

ORISSA STATE ROAD PROJECT

PHASE - II,

Jagatpur - Chandbali Road Corridor (Package - P04)



Environmental Impact Assessment Report

July - 2013

Prepared By

ORISSA WORKS DEPARTMENT

GOVERNMENT OF ORISSA

CONTENTS

| | |
|---|-----------|
| EXECUTIVE SUMMARY | 7 |
| CHAPTER 1 | 18 |
| INTRODUCTION | 18 |
| 1.0 Background | 18 |
| 1.1 Project Description | 19 |
| 1.2 Objectives of the Project | 20 |
| 1.3 Purpose of the Environmental Assessment | 20 |
| 1.4 Boundaries of the Project Road | 20 |
| 1.5 Scope of EIA Report | 21 |
| 1.6 Structure of EA Report | 21 |
| CHAPTER 2 | 23 |
| PROJECT DESCRIPTION | 23 |
| 2.1 General Project Description | 23 |
| 2.2 Expected Benefits of the Project | 24 |
| 2.3 Existing Road Features | 24 |
| 2.3.1 Land Use along the Project Road | 24 |
| 2.3.2 Existing Right of Way (RoW) | 25 |
| 2.3.3 Major Settlements En route and Built-up Area | 26 |
| 2.3.4 Existing Road Carriageway | 27 |
| 2.3.5 Pavement Conditions | 27 |
| 2.3.6 Roadside Drains | 27 |
| 2.3.7 Existing Cross Drainage Structures | 28 |
| 2.3.8 ROB/Flyover | 29 |
| 2.3.9 Flood Prone Section | 29 |
| 2.3.10 Junctions and Intersections | 29 |
| 2.3.11 Existing Traffic | 30 |
| 2.3.12 Road Accident | 31 |
| 2.3.13 Utility Shifting | 31 |
| 2.4 Improvements Proposal | 32 |
| 2.4.1 Proposed Carriageway Width | 32 |
| 2.4.2 Geometric Improvement | 32 |
| 2.4.3 Roadside Drain | 33 |
| 2.4.4 Improvement proposed for Bridges and Culverts | 34 |
| 2.4.5 Paved Shoulders | 34 |
| 2.4.6 Junction Improvements | 35 |
| 2.4.7 Traffic Projection | 35 |
| 2.4.8 Safety Crash Barrier | 36 |
| 2.4.9 Pedestrian and Cattle Underpass | 36 |
| 2.4.10 Traffic Signs | 36 |
| 2.4.11 Bus Bays | 37 |
| 2.4.12 Truck Lay Bys | 38 |
| 2.4.13 Service Road | 38 |
| 2.4.14 Toll Plazas | 38 |
| 2.5 Natural Resource Requirements | 38 |
| 2.5.1 Borrow Area | 38 |
| 2.5.2 Aggregate | 38 |

| | | |
|--|---|-----------|
| 2.5.3 | Sand | 39 |
| 2.5.4 | Water Requirements | 39 |
| 2.5.5 | Fly Ash Utilisation | 39 |
| 2.6 | Project Implementation Schedule | 39 |
| 2.7 | Manpower Requirements | 39 |
| 2.8 | IRC Guidelines for widening & up-gradation of Highway | 39 |
| CHAPTER 3..... | | 41 |
| POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK..... | | 41 |
| 3.1 | General | 41 |
| 3.2 | Natural environment | 41 |
| 3.4 | Other legislations applicable to road projects | 44 |
| 3.6 | World bank requirements | 50 |
| 3.8 | Interface with Department of Revenue, GoO | 52 |
| 3.11 | Interface with the Department of Mines, GoO | 52 |
| 3.12 | Capability of OWD for interface management | 52 |
| ANALYSIS OF ALTERNATIVES | | 53 |
| 4.1 | General | 53 |
| 4.2 | With and Without Project Alternatives | 53 |
| 4.3 | Analysis of Alternative Alignments | 56 |
| 4.4 | Evaluation of Options | 58 |
| CHAPTER 5..... | | 59 |
| DESCRIPTION OF ENVIRONMENT..... | | 59 |
| 5.0 | Introduction | 59 |
| 5.1 | Methodology for EIA | 59 |
| 5.2 | Study Area | 59 |
| 5.2.1 | Corridor of Impact | 59 |
| 5.2.2 | Project Influence Area | 59 |
| 5.3 | Land Environment | 60 |
| 5.3.2 | Geology | 61 |
| 5.3.3 | Sismicity | 62 |
| 5.3.3 | Hydrology | 63 |
| 5.3.4 | Land Use | 64 |
| 5.3.5 | Soil | 64 |
| 5.3.6 | Water Resources and Drainage | 65 |
| 5.3.7 | Meteorological Conditions | 68 |
| 5.3.8 | Air | 69 |
| 5.3.9 | Noise | 71 |
| 5.4 | Biological Environment | 71 |
| 5.4.1 | Forest | 71 |
| 5.4.2 | Protected Natural Habitat and Wildlife Movement | 72 |
| 5.4.3 | Flora | 72 |
| 5.4.4 | Fauna | 75 |
| 5.5 | Socio Economic Environment | 76 |
| 5.5.1 | Demography | 76 |
| 5.5.2 | Industries | 77 |
| 5.5.3 | Archeological Monuments and Tourist Places | 77 |
| 5.5.4 | Sensitive Receptors (schools, colleges, health centers, hospitals) | 77 |
| 5.5.5 | Community Property Resources (hand pumps, wells, religious structures etc.) | 78 |

| | |
|--|-----------|
| CHAPTER 6..... | 82 |
| CONSULTATION WITH STAKEHOLDERS..... | 82 |
| 6.1 General | 82 |
| 6.2 Definition of Stakeholder | 82 |
| 6.3 Types/ Categories of Stakeholders | 82 |
| 6.4 Process of Stakeholder consultation | 82 |
| 6.5 Public Consultations Strategy | 83 |
| 6.5.1 District Level consultation | 83 |
| 6.5.2 Village Level Consultation | 84 |
| 6.5.3 Focus Group Discussion | 85 |
| 6.5.4 Consultation Findings | 85 |
| 6.6 Follow-up Consultations | 86 |
| 6.7 Consultation Findings and Project Proponent Response | 86 |
| CHAPTER 7..... | 93 |
| POTENTIAL IMPACTS AND MITIGATION MEASURES | 93 |
| 7.1. Likely Positive Impacts | 93 |
| 7.1.1 Likely Positive Impacts – Construction Stage | 93 |
| 7.1.2 Likely Positive Impacts – Operation Stage | 94 |
| 7.2 Potential Adverse Impacts | 95 |
| 7.2.1 Construction Stage | 96 |
| 7.2.2 Operation Stage | 109 |

ABBREVIATIONS

| | |
|----------|--|
| ADB | Asian Development Bank |
| ASI | Archaeological Survey of India |
| ADVs | Animal Drawn Vehicles |
| BP | Bank Practices |
| BH | Breast Height |
| BR | Biosphere Reserve |
| CAMPA | Compensatory Aforestation Fund Management and Planning Authority |
| CD | Cross Drainage |
| CGWB | Central Ground Water Board |
| CoI | Corridor of Impact |
| CPCB | Central Pollution Control Board |
| CPR | Common Property Resources |
| CT | Census Town |
| DCAC | District Compensation Advisory Committee |
| DFO | Divisional Forest Officer |
| DOE | Department of Environment |
| DPR | Detailed Project Report |
| EA | Environment Assessment |
| EAC | Expert Appraisal Committee |
| EE | Environment Expert |
| EIA | Environment Impact Assessment |
| EIAA | Environment Impact Assessment Authority |
| EMAP | Environment Management Action Plan |
| EMP | Environment Management Plan |
| FACOR | Ferro Alloys Corporation of Odisha |
| F(C) Act | Forest Conservation Act |
| FGD | Focus Group Discussion |
| FRP | Fiber Reinforced Plastic |
| GoI | Government of India |
| GoO | Government of Odisha |
| GP | Good Practices, Gram Panchayat |
| HAL | Hindustan Aeronautics Limited |
| HDVs | Human Drawn Vehicles |

| | |
|------------------|--|
| Ibs | Inspection Bungalows |
| IER | Independent Environmental Review |
| IMD | Indian Meteorological Department |
| IMFA | Indian Metals & Ferro Alloys Corporation |
| IRC | Indian Road Congress |
| ISAP | Institutional Strengthening Action Plan |
| KBK | Koraput-Bolangir-Kalahandi |
| LCV | Light Commercial Vehicles |
| MDR | Major District Road |
| MoEF | Ministry of Environment & Forests |
| MoST | Ministry of Surface Transport |
| MOU | Memorandum of Understanding |
| NAC | Notified Area Council |
| NALCO | National Aluminium Company |
| NCDB | Noise Cum Dust (control) Barrier |
| NGO | Non Government Organization |
| NH | National Highway |
| NOC | No Objection Certificate |
| NTPC | National Thermal Power Corporation |
| O&M | Operation & Maintenance |
| OBCC | Odisha Bridge Construction Corporation |
| ODR | Other District Road |
| OFC | Optical Fibre Cable |
| OFDC | Odisha Forest Development Corporation |
| OP | Operational Policies |
| OSPCB | Odisha State Pollution Control Board |
| OSRP | Odisha State Roads Project |
| OT&OFPT Rules | Odisha Timber & Other Forest Produce Transit Rules |
| OUAT | Odisha University of Agriculture & Technology |
| OWD | Odisha Works Department |
| PA | Protected Areas |
| PAPs | Project Affected Persons |
| PC | Priming Coat |
| PCC | Portland Cement Concrete |

| | |
|-------|---|
| PCCF | Principal Chief Conservative Forest |
| PF | Protected Forest |
| PHC | Primary Health Center |
| PHD | Public Health Department |
| PIA | Project Influence Area |
| PIU | Project Implementation Unit |
| PMU | Project Monitoring Unit |
| PRF | Proposed Reserved Forest |
| PRI | Panchayat Raj Institutions |
| RAP | Resettlement Action Plan |
| RCC | Reinforced Cement Concrete |
| RF | Reserved Forest |
| R&R | Rehabilitation & Resettlement |
| RD | Rural Development |
| ROB | Road Over Bridge |
| RoW | Right of Way |
| RPDAC | Resettlement and Periphery Advisory Committee |
| RWSS | Rural Water Supply and Sanitation |
| SC | Scheduled Caste, Supervision Consultant |
| SEZ | Special Economic Zone |
| SEIAA | State Environment Impact Assessment Authority |
| SH | State Highway |
| SHG | Self Help Group |
| ST | Scheduled Tribe |
| ToR | Terms of Reference |
| TW | Tube Well |
| VECs | Valued Environment Components |
| VF | Village Forest |
| WB | World Bank |
| ZOI | Zone of Influence |

EXECUTIVE SUMMARY

ES 1.0 Introduction

The Government of India has requested the assistance of the World Bank for upgrading and rehabilitation of State Highways, Major District Roads and Other District Roads in the State of Odisha at a total estimated project cost of US\$ 265 million¹. The International Bank for Reconstruction and Development shall fund US\$ 196 million and remaining USD 69 millions shall be through the Odisha State funding. The Odisha Works Department (OWD) will be the executing agency for the Project.

The Odisha State Roads Project (OSRP) is a road upgrading and rehabilitation initiative of the Govt. of Odisha with financial assistance from the World Bank. The OSRP includes rehabilitation and improvement of existing roads by widening and strengthening pavements. In addition, minor realignments are being/will be carried out where found necessary. The intention is to remove transport bottlenecks in targeted corridors, thereby increase the capacity of the road, decrease travel time and reduce congestion thereby drawing greater investment and economic and social development activities in the state of Orissa.

The project was restructured in February 2013 and changes were made in “Road Corridor Improvement” component that includes widening, strengthening and selective realignment of about 310 km of existing roads in the State of Odisha to the double-lane standard, to be completed in two phases: (i) Phase I Roads, comprising about 204 km; and (ii) Phase II Roads, comprising 106 (Jagatpur - Chandbali) km.

Under Phase I of the Project, 204 km of State Highways have been selected for upgrading and rehabilitation and these works are currently under execution. These roads were short listed based on technical and economic evaluation studies conducted by Odisha Works Department (OWD) of Government of Odisha. The preparation of Detailed Project Reports for these State Highways under Phase I involved through on-site data collection on traffic volumes, existing pavement condition in terms of roughness and design, assets and resources within and outside the Right of Way. The technical and safeguard reports were prepared (including review by Independent Consultant) and disclosed in 2007. Also cost estimates, bid documents have been prepared along with measures to address environment and social issues in the light of World Bank guidelines, statutory requirements of Government of India and those of State Government.

The present Environmental Impact Assessment exercise relates to the fourth road, Jagatpur to Chandbali comprising of a length of 106 km that has been selected for inclusion as part of Phase II works under the project. The output of the EIA exercise is a corridor specific Environmental Management Plan, which is a stand-alone report in itself.

¹ As per the Project Restructuring carried out in January 2013. The figures in 2007 when the project was approved by the Bank were different.

Project Road

The Project Road Jagatpur – Chandbali starts from the junction of NH 5 (km 28) at Jagatpur (near Cuttack i.e. km 0 of project road) and ends at km 45 of SH 9 beyond Chandbali. The total length of the project road is 106 km.

The existing road is a single lane carriageway with condition of horizontal and vertical geometric varying from average to poor. The existing Project Roads has sharp horizontal curves and insufficient vertical design standard, which do not provide adequate overtaking sight and stopping distance even for 35 kmph thereby making the accidents more frequent.

Table ES 1.1: General Information about the Project Road

| Project road Features | Description | |
|------------------------|--|--|
| | Chainage | Geographical Coordinates |
| Starting Point | km 0.000 | 20 ⁰ 29'44"N,85 ⁰ 55'23"E |
| Ending point | Km 45 of SH-9 | 20 ⁰ 48'22"N, 86 ⁰ 45'36"E |
| Road length | 106 km | |
| State | Odisha | |
| District en-route | Cuttack, Kendrapada and Bhadrak | |
| Village along the road | Total: 113 villages (Cuttak – 44, Kendrapada - 62, & Bhadrak:07nos | |
| Proposed ROW | 26 m in open area, 16m in built up area and 35 m for Bypasses | |

ES 2.0 Project Description

The road corridor is proposed for widening and strengthening to two lane carriageway width hard shoulders on either side. In open/rural areas, the carriageway width has been taken as 7.0 m with 2.5m wide hard shoulders on either side. In built up areas, paved shoulder of 1.5 m widths shall be provided making total roadway width of 10 m. Beyond this, covered drains shall be provided at built-up areas which will be used as walkway.

Table ES 2.1: Proposed Paved Shoulder Stretches

| S.No. | Chainage | | Length (km) |
|-------|----------|--------|------------------------------|
| | From | To | |
| 1 | 0.000 | 54.250 | 54.250 (Continuous stretch) |
| 2 | 57200 | 57400 | 200 |
| 3 | 58050 | 58450 | 400 |
| 4 | 62950 | 63200 | 250 |
| 5 | 65400 | 65900 | 500 |
| 6 | 69400 | 69650 | 250 |
| 7 | 72050 | 72450 | 400 |
| 8 | 84950 | 85550 | 600 |
| 9 | 94750 | 95000 | 250 |
| 10 | 95000 | 95400 | 400 |
| 11 | 99800 | 100100 | 300 |
| 12 | 100100 | 101400 | 1300 |
| 13 | 101400 | 101750 | 350 |
| 14 | 101750 | 102000 | 250 |
| 15 | 102000 | 102200 | 200 |
| 16 | 104500 | 104700 | 200 |
| 17 | 104950 | 105100 | 150 |

Table ES 2.2: Location of Service Road

| S.No | Chainage | | Length (m) | Remark |
|------|----------|--------|------------|---|
| | From | To | | |
| 1 | 48.250 | 49.0 | 750 | proposed for diversion of local traffic at Kendrapara |
| 2 | 49.200 | 53.200 | 4000 | |

Table ES 2.3: Locations for New/Re-Alignment

| Sl.No. | From | To | Length (m) |
|--------|--------|--------|------------|
| 1 | 37.900 | 38.100 | 200 |
| 2 | 56.200 | 56.450 | 250 |
| 3 | 73.400 | 73.650 | 250 |
| 4 | 97.690 | 98.150 | 460 |
| 5 | 98.500 | 99.100 | 600 |

Table ES 2.4: Propose roadside drain locations

| From | To | Sides | Length (m) | From | To | Sides | Length (m) |
|--------|--------|-------|------------|---------------------------|---------|-------|--------------|
| 0 | 1.900 | Both | 1900 | 48.250 | 48.950 | Both | 700 |
| 2.200 | 2.400 | Both | 200 | 49.100 | 49.200 | Both | 100 |
| 2.530 | 2.800 | Both | 270 | 50.000 | 52.000 | Both | 2000 |
| 3.850 | 4.300 | Both | 450 | 53.200 | 54.000 | Both | 800 |
| 5.800 | 7.200 | Both | 1400 | 55.100 | 55.300 | Right | 200 |
| 7.550 | 7.950 | Both | 400 | 55.300 | 55.550 | Both | 250 |
| 9.300 | 9.6600 | Both | 360 | 56.600 | 56.850 | Both | 250 |
| 10.100 | 10.48 | Both | 380 | 57.200 | 57.400 | Both | 200 |
| 10.600 | 10.700 | Right | 100 | 58.050 | 58.450 | Both | 400 |
| 10.700 | 10.850 | Left | 150 | 62.950 | 63.200 | Both | 250 |
| 13.800 | 14.000 | Both | 200 | 65.400 | 65.900 | Both | 500 |
| 16.600 | 17.100 | Both | 500 | 69.400 | 69.65 | Both | 250 |
| 17.700 | 20.800 | Both | 3100 | 72.050 | 72.450 | Both | 400 |
| 22.150 | 22.500 | Both | 350 | 84.950 | 86.450 | Left | 1500 |
| 24.000 | 24.250 | Both | 250 | 84.950 | 86.450 | Right | 1500 |
| 26.600 | 26.800 | Both | 200 | 94.750 | 95.000 | Left | 250 |
| 27.250 | 28.400 | Both | 1150 | 95.000 | 95.400 | Both | 400 |
| 32.650 | 33.200 | Both | 550 | 99.800 | 100.100 | Left | 300 |
| 35.250 | 35.900 | Both | 650 | 100.100 | 101.400 | Both | 1300 |
| 38.600 | 39.550 | Both | 950 | 101.400 | 101.750 | Left | 350 |
| 41.400 | 41.600 | Both | 200 | 101.750 | 102.000 | Both | 250 |
| 43.300 | 43.600 | Both | 300 | 102.000 | 102.200 | Left | 200 |
| 44.300 | 44.800 | Both | 500 | 104.500 | 104.700 | Right | 200 |
| 44.800 | 45.150 | Left | 350 | 104.950 | 105.100 | Both | 150 |
| 47.950 | 48.250 | Right | 300 | Total Drain Length | | | 27860 |

Table ES 2.5: Improvement Proposal for Bridges and Culverts

| Structure Type | Total No. Existing | Retained | Replaced | Widened | Choked / Not Visible | New | Total after Improvement |
|----------------|--------------------|----------|----------|---------|----------------------|-----|-------------------------|
| Major Bridges | 3 | 3 | nil | nil | --- | nil | 3 |
| Minor Bridges | 13 | 8 | 5 | Nil | Nil | 3 | 16 |
| Culverts | 144 | Nil | 126 | 16 | 2 | 190 | 332 |

Pedestrian and Cattle Underpass

There is a provision of 5 cell 8 mts. span box cell culverts provided in the Pattamundai bypass section at Km.70+100 which shall work both as a drainage outlet and also as pedestrian under pass as there is no defined nullah in the stretch. Further, 6 cattle under passes have been proposed at km.78+980, 91+800, 92+800, 93+800, 96+320 & 96+920 due to high embankments at flood prone sections and bridge approaches.

Safety Crash Barrier

The Guard Posts has been proposed at 130 locations (**Annexure - 2.3**) and crash barrier has been proposed at 3 major bridges (250m at 2 sides on both ways) and 16 minor bridges (80m at 2 sides on both ways).

Table ES 2.6: The Abstract of Quantities of safety devices

| SI No. | Safety Devices | Quantity |
|--------|-------------------------|----------|
| 1 | Stop | 183 |
| 2 | Restriction Ends | 63 |
| 3 | Speed Limit-50 | 05 |
| 4 | Speed Limit-65 | 57 |
| 5 | School Zone | 39 |
| 6 | Compulsory Sound Horn | 282 |
| 7 | Cross Road | 49 |
| 8 | Right Side Road – T | 95 |
| 9 | Left Side Road – T | 95 |
| 10 | Right Hand Curve | 58 |
| 11 | Left Hand Curve | 58 |
| 12 | Right Reverse Bend | 07 |
| 13 | Left Reverse Bend | 7 |
| 14 | Pedestrian Crossing | 161 |
| 15 | Staggered Intersection | 70 |
| 16 | Left Side Road –Y | 146 |
| 17 | Right Side Road – Y | 146 |
| 18 | Narrow Bridge | 19 |
| 19 | Series of Bends | 05 |
| 20 | Hump | 174 |
| 21 | State Route Marker Sign | 21 |
| 22 | Petrol Bunk | 21 |
| 23 | Hospital | 20 |

Table ES 2.7: Proposed Bus Bays Locations

| Sl. No. | Chainage | Side |
|---------|----------|------|---------|----------|------|---------|----------|------|---------|----------|------|
| 1 | 1900 | L | 26 | 20300 | L | 51 | 43690 | L | 76 | 71400 | L |
| 2 | 2000 | R | 27 | 22220 | L | 52 | 44650 | L | 77 | 72710 | L |
| 3 | 3750 | L | 28 | 22300 | R | 53 | 44800 | R | 78 | 72810 | R |
| 4 | 4350 | R | 29 | 23900 | R | 54 | 45800 | R | 79 | 74631 | R |
| 5 | 5740 | L | 30 | 24300 | L | 55 | 45850 | L | 80 | 74651 | L |
| 6 | 6200 | R | 31 | 26900 | R | 56 | 48000 | R | 81 | 77500 | L |
| 7 | 7450 | L | 32 | 27160 | L | 57 | 48100 | L | 82 | 77900 | R |
| 8 | 7750 | R | 33 | 28000 | L | 58 | 49200 | R | 83 | 78990 | L |
| 9 | 9200 | L | 34 | 29650 | L | 59 | 50400 | L | 84 | 79750 | R |
| 10 | 9640 | R | 35 | 30950 | R | 60 | 51250 | R | 85 | 84820 | L |
| 11 | 10000 | L | 36 | 31000 | L | 61 | 51850 | L | 86 | 85550 | R |
| 12 | 10200 | R | 37 | 32850 | L | 62 | 51880 | R | 87 | 93865 | L |
| 13 | 10600 | L | 38 | 33000 | R | 63 | 53800 | R | 88 | 93900 | R |
| 14 | 10900 | R | 39 | 33700 | R | 64 | 54550 | L | 89 | 94830 | R |
| 15 | 12980 | L | 40 | 34000 | L | 65 | 54600 | R | 90 | 95400 | L |
| 16 | 13950 | R | 41 | 35250 | L | 66 | 55200 | L | 91 | 101600 | R |
| 17 | 14000 | L | 42 | 35750 | R | 67 | 56800 | L | 92 | 103020 | L |
| 18 | 15600 | L | 43 | 36950 | L | 68 | 57350 | R | 93 | 104180 | R |
| 19 | 15650 | R | 44 | 37000 | R | 69 | 58200 | L | 94 | 104420 | L |
| 20 | 16750 | L | 45 | 37800 | R | 70 | 58400 | R | | | |
| 21 | 17100 | R | 46 | 38370 | L | 71 | 61600 | L | | | |
| 22 | 18650 | L | 47 | 38570 | R | 72 | 61820 | R | | | |
| 23 | 18670 | R | 48 | 41150 | L | 73 | 62850 | R | | | |
| 24 | 19555 | R | 49 | 41155 | R | 74 | 63200 | L | | | |
| 25 | 19775 | L | 50 | 43230 | R | 75 | 65300 | L | | | |

ES 3.0 Policy, Legal and Administrative Framework

Review of the existing legislation, institutions and policies relevant to the Environmental Impact Assessment for Orissa State Road Sector Project at the National and State levels are reviewed and identified the clearance requirement for the project at various stages of the project. The requirement obtaining the clearances for the project at project preparation stages are summarised below;

ES Table 3.2: Key Regulatory Requirements for Jagatpur – Chandbali Road

| Type of Clearance | Project Stage | Responsible Agency for Obtaining Clearance | Remark |
|---|------------------|--|---|
| Consent to Establish and Operate from OSPCB | Pre Construction | Contractor | Prior to installation of Plant (HMP, WMM, Concrete Batching Plant, Crushers etc). |
| Environmental Clearance from MoEF | Pre Construction | Odisha Works Department | As per EIA notification as amended in 2011, only construction of new and |

| Type of Clearance | Project Stage | Responsible Agency for Obtaining Clearance | Remark |
|---|--------------------|--|---|
| | | | expansion of Expressway, National Highway and State Highway requires EC. The project road is categorised as Major District Road and does not fall under categories notified in EA notification. Hence, EC is not required for the road corridor. |
| Tree Cutting Permission | Pre Construction | Orissa Works Department | Obtained except for one section (on Jagatpur side) |
| Consents under Air and Water Act stage (Prior to initiation of any work) for establishment of construction camps | Construction stage | Contractor | Prior to initiation of any work. |
| Explosive License for storing fuel oil, lubricants, diesel, etc. at construction camp from Chief Controller of Explosives, Nagpur | Construction stage | Contractor | Prior to initiation of any work. |

ES 4.0 Analysis of Alternatives

Analysis for alternatives was carried out for with project and without project scenario, taking into account different parameters as given in Table ES 4.1. Based on comparative analysis below, 'With' project scenario with its minor adverse impacts is more acceptable than the 'Without' project scenario which would mean an aggravation of the existing problems. The potential benefits of the proposed road improvements are substantial and far-reaching both in terms of the geographical spread and time. Hence, it is clear that the implementation of the project will be a definite advantage to State of Odisha in order to achieve all-round development of its economy and progress of its people.

Table ES 4.1: Comparative Analysis of 'With' and 'Without' Project Scenario

| Component | With Project Scenario | Without Project Scenario |
|--------------------|---|--|
| Carriageway | <ol style="list-style-type: none"> 7.0 m Carriageway with paved shoulder for 69 km. 7.0 m carriage way with hard shoulder for 37 km. Rigid concrete pavement for 30 km in built up area. Raising of embankment at all locations where submergence was there. Provision of 334 CDS for safe and quick discharge of water. | <p>Carriage way varies from 3.50m to 5.5m all throughout.</p> <p>Existing 129 CDs are in poor condition and not catering to drainage requirements.</p> |

| Component | With Project Scenario | Without Project Scenario |
|---|--|---|
| Traffic congestion | <ol style="list-style-type: none"> 1. Bye pass suggested at Pattamundai. 2. Service lanes being provided at Kendrapara. 3. All utilities shifted beyond road area and drains provided. | <ol style="list-style-type: none"> 1. Pattamundai market area is heavily congested. 2. Kendrapara market area is heavily congested. 3. Market area generally congested everywhere due to electric poles and poor drainage. |
| Road Safety | <ol style="list-style-type: none"> 1. The horizontal and vertical geometry shall be improved to provide a smooth and safe road. 2. Safety measures and devices shall be enhanced by providing white markings on the surfaces and providing adequate furniture, signage and appurtenances for better visibility at night. 3. Traffic islands, rumble strips are provided near Minor Junctions. | Basically no road safety provisions in particular. |
| Environmental Quality | <ol style="list-style-type: none"> 1. Adequate and appropriate drainage facilities provided. 2. All the submersible areas have been improved to provide all weather access. 3. Slope protection measures have been taken with provision of erosion control blanket and stone pitching. 4. Provision of silt fencing made to reduce construction generated silt losses. 5. Wild life mitigation measures taken, reptile passes provided. 6. Precautions taken not to impact Water quality during construction and operation. 7. Air quality and noise pollution shall be improved in the congestion areas due to smooth traffic flow. 8. Biodiversity are embedded in the project scenario. | Environment parameters were absent. |
| Better Transportation Facilities | The road shall be widened to cater to the projected traffic need after twenty years. The pavement condition would improve resulting into reduce the travel time, vehicle operating and maintenance cost etc. that will adds to accessibility of the road users to various important centers. | Narrow and poorly surfaced roads not facilitating easy transport, inaccessible to important centers due to high travel time. |
| Economic Development | The improve road will provide accessibility to markets and open opportunities to employments, trade and commercial activities. In addition to catering to the needs of social and environmental aspects of the locality so that there is spiraling growth of the area contributing immensely to the development of the state. | Meager economic activities going on at present. Also the external market and agencies do not reach the public in time. |
| Regional connectivity | All weather connectivity to the district Headquarters at Cuttack and Kendrapara shall be improved. Connectivity to the state capital shall be better. | No connectivity is available at present for the local people to approach the Administration during flood. The Administration too feels helpless being unable to extend its support and services during such peril. |
| Accessibility to growth centers/market | All weather connectivity to the growth centers at Cuttack and Bhubaneswar and market at Cuttack shall be improved. | People remain inaccessible for a long period every year due to flood which ruins their economic backbone. |
| Employment | Once this facility is put to operation, economic | Many people do not prefer to move out of |

| Component | With Project Scenario | Without Project Scenario |
|---------------|--|---|
| opportunities | and trade activities shall flourish and in turn shall generate employment opportunities. | their village due to poor connectivity. |

ES 5.0 Description of Environment

Baseline data has been collected including meteorological data, water quality, air quality, soil quality, noise levels, flora, fauna, land used and socio-economic status for the Project influence area during the project preparation stage, which is summarized in **Table ES 5.1**.

Table ES 5.1: Summary of Baseline (Jagatpur –Chandbali)

| Environmental Parameters | Remark |
|---|--|
| Physiography | Flat terrain |
| Gelogy | Rock formations belonging to Archaean system of Pre-Cambrian geological age and Recent to sub-recent sediments |
| Temperature | Maximum 35-40 °C Minimum 12-14°C |
| Rainfall | 1500 mm |
| Soil Type | Lateritic, Coastal Saline And Alluvial, And Deltaic Alluvial |
| Surface water bodies crossing/ along the road: River/Canal/Stream/Ponds | 3 Rivers, 44 Ponds |
| Ground Water Bodies along the road: HP/TW/Well/Stand Post | 72 Wells, 37 Tube Wells, 36 Stand Posts |
| Surface and ground Water Quality | All parameters within permissible limit, except for Iron content that is exceeding the prescribed limit. |
| Air Quality | Within permissible limit |
| Noise Level | Within permissible limit |
| Forest Along the Road | Road side trees declared as Protected Forest in Odisha |
| Eco-sensitive area with 10 km | Bhitarkanika Wildlife Sanctuary |
| Avenue Trees along the road | 7568 Nos. |
| Settlements Along the road | 116 Nos. |
| Religious Properties along the road | 165 Nos. |
| Educational Institutes Along the road | 21 Nos. |
| Land Use Along the road | Agriculture, Built Up Area, Commercial Area, Industrial Area |

ES 6.0 Public Consultation

The project has ensured involvement of various stakeholders and people in project planning, implementation and operation. The consultations under the project were conducted during Feasibility Stage and Detailed Project Preparation stage, so that people aspiration of people is assessed for collective and mutually agreed project decisions. The consultation mechanism has been designed in such a manner that every stratum of society and concerned administration is consulted at different spatial hierarchy.

- i. District Level consultation
- ii. Village Level Consultation
- iii. Focused Group Discussion

ES 6.1: Date and Venue of District Level Meeting

| Sl. No. | Name of the District | Date of Meeting | Venue | Important Participants |
|---------|----------------------|-----------------|----------------------|---|
| 1 | Bhadrak | 8-12-2006 | DRDA Conference Hall | MP, MLA, Chairman, Zilla parishad and, Panchayat president, Vyapari sangh and District Officials, media persons |
| 2 | Cuttack | 23-12-2006 | DRDA Conference Hall | Officials from Revenue, line department, forest elected representatives and common people, media persons |
| 3 | Kendrapada | 26-12-2006 | DRDA Conference Hall | Officials from Revenue, line department, forest elected representatives and common people, media persons |

Table ES 6.2: Date and Venue of Project Level Consultation

| Sl. No. | Date of Meeting | Venue | Important Participants |
|---------|-----------------|---------------------------------------|---|
| 1 | 21.04.2013 | Gulnagar High School, Kendrapada | PAP's and residents along project road. |
| 2 | 21.04.2013 | Maa Tarini Peeth, Gopapur | |
| 3 | 22.04.2013 | Irrigation Inspection Bungalow, Gogua | |
| 4 | 24.04.2013 | Paga Bazaar Haat, Paga Bazaar | |
| 5 | 24.04.2013 | Maa Basulei Peeth, Padampur | |
| 6 | 24.04.2013 | Gokarneswar Shiv Temple, Kantapada | |
| 7 | 25.04.2013 | Maa Saheswari Temple Complex, Salepur | |
| 8 | 25.04.2013 | Sureswar Temple, Krushnapur | |

ES 7.0 Environmental Assessment of the Project

The detailed design of the project has been closely coordinated with the preparation of this Environmental Impact Assessment Report and the Environmental Management Plans. The EA preparation led to identification of potential negative environmental impacts and their feasible remedial measures (including avoidance, mitigation and enhancements). Based on these findings Environmental Management Plans (EMPs) have been prepared (separate volume) for the implementation for the construction package. The EMPs detail the potential negative impacts and list specific mitigation measures that are required to be included and will form the part of the Contract documents between the Contractor and the Client.

Table ES 7.1: Impact Matrix

| Sl. No. | Parameter | Details |
|-------------------------|---|-------------------|
| Negative Impacts | | |
| 1 | Hand Pumps/Tube wells Relocation (Nos.) | 146 |
| 2 | Religious | 66 |
| 3 | Total Land for Acquisition (ha.) | 235.565 Ha |
| • | Private lands | 72.288 Ha |
| • | Government lands | 163.197 Ha |
| 4 | Borrow Earth (Cum) | 1130432 |
| 5 | Quarry Material (Cum) | 556741 |
| 6 | Water (Cu.m) | 135562 |
| 7 | Nos of trees to be felled (Nos) | 7568 |
| Positive Impacts | | |

| Sl. No. | Parameter | Details |
|----------|---|---------|
| 1 | Enhancement sites | |
| A | Cultural/Religious Properties (Nos) | 2 |
| B | Surface water body | |
| • | Bathing Ghat (location) | 4 |
| • | Spillway Gate (location) | 4 |
| C | Sensitive Receptors (Educational Institutes/Hospital/Religious Place) | |
| • | MS Grill Gate (location) | 21 |
| • | Metal Barricades (location) | 15 |
| D | Utility Ducts (location) | 65 |
| E | Enhancement of Bus bays | 94 |
| F | Wall Noise Barrier | 19 |
| G | Reptile Under Passess | 26 |
| 2 | Protection Work | |
| A | Erosion Control Blanket (location) | 2 |
| B | Toe Wall (location) | 44 |
| 3 | Road safety Measures | |
| A | Minor junction improvement (nos.) | 229 |
| B | Bus Bays (nos.) | 94 |
| C | Cattle Underpass (locations) | 7 |
| D | Signage (nos.) | |
| • | Stop | 183 |
| • | Restriction Ends | 63 |
| • | Speed Limit-50 | 05 |
| • | Speed Limit-65 | 57 |
| • | School Zone | 39 |
| • | Compulsory Sound Horn | 282 |
| • | Cross Road | 49 |
| • | Right Side Road – T | 95 |
| • | Left Side Road – T | 95 |
| • | Right Hand Curve | 58 |
| • | Left Hand Curve | 58 |
| • | Right Reverse Bend | 07 |
| • | Left Reverse Bend | 7 |
| • | Pedestrian Crossing | 161 |
| • | Staggered Intersection | 70 |
| • | Left Side Road – Y | 146 |
| • | Right Side Road – Y | 146 |
| • | Narrow Bridge | 19 |
| • | Series of Bends | 05 |
| • | Hump | 174 |

| Sl. No. | Parameter | Details |
|----------|----------------------------|---------|
| • | State Route Marker Sign | 21 |
| • | Petrol Bunk | 21 |
| • | Hospital | 20 |
| • | Crash Barriers (locations) | 19 |
| • | Guard Post (location) | 130 |
| 4 | Drainage | |
| A | Drain (length in Km) | 27.86 |
| B | New Culverts | 190 |
| C | New Minor Bridges | 3 |
| D | Reconstruction & Replacing | 126 |

Integration of Environmental and Social Considerations into Design

Collaboration between design engineers and environmental and social teams during the preparation of environmental and social assessment has ensured that the best design with minimal damage is adapted to minimize loss of significant of sensitive features such as road side vegetation, local water resources, sensitive cultural and religious sites, heritage trees and age old ritual sites. Care has been taken to ensure that the downstream users of drainage systems such as residents/inhabitants of the areas and agriculturalists are not distressed or seriously affected on account of certain road construction activity and designs, which otherwise would have undesirable consequences on the flora, fauna and the human habitations. Similarly certain designs were customized into standard designs to reduce impact on built-up areas - cross section, embankment height or pavement improvements have been adjusted so that the adverse impacts from design and construction works can be better managed. Since a substantial stretch of the road passes through thickly populated alluvial plains of the coastal districts, the road design in these localities have been prepared in such a manner that, minimum residents are affected on account of road widening. In village sections a minimum standard width 7mtr carriage way with 1.5mtr line drain to serve as drainage system cum utility tract and pavement for the pedestrians with pedestrian guardrails has been provided so that the direct effects of the widening can be reduced. The speed limit has been kept to around 60km per hour in stretches with road side habitations. Additionally, traffic claiming measures will be required to enforce the designated speed limits.

ES 8.0 Conclusion

The proposed up-gradation and strengthening of Jagatpur – Chandbali road will have multiple benefits in terms of economic development and fast connectivity. All environmental impacts identified and assessed are manageable to acceptable levels by implementing environmental management plan.

CHAPTER 1

INTRODUCTION

1.0 Background

The state of Odisha is located between latitude 17-48' to 22-34' North and 81-24' to 87-29' East longitude in the Indian Sub-continent as 10th large state of India with a geographical area of 155707 Sq. Km. It is bound by the Bay of Bengal in the East, West Bengal in the North East, Bihar & Jharkhand in the North, Chhattisgarh & MP in the West, South west, Andhra Pradesh in the South. The state has near about 480 Km of coast line.

The state has 3 revenue Divisions, 30 districts, 57 sub-divisions, 114 Tehsils, 314 Community development blocks for administration and community development. The decennial growth rate of the population was 20.06% from 1981 to 91. During 2001 this was found out to be average 236 persons per Sq.km, as against 203 persons during 1991. The male female ratio is 1000/972 against national average of 933. The Scheduled cast and Scheduled Tribe population comprise 16.20 and 22.21% respectively of the total population. The literacy rate was 49.09% in 1991 which has increased to 63.61% as per 2001 census data with increase in female literacy from 34.68% to 50.97%.

The annual average rain fall is around 1400 mm constituting 80.83% of this precipitation during monsoon months (June to September) and rest during post monsoon (October, November). The average number of rainy days is around 70 days. The most disturbing trend in the rain fall pattern is found out to be failure of monsoon precipitation at nick of the moment when the cropping pattern requirement is maximum leading to loss of agriculture. There has been another disturbing trend which shows a marked increase in the number of depressions in the Bay of Bengal & whirl winds in interiors areas of the state causing flash floods and series of destructions in the coastal as well as hilly tracts. The mean monthly temperature is around 37.1°C in the month of May, whereas the monthly minimum temperature is about 13.8°C mostly this is during mid-December to 2nd week of January. The highest temperature recorded is 52°C in Talcher surpassing the previous high of 47°C - 51°C. This is confined to pollution hot spots and low rainfall zones like Talcher, Rourkela, Ib valley, Joda – Badabil and Titlagarh.

The industries are now coming up in the state which are capital intensive and guzzlers of fossil fuel, minerals from mines and water from rivers, releasing millions of tons of unutilizable wastes, particulate matter and bringing in wide spread loss of vegetation shall put the state under near desert conditions within the coming 20 years due to increase in temperature, pollution of air, loss of available water to sustain agriculture and Eco flow.

The economic prosperity of the state depends on its infrastructure. Surface transport is one of the main components of infrastructure which ushers in socio-economic development as roads are like arteries, which help in circulation of men, materials and economic benefits to the remote corners of the state. Highways are one of the major modes of inland transport of goods and services as compared to other mode of transport which can not deliver the goods and services at door steps. The pace of progress, in all fields from Mining to industry, Agriculture to defense all need a well designed road network to attract investment in industry, food production and trade, tourism and education, urban housing and health

services. Odisha with its poor roads condition, lack of funds to widen and maintain the existing ones have been the bottleneck for lagging behind in the economic front. The corridor development project was initially conceived in the year 2000 but could not proceed. The present Government has again embarked upon the road development in a big way through revival of the Odisha State Roads Project (OSRP), under Odisha Works Department (OWD).

1.1 Project Description

The Government of India has requested the assistance of the World Bank for upgrading and rehabilitation of State Highways, Major District Roads and Other District Roads in the State of Odisha at a total estimated project cost of US\$ 265 million². The International Bank for Reconstruction and Development shall fund US\$ 196 million and remaining USD 69 million shall be through the Odisha State funding. The Odisha Works Department (OWD) will be the executing agency for the Project.

The Odisha State Roads Project (OSRP) is a road upgrading and rehabilitation initiative of the Govt. of Odisha with financial assistance from the World Bank. The OSRP includes rehabilitation and improvement of existing roads by widening and strengthening pavements. In addition, minor realignments are being/will be carried out where found necessary. The intention is to remove transport bottlenecks in targeted corridors, thereby increase the capacity of the road, decrease travel time and reduce congestion thereby drawing greater investment and economic and social development activities in the state of Orissa.

The project was restructured in February 2013 and changes were made in “Road Corridor Improvement” component that includes widening, strengthening and selective realignment of about 310 km of existing roads in the State of Odisha to the double-lane standard, to be completed in two phases: (i) Phase I Roads, comprising about 204 km; and (ii) Phase II Roads, comprising 106 (Jagatpur - Chandbali) km.

Under Phase I of the Project, 204 km of State Highways have been selected for upgrading and rehabilitation and these works are currently under execution. These roads were short listed based on technical and economic evaluation studies conducted by Odisha Works Department (OWD) of Government of Odisha. The preparation of Detailed Project Reports for these State Highways under Phase I involved through on-site data collection on traffic volumes, existing pavement condition in terms of roughness and design, assets and resources within and outside the Right of Way. The technical and safeguard reports were prepared (including review by Independent Consultant) and disclosed in 2007. Also cost estimates, bid documents have been prepared along with measures to address environment and social issues in the light of World Bank guidelines, statutory requirements of Government of India and those of State Government.

The present Environmental Impact Assessment exercise relates to the fourth road, Jagatpur to Chandbali comprising of a length of 106 km that has been selected for inclusion as part of Phase II works under the project. The output of the EIA exercise is a corridor specific Environmental Management Plan, which is a stand-alone report in itself.

² As per the Project Restructuring carried out in January 2013. The figures in 2007 when the project was approved by the Bank were different.

1.2 Objectives of the Project

The main objective of the OSRP is to increase the capacity of the roads and meet forecast increases in traffic, improve road conditions, decrease travel time, reduce congestion, provide improved operating costs to vehicle users and minimize environmental and social impact. Multiple secondary uses of the project road is also a prominent factor and due recognition will also be given to this issue.

Overall project aims are outlined in the Feasibility study includes:

- Reduce the transport operation cost by improving the riding quality of the roads
- Reduce journey time by minimizing congestion in urban centers:
- Minimize road accidents by increasing road widths, improving intersections and road geometry
- Upgrade roads to function in all weathers by improving drainage and raising road levels
- Provide route options to achieve better distribution of traffic
- Provide structurally sound roads capable of achieving their design life.
- Minimize subsequent in use annual road maintenance costs.
- Minimize the social and environmental impact from road improvement works.

1.3 Purpose of the Environmental Assessment

This EIA is both a planning tool and a mechanism for decision making. The main objectives are to:

- Assess potential environmental impacts associated with the project:
- Establish an engineering design philosophy that integrates environmental and social considerations into the project's detailed engineering/technical designs.
- Assess alternatives and provide inputs into project design.
- Design adequate and practical mitigation and management measures to be implemented during road construction and operation to avoid or minimize adverse impacts.
- Improve/manage health and safety conditions
- Propose and design environmental enhancements to be incorporated in the contract specification.

1.4 Boundaries of the Project Road

The Jagatpur – Chandbali project covers portions of MDR between Jagatpur to Baitarani Bridge over 99 km and remaining 7 km stretch of SH-9. The road covers the districts of Cuttack, Kendrapada and Bhadrak, which passes through thick habitations of Jagatpur, Bahugram, Salepur, Kendrapada, Patamundai, Aul up to Chandbali bridge and 7 km beyond Chandbali town across river Baitarani, the remaining portions of SH-9. This corridor provides access to main market of Jute, Rice and agricultural product, industries like Jute, Textile and paper mills and also connects places of tourism interests namely Ratangiri and Udaigiri and also breeding centers of crocodile and turtles at Bhitarkanika and Tikarpada. This road is located within 10 km radial distance of Bhitarkanika wildlife sanctuary and

National park, which is an important tourist spot for nature lovers and protection of rare flora and fauna.

1.5 Scope of EIA Report

The scope of this environment impact assessment study is to ensure that the EIA meets all requirements of World Bank Operative Directive 4.01 and the project complies with the statutory requirements. In addition to a standalone report already prepared for all the Phase –I roads, the report intend to assess the proposed project probable impacts that will be on

- Geophysical changes that may be brought under due to the corridor development, which are widely fluctuating from one corridor to other.
- The drainage systems and the effects of agriculture, that may undergo a change.
- The geological formation and the effects of road widening in ghats over the area and in the immediate vicinity and beyond to accesses the positive and negative effects.
- Standard design concept and specific environmental issues along the project corridor, those have been accommodated by integrating environmental and social requirements into detailed design and minimizing impacts thereby.
- Relevant legislations, policy and standards including statutory summary of the requirements by the GOI and State department with that of the World Bank requirements.
- EIA methodology including site investigation, research on issues, analysis of data and preparation of the report for EIA.
- Extensive community and Govt. consultation programs undertaken during the EIA preparation and summaries of the main issues raised during such public disclosure.
- Possible alternative to the OSRP designs and the do nothing options.
- Existing bio-physical environment and identification of relevant issues along the project corridor with baseline data to determine the impact based on VEC (Value Ecosystem Component) are defined by the World Bank.
- Existing socio economic conditions, including summary of community profiles.
- The main issues assessed such as land use, soil and segmentation, vegetation and wildlife, cultural and archeological sites, ambient noise, vibration, air and noise quality.
- Cumulative impact of the OSRP that may develop into potential effects on other major developments in the study area.
- Recommended mitigation measure to minimize impacts.
- Outline Environmental Management Plant (EMP) to be incorporated in the contract document and implemented during construction and operation period.
- Environment enhancement measures to improve or rehabilitate degraded areas.

1.6 Structure of EA Report

The Environmental Impact Assessment Report has been prepared as per format described in the EIA Notification-2006 of Govt. of India and in line with the guidance provided in Bank's operational policies. A separate standalone detailed Environmental Management Plan has

been prepared for the road corridor with detailed mitigation matrix, institutional arrangement, environmental monitoring and environmental budget. The EIA report contains following chapters.

Chapter 1 Introduction provides an introduction consisting of the background of project, brief description of nature, size, location of the project and its importance objectives of EIA and structure of EIA report.

Chapter 2 Project Description describes in terms of its basic activities. This chapter of the EIA report provides sufficient details on the project, need for project, location and description of the project.

Chapter 3 Policy and Legal Framework describes about various National Acts, Policies and Rules along with compliance to the World Bank safeguard policies. The chapter also enlists about details of statutory clearances that are required for the project.

Chapter 4 Analysis of Alternatives examines alternative means of carrying out a project involves description of each alternative, summary of adverse impacts of each alternative, mitigation measures proposed for each alternative and selection of best alternative.

Chapter 5 Description of the Environment provides the details of study area, period, components & methodology, establishment of baseline for valued environmental components, as identified in the scope, it deals with physical and biological environmental components of baseline environmental conditions in the study area of the project road, namely, soil, hydrology, water quality, climatology, meteorology, ambient air quality, noise levels and land use as well as terrestrial ecology. Baseline environmental conditions for demographic and socio-economic aspects are also presented briefly.

Chapter 6 Public Consultations details the overview of the stakeholders consultation carried out during the project preparation stage and people's perceptions of the project benefits and the potential impacts.

Chapter 7 Potential Impacts and Mitigation Measures describe the anticipated potential environmental impacts, both-direct and indirect, reversible and irreversible on different environmental parameters during construction and operation of proposed road.

In addition, to the avoidance and mitigation measures in the Environmental Assessment Report a separate Environmental Management Plan report has also been prepared that discusses management measures, institutional arrangement and various environmental enhancements suggested by the project including the enhancement of common property resources such as community wastewater bodies and cultural resources along the project.

CHAPTER 2 PROJECT DESCRIPTION

2.1 General Project Description

The project road starts from the junction of NH 5 (km 28) at Jagatpur (near Cuttack i.e. km 0 of project road) and ends beyond Chandbali (km 106) and passes through the districts of Cuttack, Kendrapada and Bhadrak. The majority of the project road length (Fig 2.1) is MDR between Jagatpur to Baitarani Bridge for a road length of 99 km (SH9A was de-classified to MDR vide government of Odisha gazette notification dated 24th November 2004 - Copy of Gazette notification enclosed at Annexure – 2.1) and 7 km stretch of SH-9A. The corridor passes through thick habitations of Jagatpur, Bahugram, Salepur, Kendrapada, Patamundai, Aul and Chandbali town. The entire road length is in plain terrain of densely populated and fertile agricultural land. This route has acquired great importance due to direct access to 4-Lane NH-5A (Kendrapada) connecting Paradeep port beside inter-region freight and passenger movement. This corridor provides access to main market of Jute, Rice and agricultural product, industries like Jute, Textile and paper mills and also connects places of tourism interests namely Ratnagiri and Udayagiri and also breeding centers of crocodile and turtles at Bhitarkanika. Recently two major bridges on river Kharashrota (Km 89/4) and Baitarani (Km 99/0) have been constructed and up-gradation of this road corridor will provide new dimensions on overall development of the project area and to the traffic plying through the corridor particularly to heavy commercial traffic.

Fig 2.1: Project Location Map

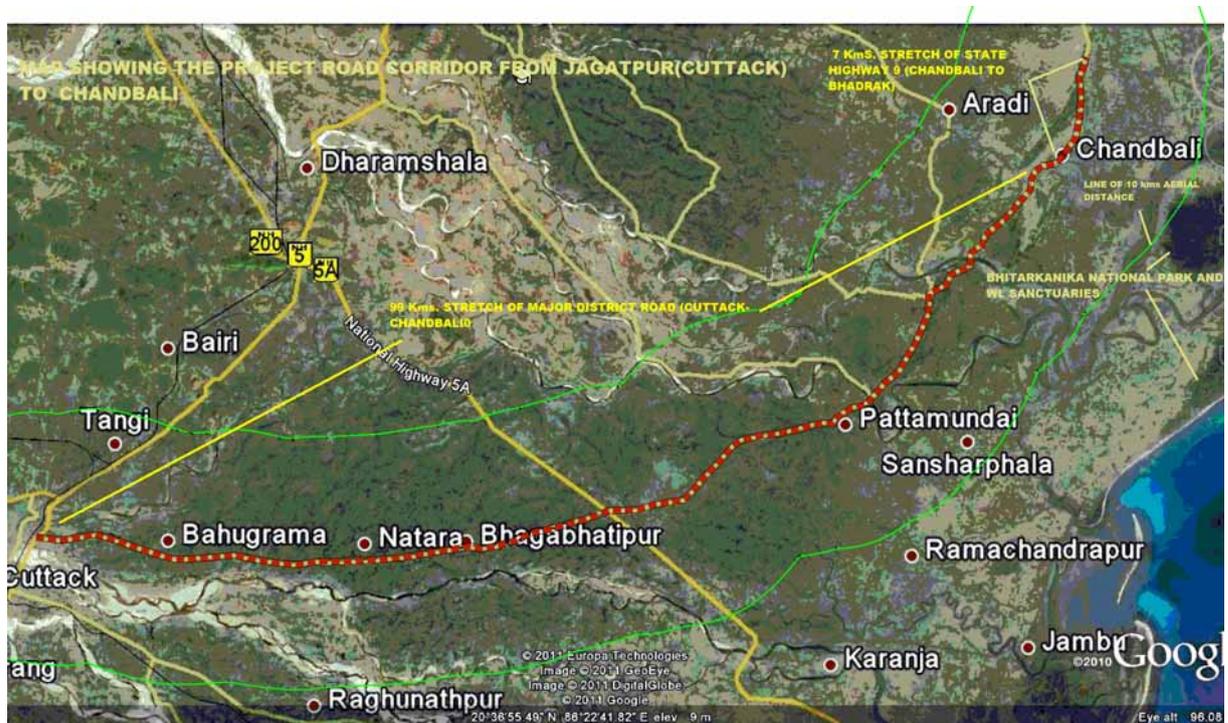


Table 2.1 General Information about the Project Road

| Project road Features | Description | |
|------------------------|--|--|
| | Chainage | Geographical Coordinates |
| Starting Point | km 0.000 | 20 ⁰ 29'44"N,85 ⁰ 55'23"E |
| Ending point | Km 45 of SH-9 | 20 ⁰ 48'22"N, 86 ⁰ 45'36"E |
| Road length | 106 km | |
| State | Odisha | |
| District en-route | Cuttack, Kendrapada and Bhadrak | |
| Village along the road | Total: 113 villages (Cuttak – 44, Kendrapada - 62, & Bhadrak:07nos | |
| Proposed ROW | 26 m in open area, 16m in built up area and 35 m for Bypasses | |

2.2 Expected Benefits of the Project

The Project is aimed to remove transport bottlenecks in the road corridor for greater investment and economic and social development activities in the three important coastal districts namely Cuttack, Kendrapada and Bhadrak. The major benefit will be improvement in the performance, safety, and carrying capacity of road in an environmentally and socially sustainable way. The existing horizontal have been modified at critical spots to avoid sharp curves and or accident black spots. Vertical and horizontal alignment designs cater at most of the places to serve the standards fit for good state highways i.e. a speed of 80 km per hour. Cross drainage structures have been widened to cater to the increased width of approach roads. Other aspects like lane marking, road signs, junction improvements with important major roads, providing road side appurtenances/amenities for trucks and buses and pedestrian amenities in built-up areas have all been incorporated in the designs to cater to public needs. Bypass options wherever the roads pass through heavily built up towns have been considered in consultation with OWD and the local public. One bypass alignment around congested town of Pattamundai has been considered to ensure smooth flow of traffic. The project also considers the need for wildlife movement at critical places and provides for animal crossings and reptile passes.

2.3 Existing Road Features

2.3.1 Land Use along the Project Road

The project road passes through district of Cuttak, Kendrapada and Bhadrak. Predominantly land use is under agricultural accounting to 64%, residential 21%, and commercial 15%. The detail break- up is as per given Table 2.2.

Table 2.2 Land Use Pattern of Project Districts (in '000 Ha)

| Land use Pattern | | Bhadrak | Cuttack | Kendrapada |
|--|------|---------|---------|------------|
| Forest | Area | 10 | 79 | 25 |
| | % | 1.24 | 16.68 | 8.21 |
| Misc. tree crops & grooves | Area | 17 | 5 | 6 |
| Permanent pasture & other grazing land | Area | 14 | 10 | 8 |
| Cultivable waste land | Area | 11 | 11 | 7 |
| Land put to non - agricultural uses | Area | 21 | 60 | 42 |
| Barren & uncultivable land | Area | 4 | 8 | 1 |
| Current fallows | Area | 8 | 13 | 14 |
| Other fallows | Area | 13 | 23 | 14 |
| Net Area Sown | Area | 170 | 164 | 138 |

| Land use Pattern | | Bhadrak | Cuttack | Kendrapada |
|------------------|------|---------|---------|------------|
| Total | Area | 268 | 373 | 255 |

2.3.2 Existing Right of Way (RoW)

The existing Right of Way along the project corridors varies from 15 m to 30 m. Encroachment is evident along the existing carriageway with shops and residences in the town areas. The narrow RoW at town and residential areas result into frequent traffic congestion and would pose a challenge during implementation stage. This would require for detailed planning & scheduling (especially monsoon period) of construction activities at such locations to prevent accident, inconvenience to road users, resident along the road and free movement of existing traffic. Details of RoW in project stretch is given in **Table 2.3**.

Table 2.3 Existing RoW of Project Road

| From | To | Pavement Width (m) | RoW (m) | From | To | Pavement Width (m) | RoW (m) |
|------|----|--------------------|---------|------|----|--------------------|---------|
| 01 | 00 | 5.5 | 17-21 | 32 | 31 | 3.9 | 24 |
| 02 | 01 | 5.5 | 22-26 | 33 | 32 | 3.70 | 20 |
| 03 | 02 | 5.40 | 27-21 | 34 | 33 | 5.70 | 21 |
| 04 | 03 | 5.3 | 19-27 | 35 | 34 | 5.0 | 22-24 |
| 05 | 04 | 5.3 | 18-21 | 36 | 35 | 4.2 | 20-24 |
| 06 | 05 | 5.9 | 22-16 | 37 | 36 | 5.45 | 21-23 |
| 07 | 06 | 5.3 | 7.3-25 | 38 | 37 | 5.5 | 20-21 |
| 08 | 07 | 5.3 | 14-10 | 39 | 38 | 4.9 | 22 |
| 09 | 08 | 5.5 | 15-18 | 40 | 39 | 5.2 | 24-21 |
| 10 | 09 | 5.8 | 10-17 | 42 | 41 | 5.2 | 22-24 |
| 11 | 10 | 5.10 | 17 | 43 | 42 | 5.9 | 24-15 |
| 14 | 13 | 5.5 | 21 | 44 | 43 | 5.5 | 23-20 |
| 15 | 14 | 5.5 | 23-22 | 45 | 44 | 4.8 | 23-18 |
| 16 | 15 | 5.4 | 21 | 46 | 45 | 5.6 | 20 |
| 17 | 16 | 3.9 | 22-20 | 49 | 48 | 5.5 | 18-16 |
| 18 | 17 | 3.5 | 22-20 | 50 | 49 | 5.5 | 29-25 |
| 19 | 18 | 4.5 | 22-21 | 51 | 50 | 6.8 | 52-20 |
| 20 | 19 | 7.0 | 20-16 | 52 | 51 | 5.5 | 21 |
| 21 | 20 | 4.5 | 22 | 54 | 53 | 5.4 | 22 |
| 22 | 21 | 3.5 | 22 | 55 | 54 | 5.5 | 21-22 |
| 23 | 22 | 5.2 | 20-24 | 56 | 55 | 4.8 | 20-22 |
| 24 | 23 | 3.5 | 23-22 | 57 | 56 | 5.0 | 22-20 |
| 25 | 24 | 3.5 | 20 | 58 | 57 | 5.2 | 22-20 |
| 26 | 25 | 3 | 22 | 59 | 58 | 4.0 | 20 |
| 27 | 26 | 5.00 | 21 | 62 | 61 | 4.8 | 30-20 |
| 28 | 27 | 5.5 | 22 | 63 | 62 | 3.5 | 24-22 |
| 29 | 28 | 3.9 | 21-19 | 65 | 64 | 5.5 | 20-23 |
| 30 | 29 | 3.5 | 25 | 66 | 65 | 5.5 | 28-20 |
| 31 | 30 | 3.6 | 24 | 67 | 66 | 5.5 | 32-24 |
| 73 | 72 | 5.00 | 28-27 | 86 | 85 | 4.00 | 20-21 |
| 74 | 73 | 6.00 | 34-28 | 87 | 86 | 3.50 | 18 |
| 75 | 74 | 3.7 | 32-30 | 91 | 92 | 3.00 | 29-20 |
| 78 | 77 | 3.8 | 36 | 93 | 94 | 3.00 | 15-12 |

| From | To | Pavement Width (m) | RoW (m) |
|------|----|--------------------|---------|
| 79 | 78 | 3.6 | 56-36 |
| 80 | 79 | 3 | 34-26 |
| 81 | 80 | 3.5 | 36-29 |
| 82 | 81 | 3.5 | 42-36 |
| 83 | 82 | 3.6 | 34-36 |
| 85 | 84 | 3.7 | 30-21 |

| From | To | Pavement Width (m) | RoW (m) |
|------|-----|--------------------|---------|
| 94 | 95 | 3.00 | 30-20 |
| 95 | 96 | 3.0 | 27-21 |
| 97 | 98 | 6.0 | 19.5-33 |
| 99 | 100 | 6.0 | River |
| 100 | 106 | 6.0 | 15-20 |

2.3.3 Major Settlements En route and Built-up Area

The project road takes off from Jagatpur and passes through the following settlements. Details of major settlements are given in **Table 2.4** and details of built-up area in project road are given in **Table 2.5**.

Table 2.4 Name of Major Villages/Towns along the project road

| District | Name of Villages/Towns |
|------------|--|
| Cuttack | Badakhira, Tarol, Khaera, Imamnagar, Gunjarpur, Bhairapur, Mutarifa, Purvakacha, Trilochanapur, Mohajanpur, Bahadulpatna, Bahugram, Singapur, Bhatapada, Gangapur, Bahabalapur, Sisua, Sapanpur, Balisahi, Chandradeipur, Lunahar, Betei, Dingeswar, Kulia, Arhanga, Badarautapati, Patapur, Matakatapur, Risho, Mohajanpur, Nischintakoili, Gopapur, Badakhira, Katarapada, Pithapada, Sukarapada, Ranipada, Julki pada, Aenda, Kendilo, Banamalipur, Paschimakhanda, Bhola, Ramarang, Katikata |
| Kendrapada | Ganeshpur, Bhanagaon, Chandola, Kesharpur, Badasalar, Rajanga, Daliji, Khamola, Syamsundarpur, Bhagabatapur, Jantilo, Badagaon, Jamadhar, Kasoti, Pandiri, Gualasing, Bhamaradiapatna, Tinipada, Gulangar, Ramanagarpatna, Garapur, Kapaleswar, Alijanga, Jajanga, Khamarkespur, Trilochanapur, Tarando, Baro, Bharsing, Gangapada, Gagua, Sanamulabasanta, Badamulabasanta, Pohala, Belatala, Tanupur, Balipada, Balipada-A, Kasananta, Gopalpur, Bilikana, Patarapur, Mahasani, Chandiagadi, Sitalleswar, Niala, Balabhadrapur, Gaudapatna, Demala, Kalapahada, Lokapada, Ranipokhari, Nagapada, Bharigada, Barunadiha, Achutapur, Makundapur, Ganja, Gokaneswara, Gokaneswara-A, Kanthapada, Arasa, Barada, Ostia |
| Bhadrak | Chandaballi, Panchapada, Barehipur, Shyamdaspur, Krishnapur, Kakharudihi, Nischinta |

Table 2.5 Built-up Area along the Project Road

| Sl.no. | Chainage | | Side | Distance | Sl.no. | Chainage | | Side | Distance |
|--------|----------|-------|-------|----------|--------|----------|-------|-------|----------|
| | Start | End | | | | Start | End | | |
| 1 | 0 | 1900 | Both | 1900 | 25 | 47950 | 48250 | Right | 300 |
| 2 | 2200 | 2400 | Both | 200 | 26 | 48250 | 48950 | Both | 700 |
| 3 | 2530 | 2800 | Both | 270 | 27 | 49100 | 49200 | Both | 100 |
| 4 | 3850 | 4300 | Both | 450 | 28 | 50000 | 52000 | Both | 2000 |
| 5 | 5800 | 7200 | Both | 1400 | 29 | 53200 | 54000 | Both | 800 |
| 6 | 7550 | 7950 | Both | 400 | 30 | 55100 | 55300 | Right | 200 |
| 7 | 9300 | 9660 | Both | 360 | 31 | 55300 | 55550 | Both | 250 |
| 8 | 10100 | 10480 | Both | 380 | 32 | 56600 | 56850 | Both | 250 |
| 9 | 10600 | 10700 | Right | 100 | 33 | 57200 | 57400 | Both | 200 |
| 10 | 10700 | 10850 | Left | 150 | 34 | 58050 | 58450 | Both | 400 |
| 11 | 13800 | 14000 | Both | 200 | 35 | 62950 | 63200 | Both | 250 |
| 12 | 16600 | 17100 | Both | 500 | 36 | 65400 | 65900 | Both | 500 |
| 13 | 17700 | 20800 | Both | 3100 | 37 | 69400 | 69650 | Both | 250 |
| 14 | 22150 | 22500 | Both | 350 | 38 | 72050 | 72450 | Both | 400 |
| 15 | 24000 | 24250 | Both | 250 | 39 | 84950 | 85550 | Both | 600 |

| Sl.no. | Chainage | | Side | Distance | Sl.no. | Chainage | | Side | Distance |
|--------|----------|-------|------|----------|--------|----------|--------|-------|----------|
| | Start | End | | | | Start | End | | |
| 16 | 26600 | 26800 | Both | 200 | 40 | 94750 | 95000 | Left | 250 |
| 17 | 27250 | 28400 | Both | 1150 | 41 | 95000 | 95400 | Both | 400 |
| 18 | 32650 | 33200 | Both | 550 | 42 | 99800 | 100100 | Left | 300 |
| 19 | 35250 | 35900 | Both | 650 | 43 | 100100 | 101400 | Both | 1300 |
| 20 | 38600 | 39550 | Both | 950 | 44 | 101400 | 101750 | Left | 350 |
| 21 | 41400 | 41600 | Both | 200 | 45 | 101750 | 102000 | Both | 250 |
| 22 | 43300 | 43600 | Both | 300 | 46 | 102000 | 102200 | Left | 200 |
| 23 | 44300 | 44800 | Both | 500 | 47 | 104500 | 104700 | Right | 200 |
| 24 | 44800 | 45150 | Left | 350 | 48 | 104950 | 105100 | Both | 150 |

2.3.4 Existing Road Carriageway

The existing road is a single lane carriageway with condition of horizontal and vertical geometric varying from average to poor. The existing Project Roads has sharp horizontal curves and insufficient vertical design standard, which do not provide adequate overtaking sight and stopping distance even for 35 kmph thereby making the accidents more frequent. Existing road junctions are not properly designed (Details in DPR Report).

2.3.5 Pavement Conditions

Studies and investigations were carried out on existing pavement condition to determine the most technically sound and economically feasible pavements design. The investigations include Visual Inspection Survey, Pavement Composition, Roughness Survey and Benkelman Beam Deflection Survey.

The Visual Inspection Survey was carried out for the entire stretch under consideration. The parameters observed in this Survey were

- i. Type of surface
- ii. Types of cracks (alligator/block/transverse/longitudinal) and its area.
- iii. Pot holes, raveling and patching areas
- iv. Shoulder condition
- v. Rutting (measured with a 3 meter long straight edge).

