

**BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI**

Original Application No. 76 of 2022 (SZ).

IN THE MATTER OF:-

Damayanti Subray Mesta

...Applicant(s)

Versus

**Department of Public Works, Ports and
Inland Water Transport, Bangalore & ors.**

...Respondent(s)

Next Date. 21/10/ 2022

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New Delhi

Filled By :-



Date 18/10/2022,

(Mr. DARPAN KM Adv.)
Advocate for the Respondent No.1 & 8
Kar/1053/2009.
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New Delhi - 110024
Mob. 9968638862

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, AT CHENNAI
ORIGINAL APPLICATION NO. 76 OF 2022 (SZ)**

IN THE MATTER OF:

Damayanti Subray Mesta

...APPLICANT

VERSUS

Department of Public Works
Ports & Inland Water Transport
Government of Karnataka & Others

...RESPONDENTS

**ADDITIONAL OBJECTIONS ON BEHALF OF RESPONDENT NO. 1
(DEPARTMENT OF INFRASTRUCTURE DEVELOPMENT, PORTS
AND INLAND WATER TRANSPORT), KARNATAKA**

MOST RESPECTFULLY SHOWETH:

1. That the present Original Application ('OA') has been filed alleging violation of provisions of CRZ Notification, 2011 and Environment (Protection) Act, 1986 and seeking *inter alia* an order of stay against the ongoing construction of Connectivity Road from the Honavar Port Project of M/s Honavar Port Private Limited ('HPPL') at Kasarkod Tonka to National Highway-66.
2. That upon the existence of a kachcha road along the seawall constructed at the shoreline at Kasarkod being brought to the Notice of this Hon'ble Tribunal on 12.09.2022, the Answering Department/Respondent No. 1 had filed a map on 13.09.2022, indicating the existing kachcha road in blue colour.

3. That on 14.09.2022, certain documents were produced by the Applicants before this Hon'ble Tribunal (***the Additional Documents***). It was the contention of the Applicants by way of the Additional Documents that there has never existed any Kaccha Road, as opposed to the Kaccha Raod reflected in Blue by this Respondent in the map filed on 13.09.2022 following this Hon'ble Tribunal's order dated 12.09.2022 in the instant matter. The applicants also incorrectly contend that the Impugned proposed road has incorrectly been showed as an existing kaccha road.

**THE FOLLOWING OBJECTIONS ARE THEREFORE PLACED
BEFORE THIS HON'BLE TRIBUNAL IN THIS REGARD:**

4. It is humbly submitted that a Kaccha road has always existed at the area in question, as indicated in Blue Colour in the map filed on 13.09.2022.
5. It is submitted that the Department of Minor Irrigation, Government of Karnataka had undertaken the Sea protection works at Kasarkod Village before the year 2000 to protect the land adjacent to the Kasarkod shore.
6. Thereafter, the Answering Respondent, *i.e.* the Department of Ports and Inland Water Transport has been constructing Sea Walls in Kasarkod Village. It is humbly submitted that the construction of seawall involves placing of granite stones of various sizes and shapes along with high density polythene

mat and sand filled nylon bags at specified depth and location as per the technical design furnished by the designers.

7. Such being the requirements for the construction of a seawall, the existence of a road is in fact a prerequisite for the movement of tippers and dumpers carrying the material required for construction of seawall as well as the machinery required for placement of granite stones of various sizes and shapes for successful completion of work.
8. It is hence humbly submitted that wherever seawall has been constructed along the shore at Kasarkod, a kachcha road had been constructed on the landside in order to facilitate safe and smooth movement of vehicles and machineries for execution of the work. ***The pre-existence of a kachcha road is hence self-explanatory.***
9. It is further humbly submitted that seawalls are clearly shown in the Map No. KA 25 of CZMP prepared by NCSCM, Chennai as annexed by the Applicants at Page 5 of the Additional Documents filed on 14.09.2022. Thus, it is evident that a kachcha road of Murrum or gravel (mud pathway) had been constructed.
10. Further, reference may be had to Page 11 of the Additional Documents filed by the Applicants on 14.09.2022. It is stated that *“the area between the sea wall and fisher homes is a small narrow mud pathway and fish drying area.”*

11. It is submitted that this mud pathway is the kachcha road constructed for execution of seawall work and it is very clear that this portion of road is used by fishermen and fisherwomen for fish drying illegally by encroaching this kachcha road. Accordingly, the Answering Department at Para 32, Pages 10-11 of its Reply dated 20.08.2022 to the Original Application, had referred to the illegal and unauthorized use of Government land for fish drying. Annexure R-15 of the Answering Department's reply dated 20.08.2022 is the eviction order dated 29.11.2016 against various persons involved illegally in fish drying over the area in question, passed by the Deputy Commissioner, Uttar Kannada District, which is already placed on record.
12. Thus, it is clear and evident that the kachcha road (mud pathway) existed earlier and the same has in fact been used illegally for fish drying by encroaching upon it.
13. The above is evident by the Photograph (with a false and misleading caption) produced at Page No. 24 by the Applicant in the Additional Documents filed on 14.09.2022. In fact, the seawall is clearly visible in the background in the said picture.
14. It is submitted that however, at some reaches, the kachcha road is not visible at present due to sand deposition, as can be seen at the Photograph produced at Page No. 23 of the Additional Documents filed by the Applicant. In these areas, murrum was laid to make the existing kachcha road motor-

able again, an example of which is the Photograph (with a false and misleading caption) produced at Page No. 25 by the Applicant in the Additional Documents filed on 14.09.2022.

15. Therefore, it is submitted that the Answering Department has not falsely presented the Impugned proposed road as an existing road, because the kachcha road was in existence since the construction of seawalls at Kasarkod Village.
16. It is submitted that the photographs of this existing kachcha road at various stretches are clearly shown in the Detailed Project Report (DPR) of Honnavar Port Road Connectivity from NH 66, prepared by Intercontinental Consultants and Technocrats Pvt. Ltd. (ICT), New Delhi during February, 2020 at pages 17 to 19 of the DPR. The project is being implemented by NHAI and is uploaded in Prime Minister Gati Shakti portal. True Copy of Detailed Project Report is annexed hereto as **Annexure R-1.**
17. It is humbly submitted that local fishermen were illegally using the land ear marked for port development at Kasarkod Village for fish drying purpose. The Department of Ports has taken action against the illegal occupants to evict them and issued notice.
18. Hence, regarding the issue raised by the Applicant stating that the project site belongs to fishermen, it is humbly submitted that against the eviction notice, the illegal occupants had filed

WP Nos 100908-934/2016 before the Hon'ble High Court of Karnataka, Dharwad Bench.

19. The Learned Single Judge was pleased to dismiss the same vide order dated 10.02.2016, stating that the Writ Petitioners have no documents to show that they are having right, title or possession over the said land.

True Copy of the order dated 10.02.2016 passed by the Hon'ble High Court of Karnataka is annexed hereto as **Annexure R-2**.

20. Against the said dismissal, Writ Appeal Nos. 100303/2016 & 101144 to 101169/2016 (GM-RES) were filed by the illegal occupants. The Hon'ble High Court by its order dated 20.09.2016, regarding the appellants' claim for fish drying area of 93 acres, disposed of the WAs by upholding the Order of learned Single Judge.

True Copy of the order dated 20.09.2016 passed by the Hon'ble High Court of Karnataka is annexed hereto as **Annexure R-3**.

21. The illegal occupants of this newly formed land had also filed an application in the court of Deputy Commissioner, Uttara Kannada, Karwar in MA No. 1/2016 for the same relief.

22. On hearing the arguments and perusal of records, the Deputy Commissioner found no grounds to grant the Government land once again, and the revenue documents like RTC and Mutation were all standing in the name of the Government of Karnataka.

23. Therefore, the said Petition was dismissed and it was directed to evict the encroachers by the Deputy Commissioner vide order dated 29.11.2016. The said order is already placed on record as Annexure R-15 at Page No. 86 of the Reply to the OA filed by the Answering Respondent.
24. It is submitted that the illegal occupants were accordingly evicted from the project area on on 07.12.2016 as per the orders of the Hon'ble High Court and as per the order issued by Deputy Commissioner, Uttar Kannada, Karwar.
25. **In view of these circumstances, it is submitted that while the Application was filed only against the Impugned proposed road, the Applicants, being illegal occupants of government land, are trying to better their case by now falsely claiming an existing road to be the proposed Impugned road.**
26. Therefore, in view of the above-mentioned facts, it is submitted that the Kachcha road was formed for construction of seawalls and not for fish drying and thus, it existed earlier, as opposed to the Applicant's claim that it is newly formed.
27. Hence it is prayed that the tribunal may be pleaded to reject the Additional Documents filed by the Applicant on account of

the same being entirely false and misleading. It is further prayed accordingly that the present Application may be dismissed with costs.

Pandurang
PORT ENGINEER
DIRECTORATE OF PORTS & I.W.T

Port Engineer
Directorate of Ports & Inland Water Transport
Baitkhol, Karwar
On Behalf of Respondent No. 1 & 8

THROUGH

Darpan KM
Darpan KM

Darpan KM
Advocate for Respondent No. 1

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SOUTHERN ZONE, AT CHENNAI
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IN THE MATTER OF:

Damayanti Subray Mesta

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VERSUS

Department of Public Works
Ports & Inland Water Transport
Government of Karnataka & Others

...RESPONDENTS

AFFIDAVIT

I, Pandurang N Kulkarni S/o Narayan Rao, aged about 55 years, working as the Port Engineer, Karwar having office at the Office of the Directorate, Ports and Inland Water Transport Building, Baithkol, Karwar-581302, Karnataka, presently at Bangalore do hereby solemnly affirm and state as under:

1. That I have been appointed the Officer in Charge on behalf of Respondent No. 1 in the above mentioned Original Application and being fully conversant with the facts and circumstances of the case, I am competent to swear this affidavit.
2. That I have gone through the accompanying Objections, drafted on my instructions. I say that the contents thereof are true and correct to the best of my knowledge and belief. Annexures are true copies of their respective originals.

Pandurang
DEPONENT
DIRECTORATE OF PORTS & I.W.T
KARWAR

VERIFICATION:

I, the above named deponent do hereby verify that the contents of my affidavit are true and correct to the best of my knowledge and belief, no part of which is false and nothing material has been concealed therefrom.

Verified at Karwar on this 18 day of October, 2022.



'SWORN TO BEFORE ME'

Bhute

K. T. BHUTE

ADVOCATE & NOTARY, KARWAR

18 OCT 2022

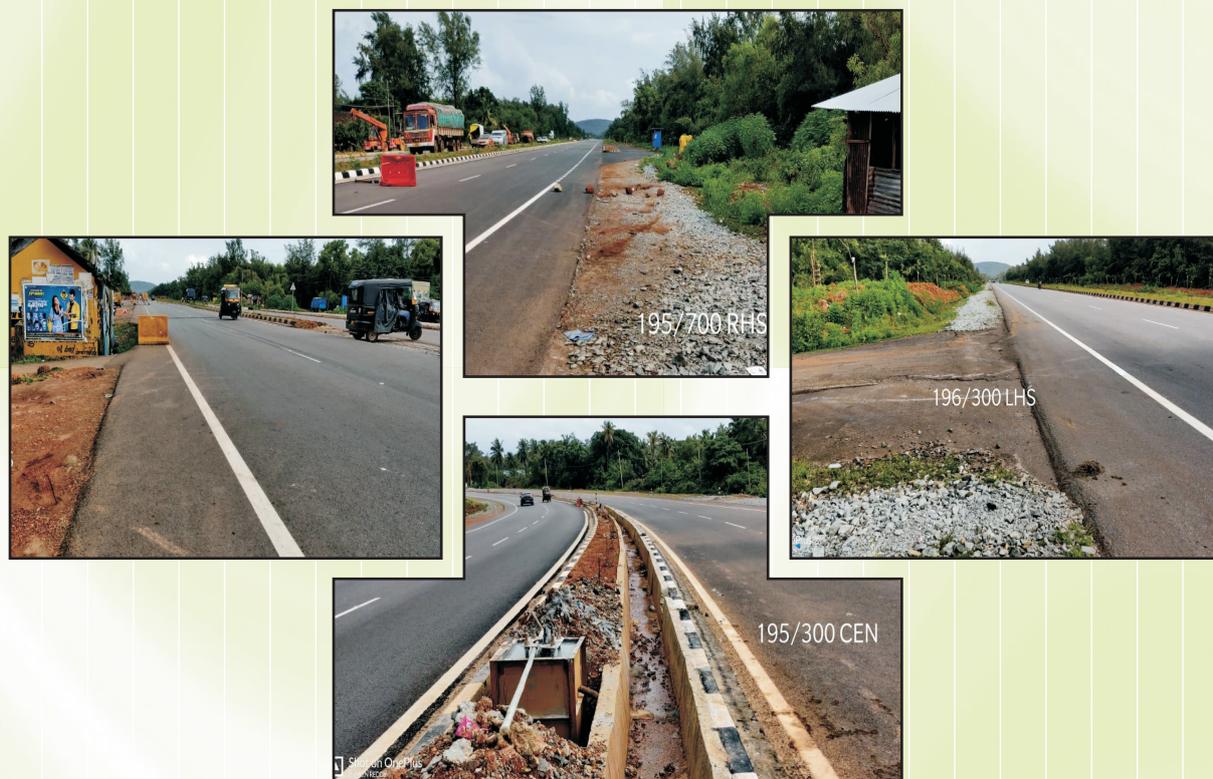
Pandurang
DEPONENT
DIRECTORATE OF PORTS & I.W.T
KARWAR

No. of Corrections - Nil
18/10/2022



HONNAVAR PORT PVT. LTD.

**Consultancy Services for Preparation of DPR of
Honnavar Port Road Connectivity
(Access road from Kasarkod Side of Honnavar Port
Km. 0+000 to Km. 2+580) on NH-66**



DETAILED PROJECT REPORT
VOLUME I: MAIN REPORT



Intercontinental Consultants and Technocrats Pvt. Ltd.
A-8, Green Park, New Delhi - 110 016, India

February, 2020

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

This Executive Summary of DPR pertains to Four laning with paved shoulder and soft shoulder for the Project Roads (Port Access Connecting Road and for Km.195+000 to Km. 197+000 of NH-66).

The state of Karnataka is blessed with a pristine coastal stretch of over 300 km between Karwar (in the North) and Mangalore (in the South) flanked by Uttara Kannada, Udupi and Dakshina Kannada districts with favorable and strategic port location. The coast line of the state is lined with ten minor ports between Karwar and Mangalore.

The Government of Karnataka has introduced Industrial Policy 2006-11 with an aim to increase growth of GDP, strengthen manufacturing industries, increase share of exports from Karnataka, to generate additional employment of at least 10 lakh persons in the manufacturing and service sectors, reduce regional imbalance and ultimately aim at overall socio-economic development of the State.

Accordingly, the Directorate of Ports and Inland Water Transport Department, Government of Karnataka has decided to develop "Honnavar Port" at the mouth of Sharavati River in Uttara Kannada District of Karnataka. Against this background, the Honnavar Port Private Ltd. (HPPL) has subsequently proposed to undertake the Four lane of providing road connectivity from the proposed Port to existing NH-66 to Kasarkod Side of Honnavar Port under Port connectivity road stretches under Bharatmala Pariyojana and has entrusted work to M/s ICT Pvt. Ltd. accordingly.

M/s ICT Pvt. Ltd. accordingly has taken up the assignment and submitted the feasibility report. Subsequently upon submission of feasibility report the consultant made a presentation at RO, NHAI-Bangalore on the 22.07.2019 with alternative alignment proposals.

Further for alignment finalisation a meeting was held on the 30.08.2019 at NHAI, HQ under the chairmanship of the Member (P).Accordingly in principal approval for alignment was accorded vide letter NHAI/Mgr Bypass/2106/141164 dated 17.09.2019.

Based on the approval of the alignment, this report is been submitted as Part of Detailed Project Report incorporating the outcome of the meeting.

The proposed Four Lane Road connectivity has been planned to takeoff from Honnavar Port at Kasarkod side. This alignment traverses along the bank/shore of the existing coast for approximately about 2.2kms and 0.4km on mainland before merging with the existing NH-66 (Goa-Mangalore) at Km. 196/0.

To understand the economic feasibility / Traffic on the proposed road connectivity, It was analyzed the traffic potential from bulk cargo constituting four commodities namely thermal Coal, Coking coal, Fertilizers, Limestone & Iron ore from general cargo / containers.

DPR study (DPR) was conducted with following provisions –

- Four Lane with Paved Shoulder for the Access Road connecting Port to NH-66
- Service road -5.5m wide with 1.5m wide earthen shoulder on LHS for the use of Adjacent Built-Up area/habitants where nominal traffic exists
- A LVUP for traffic using/accessing the Eco beach park
- Catering to the Traffic movements for traffic accessing the Port Road with At-Grade and Grade Separated Proposals
- Minimal land acquisition and minimal disturbance to ecosystem
- Provision of CD's for Proper Drainage Purpose
- Utility Corridor provision

- Provision for bank protection on the sea side with robust design
- Improvements to NH-66 with the result of integration of Port Road with NH-66

An independent traffic assessment has been carried out by M/s. Honnavar Port Private Limited (HPPL) and the traffic projection for the proposed road connectivity is given under Chapter 5 of this report.

The revised estimated cost for construction of this project is **Rs. 99.51 Crores**. This involves cost of construction of project works of civil works.

The time frame for construction work is 18 months which is excluding time required for land acquisition and pre-execution activities.

The project stretch is a small stretch, Hence, the stretch is recommended to be implemented under Engineering Procurement and Construction (EPC) mode under Govt. of India funding.

Abstract cost for access road Connectivity from Honnavar Port to NH-66

**General Abstract of Cost
Honnavar Port Road Connectivity-Rigid Pavement**

S No.	Bill No	Description	Amount (Rs.)
1	Bill No 1	Site Clearance and Dismantling	6,587,935.00
2	Bill No 2	Earthwork	106,283,603.00
3	Bill No 3	Granular Sub - Base and Base Course	43,726,010.00
4	Bill No 4	Cement Concrete Pavement	257,538,054.00
5	Bill No 5	Cross Drainage Works	10,706,400.00
6	Bill No 6	Bridge's & Underpass	49,660,733.00
7	Bill No 7	RE Wall	99,917,432.00
8	Bill No 8	Traffic Signs, Markings and Road Appurtenances	4,847,135.00
9	Bill No 9	Drainage and Protective Works	395,643,745.00
10	Bill No 10	Electrical Works (Highway Lighting)	15,735,000.00
11	Bill No 11	Miscellaneous Items	4,485,589.00
A)		CIVIL COST (in Rs.)	995,131,636.00
		Cost in Crores	99.51
B)		GST @ 12% on (A)	119,415,796.00
C)		Add Contingencies @ 2.8% on (A)	27,863,686.00
		TOTAL CONSTRUCTION COST (A+B+C)	1,142,411,118.00
D)		Construction Supervision Charges @ 3% on (A)	29,853,949.00
E)		Agency Charges @ 3% on (A)	29,853,949.00

*Consultancy Services for Preparation of DPR of Honnavar Port Road Connectivity
(Access road from Kasarkod Side of Honnavar Port Km. 0.000 to Km. 2+580) on NH-66*

S No.	Bill No	Description	Amount (Rs.)
		Sub Total (D+E)	59,707,898.00
F)		Maintenance Cost for 10 Years @ 5% on (A)	49,756,582.00
G)		Escalation during construction i.e. 10% on (A)	99,513,164.00
		Sub Total (F+G)	149,269,746.00
		Total (A+B+C+D+E+F+G)	1,351,388,762.00
			Say Rs. 135.14 crore
H)		Environment cost	9,951,316.00
I)		Cost for Shifting of utilities	19,902,633.00
		Total (H+I)	29,853,949.00
		TOTAL PROJECT COST (in Rs.)	1,381,242,711.00
		TOTAL PROJECT COST (in Crores)	Say Rs. 138.12 crore

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1. INTRODUCTION

1. INTRODUCTION

1.1 BACKGROUND

Karnataka is a state in the south western region of India. It was formed on 1 November 1956, with the passage of the States Reorganization Act. Originally known as the State of Mysore, it was renamed Karnataka in 1973. The metropolitan city Bangalore is capital of Karnataka.

Karnataka is bordered by the Arabian Sea to the West, Goa to the Northwest, Maharashtra to the North, Telangana to the NorthEast, Andhra Pradesh to the East, Tamil Nadu to the SouthEast, and Kerala to the south. The state covers an area of 191,976 square kilometers (74,122 sq. mi), or 5.83 percent of the total geographical area of India. It is the seventh largest Indian state by area and comprises 30 districts. It is also the 8th largest state by population. According to the 2011 census of India, the total population of Karnataka is 61,095,297 of which 30,966,657 (50.7%) are male and 30,128,640 (49.3%) are female, or 1000 males for every 973 females. This represents a 15.60% increase over the population in 2001. The population density is 319 per km² and 38.67% of the people live in urban area.

The State of Karnataka is enriched with abundant primary resources like iron ore, gold, platinum group of elements, bauxite, lime stone, refractory minerals and ornamental variety of granites. It has the second largest iron ore reserves in India and is the third largest producer of steel in India. Apart from this, in the agricultural sector, the state has the largest area under horticulture and is the third largest producer of horticulture products in the country producing about 12% fruits and 8% vegetables grown in the country. The state also leads in floriculture, coffee, spices, aromatic and medicinal crops. These resources have always been one of the key growth drivers of the economy of Karnataka.

1.1.1 Industrial Growth of Karnataka

Karnataka has always been at the front of industrial growth in India. The state is one of India's leading industrial states, contributing almost 8% to the national manufacturing income and 9.8% of India's product exports. With its inherent capabilities coupled with its enterprising citizens, Karnataka provides the ideal choice for investment opportunities. The major industries are steel and iron ore industry, power industry, cement industry, food processing units, automobile unit, information technology/biotechnology, readymade garment industry, sugar and co-gen industry and pharmaceutical industry. The industry and trade sectors are growing at a steady pace and it is likely to see more investments in the future.

While the National GDP grew at 8.7% between 2005 and 2010, the combined growth rate of the four southern states was merely 7.85%, with Karnataka leading at 8.7%, Kerala 8.1%, Andhra Pradesh and Tamil Nadu at 7.4% each (according to a McKinsey Survey Report, commissioned by Indian Industry in March 2011).

1.1.2 Present Port Policy

Karnataka is blessed with a pristine coastal stretch of over 300 km between Karwar (in the North) and Mangalore (in the South) flanked by Uttara Kannada, Udupi and Dakshina Kannada districts with favorable and strategic port location. The coast line of the state is lined with ten minor ports between Karwar and Mangalore.

The Government of Karnataka has introduced Industrial Policy 2006-11 with an aim to increase growth of GDP, strengthen manufacturing industries, increase share of exports from Karnataka, to generate additional employment of at least

10 lakh persons in the manufacturing and service sectors, reduce regional imbalance and ultimately aim at overall socio-economic development of the State.

Accordingly, the Directorate of Ports and Inland Water Transport Department, Government of Karnataka has decided to develop “Honnavar Port” at the mouth of Sharavati River in Uttara Kannada District of Karnataka. Against this background, the Honnavar Port Private Ltd. (HPPL) has subsequently proposed to undertake the feasibility study of providing road connectivity from the proposed Port to existing NH-66 and has entrusted work to M/s ICT Pvt. Ltd. accordingly.



Existing Honnavar Fishing Harbour Port & Honnavar Lighthouse



Existing Access to the Proposed Port Traversing Kasarkod Village

1.2 OBJECTIVE OF THE STUDY

The main objective of the assignment is to detailed engineering project ready for bidding of Road connectivity to Existing NH-66 from the proposed Honnavar Port.

1.3 SCOPE OF WORK

The broad scope of the study is as follows:

- a. Collection of data and other relevant reports from the relevant departments.
- b. Review of traffic data and projection of anticipated traffic from secondary sources and Honnavar Port authorities (Consultants) traffic projection.
- c. Review existing available pavement, material, geotechnical investigation data and results
- d. Preliminary Design Report
- e. Preparation of Highway Alignment Plan and Profiles and GAD's for structures,

- f. BOQ & Cost estimates.
- g. Preparation and Submission of Draft Project Report & Drawings
- h. Preparation and Submission of Detailed Design Report & Drawings
- i. Preparation of Technical Schedules and Tender Documents.

1.4 APPROACH AND METHODOLOGY

A team comprising of experts drawn from associated disciplines constituted to carry out the study in coordinated manner.

Based on the principal approval of the alignment the detailed design work is being taken up.

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2. OVERVIEW OF NHAI ORGANISATION

2. OVERVIEW OF NHA ORGANISATION

2.1 NHA ESTABLISHMENT

The National Highways Authority of India was constituted by an act of Parliament, "The National Highways Authority of India Act, 1988". It is responsible for the development, maintenance and management of National Highways entrusted to it and for matters connected or incidental thereto. The Authority was operationalized in February 1995 with the appointment of full time Chairman and other Members. Additional information about NHA activities and other details can be found on www.nhai.org. The source of information provided in this report is taken from NHA website.

2.2 NHA VISION

"To meet the nation's need for the provision and maintenance of National Highways network to global standards and to meet user's expectations in the most time bound and cost effective manner, within the strategic policy framework set by the Government of India and thus promote economic well-being and quality of life of the people."

2.3 NHA MANDATE

NHDP Programme

Primary mandate is time and cost bound implementation of National Highways Development Project (NHDP) through host of funding options including from external multilateral agencies like World Bank, Asian Development Bank, JBIC etc. Work mainly comprises of strengthening and four laning of high-density corridors around 13,146 Kms.

The components are:

- ❖ Golden Quadrilateral - 5,846 Kms connecting Delhi-Kolkata-Chennai-Mumbai
- ❖ North-South-East-West Corridor-7,300 Kms connecting Kashmir to Kanyakumari and Silchar to Porbandhar
 - Providing Road connectivity to major Ports.
 - Involving the private sector in financing the construction, maintenance and operation of National Highways and wayside amenities
 - Improvement, maintenance and augmentation of the existing National Highways network.
 - Implementation of road safety measures and environmental management.
 - Introducing Information Technology in Construction, maintenance and all operation of NHA.

Bharatmala Pariyojana

NHA has been entrusted with the development of Bharatmala Project comprising over 65000 Kms of National Highway and State roads. The objective of programme is to optimize the efficiency of freight and passenger movement across the country by bridging critical infrastructure gaps through development of Economic Corridors, Inter Corridors and Feeder Routes, National Corridors Efficiency Improvement, Border and International connectivity roads, Coastal and Port connectivity roads and Green field expressways. The stretches are to be developed to minimum 4-lane National Highway standards. The Bharat Mala Project will be implemented in two phases.

Construction of a total length of about 24800 kms is being taken up under phase-I of Bharatmala Pariyojana. In addition, Phase-I would also include about 10000 kms of residual works of NHDP programme.

2.3.1 NHAI Organization

A full time Chairman heads NHAI. Member Finance, Member Administration and Member Technical head their respective departments and report to the Chairman. A detailed organization chart of NHAI is given in **Figure 2.1**.

