

ENVIRONMENT AND SOCIAL DUE DILIGENCE OF AN OPERATING ROAD ASSET BETWEEN END OF KOTAKATTA BYPASS TO KURNOOL ON NH-7

Andhra Pradesh, India



JANUARY 2017

Environment and Social Due Diligence of an Operating Road Asset between end of Kotakotta Bypass to Kurnool

Prepared for

Cube Highways and Transportation Assets Advisors (P) Ltd.

Prepared by

AECOM India Private Limited

www.aecom.com

January 2017

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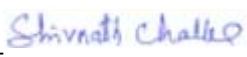
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| Revision No. 03 | 28 th November 2016 | Addressal of Cube Comments | Programme Director |  |

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List of Abbreviations

| | |
|--------|--|
| APEL | Andhra Pradesh Expressway Limited |
| APSPCB | Andhra Pradesh State Pollution Control Board |
| COD | Commercial Operation Date |
| CAP | Corrective Action Plan |
| DG | Diesel Generator |
| ESDD | Environment and Social Due Diligence |
| E&S | Environment and Social |
| ESAP | Environment and Social Action Plan |
| EC | Environment Clearance |
| EHS | Environment Health and Safety |
| EIA | Environment Impact Assessment |
| EMP | Environment Management Plan |
| FC | Forest Clearance |
| ITNL | IL&FS Transportation Networks Limited |
| IL&FS | Infrastructure Leasing and Financial Service Limited |
| IFC | International Finance Corporation |
| LHS | Left Hand Side |
| MoEF | Ministry of Environment and Forest |
| NH | National Highway |
| NHAI | National Highway Authority of India |
| O&M | Operation and Maintenance |
| PS | Performance Standard |
| PPE | Personnel Protective Equipment |
| PAF | Project Affected Population |
| RAP | Resettlement Action Plan |
| RHS | Right Hand Side |
| ROW | Right of Way |
| SPV | Special Purpose Vehicle |
| SPCB | State Pollution Control Board |

Executive Summary

The 'four lane' operating road asset is located at Kotakatta Bypass to Kurnool between 136.007 km (end of Kotakatta By pass) to 211.000 km (Kurnool Town) on NH-7 in the states of Andhra Pradesh and Telangana. The project is owned by National Highways Authority of India (NHAI) and the Operation and Maintenance (O&M) Contractor is IL&FS Transportation Networks Limited (ITNL).

The project is being operated and maintained by Andhra Pradesh Expressway Limited (APEL), a Special Purpose Vehicle (SPV) which has been incorporated and promoted by Infrastructure Leasing and Financial Service Limited (IL&FS) and ITNL for development, operation and maintenance of the operating road asset from Kotakatta Bypass to Kurnool on Build Operate Transfer (Annuity) basis. An Environmental and Social Due Diligence (ESDD) was undertaken as IFC framework and ESG related clauses developed for ISQ Asia and Road Holdco decision tree matrix for the operating road asset (project) by AECOM which was engaged by Cube Highways and Transportation Assets Advisors (P) Limited.

The project has been operated by ITNL on annuity basis and owned by the National Highways Authority of India (NHAI). The project stretch starts from Km 136.007 at Kotakatta bypass and ends at Km 211.000 at Kurnool city. The project road traverses through two (02) districts and 32 villages spread across two (02) states i.e. newly formed Telangana and Andhra Pradesh. The land use around the project is mainly seasonal agriculture and plain terrain with low water availability. AECOM undertook site visits to the project area and held consultations with local communities as well as stakeholders. In addition, a survey was also conducted to find out the status of encroachment, legal compliances and other related issues. The following are the main findings on the basis of data collection as well as field survey:

- The Provisional Commercial Operating Date (PCOD) of the project was obtained on 30th September 2009.
- The land acquisition process commenced in 2005 and the final award was declared in 2007.
- The project comprised of 197.63 hectares of land out of which 192.51 hectares is private land and 5.12 hectares is government land.
- Land was acquired from a total of 1933 project affected person in thirty two (32) villages spread across two (02) districts of Mahbubnagar (Telangana) and Kurnool (Andhra Pradesh).
- For future requirement of 3.06 hectares of land for the project, the land acquisition process will be undertaken in compliance with IFC PS 5 requirement. The land area is required for two (02) wayside amenity complexes (2.647 ha.), administrative base camp (0.18 ha.) and incomplete stretches of service roads (0.233 ha.) in three locations. These have been included in the punch list items for the road.
- The pending land acquisition will have no adverse impact on the overall functioning of the road/main carriageway.
- There are eight (08) pending arbitration cases which have been filed, which accounts to 0.41%. All the cases relate to enhancement of compensation payments.

The following table provides the gaps and recommendations on the basis of due diligence as per IFC PSs and related framework.

| S. No. | Gaps Identified | Recommendations |
|--|---|---|
| Environment and Social Management System (ESMS) | | |
| 1 | Environment & Social Management System (ESMS) has not been developed. | ITNL should develop an overarching Environment and Social Policy Statement defining the environment and social objectives and principles that would guide the project to achieve sound environment and social performance such as pollution prevention, occupational health and safety, engagement with stakeholders, grievance redressal, community engagement, and information disclosure. |
| 2 | Procedures relating to hazard/risk assessment to identify risks and impacts during the operation phase, monitoring and review (internal and external audits), training and competency, protective personal equipment (PPE) identification and usage, contractor screening and management, stakeholder engagement, external communication and grievance mechanism have not been developed as | Procedures relating to the following should be developed by ITNL as part of updation of their existing O&M Manual, <ul style="list-style-type: none"> ○ identify risks and impacts during the operation phase; ○ monitoring and review (internal and external audits); ○ training and competency; ○ protective personal equipment (PPE) identification and usage; ○ contractor screening and management; ○ community and stakeholder engagement; ○ safety audit and accident removal program; ○ procedures related to route operation and ambulance movement; |

| S. No. | Gaps Identified | Recommendations |
|--|--|---|
| | per review of the O&M Manual. | <ul style="list-style-type: none"> ○ incidence management; ○ external communication; and ○ grievance mechanism. |
| 3 | No dedicated E&S personnel has been appointed/designated on site. | An E&S expert should be appointed on site to oversee all environment and social related aspect associated with the operational road asset. He is to report directly to the APEL SPV head. |
| 4 | No training records have been maintained on site. | Documentation pertaining to attendance register and trainings on Emergency Preparedness and Response, Mock Drills and Fire Extinguishers Demo should be maintained on site for all employees (direct and indirect) working on the operational road asset. |
| 5 | Training requirements for security personnel have not been developed | Training requirement for security personnel with emphasis on community health & safety concerns as well as dealing with the community and road users during emergencies like accidents and property damage should be provided. |
| Legal | | |
| 6 | Legal Register has not been developed. | A comprehensive environmental and social legal register should be developed to ensure compliances to all applicable permit conditions and licenses as well as those additionally required to meet requirements of the applicable reference framework. |
| 7 | CTO to be applied for and obtained from APPCB for installed DG set at Toll Plaza | Consent to Operate to be obtained for installed D.G Set under Air Act at Toll Plaza |
| 8 | Hazardous waste authorization has not been obtained by M/s Shri Sai Enterprises | Hazardous waste authorization from APPCB for used oil. |
| Community Engagement and Development of Stakeholder Management Plan | | |
| 9 | Stakeholder Management Plan has not been developed. | A Stakeholder Engagement Plan to engage the various stakeholder of the project on a regular basis should be developed. The Stakeholder Engagement Plan should have elements such as identification of direct and indirect stakeholders, mapping them according to their interest and influence, plan to engage them regularly, communications methods to be used, documentation of meetings conducted and monitoring and review of the process. |
| 10 | An External Communication Procedure and formalized Grievance Mechanism has not been developed. | An external communication procedure and formalized grievance mechanism system for the community should be developed. |
| 11 | Pending arbitration cases and absence of a formalised grievance mechanism for communities. | Follow up with NHAI for early settlement of the court cases and development of formal redressal process, which provides for hassle free reporting of grievances and set procedures for recording, addressing and timelines for redressal of community grievances. This will also need to be linked to existing mechanisms within NHAI's grievances procedure. All these activities should be defined in stakeholder engagement and management plan. |
| Human Resources and Contractor Management | | |
| 12 | The HR Manual does not adequately comply with IFC PS 2. | A comprehensive HR policy, which will provide an understanding of the project's policy on Child labor, Forced labor, Gender discrimination, Equal Treatment, Freedom of association, Retrenchment policy, Employee grievance mechanism, and its applicability to contractors and contractual workers in compliance with IFC PS 2 should be developed and maintained on site. |
| 13 | No Contractor Management Plan has been developed | Formulation of a Contractor Management Plan |
| 14 | Regular monitoring (on a monthly basis) of the implementation of the contractor agreements is not been done. | Regular monitoring (on a monthly basis) of the implementation of the contractor agreements and ensure that the compliance to the applicable rules and regulations should be undertaken |
| Occupational Health and Safety | | |
| 15 | Trainings on HR Policies and Procedures | Provide trainings to employees on the purpose and implementation of the |

| S. No. | Gaps Identified | Recommendations |
|--------|---|--|
| | as part of Employees induction and refresher trainings are not provided. | mechanism as part of their induction and Refresher trainings on at least an annual basis. |
| 16 | Attendance records of drills and trainings undertaken are not maintained | Maintenance of registers and records for trainings and drills undertaken for the employees (direct and indirect). |
| 17 | Thermoplastic and pedestrian marking arrow at truck lay bye location near Kurnool city was observed to be incomplete. | Thermoplastic and pedestrian marking arrow at truck lay bye location near Kurnool city should be undertaken by ITNL. |

1.0 Introduction

Cube Highways and Transportation Assets Advisors (P) Limited (hereinafter referred to as 'Cube' or 'Client') engaged AECOM India Private Limited (hereinafter referred to as 'AECOM') to undertake an Environmental and Social Due Diligence of a 'four lane' operating road asset from Kotakotta Bypass end to Kurnool falling on National Highway - 7 (hereinafter referred to as 'Project') as per ESG related clauses in International Finance Corporation (IFC) for Road Holdco and IFC Sustainability Framework, 2012. The project is being operated and maintained by Andhra Pradesh Expressway Limited (hereinafter referred to as 'APEL'), a Special Purpose Vehicle (SPV) which has been incorporated and promoted by Infrastructure Leasing and Financial Service Limited (hereinafter referred to as 'IL&FS') and IL&FS Transportation Networks Limited (hereinafter referred to as "ITNL") for development, operation and maintenance of the operating road asset from Kotakotta Bypass to Kurnool on Build Operate Transfer (Annuity) basis.

A team of professionals from AECOM undertook the site assessment of the operating road asset located at Kotakatta Bypass to Kurnool between 136.007 km (end of Kotakatta Bypass) to 211.000 km (Kurnool Town) on NH-7 in the states of Andhra Pradesh and Telangana on 8th and 9th March, 2016. The purpose of the visit was to understand the road operational activities including present environmental and social indicator being addressed to the Project. Also, initiatives were undertaken to collect data on the road asset from relevant authorities during the site visit.

The due diligence included site visit of the road alignment, review of activities at the project, consultation with direct and indirect workers, discussions with management of APEL and ITNL, review of documents such as site specific permits/ clearances, policies and procedures of APEL and ITNL and their implementation at the project level.

The present report details out the observations made during the due diligence which have been presented in Section 4.0 along with gaps identified and recommendations to mitigate or minimize the Environment and Social (E&S) risk or impact as identified.

1.1 Objective of the Study

The main objective of the study is to ensure that the assessment identifies the environment and social risks and impacts of the project so that rationale can be provided to Cube for potential investment in the project. In specific, the objectives of the study are:

- to categorize the project as per the screening criteria of IFC Road Holdco ;
- undertake the ESDD in line with the applicable requirements detailed in IFC Road Holdco ;
- review the adequacy of the organizational capacity and management structures to manage the aspects and associated impacts; and
- develop an Action Plan, with timelines and responsibilities, to address any gaps or issues that need to be managed throughout the operational life of the project.

1.2 Scope of Work

The scope of work for the due diligence entails independent verification of all environmental and social aspects of the Project, within the reference framework. This includes the following,

- Review of the environment, health and safety and social management systems of the project proponent, i.e. the SPV and Operation and Maintenance (O&M) Contractor along with the role and influence of regulatory authorities;
- Review of the road stretch along with all associated facilities such as toll booths, control rooms, any labour/staff accommodation, onsite maintenance units and set-ups etc.;
- Status of environmental clearances, no objection certificates and applicable permits, particularly conditions that apply during the operation phase of the project;
- Consultations with the community in the immediate vicinity and adjacent to the right of way (ROW) of the road as well as any directly impacted land owners during the right of way acquisition;
- Consultations with all direct SPV and O&M employees engaged in the site offices and toll road operations along with the contracted agencies and their workers;
- Review the land acquisition process/ resettlement and rehabilitation undertaken for the project;
- Review the labour working conditions on site; and

- Review the compliance of the project with legislative requirements.

Reference Framework

The reference framework for the due diligence will be:

Categorization of the Project based on Screening Criteria: The Project is to be categorized based on the screening criteria as defined by IFC. The categorization is to be based as per the following categories,

- Category 1: Operating Roads (2 or more years);
- Category 2: Operating Roads (1 or more years but less than 2 years); and
- Category 3: Just Operational (less than 1 year) or where there is any pending Land Acquisition

IFC Road Holdco Decision Tree Matrix: The Road Holdco Decision Tree Matrix is to be used besides the screening criteria of categorization to provide the project proponent a rationale for proceeding with the acquisition process or not. For projects under operation for 2 years and above, three main criteria's comprising of aspects relating to impacts on indigenous peoples/roads through scheduled areas, litigation/other risks and impact on sensitive natural habitat will signify whether the investor should go ahead or not with the investment.

- IFC Sustainability Framework , 2012
- Applicable World Bank Group/IFC Environment Health and Safety (EHS) Guidelines, specially, the following World Bank EHS Guidelines, published on 30th April, 2007
 - General EHS Guidelines;
 - EHS Guidelines for Toll Roads.
- Applicable local, national and international environmental and social legislation.

1.3 Approach and Methodology

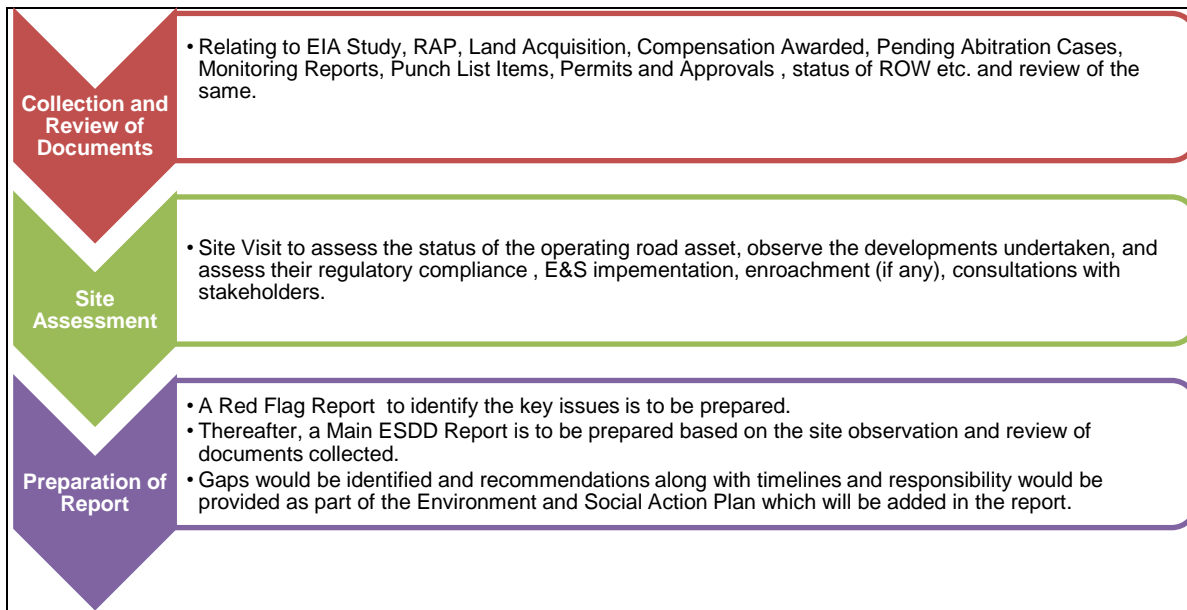
The scope of work as provided by the Client and detailed out in the proposal has been the guiding criteria for undertaking this Environment and Social Due Diligence. The approach and methodology that was adopted for this assessment has been presented in the process flowchart indicating the sequential flow of activities as provided below.

Collection and Review of Data: A detailed review and assessment of documents was undertaken in order to attain a comprehensive understanding of the project in relation to its pre-construction, construction and operational phases. At the initial phase of the due diligence exercise, collection of data relating to the different phases of the project such as Environment Impact Assessment (EIA) study undertaken for the road asset by National Highway Authority of India (NHAI), Resettlement Action Plan (RAP), Pending Land Acquisition Arbitration Cases, Grievances Raised (if any), Permits and Approvals, Monitoring Reports, Environment and Social Policies and Procedures developed and implemented for the project, records maintained etc. from NHAI authorities, Tehsildar's Office, APEL and ITNL was initiated and reviewed.

Site Assessment: As part of the due diligence purpose, a site visit was undertaken to assess the status of the Right of Way (RoW), review the implementation of the policies and procedures on site, assess if any encroachment cases have been identified along the RoW, assess the status of compliance to permitted conditions along with review of supporting documents, assess the adequacy of the roles and responsibilities of the personnel handling environmental and social risks and impacts, consultations undertaken with direct and indirect stakeholders of the project, identify gaps in compliance of labour regulatory requirements, assess if the road asset is passing through any scheduled areas, critical natural habitat and including evaluation of the adequacy of mitigation measures implemented for impacts from air and/or noise in accordance with Performance Standard (PS) 3 and World Bank Group EHS Guidelines.

Preparation of Report: Based on review of the documents collected and site visit undertaken, a key summary findings report was prepared after the site visit to highlight red flag environment and social issues that have been identified during the review. Thereafter, a detailed Environment and Social Due Diligence Report has been prepared describing the project based on environment and social footprint, applicability of the reference framework, site observations and associated non-conformance/non-compliances and area of concerns and suggestion in the form of an Environment and Social Action Plan which has detailed corrective and preventive actions, mitigation measures along with timelines, deliverables and responsibilities.

Figure 1-1: Process Flowchart adopted for Environment and Social Due Diligence



1.4 Limitations and data gaps

This report describes the results of AECOM's Environment and Social Due Diligence conducted to assess the potential EHS and social issues associated with the activities related to the operational road asset as limited in the Scope of Work section of this report. As with any assessment/due diligence study, there is a certain degree of dependence upon verbal information provided by site and company representatives, which is not readily verifiable through visual observations or supported by any available written documentation. During the course of this site assessment, AECOM has attempted to independently assess the potential presence of such conditions within the limits of the established scope of work as described in the proposal.

However, verification of potentially important facts is not always possible. AECOM shall not be held responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed by authorities or site representative at the time this assessment was performed.

This report was prepared by AECOM in accordance with the agreed upon scope of work and generally accepted scientific practice in effect at the time of AECOM's assessment during the site visit. The statements, conclusions, and opinions contained in this report are only intended to give approximations of the EHS and social condition of the project. Moreover, there are several major limitations that are inherent in the conduct of this, or any other, environmental and social due diligence.

- First, it is difficult to predict which, if any of the potential EHS and social issues identified will become actual problems in the future, EHS and social regulations continually change, as do the enforcement priorities of the applicable governmental agencies involved.
- Second, even for problems currently identified, it is often difficult and sometimes impossible to accurately estimate the liabilities that may be involved in remedying the problem(s), for the legal and technological standards for evaluating, remedying, and allocating liability for EHS and social issues which are in a constant state of change. Moreover, the liability for remedying environmental problems tends to be highly dependent upon agency negotiations and sometimes upon arbitrary and unpredictable nature of agency officials charged with such negotiations.
- Third, there is always the distinct possibility that major sources of future environmental and social liability have yet to manifest themselves to the point where they are reasonably identifiable through an external assessment such as the one conducted herein.

This report has been prepared by AECOM for the benefit of its client, Cube. AECOM's client may release the information to third parties, who may use and rely upon the information at their discretion. However, any use of or reliance upon the information by any party shall be solely at the risk of such party and without legal recourse against AECOM, its parent, its subsidiaries and affiliates; or their respective employees, officers, or directors; regardless of whether the action in which recovery of damages is

sought is based upon contract, tort (including the sole, concurrent, or other negligence and strict liability of AECOM), statute, or otherwise.

The environmental and social due diligence for Cube is largely based on the documents made available, discussions with stakeholders and observations from the site visit undertaken by AECOM professionals during the assessment process.

Wherever AECOM has not been able to make a judgment or assess any process, it has highlighted that as an information gap in the report.

1.5 Layout of the Report

The layout of the report is provided as below,

Chapter 2 outlines the Project Description

Chapter 3 provides the Applicable Regulatory Framework

Chapter 4 details the Documents Reviewed and Site Observations

Chapter 5 presents the Categorization and Environment and Social Action Plan

Annexures have also been added to the Report to support the observations made and date reviewed in preparation of the report.

Annexure A: Strip Plan for the Project

Annexure B: Perception Study undertaken for the Project

Annexure C: Encroachment Status List as provided by ITNL

Annexure D: Photo Documentation

Annexure E: Certificates obtained for the Project

2.0 Project Description

This section of the report provides the details about the project background and current status of the operating road asset. It also provides a description of project components along with associated facilities.

2.1 Project Background

The project is owned by National Highways Authority of India (NHAI) and the O&M Contractor is ITNL. The Provisional Commercial Operating Date (PCOD) of the project was obtained on 30th September 2009. The Project is yet to receive its final COD.

The project is part of National Highway 7 (NH 7) which forms an important part of the North-South Corridor Project connecting Srinagar in Jammu and Kashmir to Kanyakumari in Tamil Nadu including Salem to Cochin (Kerala) spur. NH 7 links important cities of Jabalpur, Nagpur, Hyderabad, Bangalore, Salem and Madurai. The operating road asset traverses a total length of 74.622 km. The co-ordinates of the project length have been provided below in **Table 2-1** project road is depicted in the **Figure No 2.1** in the subsequent pages. The present status of the road along with available infrastructure is provided in the **table No. 2-2**.