It was observed from the above studies that the road quality is poor. There are cracking, raveling, pot holes, high pavement edge drop, poor embankment condition, very low embankment height and absence of road side drains.

2.3.6 Roadside Drains

The project road has pucca drain at built up areas (Table 2.6). The pucca road side drains existing along the corridor are nonfunctional.

Table 2.6 Details of Pucca Drains at Built-up Areas

| Sl.No | Settlement /Built-up Name | Chainage | | Length (m) | Drain Type | Remark |
|-------|---------------------------|----------|--------|------------|------------|-----------------------|
| | | From | To | | | |
| 1 | Jagatpur | 0+200 | 0+800 | 600 | Open | Nonfunctional. |
| 2 | Madhubazar | 6+200 | 6+500 | 300 | Open | Nonfunctional. |
| 3. | Salipur | 18+600 | 19+300 | 700 | Closed | Nonfunctional. |
| 4. | Kendrapara | 50+000 | 51+000 | 1000 | Open | Nonfunctional. |
| 5. | Pattamundai | 69+900 | 70+600 | 700 | Open | The road is bypassed. |
| 6. | Alu | 85+250 | 85+500 | 250 | Open | Nonfunctional. |

2.3.7 Existing Cross Drainage Structures

A detailed condition survey (visual inspection) of the existing structures has been carried out by the concerned key professionals to assess and ascertain the existing condition/characteristics of bridges and other structures

i) Bridges

There are 3 major bridges and 15 minor bridges located on the project road. These are all High Level Bridges in good condition. The project road has also 15 minor bridges, 5 are weak/narrow; submersible. Existing bridge at Ch. 69/900 needs realignment as per site conditions. The expansion joints are buried and not functioning in most of the bridges. The bridge at Ch. 66/700 is recorded as submerged and also in poor condition. The bridge at Ch.32/075 is narrow in width and having inadequate vent for the flow of canal water.

Table 2.7: Details of Existing Bridge

| Sl. No. | Location/ Chainage | Existing Span Arrangement | Type of Superstructure | Type of foundation | Overall condition/ Recommendation |
|-----------------------------|--------------------|--|------------------------|--------------------|--|
| Jagatpur – Chandbali | | | | | |
| 1 | 2/145 | 5 x 8.8 | RCC solid slab | Open foundation | Good, Rehabilitation required |
| 2 | 10/400 | 1 x 8.15 | RCC Cell Box | Raft foundation | Good, Rehabilitation required |
| 3 | 15/900 | 1 x 8.75 | RCC solid slab | Open foundation | Good, Rehabilitation required |
| 4 | 32/075 | 2 x 3.9 | RCC solid slab | Open foundation | Reconstruction due to poor condition, inadequate vent way and narrow width |
| 5 | 51/700 | 2 x 33.0 | RCC Box Girder | Well foundation | Good, Rehabilitation required |
| 6 | 56/350 | 3 x 8.5 | RCC solid slab | Open foundation | Good, Rehabilitation required |
| 7 | 61/200 | 1 x 7.0 | RCC solid slab | Open foundation | Reconstruction due to poor condition |
| 8 | 63/400 | 3 x 4.7 | RCC solid slab | Open foundation | Good, Rehabilitation required |
| 9 | 66/700 | 2 x 4.4 | RCC solid slab | Open foundation | Reconstruction due to submergence and poor condition |
| 10 | 69/900 | 3 x 6.75 | RCC solid slab | Open foundation | Good, realignment required |
| 11 | 71/050 | 5 x 3.8 | RCC solid slab | Open foundation | Good, Rehabilitation required |
| 12 | 71/200 | 2 x 4.25 | RCC solid slab | Open foundation | Reconstruction due to poor condition |
| 13 | 74/000 | (1 x 7.0) + (3 x 116.0) + (1 x 7.0) | Balanced cantilever | Well foundation | Good, nothing to be done |
| 14 | 78/800 | 4 x 7.0 | RCC solid slab | Open foundation | Good, Rehabilitation required |
| 15 | 89/500 | (4 x 40.0) + (1 x 7.0) + (3 x 104.0) + (1 x 7.0) | Balanced cantilever | Well foundation | Good, nothing to be done |
| 16 | 97/000 | (1 x 7.0) + (2 x 106) + (1 x 7.0) + (2 x 33.0) | Balanced cantilever | Well foundation | Good, nothing to be done |

| Sl. No. | Location/ Chainage | Existing Span Arrangement | Type of Superstructure | Type of foundation | Overall condition/ Recommendation |
|----------------------------|--------------------|---------------------------|------------------------|--------------------|---|
| 17 | 98/500 | 1 x 6.85 | RCC Cell Box | Raft foundation | Good, Rehabilitation required |
| Chandbali – Bhadrak | | | | | |
| 1 | 46/700 | 10 x 0.45 | - | - | Vented causeway to be Reconstruction due to submergence |

ii) Culverts

The project road has 144 culverts (**Annexure – 2.2**). These cross drainage structures are mostly old, has insufficient vent and in poor condition causing difficulties in draining of water. Most of the CD culverts are having overall width less than 12 m. Return walls, Head walls or parapet wall of most of the culverts are damaged and needs to be reconstructed where culverts condition are in good conditions and alignment permits. At certain locations ground levels and road levels are almost at same level due to which area becomes submerged. Most of the culverts do not meet the considerations of maintenance of culverts (minimum vent size) as specified in IRC: SP-13: 2004, para 13.3.2.

Table 2.8 Details of Existing Culverts

| Sl.No | Type of Culvert | Nos. |
|--------------|-----------------|------------|
| 1 | Pipe | 77 |
| 2 | Slab | 47 |
| 3 | Arch | 16 |
| 4 | Choked | 4 |
| Total | | 144 |

2.3.8 ROB/Flyover

There is no Railway over Bridge or Flyover existing along the corridor.

2.3.9 Flood Prone Section

The project road is located in flood prone area and three road sections along the corridor have been identified that are prone to flooding. The road sections are as follows.

1. Km.69/800 to KM.74/000
2. Km.75/000 to Km.78/000
3. Km. 91/000 to Km.93/000

2.3.10 Junctions and Intersections

Though the present project road does not have any Major junctions, but 35 minor junctions are present. These junctions had not been designed as per the standards, had insufficient sight distance, turning radius etc. In addition, these junctions from road safety perspective lacks appropriate road markings to guide the merging as well as the main road traffic, pedestrian crossing facility, and junction signage's etc. Thereby, needs appropriate intervention during design stage of road corridor.

Table 2.9: List of Minor Junctions

| Sl no | Chainage | Type of Junction | LHS/RHS | Name of the Village |
|-------|----------|------------------|---------|---------------------|
| 1 | 512 | Y-Intersection | Left | Jagatpur |
| 2 | 1182.5 | Y-Intersection | Left | Jagatpur |
| 3 | 1800 | T-Intersection | Right | Jagatpur |
| 4 | 5161 | Y-Intersection | Left | Gajarpur Village |
| 5 | 7641 | T-Intersection | Left | Kazibazar Village |

| Sl no | Chainage | Type of Junction | LHS/RHS | Name of the Village |
|-------|----------|--------------------|---------|---------------------------|
| 6 | 10858 | T-Intersection | Right | Bahugram Village |
| 7 | 13900 | Cross Intersection | | Nandalgada |
| 8 | 15646 | Y-Intersection | Left | Jowari |
| 9 | 16892 | Y-Intersection | Right | Sisua Village |
| 10 | 18655 | Y-Intersection | Left | Salipur |
| 11 | 19642 | Y-Intersection | Right | Salipur |
| 12 | 24112 | Y-Intersection | Right | Kendupatna |
| 13 | 24428 | Y-Intersection | Left | Kendupatna |
| 14 | 33133 | T-Intersection | Right | Sugarpada |
| 15 | 35335 | T-Intersection | Right | Katikata |
| 16 | 36269 | Y-Intersection | Left | Katipada |
| 17 | 36730 | Y-Intersection | Left | Bharatpada |
| 18 | 38930 | Y-Intersection | Left | Danpur |
| 19 | 38944 | Y-Intersection | Right | Danpur |
| 20 | 41446 | T-Intersection | Right | Paradeep Road-NH Crossing |
| 21 | 50850 | Cross Intersection | | Kendrapara |
| 22 | 53113 | T-Intersection | Right | Kendrapara |
| 23 | 55970 | T-Intersection | Right | |
| 24 | 61800 | Y-Intersection | Left | |
| 25 | 69700 | Cross Junction | | Pattamundai |
| 26 | 70400 | Cross Intersection | | Thanpur |
| 27 | 71400 | Y-Intersection | Right | |
| 28 | 72478 | T-Intersection | Right | |
| 29 | 75195 | T-Intersection | Right | Narendarpur |
| 30 | 79885 | T-Intersection | Right | Singira |
| 31 | 85910 | T-Intersection | Right | Aul Ring Road |
| 32 | 93850 | Cross Intersection | | |
| 33 | 94700 | T-Intersection | Left | |
| 34 | 97600 | Y-Intersection | Right | Chandbali |
| 35 | 100564 | Y-Intersection | Right | Chandbali |

2.3.11 Existing Traffic

The traffic surveys were conducted to determine classified traffic volumes in terms of Annual Average Daily Traffic (AADT), directional split, hourly variation, trip length pattern, travel pattern of goods and passenger traffic, commodity flow and axle loads. Traffic surveys were conducted at three locations (Table 2.10) along project road to capture existing traffic volume, pattern and its composition. On the basis of traffic survey, two wheelers and slow moving traffic at present comprised the majority of road user, but with improvement of road corridor, the volume of fast moving traffic might increase, thereby posing road safety concern at later stage.

Table 2.10: Details of Traffic Survey Locations

| Sl.No | Chainage | Location/Village |
|-------|----------|------------------|
| VC 01 | 5/500 | near Nuapatna |
| VC 02 | 76/000 | Singiri |
| VC 03 | 5/500 | near Barik Chhak |

Table 2.11: Location wise ADT (No. and PCU in Both Directions)

| Count Station | Description | FAST MOVING VEHICLES | | | | | | | | | | | SLOW MOVING VEHICLES | | | |
|---------------|-------------|----------------------|-------|-------------------|-------|-------|-------|--------|------------|-------------|---------------|------------|----------------------|----------|--------------|-------------|
| | | 2W | 3W | Car/Jeep/Van/Taxi | Bus | | LCV | TRUCK | | | Agri. Tractor | | Cycle | Rickshaw | Animal DRAWN | |
| | | | | | Mini | Full | | 2-Axle | Multi-Axle | Articulated | With Trailer | No Trailer | | | Bullock Cart | Horse Drawn |
| VC-01 | AADT | 4,621 | 471 | 1,502 | 147 | 116 | 361 | 323 | 89 | 19 | 27 | 52 | 3,878 | 96 | 11 | 1 |
| | PCU | 2,310 | 471 | 1,502 | 221 | 348 | 542 | 968 | 266 | 85 | 124 | 78 | 1,939 | 192 | 91 | 4 |
| | % | 39.45% | 4.02% | 12.82% | 1.25% | 0.99% | 3.08% | 2.76% | 0.76% | 0.16% | 0.23% | 0.44% | 33.11% | 0.82% | 0.09% | 0.01% |
| VC-02 | AADT | 1103 | 53 | 307 | 14 | 31 | 19 | 58 | 13 | 2 | 21 | 5 | 1082 | 25 | 2 | 0 |
| | PCU | 553 | 53 | 307 | 22 | 93 | 28 | 173 | 40 | 9 | 94 | 8 | 541 | 51 | 15 | 0 |
| | % | 40.33% | 1.94% | 11.22% | 0.51% | 1.13% | 0.69% | 2.12% | 0.48% | 0.07% | 0.77% | 0.18% | 39.56% | 0.91% | 0.07% | 0.00% |
| VC-03 | AADT | 2141 | 143 | 795 | 128 | 71 | 102 | 146 | 2 | 3 | 2 | 10 | 1952 | 104 | 0 | 0 |
| | PCU | 1071 | 143 | 795 | 192 | 213 | 153 | 439 | 7 | 15 | 11 | 15 | 976 | 208 | 0 | 0 |
| | % | 38.24% | 2.55% | 14.20% | 2.29% | 1.27% | 1.82% | 2.61% | 0.04% | 0.05% | 0.04% | 0.18% | 34.86% | 1.86% | 0.00% | 0.00% |

2.3.12 Road Accident

Based on the Statistical Abstract of Odisha, the numbers/rate of road accidents (Table 2.12) and fatality has increased in state of Odisha over the year (till 2009). To understand road accident and its causes along project road corridor, road accident data (Table 2.13) from FIR records were collected from concerned police stations under whose jurisdiction different road sections fall. It is evident from data that majority of accident is reported for two wheelers followed by trucks. The information on accident location, cause and fatality of these accidents was not available, but the possible reason for accident can be attributed to human driving behavior, poor road condition, narrow carriageway width, congestion etc.

Table 2.12: Road Accident Data, Odisha

| Sl.No. | Types of accident | 2006 | 2007 | 2008 | 2009 |
|--------|---|------|-------|-------|-------|
| 1 | Total Number of Road Accidents | 7729 | 8213 | 8181 | 8887 |
| 2 | Total Number of Persons Injured in Road Accidents | 9763 | 11305 | 10378 | 11296 |
| 3 | Total Number of Persons Killed in Road Accident | 2755 | 3000 | 3079 | 3527 |
| 4 | Total Number of Road Accidents on State Highways | 2088 | 2198 | 1964 | 2386 |
| 5 | Total Number of Persons Killed on State Highways | 710 | 803 | 625 | 955 |
| 6 | Total Number of Persons Injured on State Highways | 2931 | 3093 | 2631 | 3270 |
| 7 | Total Number of Fatal Road Accidents | 2456 | 2726 | 2838 | 3043 |

Source: Statistical Abstract of Orissa. P.169

Table 2.13: Road Accidents due to Conveyances in Project Districts

| District | Bus | Truck | Jeep / Car & Taxi | Motor Cycle & Scooter | Three wheelers |
|--------------|-----------|------------|-------------------|-----------------------|----------------|
| Bhadrak | NA | NA | NA | 13 | 3 |
| Cuttack | 63 | 115 | 26 | 230 | 15 |
| Kendrapada | 4 | 74 | 19 | 11 | 2 |
| Total | 67 | 189 | 45 | 254 | 20 |

Source: Police Station FIR Record.

2.3.13 Utility Shifting

Different types of existing utility services (Table 2.13) like Optical Fiber Cables (OFC), Electric poles, transformers, Telephone poles are existing and that will be affected during

implementation stage and may require shifting for widening of road into two-lane carriageway. The summary of existing utilities is in Table 2.14.

Table 2.14: Summary of Utility

| Sl.No. | Type of Utility Services | Unit | Quantity |
|--------|--------------------------|------|--------------------|
| 1 | Electric Poles | Km. | 121km (Each sides) |
| 2 | Transformers | Nos. | 106 |
| 3 | Water supply line | m | 17380 |

2.4 Improvements Proposal

The road corridor is proposed for widening and strengthening to two lane carriageway width hard shoulders on either side. During road design, due importance has been given to environmental and social issues. The coordination between Environmental, Social and Design team helped in minimizing the negative impact due to Project. In view of its proposed development, widening options i.e. concentric or eccentric in addition to design modification alternatives were also considered to avoid extra land acquisition, minimize the negative social and environmental Impact. Unlined open trapezoidal drains for the rural sections and RCC Box covered drains for the Built-up Sections have been used.

2.4.1 Proposed Carriageway Width

The Project road has been designed as a two-lane carriageway with hard shoulders. The carriageway width has been taken as 7.0 m with 2.5m wide hard shoulders on either side. Total roadway width has been taken as 12.00 m in rural areas. In built up areas, paved shoulder of 1.5 m widths shall be provided making total roadway width of 10 m. Beyond this, covered drains shall be provided at built-up areas which will be used as walkway.

Extra widening on curves as per provision of IRC: 73 – 1980 section 9.8 are given in following table.

Extra Widening at Curve

| Carriageway | Radius of Curve (m) | | | | |
|-------------|---------------------|----------|----------|-----------|------------|
| | Up to 20 | 21 to 40 | 41 to 60 | 61 to 100 | 101 to 300 |
| Two Lane | 1.5 | 1.5 | 1.2 | 0.9 | 0.6 |
| Single Lane | 0.9 | 0.6 | 0.6 | - | - |

Wherever the radius is less than that specified for minimum design speed, the transition curve, super elevation and pavement widening has been introduced. This will minimize the intrusion of vehicles on to adjacent lanes, tend to encourage uniformity of speed and increase vehicle speed at the curves.

2.4.2 Geometric Improvement

The existing road geometric component at certain stretches or locations does not confirm with State Highway Standard as specified in the IRC: 73-1980 “Geometric Design Standard for Rural (Non-urban) Highways” guidelines. Locations and road stretches that are associated to congestion, road users safety, poor geometry i.e. sharp curve, blind curves, less sight distance etc. have been identified and has been proposed for realignment. Under the project at five locations (for smoothening curves not meeting IRC: 73 – 1980 requirements) realignment and one bypass from Km.69/700 to 71/500 for Pattamundai town has been proposed in the Project (Details of bypasses in **Chapter 4**).

The locations proposed for new alignment is in Table 2.15 listed below.

Table 2.15: Locations for New/re Alignment

| Sl.No. | From | To | Length (m) |
|--------|--------|--------|------------|
| 1 | 37/900 | 38/100 | 200 |
| 2 | 56/200 | 56/450 | 250 |
| 3 | 73/400 | 73/650 | 250 |
| 4 | 97/690 | 98/150 | 460 |
| 5 | 98/500 | 99/100 | 600 |

The road geometry has been designed to meet the State Highway standards as specified in the IRC: 73-1980 “Geometric Design Standard for Rural (Non-urban) Highways” guidelines. The design has been done to match horizontal alignment and vertical grades as to eliminate elements of surprise to the drivers. Overtaking sight distances have been provided to increase safe overtaking opportunities and to reduce accidents. At heavy built up / village sections speed limits have been reduced to 50 kmph to 65 kmph considering the heavy pedestrian and local traffic movement by posting appropriate signs. In open uninhabited areas where the existing alignment is safe enough to maintain a speed of 80 kmph, the design speed of 100 kmph has been adopted with minor changes to the alignment.

All the narrow bridges (less than 7.5m carriageway) are proposed for development to minimum of 7.5m carriageway and narrow culverts are proposed for development to full formation width i.e. 12.0 m.

2.4.3 Roadside Drain

Most of roadside drains are either choked or nor functional and would not be effective in draining out storm water runoff. Considering settlements along road, un-functional and absence of roadside drain at many settlements, under the project drains have been proposed for a total length of of 27.86 km. The details location of drains proposed is in table 2.16.

Table 2.16: Propose roadside drain locations

| From | To | Sides | Length (m) | From | To | Sides | Length (m) |
|--------|--------|-------|------------|--------|--------|-------|------------|
| 0 | 1.900 | Both | 1900 | 48.250 | 48.950 | Both | 700 |
| 2.200 | 2.400 | Both | 200 | 49.100 | 49.200 | Both | 100 |
| 2.530 | 2.800 | Both | 270 | 50.000 | 52.000 | Both | 2000 |
| 3.850 | 4.300 | Both | 450 | 53.200 | 54.000 | Both | 800 |
| 5.800 | 7.200 | Both | 1400 | 55.100 | 55.300 | Right | 200 |
| 7.550 | 7.950 | Both | 400 | 55.300 | 55.550 | Both | 250 |
| 9.300 | 9.6600 | Both | 360 | 56.600 | 56.850 | Both | 250 |
| 10.100 | 10.48 | Both | 380 | 57.200 | 57.400 | Both | 200 |
| 10.600 | 10.700 | Right | 100 | 58.050 | 58.450 | Both | 400 |
| 10.700 | 10.850 | Left | 150 | 62.950 | 63.200 | Both | 250 |
| 13.800 | 14.000 | Both | 200 | 65.400 | 65.900 | Both | 500 |
| 16.600 | 17.100 | Both | 500 | 69.400 | 69.65 | Both | 250 |
| 17.700 | 20.800 | Both | 3100 | 72.050 | 72.450 | Both | 400 |
| 22.150 | 22.500 | Both | 350 | 84.950 | 86.450 | Left | 1500 |
| 24.000 | 24.250 | Both | 250 | 84.950 | 86.450 | Right | 1500 |
| 26.600 | 26.800 | Both | 200 | 94.750 | 95.000 | Left | 250 |
| 27.250 | 28.400 | Both | 1150 | 95.000 | 95.400 | Both | 400 |

| From | To | Sides | Length (m) | From | To | Sides | Length (m) |
|--------|--------|-------|------------|---------------------------|---------|-------|--------------|
| 32.650 | 33.200 | Both | 550 | 99.800 | 100.100 | Left | 300 |
| 35.250 | 35.900 | Both | 650 | 100.100 | 101.400 | Both | 1300 |
| 38.600 | 39.550 | Both | 950 | 101.400 | 101.750 | Left | 350 |
| 41.400 | 41.600 | Both | 200 | 101.750 | 102.000 | Both | 250 |
| 43.300 | 43.600 | Both | 300 | 102.000 | 102.200 | Left | 200 |
| 44.300 | 44.800 | Both | 500 | 104.500 | 104.700 | Right | 200 |
| 44.800 | 45.150 | Left | 350 | 104.950 | 105.100 | Both | 150 |
| 47.950 | 48.250 | Right | 300 | Total Drain Length | | | 27860 |

2.4.4 Improvement proposed for Bridges and Culverts

Weak and narrow major/minor bridges are proposed to be reconstructed based on the requirements laid down in IRC SP 73. All proposed new bridges have been proposed to accommodate two-lane traffic adopting cross sections as per MoRTH guidelines issued during March 2009.

In proposed project improvement, all 3 major bridges that are existing are in good conditions are proposed to retain. 5 minor bridges are to be replaced and 3 new minor bridges will be newly constructed. A total of 332 culverts are proposed for improvement that includes 16 proposed for widening, 123 to be replaced and 196 new culverts are to be added. The summary of CD structures proposed for improvement is given below **Table 2.17**.

Table 2.17: Improvement Proposal for Bridges and Culverts

| Structure Type | Total No. Existing | Retained | Replaced | Widened | Choked / Not Visible | New | Total after Improvement |
|----------------|--------------------|----------|----------|---------|----------------------|-----|-------------------------|
| Major Bridges | 3 | 3 | nil | nil | --- | nil | 3 |
| Minor Bridges | 13 | 8 | 5 | Nil | Nil | 3 | 16 |
| Culverts | 144 | Nil | 126 | 16 | 2 | 190 | 332 |

2.4.5 Paved Shoulders

For safety of pedestrians and cyclist in urban areas, paved shoulder (Rigid) of 1.5m width is provided on either side. The composition of the paved shoulder is same as with carriageway.

Table 2.18: Proposed Paved Shoulder Stretches

| S.No. | Chainage | | Length (km) |
|-------|----------|--------|------------------------------|
| | From | To | |
| 1 | 0.000 | 54.250 | 54.250 (Continuous stretch) |
| 2 | 57200 | 57400 | 200 |
| 3 | 58050 | 58450 | 400 |
| 4 | 62950 | 63200 | 250 |
| 5 | 65400 | 65900 | 500 |
| 6 | 69400 | 69650 | 250 |
| 7 | 72050 | 72450 | 400 |
| 8 | 84950 | 85550 | 600 |
| 9 | 94750 | 95000 | 250 |
| 10 | 95000 | 95400 | 400 |
| 11 | 99800 | 100100 | 300 |
| 12 | 100100 | 101400 | 1300 |
| 13 | 101400 | 101750 | 350 |
| 14 | 101750 | 102000 | 250 |
| 15 | 102000 | 102200 | 200 |

| S.No. | Chainage | | Length (km) |
|-------|----------|--------|-------------|
| | From | To | |
| 16 | 104500 | 104700 | 200 |
| 17 | 104950 | 105100 | 150 |

2.4.6 Junction Improvements

There is no major junction along project road, though 229 minor junctions exist that has inadequate sight distance, turning radius, no appropriate road markings and does not comply with IRC design requirements. Envisaging the road safety issue after the up-gradation of road, the improvement of 229 minor junctions has been proposed under the project.

2.4.7 Traffic Projection

The traffic forecast has been made on the basis of elasticity of transport demand keeping in view present growth in registration of vehicles, economic indicators like Net State Domestic Product, Per Capita Income, Net National Domestic Product and growth in population. The projected traffic in different years is shown in Table 2.18.

Table 2.18: Projected Traffic

| Year | AADT | | | PCU | | |
|------|-------|-------|-------|-------|-------|-------|
| | VC-01 | VC-02 | VC-03 | VC-01 | VC-02 | VC-03 |
| 2006 | 11714 | 2735 | 5599 | 9141 | 1987 | 4238 |
| 2007 | 12199 | 2835 | 5816 | 9606 | 2077 | 4433 |
| 2008 | 14003 | 3284 | 6704 | 11129 | 2525 | 5242 |
| 2009 | 14710 | 3434 | 7023 | 11818 | 2671 | 5542 |
| 2010 | 15470 | 3595 | 7366 | 12564 | 2830 | 5866 |
| 2011 | 16288 | 3769 | 7735 | 13373 | 3001 | 6217 |
| 2012 | 17168 | 3955 | 8131 | 14251 | 3188 | 6596 |
| 2013 | 18115 | 4155 | 8557 | 15203 | 3390 | 7007 |
| 2014 | 19159 | 4375 | 9025 | 16255 | 3613 | 7460 |
| 2015 | 20285 | 4612 | 9530 | 17398 | 3855 | 7951 |
| 2016 | 21500 | 4868 | 10074 | 18641 | 4118 | 8484 |
| 2017 | 22810 | 5143 | 10659 | 19993 | 4404 | 9062 |
| 2018 | 24223 | 5440 | 11289 | 21463 | 4714 | 9689 |
| 2019 | 25618 | 5732 | 11910 | 22934 | 5025 | 10314 |
| 2020 | 27115 | 6045 | 12575 | 24526 | 5360 | 10989 |
| 2021 | 28721 | 6380 | 13287 | 26248 | 5723 | 11717 |
| 2022 | 30445 | 6739 | 14050 | 28112 | 6115 | 12503 |
| 2023 | 32295 | 7124 | 14867 | 30130 | 6540 | 13353 |
| 2024 | 34092 | 7498 | 15660 | 32106 | 6955 | 14183 |
| 2025 | 36010 | 7896 | 16505 | 34232 | 7401 | 15074 |
| 2026 | 38057 | 8320 | 17405 | 36518 | 7880 | 16030 |
| 2027 | 40240 | 8772 | 18363 | 38976 | 8396 | 17057 |
| 2028 | 42571 | 9253 | 19385 | 41622 | 8950 | 18160 |

The existing traffic composition is higher for slow moving traffic and factoring provision of paved shoulders has been made in order to provide additional space for overtaking, slow moving and non-motorised traffic and for parking in the built up section. A wide cross-section (7.0 m carriageway + 1.5 m paved shoulder) has been used in to increase safety, by allowing separation of slower traffic, which can travel on the relatively wide paved shoulder,

rather than completely in the main carriageway, which is now the case. This manner further helps to reduce accidents and increase road capacity.

2.4.8 Safety Crash Barrier

Taking into safety of road users at high embankment locations and approach to bridges, safety Crash Barrier and Guard Post has been proposed under the project. The Guard Posts has been proposed at 130 locations and crash barrier has been proposed at 3 major bridges (250m at 2 sides on both ways) and 16 minor bridges (80m at 2 sides on both ways).

2.4.9 Pedestrian and Cattle Underpass

There is a provision of 5 cell 8 mts. span box cell culverts provided in the Pattamundai bypass section at Km.70+100 which shall work both as a drainage outlet and also as pedestrian under pass as there is no defined nullah in the stretch. Further, 6 cattle under passes have been proposed at km.78+980, 91+800, 92+800, 93+800, 96+320 & 96+920 due to high embankments at flood prone sections and bridge approaches.

2.4.10 Traffic Signs

Different type of traffic signs that includes regulatory, informatory and caution have been proposed throughout the whole project road to facilitate the road users for giving proper direction and warning to the driver, as well as direct them the route they want to follow. The traffic signs will be as per IRC Standard as will be of “Retro Reflection Type”. The Summary of proposed traffic Signs in Project section is summarized below:

Table 2.19: The Abstract of quantities of safety devices

| Sl No. | Safety Devices | Quantity |
|--------|-------------------------|----------|
| 1 | Stop | 183 |
| 2 | Restriction Ends | 63 |
| 3 | Speed Limit-50 | 05 |
| 4 | Speed Limit-65 | 57 |
| 5 | School Zone | 39 |
| 6 | Compulsory Sound Horn | 282 |
| 7 | Cross Road | 49 |
| 8 | Right Side Road – T | 95 |
| 9 | Left Side Road – T | 95 |
| 10 | Right Hand Curve | 58 |
| 11 | Left Hand Curve | 58 |
| 12 | Right Reverse Bend | 07 |
| 13 | Left Reverse Bend | 7 |
| 14 | Pedestrian Crossing | 161 |
| 15 | Staggered Intersection | 70 |
| 16 | Left Side Road –Y | 146 |
| 17 | Right Side Road – Y | 146 |
| 18 | Narrow Bridge | 19 |
| 19 | Series of Bends | 05 |
| 20 | Hump | 174 |
| 21 | State Route Marker Sign | 21 |
| 22 | Petrol Bunk | 21 |
| 23 | Hospital | 20 |

2.4.11 Bus Bays

Bus bays are proposed as per the recommendations of IRC: 80-1981. The following data was gathered during field visits.

- i. All though there were considerable through bus traffic movements, the number of buses stopping at existing bus stops was few.
- ii. People travelling from villages to nearby towns make use of taxicabs, jeeps and other light commercial vehicles including goods vehicles in preference to buses.
- iii. The number of trips made by other carriers was greater than those made by buses.
- iv. Local consultations were held to study the need for bus bays in specific villages by collecting details pertaining to the number of buses, frequency of buses stopping to pick up passengers, duration of bus stops, etc.
- v. The need for bus bays at religious places, educational institutions, public buildings, intersections of minor roads leading to interior villages, which are not connected to the bus route network, were studied.

Taking into account above data bus bay locations are provided in all 94 up-gradation links as required.

Table: 2.20 Proposed Bus Bays Locations

| Sl. No. | Chainage | Side |
|---------|----------|------|---------|----------|------|---------|----------|------|---------|----------|------|
| 1 | 1900 | L | 26 | 20300 | L | 51 | 43690 | L | 76 | 71400 | L |
| 2 | 2000 | R | 27 | 22220 | L | 52 | 44650 | L | 77 | 72710 | L |
| 3 | 3750 | L | 28 | 22300 | R | 53 | 44800 | R | 78 | 72810 | R |
| 4 | 4350 | R | 29 | 23900 | R | 54 | 45800 | R | 79 | 74631 | R |
| 5 | 5740 | L | 30 | 24300 | L | 55 | 45850 | L | 80 | 74651 | L |
| 6 | 6200 | R | 31 | 26900 | R | 56 | 48000 | R | 81 | 77500 | L |
| 7 | 7450 | L | 32 | 27160 | L | 57 | 48100 | L | 82 | 77900 | R |
| 8 | 7750 | R | 33 | 28000 | L | 58 | 49200 | R | 83 | 78990 | L |
| 9 | 9200 | L | 34 | 29650 | L | 59 | 50400 | L | 84 | 79750 | R |
| 10 | 9640 | R | 35 | 30950 | R | 60 | 51250 | R | 85 | 84820 | L |
| 11 | 10000 | L | 36 | 31000 | L | 61 | 51850 | L | 86 | 85550 | R |
| 12 | 10200 | R | 37 | 32850 | L | 62 | 51880 | R | 87 | 93865 | L |
| 13 | 10600 | L | 38 | 33000 | R | 63 | 53800 | R | 88 | 93900 | R |
| 14 | 10900 | R | 39 | 33700 | R | 64 | 54550 | L | 89 | 94830 | R |
| 15 | 12980 | L | 40 | 34000 | L | 65 | 54600 | R | 90 | 95400 | L |
| 16 | 13950 | R | 41 | 35250 | L | 66 | 55200 | L | 91 | 101600 | R |
| 17 | 14000 | L | 42 | 35750 | R | 67 | 56800 | L | 92 | 103020 | L |
| 18 | 15600 | L | 43 | 36950 | L | 68 | 57350 | R | 93 | 104180 | R |
| 19 | 15650 | R | 44 | 37000 | R | 69 | 58200 | L | 94 | 104420 | L |
| 20 | 16750 | L | 45 | 37800 | R | 70 | 58400 | R | | | |
| 21 | 17100 | R | 46 | 38370 | L | 71 | 61600 | L | | | |
| 22 | 18650 | L | 47 | 38570 | R | 72 | 61820 | R | | | |
| 23 | 18670 | R | 48 | 41150 | L | 73 | 62850 | R | | | |
| 24 | 19555 | R | 49 | 41155 | R | 74 | 63200 | L | | | |
| 25 | 19775 | L | 50 | 43230 | R | 75 | 65300 | L | | | |

The typical bus bay consists of deceleration and acceleration lanes of 45m length with stopping lane of 3.5m wide, 15m long. Adequate arrangements have also been made to drain off surface water. Typical bus bay layout and schedule of locations are included in the Drawings Volume.

2.4.12 Truck Lay Bys

No truck lay byes has been proposed under the project.

2.4.13 Service Road

Service road at chainage KM.48/250 to 49/0 & Km.49/200 to 53/200 has been proposed to be provided for diversion of local traffic at Kendrapara.

2.4.14 Toll Plazas

Toll Plaza has been proposed at Km.31/330 to Km.31/670

2.5 Natural Resource Requirements

Potential sources of material for construction, the survey and investigation for different construction materials were carried out in respect of their likely sources and the availability and suitability of various materials. Relevant laboratory tests were conducted on representative samples as per requirement. The estimated quantities for different construction materials for up-gradation of entire road base on design cross-section are in Table 2.20.

Table 2.21: Summary of Construction Materials

| Sl.No | Construction Materials | Units | Quantity |
|-------|------------------------|-------|----------|
| 1 | Earth | Cu.m | 1130432 |
| 2 | Aggregate | Cu.m | 556741 |
| 3 | Sand | Cu.m | 1017592 |
| 4 | Bitumen | Cu.m | 6487 |
| 5 | Water | Cu.m | 135562 |

2.5.1 Borrow Area

Extensive survey was conducted to locate the potential source of borrow area soils required for the construction of embankment and sub-grade. The location, type of soil, available quantity and approximate distance from the project road is given below in **Table 2.21**.

Table 2.22: Details of Borrow Areas

| Sl.No | Chainage | Side (Left/Right) | Borrow Area Location | Lead From Project Road (km) | Type of Soil | Quantity Available Cu.m) |
|-------|----------|-------------------|----------------------|-----------------------------|--------------|--------------------------|
| 1 | 0.00 Kms | RHS | Neulpur | 40 | Murram | 100000(Approx) |

2.5.2 Aggregate

Extensive survey has been carried out to identify the suitable stone quarry nearer to the project road. There are good quality stone quarries are available in the vicinity of project road. Details of stone quarries for the project road are presented in **Table 2.19**.

Table 2.23: List of Quarry Locations

| Sl.No | Chainage | Quarry Location | Lead project road (km) | Remark |
|-------|----------|-----------------|------------------------|-----------|
| 1 | Baghua | Baghua | 50 | Aggregate |

2.5.3 Sand

Sand quarries have been identified for suitable sand nearer to the project road. There are only few good quality sand quarries available in the vicinity of project road with in the economical lead. Details of quarry sources for sand to be used under the project road are given below.

Table 2.24 List of Sand Quarry Locations

| Sl.No | Chainage | Quarry Location | Lead project road (km) |
|-------|----------|-----------------|------------------------|
| 1 | 35.300 | Asuraswar | 3.0 (RHS) |
| 2 | 39.500 | Danapur | 3.0 (RHS) |
| 3 | 49.000 | Basipur | 10.0 (RHS) |
| 4 | 63.000 | Brahmani | 6.0 (LHS) |
| 5 | 93.500 | Singur | 25.0 (LHS) |

2.5.4 Water Requirements

For up-gradation of the project road, approx 88.8 cum/day (excluding drinking/domestic requirement for construction camp) water is likely to be needed for construction purpose depending upon construction activities. Water for construction of the road will be extracted from river water /ground water sources after obtaining necessary permission. Details of the water requirement assessed for the project are presented in Table 2.24.

Table 2.25: Requirement of Water for Proposed Construction Works

| Purpose | Water Requirement (Cum/day) |
|---|-----------------------------|
| Earth Work | 66.5 |
| Sub-base/base course | 12.3 |
| Concrete Works(Culverts, Bridges, drains) | 10.0 |
| Total | 88.8 |

2.5.5 Fly Ash Utilisation

As per Fly ash Notification 2009, use of Fly ash is mandatory in highway projects where the project is situated within 100 km radius from any Coal based thermal Power Plant. The nearest Thermal power plant is located at Kanihia at distance of 160 km distance from project road. Hence, the use of fly ash from this thermal power plant would not be economically viable for the proposed project on account of high lead and transportation cost.

2.6 Project Implementation Schedule

The project road will be divided into two contract packages. The project duration for each contract shall be 27 months from date of start of award of contract.

2.7 Manpower Requirements

The construction of the project road would require labour and is estimated that about 200 workers at each contract including management and supervisory staff will be deployed at each contract package. During hiring of labour both skilled and unskilled, priorities and preference would be given to workers come from local area.

2.8 IRC Guidelines for widening & up-gradation of Highway

Following IRC Guidelines followed for widening & up-gradation of Road

| For Survey & Investigation | For Design |
|---|--|
| <p>Traffic Survey & Studies: IRC-SP-41 and Approved methodology Covering All the aspects of TOR</p> | <p>For geometric design: IRC38-1990, IRC SP23-1983, IRC 73 – 1980, IRC 66 – 1976. TRL Research Report 114A ‘Review of some recent geometrical road standards and their application to developing countries and its guide to geometric design</p> |
| <p>Pavement Condition, Materials & Sub-Grade Investigation: Latest IRC-SP-19, IRC 37, IRC 81, IRC-82, IRC SP-19, BIS codes, AASHTO Method, OECD, TRL & W.B. Publication. Geotechnical Investigation for Bridges: Latest IRC 78, IRC-SP-19 and in accordance with Relevant IS Codes. Hydrological Studies & Condition Survey of Bridges: IRC 5, IRC-78, IRC SP-13 IRC-SP-35, SP-37 & SP-40</p> | <p>For Road Safety & Drainage: IRC: 103: 1988, IRC: SP: 44, IRC: SP: 55:2001, IRC: SP: 42- 1994, IRC: SP: 50-1990 For pavement design: IRC 37, IRC-58, IRC 81, IRC 58 AASHTO Method, TRL Road Note 31 For structural design: Latest editions of IRC-5, IRC-6, IRC-21, IRC-18, IRC-78, IRC-83 etc.</p> |

CHAPTER 3 POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

3.1 General

This Chapter deals with the legislative and administrative requirements that are to be fulfilled in course of various activities in the project as per the existing law. This includes statutory requirements laid down under the Forest (Conservation) Act 1980, the Wildlife Protection Act., the Environment Protection Act, the Pollution Control norms (laid down by Central and State Pollution Control Boards), the Indian Road Congress Guidelines, the Technical Specifications of the Ministry of Road Transport and Highway Development (MoRTH) as well as Acts relating to use of natural resources, prevention of air, noise and water pollution standards.

In 1976 the 42nd Constitutional Amendment created Article 48A and 51A, placing an obligation on every citizen of the country to attempt to conserve the environment. As a result, a number of laws related to environment were passed to strengthen the existing legislation. Environment (Protection) Act, 1986 is the landmark legislation as it provides for the protection of environment and aims at plugging the loopholes in the other related acts.

The Ministry of Environment and Forest made it mandatory for introducing environment assessment into the planning process of road projects as well as environmental impact appraisal as per Environmental Protection Act, 1986. The Ministry of Environment and Forest (MoEF) has overall authority for the administration and implementation of government policies, laws and regulations. At the state level, the Department of Environment and Forest implements the policy and legal requirements laid down by the center.

This was a category “A” project as per environmental grading by MoEF, in their notification No. 1433 dated 14/09/2006. But subsequently on amendment to the Environment Protection Act vide Notification No.695 (A) Dtd 4th April 2011, this road project does not attract environment clearance from the MoEF because its 0 to 99 Kms stretch falls under MDR category and rest 7 Kms from 100 to 106 Kms which is part of SH-9 does not lie in eco sensitive area, which has been well confirmed by the PCCF (Wildlife) Odisha.

However, as the road runs at nearest aerial distance of 10 kms from Bhitarkanika National Park, and wildlife sanctuary and salt water crocodile habitat, the PCCF (Wildlife) Odisha was consulted and as per his suggestion, some wildlife related mitigation and conservation support activities have to be undertaken along with road construction.

In OSRP, like other development projects, the environment acts, policy guidelines of both State and Central Government will be applicable. As these acts/regulations have varying procedures, requirements depending on type of Project, a detailed discussion is required in this report to study the extent of applicability, procedures and requirements to be met by OSRP implementing authorities. The following subsections summarize the legislative framework in which OSRP will be addressing the environment & social issues.

3.2 Natural environment

The laws, regulations, and guidelines that govern the issues of natural environment associated with planning, construction and operation of the project are summarized in **Table 3.1**.

Table 3.1 Legal Framework – Natural Environment

| Law / Regulation/ Guidelines | Relevance | Responsible Agency |
|---|--|---|
| The Forest (Conservation) Act, 1980 | Applies to natural forest areas - Authority to issue clearance: (i) if area of forest >40ha (10ha in hilly area)→ Central Government; (ii) 0ha–40ha, Regional Office of Chief Conservator of Forests (central) eastern region; (iii) if tree density >40%, permission for any work must come from the Central Government, regardless of area of forest to be cleared.) As per the prevailing timber and other forest produce transit rules 1980 in Orissa as amended up to date, the felling of trees from any govt. land and private land requiring removal from stump site shall be jointly verified by revenue and forest department and permission for felling, logging, removal will be issued by the DFO having jurisdiction over the area. Accordingly the PIU has to apply in form no.3 under OT and OFPT rules to the DFO in this regard for tree removal. | PMU of OWD, Govt. of Orissa, Forest & Environment Department, MoEF |
| The Environmental (Protection) Act, 1986, and Rules, 1987-2006 (various) | The various aspects of the Environment (Protection) Act and Rules apply to the road construction projects. The standards for discharge of pollutants in the atmosphere and noise levels are fixed. These standards are directed primarily at the industrial pollution, but are also applicable to road construction activity. The GoI, MoEF Notification of 10 April 1997 empowers the State Pollution Control Board to hold public hearing for all projects requiring environmental clearances from the MoEF. | MoEF, GoI; DoE, GoO; CPCB; OSPCB |
| The Environmental Impact Assessment Notification No.1533, Dt. 14 th September 2006 and ammendements | Stipulates any new State High Way or State Highway at above 1000 mtr. MSL or in eco-sensitive areas. | MoEF, GoI; DoE, GoO; OSPCB; CPCB |
| The Wildlife (Protection) Act, 1972 | Provides for the creation, conservation and protection of National Parks and Sanctuaries and wildlife. | Chief Wildlife Warden, Forest Dept., GoO. |
| National Forest Policy, 1952, 1988 (Rev.) | To maintain ecological stability through preservation and restoration of biological diversity and sustainable use of resources. | Forest Department, GoI and GoO |
| The Water (Prevention and Control of Pollution) Act, 1974 | Central and State Pollution Control Board to establish/enforce water quality and effluent standards, monitor water quality, prosecute | OSPCB |

| | | |
|--|--|---|
| | offenders, and issue licenses for construction/operation of certain facilities including permission to use natural water sources as well as under-ground water. | |
| The Air (Control of Pollution) Act, 1981 | Empowers SPCB to set and monitor air quality standards and to prosecute offenders, excluding vehicular air and noise emission, in accordance with the standard set up by the CPCB of Govt. of India. | OSPCB & Transport Department. |
| Hazardous Wastes (Management and Handling) Rules, 1989; 2006. Public Liability Insurance Act, 1991 and Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996. | The rules prescribe the details of management of hazardous industrial solid wastes from its generation to final disposal (cradle to grave) and fixes responsibilities on the generator, the transporter and the disposal agencies. Requirement of preparation of on-site and off-site Disaster Management Plans for accident-prone areas. Special responsibilities are fixed on the managers of hazardous industries, Factory Inspectorates, Pollution Control Boards, local and district authorities, the State Government and the Central Government. | State Government and OSPCB |
| The Motor Vehicular Act, 1988 Central Motor Vehicles Rules, State Motor Vehicles Rules | Empowers State Transport Authority to enforce standards for vehicular emissions and control pollution. Govt. of India in their August 1997 proclamation have fixed the standards of emissions from different equipment and machineries, auto mobiles etc. for issue of "Pollution Under Control Certificate" if the emissions are within the standard set forth by the GoI. | Transport Department, State Government. |
| Guidelines for Rail, Road and Highways Projects, 1989 | Issued by the MoEF and the MoST as a standard recommended practice. However, this serves the purpose of a useful framework for environmental reporting in case of any lapses. | MoEF & MoST |
| World Bank Guidelines | Operational Policies (OP) 4.01 4.36, 4.04, 4.11, including those related to disclosure of information | State Government/ Project Authority and World Bank |
| The Noise Pollution Control Act, 1990. | The MoEF for various categories of area has promulgated the ambient standards for noise levels applicable for day and night in residential, industrial and urban areas. | OSPCB |
| The Mining Act | The mining act has been notified for safe and sound mining activity. | Orissa State Department of Mining |
| Orissa Minor Mineral Concession Rules, 2004 | Leases for mining of construction materials and STP for borrow pits etc. | Department of Mines and Geology Govt. of Orissa. |

3.4 Other legislations applicable to road projects

During road construction stage generally equity, safety and health issues of workers and public are involved. The Orissa State Road Project is to be implemented complying with laws of the land, which include *inter allia*, the following:

- Workmen's Compensation Act, 1923 (the Act provides for compensation in case of injury by accident arising out of and during the course of employment);
- Payment of Gratuity Act, 1972 (gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years);
- Employees PF and Miscellaneous Provision Act, 1952 (the Act provides for monthly contributions by the employer plus workers);
- Maternity Benefit Act, 1951 (the Act provides for leave and some other benefits to women employees in case of confinement or miscarriage, etc.);
- Contract Labour (Regulation and Abolition) Act, 1970 (the Act provides for certain welfare measures to be provided by the contractor to contract labour);
- Minimum Wages Act, 1948 (the employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the);
- Payment of Wages Act, 1936 (it lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers);
- Equal Remuneration Act, 1979 (the Act provides for payment of equal wages for work of equal nature to Male and Female workers and not for making discrimination against Female employees);
- Payment of Bonus Act, 1965 (the Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages);
- Industrial Disputes Act, 1947 (the Act lays down the machinery and procedure for resolution of industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment);
- Industrial Employment (Standing Orders) Act, 1946 (the Act provides for laying down rules governing the conditions of employment);
- Trade Unions Act, 1926 (the Act lays down the procedure for registration of trade unions of workers and employers. The trade unions registered under the Act have been given certain immunities from civil and criminal liabilities);
- Child Labour (Prohibition and Regulation) Act, 1986 (the Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of child labour is prohibited in Building and Construction Industry);
- Inter-State Migrant Workmen's (Regulation of Employment and Conditions of Service) Act, 1979 (the inter-state migrant workers, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, travelling expenses from home to the establishment and back, etc);
- The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and the Cess Act of 1996 (all the establishments who carry on any building or

other construction work and employs 10 or more workers are covered under this Act; the employer of the establishment is required to provide safety measures at the building or construction work and other welfare measures, such as canteens, first-aid facilities, ambulance, housing accommodation for Workers near the workplace, etc.);

- The Factories Act, 1948 (the Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours and rendering information regarding accidents or dangerous occurrences to designated authorities);
- Orissa Panchayat Raj (OPR) Act, 1964 (Panchayat has been delicate power to manage/ maintain/ develop assets like pond, tank, waste land, follow land, tube wells, wells, burial grounds under OPR Act 1964 and its amendments. Primary schools are also being looked after by village level education standing committee of Panchayat. Any short of in the project needs approval of local PRIs like Grampanchayat, Gramasabha etc. There is provision in recent Orissa R&R Policy that before acquiring any land in rural areas for any development project should be discussed in Gramasabha/ Pallisabha).

3.5 Salient features of important laws/regulations

i. Forest (Conservation) Act, 1980

This Act is of particular significance in case the project corridor requires acquisition of forestland. The Forest (Conservation) Act 1980 was promulgated to check the rapid loss of forest for various non-forest activities for which forest lands were indiscriminately leading to deforestation throughout the country. At the state level, the government was empowered to declare reserve and protected forest and was also given the authority to acquire land for extension and preservation of the forests. An advisory Committee was formed to supervise compliance of the act within other government departments including forest department. The interpretation of "Forest" apart from its dictionary meaning for the purpose of F(C) Act. 1980 was further clarified by the apex court in their judgment in December 1996.

In the present case this act will be applicable for all the roads irrespective of the presence or absence of reserved or protected forest along the road corridors as per the prevailing legal positions, wherever any forest land is proposed to be acquired for the road development. Besides this the zone of impact on account of the road development shall be considered under environment notification SO.1533 dated 14/09/2006, to a radial distance of 10km either side of each corridor to determine the positive and negative impacts on the resident animals and plant life together with the ambient air, water and noise quality, so that mitigation and controlling measures can be considered by the statutory authority before issue of any environmental clearance for such projects.

The F(C) Act has undergone several changes so far and several guidelines have been issued by the MoEF, GoI, from time to time for regulating the activities relating to non forest use of forest land procedure for submission of application to obtain forest clearance for non forest purposes etc. The Forest (Conservation) Rules 2003 is now vogue and the rules revised in 2004 by the GoI, have been stayed by the Hon'ble Supreme Court until for the orders.

The Act prohibits diversion of any forestland for any non-forestry purpose and certain activities in the forestry operations by even forest department.

As per the Section – 2 of the Act, the definition of forestland include not only forest as understood in the dictionary sense, but any area recorded as forest in the Government record

irrespective of its ownership. The provisions enacted in the forest conservation Act 1980 for the conservation of forests and the matters connected there which shall apply clearly to all forests so understood irrespective of the ownership or classification there of.

The term "Forest land" mentioned in Section 2 of the Act refers to Govt. Reserved Forest, Protected forest or any area recorded as forest in the Govt. records. Lands, which are notified under section 4 of Indian Forest Act, would also come within the preview of the Act (Supreme courts Judgment in NTPC's case). It would also include 'forest' as understood in the dictionary sense (Supreme Courts order dt 12.12.1996 in WP No.202/1995). All proposals for diversion of such areas for any non-forestry purpose, irrespective of its ownership would require prior approval of the Central Govt.

(Boulders, bajri, stone etc. in the river beds located within forest areas would constitute a part of the forest land and their removal would require prior approval of Central Government)

Diversion of Forest land for Non-Forest Purpose

Any proposal for diversion of forest land for non-forest purposes, involving Reserve Forest and Proposed Reserve Forest are to be very carefully examined and detailed justification after exhausting all alternatives for locating the project in this forest area should be given while forwarding the proposal.

It is essential to have the opinion of the local people whenever the project is coming up in the area. Therefore any proposal for diversion of forestland should be accompanied by a resolution of the "Aam Sava" of the Gram Panchayat or local body of the area endorsing the proposal that the project is in the interest of the people.

Map of the forest area required showing boundary of adjoining forests etc. is to be furnished along with the prescribed form No. 'A'. This should normally be on 1:50000 scale original Survey of India topo sheets.

Species wise, diameter class wise abstracts of trees to be felled should be furnished in the prescribed form. Total enumeration of such trees is necessary only up to 10 ha. For larger areas species wise and diameter class wise abstract of trees may be computed either from the Working plans or by standard sampling methods.

Compensatory Afforestation

Compensatory afforestation is one of the most important conditions stipulated by the Central Govt. while approving proposal for diversion of forestland for non-forest use. It is essential that a comprehensive scheme for compensatory afforestation is formulated and submitted to the Central Govt. Provided further that, incase of the total Forest land proposed to be acquired up to 1 ha shall not require equivalent non forest area to be identified for compensatory afforestation. Only the plantation cost of 10 times the number of plants to be removed from such land shall be deposited with the CAMPA or as directed by the MoEF in their orders.

The scheme should include details of non-forestland or degraded forestland identified for compensatory afforestation, map of the areas to be taken up for compensatory afforestation, year wise phased forestry operations, details of species to be planted and suitability certificate from afforestation/management point of view along with cost structure of various operations to be furnished.

The compensatory afforestation schemes must have technical and administrative approvals, from the competent authority and should be in conformity with cost norms based on species, type of forestland and site conditions.

Where non forest land for compensatory afforestation is not available compensatory, afforestation may be carried out over twice the area of degraded forests subject to production of

certificate of non availability of non forest land within the entire state for compensatory afforestation from the Chief Secretary of the state.

Components of Scheme for Compensatory Afforestation:

- a) Details of equivalent non-forest or degraded forestland identified for raising compensatory afforestation.
- b) Delineation of Proposed area on a suitable map
- c) Agency responsible for afforestation.
- d) Details of work schedule proposed for compensatory afforestation.
- e) Cost structure of Plantations, provision of funds and mechanism to ensure that the funds will be utilized for raising afforestation.
- f) Details of proper monitoring mechanism.

Non-forestlands identified for compensatory afforestation are to be transferred to the Forest department and declared as Reserved or Protected forests so that the plantation raised can be maintained permanently. The transfer and notification must take prior to the commencement of the project. This has been modified later by MoEF to ensure notification under State Forest Act to be declared as a demarcated protected forest or a reserved forest, according to its location and contiguous nature of existence for inclusion as a part of adjacent existing reserved forest. The Nodal officer is to ensure final notification as demarcated protected forest or RF within 6 months. The honorable Supreme Court of India in their orders on 30.10.2002 in 1A No.566 writ petition (Civil) No. 202 of 1995 have directed regarding the creation of a body for “Compensatory Afforestation Management and Planning Agency” to be constituted in each state. This body will look after the receipt of such compensatory afforestation fund from the user agency, the net present value of forest land (NPV) fund, the catchments area treatment fund, the wild life management plan fund etc. for the conditions stipulated by the Central Govt. Compensatory Afforestation fund Management and Planning Authority (CAMPA) has been notified in the official gazette on 23rd April-2004 by GOI.

Applicability of the provisions of this act to the linear plantations was modified by notifications from the GoI, MoEF, dated 18th February 1998. The spirit behind the Forest (Conservation) Act was conservation of natural forest, and not strip plantation. In case of the “notification to be protected” road side plantations, the clearance now may be given by the concerned Regional Offices of the MoEF, irrespective of the area of plantation lost. While issuing the approval, in place of normal provision for compensatory Afforestation, the Regional Offices will stipulate a condition that Afforestation to be compensated in planting three times for felling down of every tree where the forest area to be released does not exceed 20ha. If the concerned Regional Offices do not accord the decision within 30 days of the receipt of fully completed application, the proponent agency may proceed with the widening/expansion under intimation to the State Forest Department and MoEF.

The approval requires that all forested land to be used must be surveyed and the species, size, number of trees and their location to be recorded. These data, plus other specific data must be prepared in a lengthy application for clearance.

ii. Wild Life (Protection) Act

The Wildlife (Protection) Act, 1972 has allowed the Government to establish a number of National Parks and Sanctuaries to protect and conserve the flora and fauna of the state.

The Wildlife Protection Act, (1972) is the first comprehensive act enacted to protect the wild animals and their habitats. It will improve protection measures of the existing National Parks and Sanctuaries and strengthen the Protected Areas (PA). The objectives of the act include to protect the rapidly declining wild animal and birds of the country, control trade in wildlife products, streamline and strengthen wildlife setup at Central and State level and establishment of Wildlife Advisory Board. In the extensive amendment in 1991, endangered wild plants have also been included within the protective umbrella of this Act.

In the present case this act will be applicable, in case of all the packages from P01 to P08, at different stages since there are Elephant, Bear, Panther movement areas along with Ungulates, Reptiles and Amphibians movement across the project roads requiring careful planning for preservation and protection of wildlife and natural habitats without any critical damage to the flora and fauna. Special mention may be made with regard to the isolated elephants of Rayagada, Gajapati and Keonjhar districts as well as the sporadic movement else where. In addition to this Similipal hills and the Biosphere reserve buffer zone are more specified in their Biodiversity and evolutionary process of activity. Wildlife Park, Sanctuary exists within close vicinity (up to 10Kms). None of the project route passes through Wildlife Park, Sanctuary and Biosphere reserves. The applicability and clearance procedure of Forest (Conservation) Act and Wild Life (Protection) Act are discussed in more details in Biodiversity Assessment and Management Plan.

iii. The Water (Prevention and Control of Pollution) Act, 1974 resulted in the establishment of the Central and State level Pollution Control Boards whose responsibilities include managing water quality and effluent standards, as well as monitoring water quality, prosecuting offenders and issuing licenses for construction and operation of any facility. This will include generation of liquid effluent during construction of road from civil engineering activities or from domestic activities in workers' camp. There are specific penalties for violation, which include imprisonment for responsible officials. This act will apply to all corridors under consideration.

iv. The Air (Prevention and Control of Pollution) Act, 1981 empowers Central and State Pollution Control Boards for managing air quality and emission standards, as well as monitoring air quality, prosecuting offenders and issuing licenses for construction and operation of any facility. Air quality includes noise level standards. There are specific penalties for violation, which include imprisonment for responsible officials. This act has notified National Ambient Air Quality Standard for different regions e.g. Industrial, Residential and Commercial areas. Air quality during construction and operation phases will be guided by this specific act. This act will apply to all corridors under consideration.

vi. The Noise Pollution Regulation and Control Act has been issued to promulgate noise level standards for various land uses. Under this act day and time noise levels and other regulations have been issued to regulate noise levels. This act will apply to all corridors under consideration.

vii. The Mining Act has been enacted for safe and sound mining activity. This act will apply for all corridors under consideration, as construction materials are to be procured at all corridors from mine in near vicinity.

viii. The Environment (Protection) Act, 1986: This act was passed as an overall comprehensive act "for protection and improvement of environment" Under this act rules

have been specified for discharge/emission of effluents and different standards for environmental quality. These include Ambient Noise Standard, Emission from Motor Vehicles, Mass Emission standard for Petrol Driven Vehicles, General Effluent Standards etc. especially important for road project.

3.6 Applicability of Acts and Rules to OSRP

Table 3.3: Applicability of Acts and Rules to OSRP

| Act/Rules | Applicability Yes/No | Remark |
|--|----------------------|--|
| Environment (Protection) Act, 1986 | No | 99 kms of the stretch is MDR status. Only balance 7 kms are part of SH-9 which is not in eco sensitive area. |
| Environmental Impact Assessment Notification Dt.14 th September 06. | No | 99 kms of the stretch is MDR status. Only balance 7 kms are part of SH-9 which is not in eco sensitive area. |
| The Forest (Conservation) Act 1980 and Forest (Conversion) Rules 2003 | No | No forest stretch required to be diverted. |
| Wild Life (Protection) Act, 1976 | No | However as the road corridor is near to Bhitarkanika WL sanctuary and National Park suggestions has been invited from the Chief WL Warden , Odisha and mitigation measures as suggested by the Authority have been incorporated in the project, including the budget for environment management. |
| Water (Prevention & Control of Pollution) Act | Yes | This act will be applicable during construction for establishments of hot mix plant, construction camp, workers' camp, etc. |
| The Air (Prevention & Control of Pollution) Act, 1981 | Yes | This act will also be applicable to the OSRP project during construction; for obtaining NOC for establishment of hot mix plant, workers' camp, construction camp, etc. |
| Central Motor Vehicle Act and Central Motor Vehicle Rules | No | These acts and rules are not applicable to OSRP. These will be applicable to road users. |
| Ancient Monuments & Archaeological Sites and Remains Act | No | This act is not applicable to OSRP as none of the project route is close to ancient monument declared protected under the act. |
| The Land Acquisition Act | Yes | This act will be applicable to OSRP as there will be acquisition of land for geometric improvements, bypasses and realignments. |
| Noise Pollution (Regulation & Control Act) | Yes | This act will be applicable to OSRP as vehicular noise on project routes required assessing for future years and necessary protection measure need to be considered in design. |
| The Mining Act | Yes | The construction of project roads under OSRP will require sand aggregates. These will be procured through mining from riverbeds and quarries. |
| Minor Mineral Concession Rules, 2004 | Yes | Leases for mining of construction materials and STP for borrow pits |
| Orissa R & R Policy, 2006 | Yes | This act will be applicable to OSRP as there |

| Act/Rules | Applicability Yes/No | Remark |
|------------------|-------------------------|--|
| | | will be acquisition of land, displacement of people and need for subsequent R & R operations |
| Labour Act. 1984 | Yes | Deal with matter relating to engagement of labour under various activities. |

3.6 World bank requirements

The World Bank requirements from environment point of view are based on a three part classification system such as Category A, Category B, and Category C as defined by the World Bank OP 4.01. A project designated as Category A requires a full environmental assessment followed by Independent Environmental Review (IER) by an independent consultant and Category B projects require a lesser level of environmental investigations.

A brief description about applicable Bank policies is provided below:

Environmental Assessment (OP 4.01)

Environmental Assessment is used in the World Bank to identify, avoid, and mitigate the potential negative environmental impacts associated with Bank's lending operations early-on in the project cycle. The policy states that Environment Assessment (EA) and mitigation plans are required for all projects having significant adverse environmental impacts or involuntary resettlement. Assessment should include analysis of alternative designs and sites, or consideration of "no option" and require public participation and information disclosure before the Bank approves the project.

In World Bank operations, the purpose of Environmental Assessment is to improve decision making, to ensure that project options under consideration are sound and sustainable, and that potentially affected people have been properly consulted and their concerns addressed. The World Bank's environmental assessment policy and recommended processing are described in Operational Policy (OP)/Bank Procedure (BP) 4.01: Environmental Assessment.

Natural Habitat (OP 4.04)

The policy implementation ensures that Bank-supported development projects give proper consideration to the conservation of natural habitats, in order to safeguard their unique biodiversity and ensure the sustainability of the environmental services and products which natural habitats provide to human society.

This policy is applicable when a project (including any subproject under a sector investment or financial intermediary loan) with the potential to cause significant conversion (loss) or degradation of natural habitats, whether directly (through construction) or indirectly (through human activities induced by the project).

Forest Policy (OP 4.36)

The implementation of the policy ensures that envisaged forest sector activities and other Bank sponsored interventions which have the potential to impact significantly upon forested areas:

- (a) Do not encroach upon significant natural forest areas that serve important social, environmental or local economic purposes.
- (b) Do not compromise the rights of local communities to continue their traditional use of forests in a sustainable fashion.
- (c) Do not finance commercial logging operations, in the case of primary tropical moist forest, nor any purchase of equipment for this purpose.

Cultural Property (OP 4.11)

The World Bank Policy OP/BP 4.11 defines physical cultural resources as movable or immovable objects, sites, structures, groups of structures, natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings, and may be above or below ground, or under water. Their cultural interest may be at the local, provincial or national level, or within the international community.

The Bank assists countries to avoid or mitigate adverse impacts on physical cultural resources from development projects that it finances. The impacts on physical cultural resources resulting from project activities, including mitigating measures, may not contravene either the borrower's national legislation, or its obligations under relevant international environmental treaties and agreements. The borrower addresses impacts on physical cultural resources in projects proposed for Bank financing, as an integral part of the environmental assessment (EA) process.

Additionally, a brief mention about the two applicable social safeguard policies is given below. Stand-alone Social Impact Assessment Report and Resettlement Action Plan has been prepared to address the requirements set forth in these policies.

Indigenous People (OP 4.10)

This policy states that any development process under the Bank finance should fully respect the dignity, human rights, economies, and cultures of Indigenous Peoples. Project should engage in a process of free, prior, and informed consultation with IPs that should result in broad community support to the project by the affected Indigenous Peoples.

Projects should include measures to avoid potentially adverse effects on the Indigenous Peoples' communities or when avoidance is not feasible, minimize, mitigate, or compensate for such effects. Project should ensure that the Indigenous Peoples receive social and economic benefits that are culturally appropriate and gender and inter-generationally inclusive.

The Policy will apply if there is presence of IPs in the sub-project area and if there are, the project will consult the indigenous community and will prepare vulnerable community development plan.

Involuntary Resettlement (OP 4.12)

OP 4.12 recognizes that involuntary land taking resulting in loss of shelter, assets or access and income or sources of income should be addressed by the project. Displaced persons should be meaningfully consulted, given opportunities to participate in planning and implementing resettlement programs and assisted in their efforts to improve their livelihoods and standards of living. Absence of legal title to land should not be a bar for compensation, resettlement, and rehabilitation assistance. Vulnerable groups such as indigenous people, women-headed households, and senior citizens should be entitled to special benefit package in addition to compensation and resettlement. The Operational Policy will be applicable in case there is involuntary land taking resulting in displacement of people and / or loss of livelihood or source of livelihood.

3.8 Interface with Department of Revenue, GoO

For land acquisition purpose, an effective interface with the District and Tahasil level Offices of the Land & Revenue Department is necessary. With the authentication of the information compiled by the PIU by these offices, the District Collector can expedite the process. Public grievance in such matters complicates the schedule of implementation of the project. Therefore, it is recommended that no construction work should start before completing land acquisition process ending with payment of compensation and/or rehabilitation.

3.9 Interface with the Department of Forests of the GoO

For this particular project there is no need of regulatory clearances in terms of environment and forest acts. However, due to its proximity to Wildlife sanctuary extra precautionary measures have been taken up by involving the Park Authorities and the Chief Wildlife Warden, Odisha. The mitigation measures as suggested by the Authority have been adopted and integrated into sub-project design.

Also, when road developments projects require felling of trees along RoW, consent of the Forest Department, Revenue Department of the State is required. The trees on private land and those on the non-forest land that require removal for the project shall be counted separately. Separate records shall be maintained by PIU/OWD in both these cases. The trees on non-forest land shall be cut following the Forest Act provisions - only after the final/formal clearance has been received by the PIU/OWD. The project may seek the help of OFDC in cutting the trees on private land. Modalities (including distribution of sale proceeds) for the same should be as per the regular norms in the state and these too should be covered in the agreement/MoU mentioned in point 36.

3.10 Interface with the District Magistrate Office, Municipal authorities, local administrative officials and Panchayat raj Institutions:

This kind of interface is essential at the time of demolishing of encroached structures from RoW. The Magistrate of the District would take all actions on clearance of these encroachments. Rehabilitation of the displaced persons would need the assistance of District Magistrate Office, Municipal authorities, local administrative officials and Panchayat Raj Institutions. These offices should be approached while formulating the Resettlement & Rehabilitation Plan. Observations on this issue would come in the R&R Plans, which would be presented, in a separate report. However, in the context of environmental management, no construction work should start before the displaced persons are resettled and rehabilitated.

3.11 Interface with the Department of Mines, GoO

Permission shall be sought for opening and operating existing or new quarry sites for exclusive /extensive use of quarry materials from specific locations according to the approved quality standards to be issued in favor of the contractor by the Revenue Authorities /Irrigation department Govt. of Orissa, under Orissa Minor Minerals Concession rules 2004 and relevant mines act where ever applicable.

