | 40                      | 5                | aam       |           |        |           |         |
|              |                     | 23+750   | RHS  | 80                      | 5                | badam     |           |        |           |         |
|              |                     | 23+750   | RHS  | 80                      | 5                | badam     |           |        |           |         |
|              |                     | 23+750   | RHS  | 40                      | 5                | aam       |           |        |           |         |
|              |                     | 23+750   | RHS  | 50                      | 6                | aam       |           |        |           |         |
|              |                     | 23+750   | RHS  | 40                      | 7                | aam       |           |        |           |         |
|              |                     | 23+790   | RHS  | 50                      | 5                | aam       |           |        |           |         |
|              |                     | 23+790   | RHS  | 50                      | 5                | aam       |           |        |           |         |
|              |                     | 23+790   | RHS  | 50                      | 5                | aam       |           |        |           |         |
|              |                     | 23+790   | RHS  | 50                      | 5                | aam       |           |        |           |         |
|              |                     | 23+790   | RHS  | 60                      | 5                | aam       |           |        |           |         |
|              |                     | 23+790   | RHS  | 60                      | 7                | aam       |           |        |           |         |
|              |                     | 23+790   | RHS  | 60                      | 7                | aam       |           |        |           |         |
|              |                     | 23+790   | RHS  | 50                      | 5                | aam       |           |        |           |         |
|              |                     | 23+790   | RHS  | 50                      | 5                | aam       |           |        |           |         |

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|        |     |     |   |     |  |  |  |  |  |
|--------|-----|-----|---|-----|--|--|--|--|--|
| 23+790 | RHS | 50  | 5 | aam |  |  |  |  |  |
| 23+790 | RHS | 50  | 5 | aam |  |  |  |  |  |
| 23+790 | RHS | 80  | 7 | aam |  |  |  |  |  |
| 23+790 | RHS | 90  | 7 | aam |  |  |  |  |  |
| 23+790 | RHS | 80  | 7 | aam |  |  |  |  |  |
| 23+790 | RHS | 80  | 5 | aam |  |  |  |  |  |
| 23+790 | RHS | 80  | 5 | aam |  |  |  |  |  |
| 23+790 | RHS | 40  | 4 | aam |  |  |  |  |  |
| 23+790 | RHS | 40  | 4 | aam |  |  |  |  |  |
| 23+790 | RHS | 40  | 5 | aam |  |  |  |  |  |
| 23+790 | RHS | 50  | 5 | aam |  |  |  |  |  |
| 23+750 | RHS | 100 | 5 | aam |  |  |  |  |  |
| 23+750 | RHS | 90  | 5 | aam |  |  |  |  |  |
| 23+750 | RHS | 90  | 5 | aam |  |  |  |  |  |
| 23+750 | RHS | 90  | 7 | aam |  |  |  |  |  |
| 23+750 | RHS | 90  | 7 | aam |  |  |  |  |  |
| 23+750 | RHS | 40  | 5 | aam |  |  |  |  |  |
| 23+750 | RHS | 40  | 5 | aam |  |  |  |  |  |
| 23+750 | RHS | 80  | 5 | aam |  |  |  |  |  |
| 23+750 | RHS | 90  | 5 | aam |  |  |  |  |  |
| 23+750 | RHS | 80  | 7 | aam |  |  |  |  |  |
| 23+750 | RHS | 80  | 7 | aam |  |  |  |  |  |
| 23+750 | RHS | 80  | 7 | aam |  |  |  |  |  |
| 23+750 | RHS | 90  | 7 | aam |  |  |  |  |  |
| 23+750 | RHS | 80  | 7 | aam |  |  |  |  |  |
| 23+750 | RHS | 50  | 7 | aam |  |  |  |  |  |
| 23+750 | RHS | 80  | 7 | aam |  |  |  |  |  |
| 23+750 | RHS | 80  | 7 | aam |  |  |  |  |  |
| 23+750 | RHS | 70  | 7 | aam |  |  |  |  |  |
| 23+790 | RHS | 40  | 5 | aam |  |  |  |  |  |
| 23+790 | RHS | 40  | 5 | aam |  |  |  |  |  |

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|        |     |    |   |     |  |  |  |
|--------|-----|----|---|-----|--|--|--|
| 23+790 | RHS | 50 | 5 | aam |  |  |  |
| 23+790 | RHS | 50 | 7 | aam |  |  |  |
| 23+790 | RHS | 40 | 7 | aam |  |  |  |
| 23+790 | RHS | 40 | 5 | aam |  |  |  |
| 23+790 | RHS | 50 | 5 | aam |  |  |  |
| 23+790 | RHS | 40 | 5 | aam |  |  |  |
| 23+790 | RHS | 50 | 7 | aam |  |  |  |
| 23+790 | RHS | 30 | 7 | aam |  |  |  |
| 23+790 | RHS | 40 | 7 | aam |  |  |  |
| 23+790 | RHS | 40 | 5 | aam |  |  |  |
| 23+790 | RHS | 50 | 5 | aam |  |  |  |
| 23+790 | RHS | 50 | 5 | aam |  |  |  |
| 23+790 | RHS | 40 | 7 | aam |  |  |  |
| 23+790 | RHS | 40 | 5 | aam |  |  |  |
| 23+790 | RHS | 40 | 5 | aam |  |  |  |
| 23+790 | RHS | 80 | 4 | aam |  |  |  |
| 23+790 | RHS | 90 | 5 | aam |  |  |  |
| 23+790 | RHS | 80 | 7 | aam |  |  |  |
| 23+750 | RHS | 40 | 5 | aam |  |  |  |
| 23+750 | RHS | 40 | 7 | aam |  |  |  |
| 23+750 | RHS | 50 | 7 | aam |  |  |  |
| 23+750 | RHS | 50 | 5 | aam |  |  |  |
| 23+750 | RHS | 50 | 5 | aam |  |  |  |
| 23+750 | RHS | 40 | 7 | aam |  |  |  |
| 23+750 | RHS | 40 | 7 | aam |  |  |  |
| 23+750 | RHS | 40 | 5 | aam |  |  |  |
| 23+780 | RHS | 80 | 7 | aam |  |  |  |
| 23+780 | RHS | 80 | 5 | aam |  |  |  |
| 23+780 | RHS | 80 | 5 | aam |  |  |  |
| 23+780 | RHS | 80 | 7 | aam |  |  |  |
| 23+780 | RHS | 80 | 7 | aam |  |  |  |
| 23+780 | RHS | 80 | 5 | aam |  |  |  |
| 23+780 | RHS | 90 | 7 | aam |  |  |  |
| 23+780 | RHS | 30 | 5 | aam |  |  |  |
| 23+780 | RHS | 30 | 5 | aam |  |  |  |







|        |     |     |    |         |  |  |  |  |  |
|--------|-----|-----|----|---------|--|--|--|--|--|
| 23+770 | RHS | 80  | 7  | aam     |  |  |  |  |  |
| 23+770 | RHS | 90  | 5  | aam     |  |  |  |  |  |
| 23+770 | RHS | 50  | 7  | aam     |  |  |  |  |  |
| 23+770 | RHS | 50  | 7  | aam     |  |  |  |  |  |
| 23+770 | RHS | 60  | 5  | aam     |  |  |  |  |  |
| 23+770 | RHS | 60  | 5  | aam     |  |  |  |  |  |
| 23+770 | RHS | 60  | 5  | aam     |  |  |  |  |  |
| 23+770 | RHS | 80  | 7  | aam     |  |  |  |  |  |
| 23+770 | RHS | 40  | 7  | aam     |  |  |  |  |  |
| 23+770 | RHS | 40  | 7  | aam     |  |  |  |  |  |
| 23+770 | RHS | 50  | 7  | aam     |  |  |  |  |  |
| 23+770 | RHS | 50  | 7  | aam     |  |  |  |  |  |
| 23+790 | RHS | 40  | 5  | aam     |  |  |  |  |  |
| 23+790 | RHS | 40  | 7  | aam     |  |  |  |  |  |
| 23+790 | RHS | 40  | 7  | aam     |  |  |  |  |  |
| 23+790 | RHS | 50  | 5  | aam     |  |  |  |  |  |
| 23+790 | RHS | 50  | 5  | aam     |  |  |  |  |  |
| 23+790 | RHS | 40  | 3  | aam     |  |  |  |  |  |
| 23+790 | RHS | 40  | 3  | aam     |  |  |  |  |  |
| 23+790 | RHS | 80  | 5  | aam     |  |  |  |  |  |
| 23+790 | RHS | 80  | 5  | aam     |  |  |  |  |  |
| 23+790 | RHS | 90  | 7  | aam     |  |  |  |  |  |
| 23+790 | RHS | 60  | 5  | aam     |  |  |  |  |  |
| 23+790 | RHS | 60  | 5  | aam     |  |  |  |  |  |
| 23+790 | RHS | 80  | 5  | aam     |  |  |  |  |  |
| 23+790 | RHS | 90  | 5  | aam     |  |  |  |  |  |
| 23+790 | RHS | 80  | 5  | aam     |  |  |  |  |  |
| 23+800 | RHS | 150 | 8  | nim     |  |  |  |  |  |
| 23+800 | RHS | 200 | 10 | nim     |  |  |  |  |  |
| 23+815 | RHS | 200 | 15 | nim     |  |  |  |  |  |
| 23+815 | RHS | 300 | 15 | asopalu |  |  |  |  |  |
| 23+815 | RHS | 90  | 5  | nim     |  |  |  |  |  |
| 23+820 | RHS | 0   |    |         |  |  |  |  |  |

[illegible]

|     |        |     |     |    |         |         |    |          |  |
|-----|--------|-----|-----|----|---------|---------|----|----------|--|
| 639 | 24+140 | RHS | 200 | 10 | nim     |         |    | Total-6  |  |
|     | 24+150 | RHS | 200 | 10 | nim     |         |    |          |  |
|     | 24+156 | RHS | 100 | 10 | nim     |         |    |          |  |
|     | 24+150 | RHS | 200 | 10 | nim     |         |    |          |  |
| 478 | 24+350 | RHS | 100 | 15 | kisjado | kisjado | 1  |          |  |
|     | 24+350 | RHS | 150 | 10 | nim     | nim     | 2  |          |  |
|     | 24+350 | RHS | 250 | 10 | nim     | pipal   | 1  |          |  |
|     | 24+350 | RHS | 200 | 7  | pipal   |         |    | Total-4  |  |
| 477 | 24+350 | RHS | 200 | 10 | pipal   | pipal   | 1  |          |  |
|     | 24+360 | RHS | 100 | 7  | nim     | nim     | 11 |          |  |
|     | 24+370 | RHS | 90  | 10 | nim     |         |    | Total-12 |  |
|     | 34+340 | RHS | 100 | 15 | nim     |         |    |          |  |
|     | 34+400 | RHS | 120 | 15 | nim     |         |    |          |  |
|     | 34+410 | RHS | 90  | 10 | nim     |         |    |          |  |
|     | 34+412 | RHS | 90  | 7  | nim     |         |    |          |  |
|     | 34+450 | RHS | 200 | 10 | nim     |         |    |          |  |
|     | 34+450 | RHS | 200 | 7  | nim     |         |    |          |  |
|     | 34+453 | RHS | 90  | 5  | nim     |         |    |          |  |
|     | 34+455 | RHS | 200 | 7  | nim     |         |    |          |  |
|     | 34+460 | RHS | 90  | 5  | nim     |         |    |          |  |
| 472 | 24+540 | RHS | 100 | 10 | nim     | nim     | 9  |          |  |
|     | 24+545 | RHS | 90  | 10 | nim     | guda    | 2  |          |  |
|     | 24+550 | RHS | 200 | 5  | nim     |         |    | Total-11 |  |
|     | 24+566 | RHS | 200 | 10 | nim     |         |    |          |  |
|     | 24+565 | RHS | 100 | 5  | nim     |         |    |          |  |
|     | 24+560 | RHS | 200 | 5  | nim     |         |    |          |  |
|     | 24+600 | RHS | 80  | 7  | nim     |         |    |          |  |
|     | 24+600 | RHS | 90  | 7  | nim     |         |    |          |  |
|     | 24+600 | RHS | 100 | 10 | guda    |         |    |          |  |
|     | 24+600 | RHS | 200 | 10 | guda    |         |    |          |  |
|     | 24+590 | RHS | 200 | 10 | nim     |         |    |          |  |

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| Village name | Survey/ Plot No. | Change | Side | Girth (Bark)<br>In Cm. | Height (ft<br>in) | Tree<br>Name | Tree<br>Name | Number | Total     | Remarks |
|--------------|------------------|--------|------|------------------------|-------------------|--------------|--------------|--------|-----------|---------|
| Kajjala      | 139              | 43+450 | LHS  | 50                     | 3                 | Kuaso        | Kuaso        | 1      | Total= 1  |         |
|              | 141              | 45+750 | LHS  | 30                     | 3                 | Kuaso        | Kuaso        | 1      | Total= 1  |         |
|              | 86               | 46+415 | LHS  | 90                     | 5                 | Sabul        | Sabul        | 1      | Total= 1  |         |
|              | 81               | 46+415 | LHS  | 40                     | 3                 | Kuaso        | Kuaso        | 1      | Total= 1  |         |
|              |                  | 46+415 | LHS  | 90                     | 7                 | Kuaso        | Kuaso        | 1      |           |         |
|              |                  | 46+700 | LHS  | 200                    | 5                 | Kuaso        | Kuaso        |        | Total= 3  |         |
|              |                  | 46+700 | LHS  | 80                     | 7                 | Kuaso        | Kuaso        |        |           |         |
|              |                  | 46+700 | LHS  | 90                     | 3                 | Kuaso        | Kuaso        | 5      |           |         |
|              |                  | 46+720 | LHS  | 100                    | 5                 | Kuaso        | Kuaso        | 5      |           |         |
|              |                  | 46+720 | LHS  | 40                     | 5                 | Kuaso        | nm           | 4      |           |         |
|              |                  | 46+720 | LHS  | 90                     | 5                 | Kuaso        | bor          | 1      |           |         |
|              |                  | 46+721 | LHS  | 90                     | 3                 | Kuaso        | Kuaso        | 1      |           |         |
|              |                  | 46+722 | LHS  | 40                     | 5                 | Kuaso        | Kuaso        |        | Total= 25 |         |
|              | 60               | 46+720 | LHS  | 50                     | 7                 | Kuaso        |              |        |           |         |
|              |                  | 46+820 | LHS  | 90                     | 2                 | nm           |              |        |           |         |
|              |                  | 46+700 | LHS  | 300                    | 7                 | Kuaso        |              |        |           |         |
|              |                  | 46+700 | LHS  | 90                     | 5                 | Kuaso        |              |        |           |         |
|              |                  | 46+700 | LHS  | 40                     | 7                 | nm           |              |        |           |         |
|              |                  | 46+700 | LHS  | 60                     | 5                 | nm           |              |        |           |         |
|              |                  | 46+530 | LHS  | 40                     | 5                 | nm           |              |        |           |         |
|              |                  | 46+530 | LHS  | 40                     | 5                 | nm           |              |        |           |         |
|              |                  | 46+530 | LHS  | 40                     | 5                 | Kuaso        |              |        |           |         |
|              |                  | 46+530 | LHS  | 90                     | 5                 |              |              |        |           |         |
|              |                  | 46+550 | LHS  | 80                     | 3                 |              |              |        |           |         |
| Kajjala      | 64               | 46+600 | LHS  | 90                     | 5                 |              |              |        |           |         |
|              |                  | 46+650 | LHS  | 150                    | 7                 |              |              |        |           |         |
|              |                  | 46+870 | LHS  | 80                     | 3                 |              |              |        |           |         |
|              |                  | 46+890 | LHS  | 60                     | 8                 |              |              |        |           |         |
|              |                  | 46+890 | LHS  | 80                     | 7                 |              |              |        |           |         |
|              |                  | 46+895 | LHS  | 60                     | 7                 |              |              |        |           |         |
|              |                  | 46+895 | LHS  | 90                     | 3                 | bor          |              |        |           |         |
|              |                  | 46+890 | LHS  | 80                     | 4                 | bor          |              |        |           |         |
|              |                  | 46+900 | LHS  | 200                    | 2                 | bor          |              |        |           |         |
|              |                  | 46+900 | LHS  | 80                     | 3                 | Kuaso        | Kuaso        | 1      | Total= 1  |         |
|              | 167              | 46+880 | LHS  | 200                    | 7                 | Kuaso        | Kuaso        | 1      | Total= 1  |         |
|              |                  | 46+880 | LHS  | 200                    | 5                 | Kuaso        | Kuaso        | 1      | Total= 1  |         |
|              |                  | 46+500 | LHS  | 90                     | 3                 | Sabul        | Sabul        | 1      | Total= 1  |         |
|              |                  | 46+500 | LHS  | 80                     | 5                 | Sabul        | Sabul        | 1      | Total= 1  |         |
|              |                  | 46+800 | LHS  | 40                     | 3                 | Kuaso        | Kuaso        | 1      | Total= 2  |         |
|              |                  | 46+800 | LHS  | 60                     | 3                 | Kuaso        | Kuaso        | 1      | Total= 2  |         |
|              |                  | 47+250 | LHS  | 50                     | 3                 | Kuaso        | Kuaso        | 1      | Total= 1  |         |
|              |                  | 47+350 | LHS  | 40                     | 7                 | Kuaso        | Kuaso        | 1      | Total= 1  |         |
|              |                  | 47+680 | LHS  | 100                    | 7                 | Kuaso        | Kuaso        | 1      | Total= 1  |         |
|              |                  | 47+680 | LHS  | 200                    | 7                 | nm           | nm           | 1      | Total= 2  |         |
|              |                  | 47+880 | LHS  | 200                    | 7                 | nm           | nm           | 1      | Total= 2  |         |
|              | 307              | 47+880 | LHS  | 60                     | 5                 | Kuaso        | Kuaso        | 1      | Total= 2  |         |
|              |                  | 47+880 | LHS  | 60                     | 5                 | Kuaso        | Kuaso        | 1      | Total= 2  |         |

|     |        |     |     |   |        |        |   |         |
|-----|--------|-----|-----|---|--------|--------|---|---------|
| 410 | 47+980 | LHS | 80  | 3 | Missed |        |   | Total=6 |
|     | 47+980 | LHS | 100 | 5 | Missed |        |   |         |
|     | 47+980 | LHS | 90  | 7 | Missed |        |   |         |
| 418 | 48+150 | LHS | 80  | 3 | Missed | Missed | 2 |         |
|     | 48+156 | LHS | 90  | 3 | Missed |        |   | Total=2 |
|     | 47+180 | LHS | 80  | 5 | Missed | Missed | 5 |         |
| 421 | 47+180 | LHS | 80  | 3 | Missed |        |   | Total=5 |
|     | 47+190 | LHS | 80  | 5 | Missed |        |   |         |
|     | 47+190 | LHS | 80  | 3 | Missed |        |   |         |
|     | 47+190 | LHS | 90  | 3 | Missed |        |   |         |
| 111 | 49+280 | LHS | 90  | 2 | Missed | Missed | 2 |         |
|     | 49+200 | LHS | 90  | 3 | Missed | Missed |   | Total=1 |
| 328 | 49+410 | LHS | 80  | 5 | Missed | Missed | 3 |         |
|     | 49+450 | LHS | 80  | 3 | Missed |        |   | Total=3 |
|     | 49+520 | LHS | 80  | 3 | Missed | Missed | 2 |         |
| 339 | 49+540 | LHS | 100 | 2 | Missed | Missed | 1 |         |
|     | 49+720 | LHS | 100 | 3 | Missed |        |   | Total=3 |
|     | 49+750 | LHS | 80  | 3 | Missed | Missed | 6 |         |
|     | 49+750 | LHS | 90  | 3 | Missed |        |   | Total=6 |
| 338 | 49+750 | LHS | 70  | 2 | Missed |        |   |         |
|     | 49+750 | LHS | 90  | 4 | Missed |        |   |         |
|     | 49+750 | LHS | 80  | 4 | Missed |        |   |         |
| 328 | 49+750 | LHS | 80  | 5 | Missed | Missed | 1 | Total=1 |
|     | 50+150 | LHS | 90  | 3 | Missed |        |   |         |