Further, details on areas falling under road assets, concise information on various statutory approvals (environment clearance, NOC from SPCB and RAP findings etc.) along with remaining issues to be undertaken at the end of NHAI are provided in table No. 2.3, 2.4 and 2.5 respectively.

Table 2-1: Geographical Co-ordinates of the Project Length

| | | | |
|-------------------------------------|---------------------------------|--|--------------------------------|
| Project Starting point Co-ordinates | 16°21'.25.66"N 77°56'40.30"E |  | Kotakatta Bypass |
| Project end point Co-ordinates | 15°48'29.50"N 78°1'.58°37'E |  | Kallur village in Kurnool Town |

The current features of the project have been provided below,

Table 2-2: Current Features of the Operating Road Asset

| S. No. | Features | Details |
|--------|---------------|---|
| 1 | Service Roads | Service Roads of total length of 16.012 km with 11.512 km of 7.00 m wide and 4.500 km of 5.50 m wide. |

| S. No. | Features | Details |
|--------|----------------|---|
| 2 | Bridges | <ul style="list-style-type: none"> • 3 Major Bridges <ul style="list-style-type: none"> ○ Existing structure No.163/1(Krishna Bridge) @ existing chainage of 162+800 newly constructed 2-lane structure on LHS ○ Existing structure No. 204/1(Tungabhadra Bridge) @ existing chainage of 203+400 newly constructed 2-lane structure On LHS ○ Existing structure No. 211/1(Hundri Bridge) @ existing chainage of 210+400 newly constructed 2-lane structure On RHS • 37 minor bridges <ul style="list-style-type: none"> ○ Construction of additional 2 lane bridges at 32 Locations ○ Construction of 4 lane bridges at 2 Locations in Pebbair Bypass ○ 2 No of Existing Minor Bridges have been Dismantled/abandoned and re-constructed as 4 lane Bridges at Ch: 156+416 & Ch: 170+395 ○ Construction of 4 lane bridges for Main carriageway and one additional Bridge for Service Road at Ch: 208+820 |
| 3 | Toll Plaza | One Toll Plaza at Ch:200+088 having 12 lane (5 Lane + 1 Lane for over size dimension vehicle/exempted vehicles in each direction) along with base camp and administrative blocks for O&M and toll operation. Currently, the Toll Plaza is being operated by M/s Shri Sai Enterprises engaged by NHAI. |
| 4 | Bye Lanes | <ul style="list-style-type: none"> • 4 no. truck lay byes • 47 nos. bus lays with the provision of bus shelters |
| 5 | Road Furniture | <ul style="list-style-type: none"> • Over-head Gantry Boards: 2 Lane – 6 nos., 4 Lane – 4 nos. • Hazard Marker Boards: 500 Nos. • Single Post Sign Boards: 980 nos. • Double Post Sign Boards: 120 nos. |
| 6 | Plantation | <ul style="list-style-type: none"> • Median Plantation: 51478 nos. • Avenue Plantation: 8592 nos. on LHS and 7638 nos. RHS |
| 7 | Miscellaneous | <ul style="list-style-type: none"> • 7 major junctions and 62 minor junctions • 1 Bye pass for Pebbair Village of 2.95km • 1 ROB: Widening of 1 no. existing ROB at Km. 195+423 from 2-lane to 4-lane. • 2 flyovers at chainages 196+810 (6 – Lane) and at 207+850 (6 – Lane) • 2 wayside amenity complexes cum rest areas • 44 nos. authorized median openings • 6 nos. unauthorized median openings • RCC / PCC / masonry Retaining wall, Toe walls as per requirement. • Approach Slab on the Approaches of the structures (Major Bridges, Minor Bridges, VUP, & Flyovers). • Pedestrian guard rail at urban areas, major junctions, schools & hospitals etc. • Protection work in the quadrant portion of the Structures and approaches of Major Bridges. • Thermoplastic Road marking paint as per IRC specification. • Cautionary, Mandatory and inforamatory Road signages as per IRC specifications. • W-Beam Metallic Crash Barriers at high embankment and sharp curves: 23956 Rmt- Road side and 2864 Rmt- Median • Guard Posts: 1204 nos. • Hectometer stones: 598 nos. • Kilometer stones: 148 nos. • PVC Median Delineators: 10810 nos. • MS Delineators: 450 nos. |

| S. No. | Features | Details |
|--------|----------|--|
| | | <ul style="list-style-type: none"> Syntax tanks with tap: 51 nos. |

Source: Details provided by APEL

The Strip Plan of the Operating Road Asset has been provided in *Annexure A*.

The land acquired for the operating road asset was undertaken in 2005 and completed in 2007 for a total of 197.63 hectares land area, out of which 192.51 hectares is private land and 5.12 hectares is government land. As per review of the 3G List (land acquisition records) till 2007, a total of 1933 project affected persons (PAP) were affected. The operating road asset falls under the following areas has been detailed below,

Table 2-3: Details of Areas falling under the Operating Road Asset

| State | District | Taluka | Villages | Total Land Area Acquired (in ha.) | | Project Affected Persons (PAP) | | |
|--------------|-------------|------------------|-----------------|-----------------------------------|---------------|--------------------------------|-----|----|
| | | | | Private | Government | | | |
| Telangana | Mahbubnagar | Kotakatta | Nyatavally | 4.39 | 0.64 | 40 | | |
| | | | Mummalapally | 8.96 | - | 125 | | |
| | | | Ranipet | 2.14 | 0.14 | 31 | | |
| | | | Amadabakula | 9 | 0.58 | 59 | | |
| | | | Nancharammapet | 0.56 | - | 2 | | |
| | | | Miraspally | 11.14 | 0.85 | 80 | | |
| | | Pebbair | Pebbair By pass | 19.02 | 0.07 | 103 | | |
| | | | Shakapur | 0.29 | 0.12 | 3 | | |
| | | | Thomalapally | 6.47 | - | 74 | | |
| | | | Pebbair | 7.93 | - | 340 | | |
| | | | Buniyadpur | 2.74 | 0.01 | 17 | | |
| | | | Rangapur | 6.52 | 0.19 | 77 | | |
| | | | Manopadu | Narayanpur | 5.75 | - | 104 | |
| | | Undavelly | | 11.64 | - | 69 | | |
| | | Pullur | | 13.87 | - | 144 | | |
| | | Kanchupadu | | 1.11 | - | 5 | | |
| | | Khanapur | | 7.22 | - | 41 | | |
| | | Itikyalapad | | 1.26 | - | 5 | | |
| | | Ravimakula Kunta | | 6.68 | - | 23 | | |
| | | Chandapur | | 2.76 | - | 13 | | |
| | | Manopad | | 3.93 | - | 36 | | |
| | | Itikyala | | Timmapur | 10.89 | 0.58 | 72 | |
| | | | Kondair | 10.36 | 0.25 | 88 | | |
| | | | Munagala | 7.57 | 0.03 | 63 | | |
| | | | Putandoddi | 5.23 | 0.07 | 70 | | |
| | | | Vemula | 12.03 | 0.34 | 99 | | |
| | | | Dharmavaram | 7.62 | - | 36 | | |
| | | | Vallur | 1.95 | - | 5 | | |
| | | Wanaparthy | Kadkuntla | 1.17 | - | 8 | | |
| | | | | | | | | |
| | | Andhra Pradesh | Kurnool | Kurnool | Panchalingala | 1.22 | - | 41 |
| | | | | | Mamidalapadu | 0.13 | - | 2 |
| Kallur | 0.93 | | | | 0.53 | 58 | | |
| Total | | | | 192.51 | 5.12 | 1933 | | |

Source: 3G List as verified at NHAI office during site visit

The road asset passes through plain terrain and traverses through six (06) Talukas out of which five (05) Talukas falls under Mahbubnagar District under Telangana State and one (01) Taluka under Kurnool District in Andhra Pradesh State. The operating road asset passes through a total of 32 villages, out of which 29 villages comes under Mahbubnagar District and 3 villages under Kurnool District.

An Environment Impact Assessment (EIA) and Resettlement Action Plan (RAP) were undertaken for the operating road asset by the National Highways Authority of India under the Ministry of Road Transport and Highways in March 2006. An Environment Clearance (EC) for the project was obtained vide letter no. 11013/1/2k/GM (Environment) 38, dated 16th March 2006.

The following table details out the EIA, RAP and conditions of the EC of the project,

Table 2-4: Details of the Permits and Approvals obtained for the Project

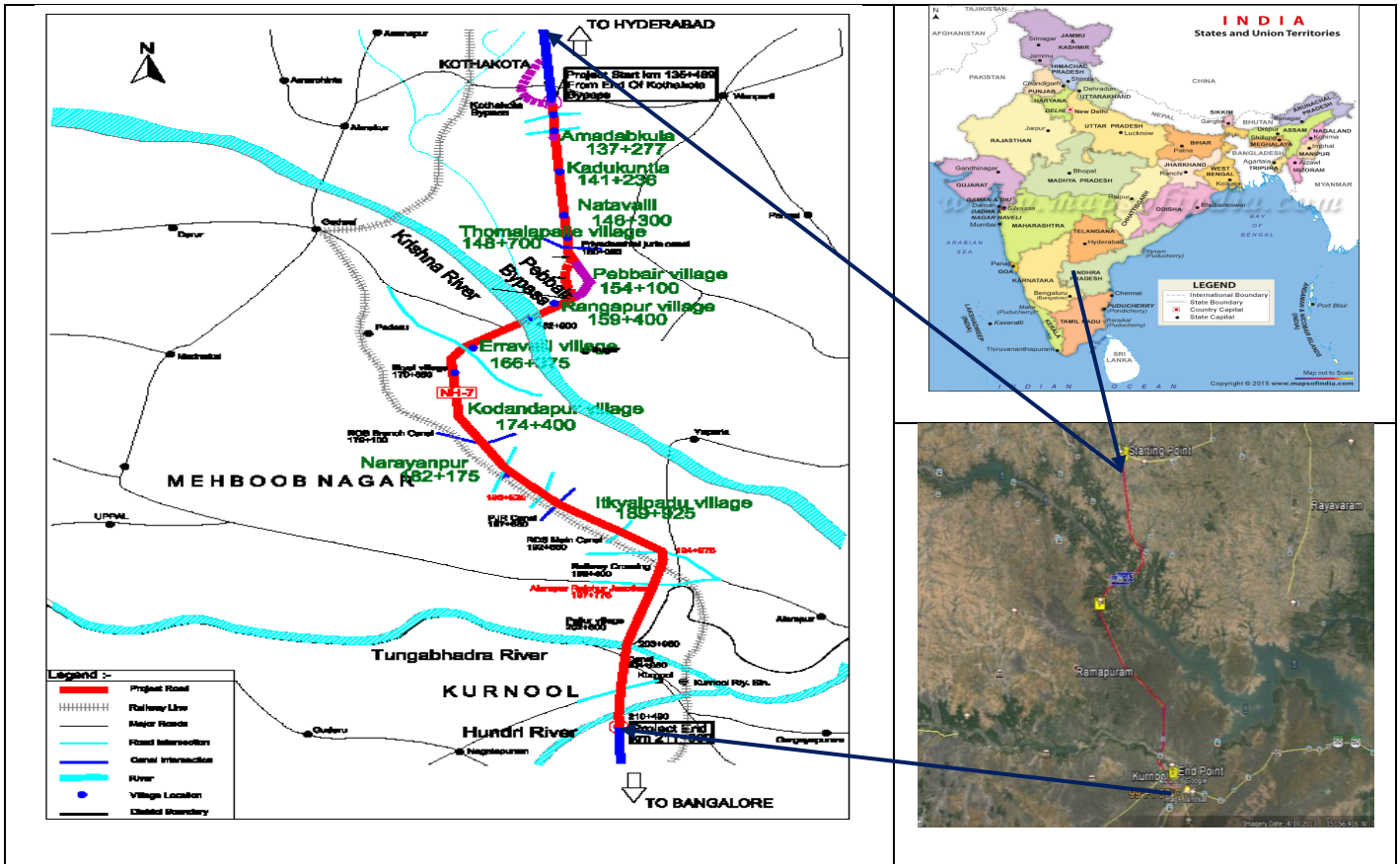
| S. No. | Studies/Permits/Approvals | Details/Conditions |
|--------|------------------------------|--|
| 1 | EIA | <p>The EIA study for the project was undertaken in March 2006. Main details of the EIA study are provided below,</p> <ul style="list-style-type: none"> • No loss of bio-diversity were noted since no rare species of plants or animals were found in the region. • No National Park or Wildlife Sanctuary is located within a radius of 10 km from the Highway. As such, the project is free from environmentally sensitive issue. • No monument protected by the Archaeological Survey of India is located adjacent to the road. • The chemical composition of the soil is not being affected in any way. • The main impact on soil relates to loss of productive soil, erosion and contamination of soil. The mitigation measure suggested is that more trees plantation should be done to enhance environment and soil conservation. • The impact on air quality relates to pollution from vehicles and material movement. Mitigation measures suggested includes policies, regulation and enforcement programmes 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 absorb some pollutants. • The impacts on noise levels relates to road traffic. • The construction and operation of the proposed project roads will not have any major impact on the surface water and the ground water quality in the area. Contamination to water bodies may result due to spilling of construction materials, oil, grease, fuel and paint in the equipment yards and asphalt plants. But, the quantities of such spills were negligible. • The development in the study area would bring substantial changes in the land-use pattern. Even in the case of the proposed roads, acquisition of fallow lands has mainly taken place. The proposed project includes tree plantation all along the proposed new alignment especially in case of Pebbair bypass, which adds to quality of life and aesthetics of the area. • Greenbelt development was to be done along the roadside and suitable shrubs and trees were to be planted on the median to enhance aesthetics and to reduce glaring effect during night. • Impact on flora, fauna and ecosystem is negligible for the project. |
| 2 | RAP as part of the EIA study | <ul style="list-style-type: none"> • The total affected population as per the RAP mentions 3967 Project Affected Households, 8033 Project Affected Families and 19154 Project Affected Persons. • The total livelihood affected families accounts to approximately 9.4 percent in the project area. • The total area to be acquired that as mentioned in the RAP was 153.36 hectares out of which 149.41 hectares was private land and 3.95 hectares was government land. A total of 33 villages were mentioned to be affected. • The estimated budget for land and asset acquisition was estimated to be INR 2511.05 lakhs. • A census survey of 100 percent directly affected families and 25 percent socio-economic survey was undertaken. • Seven (07) FGDs and (07) public consultations were held during the survey activity. |

| S. No. | Studies/Permits/Approvals | Details/Conditions |
|--------|--|---|
| 3 | EC from Ministry of Environment and Forests (MoEF) | <ul style="list-style-type: none"> • The R&R Budget was estimated to be INR 251.10 million. • The land use pattern of the project area comprised of agricultural (76%), built up (14%) and barren (10%). • No forest area is acquired for the project and no wildlife sanctuary/ national park passes within the Project Influenced Area. • About 5818 trees are proposed to be felled. Three new trees are proposed to be planted against each tree felled. Total, 17454 trees are proposed to be planted. • About 3967 households, 19154 persons and 8033 families were going to be affected by the project. • The entitled persons were to be compensated as per the RAP. The total cost of the RAP was approximately INR 251.10 million. • The specific conditions mentioned in the EC are, <ul style="list-style-type: none"> ○ All conditions mentioned in the NOC accorded by APSPCB were to be strictly adhered to. ○ The major bridge across the Godavari was to be aligned and designed to prevent scouring. ○ Details of fly ash utilization were to be provided. ○ Disposal of black cotton soil was to be detailed along with rehabilitation of burrow areas. ○ Footpath was to be provided on the existing bridges along the NH. ○ Specials consideration was to be undertaken for accident prone areas for improvement of alignment along with highway safety measures and signages. ○ The design life of new pavement and overlap pavement were to be kept the same. ○ Necessary rainwater harvesting structures were to be provided along the alignment. ○ Solid waste generated was to be disposed at identified and approved locations. ○ Controlled blasting was to be resorted to while excavating the rock for laying the road on hill section. ○ The project proponent was to obtain necessary permission from the State Irrigation Department before drawing water from the river sources for the purpose of the construction activity. No groundwater was to be drawn for the project. If needed, approval from Groundwater Board is to be obtained for drawal of groundwater. ○ Longitudinal drains are to be provided all along the project road to ensure proper drainage of the area. Adequate number of culverts and under passes to act as cross drainage structures were to be provided. ○ The hot mix plant is to be located at least 500 m away from habitation and on barren land to avoid its adverse impact on the human population. ○ Felling of trees to be restricted to the barest minimum. The trees are that are removed are to be relocated to the extent possible. Suitable tree species/ vegetation which are not only pollution resistant but also minimises pollution are to be planted along the road corridor. ○ Rehabilitation and payment of compensation to the PAP are to be made as per the policy of the State Government. ○ The embankment/ slopes and the slopes left after cutting are to be provided with vegetative turving to avoid soil erosion. ○ Noise barriers are to be provided at appropriate locations particularly in the area where the alignment passes through inhabited areas so as to ensure that the noise levels do not exceed the prescribed standards. ○ The blue metal/ borrow materials are to be obtained only from the approved quarries. ○ A detailed land use plan along the road corridor is to be furnished to the |

| S. No. | Studies/Permits/Approvals | Details/Conditions |
|--------|--|--|
| | | <p>Ministry for its records and reference within six months from the date of issue of the letter.</p> <ul style="list-style-type: none"> ○ Necessary permission for tree felling from the concerned department should be obtained before commencement of the project work and copies of the same are to be submitted the Ministry. ○ Efforts are to be made to use the fly ash in the project. A plan for use of fly ash is to be prepared and submitted within 60 days in any case before starting construction on this project. ○ For road safety, IRC guidelines in respect of service roads, bus lays, inter-sections, pedestrians crossings, etc. should be strictly adhered to. Further, details of lightings, road signage and indications along the road for villages, for enhancing road safety and minimising accidents may be taken up. ● The general conditions of the EC are as follows, <ul style="list-style-type: none"> ○ Adequate provisions for infrastructure facilities including water supply, fuel and sanitation are to be ensured for construction workers during the construction phase of the project in order to avoid any damage to the environment. ○ Appropriate measures are to be taken while undertaking digging activities to avoid any likely degradation of water quality. ○ Borrow site for earth, quarry sites for road construction material and dump sites are to be identified keeping in view that no excavation or dumping on private property is carried out without written consent of the owner, no dumping is to be allowed on wetlands, forest areas or other ecologically sensitive locations, excavation work is to be done in consultation with the Soil Conservation and Watershed Development Agencies working in the area and construction spoils including bituminous material and other hazardous materials are to be allowed to contaminate water courses and dump sites should not leach into the ground water. ○ The construction material is to be obtained from approved quarries only. ○ Adequate precautions are to taken during transportation of the construction material and for quarries. ○ Borrow pits and other scars created during construction should be properly levelled. ○ Detailed plan for drainage pattern on a topo sheet is to be submitted within six months to the Ministry. ○ Detailed plan on rainwater harvesting to be prepared with budgetary implications. ○ The project is to have set up a separate environment management cell under the supervision of a Senior Executive. ○ Six monthly reporting to be submitted to the Regional Office, Bangalore. ○ Safety provisions such as bus lays, service roads intersection improvement are to be carried out by the project proponent. |
| 4 | Tree Felling Permission from Forest Department, Government of Andhra Pradesh | <ul style="list-style-type: none"> ● According to the Permission for Tree Felling to the Forest Department, Government of India dated 14th July 2006, a total of 2709 trees have been felled. The mitigation measure suggested was to plant trees twice (02) the number to trees felled i.e. 5418 are to be planted within the Right of Way. ● As per the details provided by APEL in the Asset Inventory, as on date, a total of 17000 trees have been planted on the avenue side and 45870 plants on the median side. |
| 5 | No Objection Certificate (NOC) under Air Act, 1981 and Water Act, 1974 from Andhra Pradesh State Pollution Control Board | <ul style="list-style-type: none"> ● Order No. APPCB/HYD/HYD/1183/HO/2005/-1553 dated 10th September 2005 under section 21 of the Air Act, 1981 for the Project from Andhra Pradesh Pollution Control Board (APPCB) has been obtained. This was mentioned in the EC; however, the same was not available for review during the site assessment. |

| S. No. | Studies/Permits/Approvals | Details/Conditions |
|--------|--|--|
| 6 | Contract Labour (Regulation and Abolition) Act, 1970 | <ul style="list-style-type: none"> M/s Elsamex Maintenance Services Limited has obtained Contract Labour License for 195 workers from Office of the Deputy Chief Labour Commissioner (Central) under Ministry of Labour and Employment vide letter no. 46(06)/ 2016-E3/E5 dated 7th January 2016. The license is valid upto 6th January 2017. |
| 7 | Contract Labour (Regulation and Abolition) Act, 1970 | <ul style="list-style-type: none"> Contract Labour Licenses of M/s Sai Infrastructure Solution and M/s Shri Siddi Vigneswara could not be reviewed due to non-availability of the document during the site assessment. |

Figure 2-1: Total Length of the Operating Road Asset



Punch List Items

As reported by APEL Representative, the pending Punch List items provided in the following are not completed as on date as the land acquisition process for 3.06 hectares is yet to be acquired by NHAI for these amenities. Details of the pending punch list items have been provided below,