2.3.2 National Highway Development Program (NHDP)

The National Highways have a total length of 70,548 km to serve as the arterial network of the country. The development of National Highways is the responsibility of the Government of India. The Government of India has launched major initiatives to upgrade and strengthen National Highways through various phases of National Highways Development Project (NHDP), which are briefly as under:

- NHDP Phase I : NHDP Phase I was approved by Cabinet Committee on Economic Affairs (CCEA) in December 2000 at an estimated cost of Rs.30,000 crore comprises mostly of GQ (5,846 km) and NS-EW Corridor (981km), port connectivity (356 km) and others (315 km).
- NHDP Phase II : NHDP Phase II was approved by CCEA in December 2003 at an estimated cost of Rs.34,339 crores (2002 prices) comprises mostly NS-EW Corridor (6,161 km) and other National Highways of 486 km length, the total length being 6,647 km. The total length of Phase II is 6,647 km.
- NHDP Phase-III: Government approved on 5.3.2005 up gradation and 4 laning of 4,035 km of National Highways on BOT basis at an estimated cost of Rs. 22,207 crores (2004 prices). Government approved in April 2007 up gradation and 4 laning at 8074 km at an estimated cost of Rs. 54,339 crores.
- NHDP Phase-IV: Government approved on 31.10.2013 up gradation and 4 laning of 20,000 km of National Highways out of which 14,799 km as assigned to NHAI remaining Km with MORT&H.
- NHDP Phase V: CCEA has approved on 5.10.2006 six laning of 6,500 km of existing 4 lane highways under NHDP Phase V (on DBFO basis). Six laning of 6,500 km includes 5,700 km of GQ and other stretches.
- NHDP Phase VI: CCEA has approved on November 2006 for 1000 km of expressways at an estimated cost of Rs. 16680 crores.
- NHDP Phase VII: CCEA has approved on December 2007 for 700 km of Ring Roads, Bypasses and flyovers and selected stretches at an estimated cost of Rs. 16680 crores.

National Highway Development Project is envisaged to plan, design and construct a network of world class highways to support the economic growth of the country. Infrastructure in India has been found to be a bottleneck/ speed breaker for the trade and business, poverty alleviation and economic growth of the country. An advantage of providing well developed network of highways is as follows:

- Savings in vehicle operating costs by reduced fuel consumption and maintenance costs
- Travel time saving by faster and comfortable journeys
- Safer travel
- Benefits to trade especially in movement of perishable goods
- Reduce demographic shift to urban areas

- Poverty alleviation and all round development of areas

NHDP's focus is on developing International standard roads with facilities for uninterrupted flow of traffic with:

- Enhanced safety features
- Better Riding Surface.
- Better Road Geometry
- Better Traffic Management and Noticeable Signage.
- Divided carriageways and Service roads
- Grade separators
- Over bridges and Underpasses
- Bypasses
- Wayside amenities

2.3.3 Components of Bharatmala Pariyojana

- a. Economic Corridors:
- b. Inter-corridor and feeder roads to National and Economic Corridors:
- c. National Corridors Efficiency Improvement:
- d. Border and International connectivity roads:
- e. Coastal and Port connectivity roads
- f. Green-Field Expressways:

2.3.4 Government Policy Initiatives

Policy Initiatives for Attracting Private Investment

- Government will carry out all preparatory work including land acquisition and utility removal. Right of way (ROW) to be made available to concessionaires free from all encumbrances.
- NHAI / GOI to provide capital grant up to 40% of project cost to enhance viability on a case to case basis
- 100% tax exemption for 5 years and 30% relief for next 5 years, which may be availed of in 20 years.
- Concession period allowed up to 30 years
- Arbitration and Conciliation Act 1996 based on UNICITRAL provisions.
- In BOT projects entrepreneur are allowed to collect and retain tolls
- Duty free import of specified modern high capacity equipment for highway construction.

OVERVIEW OF NHAİ'S ORGANISATION

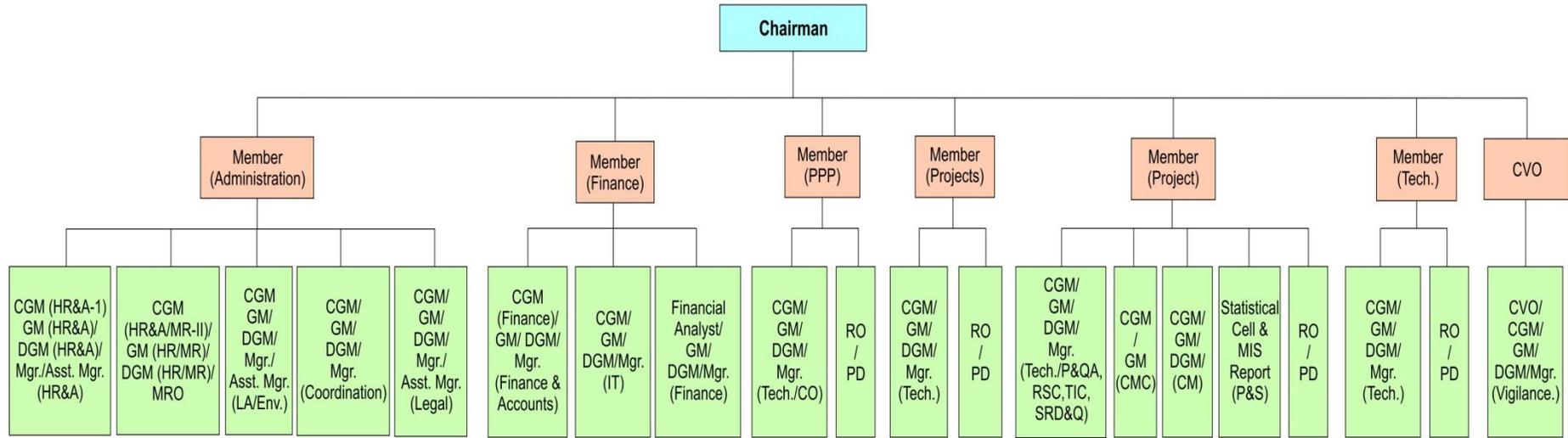


Figure 2.1: Organisation Chart of NHAİ

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3. STUDY OF PROJECT AREA

3. STUDY OF PROJECT AREA

3.1 SITE APPRECIATION

3.1.1 Introduction

In order to enhance the industrial progress of Karnataka, the State Government has introduced Industrial Policy 2006-11 with an aim to increase growth of GDP, strengthen manufacturing industries, increase share of exports from Karnataka, to generate additional employment of at least 10 lakh persons in the manufacturing and service sectors, reduce regional imbalance and ultimately aim at overall socioeconomic development of the State. It is with this background that the Directorate of Ports and Inland Water Transport Department, Government of Karnataka has decided to develop “Honnavar Port” at the mouth of Sharavati River in Uttara Kannada District of Karnataka. The concession agreement was signed between Directorate of port and HPPL on built operate and transfer basis for 30 years.

The HPPL has proposes to conduct the feasibility study of providing road connectivity from Honnavar Port to existing NH-66 and entrusted M/s ICT Pvt. Ltd. to carry out the work.

3.2 LOCATION OF THE PROJECT

The proposed project site is situated in Kasarkod village of Honnavar taluk of Uttara Kannada District in Karnataka. The location of the project with respect to the state and existing National Highway is shown as **Figure 3.1**.

3.3 ABOUT UTTARA KANNADA DISTRICT

Uttara Kannada (also known as North Canara) is a district in the State of Karnataka. It is bordered by the State of Goa and Belagavi District to the north, Dharwad District and Haveri District to the east, Shivamogga District and Udupi District to the south, and the Arabian Sea to the west. The District administrative headquarters is Karwar.

3.3.1 Geography

The main geographic feature of the district is the Western Ghats or Sahyadri range, which runs from north to south through the district. Between the Sahyadris and the sea is a narrow coastal strip, known as the Payanghat, which varies from 8 to 24 Kms (5.0 to 14.9 miles) in width. Behind the coastal plain are flat-topped hills from 60 to 100 meters in height, and behind the hills are the ridges and peaks of the Sahyadris. East of the Sahyadris is the Balaghat upland, part of the vast Deccan plateau. Moisture bearing winds come from the west, and yearly rainfall averages 3,000 mm (120 inches) on the coast, and as high as 5,000 mm (200 in) on the west-facing slopes of the Sahyadris. East of the crest is the rain shadow of the Sahyadris, which receive as little as 1,000 mm (40 inches) annually. Much of the rain falls during the June–September monsoon.

3.3.2 Climate

Summers of Uttara Kannada are extremely hot and humid. The temperature ranges from 24°C to 38°C in the months of April to June. July marks the beginning of Monsoon season in Uttara Kannada and lasts till September. Sporadic rainfalls make Uttara Kannada look very beautiful during this season. Winter approaches Uttara Kannada in December and lasts till February. The climate is pleasantly cool and the temperature ranges from 20°C to 30°C. Winter is the appropriate season for sightseeing in Uttara Kannada.



Figure 3.1: Location Plan

3.3.3 Agriculture

The chief crops of the district are rice and areca nut, along with a great diversity of other crops. Tree crops include coconut, sugarcane, cocoa, cashew, mango, banana, pineapple, garcinia and sapota; vegetables include onion, radish, cucumber, cauliflower, sweet-potato, eggplant (brinjal) and amaranth; spices include pepper, cardamom, ginger and nutmeg. Millet and cotton are grown in the drier portion of the district east of the Western Ghats. Bhatkal is famous for its imported goods markets, which existed even before India's liberalization.

3.3.4 Demographics

According to the 2011 census Uttara Kannada has a population of 1,436,847. The district has a population density of 140 inhabitants per square km (360/sq. mi). Its population growth rate over the decade 2001- 2011 was 6.15%. Uttara Kannada has a sex ratio of 975 females for every 1000 males.

3.3.5 Language and Literacy

Kannada is the predominant language of the district, followed by Konkani which is also widely spoken. Nawayath is spoken by Muslims in Bhatkal and surrounding areas. About 10.8 lakh people in the district are literate; among them about 5.8 lakh are male and about 5 lakhs are female. Literacy rate (children under 6 are excluded) of Uttara Kannada is 84%. 90% of male and 78% of female population are literate here. Overall literacy rate in the district has increased by 7%. Male literacy has gone up by 5% and female literacy rate has gone up by 10%.

3.4 HONNAVAR TALUK

The proposed Road connectivity from the Honnavar Port to NH-66 at KASARKOD is situated in the Honnavar Taluk of the district. Honnavar Taluk is one of the five coastal taluks in the district of Uttara Kannada. It is bounded by Kumta Taluk towards North, Bhatkal Taluk towards South, Siddapur Taluk towards East; and Arabian Sea on west.

3.4.1 Geography

Honnavar taluk has Arabian Sea to the west, Kumta Taluk to the North, Siddapur and Sagar taluks to the east and Bhatkal taluk to the south. The western part of the taluk towards Arabian Sea is a plain with paddy fields, coconut and areca nut plantation while the eastern part has Sahyadri hill range with thick forest.

3.4.2 Demography

As of the Census of 2011, there are 160,331 people, of which males constitute 49.9% (80,018) and females were 50.09% (80,313). A majority of the population (141,222) lives in rural villages while about 19,109 people live in semi-urban Honnavar town, which is the headquarters of the Taluk. Kannada is the local language. People also speak Konkani and Marathi.

3.4.3 Economy and Industry

Agriculture and fishery are the major contributors to the economy of Honnavar taluk. There are also a few roof tiles factories in the taluk that are on the decline. Cashew nut processing, beekeeping and coir processing are the other businesses in the taluk.

3.4.4 Kasarkod Village

Kasarkod is a village in the southern state of Karnataka, India. It is located in the Honnavar taluk of Uttara Kannada district in Karnataka. As of 2001 India census, Kasarkod has a population of 8,036 with 3,958 males and 4,078 females. The total geographical area of village is 391.23 hectares. It is situated 6km away from

sub-district headquarter Honnavar and 96km away from district headquarter Karwar. It is well connected with NH-66.



Kasarkod Village



Junction of Kasarkod Village Road & NH-66

3.4.5 Honnavar

Honnavar is a port town in the Honnavar taluk and is the taluk headquarters. The Town Panchayat has a population of 19,109 of which 9,526 are males while 9,583 are females as per report released by Census India 2011. In Honnavar Town Panchayat, Female Sex Ratio is of 1006 against state average of 973. Literacy rate of Honnavar town is 93.29 % which is higher than state average of 75.36 %. In Honnavar, male literacy is around 96.35 % while female literacy rate is 90.29 %. The Konkan Railway line passes through Honnavar, having longest bridge of 2.065 km in length, over the Sharavati River. In October 2013, Karnataka government announced plans to develop a new port at Honnavar, to be funded by a public-private partnership (PPP) model.



Sharavathi River Bridge Along Nh-66 At Honnavar



Local Fishing Harbour At Honnavar Town

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4. ENGINEERING SURVEYS AND INVESTIGATIONS

4. ENGINEERING SURVEYS AND INVESTIGATIONS

4.1 INTRODUCTION

This chapter deals with the Engineering Surveys and Investigations carried out during the course of the Feasibility Study. Alignment study, topographical surveys and other field investigations viz. road inventory, condition surveys, Inventory and Condition surveys of culverts and bridges, Topographical Soil and Material investigations and hydrological investigation study have been discussed in this chapter.

4.2 COLLECTION OF SECONDARY DATA

All relevant reports and data, development plans concerning to the proposed project and the project influence area was collected directly or with the help of the Client from concerned Departments of Government of India (GOI) and Government of Karnataka. Details of delineated Forest area were collected from Forest Department.

4.3 STUDY OF THE PROJECT ALIGNMENT

4.3.1 General

Project Highway shall include Development and Construction of Port Road Connectivity to New Honnavar Port in the State of Karnataka.

The Site of the Four-lane divided Project Highway comprises of two sections:

1. Honnavar Port Road Connectivity (New Greenfield Alignment):

Access Road from Kasarkod Side of Honnavar Port to Existing NH-66 at Km 196/0, total design length is 2.580 km. Details of section is mentioned in **Table 4.1.**

Table 4.1: Details of PORT CONNECTIVITY Road

Sl. No.	Section	State	Design Length (In km)
1.	Honnavar Port Road Connectivity (Access Road from Kasarkod side of Honnavar Port to NH-66 at Km. 196/0, Kasarkod)	Karnataka	2.580
Total Length			2.580

2. Improvements along NH-66 (From 195+000 to 197+000) for integration of Port Road with NH-66, total design length is 2.000 km. Details of section is mentioned in **Table 4.2.**

Table 4.2: Details of NH-66 ROAD

Sl. No.	Section	State	Design Length (In km)
1.	Improvements along NH-66 (From 195+000 to 197+000) for integration of Port Road with NH-66	Karnataka	2.0
Total Length			2.0

The Project Appreciation and the initial findings are outlined in the subsequent sections of the chapter:

4.4 PROJECT ROAD DESCRIPTION

During the reconnaissance survey of the project site the basic features of the project road like the terrain, land use, existing traffic, road width, road condition, type and condition of bridges and culverts, drainage etc. were deliberated.

4.4.1 Start & End Points for PORT Connecting Road

The center line of the proposed alignment shall be the fixed point for reference of design considering at the Port Compound/Boundary wall as the takeoff point @ Ch.0/0m then traverses along the shore for about 2.1kms before coming back on to the main land. After reaching the mainland from 2.1km the alignment passes through forest land for about 600m before joining/merging with the existing NH-66 at NH KM. 196/000. The Proposal from Ch.0/0 to Ch.2/100 is common for all the four alternatives proposed. Service road has also been considered from Ch.0/0 to Ch.2/100 in all the options to cater to the traffic movement of the nearby habitants along the proposed alignment. Based on the connectivity option with NH-66, the proposals undergo different alternatives for achieving traffic movement.



Proposed take off Point @ CH:0+000 near Port Boundary Wall



Existing View Towards Proposed Port from @CH 0+300



Existing view towards Proposed Port from @CH 0+500



Existing Gravel Road view from Proposed Port From @CH 0+800



Existing Gravel Road view From Proposed Port from @CH 1+200



Existing Gravel Road view towards Proposed Port from @CH 1+500



Existing Gravel Road view towards Proposed Port from @CH 1+800



Existing Gravel Road view towards Proposed Port from @CH 2+000



**Alignment @CH 2+100; Proposed Service Road Ends
(Join WITH Existing CC Road)**



Alignment @CH 2+300; reaching from shore on to the Mainland



**Alignment @CH 2+580 from LHS (merging location) on existing
NH-66 at KM. 196/0**

4.4.2 Start & End Points for NH-66

The study impacted section due to the integration of Port Road with NH-66, is studied from km. 195+000 to 197+000 of NH66, between the end of Sharavati River Bridge approach (LHS Carriageway) and Apsarakona Village at Km. 197+000.





4.5 EXISTING ROAD CONDITION

4.5.1 Port Connecting Road

The Proposed project alignment section traverses along the sea coast from the proposed Honnavar port in the North-South Direction before merging back on to the NH-66. This proposal shall be new alignment.

Table 4.3: Land Use Pattern

Sl. No.	National Highway no.	Chainage (Km)		Length (Km)	Land Use
		From	To		
1	Port Road	0+000	2+580	2.580	Barren/ Forest

4.5.2 Along NH-66

The Project section is part of existing NH-66, where construction is under progress under DBFOT scheme. This section from Km. 195+000 to 197+000 takes off from the end approach of Sharavati River Bridge travelling from Karwar-Mangalore Direction. The embankment height in this two kilometer section along the existing road is varying from 0.5m to 8m.

It has also been observed during the site visit that, approach for the existing 2L lane Bridge across River Sharavati is still to be taken up.

The brief summary of type and width of the existing shoulder has been presented in **Table 4.4**.

Table 4.4: Type and Width of Existing Shoulder

Sl. No.	Highway No.	Chainage (Km)		Length (Km)	Shoulder Type		Shoulder Width on either side (m)	
		From	To		Paved	Earthen	Paved	Earthen
1	NH-66	195+000	197+000	2.0	Yes	Yes	1.0	1.5-2.00

Lane Configuration

The Project road is having 4-Lane divided carriageway with paved and earthen shoulders throughout the length of the stretch for two kilometers.

Existing Road Geometry & Black Spots

Horizontal Curve

The Existing Horizontal alignment is satisfactory and to standards with one Horizontal Curve radius of 250m designed for a speed of 80kmph.

Vertical Profile

The vertical profile seems to be satisfactory and to standards.

The Observation on existing Horizontal & Vertical geometry is given in **Table 4.5**.

Table 4.5: Observation on Existing Horizontal & Vertical Geometry

National Highway No.	Total Length (Km)	Horizontal Geometry	Vertical Geometry	Remark
NH - 66 Km. 195+000 to Km. 197+000	2.0	The existing geometry is found satisfactory and as per IRC standard.	The existing vertical geometry is found satisfactory and as per IRC standard.	Construction work for Approach of Sharavati River(Existing Bridge) bridge for Mangalore to Karwar direction is under progress



Figure 4.1: Incomplete work at Km 195+160 (RHS)



Figure 4.2: Curve at 195+300 (R=250m).

Identification and Analysis of Black Spots

Black spots are locations which has relatively high accident potential. As per the protocol adopted by MoRT&H, a black spot is a section of road up to 500m length or a junction, witnessing repetitive road accidents over a period of two to three years.

Terrain Classification

During the initial findings it has been observed that, the Project Road falls under the category of Plain Terrain.

Land Use Pattern

The land use pattern along the Project Road is presented in the **Table 4.6**.

Table 4.6: Land Use Pattern

Sl. No.	National Highway no.	Chainage (Km)		Length (Km)	Land Use
		From	To		
1	NH-66	Km. 195+000	Km. 197+000	2.0	Existing NH ROW.

Major Built Up Sections along the Project Road

No major built up section exists along the existing alignment.

Pavement Condition and Type of Pavement of Existing Road

The pavement condition of the existing road (NH-66) is generally good/fair. This existing road section has been recently constructed under the DBFOT Project scheme for which COD is yet to be granted. Some typical pavement condition locations are indicated in Photographs below:



Figure 4.3.: Present Pavement Condition on NH-66 from Km. 195+000 to 197+000

The surface of existing road section is having bituminous pavement throughout the length of the alignment.

Junctions

The Project stretch passes through Kasarkod Village where minor junctions with side roads are witnessed.

Right of Way (ROW)

The Right of Way (ROW) pillars are not marked on the ground. However, Consultants team has acquired the existing ROW at site during Inventory and Condition Survey and from NHA and Ports Authority and the same is presented in **Table 4.7**.

Table 4.7: Details of Existing ROW along NH-66

Sl. No.	Existing Chainage (km)		Existing ROW (In meters)
	From	To	
1	195+000	195+530	60
2	195+530	195+610	45

Sl. No.	Existing Chainage (km)		Existing ROW (In meters)
	From	To	
3	195+610	195+700	52
4	195+700	195+880	55
5	195+880	197+000	52.5

Permission for ROW for Port Connectivity has been granted by the Ports Authority for the proposed alignment. Details of the same are enclosed in the corresponding letters from the Ports Authority to the M/S HPCPL.

Major Utility Crossings

There are some utilities lines such as Electrical along the project road.

4.6 EXISTING SAFETY REGULATIONS

There are currently some safety regulations in place on the existing road NH-66, which are enumerated below:

a) Safety Signs

4.7 CULVERT INVENTORY

The culvert condition and inventory surveys were carried out to find the number, type, size and condition of the Culvert. The summary of the culverts along NH-66, by type is given in **Table 4.8**.

Table 4.8: Type, Size and Number of Culverts

Sl. No.	Chainage	Size of Culvert	Type of Culvert	Remarks
1	195+540	0.9	Hume Pipe Culvert	No Headwall on One side

These culverts are presented in photographs below:



Figure 4.4.: Present Condition of Pipe Culvert at 195+540.

4.8 TOPOGRAPHICAL SURVEY

Detailed methodology and technical specifications for conducting topographical survey for the proposed alignment of the project road including establishment of survey control network and subsequent processes is elaborated in the following paragraphs.

4.3.1 Objective

The basic objective of topographical survey is to collect positions of all ground features including cross sections of the proposed alignment in the form of x, y and z coordinates with respect to a defined reference system of coordinates to develop accurate digital terrain model of the project corridor for preparation of strip plan and subsequent road design and cost estimation.



4.9 SCOPE OF WORK

This report covers Topographical Surveys component of the assignment. Broad outline of the scope of services are:

- Establishment of survey control network along the project corridor
- Connect all Survey control points to National GTS Bench Marks by Digital Levels
- Detailed Topographical Survey including cross sections of project road corridor.

4.10 DETAILED TOPOGRAPHICAL SURVEY

Based on the x, y & z coordinates of survey control points determined, the detailed topographical survey is carried out to pick up x, y and z coordinates of all natural and manmade topographical features falling within the proposed corridor using Total Stations having automatic data recording devices with appropriate feature codes attached to each point. Route corridor of 150m having 75m on either side of the proposed alignment of the project corridor has been surveyed. Adequate numbers of spot height points have been picked up within the specified corridor in the form of cross sections at very close interval of 20m/10m to generate accurate Digital Terrain Model of the surveyed corridor.

All man-made and natural topographical features are surveyed, including:

- Longitudinal and transverse drains/ ditches

- Water sources, Channels etc.
- Electric and telephone lines
- Huts, Buildings, fences, hand pumps, bore wells, wells
- All Buildings are collected with suitable codes depending upon its classification like residential, commercial, educational, health Center, industrial, religious etc.
- All trees with girth greater than 0.3 meter.

At locations, where realignment is merging/ diverting from/ to NH-66, survey has been extended longitudinally to 200m along the road to allow for the geometric improvements of the proposed major junctions at start & end of Project Road.

Longitudinal and Cross-Sections of the existing road

Levels for longitudinal section of the proposed alignment are picked up at an interval of 10 or 20 meter or less at change of slope. Cross sections are also taken at regular interval of 20 meter or less at change of slope along the alignment extending about 50m on both sides.

4.10.1 Data Processing

All field survey data recorded by total stations is downloaded regularly on to the field computer and processed with Survey Control Centre (SCC), the data processing software, to form proper connectivity of linear features based on the feature code and sequence of points of each object collected on ground. These line features also serve as break lines while developing DEM of the corridor. The x, y and z coordinates of all ground features collected by the Total Station including spot heights were suitably processed to generate digital map and Digital Elevation Model of the project road corridor. The hard copy output of the survey drawing on suitable scale is taken for physical verification on the ground to check correctness of ground features and other relevant information. After complete examination, the data is supplied to design team for further processing for design and drawings.

4.10.2 Feature Codes

Unique feature codes are used for all ground features while picking up the x, y and z coordinates by Total Station during field survey. These feature codes are used for proper identification and presentation of ground objects by suitable symbols on maps.

4.10.3 Quality Control

Adequate quality assurance measures are incorporated in the methodology, which were followed at every stage. The key surveyor assigned for the total survey work carried out constant supervision of day-to-day survey activities. The senior surveyor examines survey observations while downloading the data from Total Station and ensures that adequate quality control measures are followed. The final processed survey data is plotted on paper sheets and is physically verified by the senior surveyor by ground visits. Digital terrain models are generated at the site office to ensure quality output.

4.11 BRIDGES / STRUCTURES

During Inventory Condition Survey of Bridge/ Structures, only one minor bridge has been observed by team along the Project Road.

4.11.1 Field Surveys

The following field surveys were carried out in accordance with the provisions of

IRC: SP: 35-1990:

- Inventory of existing bridges / structures
- Visual condition survey of existing bridges / structures

4.11.2 Inventory of Existing Bridges

The inventory of all bridges / structures having lengths more than 6.0 m were carried out. These bridges / structures comprise the following:-

Major bridges (Length > 60m)	-	NIL
Minor bridges (Length < 60m & > 6m)	-	1 no.
Total	-	1 no.

Details of Existing Bridges

Salient features of existing bridge such as name, location, span arrangement, type of superstructures, type of substructures / foundation and other details are given in the **Figure 4.5** & in **Table 4.9** below.



Figure 4.5.: Present Condition of Existing Bridge on NH-66 at 195+916

Table 4.9: List of Minor Bridges

Sl. No.	Chainage (Km)	Nature of Stream	Type of Structure	Span Arrangement	Year of Construction
1	195+916	Local drain for Balancing	Single span of RCC Slab	1x 6.5m	2017-2018

4.11.3 Carriageway Width

The carriageway width of existing 4- Lane Bridge including median

4.11.4 Overall Deck Width

Overall deck width of bridge of the bridge is 23.5m including median.

4.11.5 General Condition of Existing Bridges

Following distresses have generally been noticed:-

- Excessive vegetation growth around the bridge and in stream bed.
- Damage to slope pitching and bed protection
- Blockage of waterway by debris

4.12 SOIL AND MATERIAL INVESTIGATION

4.12.1 Introduction

The materials investigation was undertaken with the following objectives:

- (a) Locate, explore and evaluate the suitability of locally available sources of borrow soil/ natural gravel, riverbed material for use in the embankment and subgrade.
- (b) Identify existing sources of rock aggregates/ quarries within short haulage distance possible from the project road for sub base / base course, cement concrete works and bituminous works.
- (c) Identify potential sources of sand, water and other manufactured materials such as cement, steel etc.
- (d) Identify existing sources of Fly ash and Pond ash material if available in the vicinity of project area for use in ground improvement, pavement layers and concrete works.
- (e) Establish quality and quantity of various construction materials which mainly includes borrow soil, sand, aggregates & water and recommend their use on the basis of techno-economic principles.
- (f) Identify sources of manufacturing materials like bitumen, steel, cement etc.
- (g) Perform relevant laboratory tests to determine engineering properties of the materials from (a) to (e) above, and evaluate the suitability of each material for use in the construction of the project road.

The details of items (a) to (g) are as follows.

4.12.2 Inspection and Exploration of Soil Borrow Areas

The objective of borrow area investigation was to identify suitable borrow sources (in terms of quantity and quality) in the near vicinity of the project road for embankment fill & sub-grade.

Several enquiries were made with the local inhabitants and material supply contractors who have relevant knowledge about the sources due to their direct or indirect involvement in construction activities in the project vicinity area. A total of Two (2) borrow soils sources including excavated soil from adjacent cut sections have been located, inspected and sampled.

The exploration is conducted in each identified borrow area by excavating test pits measuring 1 m x 1m within selected borrow areas The test pit was excavated to a depth of 1 to 2 m so that top soil and vegetation layer shall not be collected for sampling. Soils samples were collected from each borrow area for laboratory testing.

