



TRANSPORTING ROADS WITH BETTER SAFETY

Metal Beam Crash Barrier (MBCB)



WHO WE ARE

An ISO 9001:2015 certified organisation with an annual turnover of over 250 million USD, **Utkarsh India** is a core engineering enterprise that boasts of its multi-decade-long fame for manufacturing excellence in steel fabrication, galvanisation, plastic extrusion, and moulding.

Standing today, being a trusted one-stop solution for all need-based applications ranging from design, engineering, rolling, forming to fabrication and galvanising, **Utkarsh India**, located at Gurap and Jangalpur in West Bengal, has an avant-garde infrastructure & manufacturing setup spread across a mammoth 3,428,090 sqft, thereby becoming the most preferred infrastructural partner in the public and private sector space, catering extensively to the global and Indian customer requirements.

With over 4000 highly skilled permanent and contractual workforce, all our products are crafted with heart and perfection. Our High Masts and Poles undergo thorough wind tunnel testing, and we are, in fact, one of the few companies in the world to have an actual crash test certification for our Metal Beam Crash Barriers!

Combine that pursuit of perfection with a highly functional wide web network of hundreds of vendor partners, from logistic services, raw material suppliers, and capital goods suppliers - all standing together and committed to our ethos - LIFE DEMANDS, WE DELIVER.



\$250 million+
Annual Turnover



3,428,090 sqft
Infrastructure &
Manufacturing Setup

Cover Area | Uncover Area
784,391 sqft | 2,643,598 sqft



4000+
Highly Skilled
Workforce



Utkarsh India is a major exporter throughout the globe and ranks amongst the top pan-India manufacturers, suppliers & distributors of –

- Metal Beam Crash Barriers
- Pedestrian Guard Rail
- Polygonal & Octagonal Poles
- High Mast Lighting Structures
- Steel Tubular Poles
- Railway Electrification Structures
- Mild Steel and Galvanised Steel Pipes
- Polymer Pipes, Fittings, and accessories
- Transmission Line Towers for electrification
- Telecom Towers for communication
- Water Tank Metal Structures
- Pre-Fabricated Building Structures
- HDPE Pipes

At Utkarsh India, we follow the strictest manufacturing norms and certifications for our product range, namely - ISO, BS, ASTM, AS, EN, OHSAS, MORTH & SLS.

In addition, with regard to testing facilities, Utkarsh India is equipped with cutting-edge testing labs, having partnered with several International & National testing labs and testing centers like SGS, CE, DNV, BVQI, and TUV, thereby ensuring our unmatched product quality and services.



WHY UTKARSH INDIA

- Utkarsh India provides a single roof for all infrastructural manufacturing requirements.
- We have highly competent in-house design as well as research & development laboratories.
- We host well-equipped, cutting-edge in-house testing facilities.
- We have a sound financial standing to accomplish manufacturing target deadlines.
- Our MOUs with leading National and International raw material manufacturers allow superior quality and easy procurement.
- We are equipped with ample stock holding area for finished products as well as raw material storage.
- Our manufacturing units are closely connected via seaports, national highways, and railways.
- We possess excellent vendor management skills with committed after-sales support.



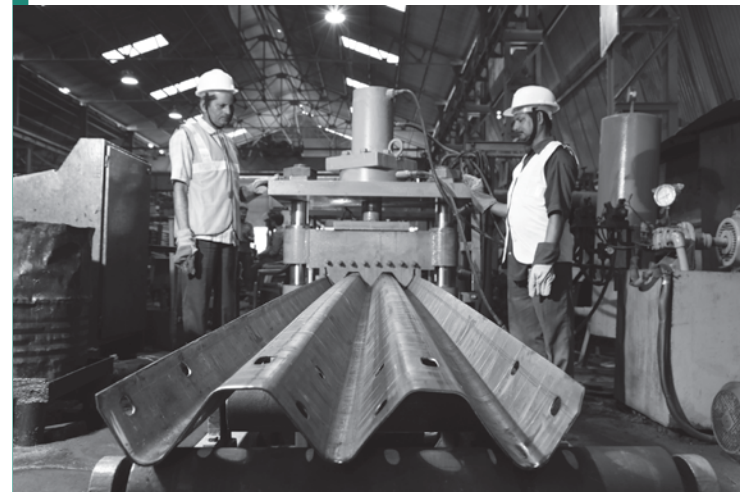
CRASH BARRIER DIVISION

A premier brand in the metal Beam Crash Barrier Industry, Utkarsh India aims to Protect every journey.

With a combined two-decade worth of experience in manufacturing and providing over 2,00,000+ Km. of metal Beam Crash Barrier, our brand is approved by Government departments & Infra Companies, thereby making us a part of every prestigious project both nationally and globally.

