HTOA Hydraulic Trailer Owners Association

Volume 10 Issue 2
May 2024

HEAVY HAULERS

FIRST HEAVY LIFT JOURNAL OF INDIA

TRANSFORMING ODC MOVEMENT

DELIVERING LOGISTICS EXCELLENCE

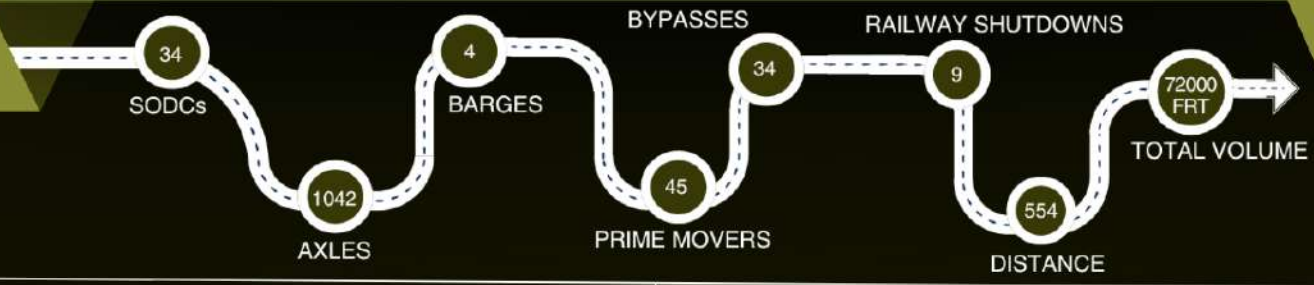
Asia's largest multimodal project cargo

Transportation Project Over The Longest Distance...

PRISM LOGISTICS moves Specialised & Oversized Cargo Globally

THINK BIG | THINK SAFE | THINK PRISM

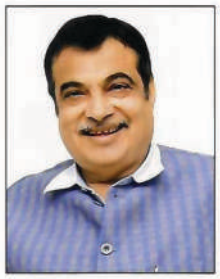
PRISM LOGISTICS



Prism Logistics Pvt Ltd. :- Kolkata Office
Chatterjee International Centre 4th Floor, Suite No. 2 & 3,
33A, Jawaharlal Nehru Road, Kolkata – 700 071,
Contact - 033 22884416/17/19
E-mail: projects@prismlogistics.in

Prism Logistics Pvt. Ltd. :- Mumbai Office
Unit No.206, 2nd floor, Wing - A, 215 Atrium Andheri Kurla
Road, Andheri East, Mumbai - 400059 Maharashtra,
Contact - 022 46089537
Website : www.prismlogistics.in

नितिन गडकरी
NITIN GADKARI



सत्यमेव जयते

मंत्री
सड़क परिवहन एवं राजमार्ग
भारत सरकार
Minister
Road Transport and Highways
Government of India

MESSAGE

I am glad to know that Hydraulic Trailer Owners Association (HTOA) has published "Heavy Haulers," a pioneering heavy lift journal, fostering understanding and communication among stakeholders of the intricacies of transportation of over-dimensional and over-weight equipment and enhancing the operational framework.

I am also glad to know that HTOA is engaged in healthy dialogue with industry stakeholders and policy makers for formulating pragmatic guidelines, supportive of the heavy haulers industry and efficiency. I acknowledge and appreciate HTOA's proactive approach in addressing the challenges faced in the movement of over-dimensional and over-weight consignments.

As we continue to push the boundaries towards digitalization and ease of doing business, we are hopeful that "Heavy Haulers" will add a significant feather to HTOA's cap by disseminating vital information that supports these initiatives.

I wish HTOA and "Heavy Haulers" every success in their future endeavours.

(NITIN GADKARI)

NEW DELHI
Date 14.05.2024

Room No. 501, Transport Bhawan, 1, Sansad Marg, New Delhi – 110 001, Tel.: 011-23710121, 23711252 (O), 23719023 (F)
E-mail: nitin.gadkari@nic.in; website-www.morth.nic.in

DHP HEAVYLIFT SOLUTION PRIVATE LIMITED
1207, 12th Floor, Universal Majestic, P L Lokhande Marg,
Chembur West, Mumbai-400071, Maharashtra India.
Email Us- sales@dhpheavy.com | info@dhpheavy.com

Expertise in Heavylift Cargo, Multimodal and Indian coastal Transportation

Specialised Transport Asset owned enterprise

- Transportation Solutions Meeting Every Industry's Need.
- In-house transport engineering.
- Exclusive Equipment - SPMT and Pontoon Barges.

Vivek Bhimanwar

Transport Commissioner

Tel. No. : 022-22614721 / 22614722
Fax No. : 022-22615073
Email : transport.commr-mh@gov.in

D.O. No. 5750

TRANSPORT COMMISSIONER'S OFFICE
5th Floor, Fountain Telecom Building - 2,
M. G. Road, Fort, Mumbai 400 001.

Date : 16 MAY 2024

MESSAGE

On behalf of the Government of Maharashtra, I extend hearty congratulations on the revival of HTOA`s esteemed journal, "Heavy Haulers."

The revival of "Heavy Haulers" is a testament to HTOA's commitment to excellence and its relentless pursuit of enhancing the operational framework within the heavy transport sector. Your efforts in maintaining a transparent dialogue between the government and the industry stakeholders help us in formulating policies that are not only pragmatic but also supportive of the industry's growth and efficiency.

In pursuit to your association`s efforts, I am happy to inform that Government of Maharashtra has already started single window online ODC Permission Process for transportation of ODCs on Multi Axles Hydraulic Trailers on state highways. This has helped many over-dimensional/over-weight consignment transporters in obtaining time bound permissions.

We thank you sincerely for your dedication to enhancing the heavy lift and transport sector and look forward to your continued support. Congratulations once again on this significant achievement, and we anticipate more collaborative successes in the future.

Warm regards.

Transport Commissioner,
Maharashtra State.

J M BAXI
THE PORT SPECIALIST
PORTS & LOGISTICS

India's heaviest 6700 ton load out
ONTIME, EVERYTIME - SAFELY

J M Baxi Heavy successfully Transports and Loads Out the TP 13 Platform Topside Module at L&T Hazira Yard

260
Axle Lines

12
PPU

85
Ballast Pumps

Discover Precision-Crafted Solutions:
Tailoring engineering expertise to conquer your project's every challenge

J M BAXI HEAVY PVT. LTD,
Godrej Coliseum, 8th Floor, 802-B Wing, Everard Nagar,
Sion (East), Mumbai 400 022. Maharashtra. India

B: +91 22 71986666 | E: projects.heavy@jmbaxi.com | W: www.jmbaxi.com

CONTENT

1. HTOA - Core Values ..... | 08
2. From The Desk of Chairman..... Sameer Parikh | 09
3. Office Bearers ..... | 14
4. IT & Training Sub Committee ..... | 15
5. Safety & Regulatory Sub Committee ..... | 16
6. Trade Representative Sub Committee ..... | 17
7. Know Your Convener ..... | 18
8. Transporting OWC over Ageing Highway Bridge Infrastructure - Challenges & Remedies..... Alok Bhowmick | 20
9. Techno Commercial Aspects of Cargo Transportation for High Value projects ..... Pradeep Dongre | 27
10. Heavy Transportation Prioritizing Safety ..... Sameer Parikh | 35
11. Recent Activities by HTOA ..... | 38
12. MoRTH Guidelines on OD/OWC Movement..... | 45
13. Navigating Giants: Transporting Power Equipment Across India's Geographical Vastness ..... Nilesh Sinha | 72
14. Single window online ODC Permission for transportation of ODCs on Multi Axles Hydraulic Trailers started by Maharashtra state. ..... | 77
15. Carrying Modular Hydraulic Trailer on Kundli Manesar Palwal Express Highway - HSIIDC. ..... | 78
16. Super heavy cargo end to end multimodal transportation - It is high time for a change .....H.S. Acharya | 80
17. MoRTH ODC Portal since 2015 data analysis ..... N.I.C. | 86
18. HTOA Member List ..... | 89
19. Ministry of Road Transport and Highways - who is who ..... | 91

Hydraulic Trailer Owners Association

301, Commercial Manor,
4th Cross Clive Road, Masjid Bunder (East), Mumbai - 400009,
Maharashtra, India.

HTOA
Core Values

APPLICATION
Ensure 100% ODC/OWC movement under cover of MoRTH Permission.

SAFETY
Members will adhere to MoRTH safety guidelines and conditions mentioned in the permission.

DECLARATION
Members commit to declaring true, correct, and complete information about ODC cargo, weight, and dimensions.tt

COMPLIANCE
Members commit to moving cargo as per the permission issued and follow the law of the land.

SUPPORT & PROFESSIONAL COMMITMENT
Members will guide and train other carriers not to carry more than one package on a Hydraulic Trailer. As per the announcements by Authorities or as informed, carriers will not use distressed bridges & routes.

PROFESSIONAL SERVICES
Members will follow ESG norms, ensure proper loading, lashing & securing, follow anufacturer's guidelines, use quality equipment, training to drivers and operators and respect to public propety.

TECHNICAL APPLICATION
Strict observance of permitted Gross Combination Weight (GCW) limits along with per axle row weight limit of 18 tons/axle row including tare weight.

COMRADERY & HEALTHY COMPETITION
Members will support each other and guide other operators to work in harmony, not venture into incorrect and unethical practices. Members will communicate and guide operators not to,

a. Overload the cargo.
b. Carry more than one package per modular trailer.
c. Tamper or deviate from the MORTH permission.

Sameer Parikh
Chairman HTOA

From The Desk of **Chairman**

Hydraulic Trailer Owners Association (HTOA), an esteemed organization dedicated to promoting excellence and innovation in the field of heavy and specialized transportation. HTOA serves as a vital platform for hydraulic trailer owners, providing a unified voice to address industry challenges, advocate for policy improvements, and enhance operational standards. In continuation to address the quest of knowledge and information assimilation , I am pleased to share that we are releasing the new edition of Heavy Haulers – India's First Heavy Lift Journal .

Heavy Haulers is India's first comprehensive journal dedicated to the heavy lift and specialized transport industry. Our journey began with the vision of creating an informative and collaborative space for industry stakeholders. This journal has become an invaluable resource, offering insights into the complexities of transporting oversized and heavy equipment essential for key infrastructure projects across various sectors since 2015 . Our goal is to document and share the pioneering efforts and innovations within our industry, highlighting the achievements and challenges faced by those who undertake these formidable tasks.

During the 16th Annual General Meeting (AGM) of HTOA, we reaffirmed our commitment to act as a bridge between our members and all stakeholders, including hydraulic trailer operators, regulators, equipment manufacturers, vehicle-related OEMs/ suppliers, infrastructure providers (both physical and digital), manpower/crew, environment, and society. The journal will be a guide and knowledge center for all members as we pull out :

A. Learning from Industry Leaders: We aim to bring forth the experiences and wisdom of various leaders in our industry. Their journeys, challenges, and successes will provide valuable

lessons and inspiration for all our members.

B. Guiding Good Practices: HTOA will act as a beacon, guiding our members towards best practices that enhance safety, efficiency, and sustainability in our operations. Sharing knowledge and setting benchmarks will enable us to collectively elevate industry standards.

C. Showcasing Global Projects: Our journal will highlight innovative projects from across the world, showcasing new ideas and remarkable achievements. These stories will not only inspire but also provide practical insights that can be applied to our local context.

D. Introducing Special Articles: Moving forward, we plan to introduce special articles focusing on critical aspects such as safety, lashing, and engineering. These articles will delve into technical details, offering expert advice and practical solutions to everyday challenges faced by our members.

This addition of Heavy haulers we are addressing the significant transformations taking place in the transportation of Over-Dimensional (OD) and Over-Weight (OW) cargo in India. Indian companies are raising the bar by solving complex transport engineering problems with their in-house teams, experts, and skills. The innovative solutions and achievements in this field are a testament to the growing capabilities and expertise within our industry.

This edition of Heavy Haulers also covers important topics such as bridge management, project management, safe practices, multi-modal transportation of super heavy cargo, and guidelines issued by the Ministry of Road Transport and Highways (MoRTH) and their implications.

The HTOA Board Member and Management committee aims to bridge the missing link, fostering collaboration, education, and the sharing of best practices among all stakeholders. Therefore , We invite you to take this opportunity to submit your papers for the upcoming editions of Heavy Haulers, contributing to the collective knowledge and progress of our industry.

Together, we can drive the industry forward, embracing innovation and best practices while ensuring the highest standards of safety and efficiency.

Warm regards,
Sameer Parikh
Chairman HTOA

समीर पारिख
अध्यक्ष - एचटीओए

अध्यक्ष की कलम से

हाइड्रोलिक ट्रेलर ओनर्स एसोसिएशन (HTOA), भारी और विशेष परिवहन के क्षेत्र में उत्कृष्टता और नवाचार को बढ़ावा देने के लिए समर्पित एक प्रतिष्ठित संगठन है। HTOA हाइड्रोलिक ट्रेलर मालिकों के लिए एक महत्वपूर्ण मंच के रूप में कार्य करता है, जो उद्योग की चुनौतियों का समाधान करने, नीतिगत सुधारों की वकालत करने और परिचालन मानकों को बढ़ाने के लिए एक एकीकृत आवाज़ प्रदान करता है। ज्ञान और सूचना आत्मसात की खोज को संबोधित करने के लिए, मुझे यह साझा करते हुए खुशी हो रही है कि हम हैवी हॉलर्स - भारत की पहली हैवी लिफ्ट जर्नल का नया संस्करण जारी कर रहे हैं।

दस्तावेजित करना और साझा करना है, जो इन दुर्जेय कार्यों को करने वालों द्वारा सामना की जाने वाली उपलब्धियों और चुनौतियों पर प्रकाश डालते हैं।

HTOA की 16वीं वार्षिक आम बैठक (AGM) के दौरान, हमने अपने सदस्यों और हाइड्रोलिक ट्रेलर ऑपरेटरों, विनियामकों, उपकरण निर्माताओं, वाहन-संबंधित OEM/आपूर्तिकर्ताओं, बुनियादी ढाँचा प्रदाताओं (भौतिक और डिजिटल दोनों), जनशक्ति/चालक दल, पर्यावरण और समाज सहित सभी हितधारकों के बीच एक सेतु के रूप में कार्य करने

हैवी हॉलर्स भारत की पहली व्यापक पत्रिका है जो हैवी लिफ्ट और विशेष परिवहन उद्योग को समर्पित है। हमारी यात्रा उद्योग के हितधारकों के लिए एक सूचनात्मक और सहयोगी स्थान बनाने की दृष्टि से शुरू हुई। यह पत्रिका एक अमूल्य संसाधन बन गई है, जो 2015 से विभिन्न क्षेत्रों में प्रमुख बुनियादी ढांचा परियोजनाओं के लिए आवश्यक बड़े और भारी उपकरणों के परिवहन की जटिलताओं के बारे में जानकारी प्रदान करती है। हमारा लक्ष्य हमारे उद्योग के भीतर अग्रणी प्रयासों और नवाचारों को

की अपनी प्रतिबद्धता की पुष्टि की। यह पत्रिका सभी सदस्यों के लिए एक मार्गदर्शक और ज्ञान केंद्र होगी क्योंकि हम निम्नलिखित कार्य करेंगे:

A- इंडस्ट्री लीडर से सीखना: हमारा लक्ष्य हमारे उद्योग के विभिन्न नेताओं के अनुभवों और ज्ञान को सामने लाना है। उनकी यात्राएँ, चुनौतियाँ और सफलताएँ हमारे सभी सदस्यों के लिए बहुमूल्य सबक और प्रेरणा प्रदान करेंगी।

B- अच्छे अभ्यासों का मार्गदर्शन करना: HTOA एक प्रकाश स्तंभ के रूप में कार्य करेगा, जो हमारे सदस्यों को हमारे संचालन में सुरक्षा, दक्षता और स्थिरता को बढ़ाने वाली सर्वोत्तम प्रथाओं की ओर मार्गदर्शन करेगा। ज्ञान साझा करना और मानक स्थापित करना हमें सामूहिक रूप से उद्योग मानकों को बढ़ाने में सक्षम बनाएगा।

C- वैश्विक परियोजनाओं का प्रदर्शन: हमारी पत्रिका दुनिया भर की अभिनव परियोजनाओं को उजागर करेगी, नए विचारों और उल्लेखनीय उपलब्धियों को प्रदर्शित करेगी। ये कहानियाँ न केवल प्रेरणा देंगी, बल्कि व्यावहारिक अंतर्दृष्टि भी प्रदान करेंगी, जिन्हें हमारे स्थानीय संदर्भ में लागू किया जा सकता है।

D- विशेष लेख प्रस्तुत करना: आगे बढ़ते हुए, हम सुरक्षा, लैशिंग और इंजीनियरिंग जैसे महत्वपूर्ण पहलुओं पर ध्यान केंद्रित करते हुए विशेष लेख प्रस्तुत करने की योजना बना रहे हैं। ये लेख तकनीकी विवरणों पर चर्चा करेंगे, हमारे सदस्यों द्वारा सामना की जाने वाली रोज़मर्रा की चुनौतियों के लिए विशेषज्ञ सलाह और व्यावहारिक समाधान प्रदान करेंगे।

हैवी हॉलर्स के इस संस्करण में हम भारत में ओवर-डायमेंशनल (OD) और ओवर-वेट (OW) कार्गो के परिवहन में हो रहे महत्वपूर्ण परिवर्तनों को संबोधित कर रहे हैं। भारतीय कंपनियाँ अपनी इन-हाउस टीमों, विशेषज्ञों और कौशल के साथ जटिल परिवहन इंजीनियरिंग समस्याओं को हल करके मानक बढ़ा रही हैं। इस क्षेत्र में अभिनव समाधान और उपलब्धियाँ हमारे उद्योग के भीतर बढ़ती क्षमताओं और विशेषज्ञता का प्रमाण हैं।

हैवी हॉलर्स के इस संस्करण में पुल प्रबंधन, परियोजना प्रबंधन, सुरक्षित अभ्यास, सुपर हैवी कार्गो के मल्टी-मॉडल परिवहन और सड़क परिवहन और राजमार्ग मंत्रालय (MoRTH) द्वारा जारी दिशा-निर्देश और उनके निहितार्थ जैसे महत्वपूर्ण विषयों को भी शामिल किया गया है।

एचटीओए बोर्ड के सदस्य और प्रबंधन समिति का उद्देश्य सभी हितधारकों के बीच सहयोग, शिक्षा और सर्वोत्तम प्रथाओं को साझा करने को बढ़ावा देते हुए, लापता कड़ी को पाटना है। इसलिए, हम आपको इस अवसर का लाभ उठाने के लिए आमंत्रित करते हैं ताकि आप हेवी हॉलर्स के आगामी संस्करणों के लिए अपने शोधपत्र प्रस्तुत कर सकें, जिससे हमारे उद्योग के सामूहिक ज्ञान और प्रगति में योगदान मिल सके।

साथियो साथ मिलकर, हम उद्योग को आगे बढ़ा सकते हैं, सुरक्षा और दक्षता के उच्चतम मानकों को सुनिश्चित करते हुए नवाचार और सर्वोत्तम प्रथाओं को अपना सकते हैं।

हार्दिक शुभकामनाएं,
समीर पारिख
अध्यक्ष - एचटीओए

WE ARE ALL ABOUT MOVEMENT

Express Global Logistics is a leading name in India for engineering expertise, heavy lifting, transportation, and international forwarding. With door-to-door logistics management, we own assets like cranes, SPMT, and Hydraulic axles, and boast the oldest CHA license with 77+ years of experience. Our reach extends pan India and overseas to Bangladesh, Nepal & globally through various networks, ensuring a strong market presence. With us, handling Over Dimensional Cargo (ODC) is easy, thanks to our extensive capabilities and field experience.

OUR EXPERTISE

- Heavy Lifting & ODC Transportation
- Freight Forwarding & Chartering
- Project Logistics
- Custom Clearance
- Warehousing 3PL

SINCE 1946

EXG

EXPRESS GLOBAL LOGISTICS

Kulkarni Patil Bhavan, 2nd floor. 14 Murzban Road.Mumbai 400 001. Tel:+91 22 66339898, Fax: +91 22 6633 9833.
Website : www.expressworld.com

Office Bearers

Sameer Parikh
Chairman

Zarksis Parabia
Vice Chairman

Nilesh Sinha
General Secretary

Nitin Singal
Treasurer

Suhas Labde
Joint Secretary

IT & Training
Sub Committee

H.S. ACHARYA
Chairman

Suhas Labde
Member

Shrenik Kataria
Member

Safety & Regulatory

Sub Committee

RAJESH GUPTA
Chairman

BHARAT GANDHI
Member

H.S. ACHARYA
Member

SARABJIT SINGH
Member

NAILESH GANDHI
Member

Trade Representative
Sub Committee

MANISH KATARIA
Chairman

RAMRATAN AAGRWAL
Member

JIGNESH PATEL
Member

H.S. ACHARYA
Member

NILESH SINHA
Member

KNOW YOUR **CONVENER**

PAWAN JAIN
EASTERN REGION

ANKIT BAMAL
NORTHERN REGION

E. CHAKKARAVARTHY
SOUTHERN REGION

PRITESH GANDHI
MAHARASHTRA

ARCHIT AGARWAL
GUJARAT

ERECTORS AND
TRANSPORTERS
OF SUPER HEAVY
& OD EQUIPMENTS

Multimodal ODC Transport
Project Material Handling and Management
Erection, Testing and Commissioning of Power Transformers
Crane Hiring

PARABIA TRANSPORT
AN ISO & OHSAS 9001 : 14001 : 18001 I CERTIFIED COMPANY
JHP | GLOBAL

+912652339526
jhp@jhparabia.com
www.jhparabia.com

J.H.PARABIA TRANSPORT PVT. LTD,
'Samir', New India Mill Road,
Vadodara, 390007,Gujarat, India

MTO

Transporting OWC over Ageing Highway Bridge Infrastructure - Challenges & Remedies

Alok Bhowmick
(FNAE; IntPE(India);
Managing Director,
B&S Engineering Consultants Pvt. Ltd.)

Abstract

The bridge assets vary in age, condition and the type. The design loadings, codes and standards followed and the design methods adopted in construction of these bridges also vary depending upon the period in which the bridge was constructed. Traffic loads have also increased significantly over the last 4 decades, to the extent that the current loads are much more severe than the original design loads for which majority of in-service bridges were designed. A major change brought in the loading code (IRC:6) was in 2014, when Special Vehicle with multi-axle trailer load carrying 385 tonnes was introduced.

Passage of these longer and heavier vehicles, coupled with increase in the legal axle load limits by amendment of the Motor Vehicle Act in 2018, by the authorities have resulted in the traffic load effects on bridge assets far exceeding the design capacity of bridges, particularly old bridges which were designed originally for lesser loads.

Over the years, significant improvements have taken place in tyre technology, vehicle design, pavement design etc. The global axle weight norms are higher as compared to the existing Indian norms. The lower axle weight has often been cited as one of the major factors responsible for high logistics cost in India and frequent incidence of overloading.

The paper looks at the challenges associated with the passage of these OWC's over the existing flock of bridges and suggests the way forward.

Introduction

General

Transportation of Over-Dimensioned and Over-Weight consignments (ODC/OWC) through roads and bridges is a challenging undertaking, requiring careful planning and execution. These special cargoes face difficulties due to their enormous size and weight, including logistical difficulties and legal restrictions, that may have a substantial impact on the effectiveness of transportation.

The situation is further compounded by the continuing evolution of heavy vehicles and the increased demand for the transport of very heavy loads driven by the infrastructure boom in India, where the transporters are putting a lot of pressure on the bridge authorities. In this context, the authorities and decision-makers are regularly required to exercise judgment, balancing between increased productivity and reduced risk of damaging bridges. **Fig.1** shows how authorities are positioned to perform this balancing act [1] To ensure safety of the bridge stock over which these vehicles will ply, to ensure a secure delivery of the consignment on schedule, it is essential to comprehend these obstacles.

This paper offers a thorough examination of various challenges that are faced by the transporters as well as authorities responsible for asset management of our road / bridge infrastructure, in passage of these vehicles, illuminating the possible solutions that can make these onerous chores possible.

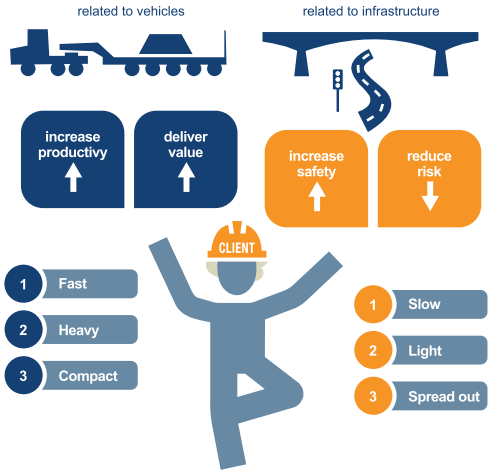


Fig. 1 : ODC/OWC vehicle access and planning decisions – A balancing act [Source: Ref.1]

When do we call a transport vehicle Over-dimensioned / Overweight?

Oversized or overweight loads are those that are heavier or bigger than the permitted legal limitations for road transportation. In Central Motor Vehicle Rules (CMVR) (Section 93, Sub Section 2, Page No 68), the Indian government defines the height limit for all mechanical trucks and trailers as 4.0 meters (13 feet) from the surface. Any truck or trailer with a height above this legal limit will be considered over-dimensioned. A standard vehicle with the highest gross vehicle weight (GVW) is an articulated trailer. A trailer having a double axle in the prime mover and a triple axle in the trailer has a GVW of 55 tons. Any vehicle with GVW of over 55 tons will be considered an Overweight Cargo. Such ODC / OWC will require a special permit from road authorities before plying on any route because they confirm the transit's legality and safety.

These licenses contain special requirements like a) Travel times; b) Escorted cars; c) Signage. The regulatory requirements for passage of ODC/OWC vary greatly between various states and the centre, complicating the process of obtaining permits. A key component of transporting big loads is understanding and adhering to these varied regulatory regimes.

Risk associated with the passage of ODC/ OWC over existing bridges

More than seventy-five percent of the existing highway bridges in India were constructed before special SV loading was introduced in IRC 6 code, in the year 2014. These existing bridges were designed to support hypothetical Class A, Class 70R loading or smaller.

Contemporary heavy vehicles carrying OWC are much heavier than loads coming from these design vehicles. Consequently, the existing bridges are subjected to overloads when such vehicles cross these bridges. There has been a steady increase in the frequency and magnitude of these heavy vehicles plying on Indian roads. As a consequence, there have been more frequent instances of bridges showing signs of structural distress or demonstrating rapid deterioration unrelated to environmental factors. These bridges are often "operational bridges" frequented by platform trailers and other heavy vehicles supporting economic development activities such as infrastructure growth, industrial applications. **Fig. 2** below shows some of these bridge failures that has occurred in India over last 15 years during the passage of overloaded trucks and ODC/OWC movements. The risk of bridge failures during passage of overloads not only India-centric issues. They are concerns worldwide. This fact is reflected in one of the recent publication [1], where there are reports of overloading problems in Queensland, Australia. Following type of failures reported in this paper :

a) **Pier settlement:** Two bridges have experienced settlement of driven piles after more than 60 years of service.
b) **Articulation / Halving joints:** Cracking induced by traffic loading has led to concrete halving joint strengthening at some locations.
c) **Bridge bearings:** Some pot or rocker bearings have failed through discharge of the polytetrafluoroethylene (PTFE) sliding material.
d) **Fatigue:** Recently possible concrete fatigue has been identified in concrete bridge decks. Similarly, fatigue cracking has been identified in welded connections in steel girder bridges.
e) **Deck joint failures**: There is an increasing number of failures of bridge deck joints and deck slabs adjacent to the trimming angles located at deck joints.


