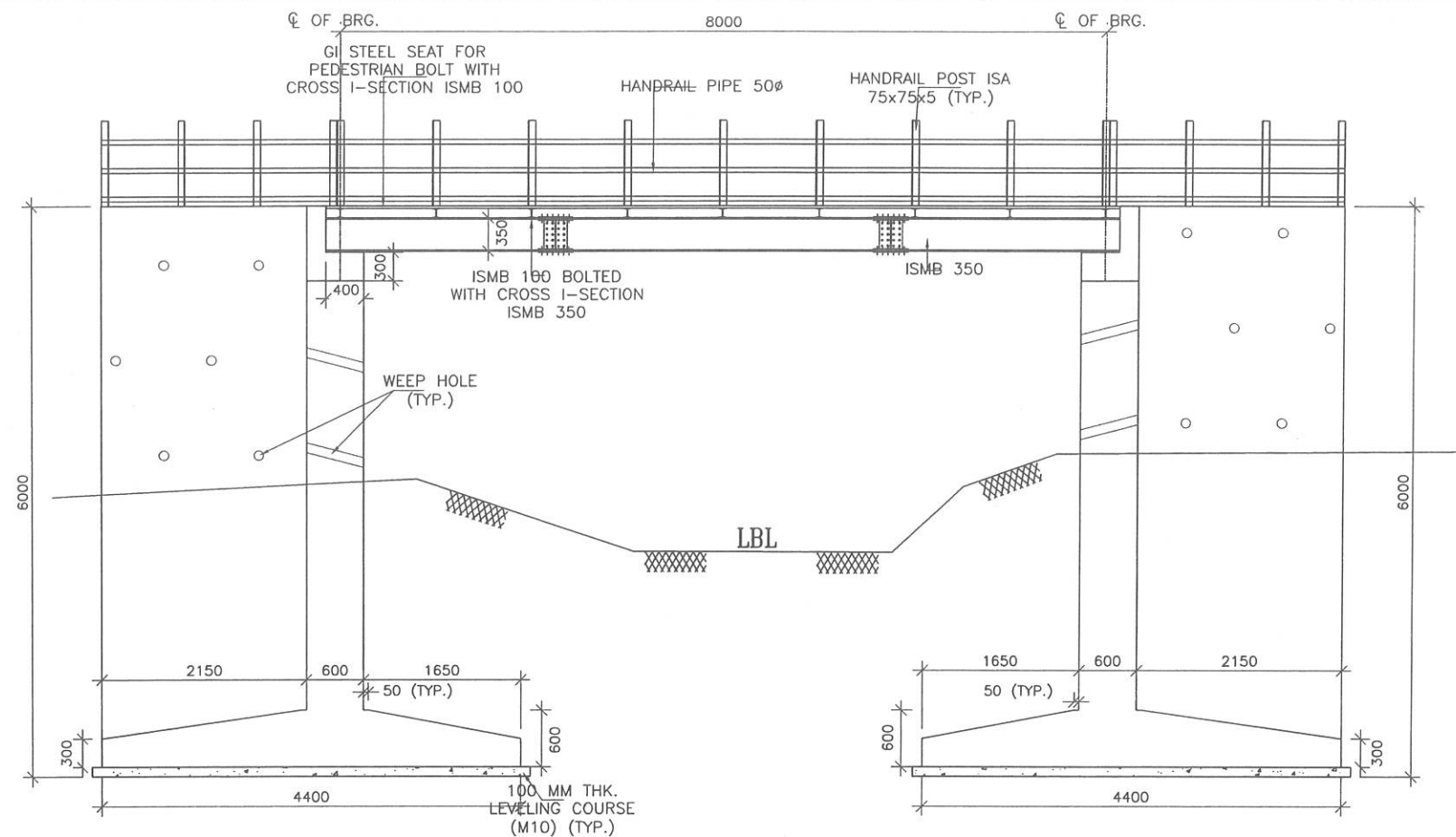
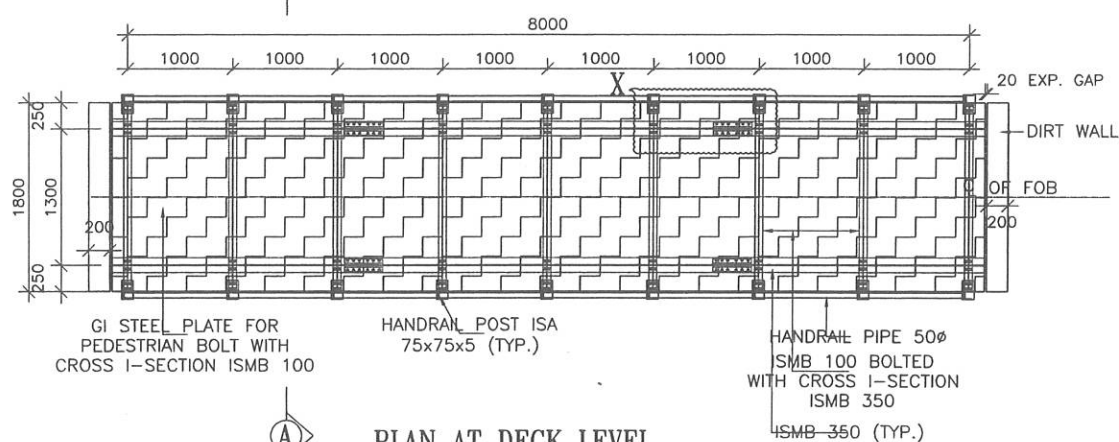


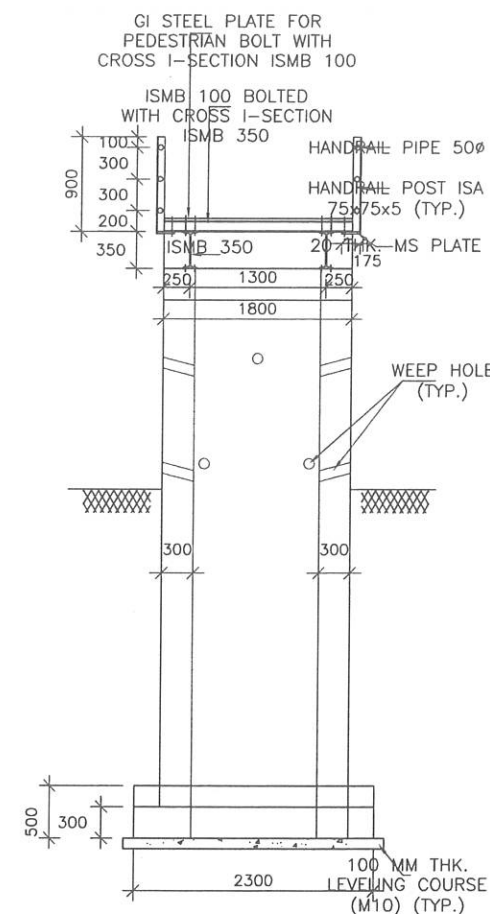
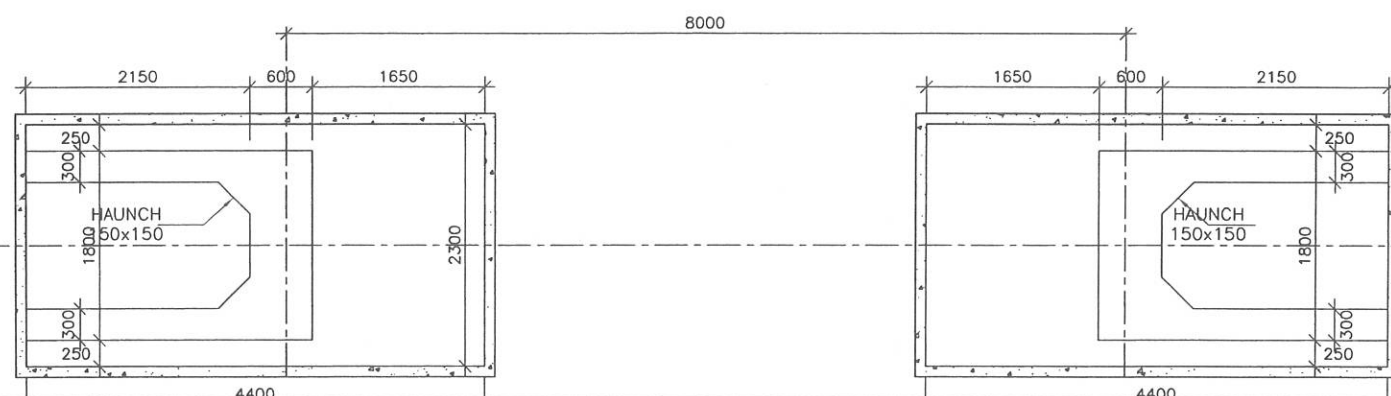
STRUCTURE DRAWING



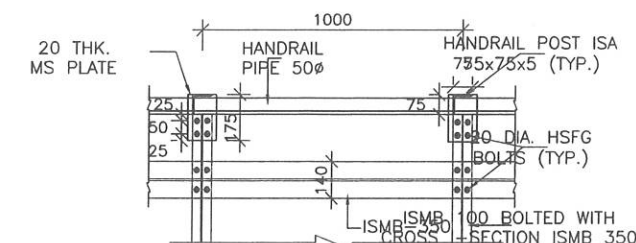
SECTIONAL ELEVATION
(SCALE-1:50)



PLAN AT DECK LEVEL



SECTION A-A



DETAIL-X
(SCALE-1:20)

NOTE:-

1. ALL STRUCTURAL STEEL SHALL CONFORM TO IS:2062, E-350 (Fe-490) C-QUALITY.
2. ALL WELDING SHALL CONFORM TO IS:816 & IS:1024.
3. STEEL WASHER SHALL BE PROVIDED AT ALL BOLTS LOCATIONS.
4. ALL WELDING SHALL BE 8mm THICK FILLET WELD.
5. ALL WELDING & ITS TESTING SHALL BE AS PER RELEVANT CODES MENTIONED IN IRC:24-2001.
6. WELDING IS MAINLY PROPOSED TO BE DONE AT FABRICATION YARD ONLY.
7. FILLER TYPE EXPANSION JOINTS OF PROVEN QUALITY SHALL BE PROVIDED IN TERMS OF MODIFIED INTERIM SPECIFICATIONS IN ANNEXURE-I TO MORTH CIRCULAR NO. RW/NH-34059/1/6-S&R DATED 30.11.2000. THE MATERIAL SPECIFICATIONS OF THE FILLER JOINTS SHALL BE IN ACCORDANCE WITH SECTION 2605 OF MORTH SPECIFICATIONS FOR ROAD AND BRIDGE WORKS, FOURTH REVISION.

CLIENT



CENTRAL PUBLIC WORKS DEPARTMENT



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NAME OF WORK

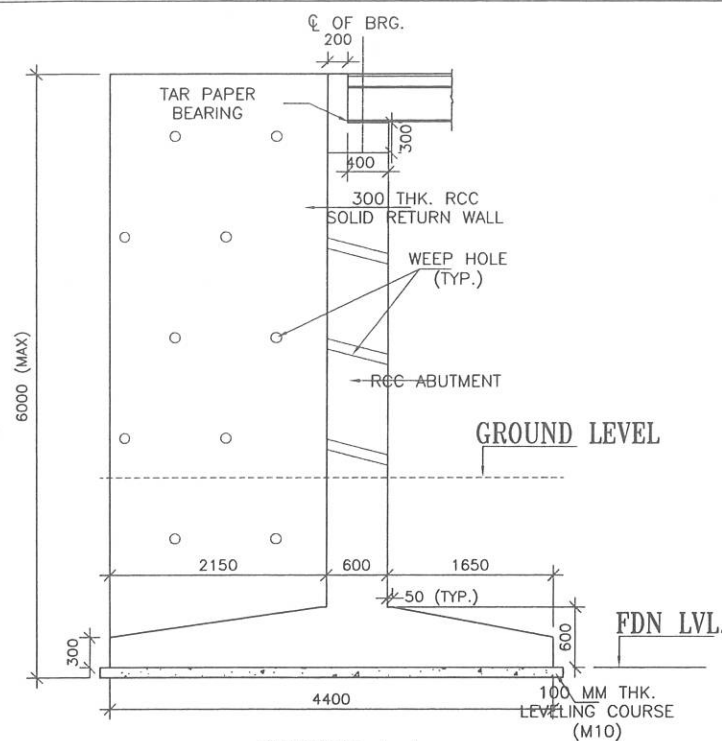
CONSULTANCY SERVICES FOR PREPERATION OF DETAIL PROJECT REPORT
OF CRITICAL INFRASTRUCTURE IN ARUNACHAL PRADESH
SH: FOOT TRACKS ,PATROL ROUTES & FSB

DRAWN BY	P.D
DESIGN BY	Y.B
APPROVED BY	S.G

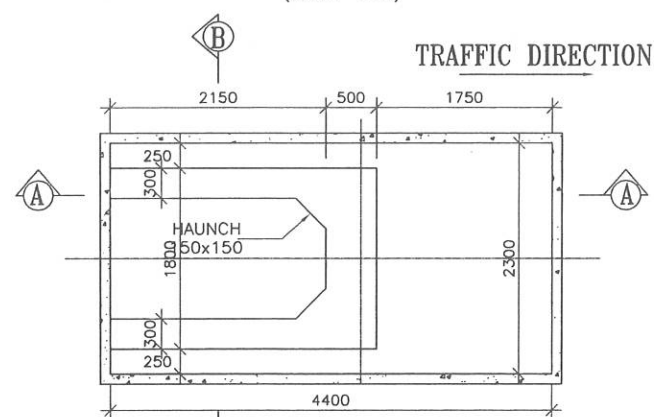
REVISION : R0
SHEET:
DEC : 2019
SIZE : A3

TITLE:-
GENERAL ARRANGEMENT DRAWING
OF RENFORCEMENT 8.0M

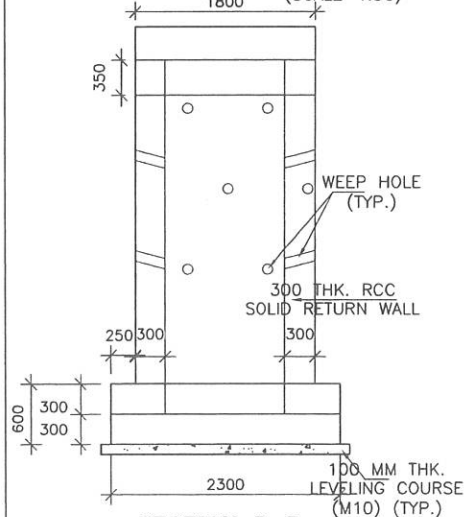
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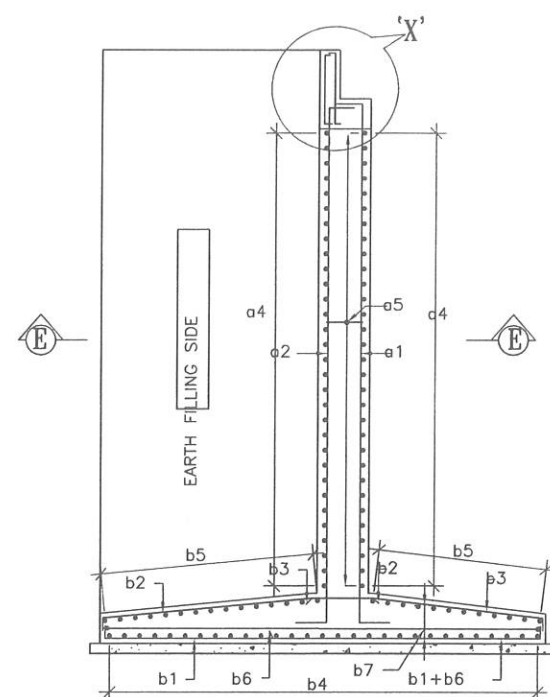
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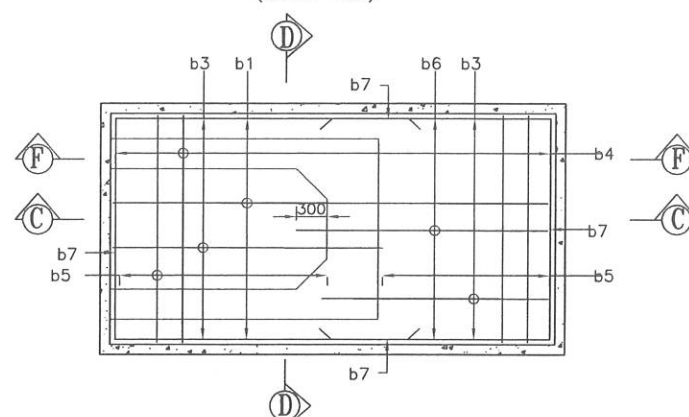
PLAN AT FOOTING TOP LEVEL
(SCALE-1:50)