SOLD

2,00,000+ Km
Metal Beam Crash





Why Utkarsh India's Crash Barrier?

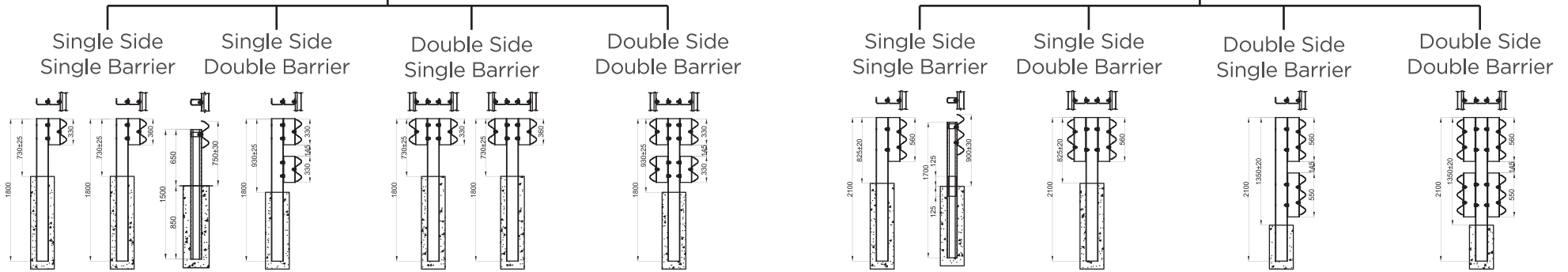
- We are amongst the top manufacturer of India's certified crash tested crash barrier
- Our Raw material for sourced only from SAIL & TATA.
- We have State of art production unit located in proximity of sea ports, Rail route and Indian national highway with expert logistics team for forwarding and logistics facilities
- We have 5 in-house 12.5m long Hot Dip Galvanizing facilities, using only Special High Grade Zinc (99.995% purity) procured from Hindustan Zinc Limited.
- Our Production capacity of 1,44,000 MT/ 6500 km per annum of crash barrier both type "TYPE A" W-BEAM & "TYPE B" THREI BEAM as per MoRTH clause 810/IRC with more than 5000 MT in ready stock for faster delivery
- In-house well equipped testing facilities with qualified quality engineers and advance machineries to test the quality of raw materials, ongoing production and finished material