A summary description of the borrow areas indicating their location presented in the Material report in **Volume-II**.

4.13 HYDROLOGICAL INVESTIGATION

4.13.1 Overview of the Existing Condition of the Study Area

A reconnaissance survey of the site was carried in order to investigate the study area in terms of geological formation, rainfall and runoff potential and the hydraulic performance of the existing bridges / cross drainage structures to pass flood runoff of the past events. The purpose of the visit was to collect information regarding:

- General idea about the topography of the project road, river/ stream network and their catchments.
- Drainage characteristics of the area.
- Information regarding the performance of the existing embankment, culverts and bridges during recent flood event and identification of vulnerable stretches of road sections.
- Information regarding HFL of rivers/streams from local enquiry or visible water mark on the bridge piers, abutments, etc.
- General condition of the existing structures of the project road.
- Condition of the existing roadside drains, culverts, sag points in existing road profile and waterlogged areas.
- Hydraulic data of canal, crossing the project roads.
- HTL/ LTL data

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5. TRAFFIC PROJECTION

5. TRAFFIC PROJECTION

5.1 GENERAL

Since there is no past traffic data for the proposed access Road from Honnavar Port as it is newly proposed, the expected traffic data for the next five years was obtained from the Port authority.

Based on the traffic study carried out for Honnavar Port by Avalon Global Research in July 2018, the following data required for traffic study of the Sagarmala/Bharatmala Pariyojana-Proposal for Four Lane Road Connecting from National Highway-66 to Kasarkod Side of Honnavar Port is taken into consideration.

IRC pavement method (IRC:58-2015) requires various traffic input parameters to evaluate design traffic for the design of rigid pavements. The input parameters and design traffic estimation is discussed below.

5.2 VOLUME OF TRAFFIC

The major cargo expected to be handled at Honnavar port as projected in traffic study carried out by the port authority is as under

Sl. No.	Cargo	Quantity in MTPA
1	Coal	2.80
2	Iron Ore	1.00
3	Fertilizer	0.20
4	Liquid Cargo	0.15
5	Steel Product	0.40
6	Granite	0.15
7	Sugar	0.29
	Total	4.99

5.3 DESIGN PERIOD

Four-Laning Manual through (IRC SP 84-2019) specifies the minimum design period of 15 years or the operation period, whichever is more. The rigid pavement is designed for 30 years as per clause 5.4.2, para (i) of IRC SP 84-2019.

5.4 ANTICIPATED ROAD TRAFFIC

It is anticipated that total yearly forecast for Honnavar Port is around 4.99 Million Tonne per year. The traffic forecast in terms of PCU's as provided by Honnavar port (P) Ltd. which is around 4722 PCU's in the year 2020 and by mid of year 2023 it is expected to reach more than 10,000 PCU's and by year 2024 it is forecasted to reach 14486 PCU's with an increase of Cargo Quantity to 12.58 MTPA.

Hence considering the above capacity, lane configuration of four lane with Paved Shoulders (4L+PS), has been proposed. Since majority of the traffic movement is bound towards north, the options to cater the traffic movements accordingly have been studied and deliberated in the subsequent chapter.

In this Project, Honnavar Port Ltd. has provided the Annual production of Non-coking coal, Coking coal, Steel, Fertilizer and Granite given in **Annexure 5.1**. Around 300 day of annual production takes place and it is transported by 2 axle & Multi axle trucks. Due to this, Overloading of these vehicle are considered. So the standard axle is taken as 20% more of the standard legal axle. It can be seen from the **Table 5.1** Detail of Annual production of coal, Steel & Granite provided by Honnavar port Ltd., Annual Daily traffic and PCU.

Table 5.1: Annual coal Production, Annual Average Daily Traffic (AADT)

Sl. No.	Year	Annual Production of Coal	Per Day production of Coal	No. of truck Movement on road		PCU (Vehicle		Total PCU
				2 Axle	MAV	UP	Down	
1	2020	4100000	13666.7	564	149	2361	2361	4722
2	2021	7280000	24266.7	1001	264	4192	4192	8383
3	2022	7580000	25266.7	1042	275	4364	4364	8729
4	2023	7780000	25933.3	1070	282	4479	4479	8959
5	2024	12580000	41933.3	1730	456	7243	7243	14486
6	2025	12680000	42266.7	1744	460	7301	7301	14601
7	2026	12680000	42266.7	1744	460	7301	7301	14601
8	2027	12680000	42266.7	1744	460	7301	7301	14601
9	2028	12680000	42266.7	1744	460	7301	7301	14601
10	2029	12680000	42266.7	1744	460	7301	7301	14601
11	2030	17920000	59733.3	2464	650	10318	10318	20635
12	2031	17920000	59733.3	2464	650	10318	10318	20635
13	2032	17920000	59733.3	2464	650	10318	10318	20635
14	2033	17920000	59733.3	2464	650	10318	10318	20635
15	2034	17920000	59733.3	2464	650	10318	10318	20635
16	2035	18970000	63233.3	2609	688	10922	10922	21844
17	2036	18970000	63233.3	2609	688	10922	10922	21844
18	2037	18970000	63233.3	2609	688	10922	10922	21844
19	2038	18970000	63233.3	2609	688	10922	10922	21844
20	2039	18970000	63233.3	2609	688	10922	10922	21844
21	2040	21820000	72733.3	3001	791	12563	12563	25126
22	2041	21820000	72733.3	3001	791	12563	12563	25126
23	2042	21820000	72733.3	3001	791	12563	12563	25126
24	2043	21820000	72733.3	3001	791	12563	12563	25126

Sl. No.	Year	Annual Production of Coal	Per Day production of Coal	No. of truck Movement on road		PCU (Vehicle)		Total PCU
				2 Axle	MAV	UP	Down	
25	2044	21820000	72733.3	3001	791	12563	12563	25126
26	2045	22870000	76233.3	3145	830	13168	13168	26335
27	2046	22870000	76233.3	3145	830	13168	13168	26335
28	2047	22870000	76233.3	3145	830	13168	13168	26335
29	2048	22870000	76233.3	3145	830	13168	13168	26335
30	2049	22870000	76233.3	3145	830	13168	13168	26335
31	2050	22870000	76233.3	3145	830	13168	13168	26335

5.4.1 Identification of Homogeneous Sections

The entire project road stretch from Honnavar port to NH-66 (Km 195/650) has been considered as one single homogenous section based on the traffic volume as shown in **Table 5.2** gives the details of the homogeneous section considered along the project road.

Table 5.2: Homogeneous Sections of Project Highway

Sl. No.	Homogeneous Section (HS)	Existing Chainage (km)		Length (km)	Traffic Volume AADT (PCU)
		From	To		
1	HS- I	0+000	2+580	2.580	21844

5.4.2 Traffic Growth Rates

As per the data provided by Honnavar Port Pvt Ltd., as weighted average growth rate was worked out for the project road stretch and influence area, depending upon the share of traffic contributed by each power plant production, and its respective mode-wise elasticity values obtained through regression analysis and are presented in **Annexure 5.2**.

5.5 ESTIMATION OF DESIGN TRAFFIC IN MSA

Axle Load Survey

The axle load survey provides data to enable the assessment of the damaging effect of the heavily loaded commercial vehicles. Axle load survey was not possible at site so we have considered the standard axle load for two axle & MAV with considering overloading of vehicle from **Table 5.3**.

Vehicle Damage Factor (VDF)

The vehicle damage factor (VDF) is a multiplier to convert the number of commercial vehicles of different axle loads and axle configuration to the number of standard axle load repetitions. It is defined as equivalent number of standard axles for each category of commercial vehicle. The VDF varies with the vehicle axle configuration, axle loading, terrain, type of road and from region to region. The VDF is arrived at from axle load surveys on typical road sections so as to cover various influencing factors, such as traffic mix in terms of different

commercial vehicles (goods vehicles), commodities carried, time of the year, terrain, road conditions and degree of enforcement. VDF is determined as the average value for each category of the commercial vehicle.

The axle load equivalency factors recommended in the AASHTO guide are given in **IRC: 37-2018**.

For design purposes, the variation in axle loads is determined by converting the actual axle loads to "Equivalent Standard Axle Load (ESAL)". An equivalency is a convenient means of indexing the wide spectrum of actual loads to one common scale or value. The Equivalency Factor to convert the actual axle loads to Equivalent Standard Axle Load is determined by the following relationship:

$$\text{Equivalency Factor} = \left(\frac{\text{Specific axle group load}}{\text{Standard axle group load}} \right)^4$$

Recommended values for Standard Axle/Standard Axle Group load are given in **Table 5.3**.

**Table 5.3: Recommended Values
of Standard Axle / Standard Axle Group Load**

Axle Type	Standard Axle Load (Tonnes)
Single Wheel – Single Axle	6
Dual Wheel – Single Axle	10.2
Dual Wheel – Tandem Axles	19
Dual Wheel-Tridem Axles	24

The above relationship to determine the equivalency factor is sometimes referred to as "Fourth Power Law" of damaging effect of axle load. Thus, this relationship states that the damaging effect of an axle load increases as a fourth power of the ratio of the weight of an axle to the weight of the standard axle. In order to convert the observed axle loads during surveys into ESAL; each axle of the vehicle is multiplied by equivalency factor (EF) of that axle. All EF per axle of the vehicle is then summed up to obtain the cumulative value of the EF of all vehicles in a category, which is finally divided by the number of vehicles in that class of vehicle for obtaining the average value of the VDF (vehicle damage factor) of that class of vehicle.

The values of VDF were calculated by dividing the sum of all the Equivalency Factor by the number of Samples. But, it was observed that the Equivalency Factor of empty vehicle had got substantial influence on the VDF values. Therefore, an attempt was made to give weightage to the empty and loaded vehicle based on their presence on the highway according to their proportion.

To calculate the cumulative number of standard axles to be catered for in the design in terms of MSA, vehicle category-wise VDF is required. In order to arrive at category wise VDF values for various types of vehicles, a weighted average of different axle configuration for a particular category has been calculated. Axle load survey was not done on this section so we are using IRC 37:2018. Clause 4.4.6 the VDF value are given in the **Table 5.4**.

Table 5.4: Vehicle Damage Factor (VDF)

Traffic volume in term of commercial vehicle per day	Terrian	
	Plain/ Rolling	Hilly
0-150	1.5	0.5
150-1500	3.5	1.5
1500-Above	4.5	2.5

Axle Load Spectrum

Unlike flexible pavement, the design of rigid pavement is governed by single, tandem and Tridem axle loads, their repetition, tyre pressure and lateral placement characteristics of commercial vehicles. Since axle load spectrum was not possible, the gross weight of vehicle with overloading of vehicle has been considered.

Front axle of the commercial vehicles is not considered in the rigid pavement design, as it carries much lower load and causes lesser flexural stress in the concrete pavements. Only the rear axle (single, tandem and tridem) is considered for the design of rigid pavements.

Lane distribution factor considered for calculating design traffic is 0.75 of the commercial vehicles in each direction (three lane dual carriageway) as per IRC 37-2018.

From base year traffic volumes (vehicle category-wise) in terms of AADT, vehicle damage factors, lane distribution factors, traffic growth rates and design period, the cumulative number of repetitions of equivalent standard axles during the design period of 15 years is computed from the following formula:

$$C = 365 \times A \frac{(1+r)^n - 1}{r} \times \text{VDF} \times \text{LDF}$$

C = Cumulative number of axles during the design period for a given category of commercial vehicle.

A = Opening year AADT (two directional)

r = Annual rate of growth of a given commercial vehicle

n = Analysis period in years

VDF= Vehicle damage factor

LDF = Lane distribution factor

Design MSA: The design traffic estimation calculations are presented in **Table 5.5** and the summary is shown in **Table 5.6**.

Table 5.5: Design Traffic Estimation UP, Down Direction- Honnavar Port Project

	Year	2 Axle Truck	MAV	Total No. Of Commercial Vehicle	Design Traffic (MSA)	Cumulative Design Traffic (MSA)
Base Year	2019					
Construction Years	2020	564	149	713		

*Consultancy Services for Preparation of DPR of Honnavar Port Road Connectivity
(Access road from Kasarkod Side of Honnavar Port Km. 0.000 to Km. 2+650) on NH-66*

	Year	2 Axle Truck	MAV	Total No. Of Commercial Vehicle	Design Traffic (MSA)	Cumulative Design Traffic (MSA)
Year of Opening	2021	1001	264	1265	1.2	1.2
	2022	1042	275	1317	1.3	2.5
	2023	1070	282	1352	1.3	3.8
	2024	1730	456	2186	2.7	6.5
	2025	1744	460	2204	2.7	9.2
	2026	1744	460	2204	2.7	11.9
	2027	1744	460	2204	2.7	14.6
	2028	1744	460	2204	2.7	17.3
	2029	1744	460	2204	2.7	20.0
10th Year	2030	2464	650	3114	3.8	23.9
	2031	2464	650	3114	3.8	27.7
	2032	2464	650	3114	3.8	31.5
	2033	2464	650	3114	3.8	35.4
	2034	2464	650	3114	3.8	39.2
15th Year	2035	2609	688	3297	4.1	43.3
	2036	2609	688	3297	4	47.3
	2037	2609	688	3297	4.1	51.4
	2038	2609	688	3297	4.1	55.5
	2039	2609	688	3297	4.1	59.5
	2040	3001	791	3792	4.7	64.2
	2041	3001	791	3792	4.7	68.9
	2042	3001	791	3792	4.7	73.5
	2043	3001	791	3792	4.7	78.2
	2044	3001	791	3792	4.7	82.9
	2045	3145	829	3974	4.9	87.8
	2046	3145	829	3974	4.9	92.7
	2047	3145	829	3974	4.9	97.6
	2048	3145	829	3974	4.9	102.5
	2049	3145	829	3974	4.9	107.4
	2050	3145	829	3974	4.9	112.3

Table 5.6: Estimation of Design MSA for Main Carriageway

Traffic Homogeneous Section	Proposed carriageway configuration	Direction	Design Traffic (MSA)		Adopted for Design (MSA)	
			10 years	15 years	10 years	15 years
HS - 1	4L+PS	Up	24	44	24	45
		Down	24	44		

Design Traffic of Service Road & Slip Road

AS per IRC:84-2019, the design traffic for Service Road/Slip Road is considered as 10 MSA.

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6. ALIGNMENT DESIGN PROPOSAL

6. ALIGNMENT DESIGN PROPOSAL

6.1 STUDY OF VARIOUS ALTERNATIVES

Four alternative alignments were studied by the Consultant for connectivity from proposed Honnavar Port to NH-66 Road. Main thrust of exploring the alternatives was focused on catering for the traffic movement to and from the Port without any hindrance to the existing NH-66 through traffic; which has been recently four laned. Further these alternative options were described at Feasibility stage in detail of which Alternative option-2 has been found to be feasible as the best option. In broad with mainly, with respect to ease of operation and work involved.

- a) Alternative 1: Port Road Connectivity with NH-66 (At Grade Junction proposal with Median Opening)
- b) Alternative 2: Port Road Connectivity with NH-66 (with One Side Flyover proposal for Traffic from Mangalore to Karwar)
- c) Alternative 3: Port Road Connectivity with NH-66 (with Elevated U-Turn facility for Traffic from Karwar to Honnavar Port)
- d) Alternative 4: Port Road Connectivity with NH-66 (with Conflict Free Traffic Movement to & from Honnavar Port)

6.2 DEVELOPMENT PROPOSAL

Alternative Option 2: Port Road Connectivity with NH-66 (with One Side Flyover proposal for Traffic from Mangalore to Karwar direction)

In this proposal a single side flyover is being proposed for traffic plying on NH-66 along Mangalore to Karwar. Accordingly At Grade connectivity has been considered for catering all other traffic movements. In addition the proposal has 3no's CD box culverts, one number LVUP, One number Box Culvert for pedestrian movement. Since this proposal being economical and safe from safety aspects, Alternative option-2 was the recommended proposal. **The layout Plan is as Annexure 6.1**

The center line of the proposed alignment is fixed point for reference of design considering at the Port Compound/Boundary wall as the takeoff point @ Ch.0+000m then traverses along the shore for about 2.1kms before coming back on to the main land. After reaching the mainland from 2.1km the alignment passes through forest land for about 600m before joining/merging with the existing NH-66 at NH KM. 196+000. The Proposal from Ch.0+000 to Ch.2+100 is common for all the four alternatives proposed. Service road has also been considered from Ch. 0+400 to Ch. 2+100 in all the options to cater to the traffic movement of the nearby habitants along the proposed alignment. Based on the connectivity option with NH-66, the proposals undergo different alternatives for achieving traffic movement.

Due to the integration of the proposed Port Road with the existing NH-66, all the improvements and junction development are been taken account off. All the details are provided at Vol-3 Drawings folder.

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7. PAVEMENT DESIGN

7. PAVEMENT DESIGN

7.1 GENERAL

This Chapter deals with New Pavement design and Service Road.

7.2 DESIGN STANDARDS

The following IRC publications have been used for the design of pavement.

- IRC: 58 – 2015, “Guidelines for the Design of Plain Jointed Rigid Pavements for Highways, 4th Revision”.
- IRC: SP-84:2019 - Manual of Specifications & Standards for four Laning of Highways

7.3 DESIGN

The detailed design of pavements involves the following cases:

- (i) Design of the pavements for new construction which are likely to be taken up in the areas of New alignment.
- (ii) Pavement Design of service roads

7.4 DESIGN OF NEW CONSTRUCTION OF MAIN CARRIAGEWAY

a. Rigid Pavement for New Construction

A typical pavement composition for rigid pavement includes layers of (a) pavement quality concrete (PQC) (b) dry lean concrete (DLC) sub base (c) drainage layer and (d) granular sub-base as separation layer. This pavement shall be constructed over prepared roadbed soil / natural subgrade or selected soil subgrade from borrow sources. pavement structural design of rigid pavement for a design period of 30 years has been carried out as per IRC 58-2015. The design is based on cumulative fatigue damage analysis under expected combination of load stresses & thermal stresses as per IRC: 58-2015. The temperature zone(s) applicable to various links of the project roads and effective modulus of subgrade reaction, k-effective, on the top of 150 mm thick DLC layer are given below:

Link	Temperature Zone as per IRC:58-2015	Subgrade CBR (Soaked)	E-Value of Subgrade (MPa/m)	Proposed Thickness of DLC (mm)	Effective Modulus of Subgrade Reaction on the Top of the DLC (Mpa/m)
Karnataka Portion :HS-1	IV	8	50.3	150	285

The following combinations of pavements were considered for the analysis of bottom-up and top-down cracking.

- Pavement with tied concrete shoulder
- Pavement with dowel bars across transverse joints (spacing of joint =4.5m)

The results of rigid pavement design as per IRC 58-2015 which includes results of cumulative fatigue damage (CFD) analysis for bottom up cracking (BUC), top down cracking (TDC), Design of dowel bar and tie bar are presented in **Annexure 7.1**. Based on the results of analysis, the recommended pavement structure, spacing & length of dowel bar and tie bar are presented in **Table 7.1**

Table 7.1: Pavement Structure for New Construction

Layer Type	Layer Thickness (mm)
Design Subgrade CBR (%)	8
Pavement Quality Concrete (PQC)	340
Dry Lean concrete (DLC)	150
Granular Subbase	225
Subgrade	500
Dowel Bar and Tie Bar Dimensions	
Dowel Bar	
Diameter	36
Spacing	300
Length	450
Tie Bar (Deformed)	
Diameter	12
Spacing	510
Length	640

For GSB layer, Grading V as per clause 401.2.1 and Table 400-1 of MORTH shall be used. A separation membrane of 125 micron polyethylene is interposed between PQC and DLC to reduce inter-layer friction.

7.5 PAVEMENT DESIGN OF SERVICE ROADS/SLIP ROADS

Two type of pavement are considered for service road. The design of pavement is presented below:

(a) Rigid Pavement

The rigid pavement is designed taking design CBR of 8% (As per IRC 58:2015 Minimum CBR of subgrade 8%) and design traffic of 10 million repetitions as per IRC: SP-84-2014. Width of service road considered is 5.5m. There is no movement of commercial vehicle along the service road. Axle load of 80KN for the design of Rigid Pavement and compositions are presented in **Table 7.2** and the detailed design is attached in **Annexure 7.2**.

Table 7.2: Rigid Pavement Structure for Service Roads/Slip Roads

PQC	DLC	GSB	Dowel Bar			Tie Bar		
			Dia.	Length	Spacing	Dia.	Length	Spacing
230	150	200	32	450	300	12	640	800

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8. ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

8. ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

Environmental clearance is not required for the project as it does not attract any provisions of EIA Notification, 2006 and its subsequent amendments.

However, environmental clearance for the proposed port development has been obtained On 21 Sept 2012 and its validity has been extended for a further period of three years from the date of expiry of the EC validity (i.e., upto 20 Sept 2022), wherein the **proposed port connectivity is an integral part of the development proposal**.

Forest Clearance: The proposed project involves diversion of notified forest land for non-forestry use, and therefore requires Forest Clearance under the provisions under section 2 of Forest Conservation Act, 1980, which has already been applied with Forest Department. Tree Felling Permission is required to be obtained for felling of trees in both forest and non-forest land.

A summary of various statutory clearances required for the project road is presented in **Table 8.1**.

Table 8.1: Statutory Clearances required for the Project Road

Type of Clearance	Name of the Authority	When Required
Forest Clearance	Department of Forest, GoK	Before Construction
Tree Felling Permission	Department of Forest, GoK	Before Construction

The contractor, before starting the construction work has to obtain the following Clearances / NOCs as applicable, listed in Table 2 for operating equipment and carrying out construction work.

Table 8.2: Clearances Required to be obtained by the Contractor

Sl. No.	Construction Activity & Type of Clearance Required	Statutory Authority	Statute Under which Clearance is Required
1.	Consent for Establishment of Hot Mix Plant, WMM Plant, Stone Crushers and Batching Plant	<ul style="list-style-type: none"> ▪ Karnataka State Pollution Control Board 	<ul style="list-style-type: none"> ▪ Air (Prevention and Control of Pollution) Act, 1981 ▪ Water (Prevention and Control of Pollution) Act, 1974 ▪ The Noise Pollution (Regulation and Control) Rules, 2000
2.	Consent for Operation of Hot Mix Plant, WMM Plant, Stone Crushers and Batching Plant		
3.	Permission for withdrawal of groundwater for construction	<ul style="list-style-type: none"> ▪ Central Ground Water Authority ▪ State Ground Water Board 	<ul style="list-style-type: none"> ▪ Environment (Protection) Act, 1986 ▪ Ground Water Rules, 2002
4.	Permission for extraction of sand from river bed	<ul style="list-style-type: none"> ▪ Department of Mines & Geology, Government of Karnataka ▪ District Level 	<ul style="list-style-type: none"> ▪ Environment (Protection) Act, 1986
			<ul style="list-style-type: none"> ▪ Environment (Protection) Act, 1986

Sl. No.	Construction Activity & Type of Clearance Required	Statutory Authority	Statute Under which Clearance is Required
		Environment Impact Assessment ▪ Authority (DEIAA)	
5.	New Quarry and its operation	<ul style="list-style-type: none"> ▪ Department of Mines & Geology, Government of Karnataka ▪ Karnataka State Pollution Control Board 	<ul style="list-style-type: none"> ▪ Environment (Protection) Act, 1986 ▪ Karnataka Minor Mineral Concession Rules, 1994 ▪ The Mines Act. 1952 ▪ Mines and Minerals (Development and Regulation) Amendment Act, 2015 ▪ The Explosive Act, 1984 ▪ Air (Prevention and Control of Pollution) Act, 1981 ▪ Water (Prevention and Control of Pollution) Act, 1974
6.	Opening of New Borrow Areas / Quarry	<ul style="list-style-type: none"> ▪ MoEF&CC / SEIAA / DEIAA ▪ Karnataka State Pollution Control Board ▪ District Collector 	<ul style="list-style-type: none"> ▪ Environment (Protection) Act, 1986 ▪ Air (Prevention and Control of Pollution) Act, 1981 ▪ Minor Mineral and Concession Rules, 2015
7.	Location and layout of workers camp, & equipment and storage yards	<ul style="list-style-type: none"> ▪ Karnataka State Pollution Control Board 	<ul style="list-style-type: none"> ▪ Environment (Protection) Act, 1986; Manufacturing, Storage and Import of Hazardous Chemicals Rules, 1989
8.	Discharges from labour camp	<ul style="list-style-type: none"> ▪ Karnataka State Pollution Control Board 	<ul style="list-style-type: none"> ▪ Water (Prevention and Control of Pollution) Act, 1974
9.	Storage, handling and transport of hazardous materials	<ul style="list-style-type: none"> ▪ Karnataka State Pollution Control Board 	<ul style="list-style-type: none"> ▪ Hazardous and Other Waste (Management and Trans-boundary Movement) Rules, 2016 ▪ Manufacturing, Storage and Import of Hazardous Chemicals Rules, 1989
10.	Disposal of Bituminous Wastes	<ul style="list-style-type: none"> ▪ Intimate local civic body to use local solid waste disposal site 	<ul style="list-style-type: none"> ▪ Hazardous and Other Waste (Management and Trans-boundary Movement) Rules, 2016

Sl. No.	Construction Activity & Type of Clearance Required	Statutory Authority	Statute Under which Clearance is Required
11.	PUC Certificate for all construction vehicles and all machineries	<ul style="list-style-type: none"> ▪ Transport Department of Govt. of Karnataka 	<ul style="list-style-type: none"> ▪ The Motor Vehicle Act 1988 ▪ The Motor Vehicles (Amendment) Bill, 2015 ▪ The Central Motor Vehicles Rules, 1989
12.	Installation of DG Set (Consent to Establish)	<ul style="list-style-type: none"> ▪ Karnataka State Pollution Control Board 	<ul style="list-style-type: none"> ▪ Air (Prevention and Control of Pollution) Act, 1981 ▪ The Noise Pollution (Regulation and Control) Rules, 2000
13.	Operation of DG Set (Consent to Operate)		
14.	Engagement of Labour - Labour License	<ul style="list-style-type: none"> ▪ Labour Commissioner (Ministry of Labour and Employment) 	<ul style="list-style-type: none"> ▪ The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 ▪ Contract Labour (Regulation and Abolition) Act 1970 along with Rules, 1971
15.	Engagement of Labour - Social Security - Labour Welfare - Wages	<ul style="list-style-type: none"> ▪ Labour Commissioner (Ministry of Labour and Employment) 	<ul style="list-style-type: none"> ▪ The Employees' Provident Fund & Miscellaneous Provisions (Amendment) Act, 1996 ▪ The Personal Injuries (Compensation Insurance) Act, 1963 ▪ The Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979 ▪ Equal Remuneration Act, 1976 ▪ The Payment of Wages (Amendment) Act, 2005 ▪ The Minimum Wages Act, 1948 ▪ The Minimum Wages (Central) Rules, 1950

Social Issues:

There are no settlements on the project road and land along NH-66 is already in possession with NHAI and ROW for Port Road has been granted by the Ports Authority. All the CRZ and Environmental Clearances obtained have been enclosed as **Annexure 8.1**

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9. COST ESTIMATE

9. COST ESTIMATE

9.1 GENERAL

The detailed cost estimates for various components of are worked out based on the latest SOR rates of respective items of NH Dharwad Circle. The details are provided at Volume-6. The Abstract of estimated cost prepared separately for construction of Port connectivity with NH-66 is as under

General Abstract of Cost

Honnavar Port Road Connectivity-Rigid Pavement

S No.	Bill No	Description	Amount (Rs.)
1	Bill No 1	Site Clearance and Dismantling	6,587,935.00
2	Bill No 2	Earthwork	106,283,603.00
3	Bill No 3	Granular Sub - Base and Base Course	43,726,010.00
4	Bill No 4	Cement Concrete Pavement	257,538,054.00
5	Bill No 5	Cross Drainage Works	10,706,400.00
6	Bill No 6	Bridge's & Underpass	49,660,733.00
7	Bill No 7	RE Wall	99,917,432.00
8	Bill No 8	Traffic Signs, Markings and Road Appurtenances	4,847,135.00
9	Bill No 9	Drainage and Protective Works	395,643,745.00
10	Bill No 10	Electrical Works (Highway Lighting)	15,735,000.00
11	Bill No 11	Miscellaneous Items	4,485,589.00
A)		CIVIL COST (in Rs.)	995,131,636.00
		Cost in Crores	99.51
B)		GST @ 12% on (A)	119,415,796.00
C)		Add Contingencies @ 2.8% on (A)	27,863,686.00
		TOTAL CONSTRUCTION COST (A+B+C)	1,142,411,118.00
D)		Construction Supervision Charges @ 3% on (A)	29,853,949.00
E)		Agency Charges @ 3% on (A)	29,853,949.00
		Sub Total (D+E)	59,707,898.00
F)		Maintenance Cost for 10 Years @ 5% on (A)	49,756,582.00
G)		Escalation during construction i.e. 10% on (A)	99,513,164.00

S No.	Bill No	Description	Amount (Rs.)
		Sub Total (F+G)	149,269,746.00
		Total (A+B+C+D+E+F+G)	1,351,388,762.00
			Say Rs. 135.14 crore
H)		Environment cost	9,951,316.00
I)		Cost for Shifting of utilities	19,902,633.00
		Total (H+I)	29,853,949.00
		TOTAL PROJECT COST (in Rs.)	1,381,242,711.00
		TOTAL PROJECT COST (in Crores)	Say Rs. 138.12 crore

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10. RECOMMENDATIONS

10. RECOMMENDATIONS

10.1 GENERAL

Based on the initial studies, identifications of various alternatives and in discussions with HPPL officials, the outcome of the study is narrated as under

- Four Alternative options were examined to decide the most viable option for proposed port road connectivity with NH-66
- Upon detailed examination it was found that Alternative Option-2 with One side flyover along NH-66 (Mangalore-Karwar direction) is the best feasible option. This option is recommended for detailed study and is recommended for accord of approval.
- This proposal needs minimal Land Acquisition compared to other options 3 & 4.
- Option-1 being economical in cost but from safety aspects is not recommended.
- With this recommended option the existing Slab Culvert at the Junction of Port Road and NH-66 needs to be dismantled and a new culvert of the same size nearby has to be accommodated.
- Existing Bus Bay relocations shall be considered accordingly due to the effect of improvements with this proposals
- CRZ, Environmental clearances have been granted from the concerned departments and Forest clearances have been initiated.
- Due care to be taken for Protection works for the Port Road on the sea side at the execution stage.
- The Consultant has proposed Rigid Pavement considering the Port Traffic, Coastal weather conditions which are subjected to heavy rainfalls, maintenance etc.