3.12 Capability of OWD for interface management

In the past prior to the preparation and implementation of the OSRP, the Orissa Works Department had no special wing to deal with environment management, land acquisition, compensatory afforestation and carrying out resettlement & rehabilitation operations. However, now the present Project Management Unit (PMU) has the involvement of a multidisciplinary team, which is involved and will continue to work and coordinate on the various environmental activities for this corridor.

CHAPTER 4 ANALYSIS OF ALTERNATIVES

4.1 General

The mandate of the current project is to widen the existing road to two lanes with paved/hard shoulder. The chapter discusses on the “**With**” and “**Without**” project scenarios. The methodology that has been adopted for the evaluation of the alternate alignment route for construction of Project Road and the selection based on engineering, economic, environmental and social considerations have been highlighted. The minimization of environmental impacts by considering design alternatives determines the extent of mainstreaming of the environmental component. An evaluation of the various alignment options has been evaluated for arriving at the most promising alignment. This chapter looks at the decisions made during the project when alternatives were available and describes the rationale behind each decision.

4.2 With and Without Project Alternatives

The corridor with a total length of 106 kms is passing through the thickly populated coastal districts of Odisha such as Cuttack, Kendrapara and Bhadrak. This corridor originates from Jagatpur near Cuttack and runs parallel to the river Mahanadi. The majority of road length comprises of Major District Road and part of State Highways 9. It passes through the plain terrain of densely populated and fertile agricultural land. This corridor provides access from the main market of jute, rice and other agricultural products to the industries like jute, textile and paper mills. It also connects places of Historical tourism interest namely Ratnagiri, Udayagiri. It also leads to the eco-tourism sites like Bhitarkanika and Gahiramatha which are breedingcenters of crocodiles and Olive Ridley turtles. This route has acquired great importance due to direct access to 4-lane NH-5A (Kendrapara) connecting Paradeep port besides inter-region freight and passenger movement. Moreover, fast emerging Dhamra port and Industrial park would further boost the freight and passenger movement.

‘Without Project’ Scenario

The project road corridor has varying carriageway width from single lane to intermediate lane. Major part of the road passes through plain terrain of agricultural land, industrial area at Jagatpur and built up areas at Jagatpur, Padmapur, Paga Bazar, Salepur, Kendupatana, Nischintakoili, Kendrapara, Patamundai, Aul, Rajkanika and Chandbali. Since the road passes through areas of rich cultural heritage and big trading centers, there is ample opportunity for the local people to grow once they are well connected with the important growth centers. High growth of vehicle population as envisaged in the traffic project model adds to the apprehension of future congestion and unsafe conditions on the road. The travel time now is quite high considering the narrow width of carriage way, poor geometry, especially unsafe curves with less or no transitions, inadequate superelevation, improper sight distances and poor offsets. Heavy water logging, insufficient cross drainage works and excessive surface failures following every monsoon period add to the misery of the commuters.

“With Project” scenario

The project once completed will vastly improve the environment and enhance social and economic development of the region compared to the “Without project” scenario. Technical interventions shall be made for catering to the needs of social and environmental aspects of the locality so that there is spiraling growth of the area contributing immensely to the development of the state. The road shall be widened to 2 lanes carriageway with paved/hard shoulders to cater projected traffic need after twenty years. Simultaneously, the horizontal and vertical geometry of the road shall be improved to provide a smooth and safe driving experience to the traffic. Safety measures shall be further enhanced by providing white markings of the surfaces and providing adequate furniture, signage and appurtenances for better visibility at night, thereby minimizing loss of property and life.

Major junctions shall be improved for clear visibility and smooth movement of traffic. Bus shelters shall be provided at the villages. Toe walls in the ponds shall checkerosion of the embankments. Utility ducts across the road in the villages shall be provided to facilitate availability of amenities and facilities on either side of the localities.

The road shall be raised in the flood prone locations with adequate numbers of cross drainage structures and reconstructing the existing CDS in poor conditions, so that all weather movement is facilitated. Cattle under passes shall be provided for movement of animals and people on either side of the embankments. Bye pass shall be provided at Pattamundai where the present road passes through heavy congestion and flood prone area. Once this facility is put to operation, economic and trade activities shall flourish and in turn shall generate employment opportunities.

Considering the site conditions and the scope of development of the area, the ‘With Project’ and ‘Without Project’ scenarios have been compared as given in **Table 4.1**.

Table 4.1: ‘With’ and ‘Without’ Project Scenario

| Component | With Project Scenario | Without Project Scenario |
|---------------------------|--|--|
| Carriageway | <ul style="list-style-type: none"> • 7.0 m Carriageway with paved shoulder for 69 km. • 7.0m carriage way with hard shoulder for 37km. • Rigid concrete pavement for 30km in built up area. • Raising of embankment at all locations where submergence was there. • Provision of 334 CDS for safe and quick discharge of water. | <ul style="list-style-type: none"> • Carriage way varies from 3.50m to 5.5m all throughout. • Existing 129 CDs are in poor condition and not catering to drainage requirements. |
| Traffic congestion | <ul style="list-style-type: none"> • Bye pass suggested at Pattamundai. • Service lanes being provided at Kendrapara. • All utilities shifted beyond road area and drains provided. | <ul style="list-style-type: none"> • Pattamundai market area is heavily congested. • Kendrapara market area is heavily congested. • Market area generally congested everywhere due to |

| Component | With Project Scenario | Without Project Scenario |
|---|--|--|
| | | electric poles and poor drainage. |
| Road Safety | <ul style="list-style-type: none"> • The horizontal and vertical geometry shall be improved to provide a smooth and safe road. • Safety measures and devices shall be enhanced by providing white markings on the surfaces and providing adequate furniture, signage and appurtenances for better visibility at night. • Traffic islands, rumble strips are provided near Minor Junctions. | <ul style="list-style-type: none"> • Basically no road safety provisions in particular. |
| Environmental Quality | <ul style="list-style-type: none"> • Adequate and appropriate drainage facilities provided. • All the submersible areas have been improved to provide all weather access. • Slope protection measures have been taken with provision of erosion control blanket and stone pitching. • Provision of silt fencing made to reduce construction generated silt losses. • Wild life mitigation measures taken, reptile passes provided. • Precautions taken not to impact Water quality during construction and operation. • Air quality and noise pollution shall be improved in the congestion areas due to smooth traffic flow. • Biodiversity are embedded in the project scenario. | <ul style="list-style-type: none"> • Environment parameters were absent. |
| Better Transportation Facilities | The road shall be widened to cater to the projected traffic need after twenty years. The pavement condition would improve resulting into reduce the travel time, vehicle operating and maintenance cost etc. that will adds to accessibility of the road users to various important centers. | <ul style="list-style-type: none"> • Narrow and poorly surfaced roads not facilitating easy transport, inaccessible to important centers due to high travel time. |
| Economic Development | The improve road will provide accessibility to markets and open opportunities to employments, trade and commercial activities. In addition to catering to the needs of social and environmental aspects of the locality so that there is spiraling growth of the area contributing immensely to the development of the state. | <ul style="list-style-type: none"> • Meager economic activities going on at present. Also the external market and agencies do not reach the public in time. |
| Regional | All weather connectivity to the district | <ul style="list-style-type: none"> • No connectivity is available |

| Component | With Project Scenario | Without Project Scenario |
|---|---|---|
| connectivity | Headquarters at Cuttack and Kendrapara shall be improved. Connectivity to the state capital shall be better. | at present for the local people to approach the Administration during flood. The Administration too feels helpless being unable to extend its support and services during such peril. |
| Accessibility to growth centers/market | All weather connectivity to the growth centers at Cuttack and Bhubaneswar and market at Cuttack shall be improved. | People remain inaccessible for a long period every year due to flood which ruins their economic backbone. |
| Employment opportunities | Once this facility is put to operation, economic and trade activities shall flourish and in turn shall generate employment opportunities. | Many people do not prefer to moveout of their village due to poor connectivity. |

4.3 Analysis of Alternative Alignments

The proposed road passes through Pattamundaitown between Km. 68/700 to Km. 72/500 that is densely populated residential and market area for a length of about 1.5km. The Government offices are situated in this stretch and during the day time, the market attracts consumers, thereby leads to a lot of crowding. People who come to the market for their purchases, park their vehicles on the road and the effective carriage way left for through traffic reduces to less than 3.75mtrs almost during the entire day. It has been observed that the vehicles plying on this route run their engines in idling conditions for quite a long time in order to negotiate the traffic and maneuver their vehicles. The local administration, in order to reduce the congestion inside the town, has restricted the entry of bigger vehicles to the town during the business hours. Hence, to address the issue of traffic congestion, road users safety, travel time, vehicle operating cost, exposure of residents to vehicular emission etc. bypass has been proposed for Pattamundai town.

The various alternative alignments were studied keeping in view of the following considerations:

- Avoidance marshy ground and areas subject to flooding and inundation.
- Shorter route length
- Minimum impact on existing settlements, businesses and public utilities
- Improvement in geometrics
- Avoid conflict with future planned developments
- Integrate with existing roads to important towns and villages
- Optimization of traffic capacity and road safety
- Minimum impact to the environment

Based on above consideration, three alternative options have been identified for proposed Pattamundai bypass.



Fig. 4a: Pattamundai Town Bypass with alternative alignments options

Option – 1

The proposed option is on green field where new alignment is proposed after Km.69/700 where it would go straight crossing the Pattamundai main canal through the agricultural field. The total length of proposed alignment is 1.7 km with acquisition of 35 m land width. The road has to be constructed over a high embankment as this area shall be inundated during rainy season. The road shall cross a village road maintained by Rural Works Department connecting three villages namely Tanupur, Balipatna, Khadipal. Population in these villages is about 3000 and the prime occupation of the inhabitants is agriculture. These villages are situated on the southern side bank of river Brahmani. The alignment shall meet the existing road at Km.71/400 in village Ballipada, and before village Kasananta.

Option – 2

This option proposes widening portion of existing canal embankment that is being currently used for diverting of heavy vehicle during business hour. The existing right of way available is 20 m and a total of 1.8 km is proposed for improvement. The canal embankment is the property of Water Resources Department. Adopting this alignment would necessitate improvement of two junctions with the present road, involving significant dislocation.

Option – 3 (Improvement of Existing Alignment)

The third option is improvement of existing alignment for a length of 2.04 km, where the existing available Right of Way is 12 m. As the available RoW is less, accommodating the 16 m cross sectional width is not viable and geometric improvement has to be made at many locations as there are sharp bends with inadequate site distances and set-back distances. This requires acquisition of land and there it is likely to affect 450 structures on both sides during widening.

4.4 Evaluation of Options

A comparative evaluation of all these alternatives has been given in **Table 4.2**, which will help in selecting the alignment with least social and environmental issues as well addressing the engineering requirements. On the basis of comparative analysis, Option – I is the recommended option with minimal social and environmental issues in comparison to other two alternatives.

Table 4.2: Comparative Analysis of Proposed Pattamundai Bypass

| Parameters | | Unit | Alternative Options | | |
|---|------------------|------|-------------------------------|---------------------------------|-------------------------------|
| | | | Option 1 | Option 2 | Option 3 |
| Length (m) | | m | 1701 | 1840 | 2041 |
| Right of Way | Existing | m | NIL | 20 | 20 |
| | Proposed | m | 35 | 16-26 | 16-26 |
| Land to be Acquired | | Acre | 12.1 | 6.8 | 3.0 |
| Diversion of Forest Land | | Acre | Nil | Nil | Nil |
| Structure Affected | | Nos. | 07 | 65 | 450 |
| Number of PAP | | Nos. | 98 | 150 | 245 |
| Trees to be cut | | Nos. | 07 | 30 | 35 |
| Cost of Land | | Lakh | Rs. 85 (Rs.7Lakh/a cre) | Rs. 102 (Rs.15Lakh/ acre) | Rs.75 (Rs.25Lakh/ac re) |
| Cost of R&R compensation | Land | Lakh | Rs.30 | Rs. 25 | Rs.25 |
| | Structure | Lakh | Rs.35 | Rs. 65 | Rs.65 |
| Cost of Road Construction | | Lakh | Rs.510 | Rs.552 | Rs.612 |
| Total Cost of improvement | | Lakh | Rs.660 | Rs.744 | Rs.1787 |

CHAPTER 5

DESCRIPTION OF ENVIRONMENT

5.0 Introduction

Environment embraces all the three components like the physical, biological and the socioeconomic environment that would have repercussion of project when project planning is of short vision. To ensure adequate integration of these components in project planning and design, EIA is to be carried out which is a formal decision making process for identifying the likely effects of particular activities or projects on the environment and human health. The process also encompasses the development of mitigation measures to address these impacts and suggested approaches for implementation of mitigation and monitoring measures. Hence, establishment of baseline data is essential to identify the likely effect of the project and developing avoidances or preventives or mitigating measures for the project to minimize the negative impact. For Environmental assessment along the project road, information and data have been obtained by intensive site visits, primary data collection, secondary data from published sources, and various government agencies.

5.1 Methodology for EIA

The EIA procedure proceeded simultaneously with design of the project road. The important findings of the assessment gave important feedback to the design team, especially in terms of the sensitive receptor utilities /facilities to be impacted, water logged stretches and locations of religious properties. It helped modify the designs at locations where impacts had to be avoided and incorporate mitigation measures wherever the impacts were unavoidable due to other constraints. The steps covered in the preparation of EIA are as follows:

- Review of Documents;
- Reconnaissance Surveys;
- Collection of Secondary Data and Generation of Primary Data;
- Documentation of Baseline Conditions;
- Assessment of Potential Impacts;
- Identification of Mitigation and Enhancement Measures;
- Analysis of Alternatives;
- Public Consultations; and
- Preparation of the Environmental Management Plans.

5.2 Study Area

5.2.1 Corridor of Impact

The primary baseline data has been collected within the proposed right of way that is 30 m for bypasses, 20 m for open/ rural areas and 16 m in built-up areas. The overall project's direct impact has been identified for the areas coming under Corridor of Impact.

5.2.2 Project Influence Area

As per guidelines of EIA Notification-2006 and MoEF Environmental Impact Assessment Guidelines Manual for Highways, the Project Influence Area (Fig 5.1) has been defined as 10

km on either side (Aerial distance) from boundary of road for collection of secondary data, including impacts due to ancillary sites like borrow areas, quarry, material storage and disposal areas.

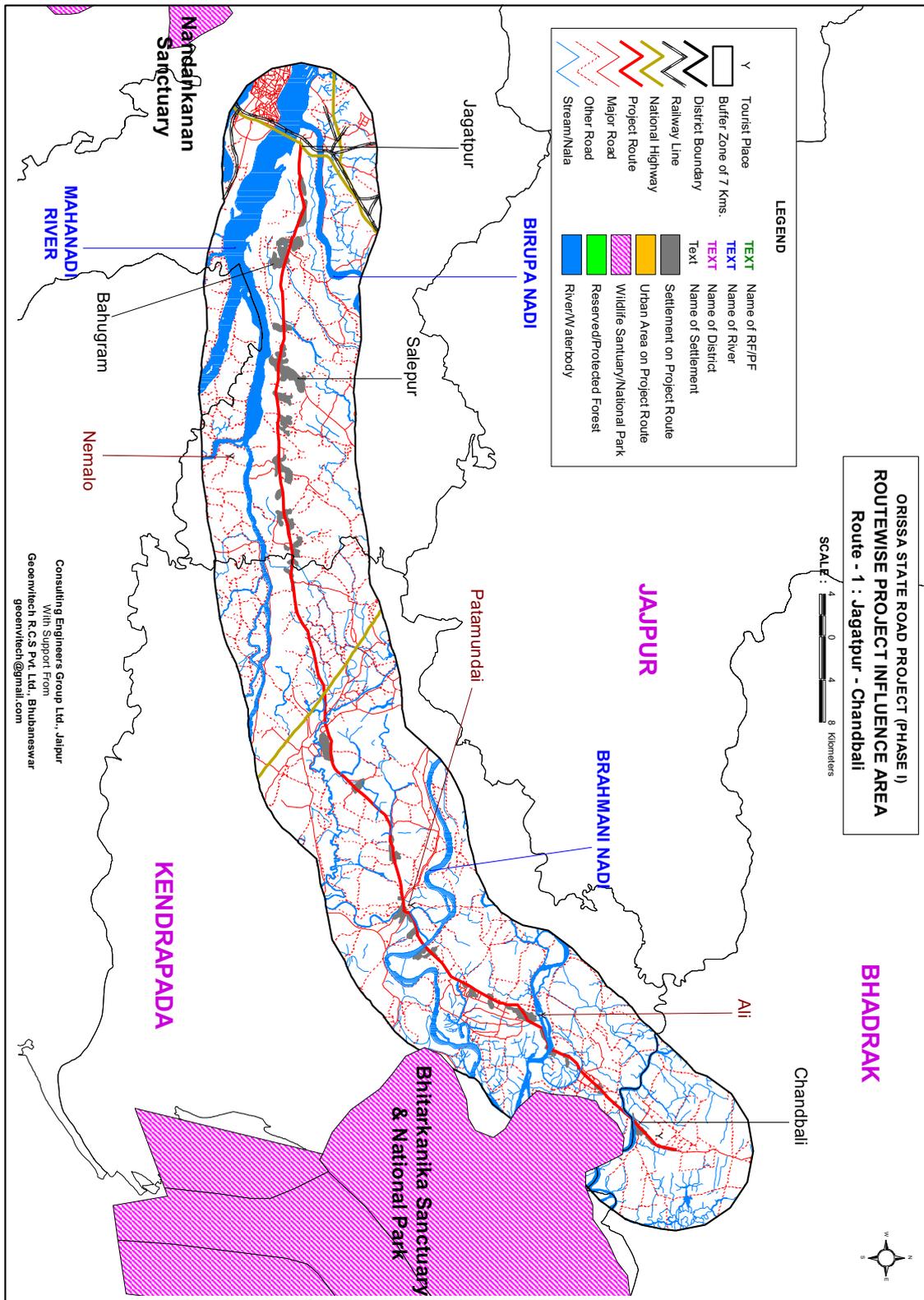


Fig 5.1: Project Influence Area

5.3 Land Environment

5.3.1 Physiography

The project districts i.e. Bhadrak, Cuttack and Kendrapada are located in Coastal Plain formed due to alluvial deposit of the rivers originating in the Eastern Ghats and flowing eastwards draining into the Bay of Bengal. The project road corridor is passes through flood plains of Baitarani River in the deltaic region between river Budhabalanga and Baitarani. The area has flat topography extending in the north-south direction along the coast and toptographical gradient is towards east where the elevation is very negligible leading to persistent water logging during rains in all these tracts along the coast.

5.3.2 Geology

Odisha has three distinct geological provinces, The Singhbhum - North Orissa creation occupies Mayurbhanj, Keonjhar, parts of Balasore, Dhenkanal, Deograh, Sambalpur and Sundargarh districts. The litho assemblage in this sector comprises Banded Iron Formation, Green stone, and Granite association. The southern portion of the state is covered with the rocks of Eastern Ghats mobile belt. It comprises mainly granitic suite, charnokite, khandelite etc. These rocks of Precambrian age cover the vast stretch of Cuttack, Khurda, Nayagarh, undivided Bolangir, Sambalpur, Phulbani, Ganjam, Kalahandi and Koraput districts. In the western sector lies the Bhandara creation, which comprises greenstone, granite, and granulite etc facie assemblages along with upper Proterozoic sedimentary rocks. The Preoterozoic sedimentary rocks cover parts of Nuapara, Bargarh, Koraput, Nawarangpur and Malkanagiri districts. Boundaries in between these three Precambrian provinces are marked by structural lineaments.

Table 5.1: Distribution of major geological units in the State

| Geological Age | Rock formation | | Districts |
|--------------------------------------|-------------------|--|---|
| CONSOLIDATED FORMATION | | | |
| Pre-Cambrian | Archaean complex | Granite gneiss Charnockites, Khondalites, Schist, Phyllite, slates, Granulite, Banded Haematite-Quartzite etc. | Occur in all districts except Kendrapada, Jagatsinghpur, Bhadrak |
| | Cuddapah Vindhyan | Shale, Sand Stone, Quartzite, Limestone etc. | Koraput, Nawarangpur, Bargarh, Nuapara, Khurda, Cuttack, Sundargarh |
| SEMI – CONSOLIDATED FORMATION | | | |
| Palaeozoic – Mesozoic | Gondwana Group | Boulder bed, Sandstone, Shale and coal seams | Angul, Sambalpur, Jharsuguda, Dhenkanal, Angul, Sundargarh, |
| Tertiary | Baripada beds | Loosely cemented calcareous sandstone | Mayurbhanj, Cuttack, Khurda, Nayagarh |
| Unconsolidated Formation | | | |
| Pleistocene to Recent | | Alluvium (clay, silt, gravel and sand in varying proportion) | Ganjam, Gajapati, Mayurbhanj, Khurda, Puri, Cuttack, Kendrapara, Jajpur, Bhadrak, Balasore, Keonjhar, Rayagada, Koraput, Nawarangpur. |

The geology of the project area is mainly comprised of rock formations belonging to Archaean system of Pre-Cambrian geological age and Recent to sub-recent sediments deposited by various river systems built up at deltas at the river mouths.

5.3.3 Sismicity

As per the Bureau of the Indian Standards (BIS) map IS: 1983-1984, the district of Cuttack and Kendrapara lies in Zone III, and Bhadrak lies in zone II. Zone III is a moderate earthquake zone where as zone II is a low damage risk zone. Map showing seismic zone of India and Odisha is given below in **Figure 5.2** and **Figure 5.3** respectively.

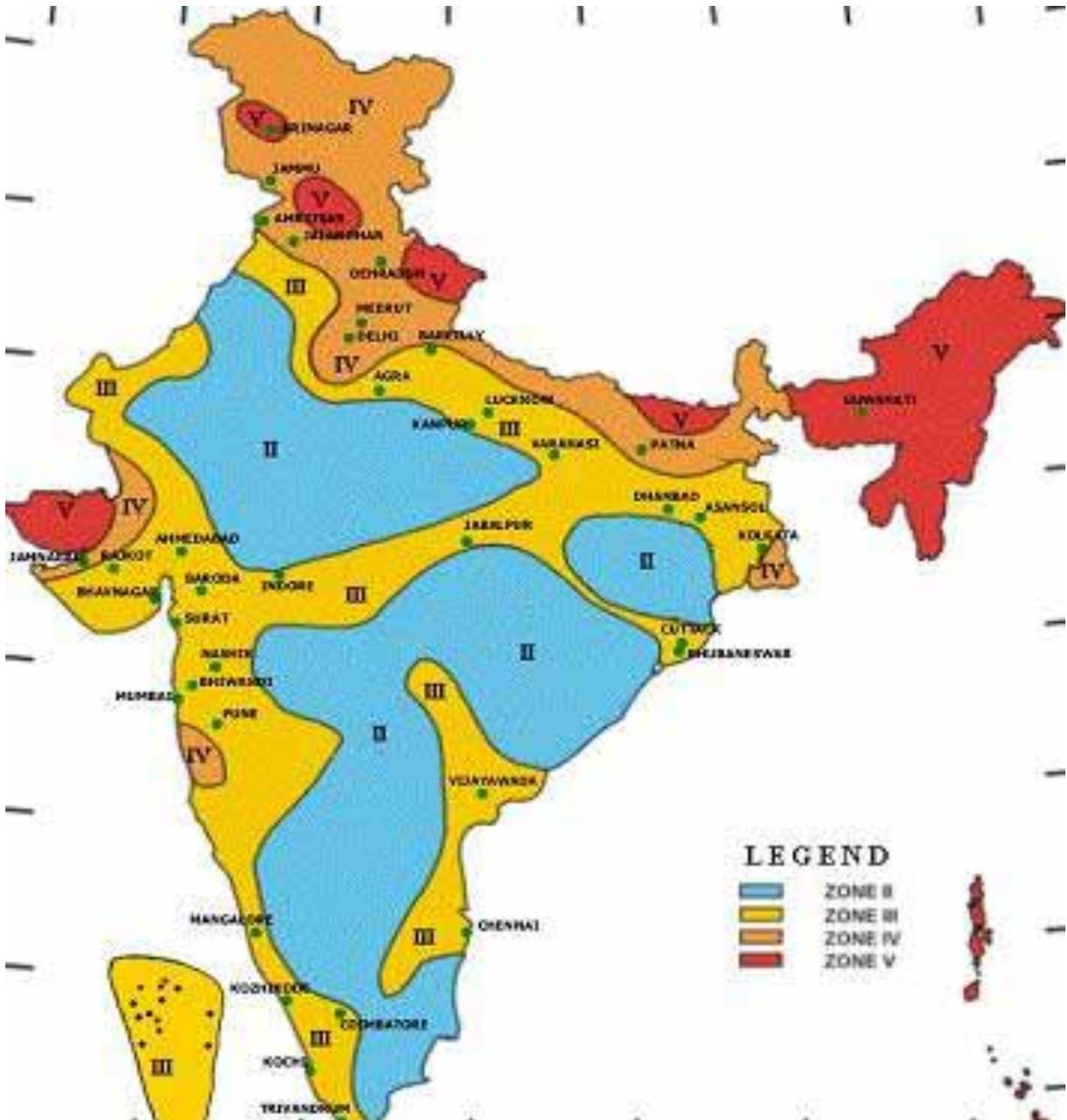


Fig 5.2: Seismic Zoning Map of India

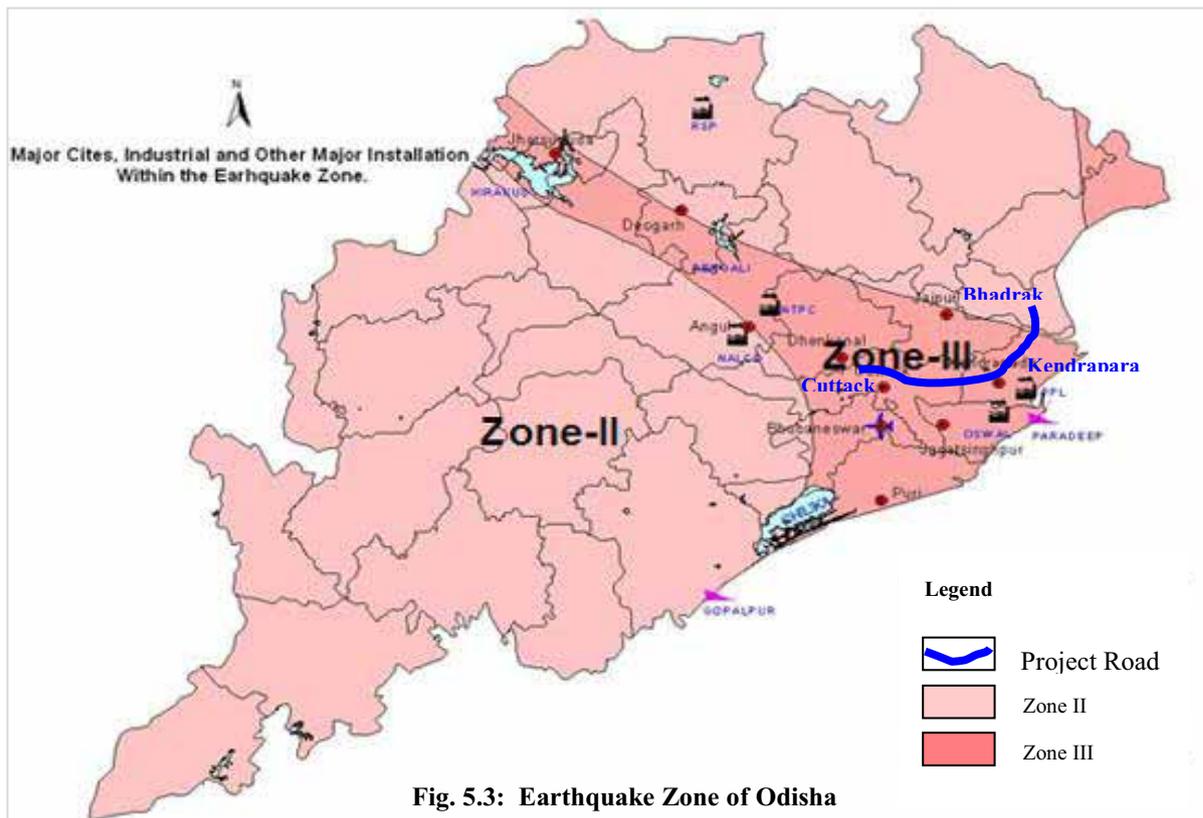


Fig. 5.3: Earthquake Zone of Odisha

It is evident from the earthquake zoning map of Odisha that majority of project road lies in Zone III, which is a moderate earthquake zone.

5.3.3 Hydrology

Three major hydrological units have been identified in the State based on the geological set up, occurrence and distribution of aquifers and their yield potentials, and they are: (i) Consolidated formation includes mainly granites, gneisses, schists, amphibolites, khondalites, charnockites, Pre-cambrian sandstones, and shales, quartzites, and limestones, basic and acid intrusions. They occupy about 70% of the geographical area of the state; (ii) Semi-consolidated Gondwana formations and Tertiary deposits the weathered, friable and loosely cemented sandstones forms the aquifer and (iii) Un-consolidated formation include alluvial deposits in the coastal tract and river alluvium along with the major rivers and streams. The project districts has both consolidated and un-consolidated hydrological units. Depth to water level varies from 0 to 2m in the post-monsoon and 2 to 4m in pre-monsoon periods. Yield of tube wells in these tracts can be of 18 to 76 lps. The hydrological map of Odisha is in Fig 5.4.

The project road is falling under three river basins, namely Baitarni, Bhramani and Mahanadi, though majority of the road length is coming under Bhramani and Baitarni river basin (Fig 5.5). The project road crosses three major rives namely Baitarani, Bhramani and Kharshrota. The Brahmani River rises near Nagri village in Ranchi district of Jharkhand at an elevation of about 600 m and has a total length of 799 km. The Baitarani River rises in the hill ranges of Keonjhar district of Orissa at an elevation of about 900 m and has length of about 365 km. The important tributaries of Brahmani are the Karo, the Sankh, and the Tirka and those of Baitarani are the Salandi and the Matai. These river systems outfalls are into the

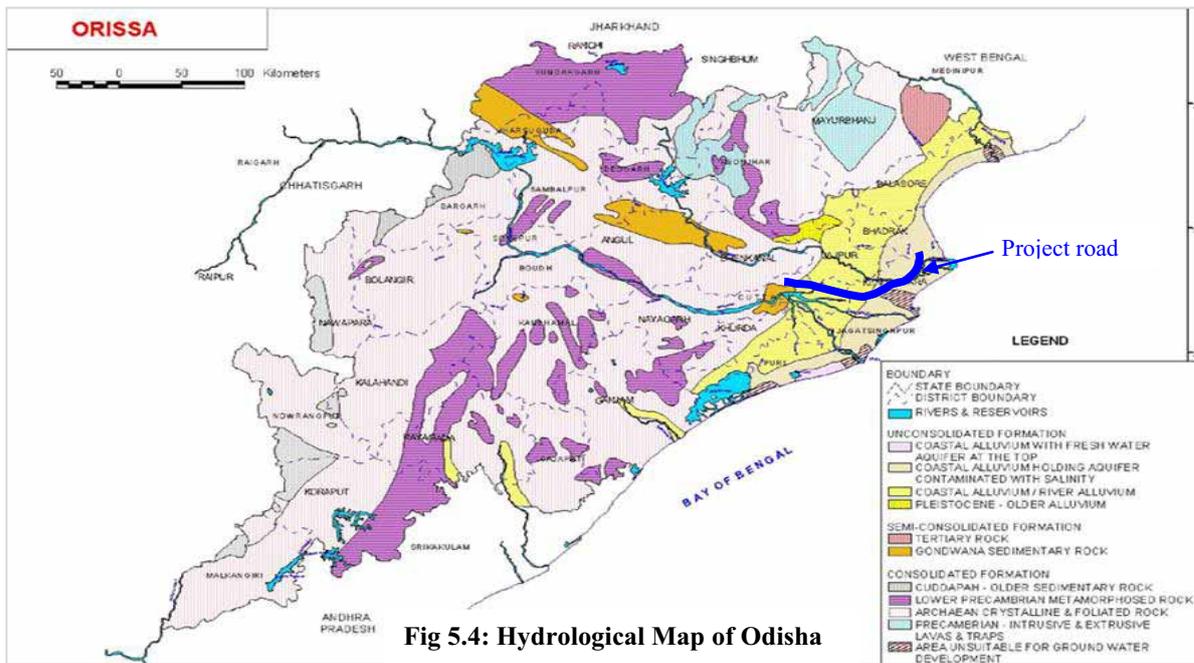


Fig 5.4: Hydrological Map of Odisha

Bay of Bengal forming a common delta area with minimum level difference with the sea make the project districts prone to ravages of frequent flood, inter tidal inundation, water logging and cyclonic storms besides being enriched by the silt deposits caused 2 to 3 times repeatedly every year on accounts of floods.

5.3.4 Land Use

Project highway traverses through plain area. The project road passes through district of Cuttak, Kendrapada and Bhadrak. Predominantly land use is under agricultural, residential, and commercial. There is no forest (Except road side plantation), environmental sensitive places, notified industrial areas and lake along the project road. Project road passes through 116 villages/ settlements in 3 districts.



Fig 5.5: Baitrani and Bhramani river Basin

5.3.5 Soil

Based on soil types, rainfall, temperature etc. the state has been divided in to ten Agro climatic zones (Table 5.2). The project road comes under three agro climatic zone of the state namely, North Eastern Coastal Plain, East and South Eastern Coastal Plain and Mid-Central Table Land Agro Climatic Zone respectively. The soil types along project roads area are mainly lateritic, coastal saline and alluvial, and deltaic alluvial soil on both sides.

The soil texture vary from sand loam to loamy sand in few road stretches in Cuttack, while it is clayey texture in road stretch passing through deltic alluvial and coastal saline and alluvial soil type in Cuttack, Kendrapara and Bhadrak. Because of the location being in the deltic region of river Brahmani and Baitarani, the project area has fertile land due to alluvial deposits, over which the districts are located (Fig 5.6).

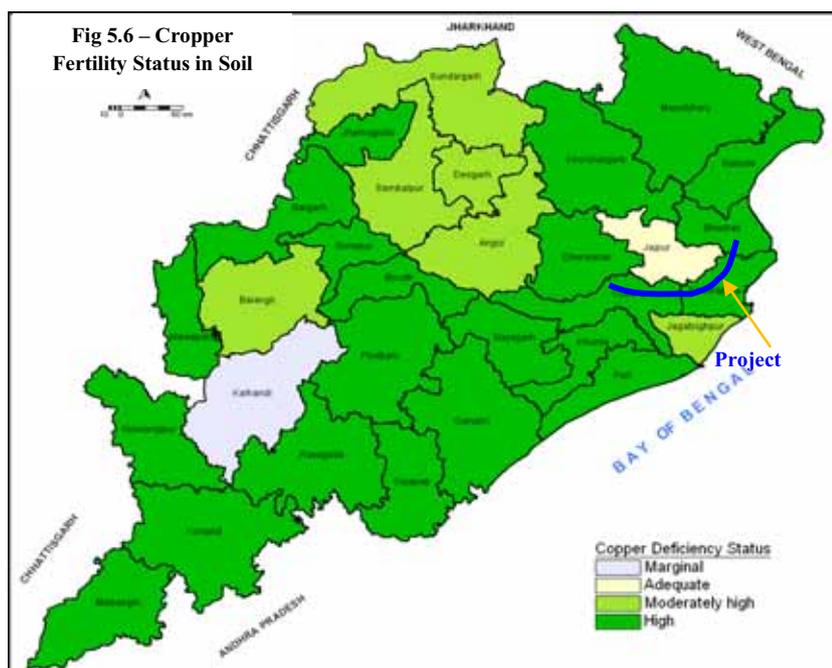


Table 5.2: Soil types in different Agro Climatic zones of Orissa state

| Sl. No | Agro-climatic zones | Districts | Soil Group |
|--------|--|---|---|
| 1 | North Western Plateau Zone | Sundargarh, Deograh | Red, Brown forest, Red & yellow, Red and black |
| 2 | North Central Plateau Zone | Keonjhar, Mayurbhanj | Lateritic, Red & Yellow, Mixed red & black |
| 3 | North Eastern Coastal Plain Zone | Balasore, Bhadrak , Keonjhar, Jajpur | Red & laterite, Deltaic alluvium, Coastal alluvium including saline |
| 4 | East and South Eastern Coastal Plain Zone | Cuttack, Jagatsinghpur Kendrapara , Khurda, Puri, Nayagarh, Ganjam | Coastal saline & sandy, Lateritic alluvial, black, red and lateritic |
| 5 | North Eastern Ghats Zone | Phulbani, Rayagada, Gajapati, part of Ganjam | Brown forest, Lateritic, Alluvial, red, Black, Red and yellow |
| 6 | Eastern Ghats Highland Zone | Koraput, Nawarangpur | Red, Mixed red and black, Mixed red and yellow, Alluvial |
| 7 | South Eastern Ghats Zone | Malkanagiri, Jeypore | Red, lateritic, Black |
| 8 | Western Undulating Zone | Kalahandi, Nuapara, part of Nawarangpur | Red, Red and yellow, Yellow, Red and black, Black, Deltaic alluvium |
| 9 | West Central Table Land Zone | Sambalpur, Sonapur, Bargarh, Bolangir | Alluvial, red and yellow, red and black, Black, Lateritic red, Forest |
| 10 | Mid- Central Table Land Zone | Dhenkanal, Angul, part of Cuttack | Alluvial, Black, red and laterite, Lateritic red |

Source: Directorate of Research office, OUAT, Bhubaneswar

5.3.6 Water Resources and Drainage

Surface Water

Water bodies in the project area mainly include rivers, ponds, canals, tanks etc. Major rivers flowing in and around project area are Brahmani, Kharasrota and Baitarani. These rivers are most problematic rivers along the corridors that inundate vast stretches of the corridor and

residential localities around. The project roads also have man-made water storage tanks in shape of ponds, irrigation tanks and minor water harvesting structures besides dug up depression created along coastal traps coming within inter tidal zones to harvest fish and crustacea that move about with the rise and fall in water level. These artificial impounding of precious water harvesting units not only serve as major ground water recharging unit but also provide cheap protine to the rural population while serving as source of irrigation, bathing, washing and feeding domestic cattle. During the field survey, 44 water bodies have been identified and located within 10 to 15 mtrs of the toe line on either sides of the road (details at **Annexure 5.2**).

Ground Water

Besides the ponds, water harvesting structures, there are potable water sources in the form of open shallow wells of coastal districts, deep wells and bore wells, piped water supply units in rural, semi urbane and urbane locationsn either side of the corridor which are going to be shifted and reestablished away from the existing corridor. As the health and wellbeing of a community depends on the health and sanitation facilities in which **water plays an important role**, the detail locations of these utilities were recorded and with the opinion of the stakeholders these are to be relocated at alternate sites on high ground with better sanitation and waste water management devices. Wells have been abandoned or less frequently used in many localities owing to the sinking of bore wells or deep hand pump units under **RWSS and Swatchha jaladhara programme**. The Table 5.3 below present the summary of existing potable water sources that are along the road (for details at **Annexure 5.1**).

Table 5.3: Existing Potable Water Sources

| Sl.No | Type of Structure | Number |
|-------|-------------------|------------|
| 1 | Well | 72 |
| 2 | Tube Well | 37 |
| 3 | Stand Post | 36 |
| | | 145 |

Water Quality

To understand baseline conditions of water quality, samples from six locations for surface-water quality and six locations for ground water quality were collected. The sampling locations were selected after the field investigations and review of all the water bodies/resources along the project stretch. Baseline information on the quality of surface and ground water sources along the alignment of proposed road is required before predictions can be made of the future quality.

Grab samples were collected from these locations and were analyzed for various parameters as per the procedures laid down in the APHA & BIS. The location details of water quality monitoring stations are presented in **Table 5.4**.

Table 5.4: Details of Water Quality Monitoring Locations

| S.No. | Ground Water | | Surface Water | |
|-------|--------------|----------|-----------------|----------|
| | Description | Chainage | Description | Chainage |
| 1 | Jagatpur | 3.500 | Brahmini River | 73.000 |
| 2 | Salepur | 20.000 | Baitarini River | 87.500 |
| 3 | Kendrapada | 51.00 | | |
| 4 | Pattamundai | 72.00 | | |

These water samples were collected as grab samples and were analyzed for various parameters and compared with the standards for drinking water as per IS 10500: 1991 (**Annexure 5.4**). Ground water samples were collected from most commonly used sources along the project road. Surface water samples were collected from Brahmani and Baitarani River crossing the project road. The analysis of surface water quality has been done as per water quality standards prescribed by Centre for Pollution Control Board (**Annexure 5.3**). Analysis results for ground water samples and surface water are given in **Table 5.5**.

Table 5.5: Water Quality in the Project Area

| Sl. No | Parameters | Ground Water Sample Jagatpur Chainage 3.500 | Ground Water Sample Salepur Chainage 20.000 | Ground Water Sample at Kendrapada Chainage 51.00 | Ground Water Sample at Pattamundai Chainage 72.00 | Water Sample of Brahmini River at Chainage 73.000 | Water Sample of Baitarani River at Chainage 87.500 |
|--------|--|---|---|--|---|---|--|
| 1 | PH value | 7.9 | 6.5 | 7.5 | 7.2 | 6.8 | 7.0 |
| 2 | TDS, mg/l | 362 | 349 | 352 | 358 | 73 | 76 |
| 3 | Oil & Grease, mg/l | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.2 |
| 4 | BOD (27°C 3 days), mg/l | 3.1 | 2.2 | 2.5 | 3.0 | 4 | 5 |
| 5 | COD, mg/l | 19 | 12 | 14 | 15 | 20 | 25 |
| 6 | Chloride as Cl, mg/l | 16 | 11 | 12.5 | 12 | 4 | 5 |
| 7 | Sulphate as SO ₄ , mg/l | 13 | 10 | 11 | 10 | 3.9 | 5.0 |
| 8 | Salinity | 7.9 | 2.5 | 4.2 | 5.8 | 6.9 | 7.3 |
| 9 | Dissolved Oxygen, mg/l | 5.5 | 4.3 | 4.9 | 5.0 | 6.0 | 7.0 |
| 10 | Iron as Fe, mg/l | 1.45 | 1.00 | 1.02 | 1.25 | 1.2 | 0.8 |
| 11 | Copper as Cu, mg/l | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 12 | Zinc as Zn, mg/l | 0.05 | 0.03 | 0.04 | 0.04 | 0.03 | 0.03 |
| 13 | Lead as Pb, mg/l | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 14 | Chromium as Cr, mg/l | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 15 | Cadmium as Cd, mg/l | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 16 | MPN Coliform | Nil | Nil | Nil | Nil | 29 | 31 |
| 17 | E-Coli | Absent | Absent | Absent | Absent | Present | Present |
| 18 | Total Hardness as CaCO ₃ , mg/l | 325 | 305 | 312 | 318 | 110 | 119 |
| 19 | Total Suspended Solids, mg/l | 5.3 | 4.1 | 4.2 | 4.9 | 42 | 47 |
| 20 | Color, NTU | 3.8 | 3.0 | 2.9 | 3.0 | 7.9 | 8.5 |
| 21 | Odour | Absent | Absent | Absent | Absent | Absent | Absent |
| 22 | Turbidity, NTU | 5 | 4 | 4 | 4 | 10 | 12 |

It is revealed from observations that all essential parameters of water samples are well within the prescribed limit for potable water as per IS: 10500-1991. Except for Iron content that is exceeding the prescribed limit.

The surface water quality of Brahmani and Baitarini River was found satisfactory and is fit for bathing and domestic purposes. Water quality of Brahmani and Baitarini River was under class ‘B’ of CPCB standard.

5.3.7 Meteorological Conditions

Geographically the state is located on the coastal belt as a result the weather in Orissa is greatly influenced by the sea. Orissa is lying just south of the Tropic of Cancer and the climate of the region is tropical resulting in very high temperature in the months of April and May. On the contrary, the Eastern Ghats of the state experience an extremely cold climate.

Temperature

The project districts are located in coastal plain. The climate in project area is equable but highly humid and sticky. As per the meteorological information the summer maximum temperature ranges between 35-40° C and the lowest temperature are usually between 12-14°C. The and the low temperatures are usually between 12-14° C. Winter is not very severe except in some areas in Koraput and Phulbani where minimum temperature may drop to 3-4° C.

Rainfall

The average annual rainfall is the project area is 1500 mm, experienced as the result of south west monsoon during July-September (Fig 5.7 and 5.8). The month of July is the wettest and the major rivers may get flooded. The state also experiences small rainfall from the retreating monsoon in the months of October-November. January and February are dry.

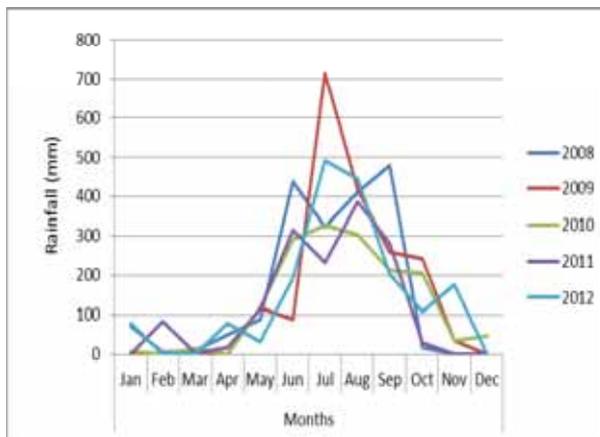


Fig 5.7: Cuttack Rainfall Trend

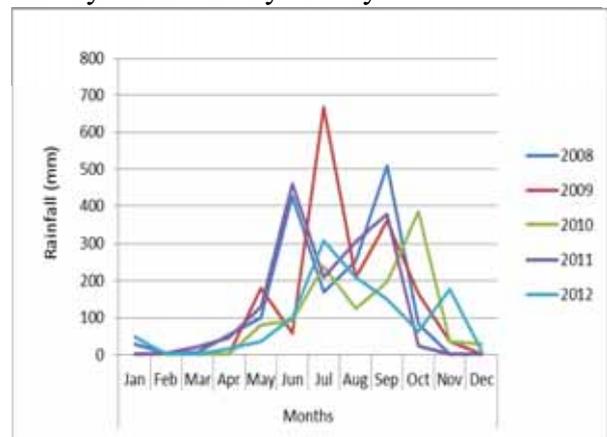


Fig 5.8: Kendrapara Rainfall Trend

Table 5.6: Rainfall Data - Cuttack

| Month | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|------|
| 2008 | 71.1 | 5.4 | 9.3 | 50.3 | 87.4 | 436.8 | 321.9 | 410.9 | 479.6 | 17.0 | 0.0 | 0.0 |
| 2009 | 0.0 | 0.0 | 0.4 | 1.0 | 118.0 | 88.3 | 712.9 | 417.5 | 259.7 | 243.2 | 35.3 | 0.0 |
| 2010 | 8.4 | 0.0 | 15.7 | 0.0 | 116.4 | 291.8 | 327.1 | 302.5 | 211.7 | 206.6 | 34.6 | 46.9 |
| 2011 | 0.0 | 84.5 | 2.1 | 17.6 | 116.1 | 314.3 | 232.6 | 387.2 | 282.1 | 29.4 | 0.0 | 0.0 |
| 2012 | 79.3 | 0.0 | 0.0 | 77.8 | 31.8 | 192.9 | 491.8 | 445.7 | 202.3 | 106.7 | 175.5 | 0.0 |

Source: IMD

Table 5.7: Rainfall Data - Kendrapara

| Month Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---------------|------|-----|------|------|-------|-------|-------|-------|-------|-------|-------|------|
| 2008 | 27.3 | 4.0 | 5.0 | 52.0 | 101.0 | 428. | 168.3 | 254.3 | 508.0 | 83 | 0.0 | 0.0 |
| 2009 | 0.0 | 0.0 | 0.0 | 2.0 | 179.7 | 58.7 | 667.3 | 209.0 | 360.3 | 164.0 | 35.7 | 0.0 |
| 2010 | 0.0 | 0.0 | 0.3 | 0.0 | 81.0 | 92.7 | 238.3 | 123.7 | 196.3 | 384.3 | 35.0 | 27.3 |
| 2011 | 0.0 | 3.7 | 21.0 | 45.3 | 129.7 | 460.2 | 209.3 | 305.2 | 378.4 | 23.3 | 0.0 | 0.0 |
| 2012 | 47.3 | 0.0 | 0.7 | 17.0 | 36.9 | 100.2 | 307.0 | 207.9 | 149.2 | 63.8 | 176.2 | 9.5 |

Source: IMD

5.3.8 Air

The ambient air quality with respect to the study area along the project road form baseline information. The study area represents mostly rural/residential as well as urban. The sources of air pollution in the region are mainly vehicular traffic; dust arising from unpaved road and domestic fuel burning etc. The prime objective of the baseline air quality study is to establish the existing ambient air quality along the project road. This will be useful for assessing the conformity to standards of the ambient air quality specified by CPCB due to the construction and operation of the project road. The ambient air quality monitoring has been carried out as per new notification, issued on 16th November 2009.

Selection of Sampling Locations

Air quality monitoring was done at four locations. The sampling of the ambient air quality has been established through a scientifically designed ambient air quality monitoring network and is based on the following considerations:

- Meteorological conditions on synoptic scale;
- Topography of the study area;
- Representatives of likely impact areas along the project road.

The samples were analysed for pollutants of interest (CO, NO_x, SO₂, SPM and RPM) using the appropriate method prescribed by Bureau of Indian Standards and Central Pollution Control Board. Repairable dust samplers/high volume samplers of Envirotech Instruments were used for monitoring suspended particulate matters (SPM), repairable particulate matters (RPM), SO_x, and NO_x

Sampling and Analytical Techniques

Ambient air quality monitoring has been carried out at Jagatpur, Kendrapara, Pattamundai and Chandbali locations along the project road. The ambient air quality monitoring stations were selected with major settlement with large population and proximity to/along the project road. Monitored values are compared with National Ambient Air Quality Standards (Table 5.8) prescribed by Central Pollution Control Board (CPCB).

Table 5.8: National Ambient Air Quality Standards (CPCB, 1997)

| Pollutant | Time Weighted Average | Concentration in Ambient air ($\mu\text{g}/\text{m}^3$) | | |
|---|-----------------------|---|-----------------------|-----------|
| | | Industrial | Rural and Residential | Sensitive |
| Sulphur Dioxide (SO_2) | Annual Average* | 80 | 60 | 15 |
| | 24hr** | 120 | 80 | 30 |
| Oxides of Nitrogen (as NO_2) | Annual Average * | 80 | 60 | 15 |
| | 24hr** | 120 | 80 | 30 |
| Suspended particulate Matter (SPM) | Annual Average * | 360 | 140 | 70 |
| | 24hr** | 500 | 200 | 100 |
| Respirable particulate matter (<10 μm) (RPM) | Annual Average * | 120 | 60 | 50 |
| | 24hr** | 150 | 100 | 75 |
| Lead | Annual Average * | 1.0 | 0.75 | 0.50 |
| | 24hr** | 1.5 | 1.00 | 0.75 |
| Carbon monoxide mg/m^3 | 8hr | 5.0 | 2.0 | 1.0 |
| | 1hr | 10.0 | 4.0 | 2.0 |
| * Annual Arithmetic mean of minimum 104 measurements in a year taken for a week 24 hourly at uniform interval. | | | | |
| ** 24 hourly/8 hourly values should meet 98 percent of the time in a year | | | | |
| Source: Central Pollution Control Board (1997) National Ambient Air Quality Monitoring Series, NAQMS/a/1996-97. | | | | |

The monitoring result of all five parameters in Table 5.9 showing the survey station for air quality monitoring indicates the level of various parameters being far below the ambient levels prescribed by the Govt. of India as regards air quality along the corridors proposed to be developed, as can be seen from the average reading derived at each survey station on specific corridors.

Table 5.9: Ambient Air Quality Status along the Project Road

| No. of Reading | SPM ($\mu\text{g}/\text{m}^3$) | RPM ($\mu\text{g}/\text{m}^3$) | SO_2 ($\mu\text{g}/\text{m}^3$) | NO_x ($\mu\text{g}/\text{m}^3$) | CO (ppm) |
|---|----------------------------------|----------------------------------|--|--|--------------|
| Survey Station (SS): Jagatpur Chainage (3.500) | | | | | |
| 1. | 185.0 | 60.2 | 8.3 | 10.7 | 1.32 |
| 2. | 200.0 | 50.0 | 9.1 | 17.3 | 1.18 |
| 3. | 209.1 | 69.7 | 9.3 | 9.2 | 1.25 |
| 4. | 210.1 | 70.7 | 9.5 | 10.2 | 1.15 |
| Average Reading | 201.05 | 62.65 | 9.05 | 11.85 | 1.225 |
| Survey Station (SS): Kendrapara Chainage (52.000) | | | | | |
| 1. | 258.0 | 92.5 | 9.3 | 14.3 | 1.5 |
| 2. | 185.0 | 61.8 | 10.1 | 19.5 | 1.8 |
| 3. | 174.0 | 57.9 | 7.3 | 13.7 | 1.0 |
| 4. | 165.0 | 49.8 | 9.8 | 15.5 | 1.2 |
| Average Reading | 195.5 | 65.5 | 9.125 | 15.75 | 1.375 |
| Survey Station (SS): Pattamundai Chainage (72.000) | | | | | |
| 1 | 188.0 | 69.3 | 7.9 | 16.2 | 1.5 |
| 2 | 164.0 | 65.2 | 8.9 | 13.0 | 1.6 |
| 3 | 152.4 | 43.1 | 7.5 | 13.8 | 2.1 |
| 4 | 147.6 | 42.1 | 6.8 | 12.0 | 1.8 |
| Average Reading | 163 | 54.925 | 7.775 | 13.75 | 1.75 |
| Survey Station (SS): Chandbali Chainage (99.000) | | | | | |
| 1 | 163.3 | 52.2 | 9.9 | 14.4 | 0.6 |
| 2 | 179.0 | 61.0 | 9.7 | 6.2 | 0.8 |
| 3 | 59.6 | 17.7 | 5.6 | 10.2 | 0.5 |

| No. of Reading | SPM ($\mu\text{g}/\text{m}^3$) | RPM ($\mu\text{g}/\text{m}^3$) | SO ₂ ($\mu\text{g}/\text{m}^3$) | NO _x ($\mu\text{g}/\text{m}^3$) | CO (ppm) |
|------------------------|----------------------------------|----------------------------------|--|--|-------------|
| 4 | 54.5 | 16.4 | 6.2 | 9.2 | 0.3 |
| Average Reading | 114.1 | 36.825 | 7.85 | 10 | 0.55 |

5.3.9 Noise

A preliminary reconnaissance survey was undertaken to identify the major noise generating sources along the project road. The noise monitoring at five locations considering all categories like commercial, residential and silence zone has been carried out. The monitoring result (Table 5.11) has been analysed with Ambient Noise Standard, CPCB (Table 5.10).

Table 5.10: National Ambient Noise Level Standards

| Area Code | Category | Limits in Decibels (dB A) | |
|-----------|---------------|---------------------------|------------|
| | | Day Time | Night Time |
| A | Industrial | 75 | 70 |
| B | Commercial | 65 | 55 |
| C | Residential | 55 | 45 |
| D | Silence Zones | 50 | 40 |

Source: Central Pollution Control Board, New Delhi

- Note: (1) **Daytime:** 6 AM to 9 P.M., **Night-time** 9 PM to 6 AM;
 (2) Silence zone is an area up to 100 m around premises as hospitals, educational institutions and courts.

Table 5.11: Ambient Noise Level at Project Area

| Sl.No | Sampling Locations | Leq day (15 hourly) dB (A) | Leq night (9 hourly) dB (A) | Leq day (15 hourly) dB (A) | Leq night (9 hourly) dB (A) |
|-------|--------------------|----------------------------|-----------------------------|----------------------------|-----------------------------|
| 1 | Jagatpur | 49.8 | 42 | 50 | 42.8 |
| 2 | Kendrapara | 47 | 36.7 | 47.6 | 37 |
| 3 | Pattamundai | 42.2 | 39.2 | 43 | 39.6 |
| 4 | Aul Market | 43.5 | 36.7 | 43.8 | 37 |
| 5 | Chandbali | 50.7 | 46 | 51 | 46.5 |

Day and night time noise level at all monitored site was noted under permissible limit of CPCB.

5.4 Biological Environment

5.4.1 Forest

As per the report of the Forest Survey of India using remote sensing techniques, the forest cover in the State is 48,855 sq. kms of which 7,073 sq. kms is very dense forest. The moderately dense forest extends over 21,394 sq. kms while open forest is over 20,388 sq. kms. The forest cover in the State constitutes 31.38% of the geographical area. Besides this, there exists tree cover outside the forest over 2.85% of the geographical area of the State. Thus the forest and tree cover in the State is 34.23% of the geographical area.

The project road does not pass through any forest area (Fig 5.9) either reserved forest or protected forest. Plantation along the road sides is observed and this plantation has been notified as protected forest.

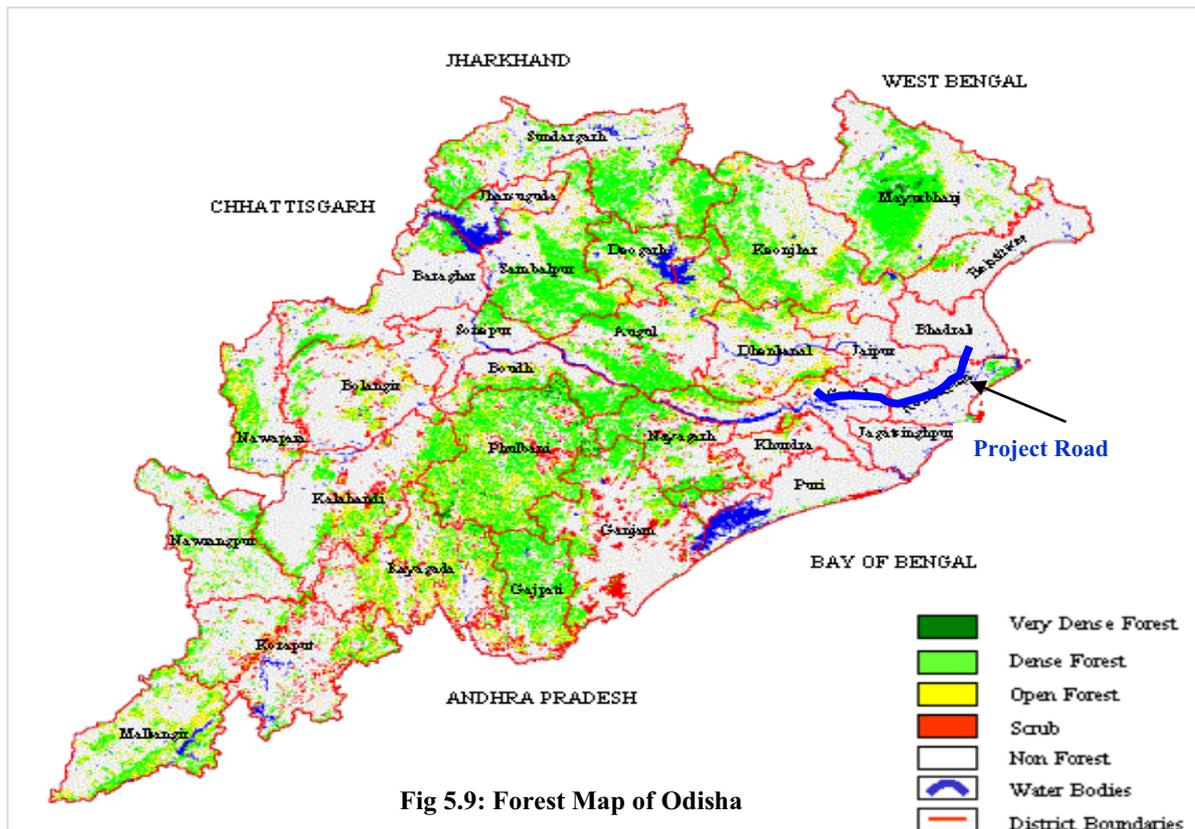


Fig 5.9: Forest Map of Odisha

Source: Forest Department, Govt. of Odisha

5.4.2 Protected Natural Habitat and Wildlife Movement

Bhitarkanika wildlife sanctuary is situated within 10 km radius from the project road. As per Wildlife (Protection) Act 1972, necessary Wildlife Clearance needs to be obtained for the project road from Wildlife Department.

No specific wildlife movement zone confined to land on either sides of water body and rivers have been noted during surveys, consultation with people and wildlife departments.

5.4.3 Flora

The project road has green tunnel for a total 15 km road length. The widening of road will involve cutting of 7568 trees that are coming within Corridor of Impact (**Details in Annexure 5.5**). During the pre-construction phase many of the huge and aged (more than 120 year old) trees standing there as towers to prevent wind damage in its leeward side will be lost along with the very shelter belt character of these trees, after the avenues are cut and removed for the widening.

Major tree species under avenue plantation in the road corridor includes *Anogeissus latifolia*, *Azadirachta indica* (Neem), *Eucalyptus*, *Acacia*, *Simul*, *White Simul*, *Patuli*, *Kuruma*, *Tentuli*, *Mango*, *Pepal* (*Ficus religiosa*), *Banyan* (*F.bengalensis*), *Kadamba*, *Ficus glumerata*, *F.infectoria*, *Palmyra palms*, *Date palms*, *Strebulus asper*, *Acacia nilotica*, *A.leucophlea*, *Buchanania lanjan* (Chiranji), *Butea monosperma* (Palas), *Careya arborea*, *Cassia fistula*, *Dalbergia Latifolia* (Sishu), *Diospyros melanoxylon* (Kendu), *Madhuca Indica* (Mohua),

Phyllanthus emblica (Amla), *Scleichera oleosa* (Kusum), *Samecarpus anacardium* (Bhalia), *Semaruba glauca*, *Shorea robusta* (Sal), *Syzygium Cummini* (Jamum), *Tectona grandis*, *Terminalia arjuna* (Arjun), *Terminalia belerica* (Bahera), *Terminalia chebula*, *Wrightia arborea*, *Zizyphus oenoplia*, *albizia lebecs*, *cassia siamia*, *samania saman*.

Similarly, important medicinal plants found in the project along the road are chandan (*santalum album*), bija (*pterocarpus marsupium*), rohini (*ssoyimida fabrifuga*), fanfana, (*oroxylon indicem*), kamalagudi (*malotus philipinansis*), patuli (*pterospermum swave*), chadeigodi (*vitex peduncularis*), bidanga (*embelia ribes*), modafal (*helioteres isora*), banapipali (*piper longum*), karpura haldi (*curcuma aromatica*), iswari (*aristolochea indica*), bridha daruka (*aargeyreia durvula*) etc.

An exhaustive list of vegetation along the corridor including the forest and non-forest land has been providing in Table 5.12.