OUR PRODUCTS

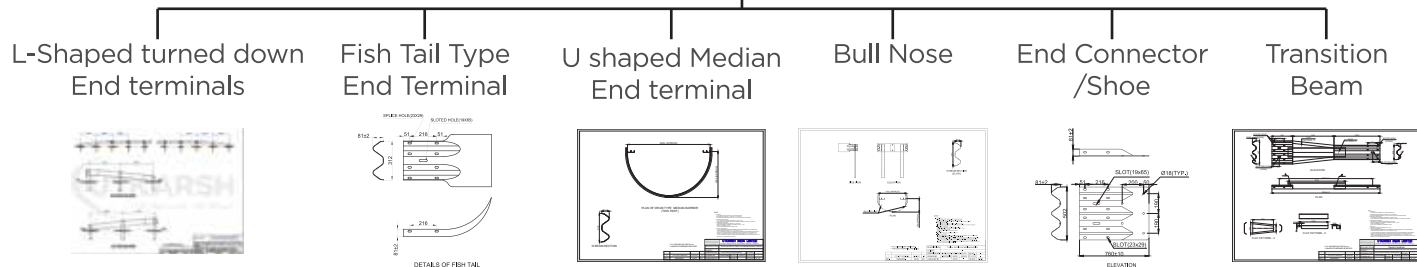


W Beam

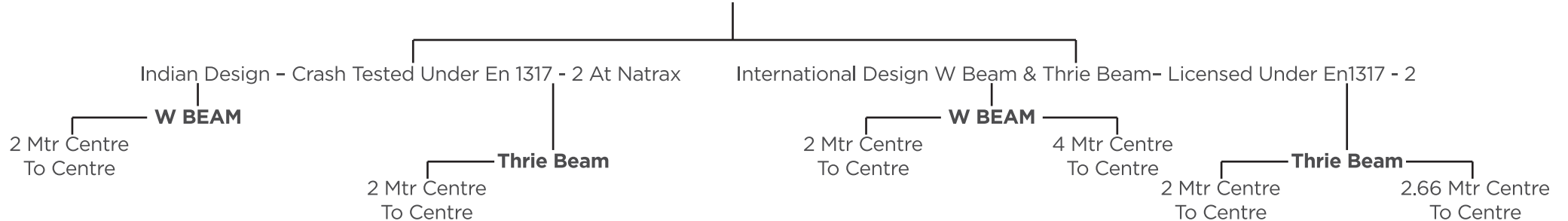
Thrie Beam



Anchorage System



Crash Tested Metal Crash Barriers



European Standards EN 1317 Road Restraint Systems Norms and System Selector



EN 1317: INSTRUCTION

- Part 1 Terminology and general criteria for test methods
- Part 2 Performance classes, impact test acceptance criteria and test methods for safety barriers including vehicle parapets
- Part 3 Performance classes, impact test acceptance criteria and test methods for crash cushions
- Part 4 Performance classes, impact test acceptance criteria and test methods for terminals and transitions of safety barriers
- Part 5 Product requirements and evaluation of conformity for vehicle restraint systems
- Part 6 Pedestrian restraint systems - Pedestrian parapets
- Part 7 Performance classes, impact test acceptance criteria and test methods for terminals of safety barriers
- Part 8 Motorcycle road restraints systems which reduce the impact of motorcyclist collisions with safety barriers

EN 1317: PART 2: NORMS FOR SAFETY BARRIERS

The norms stipulates that the safety barriers when tested in accordance with Criteria (Table A) defined below shall conform to the requirements of:

1. Containment levels (Table 1)
2. Classes of working width (Table 2)
3. Vehicle Intrusion (Table 3)
4. Impact Severity (Table 4)
- 5 Post Impact Vehicle Response (Table 5)

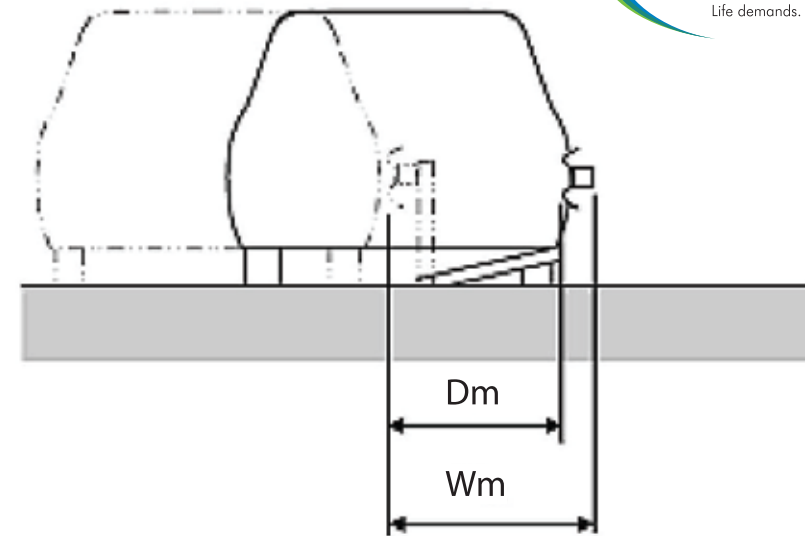
Table A: Vehicle impact test criteria

Test	Impact speed km/h	Impact angle °	Total mass kg	Type of vehicle
TB 11	100	20	900	Car
TB 21	80	8	1 300	Car
TB 22	80	15	1 300	Car
TB 31	80	20	1 500	Car
TB 32	110	20	1 500	Car
TB 41	70	8	10 000	Rigid HGV
TB 42	70	15	10 000	Rigid HGV
TB 51	70	20	13 000	Bus
TB 61	80	20	16 000	Rigid HGV
TB 71	65	20	30 000	Rigid HGV
TB 81	65	20	38 000	Articulated HGV

Classes of containment (Table 1)

Containment levels			Acceptance test
Low angle containment	T1	/	TB 21
	T2	/	TB 22
	T3		TB 41 and TB 21
Normal containment	N1	/	TB 31
	N2	/	TB 32 and TB 11
Higher containment	H1		TB 42 and TB 11
	L1		TB 42 and TB32 and TB 11
	H2	/	TB 51 and TB 11
	L2		TB 51 and TB32 and TB 11
	H3	/	TB 61 and TB 11
	L3		TB 61 and TB32 and TB 11
Very high containment	H4a H4b	/	TB 71 and TB 11 TB 81 and TB 11
	L4a L4b		TB 71 and TB32 and TB 11 TB 81 and TB32 and TB 11
<p>NOTE 1 Low angle containment levels are intended to be used only for temporary safety barriers. Temporary safety barriers can also be tested for higher levels of containment.</p> <p>NOTE 2 A successfully tested barrier at a given containment level should be considered as having met the containment requirements of any lower level, except that N1 and N2 do not include T3, H-Levels do not include L-Levels and that H1, ..., H4b do not include N2.</p> <p>NOTE 3 Because testing and development for very high containment safety barriers in different countries has taken place using significantly different types of heavy vehicles, both tests TB 71 and TB 81 are included in the standard at present. The two containment levels H4a and H4b should not be regarded as equivalent and no hierarchy is given between them. The same holds for the two containment levels L4a and L4b.</p> <p>NOTE 4 The performance of Containment Classes L is enhanced in respect to the corresponding H classes by the addition of Test TB 32.</p>			