Photo -1 : Kullu (June, 2008)


Photo - 2: Gujarat (August, 2009)


Photo - 3 : Kolkata (January, 2011)


Photo - 4 : MP (September, 2011)


Photo - 5 :Srinagar (August, 2012)


Photo - 6 : Sikkim (December, 2011)


Photo - 7 :Haryana (May, 2016)


Photo – 8 : Arunachal Pradesh (Nov 2020)


Photo – 9 : Manipur(May 2022)

Fig. 2 : Bridge Failures in India during passage of Overloaded Vehicles

MoRTH initiative for smoothening the approval process in passage of OWC

To smoothen the process of approval for passage of ODC/OWC over Indian roads by the authorities, the Hydraulic Trailer Owners Association of India (HTOA) took the initiative and under the guidance of MORT&H, engaged a group of experts to carry out a generic study of Bridge Superstructures of the existing flock of simply supported right bridges for safety during the passage of OWC. This was subsequently approved by MORTH and following the issuance of circular no. RW/NH-35072/1/2010 S&R(B) dated 24th January 2013 by the Ministry of Road Transport & Highways (MORT&H) [3], there has been significant improvement in the regulation of these OWCs, nationwide and in fast-tracking the approval process. Thirteen types of MAHT were in use at the time of this study, grouped in three categories, which are highlighted in Table 1. Details of the network of these special vehicles, meant to carry overweight consignments, as considered by MoRT&H is given in **Fig. 3**. Few photographs of passage of OWC with hydraulic trailers is shown in **Fig. 4**

Table 1 : Different Types of MAHT considered for study by HTOA (2011-12)

Sl. No.	Vehicle Type	Axle Arrangement	Gross Vehicle Weight (*) (T)
1	HT1 to HT9 (Single Trailer Unit)	Trailer unit carrying 4, 6, 8, 10, 12, 14, 16, 18 & 20 axles for HT1 to HT9 respectively	97 to 385
2	HT10 & HT11 (Twin Trailers with turn table Bolster)	(8+8) & (10+10) axle trailer units for HT10 & HT11 respectively	313 and 385
3	HT12 & HT13 (Twin Multi-Axle trailer with Girder)	(14+14) & (16+16) axle Trailer units for HT10 & HT11 respectively	529 & 601

(*) GVW includes weight of Puller Tractor, taken as 25 Tonnes. Axle Load = 18t spread over 8 tyres

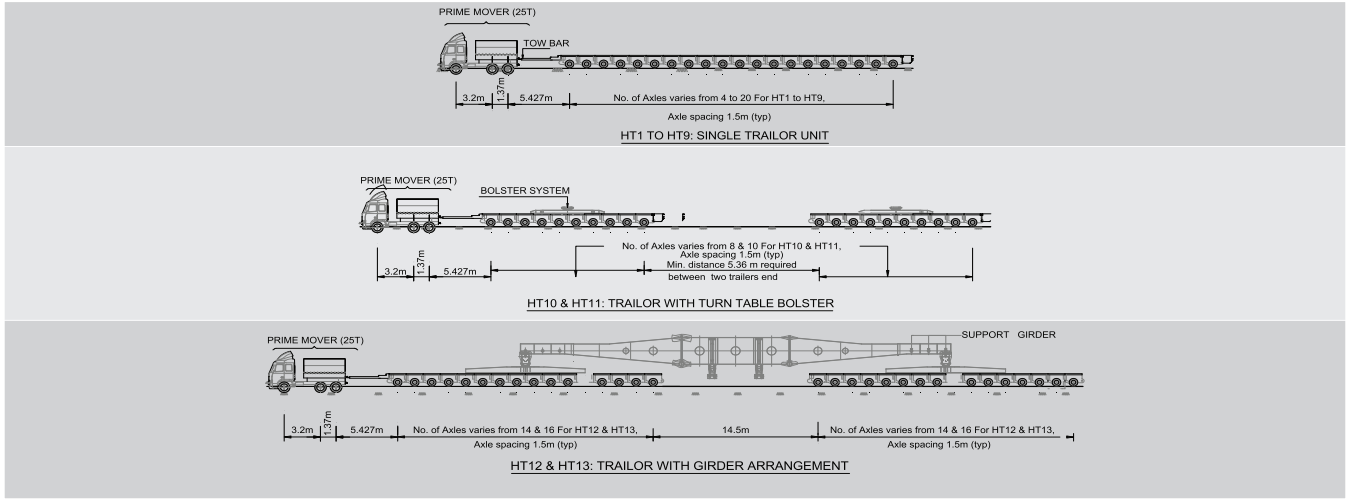


Fig. 3 : Configuration of MAHT covered under MoRTH guideline for online approval

Limitations of the Study carried out by HTOA in 2011-12 for OWC movement

The limited study carried out by HTOA, which eventually formed the basis for MoRT&H to regulate the movement of OWC with online portal, had several limitations, as stated below :

a) The study was carried out only for bridges with simply supported spans, having maximum span length of 50m
b) Only a few structure types were included in the study (Masonry Arch Bridges, RCC Solid / Voided Slab bridges, RCC/PSC beam and slab bridges, RCC/PSC box girder bridges, segmental bridges and composite decks with steel beams and RCC deck slabs. There are many other types of bridge configurations which are encountered enroute in the corridor, which are not covered. As an example any type of continuous bridge, long span cantilever bridges, extradosed bridges, cable stayed bridges, trussed bridges …etc. are not covered in this study.

c) Study was carried out only for Superstructure. It was presumed that the substructure and foundation will have no adverse impact when OWC will be crossing the bridge.

This assumption may not be true and failure records world over indicates that foundations can also fail during the passage of OWC.

d) There was no provision made in the Ministry's circular for instrumentation and monitoring of the bridges over which the OWC passes through. It is important to instrument few sample bridges during the passage of OWC and monitor the behaviour so that it provides a feedback loop for checking or validating the traditional assumptions and rules followed for assessment of bridge capacities.

Fig. 4 : Photographs showing passage of OWC on MAHT

e) The fundamental assumptions made in the study is that all axles and all tyres under hydraulic trailers share equal loads. This may not always be true. Related observations that challenge this assumptions are :

i. Axles can be lifted as an alternative to stopping (in potentially unsafe locations) to replace tyres or to improve traction by transferring more load to the drive axles.

ii. Hydraulic suspensions allow different axle groups to be connected to different hydraulic circuits. This is necessary to ensure trailer stability and leads to unequal load distributions. For example, the axle loads can vary by ±10% when the centre of gravity of the loading is offset from the centre of a drawn trailer. This translates into similar increases in bridge responses, especially in shorter span bridges. **Fig. 5** below explains the issue through sketch.

f) Platform trailers induce much larger dynamic responses in the bridge deck slab compared to other heavy vehicles. During the passage of these hydraulic trailers over bridges, they are cracking the deck slab, which makes the deck slab vulnerable to fatigue damage from other heavy vehicles [1]. This aspect was not addressed in the study made earlier.

g) The study presumed that OWC movement over the bridge will be at a speed not more than 5 km/h and the vehicle will not apply any break in between while crossing over the bridge. Not allowing any traffic over the bridge during the passage of OWC ca cause significant public inconvenience and safety issues in certain situations, particularly where the bridge / elevated corridor is long in length. This may mean blocking traffic over the bridge for hours. As an example, in a 15 Km long elevated corridor, the MAHT carrying OWC will take 3 hours and for during this 3 hours, traffic has to be closed in the corridor. This may not be feasible in many situations. A balance between benefits of allowing OWC versus managing bridge damage, public safety, and traffic inconvenience needs to be maintained. There is a need for the authorities to prepare a guideline in this regard.

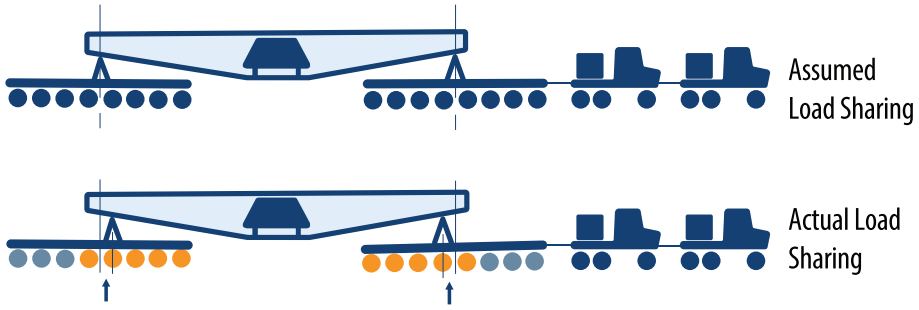


Fig. 5 : Unequal distribution of load in axles due to offset of load

Evolution of fleet of freight vehicles in India over the last 10 years

The increasing demands to move heavier consignments with increased GVW than ever before led to additions of fleet of special vehicles by the transporting agencies, which can carry more and more weights. Other than the 13 type of MAHT, which was originally envisaged by HTOA in 2013, HTOA has recently approached MoRT&H to come out with 10 more MAHT fleet and knocking the doors of Ministry for inclusion in the online portal. Table 2 below gives details of new fleet of MAHT for which HTOA is trying to get approval of MoRTH .

Suggestions and Way Forward

Mitigating risk is key during the road transportation of OWC with MAHT, as these involve high-value, custom-engineered assets that cannot be replaced. Bridge crossings are particularly challenging since the load must be distributed with care to mitigate the risk of damage to it, which would lead to congestion and disruption. In light of the above, following measures are recommended :

a) It is strongly recommended that HTOA sponsor another desk study for bridges, to check adequacy and safety during the passage of OWC. The scope of the study should be fixed in consultation with MoRT&H, which should broadly cover the following:

   i. HT Loads from HT-1 to HT-23, covering loads with more than 8 tyres per axle. Last study covered HT-1 to HT-13 only with single trailer having 8 tyres per axle.
   ii. Continuous Bridges. Last study was restricted to simply supported spans only.
   iii. Structural forms with trusses, variable depth long span cantilever bridges, extradosed bridges and cable stayed bridges. These were not covered in the last study.
   iv. Possibility of increasing the speed of movement from 5 Km/hr to a higher value, in line with the international practice may be explored. This will be beneficial in case of long length of bridges, where inconvenience to traffic can be reduced.

b) There should be mechanism to check the gross vehicle load plying on the bridge, before the special vehicle carrying heavy load is allowed to move over the bridge. Mere production of certificates by the transporter may not be relied upon, since the impact of overloading can be catastrophic.

c) It is suggested that MoRT&H should independently sponsor research for monitoring of existing bridges during the passage of OWC with instrumentation, so as to validate the desk study results.

d) State or Central authorities should maintain a 'register of performance' of all bridges over which the special vehicle carrying OWC passes. This data will be extremel useful to assess the condition of the existing bridge.

Table 2 : New fleet of MAHT proposed by HTOA in recent times

Proposed HT Type	No. of axle rows in MHT combination	No. of Tyres per axle row	Total No. of tyres in MHT combination excluding puller	Overall width (m)	Overall MHT combination length excluding Puller Tractor (m)	Gross Vehicle Weight (*)(T)
HT 14	22 (Single Trailer Unit)	8	176	3.00	33	421
HT 15	24 (Single Trailer Unit)	8	192	3.00	36	457
HT 16	16 (1+1/2)	8+4=12	192	4.90	24	457
HT 17	18 (1+1/2)	8+4=12	216	4.90	27	511
HT 18	20 (1+1/2)	8+4=12	240	4.90	30	565
HT 19	16 (1+1)	8+8=16	256	6.30	24	601
HT 20	18 (1+1)	8+8=16	288	6.30	27	673
HT 21	20 (1+1)	8+8=16	320	6.30	30	745
HT 22	18+18+ATTACHMENT	8	288	3.00	27+15+27=69	673
HT 23	20+20+ATTACHMENT	8	320	3.00	30+15+30=75	745

(*) GVW includes weight of Puller Tractor, taken as 25 Tonnes. Axle Load = 18t spread over 8 tyres

REFERENCES

1. BRIDGE MONITORING AND DATA-DRIVEN STRUCTURAL ASSET MANAGEMENT R. Heywood*, T. Pape, D. Ward, P. Shaw, A. Voll, M. Haldane Department of Transport and Main Roads, Queensland, Australia Robert.J.Heywood@tmr.qld.gov.au and Torill.M.Pape@tmr.qld.gov.au
2. New Special Vehicle Loading in IRC:6 for Design of Bridges, Alok Bhowmick, Lakshmy Parameswaran & G L Verma, HTOA Publication "Heavy Haulers", May 2015 Issue
3. MoRTH Circular for movement of OWC on National Highways (Dated Jan. 2013)

*****

PROCAM
GROUP ™
Delivering Innovation & Commitment

FREIGHT FORWARDING

HEAVY HAULAGE
TRANSPORTATION

LIFTING & RIGGING

WAREHOUSING

PROJECT FORWARDING

info@procamgroup.in | www.procamgroup.in

Techno Commercial Aspects of Cargo Transportation for High Value projects

Pradeep Dongre
Retired as Acting Executive Director (Contracts and Materials Management), Nuclear Power Corporation of India Ltd.

For any international project involving imports, will necessarily requires a logistic support. The entire Supply Chain Management needs to be understood properly by SWAT analysis.

Technological advancements in the supply chain are designed to ensure supply chain resilience so that e-commerce brands can easily adopt to changes as the industry grows.

The companies across the world are looking to rejig their supply chain, post pandemic and looking at trusted partners for the resilient supply chain.

Careful advance planning, attention to detail, meticulous execution, identifying experience handlers and supply chain specialist for handling of ODC cargo clearance of the same through customs etc. All have contributed to the development of service logistics with adequate utilisation of existing capabilities.

Compliance with strict environmental regulations and meeting client demands for sustainable infrastructure are key challenges for EPC companies.

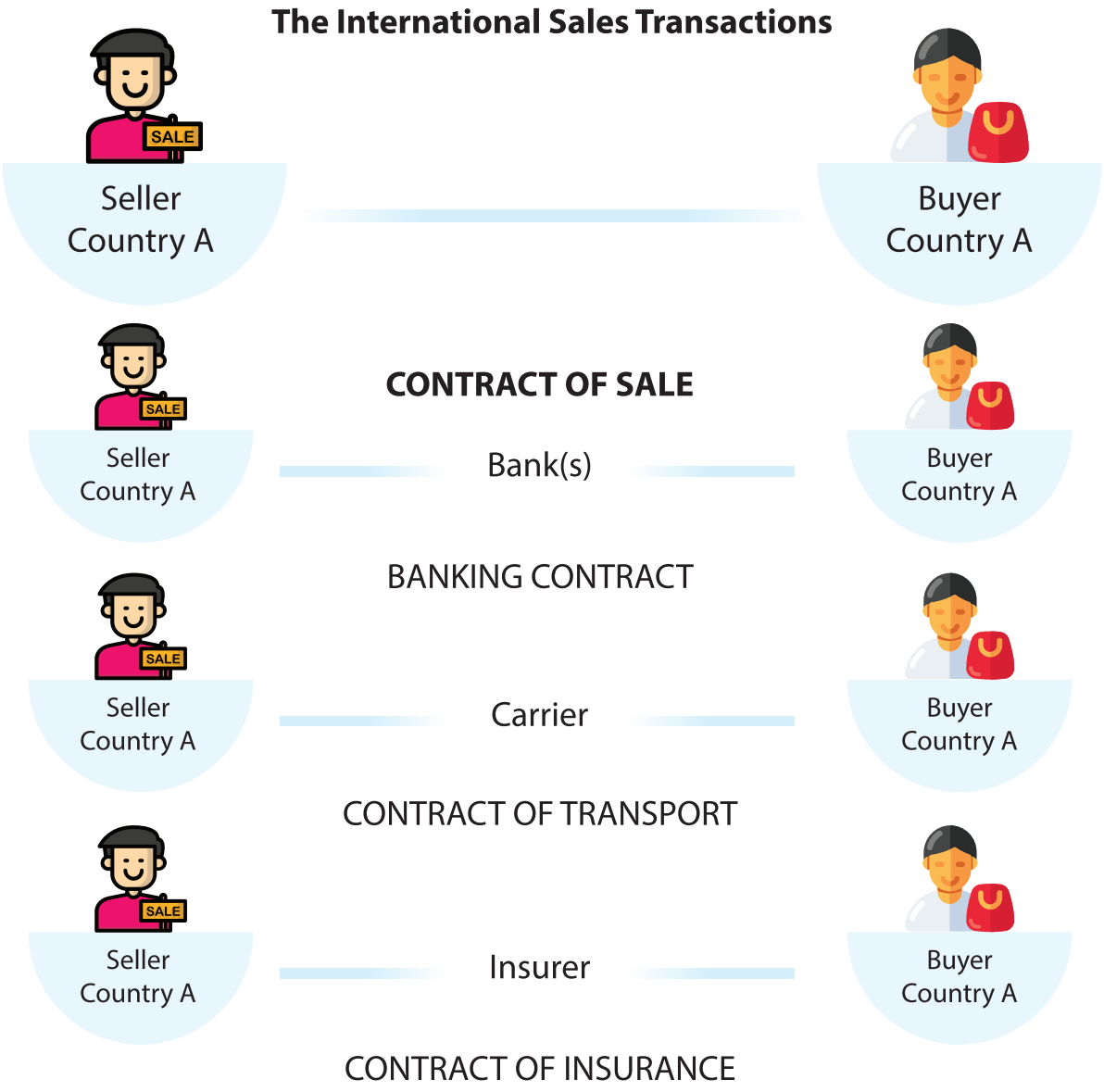
Reverse logistics revolves around tracing back the supply change journey, where a product that is in possession of end user is returned to the retailer or manufacturer for the purpose of return, recall, repair or for repackaging or recycling process.

The 3PL sector is likely to retain a large market share even as e-commerce and other sector continue to outsource typically 3PL market leaders have the capacity expertise and resources to automate every function and process to bring down cost improve efficiency and ensure optimum allocation of human resources to the most important tasks.Thus in the Present Scenario Transport is derived demand from Trade.

In any business process to acquire business it is a must to grab the contracts participating in competitive tendering process. This is particularly necessary for government projects. To achieve this company need to be aware of all aspects involved in scope of work. Further it should able to assess the various costs involved. Further it is required to optimise costs and maximising the profit without compromising quality and performance. Nowadays QCBS (quality and cost basis evaluation system) is being used for awarding the contracts. Soon it will be used vastly based on its performance.

Following paras are for the benefit of working level executives. They can get insight of aspects involved in logistic jargon. Even at management level, It can refresh their past knowledge to oversee the execution.

Any Supply contract between two countries will necessarily be accompanied by Transport Contract, Insurance Contract & Banking Contract.



Therefore for success of any project, Transportation Contract is the first finest link which has to be successful to make the project viable (timely completion).

Why does the freight forwarder need to learn about Incoterms?

So that he can advise his client (buyer or seller) on the division of costs, risks and responsibilities between the buyer and seller.

Put in another way the term determines at what points the seller has fulfilled his obligations so that the goods in a legal sense could be said to have been delivered to the buyer.

Each Incoterm provides three essential pieces of information:

- The transfer of risk of possible loss/damage to goods during the transport operation.
- The division of costs: the seller having to payment costs necessary for the goods to reach the agreed point of delivery and the buyer paying the further costs beyond this point.
- The document (or equivalent electronic

message) to be provided by the seller to the buyer as proof of shipment of delivery to the carrier.

TRANSPORT ARRANGEMENTS

Shipping / carrier service
The international shipping markets offer four types of service, namely: Conference liner service
Non-conference liner service
Non-vessel operating common carrier (NVOCC) Tramp service

Scope of freight forwarding services

Unless the consignor (the person sending goods) or the consignee (the person receiving goods), wants to attend to any of the procedural and documentary formalities himself, it is usually the freight forwarder who undertakes on his behalf to process the movement of goods through the various stages involved. The freight forwarder may provide these services directly or through sub-contractors or other agencies employed by him. He is also expected to utilize, in this connection, the services of his overseas agents. Briefly, these services are:

On behalf of the consignor (exporters)

- Choose the route, mode of transport and a suitable carrier.
- Book space with the selected carrier.
- Take delivery of the goods and issue relevant documents such as the Forwarders' Certificate of Receipt, the Forwarders' Certificate of Transport, etc. (these documents will be dealt with in more detail in the module on Freight Forwarding Documents.
- Study the provisions of the letter of credit and all Government regulations applicable to the shipment of goods in the country of export, the country of import, as well as any transit country; he would also prepare all the necessary documents.
- Pick the goods (unless this is done by the consignor before handing them over to the forwarder) taking into account the route, the mode of transport, the nature of the goods and applicable regulation, if any, in the country of export, transit countries and country of destination.
- Arrange warehousing of the goods, if necessary.
- Weigh and measure of the goods.
- Draw the consignor's attention to the need for insurance and arrange for the insurance of goods, if required by the consignor.
- Transport the goods to the port, arrange for customs clearance, related documentation formalities and deliver the goods to the carrier.
- Attend to foreign exchange transactions, if any.
- Pay fees and other charges including freight.
- Obtain the signed bills of lading from the carrier and arrange delivery to the consignor.
- Arrange for transshipment enroute if necessary.
- Monitor the movement of goods all the way to the consignee through contracts with the carrier and the forwarders' agents abroad.
- Note damages or losses, if any, to the goods.
- Assist the consignor in pursuing claims, if any, against the carrier for loss of the goods or for damage to them.

On behalf of the consignee (importer)

- The forwarder, in accordance with his shipping instructions, would:
- Monitor the movement of goods on behalf of the consignee when the consignee controls freight, that is, the cargo.
- Receive and check all relevant documents relating to the movement of the goods.
- Take delivery of the goods from the carrier and, if necessary, pay the freight costs.
- Arrange customs clearance and pay duties, fees and other charges to the customs and other public authorities.

- Arrange transit warehousing, if necessary.
- Deliver the cleared goods to the consignee.
- Assist the consignee, if necessary, in pursuing claims, if any, against the carrier for the loss of the goods or any damage to them.
- Assist the consignee, if necessary, in warehousing and distribution.

Rights, duties and responsibilities and Legal status of freight forwarder:

The forwarder is the agent of his principal, the consignor/ consignee, in arranging transport of the letter's goods, and he is subject to the traditional rules of agency such as the provision of due care in the performance of his duties, being loyal to the principal, the duty to obey reasonable instructions and to be able to account for all transactions.
When acting as agent, the defences and limitations of liability which are appropriate to an agent are available to him. But if the agent assumes the role of a principal (one who has permitted or directed another (an agent) to act for his benefit and subject to his direction and control) and concludes a contract assuming responsibility in his own name, this would not be the case. If he does this, he becomes responsible for the satisfactory performance of the whole transport operation, including the period when the goods are in the custody of the carriers and other agencies whose services he makes use of.
In actual practice, however, the position often varies with the type of service undertaken by the forwarder. For example, when a forwarder undertakes to provide road transport, transporting the goods himself, he assumes the role of a principal but if he has a sub-contractor known to his client who has been appointed with the agreement of the client, he continues to act as an agent. Again, when a forwarder provides groupage of consolidation services, and issues his own bill of lading he becomes a principal.

Rights, duties and responsibilities of the forwarder as an agent

- A forwarder acting as agent generally accepts liability for his own faults or the faults of his employees. Examples of such errors and omissions are:
- Delivery of goods contrary to instructions
- Omission to take cargo insurance in spite of instructions
- Errors during customs operations
- Routing to wrong destination

Re-export without compliance with necessary formalities for drawback or refund of duty, etc.
Delivery of goods without collecting cash from the consignee.

The forwarder is also exposed to claims from third parties for any loss or damage or personal injury that he may cause to them during the course of his operations. A forwarder generally does not accept liability for acts or omissions of third parties (such as carriers, re-forwarders, etc.) provided he has shown proper care in the choice of such third parties. This is the position under the Standard Trading Conditions when forwarders act as agents in their traditional role and perform functions such as booking of space, arranging transport, customs clearance, etc.

Rights, duties and responsibilities of the forwarder as a principal

As a principal, the forwarder is an independent contractor who assumes responsibility IN HIS OWN NAME for providing the services required by his customer. He becomes liable for the acts and omissions of carriers, re-forwarders etc., whom he engages for the performance of the contract. Generally speaking, he negotiates with his customer a price for his services instead of receiving a commission. For example, a forwarder assumes the role of a principal when providing consolidation and multimodal transport services or when he provides road transport, transporting the goods himself.

As a principal, his liability to third parties, his right to limitation of liability and right to exercise lien on goods remain the same as in his role as an agent.

When the forwarder assumes the role of a principal for providing multimodal transport services, the standard trading conditions do not generally apply. In the absence of applicable international conventions, multimodal transport contracts are largely governed by the rules framed by the International Chamber of Commerce known as the " ICC Uniform Rules of a Uniform Combined Transport Document".

Apart from the consignor and consignee, the freight forwarder has to deal with several third parties during the course of rendering services.

MULTIMODAL TRANSPORT OPERATIONS

Multimodal transport defi

Multimodal transport, as understood by many, refers to a transport system usually operated by a carrier (for instance a container line which operates both a ship and a rail system of double stack trains) with more than one mode of transport under the control or ownership of one operator. It involves the use of several means of transport: combination of truck, railcar, aeroplane and ship, in succession to each other.

Advantages of multimodal transport

Minimises time loss at trans-shipment points

Multimodal transport, which is planned and coordinated as a single operation, minimizes the loss of time and the risk of loss, pilferage and damage to cargo at trans-shipment points. The Multimodal transport operator miantin his own communication links and coordinates interchange and onward carriage smoothly at transshipment points.

Provides faster transit of goods

The faster transit of goods made possible under Multimodal transport reduces the disadvantages of distance from markets and the tying-up of capital.

Reduces burden of documentation and formalities

The burden of documentation and other formalities connected with segmented transport is reduced to a minimum.

Saves cost

The savings in costs resulting from these advantages are usually reflected in the through freight rates charged by the multimodal transport operator and also in the cost of cargo insurance.

Establishes only one agency to deal with The consignor has to deal with only the multimodal transport operator in all matters relating to the transportation of his goods including the settlement of claims for loss of goods, or damage to them, or delay in delivery at destination.

Reduces cost of exports

The inherent advantages of multimodal transport system will help to reduce the cost of exports

and improve their competitive position in the international market.

Forms of multimodal transport operations

Currently different types of multimodal transport operations involving different combination are taking place, such as:

1. Land-Sea-Land

These can be several additional links, for instance, if the container was carried by rail from, say, Kuala Lumpur to Singapore.

Where LCL cargo is concerned, the individual shipments would be delivered to the freight forwarder's CFS or the shipping line's CFS and consolidated into a FCL which, in Chicago, is trucked to the CFS, where from it is to picked-up by the consignee's truck.

2. Road/Air/Road

A combination of air carriage with truck transport is a frequent method of multimodal service. Undoubtedly, pick up and delivery services by road transport are usually incidental to air transport. But apart from this, road transport is now being increasingly used, particularly in Europe and U.S.A., for trucking air freight over long distances, sometimes across national boundaries, to connect with the main bases of airlines operating long haul services such as trans-Pacific, trans- Atlantic and inter-continental. Several airlines are building up a number of trucking hubs in Europe to act as focal pints for road-based feeder operations.

Many airlines provide road service to cities which they either find uneconomical to service by air, or to which they do not enjoy landing rights. This road transportation is often effected with their own vehicles, and to and from their own facilities, but on occasion they do also use highway common carriers.

3. Sea/Air/Sea

This combines in itself, the economy of sea transport and the speed of air transport and is becoming increasingly popular in several international trade routes like the Far East Europe route. The economics of this combination mode favour high value items like electronics, electrical goods, computers and photographic equipment as well as goods with high seasonal demand such as fashion wear and toys.

This multimodal operation is particularly applicable where the route to be covered combines large distances via land and water, and where transit time is important.

4. Rail/road/in/and waterways-sea-rail/road/in and waterways

This combination mode is in common use when goods have to be moved by sea from one country to another and one or more inland modes of transport such as rail, road or inland waterways, have to be used for moving the goods from an inland center to the seaport in the country of origin or from the seaport to an inland center in the country of destination.

5. Mini-bridge

This involves the movement of containers, under a through bill of lading issued by an ocean carrier, by a vessel from a port in one country to a port in another country and then by rail to a second port city in the second country, terminating at the rail carrier's terminal in the second port city. The mini-bridge offers the consignor a through container rate inclusive of rail freight up to the final port city in the country of destination. The railways are paid a flat rate per container by the coean carrier for the rail transit. This system is in operation on certain routes covering

the trade between the United States and the Far East, United States/Europe, United States /Australia, etc.