Since, the project road is a part of the existing Concession with **IWTPL (IRB West-Coast Toll way Private Limited-Concessionaire)**, Consultants recommends Coordination and permission for integrating the proposal with the ongoing DBFOT project of IRB is required.

10.2 TYPICAL CROSS SECTION

Typical Cross sections proposed for the project roads are annexed as **Annexure 10.1**

10.3 PROTECTION WORK

Since majority of the road alignment for runs along the sea shore, provision for bank protection is made by providing PVC sheet piles. The detailed design and methodology is presented in the Volume –II: Design report under Shore protection.

• • •

Annexures

Annexure 5.1

Year 2025					
Non-coking Coal-Honnavar Traffic Forecast for Power Plant	Coking Coal-Honnavar Traffic Forecast	Steel -Honnavar Port Traffic Forecast	Fertilizers-Honnavar Port Traffic Forecast	Granite -Honnavar Port Traffic Forecast	Total Yearly Forecast traffic for Honnavar Port
3.3 Million tonne per year	2.6 Million tonne per year	5.1 Million tonne per year	1.3 Million tonne per year	0.38 Million tonne per year	12.68 Million tonne per year
Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	

Year 2030					
Non-coking Coal-Honnavar Traffic Forecast for Power Plant	Coking Coal-Honnavar Traffic Forecast	Steel -Honnavar Port Traffic Forecast	Fertilizers-Honnavar Port Traffic Forecast	Granite -Honnavar Port Traffic Forecast	Total Yearly Forecast traffic for Honnavar Port
3.3 Million tonne per year	5.9 Million tonne per year	6.9 Million tonne per year	1.4 Million tonne per year	0.42 Million tonne per year	17.92 Million tonne per year
Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	

Year 2035					
Non-coking Coal-Honnavar Traffic Forecast for Power Plant	Coking Coal-Honnavar Traffic Forecast	Steel -Honnavar Port Traffic Forecast	Fertilizers-Honnavar Port Traffic Forecast	Granite -Honnavar Port Traffic Forecast	Total Yearly Forecast traffic for Honnavar Port
3.2 Million tonne per year	6.8 Million tonne per year	6.9 Million tonne per year	1.6 Million tonne per year	0.47 Million tonne per year	18.97 Million tonne per year
Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	

Year 2040					
Non-coking Coal-Honnavar Traffic Forecast for Power Plant	Coking Coal-Honnavar Traffic Forecast	Steel -Honnavar Port Traffic Forecast	Fertilizers-Honnavar Port Traffic Forecast	Granite -Honnavar Port Traffic Forecast	Total Yearly Forecast traffic for Honnavar Port
3.1 Million tonne per year	7.5 Million tonne per year	8.9 Million tonne per year	1.6 Million tonne per year	0.47 Million tonne per year	21.82 Million tonne per year
Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	

Year 2045					
Non-coking Coal-Honnavar Traffic Forecast for Power Plant	Coking Coal-Honnavar Traffic Forecast	Steel -Honnavar Port Traffic Forecast	Fertilizers-Honnavar Port Traffic Forecast	Granite -Honnavar Port Traffic Forecast	Total Yearly Forecast traffic for Honnavar Port
3.1 Million tonne per year	8.3 Million tonne per year	8.9 Million tonne per year	2 Million tonne per year	0.57 Million tonne per year	22.87 Million tonne per year
Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	Raw Data given in PPT provide by Honnavar Port (P) Ltd.	

Annexure 5.2

Non-Coking Coal Imports at the Thermal Power Plants												
Name	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY30	FY35	FY40	FY45
Bellary Thermal Power Station	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3				
Raichur Thermal Power Station	2	2	2	2	2	2	2	2				
Yermarus Thermal Power Station	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8				
Udupi Power Corporation Limited	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8				
Kudgi Super Thermal Power Station	0	0	0	0	0	0	0	0				
JSW Energy Ltd	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5				
Edlapur Thermal Power Station(KPCL)	0	0	0	0	0	0	0	0	0.9			
Kalaburagi Thermal Power Station(KPCL)	0	0	0	0	0	0	0	0	1.5			
Total	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	15.8	15.4	15.1	15.1

Non-Coking Coal-Honnavar Traffic Forecast for Power Plants												
	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY30	FY35	FY40	FY45
Realistic		0.68	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.6	2.6
Optimistic		0.82	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.1	3.1
Pessimistic		0.54	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1

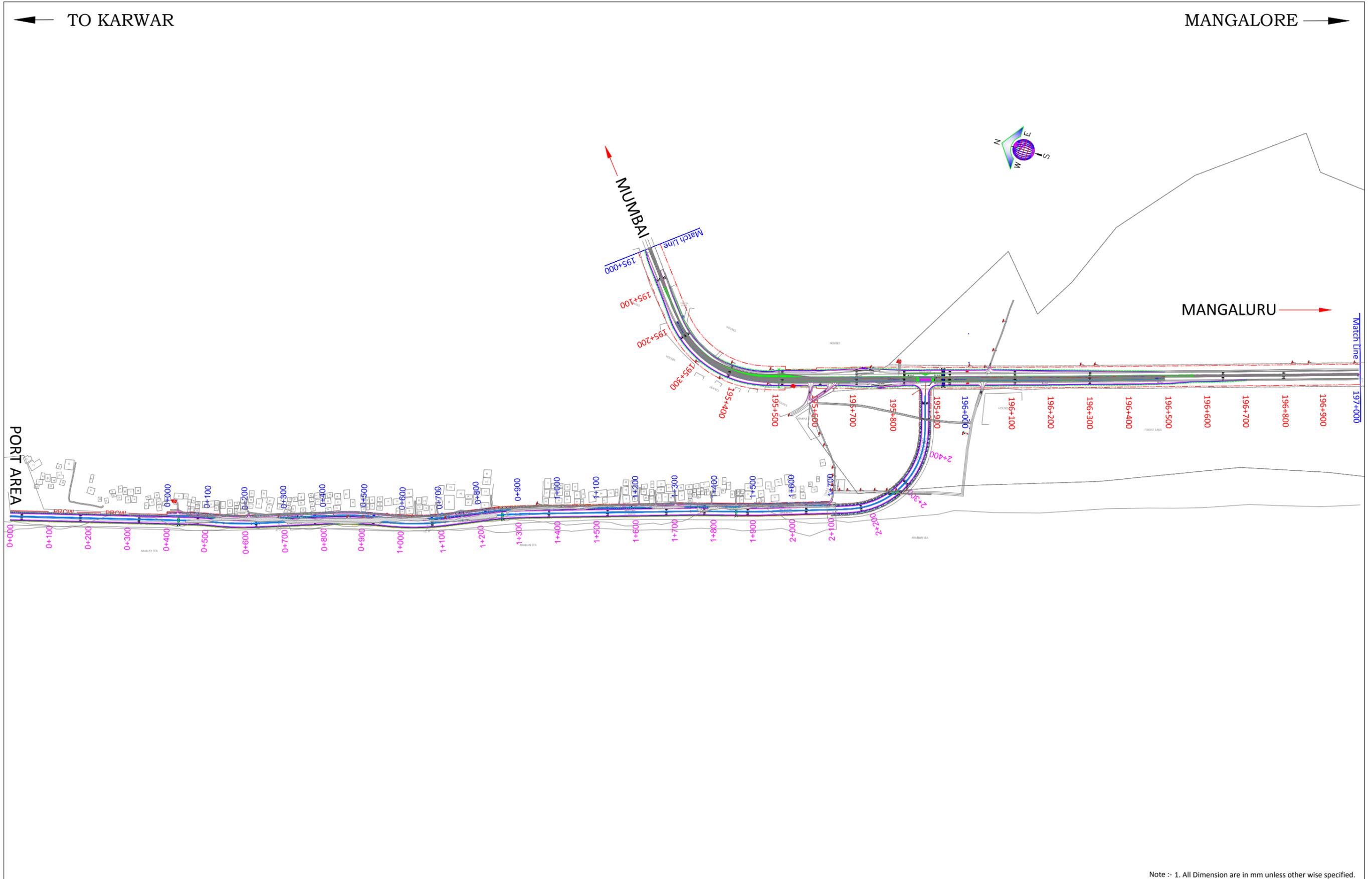
Steel Traffic Forecast for Honnavar Port(Mn T)													
		FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY30	FY35	FY40	FY45
Hinterland Steel Traffic	Realistic		2.2	2.5	2.8	3.1	3.4	3.8	7.1	7.1	9.8	9.8	12.8
	Optimistic		2.3	2.6	2.9	3.3	3.7	4.3	10.2	10.2	13.8	13.8	17.8
	Pessimistic		2.2	2.4	2.6	2.9	3.1	3.4	4.3	4.3	6.1	6.1	8.1
Honnavar Port Traffic	Realistic					1.2	1.4	1.5	2.8	2.8	3.9	3.9	5.1
	Optimistic					1.7	1.9	2.1	5.1	5.1	6.9	6.9	8.9
	Pessimistic					0.9	0.9	1	1.3	1.3	1.8	1.8	2.4

Coking Coal-Honnavar Traffic Forecast												
	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY30	FY35	FY40	FY45
Realistic		0.2	0.7	0.7	0.7	0.7	2.2	2.2	5.1	6	6.6	7.3
Optimistic		0.2	0.8	0.8	0.8	0.8	2.6	2.6	5.9	6.8	7.5	8.3
Pessimistic		0.1	0.6	0.6	0.6	0.6	1.9	1.9	4.4	5.1	5.6	6.2

Fertilizer Traffic Forecast at Honnavar Port(Mn T)												
	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY30	FY35	FY40	FY45
Hinterland Potential	2.6	2.7	2.7	2.8	2.9	3	3.1	3.2	3.6	4.1	4.5	4.9
Realistic Case				0.9	1	1	1	1	1.2	0.6	0.75	0.8
Optimistic Case				1.1	1.2	1.2	1.2	1.3	1.4	1.6	1.8	2
Pessimistic Case												

Granite-Traffic Forecast for Honnavar Port												
	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY30	FY35	FY40	FY45
Realistic				0.34	0.34	0.34	0.34	0.34	0.37	0.41	0.45	0.5
Optimistic				0.38	0.38	0.38	0.38	0.38	0.42	0.47	0.52	0.57
Pessimistic				0.29	0.29	0.29	0.29	0.29	0.32	0.35	0.39	0.43

Annexure 6



Note :- 1. All Dimension are in mm unless other wise specified.

Authority :- NATIONAL HIGHWAYS AUTHORITY OF INDIA	Client :- HONNAVAR PORT PVT. LTD.	Project Title :- Consultancy Service for Preparation of DPR of Honnavar Port Road Connectivity Access road from Kasarkod Side of Honnavar Port Km. 0+000 to Km. 2+580 on NH-66	Drawing Name :- KEY PLAN	Intercontinental Consultants & Technocrats Pvt Ltd, A-8, Green Park, New Delhi - 110016 Ph : 4086-3000, Fax 2685-5252	RO	September, 2019	Initial Drawing	Checked by
					Revisions	Date	Description	Rev. RO
					Revisions			
					DRAWING No: NHAI/NH-66/HONNAVAR PORT/ KEY PLAN/01			
					Scale = 1 : 6000 (on A2 Sheet)			
					Sheet No.- 01 of 01			
					Prepared by Shawal Sharma	Designed by Kiran. V	Checked by Madhusudhan Rao	Approved by Manoj Kumar

Annexure 7.1

Route: Honnavar Port (UP)**Applicable Chainage :-Homogenous section -1****Estimation of Design Traffic for Rigid Pavement**

Using traffic growth rate of 5 % as per IRC:SP:84-2014

$$N = 365 \times A \frac{(1+r)^n - 1}{r} \times \text{LDF}$$

30 Year Traffic for CC Pavement (2020-2049)

[A] Cumulative no.of commercial vehicles, predominant-direction (50 % of 2-directional ADT)	16,789,818
[B] No. of axle sets per vehicle	2.01
[C] No. of axles in predominant direction = [A] x [B]	33,713,954
[D] Design traffic (25% of 1D traffic for multilanes, i.e., 0.25 x [C])	8,428,488
[E] Night time (12-h) design axle repetitions (specify % night traffic)	3,828,529
[F] Day time (12-h) design axle repetitions (specify % day traffic)	4,599,959
[G] Day time (6-h) design axle repetitions for BUC	2,263,229
[H] Night time (6-hour) axle repetitions	1,829,707
[I] Percentage of vehicles w/ spacing <4.5m between the steering axle and 1st axle of the rear axle unit	0.5
[J] Night time (6-h) design axle repetitions for TDC	914,853

Axle Category	Proportion of the axle category Day time	Categorywise repetitions for BUC	Proportion of the axle category Night time	Categorywise repetitions for TDC
Front (steering) single	0.50	1,131,615	0.50	452,898
Rear single	0.35	792,130	0.35	317,028
Rear Tandem	0.15	331,940	0.15	135,869
Rear Tridem	0.00	7,544	0.01	9,058
	1.00	2,263,229	1.00	914,853

Route: Honnavar Port (UP)	Applicable Chainage :-Homogenous section -1
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Top-Down Cracking Fatigue Analysis for Night-time (6 hr) Traffic & - VE Temperature Differential

Trial thickness, h (in m)	0.33	Doweled Joints	Y
Effective modulus k, MPa/m	286	Concrete shoulder	Y
Max Daytime Temperature gradient, DT	21	Night time Temperature Differ, DT	15.5
Radius of Rel-Stiffness, l (in m)	0.75	Night time 6-h axle load repetn	914,853
Design axle load repetitions for TDC	914,853	Spacing of contraction warping joint, m	4.5
Beta Factor, b	0.66	E- Concrete, MPa	30,000
Flexural strength of concrete (28 days), MPa	4.5	μ- Concrete Poisson's ratio	0.15

(i) Rear Single Axles

 Proportion of rear single axles 0.35 Note- 2.77kg/cm³ = 27.2 MPa/m

Axle Repetitions - Rear Single Axles Only						317,028	
Axle Load Group, kN	Mid Point of Axle Load Group, kN	Frequency (as % of single axles)	Stress MPa from charts	Stress Ratio	Expected Repetitions	Fatigue Analysis	
						Allowable Repetitions	Fatigue Percent
1	2	3	0.5	5	6	7	8
205 215	210	0.0%	2.421	0.54	0	166,533	0.000
195 205	200	0.0%	2.381	0.53	0	229,127	0.000
185 195	190	0.0%	2.341	0.52	0	326,334	0.000
175 185	180	0.0%	2.301	0.51	0	485,184	0.000
165 175	170	100.0%	2.261	0.50	317,028	762,043	0.416
155 165	160	0.0%	2.221	0.49	0	1,286,914	0.000
145 155	150	0.0%	2.181	0.48	0	2,402,754	0.000
135 145	140	0.0%	2.141	0.48	0	2,402,754	0.000
125 135	130	0.0%	2.102	0.47	0	5,202,474	0.000
115 125	120	0.0%	2.062	0.46	0	14,335,236	0.000
105 115	110	0.0%	2.022	0.45	0	62,790,761	0.000
95 105	100	0.0%	1.982	0.44	0	unlimited	-
85 95	90	0.0%	1.942	0.43	0	unlimited	-
0 85	43	0.0%	1.752	0.39	0	unlimited	-
Sum		100.0%			317,028		0.42

(ii) Rear Tandem Axles

Proportion of rear tandem axles 0.15

Axle Repetitions - Rear Tandem Axles Only						135869	
Axle Load Group, kN	Mid Point of Axle Load Group, kN	Frequency (as % of Tandem axles)	Stress MPa from charts	Stress Ratio	Expected Repetitions	Fatigue Analysis	
						Allowable Repetitions	Fatigue Percent
1	2	3	4	5	6	7	8
380 400	390	0.0%	2.361	0.520	0	326,334	0.000
360 380	370	0.0%	2.321	0.520	0	326,334	0.000
340 360	350	0.0%	2.281	0.510	0	485,184	0.000
320 340	330	0.0%	2.241	0.500	0	762,043	0.000
300 320	310	0.0%	2.201	0.490	0	1,286,914	0.000
280 300	290	0.0%	2.161	0.480	0	2,402,754	0.000
260 280	270	100.0%	2.121	0.470	135,869	5,202,474	0.026
240 260	250	0.0%	2.082	0.460	0	14,335,236	0.000
220 240	230	0.0%	2.042	0.450	0	62,790,761	0.000
200 220	210	0.0%	2.002	0.440	0	unlimited	-
180 200	190	0.0%	1.962	0.440	0	unlimited	-
0 180	90	0.0%	1.762	0.390	0	unlimited	-
Sum		100.0%			135,869		0.03

(iii) Rear Tridem Axles

Proportion of Rear Tridem Axles

0.01

Axle Repetitions - Rear Tridem Axles Only

9058

Axle Load Group, kN	Mid Point of Axle Load Group, kN	Frequency (as % of Tridem axles)	Stress Mpa from charts	Stress Ratio	Expected Repetitions	Fatigue Analysis		
						Allowable Repetitions	Fatigue Percent	
1	2	3	4	5	6	7	8	
530	560	545	0.0%	2.308	0.510	0	485,184	0.000
500	530	515	0.0%	2.268	0.500	0	762,043	0.000
470	500	485	0.0%	2.228	0.500	0	762,043	0.000
440	470	455	0.0%	2.188	0.490	0	1,286,914	0.000
410	440	425	0.0%	2.148	0.480	0	2,402,754	0.000
380	410	395	0.0%	2.108	0.470	0	5,202,474	0.000
350	380	365	0.0%	2.068	0.460	0	14,335,236	0.000
320	350	335	0.0%	2.028	0.450	0	62,790,761	0.000
290	320	305	0.0%	1.988	0.440	0	unlimited	-
260	290	275	100.0%	1.948	0.430	9,058	unlimited	-
230	260	245	0.0%	1.908	0.420	0	unlimited	-
0	230	115	0.0%	1.735	0.390	0	unlimited	-
Sum		100.0%				9,058		0.00
						Cumulative fatigue life consumed	0.44	

Conclusion:- Design is safe under top-down cracking

Route: Honnavar Port (UP)

Applicable Chainage :-Homogenous section -1

Design of Dowel Bars (IRC 58-2015 Method)

A. Calculation for the radius of relative stiffness, I

Slab thickness, h	0.33 m
Modulus of elasticity of concrete, E	3.00E+04 MPa
Poisson ratio, μ	0.15
Effective modulus of subgrade reaction, k	286
$I = [Eh^3 / \{12 (1-\mu^2) k\}]^{1/4}$	752.92 mm

B. Calculation of the number of effective dowels

Trial spacing between two dowel bars, s	300 mm
Number of dowels participating in load transfer = $1 + l/s$ (1 no. as 1 st dowel directly under load)	3

{Assuming that load transferred by the first dowel bar (directly under the wheel) is P_t , and dowel bar at a distance of I from the first (radius of relative stiffness) to transfer zero load, and intermediate dowels to transfer loads proportionately in linear fashion

Dowel bar position	Distance from 1st	Effective dowel
1st dowel directly under load (100 % of applied load transfer)	0	1
2nd (@ distance of s from the 1st)	300	0.602
3rd (@ distance of 2s from the 1st)	600	0.203 0.500
4th (@ distance of 3s from the 1st)	900	0.000 (zero load transfer)
5th (@ distance of 4s from the 1st)		
6th (@ distance of 5s from the 1st)		
Number of effective dowels that carries edge load	$\Sigma =$	1.805

C. Calculation of P_t , i.e., load carried by outer dowel bar

Max ^m single axle wheel load (consider dual wheel as single wheel)	85 kN
Tied concrete shoulder	YES
Wheel load to be considered for dowel design	59.5 (new provision as per IRC:58-2015)
Load transfer (%) - Maximum is 50 %	50
$P_{group} = \text{Design wheel load} \times \text{Load transfer}$	29.75 kN
Thus, Load carried by the outer dowel bar, $P_t = P_{group} / \text{no. of effective dowels carrying edge load}$	16 kN

D. Calculation of bearing stress and bearing strength

Input variables governing bearing stress	Contraction Joint	Expansion Joint
Diameter of dowel bar, d (mm)	36	36
Joint width, z (mm)	5	20
Characteristic compressive strength, f_{ck} (Mpa)	40	40
Moment of inertia of dowel bar, $I = \pi d^4 / 64$ (cm ⁴)	82448.0	82448.0
k = modulus of dowel-concrete interface (MPa/m)	415000	415000
E = modulus of elasticity of steel dowel, MPa	2.E+05	2.E+05

Output

Relative stiffness of dowel bar embedded in concrete, $\beta = (Kd/4EI)^{1/4}$		
Per unit length (L ⁻¹)	0.022	0.022
Bearing stress caused by dowel bar = $P_t \times k \times (2+\beta z) / (4\beta^3 EI)$	21.07	24.34
Bearing strength of concrete, Fb (ksc)	27.5	27.5

$F_b = (10.16-d) * f_{ck} / 9.525$; (After ACI committee-225)

Conclusion:- Design acceptable as bearing stress is less than bearing strength

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Route: Honnavar Port (UP)

Applicable Chainage :-Homogenous section -1

Design of Tie Bars (IRC 58-2015 Method)**A. Design Parameters**

Type of bar	Plain	Deformed
Diameter of tie bar, d (mm)	12	12
Lane width, b (m)	3.5	3.5
Slab thickness, h (mm)	330	330
Concrete unit weight, kN/m ³	24	24
W = unit wt.x h (kN/m ²)	7.92	7.92

B. Spacing of Tie Bars

Weight of slab per m length, N = b x W (kN/m)	27.72	27.72
Coefficient of friction between slab and subbase, m	1.5	1.5
Frictional force, F=mN = b x f x W (kN/m)	41.58	41.58
Allowable tensile stress in reinforcement, S ; MPa	125	200
X-sectional area of reinforcement reqd, A_s (mm ² /m)	332.64	207.9
X-sectional area of single reinforcement bar, A , mm ²	113.112	0.5
Number of tie bars required per m length	2.941	415.8
Spacing required (based on 1 m length), mm	340	2

C. Length of Tie Bar

Pull-out resistance, R = bond strength x perimeter x length		
Perimeter of a single tie bar, P = pd (mm)	37.704	37.704
Bond strength, B , MPa	1.75	2.46

As per IRC 58-2002, $P \times B \times L = 2 \times S \times A$

Thus, length L = $[2 \times S \times A] / [P \times B]$ (mm)	428.6	2.2
Design length after increasing calculated length by 100 mm for loss of bond and 50 mm for tolerance in placement (mm)	579	152

Output and Recommendations

Type of tie-bar recommended	Deformed
Diameter of tie bars, mm	12
Spacing of tie bars, mm	510
Length of tie bars,mm	640

Conclusion:- Change spacing and length of tie bar and recalculate

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Annexure 7.2

Route: Honnavar Port (UP)	Applicable Chainage :-Homogenous section -1
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Calculation of Pavement Thickness (IRC 58-2015 Method)**Bottom-Up Cracking Fatigue Analysis for Day-time (6 hr) Traffic & +VE Temperature Differential**

Triaxial thickness, h (in m)	0.31	Doweled Joints	Y
Effective modulus k, MPa/m	286	Concrete shoulder	Y
Temperature gradient, ΔT	21.00	Design period	30 Yrs
Radius of Rel-Stiffness, l (in m)	0.72	Design traffic for BUC fatigue analysis	500,000
Conc. Unit weight, KN/m ³	24	E- Concrete, MPa	30000
Flexural strength of concrete (28 days), MPa	4.5	μ- Concrete Poisson's ratio	0.15

(i) Rear Single Axles

Proportion of rear single axles		0.35		Note- 2.77kg/cm ³ = 27.2 MPa/m			
Axle Repetitions - Rear Single Axles Only		175,000					
Axle Load Group, kN	Mid Point of Axle Load Group, kN	Frequency (as % of single axles)	Stress MPa from charts	Stress Ratio	Expected Repetitions	Fatigue Analysis	
						Allowable Repetitions	Fatigue
1	2	3	4	5	6	7	8
185	195	190	2.441	0.54	0	166,533	0.00
175	185	180	2.376	0.53	0	229,127	0.00
165	175	170	2.310	0.51	175,000	485,184	0.36
155	165	160	2.244	0.50	0	762,043	0.00
145	155	150	2.178	0.48	0	2,402,754	0.00
135	145	140	2.112	0.47	0	5,202,474	0.00
125	135	130	2.046	0.45	0	62,790,761	0.00
115	125	120	1.980	0.44	0	unlimited	-
105	115	110	1.914	0.43	0	unlimited	-
95	105	100	1.848	0.41	0	unlimited	-
85	95	90	1.782	0.40	0	unlimited	-
0	85	42.50	1.47	0.33	0	unlimited	-
Sum		100.00%			175,000		0.36