Working Width (Table 2)



Classes of normalised working width levels	Levels of normalised working width m
W1	$W_N \leq 0,6$
W2	$W_N \leq 0,8$
W3	$W_N \leq 1,0$
W4	$W_N \leq 1,3$
W5	$W_N \leq 1,7$
W6	$W_N \leq 2,1$
W7	$W_N \leq 2,5$
W8	$W_N \leq 3,5$
<p>NOTE 1 In specific cases, a class of working width level less than W1 may be specified.</p> <p>NOTE 2 The dynamic deflection, the working width and the vehicle intrusion allow determination of the conditions for installation of each safety barrier and also to define the distances to be provided in front of obstacles to permit the system to perform satisfactorily.</p> <p>NOTE 3 The deformation depends on both the type of system and the impact test characteristics.</p>	

Vehicle Intrusion (Table 3)

Classes of normalised vehicle intrusion levels	Levels of normalised vehicle intrusion m
<i>VI1</i>	$VI_N \leq 0,6$
<i>VI2</i>	$VI_N \leq 0,8$
<i>VI3</i>	$VI_N \leq 1,0$
<i>VI4</i>	$VI_N \leq 1,3$
<i>VI5</i>	$VI_N \leq 1,7$
<i>VI6</i>	$VI_N \leq 2,1$
<i>VI7</i>	$VI_N \leq 2,5$
<i>VI8</i>	$VI_N \leq 3,5$
<i>VI9</i>	$VI_N > 3,5$

NOTE 1 In specific cases, a class of vehicle intrusion level less than *VI1* may be specified.

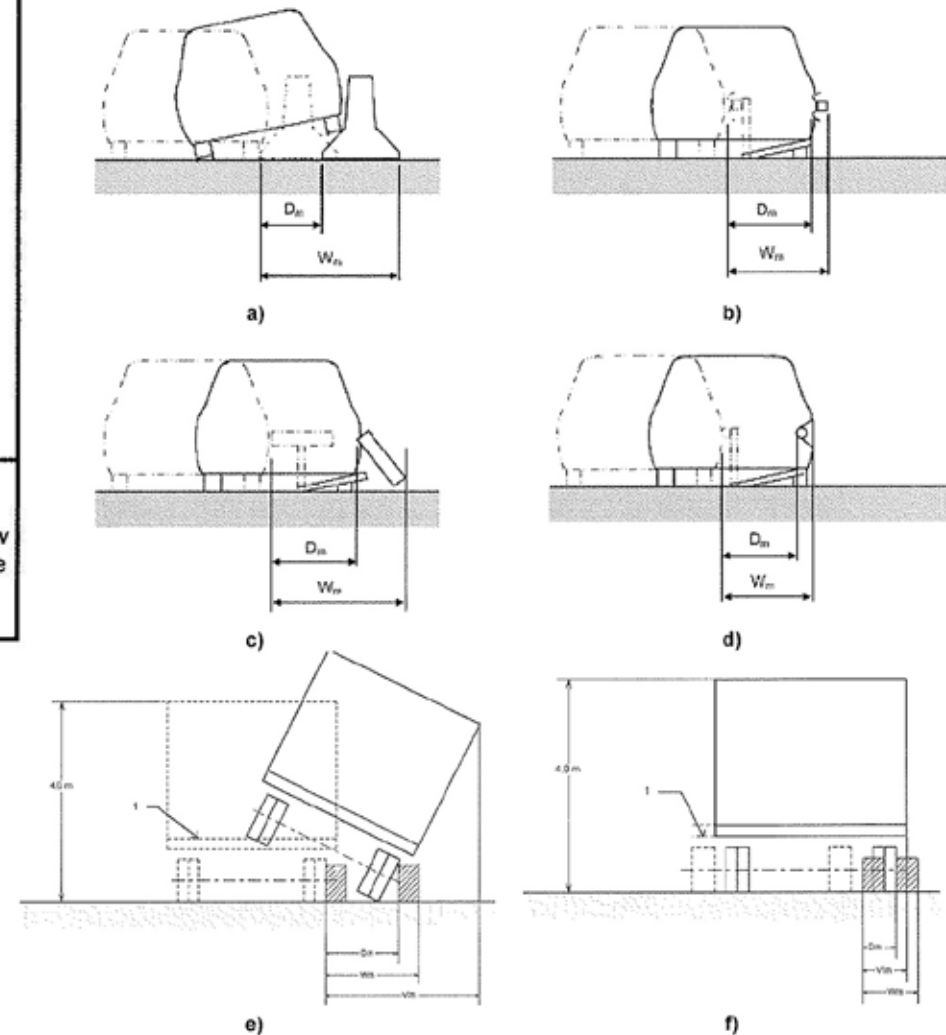
NOTE 2 The dynamic deflection, the working width and the vehicle intrusion allow determination of the conditions for installation of each safety barrier and also to define the distances to be provided in front of obstacles.