6. Land bridge

This system concerns itself with shipment of containers overland as a part of a sea-land or a sea-land-sea route. In this case also, the railways are paid a flat rate by the ocean carrier who issues the through bill of lading. This system is in operation for the movement of container on certain important international routes such as:

i. between Europe of the Middle East and the Far East via the Trans-Siberian land bridge ; and

ii. between Europe and the Far East via the Atlantic and Pacific coasts of the U.S.A., continental U.S.A. being used as a land bridge.

7. Ro-Ro (Roll-on/Roll-off)

This modes combines different means of transportation (sea and road), and is used most often with new automobiles, which are shipped by sea and them simply driven off the vessel and to the importer's warehouse. Heavy and over-dimensional cargo is also suitable for ro-ro transport.

8. L.A.S.H. (Lighter Abroad Ship)

LASH transport is the combination of deep sea and inland waters transportation. An example is the route from Germany to the Mississippi Ports where the barges sail down the Rhine, Elbe or Weser in Germany, are loaded onto LASH container vessels in Rotterdam, Hamburg or Bremen; are then carried across the Atlantic, only to be unloaded at a Mississippi delta port to sail upstream in the U.S. It must be noted that LASH vessels are expensive, and furthermore it is necessary to check on the availability of the special handling facilities necessary in the port of destination.

9. Piggyback

This is a system of unitised multimodal land transportation, a combination of transport by road and rail. It has become popular in Latin American and European countries because it combines in itself the speed and reliability of rail on long trunk hauls with the door-to-door flexibility of road transport for collection and delivery . The goods are packed in trailers and hauled by tractors to the railway station. At the station, the trailers are moved onto railway flat cars and the transport tractors, which stay behind, are then disconnected. At destination, tractors again haul the trailers to the warehouses of the consignee.

10. Sea train

This is another innovation in the multimodal transport system involving the use of rail and ocean transport. It was originally adopted in the U>S>A. It is similar to the roll-on, roll-off (ro-ro) system except that in the place of the ro-ro vehicle a rail car is used so that geographically separated rail systems can be connected by the use of an ocean carrier.

These examples are only illustrative, not exhaustive. In actual practice, several other combination modes may be used depending upon the trade routes, trans-shipment points and the availability, of different modes of transport.

An MTO should have the knowledge and skill to organize the transportation of goods through different modes of transport. In other words, he arranges with the trucking company railways, shipping lines and other transport operators to transport the goods from one place to another within the shortest time. Since the function of the MTO arises out of the needs of the shipper, he must be able to offer a service which covers a wide geographical are, either through an in-house branch network or by means of reputable agency arrangements.

The value added in terms of the services provided by a MTO is significantly greater than that provided by the conventional carrier. The role of the MTO in the transportation of goods door-to-door will continue to increase because of the single carrier liability they undertake and the flexibility with which they function. They can, for example, vary the all-in freight rates according to the complexity of the service provided, taking into account the volume of business provided by their customers.

*****

JK TYRE
TOTAL CONTROL

JETWAY JUC XM

Semi-Lug Tyre

READY FOR ALL BUSINESS APPLICATIONS

Uniform tread wear

10% Extra tyre mileage*

Excellent retreadability

Size: 295/90R20

*Based on Internal Research

www.jktyre.com | Follow us on: /JKTyre /jktyrecorporate YouTube /jktyrecorporate /jktyrecorporate

Heavy Transportation Prioritizing Safety

Sameer Parikh

What problem needs to be addressed when transporting heavy cargo in trailers?

When transporting cargo via trailers, a significant hurdle is mismatch between the dimensions of the cargo and the infrastructure of the road network, which is not typically designed to accommodate such large loads/ dimensions. A key aspect is conducting thorough route surveys to understand potential roadblocks and hazards, allowing us to proactively address them or develop contingency plans.

It's important to note that in our industry, contracts awarded are often based on competitive pricing, sometimes overlooking the importance of comprehensive solutions. Therefore, a proactive and comprehensive approach to route planning is essential for successful cargo transport operations.

What safety measures do you consider while transporting on difficult terrains?

To ensure safety while transporting heavy cargo in difficult terrains over long distances, we plan and implement a series of safety measures to mitigate risks. Our key safety considerations include:

- Personnel Safety: Managing movement of people involved in the operation to minimize the risk of accidents or injuries.
- Electrical Shutdown Planning: Coordinating with local authorities to plan and align electrical shutdowns, when necessary.
- Bridge Calculations: Thoroughly assessing the load-bearing capacity of bridges along the route to prevent any structural issues during transit.
- Hydraulic Axle Stability: Ensuring that the hydraulic used are stable and equipped to handle the specific demands of the cargo, especially on uneven or challenging terrains.
- Parking and Rest Areas: Identifying suitable parking and rest areas along the route, particularly on journeys that may require extended transit times due to permissions and challenging terrains.
- Bypass Routes or Civil Works: When applicable, constructing bypass routes or undertaking necessary civil works to ensure smooth transport.

This is by no means an exhaustive list, as safety considerations can vary significantly based on the specific project and terrain. However, these critical points represent the foundation of our safety planning efforts to execute projects

successfully in challenging environments.

What support is provided by the manufacturers of the trailers to minimize downtime?

While trailer downtime can occur occasionally, we take prompt measures to minimize the risk of downtime. We ensure that the trailers are thoroughly checked before they are deployed. Our team follows a daily checklist to inspect the hydraulic axles before the trailer hits the road.

Moreover, we maintain an inventory of all spare parts to swiftly address any unforeseen requirement. In case of an unexpected downtime, we have a dedicated workshop that responds immediately with the necessary solutions. We are supported by the trailer manufacturers, who share our commitment to minimizing downtime. They lend support through service agreements and readily available spare parts, ensuring efficient operation of their equipment. This collaborative effort allows us to maintain high operational efficiency even in the face of occasional challenges

What support is required from the government in terms of policies and infrastructure for smooth ODC transportation ?

Though the government has been proactive in responding to the needs of the trade, there are certain areas where government support become crucial for seamless transportation of Over Dimensional Cargo (ODC). These areas include:

1. **Development of Special Routes:** Specialized logistics often require routes that can accommodate heavy and oversized cargo. Government support in developing and maintaining these routes is essential to ensure safe, cost-effective, and efficient ODC transportation.

2. **Revisiting Asset Duties:** Considering the high duty costs on assets, it's important for the government to review and possibly revise these duties. This can help mitigate financial burdens, especially given the exchange rate fluctuations and the extended lead times (8 to 10 months) for importing assets.

3. **Time Constraints:** Heavy lift projects, in particular, are subject to strict time constraints. Restrictions on daily travel distances could be as low as 20 km per day or 150 km per day, depending on cargo dimensions, which can impact project timelines. The government's flexibility or support in this regard would be beneficial.

In short, while the government has taken positive steps to support the logistics industry, focusing on specific areas such as developing specialized routes, addressing the concern on high import duties, and accommodating time constraints will further enhance the efficiency and effectiveness of ODC transportation in India.

*****

Nabros
TRANSPORT PVT. LTD.

The largest super ODW Reactor of

971 MT

safely delivered

Mundra Port to HMEL Bhatinda Refinery

1400 KMs | CROSSING 4 STATES

First time in India

Mumbai Office: 301, Sai Samarth, Near Shah Industrial Estate, Govandi (E), Mumbai - 400088, Maharashtra, India.
Phone: +91 22 25558582 / 3 , Contact Person: Mr.Vasant Pathak , Cell: +91 98339 85582 ,
Email: vasant@nabrostransport.com
Ahmedabad Office: D-1201, Titanium Square, Thaltej Cross Road, Thaltej, Ahmedabad - 380 059.
Gujarat, India. Phone: +91-79-2970 2617 / 2559, Contact Person: Mr.Devansh Patel,Cell: +91 98240 12635
Email: devansh@nabrostransport.com
Vadodara Office: SF-1, "Panorama", R. C. Dutt Road, Vadodara - 390005, Gujarat, India
Phone: +91 265 2333558, Contact Person: Mr.Jignesh Patel, Cell: +91 98240 24733
Email: jignesh@nabrostransport.com

Visit us at: www.nabrostransport.com

GLOBAL PROJECT LOGISTICS NETWORK

Hydraulic Trailer Owners Association

Recent Activities by HTOA

Post 16 AGM on 15th Sept 24, the Managing Committee have accelerated the activities on all fronts and geared up to set new benchmarks for HTOA. The issue specific sub committees were formed to support the Board addressing issues pertaining to Association members & ODC/OWC transport fraternity.

Quarterly activities undertaken are shared with members. MC has announced relaunch of our knowledge bulletin Heavy Haulers staring with 2 release in a year, one in Apr 24 and second in Nov 24.

EVENTS ATTENDED

World Day of Remembrance organised by Traffic Department of Maharashtra Police on 19th & 24th Dec,2023 at Mumbai: Event was attended by Mr. Bharat Gandhi, Past Chairman and Mr. Pritesh Gandhi and had close interaction with senior Police officials and Transport Commissioner (MH) with Shri. Vivek Bhimanwar (IAS).

Launching of LEADS 2023 Survey at Bharat Mandapam in New Delhi on16th December 2023. The event was arranged by Logistics Division, DPIIT which was graced by the Honorable Minister of Commerce and Industry, Consumer Affairs, Food and Public Distribution, Textiles Shri Piyush Goyal. Hon. Minister said that LEADS is giving insights to States and UTs for further revolutionary reform in logistics sector, taking us towards our vision of Viksit Bharat. The report serves as a guide for stakeholders in the Logistics Sector by providing strategic insights. Report also underscores notable initiatives like planning infrastructure on PM GatiShakti, industry' status for logistics, multimodal connectivity, digital initiatives in logistics, City Logistics Plans, Multimodal Logistics Parks, etc. HTOAs representatives Mr. Mr. Nitin Rawat of Procam logistics, Mr. Suraj Paul of Prism Logistics & Mr. Gaurav Agrawal of Agarwal Road Carriers along with Ministry officials, dignitaries, think tanks from commerce & logistics fields.

CLT- BHP 2024 organised by EXIM INDIA at Mumbai on 14-15 Feb,2024. Event was sponsored by many members of HTOA including window stalls which provided platform to showcase their full range of services & core strength in ODC/OWC transportation to clients, logistics fraternity and tool to enhance their penetration in the domestic and global markets. Our Board members Mr. H S Acharya and Mr. Nailesh Gandhi graced the event as speakers/Panelist. HTOA members & staff visited the event in large numbers.

Logistics Excellence, Advancement & Performance Shield 2023 at Vanijya Bhawan New Delhi on 4th March,2024. The event was organised by the Logistics Division, DPIIT. Shri Rajesh Kumar Singh Secretary, DPIIT, felicitated 12 logistics players across various categories. The event was attended by more than 100 participants comprising of screening committee members, LEAPS winners (spanning across Core Logistics, Warehouse & Packaging, MSMEs, Startups, Institutions and Special categories of safety, inclusivity & diversity and ESG practices), NPG members, Industry Associations, Knowledge partners, participants of National Logistics Excellence Award and jury members. HTOA representatives Mr. Suraj Paul of Prism Logistics & Mr. Gaurav Agrawal of Agarwal Road Carriers attended the event.

*****

HTOA MEETINGS

1.	Board Meeting for the Term 2023-25	23.09.2023
2.	Board Meeting for the Term 2023-25	16.11.2023
3.	Meeting of IT & Training sub-Committee (ITTC)	21.10.2023
4.	Meeting of Safety & Regulatory sub-Committee (SRC)	9.11.2023
5.	Meeting of IT & Training sub-Committee (ITTC)	14.11.2023
6.	Meeting of Regional Convenors (RC)	19.10.2023
7.	Meeting of Trade Representative sub-Committee (TRC)	25.11.2023
8.	Meeting of Safety & Regulatory sub-Committee (SRC)	14.12.2023
9.	Meeting of IT & Training sub-Committee (ITCC)	16.12.2023
10.	Meeting of Regional Convenors (RC)	21.12.2023
11.	Meeting of Trade Representative sub-Committee (TRC)	26.12.2023
12.	Meeting of Safety & Regulatory sub-Committee (SRC)	11.01.2024
13.	Board Meeting for the Term 2023-25	18.01.2024
14.	Meeting of Trade Representative sub-Committee (TRC)	23.01.2024
15.	Meeting of IT & Training sub-Committee (ITCC)	11.03.2024
16.	Meeting of Safety & Regulatory sub-Committee (SRC)	14.03.2024
17.	Board Meeting for the Term 2023-25	21.03.2024
18.	Meeting of Trade Representative sub-Committee (TRC)	26.03.2024
19.	Meeting of Safety & Regulatory sub-Committee (SRC)	11.04.2024
20.	Meeting of Policy Book Review committee	11.04.2024
21.	Board Meeting for the Term 2023-25	18.04.2024
22.	Meeting of IT & Training sub-Committee (ITCC)	20.04.2024
23.	Meeting of Regional Convenors (RC)	25.04.2024
24.	Extra Ordinary General Body Meeting (EoGM)	27.04.2024
25.	Webinar on GST – Knowledge session	22.12.2023
26.	Webinar on Insurance for LSP – Knowledge session	23.02.2024
27.	HTOA Web Site Training to Members – Knowledge session	23.03.2024

Meetings with Government Authorities

Meeting with Sh. Mahmood Ahmed, Additional Secretary MoRTH, Sh. Jitendra Kumar, SE, MoRTH & Sh. Deepak Shinde, PS to Minister- MoRTH at Delhi on 3-Nov-2023.

L to R :- Sh. Manish Kataria, Sh. Bharat Gandhi, Sh. Sameer Parikh, Sh. Mahmood Ahmed

Topics

1) Amendment to Carriage by Road Rules,2011 w.r.t. liability on carrier. Key Points:

1. Review of Rule 12 of Carriage by Road Rules,2011 to amend it by forming net weight of consignment being damaged during transit, as the basis and liability be fixed on weight basis instead of value of the consignment.
2. Review of Rule 12 of Carriage by Road Rules,2011 and its amendment by fixing maximum cap on carrier's liability in terms of value rather than in co-relation to its freight earned or agreed for the specific consignment exposed to loss during transit.
3. Insertion of definition of Total Loss & Partial Loss in Rule 12 of Carriage by Road Rules,2011.
4. One time settlement scheme for all ongoing disputes with carriers on account of loss during transit.

2) Certificate of fitness of Modular Hydraulic Trailers – Request to increase the period of validity. Key Points:

Extend validity of Fitness for MHT as under :

1. New MHT -5 Years
2. On renewal 4 years for age up to 25 Years
3. On renewal 2.6 years for MHT above 25 years.

3) Improvement of Online Permission System for movement of ODCs/OWCs on Modular Hydraulic Trailers and implementation of Bridge Information. Key Points:

i. Integration of ODC portal with Vahan data base to ensure grant of permission for movement to genuine vehicles only.
ii. Implementation of a two-part online application system wherein:

a) The cargo owner (consignor or consignee) is the applicant and fills in details of cargo dimensions, origin and destination of the cargo; and

b) upload the details of the transit insurance taken for the subject ODC/OWC movement.
Based on the details uploaded by the cargo owner in part A of the application, Part B is to be filled in by the transporter, details such as vehicle

registration and configuration details, route to be followed and also pay the requisite fee.

iii. Implement the Bridge information Display System at both ends of each bridge on NH.
iv. Making Public sector utilities compliant to MV Act, 1988 and CMVRs, 1989 in order to check menace of overloading in articulated tractor trailers, which is a serious road safety issue.
v. To put in place a well-regulated Integrated Bridge System with real-time integration with ODC portal.
vi. Incorporation of emerging HT combinations.
vii. Feasibility study on long span cable stayed, cantilever bridge structures.

4) Overloading of Trailers while moving Import Cargo from Gateway Ports u/s 113 of Motor Vehicle Act,1988 leading to damage to National Infrastructure. Key Points:

i. For curbing overloading menace, system be put in place through digital control by linking Port Gate Pass software with Registered Laden weight capacity as per the Registration certificate of MV available on Government's Vahan Portal.
ii. Formulate and notify standard guidelines to Chairmans, CEO's of all Gateway Ports to initiate suitable actions for stopping overloading on Mechanical Trailers/Trucks for import outward movement.
iii. Evolve system for regulating export bound inward movement by regulating Port entry pass software.

The MoRTH officials gave patient hearing to the above issues and assured for favorable consideration.

Meeting with Sh. Manish Gupta Executive Director - EEM & Sh. Amit Varadan, Principal Executive Director- Safety, Ministry of Railways at Rail Bhawan Delhi on 3-Nov-2023.

L to R :- Sh. Jignesh Patel, Sh. Sameer Parikh, Sh. Amit Varadan, Sh. Bharat Gandhi, Sh. Manish Kataria

Following points were discussed with MoR officials:

1. Generation of online demand note for LC crossing charges, Division wise variation in block charges and reduction in Block charges due to WPI as per JPO terms.
2. Grant of permission within maximum 2 working days of deposit of charges as per online demand note generated from web portal.
3. LC wise fixation of 2 days/week for passage of ODC's under permission.

4. Reduction in power block time based on physical data available and subsequently reduction in Fee.
5. Migration of payment system to online.
6. Consideration on fee part for multiple movements being undertaken under single permission at common instance.
7. Clear guidelines for passage through temporary diversion approach roads.

MoR Officials gave patient hearing to the issues and assured for favorable consideration for point 1 to 6 and informed that the issue under point 7 is under preview of Railway Board.

Meeting with Secretary, RT& H & senior officials of MoRTH ministry at New Delhi on 1-Feb-2024.

L to R :- Sh. Surendra Gahlot, Sh. Suhas Labde, Sh. Sameer Parikh, Sh. Anurag Jain, Sh.Vinay Kumar, Sh. Manish Kataria, Sh. Jignesh Patel

The meeting was held under chairmanship of Sh. Anurag Jain, Secretary RT&H discussed following ODC/OWC transportation issues:

1. To carry out study on bridges over 50 meters span and not covered under ministry guidelines dtd 24.01.2013 for movement on MHT classified at HT 1 to HT 13. Appointment of expert group to examine design parameters of structures in line countries like USA, Germany S Korea for recommendation whether to allow different categories of MHTs on bridges, being allowed now.
2. Study Motion effectiveness of axle load of MHT.
3. Conduct study & finalise Carriers Liability (CL) issue basis Global & Indian standards followed. HTOA requested for review of Rule 12 of Carriage by Road Rules,2011 to amend it by forming net weight of consignment being damaged during transit as the basis and liability being fixed on weight instead of value of the consignment.
4. Secretary MoRTH insisted for restricting ODCs height below 4.75 Mtrs and wants to conduct direct discussion with Manufactures, Fabricators & user fraternity. Your managing Committee has submitted list of Manufactures, Fabricators, Trade bodies for direct discussion on height restrictions. Regulatory frame work and best practices followed in USA,UK, Germany, S Korea, Middle east will be considered for reference.
5. Para 9.2 Annexure III of Ministry circular dtd 17.01.2024. HTOA insisted these details be filed by Consignee/Consignor on portal for online permission. Ministry to integrate ODC portal with ULIP to avoid filling wrong data.

6. For Distressed bridges & bridges not covered under circular dtd 17.01.2024, the digital data available on PM Gati shakti will be used so that applicant may chose best feasible route for movement.

7. Ministry will take Insurance policy out of ODC Fees charged, to cover latent damage to road & bridge structures.

8. For curbing overloading ex. Ports, port gate pass system will be integrated thru API with Vahan portal. Pilot project will start with Mumbai & Nhavaseva Port.

9. Ministry to explore integration of State Transport Permit system with MoRTH online permit system for ODC/OWC vehicles.

10. Joint Secretary – MoRTH to monitor time bound resolution of above issues within 3 months, upgrade Portal and publish revised notifications/ guidelines.

Meeting with Chairman, Syama Prasad Mookerjee Port, Kolkata on 19th Feb,2024.

L to R :- Sh. Pawan Jain, Sh. Nilesh Sinha, Sh. Rathendra Raman

Discussion held with Shri Rathendra Raman, Chairman and port traffic team, IT Team for integration of port gate pass system for curbing Overloading of indivisible Cargo (Import & Domestic) on Mechanical Trailers for transportation from/to Port.

- **Meeting with Transport Commissioner's Office, Govt of West Bengal on 19th Feb,2024.**
  HTOA Participants – Nilesh Sinha, Pawan Jain & Shah

  Discussion held with Sh. Arindum on levy of special fees on heavy goods vehicles/MHT registered in other states holding National Permit & Air Conditioner Cabin Tax while plying from/to/ through the State of W.B.

- **Meeting with Director General (RD) & SS , MoRTH New Delhi on 10th April,2024 for discussion of ODC/OWC transportation issues.**
  Meeting under Chairmanship of DG (RD) & SS attended by Sh. Manish Kataria along with stakeholders of Power segment & virtual mode by Sh. Nilesh Sinha & Sh. Gopinath Thube. HTOA shared statistics of 750,000 ODC Permissions only 34% falls within 4.75 mtr and 64% within 4.75 to 6.5 mtr and 2% above 6.5 mtr and requested ministry should permit all ODC/OWC above 4.75 mtrs. Power Segment representatives also expressed concern on height restriction and requested ministry to consider minimum height as 6.5 mtrs.

Advisories issued to Members:

1. Safety & Compliances for road transportation of ODC/OWC's.
2. Major traffic Jam between Ghodbundar to Talasari stretch in Maharashtra on NH 48.
3. Road upgradation work between Ghodbundar to Talasari (Maharashtra) on NH48 restricting height & traffic movement.

Reshamsingh & Co. Pvt. Ltd.
ISO 45001 : 2018 COMPANY

Malhotra Chamber, Unit No. 201 / 202, Behind U.S.Vitamin Company, Deonar Road, Govandi East, Mumbai - 400 088. Tel :- 91-22-2555 4069 / 2555 4532 / 2555 4973 E-mail :- admin@reshamsinghgroup.com

THE ART OF LOGISTICS

We simplify the solutions for the point to point delivery of ODC / SUPER ODC cargoes

Years of experience in big projects handling and having owned fleets of Pullers/ Axles /Barge and Tug enables us to provide complete reliable competitive logistics solutions to our customers.

RW/NH-34062/01/2020-S&R (B)
GOVERNMENT OF INDIA
MINISTRY OF ROAD TRANSPORT & HIGHWAYS
S&R -(Bridges)
Transport Bhawan, 1, Parliament Street, New Delhi-110001

Dated:17.01.2024

To,

1. The Chief Secretaries of all State Governments/Union Territories.
2. The Principal Secretaries / Secretaries of all States/U.Ts Public Works Department dealing with National Highways, other Centrally Sponsored Schemes and State Schemes.
3. The Engineer-in-Chief and Chief Engineers of Public Works Departments of States/U.Ts dealing with National Highways, other Centrally Sponsored Schemes and State Schemes.
4. The Chairman, National Highways Authority of India (NHAI), G-5&6, Sector-10, Dwarka, New Delhi-110 075.
5. The Managing Director, NHIDCL, PTI Building, Parliament Street, New Delhi-110 001.
6. Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi-110 010.
7. The Chairman- Policy Advocacy, Process Plant and Machinery Association of India.
8. The General Secretary, Hydraulic Trailer Owners Association, Mumbai.

Subject: Online permission for single unit ODCs/OWCs consignment on Modular Hydraulic Trailers (HT-1 to HT-13) on National highways in the country.

Sir,

Ministry has been granting online permission for road movement of single indivisible unit of overweight/over dimensional consignments (OWCs/ODCs) on Modular Hydraulic Trailers under different loading arrangements classified as HT 1 to HT 13 on National Highways through Ministry's Portal (www.morth-owc.nic.in). Ministry has earlier issued guidelines vide Ministry's letters dated 24.01.2013, 20.05.2014, 20.04.2015 and 02.6.2021 for grant of aforesaid permission and the same have been reviewed. Revised comprehensive guidelines are being hereby issued in supersession of the Ministry's letters mentioned above for effective regulation of movement of OWCs/ODCs consignments on National Highways and for ensuring the safe and uninterrupted movement of all types of vehicles on National Highways and preventing damage to any component of road infrastructure.

2. A detailed analytical study was carried out in 2012 for passage of various types and combinations of multi-axle modular hydraulic trailers carrying OWC/ODC. **The study was carried out only for various types of simply supported bridge structures with span length ranging from 5m to 50m covering various cross sections with 2 lane, 4 lane, 6 lane and 8 lane width.**

3. Based on the findings of this study, simplified charts (Chart C.1 to Chart C.13) were prepared for different combinations of modular hydraulic trailers which are enclosed as Annexure-I. The said charts shall form the basis for permitting movement of multi axle modular hydraulic trailers carrying OWC/ODC throughout the territory of India. Different combinations of multi axle modular hydraulic trailers are listed in Table 1:

Table 1-Load Composition of type HT1 to HT13

Chart No.	Type Of Combination	Total No. of Axles in MH TRAILER UNIT	Gross Vehicle Weight (without Puller Tractor) (MT}
C1	HT1	4	72
C2	HT2	6	108
C3	HT3	8	144
C4	HT4	10	180
C5	HT5	12	216
C6	HT6	14	252
C7	HT7	16	288
C8	HTS	18	324
C9	HT9	20	360
C10	HTl0 *	8+8	288
C11	HT11 *	10+10	360
C12	HT12 **	14+14	504
C13	HT13 **	16+16	576

(The Unladen weight of single axle is considered as 3.3 t

(*) Units with Turn Table Bolster Arrangement (Beam Weight = 16 t)

(**) Units with Girder Arrangement (Self Weight of Girder = 132 t)

The puller tractor is considered to carry a load of 25t comprising of 6t axle load in front axle and 9.5t each in rear two axles.

4. In order to select the appropriate chart applicable to a particular type of bridge structure, it is important to identify the characteristics of the bridge (i.e. Span Length, Structure Type, Support Condition etc). Before granting permission for passage of OWC/ODC, it is important to ensure that these parameters are available with the Ministry and overall condition of the bridge is examined by the concerned Regional Officer of MoRT&H/NHAI/NHIDCL.

5.1 Based on the above referred charts, a concise recommendation of study in the form of summary is presented in Table below. The HT Loadings are categorized as A, B & C and structure types categorized as 1, 2 & 3 respectively. The summary table presents the equivalency of IRC loads to different HT Loads with respect to structure type.

5.2 **For Longer Spans and for Type of Structures not covered in the above referred charts,** specific studies need to be carried out on identical system, which shall form the basis for clearance for movement of OWC/ ODC and also for future reference.

TABLE 2: SUMMARY TABLE SHOWING ADEQUACY OF STRUCTURE TYPES FOR PASSAGE OF HT LOAD

TYPE OF BRIDGE / STRUCTURE / TYPE OF HT LOADING			CATEGORY OF STRUCTURE TYPE		
			1	2	3
			✓ Culverts ✓ Masonry Arch Bridges ✓ RCC Solid/ Voided Slab Bridges ✓ RCC Precast/ Cast-in-situ Beam & Slab Bridges (with or without intermediate cross girder)	✓ PSC Precast/ Cast-in-situ Beam and slab Bridges (with or without intermediate cross girder) ✓ PSC Cast-in-situ Box Girder type Bridges	✓ PSC Precast Segmental box Girder type Bridges with WET joints. ✓ Composite Decks with steel beams and concrete slab bridges (with or without intermediate cross girder)
HT LOADING CATEGORY	A	HT1, HT2, HT3	PASS	PASS	PASS
	B	HT4TO HT9	PASS	✓ For HT4: Pass ✓ For HT 5 to HT9: Pass with Restricted GVW in some cases- Refer charts for details.	✓ Pass with Restricted GVW in some cases- Refer charts for details.
	C	HT10, HT11, HT12, HT13	PASS	✓ Pass with Restricted GVW in some cases- Refer charts for details.	✓ Pass with restricted GVW in some cases- Refer charts for details.

As may be seen from the enclosed charts and above summary statement, free movement for MHT combination type HT1, HT2 & HT3 may be permitted for all specified types of bridges and for all specified span lengths. But for MHT combination type HT4, HT5, HT6, HT7, HT8, HT9, HT10, HT11, HT12 & HT13, movement shall be permitted up to Gross Vehicle Weight (GVW) as applicable for a particular chart or reduced GVW reflected in specific cell of the chart for different carriageway widths and structural arrangements.