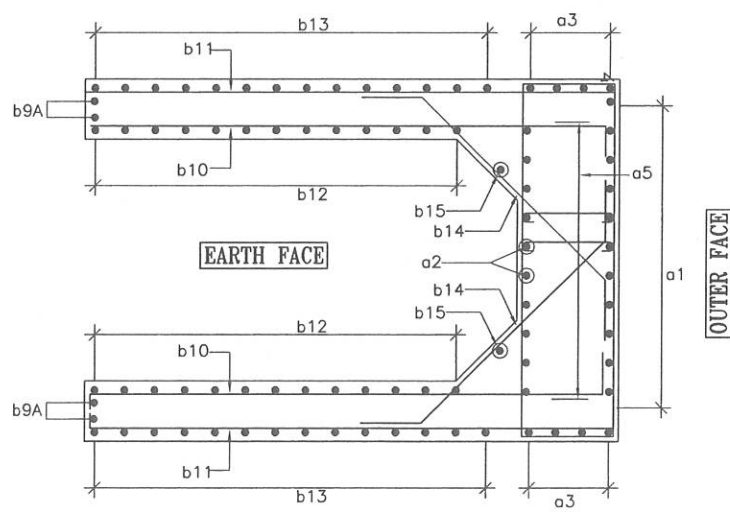
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(SCALE-1:50)



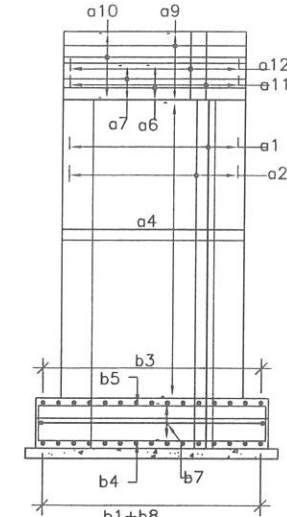
SECTION C-C
(SCALE-1:50)



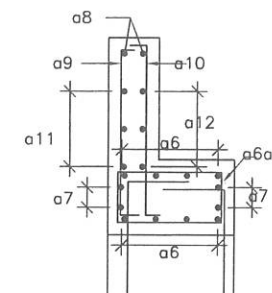
REIN. PLAN OF ABUTMENT FOUNDATION
(SCALE-1:50)



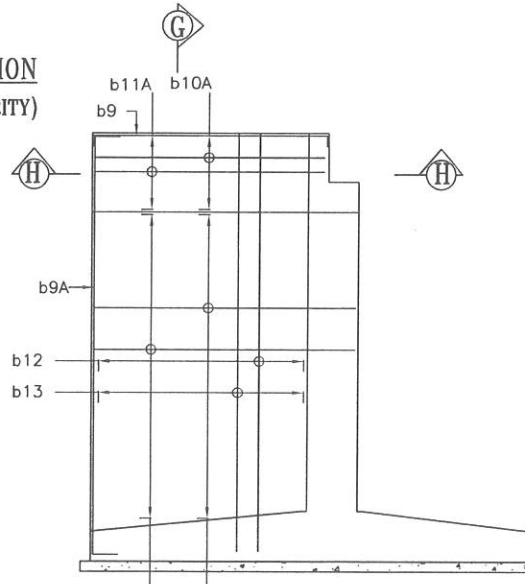
SECTION E-E
(SCALE-1:25)



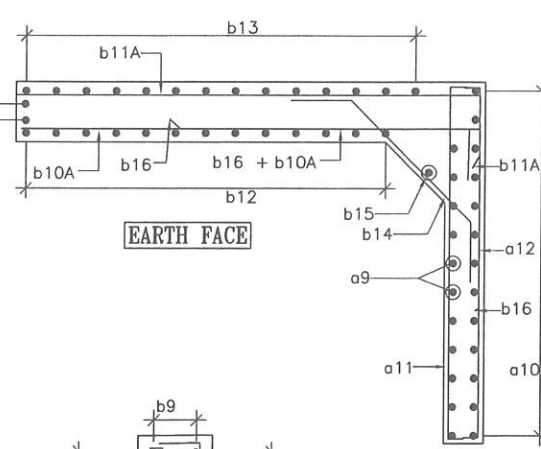
SECTION D-D
(SCALE-1:50)



DETAIL-X
REIN. DETAIL OF DIRT WALL
(SCALE-1:20)



SECTION F-F
(SCALE-1:50)



SECTION G-G
(SCALE-1:20)

REINFORCEMENT SCHEDULE

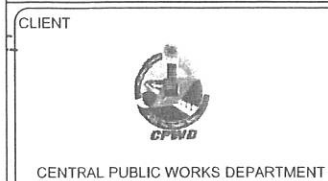
ABUTMENT SHAFT CAP & DIRT WALL			
S.NO.	BAR MARKED.	DESCRIPTION	SHAPE
1	a1	12 Φ @ 125 c/c	300
2	a2	25 Φ @ 125 c/c	300
3	a3	12 Φ @ 175 c/c	300
4	a4	12 Φ @ 150 c/c	300
5	a5	8 Φ @ 300 c/c	LINK HORZ. STANDERED
6	a6	10 Φ 4 NOS. TOP & BOTTOM	150
7	a6a	2L-12 Φ @ 150 c/c	300
8	a7	10 Φ @ 150 c/c	300
9	a8	12 Φ - 2 NOS.	100
10	a9	12 Φ @ 125 c/c	100
11	a10	10 Φ @ 125 c/c	100
12	a11	8 Φ @ 150 c/c	100
13	a12	8 Φ @ 150 c/c	100

FOOTING REIN.		
S.NO.	BAR MARKED.	DESCRIPTION
1	b1	16 Φ @ 200 c/c
2	b2	16 Φ @ 100 c/c
3	b3	16 Φ @ 100 c/c
4	b4	12 Φ @ 150 c/c
5	b5	10 Φ @ 150 c/c
6	b6	16 Φ @ 200 c/c
7	b7	12 Φ @ 200 c/c
8	b8	8 Φ @ 250 c/c (ALONG TRANSVERSE) 8 Φ @ 300 c/c (ALONG LONGITUDINAL)
RETURN WALL		
9	b9	12 Φ - 2 NOS.
10	b9A	16 Φ - 2 NOS.
10	b10	12 Φ @ 150 c/c
11	b10A	12 Φ @ 150 c/c
12	b11	10 Φ @ 150 c/c
13	b11A	10 Φ @ 150 c/c
14	b12	12 Φ @ 150 c/c
15	b13	10 Φ @ 150 c/c
16	b14	10 Φ @ 150 c/c
17	b15	10 Φ - 2 NOS.
18	b16	16 Φ @ 150 c/c

SECTION H-H
(SCALE-1:25)

NOTE:-

- CONCRETE SHALL BE DESIGN MX WITH MINIMUM 20 DAYS CHARACTERISTIC STRENGTH OF 35 Mpa FOR ALL COMPONENTS.
- 100 MM DIA WEEP HOLES SPACED AT 1000mm c/c BOTH HORIZONTALZLLY AND VERTICALLY SHALL BE PROVIDED 150 mm ABOVE GROUND LEVEL IN A STAGGERED MANNER IN VERTICALLY WALL AS SHOWN WEEP HOLES TO BE PROVIDED AS PER SPECIFICATION.
- BACK FILLING BEHIND ABUTMENT SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX:6 OF IRC:78-2014 HAVING PROPERTIES $c=0$, $\phi \geq 35^\circ$, $\delta=22.5^\circ$ & $\gamma_d = 20 \text{ KN/m}^3$.
- THE REINFORCING BARS SHALL BE OF THERMO MECHANICALLY TREATED (TMT) (GRADE DESIGNATION Fe-500D) CONFORMING TO IS:1786 STANDARDS.
- MINIMUM CLEAR COVER TO OUTER MOST REINFORCEMENT SHALL BE AS UNDER:-
 - a. FOUNDATION - 75MM
 - b. SHAFT DIRT WALL & RETURN WALL - 50MM
 - c. DIRT WALL & CAP - 40MM
- MAXIMUM LAP LENGTH SHALL BE 72 TIMES OF BAR TO BE LAPPED.
- MINIMUM LAP LENGTH OF REINFORCEMENT FOR FAVOURABLE CONDITION SHALL BE AS UNDER:
 - CONCRETE GRADE - M-30 - 56 x DIA OF BAR
 - CONCRETE GRADE - M-35 - 51 x DIA OF BAR
 - CONCRETE GRADE - M-40 - 48 x DIA OF BAR
 - CONCRETE GRADE - M-45 - 45 x DIA OF BAR
- SAFE BEARING CAPACITY ASSUMED IN DESIGN AT PROPOSED FOUNDING LEVEL IS 16 t/m². THIS SHALL BE ASCERTAINED BEFORE EXECUTION OF WORK AT SITE.

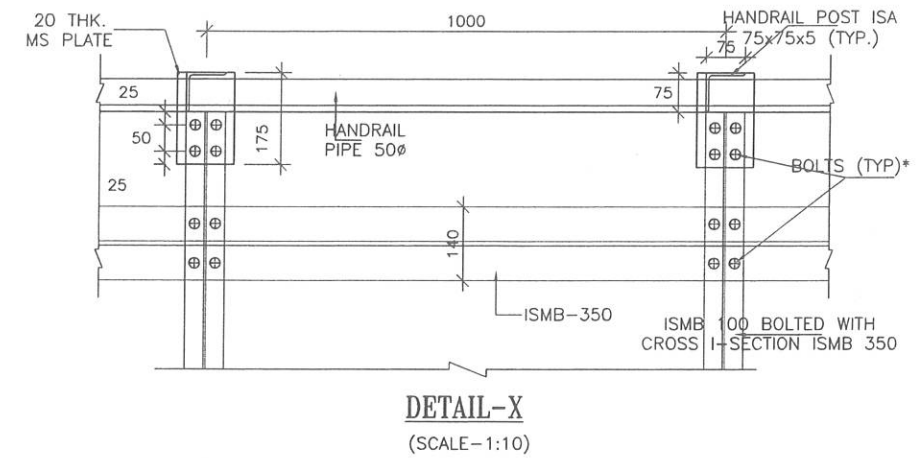
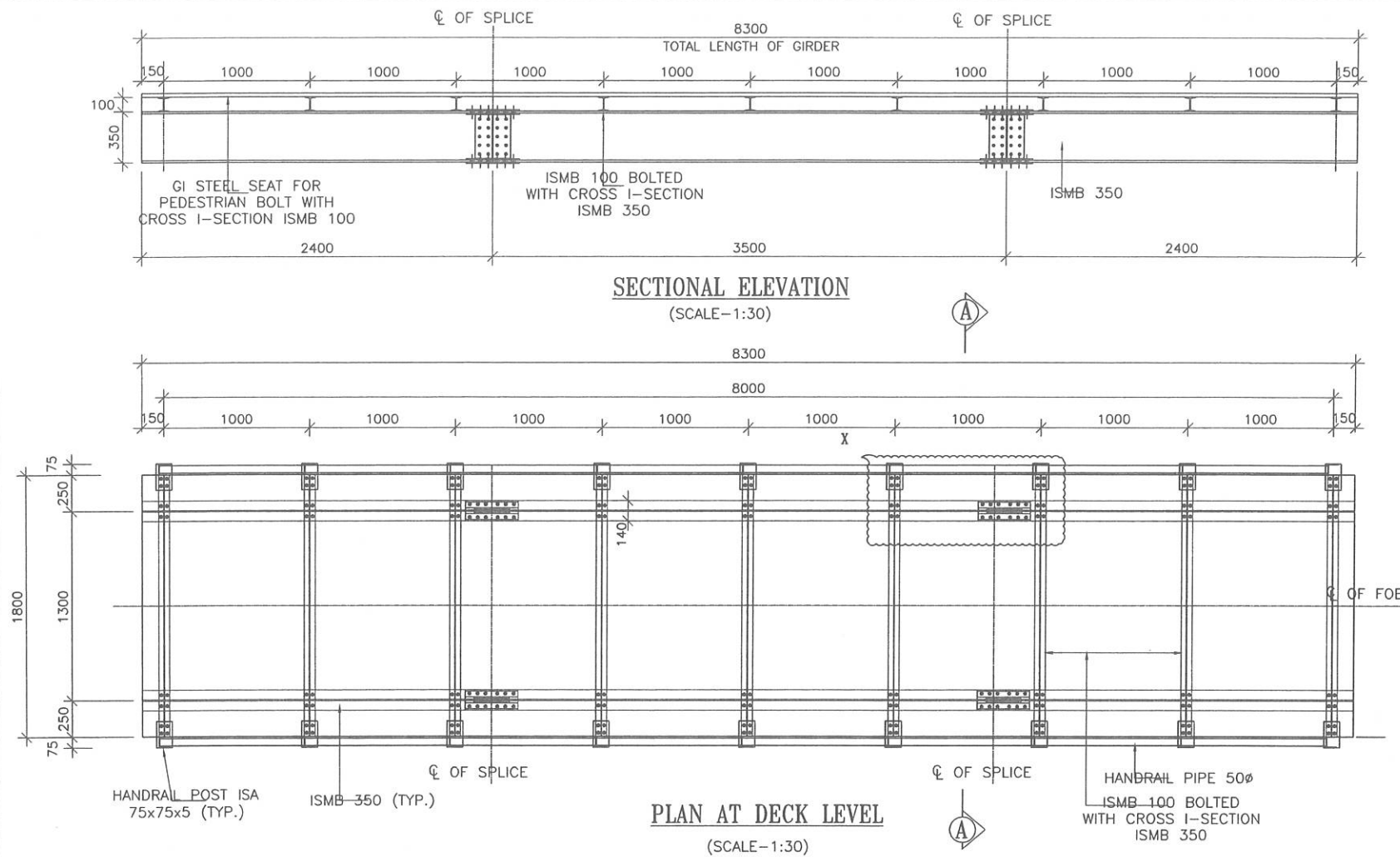