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| Village name | Survey/ Plot No. | Chainage | Side | Dist (BGP) in Cm | Height (in m) | Tree Name | Tree Number | Total    | Remarks |
|--------------|------------------|----------|------|------------------|---------------|-----------|-------------|----------|---------|
|              | 112              | 45+500   | RHS  | 100              | 7             | Kjalo     | 1           | Total-1  |         |
|              | 114              | 45+700   | RHS  | 40               | 3             | nam       | 1           | Total-2  |         |
|              | 117              | 46+000   | RHS  | 250              | 7             | Kjalo     | 1           | Total-3  |         |
|              | 121              | 46+050   | RHS  | 50               | 5             | Kjalo     | 1           | Total-4  |         |
|              | 124              | 46+100   | RHS  | 40               | 5             | Kjalo     | 7           | Total-5  |         |
|              | 125              | 46+150   | RHS  | 50               | 4             | Kjalo     |             | Total-6  |         |
|              | 126              | 46+150   | RHS  | 100              | 5             | Kjalo     |             | Total-7  |         |
|              | 127              | 46+150   | RHS  | 40               | 2             | Kjalo     |             |          |         |
|              | 128              | 46+150   | RHS  | 30               | 3             | Kjalo     |             |          |         |
|              | 129              | 46+150   | RHS  | 90               | 5             | Kjalo     |             |          |         |
|              | 130              | 46+150   | RHS  | 100              | 5             | Kjalo     | 2           | Total-8  |         |
|              | 131              | 46+150   | RHS  | 90               | 7             | Kjalo     |             | Total-9  |         |
|              | 132              | 46+150   | RHS  | 90               | 3             | Kjalo     | 2           | Total-10 |         |
|              | 133              | 46+150   | RHS  | 100              | 5             | Kjalo     |             | Total-11 |         |
|              | 134              | 46+150   | RHS  | 90               | 3             | Kjalo     | 3           | Total-12 |         |
|              | 135              | 46+150   | RHS  | 40               | 3             | Kjalo     | 1           | Total-13 |         |
|              | 136              | 46+150   | RHS  | 90               | 3             | Kjalo     |             | Total-14 |         |
|              | 137              | 46+150   | RHS  | 90               | 5             | nam       | 1           | Total-15 |         |
|              | 138              | 46+150   | RHS  | 90               | 4             | Kjalo     | 4           | Total-16 |         |
|              | 139              | 46+150   | RHS  | 100              | 5             | Kjalo     |             | Total-17 |         |
|              | 140              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-18 |         |
|              | 141              | 46+150   | RHS  | 40               | 3             | Kjalo     | 1           | Total-19 |         |
|              | 142              | 46+150   | RHS  | 90               | 5             | Kjalo     | 13          | Total-20 |         |
|              | 143              | 46+150   | RHS  | 40               | 3             | Kjalo     |             | Total-21 |         |
|              | 144              | 46+150   | RHS  | 40               | 3             | Kjalo     |             | Total-22 |         |
|              | 145              | 46+150   | RHS  | 80               | 3             | Kjalo     |             | Total-23 |         |
|              | 146              | 46+150   | RHS  | 60               | 4             | Kjalo     |             | Total-24 |         |
|              | 147              | 46+150   | RHS  | 70               | 4             | Kjalo     |             | Total-25 |         |
|              | 148              | 46+150   | RHS  | 40               | 5             | Kjalo     |             | Total-26 |         |
|              | 149              | 46+150   | RHS  | 40               | 5             | Kjalo     |             | Total-27 |         |
|              | 150              | 46+150   | RHS  | 80               | 5             | Kjalo     |             | Total-28 |         |
|              | 151              | 46+150   | RHS  | 40               | 3             | Kjalo     |             | Total-29 |         |
|              | 152              | 46+150   | RHS  | 80               | 3             | Kjalo     |             | Total-30 |         |
|              | 153              | 46+150   | RHS  | 50               | 7             | Kjalo     |             | Total-31 |         |
|              | 154              | 46+150   | RHS  | 50               | 4             | Kjalo     |             | Total-32 |         |
|              | 155              | 46+150   | RHS  | 50               | 4             | Kjalo     | 3           | Total-33 |         |
|              | 156              | 46+150   | RHS  | 200              | 7             | Kjalo     |             | Total-34 |         |
|              | 157              | 46+150   | RHS  | 140              | 5             | Kjalo     |             | Total-35 |         |
|              | 158              | 46+150   | RHS  | 80               | 5             | Kjalo     |             | Total-36 |         |
|              | 159              | 46+150   | RHS  | 50               | 2             | Kjalo     | 1           | Total-37 |         |
|              | 160              | 46+150   | RHS  | 40               | 5             | Kjalo     | 1           | Total-38 |         |
|              | 161              | 46+150   | RHS  | 40               | 5             | Kjalo     | 5           | Total-39 |         |
|              | 162              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-40 |         |
|              | 163              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-41 |         |
|              | 164              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-42 |         |
|              | 165              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-43 |         |
|              | 166              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-44 |         |
|              | 167              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-45 |         |
|              | 168              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-46 |         |
|              | 169              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-47 |         |
|              | 170              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-48 |         |
|              | 171              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-49 |         |
|              | 172              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-50 |         |
|              | 173              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-51 |         |
|              | 174              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-52 |         |
|              | 175              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-53 |         |
|              | 176              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-54 |         |
|              | 177              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-55 |         |
|              | 178              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-56 |         |
|              | 179              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-57 |         |
|              | 180              | 46+150   | RHS  | 100              | 7             | Kjalo     |             | Total-58 |         |

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| 41A | 48+260 | 845 | 60 | 3 | kjado |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----|--------|-----|----|---|-------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

114

| Village name | Survey/<br>Plot No. | Chainage | Side | Girth<br>(BGH) in<br>cm | HIEGHT<br>(in m) | Tree<br>Name | Tree<br>Name | Number | Total   | Remarks |
|--------------|---------------------|----------|------|-------------------------|------------------|--------------|--------------|--------|---------|---------|
| Rupgadh      | 81                  | 37+200   | LHS  | 100                     | 5                | Nim          |              |        |         |         |
|              |                     | 37+200   | LHS  | 80                      | 4                | Nim          |              | 2      | TOTAL-2 |         |
|              | 835                 | 38+450   | LHS  | 100                     | 5                | Kesudo       |              |        |         |         |
|              |                     | 38+450   | LHS  | 100                     | 5                | Kesudo       |              | 1      | TOTAL-1 |         |
|              | 745                 | 40+680   | LHS  | 80                      | 4                | Kesudo       |              | 1      | TOTAL-1 |         |
|              |                     |          |      |                         |                  |              |              |        |         |         |

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| Village Name | Survey/<br>Plot No. | Design<br>Chainage | Side | Girth<br>(BGH) in<br>m | Approx.<br>High (m) | Tree<br>Name | Tree<br>Name | No | Total    | Remarks |
|--------------|---------------------|--------------------|------|------------------------|---------------------|--------------|--------------|----|----------|---------|
|              | 300                 | 51+200             | LHS  | 120                    | 10                  | Kejudo       | Kejudo       | 1  | Total=1  |         |
|              | 299                 | 51+202             | LHS  | 30                     | 2                   | Kejudo       | Kejudo       | 13 | Total=13 |         |
|              |                     | 51+200             | LHS  | 60                     | 3                   | Kejudo       |              |    |          |         |
|              |                     | 51+200             | LHS  | 100                    | 5                   | Kejudo       |              |    |          |         |
|              |                     | 51+260             | LHS  | 90                     | 3                   | Kejudo       |              |    |          |         |
|              |                     | 51+280             | LHS  | 200                    | 10                  | Kejudo       |              |    |          |         |
|              |                     | 51+280             | LHS  | 100                    | 5                   | Kejudo       |              |    |          |         |
|              |                     | 51+280             | LHS  | 100                    | 4                   | Kejudo       |              |    |          |         |
|              |                     | 51+300             | LHS  | 80                     | 3                   | Kejudo       |              |    |          |         |
|              |                     | 51+500             | LHS  | 90                     | 4                   | Kejudo       |              |    |          |         |
|              |                     | 51+255             | RHS  | 90                     | 5                   | Kejudo       |              |    |          |         |
|              |                     | 51+255             | RHS  | 100                    | 5                   | Kejudo       |              |    |          |         |
|              |                     | 51+255             | RHS  | 120                    | 7                   | Kejudo       |              |    |          |         |
|              |                     | 51+260             | RHS  | 60                     | 3                   | Kejudo       |              |    |          |         |
|              | 453                 | 52+710             | LHS  | 250                    | 10                  | Kejudo       | Kejudo       | 1  | Total=1  |         |
| 541          |                     | 53+500             | LHS  | 40                     | 3                   | Kejudo       | Kejudo       | 3  | Total=3  |         |
|              |                     | 53+500             | LHS  | 40                     | 3                   | Kejudo       |              |    |          |         |
|              |                     | 53+500             | RHS  | 80                     | 3                   | Kejudo       |              |    |          |         |
| 548          |                     | 54+050             | LHS  | 90                     | 3                   | Kejudo       | Kejudo       | 2  | Total=2  |         |
|              |                     | 54+050             | LHS  | 80                     | 7                   | Kejudo       |              |    |          |         |
|              |                     | 54+150             | LHS  | 80                     | 3                   | Kejudo       | Kejudo       | 7  |          |         |
| 550          |                     | 54+150             | LHS  | 90                     | 3                   | Kejudo       | Nim          | 1  | Total=8  |         |
|              |                     | 54+150             | LHS  | 100                    | 7                   | Kejudo       |              |    |          |         |
|              |                     | 54+150             | LHS  | 100                    | 7                   | Kejudo       |              |    |          |         |
|              |                     | 54+250             | LHS  | 100                    | 10                  | Kejudo       |              |    |          |         |
|              |                     | 54+150             | RHS  | 40                     | 3                   | Kejudo       |              |    |          |         |
|              |                     | 54+150             | RHS  | 90                     | 3                   | Kejudo       |              |    |          |         |
|              |                     | 54+150             | RHS  | 150                    | 7                   | Nim          |              |    |          |         |
| 569          |                     | 54+725             | LHS  | 100                    | 5                   | Kejudo       | Kejudo       | 1  | Total=1  |         |
| 570          |                     | 54+825             | LHS  | 90                     | 5                   | Kejudo       | Kejudo       | 1  | Total=1  |         |

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|     |        |     |     |    |        |        |    |          |  |
|-----|--------|-----|-----|----|--------|--------|----|----------|--|
| 309 | 51+250 | RHS | 150 | 7  | Kejudo | Kejudo | 1  | Total=1  |  |
| 297 | 51+400 | RHS | 40  | 2  | Kejudo | Kejudo | 2  | Total=2  |  |
|     | 51+450 | RHS | 40  | 3  | Kejudo |        |    |          |  |
| 315 | 51+650 | RHS | 150 | 10 | Kejudo | Kejudo | 1  | Total=1  |  |
|     | 51+800 | RHS | 120 | 7  | Kejudo | Kejudo | 4  | Total=4  |  |
| 314 | 51+800 | RHS | 60  | 3  | Kejudo |        |    |          |  |
|     | 51+800 | RHS | 90  | 5  | Kejudo |        |    |          |  |
|     | 51+830 | RHS | 40  | 3  | Kejudo |        |    |          |  |
|     | 52+060 | RHS | 150 | 7  | Kejudo | Kejudo | 4  | Total=4  |  |
| 319 | 52+000 | RHS | 40  | 3  | Kejudo |        |    |          |  |
|     | 52+000 | RHS | 40  | 2  | Kejudo |        |    |          |  |
|     | 52+000 | RHS | 60  | 2  | Kejudo |        |    |          |  |
| 538 | 53+780 | RHS | 40  | 3  | Kejudo | Kejudo | 2  | Total=2  |  |
|     | 53+780 | RHS | 60  | 3  | Kejudo |        |    |          |  |
|     | 53+800 | RHS | 90  | 5  | Kejudo | Kejudo | 12 | Total=12 |  |
|     | 53+800 | RHS | 80  | 3  | Kejudo |        |    |          |  |
|     | 53+801 | RHS | 40  | 5  | Kejudo |        |    |          |  |
|     | 53+802 | RHS | 100 | 7  | Kejudo |        |    |          |  |
| 539 | 53+803 | RHS | 90  | 3  | Kejudo |        |    |          |  |
|     | 53+804 | RHS | 90  | 3  | Kejudo |        |    |          |  |
|     | 53+810 | RHS | 100 | 5  | Kejudo |        |    |          |  |
|     | 53+820 | RHS | 100 | 5  | Kejudo |        |    |          |  |
|     | 53+820 | RHS | 90  | 3  | Kejudo |        |    |          |  |
|     | 53+850 | RHS | 60  | 3  | Kejudo |        |    |          |  |
|     | 53+870 | RHS | 60  | 2  | Kejudo |        |    |          |  |
|     | 53+900 | RHS | 100 | 5  | Kejudo |        |    |          |  |
|     | 54+000 | RHS | 40  | 3  | Kejudo | Kejudo | 8  | Total=9  |  |
| 533 | 54+010 | RHS | 40  | 3  | Kejudo | Nim    | 1  |          |  |
|     | 54+010 | RHS | 60  | 5  | Kejudo |        |    |          |  |
|     | 54+020 | RHS | 80  | 3  | Kejudo |        |    |          |  |
|     | 54+020 | RHS | 100 | 5  | Kejudo |        |    |          |  |
|     | 54+050 | RHS | 90  | 3  | Kejudo |        |    |          |  |
|     | 54+060 | RHS | 92  | 3  | Kejudo |        |    |          |  |

Bsaragvula

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|     |        |     |     |    |        |        |   |  |         |
|-----|--------|-----|-----|----|--------|--------|---|--|---------|
|     | 54+080 | RHS | 90  | 3  | Kejudo |        |   |  |         |
|     | 54+100 | RHS | 90  | 7  | Nim    |        |   |  |         |
| 549 | 54+100 | RHS | 100 | 7  | Kejudo | Kejudo | 1 |  | Total=1 |
|     | 54+215 | RHS | 100 | 7  | Kejudo | Kejudo | 2 |  | Total=2 |
| 531 | 54+215 | RHS | 40  | 3  | Kejudo |        |   |  |         |
|     | 54+250 | RHS | 60  | 2  | Kejudo | Kejudo | 3 |  | Total=3 |
| 562 | 54+250 | RHS | 60  | 2  | Kejudo |        |   |  |         |
|     | 54+360 | RHS | 90  | 3  | Kejudo |        |   |  |         |
| 565 | 54+410 | RHS | 150 | 7  | Kejudo | Kejudo | 1 |  | Total=1 |
|     | 54+740 | LHS | 40  | 3  | Kejudo | Kejudo | 4 |  | Total=4 |
| 687 | 54+740 | LHS | 40  | 3  | Kejudo |        |   |  |         |
|     | 54+760 | LHS | 80  | 5  | Kejudo |        |   |  |         |
|     | 54+760 | LHS | 100 | 5  | Kejudo |        |   |  |         |
| 705 | 55+325 | LHS | 200 | 5  | Kejudo | Kejudo | 1 |  | Total=1 |
| 811 | 56+140 | LHS | 40  | 3  | Kejudo | Kejudo | 1 |  | Total=1 |
|     | 57+980 | LHS | 80  | 5  | Kejudo | Kejudo | 2 |  | Total=2 |
| 614 | 58+125 | LHS | 100 | 7  | Kejudo |        |   |  |         |
| 702 | 55+125 | RHS | 40  | 3  | Kejudo | Kejudo | 1 |  | Total=1 |
| 703 | 55+300 | RHS | 90  | 5  | Kejudo | Kejudo | 1 |  | Total=1 |
| 704 | 55+480 | RHS | 200 | 10 | Kejudo | Kejudo | 1 |  | Total=1 |
| 774 | 56+480 | RHS | 80  | 3  | Nim    | Nim    | 1 |  | Total=1 |
| 783 | 56+700 | RHS | 90  | 5  | Kejudo | Kejudo | 1 |  | Total=1 |
| 530 | 59+310 | RHS | 90  | 6  | Babul  | Babul  | 1 |  | Total=1 |
|     | 61+265 | LHS | 90  | 3  | Kejudo | Kejudo | 4 |  | Total=4 |
|     | 61+385 | LHS | 40  | 2  | Kejudo | Kejudo |   |  |         |
|     | 61+386 | LHS | 80  | 3  | Kejudo | Kejudo |   |  |         |
|     | 61+390 | LHS | 40  | 2  | Kejudo | Kejudo |   |  |         |
|     | 61+310 | LHS | 40  | 3  | Kejudo | Kejudo |   |  |         |
|     | 61+380 | LHS | 80  | 3  | Kejudo | Kejudo |   |  |         |
| 747 | 61+420 | LHS | 50  | 3  | Kejudo | Kejudo |   |  |         |
|     | 61+460 | LHS | 150 | 7  | Kejudo | Kejudo |   |  |         |
|     | 61+380 | RHS | 30  | 3  | Kejudo | Kejudo |   |  |         |
|     | 61+380 | RHS | 40  | 5  | Kejudo | Kejudo |   |  |         |

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|      |        |     |     |    |         |         |  |  |  |
|------|--------|-----|-----|----|---------|---------|--|--|--|
|      | 61+525 | RHS | 90  | 4  | Kejudo  | Kejudo  |  |  |  |
|      | 61+530 | RHS | 150 | 5  | Kejudo  | Kejudo  |  |  |  |
| 743  | 61+465 | LHS | 200 | 10 | Kejudo  | Kejudo  |  |  |  |
|      | 62+615 | LHS | 40  | 3  | Kejudo  | Kejudo  |  |  |  |
| 823  | 62+800 | RHS | 40  | 3  | Kejudo  | Kejudo  |  |  |  |
|      | 63+915 | LHS | 100 | 7  | Kejudo  | Kejudo  |  |  |  |
|      | 63+920 | LHS | 80  | 3  | Kejudo  | Kejudo  |  |  |  |
| 848  | 63+925 | LHS | 60  | 5  | Vukhudi | Vukhudi |  |  |  |
|      | 63+160 | RHS | 500 | 3  | Vakudi  | Vakudi  |  |  |  |
|      | 63+165 | RHS | 150 | 7  | Kejudo  | Kejudo  |  |  |  |
| 653  | 63+580 | LHS | 100 | 5  | Kejudo  | Kejudo  |  |  |  |
|      | 68+270 | LHS | 50  | 6  | Kejudo  | Kejudo  |  |  |  |
| 1438 | 68+270 | LHS | 50  | 7  | Kejudo  | Kejudo  |  |  |  |
|      | 68+270 | LHS | 40  | 6  | Kejudo  | Kejudo  |  |  |  |
| 1439 | 68+145 | LHS | 60  | 5  | Kejudo  | Kejudo  |  |  |  |
| 1441 | 67+990 | LHS | 80  | 4  | Nim     | Nim     |  |  |  |
|      | 67+840 | LHS | 30  | 2  | Kejudo  | Kejudo  |  |  |  |
|      | 67+835 | LHS | 30  | 2  | Kejudo  | Kejudo  |  |  |  |
|      | 67+835 | LHS | 40  | 1  | Kejudo  | Kejudo  |  |  |  |
|      | 67+830 | LHS | 40  | 3  | Kejudo  | Kejudo  |  |  |  |
|      | 67+830 | LHS | 30  | 2  | Kejudo  | Kejudo  |  |  |  |
|      | 67+830 | LHS | 40  | 5  | Kejudo  | Kejudo  |  |  |  |
|      | 67+825 | LHS | 80  | 3  | Kejudo  | Kejudo  |  |  |  |
|      | 67+825 | LHS | 60  | 3  | Kejudo  | Kejudo  |  |  |  |
|      | 67+825 | LHS | 80  | 4  | Kejudo  | Kejudo  |  |  |  |
| 1419 | 67+900 | LHS | 80  | 3  | Kejudo  | Kejudo  |  |  |  |
|      | 67+800 | LHS | 70  | 3  | Kejudo  | Kejudo  |  |  |  |
|      | 67+810 | RHS | 200 | 10 | Kejudo  | Kejudo  |  |  |  |
|      | 67+815 | RHS | 60  | 3  | Kejudo  | Kejudo  |  |  |  |
|      | 67+816 | RHS | 80  | 2  | Kejudo  | Kejudo  |  |  |  |
|      | 67+820 | RHS | 40  | 2  | Kejudo  | Kejudo  |  |  |  |
|      | 67+830 | RHS | 40  | 3  | Kejudo  | Kejudo  |  |  |  |
|      | 67+850 | RHS | 100 | 7  | Kejudo  | Kejudo  |  |  |  |

