

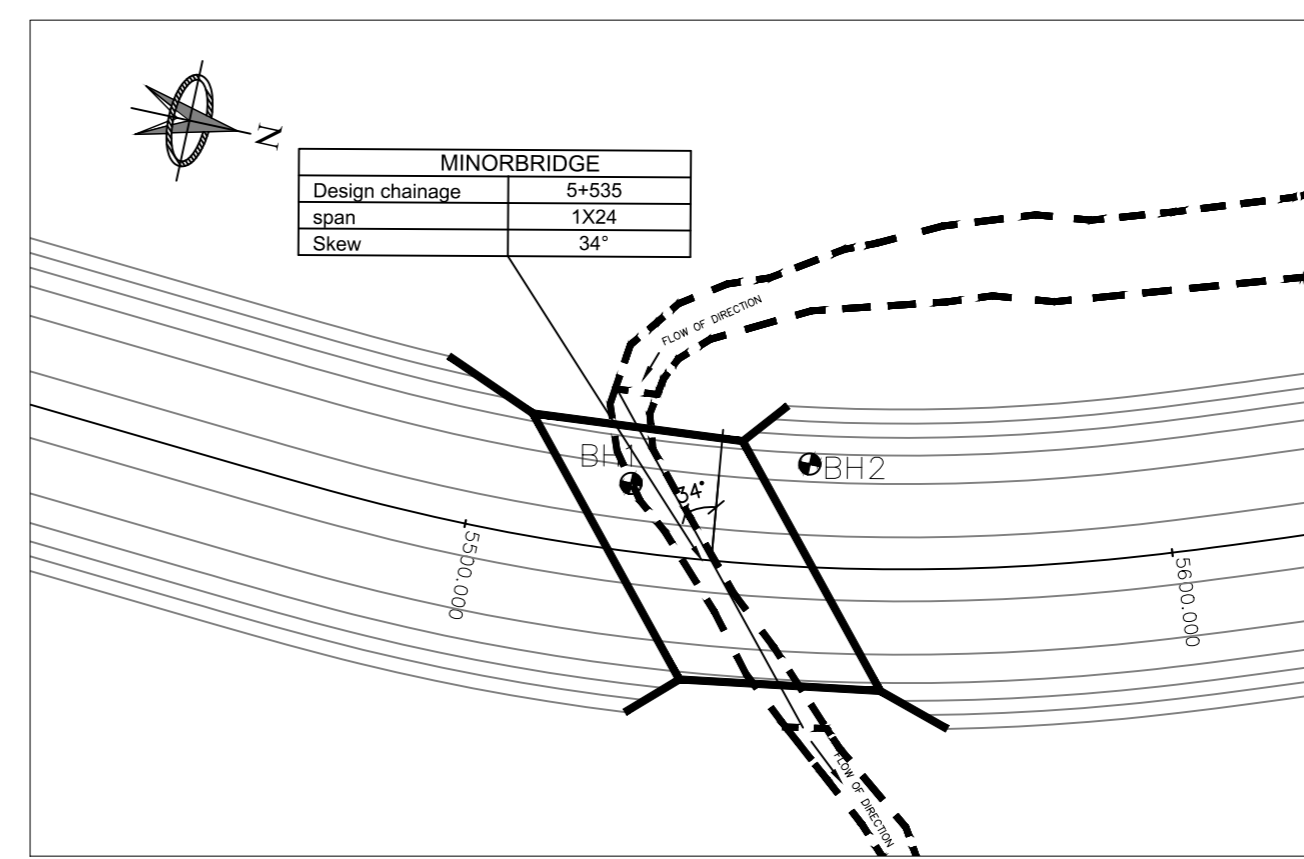
NOTE

1. ALL DIMENSIONS ARE TO BE READ NOT TO BE MEASURED.