Table 5.12: List of Flora Species

| Sl. No. | Local Name | Scientific Name |
|---------|---------------|---|
| 1 | Banyan | <i>Ficus bengalensis</i> |
| 2 | Aswath | <i>Ficus religiosa</i> |
| 3 | Udumbara | <i>Ficus glumerata</i> |
| 4 | Jari | <i>Ficus infectoria</i> |
| 5 | Tentuli | <i>Tamarindus indica</i> |
| 6 | Karanja | <i>Pongamea pinnata</i> |
| 7 | Dharunja | <i>Holoptelia integrifolia</i> |
| 8 | Bada Chakunda | <i>Samania saman</i> |
| 9 | Chakundi | <i>Cassia siamea</i> |
| 10 | Sirisa | <i>Albizia lebeck</i> |
| 11 | Simul | <i>Ceiba patendra</i> |
| 12 | Fasi | <i>Annogeissus acuminata</i> |
| 13 | Amba | <i>Mangifera indica</i> |
| 14 | Limba | <i>Azadirachta indica</i> |
| 15 | Mahala | <i>Ailanthus excelcassa</i> |
| 16 | Mahula | <i>Madhuca latifolia</i> |
| 17 | Kochila | <i>Strychnos nuxvomica</i> |
| 18 | Ritha | <i>Sapindus emarginatus</i> |
| 19 | Akash malli | <i>Melingtonea hortensis</i> |
| 20 | Jamun | <i>Cizygium cumini</i> |
| 21 | Kendu | <i>Diospiros montana</i> |
| 22 | Sisoo | <i>Dalbergia sisoo</i> |
| 23 | Chhatiana | <i>Alstonea scholaris</i> |
| 24 | Arjuna | <i>Terminalia arjuna</i> |
| 25 | Harida | <i>T.chebula</i> |
| 26 | Bahada | <i>T.bellerica</i> |
| 27 | Ainala | <i>Phyllanthus emblica/ Emblica officinalis</i> |
| 28 | Harasingar | <i>Nyctanthes arbortristis</i> |
| 29 | Sahada | <i>Strebulus asper</i> |
| 30 | Ankula | <i>Alangium hexapetalum</i> |
| 31 | Baula | <i>Mymosops elengi</i> |
| 32 | Champa | <i>Michelia champaca</i> |
| 33 | Katha champa | <i>Plumeria alba /P.rubra</i> |
| 34 | Sunari | <i>Cassia fistula</i> |
| 35 | Atundi | <i>Combretum decandrum</i> |
| 36 | Baigaba | <i>Jatropha curcas /J.gossypifolia</i> |
| 37 | Palasa | <i>Beutia frondosa</i> |
| 38 | Gambhari | <i>Gmelina arborea</i> |

| Sl. No. | Local Name | Scientific Name |
|---------|------------------------------|---------------------------------------|
| 39 | Gohira | <i>Acacia leocophloea</i> |
| 40 | Babul | <i>Acacia nilotica</i> |
| 41 | Bela | <i>Aegle marmelus</i> |
| 42 | Puruni (Ghodapuruni) | <i>Boerhovia diffusa</i> |
| 43 | Apamarga | <i>Achyranthes aspera</i> |
| 44 | Bhui neem | <i>Andrographis paniculata</i> |
| 45 | Ayyapan | <i>Aristolochia indica</i> |
| 46 | Tihudi | <i>Operculina turpethum</i> |
| 47 | Sugandhi | <i>Hemidesmus indicus</i> |
| 48 | Arka | <i>Calatropis gigantia</i> |
| 49 | Gunja / Kaincha | <i>Abrus precatorius</i> |
| 50 | Pasaruni | <i>Pederia foetida</i> |
| 51 | Mersunga | <i>Muraya koengii</i> |
| 52 | Banatulasi | <i>Ocimum gratissimum</i> |
| 53 | Kateri/Chakadabheji | <i>Solanum xanthocarpum</i> |
| 54 | Bala | <i>Sida cordifolia</i> |
| 55 | Dengabheji | <i>Soalanum torvum</i> |
| 56 | Fanafana | <i>Oroxylon indicum</i> |
| 57 | Guduchi | <i>Tinospora cordifolia</i> |
| 58 | Salaparni | <i>Desmodium gangeticum</i> |
| 59 | Bankulthi | <i>Tephrosia purpuria</i> |
| 60 | Arrow root | <i>Curcuma aungostifolia</i> |
| 61 | Daskerenta | <i>Barleria cristata</i> |
| 62 | Dahidahika | <i>Cocculus hirsutus</i> |
| 63 | Satabari | <i>Asparagus racemosus</i> |
| 64 | Baidanka | <i>Muccuna Pruriens</i> |
| 65 | Gokshura (Bada) | <i>Pedaliium murex</i> |
| 66 | Sangokshura | <i>Tribulus terrestris</i> |
| 67 | Patalgaruda | <i>Rauwolfia serpentina</i> |
| 68 | Dhataki | <i>Wood forida fruticosa</i> |
| 69 | Keruan | <i>Holarhena antidysenterica</i> |
| 70 | Baruna | <i>Creteva religiosa /C . nurvula</i> |
| 71 | Puruni/Atikapudi | <i>Trianthema portulacastrum</i> |
| 72 | Narguni | <i>Atlantia manophylla</i> |
| 73 | Nagarmatha | <i>Cyperus rotundus</i> |
| 74 | Krushnaparni | <i>Uraria picta</i> |
| 75 | Sankarjata | <i>Urenia lagopoides</i> |
| 76 | Mendi or Anantamula | <i>Tylophora indica</i> |
| 77 | Keu | <i>Costus speciosus</i> |
| 78 | Gaigobra / Langalangalia | <i>Gloriosa superba</i> |
| 79 | Sankhapuspi | <i>Clitorea ternatia</i> |
| 80 | Bhuin amla | <i>Phyllanthus fraternus</i> |
| 81 | Atibala | <i>Abutilon indicum</i> |
| 82 | Bala | <i>Sida cordifolia</i> |
| 83 | Chiller | <i>Caesal pinea sappan</i> |
| 84 | Gillo | <i>Caesalpinea cristata</i> |
| 85 | Bajradanti | <i>Barbaria crista</i> |
| 86 | Bakuchi | <i>Psoralia corrylifolia</i> |
| 87 | Sweta sorisha | <i>Cleome gynandraCleome viscosa</i> |
| 88 | Sweta tila | <i>Digitalis purpurea</i> |
| 89 | Pasanabhedi (Paunsa paunsia) | <i>Erva lanata</i> |
| 90 | Keshdura or Bhringaraj | <i>Eclipta prostrata /E. erecta</i> |
| 91 | Keshranjani | <i>Wadellia chinensis</i> |
| 92 | Bana alu | <i>Dioscorea digitalis</i> |
| 93 | Mundi | <i>Speranthus indicus</i> |
| 94 | Pokasunga | <i>Baliospermum montanum</i> |
| 95 | Pasanabhedi | <i>Collius frescohli</i> |

| Sl. No. | Local Name | Scientific Name |
|---------|-----------------------|---|
| 96 | Bidarikand | <i>Pruraria tuberosa</i> |
| 97 | Gudmari | <i>Gymnema silvestre</i> |
| 98 | Bada Pokasunga | <i>Cineraria versicolour / Cineraria maritime</i> |
| 99 | Indramarisha | <i>Acalypha indica</i> |
| 100 | Indrayan | <i>Citrallus colocynthis</i> |
| 101 | Uturudi | <i>Pergularia damea</i> |
| 102 | Sivalingi | <i>Diplocyclos palmatus</i> |
| 103 | Asadhua | <i>Caparis horrida</i> |
| 104 | Guduchi | <i>Tinospora cordifolia</i> |
| 105 | Baigoba | <i>Jatropha curcas</i> |
| 106 | Nalibaigoba | <i>Jatropha gossypifolia</i> |
| 107 | Gandhana | <i>Premna tomentosa</i> |
| 108 | Modafal | <i>Helectris isora</i> |
| 109 | Tundapoda | <i>Todalia asiatica</i> |
| 110 | Sunsunia | <i>Oxalis Corniculata</i> |
| 111 | Pita saga | <i>Malugo pentahyla</i> |
| 112 | Lahanga | <i>Cellosia arjenta</i> |
| 113 | Monsa rohini | <i>Soymida febrifuga</i> |
| 114 | Basanga | <i>Justacia adhatoda / Adhatoda vasica</i> |
| 115 | Bramhi | <i>Bacopa monieri</i> |
| 116 | Thalkudi | <i>Centella asiatica</i> |
| 117 | Kani khanda | <i>Ipomea haderacia / Ipomea nil</i> |
| 118 | Palm | <i>Borassus flabelifer</i> |
| 119 | Cocoanut | <i>Cocous nucifera</i> |
| 120 | Lotus | <i>Nilumbo nauchali</i> |
| 121 | Water lily | <i>Nilumbo nucifera</i> |
| 122 | Singada | <i>Trappa bispinosa</i> |
| 123 | Blue lotus(Pundarika) | <i>Euryle ferox</i> |
| 124 | Gandhi(Lankamarichia) | <i>Croton bonpalandianus</i> |

5.4.4 Fauna

Faun species like hyaena, jackles, fox etc have been spotted in vicinity of project during course of field investigations. Various types of fauna species of reptiles, amphibian and aves have also been observed in the project area are listed in Table 5.13.

Table 5.13: List of Fauna Species

| Sl. No. | Names | Scientific name |
|-----------------|----------------|---------------------------------------|
| Mammalia | | |
| 1 | Monkey | <i>Rheses macaque / Macaca mulata</i> |
| 2 | Hanuman | <i>Presbytis entellus</i> |
| 3 | Pangoline | <i>Manis crassicaudata</i> |
| 4 | Mongoose | <i>Herpestes edwardsii</i> |
| 5 | Small mongoose | <i>Herpesters javanicus</i> |
| 6 | Bat | <i>Cynopterus sphinum</i> |
| 7 | Jackle | <i>Canis aureus</i> |
| 8 | Hyaena | <i>Hyaena hyaena</i> |
| 9 | Small squirrel | <i>Funambulus penanti</i> |
| 10 | Fox | <i>Vulpes bengalensis</i> |
| 11 | Otter | <i>Lutra perspicillata</i> |
| 12 | Civet | <i>Viverricula indica</i> |
| 13 | Hare | <i>Lepus nigricollis</i> |
| 14 | Rat(Wild) | <i>Ratus ratus</i> |
| Amphibia | | |
| 15 | Toad | <i>Bufo melanostictus</i> |

| Sl. No. | Names | Scientific name |
|-----------------|---------------------------|----------------------------------|
| 16 | Bull frog | <i>Rana tigrina</i> |
| Reptilia | | |
| 17 | Chameleon | <i>Chameleon calcuratus</i> |
| 18 | Calotis | <i>Calotis vercicolor</i> |
| 19 | Mabuya | <i>Mabuya bibro</i> |
| 20 | Lizard | <i>Hemidactylus flaviviridis</i> |
| 21 | Varanus | <i>Varanus salvator</i> |
| 22 | Cobra | <i>Naja naja naja</i> |
| 23 | Keutia (Naga) | <i>Naja naja Kaouthia</i> |
| 24 | Krait | <i>Bungarus caeruleus</i> |
| 25 | Green snake | <i>Dryophis nasutus</i> |
| 26 | Rat snake | <i>Ptyas mucosus</i> |
| 27 | Water snake | <i>Natrix piscator</i> |
| 28 | Blind snake | <i>Typhlops brahminis</i> |
| 29 | Sand Boa | <i>Eryx stolata</i> |
| 30 | Indian python | <i>Python molurus</i> |
| 31 | Saw scaled viper | <i>Echis carinatus</i> |
| 32 | Russell's viper | <i>Vipera russelli russelli</i> |
| Aves | | |
| 33 | Snake bird | <i>Anhinga rufa</i> |
| 34 | Pond Heron | <i>Ardela grayii</i> |
| 35 | Pea fowl | <i>Pavo cristatus</i> |
| 36 | Brown dove | <i>Streptopilia senegalensis</i> |
| 37 | Parakeet | <i>Psittacual eupatria</i> |
| 38 | Crow pheasant | <i>Centopus sinensis</i> |
| 39 | King fisher | <i>Alcedo atthis</i> |
| 40 | Wood pecker | <i>Dinopium bengalense</i> |
| 41 | Myna | <i>Acridotheres tristis</i> |
| 42 | Bulbul | <i>Pycnonotus cafer</i> |
| 43 | Sparrow | <i>Passer domesticus</i> |
| 44 | Crow | <i>Carvus spelendens</i> |
| 45 | Grey Harnbill | <i>Tockus birostris</i> |
| 46 | Pied hornbill | <i>Anthracoceros coronatus</i> |
| 47 | White belliled drongo | <i>Discrurus caeruleus</i> |
| 48 | Sun bird | <i>Nectarinia asiatica</i> |
| 49 | Little egret | <i>Egretta garzetta</i> |
| 50 | Median egret | <i>Mesophoryx intermedia</i> |
| 51 | Cattle egret | <i>Bubulcus ibis</i> |
| 52 | Large egret | <i>Casmerodius albus</i> |
| 53 | Cormorants | <i>Phbalacroco raxniger</i> |
| 54 | Indian roller or Blue Jay | <i>Coracias bengalensis</i> |

Based on secondary data i.e. Wildlife (Protection) Act, 1972, IUCN report and during primary data collection i.e. public consultation and observations, it has been found that no rare or endangered species of flora and fauna exist in project area

5.5 Socio Economic Environment

5.5.1 Demography

The population of the state as enumerated in 2001 census is about 3.68 crores of which, about 1.87 crores are males and about 1.81 crores are females. The populations are spread over an area of 155707 sq.km and are distributed in about 7.7 lakhs households. The population density of the State is 236 and the average size of household is 4.8. The sex ratio of the population (females per thousand males) is 972 and that of 0-6 years is 953. The population growth rate during the decade 1991-2001 is 1.63 averaged annually.

The state has a literacy rate of 63.1 percent. The male literacy rate is 75.35 percent but female literacy is 50.51 percent. The work participation rate is 38.79 percent. Of the total workforce 26 percent are main workers and 12.7 percent are marginal workers. Non workers constitute 61.21 percent. Safe drinking water is available in 98.27 percent of villages. Electricity is available in 65.32 percent of villages of which only 9.52 percent of villages use it for agriculture purposes.

5.5.2 Industries

Till 1950's, Orissa did not have any industry worth the name except for a few sawmills and some ice factories near Cuttack. Exploitation of its natural resources began in the 1950's with the construction of Hirakud Dam and Rourkela Steel Plant. The progress of development was slow during the first three Plan Periods. Beginning from the 1970s, more dams, mines and industries were setup and use of mineral and other natural resources started at a faster rate. Formulation of new Industrial Policy in 2001 and higher emphasis on industrialization by elected Government, Orissa has witnessed a huge influx of corporate giants to set up Industries in the State.

Along the project road there are many industries varying from Rice mills, fish processing, milk and milk products, beverages, vegetable and edible oil, soak and chemical, ferrochrome etc.

5.5.3 Archeological Monuments and Tourist Places

No archaeological sites are so far reported to be located within project area of the road corridor. Only tourist places are located, the details of which are presented in Table 5.15.

Table 5.15: Places of Tourist interest in Project Districts

| Districts | Tourist Spot |
|------------|---|
| Bhadrak | Aredi - Akhandalamani Temple, Bhadrakali Temple, Chandbali, Dhamnagar, Dhamra, Iswarpur, Guamala Nuasasana, |
| Cuttack | Anshupa, Charchika Temple Banki, Bhattarika, Chuduar, Barabati Fort, Dhableswar, Lalitgiri, Nemala, Nialimadhaba, Naraj, Kakudiapada, Paramahansa, Satkosia Gorge, Singhanatha, |
| Kendrapada | Bhitarkanika, Aul, Kendrapada, Tamala sasan, Rajnagar, Gahiramatha, Kendujhar, Badaghagara, Kosaleswara, Ghatagaon, Gonasika, Gundicha ghai, Hadagarh, Handibhanga, Kanjipani, Khandadhar, Murgamadhaba, Podasingidi, Sanaghagra, Saraikesarikunda, Sitabinji |

5.5.4 Sensitive Receptors (schools, colleges, health centers, hospitals)

Educational Institutes

Along the project road, there are many schools, which are located close to the project road. Chainage wise location details of schools are presented in Table 5.16. Most of these are located close to the project road, therefore, road safety and noise control measures near school are important issues to be taken care during design of the project road.

Table 5.16: List of Educational Institutes (schools/colleges)

| Sl No. | Side (L/R) | Chainage | District | Revenue Village |
|--------|------------|----------|----------|-----------------|
| 1 | Left | 3-4 | Cuttack | Gujarpur |

| | | | | |
|----|-------|---------|------------|-----------------|
| 2 | Left | 11-12 | Cuttack | Bhatapada |
| 3 | Left | 36-37 | Kendrapara | Bhanagaon |
| 4 | Left | 44-45 | Kendrapara | Bhagabatpur |
| 5 | Left | 48-49 | Kendrapara | Kasati |
| 6 | Left | 58-59 | Kendrapara | Baro |
| 7 | Left | 59-60 | Kendrapara | Baro |
| 8 | Right | 62-63 | Kendrapara | Gangapada |
| 9 | Right | 75-76 | Kendrapara | Bilikan |
| 10 | Left | 79-80 | Kendrapara | Chandigadi |
| 11 | Right | 82-83 | Kendrapara | Sitaleswar |
| 12 | Right | 82-83 | Kendrapara | Sitaleswar |
| 13 | Left | 91-92 | Kendrapara | Achhutapur |
| 14 | Left | 100-101 | Bhadrak | Chandabali |
| 15 | Right | 55-56 | Kendrapara | Jajanga |
| 16 | Left | 64-65 | Kendrapara | Gogua |
| 17 | Right | 65-66 | Kendrapara | Badamulabasanta |
| 18 | Left | 50-51 | Kendrapara | Guhalsingh |
| 19 | Right | 69-70 | Kendrapara | Belatala |
| 20 | Right | 72-73 | Kendrapara | Kasananta |
| 21 | Right | 95-96 | Kendrapara | Kantapada |

5.5.5 Community Property Resources (hand pumps, wells, religious structures etc.)

Religious Structures

Under the direct and indirect impact zone there is no Site or Property protected under the Archeological Survey of India and the State Archaeological Department. However, there are 165 religious structures located within existing Right of Way all along project road stretch. Chainage wise details of these are presented in Table 5.17 below:

Table 5.17: List of Existing Religious Structure within RoW

| S.No | Side (L/R) | Chainage | District | Revenue Village | Type of Religious Structure |
|------|------------|----------|----------|-----------------|-----------------------------|
| 1 | Right | 1-2 | Cuttack | Jagatpur | Temple |
| 2 | Left | 5-6 | Cuttack | Bhairpur | Tulasi Chaura |
| 3 | Right | 5-6 | Cuttack | Bhairpur | Bishnu Mandir |
| 4 | Right | 6-7 | Cuttack | Mutarifa | Tarini Statue |
| 5 | Right | 6-7 | Cuttack | Mutarifa | Religious Platform |
| 6 | Left | 7-8 | Cuttack | Mutarifa | Chaura |
| 7 | Left | 7-8 | Cuttack | Mutarifa | Temple |
| 8 | Right | 7-8 | Cuttack | Mutarifa | Temple |
| 9 | Right | 8-9 | Cuttack | Bahadulpatna | Temple |
| 10 | Left | 9-10 | Cuttack | Bahadulpatna | Hara Parbati Temple |
| 11 | Left | 10-11 | Cuttack | Singmapur | Akhandalamani Temple |
| 12 | Right | 10-11 | Cuttack | Bahugram | Temple |
| 13 | Right | 10-11 | Cuttack | Bahugram | Shiva Mandira |
| 14 | Right | 11-12 | Cuttack | Bhatapada | Manument of Bull |
| 15 | Right | 11-12 | Cuttack | Singmapur | Manument of Bull |
| 16 | Left | 15-16 | Cuttack | Gangapur | Maa Tarini Mandap |
| 17 | Right | 17-18 | Cuttack | Sapanpur | Chandini |
| 18 | Right | 18-19 | Cuttack | Balisahi | Tarani temple |
| 19 | Left | 18-19 | Cuttack | Balisahi | Santosi Mandhir |
| 20 | Left | 18-19 | Cuttack | Sapanpur | Chaura |
| 21 | Right | 19-20 | Cuttack | Balisahi | Temple |
| 22 | Right | 19-20 | Cuttack | Balisahi | Tulasi Chaurna |
| 23 | Left | 22-23 | Cuttack | Kulia | Kulia Matha |
| 24 | Left | 22-23 | Cuttack | Kulia | Trinath Mandir |
| 25 | Right | 24-25 | Cuttack | Patapur | Durga Mandap |

| S.No | Side (L/R) | Chainage | District | Revenue Village | Type of Religious Structure |
|------|------------|----------|------------|-----------------|--|
| 26 | Left | 24-25 | Cuttack | Patapur | Temple of kamakshya Durga |
| 27 | Right | 24-25 | Cuttack | Patapur | Durga Mandap |
| 28 | Left | 29-30 | Cuttack | Gopapur | Lord Shiva Mandir |
| 29 | Left | 29-30 | Cuttack | Gopapur | Maa Tarini Temple & Kitchen Room of temple |
| 30 | Left | 30-31 | Cuttack | Salipur | Maa Basulie Mandap |
| 31 | Left | 33-34 | Cuttack | Ranipada | Pedestral for Manument of Bull of Lord siva Temple |
| 32 | Right | 33-34 | Cuttack | Julikipara | Shiva Mandira |
| 33 | Right | 34-35 | Cuttack | Banamalipur | Lord Shiva Temple |
| 34 | Right | 34-35 | Cuttack | Kendila | Trinath Temple |
| 35 | Right | 35-36 | Cuttack | Paschimakhanda | Hanuman Temple(Broken) |
| 36 | Left | 36-37 | Kendrapara | Ganeshpur | Hanuman Temple |
| 37 | Right | 37-38 | Kendrapara | Bhanagaon | Tarini Temple |
| 38 | Right | 37-38 | Kendrapara | Bhanagaon | Mahadev Temple |
| 39 | Right | 39-40 | Kendrapara | Chandol | Shiva Mandap |
| 40 | Right | 39-40 | Kendrapara | Chandol | Lord Shiva Temple |
| 41 | Left | 40-41 | Kendrapara | Kesharpur | Salar Matha |
| 42 | Right | 41-42 | Kendrapara | Daliji | Religious Platform |
| 43 | Left | 42-43 | Kendrapara | Daliji | Lord Shiva Temple |
| 44 | Left | 42-43 | Kendrapara | Khamal | Mahadev Temple |
| 45 | Right | 43-44 | Kendrapara | Syamsundarpur | Trinath Mandap |
| 46 | Left | 43-44 | Kendrapara | Syamsundarpur | Trinath Temple |
| 47 | Right | 44-45 | Kendrapara | Bhagabatpur | Thanapati Mandap |
| 48 | Right | 44-45 | Kendrapara | Bhagabatpur | Katekaswar temple |
| 49 | Left | 44-45 | Kendrapara | Bhagabatpur | Mahavir Mandap |
| 50 | Right | 47-48 | Kendrapara | Jamadhara | Arakhat Mahapuris Temple |
| 51 | Left | 58-59 | Kendrapara | Baro | Chaura |
| 52 | Left | 58-59 | Kendrapara | Baro | Laxmi Mandap |
| 53 | Left | 58-59 | Kendrapara | Baro | Siba Temple |
| 54 | Left | 58-59 | Kendrapara | Baro | Sarala Temple |
| 55 | Left | 59-60 | Kendrapara | Baro | Laxmi Narayan Temple Baro |
| 56 | Left | 59-60 | Kendrapara | Baro | Akhandalamani Temple |
| 57 | Right | 61-62 | Kendrapara | Bhairsing | Temple Gate / Two Lion Statue |
| 58 | Left | 62-63 | Kendrapara | Gangapada | Statue Ganakabi Gopala Das |
| 59 | Right | 74-75 | Kendrapara | Patrapur | Hanuman Chabutara |
| 60 | Right | 74-75 | Kendrapara | Patrapur | Chakradhar Baba Samadhi Mandir |
| 61 | Left | 74-75 | Kendrapara | Patrapur | Mahadev Chabutara |
| 62 | Right | 74-75 | Kendrapara | Patrapur | HanumanChabutara with Statue |
| 63 | Right | 77-78 | Kendrapara | Mahasahani | Tarini Chabutara |
| 64 | Left | 77-78 | Kendrapara | Mahasahani | Mahadev Temple |
| 65 | Right | 79-80 | Kendrapara | Chandigadi | Hanuman Temple |
| 66 | Right | 79-80 | Kendrapara | Chandigadi | Malapatana Batagosain Chabutara |
| 67 | Right | 80-81 | Kendrapara | Chandigadi | Religns Platform / Malapatana Grama Devi |
| 68 | Left | 80-81 | Kendrapara | Chandigadi | Tarini Chabutara with Statue |
| 69 | Right | 80-81 | Kendrapara | Chandigadi | Mahadev Temple |
| 70 | Right | 80-81 | Kendrapara | Chandigadi | Hanuman Chabutara with Statue |
| 71 | Left | 81-82 | Kendrapara | Sitaleswar | Mandap |
| 72 | Right | 81-82 | Kendrapara | Sitaleswar | Hanuman Chabutara with Statue |
| 73 | Left | 82-83 | Kendrapara | Balabhadrapur | Mahadev Chabutara |

| S.No | Side (L/R) | Chainage | District | Revenue Village | Type of Religious Structure |
|------|------------|-------------|------------|------------------|------------------------------------|
| 74 | Left | 86-87 | Kendrapara | Kalapahada | Mahadev Temple |
| 75 | Left | 87-88 | Kendrapara | Nagapada | Thakurani Temple |
| 76 | Left | 87-88 | Kendrapara | Nagapada | Hanuman Temple |
| 77 | Right | 87-88 | Kendrapara | Ranipokhori | Common Worship place |
| 78 | Left | 87-88 | Kendrapara | Nagapada | Hanumana Chabutara with Statue |
| 79 | Right | 91-92 | Kendrapara | Achhutapur | Sani Temple |
| 80 | Right | 91-92 | Kendrapara | Achhutapur | Sani Chabutara |
| 81 | Left | 91-92 | Kendrapara | Achhutapur | Brundabati Chaura |
| 82 | Left | 91-92 | Kendrapara | Achhutapur | Tarini Chabutara |
| 83 | Right | 91-92 | Kendrapara | Achhutapur | Tarini Temple |
| 84 | Left | 93-94 | Kendrapara | Ganja | Ghanteswar Mahadev Chabutara |
| 85 | Left | 99.5-100 | Bhadrak | Simulia | Maa Tareni Temple |
| 86 | Left | 100-101 | Bhadrak | Chandabali | Rameswar Temple (R) |
| 87 | Left | 100-101 | Bhadrak | Chandabali | Rameswar Temple (L) |
| 88 | Right | 100-101 | Bhadrak | Chandabali | Tarini Pindi/Hundi (2 Nos.) |
| 89 | Left | 100.85-102 | Bhadrak | Chandabali | Hateswar Temple |
| 90 | Left | 101-102 | Bhadrak | Chandabali | Hargouri/Siba Mandir |
| 91 | Right | 101-102 | Bhadrak | Chandabali | Siba Mandap |
| 92 | Right | 101-102 | Bhadrak | Panchapada | Tarini Mandir |
| 93 | Right | | Bhadrak | Panchapada | Siba Mandir |
| 94 | Left | | Bhadrak | Panchapada | Trisakha mandir |
| 95 | Left | | Bhadrak | Panchapada | Siba Mandir |
| 96 | Right | 102.702-103 | Bhadrak | Panchapada | Tarini Pindi/Mandir |
| 97 | Right | 103-104 | Bhadrak | Kuansar | Bhagabat Tungi |
| 98 | Right | | Bhadrak | Panchapada | Jodanasini Temple gate |
| 99 | Left | 104-105 | Bhadrak | Kuansar | Shib Mandir |
| 100 | Left | 104-105 | Bhadrak | Kuansar | Tulasi Chaura |
| 101 | Right | 104.05-105 | Bhadrak | Kuansar | Tulasi Chaura |
| 102 | Right | | Bhadrak | Panchapada | Radhakrishna Mandir |
| 103 | Left | | Bhadrak | Panchapada | Mahadev Mandir |
| 104 | Left | 104.35-105 | Bhadrak | Kuansar | Jagannath Mandir |
| 105 | Left | 55-56 | Kendrapara | Jajanga | Laxmi Mandap |
| 106 | Left | 55-56 | Kendrapara | Jajanga | Gajalaxmi |
| 107 | Right | 55-56 | Kendrapara | Jajanga | Trinath Mandir |
| 108 | Right | 56-57 | Kendrapara | Khamarkespur | Manibaba Temple |
| 109 | Left | 56-57 | Kendrapara | Khamarkespur | Tarini Mahadev Mandir |
| 110 | Left | 56-57 | Kendrapara | Khamarkespur | Dakhina Kali Mandir |
| 111 | Left | 56-57 | Kendrapara | Khamarkespur | Kitchen of Maa Dakhina Kali Mandir |
| 112 | Left | 57-58 | Kendrapara | Bhamaradiapatna | Haraparabati Mandap |
| 113 | Left | 63-64 | Kendrapara | Gangapada | Mahabir Mandap |
| 114 | Left | 63-64 | Kendrapara | Gangapada | Gaja Laxmi Temple |
| 115 | Right | 63-64 | Kendrapara | Gangapada | Akhandalamani Temple |
| 116 | Left | 63-64 | Kendrapara | Gangapada | Jaya Guru Ashram |
| 117 | Left | 63-64 | Kendrapara | Gangapada | Laxmi Narayan Puja Mandap |
| 118 | Right | 63-64 | Kendrapara | Gogua | Siba Mandir |
| 119 | Right | 64-65 | Kendrapara | Sanamula Basanta | Hanuman Statue |
| 120 | Right | 64-65 | Kendrapara | Sanamula Basanta | Maa Mangala Temple |
| 121 | Left | 64-65 | Kendrapara | Gogua | Chaura |
| 122 | Left | 64-65 | Kendrapara | Gogua | Bhagabat Tungi |
| 123 | Left | 64-65 | Kendrapara | Gogua | Chaura / Laxmi Narayan Puja Mandap |
| 124 | Right | 64-65 | Kendrapara | Gogua | Mahadev Temple Mukasala |
| 125 | Left | 65-66 | Kendrapara | Badamulabasanta | Tulashi Chaura |
| 126 | Left | 65-66 | Kendrapara | Badamulabasanta | Akhandalamani Temple |

| S.No | Side (L/R) | Chainage | District | Revenue Village | Type of Religious Structure |
|------|------------|----------|------------|-----------------|--|
| 127 | Left | 65-66 | Kendrapara | Badamulabasanta | Tarini Temple Mukhasala |
| 128 | Right | 65-66 | Kendrapara | Badamulabasanta | Hanuman Mandap |
| 129 | Left | 65-66 | Kendrapara | Badamulabasanta | Laxmi Narayan Mandir |
| 130 | Left | 65-66 | Kendrapara | Badamulabasanta | Dhabaleswar Mahadev Mandir, Mukhasala |
| 131 | Right | 65-66 | Kendrapara | Badamulabasanta | Mangala Temple |
| 132 | Right | 65-66 | Kendrapara | Badamulabasanta | Chaura |
| 133 | Left | 49-50 | Kendrapara | Kasati | Laxmi Mandap |
| 134 | Right | 49-50 | Kendrapara | Kasati | Satasanga Kendra |
| 135 | Right | 50-51 | Kendrapara | Bhamaradiapatna | Mani Manap |
| 136 | Right | 50-51 | Kendrapara | Guhalsingh | Laxmi Mandap |
| 137 | Right | 50-51 | Kendrapara | Bhamaradiapatna | Mani Mandop / College Square Tarini Temple |
| 138 | Right | 50-51 | Kendrapara | Guhalsingh | Laxmi Mandap |
| 139 | Right | 50-51 | Kendrapara | Guhalsingh | Laxmi Mandap |
| 140 | Left | 51-52 | Kendrapara | Gulnagar | Mahalaxmi Puja Committee |
| 141 | Left | 51-52 | Kendrapara | Gulnagar | Mani Temple |
| 142 | Left | 51-52 | Kendrapara | Bhamaradiapatna | Gaja Laxmi Puja Committee / Tinimuhani Laxmi Mandap |
| 143 | Left | 51-52 | Kendrapara | Bhamaradiapatna | Laxmi Mandap |
| 144 | Left | 52-53 | Kendrapara | Gulnagar | Trinath Mandir |
| 145 | Right | 53-54 | Kendrapara | Garapur | Mani Mandap |
| 146 | Left | 54-55 | Kendrapara | Kapaleswar | Hanuman Temple |
| 147 | Right | 54-55 | Kendrapara | Kapaleswar | Maa Magala Temple |
| 148 | Right | 54-55 | Kendrapara | Haladi Diha | Haladi Diha Thakurani Gate / Haladi Diha Chhak Elephant Lion Staatue |
| 149 | Right | 68-69 | Kendrapara | Belatala | Siba Temple |
| 150 | Right | 68-69 | Kendrapara | Belatala | Maa Tarini Temple |
| 151 | Right | 68-69 | Kendrapara | Belatala | Siba Temple |
| 152 | Right | 68-69 | Kendrapara | Belatala | Maa Tarini Temple |
| 153 | Left | 72-73 | Kendrapara | Kasananta | Jagannath Mandap |
| 154 | Left | 72-73 | Kendrapara | Kasananta | Durga Mandap |
| 155 | Right | 72-73 | Kendrapara | Kasananta | Maa Tarini Tungi |
| 156 | Left | 84-85 | Kendrapara | Niala | Mahadev Temple |
| 157 | Right | 84-85 | Kendrapara | Aul | Choura |
| 158 | Left | 85-86 | Kendrapara | Demala | Mahadev Temple |
| 159 | Right | 85-86 | Kendrapara | Demala | Hanuman Chabutara with Statue |
| 160 | Left | 85-86 | Kendrapara | Demala | Puja Mandap / Dasahara Mandap |
| 161 | Right | 95-96 | Kendrapara | Kantapada | Mahadev Temple with Bull |
| 162 | Left | 95-96 | Kendrapara | Arsha | Arsha Mahadev Temple |
| 163 | Right | 95-96 | Kendrapara | Arsha | Mahadev Temple |
| 164 | Right | 97-98 | Kendrapara | Ostia | Temple Under Constration |
| 165 | Right | 97-98 | Kendrapara | Ostia | Hanuman Temple |

CHAPTER 6

CONSULTATION WITH STAKEHOLDERS

6.1 General

Stakeholder's consultations and participation have been viewed as a continuous two way process, involving, promoting of public understanding of the processes and mechanisms through which developmental problems, needs are investigated and resolved. The stakeholder consultation, as an integral part of environmental impact process throughout the project preparation stage not only minimizes the risks and unwanted political propaganda against the project but also abridges the gap between the community and the project formulators, which leads to timely completion of the project and making the project people friendly.

6.2 Definition of Stakeholder

Stakeholder consultation is a two way process, which involves the interaction of various stakeholders and the project proponent. It is highly desirable for all key stakeholders to arrive at a consensus on sensitive features, impacts and remedial actions.

6.3 Types/ Categories of Stakeholders

Based on their role towards the project, stakeholders have been categorized into following;

(i) Owners or Project Proponent

This is related to the stakeholder who risks their own money in a venture. Whilst they will get a return on their investment, usually in the form of a dividend they have a vested interest in seeing the Organization being successful, to not only guarantee their dividend but also to ensure it grows.

(ii) Government Agencies

Some government departments which will be affected positive or negative or both by proposed road are required to give their inputs to make project successful. These government agencies are Revenue department, Forest department, Electricity department, Agriculture department, Panchaytiraj department, Education department etc.

(iii) Communities

This is very important stakeholder category i.e. PAFs/PAP who are being affected directly through land acquisition or their structures removal full or partial. Persons other than PAF/PA but residing in same location are also significant to provide their opinions/ suggestions in terms of project design.

(iv) Non-Governmental Organizations (NGOs)

The non-government organizations which are working in project affected area can be considered as stakeholder.

6.4 Process of Stakeholder consultation

Public consultation is an important method of involving various stakeholders particularly, local community with reference to the proposed development initiatives. It provides a platform to participants to express their views, concerns and apprehensions that might affect them positively or negatively. Through participation and consultation stakeholders influence development initiatives, and decision making process. The effectiveness of participation and consultation is directly related to the degree of involvement by the likely project affected persons and the local community and integration of outcome of consultations wherever feasible in the proposed development initiatives. Detailed planning is required to ensure that likely project affected persons, local community, interested groups, non-governmental

organizations, civil society organizations; local government, line departments, etc. are consulted regularly, frequently and purposefully during different stages of the project including project preparation.

Type of Consultations

Various types of Public Consultation have been carried out during the project preparation stage which includes

- individual consultations,
- public meeting,
- focus group discussion
- consultation with stake holder institution at the Project Level
- consultation with stake holders institutions at District Level

6.5 Public Consultations Strategy

The preparation of OSRP ensures involvement of various stakeholders and people in project planning, implementation and operation. The consultations under the project were conducted during Feasibility Stage and Detailed Project Preparation stage, so that people aspiration of people is assessed for collective and mutually agreed project decisions. The consultation mechanism has been designed in such a manner that every stratum of society and concerned administration is consulted at different spatial hierarchy.

6.5.1 District Level consultation

District level consultation witnesses active involvement of elected representatives (MP, MLA, President ZilaParishad, Municipality chairman, Block chairman, Vyaparisangh, PanchayatPradhan, Women elected member and others), Revenue Official, Forest Official, officials of line department, media persons, common people and other stakeholders such as lawyers, business man who can enhance the quality of planning because of their past working experiences in the region, including project affected persons. The consultation focused on technical, environmental and social aspects of the project. Community development component was major attraction of discussion.

The district level consultations were held in all districts namely Bhadrak, Cuttack and Kendrapada, through which the project road is passing. Dates of District level Meeting was advertised in local newspapers and consultations were conducted between 2nd– 26thDecember 2006. Outcome of these meetings has received due attention by electronic visual media and print media. The Table 6.1 summarizes date and venue of District level Consultations.

Table 6.1: Date and Venue of District Level Meeting

| Sl. No. | Name of the District | Date of Meeting | Venue | Important Participants |
|----------------|-----------------------------|------------------------|-------------------------|---|
| 1 | Bhadrak | 8-12-2006 | DRDA Conference Hall | MP, MLA, Chairman, Zillaparishad and, Panchayat president, Vyaparisangh and District Officials, media persons |
| 2 | Cuttack | 23-12-2006 | DRDA Conference Hall | Officials from Revenue, line department, forest elected representatives and common people, media persons |
| 3 | Kendrapada | 26-12-2006 | DRDA Conference Hall | Officials from Revenue, line department, forest elected representatives and common people, media persons |

Technical team and District Level Consultation Committee formed under the project participated and presented on engineering details, environmental issues and social issues, to understand opinion and preferences of PAPs, elected representatives and people from revenue, forest administration, line departments of the areas and other stakeholders. The consultation goals was also to engage/participation of local administration in the project planning and to understand major bottlenecks in implementation; accordingly to suggest remedial measures for smooth and speedy implementation.

Provisions of the Odisha resettlement and Rehabilitation Policy 2006 have been discussed in detail. Entitlement for the project affected families in present project improvement has been explained and people were requested to comment and give their views about entitlement.

The main issues/component discussed at the District level meeting

- Classification of road under Phase-I/Year-2 roads and road improvement proposal likely to take place in the Districts.
- Plan and profile of the road under improvement proposal and carriageway configuration.
- Pavement design/Overlay composition of proposed improvement
- Alignment proposal, location of realignment, geometric improvement and bypasses in the concerned district.
- Location of road safety measures such as junction improvement, service road etc proposed in the district.
- Improvement/reconstruction proposal of minor bridges.
- Extent and type of land acquisition in the district.
- Characteristics and type of loss of properties in the district.
- Importance of involvement of community in planning
- Highlights of **the Odisha Resettlement and Rehabilitation Policy 2006**
- Entitlement framework proposed in the OSRP
- Major environmental features, issues along the road.
- Tree cutting, loss of community resources etc.
- Status of air quality, water quality areas of soil erosion, hill cutting (if any)
- Provision of mitigation measures proposed
- Proposed environmental enhancement.
- Basic feature of environmental management plan
- Preventing movement of heavy vehicles carrying mined out iron ore on Karanjia – Anandapur (SH-53) corridor for wildlife and Biosphere Reserve (BR) as well as Elephant movement tracks.
- Reducing the carriageway width to minimum requirement to avoid / minimize acquisition of forest land and tree felling from RFs in buffer zone / additional buffer zone of Similipal BR.

6.5.2 Village Level Consultation

At the feasibility stage of project preparation, consultations were held at *Nukkad* level, hamlet level, village level and Panchayat level. The following methodologies have been adopted for carrying out public consultations in this project area:

- (a) Disseminating information about the project and requesting villagers to attend the public consultation meetings;
- (b) Sharing the opinions and preferences of the potential project affected persons;

- (c) Involving the affected persons in decision-making such as proposition of bypasses or realignments, public amenities available and required, availability of community infrastructure in the village etc.
- (d) Information dissemination through Educating PAPs such as Pictorial Methods using board/ Marker. Design of the proposed road explained to the people on the board.

Consultations during project preparation involved agreements on compensation and assistance options, entitlement package, road designs, submergence stretches, tree cutting, congestion options of bypasses and realignment.

6.5.3 Focus Group Discussion

The Census/Survey Team carried with assistance of OWD field engineers, Focused Group Discussions (FGDs) were conducted primarily in settlements with problems of traffic congestion, dense informal/squatter settlement, close junctions and road intersections. During the survey, intensive discussion and consultation meetings were conducted with large number of PAPs in nearly every affected village where in issues related to R&R policy; displacements and other related issues were discussed. Suggestions and comments of PAPs were incorporated in the project road design as well as the policy measures for resettlement management. Public discussions were conducted at important points, where people could assemble in large numbers. Panchayat members were contacted to inform the people. The Team also had informal meetings with village head, *panchayat* and other district level government officials, leaders of local level organization like *Vyapari* (business community) association, truckers, and village women groups.

The survey team also conducted meeting at block level/Tahsil level. The meeting primarily focused on community development initiatives, options of income generation available through government schemes especially in tribal areas and implementation arrangement of land acquisition plan. Land alienation in tribal areas for the development and construction of road was also discussed in detail. The participants were block chairman and other representatives like Sarpanch, Tahasildar, Block Development Officer and others of District Administration.

The findings of District Level Consultation have been documented in **Annexure 6.1**

6.5.4 Consultation Findings

Overall District level meeting was a grand success and cooperation in implementation of the project has been promised from every corner of society including elected representatives irrespective of their affiliation from different ideological background.

Following are major findings of the District level meeting:

- Assistance to Kiosks @ Rs.5000 is very high amount it should be reduced
- Implementation of RAP should be done through RPDAC
- Local level committee should be formed for land acquisition to negotiate with District administration.
- Drainage system should be adequately design to cater the requirement of storm water flow.
- Development of perennial ponds along Chandbali – Jagatpur section should be prioritized.
- Community based Management and planning of storm water drainage system would ensure active community participation.
- Peoples representatives could also be part of implementation and community participation should be ensured through them.
- Mechanism to prevent further influx of the informal dwellers should be transparent
- Establishment of detail compensation procedure for partial acquisition of structures.
- Borrow areas should be converted into pond as component of CD initiatives.
- Community (Women groups) should manage road side plantation as a component of social forestry

- In Jagatpur-Chandbali section along congested settlement carriageway width should be 10 meter so that extra 2-meter could be utilized for motorbike and cycle parking.

6.6 Follow-up Consultations

Odisha State Road Project has experienced considerable implementation issues resulting in low disbursements, primarily due to delays in pre-construction activities and unsatisfactory project/contract management. As a result, the disbursement was suspended and remains suspended for almost more than one year. Subsequently, it was restructured in February 2013 after GOO's shown interest in the project along with substantial compliance to agreed Bank's Actions for lifting suspension. Hence, a project level follow-up consultations were again conducted at 8 locations after giving due notice (**Annexure 6.3**) between 21th- 25th April, 2013 to update issues and finding identified during earlier consultations that were carried out in 2006. The consultations were carried out by OWD engineer and the NGO (M/s CART) hired by OWD responsible for implementation of RAP activities under the project. The details of consultations that were conducted are tabulated in Table 6.2.

Table 6.2: Date and Venue of Project Level Consultation

| Sl. No. | Date of Meeting | Venue | Important Participants |
|---------|-----------------|---------------------------------------|---|
| 1 | 21.04.2013 | Gulnagar High School, Kendrapada | PAP's and residents along project road. |
| 2 | 21.04.2013 | MaaTariniPeeth, Gopapur | |
| 3 | 22.04.2013 | Irrigation Inspection Bungalow, Gogua | |
| 4 | 24.04.2013 | Paga Bazaar Haat, Paga Bazaar | PAP's and residents along project road. |
| 5 | 24.04.2013 | MaaBasuleiPeeth, Padampur | |
| 6 | 24.04.2013 | Gokarneswar Shiv Temple, Kantapada | |
| 7 | 25.04.2013 | MaaSaheswari Temple Complex, Salepur | |
| 8 | 25.04.2013 | Sureswar Temple, Krushnapur | |

6.7 Consultation Findings and Project Proponent Response

Overall people in general and other stakeholders are in favour of the proposed project. Likely project affected persons were also found in favour of the proposed project. However, these people have concerns about the land compensation, valuation of land to be acquired, and restoration of the means of livelihood. People have been able to make meaningful choices during consultations and expressed their opinion, concern and suggestions in a free and frank manner. The findings of Project Level Consultation have been documented in **Annexure 6.2** and the photographs are displayed at **Annexure 6.3**.

The Table 6.3 summarizes the issues that have been addressed under the project through design intervention.

Table 6.3: Consultation Findings and Response of Project Proponent

| Sl.No | Public Comments during Consultation. | Project response |
|---|---|--|
| Gulnagar High School, Kendrapada | | |
| 1 | The road passes through the main Kendrapada township by which the livelihood of around 200 small business persons is going to be lost. Though there | This is beyond the scope of project. However the project will place the demand before the RPDAC through the District Administration for the appropriate redressal of the |

| Sl.No | Public Comments during Consultation. | Project response |
|--------------------------------|--|--|
| | is rehabilitation provision to compensate the issue is in progress, still there will be a major gap in line and length of present business flow because present business entirety will be lost. | issue/suggestions. |
| 2 | Due to road widening the four schools namely Duhuria High School, Duhuria Lower Primary School, Gulnagar High School and Jajang Upper Primary School will be fully affected. | The boundary wall of the school is affected due to proper road improvement and widening. The reconstruction of the boundary wall is included in the project as being taken up through the concerned EE (R&B) Division the approved design in the EMP are being followed. |
| 3 | After road widening the speed of the vehicles will increase which will cause problem to many pedestrian while crossing road and junctions. | The service road along with road delineator is provided along the urban habitation stretch in Kendrapara town. In the other habitation area (16mtr) guardrails and saucer drains are provided along with standard and safety signage. |
| 4 | Due to road widening and embankment height surface runoff and sewage may be stagnated in nearby low areas affecting the entire habitation thereof. | Provided |
| 5 | In road widening many old giant trees are going to be removed. As a result of which the road user will devoid of shade in scorching sun and also there will be increase in vehicular smoke causing air pollution. | As per Govt. Odisha norm, to compensate 10 times of trees to be cut are going to be planted from July 2013 onwards along the public institutions and feeder roads to the project road. |
| 6 | As there will be huge requirement of soil and earth during road construction the contractor may use the soil /earth along the project road which is fertile and suitable for cultivation like jute and ground nut. | The borrow area are well marked for the contractor. The along side of project road will not be allowed for use . |
| MaaTariniPeeth, Gopapur | | |
| 1 | In road widening many trees along road side are going to be removed. The local people were depending upon such trees for many uses. After removal of these trees in road widening there will be huge irreparable gap and imbalance in the local environment. | As per Govt. Odisha norm, to compensate 10 times of trees to be cut are going to be planted from July 2013 onwards along the public institutions and feeder roads to the project road. |
| 2 | The existing water bodies like Nallahs, Streams, water harvesting structures, tanks which are useful in irrigating jute crops, may likely to be affected due to road | Traditional Nayanjoris which are going to be affected due to widening of the road will be restored in the additional areas acquisitioned for the purpose. 1.5 meter width earthen drain |

| Sl.No | Public Comments during Consultation. | Project response |
|---|--|---|
| | widening. | is provided on either side of the road is including in the design. RCC retaining walls are provided to minimize damage to ponds and tanks. Balancing culverts are provided in the entire road package to minimize effect of water logging. CD works are provided at junctions wherever necessary to facilitate continue flow of water along the road side channels. |
| 3 | Due to road widening and embankment height, surface runoff and sewage may be stagnated in nearby low areas affecting the entire habitation thereof. As a result three traditional drainage channels will be obstructed causing water stagnation and flash flood. | CD works are provided at junctions wherever necessary to facilitate continue flow of water along the road side channels. |
| 4 | The road passes through the main market and bywidening the livelihood of about 400 families living upon business in this commercial stretch will be severely affected. | This is beyond the scope of project. However the project will place the demand before the RPDAC through the District Administration for the appropriate redressal of the issue/suggestions. |
| 5 | Due to road widening and embankment height the land over the cremation ground may be acquired partly causing congestion and inconvenience. | As per the social survey carried out recently and verified by NNGO there is no cremation ground affected in the widening of the road. |
| Irrigation Inspection Bunglow, Gogua | | |
| 1 | Villagers from both village GaguaGangapada and nearby villages are crossing the road for farming with their cattle. .Due to widening and strengthening of road accident may occur during crossing of road. | No pedestrian over bridge is provided in the project. However junction development, signage has been provided for smooth road crossing. The bus bays are provided from Ch 61.820 Km to 61.925 Km & 62.820 to 62.955 Km |
| 2 | Due to road widening old trees are removed causing environmental imbalance. | As per Govt. Odisha norm, to compensate 10 times of trees to be cut are going to be planted from july 2013 onwards along the public institutions and feeder roads to the project road. |
| 3 | Due to road widening and embankment height, surface runoff and sewage may be stagnated in nearby low areas affecting the entire habitation thereof. As a result three traditional drainage channels will be obstructed causing water stagnation and flash flood. | CD works are provided at junctions wherever necessary to facilitate continue flow of water along the road side channels. |
| 4 | As there will be huge requirement of soil and earth during road construction the | It has been taken care of in the BID document. |

| Sl.No | Public Comments during Consultation. | Project response |
|--------------------------------------|---|---|
| | contractor may use the soil /earth along the project road which is fertile and suitable for cultivation like jute and ground nut, potato. | |
| 5 | The existing water bodies like Nallahs, Streams, water harvesting structures, tanks which are useful in irrigating crops, may likely to be affected due to road widening. | Traditional Nayanjoris which are going to be affected due to widening of the road will be restored in the additional areas acquisitioned for the purpose. 1.5 meter width earthen drain is provided on either side of the road is including in the design. RCC retaining walls are provided to minimize damage to ponds and tanks. Balancing culverts are provided in the entire road package to minimize effect of water logging. CD works are provided at junctions wherever necessary to facilitate continue flow of water along the road side channels. |
| 6 | After road widening it will be difficult for the children to cross the road to reach Gogua School. | Proper junction development, signages have been provided for smooth road crossing. |
| 7 | The land owners of acquired lands of Gogua and Gangapada have not been paid the compensation yet. | LAO has been moved` to be needful. |
| Paga Bazaar Haat, Paga Bazaar | | |
| 1 | In road widening many old giant trees are going to be removed. As a result of which the local people who were depending upon such trees for firewood generally used in nearby temple and for cremation, will suffer a lot. | As per Govt. Odisha norm, to compensate 10 times of trees to be cut are going to be planted from july 2013 onwards along the public institutions and feeder roads to the project road. |
| 2 | The road passes through the Paga Bazar which is a Haat complex, by which the livelihood of people living upon small business in Haat will be severely affected. Though there is rehabilitation provision to compensate the issue is in progress, still there will be a major gap in line and length of present business flow because presentbusiness entirety will be lost. | This is beyond the scope of project. However the project will place the demand before the RPDAC through the District Administration for the appropriate redressalof the issue/suggestions. |
| 3 | Due to road widening and embankment height surface runoff and sewage may be stagnated in nearby low areas affecting the entire habitation thereof. As a result the traditional drainage channels will be obstructed causing water stagnation and flash flood. | CD works are provided at junctions wherever necessary to facilitate continue flow of water along the road side channels. |

| Sl.No | Public Comments during Consultation. | Project response |
|---|---|--|
| 4 | The statue of legendary odiya person Madhusudan Das, situated near the Paga Bazar may be affected by the road widening, which will hurt the sentiment of thousands of local people. | The statue will be relocated at nearby suitable place under non-religious CPR case. |
| 5 | The present members unanimously opined that the government should acquire the land as per requirement and not beyond that to protect lives and livelihoods of affected inhabitants. | This has been taken care in preparation of design. |
| MaaBasuleiPeeth, Padampur | | |
| 1 | The ChandanPokhari(Tank) belongs to the Goddess and rituals are being performed every year. Acquisition of such tank will affect the performance of rituals etc. Also the Goddess temple area may be acquired. | Retaining wall has been provided to minimize the damage of the water body. |
| 2 | Due to road widening and embankment height surface runoff and sewage may be stagnated in nearby low areas affecting the entire habitation thereof. As a result three traditional drainage channels will be obstructed causing water stagnation and flash flood. | Traditional Nayanjoris which are going to be affected due to widening of the road will be restored in the additional areas acquisitioned for the purpose. 1.5 meter width earthen drain is provided on either side of the road is including in the design. RCC retaining walls are provided to minimize damage to ponds and tanks. Balancing culverts are provided in the entire road package to minimize effect of water logging. |
| 3 | The road passes through the Padmpur main market and bywidening the livelihood of people living upon business in this commercial stretch will be severely affected. | This is beyond the scope of project. However the project will place the demand before the RPDAC through the District Administration for the appropriate redressalof the issue/suggestions. |
| 4 | Due to road widening and embankment height the land over the cremation ground in Bhayarpur and burial ground near Muslim colony, will be acquired causing congestion and inconvenience. | As per the social survey carried out recently and verified by NNGO there is no cremation ground affected in the widening of the road. |
| 5 | Due to road widening and geometry, the present bus stand near MaaBasulei Temple will be affected. | Provided |
| 6 | After road widening it will be difficult for the children to cross the road to reach Padmapur high school. | Proper junction development, signages have been provided for smooth road crossing. |
| Gokarneswar Shiv Temple, Kantapada | | |
| 1 | There are twelve educational institution, | Bye-pass is beyond the scope of this project |

| Sl.No | Public Comments during Consultation. | Project response |
|---|--|--|
| | medical center, five banks, tehsil office, block office, police station, post office, veterinary center, paddy procurement center, revenue inspector office, are situated and daily about 10000 people trespass to these institutions. For this from Ganja Ghat to Ostia, there will be a lot of road accidents. | as it does not satisfy the economic feasibility of the project. |
| 2 | On Kantapada Bazar about one lakh people of nearby panchayats are depending for commercial purposes. Hence chances of road accidents are more. | As it is 2 lane road the provision of over bridge has not been made in the project. However proper junction development, signage, saucer drain guardrail have been provided for smooth road crossing. |
| 3 | In road widening many trees which are carrying the heritage value of RajKanika and Bhitarkanika are going to be removed.. | As per Govt. Odisha norm, to compensate 10 times of trees to be cut are going to be planted from July 2013 onwards along the public institutions and feeder roads to the project road. |
| 4 | Due to road widening and embankment height surface runoff and sewage may be stagnated in nearby low areas affecting the entire habitation thereof. As a result three traditional drainage channels will be obstructed causing water stagnation and flash flood. | Traditional Nayanjoris which are going to be affected due to widening of the road will be restored in the additional areas acquired for the purpose. 1.5 meter width earthen drain is provided on either side of the road including in the design. RCC retaining walls are provided to minimize damage to ponds and tanks. Balancing culverts are provided in the entire road package to minimize effect of water logging. |
| MaaSahaswari Temple Complex, Salepur | | |
| 1 | In road widening many old giant trees are going to be removed. The local people were depending upon such trees for many uses. After removal of these trees in road widening there will be a huge irreparable gap and imbalance in the local environment. | . As per Govt. Odisha norm, to compensate 10 times of trees to be cut are going to be planted from July 2013 onwards along the public institutions and feeder roads to the project road. |
| 2 | In Balisahi Gram Panchayat three canals are irrigating the nearby cultivated fields and due to road widening these canals may be filled up affecting irrigation. | The width for water way in the canal will be protected by provided structural measure in the bank adjoining the road |
| 3 | The road passes through the Salepur main market which is business hub, by widening the livelihood of people living upon business in this commercial stretch will be severely affected. Though there is rehabilitation provision to compensate the issue, still there will be a major gap. | This is beyond the scope of project. However the project will place the demand before the RPDAC through the District Administration for the appropriate redressal of the issue/suggestions. |

| Sl.No | Public Comments during Consultation. | Project response |
|------------------------------------|---|---|
| 4 | Due to road widening and embankment height surface runoff and sewage may be stagnated in Salepur Market areas affecting the entire habitation thereof. | Saucer drain with proper longitudinal slope has been provided. |
| 5 | In the stretch of road which passes through the Salepur township, many important institutions like Schools, Madicals, Colleges, Vetrinary office, Sub register office, and Treasury office are situated in both side of the road necessitating frequent road crossing by the people. By road widening there will be great hindrance and hamper the road safety. | As it is 2 lane road the provision of pedestrian over pass has not been made in the project. However proper junction development, signage, saucer drain guardrail have been provided for smooth road crossing. |
| Sureswar Temple, Krushnapur | | |
| 1 | There may be improper connection from project road to villages like Krushnapur, Kakharudiha, Kuansar. | Junction development including smooth approach has been provided. |
| 2 | Due to road widening and embankment height surface runoff and flood water maynot be properly flushed away creating flood situation. | In these locality triple celled each 8 mtrs span box culvert, 5 nos. of single celled pipe culvert , 7 nos. double celled pipe culvert, 3 nos. single celled box culvert have been provided. In addition to that the existing major bridge will be rehabilitated. |
| 3 | In road widening many trees are going to be removed. The local people were depending upon such trees for many uses. After removal of these trees in road widening there will huge irreparable gap and imbalance in the local environment. | As per Govt. Odisha norm, to compensate 10 times of trees to be cut are going to be planted from july 2013 onwards along the public institutions and feeder roads to the project road. |
| 4 | CPRs like Anandashram, RadhaGovindaTemple and Shiv Temple at Kuansar are not relocated. | Affected CPRs will be relocated. |
| 5 | The lands which areacquired, has been undervalued and not done rightly. | A District Level Committee under the chairmanship of District Administration Authority has been constituted to decide such grievances. |

CHAPTER 7

POTENTIAL IMPACTS AND MITIGATION MEASURES

The identification and prediction of impacts has been made by giving due consideration to the activities during construction and operation stages of the Project. Both beneficial and potential adverse impacts were assessed. The potential negative and positive impacts identified due to proposed project and the main findings are presented in this chapter.

7.1. Likely Positive Impacts

The anticipated benefits or positive impacts likely to arise on account of the proposed project are being briefly described below:

7.1.1 Likely Positive Impacts – Construction Stage

Employment and Income

One of the major direct beneficial impacts of the road during construction stage is the creation of employment opportunity to the local community. *The construction approach, which emphasizes using local people, tends to benefit directly to the people living in the roadside of the directly affected areas.* This road widening/improvement will create unskilled and skilled labour opportunity. *The impact is thus direct, high significance, local but short term in nature.*

Priority for employment will be given to local people. They will be given training to do the job. Proponent will implement skill training, awareness, and income generation programs encouraging them to utilize their money earned through wage.

Enterprise Development and Commercialization

Due to the road construction activity, different types of commercial activities will emerge in order to meet the demand of construction worker. For meeting these needs, enterprises like food and tea shops, groceries, lodges and restaurants will be developed for serving large numbers of people. It also exerts demand on the local production like pulses, vegetables, fruits etc. which may provide added impetus for local production and marketing. This will contribute to the local rural economy and may help reduce rural poverty. Such benefits may contribute to enterprise development which often continues to entrench beyond construction period. *This impact will be direct, medium significance, local and long term in nature.*

Skill Enhancement

The road construction activities need to employ large number of labour force during the construction period. One of the strategies of the road project is to give much emphasis for the employment of local people who are living along the road corridor and are supposed to be affected by the road project. These strategies not only provide employment opportunities to the local poor people but also supports in transfer of skills and technical know-how while working in construction works. It will enable them to get jobs in similar activities in other projects. These skills will benefit the locals in getting long-term employment opportunity in other road construction projects in future. *The impact is indirect, medium significance, local and long-term in nature.*

Development of Services

Increase in income will have direct input for the development of social service sector including health and education facilities. Local people will have the opportunity to develop their educational and health facilities and the road project may also indirectly contribute/support to uplift these facilities. *This will be direct, medium significance, local and long term impact.*

7.1.2 Likely Positive Impacts – Operation Stage

Improved Access

The upgraded road will offer easy, comfortable and quick access to the people and commodities to be transported through NH 5 from other parts of the states as well as from Odisha to the states of Andhra Pradesh and Tamilnadu. New market areas and settlements will develop, urbanization and industrialization will be possible, and all this will lead to the regional development of the area. *This will be direct, medium significance, regional and long term impact.*

Improved Road

The proposed widening/improvement works will make the existing MDR at par with standard of State Highways. It will assist to create trade and transit corridor between other neighbouring states. This will immensely enhance the economic benefits for Odisha. *Such impacts are direct, of high significance, regional to trans-boundary extent and long term in nature.*

Rise of Land Values

Road widening/improvement often leads to rising land values along the road corridor. Increased land values also enhance farmers' capability for borrowing loans on collaterals. High value lands are easily acceptable to banks and micro-finance institutions to provide loans. *This impact will be an indirect, high significance, local and long term in nature.*

Women Empowerment

Road transportation will strengthen women in particular while providing better access to schools, health centres, and markets. Women will also have better access to women development training institutes, offices and various administrative line agencies located in the district headquarters. Frequencies of visit to such organizations will increase and women's knowledge, awareness and confidence level will intensify through these contacts. There will be more women development focused NGOs/ CBOs, operating in the Project Area, resulting eventually in a number of awareness programmes that will address problems like HIV/AIDS, safe sex, girl and boy trafficking – all of which are serious concerns in the region. *The impacts on women and gender issues associated with road development are seen as indirect, medium significance, local to regional and long-term.*

Decline in Soil Loss

The proposed road project will apply slope protection measures extensively mainly through civil engineering structures methods. This will contribute to stabilize the existing slope along the road and expose cut slope. *This will be indirect, medium significance, local and long term impact.*

Management of Biological Resources

During site clearance, about 7568 tree falling within Corridor of Impact will be removed. Compensatory tree plantation (75680 trees) will be done at community open space like schools, panchayat land, hospitals, avenue plantation etc. In addition, various plant species will be introduced for slope stabilization, thereby improving both road safety and the green cover. It will help to increase forest product, soil conservation. *This will be direct, medium significance, local and long term impact.*

Benefit augmentation measures

These beneficial impacts could be augmented by involving the local people during the construction and operation of this road project. These impacts should be augmented by:

- Dissemination of the information of the project about the possible beneficial and adverse impact.
- Providing employment opportunities to the affected and local people in order to avoid increased number of outside labour force whom requires the operation of labor camp which may adversely impact on socio-culture aspects and forest resources.
- Contributing a small portion of the project fund for community development, particularly for the development of education health facilities and re-forestations to provide additional opportunities for work force and their dependents.
- Providing training to unskilled or semi-skilled local and affected people for road construction and maintenance, Bio-diversity conservation.
- Selecting the locally available plants for road slope stabilization and introduction of indigenous plants for plantation, open spaces,
- Compensatory plantation with support of DFO/GOO which makes easier for project.
- Providing safety measures for the work force.
- Open space will be used for vehicle stop, public toilet, tree plantation, recreation.
- Involving local VDCs and social groups and ethnic leaders in mitigating project- people conflict, if any.
- Environmental unit (Environmental Specialist) will be establish to regular monitor of all positive and negative impacts

7.2 Potential Adverse Impacts

The project activities during construction and in the operation of the road may create a number of adverse impacts on the local environment. These are discussed briefly in the following Sub-sections.

7.2.1 Construction Stage

7.2.1.1 Physical Environment

Change in Land Use

Impacts: Construction of road may impact cultivated land, forest/scrub land and built up area along the road. A total of **235.565 Ha** land will be acquired for the proposed road up-gradation, widening and necessary geometric correction. The land to be acquired comprises of **45.082 Ha** private lands and **190.483 Ha** government lands. The impact will be permanent, irreversible, direct, medium, local and for long term.

Measures: Compensation will be given for affected private properties. Plantation of trees will be done on all available areas and roadside slopes to increase greenery in the area. This adverse impact cannot be mitigated fully.

Impacts due to Slope Instability

Impacts: Soil erosion will mainly occur during the construction period due to excavation, cutting and removal vegetation cover. There are erosion prone areas between km.69/800 to km.71/000 and km.75/200 to km.77/000 along the road alignment. Deep and steep slope excavation may cause instability of slope and cause landslide.

The road stretches prone to erosion is mainly due to flooding related problems along road alignment where natural drainage crosses the road. During construction period erosion will be active due to slope cutting/earthwork activities. *The impact due to this will be direct, of medium significance, local, and long-term in nature.*

Measures: The mitigation measures will minimize cut slope activities. River training works, gully protection works will be included in design. Bio-engineering techniques such as grass seeding, turfing, grass plantation, brush layering, tree/shrub plantation and erosion control blanket will be proposed. Erosion control blanket shall be provided at two identified erosion prone locations (Table 7.1) as per the design specification in EMP Drg No. OSRP/ENV-14. Additional civil engineering structures should be provided for slop protection, flood protection, drainage management.

Table 7.1: Erosion Control Blanket Locations

| Sl.No | Chinage | | Side(s) | Length (m) |
|-------|---------|--------|---------|------------|
| | From | To | | |
| 1 | 69.800 | 71.000 | Both | 1200 |
| 2 | 75.200 | 77.000 | Both | 1800 |

Impacts due to Spoil Disposal

Impacts: Unmanaged disposal of spoil may cause blockage of natural drainage systems, loss of organic fertile top soil and farmlands, crops and forest, water logging. During site clearance, excavation in slope, foundation of structures will be generated huge debris. If this debris is not properly disposed significant negative impacts are anticipated on public health and safety and scenic beauty of the project area. *If not properly and timely addressed, the impacts from spoil disposal during the upgrading of the proposed road will be direct, of high significance, site-specific and long-term in nature.*

Possible locations for spoil disposal *Measures*: Spoil generated will be safely disposed and managed with minimum environmental damages. Wherever possible, surplus spoils will be used to fill eroded gullies, closing of quarries and borrow pits, depressed areas etc. 60% of the excavated material from carriage way and demolition wastes from bridges, culverts etc. shall be re-used exclusively on the embankments and the balance shall be used in filter media, back fill, earth fill, stone pitching, rubble stones, construction and pot hole repair of haulage road, diversions and its maintenance, raising of embankment of streams and spur road, on either side of the bridges and culverts, on back fills of guard walls, gabion walls, toe walls and development of sites on abandoned roads to take up plantation, besides providing scarce water sources for the wildlife and development of earthen mounds to act as flood shelters, site enhancement plantations, religious and socio culture gathering to raise medicinal plant for community use. Excavated materials will be used for reclaiming the degraded land in near vicinity in consultation with local communities. The Contractor will use environment friendly techniques for construction re-use of excavated materials (Boulder, Stone for structures, soil for filling). Disposal site shall be provided including proper drainage, vegetation and adequate protection as instructed by the Engineer.

Impacts on Water Resources by Inadequate Drainage

Impacts: River Crossing and natural drainage will get blocked due to construction of road. This may be happening especially during the construction of embankments, shoulders, reconstruction/repairing of culverts etc. The main impact of this is creation of temporary inundation areas closer to the above locations during rainy season. A total of 146 water sources like stand post, hand pump and wells require relocation. 44 water bodies are partially affected. *The impact due to this will be direct, of high significance, site specific, and long-term in nature.*

Measures: The water sources will be relocated in consultation with community and necessary protection walls will be provided for water bodies that are partially affected. In order to have minimum interference with natural drainage pattern of the area; channelize surface water discharge from side drains; do not block or divert water away from natural watercourse adequate number of cross drainage structures will be provided in addition to reconstruction of existing one.

Summary of additional cross drainage structures to mitigate the water induced adverse impacts are as given in Table 7.2. In addition, the project proposed for construction of RCC box covered drains at urban (Table 7.3) area and open trapezoidal drain on both sides of highway at rural sections to drain off the water to the nearest culvert locations or natural existing streams/nallas.

The 44 ponds on either side of the road coming under within 20mtrs proposed RoW, mitigation measures like erecting PCC (M-20) Toe walls as per design specification vide drawing No OSRP/CEG /SH /ENV/03 of Environment Management Plan) and provision of bathing ghat, sluice gate /spill way (Drawing No. OSRP/CEG/SH/ENV/10) for drainage of excess water from the area.