6. The distressed bridges on National Highways will be coded as **Orange** (moderately severe) and **Red** (highly severe) and uploaded on the OWC/ODC portal. Similarly the bridges having individual span length more than 50 m and bridges not covered in Table-2 of para-5 shall also be uploaded on the OWC/ODC portal. Some of the bridges in the above mentioned categories are already uploaded on the ODC/OWC portal. The same shall be updated and particularly colour coding shall be done for distressed bridges.

7. Permission will not be granted for movement of different combinations of Modular Hydraulic Trailers on the types of bridges as shown below:

Sl. No.	Type of Bridge	Type of Combinations which are not allowed
1	Bridges having individual span length > 50 m	HT1 to HT13
2	Bridges having superstructure not covered in Table-2 of para-5	HT1 to HT13
3	Distressed bridges coded as Red	HT1 to HT13
4	Distressed bridges coded as Orange	HT4 to HT13
5	Bridges rated under capacity for carrying loading as per IRC:6 or where load restrictions have been already imposed.	HT1 to HT13

8. Maximum height of the motor vehicle with such ODC/OWC consignment shall be 4.75 m.

9. Procedure for submission of application and grant of online permission for movement of OWC/ODC:

9.1 The transporter will register themselves once on the ODCs/OWCs portal by filling the prescribed registration format as per Annexure-II enclosed herewith. Registered email-id will act as the user-id for login on ODCs/OWCs portal for all future transactions.

9.2 The transporter already registered on the portal will upload the cargo details on the ODCs/OWCs web portal in the format as per Annexure-III. Annexure-III include a signed statement by competent person from Consignee stating the details mentioned in Annexure-III.

On successful online submission of cargo details as above, an application reference number will be generated by the system and a system generated email will be triggered to applicant registered email id confirming the same.

9.3 The applicant will upload the details of Modular Hydraulic Trailer, Puller Tractor, Driver and other details on the ODCs/OWCs web portal as per Annexure-IV. Some important details in this regard are as mentioned below:

i) Route proposed to be taken for subject movement with minimum one station at each interval of 100 kms or part thereof for the total journey shall be indicated.

ii) Portal will permit change of Puller Tractor number and/or MHT number for identical HT type prior to payment of fee.

iii) Portal will permit replacement of eligible driver prior to payment of fee.

iv) ODCs/OWCs portal will automatically verify the details of Puller Tractor, Modular Hydraulic Trailer and Driver from VAHAN and SARATHI portal.

v) Portal will not allow deployment of Puller Tractor, MHT and Driver if any of the details given in Annexure-IV in respect of the same are not valid at the time online payment of prescribed fee.

9.4 Online self-declaration shall be made by applicant as per Annexure-V.

9.5 The conditions of movement of OWCs/ODCs are at Annexure-VI.

9.6 Portal shall make available the applicant to view alternate routes from origin to destination. Once the applicant selects a route, the list of bridges of types as mentioned in para-7 above shall be available to the transporter to view so that the transporter can plan an alternative route, if any, on which such bridges can be avoided/ minimized. In case a transporter finally selects a route where there is any bridge of any type as shown in para-7 above for the corresponding MHT combination, permission shall not be granted on such bridge(s) and the transporter shall have to detour the said bridge(s) by its own arrangement.

10. In case of ODCs/OWCs classified as HT-1 to HT-3, portal will generate fee to be paid by the transporter instantaneously after the route is finally selected by the transporter. Once the fee is paid online by the transporter, the portal will generate the permission letter excluding the types of bridges mentioned at sl. no. 1, 2, 3 & 5 of Table in para-7 above. A copy of such system generated permission letter will be auto emailed to concerned RO(s) of MoRT&H/NHAI/NHIDCL and uploaded on Ministry's website. In case fee is not paid within 7 days from the date of notification of fee on the portal, the application will be automatically cancelled.

11. In case of ODCs/OWCs classified as HT-4 to HT-13, system generated email of the application exhibiting consignment, HT type and requested route will be forwarded to concerned RO(s) of the MoRT&H/NHAI/NHIDCL. After receiving system generated email, it will be responsibility of concerned RO(s) of the MoRT&H/NHAI/NHIDCL to examine and, if required, revise/modify the list of types of bridges mentioned in the para-7 above on the ODC/OWC portal as per prevailing site conditions within 15 days time period. An auto generated alert email will be sent to concerned RO(s) of the MoRT&H/NHAI/NHIDCL on seventh day following the date on which initial email was sent. Another auto generated alert email will be sent to concerned RO(s) of the MoRT&H/NHAI/NHIDCL and concerned ADG of MoRTH/Member of NHAI/Director Technical of NHIDCL on twelfth day following the date on which initial email was sent. Whether the list of bridges is modified by concerned RO(s) of the MoRT&H/NHAI/NHIDCL or not on completion of 15 days time period, the portal will generate fee to be paid by transporter. Once the fee is paid online by the applicant transporter, the portal will generate the permission letter excluding the types of bridges mentioned at sl. no. 1, 2, 3, 4 & 5 of Table in para-7 above as revised/ modified by RO(s) of the MoRT&H/NHAI/NHIDCL, if any. A copy of such system generated permission letter will be auto emailed to concerned RO(s) of MoRT&H/NHAI/NHIDCL and uploaded on Ministry's website. In case fee is not paid within 15 days from the date of notification of fee on the portal, the application will be automatically cancelled.

12. The permission shall be granted subject to the conditions mentioned in Annexure-VI.

13. ODCs/OWCs fee rate per 50 km or part thereof of total trip journey on National Highways (in Rs.) for categories of ODCs/OWCs with GCW including Puller weight is revised as under:

Type of loaded HT combination carrying ODC/OWC	Rate per 50 km or part thereof of total trip journey on National Highways (in Rs.)
HT -1 to HT-3	**1200**
HT-4 to HT-6	**2400**
HT-7 to HT-9	**3600**
HT-10 to HT-13	**4800**

14. All ROs of MoRT&H/NHAI/NHIDCL are authorised to verify all details/documents submitted by the applicant at any time during movement of ODCs/OWCs and will invariably submit a report thereto in each case. In case of any violation/deficiency, ROs of the MoRT&H/NHAI/NHIDCL will act as under:

14.1 In case, axle weight for any axle row is more than 18.0 ton or gross vehicle weight (GVW) is more than declared RLW of Puller Tractor and Modular Hydraulic Trailer or in case, the dimensions of the Puller Tractor and Modular Hydraulic Trailer under laden condition is more than the dimensions declared in Annexure-III, the onward movement of vehicle will be put on hold for a period of 7 days and a fine equivalent to twenty times of the prescribed fee will be imposed and recovered from the applicant. The ODC/OWC consignment will be allowed to move onwards but transporter will make detour of all bridges and structures irrespective of their condition/status. The transporter will be barred on ODCs/OWCs portal for a minimum period of one year from such date of detection of violation.

15. The permission granted shall be valid for a period of 6 months from the date of issue of permission letter. However, the applicant shall ensure that the journey commences within 10 days from the date permission is granted. Otherwise the applicant is required to notify its journey date on the ODC/OWC portal 7 days in advance. If there is no change in the status of bridges on the selected route with reference to para 7 of this circular, instantaneous acknowledgement will be generated through the portal and auto emailed to concerned RO(s) of MoRT&H/NHAI/NHIDCL and uploaded on Ministry's website. In case there is change in the in the status of bridges on the selected route with reference to para 7 of this circular, applicant will be displayed the revised status clearly mentioning the bridges where movement of OWC is no more allowed. If acceptable to the applicant, new permission letter will be generated immediately excluding the said bridge(s) in the selected route and the applicant will have to detour the said bridge(s) by own arrangement. Alternatively, if applicant so wishes, he can apply for alternative route without any additional charges or may seek full refund.

16. NIC will make changes in OWC/ODC portal within one month as per guidelines issued in this circular.

17. The contents of this circular may please be brought to the notice of all the concerned in your organization for strict implementation. This circular shall be effective after two months from the date of issue of this circular.

17.1 It is utmost requirement to update the database of the types of bridges mentioned in para-7 above on the ODC/OWC portal. Although such database is existing in the ODC/OWC portal presently, the same is not complete and updated. ***To ensure that there is no movement of OWC consignment on bridges in violation of para 7 of this circular, the concerned RO(s) of MoRT&H/NHAI/NHIDCL shall upload the information related to aforesaid bridges on OWCs/ODCs portal based on current status within a period of 2 months positively and update the same as and when such bridges are identified on National Highways under their jurisdiction***. In case no bridges are uploaded on the ODCs / OWCs portal within 2 months of this circular, it would be presumed that bridges of such types as mentioned in para-7 above are Nil in the jurisdiction of the concerned RO or the same were earlier updated in the portal. In the event of any untoward incident on account of not identifying / not uploading of such bridges on the ODCs / OWCs portal, the onus for such incident would lie on the concerned jurisdictional RO.

18. This issues with the approval of the competent authority.

Encl:

i. Annexure-I (Chart C.1 to Chart C.13)
ii. Annexure-II (Transporter registration format)
iii. Annexure-III (Cargo details)
iv. Annexure-IV (Details of MHT and Drivers)
v. Annexure-V (Online self declaration)
vi. Annexure-VI (Conditions of movement)

Yours faithfully,

(Jitendra Kumar)
SE(S&R) Bridges
For Director General (RD) & Special Secretary

Copy to:

1. All Technical Officers in the Ministry of Road Transport a Highways.
2. All Joint Secretaries in the Ministry of Road Transport at Highways.
3. All ROs and **ELOs** of the Ministry of Road Transport a Highways.
4 The Secretary General, Indian Roads Congress.

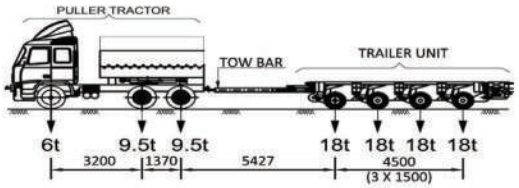
5. The Director, IAHE.
6. Technical circular file of S, R&T (B) Section.
7. NIC for uploading on Ministry's website.

Copy for kind information to:

1. PS to Hon'ble Minister (RT&H) / PS to Hon'ble MOS (RT&H).
2. Sr. PPS to Secretary (RT&H).
3. PPS to DG (RD) a SS.
4. PPS to AS at FA/ADG-I.

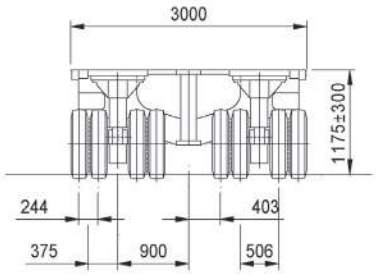
CHART SHOWING ADEQUACY OF SPAN, CARRIAGEWAY WIDTHS & STRUCTURE TYPE FOR :
HT-1 LOADING (WITH 4 AXLE TRAILER UNITS)

CHART NO. C-1



TOTAL GVW INCLUDING PULLER TRACTOR= 97 t

Span ↓ C/W typ →	C' WAY TYPE 1	C' WAY TYPE 2	C' WAY TYPE 3	C' WAY TYPE 4	C' WAY TYPE 5
1. Masonary Arch bridges					
5 m		NOT APPLICABLE			
10 m		NOT APPLICABLE			
15 m		NOT APPLICABLE			
2. RCC Solid/Voided slab bridges					
5 m					
10 m					
15 m					
20 m					
3. RCC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
10 m					
15 m					
20 m					
25 m					
4. RCC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
10 m					
15 m					
20 m					
25 m					
5. PSC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
20 m					
25 m					
30 m					
35 m					
40 m					
6. PSC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
20 m					
25 m					
30 m					
35 m					
40 m					
7. PSC Cast in Situ Box Girders type bridges					
30 m					
35 m					
40 m					
45 m					
50 m					
8. PSC Precast Segmental Box Girders type bridges - With Wet Joint					
30 m				NOT APPLICABLE	
35 m				NOT APPLICABLE	
40 m				NOT APPLICABLE	
45 m				NOT APPLICABLE	
50 m				NOT APPLICABLE	
9. Composite decks with Steel Beams and Concrete slab bridges - With Int. X Girder					
15 m					
20 m					
25 m					
30 m					
35 m					
10. Composite decks with Steel Beams and Concrete slab bridges - Without Int. X Girder					
15 m					
20 m					
25 m					
30 m					
35 m					



TYPICAL CROSS SECTION SHOWING TRANSVERSE WHEEL ARRANGEMENT OF HYDRAULIC TRAILER UNITS

Legend:

Safe to carry the specified load

Safe to carry marked reduced GVW

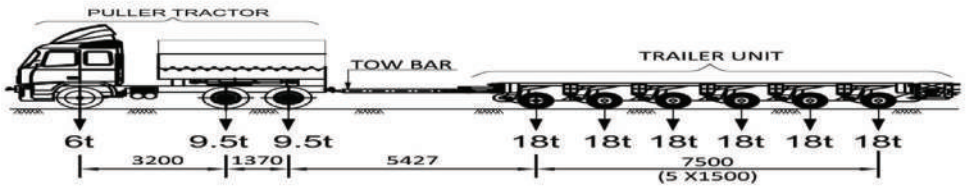
C'WAY TYPE 1 : 2 LANE SINGLE CARRIAGEWAY OR 2 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY
C'WAY TYPE 2 : 3 LANE SINGLE CARRIAGEWAY OR 3 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY
C'WAY TYPE 3 : 4 LANE SINGLE CARRIAGEWAY OR 4 LANE DUAL C' WAY WITH STRUCTURAL DISCONTINUITY OR
2 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY
C'WAY TYPE 4 : 3 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY
C'WAY TYPE 5 : 4 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

NOTES :

1 THE ABOVE CONCLUSIONS ARE FOR BRIDGES HAVING DECK SLAB WITHOUT ANY TRANSVERSE PRESTRESSING.
2 THE OWC CAN SAFELY BE PERMITTED OVER ALL TYPES OF CULVERTS HAVING SPAN LENGTH < 6m.
3 THE ABOVE CONCLUSIONS ARE BASED ON THE CONDITIONS / ASSUMPTIONS GIVEN SEPARATELY
4 WHEREVER REDUCED GVW IS MARKED "RED" IN THE CHART, CORRESPONDING REDUCED AXLE LOAD CAN BE CALCULATED BY THE FORMULA : RAL = (RGVW-25) / 4
Where : RAL = Reduced Axle Load (in tonnes); RGVW = Reduced Gross Vehicle Weight (in tonnes)
5 THE TRANSPORTER SHALL TAKE PERMISSION FROM THE CONCERNED REGULATORY AGENCY BEFORE TAKING THE HT LOADS OVER THE BRIDGES
6 IN CASE OF STRUCTURES MARKED TO CARRY RGVW, FOR INTERMEDIATE SPAN LENGTHS, THE VALUES OF GVW OF CRITICAL OF THE TWO ADJACENT SPANS HAVE TO BE TAKEN.

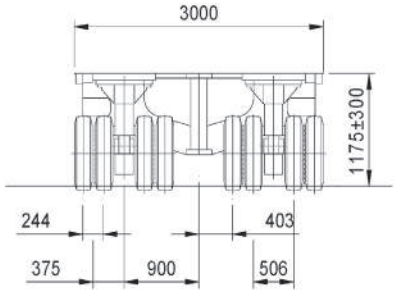
CHART SHOWING ADEQUACY OF SPAN, CARRIAGEWAY WIDTHS & STRUCTURE TYPE FOR HT-2 LOADING (WITH 6 AXLE TRAILER UNITS)

CHART NO. C-2



Span / CW type	C' WAY TYPE 1	C' WAY TYPE 2	C' WAY TYPE 3	C' WAY TYPE 4	C' WAY TYPE 5
1. Masonary Arch bridges					
5 m		NOT APPLICABLE			
10 m		NOT APPLICABLE			
15 m		NOT APPLICABLE			
2. RCC Solid/Voided slab bridges					
5 m					
10 m					
15 m					
20 m					
3. RCC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
10 m					
15 m					
20 m					
25 m					
4. RCC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
10 m					
15 m					
20 m					
25 m					
5. PSC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
20 m					
25 m					
30 m					
35 m					
40 m					
6. PSC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
20 m					
25 m					
30 m					
35 m					
40 m					
7. PSC Cast in Situ Box Girders type bridges					
30 m					
35 m					
40 m					
45 m					
50 m					
8. PSC Precast Segmental Box Girders type bridges - With Wet Joint					
30 m				NOT APPLICABLE	
35 m				NOT APPLICABLE	
40 m				NOT APPLICABLE	
45 m				NOT APPLICABLE	
50 m				NOT APPLICABLE	
9. Composite decks with Steel Beams and Concrete slab bridges - With Int. X Girder					
15 m					
20 m					
25 m					
30 m					
35 m					
10. Composite decks with Steel Beams and Concrete slab bridges - Without Int. X Girder					
15 m					
20 m					
25 m					
30 m					
35 m					

TOTAL GVW INCLUDING PULLER TRACTOR= 133 t



TYPICAL CROSS SECTION SHOWING TRANSVERSE WHEEL ARRANGEMENT OF HYDRAULIC TRAILER UNITS

Legend:

Safe to carry the specified load

Safe to carry marked reduced GVW

C'WAY TYPE 1 : 2 LANE SINGLE CARRIAGEWAY OR 2 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY

C'WAY TYPE 2 : 3 LANE SINGLE CARRIAGEWAY OR 3 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY

C'WAY TYPE 3 : 4 LANE SINGLE CARRIAGEWAY OR 4 LANE DUAL C' WAY WITH STRUCTURAL DISCONTINUITY OR 2 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

C'WAY TYPE 4 : 3 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

C'WAY TYPE 5 : 4 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

NOTES :

1 THE ABOVE CONCLUSIONS ARE FOR BRIDGES HAVING DECK SLAB WITHOUT ANY TRANSVERSE PRESTRESSING.

2 THE OWC CAN SAFELY BE PERMITTED OVER ALL TYPES OF CULVERTS HAVING SPAN LENGTH < 6m.

3 THE ABOVE CONCLUSIONS ARE BASED ON THE CONDITIONS / ASSUMPTIONS GIVEN SEPARATELY

4 WHEREVER REDUCED GVW IS MARKED "RED" IN THE CHART, CORRESPONDING REDUCED AXLE LOAD CAN BE CALCULATED BY THE FORMULA : RAL = (RGVW-25) / 6

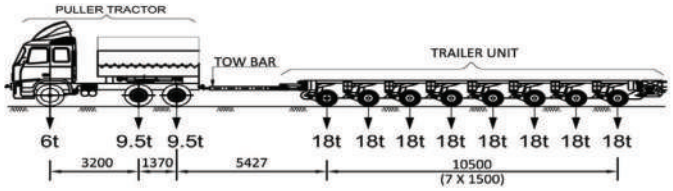
Where : RAL = Reduced Axle Load (in tonnes); RGVW = Reduced Gross Vehicle Weight (in tonnes)

5 THE TRANSPORTER SHALL TAKE PERMISSION FROM THE CONCERNED REGULATORY AGENCY BEFORE TAKING THE HT LOADS OVER THE BRIDGES

6 IN CASE OF STRUCTURES MARKED TO CARRY RGVW, FOR INTERMEDIATE SPAN LENGTHS, THE VALUES OF GVW OF CRITICAL OF THE TWO ADJACENT SPANS HAVE TO BE TAKEN.

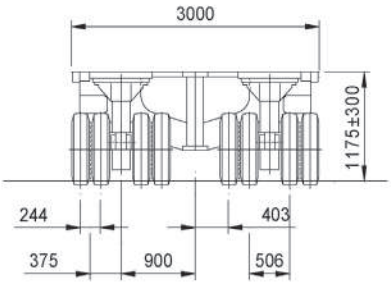
CHART SHOWING ADEQUACY OF SPAN, CARRIAGEWAY WIDTHS & STRUCTURE TYPE FOR HT-3 LOADING (WITH 8 AXLE TRAILER UNITS)

CHART NO. C-3



Span / CW type	C' WAY TYPE 1	C' WAY TYPE 2	C' WAY TYPE 3	C' WAY TYPE 4	C' WAY TYPE 5
1. Masonary Arch bridges					
5 m		NOT APPLICABLE			
10 m		NOT APPLICABLE			
15 m		NOT APPLICABLE			
2. RCC Solid/Voided slab bridges					
5 m					
10 m					
15 m					
20 m					
3. RCC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
10 m					
15 m					
20 m					
25 m					
4. RCC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
10 m					
15 m					
20 m					
25 m					
5. PSC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
20 m					
25 m					
30 m					
35 m					
40 m					
6. PSC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
20 m					
25 m					
30 m					
35 m					
40 m					
7. PSC Cast in Situ Box Girders type bridges					
30 m					
35 m					
40 m					
45 m					
50 m					
8. PSC Precast Segmental Box Girders type bridges - With Wet Joint					
30 m				NOT APPLICABLE	
35 m				NOT APPLICABLE	
40 m				NOT APPLICABLE	
45 m				NOT APPLICABLE	
50 m				NOT APPLICABLE	
9. Composite decks with Steel Beams and Concrete slab bridges - With Int. X Girder					
15 m					
20 m					
25 m					
30 m					
35 m					
10. Composite decks with Steel Beams and Concrete slab bridges - Without Int. X Girder					
15 m					
20 m					
25 m					
30 m					
35 m					

TOTAL GVW INCLUDING PULLER TRACTOR= 169 t



TYPICAL CROSS SECTION SHOWING TRANSVERSE WHEEL ARRANGEMENT OF HYDRAULIC TRAILER UNITS

Legend:

Safe to carry the specified load

Safe to carry marked reduced GVW

C'WAY TYPE 1 : 2 LANE SINGLE CARRIAGEWAY OR 2 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY

C'WAY TYPE 2 : 3 LANE SINGLE CARRIAGEWAY OR 3 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY

C'WAY TYPE 3 : 4 LANE SINGLE CARRIAGEWAY OR 4 LANE DUAL C' WAY WITH STRUCTURAL DISCONTINUITY OR 2 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

C'WAY TYPE 4 : 3 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

C'WAY TYPE 5 : 4 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

NOTES :

1 THE ABOVE CONCLUSIONS ARE FOR BRIDGES HAVING DECK SLAB WITHOUT ANY TRANSVERSE PRESTRESSING.

2 THE OWC CAN SAFELY BE PERMITTED OVER ALL TYPES OF CULVERTS HAVING SPAN LENGTH < 6m.

3 THE ABOVE CONCLUSIONS ARE BASED ON THE CONDITIONS / ASSUMPTIONS GIVEN SEPARATELY

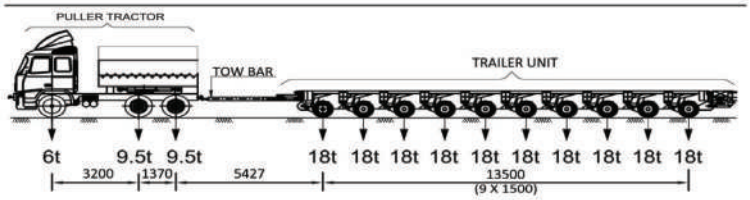
4 WHEREVER REDUCED GVW IS MARKED "RED" IN THE CHART, CORRESPONDING REDUCED AXLE LOAD CAN BE CALCULATED BY THE FORMULA : RAL = (RGVW-25) / 8
Where : RAL = Reduced Axle Load (in tonnes); RGVW = Reduced Gross Vehicle Weight (in tonnes)

5 THE TRANSPORTER SHALL TAKE PERMISSION FROM THE CONCERNED REGULATORY AGENCY BEFORE TAKING THE HT LOADS OVER THE BRIDGES

6 IN CASE OF STRUCTURES MARKED TO CARRY RGVW, FOR INTERMEDIATE SPAN LENGTHS, THE VALUES OF GVW OF CRITICAL OF THE TWO ADJACENT SPANS HAVE TO BE TAKEN.

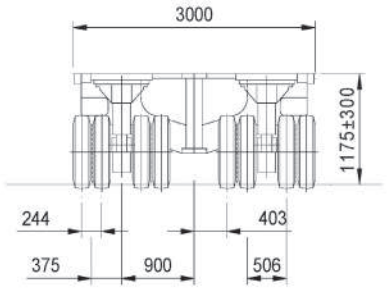
CHART SHOWING ADEQUACY OF SPAN, CARRIAGEWAY WIDTHS & STRUCTURE TYPE FOR HT-4 LOADING (WITH 10 AXLE TRAILER UNITS)

CHART NO. C-4



TOTAL GVW INCLUDING PULLER TRACTOR= 205 t

Span / CW type	C' WAY TYPE 1	C' WAY TYPE 2	C' WAY TYPE 3	C' WAY TYPE 4	C' WAY TYPE 5
1. Masonary Arch bridges					
5 m		NOT APPLICABLE			
10 m		NOT APPLICABLE			
15 m		NOT APPLICABLE			
2. RCC Solid/Voided slab bridges					
5 m					
10 m					
15 m					
20 m					
3. RCC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
10 m					
15 m					
20 m					
25 m					
4. RCC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
10 m					
15 m					
20 m					
25 m					
5. PSC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
20 m					
25 m					
30 m					
35 m					
40 m					
6. PSC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
20 m					
25 m					
30 m					
35 m					
40 m					
7. PSC Cast in Situ Box Girders type bridges					
30 m					
35 m					
40 m					
45 m					
50 m					
8. PSC Precast Segmental Box Girders type bridges - With Wet Joint					
30 m				NOT APPLICABLE	
35 m				NOT APPLICABLE	
40 m				NOT APPLICABLE	
45 m				NOT APPLICABLE	
50 m				NOT APPLICABLE	
9. Composite decks with Steel Beams and Concrete slab bridges - With Int. X Girder					
15 m					
20 m					
25 m					
30 m			201 t		
35 m					
10. Composite decks with Steel Beams and Concrete slab bridges - Without Int. X Girder					
15 m					
20 m	201 t		194 t		201 t
25 m	199 t	195 t	198 t		
30 m	199 t		198 t		
35 m	186 t		189 t		202 t



TYPICAL CROSS SECTION SHOWING TRANSVERSE WHEEL ARRANGEMENT OF HYDRAULIC TRAILER UNITS

Legend:

Safe to carry the specified load

Safe to carry marked reduced GVW

C'WAY TYPE 1 : 2 LANE SINGLE CARRIAGEWAY OR 2 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY

C'WAY TYPE 2 : 3 LANE SINGLE CARRIAGEWAY OR 3 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY

C'WAY TYPE 3 : 4 LANE SINGLE CARRIAGEWAY OR 4 LANE DUAL C' WAY WITH STRUCTURAL DISCONTINUITY OR 2 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

C'WAY TYPE 4 : 3 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

C'WAY TYPE 5 : 4 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

NOTES :

1 THE ABOVE CONCLUSIONS ARE FOR BRIDGES HAVING DECK SLAB WITHOUT ANY TRANSVERSE PRESTRESSING.

2 THE OWC CAN SAFELY BE PERMITTED OVER ALL TYPES OF CULVERTS HAVING SPAN LENGTH < 6m.

3 THE ABOVE CONCLUSIONS ARE BASED ON THE CONDITIONS / ASSUMPTIONS GIVEN SEPARATELY

4 WHEREVER REDUCED GVW IS MARKED "RED" IN THE CHART, CORRESPONDING REDUCED AXLE LOAD CAN BE CALCULATED BY THE FORMULA : RAL = (RGVW-25) / 10

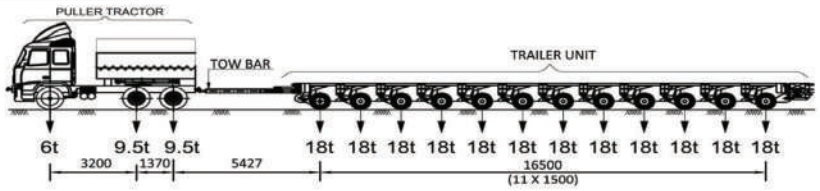
Where : RAL = Reduced Axle Load (in tonnes); RGVW = Reduced Gross Vehicle Weight (in tonnes)

5 THE TRANSPORTER SHALL TAKE PERMISSION FROM THE CONCERNED REGULATORY AGENCY BEFORE TAKING THE HT LOADS OVER THE BRIDGES

6 IN CASE OF STRUCTURES MARKED TO CARRY RGVW, FOR INTERMEDIATE SPAN LENGTHS, THE VALUES OF GVW OF CRITICAL OF THE TWO ADJACENT SPANS HAVE TO BE TAKEN.