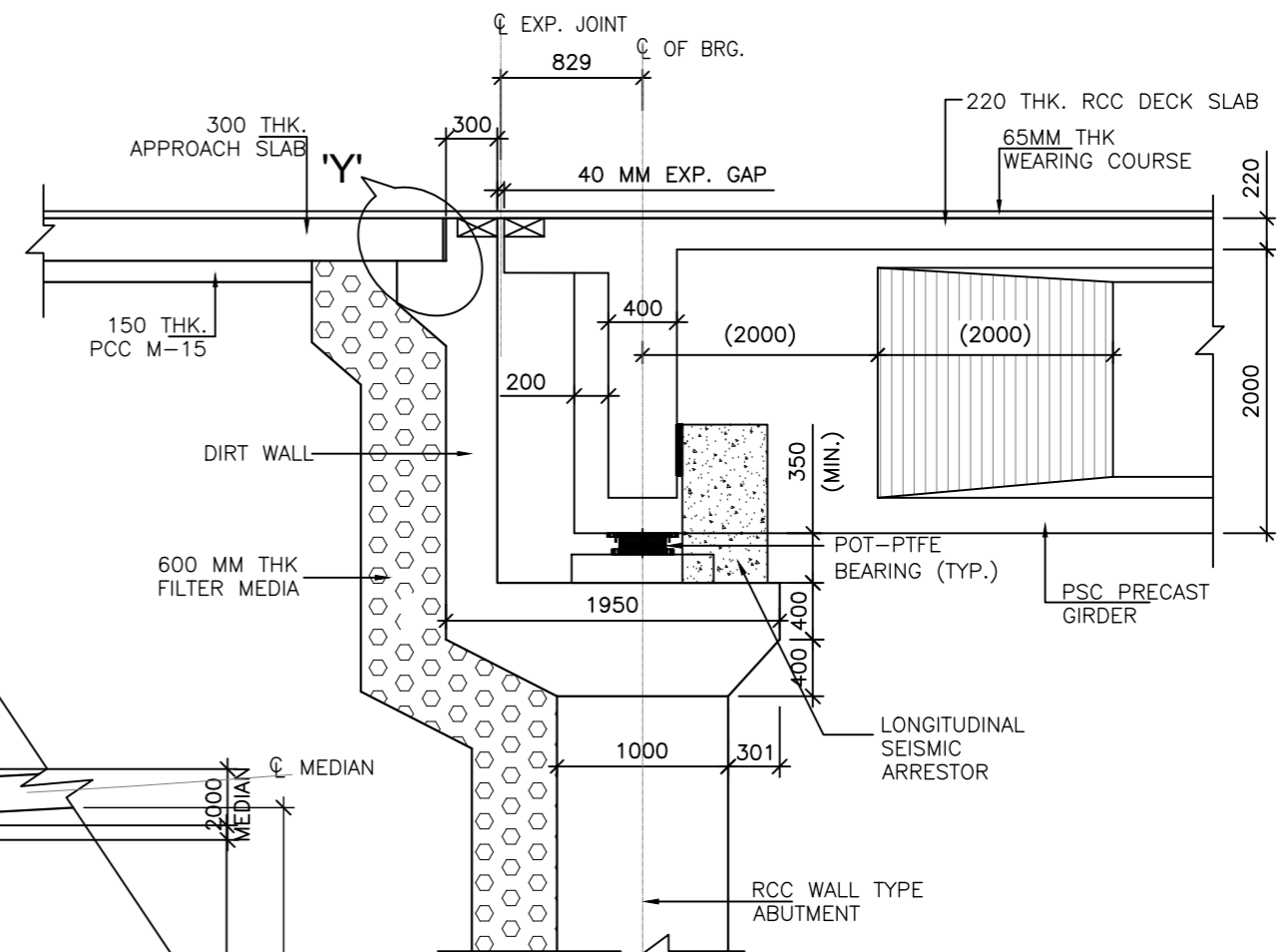
2. ALL DIMENSIONS ARE IN METER UNLESS OTHERWISE NOTED.

