

Construction of Bridge across Tapi River and along Varachha creek near Varachha main road and near Varachha water works (4-lane) at Surat on E.P.C. Basis. (Design, Engineering, Procurement and Construction).



RIVER BRIDGE		
*	S.O.R.	R & B division - 1, Surat(2015-16) & Market rate
1	Type of Bridge	Submersible, High level, Fly over
2	Year of construction	Phase I- 11/04/2021 Phase II-01/05/2022 Phase III- Under Process
3	HFL	16.635m
4	Discharge (Tapi River)	36489.00 m ³ /sec (12.886 x 10 ⁵ CUSECS)
5	No of Lanes.	<ul style="list-style-type: none"> • 2x 2 Lane (7.5m Carriageway) from Chainage 0.0m to 635.0m on Tapi River+2x2x 0.450 Crash Barrier + 2 x1.8m Footpath + 2x0.200 Parapet wall. (Total Deck Slab =2x10.4m) • 2x 1.5 Lane (5.5m Carriage Way) from Ch. 635 to 880.75m and Single (3.8m Carriage way) UP & DN Lane from Ch. 635.00 to 865.7m. • 2x3 Lane (10.2 m Carriage Way) from 880.70 to 938.00 –BOW String Bridge above Surat Kamrej Road. • 2x 1.5 Lane (5.5m Carriage Way) from Ch. 938.10m to End of the Bridge • Single (3.8m Carriage way) up & DN Lane from Ch. 938.10m up to Kalakunj Road.
6	Width of carriageway	<ul style="list-style-type: none"> • 3.8m for Single • 5.5m for 1.5 Lane • 7.5 mt for two lane. • 10.2m for Three Lane Bridge
7	Total Length of Bridge including Retaining Wall	<p>UP STREAM SIDE : @ 1415.0m from Ch. 0.0m to End of Bridge. + 240 (Dn Lane Ch. 650m to 875.m) + 135.00 (Dn Lane from Ch. 942.00 to 1077) =<u>1790.0m</u></p> <p>DN STREAM SIDE: @ 1404.0m from Ch. 0.0m to End of Bridge. + 240 (Up Lane Ch. 650m to 875.m) + 167.00m (up Lane from Ch. 938.00 to 1104.00) = 1811.0m Total =1790+1811=3601.00m</p>
	[a] Total Length of Bridge Portion	@ 305.0m (Up Stream * Downstream side)
	[b] Total Length of Retaining wall Portion	@ 296.00 mt (130+166=296m) 130.0m (64.0+66.0) Up & Dn Lane at Kalakunj Side +.166.0m (89+77) End of Bridge on Two side of Khadi.
8	Foundation	1.5 mt. Dia Bored cast in situ Piles for Tapi River Portion. 1.2mt. Dia Bored cast in situ Piles for Remaining Portion of Bridge. 0.75 mt. Dia Bored cast in situ piles for Approach Kalakunj side 30 mt T.P.Road.
9	Pile caps	RCC Pile caps as per IRC provisions.
10	Sub structure : Piers	5.3m x 1.8m Cut water piers for Tapi River Portion, 3.0m Circulars Piers for Bow String and Voided slab portion and 2.4m & 2.0m Circular Piers for Remaining Portion as per location and span.

11	Pier caps	RCC pier caps
12	Bearings	Elastomeric / POT-PTFE bearings as per span arrangements
13	Super structure	PSC Girder type / PSC solid slabs/Voided Slab / Bow String as per span and execution method adopted.
14	Wearing coat	Min 75mm th. Bituminous wearing coat with cross slope of 1: 40 (2.5 %) (50mm thk. Bituminous Concrete + 25mm thk Mastic Asphalt + 6 to 8mm Thk. Micro Surfacing).
15	Crash barriers	As per IRC provisions, RCC crash barriers
16	Expansion Joint	Strip Seal Expansion Joint
17	Approach gradient	1:48.45 Towards Motta Varachha Side 1: 19 & 1;24 For Dn and Up Lane Towards Kalakunj side. And 1 : 30 Remaining Portion as per GAD
18	Drainage spout	Galvanized water drainage spouts in adequate numbers are proposed to be provided in the deck.
KHADI BRIDGE Near Kalakunj Soc. On 30mt. TP Road (2x 15.0mx 30.0m)		
1	No of Lanes.	2x 10.5m (Three Lane) + 1.5m Both side of Footpath + 2x2.15mfor Future Provision For Carrying of Water Supply Drainage Line
2	Total Width of Bridge	2x 10.5m (Three Lane) + 1.5m Both side of Footpath + 2x2.15mfor Future Provision For Carrying of Water Supply Drainage Line +2x0.250 Parapet wall =30.0m
3	Width of carriageway	10.5m for Three Lane Bridge
4.	Total Length of Bridge including Retaining Wall	30.0m +2*14.010 (Retaining wall Portion)=68.020m
5.	[a] Total Length of Bridge Portion	@ 30.0m
	[b] Total Length of Retaining wall Portion	@ 28.020m
6	Foundation	1.2 mt. Dia Bored cast in situ Piles
7	Pile caps	RCC Pile caps as per IRC provisions.
8	Sub structure : Piers/ Abutments	As Per GAD.
9	Pier caps	RCC pier caps
10	Bearings	Elastomeric bearings as per span arrangements
11	Super structure	PSC Girder type
12	Wearing coat	Min 75mm th. Bituminous wearing coat with cross slope of 1: 40 (2.5 %) (50mm thk. Bituminous Concrete + 25mm thk Mastic Asphalt + 6 to 8mm Thk. Micro Surfacing).
13	Parapet wall	As per IRC provisions, RCC Parapet
14	Expansion Joint	Strip Seal Expansion Joint
15	Drainage spout	Galvanized water drainage spouts in adequate numbers are proposed to be provided in the deck.

1	Name of Contractor	Vijay M. Mistry Construction Pvt. Ltd., Ahmedabad
2	Sanction Authority	Standing Committee Resolution No. 266/2018, Dtd.22/02/2018
3	Tender Amount	RS.167,98,47,594=53 Paise Work Done – 69.43 Cr. (43% work completed)
4	Design Consultant	Shah Associate, Ahmedabad
5	Proof Check Consultant	SVNIT, Surat Design circle, R& B , Gandhinagar
6	Project Management Consultant	Casad Consultant, Ahmedabad
7	Time Limit	36 Months