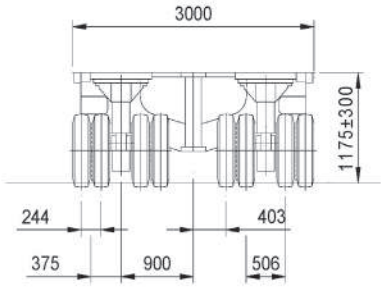
CHART SHOWING ADEQUACY OF SPAN, CARRIAGEWAY WIDTHS & STRUCTURE TYPE FOR HT-5 LOADING (WITH 12 AXLE TRAILER UNITS)

CHART NO. C-5



Span / C/W type	C' WAY TYPE 1	C' WAY TYPE 2	C' WAY TYPE 3	C' WAY TYPE 4	C' WAY TYPE 5
1. Masonary Arch bridges					
5 m		NOT APPLICABLE			
10 m		NOT APPLICABLE			
15 m		NOT APPLICABLE			
2. RCC Solid/Voided slab bridges					
5 m					
10 m					
15 m					
20 m					
3. RCC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
10 m					
15 m					
20 m					
25 m					
4. RCC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
10 m					
15 m					
20 m					
25 m					
5. PSC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
20 m					
25 m					
30 m					
35 m					
40 m	237 t				
6. PSC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
20 m				240 t	236 t
25 m					236 t
30 m				240 t	237 t
35 m					
40 m				240 t	234 t
7. PSC Cast in Situ Box Girders type bridges					
30 m					
35 m					
40 m					
45 m					
50 m					
8. PSC Precast Segmental Box Girders type bridges - With Wet Joint					
30 m				NOT APPLICABLE	
35 m				NOT APPLICABLE	
40 m	237 t			NOT APPLICABLE	
45 m	235 t			NOT APPLICABLE	
50 m	234 t			NOT APPLICABLE	
9. Composite decks with Steel Beams and Concrete slab bridges - With Int. X Girder					
15 m					
20 m	238 t				
25 m	227 t				236 t
30 m	220 t		225 t		
35 m	218 t				234 t
10. Composite decks with Steel Beams and Concrete slab bridges - Without Int. X Girder					
15 m					
20 m	226 t		237 t		226 t
25 m	217 t	237 t	216 t		226 t
30 m	216 t		213 t		227 t
35 m	204 t	237 t	203 t		222 t

TOTAL GVW INCLUDING PULLER TRACTOR= 241 t



TYPICAL CROSS SECTION SHOWING TRANSVERSE WHEEL ARRANGEMENT OF HYDRAULIC TRAILER UNITS

Legend:

Safe to carry the specified load

Safe to carry marked reduced GVW

C'WAY TYPE 1 : 2 LANE SINGLE CARRIAGEWAY OR 2 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY

C'WAY TYPE 2 : 3 LANE SINGLE CARRIAGEWAY OR 3 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY

C'WAY TYPE 3 : 4 LANE SINGLE CARRIAGEWAY OR 4 LANE DUAL C' WAY WITH STRUCTURAL DISCONTINUITY OR 2 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

C'WAY TYPE 4 : 3 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

C'WAY TYPE 5 : 4 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

NOTES :

1 THE ABOVE CONCLUSIONS ARE FOR BRIDGES HAVING DECK SLAB WITHOUT ANY TRANSVERSE PRESTRESSING.

2 THE OWC CAN SAFELY BE PERMITTED OVER ALL TYPES OF CULVERTS HAVING SPAN LENGTH < 6m.

3 THE ABOVE CONCLUSIONS ARE BASED ON THE CONDITIONS / ASSUMPTIONS GIVEN SEPARATELY

4 WHEREVER REDUCED GVW IS MARKED "RED" IN THE CHART, CORRESPONDING REDUCED AXLE LOAD CAN BE CALCULATED BY THE FORMULA : RAL = (RGVW-25) / 12

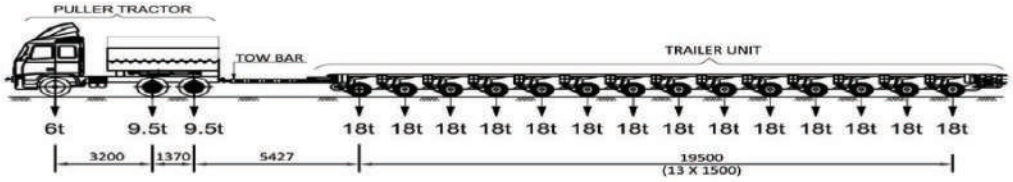
Where : RAL = Reduced Axle Load (in tonnes); RGVW = Reduced Gross Vehicle Weight (in tonnes)

5 THE TRANSPORTER SHALL TAKE PERMISSION FROM THE CONCERNED REGULATORY AGENCY BEFORE TAKING THE HT LOADS OVER THE BRIDGES

6 IN CASE OF STRUCTURES MARKED TO CARRY RGVW, FOR INTERMEDIATE SPAN LENGTHS, THE VALUES OF GVW OF CRITICAL OF THE TWO ADJACENT SPANS HAVE TO BE TAKEN.

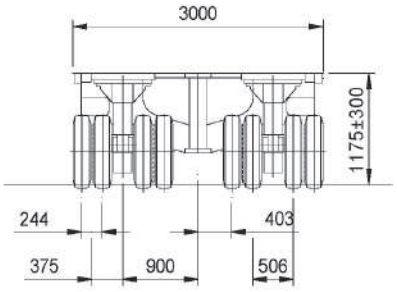
CHART SHOWING ADEQUACY OF SPAN, CARRIAGEWAY WIDTHS & STRUCTURE TYPE FOR HT-6 LOADING (WITH 14 AXLE TRAILER UNITS)

CHART NO. C-6



Span ↓ C/W type →	C'WAY TYPE 1	C'WAY TYPE 2	C'WAY TYPE 3	C'WAY TYPE 4	C'WAY TYPE 5
1. Masonary Arch bridges					
5 m		NOT APPLICABLE			
10 m		NOT APPLICABLE			
15 m		NOT APPLICABLE			
2. RCC Solid/Voided slab bridges					
5 m					
10 m					
15 m					
20 m					
3. RCC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
10 m					
15 m					
20 m					
25 m					
4. RCC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
10 m					
15 m					
20 m					
25 m					
5. PSC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
20 m					
25 m					
30 m					
35 m	266 t				
40 m	251 t				
6. PSC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
20 m				273 t	268 t
25 m		273 t		269 t	263 t
30 m		271 t		265 t	261 t
35 m		276 t		270 t	263 t
40 m	276.3 t	276.7 t		260 t	253 t
7. PSC Cast in Situ Box Girders type bridges					
30 m					
35 m					
40 m	267 t				
45 m	259 t				
50 m	258 t				
8. PSC Precast Segmental Box Girders type bridges - With Wet Joint					
30 m	276.7 t			NOT APPLICABLE	
35 m	253 t			NOT APPLICABLE	
40 m	248 t			NOT APPLICABLE	
45 m	240 t			NOT APPLICABLE	
50 m	242 t			NOT APPLICABLE	
9. Composite decks with Steel Beams and Concrete slab bridges - With Int. X Girder					
15 m					
20 m	270 t				
25 m	246 t				269 t
30 m	237 t		250 t		276.98 t
35 m	231 t		272 t		259 t
10. Composite decks with Steel Beams and Concrete slab bridges - Without Int. X Girder					
15 m					
20 m	258 t		247 t		257 t
25 m	238 t	259 t	236 t	275 t	250 t
30 m	234 t	260 t	231 t	271 t	246 t
35 m	222 t	250 t	217 t	262 t	244 t

TOTAL GVW INCLUDING PULLER TRACTOR= 277 t



TYPICAL CROSS SECTION SHOWING TRANSVERSE WHEEL ARRANGEMENT OF HYDRAULIC TRAILER UNITS

Legend:

Safe to carry the specified load

Safe to carry marked reduced GVW

C'WAY TYPE 1 : 2 LANE SINGLE CARRIAGEWAY OR 2 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY

C'WAY TYPE 2 : 3 LANE SINGLE CARRIAGEWAY OR 3 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY

C'WAY TYPE 3 : 4 LANE SINGLE CARRIAGEWAY OR 4 LANE DUAL C' WAY WITH STRUCTURAL DISCONTINUITY OR 2 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

C'WAY TYPE 4 : 3 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

C'WAY TYPE 5 : 4 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

NOTES :

1 THE ABOVE CONCLUSIONS ARE FOR BRIDGES HAVING DECK SLAB WITHOUT ANY TRANSVERSE PRESTRESSING.

2 THE OWC CAN SAFELY BE PERMITTED OVER ALL TYPES OF CULVERTS HAVING SPAN LENGTH < 8m.

3 THE ABOVE CONCLUSIONS ARE BASED ON THE CONDITIONS / ASSUMPTIONS GIVEN SEPARATELY

4 WHEREVER REDUCED GVW IS MARKED "RED" IN THE CHART, CORRESPONDING REDUCED AXLE LOAD CAN BE CALCULATED BY THE FORMULA : RAL = (RGVW-25) / 14

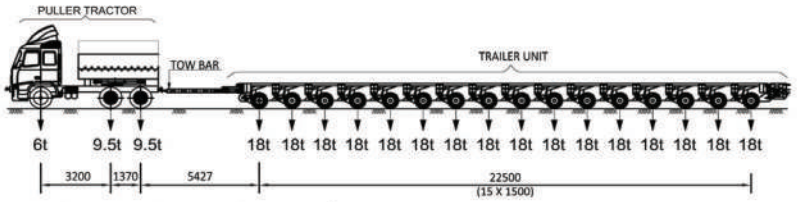
Where : RAL = Reduced Axle Load (in tonnes); RGVW = Reduced Gross Vehicle Weight (in tonnes)

5 THE TRANSPORTER SHALL TAKE PERMISSION FROM THE CONCERNED REGULATORY AGENCY BEFORE TAKING THE HT LOADS OVER THE BRIDGES

6 IN CASE OF STRUCTURES MARKED TO CARRY RGVW, FOR INTERMEDIATE SPAN LENGTHS, THE VALUES OF GVW OF CRITICAL OF THE TWO ADJACENT SPANS HAVE TO BE TAKEN.

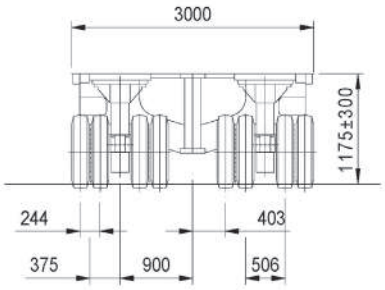
CHART SHOWING ADEQUACY OF SPAN, CARRIAGEWAY WIDTHS & STRUCTURE TYPE FOR HT-7 LOADING (WITH 16 AXLE TRAILER UNITS)

CHART NO. C-7



TOTAL GVW INCLUDING PULLER TRACTOR= 313 t

Span ↓ C/W type →	C' WAY TYPE 1	C' WAY TYPE 2	C' WAY TYPE 3	C' WAY TYPE 4	C' WAY TYPE 5
1. Masonary Arch bridges					
5 m		NOT APPLICABLE			
10 m		NOT APPLICABLE			
15 m		NOT APPLICABLE			
2. RCC Solid/Voided slab bridges					
5 m					
10 m					
15 m					
20 m					
3. RCC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
10 m					
15 m					
20 m					
25 m					
4. RCC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
10 m					
15 m					
20 m					
25 m					
5. PSC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
20 m					
25 m					
30 m	312 t				
35 m	284 t				
40 m	266 t	308 t			312 t
6. PSC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
20 m				308 t	303 t
25 m		304 t		298 t	292 t
30 m	308 t	298 t		291 t	288 t
35 m	300 t	300 t		294 t	286 t
40 m	293 t	299 t		281 t	274 t
7. PSC Cast in Situ Box Girders type bridges					
30 m	311 t				
35 m	297 t				
40 m	281 t				
45 m	270 t				
50 m	268 t				
8. PSC Precast Segmental Box Girders type bridges - With Wet Joint					
30 m	297 t			NOT APPLICABLE	
35 m	276 t			NOT APPLICABLE	
40 m	261 t			NOT APPLICABLE	
45 m	251 t			NOT APPLICABLE	
50 m	249 t			NOT APPLICABLE	
9. Composite decks with Steel Beams and Concrete slab bridges - With Int. X Girder					
15 m					
20 m	305 t				
25 m	272 t		311 t		302 t
30 m	254 t		276 t		308 t
35 m	247 t		300 t		285 t
10. Composite decks with Steel Beams and Concrete slab bridges - Without Int. X Girder					
15 m					
20 m	290 t		279 t		298 t
25 m	263 t	286 t	262 t	302 t	277 t
30 m	253 t	280 t	250 t	292 t	267 t
35 m	239 t	269 t	233 t	280 t	267 t



TYPICAL CROSS SECTION SHOWING TRANSVERSE WHEEL ARRANGEMENT OF HYDRAULIC TRAILER UNITS

Legend:

Safe to carry the specified load

Safe to carry marked reduced GVW

C'WAY TYPE 1 : 2 LANE SINGLE CARRIAGEWAY OR 2 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY

C'WAY TYPE 2 : 3 LANE SINGLE CARRIAGEWAY OR 3 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY

C'WAY TYPE 3 : 4 LANE SINGLE CARRIAGEWAY OR 4 LANE DUAL C' WAY WITH STRUCTURAL DISCONTINUITY OR 2 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

C'WAY TYPE 4 : 3 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

C'WAY TYPE 5 : 4 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

NOTES :

1 THE ABOVE CONCLUSIONS ARE FOR BRIDGES HAVING DECK SLAB WITHOUT ANY TRANSVERSE PRESTRESSIN

2 THE OWC CAN SAFELY BE PERMITTED OVER ALL TYPES OF CULVERTS HAVING SPAN LENGTH < 6m.

3 THE ABOVE CONCLUSIONS ARE BASED ON THE CONDITIONS / ASSUMPTIONS GIVEN SEPARATELY

4 WHEREVER REDUCED GVW IS MARKED "RED" IN THE CHART, CORRESPONDING REDUCED AXLE LOAD CAN BE CALCULATED BY THE FORMULA : RAL = (RGVW-25) / 16

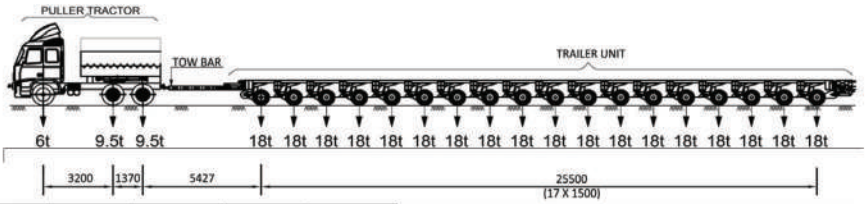
Where : RAL = Reduced Axle Load (in tonnes); RGVW = Reduced Gross Vehicle Weight (in tonnes)

5 THE TRANSPORTER SHALL TAKE PERMISSION FROM THE CONCERNED REGULATORY AGENCY BEFORE TAKING THE HT LOADS OVER THE BRIDGES

6 IN CASE OF STRUCTURES MARKED TO CARRY RGVW, FOR INTERMEDIATE SPAN LENGTHS, THE VALUES OF GVW OF CRITICAL OF THE TWO ADJACENT SPANS HAVE TO BE TAKEN.

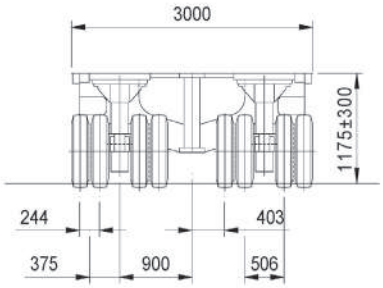
CHART SHOWING ADEQUACY OF SPAN, CARRIAGEWAY WIDTHS & STRUCTURE TYPE FOR HT-8 LOADING (WITH 18 AXLE TRAILER UNITS)

CHART NO. C-8



TOTAL GVW INCLUDING PULLER TRACTOR= 349 t

Span ↓ C/W type →	C' WAY TYPE 1	C' WAY TYPE 2	C' WAY TYPE 3	C' WAY TYPE 4	C' WAY TYPE 5
1. Masonary Arch bridges					
5 m		NOT APPLICABLE			
10 m		NOT APPLICABLE			
15 m		NOT APPLICABLE			
2. RCC Solid/Voided slab bridges					
5 m					
10 m					
15 m					
20 m					
3. RCC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
10 m					
15 m					
20 m					
25 m					
4. RCC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
10 m					
15 m					
20 m					
25 m					
5. PSC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
20 m					
25 m					
30 m	341 t				
35 m	306 t				
40 m	284 t	333 t		347 t	341 t
6. PSC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
20 m				344 t	337 t
25 m		337 t		332 t	325 t
30 m	335 t	326 t		319 t	315 t
35 m	332 t	326 t		319 t	311 t
40 m	311 t	322 t		303 t	296 t
7. PSC Cast in Situ Box Girders type bridges					
30 m	337 t				
35 m	317 t				
40 m	297 t				
45 m	283 t				
50 m	270 t				
8. PSC Precast Segmental Box Girders type bridges - With Wet Joint					
30 m	321 t			NOT APPLICABLE	
35 m	295 t			NOT APPLICABLE	
40 m	276 t			NOT APPLICABLE	
45 m	263 t			NOT APPLICABLE	
50 m	259 t			NOT APPLICABLE	
9. Composite decks with Steel Beams and Concrete slab bridges - With Int. X Girder					
15 m					
20 m	340 t				
25 m	302 t		346 t		335 t
30 m	275 t		304 t		339 t
35 m	261 t	347 t	329 t		312 t
10. Composite decks with Steel Beams and Concrete slab bridges - Without Int. X Girder					
15 m					
20 m	323 t		311 t		323 t
25 m	292 t	318 t	293 t	335 t	307 t
30 m	276 t	304 t	272 t	316 t	290 t
35 m	255 t	286 t	255 t	300 t	286 t



TYPICAL CROSS SECTION SHOWING TRANSVERSE WHEEL ARRANGEMENT OF HYDRAULIC TRAILER UNITS

Legend:

Safe to carry the specified load

Safe to carry marked reduced GVW

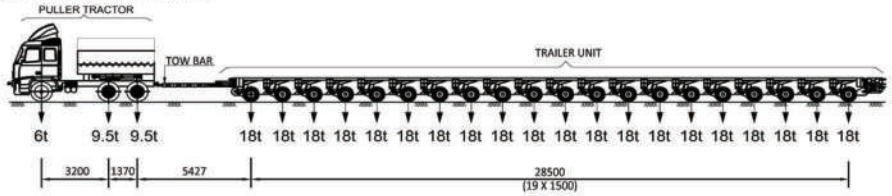
C'WAY TYPE 1 : 2 LANE SINGLE CARRIAGEWAY OR 2 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUIT
C'WAY TYPE 2 : 3 LANE SINGLE CARRIAGEWAY OR 3 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUIT
C'WAY TYPE 3 : 4 LANE SINGLE CARRIAGEWAY OR 4 LANE DUAL C' WAY WITH STRUCTURAL DISCONTINUITY OR 2 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY
C'WAY TYPE 4 : 3 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY
C'WAY TYPE 5 : 4 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

NOTES :

1 THE ABOVE CONCLUSIONS ARE FOR BRIDGES HAVING DECK SLAB WITHOUT ANY TRANSVERSE PRESTRESSING.
2 THE OWC CAN SAFELY BE PERMITTED OVER ALL TYPES OF CULVERTS HAVING SPAN LENGTH < 6m.
3 THE ABOVE CONCLUSIONS ARE BASED ON THE CONDITIONS / ASSUMPTIONS GIVEN SEPARATELY
4 WHEREVER REDUCED GVW IS MARKED "RED" IN THE CHART, CORRESPONDING REDUCED AXLE LOAD CAN BE CALCULATED BY THE FORMULA : RAL = (RGVW-25) / 18
Where : RAL = Reduced Axle Load (in tonnes); RGVW = Reduced Gross Vehicle Weight (in tonnes)
5 THE TRANSPORTER SHALL TAKE PERMISSION FROM THE CONCERNED REGULATORY AGENCY BEFORE TAKING THE HT LOADS OVER THE BRIDGES
6 IN CASE OF STRUCTURES MARKED TO CARRY RGVW, FOR INTERMEDIATE SPAN LENGTHS, THE VALUES OF GVW OF CRITICAL OF THE TWO ADJACENT SPANS HAVE TO BE TAKEN.

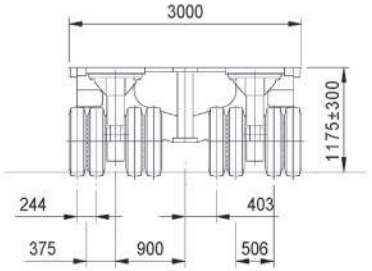
CHART SHOWING ADEQUACY OF SPAN, CARRIAGEWAY WIDTHS & STRUCTURE TYPE FOR HT-9 LOADING (WITH 20AXLE TRAILER UNITS)

CHART NO. C-9



Span ↓ CW type →	C' WAY TYPE 1	C' WAY TYPE 2	C' WAY TYPE 3	C' WAY TYPE 4	C' WAY TYPE 5
1. Masonary Arch bridges					
5 m		NOT APPLICABLE			
10 m		NOT APPLICABLE			
15 m		NOT APPLICABLE			
2. RCC Solid/Voided slab bridges					
5 m					
10 m					
15 m					
20 m					
3. RCC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
10 m					
15 m					
20 m					
25 m					
4. RCC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
10 m					
15 m					
20 m					
25 m					
5. PSC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
20 m					
25 m					
30 m	373 t				
35 m	378 t	387 t			
40 m	303 t	359 t		378 t	371 t
6. PSC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
20 m				379 t	372 t
25 m		377 t		366 t	359 t
30 m	366 t	356 t		349 t	345 t
35 m	356 t	354 t		356 t	348 t
40 m	331 t	347 t		326 t	339 t
7. PSC Cast in Situ Box Girders type bridges					
30 m	367 t				
35 m	338 t				
40 m	314 t				
45 m	297 t				
50 m	291 t				
8. PSC Precast Segmental Box Girders type bridges - With Wet Joint					
30 m	351 t			NOT APPLICABLE	
35 m	315 t			NOT APPLICABLE	
40 m	292 t			NOT APPLICABLE	
45 m	276 t	379 t		NOT APPLICABLE	
50 m	270 t	371 t		NOT APPLICABLE	
9. Composite decks with Steel Beams and Concrete slab bridges - With Int. X Girder					
15 m					
20 m	375 t				
25 m	333 t		382 t		370 t
30 m	300 t		334 t		372 t
35 m	281 t	376 t	360 t		348 t
10. Composite decks with Steel Beams and Concrete slab bridges - Without Int. X Girder					
15 m					
20 m	356 t		343 t		357 t
25 m	322 t	351 t	321 t	370 t	339 t
30 m	302 t	332 t	297 t	346 t	318 t
35 m	274 t	307 t	269 t	321 t	307 t

TOTAL GVW INCLUDING PULLER TRACTOR= 385 t



TYPICAL CROSS SECTION SHOWING TRANSVERSE WHEEL ARRANGEMENT OF HYDRAULIC TRAILER UNITS

Legend:

Safe to carry the specified load

Safe to carry marked reduced GVW

C'WAY TYPE 1 : 2 LANE SINGLE CARRIAGEWAY OR 2 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY

C'WAY TYPE 2 : 3 LANE SINGLE CARRIAGEWAY OR 3 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY

C'WAY TYPE 3 : 4 LANE SINGLE CARRIAGEWAY OR 4 LANE DUAL C' WAY WITH STRUCTURAL DISCONTINUITY OR 2 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

C'WAY TYPE 4 : 3 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

C'WAY TYPE 5 : 4 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

NOTES :

1 THE ABOVE CONCLUSIONS ARE FOR BRIDGES HAVING DECK SLAB WITHOUT ANY TRANSVERSE PRESTRESSING.

2 THE OWC CAN SAFELY BE PERMITTED OVER ALL TYPES OF CULVERTS HAVING SPAN LENGTH < 6m.

3 THE ABOVE CONCLUSIONS ARE BASED ON THE CONDITIONS / ASSUMPTIONS GIVEN SEPARATELY

4 WHEREVER REDUCED GVW IS MARKED "RED" IN THE CHART, CORRESPONDING REDUCED AXLE LOAD CAN BE CALCULATED BY THE FORMULA : RAL = (RGVW-25) / 20

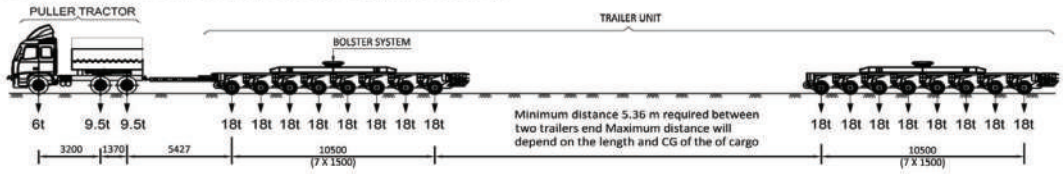
Where : RAL = Reduced Axle Load (in tonnes); RGVW = Reduced Gross Vehicle Weight (in tonnes)

5 THE TRANSPORTER SHALL TAKE PERMISSION FROM THE CONCERNED REGULATORY AGENCY BEFORE TAKING THE HT LOADS OVER THE BRIDGES

6 IN CASE OF STRUCTURES MARKED TO CARRY RGVW, FOR INTERMEDIATE SPAN LENGTHS, THE VALUES OF GVW OF CRITICAL OF THE TWO ADJACENT SPANS HAVE TO BE TAKEN.