FOR TENDER

CLIENT	MAHARASHTRA INDUSTRIAL TOWNSHIP LTD (MITL)		
PROJECT	DESIGN, CONSTRUCTION, TESTING, COMMISSIONING AND OPERATION & MAINTENANCE OF INFRASTRUCTURE WORKS AT DIGHI PORT INDUSTRIAL AREA (DPIA)- PHASE 1 UNDER DELHI MUMBAI INDUSTRIAL CORRIDOR (DMIC) ON EPC BASIS		
TITLE	GENERAL ARRANGEMENT DRAWING OF MINOR BRIDGE AT CH. 5+535 (BR-9 ROAD No. AR-1)		
PROJECT CODE: DI1628	STATUS: ISSUED FOR TENDER	DATE: 18.12.2024	
SHEET NO: (84 OF 93)	SCALE: NTS	DWG SIZE: A2	REV NO: R0
DRAWING NO:	MITL-DPIA-PKG1-RD-90		



FORMATION LEVEL (M) (FRL.)	91.369	91.458	91.546
GROUND LEVEL	86.745	84.000	86.365
FOUNDATION LEVEL	81.500		81.500
CHAINAGE (KM)	5+520	5+535	5+550



DETAIL '1

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(SCALE 1:50)

CO-ORDINATES OF BORE HOLE	
BH-1 X = 319978.0000	Y = 2033255.0000
BH-2 X = 319970.0000	Y = 2033279.0000