Table 2-5: Details of pending activities in Punch List Items

| S. No. | Details of Development | Location | Name of the Village | Details | Status (as on 30 th May 2016) as provided by APEL |
|--------|-------------------------|----------------------------------|---------------------|---|--|
| 1 | Wayside Amenity Complex | Km 154.600 RHS Pebbair Bypass | Pebbair | <ul style="list-style-type: none"> A total of 1.947 hectares of land is to be acquired from ten (10) land owners. There are no encroachers, squatters and structures on the land parcels identified for | <ul style="list-style-type: none"> NHAI had awarded the compensation for 1.3 hectares of patta land. However, dates of award of payment have not been shared by NHAI. |

| S. No. | Details of Development | Location | Name of the Village | Details | Status (as on 30 th May 2016) as provided by APEL |
|--------|--|---------------------------|---------------------|---|--|
| | | | | acquisition. <ul style="list-style-type: none"> Land acquisition for 1.3 hectares has already been completed. Total of 0.647 hectares of land is to be acquired by NHAI. | <ul style="list-style-type: none"> Payment of compensation is still pending for 0.647 hectares. NHAI is of the opinion to skip out the facility at this particular location as it is only 26 Kms away from the wayside amenities provided at Km. 128 in L&T package. However, till date this has not been communicated by any letter. |
| 2 | Wayside Amenity Complex | Km 200.100 LHS | Pullur | <ul style="list-style-type: none"> A total of 2 hectares of land is to be acquired from six (06) landowners. There are no encroachers, squatters and structures on the land parcels identified for acquisition. Compensation is yet to be awarded to the landowners. | <ul style="list-style-type: none"> District Collector, Mahbubnagar opined that the compensation must be disbursed to the landowners irrespective of the land is patta / assigned / bhudhan committee. NHAI is of the opinion that Competent Authority of Land Acquisition (CALA) is the authority to disburse the compensation and they had already deposited the money with CALA. However, dates of disbursement were not shared by NHAI. |
| 3 | Administrative Base Camp | Km. 200.983 RHS | Pullur | <ul style="list-style-type: none"> A total of 0.18 hectares of land is to be acquired from four (04) landowners. There are no encroachers, squatters and structures on the land parcels identified for acquisition. | <ul style="list-style-type: none"> PD NHAI was proposing to have a meeting with District Collector, Mahbubnagar to ascertain and confirm whether 0.18 hectares can be acquired or not. |
| 4 | Major Intersection at Bellary Cross Road | Km 208.447 | Kallur | <ul style="list-style-type: none"> A famous Hanuman Temple needs to be relocated for which the temple committee is waiting for Donors. There are five (05) encroachers on this land parcel. There are six (06) structures on the land parcels. On the one side is Hanuman temple while on the other side is one (01) lodge. In addition, there are four (04) shops and one (01) tractor showroom. | <ul style="list-style-type: none"> Compensation has been awarded to the owners for the structures. However, they have not moved from the land parcels till date. For relocation of Hanuman Temple construction work was started in 2009 and stopped due to scarcity of funds. |
| 5 | 3 Nos. of Gaps in Service Road | Km 207.460 to 207.680 RHS | Kallur | <ul style="list-style-type: none"> A total of 0.12 hectares of land is to be acquired from seven (07) landowners. There are no encroachers and squatters on the land parcels identified for acquisition. There are seven (07) structures on | <ul style="list-style-type: none"> Finalization of 3A proposals is under process. As per an application written by the PD of APEL to Joint Collector, CALA, Kurnool District dated 13th April 2016, it was mentioned that 0.12 ha. was required for |

| S. No. | Details of Development | Location | Name of the Village | Details | Status (as on 30 th May 2016) as provided by APEL |
|--------|------------------------|----------------------------|---------------------|---|--|
| | | | | the land parcels. <ul style="list-style-type: none"> There is one (01) Maruti Showroom and six (06) shops on the land parcels. | continuation of service road for which land coming under Sy. No. 386/1 of Kallur village was acquired in 2006 and compensation was awarded in 2008. However, NHAI now required land in Sy .No. 386/3A which is on the other side of the Highway for construction of gaps in service roads. <ul style="list-style-type: none"> In pursuance of this requirement, 3A proposals incorporating Sy. No. 386/1 of Kallur Village was requested. |
| 6 | | Km. 209.080 to 209.190 LHS | Kallur | <ul style="list-style-type: none"> A total of 0.089 hectares of land is to be acquired from two (02) landowners. There are no encroachers, squatters and structures on the land parcels identified for acquisition. | <ul style="list-style-type: none"> Land owners are demanding enhanced compensation. |
| 7 | | Km. 209.340 to 209.400 LHS | Kallur | <ul style="list-style-type: none"> A total of 0.024 hectares of land is to be acquired from one (01) landowner. There are no encroachers, squatters and structures on the land parcels identified for acquisition. | <ul style="list-style-type: none"> Land owner is demanding enhanced compensation. |

Source: Details provided by APEL

2.2 Current Status of the Project

The project is currently operational. The present road configuration is a four lane carriageway with total length of 74.622 km. The details of the road asset in comparison with conditions provided in the Environment Clearance (EC) have been provided below,

Table 2-6: Current Status of the Project in compliance with Environment Clearance

| S. No. | Conditions of Clearance | Current Status |
|--------|---|---|
| 1 | All conditions mentioned in the NOC accorded by APSPCB were to be strictly adhered to. | All conditions stipulated by APSPCB were monitored on a day-to-day basis by the EPC Contractor and APEL during the construction phase. Compliance report of monitoring results was provided in the monthly progress report. In addition, requisite approvals have been taken for the project when necessary. |
| 2 | <ul style="list-style-type: none"> Footpath was to be provided on the existing bridges along the NH. Special consideration was to be undertaken for accident prone areas for improvement of alignment along with highway safety measures and signages. For road safety, IRC guidelines in respect of service roads, bus lays, inter-sections, pedestrians crossings, etc. should be strictly adhered to. Further, details of lightings, road signage and indications along the road for villages, for enhancing road safety and minimising accidents may | <ul style="list-style-type: none"> Underpasses include 1 vehicular underpass and 3 pedestrians/cattle underpasses. Pedestrian guard rail at urban areas, major junctions, schools & hospitals etc. Protection work in the quadrant portion of the Structures and approaches of Major Bridges. Thermoplastic Road marking paint as per IRC specification. Cautionary, Mandatory and inforatory Road signages as per IRC specifications. Illumination/Street Lights <ul style="list-style-type: none"> Service road (single arm): LSR-298, RSR-299 (total 597 No's) MCW Double Arm: 297 nos. |

| S. No. | Conditions of Clearance | Current Status |
|--------|--|---|
| | be taken up. | <ul style="list-style-type: none"> ○ MCW Single Arm: 22 nos. ○ Service Road Solar Lights: 92 nos. ○ Median Opening Solar Lights: 8 nos. ○ High Mast: 14 nos. ● HTMS <ul style="list-style-type: none"> ○ ECB: 74 nos. ○ CCTV Camera: 4 nos. ○ VMS: 7 nos. ○ MDS: 3 nos. ○ ATCC: 2 nos. |
| 3 | Adequate number of culverts is to be provided for the project. | <ul style="list-style-type: none"> ● Total 71 nos. box culverts constructed for the new carriageway out of which 2 are in the Bypass which has been constructed for 4 lane Carriageway. All the existing Box /Arch/Slab Culverts are re constructed as Box Culverts (69 Nos.). ● Total 75 nos. pipe culverts have been constructed new in the new carriageway out of which 12 Nos have been constructed in the By-pass for the entire 4 lane carriageway ● Total 63 nos. of the existing pipe culverts on the existing carriageway are also re constructed as new pipe culverts. |
| 4 | A plan for rehabilitation and compensation of project affected people is to be prepared in consultation with State Government Authorities in accordance with the provisions of the relevant Act and shall be implemented effectively. The project affected people should be adequately rehabilitated in accordance with the R&R plans approved by the competent authority. | An RAP was developed as part of the EIA study wherein the project affected population was estimated and action plan for the PAPs were prepared including estimation of budget for implementation of the RAP. Till date, all PAPs have been largely compensated as reported by NHAI. |
| 5 | Necessary permission for tree felling from the concerned department should be obtained before commencement of the project work and copies of the same are to be submitted the Ministry. | Tree Felling permission was obtained by NHAI from Forest Department, Government of Andhra Pradesh on 14 th July 2006. |
| 6 | Adequate provisioning for infrastructure facilities including water supply, fuel and sanitation is to be ensured for construction workers during the construction phase of the project in order to avoid any damage to the environment. | <ul style="list-style-type: none"> ● The labour colonies were located at least 100 mts. away from any residential area and 1 km away from any major village. ● Proper layout of labour huts and provision of proper water supply and washing facilities were also made. ● Provision of proper waste disposal facilities was also made. ● Inspections were undertaken at a regular interval to oversee that cleanliness is being adhered to. |
| 7 | Appropriate measures are to be undertaken while digging to avoid any likely degradation of water quality. | Areas where digging activities were undertaken have been graded and leveled. |
| 8 | Borrow sites for earth, quarry sites for road construction material and dump sites must be identified keeping in view, <ul style="list-style-type: none"> ○ No excavation or dumping on private property is to be carried out without written consent of the owner. ○ No excavation or dumping is to be allowed on wetlands, forest areas | Excavation on private property was carried out with the written consent of the private property. It was reported in the EC Compliance Report that steps were undertaken to ensure that construction spoils including bituminous material and other hazardous materials are not allowed to contaminate water courses and the dumped sites were secured. |

| S. No. | Conditions of Clearance | Current Status |
|--------|---|--|
| | or other ecologically valuable or sensitive locations. <ul style="list-style-type: none"> ○ Excavation work is to be done in consultation with the soil conservation and watershed development agencies working in the area. ○ Construction spoils including bituminous material and other hazardous materials is not to be allowed to contaminate water courses and the dump sites for such materials must be secured so that it does not leach into the ground water. | |
| 9 | Adequate precautions are to be taken during transportation of the construction material so that it does not affect the environment adversely. | Dumpers were used for transfer of good earth, GSB, WMM and bituminous material. Concrete mixers or dumpers fitted with tail boards were used for concrete material. Trucks/dumpers with warning signs in the rear were used for transfer of reinforcement steel. |
| 10 | Borrow pits and other scare created during the road construction is to be properly levelled and treated. | All borrow pits have been leveled. |
| 11 | The project proponent is to set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive. | An Environment Management Plan was prepared to suggest mitigation measures for risks and impacts identified for the project. The EPC Contractor was In-Charge of the Environment Management Cell whose activities were monitored regularly by ITNL. |
| 12 | A six monthly monitoring report is to be submitted to the Regional Office of the Environment Ministry in Bangalore regarding the implementation of the stipulated conditions. | Six monthly monitoring report is submitted to the Regional Office at Bangalore. |

3.0 Applicable Regulatory Framework

This chapter provides a description of the regulatory framework applicable to the Operational Road Asset. It highlights environmental, health & safety and social regulations with applicable permits and standards in association with the project. It broadly focuses on the:

- IFC Road Holdco Decision Tree;
- IFC Performance Standards;
- World Bank Environmental Safeguard Policies; and
- Applicable national and local Environmental and Social Laws, Regulations and Policies.

3.1 IFC Road Holdco Decision Tree

The IFC Road Holdco Decision Tree stipulates that any project shall meet the following criteria throughout the operational life of an investment by IFC.

- Litigation
- Other Risks
- Assessment and Management of Environment and Social Risks and Impacts
- Resettlement Action Plan
- Stakeholder/Community Engagement
- Grievance Mechanism
- Health & Safety
- Human Resources/ Contractor Management
- Pollution Prevention
- Natural Habitats
- Indigenous Peoples, tribes and communities
- Cultural Heritage

These screening criteria provide ways and means to screen the risks of the project. The applicability of Screening Criteria for the Project have been presented below,

Table 3-1: Screening Criteria of the Project

| S. No. | Screening Criteria | Applicability |
|--------|--|---|
| 1 | Litigation Cases | There are a total of eight (08) litigation cases pending accounting to 0.41%. As reported, all the pending cases relate to enhancement of compensation being sought by the landowners over and above the compensation payment awarded and received by them. |
| 2 | Other risks | No risks pertaining to any stakeholder concerns have been expressed in the public domain. |
| 3 | Assessment and Management of Environment and Social Risks and Impact | The O&M manual of ITNL requires to be updated and in line with IFC Performance Standards. |
| 4 | Resettlement Action Plan | Land was acquired for the project and final award date was declared in 2007. Payments have largely (85.7%) been disbursed to all affected persons. There are no pending cases on R&R issues relating to the project. |
| 5 | Stakeholder/ Community Engagement | A Stakeholder Engagement Plan in line with IFC Performance Standard is required to be developed and accordingly implemented. |
| 6 | Grievance Redressal | The Grievance Mechanism in place is informal. A formalized mechanism is required to be developed and information on the procedure should be disseminated to all stakeholders. |

| S. No. | Screening Criteria | Applicability |
|--------|--|---|
| 7 | Health & Safety | ITNL Management has developed adequate Health and Safety Management Procedures wherein accidents records in the past five years show a decreasing trend. This can be attributed to adoption of various safety measures by ITNL on the road asset. |
| 8 | HR/ Contractor Management | HR and Contract Management are to be made in compliance with IFC Performance Standard 2. |
| 9 | Pollution Prevention | Adequate measures have been adopted to prevent pollution. |
| 10 | Natural Habitats | No critical natural habitat was observed near the operational asset during the site assessment. The site observation and consultations conducted with APEL and ITNL representatives along with review of maps confirms that the operated road asset does not pass through any critical natural habitat. |
| 11 | Indigenous Peoples/ Tribes and communities | As per review of the EIA Report, site observation and consultations with Site Representatives, it is established that the operating road asset does not pass through any scheduled areas. |
| 12 | Cultural Heritage | As per review of the EIA Report, site observation and consultations with Site Representatives, it is established that the operating road asset does not have impact on any forms of cultural significance. |

3.2 IFC Performance Standards

The IFC Performance Standards stipulates that any project shall meet the following requirements throughout the life of an investment by IFC or other relevant financial institution:

- Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts;
- Performance Standard 2: Labour and Working Conditions;
- Performance Standard 3: Resource Efficiency and Pollution Prevention;
- Performance Standard 4: Community Health, Safety, and Security;
- Performance Standard 5: Land Acquisition and Involuntary Resettlement;
- Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
- Performance Standard 7: Indigenous Peoples; and
- Performance Standard 8: Cultural Heritage

These performance standards and guidelines provide ways and means to identify impacts and affected stakeholders and lay down processes for management and mitigation of adverse impacts. The applicability of IFC Performance Standard for the Project have been presented below,

Table 3-2: Applicability of IFC Performance Standards

| Performance Standard | Requirement | Applicability |
|---|---|---|
| Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts | <p>PS 1 establishes the importance of:</p> <ul style="list-style-type: none"> • Integrated assessment to identify the environmental and social impacts, risks, and opportunities of projects; • Effective community engagement through disclosure of project-related information and consultation with local communities on matters that directly affect them; and • The project proponent's management of environmental and social performance throughout the life of | <p>PS 1 is applicable for the project and ITNL is required to develop and implement plans and procedures commensurate with the identified risks associated during the operation phase of the project.</p> |

| Performance Standard | Requirement | Applicability |
|--|--|---|
| | the project. | |
| Performance Standard 2: Labour and Working Conditions | <p>PS 2 recognizes that the pursuit of economic growth through employment creation and income generation should be accompanied by protection of the fundamental rights of workers. The objectives of the PS 2 are:</p> <ul style="list-style-type: none"> • To promote the fair treatment, non-discrimination, and equal opportunity of workers; • To establish, maintain, and improve the worker-management relationship; • To promote compliance with national employment and labour laws; • To protect workers, including vulnerable categories of workers such as children, migrant workers, workers engaged by third parties, and workers in the client's supply chain; • To promote safe and healthy working conditions, and the health of workers; and • To avoid the use of forced labour. | <p>PS 2 is applicable to the Project and O&M Contractor, ITNL shall ensure provision of adequate facilities such as access to clean water, sanitary facilities and other necessary facilities at the site office to all employees engaged by them. ITNL is to comply to all aspects provided in PS 2.</p> |
| Performance Standard 3: Resource Efficiency and Pollution Prevention | <p>Performance Standard 3 recognizes that increased economic activity and urbanization often generate increased levels of pollution to air, water, and land, and consume finite resources in a manner that may threaten people and the environment at the local, regional, and global levels. The objectives of PS 3 are:</p> <ul style="list-style-type: none"> • To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities. • To promote more sustainable use of resources, including energy and water. • To reduce project-related GHG emissions. | <p>ITNL shall ensure implementation of the mitigation measures provided in the EMP of the EIA Study undertaken. ITNL shall also ensure that pollution control measures are implemented and monitored on a regular basis. PS 3 is therefore applicable for the project.</p> |
| Performance Standard 4: Community Health, Safety and Security | <p>PS 4 recognizes that project activities, equipment, and infrastructure can increase community exposure to risks and impacts. Its main stress is to ensure that the safeguarding of personnel and property is carried out in accordance with relevant human rights principles and in a manner that avoids or minimizes risks to</p> | <p>The communities reside about 200-500m away from the operating road asset, hence, ITNL management is required to develop a Grievance Redressal Mechanism for the communities in case of any issues emerging out of the operational asset. Hence, PS 4 is applicable for the Project.</p> |

| Performance Standard | Requirement | Applicability |
|--|---|--|
| | the Affected Communities. | |
| Performance Standard 5: Land Acquisition and Involuntary Resettlement | PS 5 recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons that use this land. Its main aim is to anticipate and avoid, or where avoidance is not possible, minimize adverse social and economic impacts from land acquisition or restrictions on land use by providing compensation for loss of assets at replacement cost and ensuring that resettlement activities are implemented with appropriate disclosure of information, consultation, and the informed participation of affected persons and community. | Land acquisition process commenced in 2005 and the final award was declared in 2007. Payments have largely (85.7%) been disbursed to all affected persons. There are no pending cases on R&R issues relating to the project. For future land acquisition pertaining to 3.06 hectares, it is recommended that the land acquisition process is to be undertaken in compliance with IFC PS 5 requirements. |
| Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources | PS 6 recognizes that protecting and conserving biodiversity, maintaining ecosystem services, and sustainably managing living natural resources are fundamental to sustainable development. This standard is aimed to promote the sustainable management of living natural resources through the adoption of practices that integrate conservation needs and development priorities. | As per the EIA Study, the project does not affect the biodiversity of the area. In addition, as per observations during the site assessment the project does not pass through any critical natural habitat/ national parks/ critical habitats. Therefore, PS 6 is not applicable to the project. |
| Performance Standard 7: Indigenous Peoples | PS 7 recognizes Indigenous Peoples as social groups with identities that are distinct from mainstream groups in national societies, and are often among the most marginalized and vulnerable segments of the population. In many cases, their economic, social, and legal status limits their capacity to defend their rights to, and interests in, lands and natural and cultural resources, and may restrict their ability to participate in and benefit from development. | Census records and public consultations indicate that the road stretch does not pass through any scheduled areas. Thus, PS 7 is not applicable to this project. |
| Performance Standard 8: Cultural Heritage | PS 8 recognizes the importance of cultural heritage for current and future generations. Consistent with the Convention concerning the Protection of the World Cultural and Natural Heritage, this Performance Standard aims to ensure that clients protect cultural heritage in the course of their project activities. In addition, the requirements of this Performance Standard on a project's use of cultural heritage are based in part on standards set by the Convention on Biological Diversity. | Three structures (temples) were observed to be within the ROW during the site assessment undertaken which do not have any archeological significance as the structures have not been identified by the Archeological Survey of India. Hence, PS 8 is not applicable to the project. |

3.3 World Bank Group EHS Guidelines

The World Bank Group EHS Guidelines ensure that the projects are developed in a manner that is socially responsible and reflects sound environmental management practices. EHS considerations into the operation and maintenance of the road asset should be considered in order to prevent and control potential impacts.

- Environmental, Health, and Safety General Guidelines; and
- Environmental, Health, and Safety Guidelines for Toll Roads.

The key requirements stated in the EHS guidelines have been discussed in **Table 3-3**.