Impact Severity Level (Table 4)

Impact severity level	Index values		
A	$ASI \leq 1,0$	and	$THIV \leq 33 \text{ km/h}$
B	$ASI \leq 1,4$		
C	$ASI \leq 1,9$		



Post Impact Vehicle Response (Table 5)



Longitudinal Barriers (H2 Containment Level) As per European Standards 1317, Part 2: H2W3, H2W4, H2W5 (Thrie Beam)

Metal Beam Class Barrier/Safety barrier on ground conforming to Class **H2W3, H2W4, H2W5**, certified in accordance with:
European Standard EN 1317: Part 2
IRC 119 - 2015 Recommendations
Crash tested for: Bus of 13000 kgs and Car of 900 kgs



SYSTEM TYPE

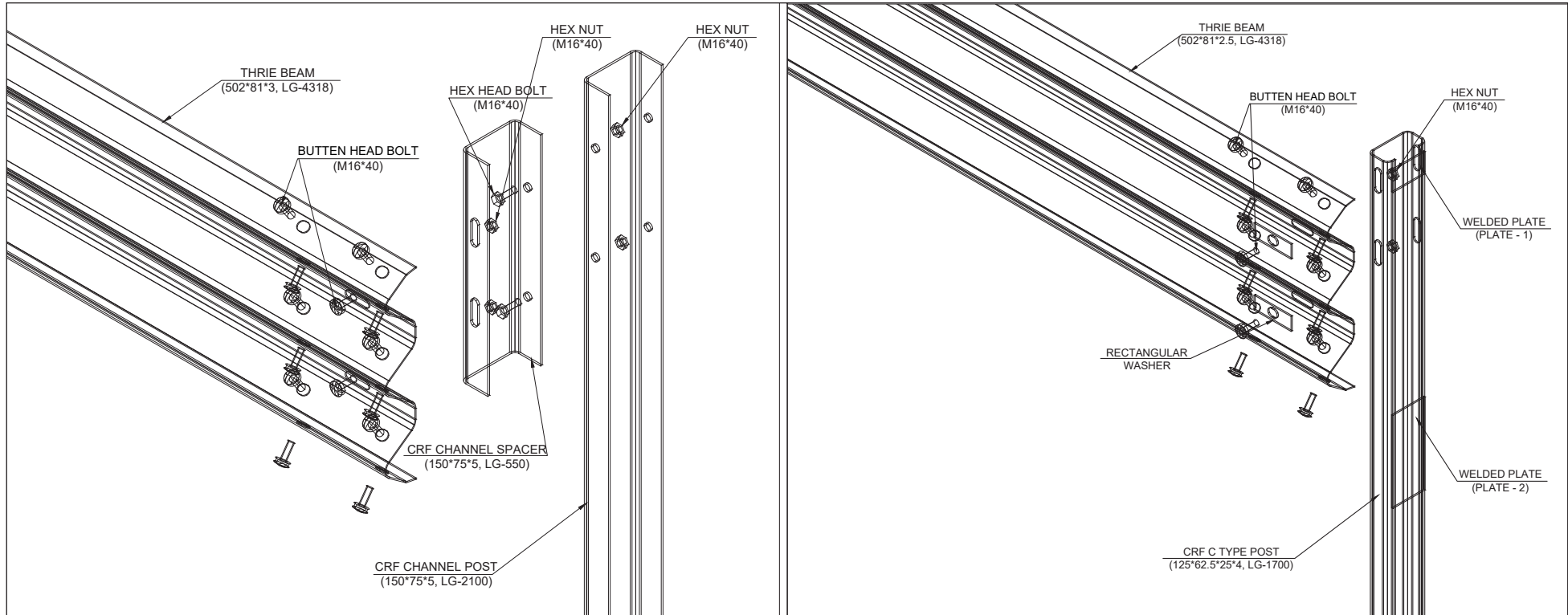
Containment Type	Higher Containment
Containment Class	H2
Dynamic deflection	1.2m
Working Width	W3(<1.0 m)W4 (<1.3 m)W5 (<1.7 m)
Vehicle Intrusion	1.5 m - VI 5
ASI	A

SYSTEM CHARACTERISTICS

Containment width (m)	0.221
Containment height (m)	0.95
Distance between posts (m)	2.00/2.66