Table 7.2: Summary of Proposed Additional Cross Drainage Structures

| Sl.No | Type of Structure | New Construction | Re construction/Replace | Retained | Widening | Total |
|-------|-------------------|------------------|-------------------------|----------|----------|-------|
| 1 | Major Bridge | - | - | 3 | - | 3 |
| 2 | Minor Bridges | 3 | 5 | 8 | - | 16 |
| 3 | Culverts | 190 | 126 | - | 16 | 332 |

Table: 7.3 Proposed Drain at Built-up Areas

| Sl. No | Chainage | | Side | Length (m) | Sl. No | Chainage | | Side | Length (m) |
|--------|----------|-------|-------|------------|--------|----------|--------|-------|------------|
| | From | To | | | | From | To | | |
| 1 | 0 | 1900 | Both | 1900 | 25 | 47950 | 48250 | Right | 300 |
| 2 | 2200 | 2400 | Both | 200 | 26 | 48250 | 48950 | Both | 700 |
| 3 | 2530 | 2800 | Both | 270 | 27 | 49100 | 49200 | Both | 100 |
| 4 | 3850 | 4300 | Both | 450 | 28 | 50000 | 52000 | Both | 2000 |
| 5 | 5800 | 7200 | Both | 1400 | 29 | 53200 | 54000 | Both | 800 |
| 6 | 7550 | 7950 | Both | 400 | 30 | 55100 | 55300 | Right | 200 |
| 7 | 9300 | 9660 | Both | 360 | 31 | 55300 | 55550 | Both | 250 |
| 8 | 10100 | 10480 | Both | 380 | 32 | 56600 | 56850 | Both | 250 |
| 9 | 10600 | 10700 | Right | 100 | 33 | 57200 | 57400 | Both | 200 |
| 10 | 10700 | 10850 | Left | 150 | 34 | 58050 | 58450 | Both | 400 |
| 11 | 13800 | 14000 | Both | 200 | 35 | 62950 | 63200 | Both | 250 |
| 12 | 16600 | 17100 | Both | 500 | 36 | 65400 | 65900 | Both | 500 |
| 13 | 17700 | 20800 | Both | 3100 | 37 | 69400 | 69650 | Both | 250 |
| 14 | 22150 | 22500 | Both | 350 | 38 | 72050 | 72450 | Both | 400 |
| 15 | 24000 | 24250 | Both | 250 | 39 | 84950 | 85550 | Both | 600 |
| 16 | 26600 | 26800 | Both | 200 | 40 | 94750 | 95000 | Left | 250 |
| 17 | 27250 | 28400 | Both | 1150 | 41 | 95000 | 95400 | Both | 400 |
| 18 | 32650 | 33200 | Both | 550 | 42 | 99800 | 100100 | Left | 300 |
| 19 | 35250 | 35900 | Both | 650 | 43 | 100100 | 101400 | Both | 1300 |
| 20 | 38600 | 39550 | Both | 950 | 44 | 101400 | 101750 | Left | 350 |
| 21 | 41400 | 41600 | Both | 200 | 45 | 101750 | 102000 | Both | 250 |
| 22 | 43300 | 43600 | Both | 300 | 46 | 102000 | 102200 | Left | 200 |
| 23 | 44300 | 44800 | Both | 500 | 47 | 104500 | 104700 | Right | 200 |
| 24 | 44800 | 45150 | Left | 350 | 48 | 104950 | 105100 | Both | 150 |

Impacts due to Quarrying Materials and Borrow Pit Operation

Impacts: Large amount of construction material such as the boulders, sand and aggregates material are required for pavement, retaining wall, breast wall, gabion wall and other structures. These materials are obtained from quarry site. The quarry site for these materials will be largely on local streams and hill slopes near the road alignment, which is adequate to meet the requirement. The extraction of materials from inappropriate places or in excessive amount can seriously damage the local environment. For example, quarrying from a high slope and fragile area can result slope instability, extraction of sand and gravel in excessive amount from river can cause riverbank cutting and erosion and changes in river regime. It may cause landslide, erosion or box cutting of agriculture land, impact on sensitive environmental areas etc. This will eventually affect the livelihood of local people. *Impacts from quarrying and borrowing will be of direct, medium significance, site-specific and long-term in nature.*

Measures: Quarry and borrow operation plan will be prepared and approved by Environmental Specialist; unstable sites, erosion prone area, forest area, settlements, fertile farm land will be avoided for quarry / borrow operation; no new quarry sites will be operated under the project. In case new quarry is operated under the project, it will be rehabilitated by providing appropriate civil engineering structures and bioengineering measures after the extraction is complete. Recommended quarry sites in the area are given below.

1. Baghua quarry for Aggregate
2. Nealpur quarry for GSB
3. Asuraswar for Sand
4. Danapur for Sand
5. Basipur for Sand
6. Brahmani for Sand
7. Singur for Sand

Impacts from Air, Noise and Water Pollution

The main construction activities that cause air pollution are earth works excavation, quarry operations, crushers, asphalt plants etc. These activities generate dust and noise, which directly affect the air quality. In addition vehicles and machinery emit smoke and fine particles. These substances will increase the local air pollution significantly during the construction stage. Air pollution will cause inconvenience to local people who reside closer to the proposed road or quarries etc. Burning of fossil fuel would result in far more environmental pollution due to emission of sulfur oxides (SO_x), nitrogen oxide (NO_x), Carbon dioxide (CO₂) and particulates. Asphalt plants would also create problems of ash disposal and thermal pollution. Combustion of fossil fuels is considered to be the largest contributing factor to the release of greenhouse gases into the atmosphere.

Noise impacts will be significant during construction periods due to increase of vehicular movements and machinery and crushing operations, material transport etc. Increased noise will affect the nearby communities and wild animals.

During construction, exposed soil, excavated soil and excess soil can be washed off into river. Emissions from machinery, equipments, vehicles, quarries, crushes and asphalt plants can be dispersed with the wind and deposited in nearby water bodies.

Contaminated top soil due to oil, liquid and other chemicals from construction vehicles /equipment, sewerage, garbage and waste water from worker camps will washed out to nearby water sources causing water pollution and consequently affecting aquatic fauna and flora, farmlands and creating health hazards.

The anticipated impacts on air, noise and water pollution will be direct, low significance, local and short term in nature.

Measures: Use of masks by the workers operating in the areas of high dust generation; avoid disposal of excavated materials in the water bodies; Use of ear muffs, helmet to lessen noise pollution during rock breaking and quarrying; cover dry material or make it wet during transportation. One's a day water sprinkling will do during construction period.

Camp Sites and Storage Depots

Impacts: Contractor will establish camp if he bring labors from outside the area. Siting of camp may cause encroachment of agriculture land and alteration of drainage, solid waste and

waste water problems. Impact will be direct, medium significance, site specific and short-term.

Measures: The mitigation measures will be use of local labors to avoid camp; rent local house instead of camp to keep labors; sitting camp away from productive lands areas; pay compensation for using private farm or lands for storage or camp. Appropriate camp sites and storage depots have to be planned by contractor for area where agriculture land is being used.

Construction Equipment and Vehicles

Impacts: The Machine Intensive Road Construction Approach will use machineries and tools (Rollers, tippers, spreader, asphalt plant, water tanker etc.). The related negative impacts are increase in air, noise pollution due to emission of smoke, increase in vibration due to vehicular movement. Impact will be direct, high significance, site specific and short-term.

Measures: The safety gadgets should be provided for the labour during construction work. The equipment/vehicles deployed for construction activities shall be regularly maintained. All the vehicles deployed for material movement shall be spill proof to the extent possible.

Crusher Plants

Impacts: The establishment and operation of and crusher can be source of air pollution, noise pollution and even water pollution if it is placed near built up area and near the water sources. *The impact is direct, low significance, local and short term in nature.*

Measures: Crusher plant should be far from settlement, forest area. Better to buy from existing markets, to avoid all impacts.

Asphalt Concrete Plant

As the proposed road is asphalt concrete road, the operation of asphalt concrete plant can produce emission of carbon into the atmosphere. *The impact is direct, medium significance, site specific and short term in nature.*

Measures: To mitigate these impacts, following mitigation measures are adopted.

- Asphalt plant metal crusher activities should be controlled. (eg. Asphalt hot-mix plants should be downwind of close sensitive receptors such as schools, religious places, forest area etc.)
- Sites should be selected for these plants at least 500m away from the sensitive receptors.
- Temperature of the asphalt concrete plant should be controlled at appropriate level in order to control exhaust gasses to comply relevant emission standards.

Impact on Community Infrastructure

Impacts and Measures: The community infrastructure that requires reconstruction/rehabilitation during construction works, and the mitigation measures are as presented in following Table 7.4. The details of CPR's affected are in **Annexure 7.1**.

Table 7.4: Impact on Community Infrastructure and Mitigation Measures

| Infrastructure | Numbers | Mitigation Measures |
|--|---------|---|
| Boundary Wall of Schools, Govt. Office etc (locations) | 42 | Noise cum dust suppression RCC boundary walls with/without grill gate. |
| Existing Resting Shed | 4 | Reconstruction |
| Religious Structure | 66 | Relocation of fully affected structures. Noise cum dust suppression RCC boundary wall with flower vase atop at fully/partially affected structures. |
| Gate | 4 | Reconstruction |
| Sitting Platform | 2 | Reconstruction |

All religious structures, whose boundaries are affected and which are opening to the RoW directly become a potential spot for occurrence of accidents during morning and evening hours as well as on certain specific ceremonial occasions. To prevent this, on either side of the main gate of the temple, traffic calming measures as provided in the list of such signage's on the direct access point of the road where the access will diverted on both side of the interception wall and thereby the rush and in advertent collusion with moving traffic on the road shall be nullified.

Boundary walls for affected religious sites with embedded flower vases over the masonry/RCC boundary wall (EMP Drg No. OSRP/CEG/SH/ENV/04-A) having grooves cut on the outer wall plastered surface and approach road with or without gates are designed for construction together with aesthetic planting of scented ,religious and flowering shrubs, herbs and small to medium trees

For burial grounds subject to availability of space in addition to the noise cum dust suppression boundary wall facing the highway, there shall be new MS grill gate and renovation of the crematoriums or pall bearers rest sheds for mitigation.

All gram panchayat market places for farmers, all weekly market places and religious structures coming within 20mtr from the proposed center line on either side, but not within the ROW shall be provided with designer boundary walls (EMP Drg No. OSRP/CEG/SH/ENV/04-B) according to the necessity with sound and dust reduction arrangement and site enhancement plantations so that the esthetic quality and approach to such sites become user friendly preventing direct impact on the road as per the designs provided.

Aesthetic tree planting within and outside the campus where ever open space is available, shall be taken up with non-poisonous, aromatic, flowering and edible fruit bearing plants of medicinal and air purifying variety, subject to approval by the governing body of such schools or the administrative authority of the institutions. In case of units under the control and management of local gram panchayat /CD Blocks/community, the consent and approval of the activities proposed to be undertaken in each case has to be communicated and prior

written approval is obtained during pre-construction activity before the construction activity is taken up.

The plants are: -

- Creepers - Quiscalis indica, Bignonea spp., Hiptage, Tecoma, Ipomea haderecia, Argeriya nurvula, Morning glory (Ipomea nill) **cuttings of which can be rooted in the nursery and transplanted in the field.**
- Shrubs - Tabernamontana coronaria, Jasminum humile, Nictanthes arbortristis, Muraya exotica, Muraya koinegi, Karabira (Red, white and cream)**cuttings and seedlings can be raised in the nursery and planted in the field'**
- Trees - Amla, Bahada, Harida, Neem, Sal, Barun, Bakul, Nageswar, Delonix,wild & Grafted Mango, Litchi, Chandan, Rakta chandan, Putranjiba, Jack fruit, Karanj, Jayanti, Agasti ,Bengal almond ,Alstonea, Bara, Aswath,Udumbar,Jari etc.(No Bara,Aswath,Jari,Udumber.Wild mango will be planted within).

Stockpiling of Construction Materials

Construction material storage site pose adverse impact during construction stage. Erosion from stockpiled material will cause water pollution, land value degradation, loss of agricultural productivity, and nuisance. *This impact is short term in duration, local in scale and short in magnitude.*

The land for storing the construction material should be far from the agriculture land, forest and water bodies. As a procedural respect, concerned contractor need to fill in standard pro-forma – developed for this issue – and submit it to and secure approval from the Resident Engineer/Environmental Specialist (including from the owner as and if required). Avoid leakage.

Decline in Aesthetic Value

Landscape degradation relates particularly to poorly designed or monitored activities resulting from quarrying operations and from indiscriminate dumping of spoil material. Road induced activities may lead to the generation and mismanagement of wastes in the roadsides and create scars on the landscape. The likely impact will be direct, low in magnitude, local nature and short term in duration.

The following mitigation measures will be adopted:

- Indiscriminate dumping of spoil material will be discouraged.
- After the extraction is completed, the quarry site will be rehabilitated to suit the local landscape.
- Plantation of local species along the roadside/ open space will be done.

7.2.1.2 Chemicals

Use of Bitumen

Impacts: Bitumen is required for black topping. Spillage of bitumen damage soil productivity and pollution. Accident will occur. Moreover, it also bring adverse impact to human health as it can causes skin burning if not properly handled, distributed during construction period etc. It also causes water pollution. *The impact will be indirect, high significance, local and short-term*

Measures: The following mitigation measures will be adopted

- Use kerosene for heating and strict prohibition to heat bitumen by using fuel wood.
- Appropriate storage of material.
- Use of appropriate safety gears to ensure safe health of workers such as masks, boot, gloves, hat.
- The bitumen storage must not be on fertile land and nearby water bodies.
- Bitumen related work should not be carried out during the rainy condition.

Impact due to Accidental leakage of Fossil Fuel, Lubricants, Oil, Acids and other Chemicals used in Vehicle, Crusher Plants, Equipment etc.

During construction period, large number of vehicles, crusher plants and several other equipments will be operating in the field. Due to significant number of vehicles, there is likely of accidental leakage of fossil fuel, lubricants, oil, acid and other chemical used in vehicles, crusher plants, and equipment if all these are not properly maintained and repaired from time to time. It could bring malefic effects to the environment. If it is exposed to the human being, aquatic animal, it even brings carcinogenic effects (Cancer induced effect) to the human being. *The impact will be indirect, high significance, local and short-term.*

7.2.1.3 Biological Environment

Impact on Vegetation and Forest Resources

Impacts: The proposed road does not pass through any forest areas, but will impact the roadside plantation along project road notified/declared as protected forest. The improvement of the road will slightly result in acerbating this effect due to widening of the formation width.

The proposed road improvement will require cutting of a total **7568** numbers of trees of various species that are growing along road side, which has been notified as protected forest. There is no diversion of forest land.

In addition, all felled trees are subject to compensatory plantation as specified by the Department of Forest in the ratio of 1:10. *The impact of this will be confined to the road alignment and thus will be local, direct, long-term and of medium significance.*

Measures: The loss of trees is largely not significant and has been minimised to the possible extent. However, even this small loss can be compensated by the plantation. Compensatory afforestation is one of the most important conditions stipulated by the Central Govt. while approving proposal for diversion of forestland for non-forest use. It is essential that a comprehensive scheme for compensatory afforestation is formulated and submitted to the Central Govt.

A total of 80000 numbers of trees will be planted as part of compensatory plantation and the cost will be provided to the concerned District Forest office by the project. Location and type of species for the plantation will be selected by the concerned DFO.

However, emphasis will be given to local, rare, endangered and protected species. For the plantation of 80000 trees, total estimated cost is INR 5,42,98,000/-. The details of compensatory plantation budget are provided in Environmental Budget chapter of Environmental Management Plan.

Impact on Wildlife Habitat and Movement

The project road passes nearest to Bhitarkanika National Park and Wildlife Sanctuary within 10 kms radius of zone of influence. Though no direct impact on the wildlife of above sanctuary and national park due to road expansion and construction activities is envisaged, but since road is within the influence area a detail discussion was also held with concern with DFO, Mangrove Division, Rajnagar along with Ranger Officer to understand and capture the possible indirect impact due to the project. Based on the consultation, the possible impacts come to light are;

- i. Due to road widening and strengthening there will be change in drainage pattern in zone of influence and this may lead to induce change in pattern of animal movement resulting in rise in animal depredation.
- ii. The raising of road embankment will act as barrier to traditional water channels and there may be change in drainage pattern impacting the movement of crocodiles and rising chances of crocodile intrusions in to bathing ghats near human settlements. This may lead to human predation at vulnerable points along the river Baitarani, Kharsua and Brahmani within zone of influence of road corridor. The most vulnerable sites are Balichandrapur, Sahupada, Manikpatana, Rajpur, Santhapada, Nalitapatia along Brahmani River, Barundiha, Gangadharprasad dia along Kharashrota River and Mahurigam, Baradiha of Baitarani River.
- iii. The wild animals within the zone of influence likely to change their movement path due to raise in road embankment and may intrude into the human habitation and crop fields in the western and northern part of the National Park arising man-wild animal conflict resulting in depredation.
- iv. Due to road widening a lot of avenue trees harbouring the wild fauna and avian will be removed there by threatening the threshold level of existence of such animals.
- v. There are certain road patches which are very near to forest area of sanctuary and national park where crocodiles/snakes/turtles/monitor lizards and other reptiles may be required to cross the road for breeding and feeding purpose. These animals might get killed while crossing the road.

These impacts are long term, local in scale and medium significance. The mitigation measures that will be adopted for avoiding predation, preventing man-wild animal conflict and preserving habitat include;

- i. Providing reptile under pass (EMP Drg No. OSRP/ENV-14) at 26 locations (Table 7.5) for allowing reptiles crossing of road.
- ii. Locations of quarries for construction material are on non-forest land and at least 5 km away from the sanctuary and national park.
- iii. Shorten construction period in forest patches adjoining to Sanctuary and National Park to minimise disturbance to animals.

Table 7.5: Reptile Underpass

| Sl. No. | Proposed Chainage | Sl. No. | Proposed Chainage |
|---------|-------------------|---------|-------------------|
| 1 | 9/030 | 14 | 70/040 |
| 2 | 12/326 | 15 | 71/243 |
| 3 | 16/423 | 16 | 74/720 |
| 4 | 25/000 | 17 | 76/600 |
| 5 | 31/100 | 18 | 78/300 |
| 6 | 33/950 | 19 | 80/880 |
| 7 | 40/174 | 20 | 83/240 |
| 8 | 43/780 | 21 | 86/640 |
| 9 | 51/240 | 22 | 92/200 |
| 10 | 60/820 | 23 | 94/140 |
| 11 | 63/358 | 24 | 96/120 |
| 12 | 64/783 | 25 | 97/778 |
| 13 | 67/680 | 26 | 102/940 |

- iv. Providing speed breakers and rumble strips at forest stretches.
- v. Avoiding sand mining from river courses along road especially involving nesting ground of fresh water turtle and other reptiles
- vi. Providing of suitable wire mesh barrier to protect human predation by crocodile. The site vulnerability to be decided by concern Official.

Impact on forest resources due to Source of Energy/Fuel

Construction Crew/Contractor will use firewood within vicinity for cooking and heating purpose, and for construction. *This is an adverse impact of short-term duration, local in scale and medium significance.*

Following mitigation measures will be adopted for avoiding the use of forest wood for cooking and heating.

- For construction crews stationed at the camp, contractor will provide kerosene or gas for cooking and heating.
- Kerosene will be used for heating of bitumen/asphalt plant.
- Use of forest wood will be restricted for meeting the fuel needs.
- Respective provisions will be included in the contract agreement document with contractor.

Effect on Aquatic Life

The road alignment passes through Brahmani River, Kharashrota River and Baitarani Rivers supporting aquatic life. There are 44 ponds located along the roads that are partially affected. The road construction activities foundation excavation, slope cutting will likely increase sediment load in these rivers and ponds.

Measures: In design, the slope cutting has been minimized as far as possible. For widening the road special retaining structures has been proposed to reduce excess excavation materials falling in river/water bodies. Site casting will be strictly prohibited in critical locations.

Table 7.6: Toe Wall at Water Bodies Impacted

| Sl No. | Items | Chainage (In Km) | Side | Sl No. | Items | Chainage (In Km) | Side |
|--------|-------|------------------|------|--------|-------|------------------|------|
| 1 | Pond | 4/477 | R | 23 | Pond | 76/400 | R |
| 2 | Pond | 5/305 | R | 24 | Pond | 77/239 | L |
| 3 | Pond | 7/411 | L | 25 | Pond | 79/682 | L |
| 4 | Pond | 7/459 | R | 26 | Pond | 81/879 | L |
| 5 | Pond | 11/585 | R | 27 | Pond | 82/012 | L |
| 6 | Pond | 34/424 | L | 28 | Pond | 82/821 | R |
| 7 | Pond | 38/560 | L | 29 | Pond | 91/351 | R |
| 8 | Pond | 45/298 | R | 30 | Pond | 91/532 | L |
| 9 | Pond | 53/374 | R | 31 | Pond | 93/300 | L |
| 10 | Pond | 54/724 | L | 32 | Pond | 96/113 | L |
| 11 | Pond | 57/162 | L | 33 | Pond | 97/712 | L |
| 12 | Pond | 57/800 | R | 34 | Pond | 102/400 | R |
| 13 | Pond | 57/830 | L | 35 | Pond | 102/650 | L |
| 14 | Pond | 63/221 | R | 36 | Pond | 102/926 | R |
| 15 | Pond | 63/381 | R | 37 | Pond | 104/033 | L |
| 16 | Pond | 63/927 | L | 38 | Pond | 104/033 | L |
| 17 | Pond | 64/944 | L | 39 | Pond | 104/485 | L |
| 18 | Pond | 65/932 | L | 40 | Pond | 104/574 | L |
| 19 | Pond | 66/763 | L | 41 | Pond | 104/670 | L |
| 20 | Pond | 67/362 | R | 42 | Pond | 104/668 | R |
| 21 | Pond | 69/570 | L | 43 | Pond | 104/776 | L |
| 22 | Pond | 72/500 | L | 44 | Pond | 105/120 | L |

7.2.1.4 Socio- Economic Environment**Social Impact**

Due to the proposed project there will be some negative and positive impacts on the socio - economics of the project areas and region as a whole. The impacts can be classified as;

- Resettlement of People
- Relocation of Community Structures
- Acquisition of Land and Structures
- Influx of Construction Workers
- Economic Impacts

Table 7.7: Details of Social Impacts

| Sl.No. | Particulars | Value | Type of Impact (partial/full) |
|--------|---------------------------------|---------|-------------------------------|
| 1 | Number of PAP's (Nos.) | | |
| | Titleholders (Nos.) | 996 | Partial to fully |
| | Encroachers (Nos.) | 315 | Partial to fully |
| | Squatters (Nos.) | 2793 | Fully |
| 2 | Land to be Acquired (Ha) | 235.565 | |
| | Private Land (Ha) | 64.082 | Partial to fully |

| Sl.No. | Particulars | Value | Type of Impact (partial/full) |
|--------|---|---------|-------------------------------|
| | Government Land (Ha) | 171.483 | Partial to fully |
| 3 | Structures Impacted | | |
| | Private Structures (Nos.) | 996 | Partial to fully |
| | Government Structure (Nos.) | 42 | Partial to fully |
| 4 | CPR's Impacted | | |
| | Religious (Nos.) | 66 | Fully |
| | Water sources (hand pump, stand post, wells etc) (Nos.) | 146 | Fully |
| | Sitting platform (Nos.) | 2 | Fully |
| | Resting Shed (Nos.) | 4 | Fully |

The overall local and regional impacts on the socio-economics will be positive because of the policies of the project on the improvement of the roads. Such strengthened infrastructure is expected to contribute to the economic growth of the State and socioeconomic wellbeing of the people. Road improvements require relocation of people and structures that are within the Corridor of Impact. A separate Resettlement Action Plan (RAP) has been prepared for the project.

Impacts due to Traffic

During construction period, especially during the spreading the bitumen surface, no vehicles are allowed to come for some interval of time till it completely dry up. These could lead to traffic congestion. It will increase the travel time of local people.

Traffic congestions will occur during the construction period especially near townships and built-up areas due to increment in number of vehicles brought for construction activities. Generally traffic jam will be significant during morning and afternoon rush hours. *This kind of impact is direct, low significance and short term in nature.*

Impacts on Community Infrastructure

Few temporary structures (encroachment of the RoW used to build temporary boutiques retail centers, fences, & front walls etc.) of the road side may need to be shifted.

These houses will be compensated under R&R policy prepared for the project; other affected structures include a number of drinking water sources, chautaries and temples. Moreover, few water drinking pipe need to remove due to road widening activities.

Any damages during construction of road are subject to immediate repair under the responsibility of the Contractor. *The impacts (immediate loss of assets) will be direct, irreversible, medium significance on community level, site-specific and long-term in nature.*

Impact on health of workers and local people living along the road corridor. Occupational Health and Safety, STDs

As the construction activity requires works such as handling of hazardous material, machinery movement, bitumen work, the workers and general local people will be prone to risk of accidental damage at construction sites.

Other impact could be due to from poor labour camp condition. Unsafe water sources and unhygienic conditions (lack of latrines and washing facilities) bear the risk of additional and

often endemic diseases, such as dysentery, diarrhoea and cholera. Uncontrolled water logging and badly managed borrows pits bear the risks of spreading water-borne diseases like malaria and dengue fever. Sexually transmitted diseases and HIV/AIDs as a result of the possible influx of migrant labourers / construction workers is rather low due to the priority to be given to local hiring of labor and the still strong social control in the villages.

Other potential impacts to health are respiratory and eye disease due to exposure to dust and emissions. *In the absence of stringent health & safety regulations and regular training through the Contractor, the identified impacts will be, with exception of HIV/AIDs, direct, high significance, local and short-term in nature.*

Measures: The workers shall be provided and made mandatory the use of helmets, safety belts, masks, gloves and boot depending on nature of work; provide clean drinking water at sites and camp; pit toilets at sites and camp; first aid facilities at sites and camp with training to use them; provide group accidental insurance for workers. Awareness generation to local people and workers on HIV/AIDs and other communicable diseases

Pressure on Social Service Facilities

For road construction activity, there will be requirement of large numbers of construction labour force. For meeting the need of the construction worker, there is likely of having pressure on existing local social service facilities such as telephone, water supply, solid waste management, health and medicine, transportation and school (if they come with family) etc. *This impact will be indirect, low significance, short-term and local in nature.*

Conflicts due to Influx of Construction Workers

The amount of money that enters into the area during construction phase as wage payment may induce local inflation. Increased income of local labours and construction crews of contractor can lead to negative impacts such as spread of alcohol consumption, gambling and prostitutions. Influx of migrant workers also bears potential dangers of girl and boy trafficking, as well as HIV/AIDs as mentioned before. *These impacts leading possibly to social and cultural conflicts will be indirect, medium significance, local, and short-term in nature.*

Impact due to unawareness on camp sanitation issues by the laour

The labours in camp are source of production of huge solid mass. If it is not properly addressed then there is likely of spreading and emergence of disease among the labour in camp. *The impact from unawareness on camp sanitation by the labour will be direct, local and short term in nature.*

Impairment in existing environmental condition due to influx of labour

Because of huge dependency on the fossil fuel, vehicles, and other natural resources, the environment could be impaired. *The impact from unawareness on camp sanitation by the labour will be direct, local and short term in nature.*

7.2.2 Operation Stage

7.2.2.1 Physical Environment

Landslide and slope failure

The project road is located in flat/plain terrain and landslide is not envisage, though slope failure may happen at high embankment, approaches to bridges etc. along the road. This may cause damage to road. *The impacts will be direct, low significance, site-specific and long-term in nature.*

The following mitigation measures will be adopted:

- Maintenance of the slope protection measures and drainage works
- Minor landslide and mass wasting will be immediately cleared and slope restored with appropriate technology (bioengineering)

Impacts on Water Resources caused by Poor Drainage

The road project aims to improve the road drainage facilities by constructing proper drain and rehabilitating culverts to facilitate better flow especially during rainy season. It will be constructed as per design. But on operation phase, the drain and culvert may block due to sediments, improper disposal of debris or disposing garbage into side drain by the general public. It will create overflow of drains and alteration of surface runoff paths causing soil erosion and health hazards, sometimes, it also bring completely failure of drainage structure. It will also induce siltation in nearby stream which can bring flood as well as affects the flora and fauna living in nearby water bodies, if maintenance activity is not carried out from time to time.

In order to avoid such impacts, the following mitigation measures will be adopted:

- To minimize the impact it is proposed to close the side drains especially near towns and maintain regularly to avoid blockage of water.
- Maintenance of smooth discharge across culverts and cross drainages by cleaning and maintaining them regularly so that water logging on adjacent land due to road do not occur.
- Roadside drain water will not be discharged into farmland or environmentally sensitive locations.
- Regular cleaning of roadside channels to avoid any blockage of drainage.

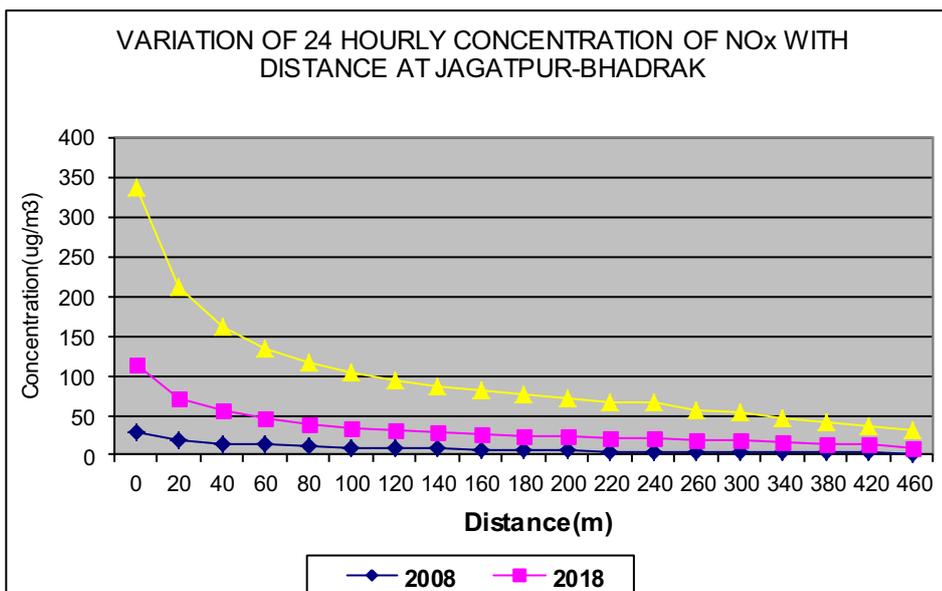
Impact Due to Air, Noise, Water and Soil Pollution

Impacts: As the road is Major District Road and the vehicular movement is expected to be very high, noise pollution will be high. However it may cause nuisance to local resident, educational institutions and hospitals located adjoining project roads.

The impact due to air and noise pollution will be *direct, low, local and long term.*

Increase in settlements, hotels and lodges will result in increased organic and inorganic solid and liquid wastes. The disposal of household wastes, washing of vehicles in water bodies will degrade the water quality. The impact will be direct, low, local and long term.

The CALINE 4 predictions of pollution level along each corridor on link basis has been checked to ascertain the level of impact during operation phase between 2008 to 2028 in the form of graphs showing the levels of NO_x as presented below at 10 year interval.



Measures: Measures to

be adopted will include plantation of trees on both sides of the road as far as possible; Speed limit of maximum 55 km/hr in settlement and built-up areas. Awareness program for drivers to drive below design speed to avoid road accident, minimal or no use of horn, erect signs at pedestrian crossing areas. To control vehicle speed, traffic calming measures will be provided at settlements/built-up areas, educational institutions and hospitals areas. Noise mitigation measures like noise barrier (EMP Drg No. OSRP/CEG/SH/ENV/04-B) either vegetative or structural type, will be provided (base on site condition) at identified environmental sensitive locations.

Table 7.7: Noise Barrier at Sensitive Areas

| Sl No. | Items | Chainage (In Km) | Side |
|--------|---------|------------------|------|
| 1 | Madrasa | 3/500 | L |
| 2 | School | 4/330 | L |
| 3 | School | 5/382 | L |
| 4 | School | 5/700 | L |
| 5 | School | 10/275 | R |
| 6 | School | 19/565 | L |
| 7 | School | 53/360 | R |
| 8 | School | 51/736 | R |
| 9 | School | 58/407 | L |

| Sl No. | Items | Chainage (In Km) | Side |
|--------|-----------------------|------------------|------|
| 10 | School | 62/987 | R |
| 11 | School | 102/700 | L |
| 12 | School | 102/745 | L |
| 13 | Hospital | 26/695 | L |
| 14 | Police Station | 0/443 | L |
| 15 | Electrical Substation | 9/580 | R |
| 16 | Sub Register Office | 19/634 | L |
| 17 | Inspection Bungalow | 33/914 | R |
| 18 | Government Building | 100/500 | R |
| 19 | Office of Tehsildar | 100/640 | L |

7.2.2.2 Biological Environment

Pollution of Water Sources

As the road is in operation, more vehicles will be moving on the upgraded road surface. So it is common to see the inappropriate driver practices connected with car/truck washing in streams and rivers which can cause local water pollution by leakage of fuel, lubricants and

hydrocarbons that may not only affect the aesthetic value of the water body, but also put hazards on people and animals using these as drinking sources. Continual water pollution will also affect the aquatic biota, with subsequent negative consequences for fisheries and the economic return of fisher folk depending on these natural resources.

Measures: The washing of cars in rivers and creeks should be strictly controlled and violators be penalized. In places where car washing habits have evolved, it is advised to erect signboards (illustrated and in local language) that explain the inherent risks for people utilizing the source for drinking and aquatic life, and also indicate penalties for violators. The vehicles are regularly checked whether it is in good condition or not by the government. It should be within government policy.

7.2.2.3 Social, Economic and Cultural Environment

Population Pressure and Impact due to New Settlement along the Road

After the construction, the RoW can be encroached at any time mainly for putting up small boutiques, vegetable and fruit sales stalls, or demarcating land boundaries. The encroachers will build permanent or temporary structures within the existing reservation causing damages to pavements, side drains or even for the soft shoulder of the RoW.

Ribbon settlement can cause significant and long-term adverse impacts if such activities cannot be avoided in time by enforcing strict legal action and social pressure.

Discouraging ribbon settlements along the road awareness raising programme through local organizations to plan proper settlements Enforce regulate settlement growth in RoW. Promote tree plantation program in Row which makes barrier.

Social Conflicts

Access facilities will bring social nuisance like increase in alcohol consumption, gambling, prostitution, and will increase girl trafficking. The impact will be indirect, medium, local and long term in nature.

Support awareness raising programs against such nuisances.

Road Accidents

The widening and improving of the surface conditions induces high vehicular speed. As a result, there will be a risk of increased of road accidents. The proposed road passes settlements, which are susceptible to accidents. Moreover there are many residents, shops and small boutiques located closer to the road. Therefore high speed vehicle movements will cause road accidents. *The anticipated impacts will be direct, medium significance, local and long term in nature.*

After the operation of road services, chances of accidents increase. In order to minimize such incidents following safety measures and restriction on speed will be adopted.

- Required delineators, safety signs etc. will be included in design appropriate along the road.
- Road safety awareness programs will be conducted
- It is also recommended to place illustrated sign boards at accident-prone spots and bus bays.

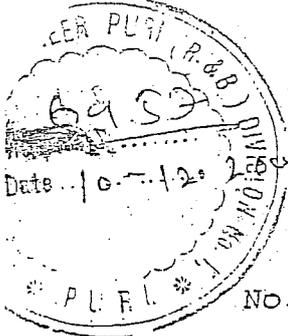
- Speed limit, No horn, warning signboard in forest, animal crossing area.

The potential impacts have been predicted in terms of their magnitude of significance (low, moderate and high), extent (site specific, local and regional) and duration (short term, medium term and long term) as well as their nature (reversible, irreversible).

Government of Orissa
Works Department

N O T I F I C A T I O N

Dated, Bhubaneswar, the 24-11-04



No.R.Misc-61/2004 20750 /W., Government in Works Deptt. have been pleased to declassifiy the 15 roads as given below from State Highways Category to Major District Roads Category with effect from the date of issue of this Notification.

- ✓ 1. Pipili-Gop-Konark Road - S.H.-13 ✓
2. Rairakhol-Kiakata Road - S.H.-24
3. Cuttack-Chandabali Road - S.H.-9A
4. Koraput-Laxmipur-Rayagada Road - S.H.-4
5. Jaleswar-Batagaon-Chandanawar Road - S.H.-57
6. Chorada-Duburi Road - S.H.-20
7. Angul-Maidharpur Road - S.H.-23
8. Bhawanipatna-Kharian Road - S.H.-16
9. Sathipur-Jajpur-Kayangola Road - S.H.-56
- ✓ 10. Phulnakhara-Niali-Madhah-Gop-Konark-Puri Road - S.H.60 ✓
11. Narasinghpur-Hindol Road - S.H.-64
12. Bhanjanagar-Tilisingh Road - S.H.37.
13. Jeypore-Kota-Malkangiri-Motu road - S.H.125
14. Umerkote-Rayagada-Kerda-Likima Road - S.H.-14
15. Angul-Tikarpara Road - S.H.-23

By order of the Governor

R.K.Dash

E. I. C. - Cum-Secretary to Govt.

Memo No. 20751 /W., Dated. 24-11-04

Copy with copy of enclosure forwarded to the P.S. to Chief Minister, Orissa for information of Hon'ble Chief Minister, Orissa/P.S. to Minister works for kind information of Hon'ble Minister works.

Memo No. 20752 /W., Dated. 24-11-04

Copy with copy of enclosure forwarded to the Chief Engineer, D.P. L&Roads for information and necessary action with reference to his letter No.40500 Dt.14.10.2004.

Deputy Secretary to Government

Contd...P/2.

Handwritten notes and signatures on the left side of the page, including a large 'L' shape and several illegible signatures.

Handwritten signature and date: 24/11/04

Handwritten signature and date: 23/11/04

Handwritten signature and date: 18/11/04

k-2-1-

Memo No. 20753 /w., Dated.

24-11-04

Copy with copy of enclosure forwarded to all Superintending Engineers of R&B Circles/All Executive Engineers of R&B Division for information and necessary action.

W. S. S. 23/11/04

Deputy Secretary to Government

Memo No. 20754 /w., Dated.

24-11-04

Copy with copy of enclosure forwarded to the Director Printing, Stationary and Publication Orissa, Cuttack for information and necessary action.

He is requested to publish, in the next issue of the Gazettee and supply 50 (Fifty copies) to this Department.

W. S. S. 23/11/04

Deputy Secretary to Government

Memo No. 20755 /w., Dated.

24-11-04

Copy with copy of enclosure forwarded to Budget Section/Plan Section/Guard file 20 copies for information and necessary action.

W. S. S. 23/11/04

Deputy Secretary to Government

SSN.

W. S. S. 23/11

0674-2370757

ANNEXURES

Annexure 2.2

Existing Culverts Inventory along Project Road

| Sl. No. | Location/ Chainage | Existing Span Arrangement | Type of Culvert | Recommendation |
|-----------------------------|-----------------------|------------------------------|-----------------|---|
| Jagatpur – Chandbali | | | | |
| 1 | 1/015 | - | Choked | Reconstruction due to insufficient vent |
| 2 | 1/460 | 1 x 0.3 | Pipe | NP-2 pipe, to be Reconstruction |
| 3 | 1/850 | 1 x 0.45 | Pipe | Reconstruction due to insufficient vent |
| 4 | 2/010 | 2 x 1.0 | Pipe | Reconstruction due to poor condition |
| 5 | 5/145 | 1 x 1.2 | Arch | Reconstruction due to poor condition |
| 6 | 5/160 | 1 x 0.25 | Pipe | NP-2 pipe, to be Reconstruction |
| 7 | 5/980 | 1 x 0.3 | Pipe | Reconstruction due to insufficient vent |
| 8 | 6/290 | 1 x 0.45 | Pipe | Reconstruction due to insufficient vent |
| 9 | 6/400 | 1 x 1.0 | Pipe | Reconstruction due to insufficient vent |
| 10 | 6/435 | 1 x 0.3 | Pipe | Reconstruction due to insufficient vent |
| 11 | 7/975 | 1 x 0.6 | Skew Pipe | Reconstruction due to insufficient vent |
| 12 | 8/250 | 1 x 1.0 | Pipe | To be widened |
| 13 | 8/425 | 1 x 1.0 | Pipe | To be widened |
| 14 | 9/090 | 1 x 0.6 | Pipe | Reconstruction due to insufficient vent |
| 15 | 9/490 | 1 x 0.45 | Pipe | Reconstruction due to insufficient vent |
| 16 | 9/710 | 1 x 0.6 | Pipe | Reconstruction due to insufficient vent |
| 17 | 10/140 | 1 x 1.0 | Pipe | To be widened |
| 18 | 10/925 | 1 x 3.0 | Skew Slab | To be widened |
| 19 | 11/860 | 1 x 0.3 | Pipe | NP-2 pipe, to be Reconstruction |
| 20 | 12/060 | 1 x 0.3 | Pipe | Reconstruction due to insufficient vent |
| 21 | 12/375 | 1 x 1.2 | Pipe | To be widened |
| 22 | 12/650 | 1 x 0.3 | Pipe | Reconstruction due to insufficient vent |
| 23 | 13/020 | - | Pipe | Reconstruction due to insufficient vent |
| 24 | 13/150 | 1 x 0.3 | Pipe | NP-2 pipe, to be Reconstruction |
| 25 | 13/400 | 1 x 0.3 | Pipe | Reconstruction due to insufficient vent |
| 26 | 14/100 | 1 x 0.45 | Pipe | Reconstruction due to insufficient vent |
| 27 | 14/850 | 1 x 0.9 | Slab | Reconstruction due to poor condition |
| 28 | 15/400 | 1 x 0.9 | Pipe | Reconstruction due to insufficient vent |
| 29 | 16/200 | 1 x 0.6 | Pipe | Nothing to do |
| 30 | 16/400 | 1 x 0.45 | Pipe | Reconstruction due to insufficient vent |
| 31 | 16/450 | 1 x 0.45 | Pipe | Reconstruction due to insufficient vent |
| 32 | 16/640 | 1 x 1.5 | Slab | Reconstruction due to poor condition |
| 33 | 16/930 | 1 x 1.5 | Arch | Reconstruction due to poor condition |
| 34 | 17/550 | 1 x 1.5 | Slab | To be widened |
| 35 | 18/190 | 1 x 0.6 | Pipe | Nothing to do |
| 36 | 18/310 | 1 x 0.6 | Pipe | Nothing to do |
| 37 | 18/595 | 1 x 0.6 | Pipe | Reconstruction due to poor condition |
| 38 | 19/350 | 1 x 1.5 | Slab | Reconstruction due to poor condition |
| 39 | 19/550 | 1 x 0.45 | Pipe | Reconstruction due to insufficient vent |

| Sl. No. | Location/ Chainage | Existing Span Arrangement | Type of Culvert | Recommendation |
|---------|-----------------------|------------------------------|-----------------|---|
| 40 | 19/950 | 1 x 2.2 | Slab | Reconstruction due to poor condition |
| 41 | 20/400 | 2 x 1.0 | Pipe | To be widened |
| 42 | 21/350 | 1 x 1.5 | Slab | Reconstruction due to poor condition |
| 43 | 21/800 | 1 x 0.75 | Pipe | NP-2 pipe, to be Reconstruction |
| 44 | 22/350 | 1 x 8.0 | Skew Arch | Reconstruction due to poor condition |
| 45 | 22/600 | 1 x 1.2 | Arch | Reconstruction due to poor condition |
| 46 | 22/950 | 1 x 0.3 | Pipe | Reconstruction due to poor condition |
| 47 | 23/200 | 1 x 0.75 | Pipe | To be widened |
| 48 | 23/900 | 1 x 1.22 | Arch | Reconstruction due to poor condition |
| 49 | 24/150 | 1 x 1.38 | Skew Slab | To be widened |
| 50 | 24/450 | 2 x 0.9 | Arch | Reconstruction due to poor condition |
| 51 | 24/800 | 1 x 1.5 | Skew Slab | Reconstruction due to poor condition |
| 52 | 25/400 | 1 x 0.3 | Pipe | NP-2 pipe, to be Reconstruction |
| 53 | 25/500 | 1 x 0.9 | Slab | Reconstruction due to poor condition |
| 54 | 25/995 | 1 x 1.2 | Pipe | Nothing to do |
| 55 | 26/150 | 1 x 2.0 | Slab | To be widened |
| 56 | 26/500 | 1 x 0.3 | Pipe | NP-2 pipe, to be Reconstruction |
| 57 | 27/200 | 1 x 0.3 | Pipe | To be widened |
| 58 | 28/000 | 1 x 0.9 | Pipe | Reconstruction due to poor condition |
| 59 | 28/200 | 1 x 5.2 | Slab | Reconstruction due to poor condition |
| 60 | 28/400 | - | Choked | Reconstruction due to insufficient vent |
| 61 | 29/200 | 1 x 0.9 | Arch | Reconstruction due to poor condition |
| 62 | 29/350 | 1 x 0.8 | Arch | Reconstruction due to poor condition |
| 63 | 30/700 | 1 x 0.9 | Pipe | To be widened |
| 64 | 31/150 | 1 x 1.0 | Pipe | To be widened |
| 65 | 32/625 | 1 x 1.2 | Pipe | To be widened |
| 66 | 32/650 | 1 x 0.45 | Pipe | To be widened |
| 67 | 34/400 | 1 x 0.6 | Slab | Reconstruction due to poor condition |
| 68 | 35/100 | 1 x 1.5 | Slab | Reconstruction due to poor condition |
| 69 | 35/700 | 1 x 0.9 | Skew Arch | Reconstruction due to poor condition |
| 70 | 36/150 | 1 x 0.6 | Pipe | NP-2 pipe, to be Reconstruction |
| 71 | 36/400 | 1 x 0.9 | Slab | Reconstruction due to poor condition |
| 72 | 36/900 | 1 x 4.5 | Slab | Reconstruction due to poor condition |
| 73 | 37/200 | 1 x 3.0 | Slab | Reconstruction due to poor condition |
| 74 | 37/700 | 1 x 0.9 | Pipe | Reconstruction due to poor condition |
| 75 | 37/980 | 1 x 0.6 | Pipe | Reconstruction due to poor condition |
| 76 | 38/350 | 1 x 0.9 | Slab | Reconstruction due to poor condition |
| 77 | 38/600 | 1 x 3.5 | Slab | Reconstruction due to poor condition |
| 78 | 38/950 | 1 x 1.9 | Skew Slab | Reconstruction due to poor condition |
| 79 | 40/175 | 1 x 1.0 | Pipe | To be widened |
| 80 | 41/250 | 1 x 1.5 | Slab | Reconstruction due to poor condition |
| 81 | 41/900 | 1 x 1.0 | Slab | Reconstruction due to poor condition |
| 82 | 42/400 | 1 x 1.5 | Slab | To be widened |
| 83 | 42/975 | 1 x 1.5 | Slab | Reconstruction due to poor condition |
| 84 | 43/230 | 1 x 1.5 | Slab | Reconstruction due to poor condition |
| 85 | 43/650 | 1 x 3.0 | Skew Slab | Reconstruction due to poor condition |
| 86 | 44/100 | 1 x 1.5 | Slab | Reconstruction due to poor condition |

| Sl. No. | Location/ Chainage | Existing Span Arrangement | Type of Culvert | Recommendation |
|---------|-----------------------|------------------------------|-----------------|---|
| 87 | 44/600 | 1 x 0.45 | Pipe | NP-2 pipe, to be Reconstruction |
| 88 | 45/550 | 1 x 1.5 | Slab | Reconstruction due to poor condition |
| 89 | 46/600 | 1 x 1.2 | Slab | Reconstruction due to poor condition |
| 90 | 46/900 | 1 x 1.2 | Slab | Reconstruction due to poor condition |
| 91 | 47/800 | 1 x 1.5 | Slab | To be widened |
| 92 | 50/200 | 5 x 1.0 | Pipe | Nothing to do |
| 93 | 52/300 | 1 x 0.25 | Pipe | Reconstruction due to poor condition |
| 94 | 52/500 | - | Choked | Reconstruction due to insufficient vent |
| 95 | 52/700 | 1 x 1.3 | Slab | Reconstruction due to poor condition |
| 96 | 52/900 | 1 x 0.45 | Pipe | Reconstruction due to poor condition |
| 97 | 53/500 | 1 x 0.3 | Pipe | Reconstruction due to poor condition |
| 98 | 53/800 | 1 x 0.9 | Slab | Reconstruction due to poor condition |
| 99 | 54/300 | - | Choked | Reconstruction due to insufficient vent |
| 100 | 54/500 | 2 x 0.6 | Pipe | Reconstruction due to insufficient vent |
| 101 | 55/100 | - | Pipe | Reconstruction due to insufficient vent |
| 102 | 55/300 | 1 x 0.6 | Pipe | Reconstruction due to poor condition |
| 103 | 57/300 | 1 x 4.7 | Slab | Reconstruction due to poor condition |
| 104 | 58/600 | 2 x 1.3 | Arch | Reconstruction due to poor condition |
| 105 | 59/300 | 1 x 0.6 | Pipe | Reconstruction due to poor condition |
| 106 | 61/100 | 1 x 4.6 | Slab | Reconstruction due to poor condition |
| 107 | 61/900 | 1 x 0.6 | Pipe | To be widened |
| 108 | 62/250 | 2 x 0.6 | Skew Pipe | To be widened |
| 109 | 62/950 | 2 x 1.0 | Arch | Reconstruction due to poor condition |
| 110 | 63/300 | 1 x 0.6 | Pipe | To be widened |
| 111 | 64/100 | 1 x 0.6 | Pipe | To be widened |
| 112 | 64/850 | 1 x 1.0 | Skew Pipe | To be widened |
| 113 | 65/925 | 1 x 1.5 | Slab | To be widened |
| 114 | 67/500 | 2 x 0.6 | Pipe | Reconstruction due to poor condition |
| 115 | 67/580 | - | Slab | Reconstruction due to poor condition |
| 116 | 68/005 | 1 x 0.6 | Pipe | NP-2 pipe, to be Reconstruction |
| 117 | 68/040 | 1 x 4.0 | Choked | Reconstruction due to insufficient vent |
| 118 | 68/050 | 5 x 1.0 | Pipe | To be widened |
| 119 | 68/900 | 2 x 1.2 | Slab | Reconstruction due to poor condition |
| 120 | 69/300 | 2 x 1.3 | Pipe | Reconstruction due to poor condition |
| 121 | 69/310 | 1 x 0.6 | Pipe | NP-2 pipe, to be Reconstruction |
| 122 | 70/900 | 1 x 1.4 | Pipe | Reconstruction due to poor condition |
| 123 | 71/600 | 1 x 0.6 | Slab | Reconstruction due to poor condition |
| 124 | 71/900 | - | Slab | Reconstruction due to insufficient vent |
| 125 | 72/850 | - | Slab | Reconstruction due to insufficient vent |
| 126 | 73/600 | 1 x 3.0 | Slab | Reconstruction due to poor condition |
| 127 | 76/100 | 1 x 4.0 | Slab | To be widened |
| 128 | 77/350 | 1 x 1.2 | Arch | Reconstruction due to poor condition |
| 129 | 79/750 | 1 x 3.0 | Slab | To be widened |
| 130 | 79/800 | 1 x 0.6 | Pipe | Reconstruction due to poor condition |
| 131 | 80/200 | 1 x 0.6 | Pipe | NP-2 pipe, to be Reconstruction |
| 132 | 81/036 | 1 x 0.6 | Pipe | NP-2 pipe, to be Reconstruction |
| 133 | 82/150 | 1 x 0.6 | Pipe | NP-2 pipe, to be Reconstruction |

| Sl. No. | Location/ Chainage | Existing Span Arrangement | Type of Culvert | Recommendation |
|----------------------------|-----------------------|------------------------------|-----------------|---|
| 134 | 83/015 | 1 x 0.6 | Pipe | NP-2 pipe, to be Reconstruction |
| 135 | 84/500 | 1 x 1.0 | Arch | Reconstruction due to poor condition |
| 136 | 86/150 | 1 x 0.3 | Pipe | NP-2 pipe, to be Reconstruction |
| 137 | 86/300 | 1 x 4.5 | Slab | To be widened |
| 138 | 86/950 | 1 x 1.0 | Arch | Reconstruction due to poor condition |
| 139 | 93/400 | 4 x 1.0 | Pipe | To be widened |
| 140 | 93/600 | 1 x 1.6 | Slab | Reconstruction due to poor condition |
| 141 | 93/700 | 1 x 0.3 | Stone Slab | Reconstruction due to poor condition |
| 142 | 94/100 | - | Choked | Reconstruction due to poor condition |
| 143 | 94/800 | 1 x 0.45 | Pipe | To be widened |
| 144 | 95/100 | 1 x 4.9 | Slab | Reconstruction due to poor condition |
| 145 | 96/900 | 3 x 1.0 | Skew Pipe | Nothing to do |
| Chandbali – Bhadrak | | | | |
| 1 | 45/200 | 1 x 1.5 | Arch | Reconstruction due to poor condition |
| 2 | 48/010 | 1 x 1.5 | Slab | To be widened |
| 3 | 48/500 | - | Choked | Reconstruction due to insufficient vent |
| 4 | 50/100 | 1 x 1.0 | Arch | Reconstruction due to poor condition |
| 5 | 50/440 | 1 x 6.0 | Slab | To be widened |
| 6 | 50/800 | - | Choked | Reconstruction due to insufficient vent |

Annexure 5.1**List of Existing Potable Water Source along Project Road**

| SI No. | Side (L/R) | Chainage | District | Revenue Village | Type of Structure |
|--------|------------|----------|----------|-----------------|-------------------|
| 1 | Right | 3-4 | Cuttack | Gujarpur | Tube Well |
| 2 | Right | 3-4 | Cuttack | Pirabazar | Tube Well |
| 3 | Right | 3-4 | Cuttack | Pirabazar | Well |
| 4 | Right | 6-7 | Cuttack | Mutarifa | Tube Well |
| 5 | Right | 6-7 | Cuttack | Mutarifa | Water Stand Post |
| 6 | Left | 7-8 | Cuttack | Mutarifa | Water Stand Post |
| 7 | Left | 7-8 | Cuttack | Mutarifa | Tube Well |
| 8 | Left | 7-8 | Cuttack | Mutarifa | Tube Well |
| 9 | Right | 8-9 | Cuttack | Purbakachha | Well |
| 10 | Right | 8-9 | Cuttack | Bahadulpatna | Tube Well |
| 11 | Left | 10-11 | Cuttack | Singhamapur | Tube well |
| 12 | Right | 10-11 | Cuttack | Bahugram | Well |
| 13 | Right | 10-11 | Cuttack | Bahugram | Well |
| 14 | Left | 11-12 | Cuttack | Bhatapada | Tube Well |
| 15 | Left | 13-14 | Cuttack | Bhatapada | Well |
| 16 | Right | 15-16 | Cuttack | Gangapur | Tube Well |
| 17 | Right | 16-17 | Cuttack | Bahabalpur | Tube Well |
| 18 | Left | 17-18 | Cuttack | Sapanpur | Tube Well |
| 19 | Left | 19-20 | Cuttack | Chandradeipur | Water Stand Post |
| 20 | Left | 22-23 | Cuttack | Kulia | Tube Well |
| 21 | Left | 22-23 | Cuttack | Kulia | Well |
| 22 | Left | 22-23 | Cuttack | Kulia | Well |
| 23 | Right | 24-25 | Cuttack | Patapur | Tube Well |
| 24 | Right | 24-25 | Cuttack | Patapur | Well |
| 25 | Right | 24-25 | Cuttack | Patapur | Tube Well |
| 26 | Left | 25-26 | Cuttack | Mahajanpur | Well |
| 27 | Left | 26-27 | Cuttack | Mahajanpur | Well |
| 28 | Left | 26-27 | Cuttack | Mahajanpur | Well |
| 29 | Right | 26-27 | Cuttack | Mahajanpur | Well |
| 30 | Right | 27-28 | Cuttack | Nischintakoili | Tube Well |
| 31 | Right | 27-28 | Cuttack | Nischintakoili | Well |
| 32 | Right | 27-28 | Cuttack | Nischintakoili | Tube Well |
| 33 | Right | 28-29 | Cuttack | Nischintakoili | Tube Well |
| 34 | Right | 31-32 | Cuttack | Katarapada | Tube Well |
| 35 | Left | 33-34 | Cuttack | Julikipara | Well |
| 36 | Left | 33-34 | Cuttack | Julikipara | Well |
| 37 | Right | 33-34 | Cuttack | Julikipara | Tube Well |

| SI No. | Side (L/R) | Chainage | District | Revenue Village | Type of Structure |
|--------|------------|----------|------------|-----------------|-------------------|
| 38 | Right | 33-34 | Cuttack | Julikipara | Tube Well |
| 39 | Right | 35-36 | Cuttack | Ramaranga | Tube Well |
| 40 | Right | 35-36 | Cuttack | Banamalipur | Tube Well |
| 41 | Right | 35-36 | Cuttack | Banamalipur | Well |
| 42 | Right | 36-37 | Cuttack | Katikata | Well |
| 43 | Right | 37-38 | Kendrapara | Bhanagaon | Tube Well |
| 44 | Left | 37-38 | Kendrapara | Bhanagaon | Tube Well |
| 45 | Left | 37-38 | Kendrapara | Bhanagaon | Water Stand Post |
| 46 | Left | 37-38 | Kendrapara | Bhanagaon | Tube Well |
| 47 | Left | 37-38 | Kendrapara | Bhanagaon | Water Stand Post |
| 48 | Right | 38-39 | Kendrapara | Chandol | Tube Well |
| 49 | Right | 38-39 | Kendrapara | Chandol | Tube Well |
| 50 | Right | 38-39 | Kendrapara | Chandol | Tube Well |
| 51 | Left | 38-39 | Kendrapara | Chandol | Tube Well |
| 52 | Left | 38-39 | Kendrapara | Chandol | Tube Well |
| 53 | Right | 42-43 | Kendrapara | Daliji | Tube Well |
| 54 | Left | 42-43 | Kendrapara | Daliji | Tube Well |
| 55 | Right | 43-44 | Kendrapara | Syamsundarpur | Well |
| 56 | Left | 43-44 | Kendrapara | Syamsundarpur | Tube Well |
| 57 | Right | 44-45 | Kendrapara | Bhagabatpur | Water Stand Post |
| 58 | Right | 44-45 | Kendrapara | Bhagabatpur | Tube Well |
| 59 | Right | 44-45 | Kendrapara | Bhagabatpur | Well |
| 60 | Right | 44-45 | Kendrapara | Bhagabatpur | Water Stand Post |
| 61 | Right | 44-45 | Kendrapara | Bhagabatpur | Well |
| 62 | Left | 46-47 | Kendrapara | Jantilo | Well |
| 63 | Left | 47-48 | Kendrapara | Jamadhara | Water Stand Post |
| 64 | Left | 48-49 | Kendrapara | Kasati | Water Stand Post |
| 65 | Right | 58-59 | Kendrapara | Baro | Tube Well |
| 66 | Left | 66-67 | Kendrapara | Badamulabasanta | Water Stand Post |
| 67 | Left | 66-67 | Kendrapara | Badamulabasanta | Tube Well |
| 68 | Left | 74-75 | Kendrapara | Gopalpur | Tube Well |
| 69 | Right | 77-78 | Kendrapara | Mahasahani | Tube Well |
| 70 | Right | 78-79 | Kendrapara | Mahasahani | Well |
| 71 | Right | 79-80 | Kendrapara | Chandigadi | Tube Well |
| 72 | Left | 79-80 | Kendrapara | Chandigadi | Well |
| 73 | Right | 79-80 | Kendrapara | Chandigadi | Tube Well |
| 74 | Right | 79-80 | Kendrapara | Chandigadi | Tube Well |
| 75 | Left | 79-80 | Kendrapara | Chandigadi | Tube Well |
| 76 | Left | 80-81 | Kendrapara | Chandigadi | Well |

| SI No. | Side (L/R) | Chainage | District | Revenue Village | Type of Structure |
|--------|------------|----------|------------|-----------------|-------------------|
| 77 | Right | 82-83 | Kendrapara | Sitaleswar | Well |
| 78 | Right | 82-83 | Kendrapara | Sitaleswar | Well |
| 79 | Left | 82-83 | Kendrapara | Sitaleswar | Well |
| 80 | Left | 82-83 | Kendrapara | Sitaleswar | Tube Well |
| 81 | Left | 82-83 | Kendrapara | Sitaleswar | Tube Well |
| 82 | Right | 86-87 | Kendrapara | Lokapada | Tube Well |
| 83 | Right | 86-87 | Kendrapara | Lokapada | Well |
| 84 | Left | 87-88 | Kendrapara | Nagapada | Tube Well |
| 85 | Left | 87-88 | Kendrapara | Nagapada | Tube Well |
| 86 | Right | 89-90 | Kendrapara | BarunaDhia | Tube Well |
| 87 | Right | 91-92 | Kendrapara | Achhutapur | Tube Well |
| 88 | Left | 93-94 | Kendrapara | Gokheneswar | Well |
| 89 | Left | 93-94 | Kendrapara | Gokheneswar | Tube Well |
| 90 | Left | 93-94 | Kendrapara | Gokheneswar | Well |
| 91 | Left | 99-100 | Bhadrak | Simulia | Tube Well |
| 92 | Left | 100-101 | Bhadrak | Chandabali | Water Stand Post |
| 93 | Left | 100-101 | Bhadrak | Chandabali | Water Stand Post |
| 94 | Left | 100-101 | Bhadrak | Chandabali | Tube Well |
| 95 | Left | 100-101 | Bhadrak | Chandabali | Water Stand Post |
| 96 | Left | 101-102 | Bhadrak | Chandabali | Water Stand Post |
| 97 | Right | 101-102 | Bhadrak | Chandabali | Water Stand Post |
| 98 | Right | 101-102 | Bhadrak | Chandabali | Water Stand Post |
| 99 | Right | 101-102 | Bhadrak | Chandabali | Water Stand Post |
| 100 | Left | 55-56 | Kendrapara | Jajanga | Tube Well |
| 101 | Right | 55-56 | Kendrapara | Jajanga | Tube Well |
| 102 | Right | 55-56 | Kendrapara | Jajanga | Tube Well |
| 103 | Left | 56-57 | Kendrapara | Khamarkespur | Tube Well |
| 104 | Right | 57-58 | Kendrapara | Trillochanpur | Well |
| 105 | Left | 63-64 | Kendrapara | Gangapada | Tube Well |
| 106 | Left | 63-64 | Kendrapara | Gogua | Tube Well |
| 107 | Left | 63-64 | Kendrapara | Gogua | Water Stand Post |
| 108 | Left | 64-65 | Kendrapara | Gogua | Tube Well |
| 109 | Left | 64-65 | Kendrapara | Gogua | Tube Well |
| 110 | Left | 65-66 | Kendrapara | Badamulabasanta | Tube Well |
| 111 | Left | 65-66 | Kendrapara | Badamulabasanta | Water Stand Post |
| 112 | Left | 65-66 | Kendrapara | Badamulabasanta | Water Stand Post |
| 113 | Right | 65-66 | Kendrapara | Badamulabasanta | Water Stand Post |
| 114 | Right | 65-66 | Kendrapara | Badamulabasanta | Water Stand Post |
| 115 | Right | 65-66 | Kendrapara | Badamulabasanta | Tube Well |

| SI No. | Side (L/R) | Chainage | District | Revenue Village | Type of Structure |
|--------|------------|----------|------------|-----------------|--------------------|
| 116 | Right | 65-66 | Kendrapara | Badamulabasanta | Tube Well |
| 117 | Right | 65-66 | Kendrapara | Badamulabasanta | Water Stand Post |
| 118 | Right | 50-51 | Kendrapara | Guhalsingh | Tube Well |
| 119 | Right | 50-51 | Kendrapara | Guhalsingh | Tube Well |
| 120 | Right | 50-51 | Kendrapara | Guhalsingh | Tube Well |
| 121 | Left | 51-52 | Kendrapara | Gulnagar | Tube Well |
| 122 | Left | 51-52 | Kendrapara | Bhamaradiapatna | Water Stand Post |
| 123 | Right | 53-54 | Kendrapara | Garapur | Tube Well |
| 124 | Right | 54-55 | Kendrapara | Kapaleswar | Well |
| 125 | Right | 68-69 | Kendrapara | Belatala | Water Stand Post |
| 126 | Left | 68-69 | Kendrapara | Belatala | Tube Well |
| 127 | Right | 68-69 | Kendrapara | Belatala | Water Stand Post |
| 128 | Left | 68-69 | Kendrapara | Belatala | Tube Well |
| 129 | Right | 69-70 | Kendrapara | Belatala | Well with Platfrom |
| 130 | Right | 69-70 | Kendrapara | Belatala | Water Stand Post |
| 131 | Right | 69-70 | Kendrapara | Belatala | Water Stand Post |
| 132 | Right | 71-72 | Kendrapara | Balipada | Water Stand Post |
| 133 | Left | 72-73 | Kendrapara | Kasananta | Water Stand Post |
| 134 | Left | 72-73 | Kendrapara | Kasananta | Water Stand Post |
| 135 | Left | 72-73 | Kendrapara | Kasananta | Water Stand Post |
| 136 | Left | 72-73 | Kendrapara | Kasananta | Water Stand Post |
| 137 | Right | 72-73 | Kendrapara | Kasananta | Well |
| 138 | Right | 72-73 | Kendrapara | Kasananta | Well |
| 139 | Left | 85-86 | Kendrapara | Demala | Water Stand Post |
| 140 | Left | 85-86 | Kendrapara | Demala | Well |
| 141 | Left | 85-86 | Kendrapara | Demala | Well |
| 142 | Left | 85-86 | Kendrapara | Demala | Water Stand Post |
| 143 | Right | 95-96 | Kendrapara | Kantapada | Tube Well |
| 144 | Right | 95-96 | Kendrapara | Kantapada | Water Stand Post |
| 145 | Right | 95-96 | Kendrapara | Kantapada | Tube Well |

Annexure 5.2**List of Existing Ponds along Project Road**

| Sl No | Item | Chainage | Location Left/Right |
|--------------|-------------|-----------------|----------------------------|
| 1 | Pond | 4.477 | Right |
| 2 | Pond | 5.305 | Right |
| 3 | Pond | 7.411 | Left |
| 4 | Pond | 7.459 | Right |
| 5 | Pond | 11.585 | Right |
| 6 | Pond | 34.424 | Left |
| 7 | Pond | 38.560 | Left |
| 8 | Pond | 45.928 | Left |
| 9 | Pond | 53.374 | Right |
| 10 | Pond | 54.724 | Left |
| 11 | Pond | 57.162 | Left |
| 12 | Pond | 57.800 | Right |
| 13 | Pond | 57.830 | Left |
| 14 | Pond | 63.221 | Right |
| 15 | Pond | 63.381 | Right |
| 16 | Pond | 63.927 | Right |
| 17 | Pond | 64.944 | Left |
| 18 | Pond | 65.932 | Left |
| 19 | Pond | 66.763 | Left |
| 20 | Pond | 67.362 | Right |
| 21 | Pond | 69.570 | Left |
| 22 | Pond | 72.500 | Left |
| 23 | Pond | 76.305 | Right |
| 24 | Pond | 76.400 | Right |
| 25 | Pond | 77.239 | Left |
| 26 | Pond | 79.682 | Left |
| 27 | Pond | 81.879 | Left |
| 28 | Pond | 82.012 | Right |
| 29 | Pond | 82.821 | Right |
| 30 | Pond | 91.351 | Left |
| 31 | Pond | 91.532 | Left |
| 32 | Pond | 93.300 | Left |
| 33 | Pond | 96.113 | Left |
| 34 | Pond | 97.712 | Right |
| 35 | Pond | 102.400 | Left |
| 36 | Pond | 102.650 | Right |
| 37 | Pond | 102.926 | Left |
| 38 | Pond | 104.033 | Left |
| 39 | Pond | 104.485 | Left |
| 40 | Pond | 104.575 | Left |
| 41 | Pond | 104.670 | Left |
| 42 | Pond | 104.668 | Right |
| 43 | Pond | 104.776 | Left |
| 44 | Pond | 105.120 | Left |

CPCB Surface Water Quality Standard

| Designated-Best-Use | Class of water | Criteria |
|--|----------------|---|
| Drinking Water Source without conventional treatment but after disinfection | A | <ul style="list-style-type: none"> Total Coliforms Organism MPN/100ml shall be 50 or less pH between 6.5 and 8.5 Dissolved Oxygen 6mg/l or more Biochemical Oxygen Demand 5 days 20°C 2mg/l or less |
| Outdoor bathing (Organised) | B | <ul style="list-style-type: none"> Total Coliforms Organism MPN/100ml shall be 500 or less pH between 6.5 and 8.5 Dissolved Oxygen 5mg/l or more Biochemical Oxygen Demand 5 days 20°C 3mg/l or less |
| Drinking water source after conventional treatment and disinfection | C | <ul style="list-style-type: none"> Total Coliforms Organism MPN/100ml shall be 5000 or less pH between 6 to 9 Dissolved Oxygen 4mg/l or more Biochemical Oxygen Demand 5 days 20°C 3mg/l or less |
| Propagation of Wild life and Fisheries | D | <ul style="list-style-type: none"> pH between 6.5 to 8.5 Dissolved Oxygen 4mg/l or more Free Ammonia (as N) 1.2 mg/l or less |
| Irrigation, Industrial Cooling, Controlled Waste disposal | E | <ul style="list-style-type: none"> pH betwwn 6.0 to 8.5 Electrical Conductivity at 25°C micro mhos/cm Max.2250 Sodium absorption Ratio Max. 26 Boron Max. 2mg/l |
| | Below-E | Not Meeting A, B, C, D & E Criteria |