Table 3-3: Key Requirement as per EHS Guidelines of IFC

| S. No. | Relevant Guidelines as stated in the EHS Guidelines |
|-----------|--|
| 1. | Right of Way Maintenance |
| a. | Regular maintenance of vegetation within road rights-of-way is necessary to avoid interference with vehicle travel and road maintenance. Unchecked growth of trees and plants can cover signals and signs, restrict motorist visibility and fall onto the road and overhead power lines. |
| b. | Implementation of integrated vegetation management <ul style="list-style-type: none"> • From the edge of the road area to the boundary of the right-of-way, vegetation is structured with smaller plants near the road and larger trees further away to provide habitats for a wide variety of plants and animals • Planting of native species and removal of invasive plant species • Use of biological, mechanical, and thermal vegetation control measures where practical, and avoiding use of chemical herbicides |
| 2. | Storm water Management |
| a. | Use of storm water management practices that slow peak runoff flow, reduce sediment load, and increase infiltration, including vegetated swales (planted with salt-resistant vegetation); filter strips; terracing; check dams; detention ponds or basins; infiltration trenches; infiltration basins; and constructed wetlands. |
| b. | Where significant oil and grease is expected, using oil /water separators in the treatment activities. |
| c. | Regular inspection and maintenance of permanent erosion and runoff control features. |
| 3. | Road Paving |
| a. | Paving in dry weather to prevent runoff of asphalt or cement materials. |
| b. | Use of proper staging techniques to reduce the spillage of paving materials during the repair of potholes and worn pavement. This may include covering storm drain inlets and manholes during paving operations; using erosion and sediment control measures to decrease runoff from repair sites; and utilizing pollution prevention materials (e.g. drip pans and absorbent material on paving machines) to limit leaks and spills of paving materials and fluids. |
| c. | Reducing the amount of water used to control dust, and using sweeping practices rather than washing. Collecting and returning swept material to aggregate base or disposing of solid waste. |
| d. | Avoiding the generation of contaminated runoff from cleaning of asphalt equipment by substituting diesel with vegetable oil as a release and cleaning agent; containing cleaning products and contaminated asphalt residues; scraping before cleaning; and conducting cleaning activities away from surface water features or drainage structures. |
| 4. | Waste |
| a. | Solid waste generation during operation and maintenance activities may include road resurfacing waste (e.g. removal of the old road surface material) road litter, illegally dumped waste, or general solid waste from rest areas; animal carcasses; vegetation waste from right-of-way maintenance; and sediment and sludge from stormwater drainage system maintenance (including sediment traps and oil /water separation systems). Paint waste may also be generated from road and bridge maintenance (e.g. due to removal of old paint from road stripping and bridges prior to re-painting). |
| b. | Provision of bottle and can recycling and trash disposal receptacles at parking lots to avoid littering along the road; |
| c. | Manage herbicide and paint inventories to avoid having to dispose of large quantities of unused product. |
| d. | Collecting animal carcasses in a timely manner and disposing through prompt burial or other environmentally safe methods; |
| e. | Composting of vegetation waste for reuse as a landscaping fertilizer; |
| f. | Managing sediment and sludge removed from storm drainage systems maintenance activities as a hazardous or |

| S. No. | Relevant Guidelines as stated in the EHS Guidelines |
|-----------|---|
| | non- hazardous waste based on an assessment of its characteristics. |
| g. | Management of all removed paint materials suspected or confirmed of containing lead as a hazardous waste |
| h. | Use of a system to collect paint waste when removing old paint containing lead. For a simple scraping operation, ground- covering tarps may be sufficient. For a blasting operation, an enclosure with a negative pressure ventilation system may be necessary; |
| i. | Grinding of removed, old road surface material and re-use in paving, or stockpiling the reclaim for road bed or other uses. Old, removed asphalt may contain tar and polycyclic aromatic hydrocarbons and may require management as a hazardous waste. |
| 5. | Noise |
| a. | Traffic noise is generated by vehicle engines, emission of exhaust, aerodynamic sources, and tire / pavement interaction. |
| b. | Traffic noise is generally not perceived as a nuisance for people who live more than 150 meters from heavily travelled highways or more than 30 to 60 meters from lightly travelled roads. |
| c. | Noise barriers along the border of the right-of way |
| d. | Use of road surfaces that generate less pavement / tire noise such as stone-matrix asphalt |
| e. | Control measures should include the use of personal hearing protection by exposed personnel and implementation of work rotation programs to reduce cumulative exposure. |
| 6. | Air Emissions |
| a. | Dust suppression techniques should be implemented, such as applying water or non-toxic chemicals to minimize dust from vehicle movements |
| b. | Controlling vehicle traffic through the use of traffic routes, establishment of speed limits, and on-site trained flag-people wearing high-visibility vests or outer clothing covering to direct traffic |
| 7. | Occupational Health and Safety |
| a. | Road construction and maintenance personnel, as well as landscaping workers maintaining vegetation in the rights-of-way, can be exposed to a variety of physical hazards, principally from operating machinery and moving vehicles but also working at elevation on bridges and overpasses. |
| b. | <ul style="list-style-type: none"> • Development of a transportation management plan for road repairs that includes measures to ensure work zone safety for construction workers and the traveling public; • Establishment of work zones to separate workers on foot from traffic and equipment by: • Routing of traffic to alternative roads when possible • Closure of lanes and diversion of traffic to the remaining lanes if the road is wide enough (e.g. rerouting of all traffic to one side of a multi-lane highway) • Where worker exposure to traffic cannot be completely eliminated, use of protective barriers to shield workers from traffic vehicles, or installation of channeling devices(e.g. traffic cones and barrels) to delineate the work zone • Regulation of traffic flow by warning lights, avoiding the use of flaggers if possible • Design of the work space to eliminate or decrease blind spots • Reduction of maximum vehicle speeds in work zones; • Training of workers in safety issues related to their activities, such as the hazards of working on foot around equipment and vehicles; and safe practices for work at night and in other low-visibility conditions, including use of high-visibility safety apparel and proper illumination for the work space (while controlling glare so as not to blind workers and passing motorists). |
| c. | <ul style="list-style-type: none"> • Implementation of a fall protection program that includes training in climbing techniques and use of fall protection • Installation of fixtures on bridge components to facilitate the use of fall protection systems; • Safety belts should be not less than 16 millimeters (mm) (5/8 inch) two-in-one nylon or material of equivalent strength. Rope safety belts should be replaced before signs of aging or fraying of fibers become evident; • When operating power tools at height, workers should use a second (backup) safety strap. |
| d. | <ul style="list-style-type: none"> • Use of millers and pavers with exhaust ventilation systems and proper maintenance of such systems to maintain worker exposure to crystalline silica (millers and grinders) and asphalt fumes (pavers) below applicable occupational exposure levels; • Use of the correct asphalt product for each specific application, and ensuring application at the correct temperature to reduce the fuming of bitumen during normal handling; |

| S. No. | Relevant Guidelines as stated in the EHS Guidelines |
|-----------|---|
| | <ul style="list-style-type: none"> Maintenance of work vehicles and machinery to minimize air emissions; Reduction of engine idling time in construction sites; Use of extenders or other means to direct diesel exhaust away from the operator; Ventilation of indoor areas where vehicles or engines are operated, or use of exhaust extractor hose attachments to divert exhaust outside; Provision of adequate ventilation in tunnels or other areas with limited natural air circulation; Installation of tollbooth ventilation and air filtration systems; Use of protective clothing when working with cutbacks (a mixture of asphalt and solvents for the repair of pavement), diesel fuel, or other solvents; Use of dustless sanding and blasting equipment and special containment measures for paint removal activities. Avoiding the use of lead-containing paint and using appropriate respiratory protection when removing paints (including those containing lead in older installations) or when cutting galvanized steel. |
| 8. | Community Health and Safety |
| a. | <ul style="list-style-type: none"> Installation and maintenance of all signs, signals, markings, and other devices used to regulate traffic, including posted speed limits, warnings of sharp turns, or other special road conditions; Setting of speed limits appropriate to the road and traffic conditions; Maintenance of the road to prevent mechanical failure of vehicles due to road conditions. |
| b. | An emergency preparedness and response plan in coordination with the local community and local emergency responders to provide timely first aid response in the event of accidents and hazardous materials response in the event of spills. |

3.4 Applicable Legal Requirements

As per review of the operating road asset’s operations, the following environmental and social issues under national and local regulations of India are applicable:

Table 3-4: Applicable Regulations

| S. No. | Legal Regulations |
|----------------------------------|--|
| Environment Aspects | |
| 1 | The Environment (Protection) Act, 1986 (amended in 1991) |
| 2 | The Environment (Protection) Rules, 1986 |
| 3 | The Air (Prevention & Control of Pollution) Act, 1981 |
| 4 | The Water (Prevention & Control of Pollution) Act, 1974 |
| 5 | The Noise Pollution (Regulation & Control) Rules, 2000 |
| 6 | Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008 (amended 2010) |
| 7 | The Pesticides Management Act, 2008 |
| 8 | The Forest (Conservation) Act, 1980 (amended in 1988) |
| 9 | Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016 |
| 10 | Plastic Waste (Management and Handling) Rules, 2011 |
| 11 | Municipal Solid Wastes (Management and Handling) Rules, 2000 |
| 12 | Solid Waste Management Rules, 2015 |
| Health and Safety Aspects | |
| 1 | The Pesticides Management Act, 2008 |
| 2 | Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008 (amended 2010) |
| 3 | The Motors Vehicles Act, 1988 |
| 4 | The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 |
| 5 | Fatal Accidents Act, 1855 |
| Social Aspects | |
| 1 | The National Highways Act, 1956 |
| 2 | The National Highways Rules, 1957 |
| 3 | The Bonded Labour System (Abolition) Act, 1976 |
| 4 | The Child Labour (Prohibition and Regulation) Act, 1986 |
| 5 | The Minimum Wages Act, 1948 and rules made thereunder |
| 6 | The Contract Labour (Regulation and Abolition) Act, 1970 |

| S. No. | Legal Regulations |
|--------|--|
| 7 | The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 |
| 8 | The Workmen's Compensation Act, 1923 |
| 9 | The Equal Remuneration Rules, 1976 |
| 10 | The Maternity Benefits Act, 1961 |
| 11 | The Trade Union Act, 1926 |
| 12 | The Employees Provident Funds and Miscellaneous Provisions Act, 1952 |
| 13 | The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 |
| 14 | The Payment of Bonus Act, 1965 |
| 15 | The Payment of Gratuity Act, 1972 |

4.0 Document Review and Observations

Applicability of IFC’s Sustainability Framework

Based on review of the documents provided by the site management, data available in public domain and observations made during the site visit, the details of the observations, gaps identified and recommendations suggested have been provided in the following sections.

The sections below detail the compliance of the project with respect to requirements under IFC Sustainability Framework and applicable national and local regulations to the extent possible.

4.1 Compliance with IFC Sustainability Framework and Regulatory Requirements

4.1.1 Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|--|---|---|--|---|
| 1.1 | <p>Environment and Social Assessment and Management System: The Client will conduct a process of environmental and social assessment, and establish and maintain an ESMS appropriate to the nature and scale of the project and commensurate with the level of its environmental and social risks and impacts. The ESMS will incorporate the following elements,</p> <ul style="list-style-type: none"> Policy | <p>There are no legal requirements which direct the operational facilities to develop Environment and Social Management System, however, under various regulations in India, indirect indication of management system or procedural or work instruction development does exist.</p> | <ul style="list-style-type: none"> ITNL has developed an Environment, Health & Safety Policy at the corporate level which is implemented at site. The Company has received ISO certification (ISO 9001:2008) for the project development, operation maintenance and tolling activities and advisory services at all site operation and offices. The certification is valid until 1st June 2016. The Company has also received ISO Certification (ISO 14001:2004) on Environment Management System for the same scope as the ISO 9001:2008 Certification. The certificate is valid until 23rd March 2018. ITNL has also received an OHSAS Certification (OHSAS 18001: 2007) on Occupational Health and Safety Management System for the scope as defined in ISO 9001:2008 certification. The Certificate is valid until 23rd March 2018. Copies of the certificates have been | <p>Social Policy has not been developed.</p> | <p>ITNL should develop an overarching Social Policy Statement defining the social objectives and principles that would guide the project to achieve sound social performance such as engagement with stakeholders, grievance redressal, community engagement, and information disclosure.</p> |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|--|---|---|---|--|
| | <ul style="list-style-type: none"> • Identification of Risks and Impacts • Management Programs • Organizational capacity and competency • Emergency Preparedness and Response • Stakeholder engagement • Monitoring and review • External Communication and Grievance Mechanism | | <p>attached as <i>Annexure E</i>.</p> <ul style="list-style-type: none"> • APEL has not developed an overarching social policy statement, which demonstrates the commitment of the management to manage social risks and impacts in a responsible manner. | | |
| 1.2 | <p>Policy: The Client will establish an overarching policy defining the environmental and social objectives and principles that guide the project to achieve sound environmental and social performance.</p> | <p>There are no legal regulations pertaining to this aspect</p> | <ul style="list-style-type: none"> • ITNL’s EHS Policy has been signed by the Executive Director of the Company and implemented on site from 2nd January 2012. • The EHS Policy showcases the Company’s commitment to ensure environmental conservation and health and safety in all its operations. The Company is committed to the continual improvement through the incorporation of health and safety considerations towards reducing risks of injury and ill health to all personnel, efficient use of resources and minimization of adverse environmental impacts through prevention of pollution, ensuring compliance with all relevant legal and associated requirements and continual knowledge dissemination on EHS practices to everyone. • ITNL has not developed a legal register that comprises of applicable environment and social legal regulations in | <p>Legal Register has not been developed.</p> | <p>A comprehensive environmental and social legal register should be developed to ensure compliances to all applicable permit conditions and licenses as well as those additionally required to meet requirements of the applicable reference framework.</p> |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|--|--|---|--|---|
| | | | compliance with the project. | | |
| 1.3 | <p>Identification of Risks and Impacts: The client will establish and maintain a process for identifying the environmental and social risks and impacts of the project. The type, scale, and location of the project guide the scope and level of effort devoted to the risks and impacts identification process. The scope of the risks and impacts identification process will be consistent with good international industry practice, and will determine the appropriate and relevant methods and assessment tools.</p> | <ul style="list-style-type: none"> The Environment (Protection) Act, 1986 (amended in 1991) The Environment (Protection) Rules, 1986 | <ul style="list-style-type: none"> An Environment Impact Assessment (EIA) and Resettlement Action Plan (RAP) were undertaken for the operating road asset by the National Highways Authority of India under the Ministry of Road Transport and Highways in March 2006. An Environment Clearance (EC) for the project was obtained vide letter no. 11013/1/2k/GM (Env.) 38, dated 16th March 2006. | No gaps are identified for this aspect. | No recommendations |
| 1.4 | <p>Management Programs: The client will establish and maintain a process for identifying the environmental and social risks and impacts of the project. The type, scale, and location of the project guide the scope and level of effort devoted to the risks and impacts identification process. The scope of the risks and</p> | There are no legal regulations pertaining to this aspect | <ul style="list-style-type: none"> ITNL has developed an Operation and Maintenance (O&M) Manual for the operational road asset. The document provided for review was an approved copy, approval was provided by the Project Director of NHAI. The Contractor engaged by them for the O&M phase is required to adhere to this Manual. The following procedures have been included within the O&M Manual, <ul style="list-style-type: none"> Inspection and Reporting: As per review of the documents, it was observed that daily inspection report, before and rainy season inspection report and monthly O&M inspection report is maintained on site. | Procedures relating to hazard/risk assessment to identify risks and impacts during the operation phase, monitoring and review (internal and external audits), training and competency, protective personal equipment (PPE) | <ul style="list-style-type: none"> Procedures relating to the following should be developed by ITNL, <ul style="list-style-type: none"> identify risks and impacts during the operation phase; monitoring and review (internal and external audits); training and competency; protective personal equipment (PPE) |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|---|--------------------|--|---|--|
| | <p>impacts identification process will be consistent with good international industry practice, and will determine the appropriate and relevant methods and assessment tools.</p> | | <ul style="list-style-type: none"> ○ Maintenance Management: The routine maintenance plan and actual activities undertaken during 2015-2016 was provided for review and is noted to be maintained on site. ○ Safety Management: Records following the format provided on accidents, incidents and measures adopted have been maintained on site. Details pertaining to the accident records have been presented in Table 4.1 of the report. ○ Traffic Management: An ambulance service with a medical attendant and equipped with stretcher and first aid medicines is required to be deployed and kept at the site office premises or at the Toll Plaza at Km. 537+770 to attend to any emergencies arising out of road accidents. During the site assessment, the ambulance was observed to be parked at the designated Toll Plaza. ○ Symptoms and Treatment of Surface Defects in Highways: This procedure discusses about the types of defects in bituminous surfacing which can occur in flexible pavements such as, surface defects, cracks, deformation and disintegration and their methods of repairmen. ○ Materials and Equipments: Procedure providing a list of major equipments, tools and tackles and requirement of material during urgent repair have also been included within the manual. ○ A format relating to project deliverables and tolerance criteria which provides information on the pavement including shoulders and slopes, roadsides, drainage, bridge/culverts, road signs and road furniture and other facilities have also been included in the Manual. <ul style="list-style-type: none"> ● Procedures relating to hazard/risk assessment to | <p>identification and usage, contractor screening and management, stakeholder engagement, external communication and grievance mechanism have not been developed as per review of the O&M Manual.</p> | <p>identification and usage;</p> <ul style="list-style-type: none"> ○ contractor screening and management; ○ stakeholder engagement; ○ external communication ○ grievance mechanism. |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|--|--|---|---|---|
| | | | identify risks and impacts during the operation phase, monitoring and review (internal and external audits), training and competency, protective personal equipment (PPE) identification and usage, contractor screening and management, stakeholder engagement, external communication and grievance mechanism have not been developed as per review of the O&M Manual. | | |
| 1.5 | Organisational Capacity and Competency: The client, in collaboration with appropriate and relevant third parties, will establish, maintain, and strengthen as necessary an organizational structure that defines roles, responsibilities, and authority to implement the ESMS. Specific personnel, including management representative(s), with clear lines of responsibility and authority should be designated. key environmental and social responsibilities should be well defined and communicated to the relevant personnel and to the rest of the client's organization. Sufficient management sponsorship and human and financial | There are no legal regulations pertaining to this aspect | <ul style="list-style-type: none"> • As per the Organogram provided in ITNL O&M Manual, the O&M Manager is responsible for all activities under the operation stage of the Project. • The Organogram has been provided in Figure 4-1 provided below. • The Project Manager is principally the representative of ITNL Company and he is responsible to co-ordinate, discuss and liaise with NHAI. He is the overseer and manager of overall maintenance of the project by directly monitoring and guiding the maintenance works being planned and carried out by the Maintenance Executive and Public Relation Officer. • The Public Relation Officer reports to the O&M Manager and is responsible for handling matters with all third parties for obtaining the applicable permits, co-ordinate with local municipal bodies and co-ordinate with support agencies including police, hospital, ambulance, fire brigade, insurance etc. He is the chief of the Emergency Response and Preparedness (ERP) team for traffic management and safety of the users and workmen on the Project Highway. • The ERP team consists of three personnel working under the Traffic Safety Engineer functioning as the Highway Patrol Team. The other engineers forms part of the ERP team on a rotational basis as scheduled by the O&M Manager from time to time. • The Maintenance Executive reports to the O&M | No dedicated E&S personnel has been appointed/designated. | An E&S expert should be appointed/designated on site to oversee all environment and social related aspect associated with the operational road asset. He is to report directly to the SPV head of APEL. |

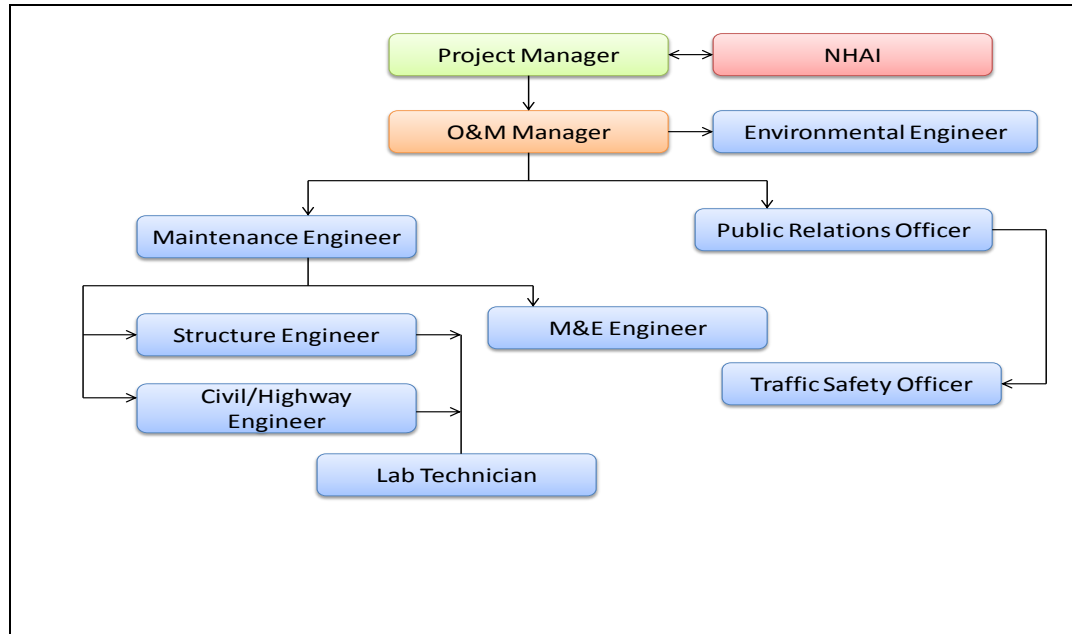
| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|---|--------------------|---|------|-----------------|
| | <p>resources will be provided on an ongoing basis to achieve effective and continuous environmental and social performance.</p> | | <p>Manager and is responsible in maintaining the project facilities to performance levels as provided in the Intervention Levels and as per the Asset Management Project Deliverables and Tolerance Criteria. He functions as the "O&M Manager in-charge" during absence of the O&M Manager.</p> <ul style="list-style-type: none"> • The Structural Engineer is responsible to perform inspections of all drainage structures, grade separator structures and other buildings of the Project. • The Civil/Highway Engineer is responsible to maintain the pavement and road marking, signages/road furniture and safety barrier, vegetation/ landscape and turfing, drainage along and across the Project Highway. • The Mechanical and Electrical Engineer is responsible in maintaining the vehicle/plant and machinery, street lighting including high mast, feeder pillars and building lighting and other electrical systems. • The Traffic and Safety Engineer is responsible for corridor control which looks at prohibiting encroachments and removal, if necessary, traffic management and safety during accident and FM events, traffic management and safety at maintenance areas. • The Environmental Engineer is deployed as and when required as per the requirement of Environmental Monitoring Activity for assessing the pollution levels periodically as per the yearly O&M Plan. The Environmental Engineer is responsible in interacting and reporting to the O&M Manager. • The Lab Technician is responsible in conducting various tests in the laboratory for various works done at site in the routine and periodic maintenance works under the guidance of the Civil/Highway Engineer and the Structure Engineer. | | |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|---|--|--|---|---|
| | | | <ul style="list-style-type: none"> On site, one (01) employee from APEL and three (03) employees from ITNL are deputed to oversee the O&M of the road asset. The APEL employee is the overall in-charge (Project Director) on site and looks after all EHSS related aspects. There is no dedicated Environment and Social personnel on site to look after the EHSS related matters on site. | | |
| 1.6 | <p>Emergency Preparedness and Response: Where the project involves specifically identified physical elements, aspects and facilities that are likely to generate impacts, the ESMS will establish and maintain an emergency preparedness and response system so that the client, in collaboration with appropriate and relevant third parties, will be prepared to respond to accidental and emergency situations associated with the project in a manner appropriate to prevent and mitigate any harm to people and/or the environment.</p> | There are no legal regulations pertaining to this aspect | <ul style="list-style-type: none"> APEL has established a procedure for Emergency Preparedness and Response to mitigate emergencies that have an impact on the health and safety arrangements. This procedure is designed to ensure the identification of the potential for emergency situations, response to such emergency situations and prevention or mitigation of associated adverse health and safety consequence is undertaken. Documentation in terms of Accident Reports are maintained on site at NPEL office. As part of the procedure, drills are undertaken to assist the employees under APEL in responding to emergencies in an efficient and effective manner. Trainings on Emergency Preparedness and Response, Mock Drills and Fire Extinguishers Demo are to be held twice in a year for all employees on site. However, attendance register and documentation records of drills undertaken are not maintained on site. | No training records have been maintained on site. | Documentation pertaining to attendance register and trainings on Emergency Preparedness and Response, Mock Drills and Fire Extinguishers Demo should be maintained on site for all employees (direct and indirect) working on the operational road asset. |
| 1.7 | Monitoring and Review: | There are no legal | <ul style="list-style-type: none"> As per the procedure on Inspection and Reporting, ITNL | No gaps are | No recommendations. |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|---|--|--|---|--|
| | The client will establish procedures to monitor and measure the effectiveness of the management program, as well as compliance with any related legal and/or contractual obligations and regulatory requirements. The client's monitoring program should be overseen by the appropriate level in the organization. For projects with significant impacts, the client will retain external experts to verify its monitoring information. The extent of monitoring should be commensurate with the project's environmental and social risks and impacts and with compliance requirements. | regulations pertaining to this aspect | <p>Management submits a daily and monthly inspection report to APEL for review and record keeping.</p> <ul style="list-style-type: none"> • The APEL Site Representative conducts inspection of the maintenance of the road asset once every week. • An annual Operation and Maintenance Report is submitted to APEL by M/s Elsamex Management. | identified for this aspect. | |
| 1.8 | Stakeholder Engagement: Clients should identify the range of stakeholders that may be interested in their actions and consider how external communications might facilitate a dialog with all stakeholders. Where projects involve | There are no legal regulations pertaining to this aspect | <ul style="list-style-type: none"> • ITNL Management has not formally identified the external and internal stakeholders that may have an interest or influence on the project. • A Stakeholder Engagement Plan that is scaled to the project risks and impacts and tailored to the characteristics and interests of the stakeholders has not been developed and implemented by ITNL till date. | Stakeholder Management Plan has not been developed. | ITNL should develop a Stakeholder Engagement Plan to engage the various stakeholder of the project on a regular basis. The Stakeholder Engagement Plan should have elements such as identification of direct and indirect stakeholders, mapping them |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|---|--|---|--|--|
| | specifically identified physical elements, aspects and/or facilities that are likely to generate adverse environmental and social impacts to Affected Communities, the client will develop and implement a Stakeholder Engagement Plan that is scaled to the project risks and impacts and development stage, and be tailored to the characteristics and interests of the Affected Communities. | | | | according to their interest and influence, plan to engage them regularly, communications methods to be used, documentation of meetings conducted and monitoring and review of the process. |
| 1.9 | External Communications and Grievance Mechanism: Client will maintain and implement a procedure for external communication. In addition, grievance mechanism scaled to the risks and impacts of the project is to be developed for the Affected Communities. | There are no legal regulations pertaining to this aspect | <ul style="list-style-type: none"> ITNL has not developed an External Communication Procedure covering both, environmental and social aspects. M/s Elsamex maintains an informal compliant register on site and submits a monthly report to APEL for record keeping and review. The grievance mechanism system of M/s Elsamex was however, could not be reviewed. A review of the informal complaints register was undertaken from 2008-2016 wherein no complaints were recorded. | An External Communication Procedure and formalized Grievance Mechanism has not been developed. | ITNL should develop an external communication procedure and formalized Grievance Mechanism as part of its O&M manual. |