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|     |        |     |     |    |        |        |  |  |  |
|-----|--------|-----|-----|----|--------|--------|--|--|--|
|     | 67+850 | RHS | 110 | 7  | Kejudo | Kejudo |  |  |  |
|     | 67+850 | RHS | 200 | 10 | Kejudo | Kejudo |  |  |  |
|     | 67+850 | RHS | 100 | 7  | Kejudo | Kejudo |  |  |  |
|     | 65+255 | LHS | 70  | 3  | Kejudo | Kejudo |  |  |  |
| 85  | 65+257 | LHS | 80  | 3  | Kejudo | Kejudo |  |  |  |
|     | 65+260 | LHS | 40  | 2  | Kejudo | Kejudo |  |  |  |
|     | 65+940 | LHS | 100 | 5  | Kejudo | Kejudo |  |  |  |
|     | 65+720 | RHS | 60  | 2  | Kejudo | Kejudo |  |  |  |
|     | 65+723 | RHS | 80  | 2  | Kejudo | Kejudo |  |  |  |
|     | 65+725 | RHS | 50  | 3  | Kejudo | Kejudo |  |  |  |
|     | 65+730 | RHS | 50  | 3  | Kejudo | Kejudo |  |  |  |
| 160 | 65+733 | RHS | 70  | 5  | Kejudo | Kejudo |  |  |  |
|     | 65+735 | RHS | 80  | 5  | Kejudo | Kejudo |  |  |  |
|     | 65+735 | RHS | 80  | 3  | Kejudo | Kejudo |  |  |  |
|     | 65+740 | RHS | 80  | 3  | Kejudo | Kejudo |  |  |  |
|     | 65+740 | RHS | 70  | 2  | Kejudo | Kejudo |  |  |  |
|     | 65+741 | RHS | 40  | 2  | Kejudo | Kejudo |  |  |  |
|     | 65+745 | RHS | 40  | 2  | Kejudo | Kejudo |  |  |  |
| 161 | 65+960 | LHS | 40  | 2  | Kejudo | Kejudo |  |  |  |
| 162 | 66+140 | LHS | 200 | 10 | Kejudo | Kejudo |  |  |  |
|     | 66+200 | LHS | 40  | 3  | Kejudo | Kejudo |  |  |  |
|     | 66+200 | LHS | 60  | 2  | Kejudo | Kejudo |  |  |  |
|     | 66+201 | LHS | 50  | 2  | Kejudo | Kejudo |  |  |  |
|     | 66+205 | LHS | 60  | 3  | Kejudo | Kejudo |  |  |  |
|     | 66+210 | LHS | 250 | 12 | Kejudo | Kejudo |  |  |  |
|     | 66+210 | LHS | 60  | 4  | Kejudo | Kejudo |  |  |  |
|     | 66+211 | LHS | 80  | 3  | Kejudo | Kejudo |  |  |  |
|     | 66+215 | LHS | 40  | 2  | Kejudo | Kejudo |  |  |  |
|     | 66+215 | LHS | 60  | 3  | Kejudo | Kejudo |  |  |  |
|     | 66+216 | LHS | 80  | 6  | Kejudo | Kejudo |  |  |  |
|     | 66+217 | LHS | 60  | 3  | Kejudo | Kejudo |  |  |  |
|     | 66+218 | LHS | 90  | 5  | Kejudo | Kejudo |  |  |  |
|     | 66+219 | LHS | 120 | 7  | Kejudo | Kejudo |  |  |  |

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|        |     |         |   |        |        |  |  |  |  |
|--------|-----|---------|---|--------|--------|--|--|--|--|
| 66+220 | LHS | 100     | 5 | Kejudo | Kejudo |  |  |  |  |
| 66+221 | LHS | 90      | 3 | Kejudo | Kejudo |  |  |  |  |
| 66+222 | LHS | 60      | 2 | Kejudo | Kejudo |  |  |  |  |
| 66+223 | LHS | 100     | 7 | Kejudo | Kejudo |  |  |  |  |
| 66+224 | LHS | 40      | 2 | Kejudo | Kejudo |  |  |  |  |
| 66+225 | LHS | 90      | 5 | Kejudo | Kejudo |  |  |  |  |
| 66+227 | LHS | 80      | 3 | Kejudo | Kejudo |  |  |  |  |
| 66+228 | LHS | 80      | 3 | Kejudo | Kejudo |  |  |  |  |
| 66+229 | LHS | 60      | 2 | Kejudo | Kejudo |  |  |  |  |
| 66+230 | LHS | 30      | 3 | Kejudo | Kejudo |  |  |  |  |
| 66+231 | LHS | 100     | 5 | Kejudo | Kejudo |  |  |  |  |
| 66+231 | LHS | 100     | 7 | Kejudo | Kejudo |  |  |  |  |
| 66+230 | LHS | 100     | 3 | Kejudo | Kejudo |  |  |  |  |
| 66+232 | LHS | 80      | 2 | Kejudo | Kejudo |  |  |  |  |
| 66+233 | LHS | 60      | 2 | Kejudo | Kejudo |  |  |  |  |
| 66+235 | LHS | 40      | 3 | Kejudo | Kejudo |  |  |  |  |
| 66+235 | LHS | 40      | 1 | Kejudo | Kejudo |  |  |  |  |
| 66+236 | LHS | 100     | 3 | Kejudo | Kejudo |  |  |  |  |
| 66+415 | LHS | 100     | 5 | Kejudo | Kejudo |  |  |  |  |
| 66+415 | LHS | 90      | 3 | Kejudo | Kejudo |  |  |  |  |
| 66+416 | LHS | 120     | 5 | Kejudo | Kejudo |  |  |  |  |
| 66+380 | LHS | 90      | 3 | Kejudo | Kejudo |  |  |  |  |
| 66+375 | LHS | 120     | 7 | Kejudo | Kejudo |  |  |  |  |
| 66+370 | LHS | 80      | 3 | Kejudo | Kejudo |  |  |  |  |
| 66+350 | LHS | 150     | 5 | Kejudo | Kejudo |  |  |  |  |
| 66+320 | LHS | 160     | 7 | Kejudo | Kejudo |  |  |  |  |
| 66+400 | RHS | 100     | 5 | Kejudo | Kejudo |  |  |  |  |
| 68+220 | LHS | 40      | 2 | Kejudo | Kejudo |  |  |  |  |
| 68+225 | LHS | 40      | 2 | Kejudo | Kejudo |  |  |  |  |
| 68+230 | LHS | 80      | 5 | Kejudo | Kejudo |  |  |  |  |
| 68+235 | LHS | 80      | 5 | Kejudo | Kejudo |  |  |  |  |
| 68+235 | LHS | 90      | 4 | Kejudo | Kejudo |  |  |  |  |
| 68+235 | LHS | #VALUE! |   | Nim    | Nim    |  |  |  |  |

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1431

Pipuli

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|      |        |     |     |           |        |  |  |  |  |
|------|--------|-----|-----|-----------|--------|--|--|--|--|
| 1445 | 68+370 | RHS | 80  | 7 Kejudo  | Kejudo |  |  |  |  |
|      | 67+750 | LHS | 60  | 5 Kejudo  | Kejudo |  |  |  |  |
| 284  | 67+480 | LHS | 80  | 3 Kejudo  | Kejudo |  |  |  |  |
|      | 67+480 | LHS | 80  | 3 Kejudo  | Kejudo |  |  |  |  |
| 1463 | 67+500 | LHS | 200 | 10 Kejudo | Kejudo |  |  |  |  |
|      | 67+100 | LHS | 90  | 1 Kejudo  | Kejudo |  |  |  |  |
|      | 67+100 | LHS | 90  | 7 Nim     | Nim    |  |  |  |  |
|      | 67+090 | LHS | 200 | 10 Kejudo | Kejudo |  |  |  |  |
| 1462 | 67+480 | LHS | 40  | 3 Kejudo  | Kejudo |  |  |  |  |
|      | 67+480 | LHS | 40  | 2 Kejudo  | Kejudo |  |  |  |  |
|      | 67+080 | LHS | 450 | 11 Nim    | Nim    |  |  |  |  |
|      | 67+080 | LHS | 40  | 2 Kejudo  | Kejudo |  |  |  |  |
| 275  | 67+300 | LHS | 100 | 5 Kejudo  | Kejudo |  |  |  |  |
|      | 67+300 | LHS | 200 | 3 Kejudo  | Kejudo |  |  |  |  |
| 284  | 67+350 | LHS | 40  | 3 Kejudo  | Kejudo |  |  |  |  |
|      | 37+340 | LHS | 80  | 5 Kejudo  | Kejudo |  |  |  |  |
|      | 37+345 | LHS | 40  | 3 Kejudo  | Kejudo |  |  |  |  |
| 285  | 67+320 | LHS | 100 | 7 Kejudo  | Kejudo |  |  |  |  |
|      | 67+320 | LHS | 200 | 5 Kejudo  | Kejudo |  |  |  |  |
|      | 67+325 | LHS | 40  | 7 Kejudo  | Kejudo |  |  |  |  |
|      | 67+330 | LHS | 80  | 3 Kejudo  | Kejudo |  |  |  |  |
| 283  | 67+340 | LHS | 90  | 3 Kejudo  | Kejudo |  |  |  |  |
|      | 67+200 | LHS | 100 | 5 Kejudo  | Kejudo |  |  |  |  |
|      | 67+210 | LHS | 90  | 5 Kejudo  | Kejudo |  |  |  |  |
|      | 67+320 | RHS | 100 | 7 Kejudo  | Kejudo |  |  |  |  |
| 277  | 67+320 | RHS | 100 | 5 Kejudo  | Kejudo |  |  |  |  |
|      | 67+320 | RHS | 100 | 5 Kejudo  | Kejudo |  |  |  |  |
|      | 67+200 | LHS | 120 | 7 Kejudo  | Kejudo |  |  |  |  |
|      | 66+700 | LHS | 90  | 3 Kejudo  | Kejudo |  |  |  |  |
| 256  | 66+700 | LHS | 80  | 3 Kejudo  | Kejudo |  |  |  |  |
|      | 66+720 | RHS | 80  | 5 Kejudo  | Kejudo |  |  |  |  |
|      | 66+720 | RHS | 60  | 3 Kejudo  | Kejudo |  |  |  |  |
|      | 66+780 | RHS | 80  | 7 Kejudo  | Kejudo |  |  |  |  |

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|      |        |     |     |    |        |        |  |  |  |
|------|--------|-----|-----|----|--------|--------|--|--|--|
| 747  | 66+780 | RHS | 60  | 7  | Kejudo | Kejudo |  |  |  |
|      | 61+360 | RHS | 80  | 5  | Kejudo | Kejudo |  |  |  |
|      | 61+360 | RHS | 80  | 5  | Kejudo | Kejudo |  |  |  |
| 785  | 61+780 | RHS | 100 | 3  | Kejudo | Kejudo |  |  |  |
| 807  | 62+415 | RHS | 100 | 5  | Kejudo | Kejudo |  |  |  |
| 834  | 62+920 | RHS | 100 | 7  | Kejudo | Kejudo |  |  |  |
| 853  | 63+210 | RHS | 100 | 5  | Kejudo | Kejudo |  |  |  |
| 852  | 63+210 | RHS | 100 | 5  | Kejudo | Kejudo |  |  |  |
| 644  | 63+910 | RHS | 80  | 5  | Kejudo | Kejudo |  |  |  |
| 1439 | 68+260 | RHS | 60  | 5  | Kejudo | Kejudo |  |  |  |
|      | 68+260 | RHS | 100 | 5  | Kejudo | Kejudo |  |  |  |
| 1440 | 66+218 | RHS | 900 | 4  | Kejudo | Kejudo |  |  |  |
|      | 68+090 | RHS | 50  | 3  | Kejudo | Kejudo |  |  |  |
| 1421 | 68+090 | RHS | 50  | 2  | Kejudo | Kejudo |  |  |  |
|      | 68+090 | RHS | 30  | 2  | Kejudo | Kejudo |  |  |  |
| 83   | 65+040 | RHS | 80  | 5  | Kejudo | Kejudo |  |  |  |
|      | 65+105 | RHS | 60  | 3  | Kejudo | Kejudo |  |  |  |
| 85   | 65+105 | RHS | 100 | 5  | Kejudo | Kejudo |  |  |  |
|      | 65+105 | RHS | 80  | 3  | Kejudo | Kejudo |  |  |  |
| 311  | 65+105 | RHS | 70  | 3  | Kejudo | Kejudo |  |  |  |
| 103  | 65+451 | RHS | 150 | 9  | Kejudo | Kejudo |  |  |  |
| 108  | 65+670 | RHS | 120 | 10 | Kejudo | Kejudo |  |  |  |
| 218  | 66+910 | RHS | 200 | 10 | Kejudo | Kejudo |  |  |  |
|      | 66+990 | RHS | 350 | 7  | Kejudo | Kejudo |  |  |  |
| 291  | 66+950 | RHS | 200 | 10 | Kejudo | Kejudo |  |  |  |
|      | 66+950 | RHS | 100 | 5  | Kejudo | Kejudo |  |  |  |
|      | 66+950 | RHS | 120 | 5  | Kejudo | Kejudo |  |  |  |
|      | 67+750 | RHS | 80  | 3  | Kejudo | Kejudo |  |  |  |
|      | 67+050 | RHS | 100 | 5  | Nim    | Nim    |  |  |  |
| 286  | 67+050 | RHS | 120 | 5  | Kejudo | Kejudo |  |  |  |
|      | 67+050 | RHS | 100 | 7  | Kejudo | Kejudo |  |  |  |
|      | 67+050 | RHS | 80  | 3  | Kejudo | Kejudo |  |  |  |
|      | 67+056 | RHS | 120 | 7  | Kejudo | Kejudo |  |  |  |

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|      |        |     |     |           |        |  |  |  |
|------|--------|-----|-----|-----------|--------|--|--|--|
| 306  | 67+200 | RHS | 120 | 7 Nim     | Nim    |  |  |  |
|      | 67+210 | RHS | 150 | 10 Kejudo | Kejudo |  |  |  |
|      | 67+210 | RHS | 80  | 7 Kejudo  | Kejudo |  |  |  |
|      | 67+250 | RHS | 90  | 7 Kejudo  | Kejudo |  |  |  |
|      | 67+251 | RHS | 100 | 5 Kejudo  | Kejudo |  |  |  |
| 305  | 67+250 | RHS | 40  | 2 Kejudo  | Kejudo |  |  |  |
|      | 67+250 | RHS | 40  | 2 Kejudo  | Kejudo |  |  |  |
|      | 67+300 | RHS | 70  | 2 Kejudo  | Kejudo |  |  |  |
| 1447 | 67+300 | RHS | 60  | 3 Kejudo  | Kejudo |  |  |  |
|      | 67+305 | RHS | 90  | 5 Kejudo  | Kejudo |  |  |  |
|      | 67+310 | RHS | 80  | 3 Kejudo  | Kejudo |  |  |  |
|      | 67+550 | RHS | 100 | 7 Kejudo  | Kejudo |  |  |  |
| 1448 | 67+600 | RHS | 80  | 3 Kejudo  | Kejudo |  |  |  |
|      | 70+720 | LHS | 60  | 3 Kejudo  | Kejudo |  |  |  |
| 89   | 70+720 | RHS | 80  | 2 Kejudo  | Kejudo |  |  |  |
|      | 70+750 | RHS | 80  | 4 Kejudo  | Kejudo |  |  |  |
|      | 70+850 | RHS | 100 | 7 Kejudo  | Kejudo |  |  |  |
|      | 70+890 | LHS | 110 | 7 Kejudo  | Kejudo |  |  |  |
|      | 70+890 | LHS | 40  | 2 Kejudo  | Kejudo |  |  |  |
| 90   | 70+890 | LHS | 40  | 3 Nim     | Nim    |  |  |  |
|      | 70+965 | LHS | 100 | 5 Kejudo  | Kejudo |  |  |  |
|      | 70+965 | LHS | 90  | 3 Kejudo  | Kejudo |  |  |  |
|      |        |     |     |           |        |  |  |  |

Valinda

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**ANNEXURE – XI**  
**(MINUTES OF RECOMMENDATION**  
**OF GCZMA FOR CRZ CLEARANCE)**





**GOVERNMENT OF GUJARAT  
FORESTS & ENVIRONMENT DEPARTMENT  
BLOCK NO. 14, 8<sup>TH</sup> FLOOR, SACHIVALAYA  
GANDHINAGAR - 382 010.**

**S.M. SAIYAD, IFS  
DIRECTOR (ENVIRONMENT) &  
ADDITIONAL SECRETARY**

**Ph : (079) 23251062**

**Fax : (079) 23252156**

**E-mail [direnvy@gujarat.gov.in](mailto:direnvy@gujarat.gov.in)**

**Ref. No.ENV-10-2018-188 -E(T Cell) September 5, 2019**

**To,  
Shri Ritesh Kumar Singh, IAS,  
Joint Secretary (CRZ) ,  
Ministry of Environment , Forests & Climate Change  
Indira Paryavaran Bhavan  
Jorbagh New Delhi - 110 003**

***Sub: CRZ clearance for proposed project for construction of Ahmedabad to Dholera Expressway passing through CRZ areas of Ahmedabad and Bhavnagar District by M/s National Highway Authority of India -reg.***

Dear Sir,

The National Highways Authority of India (NHAI) vide its application dated 19-11-2018 has approached this Department for obtaining the recommendation from the Gujarat Coastal Zone Management Authority to obtain CRZ Clearance from the Ministry of Environment, Forests and Climate Change, Government of India for proposed project of construction of Ahmedabad to Dholera Expressway (110KM) in the State of Gujarat by the National Highway Authority of India(NHAI) .

It is submitted that National Highway Authority of India has been entrusted for the implementation of Ahmedabad to Dholera Expressway (110 km) in the State of Gujarat for providing road connectivity to Dholera Special Investment Region. The Proposed road passes through km 0.000 to km 71.070 Ahmedabad District(71.07Km), km 71.070 km to km 107.2000 Dholera Special Investment Region( and km 107.200 to km 109.019 in Bhavnagar District

The NHAI has submitted the application as per the guidelines issued by this Department. The cost of the proposed project is more than 5303.03 crores.

The NHAI has also submitted the following documents alongwith their application:

1. Form -1 as per CRZ Notification 2011.
2. Rapid EIA Report including marine and Terrestrial Components and Disaster Management Plan in CRZ areas prepared by the Enviro Infra Solution Pvt Ltd

3. CRZ map alongwith demarcation of the IITL, CRZ boundary prepared by the National Center for Sustainable Coastal Management, Chennai duly superimposed for the proposed activities
4. Environmental Impact Assessment (EIA) Report, prepared by the Enviro Infra Solution Pvt Ltd .
5. Various undertakings

The Enviro Infra Solution Pvt Ltd in its EIA report has included Project Description(Chapter-2), Analysis of Alternatives (CHAPTER 3), Description of the Environment(Chapter 4), Anticipated Environmental Impact and Mitigation Measures(Chapter 5), Environmental Monitoring Programme (Chapter 6), Additional Studies(chapter 7), Project Benefits(chapter 8),Environmental Management Plan(Chapter 9).

The main findings of the Marine EIA report prepared by the Enviro Infra Solution Pvt Ltd are summarized as follows:

- I. The proposed expressway Ahmedabad - Dholera is a part of an exclusive transport corridor being planned between Ahmedabad and Bhavnagar by the Government of Gujarat, keeping the development of Special Investment Region (SIR) around Dholera in centre. The proposed expressway corridor is sited between two existing road routes to Bhavnagar: (i) Ahmedabad - Bagodara- Dhandhuka-Bhavnagar route at its west and (ii) Ahmedabad-Dholka-Wataman-Dholera-Bhavnagar route to its east.
- II. The proposed expressway takes off from Sardar Patel Ring Road near Sarkhej between Santhal Junction and Bakrol Junction in southwest of Ahmedabad, 2 km east of National Highway NH-8A. The project road starts at Ch. 0.000 at Visalpur village of Ahmedabad district and the end of project Ch. is 109.019 at Adhelai village of Bhavnagar district. From Ch. 71.070, to Ch. 107.240 comes under DSIR. The project alignment from Ch. 107-240 to Ch. 109+020 (Total length = 1.780 km) passes from Adhelai village in Bhavnagar district.
- III. The part of proposed Ahmedabad - Dholera expressway alignment crosses through Bhogwa creek and Golsar creek, which is under CRZ region. As per the above categorization, the part of the proposed expressway falls in the extensive Inter Tidal Zone i.e CRZ-II, CRZ-III and CRZ-IV areas.
- IV. The proposed Expressway passes through Valinda, Anandpur, Pipli and Bholad villages of Ahmedabad District in the state of Gujarat. The proposed

Expressway passes through creek/river at two locations. The Latitude and Longitude of the two CRZ locations are 72°15'50.167" E 22°26'42.666" N and 72°15'4.815" E 22°21'52.805" N.