UTKARSH Crash Barrier
 Model A: UTKARSH H2W4 FE03H2 2.00M (3n)
 Model B: UTKARSH H2W4 FE03H2 2.66M (3n)
 Model C: UTKARSH H2W5 TSSSB 2.00M (3n)



MATERIAL SPECIFICATIONS & STANDARDS

Steel	IS2062 E350 & E410 or equivalent IS5986/10748 Fe - 410/360 or equivalent
Galvanization	EN 1461
Screws	4.6 Grade
Bolts	4.6 Grade

MATERIAL SPECIFICATIONS & STANDARDS

Steel	EN 10025 S355JR/275JR or equivalent
Galvanization	EN 1461
Screws	4.6 Grade
Bolts	4.6 Grade

Longitudinal Barriers (H1 Containment Level) As per European Standards 1317, Part 2: H1W3, H1W4, H1W5 (W Beam)

Safety barrier on ground conforming to Class **H1W3, H1W4, H1W5**, certified in accordance with:

European Standard EN 1317: Part 2

IRC 119 - 2015 Recommendations

Crash tested for: TRUCK of 10000 kgs and Car of 900 kgs



SYSTEM TYPE

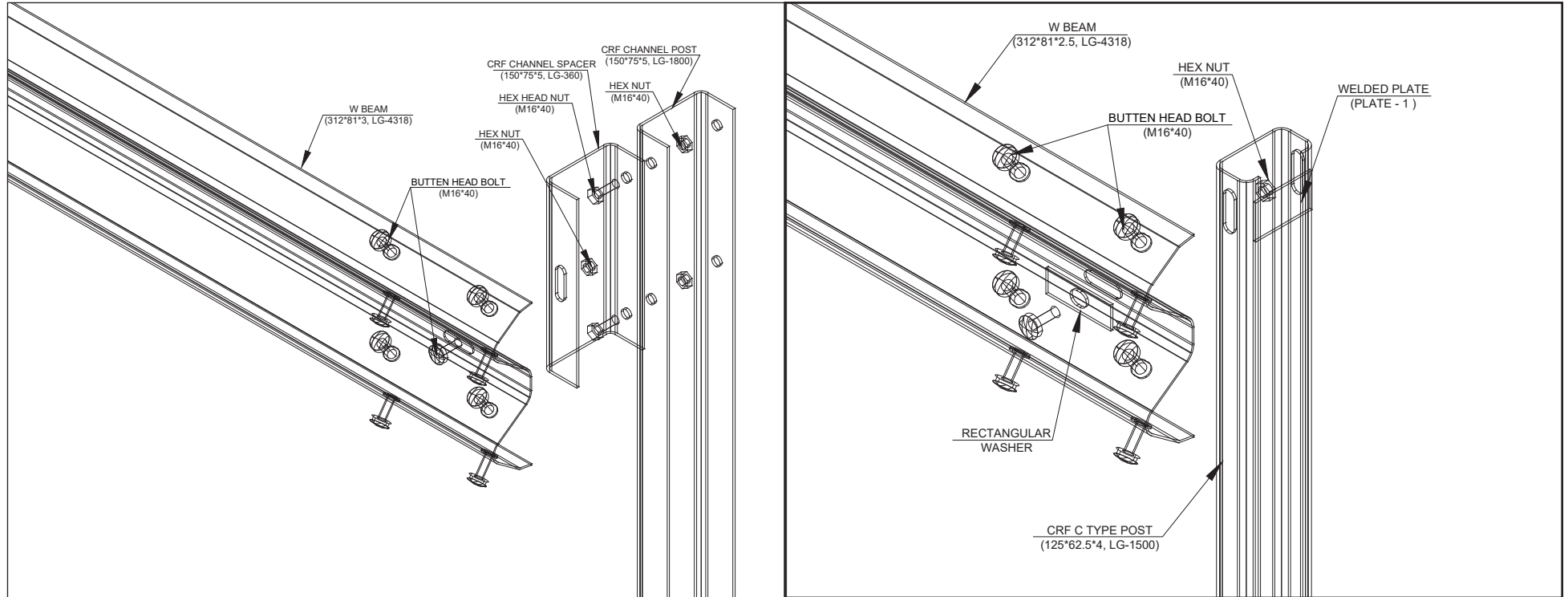
Containment Type	Higher Containment
Containment Class	H1
Dynamic deflection	1.5m
Working Width	W3(<1.0 m)W4 (<1.3 m)W5 (<1.7 m)
Vehicle Intrusion	1.7 m - VI 5
ASI	A

SYSTEM CHARACTERISTICS

Containment width (m)	0.221
Containment height (m)	0.75
Distance between posts (m)	2.00/4.00