Figure 4-1: Organisational Structure of O&M Phase



Source: Details provided by APEL

4.1.2 Performance Standard 2: Labour and Working Conditions

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|---|--|---|--|--|
| 2.1 | Working Conditions and Management of Worker Relationship: The project proponent should adopt and implement human resource policies and procedures (including components relating to working conditions and | <ul style="list-style-type: none"> The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 The Contract Labour (Regulation and Abolition) Act, 1970 | <ul style="list-style-type: none"> The Human Resources Manual comprising the policies and procedures developed by ITNL to manage its workforce could not be reviewed to verify its adequacy due to non-availability of the document on site. A total of 158 O&M workers (7 permanent workers and 151 contract workers, all males) all sourced locally is employed at APEL site office. One (01) employee on permanent basis from APEL, three (03) employees on contractual basis from ITNL and six (06) employee on | <ul style="list-style-type: none"> Trainings on HR Policies and Procedures as part of Employees induction and refresher trainings are not provided. | <ul style="list-style-type: none"> Human Resources Policies and procedures of ITNL should be in compliance with PS 2 and adequate records should be maintained on site. |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|---|--|---|------|---|
| | terms of employment, workers' organization, non-discrimination and equal opportunity, retrenchment and grievance mechanism, appropriate to its size and workforce consistent with requirements of national regulations. | <ul style="list-style-type: none"> • The Minimum Wages Act, 1948 and rules made thereunder • The Workmen's Compensation Act, 1923 • The Equal Remuneration Rules, 1976 • The Maternity Benefits Act, 1961 • The Trade Union Act, 1926 • The Employees Provident Funds and Miscellaneous Provisions Act, 1952 • The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 • The Payment of Bonus Act, 1965 • The Payment of Gratuity Act, 1972 | <p>contractual basis from M/s Elsamex including 148 O&M employees on contractual basis are engaged directly at APEL operating asset. The 148 employees are sourced by M/s Elsamex from labour contractors and suppliers, M/s Sai Infrastructure Solution and M/s Shri Siddi Vigneswara.</p> <ul style="list-style-type: none"> • It was reported that APEL has periodic maintenance contract of one year with ITNL and ITNL has signed a manpower sourcing agreement with one of its subsidiaries, M/s Elsamex Maintenance Services Limited. M/s Elsamex Maintenance Services Limited has signed a contract with M/s Sai Infrastructure Solution and M/s Shri Siddi Vigneswara for sourcing and supplying the skilled manpower and labor to undertake work related to operation and maintenance of road such as civil engineer, site supervisor, operators, drivers, patrolling supervisor, electricians, helpers, etc. • M/s Elsamex has obtained a Contract Labour License, dated 05th January 2016 under Contract Labour (Regulation and Abolition) Act, 1970 and Central Rules, 1971 for 195 workers. The License is valid upto 17th January 2017. • Contract Labour Licenses of M/s Sai Infrastructure Solution and M/s Shri Siddi Vigneswara were not available for review during the site assessment. • As per the site assessment undertaken, it was noted that the timing for the permanent and contract employees are from 8:30 am to 5:30 pm. No overtime work has been observed to be carried out by the employees. • The attendance registers of the employees of APEL and ITNL were verified during the site assessment and found to be regularly maintained. • Muster rolls register with details on age and gender of | | <ul style="list-style-type: none"> • Trainings to employees on the purpose and implementation of the HR Policies and Procedures as part of their induction and refresher trainings on at least an annual basis should be provided. |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|------------------|--------------------|--|------|-----------------|
| | | | <p>all employees and list of holidays are maintained at the on-site office.</p> <ul style="list-style-type: none"> • Documents pertaining to payment of wages and provision of other benefits to employees by ITNL, M/s Elsamex and the sub-contractors, M/s Sai Infrastructure Solution and M/s Shri Siddi Vigneswara were not available for review. • At the site office of ITNL, it was observed that a notice board detailing the minimum wages rule, working hours, date of payment, minimum rate of wages, name and address of license authority has been provided. • A Group Insurance Policy has been undertaken by M/s Elsamex Maintenance Services Limited for the employees from TATA AIG General Insurance Company under Workmen’s Compensation Act, 1923 and Fatal Accidents Act, 1855. The insurance period as reviewed is from 17th January 2016 to 16th January 2017 respectively. As per the Insurance Policy, 36 skilled workers, 42 semi-skilled workers, 109 unskilled workers have been insured. • ITNL provides filtered drinking water to all employees on site through an RO plant (of capacity 40 l/hr) installed at ITNL site office. It was reported that drinking water supply through tankers from local vender is sourced which is then treated using reverse osmosis (RO) method at the ITNL site office. However, the contract agreement between local water supplier vendor and ITNL could not be reviewed due to non-availability of the document on site. • In addition, total forty eight (48) drinking water tanks facilities of capacity 200 liter/day storage capacity have been provided at all bus stop locations. The water has been sourced from bore wells existing along the road stretch. • One (01) lavatory facility was observed at ITNL site | | |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|--|---|--|---|---------------------|
| | | | <p>office and four (04) lavatories have been provided at truck lay bye location at Chainage 150+000 on LHS, at 151+200 on RHS, at 201+500 on LHS and at 202+800 on RHS. APEL does not have a policy restricting workers to bargain collectively or forming worker's organisation.</p> <ul style="list-style-type: none"> No instances of discrimination were recorded in association of M/s Elsamex and APEL. It was reported that a grievance mechanism for employees are maintained by APEL management. Records of the same were reviewed. However, the mechanism could not be reviewed. Trainings to employees on the purpose and implementation of the HR Policies and Procedures as part of their induction and refresher trainings on at least an annual basis has not been undertaken. | | |
| 2.2 | <p>Protecting the Work Force:</p> <p>Child Labour: The client will not employ children in any manner that is economically exploitative, or is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development.</p> <p>Forced Labour: The client will not employ forced labour, which consists of any work or service not voluntarily performed that is</p> | <ul style="list-style-type: none"> The Child Labour (Prohibition and Regulation) Act, 1986 The Bonded Labour System (Abolition) Act, 1976 | <ul style="list-style-type: none"> During discussion held with ITNL and APEL management, it was noted that the employees during the engagement process has to submit their identity proof and address proof for record purposes. During this stage, the date of birth is verified by the Engagement Cell. As per consultations held with the security guards and employees, it was mentioned that no cases of bonded, forced or child labour were observed or reported. | No gaps are identified pertaining to this aspect. | No recommendations. |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|---|--|--|--|--|
| | exacted from an individual under threat of force or penalty. | | | | |
| 2.3 | <p>Occupational Health and Safety: The client will provide a safe and healthy work environment, taking into account inherent risks in its particular sector and specific classes of hazards in the client's work areas, including physical, chemical, biological, and radiological hazards, and specific threats to women.</p> | <ul style="list-style-type: none"> The Contract Labour (Regulation and Abolition) Act, 1970 | <ul style="list-style-type: none"> ITNL has implemented occupational health and safety management system on site and has obtained certification for the same. It was observed that ITNL has developed a report of maintenance and operation to EHS management system. An unsigned copy of road safety audit report dated August 2009 was present at the site and was reviewed. A Safety Committee has been formed at the Site level comprising of ITNL and M/s Elsamex personnel. Meetings of the Safety Committee are held every month with worker representatives and minutes (points discussed and actions undertaken) and attendance records have been maintained for these meetings as reviewed by the documents provided. It was noted that ITNL has its own policy of celebrating safety week in January every year. It was observed that safety trainings organized by ITNL Head Office with Central co-ordination unit (CCU) are held every month. A copy of five (05) year accident data report maintained on site was available for review, the details of which have been provided in Table 4-1. The accident records show that between a period of five (05) years the number of accidents cases (2011-2012) from 317 has considerably reduced to 153 (2015-16). This can be attributed to the fact that considerable safety measures as mentioned in Table 4-2 have been implemented by APEL on the road asset. It was noted that nature of accident, classification of accident, causes of accident, vehicle responsible and number of affected persons were recorded and maintained at the site office. | <ul style="list-style-type: none"> Attendance records of drills and trainings undertaken are not maintained. Thermoplastic and pedestrian marking arrow at truck lay bye location near Kurnool city was observed to be incomplete. | <ul style="list-style-type: none"> ITNL should maintain registers and records of trainings and drills undertaken for the employees (direct and indirect). Thermoplastic and pedestrian marking arrow at truck lay bye location near Kurnool city should be undertaken by ITNL. |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|------------------|--------------------|--|------|-----------------|
| | | | <ul style="list-style-type: none"> • It was observed that adequate safety measures like towing of damaged vehicles from the carriageway to safe location, shifting of injured people to the nearest hospitals, first aid treatment to injured person, information of accidents to the nearby police station and temporary traffic diversion by use of traffic safety equipment have been undertaken by ITNL. • Monthly adequate accident safety measures are recorded and maintained by ITNL on site which was available for review. • One (01) ambulance services equipped with stretcher, first aid medicines, mobile communication and a medical attendant have been deployed and observed to be stationed at ITNL site office to attend to any emergencies arising out of road accidents. • It was observed that two (02) first aid boxes were observed at the Toll Plaza and one (01) at ITNL site office. • It was noted that personal records of employees including medical reports and fitness certificates were not made available for review. However, health check-up every year were carried out for ITNL employees and records were maintained by ITNL at the site office which was available for review. • It was also observed during the site assessment that round the clock highway patrolling is being done by two (02) patrolling vehicles for security and safety of the project and to prevent the unauthorized encroachment/obstruction in the entire stretch of the road. • Two (02) cranes were observed to be operational at site and load testing and operation processes were verified and found adequate. In addition, cabin of crane operator was observed to be provided with suitable seat, foot rest and protection from vibration. | | |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|------------------|--------------------|---|------|-----------------|
| | | | <p>Crane hooks' safety latches were in good working order.</p> <ul style="list-style-type: none"> • Attendance records relating to Mock Drills, Trainings on Emergency Preparedness and Response and Fire Extinguishers Demo were not maintained on site. However, Emergency Response Plan was observed to be maintained at the ITNL site office. • Records for the number of PPEs that are used during road maintenance work and number of PPEs available was not available for review during the site assessment. • It was observed that emergency contacts numbers (of police station, fire station and hospital) were displayed at all bus stops, ITNL site office and toll plaza. It was also noted that emergency call boxes (ECB) and mobile communication system were installed all along road. • It was noted that six (06) nos. of video cameras at major intersections (at Chainage 153+200, 156+030, 165+800, 197+400, 202+800 and 204+100) have been provided for better assessment of any road incident. • During the site assessment, it was observed that warning signs, mandatory signs, informative signs, direction signs and hazard markers were displayed to serve all road users and communities residing adjacent to the road asset. However, thermoplastic and pedestrian marking arrow at truck lay by location near Kurnool city was observed to be incomplete. • It was observed during the site assessment that highways lighting including high mast lighting have been provided at major junctions service roads and at toll plaza location to avoid accident. • It was noted that adequate safety measures record were maintained by ITNL at site office which was available for review. | | |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|--|--|---|--|---|
| | | | <ul style="list-style-type: none"> • It was also observed that APEL has implemented some additional adequate safety measures dated January 2016 to enhance the safety for road users. The details of the additional safety measures have been provided below, <ul style="list-style-type: none"> ○ The right side service road at Pullur intersection has been extended for 200 m length to join with Panchalingala major junction to avoid wrong route travel. ○ An additional bus shelter was constructed near the model school Km. 151+900 LHS keeping in view the safety of school children for boarding the school buses. Informatory board has been fixed and thermoplastic rumble strips were also marked across the main carriageway ahead of the School. ○ PVC crash barriers have been installed in zig zag manner to reduce the speed of commuting vehicles near median openings. A 'Go-Slow' octagonal sign board was also erected near the median openings and thermoplastic rumble strips has been marked to caution the drivers ahead of prominent median openings and junctions. ○ Illumination facility was observed at Flyovers and Street light with electricity were also provided near the median openings at Km. 163 and Km. 170. Village name boards have been displayed on the bus shelter. | | |
| 2.5 | <p>Workers engaged by Third Parties: The client will establish policies and procedures for managing and monitoring the performance of third party</p> | <ul style="list-style-type: none"> • The Contract Labour (Regulation and Abolition) Act, 1970 | <ul style="list-style-type: none"> • As reported by ITNL Site Management, around 154 O&M workers, all sourced locally are employed at APEL site office. • It was reported that APEL has a periodic maintenance contract for one year period with ITNL and ITNL has signed a manpower sourcing agreement with one of its subsidiaries, M/s Elsamex Maintenance Services | <ul style="list-style-type: none"> • Training requirements for security personnel have not been developed. • Regular | <ul style="list-style-type: none"> • All documents and records pertaining to Third Party workers in compliance with PS 2 should be maintained. |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|---|--------------------|---|---|---|
| | performers and that the workers have access to grievance mechanism. | | <p>Limited.</p> <ul style="list-style-type: none"> M/s Elsamex has signed a contract agreement with M/s Sai Infrastructure Solution and M/s Shri Siddi Vigneswara for sourcing and supplying the manpower and labor. However, no contract agreements pertaining to these arrangements were available for review at the site office during the site assessment. No monitoring of the implementation of the contractor agreements is being carried out by APEL. Contract Labour License for 195 workers under Contract Labour (Regulation and Abolition) Act, 1970 and Central Rules, 1971 have been obtained by M/s Elsamex which was available for review during the site assessment. The License is valid upto 17th January 2017. Total of three (03) unarmed security guards are present on site, out of which two (02) work in the morning shifts and one (01) is engaged during night shift have been hired at site by M/s Shri Siddi Vigneswara. Additionally, two (02) helpers from M/s Shri Siddi Vigneswara have been hired for traffic clearance at Ballari Junction at Chainage 208+400 and Erravalli junction at Chainage 165+720. The attendance registers of the security guards were also verified during the site assessment and found to be regularly maintained. However, wage registers maintained for the security guards were not available for review. It was noted that training requirement for security personnel with emphasis on community health & safety concerns as well as dealing with the community and road users during emergencies like accidents and property damage have not been provided till date. | <p>monitoring (on a monthly basis) of the implementation of the contractor agreements is not been done.</p> | <ul style="list-style-type: none"> Training requirement for security personnel with emphasis on community health & safety concerns as well as dealing with the community and road users during emergencies like accidents and property damage should be provided. Regular monitoring (on a monthly basis) of the implementation of the contractor agreements and ensure that the compliance to the applicable rules and regulations should be undertaken. |

Table 4-1: Details of five (05) years accident data maintained on site

| Year | Total Accidents | Fatal | Fatalities | Major | Minor |
|----------------|-----------------|------------|------------|------------|------------|
| 2011-2012 | 317 | 53 | 58 | 161 | 103 |
| 2012-2013 | 261 | 44 | 56 | 152 | 65 |
| 2013-2014 | 246 | 35 | 38 | 166 | 45 |
| 2014-2015 | 142 | 20 | 30 | 81 | 41 |
| Q1 -2015-2016 | 53 | 11 | 11 | 30 | 12 |
| Q2 -2015-2016 | 46 | 10 | 10 | 17 | 19 |
| Q3 - 2015-2016 | 54 | 7 | 10 | 31 | 16 |
| Total | 1119 | 180 | 213 | 638 | 301 |

Source: Details provided by APEL

The details of safety provision to be made all along the road stretch have been provided in below,

Table 4-2: Adequate Safety facilities observed on site

| Safety Items | Unit | Quantity |
|---|--------|----------|
| Single Post Sign Boards | Nos. | 980 |
| Double Post Sign Boards | Nos. | 188 |
| Hazard Markers | Nos. | 500 |
| LED (Signal Lights) | Nos. | 12000 |
| Delineators | Nos. | 11260 |
| High Mast | Nos. | 12 |
| Pedestrian Guard Rails(PGRs) | Meters | 10500 |
| Fencing (Right of Way) | Meters | 110000 |
| Emergency Contact display boards | Nos. | 14 |
| Pictorial Signages | Nos. | 67 |
| Safety Slogan boards | Nos. | 20 |
| LED Chevrons | Nos. | 20 |
| Automatic Traffic counter cum classifier (ATCC) | Nos. | 2 |
| Variable message sign board (VMS) | Nos. | 14 |
| Emergency Call Booth | Nos. | 74 |
| Video Cameras | Nos. | 6 |

Source: Details provided by APEL

4.1.3 Performance Standard 3: Resource Efficiency and Pollution Prevention

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|---|--|---|--|---|
| 3.1 | <p>The objectives of the PS 3 are;</p> <ul style="list-style-type: none"> To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities. To promote more sustainable use of resources, including energy and water. <p>To reduce project-related GHG emissions.</p> | <ul style="list-style-type: none"> The Environment (Protection) Act, 1986 (amended in 1991) The Environment (Protection) Rules, 1986 The Air (Prevention & Control of Pollution) Act, 1981 The Water (Prevention & Control of Pollution) Act, 1974 The Noise Pollution (Regulation & Control) Rules, 2000 Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008 (amended 2010) The Pesticides Management Act, 2008 Plastic Waste (Management and Handling) Rules, 2011 | <ul style="list-style-type: none"> Two (02) diesel generators (D.G.) sets of capacity 100 kVA and 40 kVA were installed at the Toll Plaza for power backup and operated by M/s Shri Sai Enterprises. It was reported by M/s Shri Sai Enterprises representative that the Consent for the DG set under Air (Prevention and Control of Pollution) Act, 1981 (Air Act) has not been obtained from Andhra Pradesh Pollution Control Board (APPCB). The responsibility of managing the Tolls lies under the purview of NHAI. It was also observed that hazardous waste authorization for the generation of used oil/ waste oil from D.G set maintenance has not been obtained by M/s Shri Sai Enterprises. However, the used oil/waste oil is taken away by the authorised vendor (M/s Bhagnagar Diesels) engaged for maintenance of the D.G. set. As reported by the Site Management, ITNL owns twenty six (26) vehicles including one (01) office car, one (01) Bolero campers, one (01) Indica, two (02) crane, One (01) ambulance, two (02) route patrolling vehicle, one (01) highway maintenance van, one (01) DCM drinking water tanker, two (02) road sweeper, one (01) roller, five (05) two wheeler, two (02) water tanker , two (02) JCB, three (03) tractor and one (01) compressor for maintenance and operation of road asset. Pollution under Control (PUC) Certificate for all vehicles has been obtained dated January 2016 and same was verified during site visit and was found to be within the permissible limit. It was reported that 36000 liter/day water is currently | <ul style="list-style-type: none"> CTO to be applied for and obtained from APPCB for installed DG set at Toll Plaza Hazardous waste authorization has not been obtained by M/s Shri Sai Enterprises. | <ul style="list-style-type: none"> Consent to Operate to be obtained for installed D.G Set under Air Act at Toll Plaza. Hazardous waste authorization from APPCB for used oil should be obtained. |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|------------------|---|--|------|-----------------|
| | | <ul style="list-style-type: none"> Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016 Municipal Solid Wastes (Management and Handling) Rules, 2000 Solid Waste Management Rules, 2015 | <p>being used for sprinkling of median and avenue plantation for the entire road stretch. This water is sourced and supplied by tankers through a local vendor. As reported by ITNL management, a contract with the vendor for this water supply arrangement has been made. However, the same was not made available for review.</p> <ul style="list-style-type: none"> It was observed that five (05) underground bore-wells have been installed along the road stretch; out of which four (04) (one bore well has been installed by NHAI and three bore wells are owned by private parties) is being used for water abstraction for toilet facilities located at the truck Lay by locations. One (01) bore well located at the ITNL site office is not currently functioning. Drinking water test record on parameters such as pH, TDS, total hardness, total alkalinity, calcium, magnesium and chloride was and noted to be within the permissible limits. It was observed that D.G set at Toll plaza was enclosed in an acoustic enclosure and is being used at the time of power cut only, as a source of power back up. During the site assessment, it was observed that dedicated trash bins (one for wet waste and other for dry waste) has been kept near each truck lay bye locations. Waste collected through dust bins are disposed off in an open pit. Water logged area was observed at Chainage 139+280 on LHS of the road asset. It was also observed that hazardous waste such as electrical wires, used brush of road sweeper machines, empty oil containers, oil barrels were placed together in a covered sheds at ITNL site office. As reported by ITNL representatives no chemical pesticides are used for the plantation along the road stretch. Organic manure is being used for maintaining | | |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|------------------|--------------------|--------------|------|-----------------|
| | | | the plants. | | |