(ii) Rear Tandem Axles

Proportion of Rear Tandem axles		0.15					
Axle Repetitions - Rear Single Axles Only		73,333					
Axle Load Group, kN	Mid Point of Axle Load Group, kN	Frequency (as % of single axles)	Stress MPa from charts	Stress Ratio	Expected Repetitions	Fatigue Analysis	
						Allowable Repetitions	Fatigue
1	2	3	4	5	6	7	8
400	420	410	2.131	0.47	0	5,202,474	0.000
380	400	390	2.072	0.46	0	14,335,236	0.000
360	380	370	2.012	0.45	0	62,790,761	0.000
340	360	350	1.953	0.43	0	unlimited	-
320	340	330	1.893	0.42	0	unlimited	-
300	320	310	1.834	0.41	0	unlimited	-
280	300	290	1.775	0.39	0	unlimited	-
260	280	270	1.715	0.38	73,333	unlimited	-
240	260	250	1.656	0.37	0	unlimited	-
220	240	230	1.596	0.35	0	unlimited	-
200	220	210	1.537	0.34	0	unlimited	-
180	200	190	1.478	0.33	0	unlimited	-
0	180	90.00	1.18	0.26	0	unlimited	-
Sum		100.00%			73,333		0.00
						Cumulative fatigue life	0.36

Conclusion:- Design is Safe under Bottom-up Cracking

CFD (BUC) + CFD (TDC) =	0.95	Design Safe	As per Clause 6.3.4.1 of IRC 58-2015
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Route: Honnavar Port (UP)

Applicable Chainage :-Homogenous section -1**Top-Down Cracking Fatigue Analysis for Night-time (6 hr) Traffic & - VE Temperature Differential**

Trial thickness, h (in m)	0.31	Doweled Joints	Y
Effective modulus k, MPa/m	286	Concrete shoulder	Y
Max Daytime Temperature gradient, DT	21	Night time Temperature Differ, DT	15.5
Radius of Rel-Stiffness, l (in m)	0.72	Night time 6-h axle load repetn	500,000
Design axle load repetitions for TDC	500,000	Spacing of contraction warping joint, m	4.5
Beta Factor, b	0.66	E- Concrete, MPa	30,000
Flexural strength of concrete (28 days), MPa	4.5	μ- Concrete Poisson's ratio	0.15

(i) Rear Single AxlesProportion of rear single axles 0.35 Note- 2.77kg/cm³ = 27.2 MPa/m

Axle Repetitions - Rear Single Axles Only						173,267	
Axle Load Group, kN	Mid Point of Axle Load Group, kN	Frequency (as % of single axles)	Stress MPa from charts	Stress Ratio	Expected Repetitions	Fatigue Analysis	
						Allowable Repetitions	Fatigue Percent
1	2	3	4	5	6	7	8
205 215	210	0.0%	2.529	0.56	0	94,065	0.000
195 205	200	0.0%	2.484	0.55	0	124,526	0.000
185 195	190	0.0%	2.439	0.54	0	166,533	0.000
175 185	180	0.0%	2.394	0.53	0	229,127	0.000
165 175	170	100.0%	2.348	0.52	173,267	326,334	0.531
155 165	160	0.0%	2.303	0.51	0	485,184	0.000
145 155	150	0.0%	2.258	0.50	0	762,043	0.000
135 145	140	0.0%	2.212	0.49	0	1,286,914	0.000
125 135	130	0.0%	2.167	0.48	0	2,402,754	0.000
115 125	120	0.0%	2.122	0.47	0	5,202,474	0.000
105 115	110	0.0%	2.077	0.46	0	14,335,236	0.000
95 105	100	0.0%	2.031	0.45	0	62,790,761	0.000
85 95	90	0.0%	1.986	0.44	0	unlimited	-
0 85	43	0.0%	1.771	0.39	0	unlimited	-
Sum		100.0%			173,267		0.53

(ii) Rear Tandem Axles

Proportion of rear tandem axles 0.15

Axle Repetitions - Rear Tandem Axles Only						74257	
Axle Load Group, kN	Mid Point of Axle Load Group, kN	Frequency (as % of Tandem axles)	Stress MPa from charts	Stress Ratio	Expected Repetitions	Fatigue Analysis	
						Allowable Repetitions	Fatigue Percent
1	2	3	4	5	6	7	8
380 400	390	0.0%	2.461	0.550	0	124,526	0.000
360 380	370	0.0%	2.416	0.540	0	166,533	0.000
340 360	350	0.0%	2.371	0.530	0	229,127	0.000
320 340	330	0.0%	2.326	0.520	0	326,334	0.000
300 320	310	0.0%	2.280	0.510	0	485,184	0.000
280 300	290	0.0%	2.235	0.500	0	762,043	0.000
260 280	270	100.0%	2.190	0.490	74,257	1,286,914	0.058
240 260	250	0.0%	2.145	0.480	0	2,402,754	0.000
220 240	230	0.0%	2.099	0.470	0	5,202,474	0.000
200 220	210	0.0%	2.054	0.460	0	14,335,236	0.000
180 200	190	0.0%	2.009	0.450	0	62,790,761	0.000
0 180	90	0.0%	1.782	0.400	0	unlimited	-
Sum		100.0%			74,257		0.06

(iii) **Rear Tridem Axles**

Proportion of Rear Tridem Axles

0.01

Axle Repetitions - Rear Tridem Axles Only

4950

Axle Load Group, kN	Mid Point of Axle Load Group, kN	Frequency (as % of Tridem axles)	Stress Mpa from charts	Stress Ratio	Expected Repetitions	Fatigue Analysis	
						Allowable Repetitions	Fatigue Percent
1	2	3	4	5	6	7	8
530	560	545	2.401	0.530	0	229,127	0.000
500	530	515	2.356	0.520	0	326,334	0.000
470	500	485	2.311	0.510	0	485,184	0.000
440	470	455	2.265	0.500	0	762,043	0.000
410	440	425	2.220	0.490	0	1,286,914	0.000
380	410	395	2.175	0.480	0	2,402,754	0.000
350	380	365	2.129	0.470	0	5,202,474	0.000
320	350	335	2.084	0.460	0	14,335,236	0.000
290	320	305	2.039	0.450	0	62,790,761	0.000
260	290	275	1.994	0.440	4,950	unlimited	-
230	260	245	1.948	0.430	0	unlimited	-
0	230	115	1.752	0.390	0	unlimited	-
	Sum	100.0%			4,950		0.00

Cumulative fatigue life consumed 0.59

Conclusion:- Design is safe under top-down cracking

Route: Honnavar Port (UP)

Applicable Chainage :-Homogenous section -1**Design of Dowel Bars (IRC 58-2015 Method)****A. Calculation for the radius of relative stiffness, l**

Slab thickness, h	0.31 m
Modulus of elasticity of concrete, E	3.00E+04 MPa
Poisson ratio, μ	0.15
Effective modulus of subgrade reaction, k	286
$l = [Eh^3 / \{12 (1-\mu^2) k\}]^{1/4}$	718.43 mm

B. Calculation of the number of effective dowels

Trial spacing between two dowel bars, s	300 mm
Number of dowels participating in load transfer = $1 + l/s$ (1 no. as 1 st dowel directly under load)	3

{Assuming that load transferred by the first dowel bar (directly under the wheel) is P_t , and dowel bar at a distance of l from the first (radius of relative stiffness) to transfer zero load, and intermediate dowels to transfer loads proportionately in linear fashion

Dowel bar position	Distance from 1st	Effective dowel
1st dowel directly under load (100 % of applied load transfer)	0	1
2nd (@ distance of s from the 1st)	300	0.582
3rd (@ distance of 2s from the 1st)	600	0.165
4th (@ distance of 3s from the 1st)	900	0.000 (zero load transfer)
5th (@ distance of 4s from the 1st)		
6th (@ distance of 5s from the 1st)		
Number of effective dowels that carries edge load	$\Sigma =$	1.747

C. Calculation of P_t , i.e., load carried by outer dowel bar

Max ^m single axle wheel load (consider dual wheel as single wheel)	85 kN
Tied concrete shoulder	YES
Wheel load to be considered for dowel design	59.5 (new provision as per IRC:58-2015)
Load transfer (%) - Maximum is 50 %	50
$P_{group} = \text{Design wheel load} \times \text{Load transfer}$	29.75 kN
Thus, Load carried by the outer dowel bar, $P_t = P_{group} / \text{no. of effective dowels carrying edge load}$	17 kN

D. Calculation of bearing stress and bearing strength

Input variables governing bearing stress	Contraction Joint	Expansion Joint
Diameter of dowel bar, d (mm)	36	36
Joint width, z (mm)	5	20
Characteristic compressive strength, f_{ck} (Mpa)	40	40
Moment of inertia of dowel bar, $I = \pi d^4 / 64$ (cm ⁴)	82448.0	82448.0
k = modulus of dowel-concrete interface (MPa/m)	415000	415000
E = modulus of elasticity of steel dowel, MPa	2.E+05	2.E+05

Output

Relative stiffness of dowel bar embedded in concrete, $\beta = (Kd/4EI)^{1/4}$		
Per unit length (L ⁻¹)	0.022	0.022
Bearing stress caused by dowel bar = $P_t \times k \times (2+\beta z) / (4\beta^3 EI)$	21.76	25.14
Bearing strength of concrete, F_b (ksc)	27.5	27.5

$F_b = (10.16-d) * f_{ck} / 9.525$; (After ACI committee-225)

Conclusion:- Design acceptable as bearing stress is less than bearing strength

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version 1.0

Route: Honnavar Port (UP)		Applicable Chainage :-Homogenous section -1	
Design of Tie Bars (IRC 58-2015 Method)			
A. Design Parameters			
Type of bar	<u>Plain</u>	<u>Deformed</u>	
Diameter of tie bar, d (mm)	12	12	
Lane width, b (m)	3.5	3.5	
Slab thickness, h (mm)	310	310	
Concrete unit weight, kN/m ³	24	24	
W = unit wt.x h (kN/m ²)	7.44	7.44	
B. Spacing of Tie Barss			
Weight of slab per m length, N = b x W (kN/m)	26.04	26.04	
Coefficient of friction between slab and subbase, m	1.5	1.5	
Frictional force, F=mN = b x f x W (kN/m)	39.06	39.06	
Allowable tensile stress in reinforcement, S ; MPa	125	200	
X-sectional area of reinforcement reqd, A_s (mm ² /m)	312.48	195.3	
X-sectional area of single reinforcement bar, A , mm ²	113.112	113.112	
Number of tie bars required per m length	2.763	1.727	
Spacing required (based on 1 m length), mm	362	579	
C. Length of Tie Bar			
Pull-out resistance, R = bond strength x perimeter x length			
Perimeter of a single tie bar, P = pd (mm)	37.704	37.704	
Bond strength, B , MPa	1.75	2.46	
As per IRC 58-2002, P x B x L = 2 x S x A			
Thus, length L = [2 x S x A] / [P x B] (mm)	428.6	487.8	
Design length after increasing calculated length by 100 mm for loss of bond and 50 mm for tolerance in placement (mm)	579	638	
Output and Recommendations			
Type of tie-bar recommended	Deformed		
Diameter of tie bars, mm	12		
Spacing of tie bars, mm	510		
Length of tie bars,mm	640		
Conclusion:-The chosen spacing and length is OK for given diameter of deformed bar			
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Annexure 8.1

No. SEIAA: 22: IND: 2011
STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT
AUTHORITY, KARNATAKA
 (Constituted by Ministry of Environment & Forests, Government of India)

Department of Ecology & Environment,
 Room No.709, 7th Floor, IV-Gate,
 M.S. Building, Bangalore-560 001,
 Date: 21st September 2012.

To,

M/s. Honnavar Port Pvt. Ltd.,
 # 103, Lalehzar Apartments,
 45/I-2, Palace Road,
 Bangalore- 560 001.

Phone: +91-80-22353670, 41494960.

Fax: +91-80-22353671.

Email: info@honnavarport.com

Sir,

Sub: Development of Barge/vessel loading facility to handle 4.9 MTPA of cargo at Coastal Sand Spit, Kasarkod Tonka Village, Honnavar Taluk, Uttara Kannda District of M/s. Honnavar Port Pvt. Ltd.,- issue of Environmental Clearance- reg

* * * * *

This has a reference to your application dated 09.06.2011 and subsequent communications in this regard for Environmental Clearance for the proposed development of Barge/vessel loading facility to handle 4.9 MTPA of cargo. The proposal has been examined and processed in accordance with EIA Notification, 2006 on the basis of the mandatory documents enclosed with the application viz., the Application in Form 1, EIA, EMP and the additional clarifications furnished in response to the observations of the SEAC, Karnataka.

2. It is interalia, noted that M/s. Honnavar Port Pvt. Ltd., have proposed for development of an all weather barge / vessel loading facility at Coastal Sand Spit, Kasarkod Tonka Village, Honnavar Taluk, Uttara Kannda District. Total land requirement for the proposed facility is 44 Ha out of which, Coal stockyard area: 7 ha; Iron ore stockyard area: 1.80 ha; General cargo storage (open) area: 4 ha; General cargo storage (Closed) area: 2 ha; Liquid cargo storage area: 0.10 ha; Roads and circulation area: 8.15 ha; Operation building area: 0.05 ha; Canteen area: 0.02 ha; Vehicle parking area: 0.09 ha; Substation area: 0.02 ha; Gate house/security/weigh bridge area: 1.50 ha; Truck parking area: 5.40 ha; Fuel station area: 0.02 ha; Control tower area: 0.01 ha; Green belt area: 3.10 ha; Area available for other operations and area earmarked for future expansion: 6.72 ha and Rock armour area (approx) 4 ha.

Total capacity of cargo handling is 4.9 MTPA of which 2.70 MTPA of coal; 1.00 MTPA of iron ore; General Cargo 1.20 MTPA i.e. 0.16 MTPA Fertilizer; 0.20 MTPA molasses with agro products; 0.15 MTPA steel products and 0.29 MTPA sugar. In order to maintain tranquility in the harbor basin, two break waters are proposed (Southern Break Water: 865 m and northern break water: 820 m). Berth of 440m long and 30m wide with back up area of 44 Hectares, dredging, approach channel: (length of approach channel inner: 1395m & outer 2280m, width of the channel 100m and depth of the channel: (-)10 m), Turning circle (diameter of the turning circle -250m, dredged to a depth of (-)10 m), Estimated dredging quantity 3.9 million cum, Estimated quantity proposed to be used for reclamation 1 million cum.

3. Total water requirement during the operation phase of barge/vessel loading facility is 7 KLD will be met from Karnataka Rural Water Supply & Sanitation Agency. Out of 7 KLD, 3 KLD supply to barges, 2 KLD supply to barge loading facility staff & users and 2 KLD for miscellaneous. The water required for dust suppression system and fire fighting will be sourced from Sharavati River. The sewage system will be provided to collect the sewage from barge/vessel loading facility administration building; canteen and operation building will be treated in STP. The cargo storage area will be provided with an extensive drainage and treatment system. Drainage pits will be provided in the workshop areas, which will be connected to an oily wastewater tank. Oily wastewater if any will be collected and will be treated to meet the discharge standards. The total power requirement is 1 MVA. The total cost of the project is Rs. 513 Crores.

4. The project proposal has been considered by SEAC and ToRs were issued on 13.09.2011 for conducting Environment Impact Assessment Study and public consultation.

5. The EIA has been conducted by M/s. L&T Ramboll Consulting Engineers Ltd, 3-11921, 5th Floor, Block No. 3, White House, Kundan Bagh, Begumpet, Hyderabad - 500 016, A.P. (QCI/NABET accredit consultant). The Public Consultation was held on 27.01.2012.

6. Based on the information submitted by you, presentation made by you and the consultant, M/s. L&T Ramboll Consulting Engineers Ltd, 3-11921, 5th Floor, Block No. 3, White House, Kundan Bagh, Begumpet, Hyderabad - 500 016, A.P. the State Level Expert Appraisal Committee (SEAC) examined the proposal and has recommended for issue of Environmental Clearance in the meetings held on 20.08.2011, 17.03.2012, 07.04.2012 & 25/26.05.2012.

7. The Karnataka State Coastal Zone Management Authority has recommended the proposal for issue of Environmental Clearance during the meeting held on 28.05.2012.

8. After due consideration of the project proposal, and considering the recommendations of the State Level Expert Appraisal Committee (SEAC) and KSCZMA, the State Level Environment Impact Assessment Authority (SEIAA) in its meeting held on 06.07.2012 & 06.08.2012 accords Environmental Clearance to the project as per provisions of the EIA Notification No. S.O. 1533 dated 14th September 2006 of Ministry of Environment & Forest, GoI subject to strict compliance of terms and conditions as mentioned below:-

A. Specific Conditions:-

1. Consent for Establishment from the Karnataka State Pollution Control Board should be obtained before initiating the project.
2. Dredged material remaining after the reclamation/backfilling shall be disposed at dumpsite identified at 5 Km to the north at 18 m depth so that the material does not come 1.5 m above bed level offshore on the basis of appropriate modelling study and after reconfirmation that it will not have any adverse impact on the marine ecosystem.
3. Dredging operations shall be undertaken in consultation with expert organization to ensure that dredging operations do not cause adverse impact on water quality and marine productivity in the vicinity. Dredging operation as far as possible should be kept to the minimum for avoiding any adverse impact on marine life.
4. Fitting of Deflectors in the dredgers to prevent harm to marine species should be ensured.
5. Disposal sites for excavated material for reclamation/backfilling should be so designed that the revised land use after dumping and changes in the land use pattern do not interfere with the natural drainage.
6. To meet with any emergency situation, adequate foam containers should be kept ready with supporting fire fighting system and water pipeline.
7. Staff posted in sensitive areas should be trained in implementation of the Crisis Management Plan already drawn by the authorities. Mock drill(s) for this purpose should be conducted on a regular basis. Provisions of Dock Safety Act and the guidelines issued by the DG, FASLI/CLI, Mumbai for the safety and health of the workers should be followed.
8. Treatment and discharge of sewage and other liquid wastes including ballast into marine environment shall be carried out as per KSPCB guidelines.
9. Adequate noise control measure must be provided to control noise level at various work places within the standard prescribed. Ear plugs and ear muffs should be provided to the workers in the project area.
10. The quality of treated effluents, solid wastes and emission must conform to the standards laid down by the competent authority. There shall be no disposal of solid and liquid waste into the coastal environment.
11. Necessary leakage detection devices with early warning system must be provided at strategic locations.
12. Standby DG Sets must be provided to ensure uninterrupted power supply of the pump house and the fire fighting system.
13. All lights should be dark sky friendly and should not create glare. Glare created by light can disturb/ disorient hatchlings of Olive Ridley turtles. Light

- may be so designed that they do not create glare through spillage by following best practices adopted globally.
14. Undertaking of awareness campaigns amongst fishermen and villagers to minimize harm to species as stipulated.
 15. No beach sand shall be used for construction activities.
 16. The hydro-dynamic studies shall be undertaken to ascertain the impact to the shoreline in the stretch and ecologically sensitive areas.
 17. The approach channel shall be properly demarcated with lighted buoys for safe navigation and adequate traffic control guidelines shall be framed.
 18. The height of the buildings other than the lighthouse tower should not exceed 9 meters, and the constructions should be in accordance with the existing FSI/FAR norms in accordance with Coastal Regulation Zone Notification, 1991/2011.
 19. The construction waste should be disposed off in designated dumping grounds outside the port area after obtaining necessary permissions from the local Authorities.
 20. During transportation of the construction material, it shall be ensured that all safety norms are followed and no spillage takes place in the city roads.
 21. No product other than those permissible in the Coastal Regulation Zone Notification, should be stored in the Coastal Regulation Zone area.
 22. All construction design/ drawings relating to construction activities must have the approval of the concerned Departments/ Agencies. Ground water should not be tapped for construction activities as the drawl of ground water for industrial use from the CRZ area is a prohibited activity. It should also be ensured that as a result of the proposed constructions, ingress of saline water into ground water does not take place.
 23. There shall be no withdrawal of groundwater in Coastal Regulation Zone area, for this project. In case any ground water is proposed to be withdrawn from outside the CRZ area, specific prior permission from the concerned State / Central Groundwater Board shall be obtained in this regard.
 24. The waste water generated from the activity shall be collected, treated and reused properly.
 25. Sewage Treatment facility should be provided in accordance with the CRZ Notification.
 26. Installation and operation of DG set if any shall comply with the guidelines of CPCB. Oil spills if any shall be properly collected and disposed as per the Rules. Project proponent shall install necessary oil spill mitigation measures.
 27. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.
 28. The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purposes.
 29. It shall be ensured that the proposed activities does not cause disturbance to the fishing activity, movements of fishing boats.
 30. Adequate provision for infrastructure facilities including water supply, fuel and sanitation must be ensured for construction workers during the construction phase of the project to avoid any damage to the environment.
 31. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 27.01.2012 should be satisfactorily implemented

- and a separate budget for implementing the same shall be allocated and information submitted to the Authority.
32. The company shall comply with the recommendations made in the EIA/EMP/Risk assessment report/Modeling study etc.
 33. The project authorities shall follow the best practices that are being adopted for Safe handling and storage of coal and iron ore in other major ports.
 34. The project authorities shall follow the measures proposed for prevention and abatement of air, water and soil pollution due to handling and storage of coal and iron ore.
 35. Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from the stock yard. The water so collected should be utilized for sprinkling stockyard, roads and watering green belt development etc. The drains should be regularly de-silted and maintained properly.
 36. Garland drains (size, gradient and length) and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the stock yard. Sump capacity shall also be provided for adequate retention period to allow proper settling of silt material.
 37. Dimension of the retaining wall at the toe of dumps to check run-off and siltation should be based on the rainfall data.
 38. Vehicular emissions should be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in stock yard and in transportation of mineral. The vehicles should be covered with a tarpaulin and shall not be overloaded.
 39. Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.
 40. All approach roads shall be black topped and internal roads and major haul roads shall be black topped or concreted and swept regularly with mechanical sweepers.
 41. A 3-tier avenue plantation using local species shall be developed along the main roads, and approach roads. In addition, green belt shall be developed using local species all along the periphery of the site, along the stockyards, which shall be properly maintained. Water sprinkling arrangements shall be established and functional during transfer and loading of coal/iron ore.
 42. The project authorities shall undertake activities such as providing treated drinking water to Kasarkod, Tonka and Apsarakonda Villages by installing RO plants, provide educational and health facilities and undertake community development programs towards the programs with a total budget not less than ₹ 1.5 Crores during the project period as committed and report be submitted to the Authority.
 43. The Project authorities shall earmark at least 5 % of the total cost of the project towards the future corporate social responsibility and item-wise details along with time bound action plan shall be prepared and submitted to the Authority.

B. GENERAL CONDITIONS:

1. A separate Environment Management Cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
2. The project authorities shall strictly adhere to the stipulations made by the Karnataka State Pollution Control Board (KSPCB) and CRZ Authorities.
3. The Proponent shall obtain the construction material such as stones and jelly etc. only from the approved quarries and other construction material shall also be procured from the authorized agencies/traders.
4. The proponent shall obtain approval from the competent authorities for structural safety of the building due to earthquake, adequacy of firefighting equipment etc. as per the National Building Code (NBC) including protection measures for lightening etc.
5. At no time, the emissions shall exceed the prescribed limits. In the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.
6. No further expansion or modifications in the plant shall be carried out without prior approval of the SEIAA/Ministry of Environment and Forests as the case may be. In case of deviations or alterations in the project proposal from those submitted to this Authority for clearance, a fresh reference shall be made to the Authority to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
7. The project authorities shall strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October 1994 and January 2000. Authorization from the KSPCB shall be obtained for collection, treatment, storage, and disposal of hazardous wastes.
8. Application of solar energy should be incorporated for illumination of common areas, lighting for gardens and street lighting in addition to provision for solar water heating. A hybrid system or fully solar system for lighting and heating should be provided. Details in this regard should be submitted to the SEIAA.
9. Ambient air quality (RPM, SPM, SO₂, NOX) should be regularly monitored as per the National Ambient Air Quality Emission Standards/Limits prescribed by the Ministry of Environment and Forests, Government of India, vide G.S.R. No. 826(E) dated 16th November, 2009 and data submitted to the SEIAA Karnataka, Department of Environment and Ecology, Govt. of Karnataka, Regional Director (Environment), Department of Environment and Ecology, Government of Karnataka, Karwar and the Regional Office, MoEF, Bangalore and the State Pollution Control Board / Central Pollution Control Board once in six months.
10. Fugitive dust emission from all the sources should be controlled regularly. Water spray arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.
11. Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

Occupational health surveillance program of the workers should be undertaken periodically i.e. once in 3 months to observe any contractions due to exposure to dust and take corrective measures, if needed. Quarterly report in this regard should be submitted to the Department of Environment and Ecology, Govt. of Karnataka, Regional Director (Environment), Department of Environment and Ecology, Government of Karnataka, Karwar, the Karnataka State Pollution Control Board and the Regional Office, MoEF, Bangalore.

12. The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, Rules, 1989 viz. 85 dBA (day time) and 70 dBA (night time).
13. The project proponent shall also comply with all the environmental protection measures and safeguards as per the information provided.
14. The implementation of the project vis-à-vis environmental action plans shall be monitored by MoEF, Regional Office at Bangalore / KSPCB/ CPCB, the Department of Environment & Ecology, Bangalore and the Regional Director (Environment), Department of Ecology and Environment, Karwar. A six monthly compliance status report shall be submitted to monitoring agencies.
15. The project proponent shall inform the public that the project has been accorded environmental clearance by the SEIAA and copies of the clearance letter are available with the KSPCB and may also be seen at Website of the State Ecology and Environment department at <http://www.seiaa.kar.nic.in>. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional Office of MoEF at Bangalore / KSPCB/ CPCB/ the Department of Ecology & Environment, Government of Karnataka, Bangalore.
16. The project authorities shall inform the Regional Office of MoEF at Bangalore / KSPCB/ CPCB/ the Department of Ecology & Environment, Government of Karnataka, Bangalore, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.
17. The SEIAA, Karnataka may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
18. The SEIAA, Karnataka reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.
19. The issue of Environment Clearance doesn't confer any right to the project proponent to operate / run the project without obtaining statutory clearances / sanctions from all other concerned Authorities.
20. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environmental (Protection) Act, 1986.
21. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

22. Officials from the Department of Environment, Ecology, Bangalore/ Regional Office of MoEF, Bangalore and the Regional Director (Environment), Department of Ecology and Environment, Karwar who would be monitoring the implementation of Environmental safeguards should be given full cooperation, facilities and documents/ data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF / SEIAA should be forwarded to the Regional Office of MoEF at Bangalore / KSPCB/ CPCB/ the Department of Ecology & Environment, Government of Karnataka, Bangalore and the Regional Director (Environment), Department of Ecology and Environment, Karwar.
23. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Authority.
24. The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
25. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the competent authorities.
26. These stipulations would be enforced among others under the provisions of water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.