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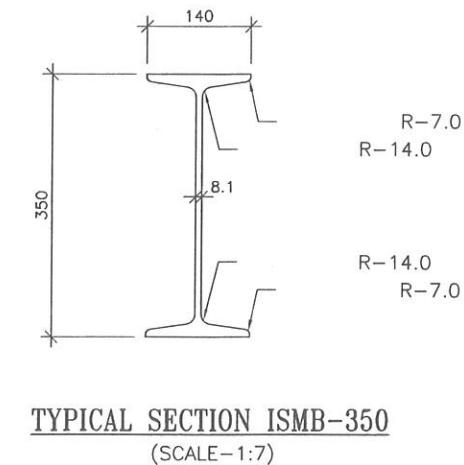
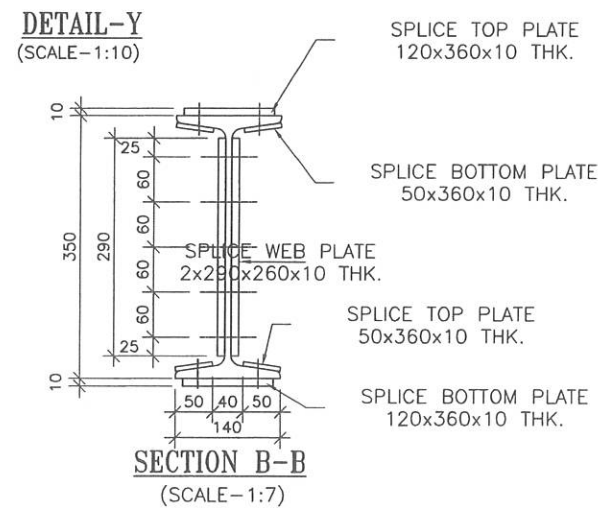
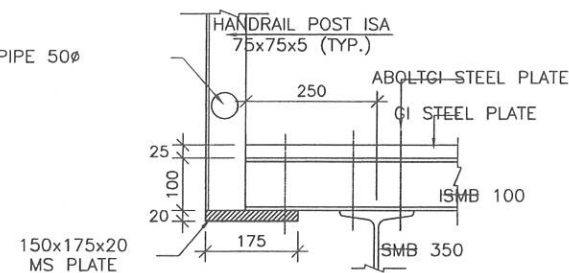
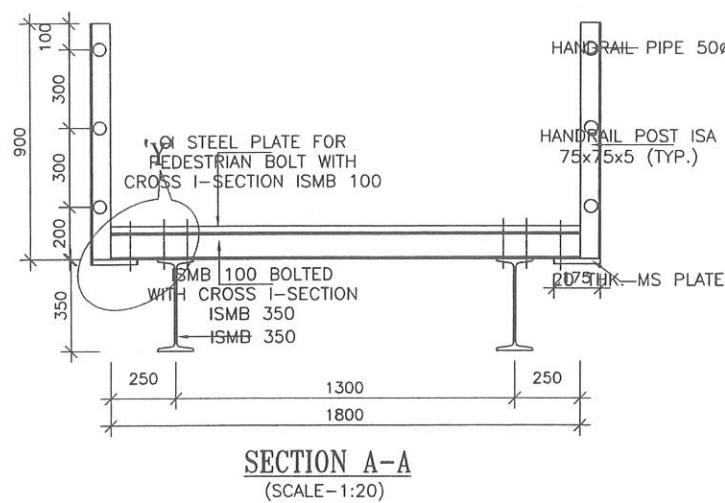
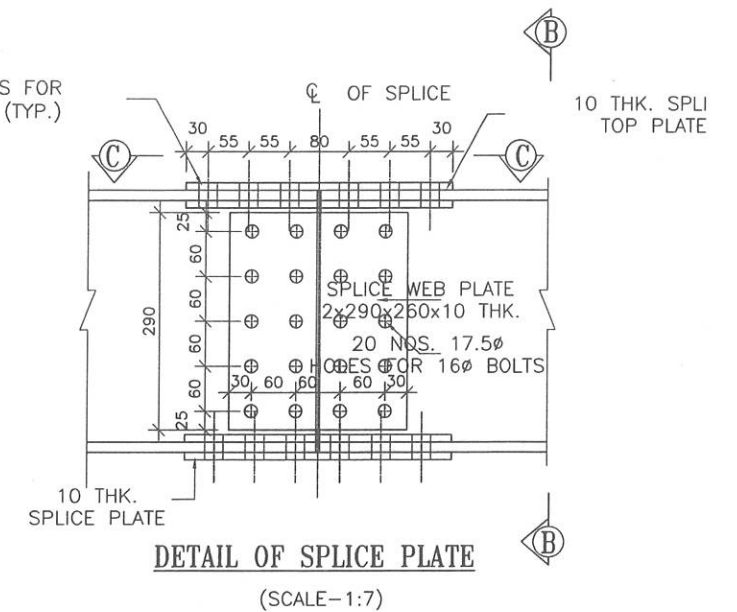
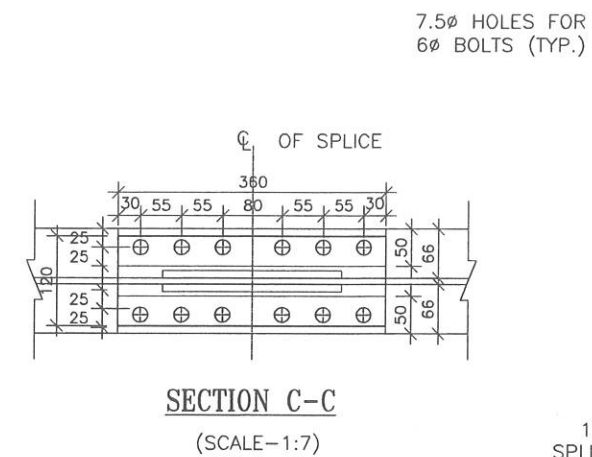
NAME OF WORK
CONSULTANCY SERVICES FOR PREPERATION OF DETAIL PROJECT REPORT
OF CRITICAL INFRASTRUCTURE IN ARUNACHAL PRADESH
SH: FOOT TRACKS ,PATROL ROUTES & FSB

DRAWN BY	P.D
DESIGN BY	Y.B
APPROVED BY	S.G

REVISION : R0	TITLE:-
SHEET:	GENERAL ARRANGEMENT DRAWING OF REINFORCEMENT 8.0M
DEC : 2019	
SIZE : A3	
DRAWING NO : HEC/CPWD/AP/FOOT TRACK/02	



HOLE ARE TENTATIVE SAME SHALL BE
ED BY CONSTRUCTION AGENCY



NOTE:-

1. ALL STRUCTURAL STEEL SHALL CONFORM TO IS:2062, E-250 (Fe-410) C-QUALITY.
2. ALL WELDING SHALL CONFORM TO IS:816 & IS:1024.
3. STEEL WASHER SHALL BE PROVIDED AT ALL BOLTS LOCATIONS.
4. ALL WELDING SHALL BE 8mm THICK FILLET WELD.
5. ALL WELDING & ITS TESTING SHALL BE AS PER RELEVANT CODES MENTIONED IN IRC:24-2001.
6. WELDING IS MAINLY PROPOSED TO BE DONE AT FABRICATION YARD ONLY.

CLIENT



CENTRAL PUBLIC WORKS DEPARTMENT



Civil Consultancy Services

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HEAD OFFICE
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SAKET NAGAR, BHOPAL (M.P)
Tel/Fax : 0755-4236317
E-mail:- hec bhopal@rediffmail.com

NAME OF WORK

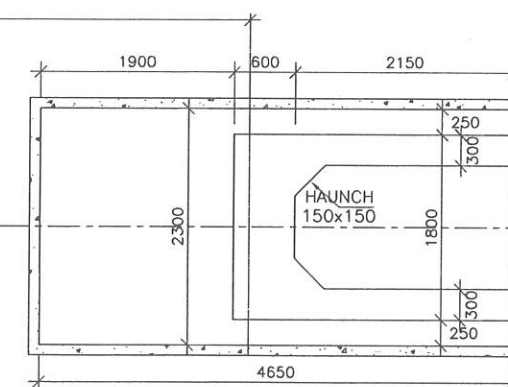
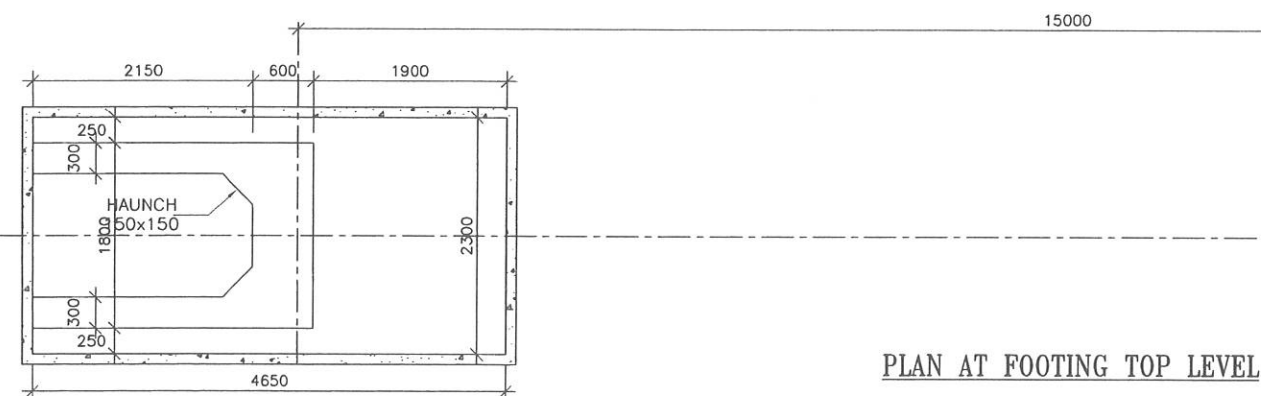
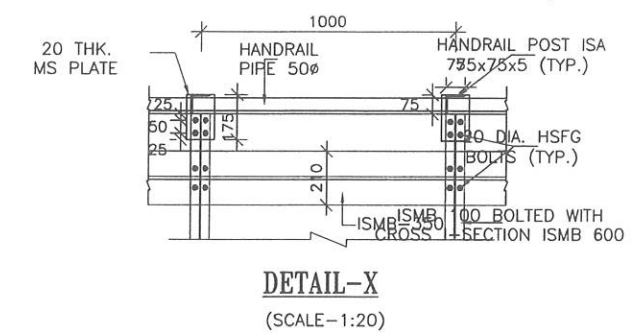
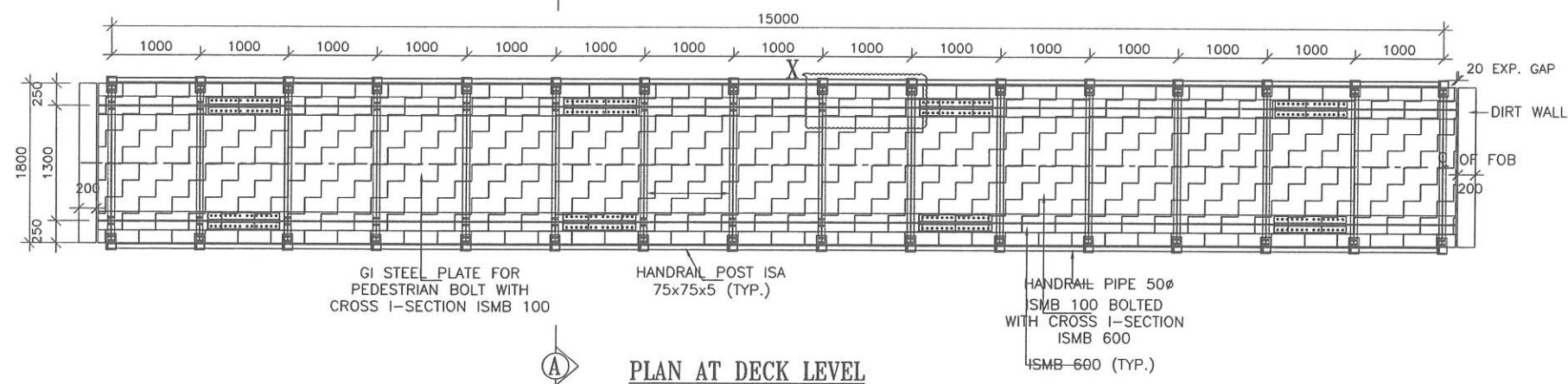
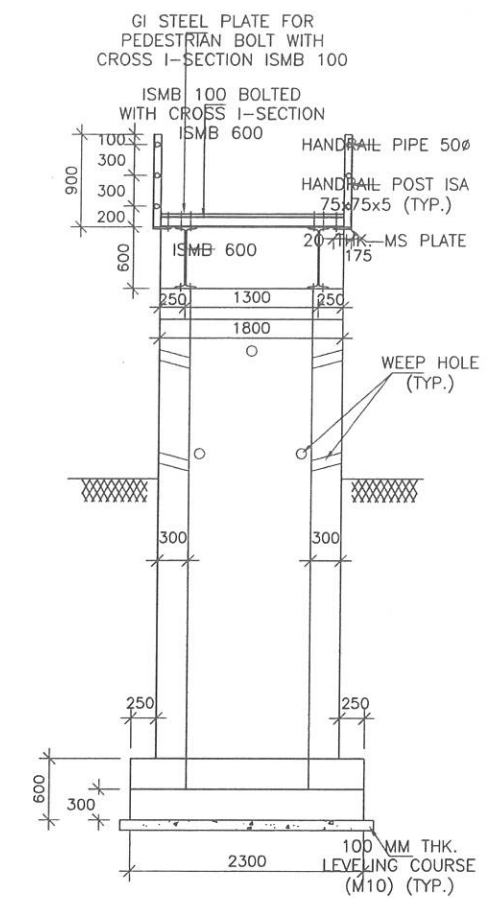
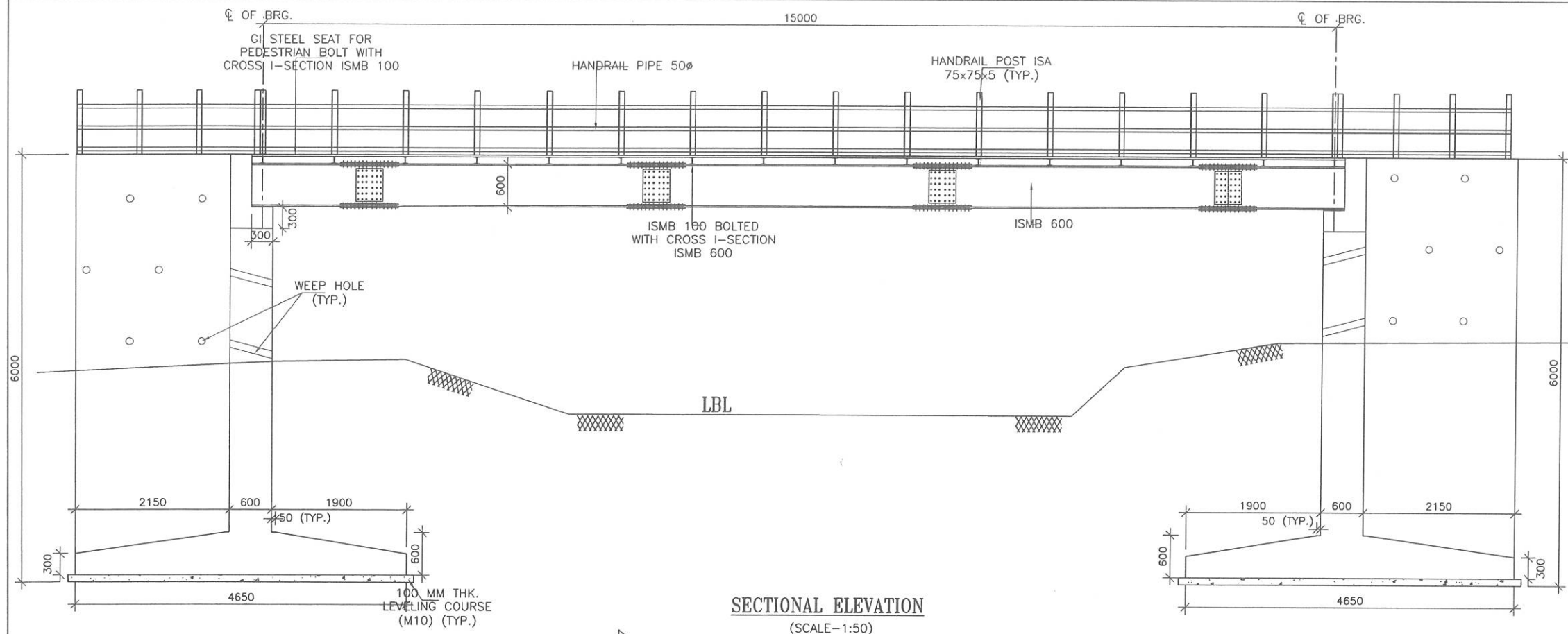
CONSULTANCY SERVICES FOR PREPERATION OF DETAIL PROJECT REPORT
OF CRITICAL INFRASTRUCTURE IN ARUNACHAL PRADESH
SH: FOOT TRACKS ,PATROL ROUTES & FSB

DRAWN BY P.D
DESIGN BY Y.B
APPROVED BY S.G

REVISION : R0
SHEET:
DEC : 2019
SIZE : A3

TITLE:-
GENERAL ARRANGEMENT DRAWING
OF REINFORCEMENT 8.0M

DRAWING NO : HEC/CPWD/AP/FOOT TRACK/03

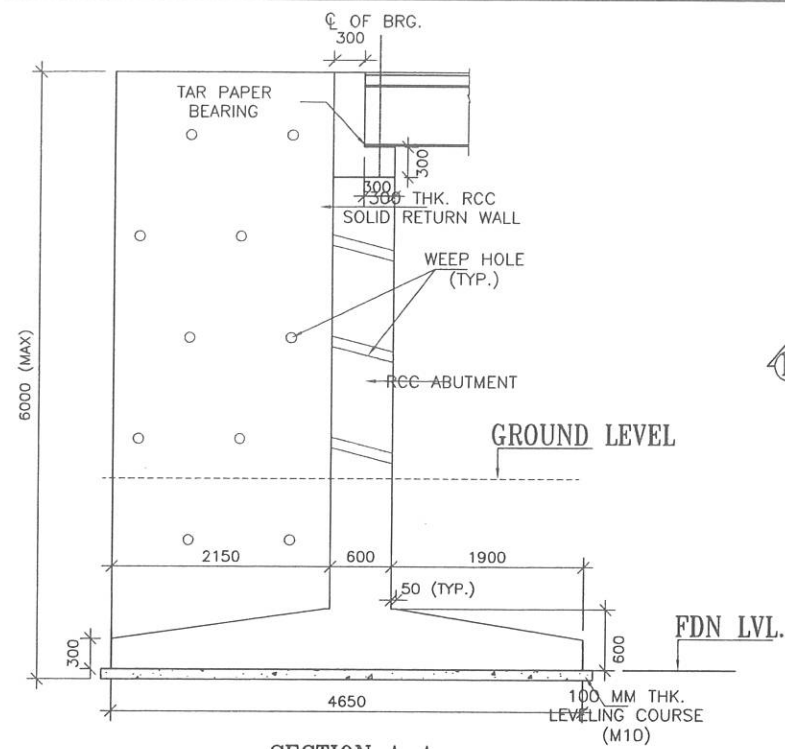


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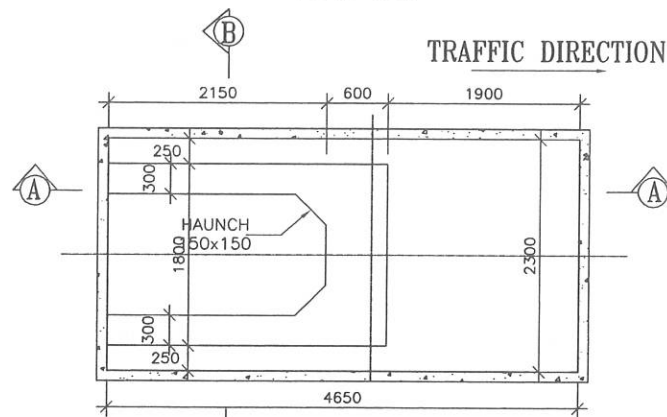
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5. ALL WELDING & ITS TESTING SHALL BE AS PER RELEVANT CODES MENTIONED IN IRC:24-2001.
6. WELDING IS MAINLY PROPOSED TO BE DONE AT FABRICATION YARD ONLY.
7. FILLER TYPE EXPANSION JOINTS OF PROVEN QUALITY SHALL BE PROVIDED IN TERMS OF MODIFIED INTERIM SPECIFICATIONS IN ANNEXURE-I TO MORTH CIRCULAR NO. RW/NH-34059/1/6-S&R DATED 30.11.2000. THE MATERIAL SPECIFICATIONS OF THE FILLER JOINTS SHALL BE IN ACCORDANCE WITH SECTION 2605 OF MORTH SPECIFICATIONS FOR ROAD AND BRIDGE WORKS, FOURTH REVISION.