- V. The construction site is devoid of mangroves and corals. The site is completely protected from waves and thus no significant sand movement in the Creek and no sand dune. The project site does not pass through any eco sensitive areas like National Parks, Wildlife Sanctuaries, Biosphere Reserves, etc. The baseline study of the project site has been incorporated in the EIA/EEMP report. All plants identified in the area are very common in occurrence.
- VI. The flora present the study area comprises of *Acacia nilotica*, *Acacia Senegal*, *Azadirachta indica*, *Balanites aegyptiaca*, *Calotropis procera*, *Capparis decidua*, *Casuarina equisetifolia*, *Prosopis juliflora*, *Salvadora oleoides* and *Zizyphus jujube*. The most dominant tree species was found to be *Prosopis juliflora*, an invasive species.
- VII. The main ground vegetation is *Typha angustata*, *Ipomoea coarctata*, *Commelina* spp., *Cyperus* sp, are the emergent vegetation. Submerged vegetation such as *Najas gracilens* and *N. marina* occupies the open water zone. Other aquatic plants found are *Hydrilla* sp. and *Vallisneria* sp. In puddles *Marselia* sp. was encountered. The overall detail of flora is present in EIA/EEMP report. The coastal region in study area is mainly covered by mudflat habitat during study period and no mangrove cover was observed within the study area.

The proposal of the NHAI was scrutinized by the Technical Committee meeting, which was held on 06-02-2019, wherein the committee asked about environmental impact and construction method. Project Proponent informed that they will carry out bridge construction on pile foundation and will carry out construction in dry season so it will be minimal impact on environment. Committee asked them to take care and not to obstruct river / creek flow during construction activity. Further to this, the representative from the NHAI made a presentation before the Technical Committee on their proposed project and EIA prepared by the Enviro Infra Solution Pvt Ltd and informed that the proposed expressway is the construction of Ahmedabad-Dholera Expressway Road (Length- 110 km) (NHA/BM/21) in the state of Gujarat. The proposed expressway is part of an exclusive transport corridor being planned between Ahmedabad and Bhavnagar by the Government of Gujarat, keeping the development of SIR around Dholera in centre. The proposed Expressway is mostly green field project

and proposed for 6 lane expressway from Ahmedabad to Dholera having a total length of 110 km Kms

It was further submitted that the proposed project expressway takes off from Sardar Patel Ring Road near Sarkhej between Santhal Junction and Bakrol Junction in southwest of Ahmedabad, 2 km east of National Highway NH-8A. The corridor runs southerly towards Dholera between NH-8A (in the west) and SH-4, SH-6, Sabarmati river course/Gulf of Khambhat (on east side)

The proposed alignment is crossing through CRZ IB, CRZ III and CRZ IV areas from Ch. 59+700 to Ch.61+200 and Ch.68+800 to Ch.70+500 at Bholad, Anandpur, Pipli and Valinda villages of Ahmedabad district in the state of Gujarat. The part of proposed Ahmedabad - Dholera expressway alignment crosses through Bhogwa creek and Golsar creek, which is under CRZ region. The study area receives water only during monsoon season, when water level becomes high, causing mixing of saline ocean water and fresh water and during rest of the days it becomes dry. The distance of the above CRZ locations from the Sea is Approx. 15 kms

The proposed alignment is crossing through CRZ IB, CRZ III and CRZ IV areas from Ch. 59+700 to Ch.61+200 and Ch.68+800 to Ch.70+500.

The part of proposed Ahmedabad - Dholera expressway alignment crosses through Bhogwa creek and Golsar creek, which is under CRZ region

Two Bridges will be constructed over Bhogwa River having total areas of bridge is 23512.5 sqm and having total 21 pillars between Ch.59,700 - Ch.61,200. Moreover, one bridge over River Ghelo will be constructed having total area @11343.75 sqm having 10 Pillars between ch. 68,800-ch.70,500 . Total Five culverts will be constructed in CRZ areas. It was inferred that Span by span construction to be adopted for construction of superstructure with cast-in-situ deck and Precast Girder. The substructure will be casted as cast-in-situ and proposed pile foundation shall be bored cast-in-situ based upon the detailed design

It was further submitted that construction activities will be done in daytime only and avoided in the night time to ensure the least disturbance. The awareness program will be conducted for workers and nearby residents so that they will not disturb at all. Haul roads will be sprinkled with water which would reduce the dust emission. It is proposed to include *Azadirachta indica*, *Ficus religiosa*, *Pongamia glabra* and *Ficus religiosa* in the plantation program as they serve as sinks for gaseous emissions. They will use of exhaust silencers and optimize acoustical to minimize compressor noise

during well foundation. Green belt and community forestry will be encouraged to mitigate the noise level. Plantation will be carried out on RoW and nearby vicinity.

It was further assured that Low pollution and low noise equipment shall be employed. Regular monitoring of marine ecosystem will be done by third party and suggestions will be implemented and monitored. The restoration of marine ecosystem will be ensured as a self-development. No construction camp within CRZ area. the sewage disposal will be done through septic tank and soak pits outside the CRZ area. Regular maintenance of greenbelt will be done.

It was submitted that The proposed expressway will provide better, fast, safe and smooth connectivity for the commuters of Gujarat state and especially Dholera region. Smooth and fast-moving traffic will cause only lower emissions thereby reducing pollution levels. Accident rates are also expected to come down substantially. Development of the proposed project road will improve the local agriculture and enable farmers to realize better value for their products as well as attract more investment to that region, thus boost economy of the area, state and nation as a whole. The vehicle operating and maintenance cost is expected to go down substantially.

It was informed that the proposed road alignment will also include general amenities like rest areas, landscaping and tree plantation, traffic aid post, emergency telecom system, emergency medical aid post, street lights etc. and thus overall facilities to the road users shall improve. People will have increased access to better social, health infrastructure and other services located outside the project area. This will in turn lead to overall improvement of the quality of life of the people residing in the project zone in terms of their economic, social and health status. Growth of local tourism and resultant boost to local economy is also expected due to proposed project.

The NHAI vide its letter dated 15-07-2019 has submitted the superimposition of their proposed activities on final approved CZMP of Gujarat.

As per the CRZ map prepared by the National Center for Sustainable Coastal Management (NCSCM), Chennai duly superimposed for proposed activities, as per provisions of CRZ Notification 2011 and as per the approved Coastal Zone Management Plan, the proposed activities fall in the CRZ-I, (B), CRZ-III and CRZ-IV area and is not prohibited activities as per CRZ Notification 2011.

Now the GCZMA is under re-constitution and as per the CRZ Notification amendment dated 03-05-2017, In case the CZMAs are not in operation due to their reconstitution or any other reasons, then it shall be responsibility of the Department of Environment

in the State Government or Union territory Administrations, who are the custodian of the Coastal Zone Management Plans of respective States or Union Territories to provide comments and recommend the proposals in terms of the provisions of the said notification to the Ministry of Environment, Forest and Climate Change.

In view of the above, the State Government hereby recommends to the Ministry of Environment, Forests and Climate Change, Government of India to grant CRZ clearance for proposed project for construction of Ahmedabad to Dholera Expressway (110KM) in the State of Gujarat by the National Highway Authority of India (NHAI) with strict compliance of the following conditions.

1. The NHAI shall strictly adhere to the provisions of the CRZ Notification, 2011
2. The NHAI shall have to ensure that approach roads on both side of the river on landward side also be constructed on pillar
3. The NHAI shall obtain all necessary clearances permissions from different Government Departments / Agencies before commencing any construction activity related to the proposed project.
4. The NHAI shall construct settling ponds and the installation of the oil receptor to prevent the entry of the surface run-off from fuel and other contaminants into the wells and other surface water bodies along the corridor.
5. The NHAI shall make sure that all the wastes arising from the project shall be disposed off at identified disposal sites in environmentally sound manner.
6. No vehicles or equipment shall be parked or refueled near the water- body, so as to avoid contamination from fuel and lubricants.
7. The NHAI shall ensure that the quarry works, from which they will purchase raw materials, shall conform to the norms and having necessary clearances from the respective authorities.
8. The NHAI shall make MOU with the raw material supplier quarry/hot mix plants etc., in such a way that they will comply with all the terms and conditions mentioned in the CCA/NOC issued by the Gujarat Pollution Control Board.
9. The NHAI shall explore the possibility for using the Fly Ash @ 5%-10% to comply with the Fly Ash Notification
10. No activity shall be carried out in the forestland or area having natural plantation /forest and all mandatory clearances under various Forest Acts including the Forests Conservation Act shall be obtained, if necessary.



11. There shall no discharge of any kind of wastewater / sewage / effluent into the creek / sea or in the CRZ areas.
12. The NHAI shall implement all the suggestions / recommendations given by their consultants in their EIA report prepared by Enviro Infra Solution Pvt Ltd
13. No groundwater shall be tapped to meet with the water requirements during the construction and/or operation phases.
14. The NHAI shall ensure that the construction camps are kept outside the CRZ areas and the construction labour are provided with adequate amenities like drinking water, fuel, sanitation, etc. to ensure that the existing environmental condition is not deteriorated by them.
15. The NHAI shall bear the cost of the external agency that may be appointed by this Department for supervision / monitoring of proposed activities.
16. The NHAI shall take up socio-economic upliftment activities in consultation with the District Collector / DDO. A separate budget shall be provided for this purpose.
17. An Environmental Cell shall be constituted with technically qualified staff to implement the Environment Management Plan. A separate budget shall be earmarked annually for this purpose and the details shall be furnished to various regulatory authorities from time to time.
18. The NHAI shall regularly submit the half-yearly compliance report on the conditions stipulated by this Department/MOEF&CC, GOI
19. Any other condition that may be stipulated by this Department/ Ministry of Environment and Forests, Government of India from time to time for environmental protection / management purpose.

Thanking You.

Your Sincerely,



(S.M. Salvi)

Copy to,

**Shri S.P. Singh,**

General Manager (Tech.) .

National Highway Authority of India .

PU-3A&3B, 2<sup>nd</sup> Floor, Amul Building, Near Denabank, Vejalpur Road,

Jivraj Park, Ahmedabad

Dist: Ahmedabad --For information and necessary action please

**ANNEXURE – XII**  
**(STAGE -1 CLEARANCE LETTER)**



सत्यमेव जयते

भारत सरकार  
GOVERNMENT OF INDIA  
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय  
MINISTRY OF ENVIRONMENT, FOREST  
& CLIMATE CHANGE

क्षेत्रीय कार्यालय, पश्चिम क्षेत्र  
Regional Office, Western Region  
"Kendriya Paryavaran Bhavan"  
लिंक रोड, नं-3 Link Road No. 3  
E-5, रविवंश नगर/Ravi Shankar Nagar,  
भोपाल (म.प्र.) Bhopal-462016 (M.P.)  
फोन- 2466525, 2463102, 2465496  
ज्युडाईक/Email: rowz.bpl-rhef@nic.in

File No. 6-GJB033/2019-BHO/713

Date: 26/09/2019

To,

The Additional Chief Secretary (Forests)  
Govt. of Gujarat  
Sachivalaya, Gandhinagar, (Gujarat).

Sub: Diversion of 1.53 ha Protected Forest land for the construction & implementation of Ahmedabad-Dholera expressway of Ahmedabad District in favour of General Manager (Tech) & Project Director, National Highways Authority of India, Ahmedabad.

Sir,

I am directed to refer to your letter No. FCA-1019/7-03/19/S.F-77/F dated 30.07.2019 on the above mentioned subject seeking prior approval of the Central Government under section-2 of the Forest (Conservation) Act, 1980. After due consideration of the above proposal of the State Government the undersigned on behalf of the Central Government is hereby directed to convey **In-principle** approval for diversion of 1.53 ha Protected Forest land for the construction & implementation of Ahmedabad-Dholera expressway of Ahmedabad District in favour of General Manager (Tech) & Project Director, National Highways Authority of India, Ahmedabad subject to the following conditions:-

1. Legal status of the forest land shall remain unchanged.
2. Forest land shall be handed over to the user agency only after required non-forest land for the project is handed over by the user agency.
3. **Compensatory afforestation** : Compensatory Afforestation shall be taken up by the Forest Department over **4.00 ha** degraded forest land in Survey No.Old 61/P, Village-Navagam Karna, Taluka-Dholera, District-Ahmedabad, Gujarat at the cost of the User Agency. As far as possible, a mixture of local indigenous species shall be planted and monoculture of any species may be avoided.
4. The cost of compensatory afforestation at the prevailing wage rates as per compensatory afforestation scheme and the cost of survey, demarcation and erection of permanent pillars if required on the CA land shall be deposited in advance with the Forest Department by the project authority. The CA will be maintained for 10 years. The scheme may include appropriate provision for anticipated cost increase for works scheduled for subsequent years.
5. **Net Present Value (NPV):**
  - a) The State Government shall charge the Net Present Value(NPV) for the **1.53 ha** forest area to be diverted under this proposal from the User Agency as per the orders of the Hon'ble Supreme Court of India dated 30.10.2002, 01.08.2003, 28.03.2008, 24/04/2008 and 09.05.2008 in IA No. 566 in WP (C) No. 202/1995 and

1.53 ha  
HAI, Ahmedabad

26/09/19



as per the guidelines issued by the Ministry vide letters No. 5-1/1998-FC (Pt.II) dated 18.09.2003, as well as letter No. 5-2/2006-FC dated 03/10/2006, 5-3/2007-FC dated 05/02/2009 and chapter 3 of handbook 2019 of F(C)A, 1980 & FC Rules 2003 in this regard.

- b) Additional amount of the NPV of the diverted forest land, if any, becoming due after finalization of the same by the Hon'ble Supreme Court of India on receipt of the report from the Expert Committee, shall be charged by the State Government from the User Agency. The User Agency shall furnish an undertaking to this effect.
6. User agency shall restrict the felling of trees upto **11 numbers** in the diverted forest land and the trees shall be felled under the strict supervision of the State Forest Department and the cost of felling of trees shall be deposited by the user agency with the State Forest Department.
7. All the funds received from the user agency under the project shall be transferred/deposited to CAMPA fund only through e-portal (<http://parivesh.nic.in/>).
8. User agency shall raise strip plantation on both sides and central verge of the road as per the IRC norms.
9. Speed regulating signage will be erected along the road at regular intervals in the Protected Areas/ Forest Areas.
10. The user agency shall provide suitable under / over pass in Protected Area / Forest Area as per recommendations of CWLW / NBWL / FAC / REC, if applicable.
11. User agency shall obtain Environmental Clearance as per the provisions of the Environmental (Protection) Act, 1986, if applicable.
12. The layout plan of the proposal shall not be changed without prior approval of Central Government.
13. No labour camp shall be established on the forest land.
14. Sufficient firewood, preferably the alternate fuel, shall be provided by the User Agency to the labourer after purchasing the same from the State Forest Department or the Forest Development Corporation or any other legal source of alternate fuel.
15. The boundary of the diverted forest land shall be suitably demarcated on ground at the project cost, as per the directions of the concerned Divisional Forest Officer.
16. No additional or new path will be constructed inside the forest area for transportation of construction materials for execution of the project work.
17. The period of diversion under this approval shall be co-terminus with the period of lease to be granted in favour of the user agency or the project life, whichever is less.
18. The forest land shall not be use for any purpose other than that specified in the project proposal.
19. The forest land proposed to be diverted shall under no circumstances be transferred to any other agencies, department or person without prior approval of Govt. of India.
20. All the conditions of State Forest Department/Local Forest rules shall be applicable in this project.
21. Violation of any of these conditions will amount to violation of Forest (Conservation) Act, 1980 and action would be taken as per the para 1.21 of Handbook of F(C) 1980 & FC Rules 2003 published in 2019.
22. Any other condition that the Ministry of Environment, Forests and Climate Change may stipulate from time to time in the interest of conservation, protection and development of forests & wildlife.

1.53 kg  
MHA, Ahmedabad

  
Sd/-

23. The complete compliance report in letter format from Govt. of Gujarat shall be uploaded on e-portal (<http://parivesh.nic.in/>).

After receipt of compliance report on fulfillment of all the above conditions from the State Government, proposal will be considered for final approval under Section-2 of the Forest (Conservation) Act, 1980.

Any order for transfer of forest land to user agency shall not be issued by the State Government till formal approval for diversion of forest land is issued by this office.

  
(B. Abhay Bhaskar)

Asstt. Inspector General of Forests (C)

Copy to :-

1. Director, ROHQ, Ministry of Environment, Forests and Climate Change, Agni, C-wing, 3rd Floor, Indira Paryavaran Bhawan, Jor Bagh Road, Aliganj, New Delhi - 110003.
2. The Addl. Principal Chief Conservator of Forests and Nodal Officer (FC), Gandhinagar, Gujarat.
3. The Dy. Conservator of Forests, Social Forestry, Navsari, Gujarat.
4. The General Manager (Tech) & Project Director, National Highways Authority of India, PIU: 3A & 3B, 2nd Floor, Amul Building, Nr. Dena Bank, Vejapur road, Jivraj Park, Ahmedabad-380051.
5. Order file.

1.53 ha

NHAI, Ahmedabad

  
(B. Abhay Bhaskar)

Asstt. Inspector General of Forests (C)

**ANNEXURE – XIII  
(LETTER FROM ACF REGARDING  
THE DISTANCE OF ALIGNMENT  
FROM THE ECO SENSITIVE ZONE  
OF VELAVADAR NATIONAL  
PARK)**



ક્રમાંક: અ/જમન/1077/2018-18  
મદદનીશ વન સંરક્ષકશ્રીની કચેરી,  
કાળીયાર રાષ્ટ્રીય ઉદ્યાન,  
એનેશી, એસ/૧૦, બહુમાળીભવન,  
ભાવનગર તા. ૧૮/૧૨/૨૦૧૮.  
Phone No. 0278-2 426 425.  
Email : acfbnp@gmail.com

પ્રતિ,  
મુખ્યવન સંરક્ષકશ્રી,  
વન્યપ્રાણી વર્તુળ,  
જૂનાગઢ.

**વિષય :** Construction of Ahmedabad-Dholera Expressway road (110 km) (NHAI/BM/21) in the state of Gujarat NOC/certification regarding applicability of NBWL with respect to Velavadar Black Buck National Park.

**સંદર્ભ :** નેશનલ હાઈવે ઓથોરીટી ઓફ ઈન્ડિયાના પત્રાંક : NHAI/PIU-Ahmedabad/SMEC/2018/1710 Dt.26/06/2018

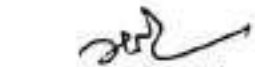
સાદર ઉપરોક્ત વિષયે અને સંદર્ભપત્ર અન્વયે જણાવવાનું કે, ઉપરોક્ત સંદર્ભથી નેશનલ હાઈવે ઓથોરીટી ઓફ ઈન્ડિયા તરફથી અમદાવાદથી ધોલેરા સર અધેનાઈ સુધી ૦ થી ૧૦૯.૧૯ સુધીનો ફોરલાઈન એક્સપ્રેસ-વે રોડની કામગીરી બાબતે અત્રેના પત્ર મળેલ છે. (નકલ સામેલ છે.)

સદર કામગીરી બાબતે તા.૩/૧૦/૧૮ ના રોજ નેશનલ હાઈવે ઓથોરીટી ઓફ ઈન્ડિયા વતી શ્રી કૌસ્તુભ દેશપાંડે, યંગ પ્રોફેશનલ ટેકનીકલ, તથા ડો.સંદિપન દાસ એન્વાયરમેન્ટ એક્ષપર્ટ અને તેની ટીમ આવેલી હતી, અને તેની સાથે અત્રેના વિભાગ હેઠળની વેળાવદર રેન્જના રેન્જ ફોરેસ્ટ ઓફિસરશ્રી તથા સ્ટાફ હાજર રહેલ હતા, અને ટીમ સાથે સ્થળ સ્થિતિનું નિરીક્ષણ કરતાં અમદાવાદ થી ધોલેરા સર અધેનાઈ સુધી ૦ થી ૧૦૯.૧૯ સુધીનો રોડ ફોરલાઈન એક્સપ્રેસ બનાવવા તેઓના અધેનાઈ તરફના એન્ડ પોઈન્ટ કાળીયાર રાષ્ટ્રીય ઉદ્યાન, વેળાવદરના જાહેર થયેલ ઈકો-સેન્સેટીવ ઝોનની હદથી કેટલા અંતરે આવેલ છે. તે મુજબ કાળીયાર રાષ્ટ્રીય ઉદ્યાનની, ભડભીડ બીટની બાઉન્ડ્રી પીલર નં.૫૮ અને ૫૯ ની મધ્યમાંથી NHAI દ્વારા લગાવવામાં આવેલ પીલર સુધીનું અંતર માપતા આ અંતર અંદાજે ૧૦૨૫ મીટર જેટલું થવા જાય છે. અને ઉપરોક્ત જગ્યાનું સ્થળ સ્થિતિ નીરીક્ષણ દરમ્યાન કરવામાં આવેલ રોજકામની નકલ આ સાથે રાખી સાદર કરવામાં આવે છે.