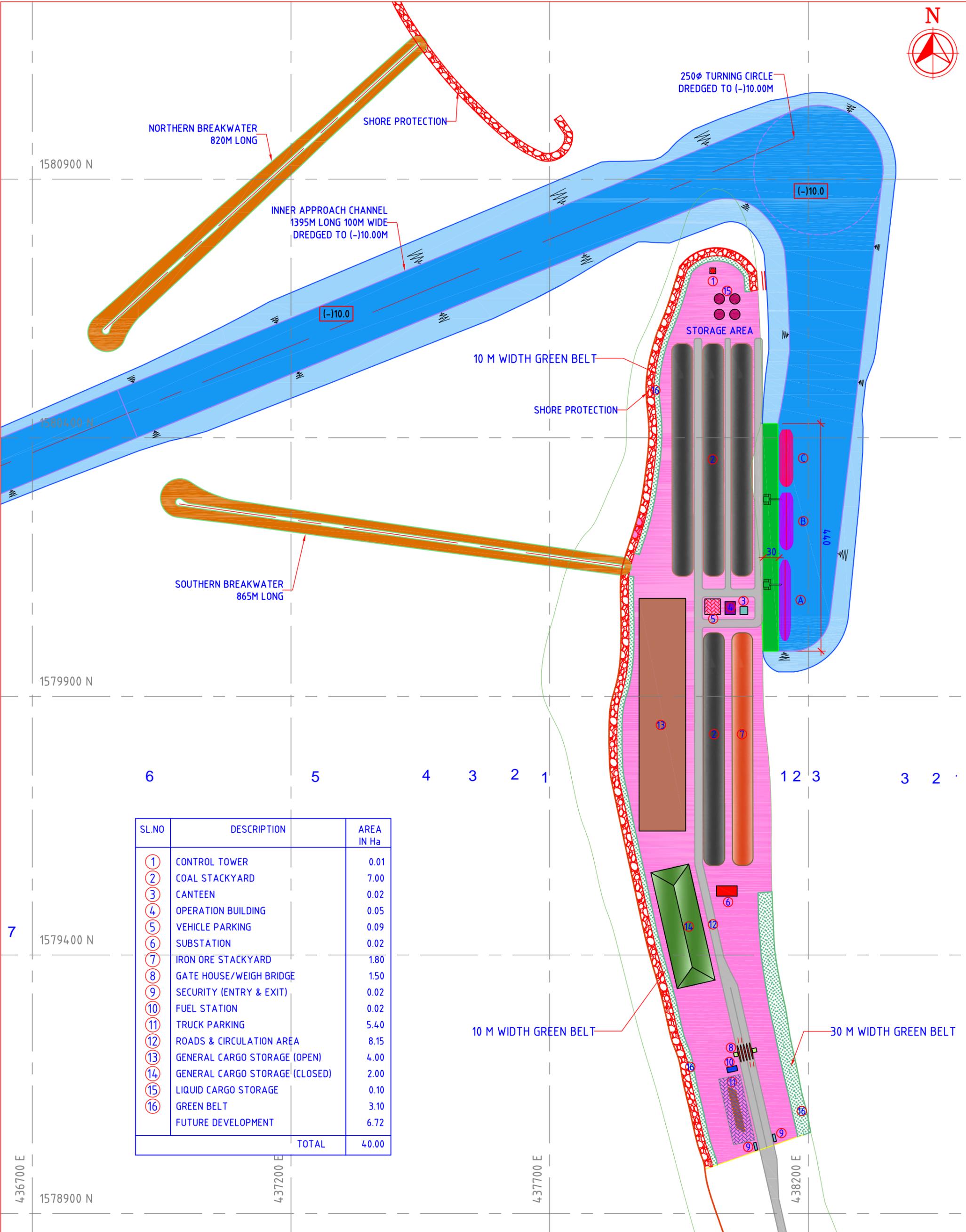
Yours faithfully,


(KANWERPAL)

Member Secretary,
SEIAA.

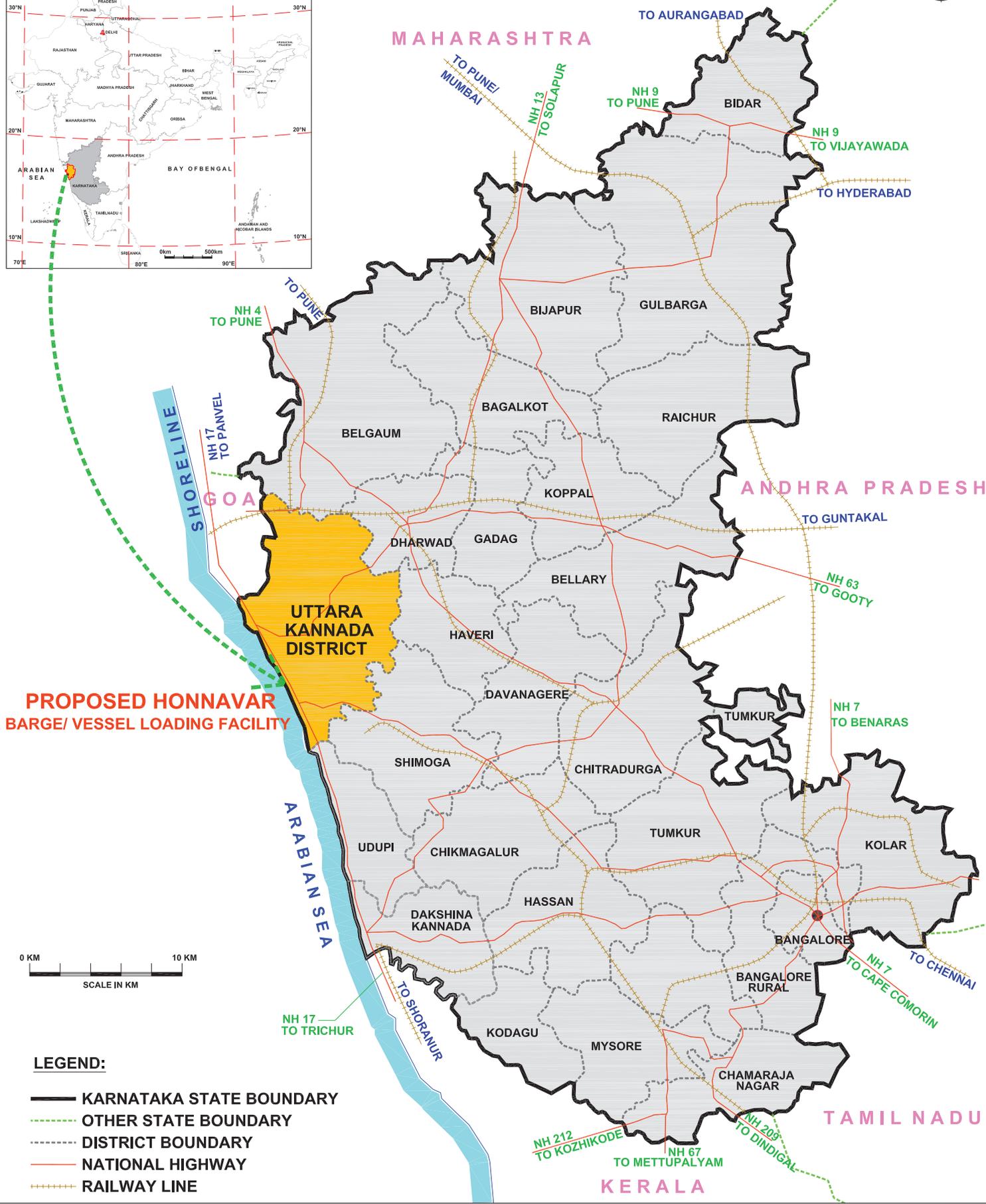
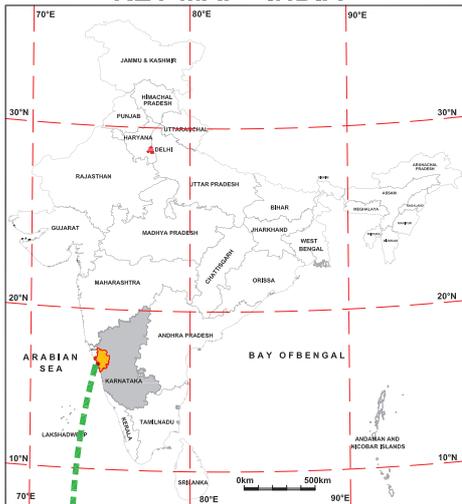
Copy to:

1. The Secretary, Ministry of Environment & Forests, Government of India, Paryavaran Bhavan, CGO Complex, Lodi Road, New Delhi-110003.
2. The Secretary, Department of Environment and Ecology, Government of Karnataka, Bangalore 560 001.
3. The Member Secretary, Karnataka State Pollution Control Board, Church Street, Bangalore - 560 001.
4. The CCF, Regional Office, Ministry of Environment & Forests (SZ), Kendriya Sada1n, IV Floor, E & F wings, 17th Main Road, Koramangala II Block, Bangalore-560 034, Bangalore.
5. The Regional Director (Environment), Department of Ecology and Environment, Karwar.
6. Guard File.



SL.NO	DESCRIPTION	AREA IN Ha
①	CONTROL TOWER	0.01
②	COAL STACKYARD	7.00
③	CANTEEN	0.02
④	OPERATION BUILDING	0.05
⑤	VEHICLE PARKING	0.09
⑥	SUBSTATION	0.02
⑦	IRON ORE STACKYARD	1.80
⑧	GATE HOUSE/WEIGH BRIDGE	1.50
⑨	SECURITY (ENTRY & EXIT)	0.02
⑩	FUEL STATION	0.02
⑪	TRUCK PARKING	5.40
⑫	ROADS & CIRCULATION AREA	8.15
⑬	GENERAL CARGO STORAGE (OPEN)	4.00
⑭	GENERAL CARGO STORAGE (CLOSED)	2.00
⑮	LIQUID CARGO STORAGE	0.10
⑯	GREEN BELT	3.10
	FUTURE DEVELOPMENT	6.72
TOTAL		40.00

KEY MAP - INDIA



PROPOSED HONNAVAR BARGE/ VESSEL LOADING FACILITY



LEGEND:

- KARNATAKA STATE BOUNDARY
- OTHER STATE BOUNDARY
- DISTRICT BOUNDARY
- NATIONAL HIGHWAY
- RAILWAY LINE

PWD 107 PSP 2013

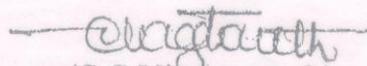
Karnataka Government Se
Vikas Soudha,
Bangalore, Dated: 09.12.2013.

NOTIFICATION

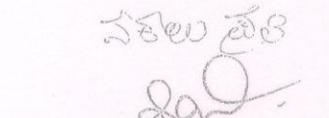
in exercise of powers conferred by Section 5 of the Indian Ports Act, 1908 and in pursuance of the modification of Notification No.PWD 142 PSP 2011 dated 13.08,2013 Government of Karnataka are please to declare from 9th December 2013 the limit of Honnavar Port of North Kanara shall be specified in Column of (4) of the table below.

Sl. No.	Name of District	Name of the Port	Limits under the Indian Port Act 1908	
1	North Kanara	Honnavara	<u>Indian Hydrographic Chart No.216</u>	
			North:-	A line drawn from the position latitude 14°18' North and longitude 74° 24'90 East due West of upto 30 Mtrs. contour in to the Sea.
			East:-	Seashore of Honnavar 50 Mtrs. above high-water mark between North and South boundary mark including the Sharavathi river and all branches thereof as far as navigable and the shores and banks within 50 Mtrs. of high-water mark spring tides including all islands. All patta lands and other private sites excluded.
			South:-	A line drawn from the position Latitude 14°13' North and longitude 74°27' East due West 30 Mtrs. contour in to the sea.
			West:-	A line joining Northern and Southern limits along 30 Mtrs contour in to the sea.

By Order and in the name of the
Governor of Karnataka,

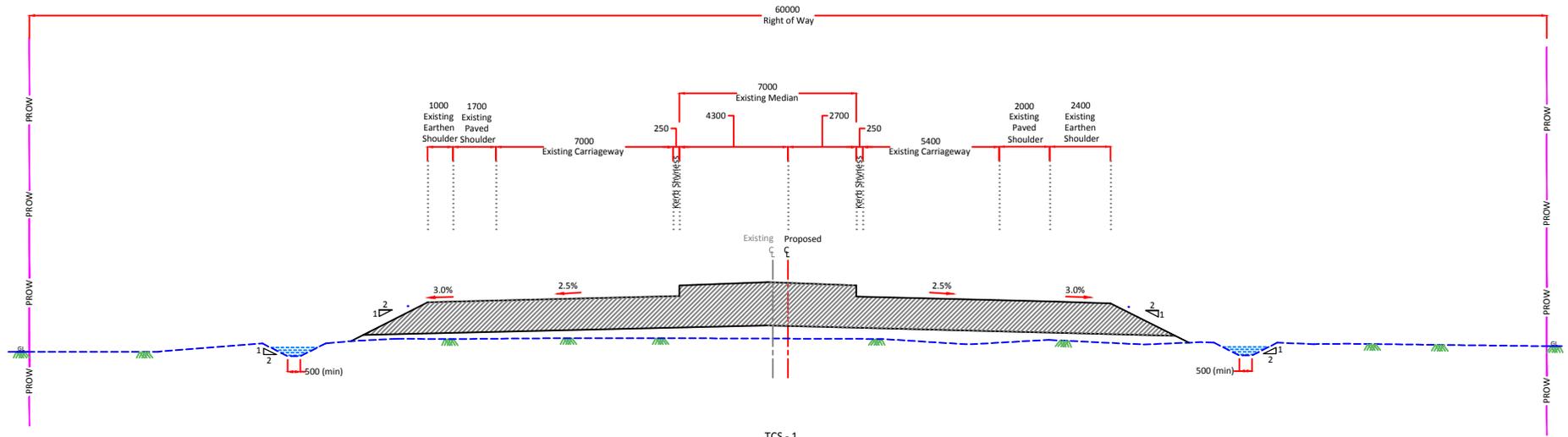

 (S.S. Viraktamath)

Under Secretary to Government


 (S.S. Viraktamath)

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 ಕುರ್ನಾವರ
 23 15 2013
 PORT OFFICE HONNAVAR

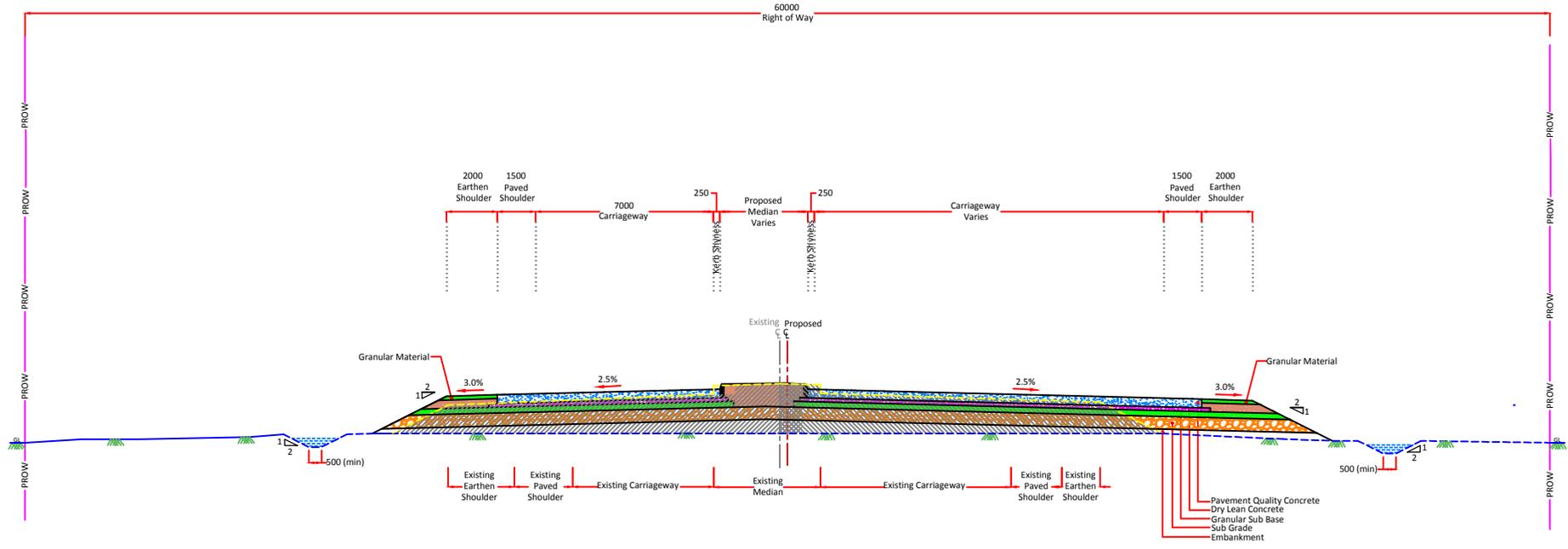
Annexure10.1



TCS - 1
 CROSS SECTION ALONG EXISTING NH - 66
 (Scale - 1:110)
 (From Ch.- 195+000 To Ch.-195+110)

Note :-
 1. All Dimension are in mm unless other wise specified.

Authority :- NATIONAL HIGHWAYS AUTHORITY OF INDIA	Client :- HONNAVAR PORT PVT. LTD.	Project Title :- Consultancy Service for Preparation of DPR of Honnavar Port Road Connectivity Access road from Kasarkod Side of Honnavar Port Km. 0+000 to Km. 2+580 on NH-66	Drawing Name :- TYPICAL CROSS SECTION (TCS - 01)	 Intercontinental Consultants & Technocrats Pvt Ltd, A-8, Green Park, New Delhi - 110016 Ph : 4086-3000, Fax 2685-5252	RO	September, 2019	Initial Drawing	Checked by
					Revisions	Date	Description	Rev. RO
					Revisions			
					DRAWING No: NHAI/NH-66/HONNAVAR PORT/TCS/ 01			
					Prepared by	Designed by	Checked by	Approved by
					Shawal Sharma	Kiran. V	Madhusudhan Rao	Manoj Kumar
					Scale - as Shown (on A2 Sheet) (Sheet No.-01 of 13)			

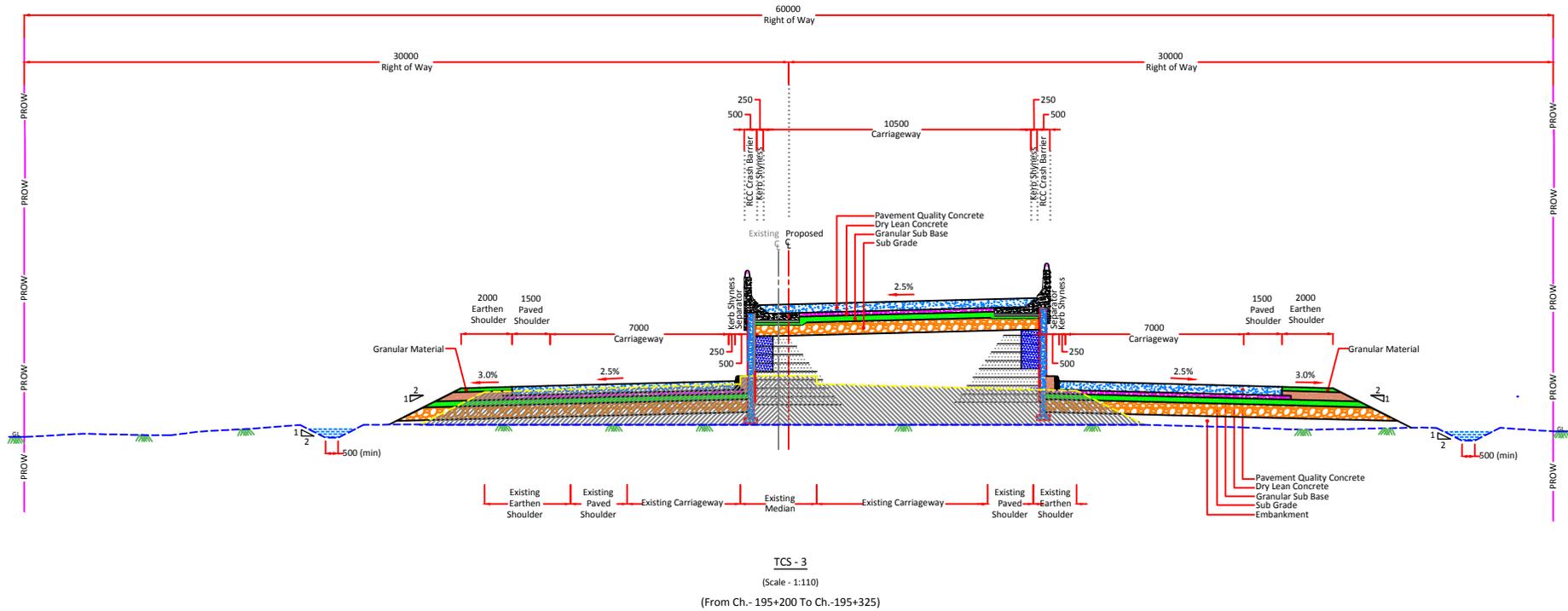


TCS - 2
 (Scale - 1:110)
 (From Ch.- 195+110 To Ch.-195+200)

Note :-
 1. All Dimension are in mm unless other wise specified.

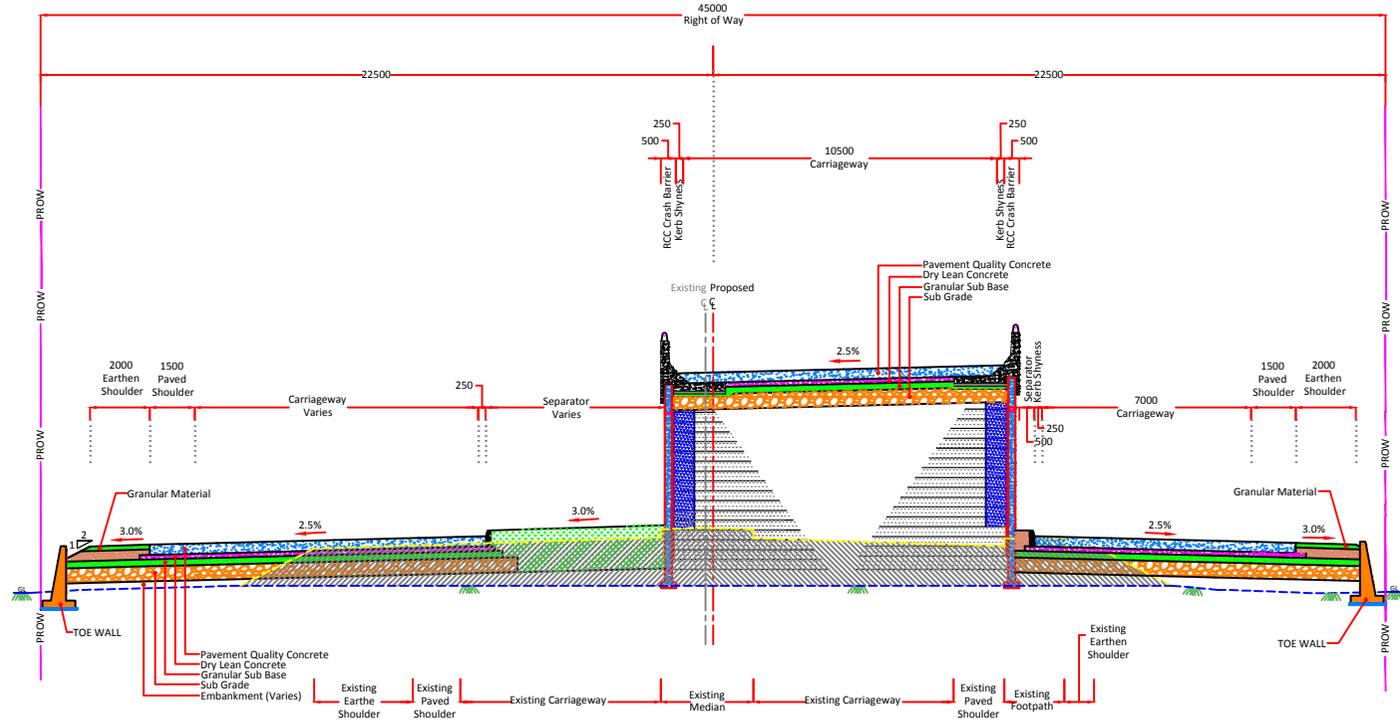
Authority :- NATIONAL HIGHWAYS AUTHORITY OF INDIA	Client :- HONNAVAR PORT PVT. LTD.	Project Title :- Consultancy Service for Preparation of DPR of Honnavar Port Road Connectivity Access road from Kasarkod Side of Honnavar Port Km. 0+000 to Km. 2+580 on NH-66	Drawing Name :- TYPICAL CROSS SECTION (TCS - 02)	 Intercontinental Consultants & Technocrats Pvt Ltd, A-8, Green Park, New Delhi - 110016 Ph : 4086-3000, Fax 2685-5252	RO	September, 2019	Initial Drawing	Checked by
					Revisions	Date	Description	
					Revisions			Rev. RO
					DRAWING No: NHA/NH-66/HONNAVAR PORT/TCS/ 02			
Scale - as Shown (on A2 Sheet)				(Sheet No.-02 of 13)				

Prepared by Shawal Sharma	Designed by Kiran. V	Checked by Madhusudhan Rao	Approved by Manoj Kumar
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Note :-
1. All Dimension are in mm unless other wise specified.

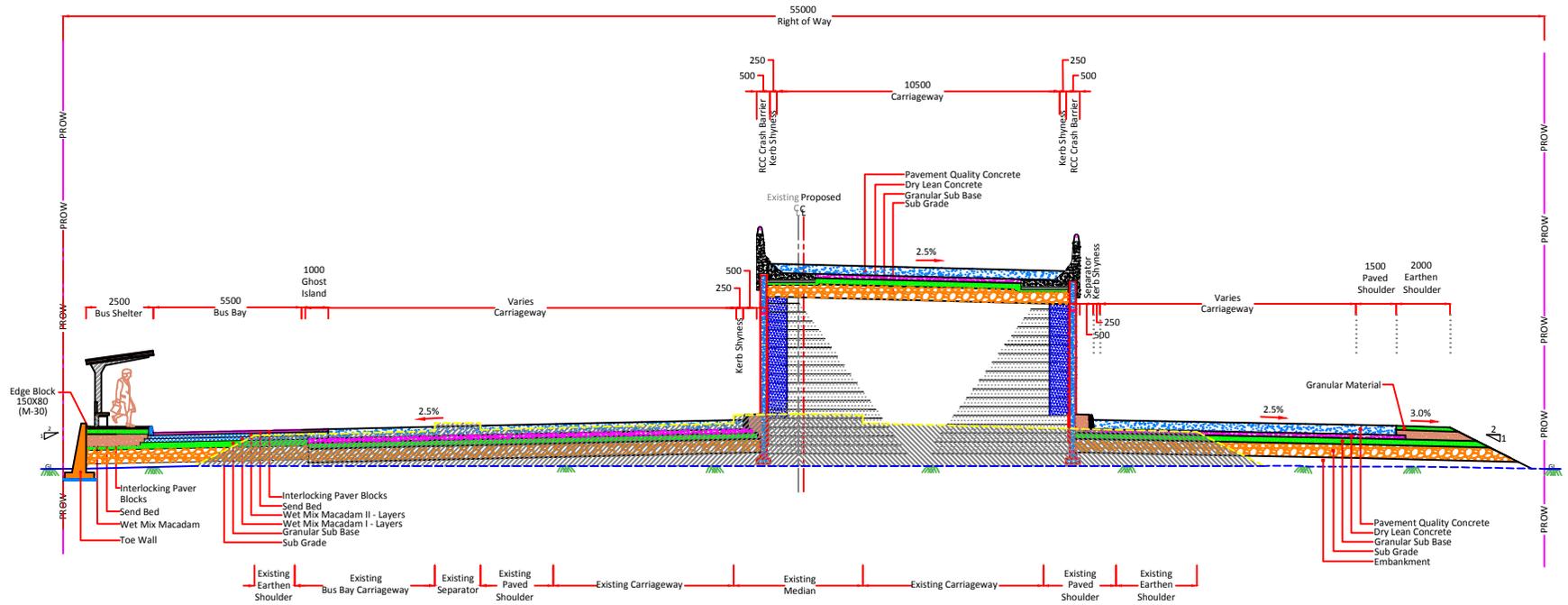
Authority :- NATIONAL HIGHWAYS AUTHORITY OF INDIA	Client :- HONNAVAR PORT PVT. LTD.	Project Title :- Consultancy Service for Preparation of DPR of Honnavar Port Road Connectivity Access road from Kasarkod Side of Honnavar Port Km. 0+000 to Km. 2+580 on NH-66	Drawing Name :- TYPICAL CROSS SECTION (TCS - 03)	Intercontinental Consultants & Technocrats Pvt Ltd, A-8, Green Park, New Delhi - 110016 Ph : 4086-3000, Fax 2685-5252	RO	September, 2019	Initial Drawing	Checked by
					Revisions	Date	Description	Rev. RO
					Revisions DRAWING No: NHA/NH-66/HONNAVAR PORT/TCS/ 03 Scale - as Shown (on A2 Sheet)			
				Prepared by	Designed by	Checked by	Approved by	(Sheet No.-03 of 13)



TCS - 4
 (Scale - 1:110)
 (From Ch.- 195+325 To Ch.-195+600)

Note :-
 1. All Dimension are in mm unless other wise specified.