NAME OF WORK

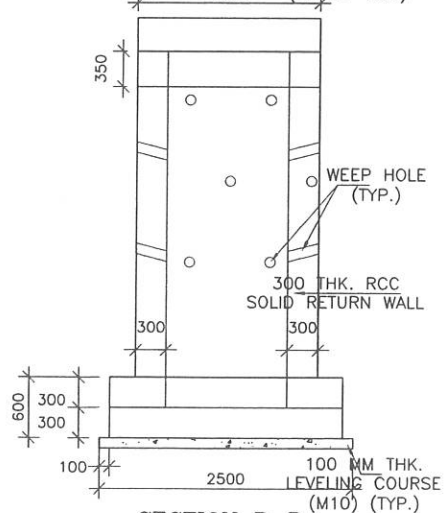
CONSULTANCY SERVICES FOR PREPERATION OF DETAIL PROJECT REPORT
OF CRITICAL INFRASTRUCTURE IN ARUNACHAL PRADESH
SH: FOOT TRACKS ,PATROL ROUTES & FSB



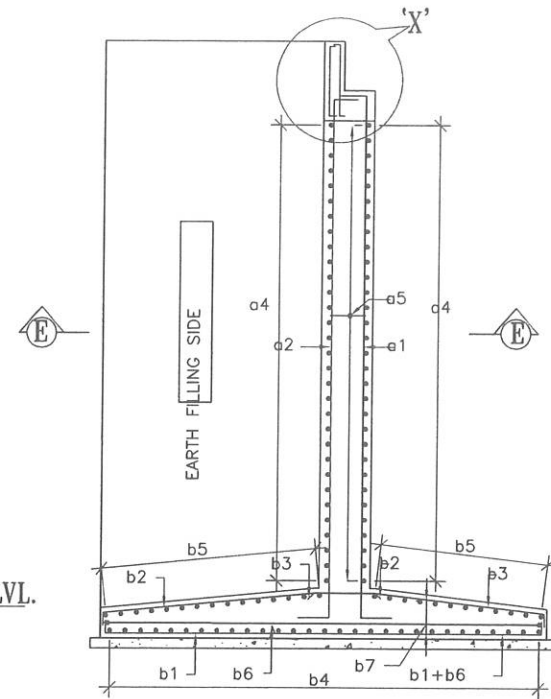
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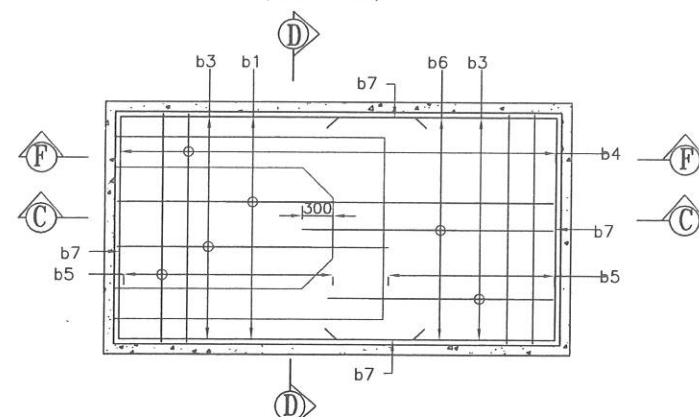
PLAN AT FOOTING TOP LEVEL
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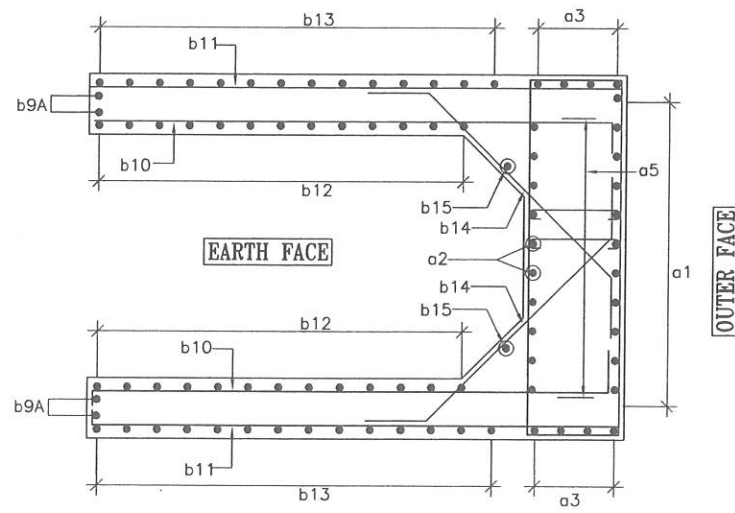
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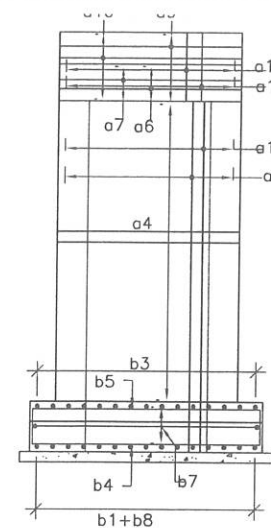
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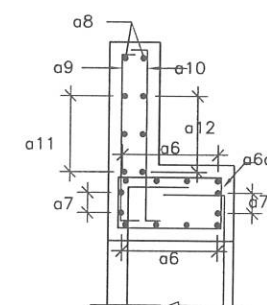
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(ABUTMENT SHAFT REINF. NOT SHOWN FOR CLARITY)
(SCALE-1:50)



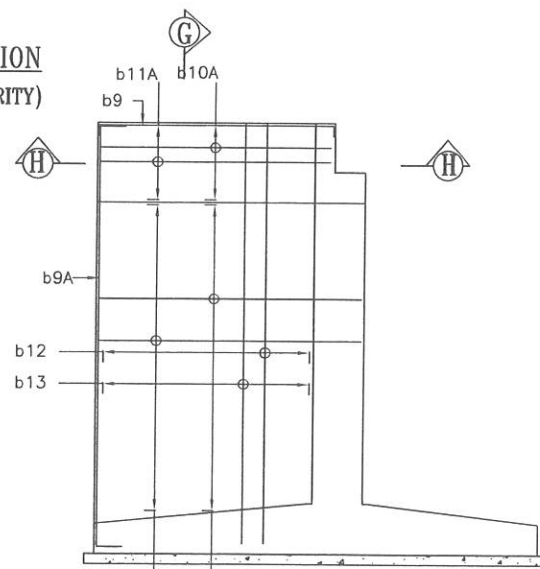
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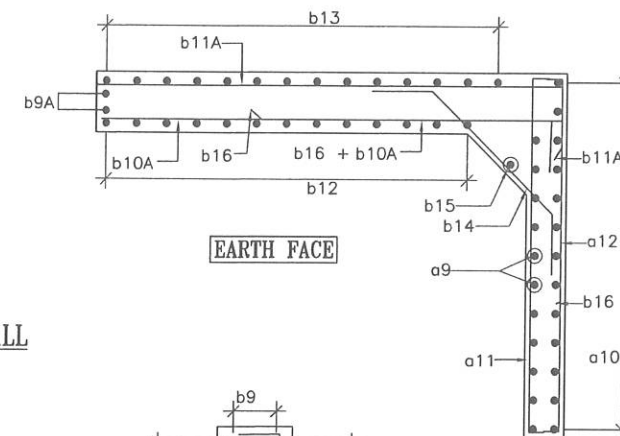
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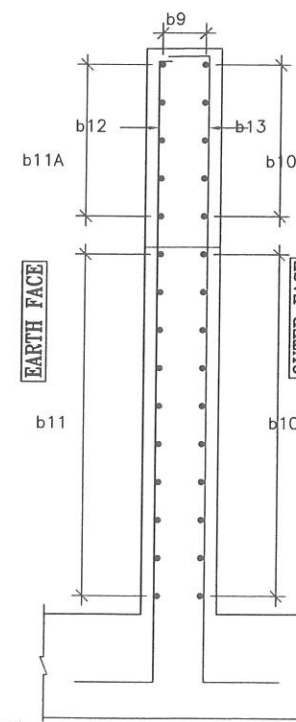
DETAIL-X
REIN. DETAIL OF DIRT WALL
(SCALE-1:20)



SECTION F-F
(FOUNDATION REINF. NOT SHOWN FOR CLARITY)
(SCALE-1:50)



SECTION H-H
(SCALE-1:25)



SECTION G-G
(SCALE-1:20)

REINFORCEMENT SCHEDULE

ABUTMENT SHAFT CAP & DIRT WALL			
S.NO.	BAR MARKED.	DESCRIPTION	SHAPE
1	a1	12 Φ @ 125 c/c	300
2	a2	25 Φ @ 125 c/c	500
3	a3	16 Φ @ 175c/c	LV.
4	a4	12 Φ @ 150c/c	LINK HORZ. STANDERED
5	a5	8 Φ @ 300c/c	150
6	a6	10 Φ 4 NOS. TOP & BOTTOM	150
7	a6a	2L-12 Φ @ 150c/c	300
8	a7	10 Φ @ 125c/c	100
9	a8	12 Φ -2 NOS.	100
10	a9	12 Φ @ 125c/c	300
11	a10	8 Φ @ 125c/c	300
12	a11	8 Φ @ 150c/c	100
13	a12	8 Φ @ 150c/c	100

FOOTING REINF.			
S.NO.	BAR MARKED.	DESCRIPTION	SHAPE
1	b1	20 Φ @ 200 c/c	150
2	b2	16 Φ @ 100 c/c	150
3	b3	16 Φ @ 100 c/c	150
4	b4	12 Φ @ 200c/c	150
5	b5	12 Φ @ 200c/c	150
6	b6	16 Φ @ 200 c/c	150
7	b7	12 Φ @ 200c/c	LV.
8	b8	8 Φ @ 200c/c (ALONG TRANSVERSE) 8 Φ @ 400c/c (ALONG LONGITUDINAL)	LV.
RETURN WALL			
9	b9	12 Φ - 2 NOS.	
10	b9A	16 Φ - 2 NOS.	300
11	b10	12 Φ @ 150c/c	150 500
12	b10A	12 Φ @ 150c/c	150 500
13	b11	10 Φ @ 150c/c	150 400
14	b11A	10 Φ @ 150c/c	300 400
15	b12	12 Φ @ 150c/c	150 300
16	b13	10 Φ @ 150c/c	150 300
17	b14	10 Φ @ 150c/c	150 150
18	b15	10 Φ - 2 NOS.	
19	b16	16 Φ @ 150c/c	

NOTE:-

- CONCRETE SHALL BE DESIGN MX WITH MINIMUM 20 DAYS CHARACTERISTIC STRENGTH OF 35 Mpa FOR ALL COMPONENTS.
- 100 MM DIA WEEP HOLES SPACED AT 1000mm c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED 150 mm ABOVE GROUND LEVEL IN A STAGGERED MANNER IN VERTICALLY WALL AS SHOWN WEEP HOLES TO BE PROVIDED AS PER SPECIFICATION.
- BACK FILLING BEHIND ABUTMENT SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX-6 OF IRC:78-2014 HAVING PROPERTIES $C=0$, $\phi=35^\circ$, $\delta=22.5^\circ$ & $\gamma_d=20$ KN/m³.
- THE REINFORCING BARS SHALL BE OF THERMO MECHANICALLY TREATED (TMT) (GRADE DESIGNATION Fe-500D) CONFORMING TO IS:1786 STANDARDS.
- MINIMUM CLEAR COVER TO OUTER MOST REINFORCEMENT SHALL BE AS UNDER:-
 - FOUNDATION - 75MM
 - SHAFT DIRT WALL & RETURN WALL - 50MM
 - DIRT WALL & CAP - 40MM
- MAXIMUM LAP LENGTH SHALL BE 72 TIMES OF BAR TO BE LAPPED.
- MINIMUM LAP LENGTH OF REINFORCEMENT FOR FAVOURABLE CONDITION SHALL BE AS UNDER:

CONCRETE GRADE - M-30	- 56 x DIA OF BAR
CONCRETE GRADE - M-35	- 51 x DIA OF BAR
CONCRETE GRADE - M-40	- 48 x DIA OF BAR
CONCRETE GRADE - M-45	- 45 x DIA OF BAR
- SAFE BEARING CAPACITY ASSUMED IN DESIGN AT PROPOSED FOUNDING LEVEL IS 16 t/m². THIS SHALL BE ASCERTAINED BEFORE EXECUTION OF WORK AT SITE.