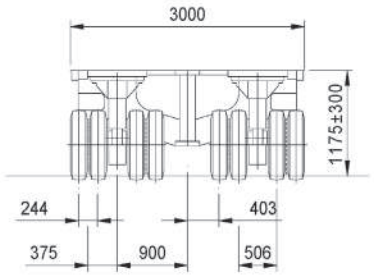
CHART SHOWING ADEQUACY OF SPAN, CARRIAGEWAY WIDTHS & STRUCTURE TYPE FOR HT-10 LOADING (WITH 8+8 AXLE TRAILER UNITS AND TURN TABLE BOLSTER)

CHART NO. C-10



Span / CW type	C' WAY TYPE 1	C' WAY TYPE 2	C' WAY TYPE 3	C' WAY TYPE 4	C' WAY TYPE 5
1. Masonary Arch bridges					
5 m		NOT APPLICABLE			
10 m		NOT APPLICABLE			
15 m		NOT APPLICABLE			
2. RCC Solid/Voided slab bridges					
5 m					
10 m					
15 m					
20 m					
3. RCC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
10 m					
15 m					
20 m					
25 m					
4. RCC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
10 m					
15 m					
20 m					
25 m					
5. PSC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
20 m					
25 m					
30 m					
35 m					
40 m	304 t				
6. PSC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
20 m					
25 m					
30 m					
35 m					
40 m				305 t	298 t
7. PSC Cast in Situ Box Girders type bridges					
30 m					
35 m					
40 m	304 t				
45 m	304 t				
50 m	296 t				
8. PSC Precast Segmental Box Girders type bridges - With Wet Joint					
30 m				NOT APPLICABLE	
35 m	304 t			NOT APPLICABLE	
40 m	284 t			NOT APPLICABLE	
45 m	283 t			NOT APPLICABLE	
50 m	275 t			NOT APPLICABLE	
9. Composite decks with Steel Beams and Concrete slab bridges - With Int. X Girder					
15 m					
20 m					
25 m					
30 m	286 t		298 t		
35 m	274 t				308 t
10. Composite decks with Steel Beams and Concrete slab bridges - Without Int. X Girder					
15 m					
20 m					
25 m	305 t		305 t		
30 m	298 t		298 t		
35 m	292 t		282 t		288 t

TOTAL GVW INCLUDING PULLER TRACTOR= 313 t



TYPICAL CROSS SECTION SHOWING TRANSVERSE WHEEL ARRANGEMENT OF HYDRAULIC TRAILER UNITS

Legend:

Safe to carry the specified load

Safe to carry marked reduced GVW

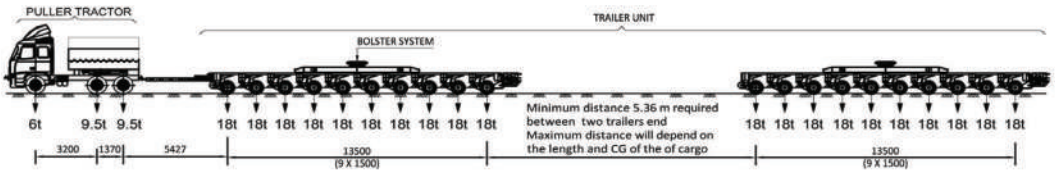
C'WAY TYPE 1 : 2 LANE SINGLE CARRIAGEWAY OR 2 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY
C'WAY TYPE 2 : 3 LANE SINGLE CARRIAGEWAY OR 3 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY
C'WAY TYPE 3 : 4 LANE SINGLE CARRIAGEWAY OR 4 LANE DUAL C' WAY WITH STRUCTURAL DISCONTINUITY OR 2 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY
C'WAY TYPE 4 : 3 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY
C'WAY TYPE 5 : 4 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

NOTES :

1 THE ABOVE CONCLUSIONS ARE FOR BRIDGES HAVING DECK SLAB WITHOUT ANY TRANSVERSE PRESTRESSING.
2 THE OWC CAN SAFELY BE PERMITTED OVER ALL TYPES OF CULVERTS HAVING SPAN LENGTH < 6m.
3 THE ABOVE CONCLUSIONS ARE BASED ON THE CONDITIONS / ASSUMPTIONS GIVEN SEPARATELY
4 WHEREVER REDUCED GVW IS MARKED "RED" IN THE CHART, CORRESPONDING REDUCED AXLE LOAD CAN BE CALCULATED BY THE FORMULA : RAL = (RGVW-25) / 16
Where : RAL = Reduced Axle Load (in tonnes); RGVW = Reduced Gross Vehicle Weight (in tonnes)
5 THE TRANSPORTER SHALL TAKE PERMISSION FROM THE CONCERNED REGULATORY AGENCY BEFORE TAKING THE HT LOADS OVER THE BRIDGES
6 IN CASE OF STRUCTURES MARKED TO CARRY RGVW, FOR INTERMEDIATE SPAN LENGTHS, THE VALUES OF GVW OF CRITICAL OF THE TWO ADJACENT SPANS HAVE TO BE TAKEN.

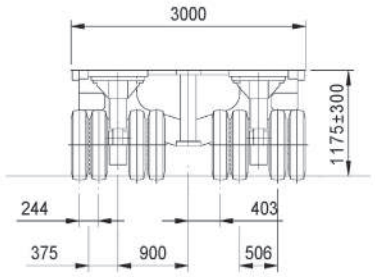
CHART SHOWING ADEQUACY OF SPAN, CARRIAGEWAY WIDTHS & STRUCTURE TYPE FOR HT-11 LOADING (WITH 10+10 AXLE TRAILER UNITS AND TURN TABLE BOLSTER)

CHART NO. C-11



Span ↓ C/W type →	C' WAY TYPE 1	C' WAY TYPE 2	C' WAY TYPE 3	C' WAY TYPE 4	C' WAY TYPE 5
1. Masonary Arch bridges					
5 m		NOT APPLICABLE			
10 m		NOT APPLICABLE			
15 m		NOT APPLICABLE			
2. RCC Solid/Voided slab bridges					
5 m					
10 m					
15 m					
20 m					
3. RCC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
10 m					
15 m					
20 m					
25 m					
4. RCC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
10 m					
15 m					
20 m					
25 m					
5. PSC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
20 m					
25 m					
30 m					
35 m	375 t				
40 m	343 t				
6. PSC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
20 m					
25 m					384 t
30 m				378 t	374 t
35 m		383 t		374 t	364 t
40 m		374 t		351 t	343 t
7. PSC Cast in Situ Box Girders type bridges					
30 m					
35 m	375 t				
40 m	343 t				
45 m	339 t				
50 m	325 t				
8. PSC Precast Segmental Box Girders type bridges - With Wet Joint					
30 m				NOT APPLICABLE	
35 m	345 t			NOT APPLICABLE	
40 m	319 t			NOT APPLICABLE	
45 m	315 t			NOT APPLICABLE	
50 m	302 t			NOT APPLICABLE	
9. Composite decks with Steel Beams and Concrete slab bridges - With Int. X Girder					
15 m					
20 m					
25 m	374 t				
30 m	339 t		356 t		
35 m	311 t				361 t
10. Composite decks with Steel Beams and Concrete slab bridges - Without Int. X Girder					
15 m					
20 m	377 t		366 t		377 t
25 m	361 t		362 t		380 t
30 m	353 t		346 t		373 t
35 m	304 t	370 t	327 t		336 t

TOTAL GVW INCLUDING PULLER TRACTOR= 385 t



TYPICAL CROSS SECTION SHOWING TRANSVERSE WHEEL ARRANGEMENT OF HYDRAULIC TRAILER UNITS

Legend:

Safe to carry the specified load

Safe to carry marked reduced GVW

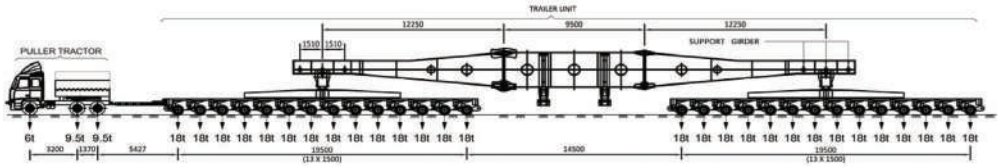
C'WAY TYPE 1 : 2 LANE SINGLE CARRIAGEWAY OR 2 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY
C'WAY TYPE 2 : 3 LANE SINGLE CARRIAGEWAY OR 3 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY
C'WAY TYPE 3 : 4 LANE SINGLE CARRIAGEWAY OR 4 LANE DUAL C' WAY WITH STRUCTURAL DISCONTINUITY OR 2 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY
C'WAY TYPE 4 : 3 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY
C'WAY TYPE 5 : 4 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

NOTES :

1. **THE ABOVE CONCLUSIONS ARE FOR BRIDGES HAVING DECK SLAB WITHOUT ANY TRANSVERSE PRESTRESSING.**
2. **THE OWC CAN SAFELY BE PERMITTED OVER ALL TYPES OF CULVERTS HAVING SPAN LENGTH < 6m.**
3. **THE ABOVE CONCLUSIONS ARE BASED ON THE CONDITIONS / ASSUMPTIONS GIVEN SEPARATELY**
4. **WHEREVER REDUCED GVW IS MARKED "RED" IN THE CHART, CORRESPONDING REDUCED AXLE LOAD CAN BE CALCULATED BY THE FORMULA : RAL = (RGVW-25) / 16**
   Where : RAL = Reduced Axle Load (in tonnes); RGVW = Reduced Gross Vehicle Weight (in tonnes)
5. **THE TRANSPORTER SHALL TAKE PERMISSION FROM THE CONCERNED REGULATORY AGENCY BEFORE TAKING THE HT LOADS OVER THE BRIDGES**
6. **IN CASE OF STRUCTURES MARKED TO CARRY RGVW, FOR INTERMEDIATE SPAN LENGTHS, THE VALUES OF GVW OF CRITICAL OF THE TWO ADJACENT SPANS HAVE TO BE TAKEN.**

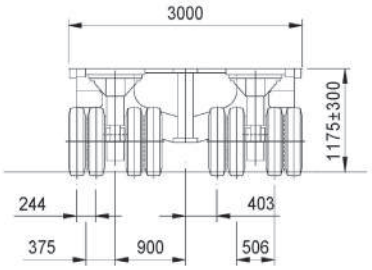
CHART SHOWING ADEQUACY OF SPAN, CARRIAGEWAY WIDTHS & STRUCTURE TYPE FOR HT-12 LOADING (WITH 14+14 AXLE TRAILER UNITS AND GIRDER ARRANGEMENT)

CHART NO. C-12



Span ↓ C/W type →	C' WAY TYPE 1	C' WAY TYPE 2	C' WAY TYPE 3	C' WAY TYPE 4	C' WAY TYPE 5
1. Masonary Arch bridges					
5 m		NOT APPLICABLE			
10 m		NOT APPLICABLE			
15 m		NOT APPLICABLE			
2. RCC Solid/Voided slab bridges					
5 m					
10 m					
15 m					
20 m					
3. RCC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
10 m					
15 m					
20 m					
25 m					
4. RCC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
10 m					
15 m					
20 m					
25 m					
5. PSC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
20 m					
25 m					
30 m					
35 m	508 t				
40 m	480 t				
6. PSC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
20 m				521 t	511 t
25 m		527 t		514 t	503 t
30 m		517 t		505 t	499 t
35 m		527 t		515 t	502 t
40 m	528.8 t	528 t		496 t	484 t
7. PSC Cast in Situ Box Girders type bridges					
30 m					
35 m					
40 m	510 t				
45 m	190 t				
50 m	482 t				
8. PSC Precast Segmental Box Girders type bridges - With Wet Joint					
30 m	528 t			NOT APPLICABLE	
35 m	494 t			NOT APPLICABLE	
40 m	474 t			NOT APPLICABLE	
45 m	159 t			NOT APPLICABLE	
50 m	458 t			NOT APPLICABLE	
9. Composite decks with Steel Beams and Concrete slab bridges - With Int. X Girder					
15 m					
20 m	516 t				
25 m	470 t				513 t
30 m	452 t		477 t		528.85 t
35 m	441 t		519 t		494 t
10. Composite decks with Steel Beams and Concrete slab bridges - Without Int. X Girder					
15 m					
20 m	490 t		472 t		490 t
25 m	464 t	495 t	450 t	527 t	472 t
30 m	447 t	496 t	441 t	527 t	471 t
35 m	424 t	478 t	415 t	500 t	466 t

TOTAL GVW INCLUDING PULLER TRACTOR= 529 t



TYPICAL CROSS SECTION SHOWING TRANSVERSE WHEEL ARRANGEMENT OF HYDRAULIC TRAILER UNITS

Legend:

Safe to carry the specified load

Safe to carry marked reduced GVW

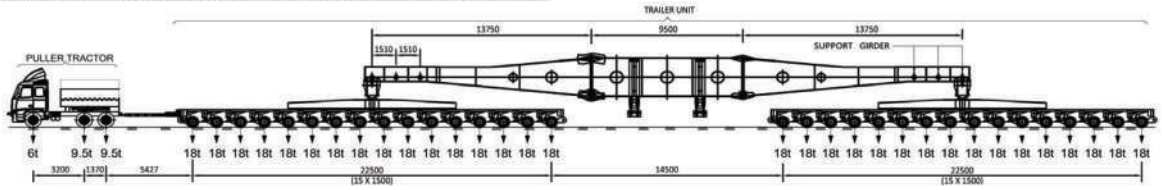
C'WAY TYPE 1 : 2 LANE SINGLE CARRIAGEWAY OR 2 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY
C'WAY TYPE 2 : 3 LANE SINGLE CARRIAGEWAY OR 3 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY
C'WAY TYPE 3 : 4 LANE SINGLE CARRIAGEWAY OR 4 LANE DUAL C' WAY WITH STRUCTURAL DISCONTINUITY OR 2 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY
C'WAY TYPE 4 : 3 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY
C'WAY TYPE 5 : 4 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

NOTES :

1 THE ABOVE CONCLUSIONS ARE FOR BRIDGES HAVING DECK SLAB WITHOUT ANY TRANSVERSE PRESTRESSING.
2 THE OWC CAN SAFELY BE PERMITTED OVER ALL TYPES OF CULVERTS HAVING SPAN LENGTH < 6m.
3 THE ABOVE CONCLUSIONS ARE BASED ON THE CONDITIONS / ASSUMPTIONS GIVEN SEPARATELY
4 WHEREVER REDUCED GVW IS MARKED "RED" IN THE CHART, CORRESPONDING REDUCED AXLE LOAD CAN BE CALCULATED BY THE FORMULA : RAL = (RGVW-25) / 28
Where : RAL = Reduced Axle Load (in tonnes); RGVW = Reduced Gross Vehicle Weight (in tonnes)
5 THE TRANSPORTER SHALL TAKE PERMISSION FROM THE CONCERNED REGULATORY AGENCY BEFORE TAKING THE HT LOADS OVER THE BRIDGES
6 IN CASE OF STRUCTURES MARKED TO CARRY RGVW, FOR INTERMEDIATE SPAN LENGTHS, THE VALUES OF GVW OF CRITICAL OF THE TWO ADJACENT SPANS HAVE TO BE TAKEN.

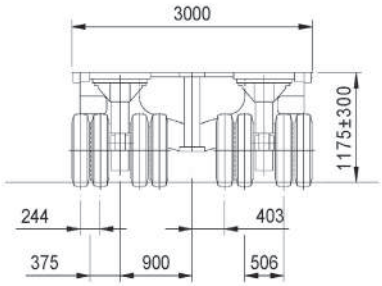
CHART SHOWING ADEQUACY OF SPAN, CARRIAGEWAY WIDTHS & STRUCTURE TYPE FOR HT-13 LOADING (WITH 16+16 AXLE TRAILER UNITS AND GIRDER ARRANGEMENT)

CHART NO. C-13



Span ↓ CW type →	C' WAY TYPE 1	C' WAY TYPE 2	C' WAY TYPE 3	C' WAY TYPE 4	C' WAY TYPE 5
1. Masonary Arch bridges					
5 m		NOT APPLICABLE			
10 m		NOT APPLICABLE			
15 m		NOT APPLICABLE			
2. RCC Solid/Voided slab bridges					
5 m					
10 m					
15 m					
20 m					
3. RCC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
10 m					
15 m					
20 m					
25 m					
4. RCC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
10 m					
15 m					
20 m					
25 m					
5. PSC Precast/Cast in-Situ Beam and Slab bridges - With Int. X Girder					
20 m					
25 m					
30 m					
35 m	546 t				
40 m	517 t	597 t			
6. PSC Precast/Cast in-Situ Beam and Slab bridges - Without Int. X Girder					
20 m				592 t	581 t
25 m		582 t		573 t	562 t
30 m	592 t	573 t		560 t	554 t
35 m	598 t	582 t		570 t	556 t
40 m	570 t	579 t		546 t	532 t
7. PSC Cast in Situ Box Girders type bridges					
30 m	598 t				
35 m	570 t				
40 m	540 t				
45 m	519 t				
50 m	524 t				
8. PSC Precast Segmental Box Girders type bridges - With Wet Joint					
30 m	570 t			NOT APPLICABLE	
35 m	543 t			NOT APPLICABLE	
40 m	502 t			NOT APPLICABLE	
45 m	482 t			NOT APPLICABLE	
50 m	478 t			NOT APPLICABLE	
9. Composite decks with Steel Beams and Concrete slab bridges - With Int. X Girder					
15 m					
20 m	586 t				
25 m	572 t		597 t		578 t
30 m	488 t		540 t		592 t
35 m	474 t		526 t		546 t
10. Composite decks with Steel Beams and Concrete slab bridges - Without Int. X Girder					
15 m					
20 m	556 t		546 t		557 t
25 m	505 t	550 t	502 t	580 t	531 t
30 m	487 t	538 t	480 t	560 t	513 t
35 m	459 t	516 t	448 t	538 t	513 t

TOTAL GVW INCLUDING PULLER TRACTOR= 601 t



TYPICAL CROSS SECTION SHOWING TRANSVERSE WHEEL ARRANGEMENT OF HYDRAULIC TRAILER UNITS

Legend:

Safe to carry the specified load

Safe to carry marked reduced GVW

C'WAY TYPE 1 : 2 LANE SINGLE CARRIAGEWAY OR 2 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY

C'WAY TYPE 2 : 3 LANE SINGLE CARRIAGEWAY OR 3 LANE DUAL CARRIAGEWAY WITH STRUCTURAL DISCONTINUITY

C'WAY TYPE 3 : 4 LANE SINGLE CARRIAGEWAY OR 4 LANE DUAL C' WAY WITH STRUCTURAL DISCONTINUITY OR 2 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

C'WAY TYPE 4 : 3 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

C'WAY TYPE 5 : 4 LANE DUAL CARRIAGEWAY WITHOUT STRUCTURAL DISCONTINUITY

NOTES :

1 THE ABOVE CONCLUSIONS ARE FOR BRIDGES HAVING DECK SLAB WITHOUT ANY TRANSVERSE PRESTRESSING.

2 THE OWC CAN SAFELY BE PERMITTED OVER ALL TYPES OF CULVERTS HAVING SPAN LENGTH < 6m.

3 THE ABOVE CONCLUSIONS ARE BASED ON THE CONDITIONS / ASSUMPTIONS GIVEN SEPARATELY

4 WHEREVER REDUCED GVW IS MARKED "RED" IN THE CHART, CORRESPONDING REDUCED AXLE LOAD CAN BE CALCULATED BY THE FORMULA : RAL = (RGVW-25) / 4

Where : RAL = Reduced Axle Load (in tonnes); RGVW = Reduced Gross Vehicle Weight (in tonnes)

5 THE TRANSPORTER SHALL TAKE PERMISSION FROM THE CONCERNED REGULATORY AGENCY BEFORE TAKING THE HT LOADS OVER THE BRIDGES

6 IN CASE OF STRUCTURES MARKED TO CARRY RGVW, FOR INTERMEDIATE SPAN LENGTHS, THE VALUES OF GVW OF CRITICAL OF THE TWO ADJACENT SPANS HAVE TO BE TAKEN.

Annexure- II

1	Name of Transporter	
2	Applicant Type	Proprietorship/Partnership/ Registered Company
3	Address Plot No.	
4	Address Street Name	
5	Address Area	
6	City	
7	Pincode	
8	Contact Person	
9	Designation	
10	Contact Number	
11	e-mail ID	
12	PAN	
13	GSTIN, if applicable	
14	Document towards address proof and PAN card/GSTIN certificate shall be uploaded.	

Annexure- III

1.	Type of consignment			
2.	Origin			
3.	Origin Pincode			
4.	Destination			
5.	Destination Pincode			
6.	Consignor Name			
7.	Consignor Address			
8.	Consignor City			
9.	Consignor email id			
10.	Consignor GSTIN or PAN			
11.	Consignor mobile no.			
12.	Consignee Name			
13.	Consignee Address			
14.	Consignee City			
15.	Consignee email id			
16.	Consignee mobile no.			
17.	Consignee GSTIN or PAN			
18.	Consignment Dimensions (in meters)	L	W	H
19.	Consignment Weight incl. packing weight, if any) in Tonnes			
20..	Transporter id on ODC Portal			
21.	Copy of a document on the letterhead of the consignee stating above details and duly signed by competent person of the Consignor shall be uploaded.			

Annexure- IV

Application Reference Number
HT type

Puller Tractor Registration No.	System will retrieve details from Ministry's VAHAN database based on registration number
Registered Owner Name	
Expiry date of Permit	
Expiry date of Fitness	
Tax Paid upto	
Attached copy of insurance	
Modular Hydraulic Trailer Registration Number (separately for each module)	system will retrieve details from Ministry's VAHAN database based on registration number
Registered Owner Name	
Expiry date of Permit	
Expiry date of Fitness	
Tax Paid upto	
Unladen Weight	
Registered laden weight	
Registered Pay load capacity	
Number of axle rows	
Transporter can update multiple number of MHT modules based on dimensions and weight of consignment subject to maximum axle rows as per HT type selected above.	
Attachment details	
Attachment weight	
Overall Dimensions of MHT combination with Puller Tractor and consignment	L: W : H:
Driver License Number	system will retrieve details from Ministry's SARATHI database based on DL number
Driver Name	
Father's Name	
Driver address	
Expiry date of DL	
Authorised to driver heavy transport vehicle	Yes/No System to verify & display

If more than one Driver is to be deployed, details of each Driver has to be submitted	
Gross Unladen weight of MHT combination excluding Puller Tractor	system to compute & display
Consignment weight as submitted by consignor/consignee	
Gross Laden weight of MHT combination with attachment(if any) and consignment excluding Puller Tractor weight	system to compute & display
Puller Tractor Number of axle rows	3
Puller Tractor weight with ballast	Less than 25 tonnes
Wheel base (distance between any two axle rows of MHT)	1.5 m
Proposed Route	
Origin	system to retrieve from consignor/consignee submission
Destination	system to retrieve from consignor/consignee submission
Intermediatory Station	minimum one intermediatory station required for each 100 kms. Of overall journey
Total Journey Distance	kms
Portal will permit change of Puller Tractor number and/or MHT number for identical HT type prior to payment of ODC fee.	
Portal will permit replacement of eligible driver prior to payment of ODC fee.	

Annexure V

ONLINE SELF DECLARATION

At the time of start of journey

I/We hereby declare that details and documents uploaded by me/us in Ministry's ODC portal for seeking permission to move single indivisible consignment under subject application are true to my/our knowledge and nothing has been concealed.

(Notarised affidavit by applicant on Rs. 100 stamp paper shall be uploaded certifying correctness of information provided in the application.)

I/We hereby declare that the validity period of fitness/license/permit of Puller Tractor, Modular Hydraulic Trailer and Driver shall be ensured till the time consignment reaches the destination.

Notarised affidavit by applicant on Rs. 100 Stamp paper shall be uploaded certifying correctness of information provided in the application and undertaking for keeping validity of fitness/license/permit of Puller Tractor, Modular Hydraulic Trailer and Driver shall be ensured till the time consignment reaches the destination.

I/we hereby agree to abide and follow all terms and conditions, imposed by the Ministry in this regard.
I/we as a transporter hereby declare that all the MHT deployed are technically fit and distribute the load evenly on all axle rows of the combination.

Within 15 days from the date of completion of journey
I hereby declare that I have completed the journey on dated..... without any damage to Bridge Structure/Road

Annexure-VI

1. The transporter will check the ODCs/OWCs web portal before actual movement of the OWC/ODC consignment. If any additional bridge has been uploaded in the portal after online permission is granted for the corresponding MHT combination, the transporter shall detour the said bridge on its own arrangement.

2. The ODCs/OWCs vehicle should display all danger flags and lights and should be accompanied by a pilot vehicle displaying prominently that an ODC/OWC consignment is passing. All necessary warning signals shall be provided on the Puller Tractor & MHT such as painting the entire width by yellow and black zebra strips on the front and rear sides, duly marked with retro reflective stickers and installing red lamps to indicate the extreme position of the vehicles clearly for night time driving /parking. Similarly, red flags on both sides should be installed for facilitating demarcation of extreme position of the vehicle during day time. Banner displaying "ODC MOVEMENT may be put at rear most end of the MHT.

3. Coupling of the modular hydraulic trailers along the width of the road (side by side) shall not be permitted. Coupling of the trailers along the length of the road shall be allowed for transportation of single consignment subject to the condition that axle weight for any axle should not be more than 18.0 ton (180.0 kN).

4. The actual programme of movement of the consignment should be intimated to all concerned field officials of MoRT&H/NHAI/NHIDCL by the transporter before start the movement of ODC/OWC. E-mail id of all concerned RO(s) of MoRTH/NHAI/NHIDCL will appear on the system generated permission.

5. The ODCs/OWCs should be allowed to cross a bridge/structure under supervision and escort of responsible technical personnel of the transporter only and at that time no other vehicle be allowed to ply on the bridge. The bridge/structure shall be inspected by responsible technical personnel of the transporter before and after inspection and any distress/abnormality shall be immediately reported to all concerned field officials of MoRT&H/NHAI/NHIDCL.

6. The driver of the Puller Tractor while moving shall carry copy of the permission letter along with uploaded documents/information.

7. The maximum speed limit of the ODC/OWC vehicle should be equal to or less than 5 km/hour while passing over a bridge/structure and no brake shall be applied while moving on the bridge/structure.

8. During movement, the centerline of ODC/OWC must be as close as possible to the centerline of the carriageway with maximum eccentricity of 300 mm measured from centerline of particular carriageway whether the bridge/structure has single or dual carriageway.

9. The consignment shall be placed in such a way which result uniform distribution of consignment load over MHT axles.

10. ODCs/OWCs shall not be moved (a) during earthquakes, and (b) when the wind speed exceeds 40 km/hr.

11. Movement of ODCs/OWCs vehicles over bridges should be when water current is minimum. Special care shall be taken during monsoon season.

DR

DARSHAN ROADLINES PVT. LTD

Specialist in Over Dimension Cargo & Project Equipments, Owners of Cranes, Trailers & Hydraulic Axles & Provides Warehousing Facilities at Taloja

Branches

Ahmedabad | Baroda | Hazira | Gandhidham | Nashik | Tarapur | Delhi | Bangalore | Chennai

ISO 9001 : 2015 certified company

CELEBRATING 50+ Years of EXCELLENCE

+91 22 6177 5555 / +91 99202 24499

info@darshanroadlines.com

www.darshanroadlines.com

301, Commercial Manor, 4th Cross Clive Road, Masjid Bunder (East), Mumbai - 400009.

Delivering Your Valued Assets Across

Navigating Giants

Transporting Power Equipment Across India's Geographical Vastness

Nilesh Sinha

The continuous growth of the power sector in India is pivotal to the nation's industrial and economic progress. As the sector expands, it not only meets domestic energy requirements but also establishes India as an influential entity in the global energy market. This expansion is supported by the government's ambitious initiatives like the National Electricity Policy, which strives to ensure universal access to electricity through increased installed capacity and the promotion of sustainable energy sources. To sustain this growth and capitalize on emerging opportunities within the evolving energy landscape, there is a crucial need for ongoing investments in technology, infrastructure, and regulatory frameworks. These efforts are integral to supporting the complex logistics required for transporting oversized and heavy power equipment across India's diverse and challenging terrains, ensuring that the infrastructure development keeps pace with the sector's rapid advancement.

In this article, the intricacies and challenges associated with the transportation of oversized and overweight power equipment, such as transformers, stators, and rotors across India is elaborated . It scrutinizes the logistical hurdles, regulatory framework, and potential improvements to enhance efficiency in road transport processes. It also aims to optimize time, reduce costs, and enhance safety, contributing to the streamlining of infrastructure development across the subcontinent.

1. India's Extensive Road Network

India possesses one of the world's most extensive road networks, totalling approximately 4.69 million kilometres, including expressways, national highways, and rural roads. This vast network carries more than 60% of all freight traffic and accommodates 85% of passenger movement. The transportation of heavy and odd-dimensional power equipment necessitates advanced route planning and survey being conducted well before the physical movement commence, taking into consideration various infrastructural limitations, especially last mile approach roads leading to the projects' sites.

For the movement of Power equipment specially the Odd and overweight equipment like Generator, Transformer, Stators and other equipment, a detail route planning and advance survey is to conducted much before physical movement and to design transport solutions, along with Loading and Unloading point, the equipment dimensions and

weight forms basis to decide the route to be used considering the various Infrastructural limitation enroute & specially at the project final site .

2. Regulatory Framework for Transporting ODC/OWC

The movement of ODC/OWC is guided by the various regulatory frameworks. Some of the key information will help understand equipment designers and manufacturers about transportation compliance, accountability, liability to plan the movement by fulfilling compliance.

i. ACT:

a. Motor Vehicle Act 1988
b. Central Motor Vehicle Rules,1989
c. IRC Codes for public road & bridge design.
d. Carriage by Road Act,2007
e. Carriage by Road Rules, 2011
f. State Motor Vehicle Rules and Regulations

ii. Nodal Ministry:

1. Ministry of Road Transport and High ways, Govt. of India.
2. Transport Department at State Level.
3. State Road & Bridge Department/PWD.

iii. Digital Platform :

1. Online Movement Permission for National Highways:
ODC/OWC Application, Ministry of Road Trans port & Highways, Government of India
https://morth-owc.nic.in

iv. Key Notification / Circular :

1. ODC Permission: The notification classifies the widely used & permissible loading arrangement type and process to get the Online permission with terms and condition.