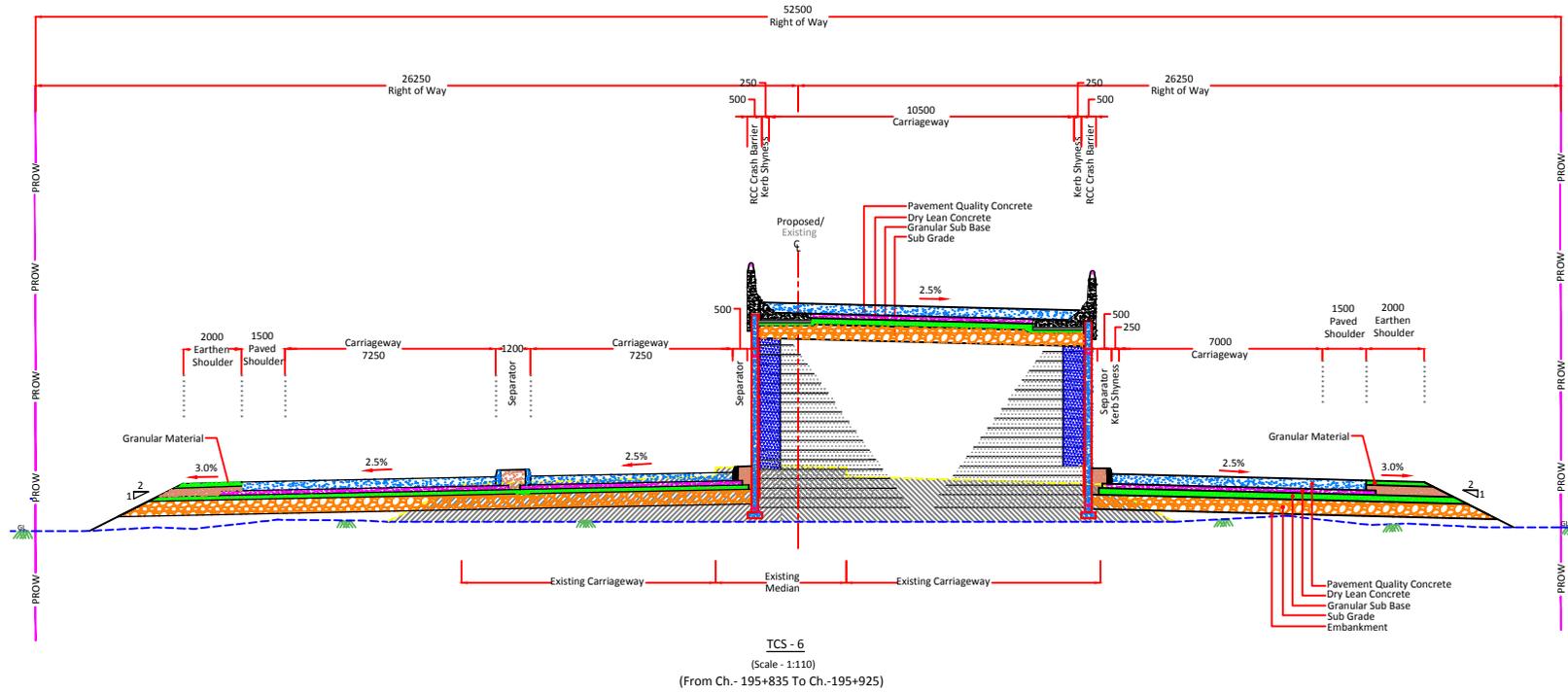
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					Revisions	Date	Description	
					Revisions			Rev. RO
					DRAWING No: NHAI/NH-66/HONNAVAR PORT/TCS/ 04			
					Prepared by	Designed by	Checked by	Approved by
					Shawal Sharma	Kiran. V	Madhusudhan Rao	Manoj Kumar
					Scale - as Shown (on A2 Sheet) (Sheet No.-04 of 13)			



TCS - 5
 (Scale - 1:110)
 (From Ch.- 195+600 To Ch.-195+835)

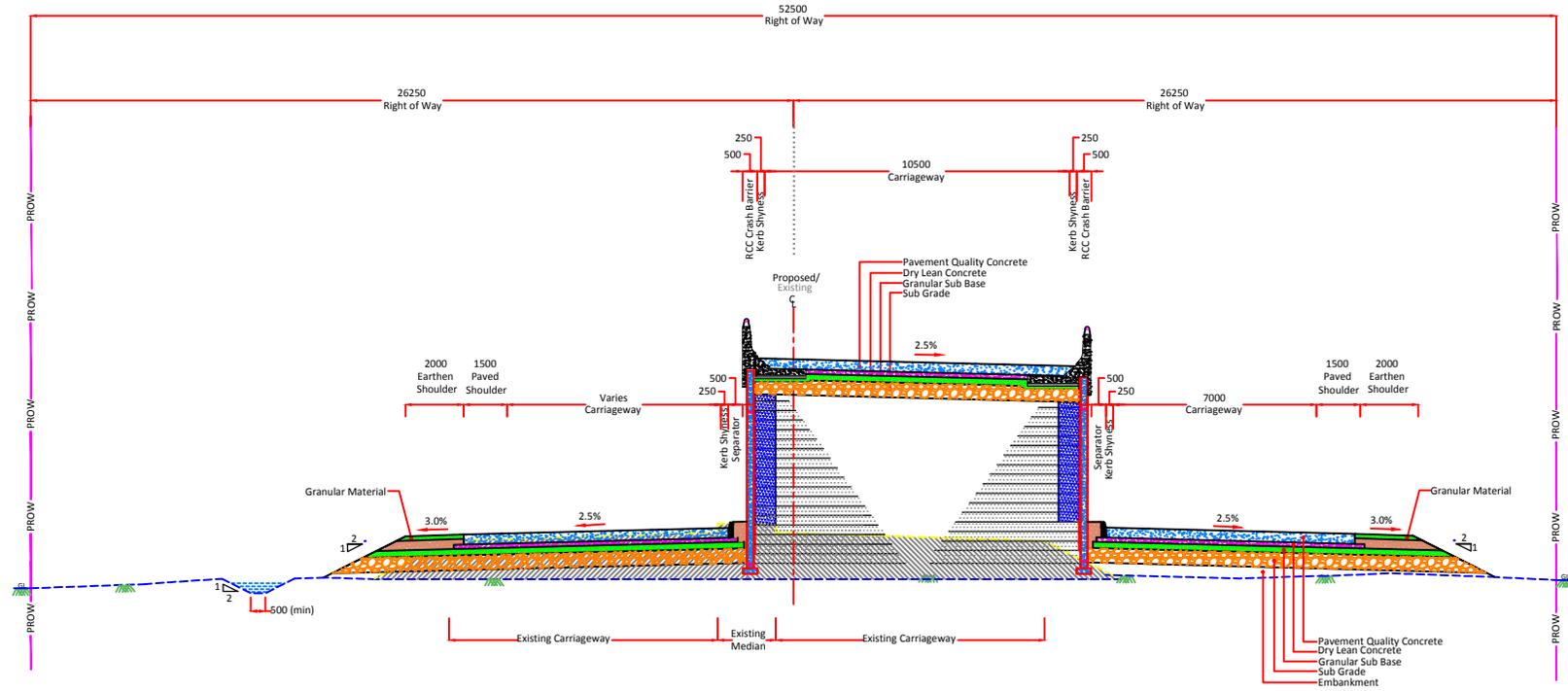
Note :-
 1. All Dimension are in mm unless other wise specified.

Authority :- NATIONAL HIGHWAYS AUTHORITY OF INDIA	Client :- HONNAVAR PORT PVT. LTD.	Project Title :- Consultancy Service for Preparation of DPR of Honnavar Port Road Connectivity Access road from Kasarkod Side of Honnavar Port Km. 0+000 to Km. 2+580 on NH-66	Drawing Name :- TYPICAL CROSS SECTION (TCS - 05)	 Intercontinental Consultants & Technocrats Pvt Ltd, A-8, Green Park, New Delhi - 110016 Ph : 4086-3000, Fax 2685-5252	RO	September, 2019	Initial Drawing	Checked by
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					Revisions DRAWING No: NHA1/NH-66/HONNAVAR PORT/TCS/ 05 Scale - as Shown (on A2 Sheet)			
					Prepared by	Designed by	Checked by	Approved by
					Shawal Sharma	Kiran. V	Madhusudhan Rao	Manoj Kumar



Note :-
1. All Dimension are in mm unless other wise specified.

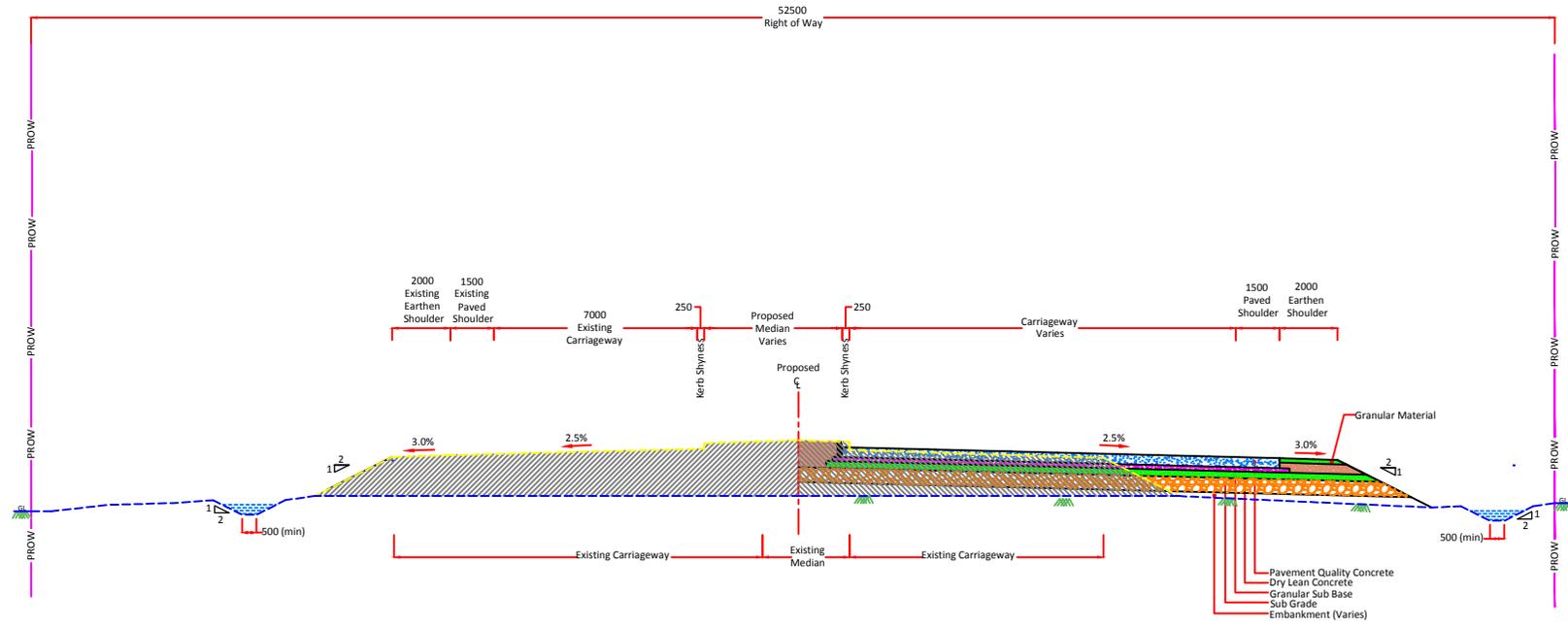
Authority :- NATIONAL HIGHWAYS AUTHORITY OF INDIA	Client :- HONNAVAR PORT PVT. LTD.	Project Title :- Consultancy Service for Preparation of DPR of Honnavar Port Road Connectivity Access road from Kasarkod Side of Honnavar Port Km. 0+000 to Km. 2+580 on NH-66	Drawing Name :- TYPICAL CROSS SECTION (TCS - 06)	 Intercontinental Consultants & Technocrats Pvt Ltd, A-8, Green Park, New Delhi - 110016 Ph : 4086-3000, Fax 2685-5252	RO	September, 2019	Initial Drawing	Checked by
					Revisions	Date	Description	Rev. RO
					Revisions DRAWING No: NHAI/NH-66/HONNAVAR PORT/TCS/ 06 Scale - as Shown (on A2 Sheet) (Sheet No.-06 of 1.3)			
				Prepared by Shawal Sharma	Designed by Kiran. V	Checked by Madhusudhan Rao	Approved by Manoj Kumar	



TCS - 7
 (Scale - 1:110)
 (From Ch.- 195+925 To Ch.-196+500)

Note :-
 1. All Dimension are in mm unless other wise specified.

Authority :- NATIONAL HIGHWAYS AUTHORITY OF INDIA	Client :- HONNAVAR PORT PVT. LTD.	Project Title :- Consultancy Service for Preparation of DPR of Honnavar Port Road Connectivity Access road from Kasarkod Side of Honnavar Port Km. 0+000 to Km. 2+580 on NH-66	Drawing Name :- TYPICAL CROSS SECTION (TCS - 07)	 Intercontinental Consultants & Technocrats Pvt Ltd, A-8, Green Park, New Delhi - 110016 Ph : 4086-3000, Fax 2685-5252	RO	September, 2019	Initial Drawing	Checked by
					Revisions	Date	Description	Rev. RO
					Revisions			
					DRAWING No: NHAI/NH-66/HONNAVAR PORT/TCS/ 07			
					Scale - as Shown (on A2 Sheet)		(Sheet No.-07 of 13)	
				Prepared by Shawal Sharma	Designed by Kiran. V	Checked by Madhusudhan Rao	Approved by Manoj Kumar	

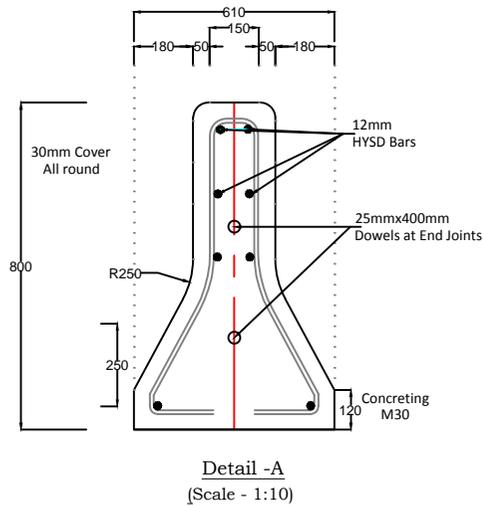
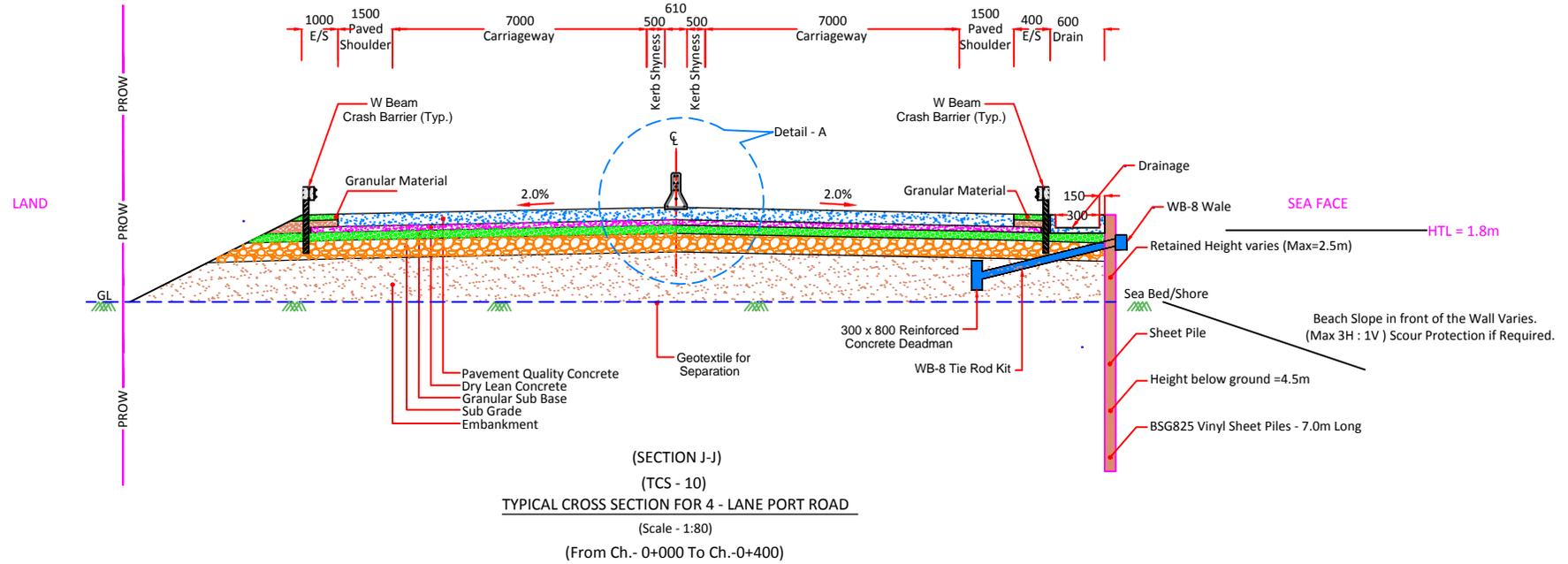


TCS - 8
 (Scale - 1:110)
 (From Ch.- 196+500 To Ch.-196+575)

Note :-
 1. All Dimension are in mm unless other wise specified.

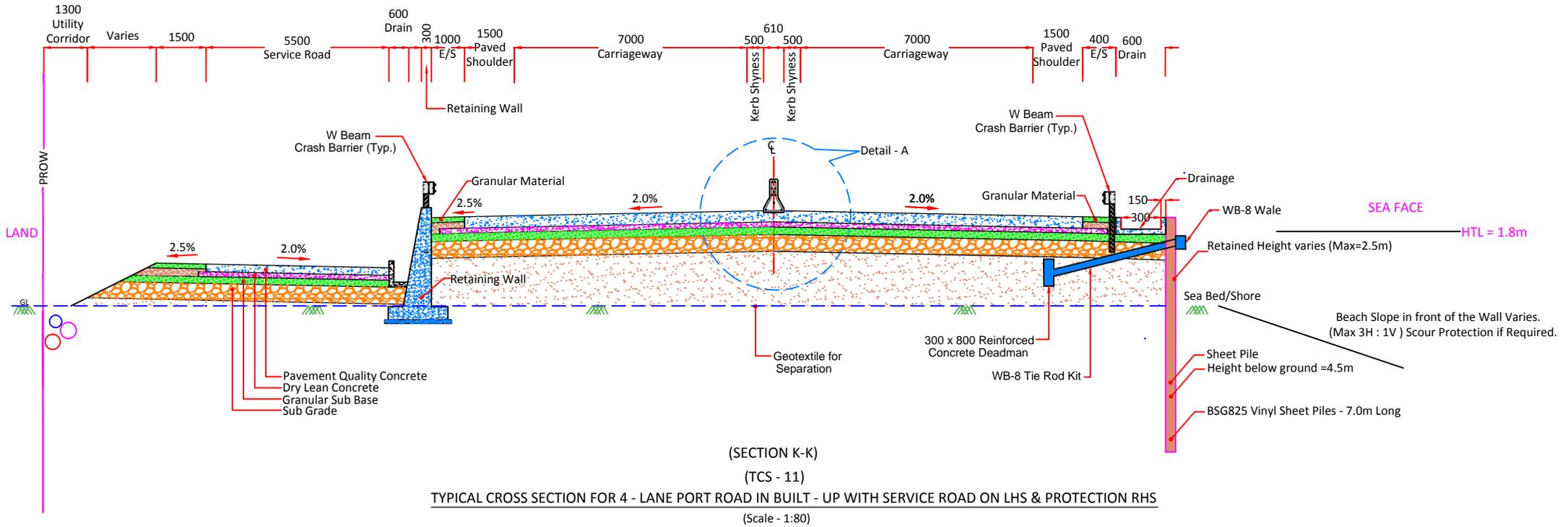
Authority :- NATIONAL HIGHWAYS AUTHORITY OF INDIA	Client :- HONNAVAR PORT PVT. LTD.	Project Title :- Consultancy Service for Preparation of DPR of Honnavar Port Road Connectivity Access road from Kasarkod Side of Honnavar Port Km. 0+000 to Km. 2+580 on NH-66	Drawing Name :- TYPICAL CROSS SECTION (TCS - 08)	Intercontinental Consultants & Technocrats Pvt Ltd, A-8, Green Park, New Delhi - 110016 Ph : 4086-3000, Fax 2685-5252	RO	September, 2019	Initial Drawing	Checked by
					Revisions	Date	Description	
					Revisions			Rev. RO
					DRAWING No: NHAI/NH-66/HONNAVAR PORT/TCS/ 08			
					Scale - as Shown (on A2 Sheet)			(Sheet No.-08 of 1.3)

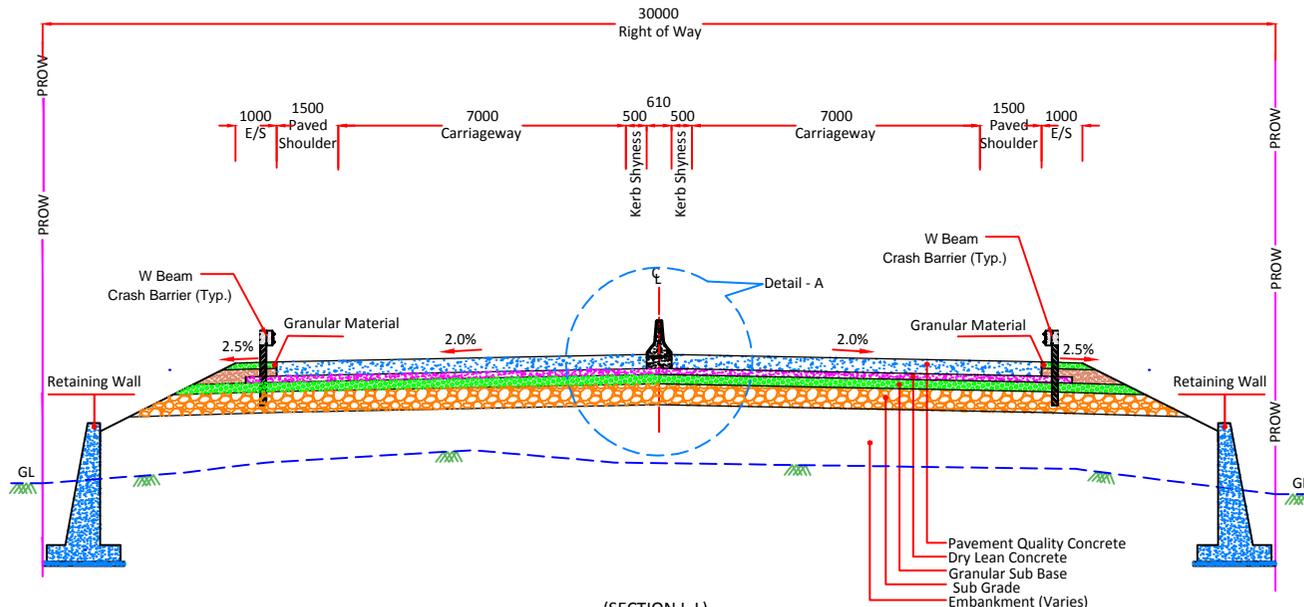
Prepared by Shawal Sharma	Designed by Kiran. V	Checked by Madhusudhan Rao	Approved by Manoj Kumar
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Note :-
1. All Dimension are in mm unless other wise specified.

Authority :- NATIONAL HIGHWAYS AUTHORITY OF INDIA	Client :- HONNAVAR PORT PVT. LTD.	Project Title :- Consultancy Service for Preparation of DPR of Honnavar Port Road Connectivity Access road from Kasarkod Side of Honnavar Port Km. 0+000 to Km. 2+580 on NH-66	Drawing Name :- TYPICAL CROSS SECTION (TCS - 10)	Intercontinental Consultants & Technocrats Pvt Ltd, A-8, Green Park, New Delhi - 110016 Ph : 4086-3000, Fax 2685-5252	RO	September, 2019	Initial Drawing	Checked by
					Revisions	Date	Description	Rev. RO
					Revisions DRAWING No: NHA/NH-66/HONNAVAR PORT/TCS/ 10 Scale - as Shown (on A2 Sheet) (Sheet No.-10 of 13)			
				Prepared by Shawal Sharma	Designed by Kiran. V	Checked by Madhusudhan Rao	Approved by Manoj Kumar	

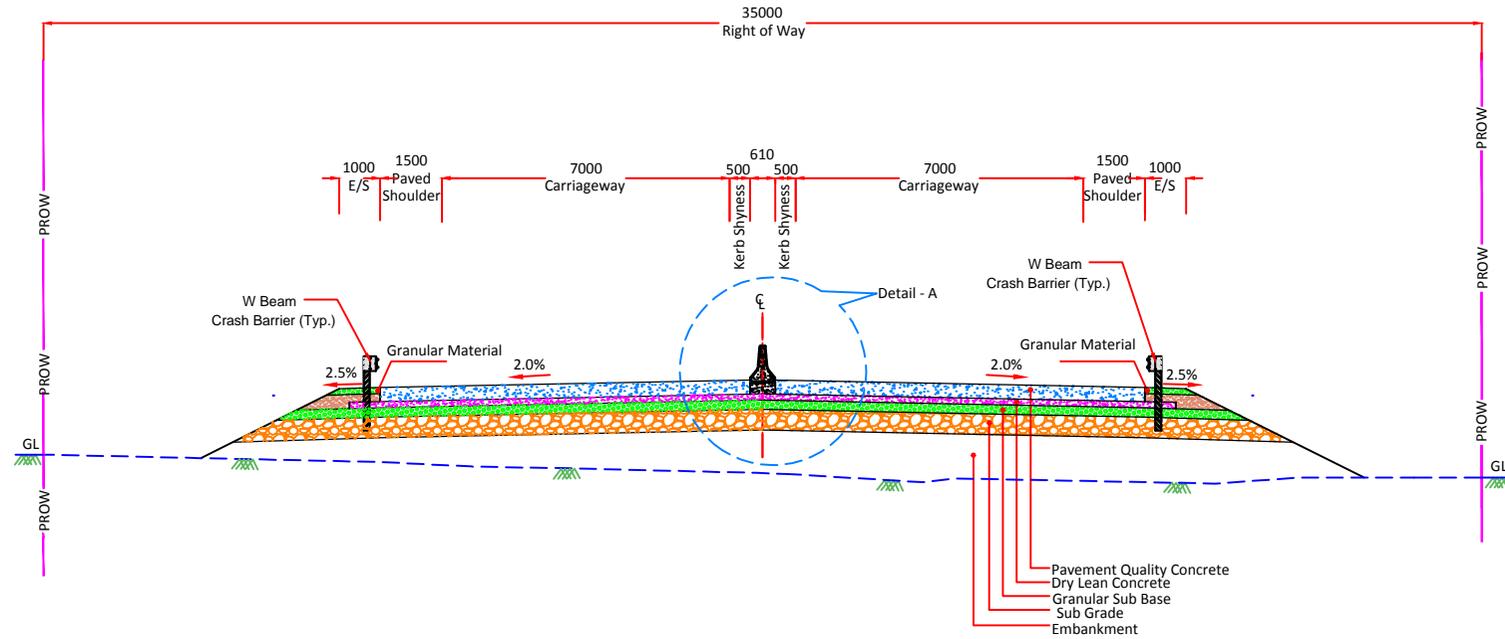




(SECTION L-L)
(TCS - 12)
TYPICAL CROSS SECTION FOR 4 - LANE PORT APPROACH OF LVUP WITH RCC RETAINING WALL
(Scale - 1:80)
(From Ch.- 2+100 To Ch.- 2+490)
* ROW from - Ch.- 2+278 To Ch.- 2+580 is 35m

Note :-
1. All Dimension are in mm unless other wise specified.