4.1.4 Performance Standard 4: Community Health, Safety, and Security

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|--|--------------------|--|---|---------------------|
| 4.1 | <p>The following are the objectives of PS 4:</p> <ul style="list-style-type: none"> To anticipate and avoid adverse impacts on the health and safety of the Affected Community during the project life from both routine and non-routine circumstances. To ensure that the safeguarding of personnel and property is carried out in accordance with relevant human rights principles and in a manner that avoids or minimizes risks to the Affected Communities. | - | <ul style="list-style-type: none"> As observed during the site assessment, communities reside about 200 m - 500 m from the operational road asset. The guidelines and standards set down by the Indian Road Congress (IRC) and Ministry of Road Transport and Highways (MoRTH) are used by ITNL for maintenance and operation of the road asset. It was observed that seven (07) major junction, sixty two (62) minor junction, four (04) pedestrian, one (01) vehicular underpass and pedestrian guard rail for 10500m length have been developed for the safe passage of cattle owned by communities residing within the vicinity of the operational road asset. It was noted that six (06) nos. of video cameras at major intersections (at Chainage 153+200, 156+030, 165+800, 197+400, 202+800 and 204+100) have been provided for better assessment of any road incident. During the site assessment, it was observed that warning signs, mandatory signs, informative signs, direction signs and hazard markers were displayed to serve all road users and communities residing adjacent to the road asset. However, thermoplastic and pedestrian marking arrow at truck lay bye location near Kurnool city was observed to be incomplete. It was observed during the site assessment that highways lighting including high mast lighting have been provided at major junctions service roads and at toll plaza location to avoid accident. One (01) ambulance services equipped with stretcher, | No gaps are identified pertaining to this aspect. | No recommendations. |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|------------------|--------------------|--|------|-----------------|
| | | | <p>first aid medicines, mobile communication and a medical attendant have been deployed and observed to be stationed at ITNL site office to attend to any emergencies arising out of road accidents.</p> <ul style="list-style-type: none"> • It was observed that two (02) first aid boxes were observed at the Toll Plaza and one (01) at ITNL site office. • It was also observed during the site assessment that round the clock highway patrolling is being done by two (02) patrolling vehicles for security and safety of the project and to prevent the unauthorized encroachment/obstruction in the entire stretch of the road. • An informal Grievance Register has been maintained at the Site Office of ITNL for grievances emerging from the community. Till date, no grievances have been recorded. • Trainings for Security guards have been provided for fire-fighting and first aid. However, training on aspects such as dealing with communities has not been initiated on site | | |

4.1.5 Performance Standard 5: Land Acquisition and Involuntary Resettlement

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|--|--|--|---|--|
| 5.1 | The Client will consider feasible alternative project designs to avoid or minimise physical and/or economic displacement, while balancing environmental, social, and financial costs and benefits, paying particular attention | <ul style="list-style-type: none"> • The National Highways Act, 1956 • The National Highways Rules, 1957 | <ul style="list-style-type: none"> • A total of 1933 PAP were identified as part of the land acquisition process of the project. • Compensation payments for 85.7 % of PAPs have been awarded till date. A total of 1658 Demand Drafts village wise has been disbursed till date. • As per the data provided on Monitoring the Land Acquisition Progress by ITNL Representative and received from NHAI, a total of 3.06 hectares of private land is to be acquired by NHAI for the Punch List | No gaps are identified pertaining to this aspect. | <ul style="list-style-type: none"> • Follow up with NHAI for early settlement of the court cases and development of formal redressal process, which provides for hassle free reporting of |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|--|--------------------|--|------|--|
| | to impacts on the poor and vulnerable. | | <p>pending activities as mentioned in Table 2-4.</p> <ul style="list-style-type: none"> • Details of land acquisition and compensation awarded have been provided in Table 4-3. • The arbitration cases relate to petitioners seeking an enhancement of compensation over and above the compensation which has already been disbursed to them. In total there are eight (08) arbitration cases pending which accounts to 0.41%. The details of pending arbitration cases in each village have been provided in Table 4-4. • As reported by ITNL and APEL representatives, no concerns have been expressed by stakeholders in the public domain. • No information on the grievances raised by the affected landowners since the project planning stage could be retrieved from NHAI. In addition, no instances of protests or civil action related to environmental impacts, land/ROW acquisition, labour working conditions, occupational health and safety and community health and safety have emerged during the operational stage of the road asset, reportedly. | | <p>grievances and set procedures for recording, addressing and timelines for redressal of community grievances. This will also need to be linked to existing mechanisms within NHAI's grievances procedure. All these activities should be defined in stakeholder engagement and management plan.</p> <ul style="list-style-type: none"> • For any future land acquisition for the project, it is recommended that the land acquisition process is to be undertaken in compliance with IFC PS 5 requirements. |

Details of the land acquisition data as provided by NHAI to ITNL have been presented below,

Table 4-3: Details of Land Acquired for the Project

| Total Land (in ha.) | Total Private Land (in ha.) | Total Government Land (in ha.) | Total Cost of Land (INR) | Compensation Awarded till date (INR) | First Award Date | Second Award Date | Village wise DDs provided |
|---------------------|-----------------------------|--------------------------------|--------------------------|--------------------------------------|------------------|-------------------|---------------------------|
| 197.63 | 192.51 | 5.12 | 13,53,22,206 | 11,65,32,011 | 2006 | 2007 | 1658 |

Source: 3G List as verified at NHAI office during site visit

Encroachment: On the day of the site assessment, 23 encroachments on the RHS were observed, while there was one encroacher on LHS falling within 30m of the ROW. It was reported by the ITNL representative that all temporary encroachments (consisting of structures like verandah of a dhaba, compound wall, room, statue, temple arch, sheds, shops etc.) on the RHS except the permanent structure at Chainage 174+400 and 174+500 comprising of Hanuman Temple and Iyaappa Temple would be removed. The same would apply to the one temporary structure on the LHS as well. A perception study on the encroachments falling within 30m of the ROW was undertaken during the site assessment. Details of the perception study have been provided in *Annexure B* of the report.

As on 29th March 2016, all temporary encroachments have been removed from the operational road asset as reported by ITNL representatives. Details of the present status on encroachments have been provided in *Annexure C* of the report.

Pending Arbitration Cases: As per review of the data provided by NHAI to APEL on the pending arbitration cases in regards of the RoW, the following details have been mentioned,

Table 4-4: Details of Pending Arbitration Cases

| S. No. | Litigation Case | Details |
|--------|--|--|
| 1 | Case No. WP 8841/2013 involving 5 petitioners and belonging to Dharmavaram Village, Itikyala Mandal, Mahbubnagar District were filed on 21/03/2013 at the Andhra Pradesh High Court. | The nature of case relates to a writ petition of the District Collector, Mahbubnagar District in refusing to admit the application of the petitioners for enhancement of the compensation amount over the lands acquired by applying the Limitation Act 1963 and National Highway Act, 1956. No hearing date for the cases has been fixed till date. |
| 2 | Case No. WP 8852/2013 involving 4 petitioners belonging to Dharmavaram Village, Itikyala Mandal, Mahbubnagar District were filed on 21/03/2013 at the Andhra Pradesh High Court | |
| 3 | Case No. WP 6428/2009 filed on 25/03/2009 at the Andhra Pradesh High Court by petitioners of Manavapadu Village, Mahbubnagar District is still pending | The nature of the case is related to enhancement of compensation awarded.. The last hearing for the case was heard on 26/03/2009. |
| 4 | Case No. WP 18224/2008 filed on 20/08/2008 at the Andhra Pradesh High Court by petitioners of Mahbubnagar District | The last hearing for the case was heard on 12/11/2009. |
| 5 | Case No. WP 6045/2009 filed on 21/03/2009 at the Andhra Pradesh High Court by S. Dhana Reddy of Kalluru Village, Kurnool District | The last hearing for the case was heard on 24/03/2009 |
| 6 | Case No. AOP – 7/2014 filed on 09/11/2013 at the District Court, Kurnool by of Kalluru Village, Kurnool District is still pending. | The last hearing for the case was heard on 03/08/2015 and 28/08/2015. A counter reply of the hearing was filed by NHAI on 08/10/2015. |
| 7 | Case No. OQ 36/2005 filed in 2005 at Debts Recovery Tribunal, Andhra Pradesh by M/s Canara Bank in Hyderabad | The nature of the case is that D1 M/s You one Maharia has been directed to pay an amount of INR 78,33,904 to the plaintiff along with interest @ 16.50% per annum from the date of filing of the suit till realization. The last hearing for the case was heard on 15/04/2014. |

| | | |
|---|--|---|
| 8 | Case No. AOP 10/2009 filed on 09/01/2009 at the District Court, Kurnool by petitioners of Kallur Village, Kurnool District | The last hearing for the case was heard on 1/7, 2/7, 6/7, 13/7, 14/7, 15/7/2015, 24/08/2015 and 28/09/2015. A counter reply of the hearing was filed by NHA1 on 28/10/2015. |
|---|--|---|

*The land area under litigation could not be attained from the NHA1 Office.

Source: Details provided by NHA1 to APEL

4.1.6 Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|--|--------------------|--|---|---------------------|
| 6.1 | Performance Standard 6 (PS6) recognizes that protecting and conserving biodiversity, maintaining ecosystem services, and sustainably managing living natural resources are fundamental to sustainable development. | - | <ul style="list-style-type: none"> As per review of the EIA Report undertaken, there has been no loss to the bio-diversity of the area nor any impact on major wildlife migration route or wetlands as no sanctuary or national park is located adjacent of the highway throughout the entire stretch of the operating road asset. The site observation and consultations conducted with APEL and ITNL representatives along with review of maps confirms that the operated road asset does not pass through any critical natural habitat. According to the Permission for Tree Felling to the Forest Department, Government of India dated 14th July 2006, a total of 2709 trees have been felled. The mitigation measure suggested was to plant trees twice (02) the number to trees felled i.e. 5418 are to be planted within the Right of Way. As per the details provided by APEL in the Asset Inventory, as on date, a total of 17000 trees have been planted on the avenue side and 45870 plants on the median side. | No gaps have been identified pertaining to this aspect. | No recommendations. |

4.1.7 Performance Standard 7: Indigenous Peoples

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|------------------------|--------------------|--|-------------------|--------------------|
| 7.1 | Performance Standard 7 | - | <ul style="list-style-type: none"> The Operating Road Asset does not pass through any | There are no gaps | No recommendations |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|---|--------------------|---|----------------------------|-----------------|
| | recognizes that Indigenous Peoples, as social groups with identities that are distinct from mainstream groups in national societies, are often among the most marginalized and vulnerable segments of the population. In many cases, their economic, social, and legal status limits their capacity to defend their rights to, and interests in, lands and natural and cultural resources, and may restrict their ability to participate in and benefit from development. | | <p>scheduled area as observed during the site visit and consultations undertaken with site representatives.</p> <ul style="list-style-type: none"> It was noted that the communities residing near the operating road asset live about 200-500 m from the road stretch and no tribal population reside within the vicinity of the road asset. As per review of the RAP and EIA Report, no tribal land was acquired nor was any loss of access to land or resources of which tribal population are dependent was noted. Therefore, PS 7 on Indigenous Peoples does not get triggered in this case. | pertaining to this aspect. | |

4.1.8 Performance Standard 8: Cultural Heritage

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|--|--------------------|--|--|--------------------|
| 8.1 | Performance Standard 8 recognizes the importance of cultural heritage for current and future generations. Consistent with the Convention Concerning the Protection of the World Cultural and Natural Heritage, this Performance Standard aims to ensure that clients | - | <ul style="list-style-type: none"> As per review of the EIA Report reviewed no structures of archaeological, paleontological, historical, cultural and artistic significance were adjacent to the road asset. The RAP reviewed mentions a section on common property resources that are affected and list the following religious structures permanently or partially affected by the project. However, information pertaining to which villages does the structures come under have not been provided in the RAP reviewed. Details of the number of structures affected as per the | There are no gaps pertaining to this aspect. | No recommendations |

| S. No. | IFC Requirements | Legal Requirements | Observations | Gaps | Recommendations |
|--------|--|--------------------|---|------|-----------------|
| | protect cultural heritage in the course of their project activities. | | <p>RAP have been provided in Table 4-5.</p> <ul style="list-style-type: none"> Details of the temple structures falling within the RoW have been provided in Table 4-6. As reported by the local communities consulted, the temple structures are between 80 to 300 years old, however, they do not have any archeological significance as the structures have not been identified by the Archeological Survey of India. <p>There is potential that there might be risk involved if the relocation activities affect the sentiments of the local communities. As the relocation of these temples lies under the purview of the NHAI, NHAI should take proper care when initiating the process of relocation whenever the process commences in the future.</p> | | |

Details of the number of these structures affected have been provided below,

Table 4-5: Structures impacted due to the Project as per the RAP

| S. No. | Description | Fully Affected (Nos.) | Partially Affected (Nos.) |
|--------|-------------|-----------------------|---------------------------|
| 1 | Temple | 5 | 1 |
| 2 | Temple Gate | 1 | 0 |
| 3 | Mosque | 1 | 0 |
| 4 | Mazar | 1 | 0 |
| 5 | Graveyard | 0 | 1 |

Source: Details extracted from the RAP

Based on the Site Assessment undertaken, it was observed that two (02) temples and one (01) temple arch were falling within the ROW. Details of the temples have been provided below,

Table 4-6: Temple Structure falling within RoW

| S. No. | Description | Area | Years in Existence | Village Name | Chainage | Present Status |
|--------|----------------|------|--|----------------|----------|---|
| 1 | Hanuman Temple | RHS | 300 years (as reported by the local community) | Kondanadapuram | 174+500 | NHAI had allowed to relocate the structure abutting to ROW after shifting from RoW at the time of widening the project road. However, no funds have been provided by NHAI till date in relocating this structure. |

| S. No. | Description | Area | Years in Existence | Village Name | Chainage | Present Status |
|--------|------------------------------|------|---|----------------|----------|--|
| 2 | Iyaappa Temple | RHS | 80 years(as reported by the local community) | Kondanadapuram | 174+400 | NHAI had allowed to relocate the structure abutting to ROW after shifting from ROW at the time of widening the project road. However, no funds have been provided by NHAI till date in relocating this structure. |
| 3 | Hanuman Temple Entrance Arch | RHS | 150 years(as reported by the local community) | Beachebelly | 163+050 | The temple arch was falling within the ROW. At present, a new arch beyond existing arch (around 25 m) is under construction and expected to complete by June 2016. Existing arch will be dismantled after construction of new arch is completed. |

Source: Details provided by APEL

5.0 Categorization and Environment and Social Action Plan

5.1 Categorization and Decision Tree Matrix

Categorization

Based on the observations and gaps identified it can be stated that the project falls under the '**Category 1: Operating roads (2 or more years)**' as defined by Screening Criteria developed as the approach for undertaking the ESDD.

The rationale for categorization being:

- As per information received from NHAI on pending arbitration cases, a total of eight (08) cases have been filed accounting to 0.41%. Out of the 8 cases, one (01) has received an award notice. A counter reply of the hearing (for the award notice) was filed by NHAI on 28th October 2015. In addition, one (01) case has been filed by M/s Canara Bank in Hyderabad at the Debts Recovery Tribunal. The remaining six (06) cases relates to enhancement of compensation. Four (04) of the cases have been filed between 2008-2009 period while two (02) cases have been filed in 2013.
- A total of 3.06 hectares of land is to be acquired by NHAI as part of the pending punch list items. The pending land acquisition has no adverse impact on the overall functioning of the road/main carriageway; hence, it is recommended that this land area is to be added as a negative scope of the project. In addition, it is further recommended that the land acquisition process for the pending punch list items is to be undertaken in compliance with IFC PS 5 requirements.
- As reported by APEL and ITNL Management, no stakeholder concerns have been expressed in the public domain against the project.
- The Grievance Mechanism in place for the external stakeholders is informal. No grievances have been recorded from the external stakeholders till date.
- No critical natural habitat was observed near the operational asset during the site assessment as well as through review of information available in the public domain. Additionally, as per review of the Environment Impact Assessment (EIA) Report, it was mentioned that no critical natural habitat is located adjacent to the road asset.
- As per review of the EIA Report, site observation and consultations with Site Representatives, it is established that the operating road asset does not pass through any scheduled areas.
- At present, only two (02) temple structures on the RHS are within the ROW. As reported by the local communities, these two temples have existed in the area between 80 to 300 years. However, they do not have any archeological significance as the structures have not been identified by the Archeological Survey of India.

There might be some potential risk involved if the relocation activities affect the sentiments of the local communities. The responsibility of relocating the temples is under the purview of NHAI. It is recommended that NHAI while relocating the temples are constantly in consultation with the local communities and abide by the local customs prevalent in the area.

Decision Tree

In relation to IFC Road Holdco Decision Tree Matrix which is to be used as an additional selection criterion besides the screening criteria of categorization, the following rationale has been adopted based on the preliminary screening findings,

- No potential impacts on Indigenous People have been observed as the operating road asset does not pass through any scheduled areas.
- As per information received from NHAI on pending arbitration cases, a total of eight (08) cases have been filed accounting to 0.41%. Out of the 8 cases, one (01) has received an award notice. A counter reply of the hearing (for the award notice) was filed by NHAI on 28th October 2015. In addition, one (01) case has been filed by M/s Canara Bank in Hyderabad at the Debts Recovery Tribunal. The remaining six (06) cases relate to enhancement of compensation. Four (04) of the cases have been filed between 2008-2009 period while two (02) cases have been filed in 2013.
- No potential impact on sensitive natural habitat has been observed both during the site assessment as well as through review of the EIA Report.

5.2 Environment and Social Action Plan

The present section delineates the list of actions required to be fill up the gaps identified during the ESDD undertaken with timelines, responsibilities in order to close the gaps identified.

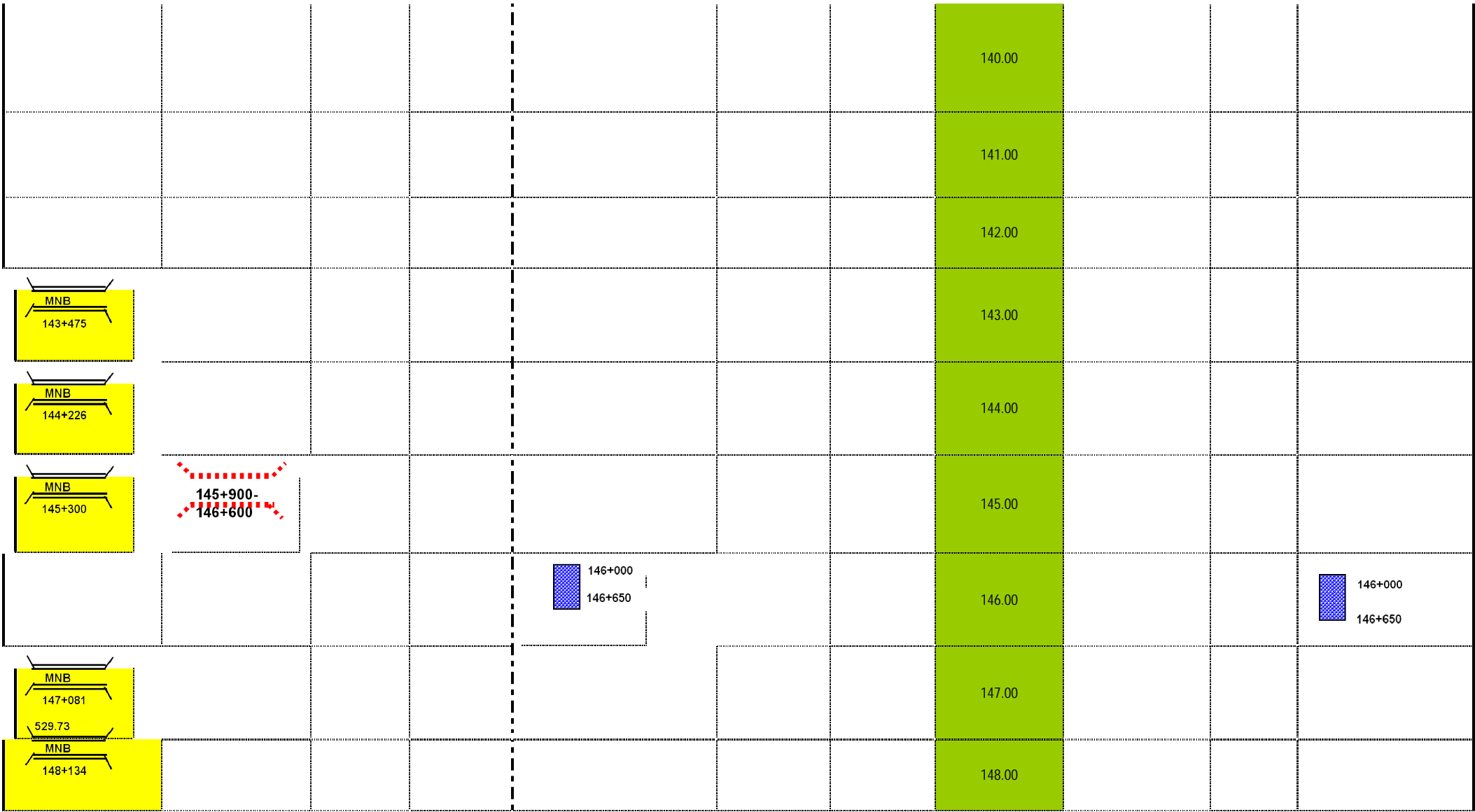
Table 5-1 : Environment and Social Action Plan