CLIENT



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Civil Consultancy Services

NAME OF WORK

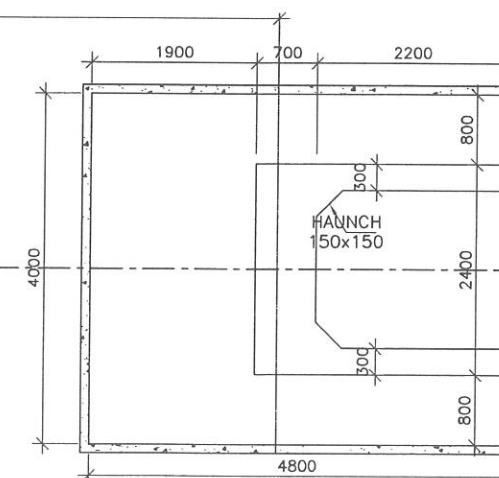
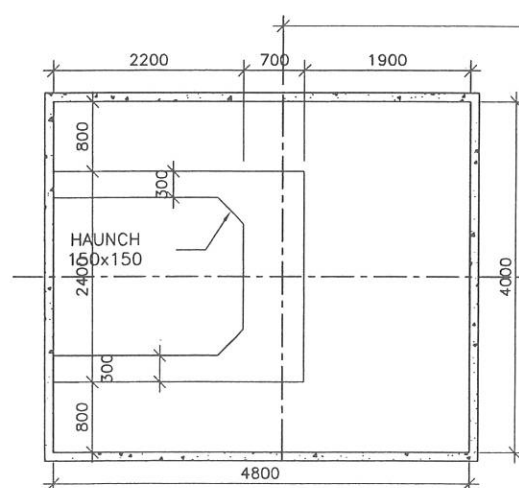
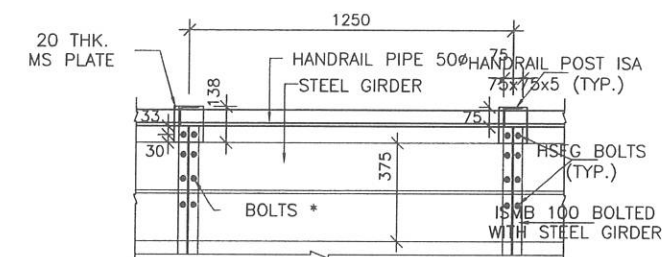
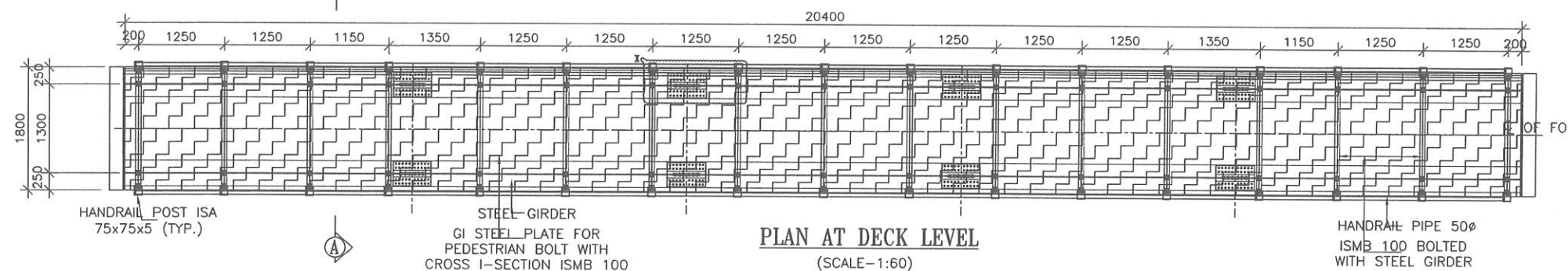
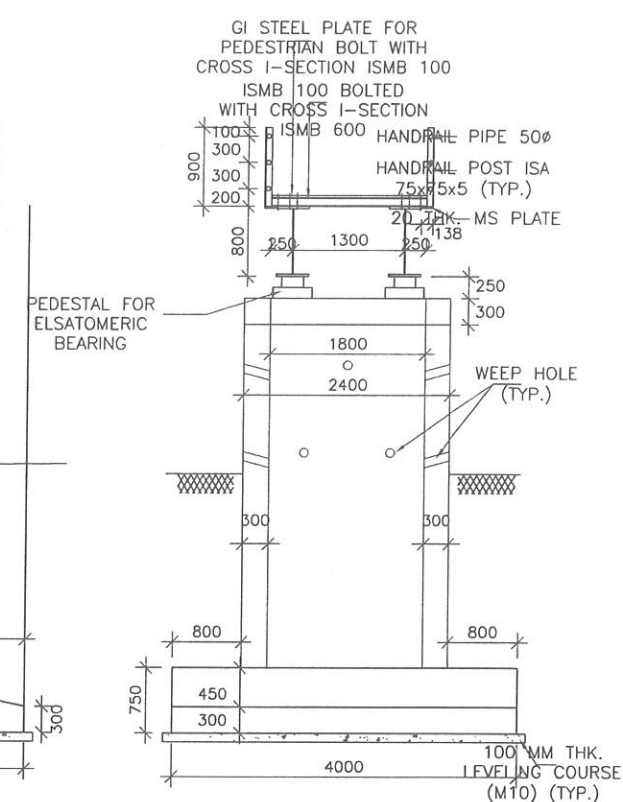
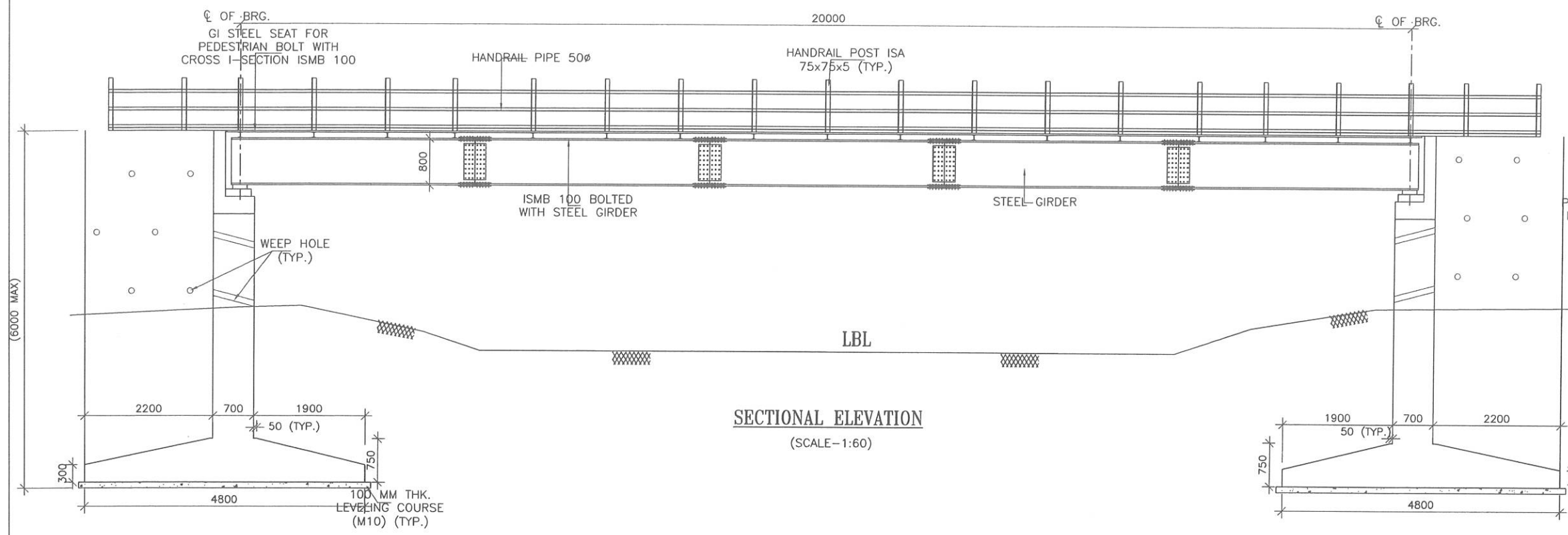
CONSULTANCY SERVICES FOR PREPERATION OF DETAIL PROJECT REPORT
OF CRITICAL INFRASTRUCTURE IN ARUNACHAL PRADESH
SH: FOOT TRACKS ,PATROL ROUTES & FSB

DRAWN BY	P.D
DESIGN BY	Y.B
APPROVED BY	S.G

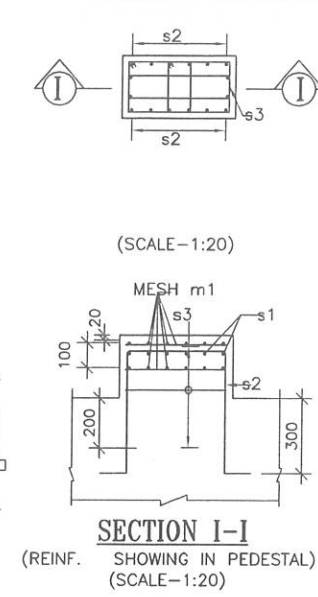
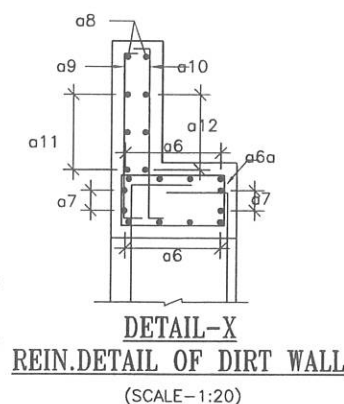
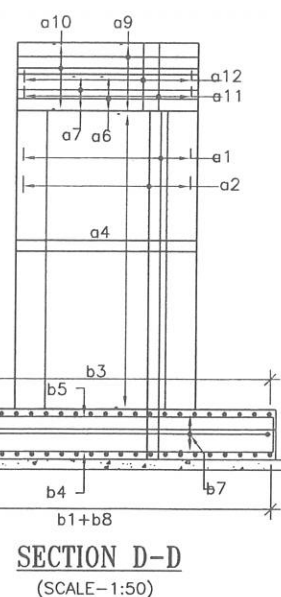
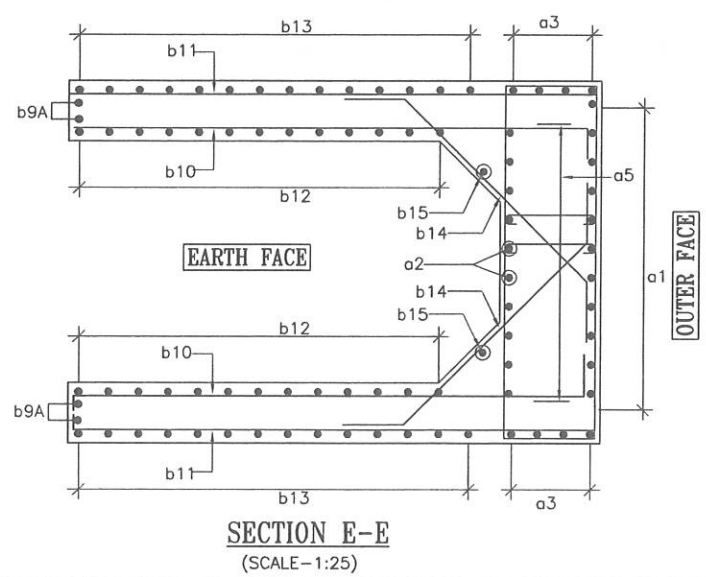
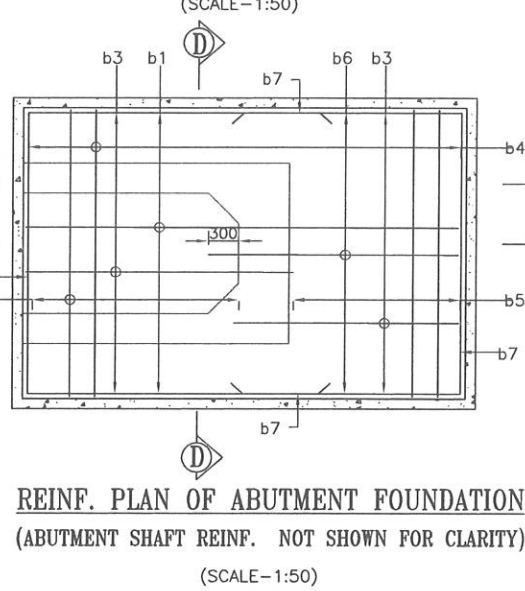
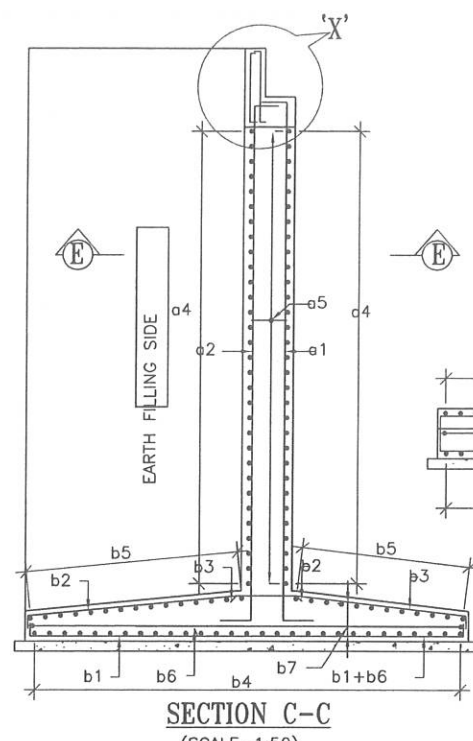
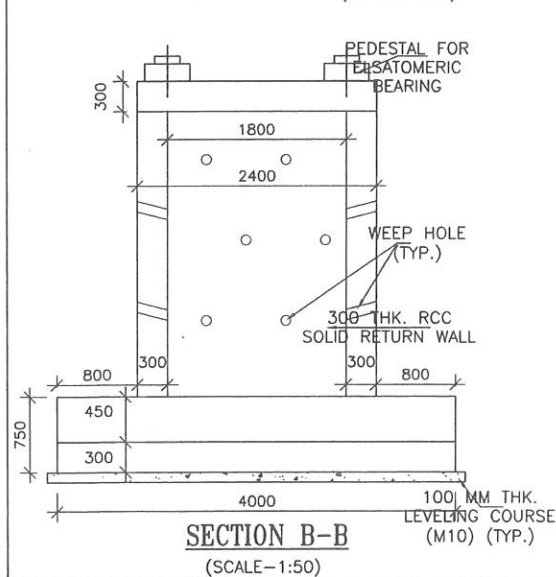
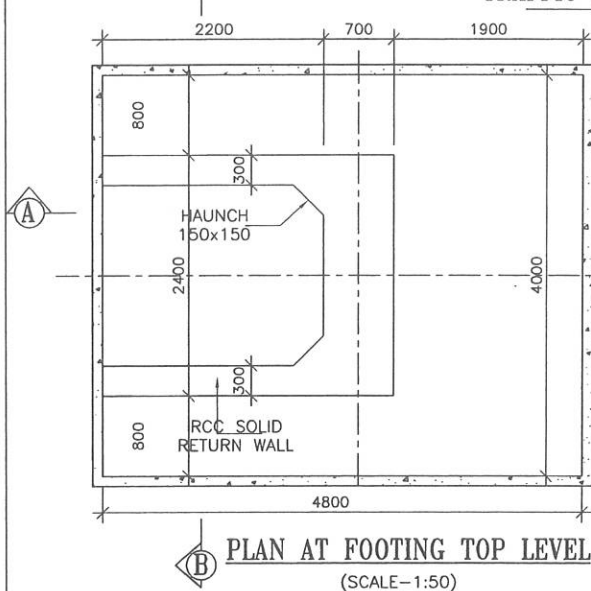
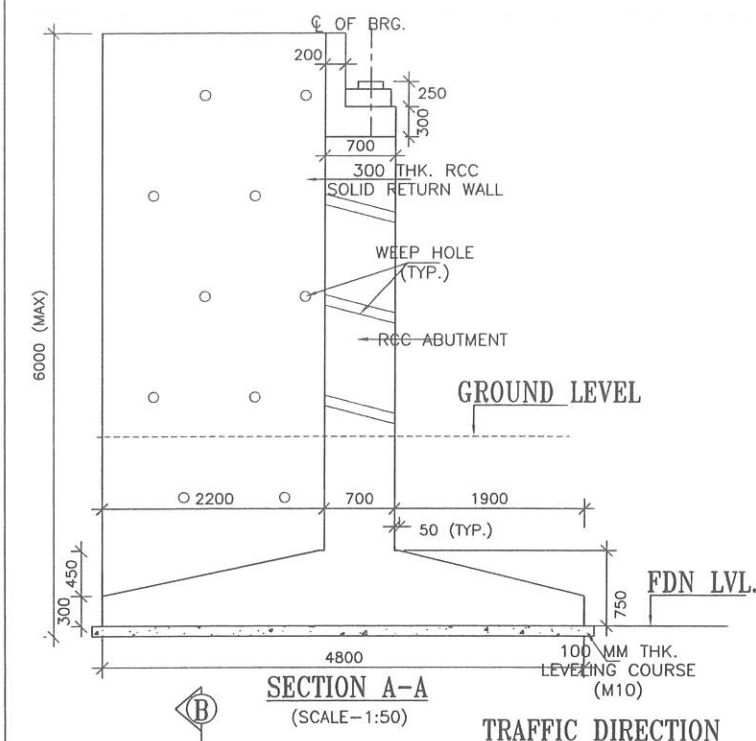
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SHEET:	GENERAL ARRANGEMENT DRAWING OF REINFORCEMENT 15.0M
DEC : 2019	
SIZE : A3	

DRAWING NO : HEC/CPWD/AP/FOOT TRACK/03

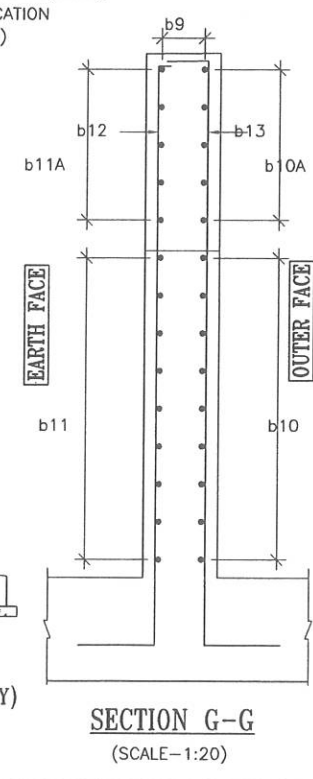
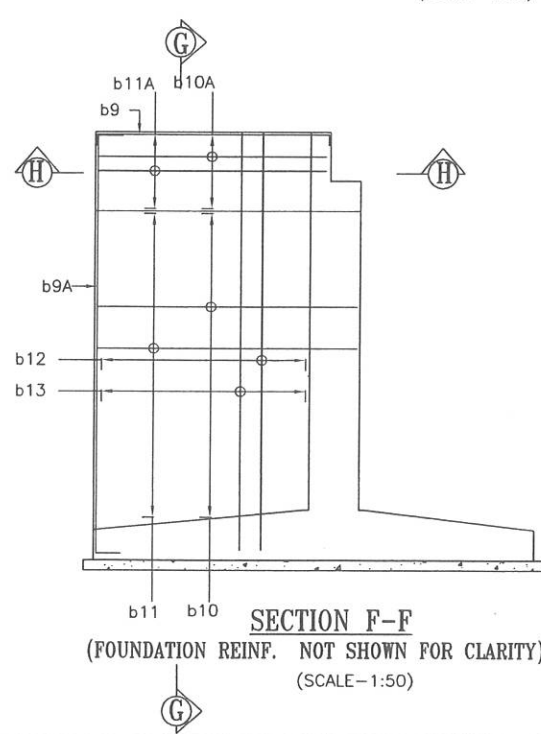
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SHEET:	
DEC : 2019	
SIZE : A3	
DRAWING NO : HEC/CPWD/AP/FOOT TRACK/03	



- NOTE:-**
1. ALL STRUCTURAL STEEL SHALL CONFORM TO IS:2062, E-350 (Fe-490) C-QUALITY.
 2. ALL WELDING SHALL CONFORM TO IS:816 & IS:1024.
 3. STEEL WASHER SHALL BE PROVIDED AT ALL BOLTS LOCATIONS.
 4. ALL WELDING SHALL BE 8mm THICK FILLET WELD.
 5. ALL WELDING & ITS TESTING SHALL BE AS PER RELEVANT CODES MENTIONED IN IRC:24-2001.
 6. WELDING IS MAINLY PROPOSED TO BE DONE AT FABRICATION YARD ONLY.