UTKARSH Crash Barrier
 Model A: UTKARSH H1W4 AG02 2.00M (2n)
 Model B: UTKARSH H1W4 AG04 4.00M (2n)
 Model C: UTKARSH H1W4 WSSSB 2.00M (2n)



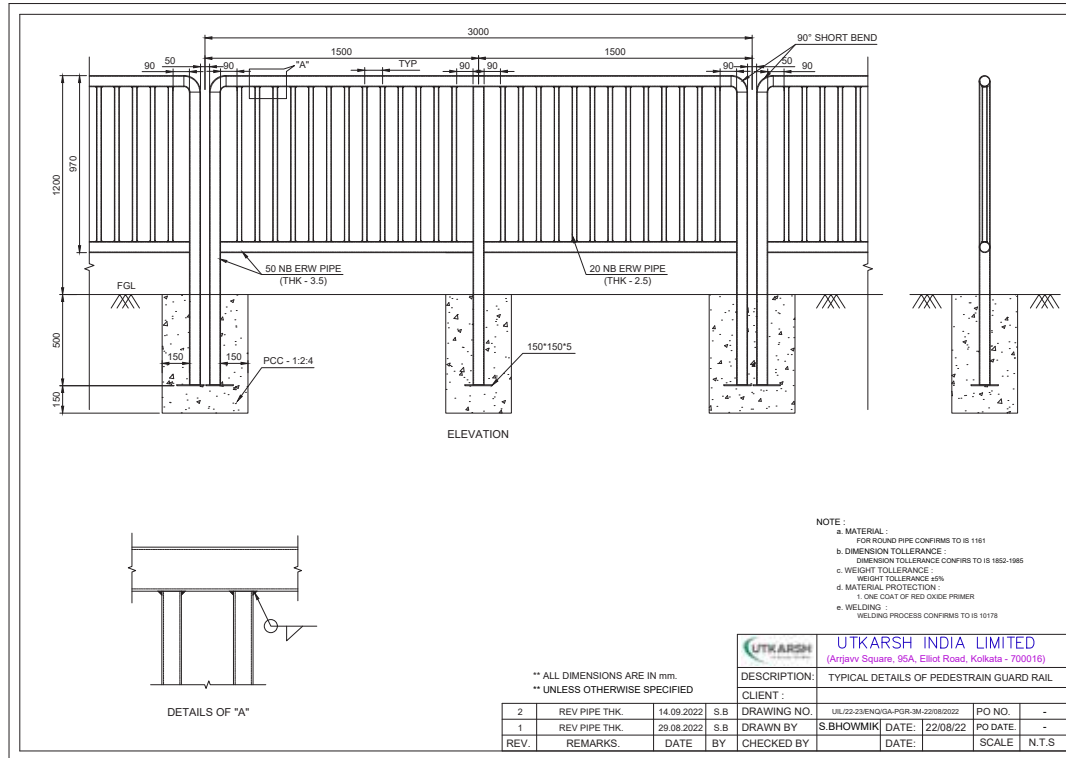
MATERIAL SPECIFICATIONS & STANDARDS

Steel	IS2062 E350 & E410 or equivalent IS5986/10748 Fe - 410/360 or equivalent
Galvanization	EN 1461
Screws	4.6 Grade
Bolts	4.6 Grade

MATERIAL SPECIFICATIONS & STANDARDS

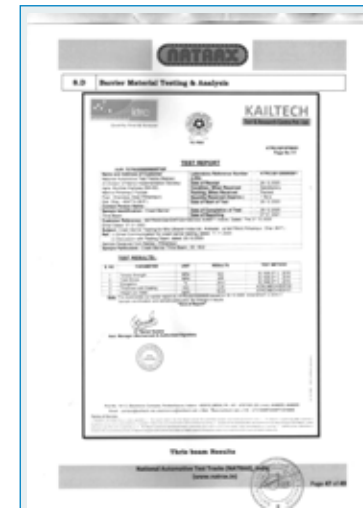
Steel	EN 10025 S355JR/250JR or equivalent
Galvanization	EN 1461
Screws	4.6 Grade
Bolts	4.6 Grade

Pedestrian Guard Rail (PGR)