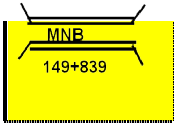
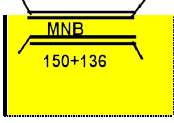




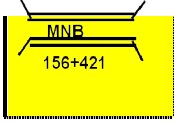

| S. No. | Actions to be taken | Reference with ESDD | Timeline for Completion of Work | Monitoring and Verification/ Responsibility |
|--|---|----------------------------|---------------------------------|---|
| Environment and Social Management System (ESMS) | | | | |
| 1.1 | ITNL should develop an overarching Environment and Social Policy Statement defining the environment & social objectives and principles that would guide the project to achieve sound social performance such as | Point 1.1 of Section 4.1.1 | Within 3 months | Document submission/ E&S expert or SPV head |

| S. No. | Actions to be taken | Reference with ESDD | Timeline for Completion of Work | Monitoring and Verification/ Responsibility |
|--------------|--|----------------------------|---------------------------------|---|
| | engagement with stakeholders, grievance redressal, community engagement, and information disclosure. | | | |
| 1.2 | <p>Procedures relating to the following should be developed by ITNL as part of updation of their existing O&M Manual,</p> <ul style="list-style-type: none"> o identify risks and impacts during the operation phase; o monitoring and review (internal and external audits); o training and competency; o protective personal equipment (PPE) identification and usage; o contractor screening and management; o stakeholder engagement; o external communication; o grievance mechanism. | Point 1.4 of Section 4.1.1 | Within 3 months | Document submission/ E&S expert or SPV head |
| 1.3 | An E&S expert should be appointed on site to oversee all environment and social related aspect associated with the operational road asset. He is to report directly to the APEL Project Director. | Point 1.5 of Section 4.1.1 | Within 2 months | Physical Verification |
| 1.4 | Documentation pertaining to attendance register and trainings on Emergency Preparedness and Response, Mock Drills and Fire Extinguishers Demo should be maintained on site for all employees (direct and indirect) working on the operational road asset. | Point 1.6 of Section 4.1.1 | Within 2 months | Document submission/ E&S expert or SPV head |
| 1.5 | Training requirement for security personnel with emphasis on community health & safety concerns as well as dealing with the community and road users during emergencies like accidents and property damage should be provided. | Point 2.5 of Section 4.1.2 | Within two (02) months | Physical verification |
| Legal | | | | |

| S. No. | Actions to be taken | Reference with ESDD | Timeline for Completion of Work | Monitoring and Verification/ Responsibility |
|--|---|----------------------------|--|--|
| 2.1 | A comprehensive environmental and social legal register should be developed to ensure compliances to all applicable permit conditions and licenses as well as those additionally required to meet requirements of the applicable reference framework. | Point 1.2 of Section 4.1.1 | Within one (01) month | Physical verification/ Project Director follow-up by E&S expert |
| 2.2 | Consent to Operate to be obtained for installed D.G Set under Air Act at Toll Plaza | Point 3.1 of Section 4.1.3 | Application to be made within one (01) month | Copy of CTO from APPCB/ SPV head follow-up by E&S expert |
| 2.3 | Hazardous waste authorization from APPCB for used oil. | Point 3.1 of Section 4.1.3 | Application to be made within one (01) month | Copy of Hazardous Waste Authorization from APPCB/ SPV head follow-up by E&S expert |
| Community Engagement and Development of Stakeholder Management Plan | | | | |
| 3.1 | A Stakeholder Engagement Plan to engage the various stakeholder of the project on a regular basis should be developed. The Stakeholder Engagement Plan should have elements such as identification of direct and indirect stakeholders, mapping them according to their interest and influence, plan to engage them regularly, communications methods to be used, documentation of meetings conducted and monitoring and review of the process. | Point 1.8 of Section 4.1.1 | Within two (02) months | Document submission/E&S expert |
| 3.2 | An external communication procedure and formalized grievance mechanism system for the community should be developed. | Point 1.9 of Section 4.1.1 | Within two (02) months | Document submission/E&S expert |
| 3.3 | Follow up with NHAI for early settlement of the court cases and development of formal redressal process, which provides for hassle free reporting of grievances and set procedures for recording, addressing and timelines for redressal of community grievances. This will also need to be linked to existing mechanisms within NHAI's grievances procedure. All these activities should be defined in stakeholder engagement and management plan. | No reference | Within two (02) months | Document submission/ SPV head followed by E&S expert. |
| Human Resources and Contractor Management | | | | |

| S. No. | Actions to be taken | Reference with ESDD | Timeline for Completion of Work | Monitoring and Verification/ Responsibility |
|---------------------------------------|--|----------------------------|---------------------------------|---|
| 4.1 | A comprehensive HR policy, which will provide an understanding of the project's policy on Child labor, Forced labor, Gender discrimination, Equal Treatment, Freedom of association, Retrenchment policy, Employee grievance mechanism, and its applicability to contractors and contractual workers in compliance with IFC PS 2 should be developed and maintained on site. | Point 2.1 of Section 4.1.2 | Within three (03) months | Document submission/ E&S expert |
| 4.2 | Formulation of a Contractor Management Plan | Point 2.1 of Section 4.1.2 | Within two (02) months | Document submission/ E&S expert |
| 4.3 | Regular monitoring (on a monthly basis) of the implementation of the contractor agreements and ensure that the compliance to the applicable rules and regulations should be undertaken | Point 2.5 of Section 4.1.2 | Within two (02) months | Document submission/ E&S expert |
| 4.4 | Provide trainings to employees on the purpose and implementation of the mechanism as part of their induction and Refresher trainings on at least an annual basis. | Point 2.1 of Section 4.1.2 | Within two (02) months | Document submission/ E&S expert |
| Occupational Health and Safety | | | | |
| 5.1 | Maintenance of registers and records for trainings and drills undertaken for the employees (direct and indirect). | Point 2.3 of Section 4.1.2 | Within two (02) weeks | Document submission/SPV head followed by E&S expert |
| 5.2 | Thermoplastic and pedestrian marking arrow at truck lay bye location near Kurnool city should be undertaken by ITNL. | Point 2.3 of Section 4.1.2 | Within one (01) month | Physical verification |



| | | | | | | | | |
|---|--|---|---------|----------------------------------|--|--------|----------------------------------|--|
|  | | | | | | 149.00 | | |
|  | | | 139+650 | | | 150.00 | Truck Bye 150+000- 150+400 | |
|  | | | 139+650 | Truck Bye 151+200- 151+600 | | 151.00 | | |
|  | |  | 152+450 | | | 152.00 | | |
|  | |  | 153+800 | | | 153.00 | | |
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|  | |  | 156+320 | | | 156.00 | | |
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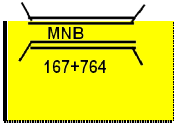
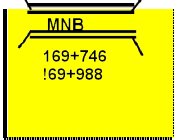
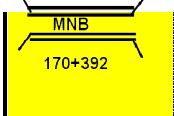
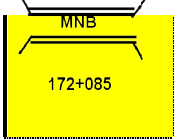
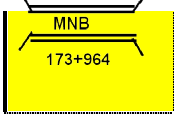
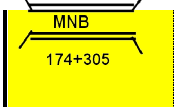
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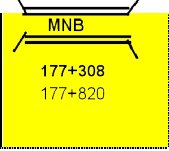
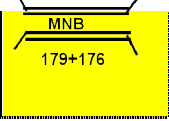
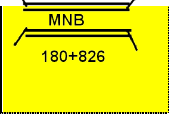
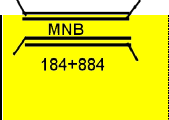
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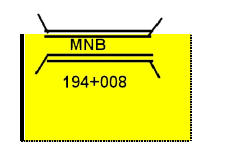
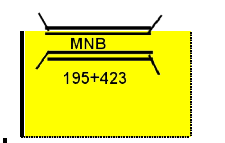
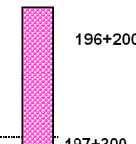
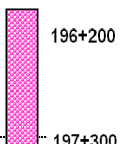
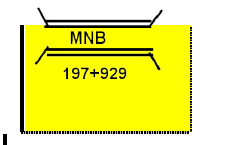

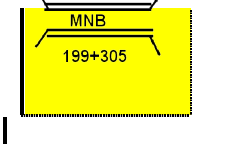
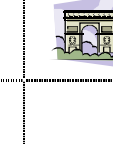
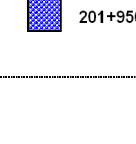
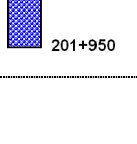
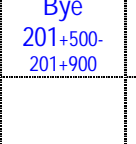
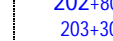
156+421

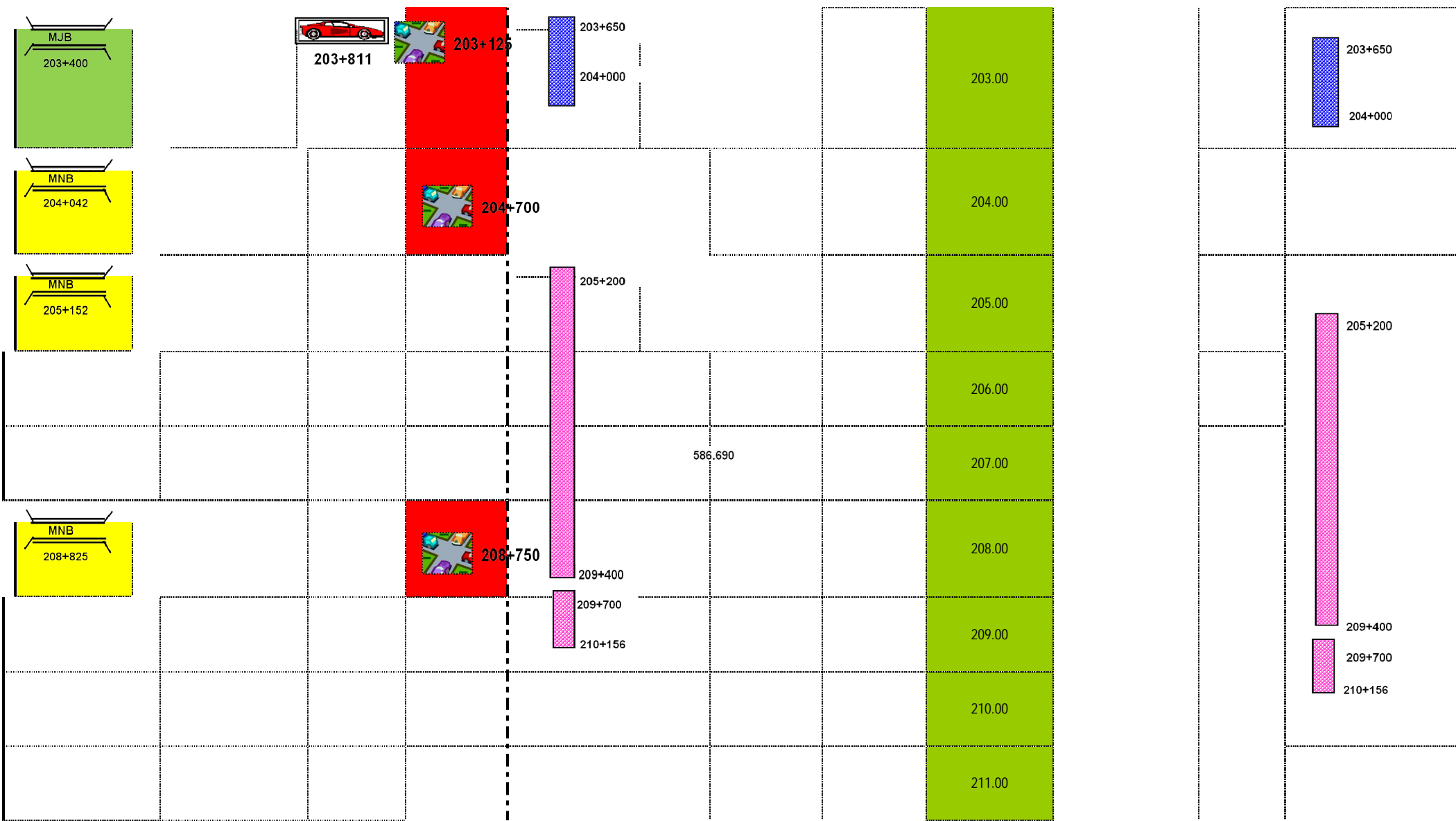


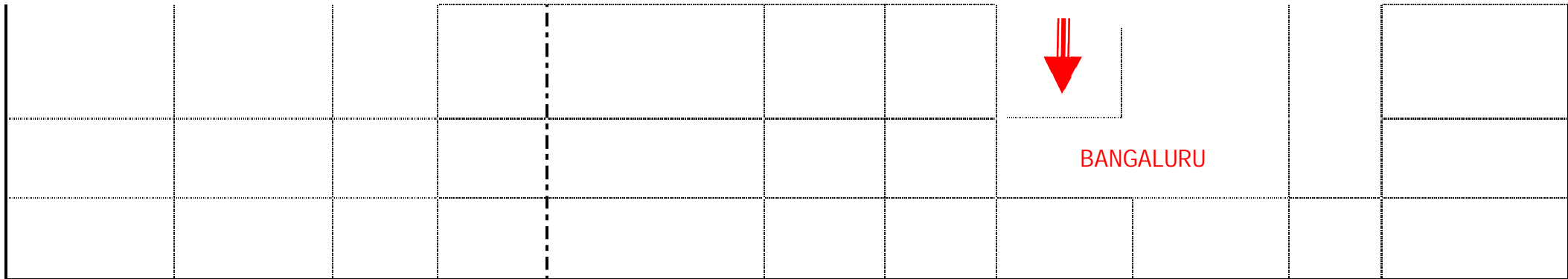
165+260

| | | | | | | | | |
|--|--|--|--|--|--|--------|--|--|
|  <p>MNB 167+764</p> | | | | | | 167.00 | | |
| | | | | | | 168.00 | | |
|  <p>MNB 169+746 169+988</p> | | | | | | 169.00 | | |
|  <p>MNB 170+392</p> | | | | | | 170.00 | | |
| | | | | | | 171.00 | | |
|  <p>MNB 172+085</p> | | | | | | 172.00 | | |
|  <p>MNB 173+964</p> | | | | | | 173.00 | | |
|  <p>MNB 174+305</p> | | | | | | 174.00 | | |
| | | | | | | 175.00 | | |

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|--|---|--|--|--|--|--------|--|--|
| | | | | | | 176.00 | | |
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|--|--|---|--|---|--|--------|---|---|
|  | | | | | | 194.00 | | |
|  | | | | | | 195.00 | | |
| | | |  | | | 196.00 | |  |
|  | |  | 197+090 | | | 197.00 | | |
| | | | | | | 198.00 | | |
|  | | | | | | 199.00 | | |
| | |  | 200+682 | | | 200.00 | | |
| | | |  | | | 201.00 |  |  |
| | | | |  | | 202.00 | | |









LEGEND :



| | | Number | | | | | Number | |
|---------------------|--|--------|--|----------------------------|--|----------------------|--------|--|
| MAJOR BRIDGE | | 3 | | Flexible Pavement | | RAIN WATER STRUCTURE | 137 | |
| MINOR BRIDGE | | 39 | | Rigid Pavement | | BOX CULVERTS | 52 | |
| PADSTRIAN UNDERPASS | | 4 | | Service Road of 5.5 m Wide | | PIPE CULVERTS | 75 | |
| VEHICULAR UNDERPASS | | 1 | | Service Road of 7m Wide | | TRUCK LAY BYE | 4 | |

| | | | | | | | | | | |
|----------------|--|---|---|---------------------|--|---|--|----------|----|--|
| MAJOR JUNCTION | | 7 |  | Toll Plaza (1 Nos.) | |  | | BUS BAYS | 48 | |
|----------------|--|---|---|---------------------|--|---|--|----------|----|--|



Perception Study undertaken for the Project



| S.No. | Area | Type of Area | Village Name | Encroachment | Since when | Why is encroachment here | Picture Documentation |
|-------|-----------------------------|---------------------|----------------|--------------|------------|--------------------------|--|
| 1 | Road Side with in ROW (RHS) | Road side Tea Stall | Kondanadapuram | Tea Stall | 20 Years | Opportunistic |  |
| 2 | Road Side with in ROW (LHS) | Road side Shop | Kondanadapuram | Shop | 6 Years | Opportunistic |  |

| S.No. | Area | Type of Area | Village Name | Encroachment | Since when | Why is encroachment here | Picture Documentation |
|-------|-----------------------------|------------------|----------------|-----------------------------------|------------|--------------------------|--|
| 3 | Road Side with in ROW (RHS) | Road side Shop | Kondanadapuram | Temporary tyre repairing tin shop | 4 Years | Opportunistic |  |
| 4 | Road Side with in ROW (RHS) | Road side Temple | Kondanadapuram | Temple | 300 Years | Legal process |  |



| S.No. | Area | Type of Area | Village Name | Encroachment | Since when | Why is encroachment here | Picture Documentation |
|-------|-----------------------------|------------------|----------------|-------------------------------|------------|-----------------------------|--|
| 5 | Road Side with in ROW (RHS) | Road side Temple | Kondanadapuram | Temple | 80 Years | Legal Process |  |
| 6 | Road Side with in ROW (RHS) | Road side Shop | Ittkaylapadu | Temporary General Kirana shop | 5 Years | Opportunistic (Shop Closed) |  |



| S.No. | Area | Type of Area | Village Name | Encroachment | Since when | Why is encroachment here | Picture Documentation |
|-------|-----------------------------|--|----------------|---------------------|------------|---|--|
| 7 | Road Side with in ROW (RHS) | Road side Shop | Kondair | Temporary Tea Stall | 3 years | Was existing, moved and shifted back |  |
| 8 | Road Side with in ROW (RHS) | Back side of Bus stand Private toilet | Kondanadapuram | Toilet | 14 Years | Opportunistic (Back side of Bus Stand Kondanadapuram) |  |



| S.No. | Area | Type of Area | Village Name | Encroachment | Since when | Why is encroachment here | Picture Documentation |
|-------|-----------------------------|-------------------------------|----------------|---------------------|------------|--|--|
| 9 | Road Side with in ROW (RHS) | Road side Hanuman Temple gate | Beachebelly | Hanuman Temple gate | 150 Years | Legal process (A new arch beyond existing arch is under construction and expected to completed by June '16.) |  |
| 10 | Road Side with in ROW (RHS) | Road side Hotel | Kondanadapuram | Mallikarjuna Hotel | 12 Years | Opportunistic |  |



| S.No. | Area | Type of Area | Village Name | Encroachment | Since when | Why is encroachment here | Picture Documentation |
|-------|-----------------------------|---------------------|----------------|---------------------|------------|--------------------------|--|
| 11 | Road Side with in ROW (RHS) | Road side Tea Stall | Kondanadapuram | Tea Stall | 9 Years | Opportunistic |  |
| 12 | Road Side with in ROW (RHS) | Road side Shop | Kondair | Temporary Tea Stall | 9 years | Opportunistic |  |



| S.No. | Area | Type of Area | Village Name | Encroachment | Since when | Why is encroachment here | Picture Documentation |
|-------|-----------------------------|------------------------|----------------|-------------------|------------|--------------------------|--|
| 13 | Road Side with in ROW (RHS) | Road side Hotel | Kondanadapuram | Shiv shanti Hotel | 8 Years | Opportunistic |  |
| 14 | Road Side with in ROW (RHS) | Road side Grocery Shop | Ittkaylapadu | Grocery Shop | 9 Years | Opportunistic |  |

| S.No. | Area | Type of Area | Village Name | Encroachment | Since when | Why is encroachment here | Picture Documentation |
|-------|-----------------------------|----------------|--------------|-------------------------------|------------|--------------------------------------|--|
| 15 | Road Side with in ROW (RHS) | Road side Shop | Kondair | Temporary tyre repairing shop | 8 Years | Was existing, moved and shifted back |  |
| 16 | Road Side with in ROW (RHS) | Road side Shop | Kondair | Temporary tyre repairing shop | 3 Years | Opportunistic |  |

| S.No. | Area | Type of Area | Village Name | Encroachment | Since when | Why is encroachment here | Picture Documentation |
|-------|-----------------------------|---|--------------|-------------------------------|------------|--------------------------|--|
| 17 | Road Side with in ROW (RHS) | Road Side Temporary Tyre repairing Shop | Kondair | Temporary tyre repairing shop | 4 Years | Opportunistic |  |
| 18 | Road Side with in ROW (RHS) | Road Side Restaurant | Kondair | Restaurant | 9 Years | Opportunistic |  |

| S.No. | Area | Type of Area | Village Name | Encroachment | Since when | Why is encroachment here | Picture Documentation |
|-------|-----------------------------|----------------------|--------------|--|------------|--------------------------------------|--|
| 19 | Road Side with in ROW (RHS) | Road Side Restaurant | Kondair | Restaurant | 13 Years | Was existing, moved and shifted back |  |
| 20 | Road Side with in ROW (RHS) | Road Side Restaurant | Kondair | Temporary extended tin shed covered restaurant | 5 Years | Opportunistic |  |

| S.No. | Area | Type of Area | Village Name | Encroachment | Since when | Why is encroachment here | Picture Documentation |
|-------|-----------------------------|------------------------|--------------|--|------------|--|--|
| 21 | Road Side with in ROW (RHS) | Road Side Chicken Shop | Kondair | Temporary extended tin shed covered chicken shop | 3 years | Opportunistic |  |
| 22 | Road Side with in ROW (RHS) | Road side Tea Stall | Beachebelly | Tea Stall | 10 Years | Was existing, moved and shifted opportunistic back |  |




| S.No. | Area | Type of Area | Village Name | Encroachment | Since when | Why is encroachment here | Picture Documentation |
|-------|-----------------------------|-------------------------------|--------------|---------------------|------------|--------------------------|--|
| 23 | Road side with in ROW (RHS) | Road side tyre repairing shop | Thomalapalli | Tyre repairing shop | 4 Years | Opportunistic |  |
| 24 | Road side with in ROW (RHS) | Road side Grocery shop | Thomalapalli | Grocery shop | 5 Years | Opportunistic |  |