ક્લેક્ટરશ્રી ભાવનગરના અધ્યક્ષ સ્થાને સાંજે અધેનાઈ ખાતે યોજાયેલ લોક સુનાવણીમાં આસપાસના ગ્રામજનો તથા અન્ય પર્યાવરણવિદ્ધ દ્વારા રજુઆતો કરવાનો આવેલ તે પંકી એમ.કે.બી.યુનિવર્સિટી ભાવનગરના મરીન સાયન્સ વિભાગના વડા ડો. આઈ.આર.ગઢવી સાહેબ દ્વારા પણ રજુઆત કરવામાં આવેલ હતી તેઓ દ્વારા કરવામાં આવેલ રજુઆત અનુસાર

અમદાવાદ-ધોલેરા વચ્ચે બની રહેલ એક્સપ્રેસ-વે ના આજુબાજુ ના વિસ્તારમાં દુર્લભ વન્યજીવોવસેલા છે. વાહન વ્યવહાર વધવાથી આ વન્યજીવો પર જીવનું જોખમ ઉભું થઈ શકે છે, જે સાથે અમો સહમત છીએ, આથી આ રસ્તાની કામગીરી ના આયોજનમાં વન્યપ્રાણી ની વસ્તી હોય તેવા વિસ્તારોને ધ્યાને લઈ આવા વિસ્તારોમાં ૧.૫ કી.મી. ના અંતરે વન્યપ્રાણી પર જોખમ ઓછું થઈ શકે તે માટે યોગ્ય માપ સાઈઝના અંડર પાસ રાખવા જરૂરી છે. અને યોગ્ય અંતરે સ્પીડબ્રેકર અને સાઈનબોર્ડ પણ રાખી શકાય જેથી વન્યપ્રાણીઓ ને રક્ષણ સારી રીતે થઈ શકે, જે આપસાહેબશ્રીને વિદિત થાય.

બિડાણ : ઉપર મુજબ



મદદનીશ વન સંરક્ષક

કાળીયાર રા/ટ્રીય ઉદ્યાન, વેળાવદર  
ભાવનગર.

નકલ સાદર રવાના : નેશનલ હાઈવે ઓથોરીટી ઓફ ઈન્ડિયા, અમદાવાદ તરફ જાણ થવા સારું.



NOTARY  
GOVT. OF INDIA  
22 JUL 2020



Office of Forest Conservatory,  
Kaliyar National Park,  
Anaxy, S/10, Bahumali Bhavan  
Bhavnagar Date: 18/12/2018  
Phone no. 028-2426 425  
Email: acfbnnp@gmail.com

This is true and correct  
Translation of the  
Original documents from  
Gujarati / Hindi to English  
1st Party / 2nd Party

NOTARY

22 JUL 2020

To,  
The chief conservative of Forest  
Wild Animal Circle,  
Junagadh

Subject: Construction of Ahmedabad – Dholera Expressway road (110 km) (NHAI/BM/21) in the state of Gujarat NOC/certification regarding acceptability of NBWL with respect to Velavadar Black Buck National Park,

Reference: National Highway Authority of India Letter No. NHAI/PIU Ahmedabad/SMEC/2018/1710 Dt.26/10/2018

Referring to the above subject matter and reference letter, we have received letter from National Highway Authority of India for the project of making four lane expressway road from 0 to 109.19 Ahmedabad to Dholera SIR till Adhelai.

For this work, on 3/10/2018 Mr Kaustubh Pandey, young professional technical and Dr Sandipan Das Environment expert and their team arrived and with them our Velavadar range forest officer and their staff stayed with them. And after monitoring the location conditions and distance between end point towards Kaliyar National century, velavadar which is declared as Eco sensitive zone of Ahmedabad to Dholera SIR Adhelai 0 to 109.19 four lane expressway. According to them, measured distance between Bhadbhid Bil's boundary pillar no. 58 to 59 and NHAI's pillar is approx 1025 meters. And we have attached the work sheet of the measurement along with this letter.

In the evening, there was a public hearing to the presidency of the Collector, Bhavnagar and during that surrounding villagers and environmentalists presented their concerns and within them the head of Marine Science department, MKB University Bhavnagar Dr I. R. Gadhvisir presented their concerns that surrounding there is rare wildlife situated. He accepted that there will be a big risk to surrounding wildlife due to increase in vehicles traffic. So that for the solution of the same, there must be provision of under passes at every 1.5 km so that wildlife can easily cross away. And also there must be speed breakers and enough sign boards so that wild life can be protected.

As Above

Officer of Forest Department

Kaliyar National Park, Velavadar, Bhavnagar

Copy to : National Highway Authority of India, Ahmedabad



**ANNEXURE – XIV**  
**(COST OF Corporate Environment**  
**Responsibility (CER))**

## Corporate Environment Responsibility (CER)

The cost for Fund allocation for Corporate Environment Responsibility (CER) as per the mentioned notification has been calculate and presented below:

| <b>Capital investment (Cr.)</b> | <b>Greenfield project CER % of capital investment</b> | <b>Total amount (Cr.)</b> | <b>Structure for the compliance of public hearing, drinking water facilities, sanitation and health, electrification including solar power, solid waste management, awareness programme for local farmers, rain water harvesting, avenue plantation (Cr.)</b> |
|---------------------------------|---|---------------------------|---|
| 3300.48                         | 0.5%  | 16.50                     | 16.50   |

## Year wise break- up for CER

[illegible]



|  |   |      |     |     |      |      |     |     |     |     |     |     |     |     |
|--|---|------|-----|-----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|
|  | amenities location to be used by all road users and local inhabitants |      |     |     |      |      |     |     |     |     |     |     |     |     |
|  | Total   | 16.5 | 1.6 | 3.6 | 3.13 | 0.97 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |

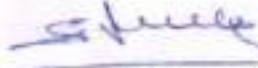
**ANNEXURE - XV**  
**(PLAGIARISM CHECK LIST BY EIA**  
**CONSULTANT ORGANIZATION)**

### Certificate of Plagiarism check

|                                  |   |
|----------------------------------|---|
| Title of EIA Report:             | Construction of Ahmedabad-Dholera Expressway Road (110 km) (NHAI/BM/21) in the State of Gujarat |
| Name of Accredited Organization: | Enviro Infra Solutions Pvt. Ltd.  |
| Unique identification Number:    | —   |
| Name of EIA Co-ordinator (EC):   | Mr. Sanjeev Sharma  |
| Name of software:                | Plagiarism Checker X  |
| Date of check:                   | 26.06.2020  |
| Time of check:                   | 11 Am   |

Declaration by the Head of the accredited consultant organization/authorized person

I hereby certify that this EIA Report has been evaluated using online/ In-house software viz., Plagiarism Checker X. The report produced has been analysed by the system and based on it, I certify that the EIA report produced in accordance with good scientific practice.

  
Date and sign of EIA coordinator: 29/6/2020

Name: Sanjeev Sharma

Designation: Director (Technical)

  
Date and sign of head of Accredited Organization: 29/6/20

Name of the EIA consultant organization: Enviro Infra Solutions Pvt. Ltd.

NABET Certificate No. & issue date: NABET/EIA/1922/ RA 0157 Dated 16<sup>th</sup> March 2020

**Reply to EDS sought by MoEF&CC on dated  
16/07/2020**

| <b>S. No.</b> | <b>EDS raised by EAC</b>   | <b>Reply to EDS</b>   |
|---------------|--|---|
| 1.            | No CRZ maps uploaded and relevant information CRZ related study documents not uploaded | The relevant CRZ maps and study documents have been already uploaded in the relevant CRZ sections and also have been attached as Annexure VIII of EIA/EMP report. |

**Reply to EDS sought by MoEF&CC on dated  
13/07/2020**

| <b>S. No.</b> | <b>EDS raised by EAC</b>  | <b>Reply to EDS</b>  |
|---------------|---|--|
| 1.            | The proposal number not match with TOR proposal number, Please verify | The details of the ToR proposal have been incorporated/updated in the respective field of EC report. |

## Reply to EDS sought by MoEF&CC on dated 01/05/2020

| S.No | EDS Raised by EAC  | Reply to EDS   |
|------|--|--|
| 1.   | Rapid EIA report of marine and terrestrial components and Disaster Management Plan in CRZ area.  | The rapid EIA report of marine and Disaster Management Plan in CRZ area has been attached as <b>Annexure VIII</b> of EIA/EMP report. |
| 2.   | Validity of EIA Consultant organization expired on November 9, 2019.                             | The NABET certificate along with the extension letters have been attached as <b>Annexure IV</b> of EIA/EMP report.                   |
| 3.   | Please submit plagiarism Checklist by EIA consultant organization.                               | The plagirasim checklist by EIA consultant has been attached as <b>Annexure XV</b> of EIA/EMP report.                                |
| 4.   | EIA/EMP has to be submitted as per the generic structure mentioned in the EIA notification 2006. | Complied.  |
| 5.   | ToR condition wise compliance in tabular form not included in the EIA/EMP report.                | The point wise compliance of TOR has been presented in <b>Table 1.4</b> of <b>Chapter 1</b> of EIA/EMP report.                       |



**Reply to EDS raised by EAC on dated 20.01.2020**

**Proposal No: IA/GJ/NCP/129696/2018**

| <b>Sr.NO.</b> | <b>EDS raised</b>   | <b>Reply to EDS</b>  |
|---------------|---|--|
| 1.            | As per the TOR condition No (viii) CRZ clearance to be obtained by DSIR for the part of the proposed alignment within the specified CRZ area. Please submit recommendation of State Coastal Zone Management Authority in this regard and upload the relevant information/Maps as mentioned in Form2 application in this regard. | The CRZ recommendation of DSIR along with the relevant maps has been attached below. |



**HARDIK SHAH**  
**DIRECTOR (ENVIRONMENT)&**  
**ADDITIONAL SECRETARY**

**GOVERNMENT OF GUJARAT**  
**Forests & Environment Department**  
**Block no. 14, 8<sup>th</sup> floor**  
**Sachivalaya, Gandhinagar - 382 010**  
**Gujarat, INDIA**  
**Ph : (079) 23251062,**  
**Fax : (079) 23252156**

**Email : direnv@gujarat.gov.in**

**Ref: No. ENV-10-2013-62-E**

**August 8, 2014**

To,  
Shri Lalit Kapoor  
Director  
Ministry of Environment and Forests  
Paryavaran Bhavan, CGO Complex  
Lodhi Road, New Delhi - 110 003

***Sub : CRZ clearance for proposed development of Dholera Special Investment Region in Gujarat by M/S Delhi Mumbai Industrial Corridor Development Corporation Limited -regarding***

Dear Sir,

The Delhi Mumbai Industrial Corridor Development Corporation Limited(DMICDCL) vide its letter dated 05/02/2014 has approached this Department seeking recommendation from the Gujarat Coastal Zone Management Authority to Ministry of Environment and Forests, Government of India for grant of CRZ clearance for proposed development of Dholera Special Investment Region(DSIR) at Dholera, Dist: Ahmedabad.

The DMICDCL has submitted that the development planning of Dholera Special Investment Region in Gujarat was presented to the Ministry of Environment and Forests, Government of India's Expert Appraisal Committee (EAC) for award of ToRs for environmental Clearance in the 99th and 100th meeting of the EAC for Building/Construction Projects/Township and Area Development Projects, Coastal Regulation Zone , Infrastructure Development and Miscellaneous projects. The ToRs were finalized in 100th meeting of EAC held on 12-05-2011. As the proposed development plan of DSIR includes certain CRZ area as per CRZ Notification 2011, it requires to obtain CRZ Clearance under said notification.

The DMICDCL has submitted following Documents alongwith application:

1. Form -I as per CRZ Notification 2011
2. The CRZ map alongwith demarcation of HTL,LTL, CRZ boundary prepared by the Institute of Remote Sensing , Anna University, Chennai
3. Superimposition of the proposed activities on CRZ map.
4. Various undertakings

5. Comprehensive Environmental Impact Assessment prepared by the SENSES Consultants India Pvt Ltd, Noida, U.P.

It is submitted by the DMICDCL that the activities to be undertaken in CRZ area are related to essential infrastructure and comprising of the following.

- Tourism resorts
- Roads
- Underground services below roads
- Disposal/Intake pipelines(water, storm -water, sewerage)
- Power Transmission facilities
- Flood mitigation facilities
- Marine Outfall

In the CEIA report M/S SENSES Consultants India Pvt Ltd has included the Project Description (chapter 2), Baseline Studies (chapters 4), DSIR Development Plan(Chapter 5), Anticipated Environmental Impacts and Mitigation Measures (chapter 6), Environmental Monitoring Program (chapter 7), Project Benefits(Chapter 9). The SENSES Consultant India Pvt Ltd has also included one chapter as summary and conclusion (Chapter 10).

The main findings of the Comprehensive EIA report prepared by the SENSES Consultant Pvt Ltd are summarized as follows:

- I. Potential loss of agricultural land is one of the key concerns in India as part of planning any large development like DSIR. This has been one of the key basis of selecting this region for DSIR development, as the selected land is not very conducive for agriculture. A significant portion (~12,800 ha) of land located on the western part of the DSIR region has however been reserved for agriculture, as these lands have a comparatively better agricultural productivity.
- II. The DSIR region at present does not have irrigation based on Narmada Canal. Irrigation is mainly done with water from ground water resources like wells, surface resources like Khet-Talavs and moisture content in air mainly in winter season. Sardar Sarovar Nigam Ltd. had planned for canal water supply in the some of the villages, which forms part of DSIR area. In absence of any other prominent irrigation water supply and absence of other prominent livelihood source, Narmada canal network is considered as major improvement change to boost local agriculture and thus economy and social upliftment of these villages.
- III. The Sardar Sarovar Nigam Ltd. has now conveyed its decision to include DSIR area in the command area of Narmada Canal. In central and eastern parts of the DSIR region areas where agricultural lands are anticipated to be partially lost.

access to irrigation water from Narmada Canal will be through either piped supply or further branched canals, depending on the technical assessment by the Sardar Sarovar Nigam Limited. This was also conveyed to the people both during the Public Hearing and in response to the queries brought out during the Public Consultation process.

- IV. A separate Dholera SIR Welfare Society formed as part of DSIR development, will ensure in co-ordination with State Agricultural Departments or any other competent agency, that the farmers in these areas are provided with advisory and resource support to improve their farm productivity and align their farm practices in line with the input needs for agri based industries that will come up in the industrial zone of DSIR. In addition to this, with such a large consumer base which will develop in the DSIR region, the farming community within the DSIR as well as those in the adjacent regions will naturally gear themselves to supply farm produce directly and benefit due to this development.
- V. Velavadar National Park (VNP) is approximately a 35 sq.km grassland habitat located at SW of the DSIR region. An area of around 730 sq.km (in two different zones) around the Velavadar National Park is proposed as Eco-sensitive zone, by the Department of Environment & Forests, Government of Gujarat - which is currently under review by the MoEF. A review of the proposed Eco-Sensitive Zone (ESZ) around the VNP with respect to the DSIR boundaries reveals that there is no overlapping between this ESZ and DSIR region.
- VI. However, considering that the closest boundary of VNP is at a distance of only 600 m from the DSIR region boundary, a detailed review by ecological experts from GEER was undertaken to study this region, and specifically to understand the need of any conservation zones within DSIR. Based on this study and a detailed review of concern on loss of biodiversity due to urbanization, it is proposed that the forest areas located in DSIR region and that are close to VNP will be reviewed in further detail to set-up a conservation zone. This is dealt in further detail on the section relating conservation of habitats for existing wildlife species in the area, with special focus on species that are endangered and endemic to the area.
- VII. Significant man-made and natural threats to Black bucks in the VNP have also been identified based on secondary reviews and consultations. Based on this review, it is understood that flooding of the VNP area and road kills are currently the major threats to Black bucks. Based on this, it will be ensured as part of the DSIR development, that the flood mitigation intervention planned for the DSIR will also include protection of the VNP from flooding. In addition to this, the trunk

level transport infrastructure will plan for wildlife crossings suitable for crossing black bucks and at appropriate locations (based on further detailed surveys and where significant movement is noticed), to ensure road kills are minimized. Also the surrounding area of VNP will be kept as green area.

- VIII. No development is proposed in the CRZ area falling in DSIR region, except for renewable energy projects (solar parks), tourism resorts, and crossing of some linear utilities such as pipelines. This includes extension of water supply from Narmada Canal. Since all these are permitted activities under the CRZ 2011 Notification and unlikely to impact the coastal environment, the project seeks CRZ Clearance for these proposed developments.
- IX. Development of the proposed Kalpasar project (a large fresh water reservoir in the Gulf of Khambhat) which is currently being reviewed by MoEF for its environmental clearance, will significantly convert coastal periphery land covered under the DSIR region from saline/brackish environment to fresh water environment. This might have a long term environmental changes in this zone. Therefore, currently no specific long term conservation measures have been assessed in this EIA.
- X. The CRZ area in DSIR region will also have a high vulnerability for illegal sourcing of natural materials required for DSIR development. This is one of the key concerns recognised, and will be addressed not just by ensuring strict enforcement of laws in the area, but also by facilitating a detailed study on possible natural material sourcing and processing areas around DSIR region, along with mitigation measures to address likely environmental degradation. This will be ensured in co-ordination with the Department of Mines & Geology, Government of Gujarat and the Department of Environment & Forests.
- XI. All the tourism resorts will be planned and developed using key eco-tourism concepts, whereby: Negative impacts on nature and culture that can damage the destination will be minimised, travellers will be educated on the importance of conservation, Importance of responsible business will be stressed upon, which works co-operatively with local authorities and people to meet local needs and deliver conservation benefits, Revenues will be directed to conservation and management of natural and protected areas, Environmental & social baseline studies, as well as long term monitoring programs will be used to assess and minimise impacts, Economic benefits to the local business and communities (living in and around these natural areas) will be maximised. It would be ensured that tourism development does not exceed social and environmental limits of

acceptable change as determined by researchers in co-operation with local residents. Rely on infrastructure developed in harmony with the environment, minimising use of fossil fuels, conserving local plants and wildlife, and blending with the natural and cultural environment.

- XII. DSIR development will also ensure tourism related development in DSIR as per the guidelines issued under CRZ 2011 Notification for development of beach resorts or hotels in the designated areas of CRZ-III and CRZ-II for occupation of tourist or visitors with prior approval of the Ministry of Environment and Forests. Construction of beach resorts or hotels will not be undertaken in ecologically sensitive areas (such as marine parks, mangroves, coral reefs, breeding and spawning grounds of fish, wildlife habitats and such other area as may be notified by the Central or State Government Union territories).
- XIII. The coastal areas comprising of wet lands, forest, settlements, etc. in villages namely Ambli, Kadhipur, Gogla, Khun, Bhimtalav, Rahtalav, Mahadevpura, Bhangadh, Zankhi, Bavaliyari, Hebatpur, Mingalpur will be conserved as no development is proposed in CRZ areas except for activities like tourism and thus the coastal areas will be maintained as contiguous area and will continue to support the present ecology.
- XIV. The forest areas will be maintained as it is and water streams/creek area will be supported with vegetation/landscape area development. In DSIR green belt will be developed on both the banks of all the creeks/rivers creating a habitat or habitat connector for biological species. As no development is proposed in CRZ I area and tourism is proposed only in CRZ III area, major portion of land is left untouched. It is observed that proposed eco sensitive zone for VNP and areas of DSIR are directly connected to each other through land, creeks/rivers and proposed development of tourism and green belt. Thus various links will be established for free movement of biological species.
- XV. All forest lands including the ones lying in Bavaliyari being close to the Velavadar National Park, will be jointly developed by the Regional Development Authority of DSIR and the Divisional Office of Forest Department of Gujarat, to enhance wildlife habitat value of these lands and promote it as an ecological conservation zone. As sufficient information could not be collected and analysed to draw out a corridor linkage of these forest areas with the eco sensitive zone around the VNP, it will be explored in detail later and accordingly added to this ecological conservation zone. Local people, NGOs, and scientific agencies will be closely engaged in identifying and developing such conservation zones.