**INDIAN STANDARD SPECIFICATIONS FOR DRINKING WATER
IS: 10500**

| S.NO. | Parameter | Requirement desirable Limit | Remarks |
|-------|------------------------------------|-----------------------------|---|
| 1. | Colour | 5 | May be extended up to 50 if toxic substances are suspected |
| 2. | Turbidity | 10 | May be relaxed up to 25 in the absence of alternate |
| 3. | pH | 6.5 to 8.5 | May be relaxed up to 9.2 in the absence |
| 4. | Total Hardness | 300 | May be extended up to 600 |
| 5. | Calcium as Ca | 75 | May be extended up to 200 |
| 6. | Magnesium as Mg | 30 | May be extended up to 100 |
| 7. | Copper as Cu | 0.05 | May be relaxed up to 1.5 |
| 8. | Iron | 0.3 | May be extended up to 1 |
| 9. | Manganese | 0.1 | May be extended up to 0.5 |
| 10. | Chlorides | 250 | May be extended up to 1000 |
| 11. | Sulphates | 150 | May be extended up to 400 |
| 12. | Nitrates | 45 | No relaxation |
| 13. | Fluoride | 0.6 to 1.2 | If the limit is below 0.6 water should be rejected, Max. Limit is extended to 1.5 |
| 14. | Phenols | 0.001 | May be relaxed up to 0.002 |
| 15. | Mercury | 0.001 | No relaxation |
| 16. | Cadmium | 0.01 | No relaxation |
| 17. | Selenium | 0.01 | No relaxation |
| 18. | Arsenic | 0.05 | No relaxation |
| 19. | Cyanide | 0.05 | No relaxation |
| 20. | Lead | 0.1 | No relaxation |
| 21. | Zinc | 5.0 | May be extended up to 10.0 |
| 22. | Anionic detergents (MBAS) | 0.2 | May be relaxed up to 1 |
| 23. | Chromium as Cr ⁺⁶ | 0.05 | No relaxation |
| 24. | Poly nuclear aromatic Hydrocarbons | -- | -- |
| 25. | Mineral Oil | 0.01 | May be relaxed up to 0.03 |
| 26. | Residual free Chlorine | 0.2 | Applicable only when water is chlorinated |
| 27. | Pesticides | Absent | -- |
| 28. | Radio active | -- | -- |

Annexure 5.5

Trees falling within COI

| Chainages (In KM) | To be Removed | | | Trees to retained | | |
|----------------------|---------------|-------|-------|-------------------|-------|-------|
| | Left | Right | Total | Left | Right | Total |
| 0/000 to 1/000 | 18 | 10 | 28 | 3 | 10 | 13 |
| 1/000 to 2/000 | 30 | 13 | 43 | 2 | 2 | 4 |
| 2/000 to 3/000 | 12 | 10 | 22 | 4 | 14 | 18 |
| 3/000 to 4/000 | 35 | 14 | 49 | 11 | 18 | 29 |
| 4/000 to 5/000 | 22 | 30 | 52 | 5 | 21 | 26 |
| 5/000 to 6/000 | 26 | 20 | 46 | 7 | 21 | 28 |
| 6/000 to 7/000 | 18 | 32 | 50 | 13 | 34 | 47 |
| 7/000 to 8/000 | 19 | 16 | 35 | 2 | 7 | 9 |
| 8/000 to 9/000 | 11 | 17 | 28 | 0 | 3 | 3 |
| 9/000 to 10/000 | 21 | 20 | 41 | 5 | 1 | 6 |
| 10/000 to 11/000 | 12 | 13 | 25 | 2 | 18 | 20 |
| 11/000 to 12/000 | 8 | 11 | 19 | 0 | 3 | 3 |
| 12/000 to 13/000 | 11 | 15 | 26 | 0 | 0 | 0 |
| 13/000 to 14/000 | 10 | 16 | 26 | 0 | 1 | 1 |
| 14/000 to 15/000 | 8 | 15 | 23 | 1 | 5 | 6 |
| 15/000 to 16/000 | 14 | 16 | 30 | 1 | 6 | 7 |
| 16/000 to 17/000 | 14 | 12 | 26 | 0 | 7 | 7 |
| 17/000 to 18/000 | 9 | 15 | 24 | 2 | 9 | 11 |
| 18/000 to 19/000 | 1 | 8 | 9 | 0 | 4 | 4 |
| 19/000 to 20/000 | 5 | 12 | 17 | 4 | 2 | 6 |
| 20/000 to 21/000 | 0 | 21 | 21 | 0 | 12 | 12 |
| 21/000 to 22/000 | 10 | 8 | 18 | 0 | 3 | 3 |
| 22/000 to 23/000 | 16 | 16 | 32 | 0 | 5 | 5 |
| 23/000 to 24/000 | 29 | 18 | 47 | 0 | 4 | 4 |
| 24/000 to 25/000 | 23 | 2 | 25 | 0 | 2 | 2 |
| 25/000 to 26/000 | 8 | 11 | 19 | 11 | 3 | 14 |
| 26/000 to 27/000 | 17 | 24 | 41 | 0 | 4 | 4 |
| 27/000 to 28/000 | 18 | 24 | 42 | 22 | 3 | 25 |
| 28/000 to 29/000 | 14 | 34 | 48 | 43 | 4 | 47 |
| 29/000 to 30/000 | 45 | 129 | 174 | 43 | 4 | 47 |
| 30/000 to 31/000 | 8 | 6 | 14 | 8 | 2 | 10 |
| 31/000 to 32/000 | 2 | 31 | 33 | 16 | 3 | 19 |
| 32/000 to 33/000 | 45 | 8 | 53 | 30 | 0 | 30 |
| 33/000 to 34/000 | 0 | 2 | 2 | 6 | 8 | 14 |
| 34/000 to 35/000 | 18 | 44 | 62 | 1 | 0 | 1 |
| 35/000 to 36/000 | 12 | 38 | 50 | 0 | 0 | 0 |
| 36/000 to 37/000 | 18 | 24 | 42 | 2 | 2 | 4 |
| 37/000 to 38/000 | 23 | 19 | 42 | 0 | 0 | 0 |

| | | | | | | |
|--------------------|-----|-----|-----|---|---|---|
| 38/000 to 39/000 | 7 | 17 | 24 | 0 | 0 | 0 |
| 39/000 to 40/000 | 15 | 12 | 27 | 0 | 0 | 0 |
| 40/000 to 41/000 | 38 | 18 | 56 | 0 | 0 | 0 |
| 41/000 to 42/000 | 23 | 26 | 49 | 0 | 0 | 0 |
| 42/000 to 43/000 | 23 | 13 | 36 | 0 | 0 | 0 |
| 43/000 to 44/000 | 26 | 21 | 47 | 0 | 0 | 0 |
| 44/000 to 45/000 | 7 | 8 | 15 | 2 | 0 | 2 |
| 45/000 to 46/000 | 16 | 21 | 37 | 0 | 0 | 0 |
| 46/000 to 47/000 | 6 | 8 | 14 | 0 | 4 | 4 |
| 47/000 to 48/000 | 32 | 47 | 79 | 0 | 0 | 0 |
| 48/000 to 49/000 | 21 | 23 | 44 | 0 | 0 | 0 |
| 49/000 to 50/000 | 18 | 32 | 50 | 0 | 0 | 0 |
| 50/000 to 51/000 | 27 | 48 | 75 | 0 | 0 | 0 |
| 51/000 to 52/000 | 12 | 34 | 46 | 2 | 0 | 2 |
| 52/000 to 53/000 | 68 | 40 | 108 | 0 | 3 | 3 |
| 53/000 to 54/000 | 35 | 30 | 65 | 1 | 0 | 1 |
| 54/000 to 55/000 | 24 | 46 | 70 | 1 | 0 | 1 |
| 55/000 to 56/000 | 78 | 52 | 130 | 0 | 0 | 0 |
| 56/000 to 57/000 | 48 | 49 | 97 | 0 | 0 | 0 |
| 57/000 to 58/000 | 59 | 43 | 102 | 0 | 0 | 0 |
| 58/000 to 59/000 | 56 | 46 | 102 | 0 | 0 | 0 |
| 59/000 to 60/000 | 118 | 92 | 210 | 1 | 0 | 1 |
| 60/000 to 61/000 | 163 | 192 | 355 | 0 | 0 | 0 |
| 61/000 to 62/000 | 155 | 76 | 231 | 1 | 0 | 1 |
| 62 /000to 63 /000 | 106 | 88 | 194 | 0 | 2 | 2 |
| 63/000 to 64 /000 | 38 | 87 | 125 | 0 | 0 | 0 |
| 64 /000 to 65 /000 | 52 | 73 | 125 | 1 | 0 | 1 |
| 65 /000 to 66 /000 | 53 | 29 | 82 | 0 | 0 | 0 |
| 66 /000 to 67 /000 | 96 | 190 | 286 | 2 | 1 | 3 |
| 67 /000 to 68 /000 | 92 | 210 | 302 | 0 | 0 | 0 |
| 68 /000 to 69 /000 | 58 | 232 | 290 | 1 | 0 | 1 |
| 69 /000 to 70 /000 | 24 | 11 | 35 | 1 | 1 | 2 |
| 70 /000 to 71 /000 | 0 | 0 | 0 | 0 | 0 | 0 |
| 71 /000 to 72 /000 | 8 | 6 | 14 | 1 | 2 | 3 |
| 72 /000 to 73 /000 | 34 | 30 | 64 | 1 | 1 | 2 |
| 73 /000 to 74 /000 | 20 | 10 | 30 | 0 | 0 | 0 |
| 74 /000 to 75 /000 | 25 | 14 | 39 | 0 | 2 | 2 |
| 75 /000 to 76 /000 | 16 | 5 | 21 | 0 | 0 | 0 |
| 76 /000 to 77 /000 | 89 | 68 | 157 | 0 | 0 | 0 |
| 77 /000 to 78 /000 | 84 | 33 | 117 | 1 | 1 | 2 |
| 78 /000 to 79/000 | 52 | 65 | 117 | 0 | 0 | 0 |
| 79 /000 to 80 /000 | 30 | 48 | 78 | 0 | 0 | 0 |
| 80 /000 to 81/000 | 45 | 53 | 98 | 0 | 0 | 0 |

| | | | | | | |
|----------------------|-------------|-------------|-------------|------------|------------|------------|
| 81 /000 to 82 /000 | 66 | 109 | 175 | 0 | 0 | 0 |
| 82 /000 to 83 /000 | 42 | 136 | 178 | 0 | 0 | 0 |
| 83 /000 to 84 /000 | 0 | 0 | 0 | 0 | 0 | 0 |
| 84 /000 to 85/000 | 0 | 0 | 0 | 0 | 0 | 0 |
| 85 /000 to 86 /000 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 /000 to 87/000 | 108 | 94 | 202 | 7 | 9 | 16 |
| 87 /000 to 88 /000 | 16 | 6 | 22 | 1 | 0 | 1 |
| 88 /000 to 89 /000 | 0 | 0 | 0 | 0 | 0 | 0 |
| 89 /000 to 90 /000 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90 /000 to 91 /000 | 0 | 0 | 0 | 0 | 0 | 0 |
| 91 /000 to 92 /000 | 12 | 10 | 22 | 0 | 0 | 0 |
| 92 /000 to 93 /000 | 48 | 20 | 68 | 0 | 0 | 0 |
| 93 /000 to 94 /000 | 58 | 79 | 137 | 0 | 0 | 0 |
| 94 /000to 95 /000 | 54 | 72 | 126 | 0 | 0 | 0 |
| 95 /000 to 96/000 | 104 | 75 | 179 | 1 | 2 | 3 |
| 96 /000 to 97 /000 | 148 | 132 | 280 | 53 | 92 | 145 |
| 97 /000 to 98 /000 | 18 | 22 | 40 | 0 | 0 | 0 |
| 98 /000 to 99 /000 | 8 | 8 | 16 | 29 | 23 | 52 |
| 99 /000100 /000 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100 /000 to 101 /000 | 8 | 5 | 13 | 0 | 0 | 0 |
| 101 /000 102/000 | 68 | 27 | 95 | 0 | 1 | 1 |
| 102 /000 to 103 /000 | 79 | 24 | 103 | 1 | 2 | 3 |
| 103 /000 to 104 /000 | 97 | 19 | 116 | 2 | 0 | 2 |
| 104/000to 105 /000 | 58 | 44 | 102 | 0 | 2 | 2 |
| 105 /000 to 106 /000 | 37 | 30 | 67 | 3 | 4 | 7 |
| Grand Total | 3636 | 3932 | 7568 | 357 | 397 | 754 |

PROCEEDINGS OF DISTRICT LEVEL CONSULTATION MEETING

Date of District Level Meeting 08.12.2006

Venue DRDA Conference Hall, Bhadrak

Road Section in the District Chandbali-Bhadrak(SH-9) and Bhadrak-Basantia(SH-53)Road

District level consultation meeting regarding improvement of about 900 km of state road with the loan assistance of World Bank was held in the conference Hall, DRDA, Bhadrak for Chandbali-Bhadrak(SH-9) and Bhadrak-Basantia(SH-53)Road. These roads are being improved in priority year one road.

The meeting was chaired by District Magistrate and Collector, Bhadrak. Hon'ble Member of Parliament was also present in the meeting. List of participants are attached.

| Sl. No | Issue Raised | Comments of the Consultation Committee | Consensus Arrived |
|--------|--|---|-------------------|
| | <p>Enquired about the status of the project</p> <p>-Whether finance ministry has cleared it?</p> <p>-Rate of interest of loan</p> <p>-Whether Humps would be proposed in the new road,</p> <p>-Date of commencement of construction</p> <p>-Enquired about Railway Over bridge and proposed alignment at Randia.</p> | <p>-Status and agreement between World Bank and Govt. of India of the project was discussed.</p> <p>-It is a soft loan to the Government which will be paid back over a longer period.</p> <p>-Humps shall not be provided in this project road. There will be some other alternatives like signals and road markings.</p> <p>-The construction activities would be starting around October 2007.</p> <p>-Our proposed alignment matches with the RoB under construction.</p> | -- |
| | <p>-Before the loan sanction, how LA could be initiated.</p> | <p>-Land acquisition has to be done prior to the loan sanction. Encumbrance free land has to be shown to the World Bank</p> | -- |

| | | | |
|--|--|-----------------------|---|
| | | for sanction of loan. | |
| -Whether money has been sanctioned for this project | -World Bank has already sanctioned the project preparation fund to the tune of \$3m. | | |
| How many committees would be formed for disbursement of compensation. | This is not finalized but Gram sabha (Panchayat level committee) would be consulted in scheduled areas. | | It was agreed that Village level committee should be formed to address issues associated with compensation and land acquisition |
| Local representatives should be selected for the places where LA is proposed. | The issue would be discussed in implementation arrangement. | | |
| After tree plantation, how they shall be maintained ? | Generally; Plantation is done by forest department and maintained by the forest department. However, this time it has been thought of handing over of such assets to the Community. | | |
| Whether maintenance of road after construction is part of project cost. | No. Maintenance would be done by the Works Department. However, the proposed road would not require major maintenance for a long time . | | |
| Drainage system should be along the road side as most of the road section is raised. | It was assured that drainage system in the project corridor would be given due attention. All cross drainage and longitudinal drainage have been designed to cater the need of the water flow. Pucca drains in the built up areas and earthen drains/lined drains in other areas are being provided. | | |
| Ponds along the project road are overflowing in rainy season but dries out in dry period. These ponds are useful for irrigation purposes. Road development should not damage existing resources | Enhancement measures would be taken up to improve ponds in the vicinity of roads. | | |

| | | | |
|--|--|--|--|
| | <p>-Urban roads should be developed before rural road development take place. Roads inside Cuttack should be developed first.</p> <p>-Settlement of encroachers should be done prior to project implementation.</p> <p>-Missing links should be developed in the first phase.</p> <p>-Drainage provision should be sufficient to dispose off water.</p> <p>-Road cutting should be done with highly sophisticated machine.</p> | <p>-Proposal is very good. But at present we are concentrating on the issues related to a particular corridor.</p> <p>-It will be done.</p> <p>-The first phase roads have already been selected on the basis of traffic studies. All such points have been considered.</p> <p>-Adequate drainage ios being designed and shall be provided.</p> <p>-Utilities shall be permitted to cross the road at specified locations. All departments in connection with utilities should mention their requirements for future and accordingly should intimate us.</p> | |
| | <p>-Sufficient provision should be made to rehabilitate PAs of Padampur-bazar to Narsinghpur Bazar in Jagatpur- Chandbali road.</p> <p>-Sufficient land should be acquired for future expansion of road and for water supply,electricity and telephone cables.</p> <p>- Road crossing should be designed to avoid accident</p> | <p>-All such rehabilitation work shall be taken up.</p> <p>-Whatever provision is made now, shall cater traffic for 20 years time.Space for utilities are being provided.</p> <p>- Junctions shall be developed keeping in view the suggestions of people in the locality and as per geometrics requirement.</p> | |

PROCEEDINGS OF DISTRICT LEVEL CONSULTATION MEETING

Date of District Level Meeting

26.12.2006

Venue

DRDA Conference Hall, Kendrapara

District level consultation meeting regarding improvement of about 900 km of state road with the loan assistance of World Bank was held in the Collector DRDA Hall Kendarpara About 55 km of road is being improved under phase-I in the District. The meeting was chaired by DM and Collector, Kendarpara.

| Sl. No | Issue Raised | Comments of the Consultation Committee | Consensus Arrived |
|--------|--|--|--|
| | <p>Action should be taken to minimize land acquisition Whenever necessary bypass may be provided</p> <p>Minimum 10 meter carriageway instead of 7 meter as in built up areas space for parking of two wheelers to avoid traffic congestion</p> <p>Raising of submergence area near Kasant, Patrapur, Pattamundai and Gadgadi Ghat-Ganja</p> <p>Resettlement of displaced families of Timmohini Chowk as it is wetland</p> <p>A market complex may be constructed</p> <p>During plantation minimum 50 % fruit bearing trees like black berry, Mango etc.</p> <p>Underpasses should be provided if required</p> <p>Near Kendrapara town, Public toilet system and park should be developed for the people (as done by NHAI in Chandikhole) should be developed</p> | <p>The project envisages barest minimum land acquisition. Generally; RoW of 26 meter in open areas and 16 meter in built-up areas is proposed. However in stretches of submergence RoW width of RoW would be more.</p> <p>Bypasses are studied in details and wherever requirement of bypasses are we are proposing. In the present corridor only Pattamundai town is having realignments</p> <p>Submergence areas are being raised.</p> <p>In this project there is no provision of development of parks.</p> | <p>Proposal of 10 meter carriageway would be analysed.</p> |
| | <p>Do we need land acquisition for the project?</p> <p>How the legal titleholder can be found out?</p> <p>Requested to start Jagatpur-Chandbali stretch in year one road</p> | <p>Collector clarified that minimum 16 meters landwidth would be considered in built-up areas. 4(1) notification would detail about titleholders.</p> | |
| | <p>Bypassing Aul town from Helipad-vetnary hospital will be economical as lot of Govt land is available to avoid private land acquisition of built-up areas.</p> | <p>At present bypass at Aul is not required.</p> | |

| | | | |
|--|--|--|--|
| | <p>There may be some shops to be relocated at Chandola Bazar ,Balia Bazar and near Gagua Bazar, Revenue department should spare some land for resettlement</p> | <p>These shops would be compensated as per LA act, 1894. Assistance would be provided to vulnerable persons.</p> | |
|--|--|--|--|

Annexure 6.3

PHOTOGRAPHS OF DISTRICT LEVEL CONSULTATION HELD DURING DECEMBER 2006



DISTRIC LEVEL CONSULTATION IN BHADRAK DISTRICT



DISTRIC LEVEL CONSULTATION IN BHADRAK, BHADRAK DISTRICT



DISTRIC LEVEL CONSULTATION IN CUTTACK, CUTTACK DISTRICT



DISTRICT LEVEL CONSULTATION IN CUTTACK, CUTTACK DISTRICT



DISTRICT LEVEL CONSULTATION IN KENDRAPADA, KENDRAPADA DISTRICT



DISTRICT LEVEL CONSULTATION IN KENDRAPADA, KENDRAPADA DISTRICT



DISTRICT LEVEL CONSULTATION IN KEONJHAR, KEONJHAR DISTRICT



DISTRICT LEVEL CONSULTATION IN NUAPADA, NUAPADA DISTRICT

PHOTOGRAPHS OF VILLAGE LEVEL CONSULTATION HELD DURING APRIL 2013



Gopapur Dt.21.4.2013



Gulnagar 21.4.2013



Padmapur Dt.24.4.2013



Village- Hata bazaar ,Paga -Salepur
Dt.24.4.2013



Kantapada, Rajkanika Dt.24.4.2013



Gagua-Pattamundai Dt.22.4.2013



Krushnapur (Chandbali) 25.4.2013



Gokarneswar 24.4.2013

Details of Community Property Resources Affected**1. Religious Structures**

| S.No | Item | Chainage | Side | Affected Fully/Partially | Affected Length in mts | Mitigation Proposed |
|------|--------------------------|----------|-------|--------------------------|------------------------|--|
| 1 | Temple | 4.344 | Right | Fully | | To be relocated |
| 2 | Temple with Boundry wall | 4.552 | Left | Fully | | To be relocated |
| 3 | Temple | 5.449 | Right | Fully | | To be relocated |
| 4 | Temple | 6.120 | Left | Not Affected | | Pedestrial barricade to be provided over 15mtrs with planting of 10 numbers of flower bearing plants |
| 5 | Temple | 6.970 | Right | Fully | | To be relocated |
| 6 | Temple | 7.190 | Left | Fully | | To be relocated |
| 7 | Temple | 9.552 | Right | Not Affected | | Barricade over 3mtrs to be provided. |
| 8 | Temple | 9.650 | Right | Fully | | To be relocated |
| 9 | Temple | 10.209 | Right | Fully | | To be relocated |
| 10 | Temple | 10.828 | Left | Partially | 31mtrs | New boundry wall with gate with planting of 10 number of flower bearing plants |
| 11 | Temple | 15.623 | Left | Fully | | To be relocated |
| 12 | Temple | 18.810 | Right | Fully | | To be relocated |
| 13 | Temple | 18.972 | Right | Fully | | To be relocated |
| 14 | Temple | 24.912 | Left | Fully | | To be relocated |
| 15 | Temple | 27.464 | Right | Fully | | To be relocated |
| 16 | Temple | 27.700 | Left | Fully | | To be relocated |
| 17 | Temple | 28.100 | Left | Fully | | To be relocated |
| 18 | Temple | 28.190 | Left | Fully | | To be relocated |
| 19 | Temple with fence | 29.632 | Left | Fully | | To be relocated |
| 20 | Temple | 30.824 | Left | Fully | | To be relocated |
| 21 | Temple | 33.670 | Right | Fully | | To be relocated |
| 22 | Temple | 34.383 | Right | Fully | | To be relocated |
| 23 | Temple | 35.327 | Right | Fully | | To be relocated |
| 24 | Temple | 36.713 | Left | Fully | | To be relocated |
| 25 | Temple | 37.152 | Right | Fully | | To be relocated |
| 26 | Temple | 39.432 | Right | Fully | | To be relocated |
| 27 | Temple | 42.178 | Left | Fully | | To be relocated |
| 28 | Temple | 43.570 | Right | Fully | | To be relocated |
| 29 | Temple | 47.200 | Right | Fully | | To be relocated |
| 30 | Temple | 50.977 | Right | Fully | | To be relocated |

| | | | | | | |
|----|-----------------|---------------|-------------|--------------|--|---|
| 31 | Temple | 51.965 | Left | Fully | | To be relocated |
| 32 | Temple | 52.072 | Left | Fully | | To be relocated |
| 33 | Temple | 53.600 | Right | Fully | | To be relocated |
| 34 | Temple | 55.548 | Right | Fully | | To be relocated |
| 35 | Temple | 56.076 | Left | Not Affected | | Pedestrial barricade over 9mtrs to be provided to restrict the devotees to enter directly on the road and planting of 10 numbers of flower bearing trees. |
| 36 | Temple | 58.274 | Left | Fully | | To be relocated |
| 37 | Temple | 63.272 | Right | Fully | | To be relocated |
| 38 | Temple | 63.669 | Right | Fully | | To be relocated |
| 39 | Temple | 64.032 | Right | Fully | | To be relocated |
| 40 | Temple | 64.293 | Left | Fully | | To be relocated |
| 41 | Temple | 64.776 | Right | Fully | | To be relocated |
| 42 | Temple | 64.942 | Left | Fully | | To be relocated |
| 43 | Temple | 65.512 | Left | Fully | | To be relocated |
| 44 | Temple | 71.974 | Right | Fully | | To be relocated |
| 45 | Temple | 72.790 | Right | Fully | | To be relocated |
| 46 | Temple | 74.874 | Right | Fully | | To be relocated |
| 47 | Temple | 77.308 | Right | Fully | | To be relocated |
| 48 | Temple | 77.705 | Left | Fully | | To be relocated |
| 49 | Temple | 79.551 | Right | Fully | | To be relocated |
| 50 | Temple | 79.877 | Right | Fully | | To be relocated |
| 51 | Temple | 79.895 | Left | Fully | | To be relocated |
| 52 | Temple | 81.725 | Right | Fully | | To be relocated |
| 53 | Temple | 84.093 | Left | Fully | | To be relocated |
| 54 | Temple | 86.424 | Left | Fully | | To be relocated |
| 55 | Temple | 96.000 | Left | Fully | | To be relocated |
| 56 | Temple | 100.117 | Right | Fully | | To be relocated |
| 57 | Temple | 100.520 | Left | Fully | | To be relocated |
| 58 | Temple | 100.529 | Left | Fully | | To be relocated |
| 59 | Temple | 100.845 | Left | Fully | | To be relocated |
| 60 | Temple | 101.083 | Left | Fully | | To be relocated |
| 61 | Temple | 101.340 | Left | Fully | | To be relocated |
| 62 | Temple | 102.745 | Right | Fully | | To be relocated |
| 63 | Temple | 103.010 | Right | Fully | | To be relocated |
| 64 | Temple | 104.061 | Right | Not Affected | | Pedestial barricade to be provided over 5mtr for restigation of direct entry of devotees on the road. |
| 65 | Temple | 104.329 | Left | Fully | | To be relocated |
| 66 | Cemetary | 55.707 | Left | Fully | | Compensation to be given. |

2. Boundary Walls (schools, govt. office etc.)

| Sl No. | Side (L/R) | Chainage | District | Revenue Village | Type of Structure | Nature of Structure |
|--------|------------|----------|------------|-----------------|-------------------------------------|---------------------|
| 1 | L | 3-4 | Cuttack | Gujarpur | Madrassa School | Education Institute |
| 2 | R | 6-7 | Cuttack | Mutarifa | Cooprative Society Padampur | Govt. Structures |
| 3 | R | 6-7 | Cuttack | Mutarifa | Boundary Wall | Boundary Wall |
| 4 | L | 11-12 | Cuttack | Bhatapada | School | Education Institute |
| 5 | R | 16-17 | Cuttack | Bahabalpur | Boundary Wall | Boundary Wall |
| 6 | L | 18-19 | Cuttack | Balisahi | Boundary Wall | Boundary Wall |
| 7 | L | 19-20 | Cuttack | Chandradeipur | Boundary Wall | Boundary Wall |
| 8 | L | 22-23 | Cuttack | Kulia | Boundary Wall | Boundary Wall |
| 9 | R | 33-34 | Cuttack | Julikipara | Sukarapara IB Boundary Wall | Boundary Wall |
| 10 | L | 36-37 | Kendrapara | Bhanagaon | Lalbahadur High school Room (1 No.) | Education Institute |
| 11 | R | 38-39 | Kendrapara | Chandol | R.I Office Chandal | Govt. Structures |
| 12 | R | 44-45 | Kendrapara | Bhagabatpur | Panchayat Office | Govt. Structures |
| 13 | L | 44-45 | Kendrapara | Bhagabatpur | Balia Primary School | Education Institute |
| 14 | L | 48-49 | Kendrapara | Kasati | Ratnakar U.P School | Education Institute |
| 15 | L | 58-59 | Kendrapara | Baro | Baruo Primary School | Education Institute |
| 16 | L | 59-60 | Kendrapara | Baro | Navodaya School | Education Institute |
| 17 | R | 62-63 | Kendrapara | Gangapada | Gangapada Nimna Madhayamika School | Education Institute |
| 18 | L | 66-67 | Kendrapara | Badamulabasanta | UCO Bank | Govt. Structures |
| 19 | R | 75-76 | Kendrapara | Bilikan | Bilikana U:P School | Education Institute |
| 20 | L | 79-80 | Kendrapara | Chandigadi | Malapatana Unnita U.P School | Education Institute |
| 21 | R | 82-83 | Kendrapara | Sitaleswar | Sitaleswar Praimary School | Education Institute |
| 22 | R | 82-83 | Kendrapara | Sitaleswar | Sitaleswar Praimary School | Education Institute |
| 23 | L | 86-87 | Kendrapara | Lokapada | Vetanary Office | Govt. Structures |
| 24 | L | 91-92 | Kendrapara | Achhutapur | Andhar Gharni Nodal U.P School | Education Institute |
| 25 | L | 100-101 | Bhadrak | Chandabali | R.I Office | Govt. Structures |
| 26 | L | 100-101 | Bhadrak | Chandabali | Aranya Nivas | Boundary Wall |

| Sl No. | Side (L/R) | Chainage | District | Revenue Village | Type of Structure | Nature of Structure |
|--------|------------|----------|------------|-----------------|--|---------------------|
| | | | | | Boundary Wall | |
| 27 | L | 100-101 | Bhadrak | Chandabali | Tahsil Office | Govt. Structures |
| 28 | L | 100-101 | Bhadrak | Chandabali | Dehka High School Chandabali Boundary Wall | Education Institute |
| 29 | L | 100-101 | Bhadrak | Chandabali | R.I Office | Govt. Structures |
| 30 | L | 100-101 | Bhadrak | Chandabali | Tahsil Office Boundary Wall | Boundary Wall |
| 31 | L | 101-102 | Bhadrak | Panchapada | Boundary Wall | Boundary Wall |
| 32 | R | 55-56 | Kendrapara | Jajanga | School Latine | Education Institute |
| 33 | R | 55-56 | Kendrapara | Jajanga | School Compound Wall | Boundary Wall |
| 34 | L | 57-58 | Kendrapara | Bhramardiapatna | Trilochan U.P School Boundary Wall | Boundary Wall |
| 35 | L | 64-65 | Kendrapara | Gogua | School | Education Institute |
| 36 | R | 65-66 | Kendrapara | Badamulabasanta | Odissa State Brigade School | Education Institute |
| 37 | L | 50-51 | Kendrapara | Guhalsingh | Kendrapara Evening College | Education Institute |
| 38 | R | 68-69 | Kendrapara | Belatala | Stand Post Boundary Wall | Boundary Wall |
| 39 | R | 69-70 | Kendrapara | Belatala | School Gill | Education Institute |
| 40 | R | 72-73 | Kendrapara | Kasananta | Kasananta U.G.P School | Education Institute |
| 41 | R | 95-96 | Kendrapara | Kantapada | Keshabananda Modal U.P school, Kantapara | Education Institute |
| 42 | R | 95-96 | Kendrapara | Kantapada | Kantapara Panchayat Office Kantapara | Govt. Structures |

3. Resting Sheds

| Sl No. | Side (L/R) | Chainage | District | Revenue Village | Type of Structure | Nature of Structure |
|--------|------------|----------|------------|-----------------|-------------------|---------------------|
| 1 | R | 27-28 | Cuttack | Nischintakoili | Rest Shed | Resting Place |
| 2 | L | 100-101 | Bhadrak | Chandabali | Rest Shed | Resting Place |
| 3 | L | 100-101 | Bhadrak | Chandabali | Rest Shed | Resting Place |
| 4 | L | 72-73 | Kendrapara | Kasananta | Rest Shed | Resting Place |

4. Sitting Platform

| Sl No. | Side (L/R) | Chainage | District | Revenue Village | Type of Structure | Nature of Structure |
|--------|------------|----------|------------|-----------------|-------------------|---------------------|
| 1 | L | 57-58 | Kendrapara | Torando | Sitting Platform | Sitting Platform |

| | | | | | | |
|---|---|-------|------------|-----|-----------------|------------------|
| 2 | R | 84-85 | Kendrapara | Aul | Sitting Platfom | Sitting Platform |
|---|---|-------|------------|-----|-----------------|------------------|

5. Gates

| Sl No. | Side (L/R) | Chainage | District | Revenue Village | Type of Structure | Nature of Structure |
|--------|------------|----------|------------|-----------------|----------------------|---------------------|
| 1 | R | 3-4 | Cuttack | Imam Nagar | Sales Tax Cheek Gate | Gate |
| 2 | L | 36-37 | Kendrapara | Ganeshpur | RMC Check gate | Gate |
| 3 | L | 47-48 | Kendrapara | Kasati | RMC Gate | Gate |
| 4 | L | 81-82 | Kendrapara | Sitaleswar | Water Supplay Gate | Gate |

BY FAX

OFFICE OF THE ENGINEER-IN -CHIEF (CIVIL), ORISSA
 NIRMAN SOUDHA, KESHARI NAGAR, UNIT - V, BHUBANESWAR - 751 001
 Letter No. PIU (WB)/ 15/2006 (5) 598 (7) Dt. 11/12/2006

From

Er. J.M.Nayak,
 Chief Engineer, World Bank Projects, Orissa,
 Head, Project Implementation Unit,
 Orissa State Road Project,
 e-mail : osrp@sify.com, piuosrp@gmail.com, Fax: 0674-2396783

To

The Collector & District Magistrate,
 Nayagarh/Angul/Dhenkanal/Cuttack/Kendrapara/Mayurbhanj/ Keonjhar

**Sub: Orissa State Road Project (OSRP) Phase-I (World Bank Assisted)
 -District Level Meeting for Public Consultation.**

Sir,

With reference to the subject cited above it is to intimate you that Works Department, Government of Orissa (OWD) has identified **900 kms of State Highways** to upgrade and strengthen / widen under World Bank assistance, in Phase-I .The assignment also includes addressing social and environment issues in the light of World Bank guidelines and Govt of Orissa Resettlement and Rehabilitation Policy '2006.

Social assessment is a major component of the present road improvement. To estimate magnitude of displacement and losses a baseline socio-economic survey and census survey have been carried out in the project areas. The consultant has been preparing a Resettlement Action Plan based on the Orissa Resettlement and Rehabilitation Policy '2006 and World Bank guidelines. The Resettlement Action Plan would be implemented with the assistance of NGOs.

As per requirement of **The Orissa Resettlement and Rehabilitation policy 2006 {enacted through Gazette Notification (15th day of May 2006)}**, public consultation is an integral part of project planning, which has to be chaired by the concerned DM and Collector. Thus, a District level meeting involving stakeholders is solicited. **A list of Participants is enclosed who are to be invited for the meeting.**

Therefore, you are requested to propose two suitable dates within 25th December, 2006 for holding the above said meeting. After obtaining proposals from all the Collectors the final date will be intimated to you.

An early action may be taken for finalization of Resettlement Action plan.

Enclosure: - As above

Yours faithfully,


Chief Engineer,
World Bank Projects,
Orissa, Bhubaneshwar.

51599 (2) 11.12.06
 Memo No. Dt.

Copy submitted to the **Engineer-in-Chief-cum-Secretary**, Works Department / **Special Secretary, PPP**, P&C Department, Government of Orissa for favour of kind information.

51600 (4) 11.12.06
 Memo No. Dt. *ok*

J. N. D.
Chief Engineer,
 World Bank Projects, Orissa

Copy forwarded to the **Superintending Engineer**, Central /Cuttack /Eastern / Keonjhar, (R&B) Circle for information and necessary action.

51601 (8) 11.12.06
 Memo No. Dt. *ok*

J. N. D.
Chief Engineer,
 World Bank Projects, Orissa

Copy forwarded to the **Executive Engineer**, (R&B) Division, Khurda/Angul/Cuttack/Charbatia/ Kendrapara/ Dhenkanal/ Mayurbhanj/ Keonjhar for information and immediate necessary follow up action.

ok

J. N. D.
Chief Engineer,
 World Bank Projects, Orissa

1. List of Participants.

1. Local Central Minister / M.P.
2. Local Minister / M.L.A.
3. President, Zilla Parishad
4. Chairman, Panchayat Samiti, Municipality/NAC
5. Officers of different Line Departments namely
 - Executive Engineer(R&B)
 - Executive Engineer, P.H.D.
 - Executive Engineer, R.W.S.S
 - Executive Engineer, Electrical
 - D.F.O.
 - Land Acquisition Officer of the District/BDOs/ Tahasildars on the Project Route.
 - Executive Officer, Municipality/ NAC
6. The persons who have brought names and fames for the District if any.
7. Local renowned NGOs in the opinion of the Collector.

OFFICE OF THE ENGINEER-IN-CHIEF (CIVIL), ORISSA
 NIRMAN SOUDHA, KESHARI NAGAR, UNIT - V, BHUBANESWAR - 751 001
 Letter No. PIU (WB)/ 15/ 44714 Dt. 30/10/2006

From

Er. J.M.Nayak,
 Chief Engineer, World Bank Projects, Orissa,
 Head, Project Implementation Unit,
 Orissa State Road Project,
 e-mail : osrp@sify.com, piuosrp@gmail.com

To

The Collector & District Magistrate, Nuapada
 At/PO/District: Nuapada.

**Sub: Orissa State Road Project (OSRP) Phase-I (World Bank Assisted)
 -District Level Meeting for Public Consultation.**

Sir,

With reference to the subject cited above it is to intimate you that Works Department, Government of Orissa (OWD) has identified **825 km of State Highways** to upgrade and strengthen / widen under World Bank assistance, in Phase-I. The assignment also includes addressing social and environment issues in the light of World Bank guidelines and Govt of Orissa Resettlement and Rehabilitation Policy '2006.

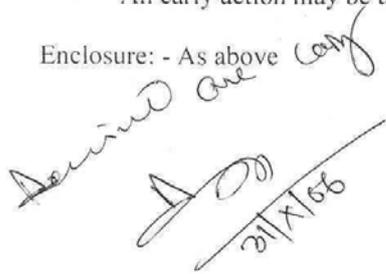
Social assessment is a major component of the present road improvement. To estimate magnitude of displacement and losses a baseline socio-economic survey and census survey have been carried out in the project areas. The consultant has been preparing a Resettlement Action Plan based on the Orissa Resettlement and Rehabilitation Policy '2006 and World Bank guidelines. The Resettlement Action Plan would be implemented with the assistance of NGOs.

As per requirement of **The Orissa Resettlement and Rehabilitation policy 2006 {enacted through Gazette Notification (15th day of May 2006)}**, public consultation is an integral part of project planning, which has to be chaired by the concerned DM and Collector. Thus, a District level meeting involving stakeholders is solicited. A list of Participants is enclosed who are to be invited for the meeting.

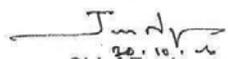
As per tentative programme the meeting for **Nuapada** district has been fixed on dated **1st December' 2006 F.N.** for your confirmation. If you want to alter the date, the same may be proposed after 5th December'2006.

An early action may be taken for finalization of Resettlement Action plan.

Enclosure: - As above

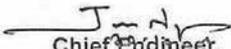
Received one copy


Yours faithfully,


 Chief Engineer,
 World Bank Projects,
 Orissa, Bhubaneshwar.

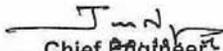
44715²⁾
 Memo No. Dt. 30-10-06

Copy submitted to the **Engineer-in-Chief-cum-Secretary**, Works Department / **Special Secretary, PPP**, P&C Department, Government of Orissa for favour of kind information.


 Chief Engineer,
 World Bank Projects, Orissa

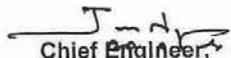
44716
 Memo No. Dt. 30-10-06

Copy forwarded to the **Superintending Engineer**, Jeypore (R&B) Circle, Jeypore for information and necessary action.


 Chief Engineer,
 World Bank Projects, Orissa

44717²⁾
 Memo No. Dt. 30-10-06

Copy forwarded to the **Executive Engineer**, Bhawanipatna (R&B) Division, / Kahriar (R&B) Division, Khariar for information and immediate necessary follow up action.


 Chief Engineer,
 World Bank Projects, Orissa

OFFICE OF THE ENGINEER-IN-CHIEF (CIVIL), ORISSA
 NIRMAN SOUDHA, KESHARI NAGAR, UNIT - V, BHUBANESWAR - 751 001
 Letter No. PIU (WB)/ 15/ 44706 Dt. 30/10/2006

From

Er. J.M.Nayak,
 Chief Engineer, World Bank Projects, Orissa,
 Head, Project Implementation Unit,
 Orissa State Road Project,
 e-mail : osrp@sify.com, piuosrp@gmail.com

To

The Collector & District Magistrate, Kalahandi
 At/PO/District: Bhawanipatna.

**Sub: Orissa State Road Project (OSRP) Phase-I (World Bank Assisted)
 -District Level Meeting for Public Consultation.**

Sir,

With reference to the subject cited above it is to intimate you that Works Department, Government of Orissa (OWD) has identified **825 km of State Highways** to upgrade and strengthen / widen under World Bank assistance, in Phase-I. The assignment also includes addressing social and environment issues in the light of World Bank guidelines and Govt of Orissa Resettlement and Rehabilitation Policy '2006.

Social assessment is a major component of the present road improvement. To estimate magnitude of displacement and losses a baseline socio-economic survey and census survey have been carried out in the project areas. The consultant has been preparing a Resettlement Action Plan based on the Orissa Resettlement and Rehabilitation Policy '2006 and World Bank guidelines. The Resettlement Action Plan would be implemented with the assistance of NGOs.

As per requirement of **The Orissa Resettlement and Rehabilitation policy 2006** {enacted through Gazette Notification (15th day of May 2006)}, public consultation is an integral part of project planning, which has to be chaired by the concerned DM and Collector. Thus, a District level meeting involving stakeholders is solicited. A list of Participants is enclosed who are to be invited for the meeting.

As per tentative programme the meeting for **Kalahandi** district has been fixed on dated **30th November' 2006 F.N.** for your confirmation. If you want to alter the date, the same may be proposed after **5th December' 2006.**

An early action may be taken for finalization of Resettlement Action plan.

Enclosure: - As above

Received copy
 Sakti
 1-11-06
 Re.

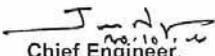


Yours faithfully,

J.M.Nayak
 Chief Engineer,
 World Bank Projects,
 Orissa, Bhubaneshwar.

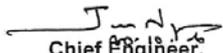
Memo No. 44707 Dt. 30-10-06

Copy submitted to the **Engineer-in-Chief-cum-Secretary**, Works Department / **Special Secretary**, PPP, P&C Department, Government of Orissa for favour of kind information.


Chief Engineer,
 World Bank Projects, Orissa

Memo No. 44708 Dt. 30-10-06

Copy forwarded to the **Superintending Engineer**, Jeypore (R&B) Circle, Jeypore for information and necessary action.


Chief Engineer,
 World Bank Projects, Orissa

Memo No. 44709² Dt. 30-10-06

Copy forwarded to the **Executive Engineer**, Bhawanipatna (R&B) Division, / Kahriar (R&B) Division, Khariar for information and immediate necessary follow up action.


Chief Engineer,
 World Bank Projects, Orissa

By Fax

**OFFICE OF THE ENGINEER-IN-CIVIL, ORISSA,
NIRMAN SOUDHA, KESHARI NAGAR, UNIT-V, BHUBANESWAR-751001**

From PIU – WB - 15/ Letter No 51386(2) dt 8.12.06

Er Jayamangal Nayak,
Chief Engineer,
World Bank Projects,
Orissa, Bhubaneswar.

To **The Collector and District Magistrate,**
Gajapati/ Ganjam

Sub: Holding of District Level Consultation Committee Meeting for the Orissa State Road Project on Brahmapur- J.K.Pur& Kerada-Rayagada- Bhawanipatna road .

Sir,

With reference to the subject cited above it is to intimate that in the mean time the District level Consultation Committee Meeting has already been conducted in the Bolangir District. The Collector, Kalahandi, Nuapada and Rayagada have fixed the date for District Level Consultation Committee Meeting on 12th, 13th and 14th December respectively for their District corridors. Hence, we offer 15th and 16th December 2006 for holding the above meetings in the afternoon hour in the District of Gajapati and Ganjam respectively .The following members may kindly be requested to attend the District level Consultation Meeting as per guideline norms of World Bank.

These are the members

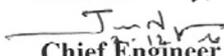
1. Local M.P
2. Local Minister/ MLA
3. President , Zilla Parishad
4. Chairman, Panchayat samiti/Municipality/ NAC.
5. Officers of different line Departments namely
 - i- Executive Engineer (R&B)
 - ii-Executive Engineer, PHD
 - iii-Executive Engineer, RWSS
 - iv-Executive Engineer, Electrical
 - v-D.F.O
 - vi- Land Acquisition officer of the District/ BDOs/ Tahasildars on the Project route.
 - vii- Executive Officer, Municipality/ NAC
6. The persons who have brought names and fames for the District (If any)
7. Local renowned NGOs in the opinion of the Collector (if any)

The Collectors of the concerned District will preside over the meeting while presentation will be made by the World Bank (OSRP) Team.

Hence it is to intimate you that either confirm the above proposal of the conducting the District Level Meeting or to propose two dates in the next week(i.e. from 18.12.2006 to 23.12.06) may please be intimated to the undersigned by Fax (0674-2396783) for further action at this end.

Thanking you.

Yours faithfully,


Chief Engineer
World Bank Projects

51387
8.12.06

Copy to Collector, Rayagada, for information and necessary action. The World Bank(OSRP) Team will reach the Collectorate in the afternoon (4PM) of 14th December for presentation in the meeting called by the Collector.


Chief Engineer
World Bank Projects

ok

OFFICE OF THE ENGINEER-IN-CHIEF (CIVIL), ORISSA
NIRMAN SOUDHA, KESHARI NAGAR, UNIT - V, BHUBANESWAR - 751 001

Letter No. PIU (WB)/ 15/ 44700 Dt. 30/10/2006

From

Er. J.M.Nayak,
Chief Engineer, World Bank Projects, Orissa,
Head, Project Implementation Unit,
Orissa State Road Project,
e-mail : osrp@sify.com, piuosrp@gmail.com

To

The Collector & District Magistrate, Bolangir
At/PO/District: Bolangir.

**Sub: Orissa State Road Project (OSRP) Phase-I (World Bank Assisted)
-District Level Meeting for Public Consultation.**

Sir,

With reference to the subject cited above it is to intimate you that Works Department, Government of Orissa (OWD) has identified **825 km** of **State Highways** to upgrade and strengthen / widen under World Bank assistance, in Phase-I. The assignment also includes addressing social and environment issues in the light of World Bank guidelines and Govt of Orissa Resettlement and Rehabilitation Policy '2006.

Social assessment is a major component of the present road improvement. To estimate magnitude of displacement and losses a baseline socio-economic survey and census survey have been carried out in the project areas. The consultant has been preparing a Resettlement Action Plan based on the Orissa Resettlement and Rehabilitation Policy '2006 and World Bank guidelines. The Resettlement Action Plan would be implemented with the assistance of NGOs.

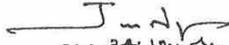
As per requirement of **The Orissa Resettlement and Rehabilitation policy 2006 {enacted through Gazette Notification (15th day of May 2006)}**, public consultation is an integral part of project planning, which has to be chaired by the concerned DM and Collector. Thus, a District level meeting involving stakeholders is solicited. A list of Participants is enclosed who are to be invited for the meeting.

As per tentative programme the meeting for **Balangir** district has been fixed on dated **2nd December' 2006** F.N. for your confirmation. If you want to alter the date, the same may be proposed after **5th December' 2006**.

An early action may be taken for finalization of Resettlement Action plan.

Enclosure: - As above

Yours faithfully,


Chief Engineer,
World Bank Projects,
Orissa, Bhubaneshwar.

44711 (2)
 Memo No. Dt. 30-10-06

Copy submitted to the **Engineer-in-Chief-cum-Secretary**, Works Department / **Special Secretary**, PPP, P&C Department, Government of Orissa for favour of kind information.


Chief Engineer,
 World Bank Projects, Orissa

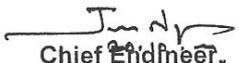
44712
 Memo No. Dt. 30-10-06

Copy forwarded to the **Superintending Engineer**, Jeypore (R&B) Circle, Jeypore for information and necessary action.


Chief Engineer,
 World Bank Projects, Orissa

44713
 Memo No. Dt. 30-10-06

Copy forwarded to the **Executive Engineer**, Bhawanipatna (R&B) Division, / Kahriar (R&B) Division, Khariar for information and immediate necessary follow up action.


Chief Engineer,
 World Bank Projects, Orissa

**OFFICE OF THE ENGINEER-IN-CHIEF (CIVIL), ORISSA,
NIRMAN SOUDHA, KESHARI NAGAR, UNIT - V, BHUBANESWAR - 751 001**

File No. PIU - WB - 15/2006

49068
25-11-06

Dt.

From

Er. J.M.Nayak
Chief Engineer, World Bank Projects, Orissa,
Bhubaneswar.

To

The Deputy Director-cum-Deputy Secretary (Advt.),
I & P R Department, Bhubaneswar.

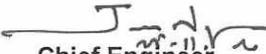
Sub: Publication of notice regarding District Consultation Committee meeting to be held in the conference Hall of the Collector of Bhadrak .

Sir,

Enclosed please find herewith the copy of the notice for holding of District Level Consultation Committee meeting Bhadrak of Orissa State Road Project under World Bank Assistance, in Oriya and English. The same may be published in two leading Oriya dailies & one English daily well before 3.12.06 for awareness of the people of Bhadrak at an early date. Complimentary copy of the News Papers publishing the above may be sent to this office for reference and record.

This is for your kind information & necessary action.

Yours faithfully,


Chief Engineer,

World Bank Projects, Orissa

Memo No

Dtd.

Encl: As above- (1)- Hard Copy- 1 Set
(2)- Soft Copy- 1 CD.

49069 Dt. 25-11-06

Copy submitted to the Engineer-in-Chief -Cum-Secretary to the Govt., Works Department, Orissa, Bhubaneswar for favour of kind information.


Chief Engineer,

World Bank Projects, Orissa

49070

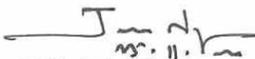
25-11-06

Memo No

Dtd.

Copy forwarded to the Head, State Portal Group, IT Centre, Department of IT, At: North Annexe of the State Secretariat (Ground Floor), Bhubaneswar - 751 001 with a request for display in the Web site of Government of Orissa. The CD containing the Notices in Oriya and English is enclosed herewith for the purpose.

Encl: As above- (1)- Hard Copy- 1 Set
(2)- Soft Copy- 1 in CD.


Chief Engineer,

World Bank Projects, Orissa

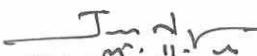
Memo No

Dtd.

49071

25-11-06

Copy submitted to Mahammed Hassan , Senior Social Development Specialist, World Bank , New Delhi office , 70 Lodi Estate , New Delhi -110003 for information and necessary action.


Chief Engineer,

World Bank Projects, Orissa

ORISSA STATE ROAD PROJECT WORLD BANK FUND ASSITANCE**District Level Consultation Committee Meeting
Notification**

A District Level Consultation Committee comprising all the District level members dully recognized by the Bhadrak District Authorities will be held in the Conference Hall of Bhadrak Collectorate on 3.12.06 at 4 PM for a detail discussion on the proposed widening and improvement of 95 Kms of Chandbali- Bhadrak – Anadapur road . All the members are requested to attend the meeting and give their valuable suggestions on the Social , Environmental and Technical aspect of this proposed road project financed by World Bank . Collector and District Magistrate of Bhadrak will preside the meeting.


Jayamangal Nayak
Chief Engineer
World Bank

ଭଦ୍ରଖ ଜିଲ୍ଲା ଜନସାଧାରଣଙ୍କ ନିମନ୍ତେ ସୂଚନା
ଓଡ଼ିଶା ରାଜ୍ୟ ସଡ଼କ ପ୍ରକଳ୍ପ

ବିଶ୍ୱ ବ୍ୟାଙ୍କ ରଣ ସହାୟତରେ ପ୍ରସାବିତ ଆନନ୍ଦପୁର-ଭଦ୍ରଖ-ଚାନ୍ଦବାଲି ଦ୍ୱିପାର୍ଶ୍ୱୀୟ (ଟୁଲେନ୍) ରାସ୍ତା ନିର୍ମାଣ ସକାଶେ ଭଦ୍ରଖ ଜିଲ୍ଲାସରକାର ପରାମର୍ଶ କମିଟିର ଏକ ସତର୍କ ଅଧିବେଶନ ତା ୩.୧୨.୨୦୦୬ ରିଖ (ରବିବାର) ଅପରାହ୍ନ-୪ଟା ସମୟରେ ଭଦ୍ରଖ ଜିଲ୍ଲାପାଳଙ୍କ ପୌରୋ-ହିତ୍ୟରେ ଜିଲ୍ଲାପାଳଙ୍କ ସମ୍ମିଳନୀ କକ୍ଷରେ ଅନୁଷ୍ଠିତ ହେବ । ଏହି ପ୍ରସାବିତ ସଡ଼କ ପାଇଁ ଜିଲ୍ଲା ପ୍ରଶାସନ ଦ୍ୱାରା ସାକ୍ଷୁତି ପ୍ରାପ୍ତ ସମସ୍ତ ସରକାରୀ ତଥା ବେସରକାରୀ ପ୍ରତିନିଧି ମାନଙ୍କୁ ଅନୁରୋଧ କରାଯାଉଅଛି ଯେ ସେମାନେ ଏହି ସଭାରେ ଉପସ୍ଥିତ ରହି ୯୫ କି.ମି ଦୀର୍ଘ ଆନନ୍ଦପୁର -ଭଦ୍ରଖ-ଚାନ୍ଦବାଲି ପ୍ରସାବିତ ସଡ଼କ ପ୍ରକଳ୍ପର ବିଭିନ୍ନ ବୈଷୟିକ, ସାମାଜିକ ତଥା ପରିବେଶୀୟ ଦିଗକୁ ଦୃଷ୍ଟିରେ ରଖି ନିଜର ସୁଚିତ୍ରିତ ପରାମର୍ଶ ପ୍ରଦାନ ପୂର୍ବକ ଏହି ମହାନ ପ୍ରକଳ୍ପର ସଫଳ ରୂପାୟନରେ ସହଯୋଗ କରିବେ ।

ଦୟାକରି ନାମକ
23.12.06
ମୁଖ୍ୟଯତ୍ନୀ ବିଶ୍ୱବ୍ୟାଙ୍କ ପ୍ରକଳ୍ପ,ଓଡ଼ିଶା
ଭୁବନେଶ୍ୱର

OFFICE OF THE ENGINEER-IN-CHIEF (CIVIL), ORISSA,
NIRMAN SOUDHA, KESHARI NAGAR, UNIT – V, BHUBANESWAR – 751 001

File No. PIU – WB – 15/2006. 49719

Dt. 29.11.06

From

Er. J.M.Nayak
Chief Engineer, World Bank Projects, Orissa,
Bhubaneswar.

To

The Deputy Director-cum-Deputy Secretary (Advt.),
I & P R Department, Bhubaneswar.

Sub: Publication of notice regarding District Consultation Committee meeting to be held in the conference Hall of the Collector of Balangir .

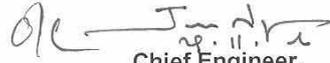
Sir,

Enclosed please find herewith the copy of the notice for holding of District Level Consultation Committee meeting Balangir of Orissa State Road Project under World Bank Assistance, in Oriya and English. The same may be published in two leading Oriya dailies & one English daily well before 3.12.06 for awareness of the people of Balangir at an early date. Complimentary copy of the News Papers publishing the above may be sent to this office for reference and record.

This is for your kind information & necessary action.

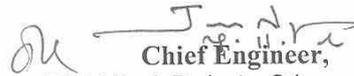
Yours faithfully,

Encl: As above- (1)- Hard Copy- 1 Set
(2)- Soft Copy- 1 CD.


Chief Engineer,
World Bank Projects, Orissa

Memo No 49720 Dtd. 29.11.06

Copy submitted to the Engineer-in-Chief -Cum-Secretary to the Govt., Works Department, Orissa, Bhubaneswar for favour of kind information.


Chief Engineer,
World Bank Projects, Orissa

Memo No 49721 Dtd. 29.11.06

Copy forwarded to the Collector and District Magistrate, Balangir for information and necessary action.


Chief Engineer,
World Bank Projects, Orissa

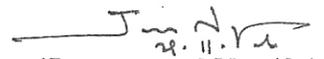
Memo No 49722 Dtd. 29.11.06

Copy forwarded to Mahammed Hassan , Senior Social Development Specialist, World Bank , New Delhi office , 70 Lodi Estate , New Delhi –110003 for information and necessary action.


Chief Engineer,
World Bank Projects, Orissa

ORISSA STATE ROAD PROJECT (WORLD BANK FUND ASSITANCE)
DISTRICT LEVEL CONSULTATION COMMITTEE MEETING
NOTIFICATION

A District level Consultation Committee meeting comprising all the District level members dully recognized by the Balangir District Aurhorities will be held in the conference Hall of Balangir District Collectorate on dtd 2.12.06 at 3PM for a detail discussion on the proposed widening and improvement of 2/0 km to 70/0 km of Bhawanipatna-Khariar road . All the members are requested to attend the meeting and give their valuable suggestion on the Social, Environmental and Technical aspect of this proposed Road project financed by the World Bank . Collector and District Magistrate of Balangir will preside the meeting .


(Jayamangal Nayak)
Chief Engineer
World Bank Projects

ବଲାଙ୍ଗୀର ଜିଲ୍ଲା ଜନସାଧାରଣଙ୍କ ନିମନ୍ତେ ସୂଚନା ଓଡ଼ିଶା ରାଜ୍ୟ ସଡ଼କ ପ୍ରକଳ୍ପ

ବିଶ୍ୱ ବ୍ୟାଙ୍କ ରଣ ସହାୟତରେ ପ୍ରସ୍ତାବିତ ଭୂମିପାଟଣା-ଖରିଆର ଦ୍ୱିପାର୍ଶ୍ୱୀୟ (ଟୁଲେନ୍) ରାସ୍ତା ନିର୍ମାଣ ସକାଶେ ବଲାଙ୍ଗୀର ଜିଲ୍ଲାସରକାର ପରାମର୍ଶ କମିଟିର ଏକ ସଭା ଅଧିବେଶନ ତା ୨.୧୨.୨୦୦୬ ରିଖ (ଶନିବାର) ଅପରାହ୍ନ-୩ଟା ସମୟରେ ବଲାଙ୍ଗୀର ଜିଲ୍ଲାପାଳଙ୍କ ପୌରୋହିତ୍ୟରେ ଜିଲ୍ଲାପାଳଙ୍କ ସମ୍ମିଳନୀ କକ୍ଷରେ ଅନୁଷ୍ଠିତ ହେବ । ଏହି ପ୍ରସ୍ତାବିତ ସଡ଼କ ପାଇଁ ଜିଲ୍ଲା ପ୍ରଶାସନ ଦ୍ୱାରା ସ୍ୱୀକୃତି ପ୍ରାପ୍ତ ସମସ୍ତ ସରକାରୀ ତଥା ବେସରକାରୀ ପ୍ରତିନିଧି ମାନଙ୍କୁ ଅନୁରୋଧ କରାଯାଉଅଛି ଯେ ସେମାନେ ଏହି ସଭାରେ ଉପସ୍ଥିତ ରହି ୬୮ କି.ମି ଦୀର୍ଘ ଭୂମିପାଟଣା-ଖରିଆର ପ୍ରସ୍ତାବିତ ସଡ଼କ ପ୍ରକଳ୍ପର ବିଭିନ୍ନ ବୈଷୟିକ, ସାମାଜିକ ତଥା ପରିବେଶୀୟ ଦିଗକୁ ଦୃଷ୍ଟିରେ ରଖି ନିଜର ସୁଚିନ୍ତିତ ପରାମର୍ଶ ପ୍ରଦାନ ପୂର୍ବକ ଏହି ମହାନ ପ୍ରକଳ୍ପର ସଫଳ ରୂପାୟନରେ ସହଯୋଗ କରିବାହେବେ ।

ମୁଖ୍ୟଯତ୍ନୀ ବିଶ୍ୱବ୍ୟାଙ୍କ ପ୍ରକଳ୍ପ,ଓଡ଼ିଶା
ଭୁବନେଶ୍ୱର

16-12-06 12:30

06766 256574

HISHRA COMMUNICATION

001

**OFFICE OF THE EXECUTIVE ENGINEER
P.W.D (R&B) DIVISION, KEONJHAR**

No..... Dt.....

To

Hon'ble M.P., Keonjhar
Hon'ble M.L.A., Anandapur
President Zilla Parishad, Keonjhar
Chairman - Panchayat Samiti , Anandapur
Chairman - Municipality, Anandapur
Executive Engineer, P.H.D, Keonjhar
Executive Engineer, R.W.S.S, Keonjhar
Executive Engineer, Electrical,(NESCO), Keonjhar/ Anandapur
D.F.O, Anandapur
Land Acquisition Officer , Keonjhar
Sub-Collector, Anandapur
B.D.O - Anandapur / Hatadihi
Tahasildar , Anandapur

Sub: - Orissa State Road Project (OSRP) Phase - I (World Bank Assisted) - District Level Meeting for Public Consultation.

Sir,

The District level consultation meeting on World Bank Project , Phase-I of Orissa State Road Project (OSRP) Scheduled to be held on 18.12.2006 at 11.30 AM In Durbar Hall, Keonjhar Collectorate, Keonjhar under the Chairmanship of Collector & District Magistrate, Keonjhar

You are requested to spare time to attend the said meeting.

Yours Faithfully

[Signature]
15/12/06

Executive Engineer
Keonjhar (R&B) Division

Memo.No.....*7067* Dt.....*15-12-06*

Copy submitted to the Chief Engineer, World Bank Projects, Orissa Bhubaneswar with a request to kindly depute the resource persons of PIU, Orissa & World Bank Projects for the meeting scheduled to be held as per above programme.

By fax
0674-2396783

[Signature]
15/12/06

Executive Engineer
Keonjhar (R&B) Division

Memo.No..... Dt.....

Copy submitted to Private Secretary , Collector & District Magistrate, Keonjhar for information. He is requested to communicate to all members to attend the meeting on 18.12.2006 at 11.30 AM in Durbar Hall, Collectorate, Keonjhar.

[Signature]
15/12/06

Executive Engineer
Keonjhar (R&B) Division

Memo.No..... Dt.....

Copy submitted to the Superintending Engineer, Keonjhar (R&B) Circle, Keonjhar for information and necessary action.

[Signature]
15/12/06

Executive Engineer
Keonjhar (R&B) Division

**DISTRICT OFFICE, BALANGIR
(Land Acquisition Section)**

No. 31 /L.A.dated. 15.1.07.

To,

The Chief Engineer, World Bank Project, Orissa
Head, Project Implementation Unit,
Orissa State Road Project, Bhubaneswar

243
24.1.07
29/1

Sub:- Forwarding of proceeding of the District Level Consultation Meeting.