   MORTH Letter No. RW/NH-35072/01/2010-S&R(B) dated 24.01.2013 & subsequent amendments dated 20.05.2014, 20.04.2015, last dated 17.01.2024 – www.htoa.org

2. Gross Vehicle Weight Limit for the use of Articulated Tractor-trailer & rigid chasis trucks:

   MoRTH (Transport Division) Letter No. RT11028 / 11 / 2017 - MVL dated 07.08.2018 www.htoa.org

   This notification provides for the maximum permissible gross vehicle weight for articulated tractor-trailer combinations as 55 Tons which means that weight of vehicle alongwith gross weight (after packing) of cargo being transported over it should not exceed 55 Tons. In simpler words, presuming the motor vehicle tare weight as . 15 tons than any cargo with weight exceeding 40 Tons should not be transported on such articulated tractor- trailer.

   For higher indivisible cargo weight regulations provide for road movement over combination of modular hydraulic trailer(s) being pulled by Puller Tractor under draw bar arrangement so as to ensure even load distribution within permissible axle load limits subject to compliance of laid town terms & conditions.

3. Transportation Challenges :

Transporting heavy equipment in India involves navigating several challenges:

A. Vertical Constraints: Transporting heavy equipment in India requires meticulous route planning due to vertical constraints like overhead gantries, signages, bridges and flyovers. These physical barriers necessitate an analysis of potential routes to ensure that oversized loads can pass through without causing structural damage or traffic disruptions. Accurate measurement and a clear understanding of the equipment dimensions are essential for selecting the appropriate path that avoids these obstacles.

B. Weight Regulations: Adhering to vehicle weight regulations is essential for the preservation of road and bridge safety. The misdeclaration of equipment weights to expedite transport permissions not only jeopardizes the integrity of infrastructure but also raises significant safety concerns. Fair declaration and compliance with these weight limits are crucial to prevent potential damages and ensure the longevity of transport routes which happen to be life line for the Country.

C. Contractual Dynamics: Transport contracts in India often impose excessive risks on carriers, potentially leading to operational inefficiencies and increased project costs. It is important that these contracts are structured fairly to distribute risks and responsibilities equitably between all the parties involved. This balance helps in minimizing disputes and ensures smoother execution of transportation projects.

D. Global vs. Local Safety Standards: There appears to be a significant gap between the safety standards implemented & followed by multi-national global manufacturers while executing such critical projects in developed countries when compared to the projects being executed in India. This disparity may lead to safety concerns and affect the operational efficiency of transporting heavy equipment. Bridging this gap by upgrading local practices to meet international standards is essential for improving safety outcomes and enhancing the credibility of Indian logistical operations.

4. Comprehensive Logistical Planning:

Effective transportation of power equipment in India often necessitates a combination of multiple transportation modes and meticulous logistical planning. This includes assessing route feasibility, managing local permissions, and ensuring compatibility with various infrastructural constraints across diverse topographical and climatic conditions.

The road transportation feasibility for heavy and odd dimension equipment, with correct dimension and weight considerations, is crucial to analyse the route, type of MHT combination to be deployed and key bottlenecks. This analysis also includes managing enroute constraints such as bridges, overhead structures, electrified railway lines, and high-tension wires, as well as considerations for turning radius and last-mile movement to ensure accessibility at the destination unloading point. The comprehensive logistics planning covering following points can help to meet safety, delivery , cost optimisation objective of projects.

a. **Pre-transportation Feasibility Studies:** To enhance the safety and efficiency of transporting oversized and heavy power equipment, establishing verified independent feasibility studies as a standard practice, rather than sporadic requirements in Requests for Quotation (RFQ), is critical. This shift will prevent carriers from adopting cost-cutting shortcuts that compromise safety and will promote a culture of rigorous compliance. The feasibility study for road transportation of heavy and odd dimension equipment involves a detailed analysis of the route, type of HT combination required and key bottlenecks. Before any physical movement, a comprehensive feasibility study should be conducted to thoroughly evaluate all potential infrastructural limitations, topographical variability and climatic impediments. This ensures all key stakeholders are well-informed of the potential risks and the mitigation measures planned, supported by detailed method statements and engineering calculations if so required, fostering a safer and more efficient transport process.

b. **Regulatory Adherence and Enhancement:** It is vital to regularly update and follow MoRTH guidelines to maintain high safety and efficiency standards in heavy transport operations. According to industry reports, adherence to updated regulatory frameworks can reduce accident rates in heavy transport by up to 30%. Regular audits and compliance training ensure that these guidelines are implemented effectively, minimizing the risk of violations that may lead to serious incidents, subsequent commercial disputes and unaffordable legal consequences.

c. **Equitable and Comprehensive Transport Contracts:** Well-structured contracts that fairly allocate risks and clearly define stakeholder responsibilities are essential for enhancing the reliability and safety of transport operations. Studies show that transparent contracts can reduce litigation risks by 20% and improve operational efficiency. These contracts help ensure that all parties are adequately protected and responsibilities are clearly understood, leading to smoother project executions and fewer disputes.

d. **Upholding International Safety Standards:** Implementing international safety standards within local operations can elevate the overall quality of transportation.

When local companies adhere to these global benchmarks, there is typically a 15% improvement in safety records and a reduction in operational mishaps. Regular training sessions, combined with international certification processes, ensure that local operations maintain high standards, thus aligning with global safety expectations.

e. **Site Preparation for Unloading:** Ensuring thorough preparation of unloading sites is crucial for the smooth operation and safety of heavy transport projects. Proper site preparation can reduce unloading and setup times by up to 25%, according to logistics studies. This involves evaluating and reinforcing the ground and access routes to accommodate heavy loads, which is essential to prevent equipment damage and delays, ensuring that the site is ready for safe and efficient operations.

6. Strategic Approaches for Enhancing Logistical Operations in ODC/OWC Power Equipment Transportation :

a. **Unified Collaboration:** Essential collaboration among regulators, manufacturers/users and transporters is required to manage the complexities of transporting heavy and oversized power equipment efficiently. This joint effort will streamline communication and coordination, reducing the risks and delays often encountered in this sector.

b. **Regulatory Improvements:** Implementation of robust regulatory frameworks is crucial for ensuring a safer and more efficient transportation process. By updating and enforcing these frameworks, we can prevent incidents that compromise safety and cause significant project delays.

c. **Equitable Contractual Terms:** Ensuring fair contractual obligations that consider the risks and responsibilities associated with transporting large equipment. Contracts must reflect realistic expectations and mutual risk management to avoid disputes and enhance the reliability of transport operations. Manufacturers/ Users should ensure fair declaration of risk involved before the insurer in the specific movement and accordingly get adequate insurance coverage from established insurers.

d. **Comprehensive Planning and Feasibility Studies:** Conducting thorough planning and feasibility studies is essential to address infrastructural limitations and topographical challenges. These studies help identify potential bottlenecks and solutions before the transportation process begins, thereby minimizing the risk of logistical failures.

e. **Adherence to Global Standards:** Aligning with global safety and operational standards to enhance the handling capabilities and safety protocols. This alignment not only ensures the safety of operations but also improves the international competitiveness of Indian logistics services.

f. **Stakeholder Collaboration:** Continuous engagement between Transformer OEMs, transportat associations like HTOA and regulatory bodies at Central/State level to discuss and resolve logistical challenges. This ongoing dialogue facilitates the sharing of best practices and the development of innovative solutions tailored to the unique needs of the Indian market.

g. **Regulation Synchronization:** Discussions on proposals like MoRTH's initiative to limit vertical clearance, aiming to harmonize government regulations with industry needs for optimized logistical solutions. This synchronization helps prevent regulatory bottlenecks that could impede the efficient transport of oversized loads.

h. **Role of Industry Organizations:**
Highlighting the role of organizations like HTOA , IEEMA in driving improvements and supporting India's industrial and infrastructural growth. These organizations are pivotal in advocating for industry interests, facilitating regulatory updates, and providing a platform for collective action. Regular interaction in fairness will lead to evolution of clear requirement of improvement in regulatory framework as well as design of proper insurance policies to cover nature of risk involved.

*****

- Transportation
- Heavy Lift
- Warehousing
- SCM Consulting

Kataria Carriers

Road Transportation Solutions

- Over Weight / Over Dimensional Cargo (OWC/ODC)
- General Cargo
- Containerized Cargo
- Automobile
- Break Bulk Cargo
- Agricultural / Dairy Cargo
- Project Cargo

Warehousing Solutions

- Warehouse Infra
- Warehouse Management

Value Added Solutions

- Heavy Lift
- Route Survey and Feasibility Studies
- Tracking
- Custom clearance for export and import cargo (both air and sea)

133/198, Transport Nagar, Kanpur – 2080 23
Contact: 0512-2600480, +91 9839035791
E-mail: ho@katariacarriers.com
Website: www.katariacarriers.com

Single window online ODC Permission for transportation of ODCs on Multi Axles Hydraulic Trailers started by Maharashtra state.

L to R Sh. Bharat Gandhi, Sh. Vivek Bhimanwar, Sh Pritesh Gandhi, Sh.Shrenik Kataria

Maharashtra State has introduced single window online ODC Permission Process for transportation of ODCs (Over Dimensional/Overweight cargo) on Multi Axles Hydraulic Trailers on state highways. Online permission process has not only reduced lengthy paperwork, delays, inconveniences but the process is now more accessible, user friendly & transparent.

By simplifying the process of ODC Transportation permission on the lines of Central Government's MoRTH permission, Maharashtra Government has extended its support to business, especially those involved in movement of heavy and oversized indivisible cargo. This digital platform has fostered transparency, accountability, speed and lead to improved supply chain efficiency, reduce logistics cost, and ultimately contribute to economic growth. This move also demonstrates state governments commitments to harnessing technology for betterment of various sectors, including supply chain, Transportation.

HTOA is thankful to the State Government of Maharashtra for initiating this process which will undoubtedly bring numerous benefits to Manufacturing Industries, EXIM trade, Transporters & Government.

HTOA is thankful to Sh. Vivek Bhimanwar, IAS (Transport Commissioner) & team of Transport Commissioner's office for spearheading this initiative for design, interfacing with Vahan, Sarathi Portals for capturing the vehicle data and making this positive change in reality.

HTOA also thanks to SH. Bharat Gandhi, Sh. Pritesh Gandhi & Sh. Shrenik Kataria for coordination with TC office.

*****

Carrying Modular Hydraulic Trailer on Kundli Manesar Palwal Express Highway - HSIIDC.

HTOA had taken up with Haryana State Industrial and Infrastructure Development Corporation, (HSIIDC) for,

i. Hindrance free movement of Modular Hydraulic Trainers (MHT) combinations as the same being globally acknowledged means for safe transportation of ODC/ OWC indivisible equipment's wherein the load is evenly distributed over all axle rows of the MHT and as such support curbing menace of overloading on public roads and bridges.

ii. Synchronization with MoRTH ODC portal for facilitating smooth hindrance free movement of large HT combinations.

iii. Action for abolition of corrupt practices.

HSIIDC vide their letter dtd.15-Apr-2024 conveyed that "Modular Hydraulic Trainers (MHT) are allowed for movement on KMP Express Highway subject to deposition of regular Toll charges as applicable. No case of corrupt practices reported to this office earlier.

Since KMP Expressway falls under the jurisdiction of the State Government of Haryana, you are advised to inform the concern parties to apply to this office separately for NOC in order to avoid any inconvenience in future. Further member transporter may also be informed to attach copy of MoRTH/NHAI NOC to enable this office to process their case on priority."

HTOA is thankful to the state government of Haryana, Managing Director, Head of Department- HSIIDC and team of Kundli Manesar Palwal Highway Cell for quick resolution to the issues, which shall facilitate faster & hindrance free movement of ODCs on KMP Expressway.

*****

INNOVATIVE ENGINEERING.....SIMPLIFIED SOLUTIONS

CORE SERVICES

- CUSTOMISED SOLUTIONS FOR CRITICAL TRANSPORTS
- FACTORY TO FOUNDATION SOLUTIONS
- TRANSPORT ENGINEERING
- SITE HANDLING AND ERECTION

SYNTRANS
F2F LOGISTICS PVT LTD

CORPORATE OFFICE : 605, R Square, LBS Marg, Opp. Veena Nagar, Mulund (West) Mumbai - 400 080. INDIA

CONTACT DETAILS : +91 99201 77505 / 98340 79632 I www.syntransf2f.com I info@syntrans.com

REGIONAL OFFICE : G-241, Sushant Shopping Arcade, Near Hotel Courtyard Marriott Gurgaon - 122001, Haryana.

CONTACT DETAILS : +91 95555 11122 I melwin.lobo@syntransf2f.com

AN ISO I 14001:2015 I 45001:2018 I 9001:2015 CERTIFIED COMPANY

SUPER HEAVY CARGO END TO END MULTIMODAL TRANSPORTATION - IT IS HIGH TIME FOR A CHANGE

H.S. Acharya

MAJOR CHALLENGES AND SOLUTIONS

The economic development of any country is directly dependent on the advancement and progress of the three sectors of the economy viz. primary sector, secondary sector and service sector and we being in service sector have a major role to play.

The writer of this article with three decades of experience in project cargo logistics, recently executed multimodal transportation project for HRRL Barmer Refinery successfully at the capacity of Project Controller and delivered safely all 34 packages, (Cargo weighing upto 743 M. Tons with dia upto 9.7 Mtrs.) in a record time of 364 days, has taken up this project as a case study to share his experience for the benefit of the Industry.

This massive project executed by a Leading ODC/ OWC operator and HTOA Member also has won the international award "Overland Transport Provider of the Year 2023" on a global platform at the Heavy Lift Awards 2023 organized by HLPFI.

Project

End to end Multimodal transportation contract for movement of 34 Nos. Super Over Dimensional Cargos from 3 different manufacturing locations in West Coast of India to HRRL Barmer Refinery in Pachpatra in Rajasthan via Mundra Port involving sea distance of 735 nm (From Mangalore) and road distance of 553 KMs from Mundra port to site was awarded by M/s Larsen & Tubro Ltd to a Leading ODC/OWC operator and HTOA Member involving following scope of work :

"Interacting, roll on roll off operation, barge transportation from Mangalore Port, Hazira and Dahej Ro-Ro jetties , Port handing, Road Transportation on hydraulic Axle trailers from Mundra Port to project site, Construction of bypasses en-route and Canal crossing with steel bridges"

Project summary

Particulars	Nos
SODC	34
Hydraulic axles deployed	1042
Pullers deployed	45
Side by side & 1+1/2 axles configuration trailers	20
Convoys	7
Longest single convoy (13 packages)	2 km+
Start date	2nd August 2022

Particulars	Nos
Bypasses constructed	32
Steel Bridges for Canal	2
Self-propelled and Dumb barges deployed	4
No of barge voyages	6
Total FRT / Total MT	72506 / 12582
Railway crossings	9
End date	31st July 2023

Major challenges

3.1. Delay in grant of permissions from various authorities

Over a dozen permissions from various govt authorities for safe movement of SODCs were to be obtain. Barring couple of permissions there was abnormal delay in grant of permission. Convoy consisting hundreds of axles were made to wait for want of permissions wiping of entire margin. There is no fixed time frame for the authorities for processing of applications except for online MORTH ODC permission which is granted in 15 days. LSPs absolutely have no control over this except patiently waiting for the permission despite regular follow up. Such delays also resulted into transportation falling into monsoon season which not only increased cost on civil work for reconstruction due to wash out of bypasses but also detention of large fleet of 520 axles and 25 prime mover for a month .

Sometimes it makes impossible to cross river on temporary bypass and force LSP to wait till water level recedes or wait till next dry season. This project was hit by cyclone 'Biparjoy' and early monsoon resulting into idling of huge quantity of resources which had major financial implications.

3.2 Local issues

For safe movement of Super heavy cargo, we are required to make temporary bypasses for all long span bridges en-route and build bypass over private land. Even after paying huge compensation to private land owners, at many places locals and Sarpanchs who have no connection whatsoever come and stop the convoy harass Transporters which delays the project.

3.3 Civil work

Land compensation cost payable to private land owners for making temporary bypass is going up every time. Even for one time crossing, demand runs into millions of rupees even for small parcel of land 50 x 10 mtrs. for few days access. Based on the data available the bypasses have been built continuously for last 3 seasons by various LSPs in every season and they have to deal with the land owners which is time consuming and too expensive. Unless and until there is a law to fix rent for private land this problem will continue and it is nothing but exploitation when there is no other option but to use private land to construct bypasses.

3.4 Canal crossing with steel bridges

In the absence of strong bridges over canal and permission not being granted for making temporary bypass using Hume pipes and soil as per earlier practice, we had to install temporary steel bridge to cross the canal at a very high cost on erection and civil work for the approach and exit. The processing time for grant of permission is 3 to 6 months which is severely affecting the project. When there is a proven method available, authorities should grant the approval within 2 weeks. No project can have the luxury of such long waiting time just for permission alone.

3.5 Railway shutdown for non LC

Despite joint procedure order issued by Railways with fixed time line for processing application in 8 days for

LC crossing but permissions never granted on time. Processing time For shutdown permission for non LC crossing is to 30 to 90 days currently. How any project can afford this kind of delay even after LSPs are made to

pay Millions of Rupees shutdown charges. Losses being incurred by LSPs are in Crores of Rupees in addition to Transporters getting exposed for late delivery penalty.

3.6 Electric Shutdown of LT/HT lines:

On the entire route hundreds of electric wires to be removed and refixed This is not only too much time consuming activity but also costly .

3.7 Bharatmala

Due to many Bharatmala crossings enroute and the clearance available in the underpass is 6 mtrs, every time packages are halted for weeks to build temporary bypass at approach and exit. It is not only costing millions of rupees but also time consuming.

3.8 Toll Booth & Toll Road

In addition to payment of heavy toll charges. Transporters are required to shell out more for small modifications / passing ODCs.
Also in some of the Toll road, even not too heavy packages side by side axle movements are not permitted over small span bridges compelling the Transporters to use service road /build bypsses with massive civil work for every convoy that too through NHAI approved contractors at very high cost running into crores of rupees. This is not only increases operational cost but also takes extra time to carry out civil modifications.
There is no safe parking bay provided on highways for ODC cargo compiling transporter to use private land and pay parking charges in lacs till cargo reaches destination despite paying road tax for axles and pullers. When we are paying road tax and are allowed to ply on road with proper permission, it is the responsibility of Road authorities to provide p safe parking. But so such facilities created along the Highways

3.9 Shortage of marine equipments in India.

There is no single self-propelled sea going barge being operated in India or available on hire for heavylift cargo movement Currently majority of the dumb barges available are either too old or not fit for carrying heavy cargo and will get rejected by marine warranty surveyors when deployed . There are only couple of good barges available to carry Heavy Lifts and when these barges go for long term offshore charter nothing will be available in the market for heavylift coastal movement. Chartering self-propelled or dumb barges from overseas also have other issues like non availability when required, coastal conversion issues, high cost of mob / demob etc. LSPs providing multimodal transportation services cannot own all resources and have to depend on market equipments and shortage of marine equipments will lead to project delays and cost of transportation goes up.

3.10 High Port Tariff

Exorbitant charges in the form of THC and storage charges in private ports charged on per frt basis which goes upto 5% of cargo value is another major challenge we are facing.

3.11 Cost Overrun :

Whatever planning and budgeting we do, we have absolutely no control over cost due to various issues explained above. They cannot even earn bare minimum rent for Axles for highly capital intensive resources deployed for the project. How long LSPs can continue incurring losses due to wasteful expenditures ?

In the present case study the logistics cost is more than 50% of equipment value. This can be brought down to half if service providers, customers and regulatory authorities work together and address issues. Though we cannot bring down the project logistics cost to Govt. expectation levels of below 10% in line with Global levels but definitely there is enough scope for improvement.

Solutions

1. Single window clearance "ONE NATION ONE PERMISSION" and grant of permission in 15 -30 days Max.
2. Permanent approach and exit Road for Bharatmala and proper service road in Toll Plaza / Road.
3. Building strong bridges over Canals to avoid construction & erection of temporary steel bridge for every project
4. Grant of railway permission for LC & Non LC and Non-LC Shutdown within 8 days.
5. Uniform concessional port tariff for coastal heavylift and ODC cargo in all ports including private on ad-valorem / percentage on per MT basis.
6. Fixation of land compensation rate for private land for byepass construction in line with land revenue lease rental rate fixed by Govt. since equipments being moved are for projects of national importance.
7. Undergrounding of electric cables except tower line to avoid inconvenience to public and also save cost.
8. Special treatment for SODCs for uninterrupted movement like Hazardous cargo movement of PSUs and Defence Cargo.
9. Govt. to encourage construction of new barges and tugs to replace old marine crafts and offer subsidies.
10. Govt. to provide permeant bypass / causeway for all long span bridges wherever feasible for heavy cargo movement on a chargeable basis or offer Temp byepass construction services through PWD Contractors at govt. approved rates including dealing with land owner.
11. Installation of dismantling type foot over bridges or provide service road for movement of high packages.
12. Change in price structure, no more all-inclusive Lumpsum price. Civil work charges on Cost Plus basis.

Conclusion

Idling of resources has direct impact over cost of transportation and if we really want to bring down the logistics cost, End users, Regulatory authorities and LSPs have to think seriously about the challenges the industry is currently facing and work together to find a permanent solution so that we can have seamless movement of cargo and help the economy and support the Government in their target to bring down the logistics cost in India to international level.

*****

NTC

NO MATTER HOW BIG IT IS. WE'LL GET IT THERE.

OUR STRENGTHS

Dedicated Route Survey Team

Our professional route survey team performs engineering surveys as per the project requirements.

Civil Work, Repair And Restructuring

As a part of the project & ODC movements, we undertake civil and construction-related activities to support our logis:ics.

Site Handling

Our own team of trained experts takes up site management and material handling at the project sites.

Own Vehicle Fabrication

We can fabricate and customize trailers as per the unique project requirements.

Here is the reason WHY CHOOSE US

NTC, a pioneer in project logistics, offers unmatched solutions for Over Dimensional Cargo (ODC) and Renewable equipment. With 25 years of experience and a specialized fleet, we provide end-to-end excellence in project forwarding.

For Enquiry

enquiry@ntcgroup.in

+91 44 66 888 777

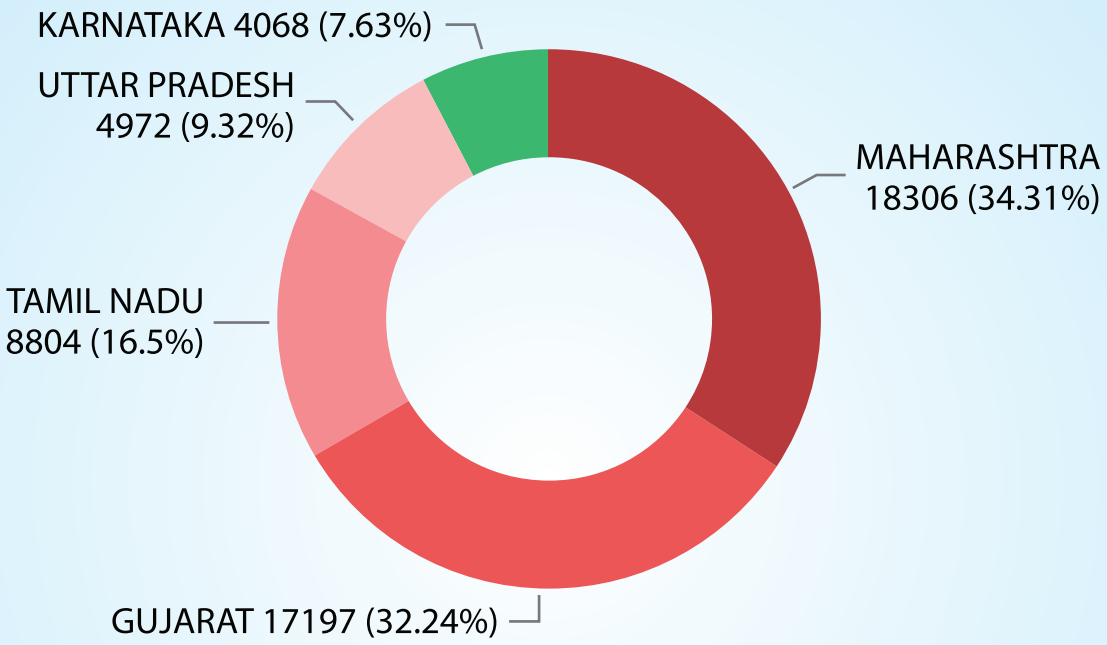
Corporate Office

No.9, 8th Floor, Calavala's Centenary Center, Club House Road, Anna Salai, Chennai - 600 002, Tamil Nadu, India