- and developing corridor linkages within will also be based on detailed local consultations and studies already undertaken as part of this EIA study, on relationships between faunal and floral species in the region. Current man-animal conflicts have also been studied, which will be taken into consideration while developing these conservation zones, so that such conflicts are not enhanced. In addition to this, none of the wastewater generation from the DSIR region will be allowed to discharge into any of the wetlands or streams/rivers in the area.
- However, treated wastewater is proposed to be used for maintaining the conservation zones as required.
- XVII. Impacts of treated wastewater STPs and CETPs on water bodies into which the treated wastewater will be discharged, and impacts on land/soil, ground water, air quality due to storage, treatment and ultimate disposal (including resource recovery) are typically required to be assessed as part of planning these facilities. However, since DSIR development is proposed to adopt maximising re-utilisation of wastewater, resource recovery of solid wastes, and use of recyclable wastes – a detailed framework on Waste Management will be developed based on the latest technology options available for adoption. Moreover, Water Resource Management Planning and Waste-Resource Management Planning will be in concurrence.
- XVIII. The proposed storm water drainage system is conceptualized to cater for surface runoff within the project area by gravity flow. Trunk storm water drains are proposed on both the sides of the roads and lateral and main drains are proposed on one side of the roads. The surface runoff collected from the catchment areas would be discharged by major outfalls into the natural streams, rivers and creeks and open land lying in the CRZ along the DSIRDA boundary. To avoid flooding in the area, sluice gates and boosting system will be provided at the outlets of the drains. When the natural streams and nallahs are full and cannot flow by gravity from drains, the water may need to be pumped out.
- XIX. Outfalls lying in the CRZ area will be planned and designed such that water discharging from the drain does not erode the land and spread in the form of sheet flooding. In order to determine the hydraulic grade line due to backwater impact under high tide conditions coinciding with downpours, the invert levels for outfalls should be kept such that the DSIR should not be submerged during high tides coinciding with heavy monsoon rainfall. The formation level of the DSIR will be planned such that it can be protected from any kind of flooding or submergence.

- XX. An integrated approach will be adopted in the DSIR to efficiently manage the solid waste generated in the region. The waste that will be generated in the DSIR can be broadly categorised as municipal waste and industrial waste. However, based on composition and characteristics they are further categorised as hazardous waste, bio-medical waste, wet organic waste, dry organic waste, electronic- waste, recyclable waste and inert material.
- XXI. Municipal waste will be collected and transported to the integrated waste management facility (IWMF). If it has not already been sorted at source, it will be segregated into five components namely 1) Wet Organic waste 2) Dry Organic waste 3) Recyclable waste 4) Inert Materials and 5) electronic- Waste. Wet waste will comprise about 20 % to 30 % of total waste. This will be converted into organic compost through proper treatment. Dry waste will form 30% to 40 % of waste which can be utilized for making green coal or fluff. After segregation, recyclable waste like rubber, metal, plastic which has economic importance will be sold. Segregated E-waste will be sent for processing along with hazardous industrial process waste. At the last stage of the process, inert materials can be partly used for making bricks by mixing it with fly ash. Finally the residue from this process which is as little as 15% to 20% will be sent for landfill in the sanitary landfill site.
- XXII. Different sources of hazardous wastes generation include industrial, commercial, agricultural and even domestic activities. However major source of hazardous wastes is the industrial activities. DSIRDA will ensure that no hazardous waste is mixed or collected along with municipal solid waste. Hazardous waste will be segregated from municipal solid waste and treated separately in accordance with the Hazardous Waste (Management and Handling) Rules, 2000. The hazardous waste will be segregated, treated and disposed of in hazardous waste landfill.
- XXIII. Energy generation also being a major source of air emission, DSIR planning has considered maximising usage of natural resource such as sunlight and natural ventilation, maximising usage of renewable sources of energy for energy generation, and energy efficient infrastructure planning. As far as fossil fuel based energy generation is concerned, large-scale power generation facilities in tune with the power demand estimations (1700 MW) are also planned within the DSIR region. Such facilities will ensure adoption of fuel type & quality, and the best available technologies in order to minimise emission of all priority pollutants such as particulate matter, oxides of sulphur and nitrogen, heavy metals, and GHGs.

... region has a medium air pollution potential during the winters and post-monsoon, whereas a very low air pollution potential in the pre-monsoons. However, as committed earlier, a detailed inventory will be prepared as part of DSIR development and operations which will use this information to develop region-specific environmental standards.

The proposal of the DMICDCL was scrutinized in 10th meeting of the Technical Committee, which was held on 20-03-2014 about the development Plan of the Dholera SIR, Comprehensive EIA report prepared by the SENES Consultants India Pvt Ltd prepared in February, 2013, CRZ map duly demarcation of HTL CRZ Boundary etc. Prepared by the Institute of Remote Sensing, Anna University, Chennai (An agency authorised by the Ministry of Environment and Forests, Government of India).

It was observed by the Technical Committee that proposed development in the CRZ area is a part of the proposed Dholera Special Investment Region(DSIR) in District: Ahmedabad. The site for proposed DSIR encompasses 19 villages of Dhandhuka Taluka and 3 villages of Barvala Taluka; total 22 villages of Ahmedabad District. It is located about 100 Km south of Ahmedabad and about 130 Km from the Gandhinagar. Total DSIR area is 920 sqkm, out of which developable area is 567 sqkm. It was informed to the Technical Committee that 12.5% of total area would be used for Industrial purpose, 13.3% would be used for Residential use, 30 % would be used for Green space, 38% for CRZ and 6.2 % area would be utilized for roads and other zones. The land of 14 villages falls in CRZ area classified as CRZ-I and CRZ-III area. Total CRZ area under consideration is about 35371.2ha, out of which 2313.1 ha area falls under CRZ-IA category, 29019.9 has fall in the CRZ-IB category, and 4038.2 ha in CRZ -III area. Existing land use of the CRZ area primarily consists of agricultural, marshy vegetation, open scrub, land under salt ingressions, forests, river/stream etc.

The representative of the DMICDCL assured that land within CRZ area would be developed as per the activities permitted under CRZ Notification 2011. Tourism resorts have been proposed on 3888 ha area in CRZ -III area as per CRZ Notification 2011. Proposed tourism resorts would be developed in three phases of 10 years each. Apart from these developments supporting infrastructure like water, sewage and storm water drainage lines, internal roads, etc would be developed.

It was observed by the Technical Committee that around 7340 ha of Forests land falls in CRZ area of DSIR, for the diversion of Forests land for non-forests purpose, clearance as required under the Forests (Conservation) Act, 1980 would be required. It was submitted that excess of treated effluent, if any, will be disposed of in the Gulf of Khambhat downstream of the proposed location of Kalpasar Project. Location of this Disposal point

would be selected after environment assessment study. Based on scrutiny of the proposal, after detailed discussion and deliberation on the presentation made by the representative of the M/S Delhi Mumbai Industrial Corridor Development Corporation Limited (DMICDCL), it was decided to ask various details from the project proponent. accordingly, the DMICDCL was asked on 10-04-2014 to submit various details. The Dholera Special Investment Regional Development Authority, vide its letter dated 17-04-2014 has submitted details asked by the Department

The representative of the DMICDC made a presentation before the GCZMA in its 22<sup>nd</sup> meeting, which was held on 30-05-2014 and submitted that following probable activities are planned in CRZ areas:

- Tourism resorts would be developed in CRZ-II area in @ 3889 ha in three phase
- Roads would be constructed in CRZ -III area in three phases having length of @ 72 Km and underground services below road in three phases having length of @104 km.
- Storm water drainage system may be laid down within CRZ areas categorized as CRZ-I and CRZ-III. This includes Outfall structures at 3 locations in @ 50 sqm area, 3 disposal lines of 1 km each, 16 disposal lines of 0.5 km each
- Outfall line-Box drain of 4MX4M
- Power Transmission line in CRZ area categorized as CRZ-IA and CRZ-III having total length of @11km and having @ 25 numbers of towers.
- River training works (for flood mitigation) in CRZ areas categorized as CRZ-I and CRZ-III in length of @ 18km.
- Desalination plant and brine disposal facilities from desalination of brackish groundwater in CRZ-I, CRZ-III and CRZ-IV areas through pipeline of @ 1km length to cater to maximum of 20 MLD flow.

The representative of the DMICDC submitted that phase wise water requirement envisaged for tourism resorts proposed in CRZ-III area of Dholera Special Investment Region(DSIR) are 37,12,20 MLD for Phase-I, II and III respectively. The water requirement would be met through Pariyej reservoir and Kanewal reservoir for domestic purpose in initial phases for domestic application. Treated wastewater from Ahmedabad will be the source for industrial grade water demand. Desalination of ground water and/or sea water also being evaluated as water sources for DSIR. There would not be any industrial waste water generated from CRZ area, as there are no industries proposed in CRZ area of DSIR. Phase wise wastewater from CRZ area primarily envisaged from the tourism resorts proposed in CRZ-III area is 30, 10, 15 MLD for Phase-I, II and III respectively. It was assured by the representative of DMICDC that they will emphasis on

for development in CRZ area, common treatment plants will be located outside the CRZ area and treated waste water will be recycled for different activities in DSIR. Only non-recyclable treated wastewater will be discharged into sea, downstream of the proposed Kalpasar alignment. Location of discharge will be selected at a later stage, based on a detailed marine ecological impact assessment.

It was further submitted by the representative of the DMICDC that around 7340 ha of forests land falls within CRZ area of DSIR, all forests land will be retained. There could be some diversion of forests land required for laying of linear utility infrastructure such as pipelines/transmission lines etc., for the diversion of forests land for non-forest purposes, clearance as required under the Forests (Conservation) Act, 1980 will be obtained. It is further submitted that Velavadar National Park situated at a distance of 3.5 km from the CRZ boundary of DSIR. Application for seeking wildlife clearance for the same has already been made.

As per the CRZ map prepared by the Institute Remote Sensing, Anna University, Chennai, 23.13 sq.km area fall within CRZ-I(A) categories, 290.2 sq.km area fall within CRZ-I(B) area and 40.38 sq.km area fall within CRZ-III area. CRZ-IA includes only mudflats, mangroves, and buffer (50m) around mangrove patches. No development proposed in both CRZ-IA and CRZ-IB categories.

It was further assured that facilities for treatment or disposal of solid waste or liquid effluent will not be located in CRZ area. Treated effluent would be reused for irrigation of land and gardens, parks and agriculture fields and industrial uses. Sewage from tourism will be collected through centralized sewage collection system and will be transported into one of the Sewage treatment Plants(STPs) proposed for treatment and further disposal of sewage for the entire DSIR. These STPs would be located outside the CRZ area. Excess of treated effluent if any, will be disposed off in the Gulf of Kambhat downstream of the proposed location of Kalpasar project. Location of this disposal point would be selected after environmental assessment study.

It was submitted by the representative of the DMICDC that solid waste from tourism resorts will be taken to the proposed Integrated Waste Management Facility(IWMF) which includes facilities for waste collection, storage, waste processing(segregation, reuse, recycle, recovery of valuables etc.), Waste treatment and disposal. An area of @200 ha has been identified for the IWMF and this will be located outside CRZ area. This would be developed as per the guideline provided by the CPHEEO, MSW Rules, Haz Waste Rules and GPCB. Municipal solid waste generation from tourism resort proposed in CRZ area is estimated be around 285 TPD. This waste will be treated in Integrated Waste Management

Facility proposed in non- CRZ area. Hazardous waste generated from tourism resorts during both construction phase(such as paint waste, used oil, etc) and operation phases(used oil, paint waste, insecticides etc.) will be treated separately in accordance with Hazardous Waste Rules, and will be disposed of in the IWMF.

It was submitted by the representative of the DMICDC that no impoundment , damming, culverting, realignment or other changes to the hydrology of the watercourses or aquifers is proposed. All structures would be provided with storm water drainage network which will collect the storm water and send it in nearby water channel such as creek, river or sea. To control this flooding , it is proposed to do peripheral bunding and training of rivers and associated water channel in non-CRZ area so that the flood water are confined within the banks of river/creek. Water storage facilities may be created in CRZ area , to support water sustainability for DSIR. Brine from desalination of brackish ground water may be considered for beneficial use such as salt pans. Detailed assessment to represent the change in natural drainage pattern of the area due to flood protection measures , and due to other natural/human -induced disaster (tsunami, sea rise) will be undertaken through an expert agency. Renewable energy source such as solar or wind energy is also being considered in the proposed DSIR, which may be proposed in CRZ area.

It was further submitted by the representative of the DMICDC that based on various impacts assessed and the alternatives evaluated for the proposed development, it can be concluded that livelihood security of the fishing and coastal communities is not impacted. Ecologically sensitive coastal features are avoided and coastal hazards relating to erosion do not get influenced.

*The Gujarat Coastal Zone Management Authority in its 22nd meeting, which was held on 30-05-2014, deliberate the proposal of Delhi Mumbai Industrial Development Company Limited for Development of Dholera Special Investment Region, and after detailed discussion, the Authority decided to recommend to the Ministry of Environment and Forests, Government of India to grant CRZ clearance for proposed development of Dholera Special Investment Region in Non-Forests area for planned activities at Dholera, Dist: Ahmedabad with some specific conditions*

In view of above, the State Government hereby recommends to the Ministry of Environment and Forests, GOI, to accord the environmental clearance under the CRZ notification for proposed development of the Dholera Special Investment Region by DMICDCL, with strict compliance of the following specific conditions:

**Specific Conditions:**

1. The provisions of the CRZ notification of 2011 shall be strictly adhered to by the DMICDCL

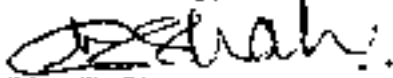


- carried out in CRZ areas and no activities shall be started in CRZ area without obtaining necessary permission under CRZ Notification 2011.
3. All necessary clearance/permissions shall be obtained by the DMICDC from the competent authority including permissions under Forests (Conservation) Act, and Wildlife (Protection) Act, as and when developmental activities take place.
  4. The DMICDC shall have to obtain all necessary permission from GMB for marine structures.
  5. Coastal area environmental conservation plan shall be prepared to conserve sensitivities as part of the DSIR development by the DMICDCL.
  6. No existing mangroves shall be damaged/destroyed due to proposed development of DSIR by the DMICDCL.
  7. Detailed Wetland conservation action plan will be formulated and implemented by the DMICDC in accordance with size and importance of wetland in the region.
  8. The Development plan for DSIR shall be revised in due course of time, based on the CRZ demarcation undertaken as per CRZ Notification 2011 and only permissible activities shall be planned in CRZ area.
  9. All construction materials are to be kept covered in storage depots or in any other enclosed space to minimize the impact on ambient air quality.
  10. M/s DMICDCL shall take necessary steps to reduce and suppress dust emission by water spraying and other effective measures.
  11. M/s DMICDCL shall take all necessary precaution so that no soil banks are formed as a result of pipeline laying. Also it shall be ensured that minimum alteration of sedimentary patterns of the flowing water bodies take place.
  12. The DMICDCL shall make sure that no structure obstructing natural flow of water will be raised. Land shall be brought back to the original position after the work is completed.
  13. All the recommendations and suggestions given by the SENES Consultants India Pvt Ltd in their Comprehensive Environment Impact Assessment Study shall be implemented strictly by M/s DMICDCL.
  14. Comprehensive Environment Impact Assessment report shall be submitted to this department and the recommendations/suggestions given in it shall be implemented. The construction debris and sewage generated during the construction phase shall not be discharged into the creek, sea, estuary or into the CRZ area. The debris shall be removed from the construction site immediately after the construction is over and shall be disposed off as per the guidance of the GPCB.
  15. The construction camps shall be located outside the CRZ area and the construction labours shall be provided with the necessary amenities, including sanitation, water supply and fuel and it shall be ensured that the environmental conditions are not deteriorated by the construction labours.

16. The groundwater shall not be tapped to meet with the water requirements during construction or operation phase in any case.
17. A Disaster Management Plan to meet with any eventualities that may arise during construction and/or operation phase shall be prepared implemented.
18. The pipeline shall be monitored regularly by the company and it shall be ensured that there is no leak from the pipeline.
19. Necessary permissions from different departments/ agencies under different laws/ acts shall be obtained before commencing the construction / pipeline laying activities.
20. A separate Environmental Cell with qualified personnel shall be created to implement the Environmental Management Plan and a separate budget shall be provided for this purpose.
21. The cost of the external agency that may be appointed by this department for supervision / monitoring of the project activities during construction/ operational phases shall be borne by M/s DMICDCL.
22. A large scale socio-economic upliftment program in consultation with the District Collector/ DDO shall be carried out. A separate budget shall be provided for this purpose and details be furnished to this Department from time to time.
23. Environmental Audit report shall be submitted every year. The report shall also cover the change in the coastal and marine environment enroute the proposed pipeline and around due to commissioning of the proposed activities.
24. Any additional condition that may be imposed by this department/Ministry of Environment and Forests, Government of India from time to time shall have to be complied with by M/s DMICDCL.

With Regards,

Yours Sincerely,



(Hardik Shah)

*Encl: As above*

Copy to:

✓ Shri Amitabh Kant, IAS

Chief Executive Officer & Managing Director .

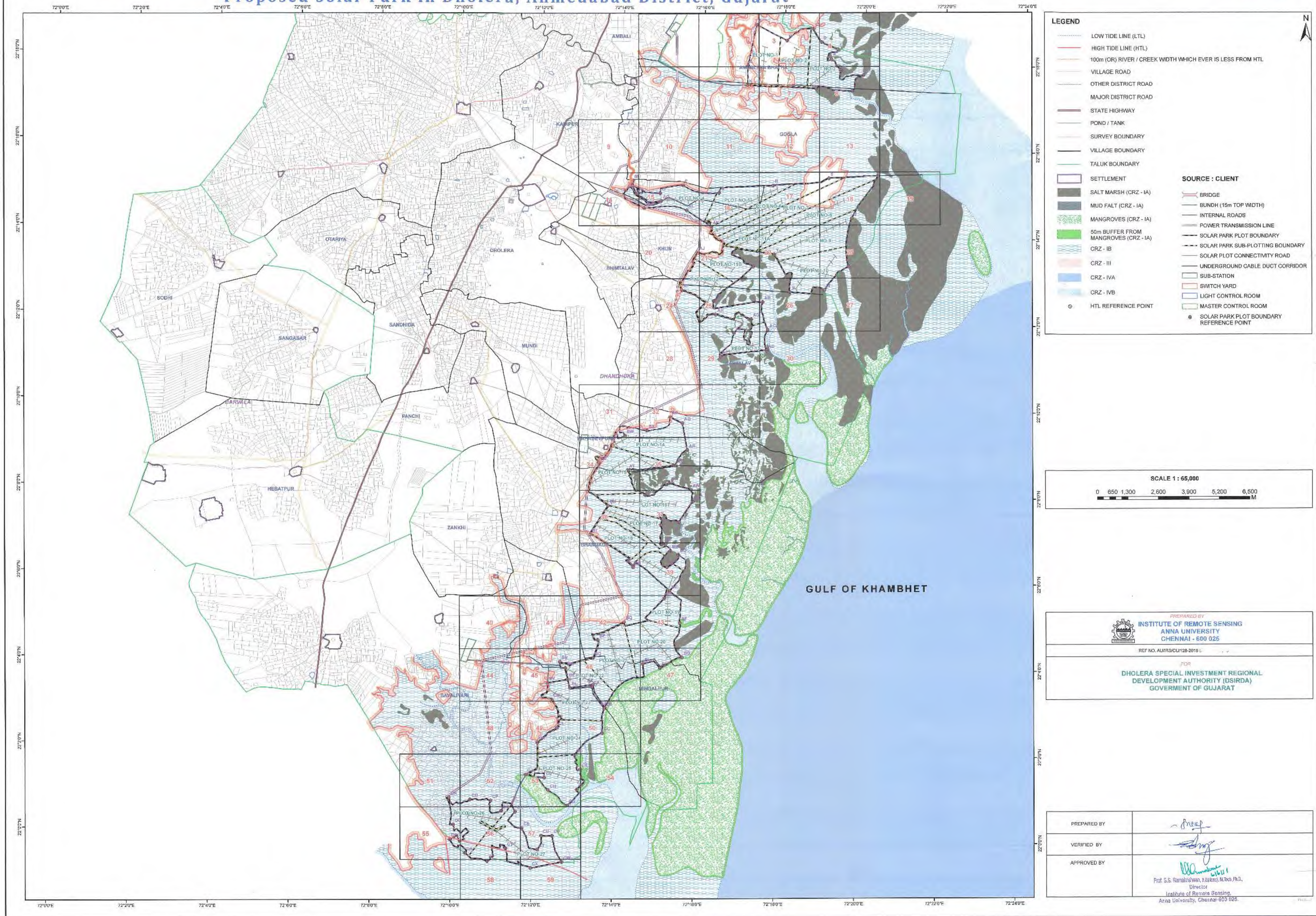
M/S Delhi Mumbai Industrial Corridor Development Corporation Limited,

1-B, 3rd Floor, Hotel Ashoka, Diplomatic Enclave, 50-B, ChanakyaPuri, New Delhi-110021 – for information and necessary action at your end please.