Annexure C: Encroachment Status List





Encroachment Status List as provided by ITNL





| S. No | Chainage | Side | Structure type | Photographs | Status as on 29.03.2016 |
|-------|----------|------|---|---|--|
| 1 | 198+600 | RHS | Temporary extended tin structure within RoW-General kirana shop |  |  <p>Canopy has been removed.</p> |
| 2 | 194+700 | RHS | Temporary extended tin structure within RoW-Grocery shop |  |  <p>Extended tin structure is removed.</p> |





| S. No | Chainage | Side | Structure type | Photographs | Status as on 29.03.2016 |
|-------|----------|------|--|---|--|
| 3 | 194+600 | RHS | Temporary tyre repairing tin shop within RoW- |  | <p>Tyre repairing shop is shifted beyond ROW</p> |
| 4 | 174+500 | RHS | Temple at Kodhnandapur, very close to paved shoulder |  | <p>NHAI had allowed to relocate the structure abutting to RCW after shifting from RCW at the time of widening the project road. We can not afford to shift at this moment.</p> |

| S. No | Chainage | Side | Structure type | Photographs | Status as on 29.03.2016 |
|-------|----------|------|---|---|--|
| 6 | 174+400 | RHS | Temple within RoW |  | <p>NHAI had allowed to relocate the structure abutting to RCW after shifting from RCW at the time of widening the project road. We can not afford to shift at this moment.</p> |
| 7 | 174+320 | RHS | Temporary extended tea stall tin shed structure |  |  <p>Extended tin shed dismantled</p> |





| S. No | Chainage | Side | Structure type | Photographs | Status as on 29.03.2016 |
|-------|----------|------|--|---|--|
| 8 | 174+300 | RHS | Extended paved bathroom structure |  | Tenants had accepted to dismantle before 30.04.2016. |
| 9 | 174+270 | RHS | Temporary extended tin covered tea stall |  | Extended tin shed dismantled. |





| S. No | Chainage | Side | Structure type | Photographs | Status as on 29.03.2016 |
|-------|----------|------|--|---|---|
| 10 | 174+200 | RHS | Temporary extended tin covered tea stall |  |  <p data-bbox="1473 722 1832 754">Extended tin shed dismantled.</p> |
| 11 | 174+180 | RHS | Temporary extended tin covered general grocery store |  |  <p data-bbox="1473 1281 2067 1347">Temporary extended tin covered general grocery store dismantled</p> |





| S. No | Chainage | Side | Structure type | Photographs | Status as on 29.03.2016 |
|-------|----------|------|--|---|--|
| 12 | 174+150 | RHS | Temporary extended tyre repairing shop |  |  <p data-bbox="1471 695 2069 727">Temporary extended tyre repairing shop removed</p> |
| 13 | 170+200 | RHS | Temporary extended tin covered tea stall |  |  <p data-bbox="1471 1232 2024 1302">Temporary extended tin covered tea stall was removed</p> |

| S. No | Chainage | Side | Structure type | Photographs | Status as on 29.03.2016 |
|-------|----------|------|--|---|--|
| 13 | 170+150 | RHS | Temporary extended tin covered tea stall |  |  <p data-bbox="1473 624 2056 691">Temporary extended tin covered tea stall shifted beyond ROW.</p> |
| 14 | 170+140 | RHS | Temporary extended tyre repairing shop |  |  <p data-bbox="1473 1190 2040 1257">Temporary extended grocery and tyre repairing shop dismantled.</p> |

| S. No | Chainage | Side | Structure type | Photographs | Status as on 29.03.2016 |
|-------|----------|------|--|---|---|
| 15 | 170+120 | RHS | Temporary extended tyre repairing shop |  |  <p data-bbox="1473 667 2047 730">Temporary extended tyre repairing shop shifted beyond ROW.</p> |
| 16 | 170+110 | RHS | Temporary extended tin shed covered restaurant |  |  <p data-bbox="1473 1249 1973 1281">Temporary extended tin shed dismantled.</p> |

| S. No | Chainage | Side | Structure type | Photographs | Status as on 29.03.2016 |
|-------|----------|------|--|---|--|
| 17 | 170+100 | RHS | Temporary extended tin shed covered restaurant |  |  <p>Temporary extended tin shed covered restaurant dismantled</p> |
| 18 | 174+050 | RHS | Temporary extended tin shed covered restaurant |  |  <p>Temporary extended tin shed dismantled.</p> |

| S. No | Chainage | Side | Structure type | Photographs | Status as on 29.03.2016 |
|-------|----------|------|--|---|---|
| 19 | 167+450 | RHS | Temporary extended tin shed covered chicken shop |  | <p>Tin shop was removed. Local MP requested to allow till 30.04.2016 (Contact no.9440297979).</p>  |
| 20 | 163+250 | RHS | Temporary extended tin covered tea stall |  | <p>Temporary extended tin covered tea stall was removed.</p>  |

| S. No | Chainage | Side | Structure type | Photographs | Status as on 29.03.2016 |
|-------|----------|------|---|---|---|
| 21 | 163+050 | RHS | Paved Hanuman jiMandir gate within RoW, now gate is in under construction stage beyond RoW. |  | <p>A new arch beyond existing arch is under construction and expected to complete by June '16. Existing arch will be dismantled after construction of new arch.</p>  |
| 22 | 147+750 | RHS | Temporary extended tyre repairing shop |  |  <p>Temporary extended tyre repairing shop dismantled.</p> |

| S. No | Chainage | Side | Structure type | Photographs | Status as on 29.03.2016 |
|-------|----------|------|--|---|---|
| 23 | 147+800 | RHS | Temporary extended tin covered general grocery store |  <p>A photograph showing a temporary structure with a tin roof, identified as a general grocery store. The structure is situated on a dirt area with other buildings and trees in the background. A sign is visible on the structure.</p> |  <p>A photograph showing the same temporary structure being dismantled. Several people are present, and a motorcycle is parked nearby. The date '29.03.2016 22:03' is visible in the bottom right corner of the image.</p> <p>Temporary extended tin covered general grocery store dismantled.</p> |

Photo Documentation

| | | |
|--|--|--|
| <p>Photo No. 1</p> | <p>Date: 8th March, 2016</p> | |
| <p>Location: Kotakatta Bypass</p> | | |
| <p>Description: Starting point at Kotakatta (136.077 km– from end of Kotakatta bypass)</p> | | |
| <p>Photo No. 2</p> | <p>Date: 8th March, 2016</p> | |
| <p>Location: Amadabakula</p> | | |
| <p>Description: drinking water tank facility at Bus stop on Amadabakula at Chainage 136+260</p> | | |
| <p>Photo No. 3</p> | <p>Date: 8th March, 2016</p> | |
| <p>Location: Sankireddy Palle Village</p> | | |
| <p>Description: Emergency contact no. displayed at Bus stop at Chainage 138+100</p> | | |

| | |
|---|--|
| Photo No. 4 | Date: 8 th March, 2016 |
| Location: Rayanipeta Village | |
| Description: Avenue plantation fencing got damaged at Chainage 139+350 to 140+200 | |






| | |
|---|--|
| Photo No. 5 | Date: 9 th March, 2016 |
| Location: Rayanipeta Village | |
| Description: Water logged area at Chainage 139+280 on LHS | |



| | |
|--|--|
| Photo No. 6 | Date: 9 th March, 2016 |
| Location: Kondapeta Village | |
| Description: Median Plantation | |



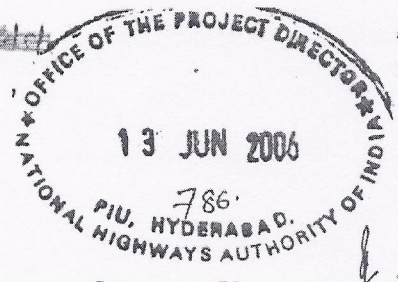
| | | |
|--|--|--|
| Photo No. 7 | Date: 9 th March, 2016 |  |
| Location: Kodhnandapur Village | | |
| Description: Temple at Kodhnandapur, very close to paved shoulder at Chainage 174+500 on RHS | | |
| Photo No. 8 | Date: 9 th March, 2016 |  |
| Location: Kodhnandapur Village | | |
| Description: Temple within RoW at 174+400 on RHS | | |
| Photo No. 9 | Date: 9 th March, 2016 |  |
| Location: Kodhnandapur Village | | |
| Description: Extended paved bathroom structure within RoW at Chainage 174+300 on RHS | | |

| | |
|--|--|
| Photo No. 10 | Date: 9 th March, 2016 |
| Location: ITNL Site Office | |
| Description: RO unit at ITNL site Office | |
| Location: ITNL Site Office | |
| Description: Cleaning Oil spill at ITNL site office. | |

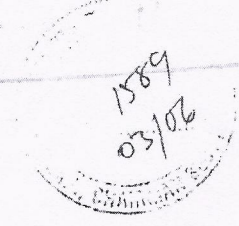


Annexure E: Environment Clearance & Certificates obtained

~~KIND ATTN: Sr. Asst. Secy. (AP) Director, NHAI~~
14494/MCD/HSEW/L
5/6



AP-5
1/4



No.5-13/2006-IA-III
Government of India
Ministry of Environment & Forests
(IA-III Division)

Paryavaran Bhavan,
C.G.O. Complex, Lodi Road,
New Delhi-110003

Dated the 19th May, 2006

Subj: Upgrading of existing 2 lane to 4 lane divided carriageway configuration of Kothakota to Kurnool Section of NH-7 from existing Km 135.469 to Km 211.000 by National Highway Authority of India - Environmental Clearance - regarding.

Reference is invited to the letter No.11013/1/2k/GM(Env.)38, dated 16.3.2006 have been considered. The Andhra Pradesh State Pollution Control Board has accorded NOC for the project vide their Order No.APPCB/HYD/HYD/1183/HO/2005/-1553, dated 10.9.2005.

The project road starts from km. 135.469 end of proposed Kothakota bypass and ends at km. 211.000 at Kallur village in Kurnool town, covering a total length of 74.651 kms. The road falls in Mahabubnagar and Kurnool district in the State of Andhra Pradesh. The land use pattern of the project area is mostly agricultural (76%), built up (14%) and barren (10%). The existing Right of Way varies from 30m to 45m except for existing Kurnool bypasses where the ROW is 60m. Entire 60m proposed ROW is to be acquired for proposed 2.950 kms long Pebbair bypass. Approximately 153.36 ha of land are being acquired; which includes 149.41 ha Private Land including 17.70 ha land for proposed Pebbair bypass and 3.95 ha Govt. / Gram Sabha / Community Land. There are 3 major bridges, 37 minor bridges, 77 slab culverts and 80 pipe culverts in the project area. 3 Flyovers / Vehicular underpasses, 3 underpasses pedestrians and cattle crossings and service roads at 16 locations with total length of 1.5 km have been provided at eight built up locations. Truck lay byes have been provided at 4 locations. Water amenities complex cum rest areas have been provided at two locations i.e. km 154.000 and km 200.400. Bus-bays with sheiters have been provided at 42 locations. There shall be one Toll Plaza in between existing km 200.700 to 201.250. The project road passes through 33 villages, out of which 29 villages are in Mahabubnagar District and 4 villages are in Kurnool District. The project road does not pass through any type of Forest Areas therefore there is no acquisition of any forest land involved. There is no Wildlife Sanctuary / National Park within the Project Influence Area.

About 5818 trees are going to be felled for the project area. Three new trees shall be planted against each tree fell within the proposed ROW. Therefore, total about 17454 trees are proposed to be planted. About 3967 households, 19154 persons and 8033 families are going to be affected due to the project. The entitled persons will be compensated and assisted as per the Resettlement and Rehabilitation plan. The total cost for Resettlement and Rehabilitation is approximately Rs.251.10 millions. The capital cost of the project is Rs.6825.22 millions.

The proposal has been examined in the Ministry of Environment & Forests and environmental clearance to the project is hereby accorded under Environmental Impact Assessment Notification, 1994 subject to effective implementation of the following conditions:-

(A) Specific Conditions:

- i) All the safeguards measures and conditions stipulated by Andhra Pradesh State Pollution Control Board vide their Order No.APPCB/HYD/HYD/1183/HO/2005/-1553, dated 10.9.2005 for establishment must be followed and implemented strictly.
- ii) The major bridge across the Godavari may be aligned and designed to prevent scouring.
- iii) Details of fly ash utilization to be provided.
- iv) Disposal of Black cotton Soil to be detailed alongwith rehabilitation of burrow areas.

PD, PIU, Hyderabad

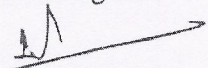
- v) Footpath should be provided on the existing bridges along the NH.
- vi) Special consideration should be taken for the accident prone areas for improving the geometrics of the alignment along with highway safety measures and signages.
- vii) The design life of new pavement and overlaid pavement should be kept same.
- viii) Necessary rainwater harvesting structures should be provided along the alignment.
- ix) The solid waste should be disposed at identified and approved locations.
- x) Controlled blasting should be resorted while excavating the rock for laying the road on the hill section.
- xi) The project proponent should obtain necessary permission from the State Irrigation Department before drawing water from the river sources for the purpose of the proposed construction activity. No groundwater should be drawn for the project. If needed, approval from Groundwater Board should be obtained for drawal of groundwater.
- xii) Longitudinal drains should be provided all along the project road to ensure proper drainage of the area. In addition, adequate number of under passes and culverts to act as cross drainage structures should also be provided.
- xiii) The hot mix plant should be located at least 500 mts away from habitation and on the barren land to avoid its adverse impact on the human population.
- xiv) Felling of trees should be restricted to the barest minimum. The trees which need to be removed should be relocated to the extent possible. (As per the proposal, a maximum of 9292 trees are required to be felled against which about 1 lac trees are going to be planted.) Suitable tree species/vegetation, which are not only pollution resistant but also minimiz must be planted along the road corridors.
- xv) Rehabilitation and payment of compensation to the project affected people (PAPs) should be made as per the policy of the State Government.
- xvi) The embankments/slopes and the slopes left after cutting should be provided with vegetative turfing to avoid soil erosion.
- xvii) Noise barriers should be provided at appropriate locations particularly in the areas where the alignment passes through inhabited areas so as to ensure that the noise levels do not exceed the prescribed standards.
- xviii) The blue metal/borrow materials should be obtained only from the approved quarries.
- xix) A detailed land use plan along the road corridor should be furnished to the Ministry for its records and reference within six months from the date of issue of this letter.
- xx) Necessary permission for tree felling from the concerned department should be obtained before commencement of the project work and copies of the same should be submitted to this Ministry.
- xxi) Efforts should be made for use of fly ash in the project. A plan for use of fly ash should be prepared and submitted within 60 days and in any case before starting construction on this project.
- xxii) For road safety, IRC guidelines in respect of service roads, bus bays, inter-sections, pedestrians crossings, etc should be strictly adhered to. Further, details of lightings, road signage and indications along the road for villages, for enhancing road safety and minimizing accidents may be taken up.

General Conditions:

- (i) Adequate provision for infrastructure facilities including water supply fuel and sanitation must be ensured for construction workers during the construction phase of the project in order to avoid any damage to the environment.
- (ii) Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.
- (iii) Borrow sites for earth, quarry sites for road construction material and dump sites must be identified keeping in view the following:
 - (a) No excavation or dumping on private property is carried out without written consent of the owner. The solid waste generated shall be safely disposed of or used in the project itself.
 - (b) No excavation or dumping shall be allowed on wetlands, forest areas or other ecologically valuable or sensitive locations.
 - (c) Excavation work should be done in consultation with the Soil Conservation and Watershed Development Agencies working in the area; and
 - (d) Construction spoils including bituminous material and other hazardous materials must not be allowed to contaminate water courses and the dump sites for such materials must be secured so that they should not leach into the ground water.
- (iv) The construction material should be obtained only from approved quarries. In case new quarries are to be opened, specific approvals from the competent authority should be obtained in this regard.
- (v) Adequate precautions should be taken during transportation of the construction material so that it does not affect the environment adversely.
- (vi) Borrow pits and other scars created during the road construction should be properly levelled and treated.
- (vii) The project affected people, if any, should be adequately rehabilitated and the details in this regard should be furnished to the Ministry.
- (viii) Detailed plan for indicating the drainage pattern on a toposheet shall be submitted within six months from the receipt of this letter.
- (ix) A detailed plan for rainwater harvesting shall be provided with budgetary provision within six months from the receipt of this letter.
- (x) Adequate financial provision must be made in the project to implement the aforesaid safeguards.
- (xi) The project proponent will set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.
- (xii) Adequate environmental safeguards shall be undertaken to minimize the input due to transportation of construction material from the quarries. The quarries shall be rehabilitated.
- (xiii) Full support should be extended to the officers of this Ministry/Regional Office at Bangalore by the project proponents during their inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigative measures and other environmental protection activities.
- (xiv) A six-Monthly monitoring report shall be submitted to the Regional Office of this Ministry at Bangalore regarding the implementation of the stipulated conditions.
- (xv) The Ministry or any other competent authority may stipulate any other conditions or environmental safeguards, subsequently, if deemed necessary, which should be complied with.

- (xvi) - The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with to the satisfaction of the Ministry.
- (xvii) In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment & Forests.
- (xviii) The project proponents shall inform the Regional office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.
- (xix) A copy of the clearance letter will be marked to concerned Panchayat/local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.
- (xx) Safety provision such as bus bays, service roads intersection improvement etc., will be carried out by the project proponent. The project proponent shall provide adequate facilities as per IRC norms/guidelines. Adequate underpass shall be provided in the inhabited area.
- (xxi) State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's Office/Tehsildar's office for 30 days.
- (xxii) The project proponent should advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned, informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen at Website of the Ministry of Environment & Forests at <http://www.envfor.nic.in>. The advertisement should be made within 7 days from the date of issue of the clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Bangalore.

These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act 1991 and EIA Notification 1994 including the amendments and rules made thereafter.



(A. Senthil Vel)
Additional Director

To


✓ The Chairman,
National Highways Authority of India,
G-5&6, Sector 10, Dwarka,
New Delhi - 110045.

Copy for information to:-

- (i) The Secretary, Ministry of Road Transport & Highways, Transport Bhavan, 1, Parliament Street, New Delhi - 110001.
- (ii) The Chairman, Andhra Pradesh State Pollution Control Board, 2nd Floor, Maitrivanam, Huda Complex, S. R. Nagar, Hyderabad - 500038.
- (iii) The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum- Office Complex, East Arjun Nagar, Delhi - 110032.
- (iv) Chief Conservator of Forests, Ministry of Environment & Forests, Regional Office (SZ), Kendriya Sadan, 4th Floor, E&F Wings, 17th Main Road, 1 Block, Koranmangala, Bangalore - 560034.
- (v) Director (EI), Ministry of Environment & Forests.
- (vi) The Regional Office Cell, MoEF.
- (vii) Guard File.
- (viii) Monitoring File.


(A. Senthil Vel)
Additional Director

CERTIFICATE OF REGISTRATION

 | Transportation

IL&FS Transportation Networks Limited

The IL&FS Financial Centre, Plot C-22, G - Block, Bandra Kuria Complex,
Bandra (E), Mumbai - 400 051, Maharashtra, INDIA

This is to certify that the Quality Management System
of above organisation has been assessed and registered by
Nimbus Certifications Private Limited against the scope of supply and provision of

ISO 9001:2008

Scope : Project Development, Operation Maintenance & Tolling
Activities and Advisory Services at all Site Operation and
Offices.

Certificate No. : MAH /Q - 1408/C1

Certificate Date : 02 June 2013

Valid Until : 01 June 2016

EAC Code : 28



Managing Director

This registration is subject to the company maintaining a management system, to the above standard,
which will be monitored by Nimbus Certifications Pvt. Ltd.


This is an accredited certificate authorized for issued by Accreditation Services for Certifying Bodies (Europe) Limited
in accordance with ISO 17021 "Requirement for Bodies providing Audit and Certification of Management Systems".

This certificate is the property of Nimbus Certification Pvt. Ltd. and must be returned on request.
This Certificate is valid when confirmed by data listed in the International Register Of Quality Assessed Organisations
www.irqao.com. The status of this certificate may be checked at www.nimbuscertifications.com

Nimbus Certification Pvt. Ltd.
#3, New Ashok Nagar B, Vazira, Borivali (W), Mumbai-400091, India



CERTIFICATE OF REGISTRATION

 | Transportation

IL&FS Transportation Networks Limited

The IL&FS Financial Centre, Plot C-22, G - Block, Bandra Kurla Complex,
Bandra (E), Mumbai - 400 051, Maharashtra, INDIA

This is to certify that the Environmental Management System
of above organisation has been assessed and registered by
Nimbus Certifications Private Limited against the scope of supply and provision of

ISO 14001:2004

Scope : Project Development, Operation Maintenance & Tolling
Activities and Advisory Services at all Site Operation and
Offices.

Certificate No. : MAH/E - 1817/CI

Initial Certificate Date: 24 March 2012

Certificate Date : 24 March 2015

Valid Until : 23 March 2018

NACE Code : F42



Managing Director

This registration is subject to the company maintaining a management system, to the above standard,
which will be monitored by Nimbus Certifications Pvt. Ltd.

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in accordance with ISO 17021 : 2011 "Requirement for Bodies providing Audit and Certification of Management Systems".

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Nimbus Certification Pvt. Ltd.
401, Ghanashyam Enclave, Link Road, Kandivai (W), Mumbai - 400067, INDIA



CERTIFICATE OF REGISTRATION



N I M B U S

IL&FS | Transportation

IL&FS Transportation Networks Limited

The IL&FS Financial Centre, Plot C-22, G - Block, Bandra Kurla Complex,
Bandra (E), Mumbai - 400 051, Maharashtra, INDIA

This is to certify that the Occupational Health & Safety Management System
of above organisation has been assessed and registered by
Nimbus Certifications Private Limited against the scope of supply and provision of

OHSAS 18001:2007

Scope : Project Development, Operation Maintenance & Tolling
Activities and Advisory Services at all Site Operation and
Offices.

Certificate No. : MAH /O - 1818/C1

Initial Certificate Date: 24 March 2012

Certificate Date : 24 March 2015

Valid Until : 23 March 2018

NACE Code : F42

Managing Director

This registration is subject to the company maintaining a management system, to the above standard,
which will be monitored by Nimbus Certifications Pvt. Ltd.

This is an accredited certificate authorised for issued by Accreditation Services for Certifying Bodies (Europe) Limited
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the world's built, natural
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