Sir,

I am to forward herewith the proceeding of the District Level Consultation Meeting which was held on dt.02.12.06 at DRDA Conference Hall, Balangir under the chairmanship of Collector & District Magistrate, Balangir

Encl:- Proceeding =4 sheets

Sri G. S. Singh, E.E.
For immediate action
15.1.07
Sri P. K. Singh, A.E.
pl. plm.
2/1

Yours faithfully
[Signature]
15/1/07
Land Acquisition Officer,
Balangir

List of Participants of Bhadrak District

Orissa State Road Projects (World Bank Funded)
Orissa Works Department (BHADRAK)

| Sl. No. | Name | Designation | Signature |
|---------|----------------------|-------------------------------|--------------------|
| 1- | Haramohan Jena. | DI & PRO, Bhadrak | 8.12.06. |
| 2- | Sanir Kumar Sam. | P.O. Bhadrak | 8/12/06. |
| 3 | B.P. Senapati | 1st Deputy Commr. | 8/12/06 |
| 4- | Madhobiata Bhoi | Chairman TIHDI Block | M. Bhoi 8/12/06 |
| 5- | Sitakanta Das. | President, SOPORTE, Bhadrak. | 8/12/06 |
| 6. | Mukundji Raut | BDO, Tihedi | 8/12/06 |
| 7 | Nadla Nath Swain | Secretary, B.S.S | 8/12/06 |
| 8 | ASHOK Kumar Panda | Project Officer SIFRD | 8/12/06 |
| 9 | Bhagaban Raut | President By N.C.O. B.S.S. | 8/12/06 |
| 10) | Santosh Pati | JE Municipality | 8/12/06 |
| 11) | Satish Kumar Panda | — | 8/12/06 |
| 12 | Bharata Bhuwan | — | 8/12/06 |
| 13 | Chitta Raju Raut | Sarpanch | 8/12 |
| 14. | Banshi Kumar Bhatia | Sarpanch | 8/12 |
| 15 | Rabi Kumar Sarapatra | Treasurer Sarapatra | 8/12/06 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**List of Participants of Cuttack District
Orissa State Road Projects (World Bank Funded)
Orissa Works Department**

| Sl. No. | Name | Designation | Signature |
|---------|-------------------------|--|--------------------------------|
| 1 | Somen Dey | Member HE | <i>[Signature]</i> |
| 2 | D.K. Singh | Collector etc | <i>[Signature]</i> 22/11/06 |
| 3 | P.C. Nayak | Charanma (Chudari) | <i>[Signature]</i> |
| 4 | M. K. JAIN | Consultant | <i>[Signature]</i> |
| 5 | Jaladhar Pradhan | EE (C/B) Cuttack | <i>[Signature]</i> |
| 6 | Rajkishore Padhi | AGM, SED Salipur CESU | <i>[Signature]</i> 22/11/06 |
| 7 | Bimal Jyoti Mahanty | Tahasiladar, Salipur | <i>[Signature]</i> 22/11/06 |
| 8 | Fakir Charan Das | BDD Salipur | <i>[Signature]</i> 22/11/06 |
| 9 | Jaynarayan Das | ADD Tahasiladar | <i>[Signature]</i> 22/11/06 |
| 10 | B. K. Das | ABB CDD CESU RANIHAT | <i>[Signature]</i> |
| 11 | Er. P.K. Das | Estimator CDD II CESU Baramkuchi | <i>[Signature]</i> 22/11/06 |
| 12 | Er. S.K. Samal | S.D.O w/ sub-div Cuttack | <i>[Signature]</i> |
| 13 | B.R. Das | ACF P/O DFO Cuttack Fortified | <i>[Signature]</i> 22/11/06 |
| 14 | Bidhu Bhushan Manojk. | DIPRO, CTC | <i>[Signature]</i> 22/11/06 |
| 15 | Alekha Ch. Jena | JE/Salipur (R/B) | <i>[Signature]</i> 22/11/06 |
| 16 | Pradeep K. Jena | A.E. Mahanga | <i>[Signature]</i> 22/11/06 |
| 17 | Kanakata Behera | Chairman, Mahaga Block | <i>[Signature]</i> 22/11/06 |
| 18 | Shikanta Nayak | Supervisor Social Work | <i>[Signature]</i> |
| 19 | Banshidhar Rout | Executive Officer Chowwar Manikpali | <i>[Signature]</i> 22/11/06 |
| 20 | Bhramar Baroja | LDO Nischintkali | <i>[Signature]</i> 22/11/06 |
| 21 | Sukanta Keshore Mahanty | O.S.D to Minister Higher Education PSAP | <i>[Signature]</i> 22/11/06 |
| 22 | S.K. ROUTRAY | EE, Charbati (R/B) Division Chudara | <i>[Signature]</i> 22/11/06 |
| 23 | P.C. Parayak | JE Athayak | <i>[Signature]</i> |
| 24 | PK Bisoi | AE, Athayak | <i>[Signature]</i> 22/11/06 |

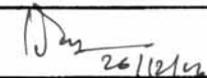
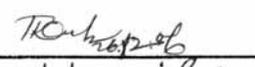
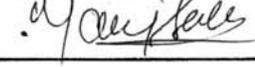
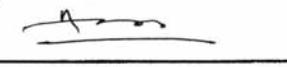
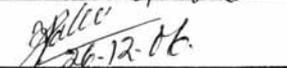
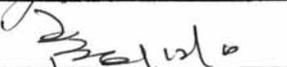
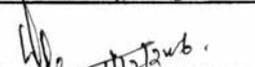
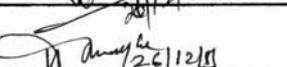
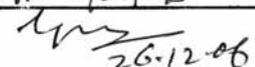
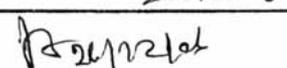
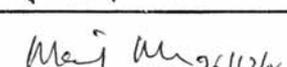
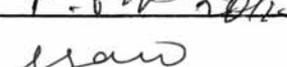
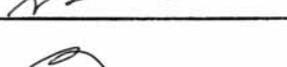
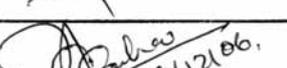
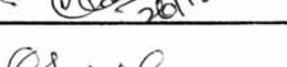
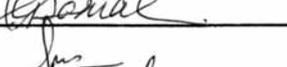
List of Participants of Kendrapada District

Orissa State Road Projects (World Bank Funded)
Orissa Works Department

| Sl. No. | Name | Designation | Signature |
|---------|------------------------|--|-------------------------------|
| 1 | Kolliotes Kondasapr | Collector KDD | [Signature] |
| 2 | Satoughna Pasida | Supdt. of Police | [Signature] 26/12 |
| 3 | Sailendra Prasad Sutar | Ex. Engineer, RRB | [Signature] 26/12/06 |
| 4 | Mageshwar Behara | President Zilla Parishad | [Signature] 26.12.06 |
| 5 | P. K. Hota | Sub-Collector KDD | [Signature] 26/12/06 |
| 6 | Kantash Chandra Nayak | Tahasildar Pattana | [Signature] 26/12/06 |
| 7 | Nityananda Bante | Tahasildar, Kanika | [Signature] 26/12/06 |
| 8 | Dhersen Sahu | J-E Pattana | [Signature] 26/12/06 |
| 9 | Biswajit Nath Bauri | A.B.D.O. Pattana | [Signature] 26/12/06 |
| 10 | Jaganath Das | Dharani Report | [Signature] 26/12/06 |
| 11 | Naren Ch. Swar | J E PH | [Signature] 26-12 |
| 12 | Bhagabat Jena | AE PH-KDD | [Signature] 26-12-06 |
| 13 | Khyatram Paramanik | Tdr. Ael. | [Signature] |
| 14 | Bipin Behar Das | Co-ordinator By. Pass Committee Ael | [Signature] Bipin Behar Das |
| 15 | Dakshya Kumar Behera | Advocate & Secretary By. Pass Committee Ael | [Signature] |
| 16 | Basantakumar Rath | President By. Pass Com Ael | [Signature] Basantakumar Rath |
| 17 | Bansunder Behara | President | [Signature] Bansunder Behara |
| 18 | [Signature] | Nabazari | Ael. |
| 19 | Allexim K Das | Nabazari | Ael. |
| 20 | P. K. Swain | S.D.O. (Elec), CESU Pattana | [Signature] 26/12 |
| 21 | Naba Kumar Mishra | S.D.O. (Elec) Kendrapada CESU | [Signature] |
| 22 | B. K. Dash | E.O. Pattana N.A.O. | [Signature] 26-12-06 |
| 27 | A. Nayak | Chairman Pattana N.A. | [Signature] 26/12/06 |
| 28 | M. R. Pattnaik | Asst Engrs. R.W. Kendrapada | [Signature] |

List of Participants of Kendrapara District

Orissa State Road Projects (World Bank Funded)
Orissa Works Department

| Sl. No. | Name | Designation | Signature |
|---------|----------------------|--|---|
| 1 | Poojit Das | ENH. Division Kendrapara |  26/12/06 |
| 2 | Rabindra Kumar Das | Dist. Correspondent The Samaya, Kendrapara |  26/12/06 |
| 3 | Honey Sall | on behalf of Chair Person, Kendrapara Municipality |  26/12/06 |
| 4 | Amulya K. Mohapatra | A.E. (R&D) Nodal officer |  26/12/06 |
| 5 | Bishnu Charan Rout | Asst. Collector and Land Acquisition Officer |  26/12/06 |
| 6 | M.F. Rabimaz | Asst. Collector Development |  26-12-06 |
| 7 | Nimesh Ch. Sahu | Tdr, Kendrapara |  26/12/06 |
| 8 | Ramesh Chandra Karan | Asst. Engineer Highway |  26/12/06 |
| 9 | Pranab Kumar Nayak | Asst. Engg. Kendrapara Div |  26/12/06 |
| 10 | G.C. Behera | DIPRO, Kendrapara |  26-12-06 |
| 11 | B.K. Bora (FECR & B) | Kendrapara |  26/12/06 |
| 12 | Manoj Kar | Journalist The Statesman |  26/12/06 |
| 13 | Rajesh Kumar Pat | Journalist The Statesman |  26/12/06 |
| 14 | Suresh Sahu | Journalist The SAMBARD |  26/12/06 |
| 15 | Ashis Saha | The Times of India |  26/12/06 |
| 16 | Chittaranjan Sahoo | Journalist The Statesman |  26/12/06 |
| 17 | Garesh Chandra Sana | Journalist Sambard/Kalika |  26/12/06 |
| 18 | Pravat Kumar Parida | Journalist KTV/NDTV |  26-12-06 |
| | | | |
| | | | |
| | | | |
| | | | |

ବିଜ୍ଞାପନ

୦୧୪/୪/୨୦୧୩

ପଠନୀଙ୍କୁ ସର୍ବସାଧାରଣଙ୍କର ଆଗରାଜି ନିମନ୍ତେ ଜଣାଉନିଆ ଲାଭକୁ
 ଛା, ବିଶ୍ୱାସୀଙ୍କ ସହାୟତାରେ ଭବିଷ୍ୟତ ହାସ୍ତା ଉପକଳ୍ପ ପୁଣି ପ୍ରସ୍ତୁତି
 କରାଯିବ - ସୁଧାକାରି ହାସ୍ତା ସଫଳାଫଳ ପଥା ପୁସ୍ତକାଳୟ
 କାର୍ଯ୍ୟ କରାଯିବ ।

ଏହି ଚାହିଦାରେ ଉକଳ୍ପ ଦ୍ୱାରା ଉପସ୍ଥାପନ ହାସ୍ତା ସକଳ
 ସାମଗ୍ରୀ ଉପକଳ୍ପକାରୀଙ୍କୁ ଅନୁରୋଧ କରାଯାଉଛି ଯାହାକୁ ୦.୨୨.୪.୧୩
 ରୁପ ଦିନ ୩୦.୦୦୦୦ ଟଙ୍କାରେ ସୁଧାକାରି ଚାହୁଣା ବାକି କରାଯା
 ୦/୧୨ ରୁପ ଉକଳ୍ପ ଦ୍ୱାରା ସାମାଜିକ ପଥା ଚାହିଦା ସମ୍ପର୍କୀୟ
 କି ଉକଳ୍ପ ସମ୍ପର୍କୀୟ ଅନୁକ୍ରମା ଉକଳ୍ପ ରେ ବିକଳରେ ବିକଳ ଚର୍ଚ୍ଚା
 କରାଯିବ ।

ଠାରୁ ଆଗରାଜାଙ୍କୁ ଉକଳ୍ପକର ନିମନ୍ତେ ସୁଧାକାରି ସମ୍ପର୍କୀୟ
 ଉପସ୍ଥାପନ ପ୍ରତି ଆଗରାଜାଙ୍କୁ ଦାୟତ୍ୱ ଦାୟତ୍ୱ ଅନୁରୋଧ କରାଯାଉଛି ।

ଆଗରାଜାଙ୍କୁ ଉପସ୍ଥାପନ
 ଆଗରାଜାଙ୍କୁ ନିମନ୍ତେ
 R.K. Rath
 SMO, PMU.
 ସୁଧାକାରି ପଥା (ସୁଧାକାରି ପଥା ସୁଧାକାରି)
 Surendra Patra ଚଳାଉଛନ୍ତି
 secretary (gen)
 Anil Tripathy
 Srikanta Nayak
 (F.C)

୧ ଭୁବନେଶ୍ୱରୀ ସାହୁ (ଗୋପାଳପୁର)

Gobinda Das. (11)
 Pratap Sahoo

* Sri Kanta Raut
 ମୁଖ୍ୟ ଉପସ୍ଥାପନ
 * Nanda Kanta Patra
 Nanda Ch Patra

Kartik Chandra Singh
 C.C (PMU)

Pratap kumar Bal.
 C.C (PMU)

Hansi Kish Bal.
 S. Kish Bal.
 କିଶୋରୀ ପାଠକ

Akshaya Kumar Patra
ଅକ୍ଷୟ କୁମାର ପାତ୍ର
ଆଖ୍ୟାୟୀ ଯୋଡ଼ି

ଶ୍ରୀମତୀ ସୁମିତ୍ରା ଦେବୀ

ଶ୍ରୀମତୀ ସୁମିତ୍ରା ଦେବୀ
Gangadhare Tripathy

ମାମୁଳୀ ଉପାଧିକାରୀ
ପଦ୍ମାବତୀ ଦେବୀ
ମାମୁଳୀ ଉପାଧିକାରୀ

Nirmala Parida
ନିର୍ମଳା ପରିଡ଼ା

ଋଷିକାନ୍ତ କୁମାର ସାମଲ

ଋଷି

Padmanabha

Kaushik (Kandara Singh)
କାଉସିକ (କାନ୍ଦରା ସିଂହ)

Pratap Kumar Singh
ପ୍ରତାପ କୁମାର ସିଂହ

ଶ୍ରୀମତୀ ପ୍ରଜ୍ଞା ଦାସ ପ୍ରୋଫେସର
 ସାମାଜିକ ତଥା ଚିକିତ୍ସାତ୍ମକ ସମସ୍ୟା କାର୍ଯ୍ୟକ୍ରମ ସଂଗଠନା ସହ

ସ୍ଥାନ:- ଭୁବନେଶ୍ୱର ବିହାରୀ ଜାମିନୀ, ବାଲୁଆ

ସମୟ: ଶୁକ୍ରବାର, ୧୫/୦୮/୨୦୧୮, ୯:୩୦ ଘଣ୍ଟା
 ତା:- ୨୨/୦୮/୨୦୧୮
 (ସୋମବାର)

ଆୟୋଜକ:- ଡ. ବିଜା ହାନ୍ସବନକ ପ୍ରଜ୍ଞା (OSRP) ପ୍ରଜ୍ଞା ପ୍ରତିଷ୍ଠାନ (OSRP)

ସହଯୋଗୀ:- ଡ. ଅନୁପମ ଦେବ (CART), ଭୁବନେଶ୍ୱର

କାର୍ଯ୍ୟକ୍ରମ:-

- (1) ନାମ ଲେଖି କରଣ / ଚିକିତ୍ସା ଚିକିତ୍ସା କରଣ ।
- (2) ସ୍ୱାସ୍ଥ୍ୟ ଓ ସୁଖର ପ୍ରଦାନ ।
- (3) ସହାୟତା ଆଣିବା
- (4) ଆଜ୍ଞା ଗ୍ରହଣ କରି ଓ ଚିକିତ୍ସା ଆମର ପ୍ରଦାନ ।
- (5) ସେଠାରେ କୌଣସି ପ୍ରଶ୍ନ ଓ ଉତ୍ତର ଦେବା ।
- (6) ଶ୍ରୀମତୀ ପ୍ରଜ୍ଞା ଦାସ ପ୍ରୋଫେସର ସାମାଜିକ ତଥା ଚିକିତ୍ସାତ୍ମକ ସମସ୍ୟା
 ସମ୍ବନ୍ଧରେ ଓ ସୁଖିକ କୋରସ ଦ୍ୱାରା ସମାପନ ଓ ଶ୍ରୀମତୀ ପ୍ରଜ୍ଞା ଦାସ
 ଶ୍ରୀମତୀ ପ୍ରଜ୍ଞା ଦାସ ପ୍ରୋଫେସର (ସି.ଇ.) ।
- (7) ଅନ୍ୟାନ୍ୟ ଉପାଦାନ ଓ ସଂସାଧନ ।

| କ୍ର.ସଂ. | ଭୁବନେଶ୍ୱର କାନ୍ଥାସୁଖାଳୟ ଓ ଅନ୍ୟାନ୍ୟ ସହଯୋଗୀ କର୍ମୀ | ସ୍ଥାନ |
|---------|--|-----------------------|
| (1) | ନାମ ଲେଖି କରଣ | ✓ Ratnagar Sutar. |
| (2) | | ✓ Anweswar Parida |
| (3) | | ✓ M. Mohan Parida |
| (4) | | ✓ ଅକ୍ଷୟ ଦେବ |
| (5) | | ✓ ଶ୍ରୀମତୀ ପ୍ରଜ୍ଞା ଦାସ |
| (6) | | ✓ ବାଟପାଟୁଣୀ |
| (7) | | ✓ Gurusongar Parida |

ବିଭାଜନୀୟ (ସ୍ତ୍ରୀ ସମ୍ବନ୍ଧ ପ୍ରଦାନ) କର୍ମ ପ୍ରାଥମିକ ଚିକିତ୍ସାକ୍ରମ
ସମୟରେ ଚିକିତ୍ସା କରାଯାଇ ଥାଏ ଓ ଆବଶ୍ୟକ କରାଯାଏ ।

ଏହାପରେ ସମସ୍ତ ଅଙ୍ଗଗୁଡ଼ିକ କାହିଁକି ସହଜରେ ନିର୍ମୂଳ
ପ୍ରାଣୀ ସାଥେ ସଂଯୁକ୍ତ କରାଯାଏ ।

ପ୍ରାଣୀଚିକିତ୍ସା :- ଶାରୀରିକ ଓ ମାନସିକ ଉଭୟ ପ୍ରାଣୀ ଉପରେ
ସ୍ତ୍ରୀ ଚିକିତ୍ସା କରାଯାଇ ସୁଖ କାର୍ଯ୍ୟ ପାଇଁ ସୁସ୍ଥପାତ୍ର ପଦ୍ଧତି
କରାଯାଇଥାଏ । ସ୍ତ୍ରୀ ପ୍ରାଣୀ ଉପରେ ଚିକିତ୍ସା କରାଯାଇ
ପରେ ସମସ୍ତ ଉପକରଣ ନିର୍ମୂଳ କରାଯାଇ ସ୍ତ୍ରୀ ଉପରେ
କରାଯାଇ ସମସ୍ତ ଉପକରଣ ନିର୍ମୂଳ କରାଯାଇ ସ୍ତ୍ରୀ ଉପରେ
ପ୍ରାଣୀ ସୁସ୍ଥପାତ୍ର ଚିକିତ୍ସା ପାଇଁ ଉପକରଣ କରାଯାଇଥାଏ ।

ପ୍ରାଣୀଚିକିତ୍ସା :- ଉପକରଣ - ଉପକରଣ ଉପରେ ସମସ୍ତ କାର୍ଯ୍ୟ
ପ୍ରାଣୀ ଉପରେ କରାଯାଇ ସୁଖ କାର୍ଯ୍ୟ ପାଇଁ ସୁସ୍ଥପାତ୍ର
ପଦ୍ଧତି କରାଯାଇଥାଏ । ସ୍ତ୍ରୀ ଉପରେ ଚିକିତ୍ସା କରାଯାଇ
ପରେ ସମସ୍ତ ଉପକରଣ ନିର୍ମୂଳ କରାଯାଇ ସ୍ତ୍ରୀ ଉପରେ
କରାଯାଇ ସମସ୍ତ ଉପକରଣ ନିର୍ମୂଳ କରାଯାଇ ସ୍ତ୍ରୀ ଉପରେ
ପ୍ରାଣୀ ସୁସ୍ଥପାତ୍ର ଚିକିତ୍ସା ପାଇଁ ଉପକରଣ କରାଯାଇଥାଏ ।

ପ୍ରାଣୀଚିକିତ୍ସା :- ଉପକରଣ, ଉପକରଣ ଉପରେ ଉପକରଣ
ପ୍ରାଣୀ ଉପରେ କରାଯାଇ ସୁଖ କାର୍ଯ୍ୟ ପାଇଁ ସୁସ୍ଥପାତ୍ର
ପଦ୍ଧତି କରାଯାଇଥାଏ । ସ୍ତ୍ରୀ ଉପରେ ଚିକିତ୍ସା କରାଯାଇ
ପରେ ସମସ୍ତ ଉପକରଣ ନିର୍ମୂଳ କରାଯାଇ ସ୍ତ୍ରୀ ଉପରେ
କରାଯାଇ ସମସ୍ତ ଉପକରଣ ନିର୍ମୂଳ କରାଯାଇ ସ୍ତ୍ରୀ ଉପରେ
ପ୍ରାଣୀ ସୁସ୍ଥପାତ୍ର ଚିକିତ୍ସା ପାଇଁ ଉପକରଣ କରାଯାଇଥାଏ ।

ପ୍ରାଣୀଚିକିତ୍ସା :- ପ୍ରାଣୀ ଉପରେ, ଉପକରଣ ଉପରେ ଉପକରଣ
ପ୍ରାଣୀ ଉପରେ କରାଯାଇ ସୁଖ କାର୍ଯ୍ୟ ପାଇଁ ସୁସ୍ଥପାତ୍ର
ପଦ୍ଧତି କରାଯାଇଥାଏ । ସ୍ତ୍ରୀ ଉପରେ ଚିକିତ୍ସା କରାଯାଇ
ପରେ ସମସ୍ତ ଉପକରଣ ନିର୍ମୂଳ କରାଯାଇ ସ୍ତ୍ରୀ ଉପରେ
କରାଯାଇ ସମସ୍ତ ଉପକରଣ ନିର୍ମୂଳ କରାଯାଇ ସ୍ତ୍ରୀ ଉପରେ
ପ୍ରାଣୀ ସୁସ୍ଥପାତ୍ର ଚିକିତ୍ସା ପାଇଁ ଉପକରଣ କରାଯାଇଥାଏ ।

ପ୍ରସ୍ତାବନା ୧:- ଶ୍ରୀମତୀ ଜୟନ୍ତୀ ଦେବୀଙ୍କ ପାଠ୍ୟ ପୁସ୍ତକରେ
କୋମଳା କାନ୍ତର (I.H) ହାସ୍ୟହାସ୍ୟ ପାଠ୍ୟ ପୁସ୍ତକରେ
୭ଟି କଳ୍ପନାମୟ କାନ୍ତର ଗୁଡ଼ିକୁ ସୁନ୍ଦର ଭାବରେ ଉଲ୍ଲେଖ କରି
ସାମାଜିକ କେବଳ ପୁସ୍ତକରେ ତାହା କେବଳ କୋମଳା ଓ
ପ୍ରସ୍ତାବନା ହେଉଅଛି ।

ପ୍ରସ୍ତାବନା ୨:- ଯଦି ଶ୍ରୀମତୀଙ୍କ ପୁସ୍ତକରେ ହାସ୍ୟପାଠ୍ୟ
ପ୍ରାକାର ସମସ୍ତା ସାହିତ୍ୟ ପଢ଼ିବାକୁ ବିକଳପଦ୍ଧତି
ସାଧୁତା ଉପକ୍ରମଣରେ ଗାନ୍ଧୀ ଓକା ବିକଳପାଠ୍ୟ କେବଳ
କରି ଉଠିବ ।

ପ୍ରସ୍ତାବନା ୩:- ଶ୍ରୀମତୀ, ଶାନ୍ତନୁ, ଉତ୍କଳୀ ପାଠ୍ୟ ପୁସ୍ତକରେ
କଳ୍ପନାମୟ କୋମଳାଙ୍କ କୋମଳାଙ୍କ (କୋମଳା) ୮୮୦
ଓ ପାଠ୍ୟପୁସ୍ତକରେ କୋମଳାଙ୍କ ଉପର ଶ୍ରୀମତୀ ୮୮୦
ପଢ଼ିବାକୁ ବିକଳପାଠ୍ୟ ଦିଆ ଯାଉ ।

ପ୍ରସ୍ତାବନା ୪:- ହାସ୍ୟହାସ୍ୟ ପାଠ୍ୟ ପୁସ୍ତକରେ ଶ୍ରୀମତୀଙ୍କ
କୋମଳାଙ୍କ କୋମଳାଙ୍କ କୋମଳାଙ୍କ କୋମଳାଙ୍କ କୋମଳାଙ୍କ
କୋମଳାଙ୍କ କୋମଳାଙ୍କ କୋମଳାଙ୍କ କୋମଳାଙ୍କ କୋମଳାଙ୍କ
କୋମଳାଙ୍କ କୋମଳାଙ୍କ କୋମଳାଙ୍କ କୋମଳାଙ୍କ କୋମଳାଙ୍କ ।

ଶ୍ରୀମତୀଙ୍କ ସହାୟ ସମାଜର ପାଠ୍ୟ ସହାୟକ
ପାଠ୍ୟପୁସ୍ତକ ପ୍ରକଳ୍ପ ସହାୟକ କୋମଳାଙ୍କ

Padmanabam
(President)
(9777048434)

Prabulla Ku. Prusty

ସୁଧ କୁମାର
Lalafendu Doh,
Baramale Rana
Somu nuth suno
Jitendra ku dash
Pramoda Kumar Sahoo
Sakanta Sahoo
Mohni Sahoo
କମଳାକାନ୍ତ ସାହୁ

Gopal. Barik,
ପ୍ରକାଶ ବାରିକ
Prakash Badik
Sajid. Khan.
ସଞ୍ଜୀବ କୁମାର

ନିର୍ମଳା କାନ୍ତ ସାହୁ
madhusudan panda

ସଞ୍ଜୀବ କାନ୍ତ
Manas Ranjan Rout
ପିପି କାନ୍ତା ମାଧବ

LTI
K. Nabin Rao.
Gagan Pradhan

ସଞ୍ଜୀବ କାନ୍ତ
ନିର୍ମଳା କାନ୍ତ
ପ୍ରକାଶ ବାରିକ
ସଞ୍ଜୀବ କାନ୍ତ
ନିର୍ମଳା କାନ୍ତ
ପ୍ରକାଶ ବାରିକ
ସଞ୍ଜୀବ କାନ୍ତ
ନିର୍ମଳା କାନ୍ତ
ପ୍ରକାଶ ବାରିକ
ସଞ୍ଜୀବ କାନ୍ତ
ନିର୍ମଳା କାନ୍ତ
ପ୍ରକାଶ ବାରିକ

- (10)
- (11)
- (12)
- (13)
- (14)
- (15)
- (16)
- (17)
- (18)
- (19)
- (20)
- (21)
- (22)
- (23)
- (24)
- (25)
- (26)
- (27)
- (28)
- (29)
- (30)

x
x
x

Kastik Ch Singh
(PMU) CC

x Pratap Kumar Bal.
PMU(C.C)

x ବିନୟ କୁମାର

x Bal Sena

x ଅନୁଜାଣି ସାହୁ

Y S.V. Singh

Y ପ୍ରଭାକର ମହାପାତ୍ର

Bijaya Kumar Das

Bahamali Rana

Sukanta Sahoo

Sudapath Nayak

Netyananda Senuin.

ଉତ୍କଳ ପେଟେଟି

M.S. Panda

Sarat Kure.

ଅନୁଜାଣି ସାହୁ

ଉତ୍କଳ ପେଟେଟି

Iwasan Kumar Behema.

Sukanta Sodapathy

ଉତ୍କଳ ପେଟେଟି

ନିତ୍ୟାନନ୍ଦ ସେନା

ଉତ୍କଳ ପେଟେଟି

Haidhar Patra.

Premila Mohapatra P.C.M

21.4.2013

Suryamani Panda

USRP (CARD) (A.P.C)

Prasant Kumar Mish. (FC) (A.M)

ବିଦ୍ୟାଳୟର ପୁସ୍ତିକ ସଂଗ୍ରହ ! -

- (୧) ପୁସ୍ତକାଳୟର ପୁସ୍ତିକା
- (୨) ପୁସ୍ତକାଳୟର ପ୍ରାଥମିକ ବିଦ୍ୟାଳୟ ।
- (୩) ପୁସ୍ତକାଳୟର ଉଚ୍ଚ ବିଦ୍ୟାଳୟ ।
- (୪) ଜିଲ୍ଲା ସ୍ତରୀୟ ବିଦ୍ୟାଳୟ ।

ପ୍ରସ୍ତାବ ନଂ ୩ ! - ସର୍ବ ସାମାଜିକ ଓ ନିମ୍ନ ମାନର ବିଦ୍ୟାଳୟରୁ ପୁସ୍ତିକା ସଂଗ୍ରହ କରି ଏହାକୁ ଉପଯୁକ୍ତ ପଦ୍ଧତିରେ ସଂଗ୍ରହ କରିବାକୁ ଉଦ୍ଦେଶ୍ୟ ରଖିବୁ ।

ପ୍ରସ୍ତାବ ନଂ ୪ ! - ସମସ୍ତ ଉପାଦାନ ଓ ପୁସ୍ତିକାକୁ ନିୟମିତ ଭାବେ ଯାଞ୍ଚାଯିବ ଏବଂ ଉପଯୁକ୍ତ ପଦ୍ଧତିରେ ସଂଗ୍ରହ କରାଯିବ ।

ପ୍ରସ୍ତାବ ନଂ ୫ ! - ପ୍ରାଥମିକ ଓ ଉଚ୍ଚ ମାନର ବିଦ୍ୟାଳୟରୁ ପୁସ୍ତିକା ସଂଗ୍ରହ କରି ଏହାକୁ ଉପଯୁକ୍ତ ପଦ୍ଧତିରେ ସଂଗ୍ରହ କରିବାକୁ ଉଦ୍ଦେଶ୍ୟ ରଖିବୁ । ଏହା ସହିତ ବିଭିନ୍ନ ପ୍ରକାରର ପୁସ୍ତିକା ସଂଗ୍ରହ କରିବାକୁ ଉଦ୍ଦେଶ୍ୟ ରଖିବୁ ।

ପ୍ରସ୍ତାବ ନଂ ୬ ! - ବିଭିନ୍ନ ପ୍ରକାରର ପୁସ୍ତିକା ସଂଗ୍ରହ କରି ଏହାକୁ ଉପଯୁକ୍ତ ପଦ୍ଧତିରେ ସଂଗ୍ରହ କରିବାକୁ ଉଦ୍ଦେଶ୍ୟ ରଖିବୁ । ଏହା ସହିତ ବିଭିନ୍ନ ପ୍ରକାରର ପୁସ୍ତିକା ସଂଗ୍ରହ କରିବାକୁ ଉଦ୍ଦେଶ୍ୟ ରଖିବୁ ।

ସମସ୍ତ ଉପାଦାନ ଓ ପୁସ୍ତିକାକୁ ନିୟମିତ ଭାବେ ଯାଞ୍ଚାଯିବ ଏବଂ ଉପଯୁକ୍ତ ପଦ୍ଧତିରେ ସଂଗ୍ରହ କରାଯିବ ।

ପ୍ରଧାନ ଶିକ୍ଷକ
(ପ୍ରଧାନ ଶିକ୍ଷକ)

M.N-୧୫୩୮୩୩୭୭୭

ନୈର୍ଦ୍ଦେଶ

୦୧୫/୦୮/୨୦୧୩

ଉପଯୁକ୍ତ ସର୍ବସାଧାରଣଙ୍କ ଅନୁମତି ନିମନ୍ତେ ଉପରୋକ୍ତ ଦିଆ ଯାଉଛି କି, ବିଶ୍ୱବ୍ୟାପୀ
ସମାଧିକାରୀ ଭବିଷ୍ୟତ ହାସ୍ତା ପ୍ରକଳ୍ପ ଦ୍ୱାରା ପ୍ରସ୍ତୁତ ହେଉଥିବା ପ୍ରକଳ୍ପକୁ
ହାସ୍ତା ସମ୍ପର୍କରେ ତଥା ପ୍ରକଳ୍ପର ଉପକ୍ରମ କରାଯିବ ।

ଉପରୋକ୍ତ ପ୍ରକଳ୍ପ ଦ୍ୱାରା ପ୍ରସ୍ତୁତ ହାସ୍ତା
ସମ୍ପର୍କର ଉପକ୍ରମକୁ କୁହାଯାଉଛି, ଯୁକ୍ତପୁର (କୋଷ୍ଟାଭିମ୍ବ) ପ୍ରକଳ୍ପର ଉପକ୍ରମକୁ
ସମ୍ପର୍କରେ କରାଯାଉଛି କି, ଆଗରୁ ୨୫/୦୫/୨୦୧୩ ତାରିଖ ଉପକ୍ରମର ଦିନ ୩ ମିନିଟ୍
ସମୟରେ କୁଳପୁରକୁ ଉପକ୍ରମର ସମ୍ପର୍କରେ ପ୍ରକଳ୍ପ ଦ୍ୱାରା
ସାମାଜିକ ତଥା ପ୍ରକଳ୍ପର ସମ୍ପର୍କରେ କି ପ୍ରକାର ସମ୍ପର୍କ ଅସ୍ପଷ୍ଟ ହେବ
କି ଦିବସରେ ଦିବସ ଚଳା କରାଯିବ ।

ଉପରୋକ୍ତ ଆବଶ୍ୟକ ନିର୍ଦ୍ଦିଷ୍ଟ ଦିନ ନିମ୍ନ
ସମୟରେ, ଆବଶ୍ୟକତାରେ ଉପକ୍ରମର ଆବଶ୍ୟକୀୟ ସମୟ ମତାମତ
ପ୍ରଦାନ କରିବା ସହ ଆବଶ୍ୟକୀୟ ସମ୍ପର୍କରେ କିଛି ତଥ୍ୟ ।

ଏମିତି ସହ ଆବଶ୍ୟକୀୟ ଉପକ୍ରମ ଜାଣନା କରୁଛୁ ।

ସୁଧାମାଳିକା ମାତା (ସହକାରୀ ପ୍ରକଳ୍ପ ସମ୍ପାଦକ)
ଭବିଷ୍ୟତ ହାସ୍ତା ସମ୍ପର୍କ ପ୍ରକଳ୍ପ (୧୦୫୫୫)

ନିର୍ଦ୍ଦେଶକ (Krushnapur)

Radhakrishna Barik
ପ୍ରକଳ୍ପ ସମ୍ପର୍କ
ଶ୍ରୀମତୀ ସତ୍ୟାମ୍ବରୀନୀ
ସତ୍ୟାମ୍ବରୀନୀ
Satyananda Barik
ପ୍ରକଳ୍ପର ନିର୍ଦ୍ଦେଶକ
ନିର୍ଦ୍ଦେଶକ

LTI Kali Barik.

sachida Nanda Pareida

କଳାଚର୍ଯ୍ୟ ପାଣ୍ଡି
Bojay Ku Nayam.

Prasanta Barik

ଅକ୍ଷୟ ପାଣ୍ଡେରାୟ (ମିଳନାମ)

ରମିତା ପାଲ

ମାରିତା ପାଲ

ସାଉଁଜୀ ପାଲ

ମୁକ୍ତେଶ୍ଵର ପାଲ

Chaitani Nath

ପ୍ରମୋଦ ପାଲ

ଅକ୍ଷୟ ପାଲ

ଉତ୍ତମ ପାଲ

Brahmananda Sethi

ଅକ୍ଷୟ ପାଲ

ଅକ୍ଷୟ ପାଲ

Aushay Acharya

ଗଜନୀ ପାଲ

(ମିଳନାମ)

Narayan Nayak

ଅକ୍ଷୟ ପାଲ

Bichitra Kumar Patra

✓ Sri Rajesh Kumar Barik

ବୁଝାମଣା

୩୧.୧୨.୧୮/୨୦୧୯

ଏହାକୁ ସର୍ବସାଧାରଣ କର୍ମ ଅବଗତ ନିମନ୍ତେ ଜଣାଉ ଦିଆ
ଗାଉଅଛି କି, ବିଜୁବାବୀ ସହାୟତାରେ ଭବିଷ୍ୟା ବାନ୍ଧୁ ପ୍ରକଳ୍ପ ଦ୍ୱାରା
ପ୍ରାୟ ୧୫ ଜଣଙ୍କୁ ଏହି ପ୍ରକଳ୍ପରେ ଯୋଗ୍ୟ କରିବା ପାଇଁ ସହାୟତା ଦିଆ
ଯାଇଅଛି ।

ଏହି ପ୍ରକଳ୍ପରେ ଯୋଗ୍ୟ ହେବା ପାଇଁ ଉପରୋକ୍ତ ନାମକ ଲୋକଙ୍କୁ
ସହାୟତା ଦିଆଯାଇଛି । ଏହାପାଇଁ ଏକ ଆବେଦନ
୧୫.୧୨.୧୮/୨୦୧୯ ତାରିଖ ଦିନ ୧୧.୦୦.୩୫ ସମୟରେ ସ୍ୱାକ୍ଷର
କରାଯାଇଥିଲା । ଏହାପରେ ଏକ ଆବେଦନ ଦ୍ୱାରା ସହାୟତା ଦିଆ
ଯାଇଅଛି । ଏହାପରେ ଏକ ଆବେଦନ ଦ୍ୱାରା ସହାୟତା ଦିଆ
ଯାଇଅଛି ।

ଏହି ଆବେଦନରେ ଉଲ୍ଲେଖ କରାଯାଇଛି ଯେ
ଆବେଦନକାରୀ ଏହି ଆବେଦନରେ ଉଲ୍ଲେଖକର
ଆବେଦନ କର୍ମ ସମ୍ପର୍କରେ ସହାୟତା ଦିଆଯାଇଛି ।

ଆବେଦନକାରୀ ଉପରୋକ୍ତ ନାମକ
କର୍ମ କରିଛନ୍ତି । ଆବେଦନକାରୀ
ସହାୟତା ପ୍ରାପ୍ତ (ସହାୟତା ପ୍ରକଳ୍ପ)
ଭବିଷ୍ୟା ହାତୀ ସହାୟତା ପ୍ରକଳ୍ପ (OSRP)

- ✓ ପ୍ରମୁଖ ଲୋକଙ୍କ ନାମ
- ✓ ସହାୟତା ପ୍ରାପ୍ତ
- ✓ ସହାୟତା ପ୍ରାପ୍ତ
- ✓ ଶ୍ରୀ କୁମାର ମହାପାତ୍ର
- ✓ ଶ୍ରୀ ସୁଧାକର ପଣ୍ଡା
- ✓ ଶ୍ରୀ କୁମାର ମହାପାତ୍ର
- ✓ Sushil Kumar Mishra
- ✓ Kanowar Mishra
- ✓ Prabhakar Kumar Swain

Gagambihari Selhi
Mungli gum
Ashon vum Reu
Umakanta pia

→ 1913 (1913/1914)
Sanyang K. Dadi

Subodha Kungu Delobopala (1910-14)

Nerujon Malilik

ସାମ୍ବାଦକଙ୍କ ଦ୍ଵାରା ପ୍ରକାଶିତ ହେବା ସମ୍ଭାଷଣ ବା ସମ୍ବାଦିକ ତଥା ଲିଖକଙ୍କ ଗତ
 ସମସ୍ୟା କିମ୍ପାକ ସମ୍ବନ୍ଧରେ ବହୁ

ଜ୍ଞାନ :- ଗୋପନୀୟତା ବିଧି ପଦ୍ଧତି, କର୍ତ୍ତବ୍ୟତା, ହାତକମ୍ପନା (ଆର୍.ଏ.ଏ. ସେକ୍ସନ)

ତାରିଖ :- ୨୪/୦୪/୨୦୧୩

ଆଲୋଚନା :- ଓଡ଼ିଶା ସାମ୍ବାଦକ ଲୋକଙ୍କୁ (OJRP) ଉପରେ ଲିଖକଙ୍କ ଗୋପନୀୟତା

ସେକ୍ସନ ଉପରେ ଆକ୍ଟିଭିଟି ସହ ଆକ୍ଟିଭିଟି, ପୁନଃଲେଖନ

"କାର୍ଯ୍ୟ ସୂଚୀ"

- (୧) ନାମ ଲେଖକଙ୍କୁ (ଅନୁପ୍ରାଣନା କରି ବହୁ)
- (୨) ସ୍ଵାଧୀନତା ସୂଚନା ସମ୍ପାଦନା ।
- (୩) ସମ୍ବାଦକ ଉପରେ ଓ ସମ୍ବାଦକ ଆକ୍ଟିଭିଟି ।
- (୪) ଅନୁପ୍ରାଣନା କାର୍ଯ୍ୟ ଲିଖକଙ୍କୁ ଆମନୀ ସମ୍ପାଦନା ।
- (୫) ଲେଖକଙ୍କୁ ଉପରେ ଉଦ୍ଦେଶ୍ୟ ଛାଡ଼ିବା ।
- (୬) ସାମ୍ବାଦକଙ୍କ ଦ୍ଵାରା ପ୍ରକାଶିତ ହେବା ସମ୍ଭାଷଣ ବା ସମ୍ବାଦିକ ତଥା ଲିଖକଙ୍କ ଗତ ସମସ୍ୟା ଓ କିମ୍ପାକ ସମ୍ବନ୍ଧରେ ବହୁ ପୁସ୍ତକ ସମ୍ପାଦନା । (୭) ସମ୍ବାଦକଙ୍କ କାର୍ଯ୍ୟ ସମ୍ପାଦନା
- (୮) ଅନୁପ୍ରାଣନା କାର୍ଯ୍ୟ ସହ ସମ୍ପାଦନା ।

ନିମ୍ନ ଉପସ୍ଥାପନ କାର୍ଯ୍ୟ ସମ୍ପାଦନା ନାମ ଉପସ୍ଥାପନ କାର୍ଯ୍ୟ ସମ୍ପାଦନା ଓ କାର୍ଯ୍ୟ ସମ୍ପାଦନା

- ✓ ପ୍ରମୁଖ ଲୋକ ଉପରେ ଗୋପନୀୟତା
- ✓ ଲେଖକ ନାମ ସମ୍ପାଦନା
- ✓ ବିଧାନ ସଭା
- ✓ ଗୁପ୍ତ କାର୍ଯ୍ୟ ସମ୍ପାଦନା
- ✓ Sushil Kumar Biswal
- ✓ Shama Khan Biswas
- ✓ Gaganbithari Sethi
- ✓ ଅନୁପ୍ରାଣନା କାର୍ଯ୍ୟ
- ✓ Ashok Kumar Seal
- ✓ Prabhakar Kumar Biswal

Suryamani Ponda (ADP)
OSRP CARP

* Prasant Kumar Dewh. (FC)

* Sanjay Kr. Doshi
9437311154 / 9737124304

शिवशंकर (शिवशंकर)

Umakanta Jia

✓
Subodha Kumar Dehshopra
Smo - Team 4

✓ Gyana ranjan Behera
(Balakati)

✓ Niranjay Mallik

✓ Mihir Das (OSRP)

✓ N. Behera

✓ Susanta Rout

✓ Sri Chandra Prasad

✓ Babaricharan Swain

✓

✓

✓

✓

ଅନ୍ୟତା ୨୪।୦୪।୨୦୧୫ ରିମ ଦିଆ ୧୦ ଲକ୍ଷିଆ ସମ୍ବଳରେ ଉଚ୍ଚତମୁତ୍-ସୁନ୍ଦରୀ ହାତ୍ୟା
 ହାତ୍ୟା କଠରେ ସୁଧା ଗାଈନିକା ଯୁକ୍ତ ଅନୁଷ୍ଠିତ ରୁଦ୍ଧିକା ବୋଲି ୦୧୭ ବର୍ଷେ
 ବୋଲି ଅଧିକ୍ଷ୍ଟ ଅଧିକ୍ଷ୍ଟ ଉପକ୍ରମ ସ୍ଵାଧୀନକାରୀ ଦ୍ୟକ୍ଷିକଠେକା ଉପକ୍ରମେ
 ଗୋକର୍ଣ୍ଣିକା ଉପକ୍ରମେ ପ୍ରକ୍ଷିକ୍ଷ୍ଟ ସ୍ଵାଧୀନକାରୀ ସାମାଜିକ ଓ ପରିବର୍ତ୍ତନ
 ସମ୍ପର୍କା ଚିତ୍ତ ଉପକ୍ରମ ଉପକ୍ରମ ଅଧିକ୍ଷ୍ଟ କ୍ରମାଧିକ୍ଷ୍ଟ ।

ଚିତ୍ତ ଉପକ୍ରମେ ଗୋକର୍ଣ୍ଣିକା କାଳକ୍ରମେ ଲୁଚିତ (OSRP) ତତ୍ପରେ ଶ୍ରୀ ସୁଧାକାରୀ
 କ୍ରମାଧିକ୍ଷ୍ଟ ପଦକ୍ରମେ (SMO), ଶ୍ରୀ ସୁଧାକାରୀ ପକ୍ଷ (APC), ଶ୍ରୀ ପ୍ରକାଶ କ୍ରମେ
 ଦାଣ୍ଡ (FC) ଉପକ୍ରମେ ଉପକ୍ରମେ ବିକ୍ରମାଧିକ୍ଷ୍ଟ ସମାଧିକ୍ଷ୍ଟ ଉଚ୍ଚତମୁତ୍ -
 ରୁଦ୍ଧିକା ହାତ୍ୟା ପ୍ରକ୍ଷିକ୍ଷ୍ଟ ଓ ପ୍ରକ୍ଷିକ୍ଷ୍ଟ ହାତ୍ୟା ସମ୍ପର୍କା ଗ୍ରାମ୍ୟ
 କୋକର୍ଣ୍ଣିକା ଉପକ୍ରମେ ଓ ସାମାଜିକ ସମ୍ପର୍କା ଚିତ୍ତ କ୍ରମେ ପ୍ରକ୍ଷିକ୍ଷ୍ଟ ଉପକ୍ରମ
 ପ୍ରାକ୍ଷିକ୍ଷ୍ଟ କ୍ରମେ ।

ଚିତ୍ତ ଉପକ୍ରମେ ଅଧିକ୍ଷ୍ଟ ଉପକ୍ରମେ ନାସକିକା ଶ୍ରୀକ୍ରମେ ନିକ୍ରମେ ପ୍ରକ୍ଷିକ୍ଷ୍ଟ
 ସମାଧିକ୍ଷ୍ଟ ଉପକ୍ରମେ ସମାଧିକ୍ଷ୍ଟ ପ୍ରକ୍ଷିକ୍ଷ୍ଟ କ୍ରମାଧିକ୍ଷ୍ଟ ସାମାଜିକ ସମ୍ପର୍କା
 ପ୍ରକ୍ଷିକ୍ଷ୍ଟ ଉପକ୍ରମେ ପ୍ରକ୍ଷିକ୍ଷ୍ଟ ପ୍ରକ୍ଷିକ୍ଷ୍ଟ କ୍ରମେ ।

ପ୍ରକ୍ଷିକ୍ଷ୍ଟ ନଂ-୧:- କ୍ରମାଧିକ୍ଷ୍ଟ ଉପକ୍ରମେ ଅଧିକ୍ଷ୍ଟ ଉପକ୍ରମେ ପ୍ରକ୍ଷିକ୍ଷ୍ଟ ଉପକ୍ରମେ ପ୍ରକ୍ଷିକ୍ଷ୍ଟ
 ଅଧିକ୍ଷ୍ଟ, ସୁଧାକାରୀ, ଉପକ୍ରମେ, ଉପକ୍ରମେ, ଉପକ୍ରମେ, ଉପକ୍ରମେ, ଉପକ୍ରମେ,
 ଅଧିକ୍ଷ୍ଟ, ଉପକ୍ରମେ, ଉପକ୍ରମେ, ଉପକ୍ରମେ, ଉପକ୍ରମେ, ଉପକ୍ରମେ, ଉପକ୍ରମେ,
 ଅଧିକ୍ଷ୍ଟ, ଉପକ୍ରମେ, ଉପକ୍ରମେ, ଉପକ୍ରମେ, ଉପକ୍ରମେ, ଉପକ୍ରମେ, ଉପକ୍ରମେ,
 ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ କ୍ରମେ । ପ୍ରକ୍ଷିକ୍ଷ୍ଟ ୧୦ ଉପକ୍ରମେ ଉପକ୍ରମେ
 ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ କ୍ରମେ ।

କ୍ରମାଧିକ୍ଷ୍ଟ ୦୧୭ ଉପକ୍ରମେ ପ୍ରକ୍ଷିକ୍ଷ୍ଟ ଉପକ୍ରମେ ଅଧିକ୍ଷ୍ଟ ଉପକ୍ରମେ
 କ୍ରମାଧିକ୍ଷ୍ଟ ୦୧୭ ଉପକ୍ରମେ ପ୍ରକ୍ଷିକ୍ଷ୍ଟ ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ
 ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ

ପ୍ରକ୍ଷିକ୍ଷ୍ଟ ନଂ-୨ - ଉପକ୍ରମେ ଉପକ୍ରମେ ସୁଧାକାରୀ ଉପକ୍ରମେ କ୍ରମାଧିକ୍ଷ୍ଟ ଉପକ୍ରମେ
 ଉପକ୍ରମେ ୦୧୭ ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ
 ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ
 ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ
 ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ ଉପକ୍ରମେ

ପ୍ରସ୍ତାବ ନଂ-୩ - ଶାନ୍ତିକମିଟିର ପ୍ରାର୍ଥନା ପାଇଁ ୧୦୦ ଟଙ୍କା ଦାନ କରୁଥିବା ବ୍ୟକ୍ତିଙ୍କୁ ପ୍ରମାଣିତ କରିବା ପାଇଁ
 ସୂଚୀ ସମ୍ପାଦନା ଶୁଣି ଏହିପରି ପ୍ରାର୍ଥନା ପତ୍ରରେ ସୂଚୀ ୨୦୦ ଟଙ୍କା
 ଚଢ଼ାଉ ସମ୍ପାଦନା ଉପରେ ଏକମୁଦ୍ରା ବାକିର କର୍ତ୍ତବ୍ୟ କରାଯାଉ ।
 ଫଳରେ ଅନ୍ତର୍ଦ୍ଧାନ ସମ୍ପର୍କୀୟ ଶୁଦ୍ଧ ସଂସ୍କାର କରିବା ଲାଗିବ ।

ପ୍ରସ୍ତାବ ନଂ-୪ - ବିଶ୍ୱ ପରିଷେଷ ପ୍ରତି କମିଟିର ଅନୁମତି ପାଇଁ ଅର୍ଥରାଶି
 ଉପରେ କମିଟି (ବିଶ୍ୱ ଉପକ୍ରମ ସ୍ତମ୍ଭ) ଲାଗୁ ହେଲେ ନିମନ୍ତେ ଅର୍ଥରାଶି
 ଦୁର୍ଭିକ୍ଷପନ୍ନ ପ୍ରକ୍ରିୟା ପୂର୍ଣ୍ଣ ପ୍ରକାଶନ ଉପକ୍ରମରେ ଅର୍ଥରାଶି
 ଏହିପରି ଉପକ୍ରମ ବାଟି ଆଗାମି ଦୁର୍ଭିକ୍ଷପନ୍ନ ପାଇଁ ଅନୁମତି ତି
 ସୁରକ୍ଷା ବିଧିବଦ୍ଧ ନିମନ୍ତେ ଅର୍ଥରାଶି ସଂଗ୍ରହ ଏକମୁଦ୍ରାରେ ।

- (କ) ତଥାକାର ଦୁର୍ଭିକ୍ଷପନ୍ନଙ୍କୁ ପାରମ୍ପରିକ ତି ଦାୟିତ୍ୱ ଦିଆଯିବ
- (ଖ) ତଥାକାର ଦୁର୍ଭିକ୍ଷପନ୍ନଙ୍କୁ ସମସ୍ତଙ୍କୁ ଦୁର୍ଭିକ୍ଷପନ୍ନ
 କରାଯାଉ । ଏହା:- ନିତ୍ୟା, ଆତ୍ମ, ପରମ୍ପରା ଅନୁମତି ଏକମୁଦ୍ରା, ନିତ୍ୟ, ଏହି
 ଅର୍ଥରାଶି, କରୁଣା, ଏକମୁଦ୍ରା, ଅର୍ଥରାଶି, ସୁରକ୍ଷା, ଉପକ୍ରମ, ଉପକ୍ରମ, ଉପକ୍ରମ, ଉପକ୍ରମ, ଉପକ୍ରମ
 ନାଭିକ୍ରମ ଆଦି ଦୁର୍ଭିକ୍ଷପନ୍ନଙ୍କୁ ଦିଆଯାଉ ।

ପ୍ରସ୍ତାବ ନଂ-୫ :- କମିଟିର ସମ୍ପୂର୍ଣ୍ଣ ଅନୁମତି ନିମନ୍ତେ ଆଜି ଆଜି ନିତ୍ୟାଗ୍ରହ ।

- (କ) ଆଜି ଆଜି ନିତ୍ୟାଗ୍ରହ ସମ୍ପୂର୍ଣ୍ଣ ପର୍ଯ୍ୟନ୍ତ ପାଖ୍ୟ ସୂଚୀ କେନ୍ଦ୍ରୀୟ ଉପରେ
 ତି ଏ କମିଟିର ଦୁର୍ଭିକ୍ଷପନ୍ନଙ୍କୁ ନିମନ୍ତେ ଦିଅ । ଏହି କେନ୍ଦ୍ରୀୟ
 ନିତ୍ୟ ବିକଳ ସମ୍ପୂର୍ଣ୍ଣ ଦିଆଯାଉ ।
- (ଖ) ଉପକ୍ରମ ଆଜି ଉପକ୍ରମ ପାଇଁ ଦୁର୍ଭିକ୍ଷପନ୍ନଙ୍କୁ ନିତ୍ୟାଗ୍ରହ ଦୁର୍ଭିକ୍ଷପନ୍ନ
 ପାଇଁ ସମ୍ପୂର୍ଣ୍ଣ ନିତ୍ୟାଗ୍ରହ ପାଇଁ ତି ଏହି ଏହି କରାଯାଉ ।
- (ଗ) ତି ଦୁର୍ଭିକ୍ଷପନ୍ନଙ୍କୁ ସମ୍ପୂର୍ଣ୍ଣ ଅନୁମତି ସମ୍ପୂର୍ଣ୍ଣ ଦିଆଯାଉ ।
- (ଘ) ଦେନପୋଷଣୀ ଉପରେ ଉପକ୍ରମର ଘାଟି ଘାଟି ପର୍ଯ୍ୟନ୍ତ ଦୁର୍ଭିକ୍ଷପନ୍ନଙ୍କୁ
 ଦୁର୍ଭିକ୍ଷପନ୍ନଙ୍କୁ ନିତ୍ୟାଗ୍ରହ ଦିଆଯାଉ । କିନ୍ତୁ ନିତ୍ୟା
 ଦୁର୍ଭିକ୍ଷପନ୍ନଙ୍କୁ କମ୍ପୂର୍ଣ୍ଣ କରୁଥିବା ଉପକ୍ରମରେ ଦୁର୍ଭିକ୍ଷପନ୍ନଙ୍କୁ ଦିଆଯାଉ ।
- (ଙ) ଅନୁମତି ୧୦୦୦ ନିତ୍ୟାଗ୍ରହ ଦିଆଯାଉ ଏକମୁଦ୍ରା କରାଯାଉ ।
 ଶାନ୍ତିକମିଟିର ସମ୍ପୂର୍ଣ୍ଣ ସମ୍ପାଦନା ଉପରେ ଅନୁମତି ଏକମୁଦ୍ରା ଫଳରେ ଉପକ୍ରମ

ତି ଭାବନା ବହୁ ଭାବନା କରାଯାଉ ।

ପ୍ରସ୍ତାବ ନଂ-୨ :- ଚାଷୁଭାଜନ ତଥା ପଞ୍ଚିତ୍ୟକୁ ଉଚିତ ନିୟମାନୁସାରେ ପାଠ୍ୟ ପୁସ୍ତକରେ ବ୍ୟବସ୍ଥା କରାଯାଉ ।

ଶେଷରେ ସମସ୍ତଙ୍କୁ ସମ୍ମତ ପାଇଁ ସମ୍ଭାଷଣ ତଥା ଯୋଗାଯୋଗ ପଦ୍ଧତିକୁ ଦୃଢ଼ୀଭାବେ ଉତ୍ତମ ସମ୍ଭାଷଣ କରାଯାଉ ।

କାର୍ଯ୍ୟକାରୀ
ଶ୍ରୀ ଶ୍ରୀ କର୍ମକାଣ୍ଡୀ

କାର୍ଯ୍ୟକାରୀ କାର୍ଯ୍ୟ
୨୨-୩୩୦-୨୦୦୪
୨୨୩୭୦୨୦୦୦୪
(ସଂଗଠିତ) ସ୍ୱାମୀ

ସାମ୍ବା ଉପାଦାନ ଦ୍ୱାରା ଉପାଦାନିତ ସାମାଜିକ ସେବା ପରିଚ୍ଛେଦନା
 ସମସ୍ୟା ଜିନିଷ ସଂଗ୍ରହଣ ସହ

ସ୍ଥାନ:- ଭୁବନେଶ୍ୱର (ଭୁବନେଶ୍ୱର) ଉପଜିଲ୍ଲା
 ତାରିଖ:- ୨୫/୦୮/୨୦୧୯
 ଆୟୋଜକ:- ଭୁବନେଶ୍ୱର ସରକାରୀ ଉପାଦାନ (OSRP) PMU

(CART) ଉପାଦାନ ଉପରେ ଆଧୁନିକ ଉପାଦାନ ଉପରେ ଉପାଦାନ
 ଉପାଦାନ (Agenda)

- (1) ନିମ୍ନଲିଖିତ
- (2) ସ୍ୱଚ୍ଛତା ଉପରେ ଉପାଦାନ
- (3) ଉପାଦାନ ଉପରେ ଉପାଦାନ
- (4) ଉପାଦାନ ଉପରେ
- (5) ଉପାଦାନ ଉପରେ ଉପାଦାନ
- (6) ଉପାଦାନ ଉପରେ (ସାମ୍ବା) ଉପାଦାନ ଉପରେ ଉପାଦାନ
 ଉପାଦାନ ସାମାଜିକ ସେବା ପରିଚ୍ଛେଦନା ସହ ସମସ୍ୟା
 ଉପାଦାନ ଉପରେ ଉପାଦାନ ଉପରେ ଉପାଦାନ
 ଉପାଦାନ ଉପରେ ଉପାଦାନ ଉପରେ ଉପାଦାନ
- (7) ଉପାଦାନ ଉପରେ ଉପାଦାନ
- (8) ଉପାଦାନ ଉପରେ ଉପାଦାନ
- (9) ଉପାଦାନ ଉପରେ ଉପାଦାନ

- ୧) ଉପାଦାନ ଉପରେ ଉପାଦାନ ଉପରେ ଉପାଦାନ
- ୨) ଉପାଦାନ ଉପରେ ଉପାଦାନ
- ୩) Sree Rajesh Kumar Barick
- ୪) ଉପାଦାନ ଉପରେ
- ୫) Bijoy Ku. Nayak
- ୬) ଉପାଦାନ ଉପରେ
- ୭) ଉପାଦାନ ଉପରେ
- ୮) ଉପାଦାନ ଉପରେ
- ୯) Prahallad Sahoo

(8)

ନିରାକର ମହାନ୍ତି

(9)

Pradyumn Choudhary

(10)

Mihiramole Mohanty

(11)

Klillip Kumar Mohanty

(12)

ଅନନ୍ତ କୁମାର ମହାନ୍ତି

(13)

Jaya prakash Mohanty

(14)

ନରାଜ ମହାନ୍ତି

(15)

Navraj Nayak

(16)

ନରାଜ ମହାନ୍ତି

(17)

ଶ୍ରୀମତୀ ସୁକୁମାରୀ

(18)

Ramesh Mohanty

(19)

ରାଜକିଶୋର ବେହେରା

(20)

Laxmi Prasad Sachoo

(21)

Sachin Nanda parida

(22)

ସୁକୁମାରୀ ମହାନ୍ତି

(23)

Jayprakash Nayak

(24)

ନରାଜ ମହାନ୍ତି

(25)

ସୁକୁମାରୀ ମହାନ୍ତି

(26)

ବିନୟାକର ବେହେରା

(27)

ରଞ୍ଜନ କୁମାର

(28)

Prasanna Nath

(29)

ଶ୍ରୀମତୀ ସୁକୁମାରୀ

(30)

ବିନୟାକର ବେହେରା

(31)

ବିନୟାକର ବେହେରା

(32)

ସୁକୁମାରୀ ମହାନ୍ତି

ଆକାଶଚାରୀଙ୍କୁ କିମ୍ପା ପ୍ରସ୍ତାବ ମାନ ଦିଆଯାଏ ।

ପ୍ରସ୍ତାବନା ୧ :- କୃତ୍ରିମ ପୁଅ, କାମ୍ୟାଳୁ ଚିତ୍ତ, କୃତ୍ରିମ ଚାନ୍ଦ ଯନ୍ତ୍ର ।
ଅତିକ୍ରମ ପାଠ୍ୟ ପୋଷାକ ହୋଇ ଚୋରା କଳ୍ପନା
ନିକଟେ ଅଭିଜ୍ଞା ଦୃଶ୍ୟର ଗୋଟିଏ ପାଠ୍ୟ ।

ପ୍ରସ୍ତାବନା ୨ :- କୃତ୍ରିମ ଚାନ୍ଦର ବ୍ୟବହାର / ବ୍ୟବହାର ବିକାଶ
ପାଠ୍ୟ ମୂଲ୍ୟ ହାତୀର ଡାକ୍ତରୀ ପ୍ରଦାନ ହୋଇ ।
ଏ ଗୋଟି ଗାଈର ଚିତ୍ତକୁ ପାଠ୍ୟର କାର୍ଯ୍ୟକାରୀ
କେଉଁଠି ବ୍ୟବହାର କରାଯାଏ । ଏହା ସାଧ୍ୟତା
ସାଧ୍ୟ ହୁଏ ଏହାକୁ ଦେଖନ୍ତୁ ।

ପ୍ରସ୍ତାବନା ୩ :- ଦାମ୍ଭାବଣ ବ୍ୟବହାର ହେଉଛି ଚାନ୍ଦର ଅଧିକାର
କୃତ୍ରିମ ପୁଅର ବୃଦ୍ଧ ହେଉଛି ଅତିକ୍ରମ କିମ୍ପା ସ୍ଥାନଗୁଡ଼ିକରେ
ବ୍ୟବହାର କରାଯାଏ ।
ସ୍ଥାନଗୁଡ଼ିକ ହେଲା :-

- (i) କୃତ୍ରିମ ପୁଅର ବ୍ୟବହାର ।
- (ii) କାମ୍ୟାଳୁ ଚିତ୍ତ ପ୍ରକାର ପ୍ରାଥମିକ ବିଦ୍ୟାଳୟ ପଢ଼ିବୁ ।
- (iii) କୃତ୍ରିମ ପୁଅର ବ୍ୟବହାର ଏକ ଡାକ୍ତରୀ ନିମ୍ନ ।
- (iv) କୃତ୍ରିମ ପୁଅର ବ୍ୟବହାର କୃତ୍ରିମ ପୁଅ ।
- (v) କାମ୍ୟାଳୁ ଚିତ୍ତ ବ୍ୟବହାର ହେଉଛି ପାଠ୍ୟର ବ୍ୟବହାର
ହେଉଛି ଚିତ୍ତ ।

ପ୍ରସ୍ତାବନା ୪ :- (CPR) ଉପାଦାନ ସମ୍ପୂର୍ଣ୍ଣ ହୋଇ ଗାଈ
ହେଉଛି, କୃତ୍ରିମ ପୁଅର ଉକ୍ତ ପାଠ୍ୟର ଉପାଦାନ
କାମ୍ୟାଳୁ ଚିତ୍ତର, କୃତ୍ରିମ ପୁଅର ବ୍ୟବହାର
ହେଉଛି ।

ପ୍ରସ୍ତାବନା ୫ :- ଅତିକ୍ରମ ନିମ୍ନ ଅଧିକାରୀ ଉକ୍ତ
ହୋଇ ଗାଈ । ଉକ୍ତ ଉପାଦାନ ଅତିକ୍ରମ ଉକ୍ତ
କାମ୍ୟାଳୁ ଚିତ୍ତର ବ୍ୟବହାର ଉକ୍ତ
ହେଉଛି ଉକ୍ତ । ଉକ୍ତ ଉକ୍ତ ଉକ୍ତ
କାମ୍ୟାଳୁ ଚିତ୍ତର ବ୍ୟବହାର ।

ପୁସ୍ତକ ନଂ: ୧ । କୁଳୁକୃତ ଶିକ୍ଷାଦି ୨ ଦଳିଆପୁସ୍ତକର ଉପର
ବସ୍ତୁର ବାହି ଶିକ୍ଷାଦିର ୩ ନ୍ୟାୟର ନିୟମାବଳୀ ।

ସେବାର ସମ୍ପର୍କର ପାଠ୍ୟ ଆବଶ୍ୟକକରି
ସହାୟକର ଦେଖାଇ ଦେଖାଇ ଦେଖାଇ ସହାୟକର ଦେଖାଇ

✓ ହିନ୍ଦୀର ମୂଳ,
ସହାୟକର ଦେଖାଇ
ଦେଖାଇ ଦେଖାଇ

କୋଟିସ୍

ତା: ୧୧/୦୪/୨୦୧୩

ଏକପକ୍ଷୀୟ ସର୍ବସାଧାରଣଙ୍କର ଅଧିକାଂଶ ନିର୍ବାଚିତ
ମତାଭିମତାଭିମତ କି ବିଶ୍ୱାସୀଙ୍କ ସମାଲୋଚନାରେ ଲିଫ୍ଟିଙ୍ଗା ହାସ୍ତୀ
ପ୍ରକଳ୍ପ ପ୍ରାୟା ପ୍ରସ୍ତାବିତ କରାଯାଇଛି - ଚୁପ୍‌ଚାପି ହାସ୍ତୀର ସମ୍ପ୍ରସାରଣ
କିମ୍ବା ପୁଠି କରଣ କାର୍ଯ୍ୟ କରାଯିବ ।

ଏହି ପରିସ୍ଥିତିରେ ପ୍ରକଳ୍ପ ପ୍ରାୟା ନିର୍ବାଚିତ
ହାସ୍ତୀ ସଂଗ୍ରହ ଗ୍ରାମର ବ୍ୟକ୍ତି କିମ୍ବା ମାନଙ୍କୁ ଅନୁରୋଧ
କରାଯାଇଛି କି ସାମନ୍ତ ତା ୧୧/୦୪/୨୦୧୩ ରିଜ ବ୍ରିକ୍ଟର
ଦିନ ୩ ଘଣ୍ଟା ସମୟରେ ସ୍ଥାନୀୟ ସମାଲୋଚନାରେ ଲିଫ୍ଟି
ପ୍ରକଳ୍ପ ପ୍ରାୟା ସାମାଜିକ କିମ୍ବା ପରିବେଶ ସମାଲୋଚନା କିମ୍ବା ସାମାଜ୍ୟ
ସମ୍ପ୍ରଦାୟ ଉପରେ କିମ୍ବା ବିଚାରରେ ବିଚାର କରାଯିବ ।

ଏହି ସାମାଲୋଚନାରେ ଉପସ୍ଥିତ ଲୋକଙ୍କ
ପ୍ରତି ଆବେଦନାରେ ଉପାଦାନ ଗ୍ରହଣ କରାଯିବ ।

Gopabandhu Behera (MPC)

Signature of MPC.

- 1 - Dr. Karan Behera
- 2 - Pradipa Kumar Sahoo
- 3 - Jagannath Sahoo
- 4 - ପ୍ରଦିପ କୁମାର
- 5 - ମଃ. ମନୋଜ ଦାଶ
- 6 - P. K. Sahoo
- 7 - Sabroto K. Mal
- 8 - S. Mishra
- 9 - Rajan Kumar Rout.
- 10 - Ananta Kishor Olu
- 11 - Pratap Satapathy.
- 12 - Sambhu Kumar
- 13 - SKA KIL
- 14 - ପ୍ରଦିପ କୁମାର
- 15 - ପ୍ରଦିପ କୁମାର
- 16 - ପ୍ରଦିପ କୁମାର
- 17 - ପ୍ରଦିପ କୁମାର
- 18 - ପ୍ରଦିପ କୁମାର
- 19 - ପ୍ରଦିପ କୁମାର

20. Bisikesan Sethy
21. Pramal Kurnia Saha
22. K. Saha
23. ବିକିଶନ ସେଥି
24. Pramal Kurnia Saha
25. କୁର୍ନିଆ କୁର୍ନିଆ
26. କୁର୍ନିଆ କୁର୍ନିଆ
27. ବିକିଶନ ସେଥି
28. Kurnia Saha
29. କୁର୍ନିଆ କୁର୍ନିଆ
30. Bijay Kumar Nayak
31. Bala Krishna Saha
32. Narayan Behera
33. Gopal Krishna Behera
34. Narayan Saha
35. କୁର୍ନିଆ କୁର୍ନିଆ
36. କୁର୍ନିଆ କୁର୍ନିଆ
37. K. Saha
38. Gurucharan Nayak
39. Bijaya Ka-Saha
40. Sri Hakim Saha
41. Rishi Chandra
42. Anil Kumar Saha
43. କୁର୍ନିଆ କୁର୍ନିଆ
44. Rajendra Barick
45. Uday Chandra
46. Pradipta Kumar Saha
- 47.