# Demarcation of High Tide Line, Low Tide Line and Coastal Regulation Zone for the Proposed Solar Park in Dholera, Ahmedabad District, Gujarat

INDEX MAP





**Direct Mail: On Demand**



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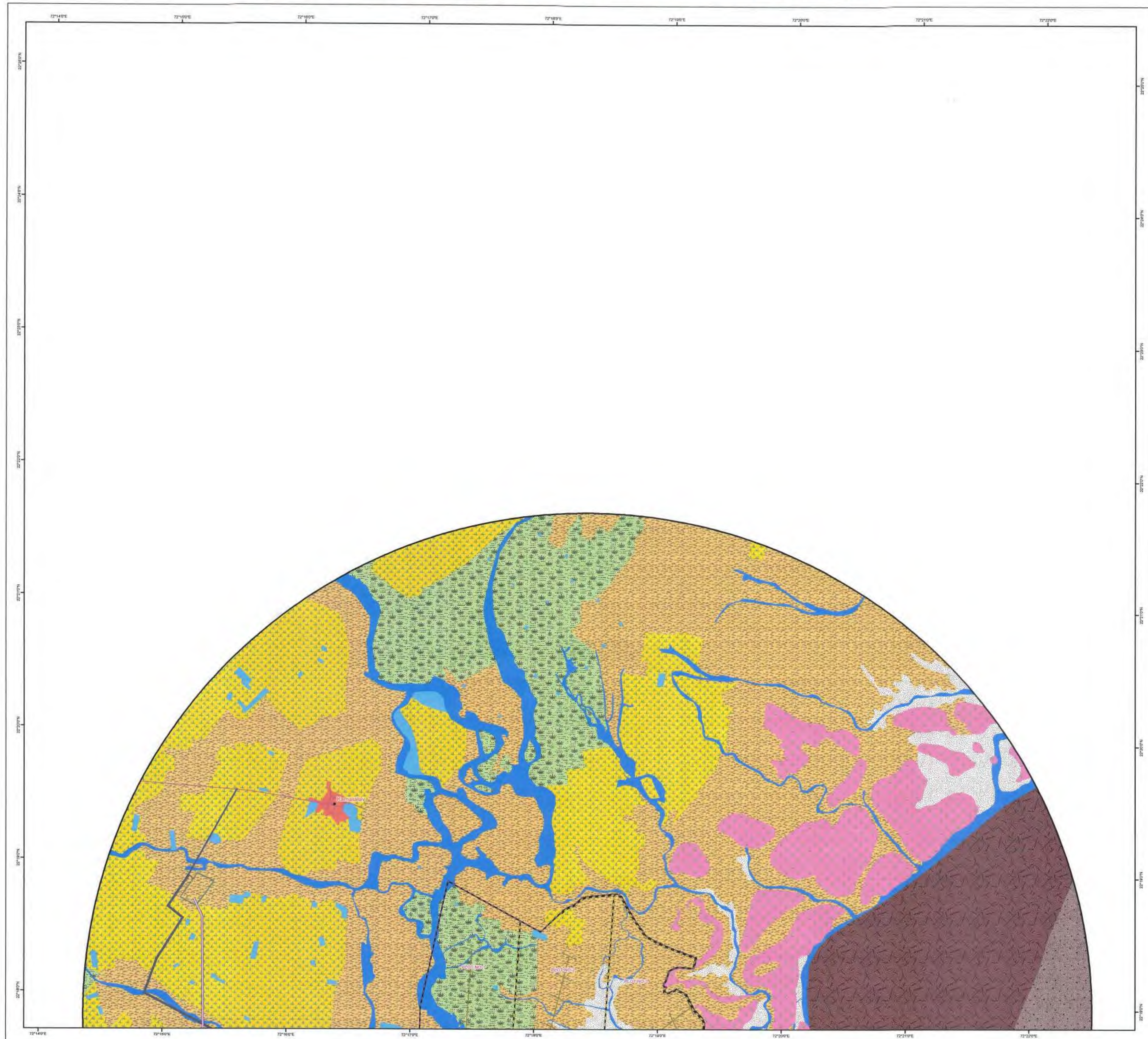
(CHOLERA SPECIAL INVESTMENT REGIONAL  
DEVELOPMENT AUTHORITY (CSIRDA)  
GOVERNMENT OF GUJARAT

Prof. S.E. Hamed (hamed@uoi.edu.iq)  
University of Al-Qadisiyah  
Iraq



# Landuse / Landcover Map (7Km Radius) for the Proposed Solar Park in Dholera, Ahmedabad District, Gujarat

SHEET NO: 01 / 07



## Legend

- ROAD
- ABANDONED AQUACULTURE
- AQUACULTURE
- BUILTUP LAND
- CROPLAND
- LAND WITH SCRUB
- LAND WITHOUT SCRUB
- MANGROVES
- MUDFLAT
- PLANTATION
- POND / TANK
- RIVER / CREEK / STREAM / CANAL
- SALT AFFECTED LAND
- SALT MARSH
- SALT PAN
- SEA
- WETLAND / WATERLOGGED
- 7Km BUFFER FROM THE PROJECT SITE

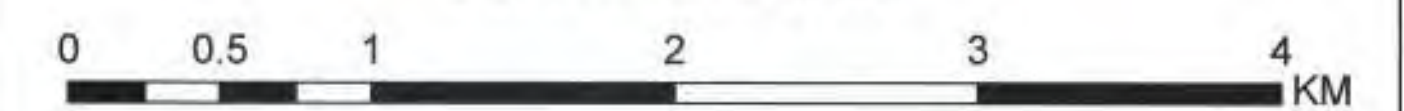
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- BRIDGE
- BUNDH (15m TOP WIDTH)
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- SOLAR PARK PLOT BOUNDARY
- SOLAR PARK SUB-PLOTTING BOUNDARY
- SOLAR PLOT CONNECTIVITY ROAD
- UNDERGROUND CABLE DUCT CORRIDOR
- SUB-STATION
- SWITCH YARD
- LIGHT CONTROL ROOM
- MASTER CONTROL ROOM

## INDEX MAP



SCALE : 1: 25,000



PREPARED BY  
**INSTITUTE OF REMOTE SENSING**  
**ANNA UNIVERSITY**  
**CHENNAI - 600 025**

REF NO. AU/IRS/CU/128-2018

FOR  
**DHOLERA SPECIAL INVESTMENT REGIONAL**  
**DEVELOPMENT AUTHORITY (DSIRDA)**  
**GOVERNMENT OF GUJARAT**

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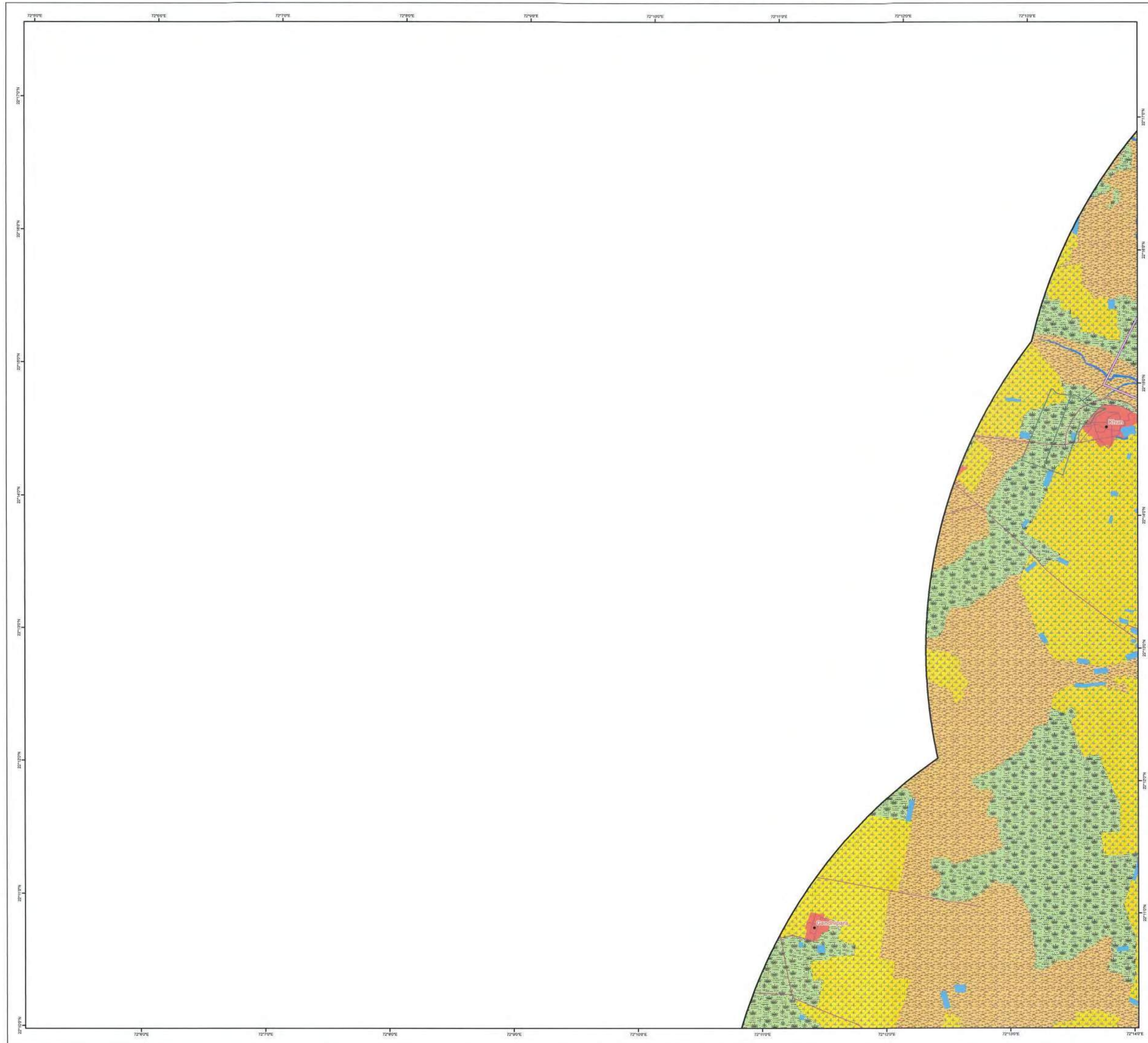
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Prof. S.S. Ramakrishnan, B.E.(Hons), M.Tech, Ph.D.,  
Director  
Institute of Remote Sensing,  
Anna University, Chennai-600 025.



# Landuse / Landcover Map (7Km Radius) for the Proposed Solar Park in Dholera, Ahmedabad District, Gujarat

SHEET NO: 02 / 07



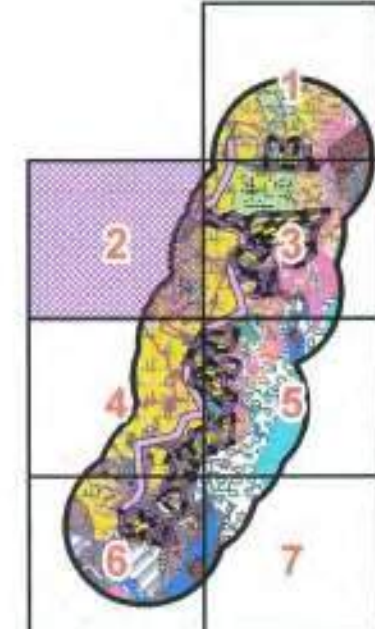
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- SALT MARSH
- SALT PAN
- SEA
- WETLAND / WATERLOGGED
- 7km BUFFER FROM THE PROJECT SITE

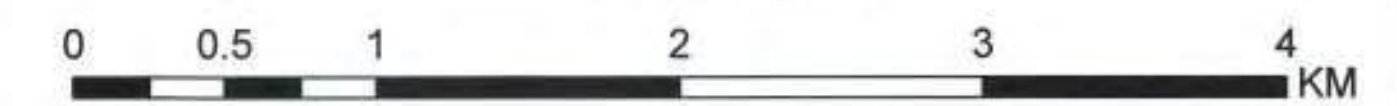
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## INDEX MAP



SCALE : 1: 25,000



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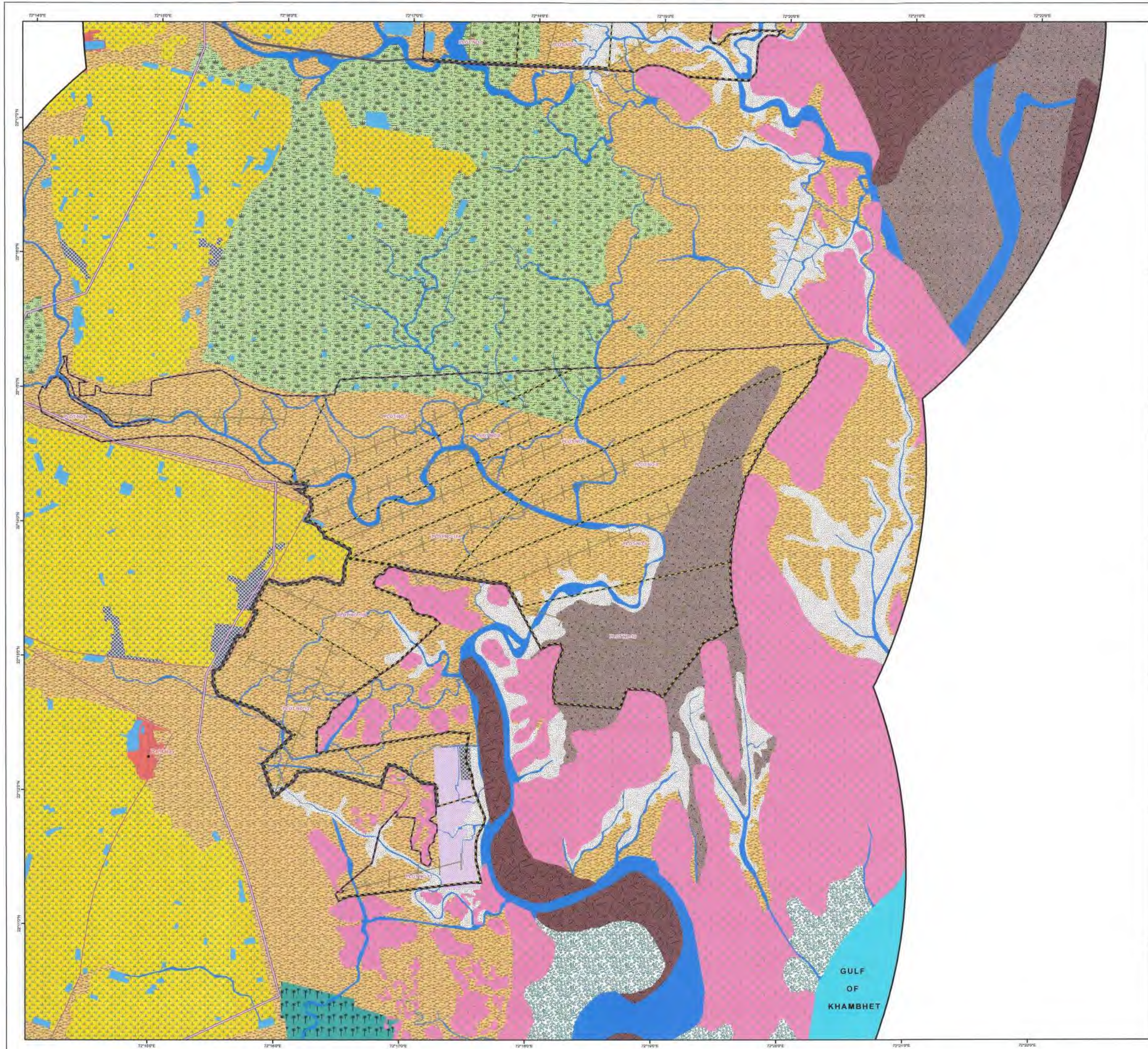
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*[Signature]*  
4/6/2018  
Prof. S.S. Ramakrishnan, B.E(Hons), M.Tech., Ph.D.,  
Director  
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# Landuse / Landcover Map (7Km Radius) for the Proposed Solar Park in Dholera, Ahmedabad District, Gujarat

SHEET NO: 03 / 07



## Legend

- ROAD
- ABANDONED AQUACULTURE
- AQUACULTURE
- BUILTUP LAND
- CROPLAND
- LAND WITH SCRUB
- LAND WITHOUT SCRUB
- MANGROVES
- MUDFLAT
- PLANTATION
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- SALT AFFECTED LAND
- SALT MARSH
- SALT PAN
- SEA
- WETLAND / WATERLOGGED
- 7Km BUFFER FROM THE PROJECT SITE

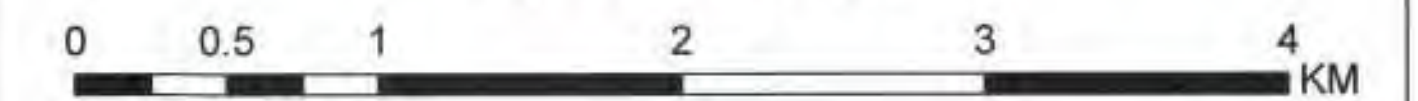
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- SOLAR PARK PLOT BOUNDARY
- SOLAR PARK SUB-PLOTTING BOUNDARY
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- UNDERGROUND CABLE DUCT CORRIDOR
- SUB-STATION
- SWITCH YARD
- LIGHT CONTROL ROOM
- MASTER CONTROL ROOM

## INDEX MAP



SCALE : 1: 25,000



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FOR  
**DHOLERA SPECIAL INVESTMENT REGIONAL  
DEVELOPMENT AUTHORITY (DSIRDA)  
GOVERNMENT OF GUJARAT**

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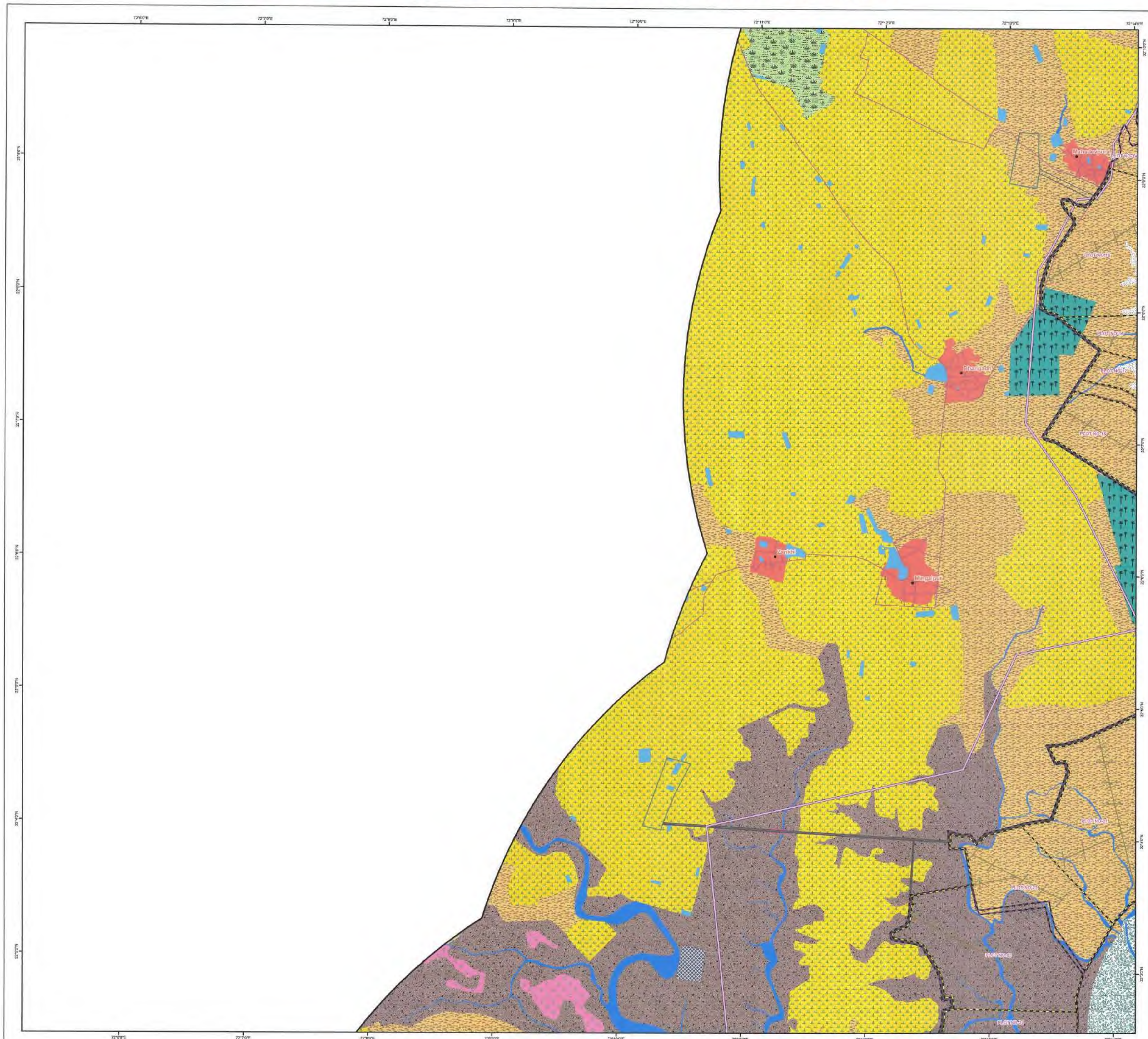
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*Approved by*  
Prof. S.S. Ramakrishnan, B.Sc(Hons), M.Tech., Ph.D.,  
Director  
Institute of Remote Sensing,  
Anna University, Chennai-600 025.