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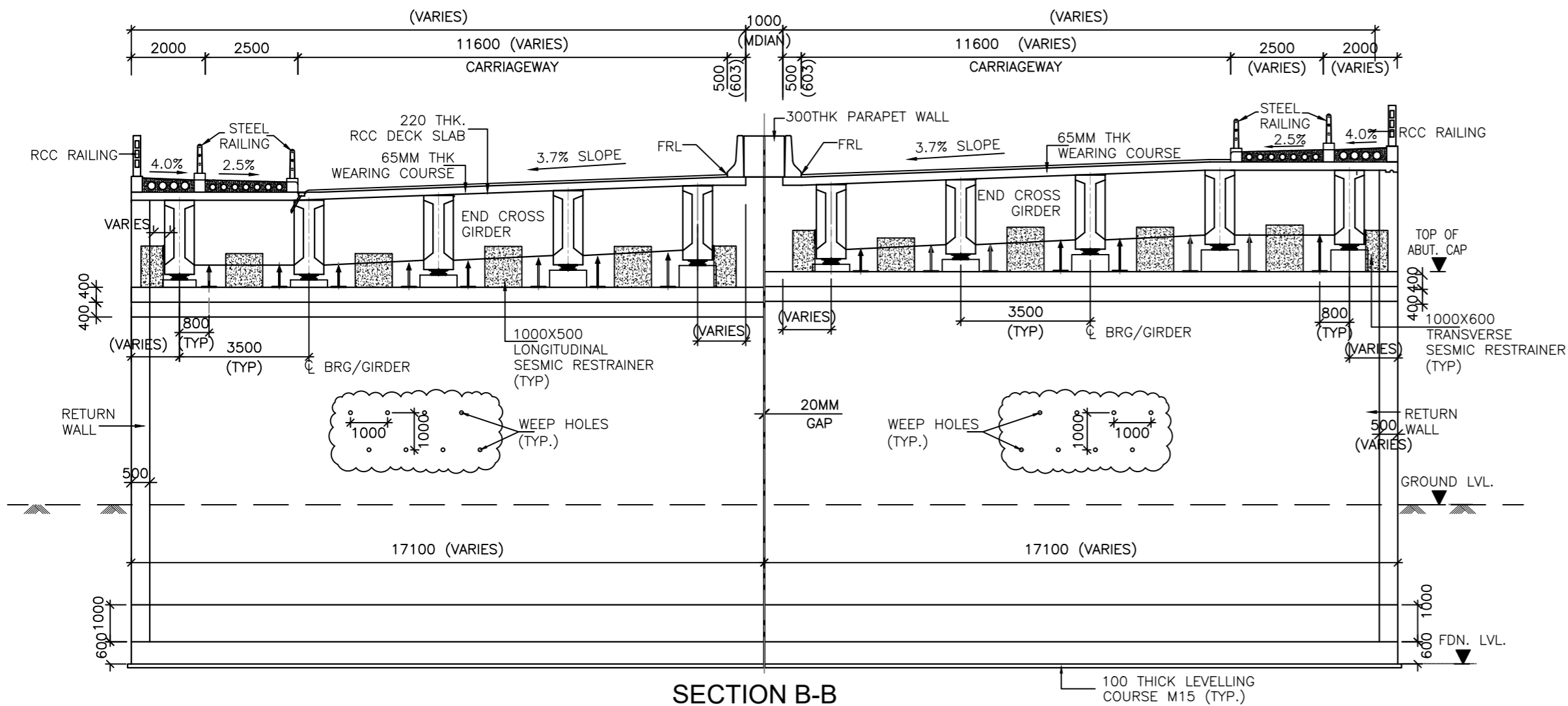
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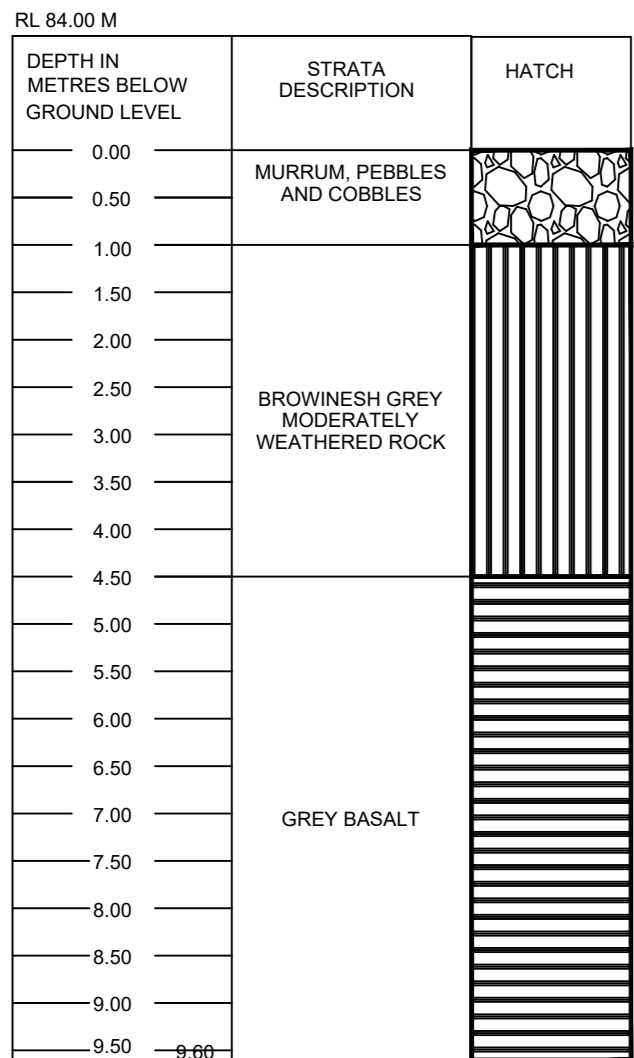
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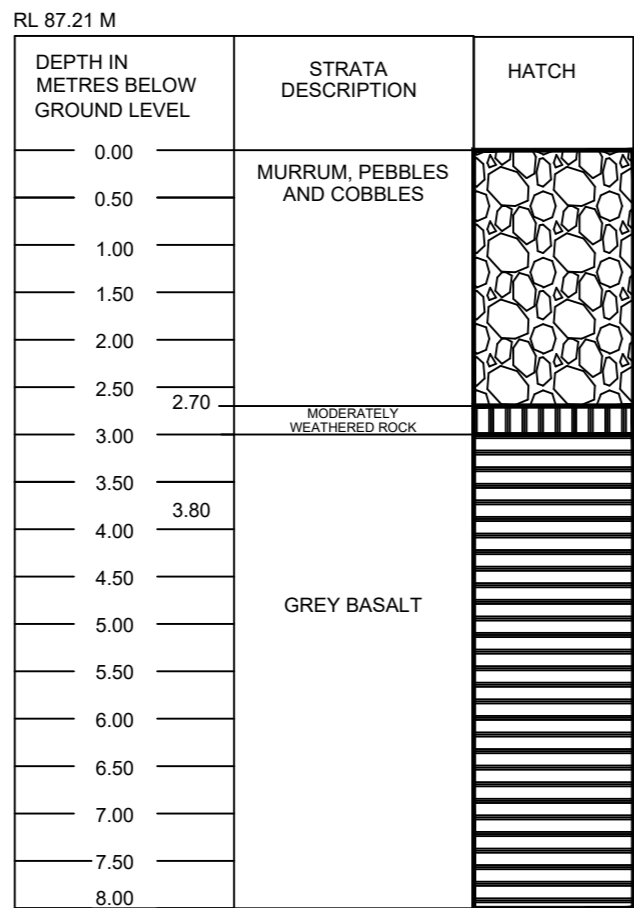
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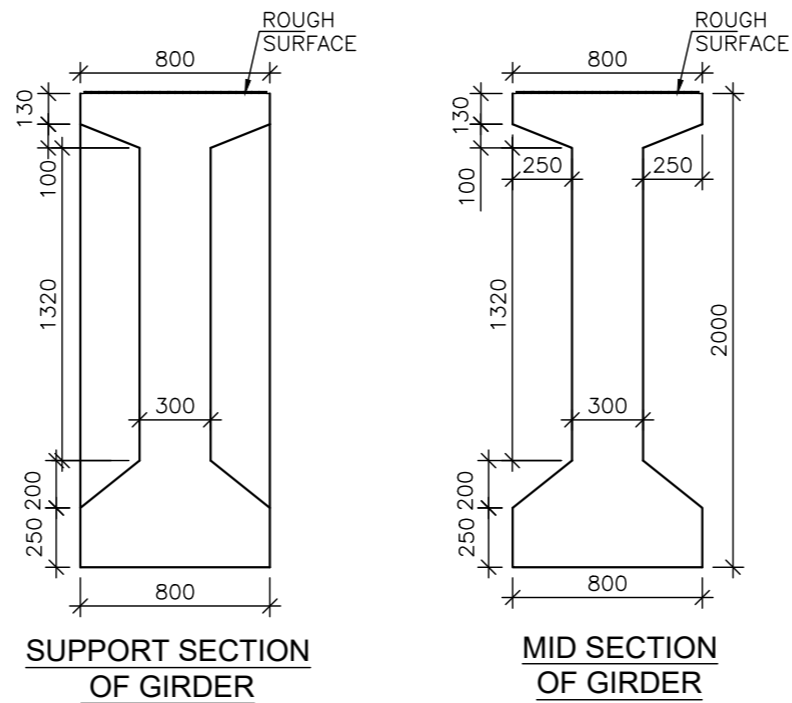
SECTION B-B  
(SCALE 1:125)