8 Ø MESH REINF. (m1)
AT PEDESTAL LOCATION
(SCALE-1:20)



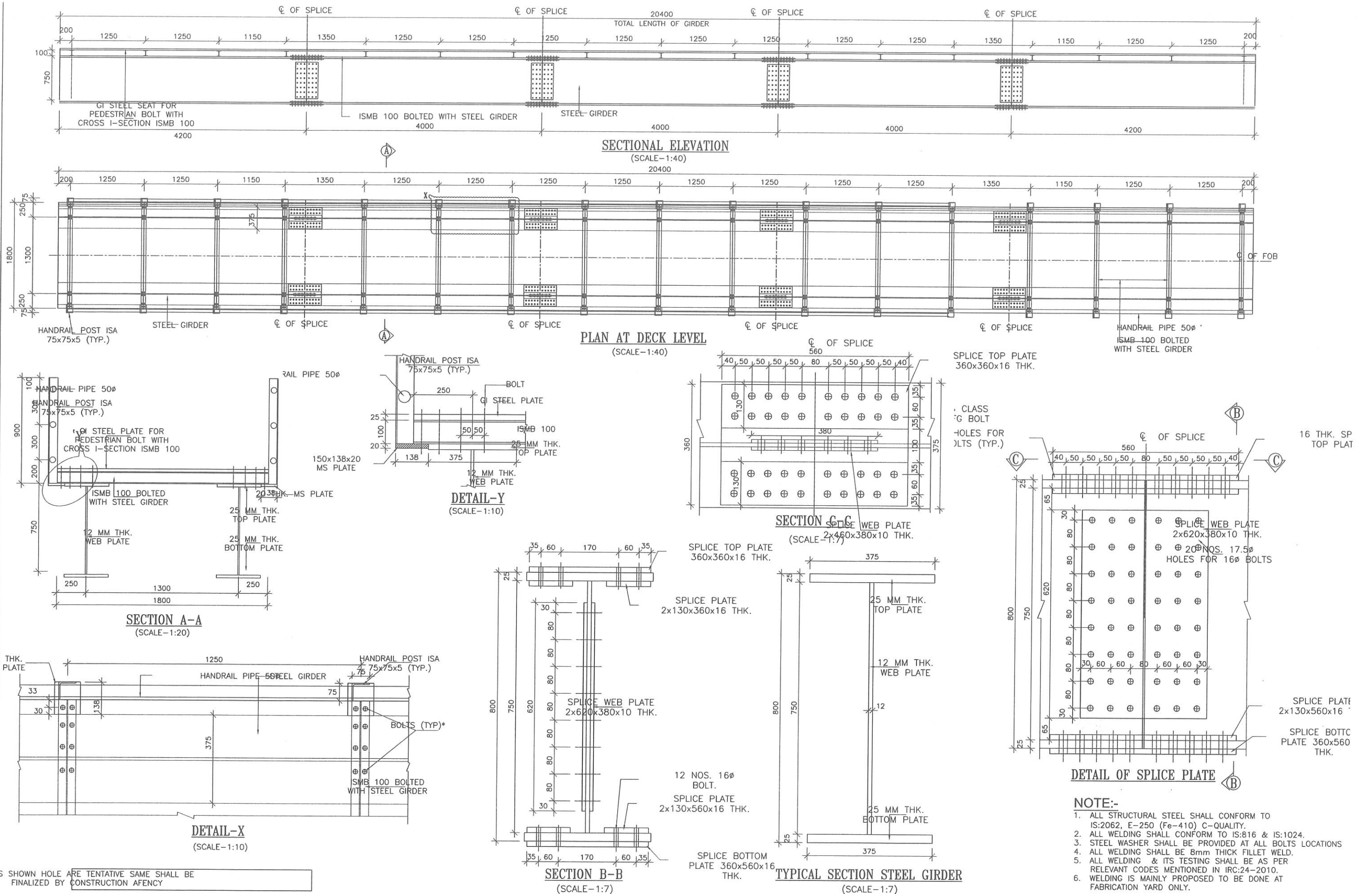
REINFORCEMENT SCHEDULE

S.NO.	BAR MARKED.	DESCRIPTION	SHAPE
1	a1	16 Ø @ 125 c/c	300
2	a2	32 Ø @ 125 c/c	500
3	a3	12 Ø @ 175c/c	LV.
4	a4	12 Ø @ 100c/c	LINK HORZ. STANDERD
5	a5	8 Ø @ 300c/c	LINK HORZ. STANDERD
6	a6	12 Ø @ 125c/c	150
7	a6a	2L-12 Ø @ 150c/c	300
8	a7	10 Ø @ 125c/c	300
9	a8	12 Ø - 2 NOS.	300
10	a9	12 Ø @ 150c/c	300
11	a10	10 Ø @ 150c/c	300
12	a11	8 Ø @ 150c/c	100
13	a12	8 Ø @ 150c/c	100

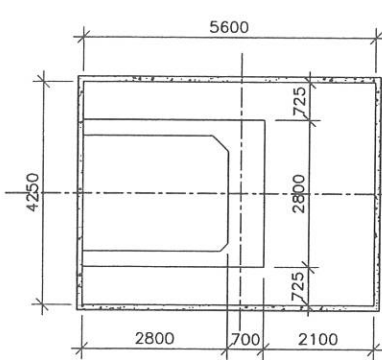
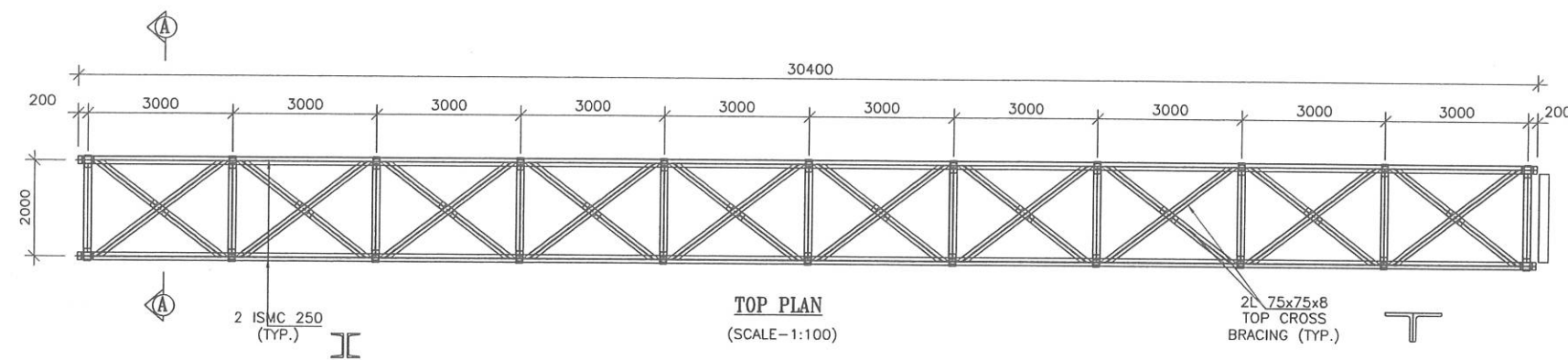
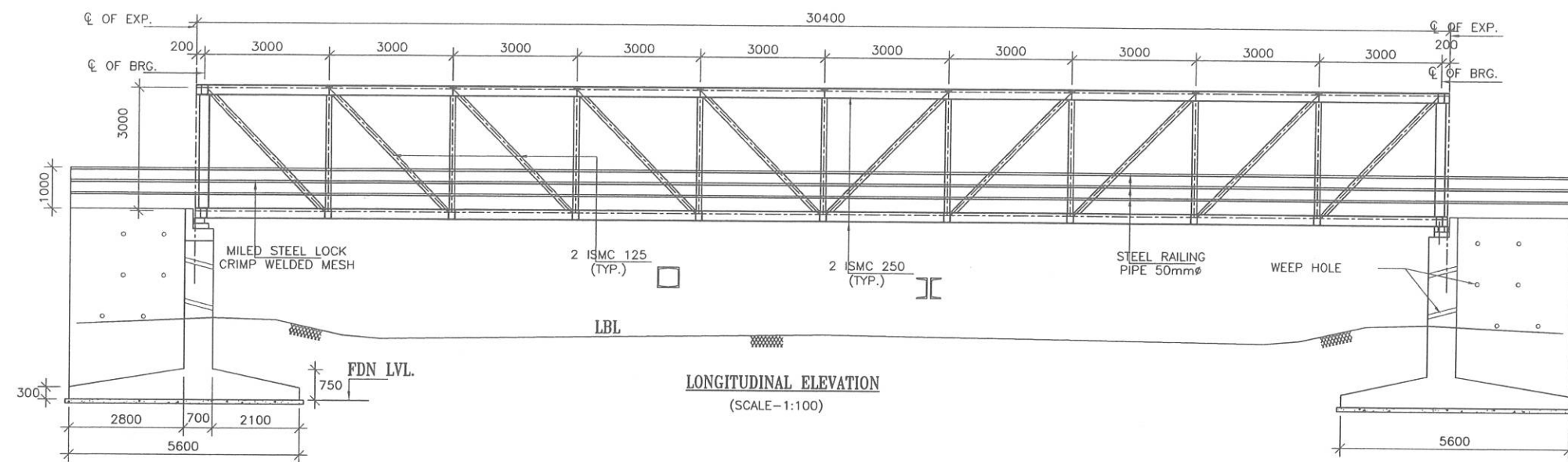
S.NO.	BAR MARKED.	DESCRIPTION	SHAPE
1	b1	20 Ø @ 200 c/c	150
2	b2	16 Ø @ 100 c/c	150
3	b3	12 Ø @ 100 c/c	150
4	b4	16 Ø @ 100c/c	150
5	b5	12 Ø @ 150c/c	150
6	b6	16 Ø @ 200 c/c	150
7	b7	12 Ø @ 200c/c	LV.
8	b8	8 Ø @ 100c/c (ALONG TRANSVERSE) 8 Ø @ 400c/c (ALONG LONGITUDINAL)	LV.
RETURN WALL			
9	b9A	12 Ø - 2 NOS.	300
10	b9	16 Ø - 2 NOS.	300
10	b10	12 Ø @ 150c/c	150 500
11	b10A	12 Ø @ 150c/c	150 500
12	b11	10 Ø @ 150c/c	150 400
13	b11A	10 Ø @ 150c/c	300 400
14	b12	12 Ø @ 150c/c	150 300
15	b13	10 Ø @ 150c/c	150 300
16	b14	10 Ø @ 150c/c	150 150
17	b15	10 Ø - 2 NOS.	150
18	s1	12 Ø @ 150 c/c	150
19	s2	12 Ø @ 150 c/c	150
20	s3	10 Ø @ 125 c/c	300
21	s4	10 Ø @ 125 c/c	300
22	s5	10 Ø @ 125 c/c	300

NOTE:-

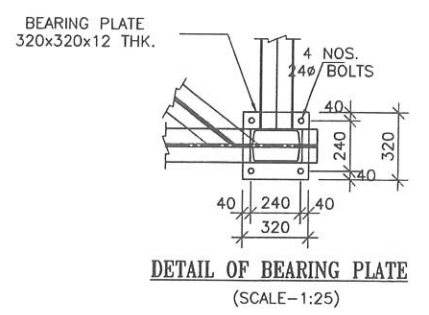
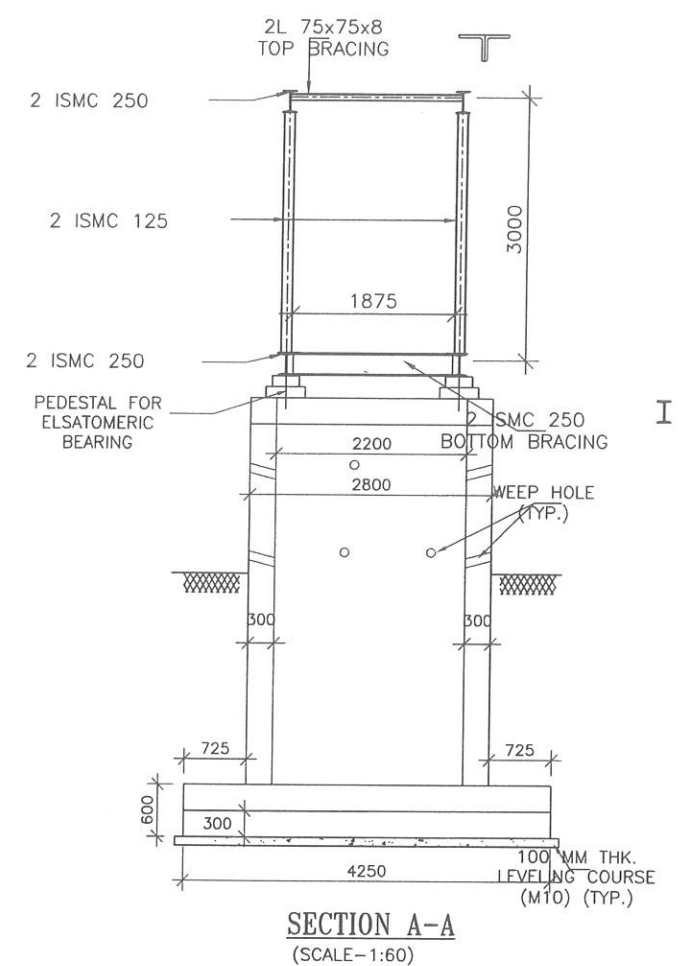
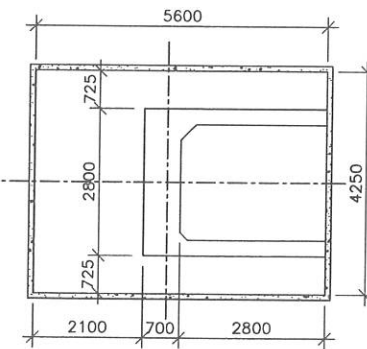
- CONCRETE SHALL BE DESIGN Mx WITH MINIMUM 20 DAYS CHARACTERISTIC STRENGTH OF 35 Mpa FOR ALL COMPONENTS.
- 100 MM DIA WEEP HOLES SPACED AT 1000mm c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED 150 mm ABOVE GROUND LEVEL IN A STAGGERED MANNER IN VERTICALLY WALL AS SHOWN WEEP HOLES TO BE PROVIDED AS PER SPECIFICATION.
- BACK FILLING BEHIND ABUTMENT SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX-6 OF IRC:78-2014 HAVING PROPERTIES C=0, $\phi \geq 35^\circ$, $\delta = 22.5^\circ$ & $\gamma_d = 20 \text{ KN/m}^3$.
- THE REINFORCING BARS SHALL BE OF THERMO MECHANICALLY TREATED (TMT) (GRADE DESIGNATION Fe-500D) CONFORMING TO IS:1786 STANDARDS.
- MINIMUM CLEAR COVER TO OUTER MOST REINFORCEMENT SHALL BE AS UNDER:-
 - a. FOUNDATION - 75MM
 - b. SHAFT DIRT WALL & RETURN WALL - 50MM
 - c. DIRT WALL & CAP - 40MM
- MAXIMUM LAP LENGTH SHALL BE 72 TIMES OF BAR TO BE LAPPED.
- MINIMUM LAP LENGTH OF REINFORCEMENT FOR FAVOURABLE CONDITION SHALL BE AS UNDER:
 - CONCRETE GRADE - M-30 - 56 x DIA OF BAR
 - CONCRETE GRADE - M-35 - 51 x DIA OF BAR
 - CONCRETE GRADE - M-40 - 48 x DIA OF BAR
 - CONCRETE GRADE - M-45 - 45 x DIA OF BAR
- HOOK AND OVERLAPS TO BE STANDARD DIMENSION.
- THE MAXIMUM PRESSURE COMING BENEATH FOUNDATION IS $16t/m^2$.