# Landuse / Landcover Map (7Km Radius) for the Proposed Solar Park in Dholera, Ahmedabad District, Gujarat

SHEET NO: 04 / 07



## Legend

- ROAD
- ABANDONED AQUACULTURE
- AQUACULTURE
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- SALT PAN
- SEA
- WETLAND / WATERLOGGED
- 7km BUFFER FROM THE PROJECT SITE

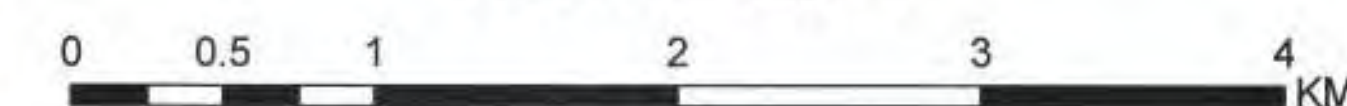
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## INDEX MAP



SCALE : 1: 25,000



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REF NO. AU/RS/CU/128-2018

FOR  
**DHOLERA SPECIAL INVESTMENT REGIONAL**  
**DEVELOPMENT AUTHORITY (DSIRDA)**  
**GOVERNMENT OF GUJARAT**

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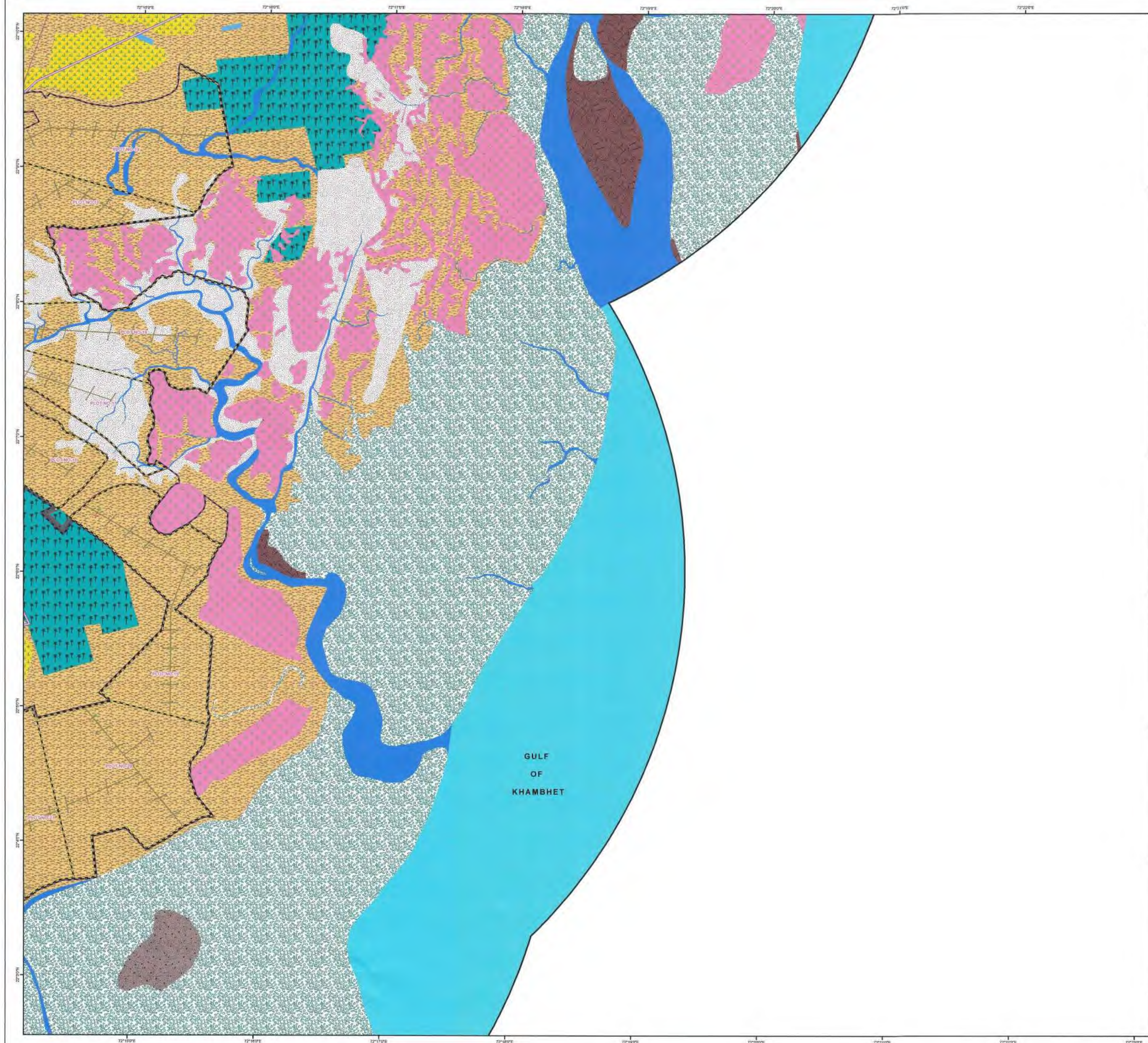
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Anna University, Chennai-600 025.



# Landuse / Landcover Map (7Km Radius) for the Proposed Solar Park in Dholera, Ahmedabad District, Gujarat

SHEET NO: 05 / 07



## Legend

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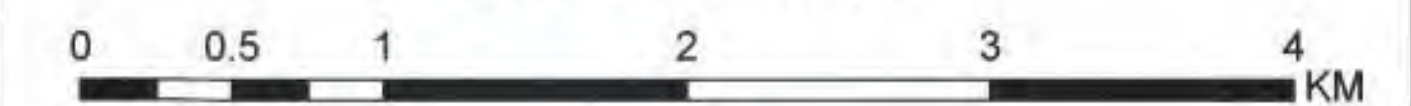
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- SWITCH YARD
- LIGHT CONTROL ROOM
- MASTER CONTROL ROOM

## INDEX MAP



SCALE : 1 : 25,000



PREPARED BY  
**INSTITUTE OF REMOTE SENSING**  
**ANNA UNIVERSITY**  
**CHENNAI - 600 025**

REF NO. AU/IRS/CU/128-2018

FOR  
**DHOLERA SPECIAL INVESTMENT REGIONAL**  
**DEVELOPMENT AUTHORITY (DSIRDA)**  
**GOVERNMENT OF GUJARAT**

PREPARED BY

*freep*

VERIFIED BY

*Shmy*

APPROVED BY

*Dr. S.S. Ramakrishnan*  
4/6/18  
Prof. S.S. Ramakrishnan, B.Tech., M.Tech., Ph.D.  
Director  
Institute of Remote Sensing,  
Anna University, Chennai-600 025.



# Landuse / Landcover Map (7Km Radius) for the Proposed Solar Park in Dholera, Ahmedabad District, Gujarat

SHEET NO: 06 / 07



## Legend

- ROAD
- ABANDONED AQUACULTURE
- AQUACULTURE
- BUILTUP LAND
- CROPLAND
- LAND WITH SCRUB
- LAND WITHOUT SCRUB
- MANGROVES
- MUDFLAT
- PLANTATION
- POND / TANK
- RIVER / CREEK / STREAM / CANAL
- SALT AFFECTED LAND
- SALT MARSH
- SALT PAN
- SEA
- WETLAND / WATERLOGGED
- VELAVADAR NATIONAL PARK
- 7Km BUFFER FROM THE PROJECT SITE

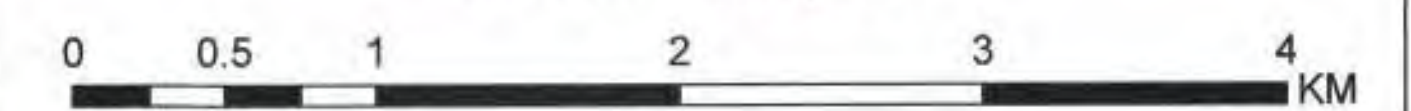
## SOURCE : CLIENT

- BRIDGE
- BUNDH (15m TOP WIDTH)
- INTERNAL ROADS
- POWER TRANSMISSION LINE
- SOLAR PARK PLOT BOUNDARY
- SOLAR PARK SUB-PLOTTING BOUNDARY
- SOLAR PLOT CONNECTIVITY ROAD
- UNDERGROUND CABLE DUCT CORRIDOR
- SUB-STATION
- SWITCH YARD
- LIGHT CONTROL ROOM
- MASTER CONTROL ROOM

## INDEX MAP



SCALE : 1: 25,000



PREPARED BY  
**INSTITUTE OF REMOTE SENSING**  
**ANNA UNIVERSITY**  
**CHENNAI - 600 025**

REF NO. AU/RS/CU/128-2018

FOR  
**DHOLERA SPECIAL INVESTMENT REGIONAL  
DEVELOPMENT AUTHORITY (DSIRDA)**  
**GOVERNMENT OF GUJARAT**

PREPARED BY

*[Signature]*

VERIFIED BY

*[Signature]*

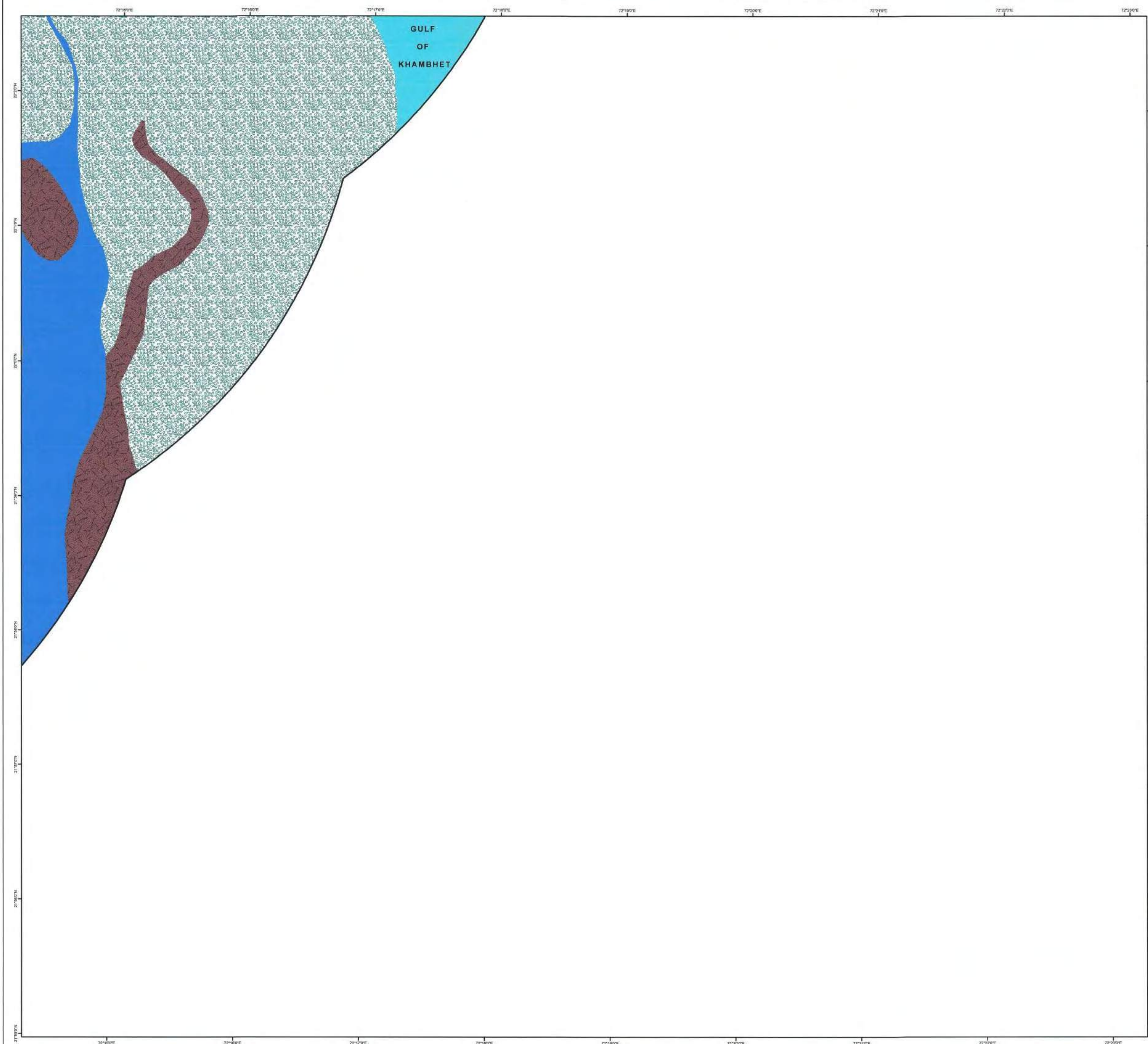
APPROVED BY

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Prof. S.S. Rameshkrishnan, B.Engg, M.Tech, Ph.D.,  
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# Landuse / Landcover Map (7Km Radius) for the Proposed Solar Park in Dholera, Ahmedabad District, Gujarat

SHEET NO: 07 / 07



## Legend

- ROAD
- ABANDONED AQUACULTURE
- AQUACULTURE
- BUILTUP LAND
- CROPLAND
- LAND WITH SCRUB
- LAND WITHOUT SCRUB
- MANGROVES
- MUDFLAT
- PLANTATION
- POND / TANK
- RIVER / CREEK / STREAM / CANAL
- SALT AFFECTED LAND
- SALT MARSH
- SALT PAN
- SEA
- WETLAND / WATERLOGGED
- 7Km BUFFER FROM THE PROJECT SITE

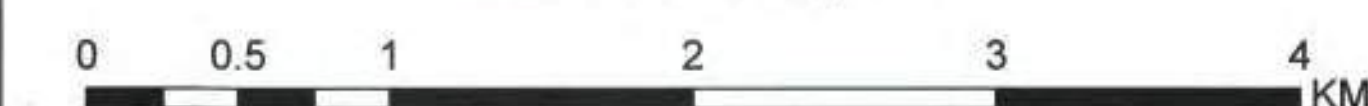
## SOURCE : CLIENT

- BRIDGE
- BUNDH (15m TOP WIDTH)
- INTERNAL ROADS
- POWER TRANSMISSION LINE
- SOLAR PARK PLOT BOUNDARY
- SOLAR PARK SUB-PLOTTING BOUNDARY
- SOLAR PLOT CONNECTIVITY ROAD
- UNDERGROUND CABLE DUCT CORRIDOR
- SUB-STATION
- SWITCH YARD
- LIGHT CONTROL ROOM
- MASTER CONTROL ROOM

## INDEX MAP



SCALE : 1: 25,000



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CHENNAI - 600 025

REF NO. AU/IRS/CU/128-2018

FOR

DHOLERA SPECIAL INVESTMENT REGIONAL  
DEVELOPMENT AUTHORITY (DSIRD)  
GOVERNMENT OF GUJARAT

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VERIFIED BY

*[Signature]*

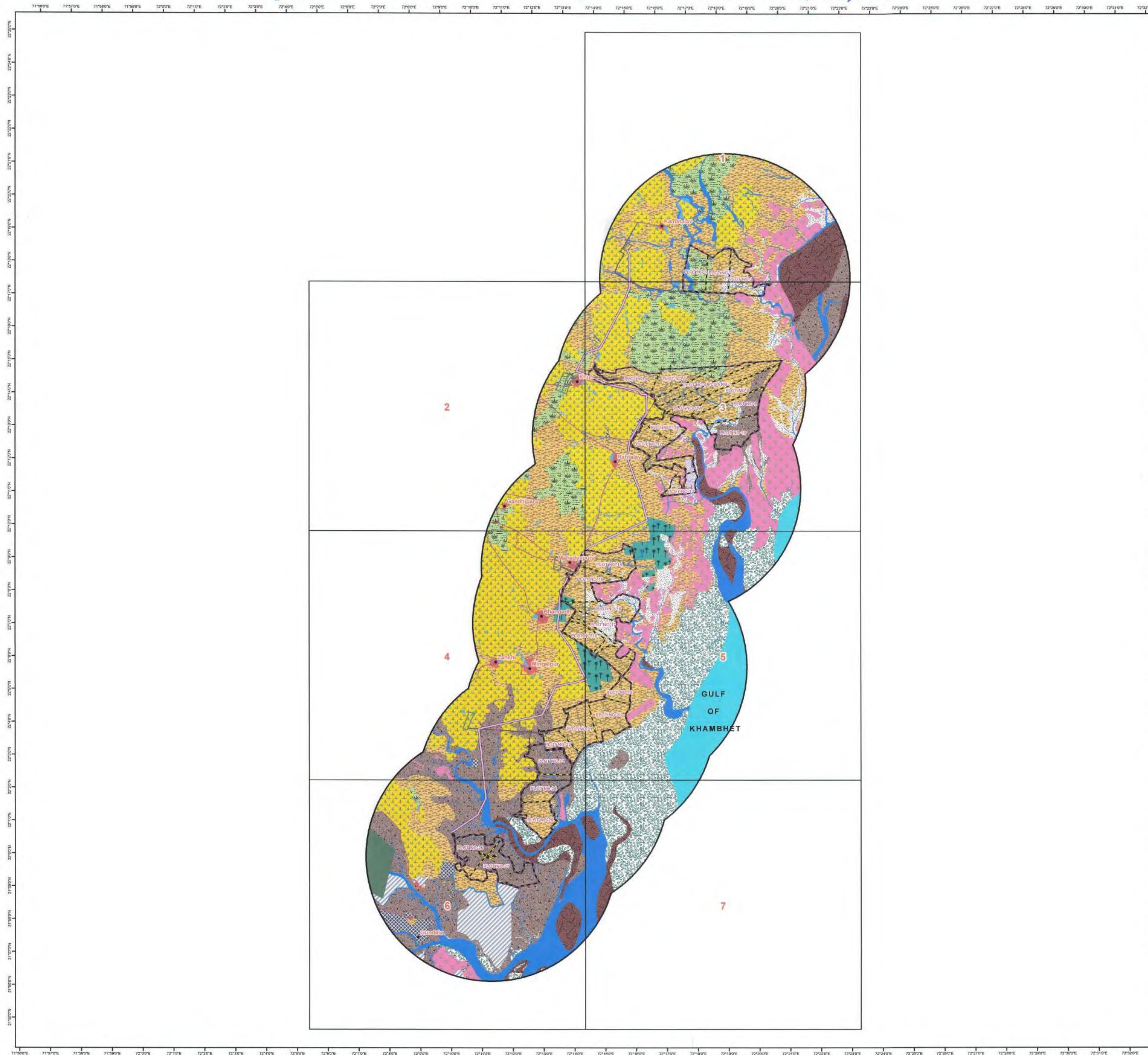
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# Landuse / Landcover Map (7Km Radius) for the Proposed Solar Park in Dholera, Ahmedabad District, Gujarat

INDEX MAP



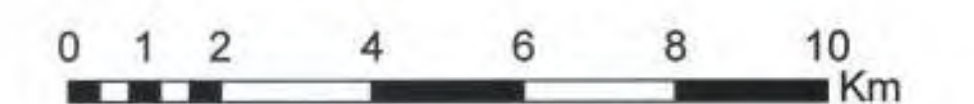
## Legend

- ROAD
- ABANDONED AQUACULTURE
- AQUACULTURE
- BUILTUP LAND
- CROPLAND
- LAND WITH SCRUB
- LAND WITHOUT SCRUB
- MANGROVES
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- SALT MARSH
- SALT PAN
- SEA
- WETLAND / WATERLOGGED
- VELAVADAR NATIONAL PARK
- 7km BUFFER FROM THE PROJECT SITE

## SOURCE : CLIENT

- BRIDGE
- BUNDH (15m TOP WIDTH)
- INTERNAL ROADS
- POWER TRANSMISSION LINE
- SOLAR PARK PLOT BOUNDARY
- SOLAR PARK SUB-PLOTTING BOUNDARY
- SOLAR PLOT CONNECTIVITY ROAD
- UNDERGROUND CABLE DUCT CORRIDOR
- SUB-STATION
- SWITCH YARD
- LIGHT CONTROL ROOM
- MASTER CONTROL ROOM

SCALE : 1 : 100,000



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**CHENNAI - 600 025**

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FOR  
**DHOLERA SPECIAL INVESTMENT REGIONAL**  
**DEVELOPMENT AUTHORITY (DSIRDA)**  
**GOVERNMENT OF GUJARAT**

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