BH-01

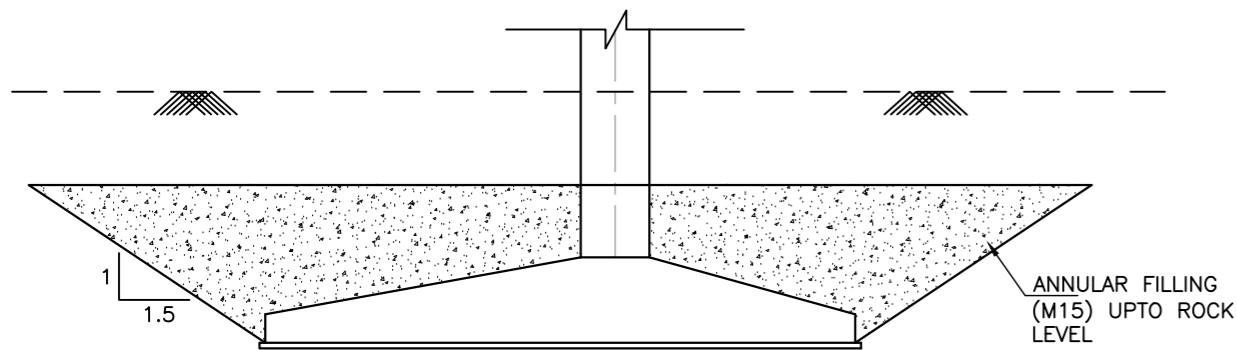


BH-02

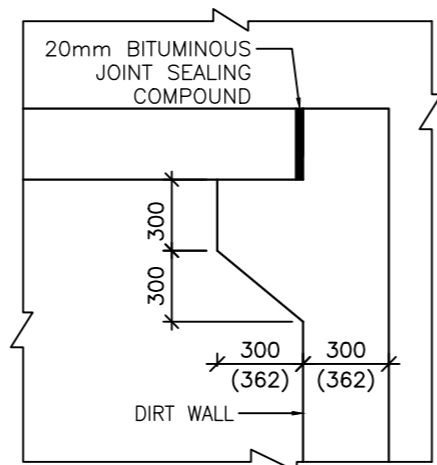


PRECAST PSC I-GIRDER

(SCALE 1:30)



DETAIL '2'  
(SCALE 1:125)



DETAIL 'Y'  
(SCALE 1:30)

#### HYDROLOGICAL DETAILS:-

HFL	85.449 m
DISCHARGE	48.104 CUMECs
DESIGN VELOCITY	2.58 M/s
SCOUR LEVEL	ROCK LEVEL

#### NOTES:-

- ALL DIMENSIONS ARE IN MILLIMETERS, LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED.
- NO DIMENSION SHALL BE MEASURED FROM THE DRAWINGS. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
- LOCATION OF THE STRUCTURE IS THE CHAINAGE AT THE CENTER LINE OF THE PROPOSED STRUCTURE.
- THE REINFORCEMENT SHALL BE HYSD. BARS OF (GRADE DESIGNATION Fe 500D) CONFORMING TO IS 1786-2008.
- STRUCTURE IS DESIGN FOR FOLLOWING VEHICULAR LOADS:
  - CLASS-A, ONE, TWO & THREE LANE WITH FOOTPATH + CYCLE TRACK.
  - ONE LANE OF CLASS 70R + FOOTPATH +CYCLE TRACK.
  - c) ONE LANE CLASS 70R+ONE LANE OF CLASS A + FOOTPATH + CYCLE TRACK
- STRIP SEAL TYPE EXPANSION JOINT SHALL BE PROVIDED OVER FULL WIDTH OF DECK.
- CONCRETE SHALL BE DESIGN MIX WITH A MINIMUM 28 DAYS CHARACTERISTIC CUBE STRENGTH FOR DIFFERENT ELEMENTS AS FOLLOWS:
  - PRECAST PSC GIRDER - M45
  - RCC SLAB & DIAPHRAGM - M40
  - RCC SUBSTRUCTURE & FOUNDATION - M35
  - CRASH BARRIER - M40
  - PCC LEVELING COURSE - M15
  - APPROACH SLAB - M35
  - PEDESTAL - M40
- CLEAR COVER TO OUTER STEEL SHALL BE AS FOLLOWS:-
  - SUPERSTRUCTURE - 45MM
  - FOUNDATION - 75MMSUBSTRUCTURE ABUTMENT:-
  - EARTH FACE - 75MM
  - NON EARTH FACE - 50MMRETURN WALL:-
  - EARTH FACE - 75MM
  - NON EARTH FACE - 45MM
  - CRASH BARRIER - 45MM
- CONSTRUCTION METHODOLOGY FOR SUPERSTRUCTURE SHALL BE AS UNDER:-
  - COMPLETION OF CASTING GIRDER.
  - ERECTION OF PRECAST GIRDER IN POSITION RESTING ON TEMPORARY BEARING.
  - ERECTION OF STAGING AND SHUTTERING SUPPORTED FROM LAUNCHED GIRDER CASTING OF DECK SLAB AND CROSS DIAPHRAGM.
  - LAYING OF SIDL AFTER 30 DAYS OF CASTING OF DECK SLAB.
- BITUMINOUS CONCRETE 40mm THICK OVERLAID WITH 25mm THICK MASTIC ASPHALT SHALL BE PROVIDED AS PER SECTION 2700 OF MORTH SPECIFICATIONS.THIS STRUCTURE LIES IN SEISMIC ZONE III.
- MINIMUM REQUIRED SOIL BEARING CAPACITY AND SBC AS PER GEOTECHNICAL REPORT AT FOUNDATION LEVEL ARE AS BELOW:-