AS SHOWN HOLE ARE TENTATIVE SAME SHALL BE FINALIZED BY CONSTRUCTION AGENCY



FOOTING PLAN
(SCALE-1:100)



- NOTES:-**
1. ALL STRUCTURAL SECTION SHALL BE MS TO IS 2062.
 2. ALL STEEL SECTION SHALL RECEIVE 0.2 PRIMER COATS OF RED CODE ZINC CHROMATE CONFORMING TO IS 2074.
 3. TWO COATS OF SYNTHETIC ENAMEL PAINT CONFORMING TO IS 2932.
 4. TOP OF THE BASE PLATE AND BOTTOM OF COLUMN MACHINED.
 5. ALL WELDS CONFORMING COLUMN TO BE BASE PLATE ARE 8mm NORMAL SIZE.
 6. END CONNECTION ROLLED BEAMS AND CHANNEL SHALL BE DESIGNED FOR MINIMUM OF 60% OF THEIR SHEAR CAPACITY & BUILT UP BEAMS FOR 80% OF THEIR SHEAR CAPACITY IN ADDITION TO AXIAL LOAD.
 7. ALL WELD ARE 6mm THICK FILLET WELD UNLESS NOTED OTHERWISE.
 8. THIS DRG. IN ONLY GAD.
 9. THE DETAILS OF CONNECTION OF THE TRUSS SHALL BE DESIGNED SCHEME OF FABRICATION TRANSPORTATION AND ERECTION AT SITE.

CLIENT



CENTRAL PUBLIC WORKS DEPARTMENT

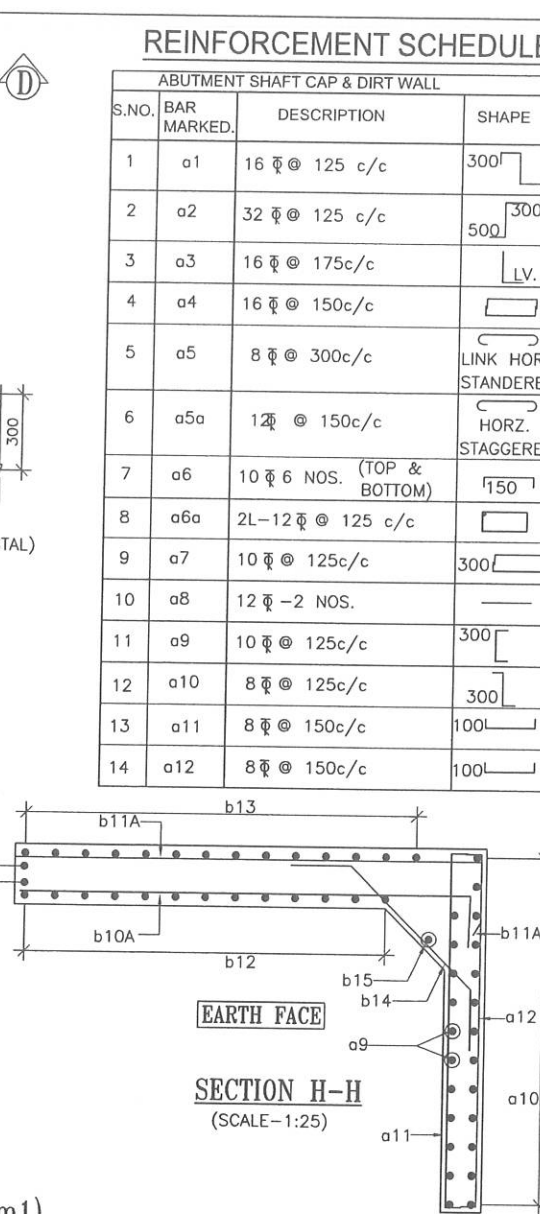
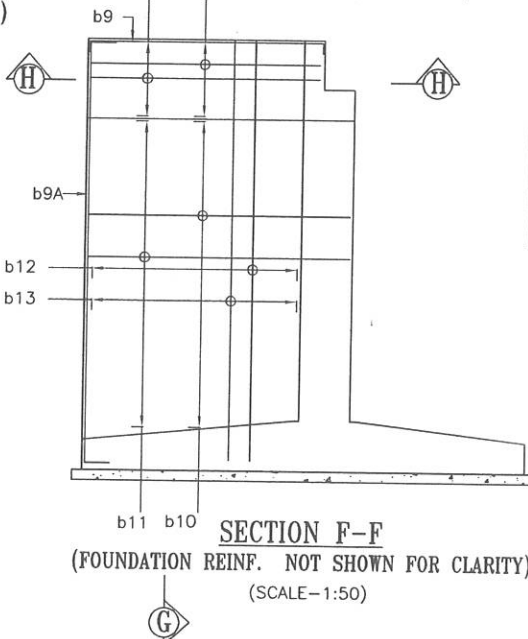
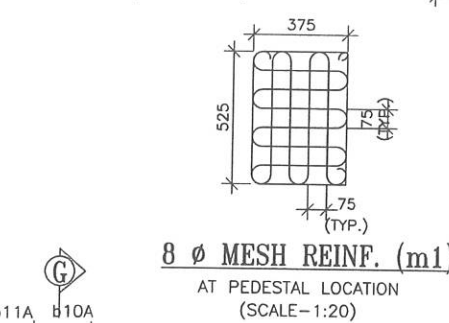
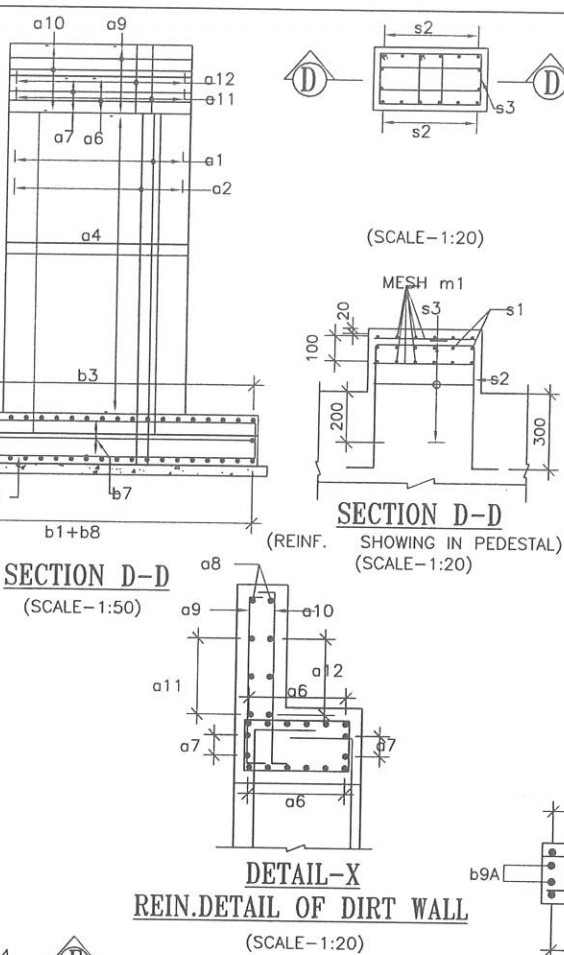
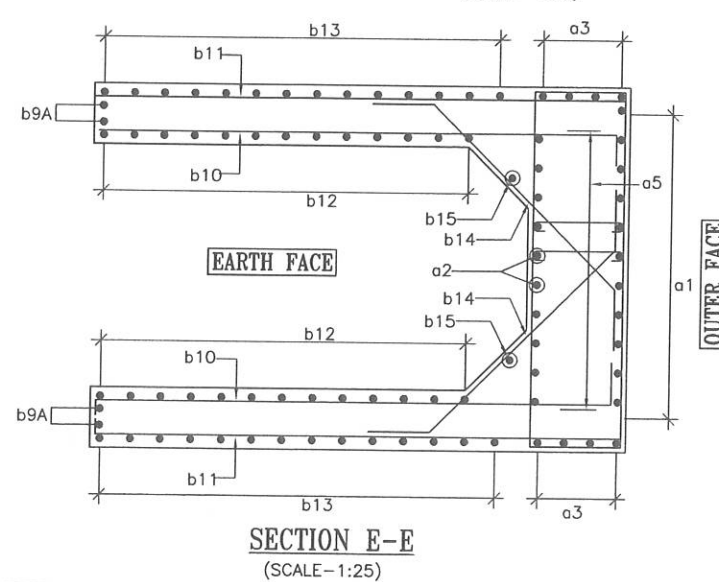
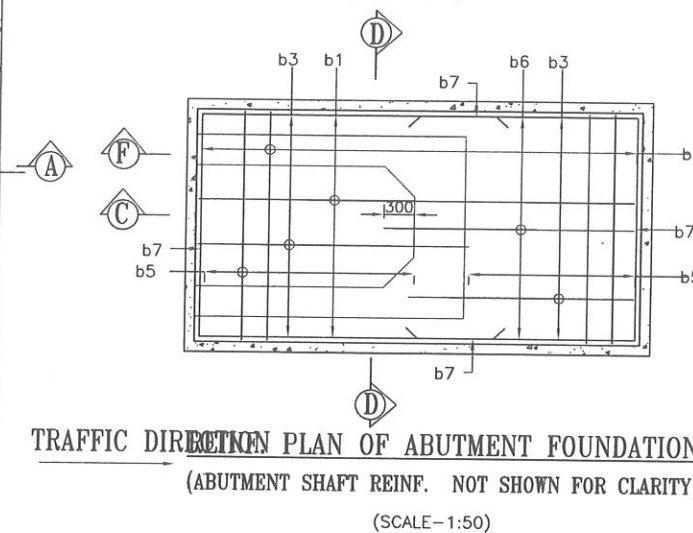
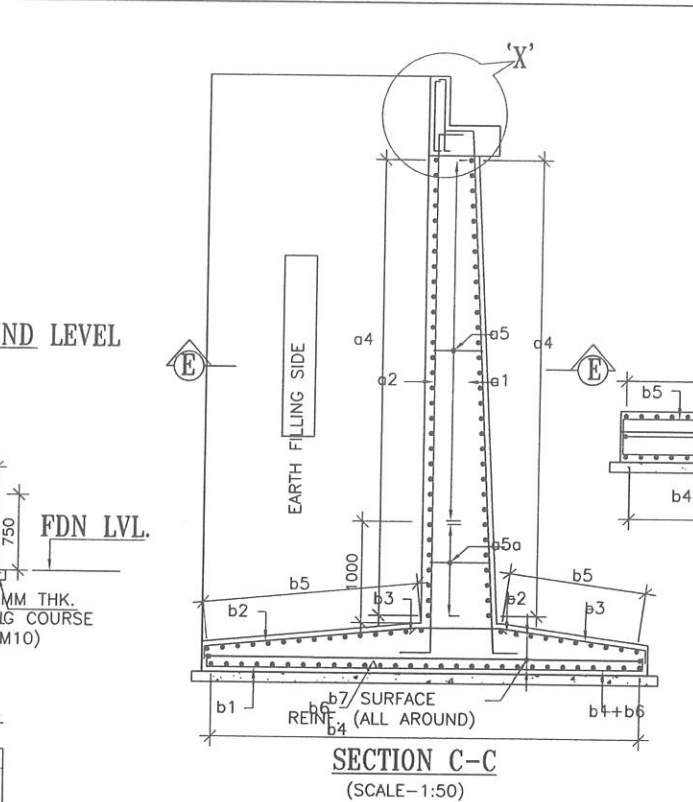
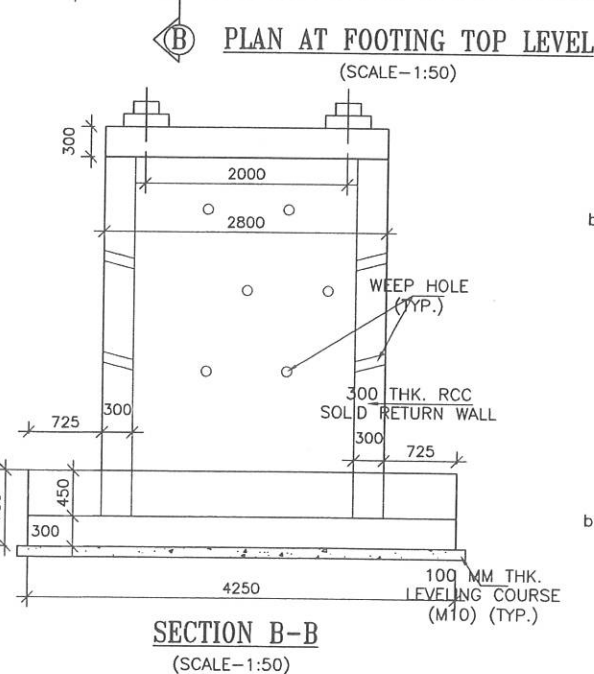
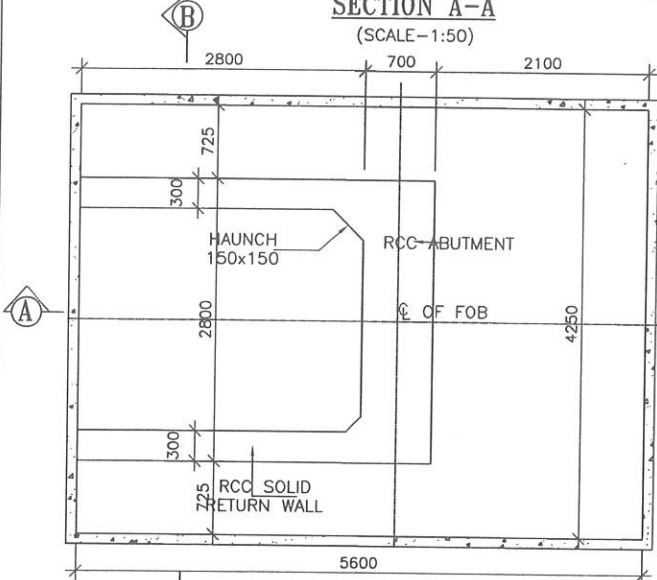
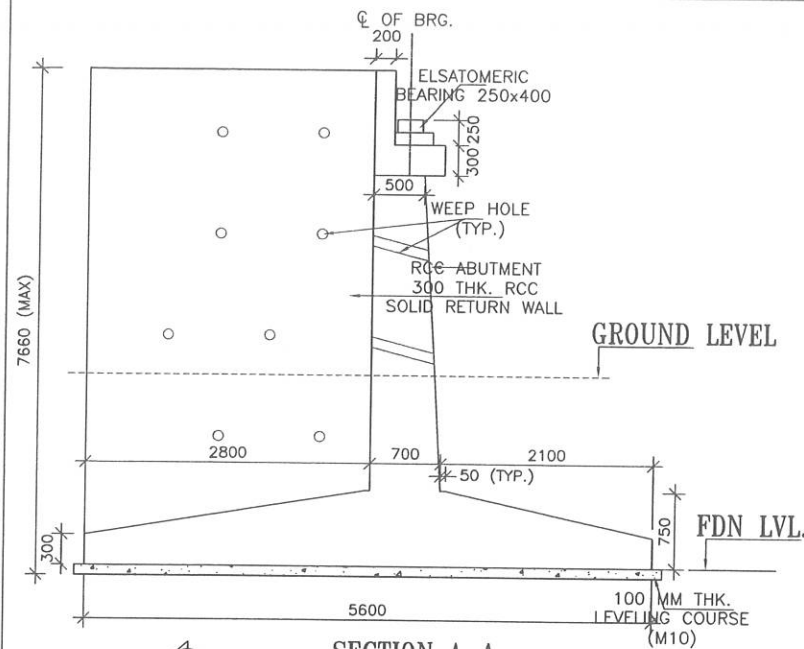


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SAKET NAGAR, BHOPAL (M.P.)
Tel/Fax : 0755-4236317
E-mail : hec_bhopal@rediffmail.com

NAME OF WORK
CONSULTANCY SERVICES FOR PREPERATION OF DETAIL PROJECT REPORT
OF CRITICAL INFRASTRUCTURE IN ARUNACHAL PRADESH
SH: FOOT TRACKS ,PATROL ROUTES & FSB