ସାମାଜିକ ଓ ଚିକିତ୍ସା ସମ୍ବନ୍ଧୀୟ ସଭା

ଅଫ ଡା ୨୧.୦୪-୨୦୧୩ ରିଜ ସକାଳ ୧୦ ଘଣ୍ଟା

ସମାପ୍ତରେ ଚିକିତ୍ସା ସାଧନ ସଫଳ ପ୍ରକଳ୍ପ ସାଧା ନିୟୋଜିତ NMC (COART) ଓ ଏ ୩୩୦ କର୍ମଚାରୀଙ୍କର ଆଧାର କୁଳା ଜିଏଚ୍ ସ୍ତର ଠାରୁ ଚୁକ୍ତିକାରି ବ୍ୟାପ୍ତି ଚୁକ୍ତିକା ହବା ହାସ୍ତ ପ୍ରସ୍ତୁତକରଣ ପ୍ରକଳ୍ପର ଉଦ୍ଦିଷ୍ଟ ନିଷ୍ପତ୍ତିକୋଷ୍ଟି, ଗୋପସ୍ତର ଓ ଏ ବକ୍ତୃତା ସାମର ଉଦ୍ଦିଷ୍ଟ/ ବିସ୍ତାରିତ ଗୋପନକର୍ତ୍ତୃ ନେତ୍ "ମା ଡାକ୍ତରୀ ପମ", ଗୋପସ୍ତର ଠାରେ ଏକ ସାମସ୍ତୃତୀୟ କମିଟି ଗଠନ କରାଯାଉଥିଲା । କିନ୍ତୁ କମିଟିରେ NMC, COART ପ୍ରାୟ ସାମସ୍ତୀ ପ୍ରମାଣା ନିରାପତ୍ତି (ବେସ୍ତିକାରିତ୍ୱ) ଓ ଏ ଶ୍ରୀମୁଖ୍ତ ଉତ୍ତରାଦ ଗୋପ (ସିଏ ବିକ୍ଷୟ) କିନ୍ତୁ ଅଭ୍ୟସ୍ତାରେ ସଭାଟିର ଆଭ୍ୟୁତ୍ଥାନ କରାଯାଉଥିଲା । କିନ୍ତୁ ସଭାରେ ସାମର ଉଦ୍ଦିଷ୍ଟ କର୍ତ୍ତୃ ଉତ୍ତରାଦ ପ୍ରାୟ କେନାକି ସଭାକର୍ତ୍ତୃରେ ଓ ଏ କମିଟିର ସମସ୍ତ ସଭ୍ୟ ସଭ୍ୟା ମାନଙ୍କୁ ନେତ୍ ସାମାଜିକ ଓ ଚିକିତ୍ସା ସମ୍ବନ୍ଧୀୟ ଉତ୍ତରାଦ କି କି ପ୍ରକାର ଅସ୍ତୁକିଆ ଚୁକ୍ତି ସେ ବିକାସରେ ଆବେଦନା କରାଯାଉଥିଲା । ସମସ୍ତ ସଭ୍ୟ ସଭ୍ୟା ମାନେ ଉତ୍ତରାଦକିନ୍ତୁ ମତ୍ତ ପ୍ରମାଣ କରାଯାଉଥିଲା । ଚିକିତ୍ସା ପ୍ରକଳ୍ପକର୍ତ୍ତୃକ ଆବେଦନା ମଧ୍ୟରୁ ନିମ୍ନ ପ୍ରସ୍ତାବ ମାନ ପ୍ରକାଶ କରାଗଲା ।

ପ୍ରସ୍ତାବ - ୧ - ହାସ୍ତ କର୍ତ୍ତୃରେ ହବା କୁଳା ପ୍ରକଳ୍ପ କର୍ତ୍ତା ଲିବା ଦ୍ୱାରା ଗୋପନକର୍ତ୍ତୃକ ଡାକ୍ତରୀ ପାଠ୍ୟ କାଠର ଆବେଦନକରଣ ଉତ୍ତରାଦ ଆବେଦନା କରାଗଲା । ଏହି ସମସ୍ତାକ୍ତ ପ୍ରକଳ୍ପ କର୍ତ୍ତା ପାଠ୍ୟ ସେନାଗେ ସେନାକର୍ତ୍ତୃକ ସାମରେ ହବା ୧୦ ଏକର ଉଦ୍ଦିଷ୍ଟ କୋଠ ଜମିକୁ କୁଳାଗୋପକା କରା ଓ ଏ ସେଷ୍ଟକିନ୍ତୁ ଉତ୍ତରାଦକରଣ ଆକର୍ଷିତ ନେତ୍ତ ବୋଲି ମତ୍ତ କରାଯାଉଥିଲା ।

ପ୍ରସ୍ତାବ - ୨ - ହାସ୍ତା ସମସ୍ତାଗୋପକା ଉତ୍ତରାଦ ଜଳ ନିରାକର୍ତ୍ତୃକର ଉତ୍ତରାଦକରଣ କରାଯା ଗୋପ ସଭାରେ ଆବେଦନା କରାଯାଉ ଓ ଏହି ବିକ୍ଷିତ ପ୍ରକଳ୍ପର ବ୍ୟବସ୍ଥା ପାଠ୍ୟ ପ୍ରକଳ୍ପ ସାଧା ନିୟୋଜିତ କର୍ତ୍ତୃକର୍ତ୍ତୃକ ଉଦ୍ଦିଷ୍ଟ ଆବେଦନା କରାଗଲା ଓ ଏ କୁଳା ବିକ୍ଷିତକର୍ତ୍ତୃ ବ୍ୟବସ୍ଥା କରାଯିବା ପାଠ୍ୟ ଆବେଦନା କରାଗଲା ।

ପ୍ରସ୍ତାବ - ୩ - ହାସ୍ତା କୁଳାକ୍ତୃ ପାଠ୍ୟରେ ହବା ପାଠ୍ୟକର୍ତ୍ତୃକ ଜଳ କର୍ତ୍ତୃକର୍ତ୍ତୃକ ମତା କୋର , ନାଳ , ଡ୍ରୁଗ ଗାଦିଆ ପ୍ରକାଶିତ ଉତ୍ତରାଦକରଣ ପ୍ରକଳ୍ପରେ ସେ ଅର୍ଥରେ ଉତ୍ତରାଦକରଣ ନିକିତା କୁଳା ଉତ୍ତରାଦ ପ୍ରକଳ୍ପ ପ୍ରକାଶକର୍ତ୍ତୃକ ସମାବନା ଉଦ୍ଦିଷ୍ଟକର୍ତ୍ତୃକ , ଚିକିତ୍ସା ସମସ୍ତାକ୍ତୃ କୁଳାକ୍ତୃ ଉତ୍ତରାଦକର୍ତ୍ତୃକ - ପାଠ୍ୟକର୍ତ୍ତୃକ ଦୁକ୍ତି ଆବେଦନା କରାଯା ପାଠ୍ୟ ସଭାରେ ବିକାଶକର୍ତ୍ତୃକ ଆବେଦନା କରାଗଲା ।

ପ୍ରସ୍ତାବ - ୪ - ନିର୍ଦ୍ଦିଷ୍ଟ କୋର୍ସର କ୍ଷେତ୍ରରେ ଗୋପାଳ ଘାଟ କରି ଜମିଦାରୀ ନିର୍ବାହ କରୁଥିବା ପ୍ରାୟ ୪୦୦ ଚାକିର ନିରାକାର ଜୀବନ ଜମିଦାରୀ କ୍ଷେତ୍ରରେ ନିଜର ପ୍ରଭାବ ଚଳାଇ, ଚାକିରୀ ପୁରୁଷଙ୍କୁ ସହ କୋର୍ସ-ବାଣୀନାଟନ ମିଳି ପ୍ରଦାନ କଲେ ତେଣୁ ସତ୍ତାର ସୁନିଶ୍ଚିତ (ସୁସ୍ଥ ଦିନରେ) କେବଳ ଧରି କର୍ମରେ ହିସା ଦିଆଯିବ ସରକାରୀ ଜମିକୁ ଏକ ମରାଜିତ କରୁଥିବା କର୍ମିକା ଗାଠ" ଏ ସମ୍ପର୍କରେ ଭଲ ଜଣାପଡ଼ିବ କୋର୍ସର ଗାଠ" ମତ ପ୍ରଦାନ କଲେ ।

ପ୍ରସ୍ତାବ - ୪ - ହାସ୍ତୀର ସମ୍ପ୍ରଦାୟର ଉତ୍ତରୀ ପ୍ରାୟ ୩୦୦ ଧନୀ ଜମିକୁ ଯାହାଙ୍କର ଉପାଦାନ ଉପରେ ଉପାଦାନ କରୁଥିବା ଉପାଦାନର ସମ୍ପ୍ରଦାୟ ଉପରେ । ଚାକିରୀ କ୍ଷେତ୍ରରେ ଦିଗ ଦିଗରେ କରାଯାଏ ।

ପରିଷଦରେ ସଭାପତିଙ୍କୁ ଧନ୍ୟବାଦ ପ୍ରଦାନ କରି ସଭାପତି କରାଯାଏ ।

Signature of PMS

- 1- Ribanjali Pradhan.
- 2- ନିରାକାର ସୁହା
- 3- ଶ୍ରୀ. K. K. K.
- 4- ଶ୍ରୀ. ପ୍ରମୋଦ କୁମାର
- 5- ଶ୍ରୀ. ପ୍ରମୋଦ କୁମାର
- 6- ଶ୍ରୀ. ପ୍ରମୋଦ କୁମାର
- 7- ଶ୍ରୀ. ପ୍ରମୋଦ କୁମାର
- 8- ଶ୍ରୀ. ପ୍ରମୋଦ କୁମାର
- 9- ଶ୍ରୀ. ପ୍ରମୋଦ କୁମାର
- 10- ଶ୍ରୀ. ପ୍ରମୋଦ କୁମାର
- 11- ଶ୍ରୀ. ପ୍ରମୋଦ କୁମାର
- 12- Prasant Kumar Swain
- 13- Raj Kumar Pater
- 14- ଶ୍ରୀ. ପ୍ରମୋଦ କୁମାର
- 15- Rajendra Bapat
- 16- Sabor K. Samin
- 17- Pradip Kumar Swain
- 18- Ranjan Ch. Jena
- 19- Bijay Kumar Mohapatra.

- 20 - Narayan Bahara
- 21 - Babaji Palei
- 22 - Debendra Sathra
- 23 - Bisay Kumar Narak
- 24 - Raghunath Selhi, TL, NNGO.
- 25 - Pradyumna Baeli
- 26 - Adhar chandra 7090
- 27 - Sibashisha Pradhan (C.C)
- 28 - P.K. Ghadej (C.C)
- 29 - Pramila Mohapatra - (P.C) NNGO,
- 30 - Suddhansu mohanta Nayak (S.M.O) ^{C.P.T}
- 31 - Fazal Rabbani (R.C)
- 32 - ଅଧ୍ୟକ୍ଷ ଶ୍ରୀ ଶ୍ରୀ
- 33 - ଅଧ୍ୟକ୍ଷ ଶ୍ରୀ ଶ୍ରୀ
- 34 - x Pramod Kumar Rout
- 35 - ଅଧ୍ୟକ୍ଷ ଶ୍ରୀ ଶ୍ରୀ
- 36 - ଅଧ୍ୟକ୍ଷ ଶ୍ରୀ ଶ୍ରୀ
- 37 - ଅଧ୍ୟକ୍ଷ ଶ୍ରୀ ଶ୍ରୀ
- 38 - Subash ch Jena
- 39 - ଅଧ୍ୟକ୍ଷ ଶ୍ରୀ ଶ୍ରୀ
- 40 - ଅଧ୍ୟକ୍ଷ ଶ୍ରୀ ଶ୍ରୀ
- 41 - ଅଧ୍ୟକ୍ଷ ଶ୍ରୀ ଶ୍ରୀ
- 42 - ଅଧ୍ୟକ୍ଷ ଶ୍ରୀ ଶ୍ରୀ
- 43 - ଅଧ୍ୟକ୍ଷ ଶ୍ରୀ ଶ୍ରୀ
- 44 - ଅଧ୍ୟକ୍ଷ ଶ୍ରୀ ଶ୍ରୀ
- 45 - ଅଧ୍ୟକ୍ଷ ଶ୍ରୀ ଶ୍ରୀ

ପଠକ ଦ୍ୱାରା ସର୍ବସାଧାରଣର ଅଧିକାଂଶ ନିମନ୍ତେ
ରଜାଜିଆସାଉଛି, ବିଶୁଦ୍ଧ୍ୟାଙ୍କି ମହାମୁକାବଳୀ
ତଳିଆ ହାସ୍ତା ପ୍ରକଳ୍ପ ଦ୍ୱାରା ପ୍ରସ୍ତୁତି ନଗରପୁର-ସୁନ୍ଦରୀ
ହାସ୍ତାକୁ ସମ୍ପ୍ରସାରଣ ଯୋ ଦୁର୍ଦ୍ଦମକରଣକାରୀ କରିବ ।

ପଠକ ପଢ଼ିବାପାଇଁ ପ୍ରକଳ୍ପ ଦ୍ୱାରା ଲିଖିତ
ହାସ୍ତା ସମ୍ପୂର୍ଣ୍ଣ ଗ୍ରାମର କର୍ମକ୍ଷେତ୍ର ବିଶାଳମାନଙ୍କୁ ଧ୍ୟାନ ଦେଇ
କରାଯାଉଛି କି ଆସନ୍ତା ତା ୨୫-୦୪-୨୦୧୩ରୁପ ଉଦ୍ଦିଷ୍ଟ
ଦିନ ଉଦ୍ଦିଷ୍ଟ ସମୟରେ ସୁନ୍ଦରୀ ପାଠାଗାର ଠାରେ
ଉକ୍ତ ପ୍ରକଳ୍ପ ଦ୍ୱାରା ସାମାଜିକ ଯୋଗାଯୋଗ ସମ୍ପୂର୍ଣ୍ଣ
କି କି ସମ୍ପାଦ୍ୟ ଅସୁବିଧାକୁ ସେ ବିଭାଗର ବିଭାଗ
କରି କରିବ ।

ପଠକ ଆପଣମାନଙ୍କ ଉକ୍ତ ଦିନ ଉପସ୍ଥିତ ହୁଅନ୍ତୁ
ଆପଣମାନଙ୍କର ଉପସ୍ଥିତିରୁ ଧ୍ୟାନ ଦେଇ କରାଯାଉଛି ।

- Fazeli Kabbani
- 1- ପୁଣିକି ପ୍ରଧାନ
- 2- Apnanajita Panigrahy
- 3- ହୃଦୟାସିନୀ
- 4- Lhama Shyam Behera
- 5- Anasanta K. Das 15/4/13
- 6- ମିଶ୍ରୀ ପଦ୍ମିନୀ 15/4/13
- 7- Rakes Sahoo
- 8- ଜାଣିକ ମହାପାତ୍ର
- 9- Parita Sata Dash
- 10- Prabulla Ku Dash
- 11- Samantana Mania
- 12- Chittaranjan Singh
- 13- ମାଧବ କୁମାର
- 14- Chandan Ku Saha
- 15- Maharananda Saha
- 16- Jagannath mania
- 17- Bhushan Lal
- 18- P. n. Lantoo
- 19- Nabakishor Patra
- 20- Anil Ku Dasera

- 21 - SR Jallaluddin
- 22 - Bijoy Kumar Mohapatra.
- 23 - Babaji Palei

ପରମ୍ପରା ଦେଖା ଦେବ । କେନ୍ଦ୍ରୀୟ ଚର୍ଚ୍ଚାରେ ସୁଦୃଢ଼ ହେବେଇ
ସମସ୍ତଙ୍କୁ ନିର୍ମୂଳା କରିବା ପାଇଁ ପ୍ରତିପ୍ରସ୍ତୁତ ଲୋକମାନେ ସହାୟତା
ଉପାୟାପନା କରନ୍ତୁ ।

ପ୍ରସ୍ତାବ - ୪ - ପାଗା ବଜାର କୁ ଲାଗିଯିବା ମଧୁବାସୁ କାର୍ଯ୍ୟ ପ୍ରତିଷ୍ଠା
ପ୍ରତିପ୍ରସ୍ତୁତ ହେବା ପରେ ସମାପନା ହିକାକୁ ଉଦ୍ଦିଷ୍ଟ ଏବଂ ଏହା
ବଜାର କାର୍ଯ୍ୟ ମାନ ମଧ୍ୟରେ ଏବଂ ବଜାର ପ୍ରକାର ପାଖାପାଖି
କେନ୍ଦ୍ରୀୟ ମଧୁବାସୁ କାର୍ଯ୍ୟ ପ୍ରତିଷ୍ଠା ଏକ ଉପାୟାପନା ସ୍ଥାନରେ
ପ୍ରତିଷ୍ଠା କରିବା ପାଇଁ ପରମ୍ପରା ଏକ ସ୍ୱରରେ ମଠି ପ୍ରଦାନ କରନ୍ତୁ ।

ପ୍ରସ୍ତାବ - ୪ - ପ୍ରାମାଣ୍ୟ ମାନେ ଉପା ବଜାରକାରୀମାନେ ସମାପନା
କାର୍ଯ୍ୟ ମାନରେ ମଠି ପ୍ରଦାନ କରନ୍ତୁ ନେ ଉପା ସହଜା ନିମନ୍ତେ
କେନ୍ଦ୍ରୀୟ କାର୍ଯ୍ୟ ଦାବୀକର ଉପାରେ ସହଜା କରନ୍ତୁ ।
ଏ ସମାପନାରେ ଜୀବନ ଉପାକାରୀ ରଖା କରନ୍ତୁ ।

ସହାୟତାରେ ସହାୟତାକୁ ପ୍ରଦାନ କରନ୍ତୁ
ସହାୟତା କରାଗଲା ।

Signature of PARS.

1. X SAKAM
2. Treballa Saha
3. Pratabnata DASH
4. ସହାୟତାକାରୀ
5. Sanatan Mania
6. ସୁଦୃଢ଼ ୨୨୨୩ ୨୫୩୨୩
7. Lakshidhara Saha
8. କାର୍ଯ୍ୟକାରୀ
9. Lhamu (Kham Kham)
10. ସହାୟତାକାରୀ
11. Sk Abdul Razak
12. Rajoy Kumar Parida
13. ସହାୟତାକାରୀ
14. ସହାୟତାକାରୀ

- 15- श्री ११४९ श्री
- 16- Pradyumna Bala
- 17- Sibashisha Pradhan
- 18- Fazeel Akbari
- 19- Gopabandhu Behera
- 20- Manoj Kumar Behera
- 21- Sradhanikamohini Nayak
- 22- Adhar chandra Jena
- 23- Bhabani Samanta (S.M.O)
- 24- Sanjay Kumar Behera

ନୋଟିସ

ତା: ୧୭/୦୪/୧୩

୦୫ ପୁରୀ ଶ୍ରଦ୍ଧସାଧନାକାର୍ଯ୍ୟ ସମିତି ନିମନ୍ତେ
କୋଭିଡିଆନାକ୍ରିଡି କି, ବିଶ୍ୱାସ୍ୟାଙ୍କ ସମାଧିରେ ଲିଙ୍ଗାଭାଷା
ପ୍ରକଳ୍ପଦ୍ୱାରା ପ୍ରସ୍ତୁତି କରାଯିବ - କୁଳଚାରି ଭାଷ୍ଟ୍ରର ସଂପ୍ରଦାନ
କି ଛାଡ଼ା ଦୁର୍ଘଟକରତା କାର୍ଯ୍ୟ କରାଯିବ ।

ଏହି ଗଭିରପ୍ରତିରେ ପ୍ରକଳ୍ପଦ୍ୱାରା ଗଭିରସ
ଭାଷ୍ଟ୍ର ଶକ୍ତୀ ବ୍ରାହ୍ମଣ ବ୍ୟକ୍ତିଗଣଙ୍କ ନାମରେ ଅନୁରୋଧ
କରାଯାଉଛି କି ଆପଣ ୦୫-୦୪-୧୩ ତାରିଖ ବିକି ସ୍ତମ୍ଭର
ଦିନ ସକାଳ ୧୧ଟାରେ ସ୍ଥାନରେ ପହଞ୍ଚି ୧୦ ଚାନ୍ଦୁ ଭିକ୍ଷ
ପ୍ରକଳ୍ପ ଦ୍ୱାରା ସାମାଜିକ ଛାଡ଼ା ଗଭିରସ ସମାଧିକୁ କି କି
ସାମାଜିକ ଅନୁପାଳନ କରନ୍ତୁ ଯେ ବିଳମ୍ବରେ ବିଳମ୍ବ ହେବା
କରନ୍ତି ।

ଏହି ଗୋପନୀୟତା କିମ୍ପାନି କରାଯିବ
ଏହି ଅନୁରୋଧରେ ଶ୍ରୀଗଣେଶାୟା ଅନୁରୋଧ କରାଯିବ ।

- ୧) Bharat Ch. Sahoo.
- ୨) Umesh Ch. Tripathy.
- ୩) Bijay Kumar Saha
- ୪) ଜେନାଲ ନାଥନାଥ
- ୫) Brahmamanda Saha
- ୬) Premamanda Saha
- ୭) Gagan Kumar Saha,
- ୮) Madhusamanda Mohanty
- ୯) ମାଧୁସାମନ୍ତ
- ୧୦) ଚିତ୍ତେଶ କୁମାର ସାହୁ ଦିବାକରଚନ୍ଦ୍ର
- ୧୧) ରାମଚନ୍ଦ୍ର ସାହୁ
- ୧୨) Ramachandra Saha
- ୧୩) ପ୍ରମୋଦ ଚନ୍ଦ୍ର ସାହୁ
- ୧୪) ଚନ୍ଦ୍ର କୁମାର ସାହୁ
- ୧୫) SK Heelam Saha
- ୧୬) ଚନ୍ଦ୍ର କୁମାର ସାହୁ
- ୧୭) SK Kishan Saha
- ୧୮) ଅନୁପମା ସାହୁ
- ୧୯) Upendra Nathi Saha

(88) ପ୍ରମିଳା ଦାସ

(89) SK. Mujib Bux .

(90) ଅନିଲ କୁମାର

(91) ଅନୁଭବ କୁମାର

(92) Anjan Koir

(93) Gagan Kumar Mohanta

(94) ପ୍ରମିଳା ଦାସ

(95) ବିପିନ କୁମାର

(96) Maheswar Sahoo

(97) ଅନୁଭବ କୁମାର

(98) Narendran Behera

(99) Hanekawhna Sahoo

(100) ପ୍ରମିଳା ଦାସ

(101) Ishab

(102) Sn. Galam Rasul .

(103) SK Abolus Sattar

ପାନଜିକ ଚକ ପରିବେଶ ସମ୍ବନ୍ଧୀୟ ସଭା ।

ଅନ୍ୟ ତା ୨୪-୦୪-୨୦୧୩ରୁ ସକାଳ ୧୧ ଘଣ୍ଟା
ସମୟରେ ଭବିଷ୍ୟତର ଅନ୍ୟ ସମ୍ଭବ ପ୍ରକଳ୍ପ ପାଇଁ ନିର୍ଦ୍ଦେଶିତ
NANCO (CART) ଚଳେ PMU କର୍ମଚାରୀଙ୍କର ଆହ୍ୱାନକ୍ରମେ
ଭବିଷ୍ୟତର ଚାକ୍ଷୁଷ ସମ୍ଭାଷଣ ପ୍ରଦାନ କରାଯାଇଥିଲା ।
ଅନ୍ୟ ପ୍ରସ୍ତୁତିକାରୀ ପ୍ରକଳ୍ପର ଅଭିଗ୍ରହ ପଦ୍ଧତୀ
ଗ୍ରାମର ଅଭିଗ୍ରହ / ବିକ୍ରୟ ବିତ ହୋଇ ମାଲିକଙ୍କୁ ନେଇ
" ମା ବାସୁଦେବ ୨୨୦ " ପଦ୍ଧତୀ ଚାକ୍ଷୁଷ ଗ୍ରାମସ୍ତ୍ରୀଙ୍କୁ
ସଭାର ଆଲୋଚନା କରାଯାଇଥିଲା ।

ଉକ୍ତ ସଭାର ଗ୍ରାମର ପରିଷଦ ଧ୍ୟେୟ ଶ୍ରୀକାନ୍ତ ସାହୁ
ଙ୍କ ସଭାପତିତ୍ୱରେ ଚଳେ କର୍ମଚାରୀ ସମସ୍ତ ସଭ୍ୟମାନଙ୍କୁ ନେଇ
ସମାଜ ଚଳେ ପରିଷଦ ଚଳେ କିଛି ପ୍ରକଳ୍ପ ଅନୁଷ୍ଠାନ
ରେ କରାଯାଇ ଆଲୋଚନା କରାଯାଇଥିଲା । ସମସ୍ତ ସଭ୍ୟମାନ
ସମାଜଙ୍କୁ ସତ ପ୍ରଦାନ କରାଯାଇଛି । ପୂର୍ବରୁ ପୂର୍ବରୁ
ଆଲୋଚନା ମଧ୍ୟରୁ ନିମ୍ନ ପ୍ରକଳ୍ପ ଗ୍ରହଣ କରାଯାଇଛି ।

ପ୍ରସ୍ତାବ - ୧ - : ପଦ୍ଧତୀ ଗ୍ରାମବାସୀଙ୍କୁ ଚାକ୍ଷୁଷ
ଚଳେ ଚାକ୍ଷୁଷର ଗୋଷ୍ଠୀ ଧ୍ୟେୟ । ସମସ୍ତ ଗ୍ରାମବାସୀମାନ
ସେହି ଗୋଷ୍ଠୀରେ ଶ୍ରୀକାନ୍ତ ସାହୁ ଧ୍ୟେୟ ଚାକ୍ଷୁଷ ଚଳେ ଚଳେ
ପ୍ରଦାନ ଧ୍ୟେୟ କରାଯାଇଛି । ତେଣୁ ସେ ଗୋଷ୍ଠୀରେ
ଧ୍ୟେୟ ଗ୍ରହଣ କରାଯାଇଛି, ଗ୍ରାମବାସୀ ମାନଙ୍କୁ ସତ ପ୍ରଦାନ
କରାଯାଇଛି ।

ପ୍ରସ୍ତାବ - ୨ - : ଅନ୍ୟ ପ୍ରସ୍ତୁତିକାରୀ ସଭା ଚାକ୍ଷୁଷ
କରାଯାଇ ଧ୍ୟେୟ ଚଳେ ପାନଜିକ ଚଳେ ଚଳେ
ପଥ କରାଯାଇଛି । ତେଣୁ ସେହି ସମସ୍ତଙ୍କୁ
କରାଯାଇ ଚଳେ ଚଳେ ଧ୍ୟେୟ କରାଯାଇଛି
ସଭାର ଆଲୋଚନା କରାଯାଇଛି ।

ପ୍ରସ୍ତାବ - ୩ - : ଅନ୍ୟ ପ୍ରସ୍ତୁତିକାରୀ ସଭା ଚାକ୍ଷୁଷ
ପଦ୍ଧତୀ କରାଯାଇ ଧ୍ୟେୟ କରାଯାଇଛି କରାଯାଇଛି
ଧ୍ୟେୟ ମାନଙ୍କୁ ନିଜ ନିଜର ଦେଖିବାକୁ ସାଧାରଣ
କରାଯାଇଛି, ଚଳେ କରାଯାଇ ଚଳେ ଚଳେ
" ମା ବାସୁଦେବ ୨୨୦ " କରାଯାଇଛି ସତ ପ୍ରଦାନ
କରାଯାଇଛି ।

ପ୍ରସ୍ତାବ - ୪ - : ଉକ୍ତ ପଦ୍ଧତୀ (ପଦ୍ଧତୀ) ଗ୍ରାମବାସୀଙ୍କୁ ଧ୍ୟେୟ
ଶ୍ରୀକାନ୍ତ ସାହୁ ଧ୍ୟେୟ ଚଳେ ଚଳେ ଗ୍ରାମବାସୀମାନଙ୍କୁ ଧ୍ୟେୟ
ରୁ ସମସ୍ତଙ୍କୁ ଚଳେ । ତେଣୁ ସେହି ଧ୍ୟେୟ ଶ୍ରୀକାନ୍ତ ସାହୁ
ଧ୍ୟେୟ ଧ୍ୟେୟ ଧ୍ୟେୟ ଧ୍ୟେୟ ଧ୍ୟେୟ ଧ୍ୟେୟ ଧ୍ୟେୟ ।

ପ୍ରସ୍ତାବ - ୧ - ଶ୍ରୀମତୀ କାମଳାକାନ୍ତ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ
 ଅନୁସାରେ ଶ୍ରୀମତୀ ପ୍ରମିଳାକାନ୍ତ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ
 ଅନୁସାରେ ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ
 ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ

ପ୍ରସ୍ତାବ - ୨ - ଶ୍ରୀମତୀ ପ୍ରମିଳାକାନ୍ତ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ
 ଅନୁସାରେ ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ
 ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ ଶ୍ରୀମତୀ
 ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ
 ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ
 ଅନୁସାରେ ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ

ପ୍ରସ୍ତାବ - ୩ - ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ
 ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ ଶ୍ରୀମତୀ
 ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ
 ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ
 ଅନୁସାରେ ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ

ପ୍ରସ୍ତାବ - ୪ - ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ
 ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ ଶ୍ରୀମତୀ
 ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ
 ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ
 ଅନୁସାରେ ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ

ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ ଶ୍ରୀମତୀ
 ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ
 ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ
 ଅନୁସାରେ ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ

- ୧ - Srikant Saha
- ୨ - Ramesh Chandra Saha
- ୩ - ଶ୍ରୀମତୀ କାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ
- ୪ - Santosh Kumar Saha
- ୫ - Madhusudan Saha
- ୬ - Ganesh Kumar Saha
- ୭ - ବିନୟ କୁମାର
- ୮ - Netrananda Saha
- ୯ - Upendra Nath Saha
- ୧୦ - ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ
- ୧୧ - Sumitranandan Pant
- ୧୨ - Sangram Keshari Saha
- ୧୩ - ଶ୍ରୀମତୀ ଚାନ୍ଦୁରୀଙ୍କ ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ
- ୧୪ - Umashanti Tripathy
- ୧୫ - Pradyumn Kumar Saha

28 - SK Hakim BSC

29 - Prabhuanna K. BSC,

30 - Fazell Rabbani

31 - Manoj Kumar Behera

32 - Sachin Kumar Mohan Nayak

33 - Animesh Kumar Behera

34 - Subhishtha Pradhan

35 - Gopabandhu Behera

36 - Bhabani Kumar Pal

37 - Ashok Chandra 70%

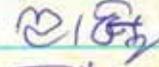
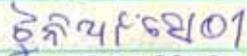
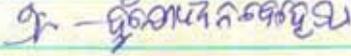
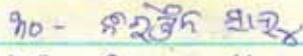
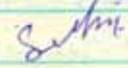
38 -

ଅଧିକାରୀ ସର୍ବସାଧାରଣଙ୍କୁ ଅବଗତ କରାଉଅଛନ୍ତି ଯେ, ବିଶ୍ୱାସୀଙ୍କ ସମାବେଶରେ ଉଦ୍ଦିଷ୍ଟା ହାତୀ ପ୍ରକଳ୍ପଦ୍ୱାରା ପ୍ରସ୍ତୁତ କରାଯିବ - ଉପକଳ୍ପ ହାତୀର ସଂପ୍ରସାରଣ ଇତ୍ୟାଦି ପୁସ୍ତକପଠା କାର୍ଯ୍ୟ କରାଯିବ ।

ଏହି ଉଦ୍ଦିଷ୍ଟିରେ ପ୍ରକଳ୍ପଦ୍ୱାରା ଅଧିକାରୀ ହାତୀ ସଂରକ୍ଷଣ ପ୍ରକଳ୍ପ ବ୍ୟକ୍ତି ବିଶେଷ ନାମକୁ ଅନୁଭୋଦ କରାଯାଉଛି ଯି ଯାଉଛି ତା ୨୪-୦୪-୨୦୧୩ ଦିନ ବୁଧବାର ଦିନ ସମୟ ୪ ଘଟିକା ସମୟରେ ସ୍ଥାନୀୟ "ସାହେବପୁରୀ ମନ୍ଦିର" ନିକଟରେ ଉକ୍ତ ପ୍ରକଳ୍ପଦ୍ୱାରା ସାମାଜିକ ଉପାଦାନ ସମ୍ପର୍କରେ ସମାବେଶ ଯି ଯି ସାମାଜିକ ଅଧିକାରୀ ଉପକଳ୍ପରେ ବିଶ୍ୱାସ ରଖି କରାଯିବ ।

ଏହି ଉଦ୍ଦିଷ୍ଟିରେ ଉକ୍ତ ଦିନ ଉପକଳ୍ପରେ ଉପକଳ୍ପଦ୍ୱାରା ଉପକଳ୍ପଦ୍ୱାରା ଉପକଳ୍ପଦ୍ୱାରା କରାଯିବ ।

- e. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- ୨. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- m. ପ୍ରକଳ୍ପଦ୍ୱାରା ଉଦ୍ଦିଷ୍ଟି
- ୪. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- ୫. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- ୬. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- ୭. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- ୮. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- ୯. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- ୧୦. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- ୧୧. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- ୧୨. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- em. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- er. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- ୧୪. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- ୧୫. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- ୧୬. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- ୧୭. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- ୧୮. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- ୧୯. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି
- ୨୦. ଅଧିକାରୀ ଉଦ୍ଦିଷ୍ଟି

- 90 - Niranjana Setty
 - 91 - Manoj Sain
 - 92 - Praveen Sahoo
 - 93 - Anilkumar Prusty
 - 94 - Sudipta Sahoo
 - 95 - 
 - 96 - Tejashree Sahoo
 - 97 - 
 - 98 - 
 - 99 - 
 - 100 - Salim Ahmed Khan
 - 101 - Astor Saha
 - 102 - Maheshwari Bhatnagar
 - 103 - 
 - 104 - EPARHEM
 - 105 - Srat Chandra
 - 106 - Jugal Kishore ^{Rathore} Saini
 - 107 - SK. Manwar Ali
 - 108 - Sheikh Jalal Uddin
 - 109 - Narayan Prasad
 - 110 - Sadhana Jena
 - 111 - Animesh Pradhan
 - 112 - Sushil Chakrabarti
- 

r - Shazieb Jalal vadd

ra - ...

ea - ...

ee - ...

eg - ...

em - ...

er - ...

es - ...

et - ...

eu = ...

er ...

eh ...

go ...

ga ...

gd - ...

gn - ...

gt - ...

gu - ...

gv - ...

gn - ...

gn - ...

no - ...

ne - ...

ଏହି ଦ୍ଵାରା ସର୍ବସାଧାରଣଙ୍କର ଅବଗତ ନିମନ୍ତେ ଜଣାଉଅଛୁ ଯେ, ବିଶ୍ଵକର୍ମାଙ୍କ ସ୍ଵାମୀଭାବେ ଲେଖାଯାଇଥିବା ପ୍ରକଳ୍ପଦ୍ଵାରା ପ୍ରସ୍ତୁତ କରାଯିବ - ଖୁଲିଚାରି ଭାଷଣ ସଂପ୍ରଦାନ କି ଯା ପୂର୍ଣ୍ଣକରଣ କାର୍ଯ୍ୟ କରାଯିବ ।

ଏହି ଗଭିରପ୍ରତିରେ ପ୍ରକଳ୍ପଦ୍ଵାରା ନିର୍ଦ୍ଦିଷ୍ଟ ରାଷ୍ଟ୍ରୀୟ ଫଳଗୁଣ ସ୍ଵାଚାର ବ୍ୟକ୍ତିଗଣଙ୍କ ସମକ୍ଷିତ ଅନୁରୋଧ କରାଯାଇଛି କି ଆସନ୍ତା ୦୪-୦୪-୧୩ ତାରିଖ କିମ୍ପା ହ୍ରାସର ଉପରେ ପ୍ରକଳ୍ପଦ୍ଵାରା ସ୍ଵାମୀଭାବେ ସ୍ଵାମୀଙ୍କୁ "ସର୍ବକର୍ମା ୩୦" ଠାରେ ଉପକ୍ରମ ପ୍ରକଳ୍ପ ଦ୍ଵାରା ସ୍ଵାମୀଭାବେ ଯାଚିବେଣୀ ସମ୍ପ୍ରଦାନ କି କି ସାମ୍ପ୍ରଦାୟ ଅନୁସାରେ ଗ୍ରହଣ କରାଯିବ ।

ଏହି ଯୋଗାଣକାରୀଙ୍କର ଅନୁରୋଧ କରାଯାଇଛି ଯେ ସମସ୍ତଙ୍କର ସ୍ଵାଗତକରଣରେ ସମ୍ମାନନୀୟ ଭାବେ ଅନୁରୋଧ କରାଯାଉ ।

- ୧) Bharat Ch. Sahoo
- ୨) Umesh Ch. Tripathy
- ୩) Bijay Kumar Saha
- ୪) ଜେନାଲ ନାଥନାଥ
- ୫) Brahmananda Saha
- ୬) Premananda Saha
- ୭) Jagmohan Saha
- ୮) Madhupramoda Mohanty
- ୯) ମାଧୁକରିନୀ
- ୧୦) ଚିତ୍ତରାଜ କୁମାର ସାହୁ ପିତାମହାରାଜ
- ୧୧) ରାଧିକା ସାହୁ
- ୧୨) Ramesh Chandra Saha
- ୧୩) Punna Chandra Saha
- ୧୪) ଶ୍ରୀମତୀ ସମାଜିକା ସାହୁ
- ୧୫) SK Heelan Saha
- ୧୬) ଶ୍ରୀମତୀ ଦୁର୍ଗା କୁମାରୀ
- ୧୭) SK Kishore Saha
- ୧୮) ଶ୍ରୀମତୀ ଦୀପ୍ତିକା
- ୧୯) Upendra Nath Saha

(98) ପୁସ୍ତକ ଚଳାଣି

(99) ଟି.କେ. ମାଞ୍ଜିବ ବାବୁ .

(100) ମୁକ୍ତିଦାୟକ

(101) ଅମ୍ବିକା କୁମାରୀ

(102) ଅମ୍ବିକା କୁମାରୀ

(103) ଗଜପତି କୁମାରୀ

(104) ଶ୍ରୀମତୀ ଲକ୍ଷ୍ମୀକାନ୍ତ

(105) ଶ୍ରୀମତୀ ଲକ୍ଷ୍ମୀକାନ୍ତ

(106) ମହେଶ୍ଵରୀ ସାହୁ

(107) ଶ୍ରୀମତୀ ଲକ୍ଷ୍ମୀକାନ୍ତ

(108) ନରେନ୍ଦ୍ରା ବେହେରା

(109) ନରେନ୍ଦ୍ରା ବେହେରା

(110) ଶ୍ରୀମତୀ ଲକ୍ଷ୍ମୀକାନ୍ତ

(111) ଶ୍ରୀମତୀ ଲକ୍ଷ୍ମୀକାନ୍ତ

(112) ଶ୍ରୀମତୀ ଲକ୍ଷ୍ମୀକାନ୍ତ

ପ୍ରସ୍ତାବ - ୫ - ଶ୍ରୀମତୀ କାମ୍ବୁଜେଶ୍ଵରୀ ଚାନ୍ଦୁଆଣୀଙ୍କ ନିର୍ଦ୍ଦେଶରେ
 ଧୂଳୀ କର୍ମକ୍ରମକୁ ସ୍ଵାସ୍ଥ୍ୟପ୍ରସ୍ତୁତିକର ଭାବରେ ନିର୍ଦ୍ଦେଶିତ
 ହେବ । ତେଣୁ ସେହି ଚାନ୍ଦୁଆଣୀଙ୍କ ନିର୍ଦ୍ଦେଶକୁ ସ୍ଵୀକାର
 କରିବାକୁ ଚଳ କର୍ମକ୍ରମକୁ ଉଦ୍ଦିଷ୍ଟ ଭାବେ ନିମ୍ନ ପ୍ରଦାନ କରାଯାଉ

ପ୍ରସ୍ତାବ - ୬ - ଶ୍ରୀମତୀ ପ୍ରସାନ୍ତି କୁମାରୀ ଦେବୀଙ୍କୁ ଧୂଳୀ
 ଚାନ୍ଦୁଆଣୀ ମନିଂଜରୀ ପ୍ରମୁ ସେବାରେ ସମ୍ମାନ ଜନା କରିବା
 ଉଦ୍ଦେଶ୍ୟରେ ତେଣୁ ଚାନ୍ଦୁଆଣୀ ମନିଂଜରୀ ଭୁବନେଶ୍ଵର
 ନାଗର ପାଲିକା ବିଭାଗରୁ ଉପାଧ୍ୟକ୍ଷ ସ୍ଵାସ୍ଥ୍ୟକ୍ଷେତ୍ରକାରୀ
 ଶ୍ରୀମତୀଙ୍କୁ ସମାଜ ସମ୍ମାନ ଭାବରେ ସମ୍ମାନନା କରିବା ଉଦ୍ଦେଶ୍ୟ
 ରେ ନିମ୍ନ କର୍ମକ୍ରମକୁ ଧୂଳୀକର ନିମନ୍ତେ ନିମ୍ନ ପ୍ରଦାନ କରାଯାଉ

ପ୍ରସ୍ତାବ - ୭ - ଚାନ୍ଦୁଆଣୀ ଧୂଳୀ କର୍ମକ୍ରମ ଗ୍ରହଣ
 କରିବାପାଇଁ ନିମ୍ନ ଉଦ୍ଦେଶ୍ୟରେ ସ୍ଵାସ୍ଥ୍ୟକ୍ଷେତ୍ର
 ନାଗର ଅଧିକାରୀଙ୍କୁ ସମ୍ମାନ ଜନକ ଭାବେ ନିମ୍ନ
 ବିଭାଗରେ ଧୂଳୀକର ଧୂଳୀକର ସ୍ଵାସ୍ଥ୍ୟକ୍ଷେତ୍ର
 ସ୍ଵାସ୍ଥ୍ୟକ୍ଷେତ୍ର ଧୂଳୀକର ଧୂଳୀକର ଧୂଳୀକର
 ସ୍ଵାସ୍ଥ୍ୟକ୍ଷେତ୍ର ଧୂଳୀକର ଧୂଳୀକର ଧୂଳୀକର

ପ୍ରସ୍ତାବ - ୮ - ଚାନ୍ଦୁଆଣୀ ସମାଜ ସମାଜ କର୍ମ
 ଧୂଳୀକର ଧୂଳୀକର ଧୂଳୀକର ଧୂଳୀକର
 ସମାଜ ସମାଜ ସମାଜ ସମାଜ

ସମାଜ ସମାଜ ସମାଜ ସମାଜ

- ୧ - Srikant Saha
- ୨ - Ramesh Chandra Saha
- ୩ - ଶ୍ରୀମତୀ କାମ୍ବୁଜେଶ୍ଵରୀ
- ୪ - Sambash Kumar Saha
- ୫ - Madhu Mohanty
- ୬ - Gun Wani Saha
- ୭ - ବିକାଶିନୀ
- ୮ - Netra nanda Saha
- ୯ - Upendra Nath Saha
- ୧୦ - ମଧୁ ମହାନ୍ତି
- ୧୧ - Gunma Chandra Saha
- ୧୨ - Sangram Keshari Saha
- ୧୩ - ଶ୍ରୀମତୀ କାମ୍ବୁଜେଶ୍ଵରୀ
- ୧୪ - Umesh Ch. Tripathy
- ୧୫ - Bijay Kumar Saha

୧୨
୧୩
୧୪
୧୫
୧୬
୧୭
୧୮
୧୯
୨୦
୨୧
୨୨
୨୩
୨୪
୨୫
୨୬
୨୭
୨୮
୨୯
୩୦
୩୧
୩୨
୩୩
୩୪
୩୫
୩୬
୩୭
୩୮
୩୯
୪୦
୪୧
୪୨
୪୩
୪୪
୪୫
୪୬
୪୭
୪୮
୪୯
୫୦
୫୧
୫୨
୫୩
୫୪
୫୫
୫୬
୫୭
୫୮
୫୯
୬୦
୬୧
୬୨
୬୩
୬୪
୬୫
୬୬
୬୭
୬୮
୬୯
୭୦
୭୧
୭୨
୭୩
୭୪
୭୫
୭୬
୭୭
୭୮
୭୯
୮୦
୮୧
୮୨
୮୩
୮୪
୮୫
୮୬
୮୭
୮୮
୮୯
୯୦
୯୧
୯୨
୯୩
୯୪
୯୫
୯୬
୯୭
୯୮
୯୯
୧୦୦

- ୧୧ - SK HEKIM BUD
- ୧୨ - Pradyumna Ku Bae
- ୧୩ - Fazell Rabbani
- ୧୪ - Manoj Kumar Behera
- ୧୫ - Sathanku Mohanti Nayak
- ୧୬ - Sunjaya Ken Behera
- ୧୭ - Subashisha Pradhan
- ୧୮ - Gopabandhu Behera
- ୧୯ - Bhabat Kumar Patel
- ୨୦ - Ashok Chandra 7000
- ୨୧

- ~ Rohit Kumar Sharma
- ~ Komal Kumar
- ~ Sachin Kumar
- ~ 2019
- ~ 2019
- ~ 2019
- ~ 2019
- ~ 2019

(1) ...
 (2) ...
 ...

...
 ...

...
 ...
 ...

...
 ...
 ...

...
 ...

sachi Gagambihari Selhi
ASWA RUM RUM
BOJA Umakanta n'a
Pora (SALATI)
Sangang K. Dadi

25
21
17
13
9

Subidha Kengar Delibopora (Syo-4)

Nerajan Malik

↑
.
B:

- ~ Shobhit Kumar Bhatia
- ~ Ashok Kumar
- ~ Anurag
- ~ Gaganbihari Saha
- ~ Saksham Kumar
- ~ Sneha Kumar Bhatia
- ~ Anurag Kumar
- ~ Anurag Kumar
- ~ Anurag Kumar

~ Anurag Kumar ~ Anurag Kumar

1. Anurag Kumar
2. Anurag Kumar
3. Anurag Kumar
4. Anurag Kumar
5. Anurag Kumar
6. Anurag Kumar
7. Anurag Kumar
8. Anurag Kumar

Anurag Kumar Anurag Kumar

Anurag Kumar Anurag Kumar

Suyarnani Pandha (APC)
ORP CARP

+ Prasant Kumar Dush. (FC)

* Saunjan K. Dush
9437311154 / 9737124304

एवम् (ए. व. व. व.)

Umakanta Jia

✓
Subodha Kishor Deshpande
Spu - Feary Y

✓ Gyuna carjan Behera
(Balakati)

✓ Niranjay Mallik

✓ Mihir Das (D.H.A)

✓
N. Behera

ପ୍ରସ୍ତାବ ନଂ-୩:- ଚାକିରୀକାରୀ ଏକାଡ଼ି଼ ପ୍ରାୟ ୩୦୦ ଟୁ ତୁଳ୍ୟ ବ୍ୟବସାୟୀମାନ
 ସୁଧା ସମାନ୍ତରା ଶାଖା ପରିସରରେ ଏକାଡ଼ି଼ ପରିସରରେ ସୁଧା ୨୦
 ଚଢ଼ିଆର ସୁଧାକାରୀ ଭାବରେ ବ୍ୟବସ୍ଥିତ କାର୍ଯ୍ୟକ୍ରମ କାର୍ଯ୍ୟକ୍ରମ
 କର୍ମରେ ଅବଧାନ ସମ୍ପର୍କରେ ଶିକ୍ଷା ସଂସ୍ଥା କରିବା ଉପରେ ।

ପ୍ରସ୍ତାବ ନଂ-୪ - ବିଶ୍ୱ ପରିଷଦ ପ୍ରତି ଜନଜାତ ଅଧିକାରୀ ଅଧିକାରୀଙ୍କୁ ଏକ
 ଭିତ୍ତିକ ଜନଜା (ବିଶ୍ୱ ଭିତ୍ତିକ ସ୍ତର) ଲାଭାତ୍ ଭିତ୍ତିକ ନିର୍ଦ୍ଦେଶ
 କୁଳଭିତ୍ତିକ ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା
 ବିଶ୍ୱଭିତ୍ତିକ ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା
 ସୁଧାକାରୀ ବିଶ୍ୱଭିତ୍ତିକ ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା

(କ) ଚାକିରୀ ସୁଧାକାରୀଙ୍କୁ ପାଠ୍ୟପୁସ୍ତକ ତ ଦାୟିତ୍ୱାତ୍ କୁଳଭିତ୍ତିକ
 କାର୍ଯ୍ୟକ୍ରମ ।

(ଖ) ଚାକିରୀ ଲୋକନାୟକ ଭାବରେ ନିର୍ଦ୍ଦେଶ ସ୍ଥାନରେ ସମ୍ପର୍କରେ ବିଶ୍ୱଭିତ୍ତିକ
 କାର୍ଯ୍ୟକ୍ରମ । ଏହା:- ନିର୍ଦ୍ଦେଶ, ଆୟ, ପରାମର୍ଶ ଅନୁମୋଦନ କର୍ମକ୍ରମ, ନିର୍ଦ୍ଦେଶ,
 ଅଧିକାରୀ, କର୍ମକ୍ରମ, ଏକତା, ଅନୁମୋଦନ, ସୁଧାକାରୀ, ବିଶ୍ୱଭିତ୍ତିକ, ବିଶ୍ୱଭିତ୍ତିକ,
 ନିର୍ଦ୍ଦେଶ ଏବଂ ବିଶ୍ୱଭିତ୍ତିକ ବିଶ୍ୱଭିତ୍ତିକ କାର୍ଯ୍ୟକ୍ରମ ।

ପ୍ରସ୍ତାବ ନଂ-୫:- ଜନଜାତ ସମ୍ପ୍ରଦାୟ ଭିତ୍ତିକ ନିର୍ଦ୍ଦେଶ ଦାହି ଦାହି ନିର୍ଦ୍ଦେଶକ୍ରମ ।
 ଚାକିରୀ ଆମର ନିର୍ଦ୍ଦେଶ ପ୍ରକ୍ରିୟା

(କ) ଦାହି ଦାହି ନିର୍ଦ୍ଦେଶକ୍ରମ ସମ୍ପର୍କରେ ପାଠ୍ୟ ପୁସ୍ତକ କେନ୍ଦ୍ରରେ
 ଭିତ୍ତିକ କାର୍ଯ୍ୟକ୍ରମ ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା ପ୍ରକ୍ରିୟା
 ନିର୍ଦ୍ଦେଶକ୍ରମ ସମ୍ପର୍କରେ ନିର୍ଦ୍ଦେଶକ୍ରମ ।

(ଖ) ବିଶ୍ୱଭିତ୍ତିକ ଆୟ ଭିତ୍ତିକ ପାଠ୍ୟ ପୁସ୍ତକ ନିର୍ଦ୍ଦେଶକ୍ରମ ସମ୍ପର୍କରେ
 ପାଠ୍ୟ ପୁସ୍ତକ ନିର୍ଦ୍ଦେଶକ୍ରମ ପାଠ୍ୟ ପୁସ୍ତକ ଏହାଦ କାର୍ଯ୍ୟକ୍ରମ ।

(ଗ) ବିଶ୍ୱଭିତ୍ତିକ ସମ୍ପ୍ରଦାୟ ଭିତ୍ତିକ ସମ୍ପର୍କରେ ପାଠ୍ୟ ପୁସ୍ତକ କାର୍ଯ୍ୟକ୍ରମ ।

(ଘ) ବିଶ୍ୱଭିତ୍ତିକ ସମ୍ପ୍ରଦାୟ ଭିତ୍ତିକ ସମ୍ପର୍କରେ ପାଠ୍ୟ ପୁସ୍ତକ କାର୍ଯ୍ୟକ୍ରମ ।
 ପାଠ୍ୟ ପୁସ୍ତକ ନିର୍ଦ୍ଦେଶକ୍ରମ ପାଠ୍ୟ ପୁସ୍ତକ କାର୍ଯ୍ୟକ୍ରମ । କାର୍ଯ୍ୟକ୍ରମ ସୁଧା
 କାର୍ଯ୍ୟକ୍ରମ କାର୍ଯ୍ୟକ୍ରମ କାର୍ଯ୍ୟକ୍ରମ କାର୍ଯ୍ୟକ୍ରମ କାର୍ଯ୍ୟକ୍ରମ କାର୍ଯ୍ୟକ୍ରମ

(ଙ) ବିଶ୍ୱଭିତ୍ତିକ ସମ୍ପ୍ରଦାୟ ଭିତ୍ତିକ ସମ୍ପର୍କରେ ପାଠ୍ୟ ପୁସ୍ତକ କାର୍ଯ୍ୟକ୍ରମ ।
 ଚାକିରୀକାରୀ ବିଶ୍ୱଭିତ୍ତିକ ସମ୍ପ୍ରଦାୟ ଭିତ୍ତିକ ସମ୍ପର୍କରେ ପାଠ୍ୟ ପୁସ୍ତକ କାର୍ଯ୍ୟକ୍ରମ ।

8000000000
~~8002000000~~
କ୍ଷମା ପ୍ରତିପତ୍ତ

ଅଧ୍ୟକ୍ଷ ଶ୍ରୀ
ଠାକୁରାଣୀ

ଶ୍ରୀମତୀଙ୍କୁ ଧନ୍ୟବାଦ ଏବଂ ପ୍ରତିଶ୍ରୁତି କ୍ରମେ ଶ୍ରୀମତୀଙ୍କୁ ଶୁଭାଶୀର୍ଵାନ ଦେଉଛି

ଶ୍ରୀମତୀଙ୍କୁ ଧନ୍ୟବାଦ ଏବଂ ପ୍ରତିଶ୍ରୁତି କ୍ରମେ ଶ୍ରୀମତୀଙ୍କୁ ଶୁଭାଶୀର୍ଵାନ ଦେଉଛି -: C - ୧୫୫୫୫

। ଠାକୁରାଣୀଙ୍କୁ ଶୁଭାଶୀର୍ଵାନ ଦେଉଛି

18/02/2021

1
2
3

1
2
3

4

5

6

7

8

9

10

11

12

13

14

- 92 - Niranjana Setty
- 93 - Manoj Sain
- 94 - Praveen Sahoo
- 95 - Anilkumar Prusty
- 96 - Sudipika Sahoo
- 97 - ~~Praveen Sahoo~~
- 98 - Tejodan Sahoo
- 99 - ~~Praveen Sahoo~~
- 100 - ~~Praveen Sahoo~~
- 101 - ~~Praveen Sahoo~~
- 102 - ~~Praveen Sahoo~~
- 103 - ~~Praveen Sahoo~~
- 104 - ~~Praveen Sahoo~~
- 105 - ~~Praveen Sahoo~~
- 106 - ~~Praveen Sahoo~~
- 107 - ~~Praveen Sahoo~~
- 108 - ~~Praveen Sahoo~~
- 109 - ~~Praveen Sahoo~~
- 110 - ~~Praveen Sahoo~~
- 111 - ~~Praveen Sahoo~~
- 112 - ~~Praveen Sahoo~~
- 113 - ~~Praveen Sahoo~~
- 114 - ~~Praveen Sahoo~~
- 115 - ~~Praveen Sahoo~~
- 116 - ~~Praveen Sahoo~~
- 117 - ~~Praveen Sahoo~~
- 118 - ~~Praveen Sahoo~~
- 119 - ~~Praveen Sahoo~~
- 120 - ~~Praveen Sahoo~~
- 121 - ~~Praveen Sahoo~~
- 122 - ~~Praveen Sahoo~~
- 123 - ~~Praveen Sahoo~~
- 124 - ~~Praveen Sahoo~~
- 125 - ~~Praveen Sahoo~~
- 126 - ~~Praveen Sahoo~~
- 127 - ~~Praveen Sahoo~~
- 128 - ~~Praveen Sahoo~~
- 129 - ~~Praveen Sahoo~~
- 130 - ~~Praveen Sahoo~~
- 131 - ~~Praveen Sahoo~~
- 132 - ~~Praveen Sahoo~~
- 133 - ~~Praveen Sahoo~~
- 134 - ~~Praveen Sahoo~~
- 135 - ~~Praveen Sahoo~~
- 136 - ~~Praveen Sahoo~~
- 137 - ~~Praveen Sahoo~~
- 138 - ~~Praveen Sahoo~~
- 139 - ~~Praveen Sahoo~~
- 140 - ~~Praveen Sahoo~~
- 141 - ~~Praveen Sahoo~~
- 142 - ~~Praveen Sahoo~~
- 143 - ~~Praveen Sahoo~~
- 144 - ~~Praveen Sahoo~~
- 145 - ~~Praveen Sahoo~~
- 146 - ~~Praveen Sahoo~~
- 147 - ~~Praveen Sahoo~~
- 148 - ~~Praveen Sahoo~~
- 149 - ~~Praveen Sahoo~~
- 150 - ~~Praveen Sahoo~~
- 151 - ~~Praveen Sahoo~~
- 152 - ~~Praveen Sahoo~~
- 153 - ~~Praveen Sahoo~~
- 154 - ~~Praveen Sahoo~~
- 155 - ~~Praveen Sahoo~~
- 156 - ~~Praveen Sahoo~~
- 157 - ~~Praveen Sahoo~~
- 158 - ~~Praveen Sahoo~~
- 159 - ~~Praveen Sahoo~~
- 160 - ~~Praveen Sahoo~~
- 161 - ~~Praveen Sahoo~~
- 162 - ~~Praveen Sahoo~~
- 163 - ~~Praveen Sahoo~~
- 164 - ~~Praveen Sahoo~~
- 165 - ~~Praveen Sahoo~~
- 166 - ~~Praveen Sahoo~~
- 167 - ~~Praveen Sahoo~~
- 168 - ~~Praveen Sahoo~~
- 169 - ~~Praveen Sahoo~~
- 170 - ~~Praveen Sahoo~~
- 171 - ~~Praveen Sahoo~~
- 172 - ~~Praveen Sahoo~~
- 173 - ~~Praveen Sahoo~~
- 174 - ~~Praveen Sahoo~~
- 175 - ~~Praveen Sahoo~~
- 176 - ~~Praveen Sahoo~~
- 177 - ~~Praveen Sahoo~~
- 178 - ~~Praveen Sahoo~~
- 179 - ~~Praveen Sahoo~~
- 180 - ~~Praveen Sahoo~~
- 181 - ~~Praveen Sahoo~~
- 182 - ~~Praveen Sahoo~~
- 183 - ~~Praveen Sahoo~~
- 184 - ~~Praveen Sahoo~~
- 185 - ~~Praveen Sahoo~~
- 186 - ~~Praveen Sahoo~~
- 187 - ~~Praveen Sahoo~~
- 188 - ~~Praveen Sahoo~~
- 189 - ~~Praveen Sahoo~~
- 190 - ~~Praveen Sahoo~~
- 191 - ~~Praveen Sahoo~~
- 192 - ~~Praveen Sahoo~~
- 193 - ~~Praveen Sahoo~~
- 194 - ~~Praveen Sahoo~~
- 195 - ~~Praveen Sahoo~~
- 196 - ~~Praveen Sahoo~~
- 197 - ~~Praveen Sahoo~~
- 198 - ~~Praveen Sahoo~~
- 199 - ~~Praveen Sahoo~~
- 200 - ~~Praveen Sahoo~~

Swamy

- ୮ - Shazieh Jalaluddin
- ୯ - ଅମୃତ କୁମାରୀ
- ୧୦ - Jugal Kumar Das
- ୧୧ - Hamir Kesh Sahoo
- ୧୨ - ନମସ୍କାର ମାଧବୀ
- ୧୩ - ବିକିତ୍ରା
- ୧୪ - ଭୀମକାନ୍ତ ଦାଶ
- ୧୫ - ଅନନ୍ତ କୁମାର
- ୧୬ - ପ୍ରମିଳା ମାଧବୀ
- ୧୭ = manoj Kumar Mohanty
- ୧୮ - Nibakanta Kan
- ୧୯ - sudipta Sahoo
- ୨୦ - ସୁମିତ୍ରା କୁମାରୀ
- ୨୧ - ମିତ୍ରା କୁମାରୀ
- ୨୨ - Ishirad Malla
- ୨୩ - ବିନୟୀ କୁମାରୀ
- ୨୪ - କୁମାରୀ ସୁମିତ୍ରା
- ୨୫ - Babu Narayan Saha
- ୨୬ - Gopabandhu Behera
- ୨୭ - Fazal Rabbani
- ୨୮ - ବିନୟୀ
- ୨୯ - Bhubanjan Pal
- ୩୦ - Adhar chandra Zena
- ୩୧ - Pradyumna Bal

Sachin's Nanda Pereira

ସଞ୍ଜେଇଁ ପ୍ରାଣି
Borjary Ku. Nagan.

Prezante Bantik
ଫୁଲ ପ୍ରାଣିପୁରୀ

ମୁଖ୍ୟମନ୍ତ୍ରୀ

ନିର୍ଦ୍ଦେଶକ
ପି.ଏ.ଏ.ଏ.ଏ.ଏ.
ସଞ୍ଜେଇଁ ପ୍ରାଣି
ମୁଖ୍ୟମନ୍ତ୍ରୀ
Bantik Natti
ମୁଖ୍ୟମନ୍ତ୍ରୀ

ପ୍ରାଣିପୁରୀ

Borjary Nanda Seki

ସଞ୍ଜେଇଁ ପ୍ରାଣି

ମୁଖ୍ୟମନ୍ତ୍ରୀ
Borjary Nanda

ମୁଖ୍ୟମନ୍ତ୍ରୀ

[ମୁଖ୍ୟମନ୍ତ୍ରୀ]

ମୁଖ୍ୟମନ୍ତ୍ରୀ

LTI Kadi Rowak.

1999/12/25
Sathya Sai Bank
Sathya Sai
Sathya Sai
Sathya Sai Bank

Sathya Sai Bank
(Kudampana)

എന്റെ പ്രിയപ്പെട്ട സുഹൃത്തേ
സാത്യസൈ ബാങ്ക് (കുടമപന)

1. സാത്യസൈ ബാങ്കിന്റെ പ്രവർത്തനം

1. 1999/12/25 തീയതിയിൽ സാത്യസൈ ബാങ്ക്
പ്രവർത്തനം ആരംഭിച്ചു. ഈ പ്രതിബദ്ധതയോടെ
പ്രവർത്തനം ആരംഭിച്ചു.

1. സാത്യസൈ ബാങ്ക് പ്രവർത്തനം
ആരംഭിച്ചു. സാത്യസൈ ബാങ്ക് പ്രവർത്തനം
ആരംഭിച്ചു. സാത്യസൈ ബാങ്ക് പ്രവർത്തനം
ആരംഭിച്ചു. സാത്യസൈ ബാങ്ക് പ്രവർത്തനം
ആരംഭിച്ചു. സാത്യസൈ ബാങ്ക് പ്രവർത്തനം
ആരംഭിച്ചു.

1. സാത്യസൈ ബാങ്ക് പ്രവർത്തനം
ആരംഭിച്ചു. സാത്യസൈ ബാങ്ക് പ്രവർത്തനം
ആരംഭിച്ചു. സാത്യസൈ ബാങ്ക് പ്രവർത്തനം
ആരംഭിച്ചു. സാത്യസൈ ബാങ്ക് പ്രവർത്തനം
ആരംഭിച്ചു.

sachinb nanda parvada

ଅନୁପମ ପାଠକ
Anupam K. Nayak

Prasanta Barik

ଅନୁପମ ପାଠକ (ନିର୍ଦ୍ଦେଶକ)

ଉତ୍କଳ ପାଠକ

ମାରିଚିକା

ସାମାଜିକ

ମୁକ୍ତ ବ୍ୟବସ୍ଥା

Quilari Natti

ନିର୍ଦ୍ଦେଶକ

ଅନୁପମ ପାଠକ

ଉତ୍କଳ ପାଠକ

Brahmananda Sethi

ଅନୁପମ ପାଠକ

ଅନୁପମ ପାଠକ

Mushap Behara

ନିର୍ଦ୍ଦେଶକ

(ନିର୍ଦ୍ଦେଶକ)

Narayan Nayak

ଅନୁପମ ପାଠକ

Becheta Kumar Patra

✓ Smt Rajesh Kumar Barik

(8)

ନିରାକରକୃଷ୍ଣଚନ୍ଦ୍ର

(9)

Pradyumn Choudhary

(10)

Mohanomolu Mohanty

(11)

Kullip Kumar Mohanty

(12)

ଉତ୍କଳ ଉତ୍କଳୀ

(13)

Jaya prakash Mohanty

(14)

ନବଜ୍ୟୋତୀ

(15)

Navajyoti Nayak

(16)

ଅକ୍ଷୟକାନ୍ତ

(17)

ଶ୍ରୀମତୀ ସୁମତୀ

(18)

Rameta Mohanty

(19)

ଉତ୍କଳ ଉତ୍କଳୀ

(20)

Laxmi Shree Sachoo

(21)

Sachida Nanda parida

(22)

ସୁଭାଷ ଚନ୍ଦ୍ର ମହାନ୍ତି

(23)

Saboo day Nath

(24)

ସୁନୀଲକାନ୍ତ

(25)

ଉତ୍କଳ ଉତ୍କଳୀ

(26)

ସୁଧାକାନ୍ତ ଚନ୍ଦ୍ର

(27)

ଉତ୍କଳ କଳା

(28)

Prasanna Nath

(29)

ଜ୍ଞାନୀ ସାଧୁ

(30)

ଶ୍ରୀମତୀ ସୁଧାକାନ୍ତ

(31)

ସୁଧାକାନ୍ତ

(32)

ସାଧୁକାନ୍ତ

କାହାଣୀ
କାହାଣୀ
କାହାଣୀ

କାହାଣୀ କାହାଣୀ କାହାଣୀ କାହାଣୀ କାହାଣୀ
କାହାଣୀ କାହାଣୀ କାହାଣୀ କାହାଣୀ କାହାଣୀ

କାହାଣୀ କାହାଣୀ କାହାଣୀ କାହାଣୀ କାହାଣୀ
କାହାଣୀ କାହାଣୀ କାହାଣୀ କାହାଣୀ କାହାଣୀ

OFFICE OF THE ENGINEER-IN-CHIEF (CIVIL), ODISHA
NIRMAN SOUDHA, KESHARI NAGAR, UNIT-V, BHUBANESWAR-751001

File No: PMU (WB)-72/2010 (Vol. II) ²⁷⁸⁴⁰ Date: 1.7.13

From

Er. Nalinikanta Pradhan,
Chief Engineer, World Bank Projects,
Tel: 0674-2390000. Fax: 0674-2391467.
Email: pmuosrp@gmail.com

To

Mr. Rajesh Rohatgi,
Senior Transport Specialist,
Sustainable Development (South Asia Region),
The World Bank,
18-20, Kasturba Gandhi Marg,
New Delhi – 110001

Sub: Submission of Environment Impact Assessment Report.

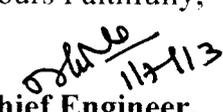
Sir,

The updated Environment Impact Assessment Report of Jagatpur-Chandbali Road is attached herewith for further necessary action at your end.

With regards

Encl: as above

Yours Faithfully,


Chief Engineer,

(World Bank Projects, Odisha)

Memo No. 27841 Dt. 1.7.13

Copy submitted to Engineer-in Chief-cum-Secretary to Government, Works Department for favour of information and necessary action.


Chief Engineer,

(World Bank Projects, Odisha)