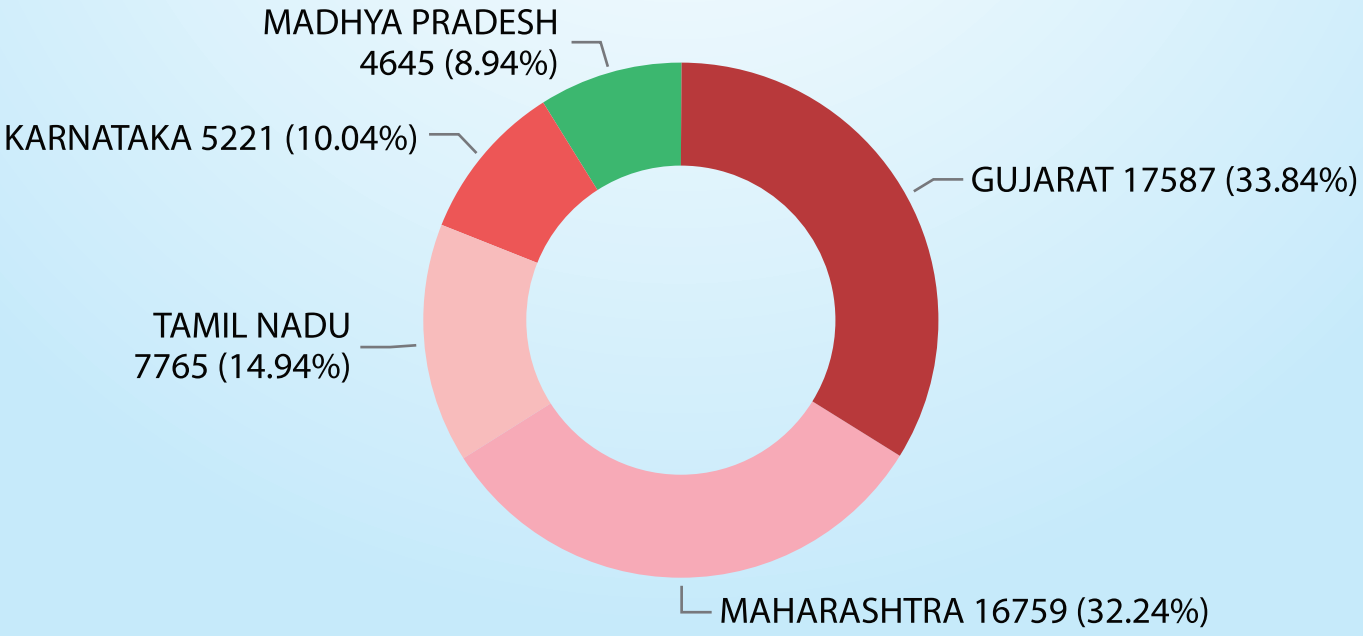
MoRTH

ODC Movement Permission 2015-2024 Data Analysis

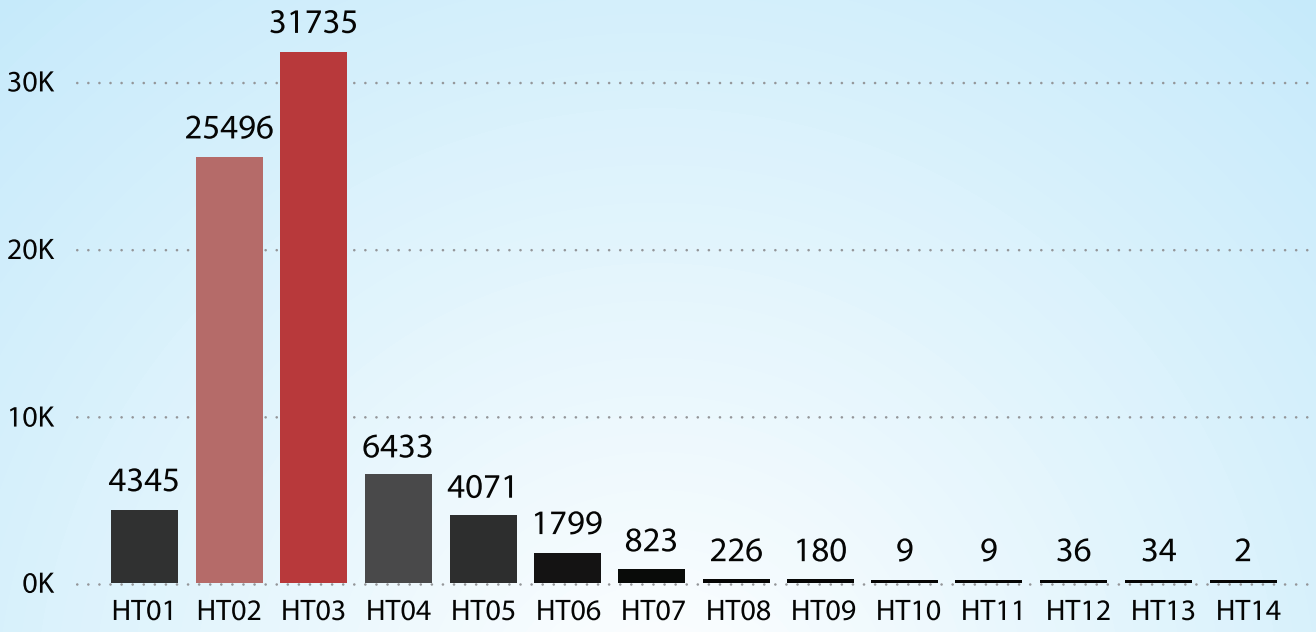
Top 5 Originating State



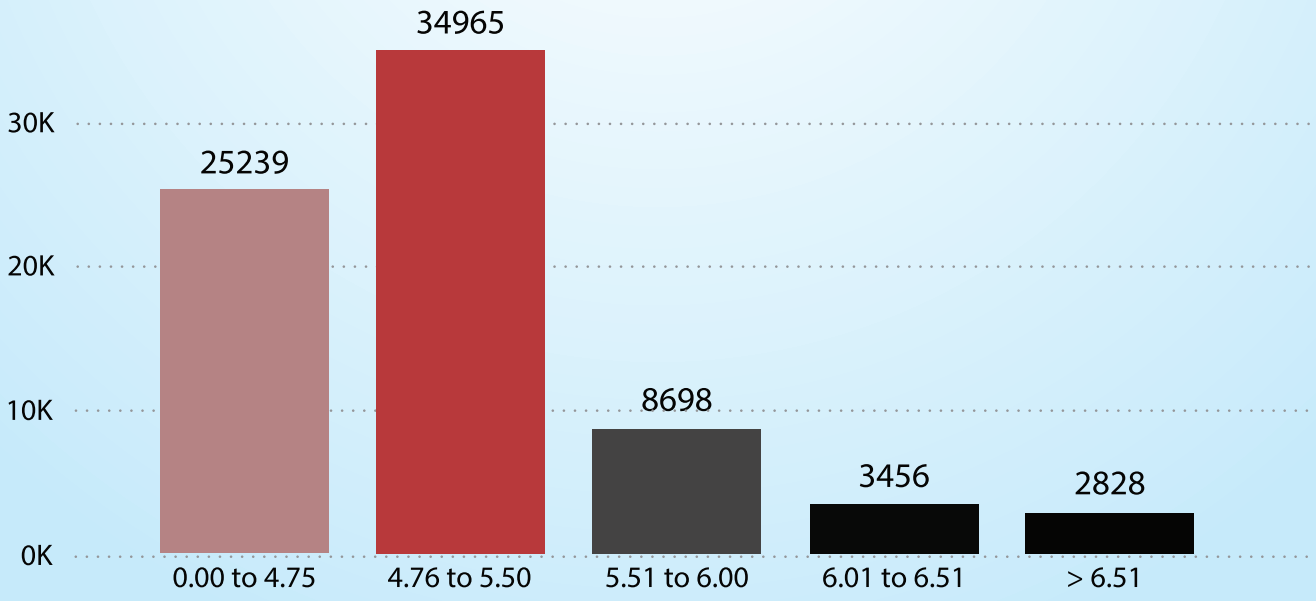
Top 5 Destination State



HT type wise Permissions Granted



Overall Height Permitted



INDIAN ROAD CARRIER

SPECIALIST FOR TRANSPORTATION OF HEAVY & OVER DIMENSION CARGO

www.indianroadcarrier.com

SINCE 1996

- Punctual in Deliveries.
- Large Fleet For ODC Transportation.
- We have Certified Quality Management System.
- Expertise in Power Transformer's Transportation.
- We are Recommended Transport Operator By IBA.
- Trusted by clients for our unwavering reliability in every project.

Contact : +91-9426074150, +91-7096444025

INDIAN ROAD CARRIER

indian_road_carrier

LIST OF HTOA MEMBERS

Sr. No	Member	COMPANY NAME	CONTACT PERSON
1	PM1001	PREMIER TRANSPORT LTD	MR RAJESH GUPTA
2	PM1002	NABROS TRANSPORT (PVT) LTD.	MR JIGNESH PATEL
3	PM1004	KATARIA CARRIERS	MR MANISH KATARIA
4	PM1005	J H PARABIA (TRANSPORT) PVT LTD	MR ZARKSIS PARABIA
5	PM1009	MFC TRANSPORT PVT. LTD.	MR RAVI SINGH
6	PM1011	ODC LOGISTICS PVT. LTD.	MR SANJAY BANKA
7	PM1013	ARDESHIR B CURSETJEE & SONS LTD	MR MANISH SRIVASTAVA
8	PM1014	NTC LOGISTICS INDIA PVT. LTD.	MR N THILLAIRASAN
9	PM1015	ABC INDIA LIMITED	MR ASHISH AGARWAL
10	PM1016	KATARIA TRANSPORT SERVICE	MR SHRENIK KATARIA
11	PM1017	GLOBE ECOLOGISTICS PVT. LTD	MR RAMRATAN AGARWAL
12	PM1019	RESHAMSINGH & CO. PVT. LTD.	MR SARABJIT SINGH
13	PM1020	DARSHAN ROADLINES PVT. LTD.	MR CHETAN GANDHI
14	PM1021	AGARWAL'S CARRIERS CORPORATION OF INDIA	MR SANJEEV AGARWAL
15	PM1022	UTC CARRIERS	MR RAVIKUMAR R AGARWAL
16	PM1023	DECENT CARGO MOVERS PVT LTD	MR K C BANSAL
17	PM1024	ASSAM BOMBAY CARRIERS PVT LTD	MR MADANLAL SHARMA
18	PM1025	TRANSPORT CORPORATION OF INDIA LTD.	MR I S SIGAR
19	PM1026	JSTC LOGISTICS PVT. LTD.	MR ANIL GOYAL
20	PM1029	MEGHDOOT ROADLINES	MR BASANT PUROHIT
21	PM1030	C J DARCL LOGISTICS LTD.	MR PARDEEP BANSAL
22	PM1031	PBL TRANSPORT CORPORATION PRIVATE LIMITED.	MR RAJESH POOSARLA
23	PM1032	SEATRANS FREIGHT CARRIERS PVT LTD	MR AMIT AGARWAL
24	PM1033	K LOG GLOBAL PVT. LTD.	MR DHARMENDRA MISHRA
25	PM1035	EXM PROJECT MOVERS PVT. LTD	MR Aniket Srivastava
26	PM1038	PROCAM LOGISTICS PVT. LTD.	MR NILESH SINHA
27	PM1039	CONTINENTAL TRANSPORT ORGANISATION PVT. LTD.	MR AJAY GARG
28	PM1040	NEELU ROADWAYS	MR NARESH AGARWAL
29	PM1041	SHREE SHYAM TRAILOR TRANSPORT	MR JASWANT SINGH
30	PM1043	INLAND WORLD LOGISTICS PVT LTD	MR SUBE SINGH POONIA
31	PM1053	SEA LAND SUPPLY CHAIN SERVICES P LTD.	MR NITESH BGADIA
32	PM1058	CARAVAN ROADWAYS LTD.	MR NIRANJAN LAL GUPTA
33	PM1059	PRISM LOGISTICS PVT LTD.	MR ADITYA BANKA
34	PM1061	JCC INDIA PVT.LTD.	MR SUSHIL KUMAR JAIN / PAWAN JAIN
35	PM1067	BHAGYODAYA TRANSPORT COMPANY	MR VIJAYANT SETIYA
36	PM1071	INDIAN ROAD CARRIER	MR ROSHANLAL BHALOTHIA
37	PM1078	SUMEET TRANS LOGISTISCS PVT LTD	MR MAHABIR GUPTA
38	PM1079	SRI KAMAKSHI LOGISTICS PVT LTD	MR E CHAKKRAVARTHY
39	PM1087	EXPRESS GLOBAL LOGISTICS PVT LTD.	MR NAILESH GANDHI
40	PM1088	SAAYAN VENTURES PVT LTD.	MR NITIN SINGAL

LIST OF HTOA MEMBERS			
41	PM1091	TOTAL MOVEMENTS PVT LTD	MR JANESH GULATI
42	PM1093	JAY PEE ROADWAYS (MADRAS)	MR DINESH SINGH
43	PM1095	J M BAXI HEAVY PVT. LTD.	MR SAMEER PARIKH
44	PM1098	SYNTRANS F2F LOGISTICS PVT.LTD	MR SUHAS LABDE
45	PM1099	DHP HEAVYLIFT SOLUTIONS PVT LTD	MR SANAL NAIR
46	PM1101	SHREE SHYAM LIFTERS	MR MR. RAMKESH ISHWAR SHARMA
47	PM1104	MOVERS ON TIME PVT LTD.	MR HARDIK SURENDRA GAHLOT
48	PM1105	EMU LINES PVT LTD	MR ARUN RAI MOHINDRU
49	OM1052	SHREE SHYAM CARGO MOVERS	MR DINESH KR YADAV
50	OM1063	UPPER INDIA CARRIERS	MR ATUL LOOMBA
51	OM1065	RAMESHWAR TRANSPORT CO.	MR RAJESH JOGI
52	OM1068	PARVAT ROAD CARRIERS	MR TRAVINDER SINGH
53	OM1069	ATUL ROAD CARRIERS	MR ANKIT BAMAL
54	OM1075	U-TRANS INDIA PVT LTD	MR KAMLESH SHULKA
55	OM1082	FREIGHT WINGS PVT LTD	MR VIJAY BHAI PAPADIWAL
56	OM1083	GOSWAMI TRANSPORT COMPANY	MR HARKESH GOSWAMI
57	OM1084	SHIVAM LIFTERS PVT LTD.	MR ROHIT SHARMA
58	OM1085	TRANS INFRA & LOGISTICS PVT LTD	MR MOHAMED ASIF
59	OM1086	NATIONAL TRAILER TRANSPORT CO.	MR TANVEER
60	OM1089	DATAR TRAILER SERVICES PVT LID.	MR SATBIR SINGH
61	OM1090	VEDANT LOGISTICS SERVICES	MR G P PANDEY
62	OM1092	BALAJI ROAD CARRIER PVT LTD	MR VIKAS SINGLA
63	OM1094	AGARWAL ROAD CARRIERS	MR BANWARILAL GARG
64	OM1096	S. JINDAL LOGISTICS	MR SANJAY JINDAL
65	OM1097	SARENS HEAVY LIFT INDIA P. LTD.	MR ARUN SAVANUR
66	OM1100	RISHU TRAILOR SERVICE	MR MR. MAHIPAL CHODHARY
67	OM1102	OCTOPUS MARINE	MR S DHARMENDRA
68	OM1103	DTS LOGISTICS PVT LTD	MR ROHTASH SAINI

Ministry of Road Transport and Highways
Government of India

Parivahan Bhawan1, Parliament Street,New Delhi- 110001

Office of Minister

Name	Designation	Room No.	Intercom	Telephone / Fax (Office)	Telephone (Residence)	Email Address
Sh. Nitin Jairam Gadkari	Minister (RT&H)	501		23711252, 23710121, 23719023- (Fax)		nitin.gadkari@nic.in
Sh. Deepak Shinde	PS to Minister (RT &H)	503	6503	23711252, 23710121, 23719023- (Fax)	23062019,2	ps-morth@gov.in
Sh. Shailesh Sharma	Addl. PS to Minister of RT&H	506	6506	23711252, 23710121, 23719023-(Fax)		shailesh.s@nic.in
General (Dr.) V.K. Singh (Retd.)	Minister of State (RT&H and Civil Aviation)	310	6310	23710236, 23731522, 23715159, Fax-23718568		vks-mosrth@gov.in
Sh. M.L. Sethi	Addl. PS to MoS	312	6311	23710236, 23731522, 23715159	9999191946	sethi.ml65@gmail.com
Secretary (MoRTH)						
Sh. Anurag Jain	Secretary (RT&H)	509	6509	23714104, 23356669 (Fax)		secy-road@nic.in
Sh. Vipin Kumar	OSD to Secretary	531	6531	23310239		vk.morth@gmail.com
Ms. Vijaya R.Sesharatnam	PSO	511	6511	23711874, 23714104		secy-road@nic.in
Sh. Yashpal	PPS	511	6511	23711874		secy-road@nic.in
Sh. M.S. Rana	PPS	511	6511	23711874		secy-road@nic.in
Additional Secretary (MoRTH)						
Sh. Mahmood Ahmed	Additional Secretary	101	6101	23351280		as-transport- morth@gov.in; mahmood.ahmed@nic.i n
Sh. S.K. Chakraborty	PPS	101	6418	23351280	9871706242	
Sh. Gaurav Hariom Gupta	Director, Road Safety & EAP	102	6471	23718575		ghgupta155-cgo@gov.in
Sh. R.R. Meena	DS (Road Safety Cell)	227	6227	23718560	9958344756	meena.rr@nic.in
Smt. Kiran Mala Kujur	US (Road Safety)	331	6331		9868301531	
Sh. Hemant Kumar Sharma	SO (RS)	231A	6261	23321738	9654713954	hemant.ks@nic.in
Additional Secretary- (MVL/ Toll,Transport/ IC)						
Sh. Mahmood Ahmed	Additional Secretary	101	6101	23351280		as-transport- morth@gov.in; mahmood.ahmed@nic.i n
Sh. S.K. Chakraborty	PPS	101	6418	23351280	9871706242	
Sh. Ankit Dugar	Director (MVL)	102	6471	23718575	9717627090	ankit.dugar1986@gov.in
Sh. K.C. Sharma	Chief Engineer (MVL)	143	6302	23711165	9868741841	kcsharma.rth@gov.in
Sh. Paresh Kumar Goel	Director (Transport)	332	6332	23351967	9968698568	paresh.goel89@gov.in
Sh. Jitender Kumar	SO (Transport)	522	6522	23715211		sot-rth@nic.in,
Sh. Vinay Kumar	Joint Secretary (H&LA)	316	6316	23710140/ 23719515		js-highways@nic.in
Sh. Anoop Seth	Sr. PPS	318	6318	23710140/ 23715195		js-highways@]nic.in
Joint Secretary- (IAHE, Logistics & Toll)						
Sh. S.P. Singh	JS	520	6520	23719209 23359477-Fax		js-logistic@gov.in
Smt. Hema Rawat	US (Logistic)	240	6413	23321729		hema.rawat71@gov.in
Road Wing Zone [(S&R) (Pavement Bridge) Standard, Research & Technology (Bridge & Bridge Design) (Road Safety)]						
Sh. D. Sarangi	ADG (East-II)	135	6359	23314356	8130781101	d.sarangi@nic.in
Sh. Anil Kumar Kushwaha	CE, S&R (Roads), BP&SP	144	6303	23710450/23314328		kushwaha.anil@gov.in, sandrmorth@gmail.com, sebpsp.morth@gmail.com
Sh. O.P. Shrivastava	CE(S&R)	134	6274	23721233	9810076022	omprakash.svv@nic.in
Sh. Jitendra Kumar	SE (S&R)	14			8107549498	k.jitendra@nic.in
National Informatics Centre (NIC)						
Sh. Joydeep Shome	D.D.G.	NIC-Headquarter		24305269		joydeep@nic.In
Sh. Avnesh Kumar Sharma	Sr. Tech. Director(HOD)	NIC-Headquarter		24305585		avnesh@nic.in
Sh. Lokesh Kumar	Scientific Technical Assistant - A	429	6429	23711824		lokesh.kumar92@nic.in

Regional Office & ELO

Name	Designation , Address	Location	State	Telephone / Fax (Office)	Telephone (Residence	Email Address
Sh. S Sadanand Babu	Superintending Engineer (Civil), Ministry of Road Transport & Highways, ,No.32 (2nd Floor),KSCFL Building, D.Devaraj Urs Road (Race Course Road), Bengaluru - 560001, Sh. Kondayya Caudhary, EE, Sh. P.K. Pendurthi, EE	Bangaluru	Karnataka	080-22105765, 22217457(Fax)	9711392402	babu.ss@nic.in

Sh. Rakesh Prakash Singh	Chief Engineer-Regional Officer, Ministry of Road Transport & Highways, 2nd Floor, Nirman Bhawan, MPPWD, Arera Hills, Bhopal-462011, Sh. Devendra Chapekar, EE(NSFG), Sh. Ankit Verma (EE)	Bhopal	MP	0755-2551329, 2551329-(Fax)	9650936940, 8108843687, 9450388378	rp.singh70@nic.in, ro.bpl-morth@gov.in
Sh. Deepak Kumar Sharma	Chief Engineer, Ministry of Road Transport & Highways, M.P.PWD, D-Wing, Satpura Bhavan Bhopal. Sh. Sumit Kumar, SE Sh. P.K. Srivastava, EE	Bhopal	MP	0755-2551329, 2551329-(Fax)	9166719292	dks.rth@gov.in, romorthbhopal@gmail.com
Sh. D.Sarangi	ADG, Ministry of Road Transport & Highways, C/o C.E. World Bank Project, NO.184,infront of CRPF Stadium Baramunda, Bhubaneshwar. Sh. Sunil Kumar, EE Sh. Biju Patir, EE	Bhubaneshwar	Odisa	0674-2564546, 25646415-(Fax)	9968118503	rakeshkumar.rth@nic.in
Sh. Navin Kumar Chaurasia	Superintending Engineer cum Regional Officer, Kendriya Sadan, Room No. 611, 6th Floor, Sector-9 A, Chandigarh, Sh. Ankit Kumar, EE, Sh. Gargi Singh, AEE	Chandigarh	CG	0172-2743228, 2740376-(Fax)		rochandigarh2010@gmail.com
Sh. Rananjay Singh	Superintending Engineer, Ministry of Road Transport & Highways, C-1-A, RajajiBhavan, Besant Nagar Chennai-600090, Sh. Shiju P. Varghese, AEE, SH. Prashant Kumar Bajpai, AEE	Chennai	TN	044-24919341, 24916032-(Fax)		cerochennaimorth@gmail.com
Sh. Sandeep Gaur	Superintending Engineer Ministry of Road Transport & Highways, New SachivalayaBalock No.14, 2nd Floor Gandhinagar.Gujarat					
Sh. A Susangi	Superintending Engineer (Civil) Ministry of Road Transport & Highways, House no-5, Rajgarh Road Chandmari, Guwahati - 781003	Guwahati	Assam	0361-2467706	9810137141	roguw-morth@nic.in, roghy2015@gmail.com
Sh. S.K. Kushvaha	Regional Officer, Ministry of Road Transport & Highways, R&B Office Complex, Errum Manzil, Hyderabad-500082 ISh. Subodh Kumar, EE Sh. Rakesh Meena, EE	Hyderabad	Telangana	040-23393206, 040-23378549	9903080825	sehyderabad@gmail.com
Sh. Alok Deepankar	Chief Engineer, Ministry of Road Transport & Highways, Opp.DCM Ajmer Road, P.O.Shyam Nagar, Jaipur	Jaipur	RJ	0141-2811670, 0141-2810639-(Fax)	9460408961	
Sh. Niranjan Kr. Nayak	Superintending Engineer, Ministry of Road Transport & Highways, R.No.106 ,1st Floor, 'C' Wing, CGO Complex, DF Block, Sector-I, Salt Lake, Kolkata.700064, Sh. Samiran Saha, SE, Ms. Sanjukta Kanjilal, AEE, Ms. Sapana Mothiya, AEE	Kolkatta	WB	033-23586940, 23586941-(Fax)	9432320806	rocmorth@gmail.com
	Chief Engineer (Mech.) Ministry of Transport & Highways, R.No.106 ,1st Floor, CGO Complex,C-Wing, DF Block, Salt Lake, Kolkata.700064	Kolkatta	WB	033-23586942, 033-23218813-(Fax)	9433005550	
Sh. Digvijay Mishra	Chief Engineer (Civil) Ministry of Road Transport & Highways, N.H., Biotech Chowk, Lucknow Ring Road Vikas Nagar Lucknow-226022, Sh. Sudhir A. Singh, EE	Lucknow	UO	0522-2967112, 2738226-(Fax)	9654297112	rolkorth@gmail.com
Sh. Rajeev Singh	Chief Engineer Ministry of Road Transport & Highways, Room no-508 & 509, KonvanBhavan, 5th Floor,Sector-6, C.B.D, Belapur, Navi Mumbai-400614 Mumbai Sh. Sanjay Jaiswal, SE Sh.TusharVyas, EE Sh. AmitRanjan, EE Sh. DevendraChapekar, EE	CBD Belaour	MH	022-27562370, 022-27562369	9868281833	romorthmumbai[at]gmail[dot]com
Sh. Pradeep Lal	Superintending Engineer, Ministry of Transport & Highways,.Vill-Chakmusa, Near Nakati Bhawani Mandir on NH-98 Post-Mohammadpur Kurji via Khagaul, Patna-801105, Bihar	Patana	Bihar	0612-2951343 /2951344		

Sh. Raj Kishor SIngh	Executive Engineer Ministr of Road Transport & Highways PIU Prayagraj Sector-D-127/11, Shantipuram Colony Phaphamau, Prayagraj UP-211013	Prayagraj	UP		8376958604	piumorthprayagraj@gmail.com
	Superintending Engineer(Civil), Ministry of Road Transport & Highways, Public Office, Buildings, Opposite to Museum,Thiruanathpuram-695033 . Sh. RamshidPadusha N T, EE	Thiruanathpuram	Kerala	0471-2326306 2320879-(Fax)		rokeralamorth@gmail.com
Sh. U.C. Chamargore	Chief Engineer, Ministry of Road Transport & Highways, Raipur(C.G.) Sh. Subhash Chandra, EE	Raipur	CG	0771-2429786, 0771-2436637	8830410857	
Sh. Abhijeet Kumar	Superintending Engineer, Ministry of Road Transport & Highways New Area, Dutta Villa Road, Near N.T.C Morabadi Ranchi-834008, Sh. Abhilash Kumar, SE	Ranchi	CG	0651-2550301, 2550183—Fax	9968124492	roranchi03@gmail.com
Sh. S. Vijaya Kumar	Chief Engineer, Regional Office,Ministr of Road Transport & Highways,199/C(1st Floor),Vidyalaya Marg,Road No.1,Ashok Nagar,Ranchi-834002	Ranchi	CG	(0651)-2240222, 2240223	7337574789	roranchi03@gmail.com
Sh. Vivek Nandan	Executive Engineer, Project Director, PIU-Dhanbad (Jharkhand), Plot No. M.I.G-69, Housing Colony Bartand, Dhanbad-826001	Dhanbad	Jharkhand		9643894182	piumorthdhanbad[at]gmail[dot]com
Sh. Shrawan Kumar Singh	Superintending Engineer, Ministry of Road Transport and Highways GorledalanapannavariVeedhi, Near American Hospital, Vijayawada-520010 Sh. Abhinav Kumar, EE	Vijayawada	AP	0866-2970220 Fax-0866-257198	9818396220	romorthvijaywada@gmail.com
Sh. Rakesh Kumar	Superintending Engineer, Ministry of Road Transport and Highways, D.No.-41-29-45A, 3rd & 4th Floors, Morth/NHAI Building, Ranigarithotha,Near-Kanaka Durga,Varadhi,Krishnalanka, Vijaywada-520013, Sh. Shashank Shekhar Rai,EE, Sh.Ashutosh Gaur, EE	Vijyawada	AP	0866-2571985	9968118503, 7827838207, 8295602277	romorthvijayawada[at]gmail[dot]com, rakeshkumar.rth[at]nic[dot]com, shashank.rai[at]gov[dot]com, ashutosh.gaur[at]gov[dot]com
Sh. Subashchandra	Superintending Engineer, Ministry of Road Transport and Highways Ward no-14, First Floor, LDS Road (Garwanpotty) Near SK Bajab Auto Mobils Tezpur, Assam -78400 Itanagar Sh. Vishal Pandey, AEE	Tezpur	Assam			
Sh. Varun Agarwal	Superintending Engineer ELO Shimla	Shimla	HP			eloshimla@gmail.com
Sh. V.S. Khaira	Chief Engineer Ministry of Transport & Highways 46/1, Canal Road, Jakhan Dehradun-248001 Deharadun. Sh. Saurabh Singh, EE	Deharadun	UK	0135-2738657	9899400253	vs.khaira@nic.in
Sh. V.S. Prasad	Chief Engineer PMU Silchar	Silchar	Assam			

Ministry of Road Transport and Highways. GOI.

National Highway Authority Of India (NHAI)

Address : National Highways Authority of India,G 5&6, Sector-10, Dwarka,New Delhi - 110 075 91-011-25074100 & 25074200

Name	Designation	Intercom	Telephone / Fax (Office)	Telephone (Residence)	Email Address
Sh.Santosh Kumar Yadav, IAS	Chairperson	1601	011-25076503		chairman@nhai.org
Sh.Umesh Taneja, Sh.Sanjeev	PS, PS, PA	1601, 1603 1604, 2605			
Sh. Alok, IAS	Member - Admin	1200, 1622	011- 25093512		memberadmin@nhai.org
Sh. Anil Kapoor / Sh. Baldev Kumar	PPS, PPS	1200, 1622			
Shri V. K. Rajawat	Member (Projects)	1327/ 1032	011-25074100/200		memberproject@nhai.org
Sh. Harjeet Singh	PS	1621			
Shri Alok Deepankar	Member (Technical)	1534/1326	011- 25074100/25074200 Ext.		membertechnical@nhai.org
Sh. K.S.Sharma / Sh. Manish Balooni	PPS to Member(Tech) / PPS	1628 / 1032			
Sh. Manoj Kumar	Member - Projects	1534	011- 25093515		mk.projects@nhai.org
Sh. C.K. Sharma	PPS	1534, 2414			
Sh. Rajeev Saxena	CVO	1515	011-25083531		cvo@nhai.org
Sh. Dharmendra Kumar	PPS	1515			
Indian Roads Congress (IRC)					
Address : IRC Bhawan, Kama Koti Marg,Sector-6, R.K. Puram,New Delhi – 110 022					

Name	Designation	Intercom	Telephone / Fax (Office)	Cell No.	Email Address
Sh. S.K. Nirmal	Secretary General		011- 26185303	8376900507	secygen.irc@gov.in
Sh. Rahul Patil	Dy. Director (Tech)		011- 26185273	9312849826	dd.irc-morth@gov.in
Sh. Ajay Kumar Bhalla	Under Secretary		011- 23387140	9999901610	ds.irc-morth@gov.in
Mrs. Shilp Shree	Assistant Director(Tech.)		011- 26185273	9643554206	ad.irc-morth@gov.in

www.nhai.org

National Highways Authority of India

Ministry of Road Transport & Highways

www.nhai.gov.in

सत्यमेव जयते

सड़क परिवहन और राजमार्ग मंत्रालय
MINISTRY OF ROAD TRANSPORT AND HIGHWAYS
भारत सरकार
Government of India

Building Roads Building the Nation

Reduction of accidents by 50%

Road Transport & Safety Bill

Multi Modal Transport for better logistics effeciency

30 km per day of road construction

MANY MORE MILES TO COVER...

MANY MORE MILESTONES TO ACHIEVE..