Authority :- NATIONAL HIGHWAYS AUTHORITY OF INDIA	Client :- HONNAVAR PORT PVT. LTD.	Project Title :- Consultancy Service for Preparation of DPR of Honnavar Port Road Connectivity Access road from Kasarkod Side of Honnavar Port Km. 0+000 to Km. 2+580 on NH-66	Drawing Name :- TYPICAL CROSS SECTION (TCS - 12)	Intercontinental Consultants & Technocrats Pvt Ltd, A-8, Green Park, New Delhi - 110016 Ph : 4086-3000, Fax 2685-5252	RO	September, 2019	Initial Drawing	Checked by
					Revisions	Date	Description	
					Revisions			Rev. RO
					DRAWING No: NHAI/NH-66/HONNAVAR PORT/TCS/ 12			
					Prepared by	Designed by	Checked by	Approved by
					Shawal Sharma	Kiran. V	Madhusudhan Rao	Manoj Kumar
					Scale - as Shown (on A2 Sheet) (Sheet No.-12 of 13)			



(SECTION M-M)
 (TCS - 13)
TYPICAL CROSS SECTION FOR 4 - LANE PORT ROAD IN OPEN COUNTRY
 (Scale - 1:80)
 (From Ch.- 2+490 To Ch.- 2+580)

Note :-
 1. All Dimension are in mm unless other wise specified.

Authority :- NATIONAL HIGHWAYS AUTHORITY OF INDIA	Client :- HONNAVAR PORT PVT. LTD.	Project Title :- Consultancy Service for Preparation of DPR of Honnavar Port Road Connectivity Access road from Kasarkod Side of Honnavar Port Km. 0+000 to Km. 2+580 on NH-66	Drawing Name :- TYPICAL CROSS SECTION (TCS - 13)	 Intercontinental Consultants & Technocrats Pvt Ltd, A-8, Green Park, New Delhi - 110016 Ph : 4086-3000, Fax 2685-5252	RO	September, 2019	Initial Drawing	Checked by
					Revisions	Date	Description	Rev. RO
					Revisions			
					DRAWING No: NHAI/NH-66/HONNAVAR PORT/TCS/ 13			
					Scale - as Shown (on A2 Sheet)		(Sheet No.-13 of 13)	
				Prepared by	Designed by	Checked by	Approved by	
				Shawal Sharma	Kiran. V	Madhusudhan Rao	Manoj Kumar	

: 1 :

IN THE HIGH COURT OF KARNATAKA
DHARWAD BENCH

DATED THIS THE 10th DAY OF FEBRUARY, 2016

BEFORE

THE HON'BLE MR.JUSTICE B.VEERAPPA

WRIT PETITION NOS.100908-934/2016 (GM-RES)

BETWEEN:

1. HASAN S/O ABUBAKAR SAB
AGE: 46 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
2. MOHAMMAD S/C KHADARSAB AHMED BABA
AGE: 52 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
3. SHRIDHAR S/O JAGANNATH OTANDEL
AGE: 29 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
4. NATEDAR S/O SAVER FERNANDES
AGE: 49 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
5. SHESHAGERI S/O VENKAPPA TANDEL
AGE: 51 YEARS,
R/O: KASARKOD TONKA,

: 2 :

TALUK: HONNAVAR,
DIST: UTTARA KANNADA.

6. SANDEEP S/O SHESHAGERI VENKAPPA TANDEL
AGE: 24 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
7. MOHAMMED RAFIQUE S/O ISMAIL SAB
AGE: 37 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
8. SANJAY S/O PEDRU FERNANDES
AGE: 35 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
9. PANDURANG S/O SHESHAGERI CHOLAYYA TANDEL
AGE: 41 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
10. ILIYAS ABDUL S/O GAFOOR KEWKA
AGE: 43 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
11. ABDUL AMEER S/O MAHAMMEDSAB ULLAL
AGE: 31 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
12. HAMJA S/O HASAN SAB
AGE: 52 YEARS,
R/O: KASARKOD TONKA,

: 3 :

TALUK: HONNAVAR,
DIST: UTTARA KANNADA.

13. ABDUL SATTAR S/O ABBAS CHAUGULE
AGE: 68 YEARS,
R/O: ASHURKHAN GALLI, BUNDER ROAD,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
14. ISMAIL S/O ABDUL SATTAR CHAUGULE
AGE: 39 YEARS,
R/O: ASHURKHAN GALLI ROAD,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
15. NARAYAN S/O RAMA TANDEL
AGE: 47 YEARS,
R/O: RAM NAGAR, KASARKOD,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
16. PRAKASH S/O OGOPAL TANDEL
AGE: 45 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
17. STANLOS S/O ALBERT FERNANDES
AGE: 55 YEARS,
R/O: R.C. CHURCH ROAD,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
18. JOHM S/O ALBERT FERNANDES
AGE: 52 YEARS,
R/O: R.C. CHURCH ROAD,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
19. JALEEL S/O MOHAMMED SAB
AGE: 29 YEARS,
R/O: KASARKOD TONKA,

: 4 :

TALUK: HONNAVAR,
DIST: UTTARA KANNADA.

20. KASEEM S/O ABDUL SAB
AGE: 50 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
21. ROSHAN S/O FELISON FERNANDES
AGE: 38 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
22. FELISON S/O MARSHAL FERNANDES
AGE: 69 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
23. DANNISH S/O SANTAN FERNANDES
AGE: 64 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
24. SURESH S/O RUKMAYYA MESTA
AGE: 52 YEARS,
R/O: DURGAKERI,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
25. VICTOR S/O MARSHAL FERNANDES
AGE: 65 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
26. VIJAY S/O VICTOR FERNANDES
AGE: 35 YEARS,
R/O: KASARKOD TONKA,

: 5 :

TALUK: HONNAVAR,
DIST: UTTARA KANNADA.

27. PANDURANG S/O GANAPATI TANDEL
AGE: 40 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.

... PETITIONERS

(BY SRI. J S SHETTY ASSOCIATES, ADVOCATES)

AND:

1. THE STATE OF KARNATAKA
BY ITS SECRETARY
DEPARTMENT OF PUBLIC WORKS,
PORT AND INLAND WATER TRANSPORT (PORT)
M.S. BUILDING, BENGALURU.
2. THE DIRECTOR,
PORT AND INLAND WATER TRANSPORT DEPARTMENT
KARWAR, DIST: UTTARA KANNADA.
3. THE PORT OFFICER
HONNAVAR PORT,
TQ: HONNAVAR,
DIST: UTTARA KANNADA.
4. THE M/S NORTH CANARA SEA PORTS
GVPREL - CONSORTIUM,
HYDARABAD.
R/B PORT OFFICER
5. THE DEPUTY COMMISSIONER
UTTARA KANNADA DISTRICT
KARWAR.

... RESPONDENTS

(BY SMT. K. VIDYAVATHI, AGA FOR R1 TO R3 & R5)

: 6 :

THESE WRIT PETITIONS ARE FILED UNDER ARTICLES 226 AND 227 OF THE CONSTITUTION OF INDIA PRAYING TO QUASH THE GOVERNMENT ORDER DATED:22.09.2010, PASSED BY RESPONDENT NO.1, THE COPY OF WHICH HAS BEEN PRODUCED HEREWITH AT ANNEXURE-A, THE NOTICE DATED:19.10.2015 ISSUED BY THE 3rd RESPONDENT, THE COPY OF WHICH HAVE BEEN PRODUCED HEREWITH AND MARKED AS ANNEXURE-B SO FAR AS PETITIONERS ARE CONCERNED AND ALSO THE NOTICES DATED:24.11.2015, ISSUED BY THE 3rd RESPONDENT TO THE PETITIONERS, THE COPIES OF WHICH HAVE BEEN PRODUCED HEREWITH AND MARKED AS ANNEXURES-C, C1 TO C26.

THESE PETITIONS COMING ON FOR PRELIMINARY HEARING THIS DAY, THE COURT MADE THE FOLLOWING:

ORDER

Learned AGA is directed to take notice for respondent Nos.1 to 3 and 5.

The petitioners, who are the unauthorised occupants of the Government land, are before this Court for a writ of certiorari to quash the Government Order No.LOE 119 PSP 2010 Bangalore dated 22.09.2010 passed by the respondent No.1 and the notices No.BHUMI/CR-22/2015-16 dated 19.10.2015 and 24.11.2015, issued by the 3rd respondent.

2. It is the case of the petitioners that they are the residents of Tonka, Kasarkod village of Honnavar taluk and all of

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them are doing traditional fisheries and allied activities and they are traditionally drying the fish so collected from the sea, in the sea shore by using the heat generated from the sun light. These fishermen are even though belonging to different social groups, caste and religion all of them are doing the said traditional fishing work and they and their family members are mainly depending on the income of said work for their livelihood. There were about 300 families who are residing in the Tonka area of Kasarkod village and the population of the area is about 1000 and they are mainly depending on the said fishing activities. There are about 5000 people who are mainly depending on the said fisheries and its allied activities, and the said activities being carried on by these petitioners from generations and generations and there were no complaint whatsoever against the petitioners and against the other persons in respect of the said activities. They also contended that there exists a temple, Christian Church and also Muslim Mosques in that area. It is also contended that the area where the petitioners are carrying on their fisheries activities is surrounded

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by the Arabian Sea on the western side and the Sharavati River on the Eastern side and the river Shavravati is joining the Arabian sea in the said area. The petitioners produced the map showing location of the said area in Annexure-E and Toposheet of Survey of India as Annexure-F and also produced the sketch prepared in the year 1923 by the Superintendent of Revenue Survey Government Cottedance Office Puna at Annexures G to G1 and copies of the Earth Image prepared by the Google Earth in the year 2004 and 2015 at Annexures – H, H1, H2, H3 and H4.

3. According to the petitioners, due to the reason of the flood and also due to reason of force of water joining the sea the river Sharavati changed its course of joining the sea and as a result of which some area had disappeared and river started to join the Arabian Sea at Mallakuruva. As a result of which, the area where in the fishermen were living had sub-merged in the sea and river water and some abandoned river bed and formed the new land and as a result of which the fisherman who were residing in the area now sub-merged in the sea water, were compelled to shift to

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the new area which was then formed and they have started to carry on their activities in the said area. The petitioners further contended that the 1st petitioner has been assessed to tax by the Gram Panchayat and he paid taxes in respect of the shed constructed by him and all the petitioners are in possession and enjoyment of the lands in question uninterruptedly.

4. It is further case of the petitioners that the land in question is a Alluvial land and the petitioners are entitled for temporary use thereof and further contended that the 3rd respondent – Port Officer, without any authority of law, had issued notice calling upon the petitioners to dismantle their houses and sheds where in the petitioners are carrying their fisheries activities and he had also issued the notice stating that this land have been granted by the Government in favour of 4th respondent, the petitioners without any right are continuing in possession and he has further directed the petitioners to vacate the land in question by removing the sheds. The copies of the

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notices issued by the 3rd respondent is produced at Annexures -- B, C and C1 to C26.

5. Thereafter, the petitioners filed objections in response to the said notice by Annexures – L, L1 to L26. However, the said objections are not all considered by the authorities till today. It is further case of the petitioners that, they made representation to the Deputy Commissioner to grant the said lands in their favour. In spite of the same, the Deputy Commissioner has not yet considered to pass orders. In the meanwhile, the respondents are threatening to evict the petitioners and hence they are before this Court.

6. I have heard the learned Counsel for the parties to the
ls.

7. Sri. J. S. Shetty, learned Counsel for the petitioners, contended that the lands in question are Alluvial lands and the petitioners are entitled for grant under the provisions of Sections 80 and 92 of the Karnataka Land Revenue Act. Before taking any

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action for grant of land in response to the applications filed by the petitioners, the respondents cannot evict the present petitioners, who are in possession and enjoyment of the respective sheds for more than 30 years. He also contended that the Deputy Commissioner has not initiated any action to consider the representation filed by the petitioners on 17.12.2015. Therefore, he sought to allow the above writ petitions.

8. Per contra, on issuing notice by the Court, Smt. Vidyavathi, learned AGA appeared for respondents 1 to 3 and 5, contended that the petitioners have not come to the Court with clean hands and they have suppressed the material facts of the case. She contended that there were three notices issued to the petitioners directing them to evict from the unauthorised occupation of the sheds unauthorisedly constructed by them in the land in question. The learned AGA brought to the notice of this Court that all the petitioners filed appeals in M.A.Nos.1/2016 to 27/2016 before the District Judge Court, U.K. Karwar at Karwar and the said appeals are pending. In the said appeals, the

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petitioners also referred the present writ petitions at Para 8 of the appeal memo, which reads as under:

“8. The appellant and other has jointly challenged the order sanctioning the land occupied by them to the third party before the Hon’ble High Court of Karnataka at W.P.No.100908/2016 to 100954/2016. The matter is pending. This has been brought to the notice of the respondent No.3.”

Therefore she contended that the very writ petitions filed by the petitioners against show cause notices are premature and are liable to be dismissed. She further vehemently contended that the petitioners cannot avail the parallel remedies simultaneously before this Court as well as before the District Judge, Karwar, against the same show cause notices. The learned AGA also brought to the notice of this Court that Annexure-A is passed by the State Government leasing five acres for ten years in favour of the 4th respondent and now the same is transferred to SPV,

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Honnagara Ports Pvt. Ltd., on 07.04.2011. Therefore, she sought to dismiss the writ petitions.

9. I have given my anxious consideration to the arguments advanced by the learned Counsel for the parties and perused the entire material on record.

10. Insofar as challenge in respect of Annexure-A passed by the State Government granting lease of five acres for ten years, on lease-cum-rental basis for Rs.1,17,560/- in favour of the respondent No.4, it is an admitted fact that all these petitioners are unauthorised occupants of the Government land. They have no *locus standi* to challenge the order passed by the State Government leasing the lands in question in favour of other person. The petitioners have not produced any material documents before this Court to show what is their right to challenge the order dated 22.09.2010 passed by the State Government. Admittedly, the State Government is the owner of the property in question. In the absence of any right, title and interest, the petitioners cannot question the same. Therefore, the

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writ petition filed by the petitioners insofar as Annexure-A is concerned, is without any right. The same cannot be accepted. On that ground alone, the writ petitions filed by the petitioners are liable to be dismissed.

11. Insofar as Annexures – B, C and C1 to C26 are concerned, it is not in dispute that the very impugned notices issued by the respondent No.3 – Port Officer, are the subject matter in the appeals before the learned District Judge, Karwar in M.A. Nos.1 to 27 of 2016, which clearly indicates that the petitioners are seeking parallel remedies simultaneously against the same show cause notices, before the District Judge as well as before this Court which is impermissible in law.

12. It is also not in dispute that in response to the notices issued at Annexures – B, C and C1 to C26 dated 19.10.2015, 24.11.2015 and 30.12.2015 respectively, the petitioners filed objections before the 3rd respondent – Port Officer on 04.01.2016, as per Annexures – L and L1 to L26. If that is so, the writ petitions filed by the petitioners against the show cause

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notices stated supra are not maintainable and the same are liable to be dismissed. It is for the 3rd respondent to consider the objections filed by the petitioners to all the show cause notices dated 19.10.2015, 24.11.2015 and 30.12.2015 and pass orders in accordance with law.

13. Insofar as the contention of the learned Counsel for the petitioners that the petitioners have made the representations for grant of land as per Annexure-D dated 17.12.2015 cannot be accepted, the subject mentioned in Annexure-D clearly depicts that the eviction of unauthorised occupation by the petitioners in survey No.305 and in the operative portion they only states, if the authorities come to conclusion that if it is an Alluvial land, the authorities can grant the same to them. Admittedly, in the representation made by the petitioners on 17.12.2015, in respect of the eviction of unauthorised occupation, the details regarding which are the property and what is the extent and how many years they are in possession of the property etc. are not forthcoming. It is for the petitioners to approach the authorities, if the land is

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available for grant, and ultimately, if the petitioners are able to prove that it is an Alluvial land, it is for the concerned authority to condone the same and pass appropriate orders in accordance with law. Therefore, the said contention of the petitioners cannot be accepted.

14. The learned Counsel for the petitioners further relied upon the judgment of this Court in the case of *Satish and Ors. Vs. The Deputy Commissioner, Bagalkot Taluk and Ors.* reported in 2015 (4) KLJ 95 in support of his arguments. The said judgment is with regard to Alluvial lands under the provisions of Section 92 of the Karnataka Land Revenue Act. Admittedly, in the present case, the petitioner has not produced any material documents before the Court that the lands in question are Alluvial lands. In the absence of the same, the judgment relied upon by the learned Counsel for the petitioners, has no application to the facts and circumstances of the present case.

15. It is a well settled law by a series of decisions of the Apex Court that no writ lies against the show cause notice,

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namely, in the case of *Executive Engineer, Bihar State Housing Board Vs. Ramesh Kumar S* reported in JT(1995) 8 SC 331, *Special Director Vs. Mohd. Ghulam Ghouse* reported in AIR 2004 SC 1467 and in the case of *State of U.P. Vs. Brahm Datt Sharma* reported in AIR 1687 SC 943. Further, the Hon'ble Supreme Court in the case of *Union of India and Another Vs. Kunishetty Satyanarayana* reported in AIR (2006) 12 SCC 28, while considering the departmental enquiry, has held that the writ jurisdiction is discretionary jurisdiction and as such, discretion under Articles 226 and 227 should not ordinarily be exercised by quashing show notice and no doubt in some very rare and exceptional cases, the High Court can quash notice, if it is found to be wholly without jurisdiction or for some other reason, which is wholly illegal. However, ordinarily, the High Court should not interfere in such matters.

16. In the present case, the petitioners are in unauthorised occupation of the Government Land and the show cause notices were issued to the petitioners calling for the explanation as to why

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action should not be taken against them within fifteen days from the receipt of notice, by producing relevant documents sought in the impugned notices and the petitioners already approached the District Judge by filing appeals in M.A.Nos. 1 to 27 of 2016 against the very same show cause notices, which nothing but seeking parallel remedies simultaneously, and the petitioners have not made out any rare and exceptional cases, so as to exercise discretionary jurisdiction of this Court. It is not a case of the petitioners that in the present case that notices issued are only without jurisdiction, nor the notices are otherwise illegal and not a case that the impugned notices are issued without application of mind. Therefore, the writ petitions are not maintainable.

In view of the aforesaid reasons, the writ petitions filed by the petitioners are dismissed as premature. However, the respondents are directed to consider the representations of the petitioners and pass appropriate orders in accordance with law. Till such consideration of the representations, the respondents shall not dispossess the petitioners from the lands in question.

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Learned AGA is permitted to file memo of appearance within four weeks.

Sd/-
JUDGE

gab

**IN THE HIGH COURT OF KARNATAKA
DHARWAD BENCH**

DATED THIS THE 20TH DAY OF SEPTEMBER, 2016

PRESENT

THE HON'BLE MR. JUSTICE ASHOK B. HINCHIGERI

AND

THE HON'BLE MR. JUSTICE P. S. DINESH KUMAR

W.A.NOs.100303/2016 & 101144-101169/2016 (GM-RES)

BETWEEN:

1. HASAN S/O ABUBAKAR SAB
AGE: 46 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
2. MOHAMMAD
S/O KHADARSAB AHMED BABA
AGE: 52 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
3. SHRIDHAR S/O JAGANNATH TANDEL
AGE: 29 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.

4. NATEDAR S/O SAVER FERNANDES
AGE: 49 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
5. SHESHAGERI S/O VENKAPPA TANDEL
AGE: 51 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
6. SANDEEP S/O SHESHAGERI VENKAPPA TANDEL
AGE: 24 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
7. MOHAMMED RAFIQUE S/O ISMAIL SAB
AGE: 37 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
8. SANJAY S/O PEDRU FERNANDES
AGE: 35 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
9. PANDURANG
S/O SHESHAGERI CHOLAYYA TANDEL
AGE: 41 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.

10. ILIYAS ABDUL S/O GAFOOR KEWKA
AGE: 43 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
11. ABDUL AMEER S/O MAHAMMEDSAB ULLAL
AGE: 31 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
12. HAMJA S/O HASAN SAB
AGE: 52 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
13. ABDUL SATTAR S/O ABBAS CHAUGULE
AGE: 68 YEARS,
R/O: ASHURKHAN GALLI,
BUNDER ROAD, TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
14. ISMAIL S/O ABDUL SATTAR CHAUGULE
AGE: 39 YEARS,
R/O: ASHURKHAN GALLI ROAD,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
15. NARAYAN S/O RAMA TANDEL
AGE: 47 YEARS,
R/O: RAM NAGAR, KASARKOD,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.

16. PRAKASH S/O.GOPAL TANDEL
AGE: 45 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
17. STANLOS S/O ALBERT FERNANDES
AGE: 55 YEARS,
R/O: R.C. CHURCH ROAD,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
18. JOHM S/O ALBERT FERNANDES
AGE: 52 YEARS,
R/O: R.C. CHURCH ROAD,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
19. JALEEL S/O MOHAMMED SAB
AGE: 29 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
20. KASEEM S/O ABDUL SAB
AGE: 50 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
21. ROSHAN S/O FELISON MARSHAL FERNANDES
AGE: 38 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.

22. FELISON S/O MARSHAL FERNANDES
AGE: 69 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
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23. DANISH S/O SANTAN FERNANDES
AGE: 64 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
24. SURESH S/O RUKMAYYA MESTA
AGE: 52 YEARS, R/O: DURGAKERI,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
25. VICTOR S/O MARSHAL FERNANDES
AGE: 65 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
26. VIJAY S/O VICTOR FERNANDES
AGE: 35 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.
27. PANDURANG S/O GANAPATI TANDEL
AGE: 40 YEARS,
R/O: KASARKOD TONKA,
TALUK: HONNAVAR,
DIST: UTTARA KANNADA.

... APPELLANTS

(BY SRI J. S. SHETTY ASSOCIATES, ADVOCATE)

AND:

1. THE STATE OF KARNATAKA
BY ITS SECRETARY
DEPARTMENT OF PUBLIC WORKS,
PORT AND INLAND WATER TRANSPORT (PORT)
M.S. BUILDING, BENGALURU
2. THE DIRECTOR,
PORT AND INLAND WATER TRANSPORT
DEPARTMENT KARWAR, DIST: UTTARA KANNADA.
3. THE PORT OFFICER
HONNAVAR PORT,
TQ: HONNAVAR,
DIST: UTTARA KANNADA.
4. THE M/S NORTH CANARA SEA PORTS
GVPREL-CONSORTIUM,
HYDARABAD.
REPRESENTED BY PORT OFFICER.
5. THE DEPUTY COMMISSIONER
UTTARA KANNADA DISTRICT
KARWAR.

... RESPONDENTS

(BY SMT. K. VIDYAVATHI, AGA FOR R1 TO R3 & R5)

THESE WRIT APPEALS ARE FILED UNDER SECTION 4 OF THE KARNATAKA HIGH COURT ACT, 1961 PRAYING TO SET ASIDE THE ORDER DATED 10.02.2016 PASSED BY THE LEARNED SINGLE JUDGE IN WP NO.100908-934/2016.

THESE APPEALS COMING ON FOR PRELIMINARY HEARING THIS DAY, **ASHOK B.HINCHIGERI, J.** DELIVERED THE FOLLOWING:

JUDGMENT

These appeals are directed against the learned Single Judge's order, dated 10.02.2016 passed in W.P.Nos.100908-934/2016. The appellants claim that earlier they were residing in the areas which came to be submerged under sea and river water. They were therefore constrained to shift to the newly formed areas near the said water. The Government, vide its order dated 22.09.2010 (Annexure - A), leased the land to M/s. North Canara Sea Ports GVPREL-Consortium, Hyderabad, the respondent No.4 herein, for a period of thirty years. The respondent No.3 issued the notice, dated 19.10.2015 (Annexure-B) to the persons, who had unauthorisedly occupied the said land and constructed the cottages/sheds. Subsequently, the individual show-cause notices (Annexures-C1 to C26) were also issued to the unauthorised occupants. The said Government Order, notice and individual show-cause notices were impugned before the learned Single Judge, who

by his order, dated 10.01.2016 disposed of the writ petitions with a direction to the respondents to pass appropriate orders on the notices issued to the appellants and the replies received thereto. He also directed the respondents not to dispossess the petitioners from the land in question until such time that their representations are considered.

2. Sri J. S. Shetty, learned counsel for the appellants submits that the learned Single Judge has erred in returning the finding that the lands in question are not alluvial lands. He asserts that the lands in question are newly formed on account of the change in the course or direction of the flow of the sea and river water. He submits that what is challenged before the District Court in M.A.No.1 to 27/2016 are the orders passed by the authorities under the provisions of Public Premises (Eviction of Unauthorised Occupants) Act. He submits that the filing of the said appeals before the District Judge is also not withheld from this Court. On the ground of the appellants filing the said appeals, the relief cannot be denied to them in the writ petition, where the challenge is primarily to the Government Order

granting the lease of the lands to the respondent No.4 for a period of 30 years. He has also relied upon the Division Bench decision in the case of *Satish and Ors. Vs. The Deputy Commissioner, Bagalkot Taluk and Ors. reported in KANTLJ-2015-4-95.*

3. Smt. K. Vidyavathi, learned Additional Government Advocate who appears for the respondent Nos. 1 to 3 and 5 submits that the Government order granting the lease of land to the respondent No.4 is issued in 2010. After five long years, the appellants approached this Court. She would contend that the writ petition is liable to be rejected on the ground of delay and laches.

4. She would submit that the Port Officer called upon the appellants to produce five specific documents. Without producing any documents, the appellants have given the replies.

5. The submission of the learned counsel have received our thoughtful consideration. The challenge to the impugned Government order dated 22.09.2010 is liable to be negated on the ground of delay and laches. No cogent explanation is forthcoming

as to why the appellants took 5-6 years to challenge the Government Order granting the lease of the land to the respondent No.4. We notice that the learned Single Judge has indeed given interim protection to the appellants. Admittedly and rightly the appellants have submitted the replies to the impugned show cause notices. Until such time that their explanation is considered, the crisis should not be precipitated. That is why the learned Single Judge has directed the respondents not to dispossess the petitioners from the land in question until such time that their representations are considered.

6. We find the learned Single Judge's order to be balanced. It does not call for any interference. All that is required to be done is to observe that the respondent No.3, to whom the explanation is offered by the appellants and the District Court, which is seized of the matter in M.A Nos. 1 to 27/2016, would dispose of the said matters pending before them independently of and without being influenced by the learned Single Judge's order.

7. Further, if the Government comes to the judicious conclusion that the appellants have the eligibility and entitlement to the grant/lease of land, it may consider their cases in respect of the alternative Government lands subject to their availability. With these observations, these appeals are disposed of.

Sd/-
JUDGE

Sd/-
JUDGE

gab