Sr No.	LOCATION	REQUIRED SBC(t/m²)	SBC AS PER GEOTECHNICAL(t/m²)
1	ABUTMENT A1	30	50
2	ABUTMENT A2	30	50

- THE REQUIRED SBC SHALL BE ENSURE AT SITE BEFORE EXECUTION USING PLATE LOAD TEST OR CONE PENETRATION (CPT) TEST.
- THE DESIGN AND DETAILED IS CARRIED OUT WITH FOLLOWING ASSUMPTION AS PER CLAUSE 4.2 OF IRC 112-2020.
    - EXECUTION WILL BE CARRIED OUT BY PERSONAL HAVING APPROPRIATE QUALIFICATION, SKILL AND EXPERIENCE.
    - ADEQUATE SUPERVISION AND QUALITY CONTROL WILL BE PROVIDED DURING ALL STAGES OF CONSTRUCTION.
  - THIS DRAWING SHALL BE READ IN CONJUNCTION WITH RELEVANT HIGHWAY DRAWING. ALL THE LEVEL, CHAINAGE, CROSS SLOPE SKEW ANGLE, SHALL BE VERIFIED FORM RELEVANT HIGHWAY DRAWING BEFORE EXECUTION.
  - EXPOSURE CONDITION IS SEVERE.
  - LAYING, COMPACTION AND EXTENT OF BACK FILL BEHIND SIDE WALL SHALL CONFIRM TO SPECIFICATION IN APPENDIX : 6 OF IRC : 78-2014.
  - THIS STRUCTURE LIES IN SEISMIC ZONE IV.  
BACK FILLING BEHIND WALLS/ABUTMENT SHALL CONSISTS OF SELECTED EARTH CONFORMING TO APPENDIX 6 OF IRC:78-2017 HAVING PROPERTIES  
 $C=0$ ,  $\phi>=30^\circ$ ,  $\delta=20^\circ$ ,  $\gamma_d=2.0t/m^3$
  - 600MM THICK FILTER MEDIA SHALL BE PROVIDED BEHIND SOLID ABUTMENT WALLS AND RETURN/RETAINING WALL.
  - ALL SOLID WALLS OF PCC/RCC/MASONRY TYPE, RETAINING THE EARTH SHALL HAVE WEEP HOLES STARTING 150MM ABOVE THE GROUND LEVEL AND SPACED 1000MM HORIZONTALLY AND VERTICALLY IN STAGGERED MANNER.
  - STRUCTURE SHOWN IN GAD ARE BASED ON PRELIMINARY DESIGN AND SAME MAY CHANGE DURING DETAIL DESIGN.
  - ANNULAR FILLING ABOVE FOUNDATION SHALL BE FILLED WITH M-15 GRADE CONCRETE UPTO ROCK LEVEL. IF THE DEPTH OF FILL REQUIRED IS MORE THAN 1.5 M IN SOFT ROCK OR 0.6 M IN HARD ROCK ABOVE THE FOUNDATION LEVEL, THEN CONCRETE MAY BE FILLED UPTO THIS LEVEL BY M 15 CONCRETE AND PORTION ABOVE MAY BE FILLED BY CONCRETE OR BY BOULDERS GROUTED WITH CEMENT.
  - FOR DETAIL OF APPROACH SLAB, DRAINAGE SYSTEM, CRASH BARRIER, RETAINING WALL ETC. REFER SEPARATE DRAWING.

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GENERAL ARRANGEMENT  
DRAWING OF MINOR BRIDGE  
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