MATERIAL SPECIFICATIONS & STANDARDS
As per Customer Specification

CERTIFICATIONS



PRESTIGIOUS PROJECTS

NH 223 (New NH - 4) Project
Andaman Trunk Road Project NH 4
Border Road Organization
Thumalacher - Guntur Road Project
Diwancheruvu Road Project
Kurnool Road Project
Bharatmala Prayojna
Gobuk - Sijhon Nallah SARDP-NE Project
Border Road Organization (Tawang)
Border Road Organization (Bhalukpong)
Passighat Road Project
Assam State Highway Project
NH 54 Project
NH 37 Project
SH 81, Aarah
BANGRAGHAT Road, Muzaffarpur - BSRDC Project
Motihari - Raxaul Road Project NH 28, Bihar
Patna-Bakhtiyarpur NH-30
Kotwa - Mujaffarpur
Aarah- Bojhpur Project
Raipur Ring Road Project
CHRDC - Word Bank Project
Nawapara - Rajim Road Project
Bijapur Road Project
Dwarka Expressway
Karaswada - Porvorim - Pnanaji - Bambolim NH - 17, Goa
Falla - Kalavad Road Project (SH)
Jasdan - Bhavnagar Road Project (SH)
Chiloda- Gandhinagar Highway NH 147
Gir - Somnath Road Project (SH)
Valsad Road Project
Sardar Sarovar Project (SH)
Bhuj Airport - Khavada Road Project NH 341
Morbi Road project
Banashkatha Road Project



Delhi-Mumbai-Vadodara Expressway
Bhiwani-Mandal-Jind NH 709 A, Project, Haryana
Trans-Haryana Expressway or Ambala-Narnaul Expressway (NH 152D)
Nigulsari - Babanagar Road Project, Kinnaur, Himachal Pradesh
Border Road Organization (Kinnaur)
Border Road Organization (Kullu)
Border Road Organization (Anantnag)
Border Road Organization (Rajauri)
Udhampur Ramban Road Project
Border Road Organization (Kargil)
Hazaribag - Chatra Road Project
Gawan - Satgaon Road Project
Jamtara to Dumka Road Project Phase II
Barhet to Sahebganj Road Project Phase IV
Tundi Highway project
Ranchi - Rargaon NHAI Project, NH-33
Barahi - Hazaribag NH 33 Project
Giridih-Jamua-Sarwan
Bijapur - Humnabad Road Project
Hubli - Hospet NH 63 Project
Bidar Road Project
Haveri Road Project
NELAMANGALA DEVIHALLI Project
NH 7 Pallakad
Kozhikode Road Project
Dharmasala - Thaliparambu - Kannur Road Project
Gwalior Shivpuri Project
Dewas Road Project, NH 3 Project
Delhi-Vadodara-Mumbai Expressway
Bhopal- Indore Highway
Parbhani-Gangakhed Road Project NH 752
Naigaon Bandi - Mangrulpir Road Project NH 161 A
Medshi-Washim Road Project
Washim - Pangare project
Gomewadi-Gtpadi Road Project
Sangli Road Project



MSRDC Road Project Pkg 17,18 & 29
Karad-Vita Road Project
Nashik Road Project
Beed Road Project
Delhi-Mumbai-Vadodara Expressway
Manipur SH Project
Meghalaya SH Project
Rulkhau - Lawngtali Road Project
Nengpuitlang - Lawngtali Road Project
Merangkong-Tamlu-Mon Road Project
Porba Road Project
Rimuli - Koida NH 215 (New NH 520)
Bamur - Kadalighar - Sarapali NH 135B Project
Malgangiri Road Project
Sambalpur- Rourkela Road Project
Gopinathpur-Badeswar Project
Talchar-Kamakhyanager Bypass Road Project
Bahugram-Jagatpur Road Project
Singhara - Bijabahal Road Project
Bahragora-Singhara Road Project
Ludhiyana - Loddawal Bypass
Phagwara Elevated Highway
Delhi - Amritsar - Katra Project
Jaisalmer- Tanot- Longewala-Khaba-Khuri-
Munabao-Barmer Road Project
Bharatmala Project NH 754
Rajasthan Refinery Project
Bhilwara Road Project
Udaipur - Shamalaji Road Project
Jhalaewar Road Project
Bhopalghar-Jodhpur Project
Balicha Bypass Project
State Highway Project S H 22
Border Road Organization (Chandmarii)

Bharatmala Project NH 227
Kanyakumari-Etturavattam
Selam Road Project
Kolachi Road Project
Kanchipuram Road Project
NH-365 Road Project
Madugullapally Road Project
NH 161, Ramsanpalle - Mangalore
Rampur-Kathgodam Project
Purwanchal Expressway
Gorakhpur NHA I Project, NH-87
Eastern Peripheral Expressway NH-NE II
Lucknow to Sultanpur Expressway
Agra -Lucknow Expressway
Bundelkhand Expressway
Ayodhya-Gorakhpur Highway
Meeruth - Bagpat Road
Outer Ring-Road
Rampur Kathgodam NH 87 Project
Chandrapuri- Rudraprayag NH 109
Kund Bypass Project
Rudraprayag Bypass Road
Lohaghat-Champawat Road Project
Baharagora-Singhara NH 6 Project
Ghoshpukur- Salsabari NH 31D Project
Kharagpur-Balasore NH-6
Kolkata - Santragachi Road Project
Border Road Organization (Darjeeling)

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