DRAWN BY	P.D
DESIGN BY	Y.B
APPROVED BY	S.G

REVISION : R0	TITLE:-
SHEET:	GENERAL ARRANGEMENT DRAWING OF RENFORCEMENT 30.0M
DEC : 2019	
SIZE : A3	
DRAWING NO : HEC/CPWD/AP/FOOT TRACK/03	



REINFORCEMENT SCHEDULE

S.NO.	BAR MARKED.	DESCRIPTION	SHAPE
1	a1	16 Φ @ 125 c/c	300
2	a2	32 Φ @ 125 c/c	500
3	a3	16 Φ @ 175c/c	LV.
4	a4	16 Φ @ 150c/c	LV.
5	a5	8 Φ @ 300c/c	LINK HORZ. STANDERD
6	a5a	12 Φ @ 150c/c	HORZ. STAGGERED
7	a6	10 Φ 6 NOS. (TOP & BOTTOM)	150
8	a6a	2L-12 Φ @ 125 c/c	150
9	a7	10 Φ @ 125c/c	300
10	a8	12 Φ -2 NOS.	300
11	a9	10 Φ @ 125c/c	300
12	a10	8 Φ @ 125c/c	300
13	a11	8 Φ @ 150c/c	100
14	a12	8 Φ @ 150c/c	100

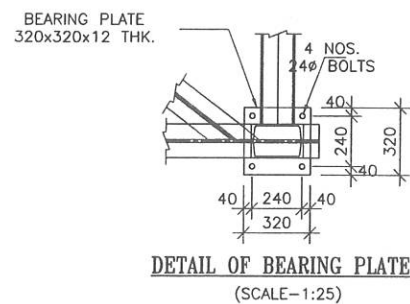
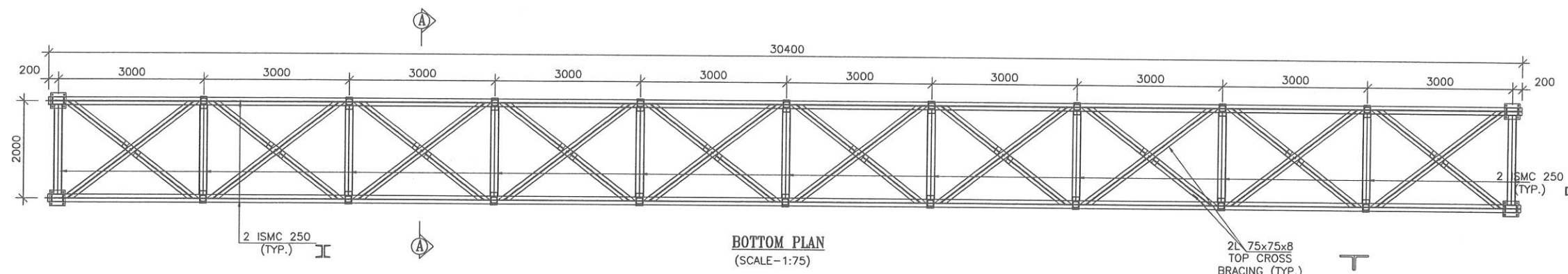
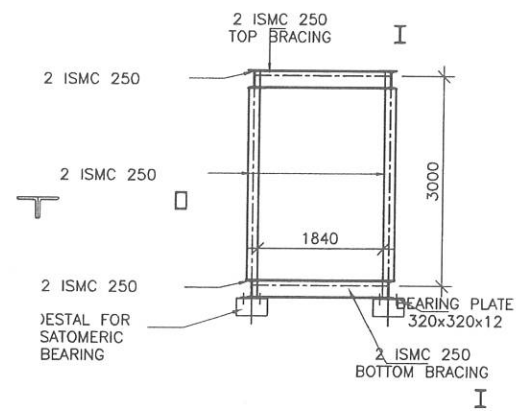
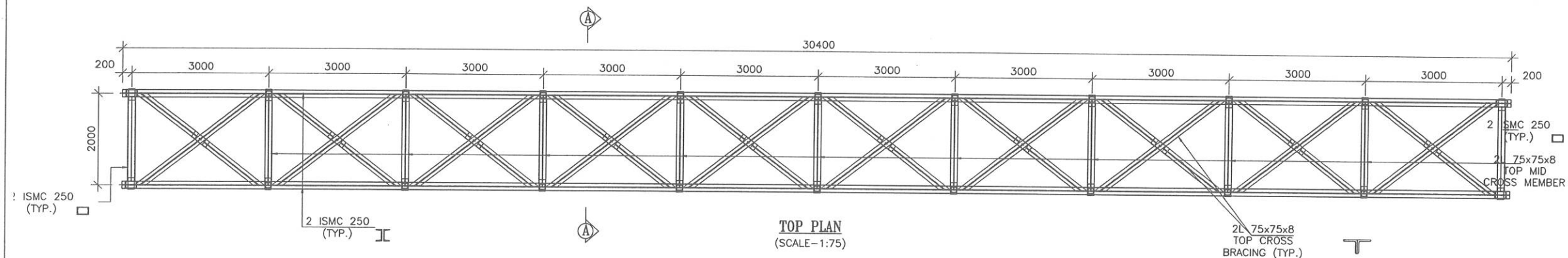
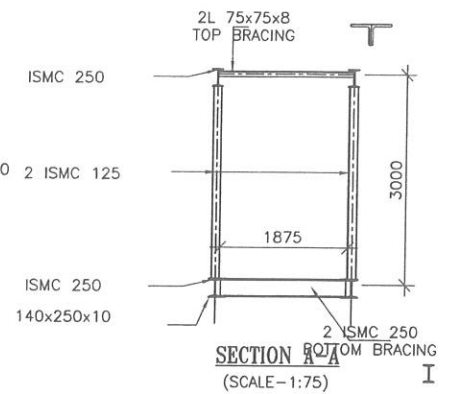
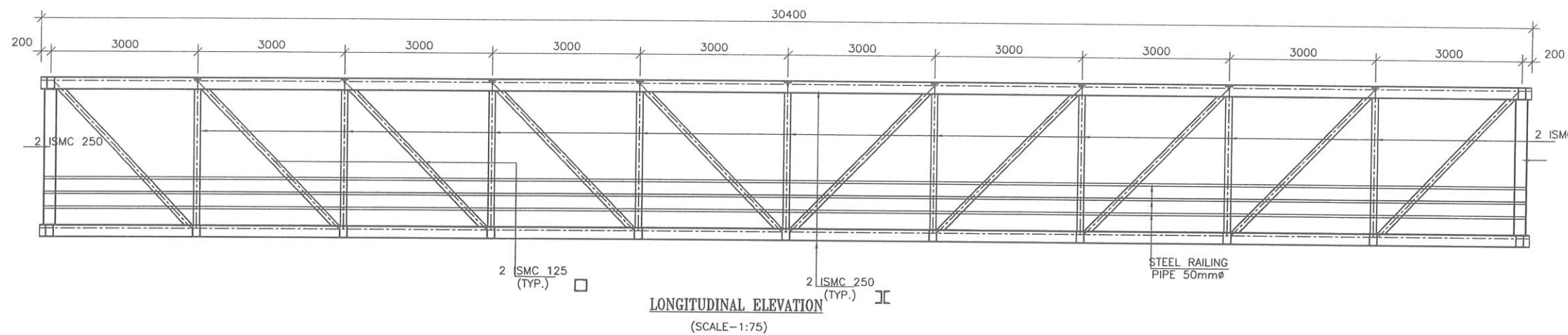
S.NO.	BAR MARKED.	DESCRIPTION	SHAPE
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4	b4	16 Φ @ 150c/c	150
5	b5	12 Φ @ 150c/c	150
6	b6	20 Φ @ 200 c/c	150
7	b7	12 Φ @ 200c/c	LV.
RETURN WALL			
8	b9	16 Φ - 2 NOS.	300
9	b9A	12 Φ - 2 NOS.	150
10	b10	16 Φ @ 150c/c	150
11	b10A	12 Φ @ 150c/c	150
12	b11	10 Φ @ 150c/c	150
13	b11A	10 Φ @ 150c/c	300
14	b12	16 Φ @ 125c/c (ALT. PLACED @ 175c/c)	150
15	b13	10 Φ @ 125c/c	150
16	b14	10 Φ @ 150c/c	150
17	b15	10 Φ - 2 NOS.	150
18	s1	12 Φ @ 150 c/c	150
19	s2	12 Φ @ 150 c/c	150
20	s3	10 Φ @ 125 c/c	150
21	s4	10 Φ @ 125 c/c	150
22	s5	10 Φ @ 125 c/c	300

NOTE:-

- CONCRETE SHALL BE DESIGN MX WITH MINIMUM 20 DAYS CHARACTERISTIC STRENGTH OF 35 Mpa FOR ALL COMPONENTS.
- 100 MM DIA WEEP HOLES SPACED AT 1000mm c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED 150 mm ABOVE GROUND LEVEL IN A STAGGERED MANNER IN VERTICALLY WALL AS SHOWN WEEP HOLES TO BE PROVIDED AS PER SPECIFICATION.
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 - CONCRETE GRADE - M-40 - 48 x DIA OF BAR
 - CONCRETE GRADE - M-45 - 45 x DIA OF BAR
- HOOK AND OVERLAPS TO BE STANDARD DIMENSION.
- THE MAXIMUM PRESSURE COMING BENEATH FOUNDATION IS 20 t/m²

LEGEND:-

TOP BAR/OUTER FACE
BOTTOM BAR/EARTH FACE
LV. LENGTH VARIES



NOTES:-

1. ALL STRUCTURAL SECTION SHALL BE MS TO IS 2062.
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CLIENT



CENTRAL PUBLIC WORKS DEPARTMENT



Civil Consultancy Services

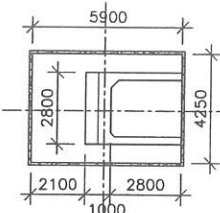
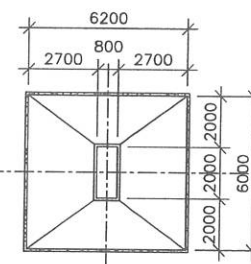
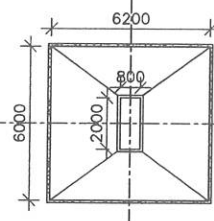
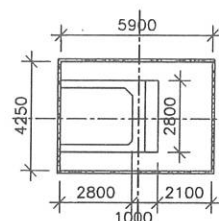
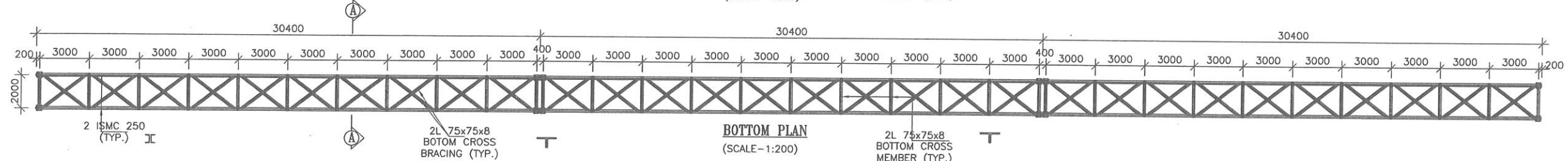
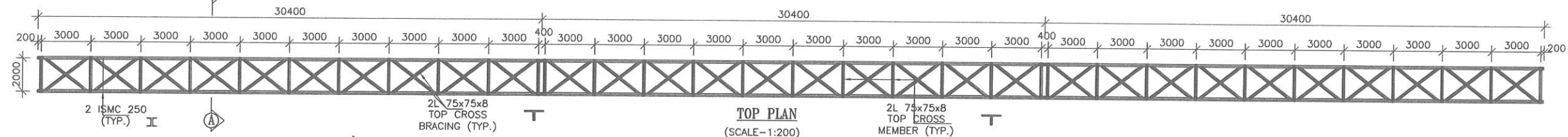
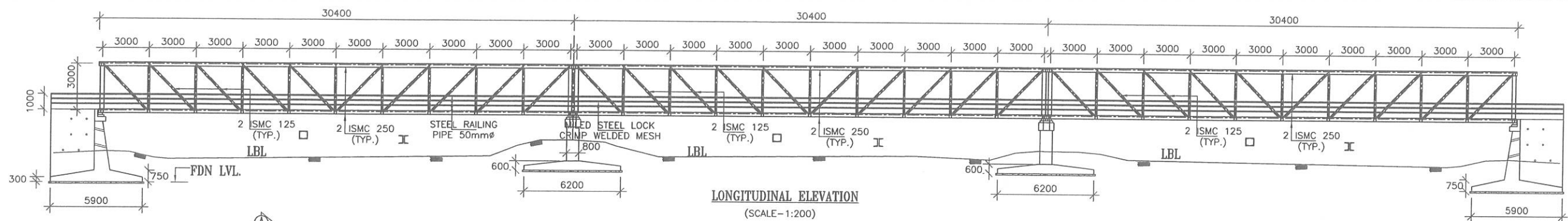
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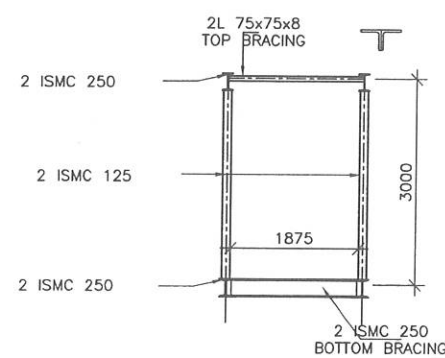
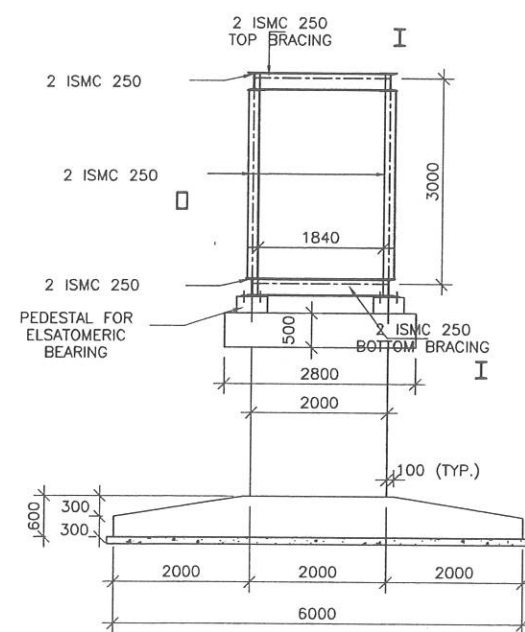
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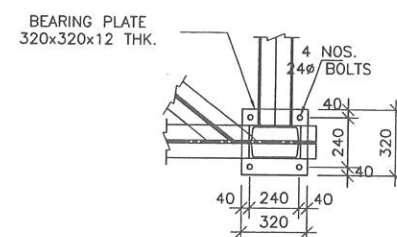
REVISION : R0	TITLE:-
SHEET:	GENERAL ARRANGEMENT DRAWING OF REINFORCEMENT 30.0M
DEC : 2019	
SIZE : A3	
DRAWING NO : HEC/CPWD/AP/FOOT TRACK/03	



FOOTING PLAN
(SCALE-1:200)



SECTION A-A
(SCALE-1:75)



DETAIL OF BEARING PLATE
(SCALE-1:25)

NOTES:-

1. ALL STRUCTURAL SECTION SHALL BE MS TO IS 2062.
2. ALL STEEL SECTION SHALL RECEIVE 0.2 PRIMER COATS OF RED CODE ZINC CHROMATE CONFORMING TO IS 2074.
3. TWO COATS OF SYNTHETIC ENAMEL PAINT CONFORMING TO IS 2932.
4. TOP OF THE BASE PLATE AND BOTTOM OF COLUMN MACHINED.
5. ALL WELDS CONFORMING COLUMN TO BE BASE PLATE ARE 8mm NORMAL SIZE.
6. END CONNECTION ROLLED BEAMS AND CHANNEL SHALL BE DESIGNED FOR MINIMUM OF 60% OF THEIR SHEAR CAPACITY & BUILT UP BEAMS FOR 80% OF THEIR SHEAR CAPACITY IN ADDITION TO AXIAL LOAD.
7. ALL WELD ARE 6mm THICK FILLET WELD UNLESS NOTED OTHERWISE.
8. THIS DRG. IN ONLY GAD.
9. THE DETAILS OF CONNECTION OF THE TRUSS SHALL BE DESIGNED SCHEME OF FABRICATION TRANSPORTATION AND ERECTION AT SITE.

CLIENT



CENTRAL PUBLIC WORKS DEPARTMENT

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NAME OF WORK

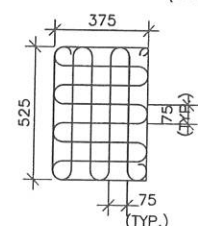
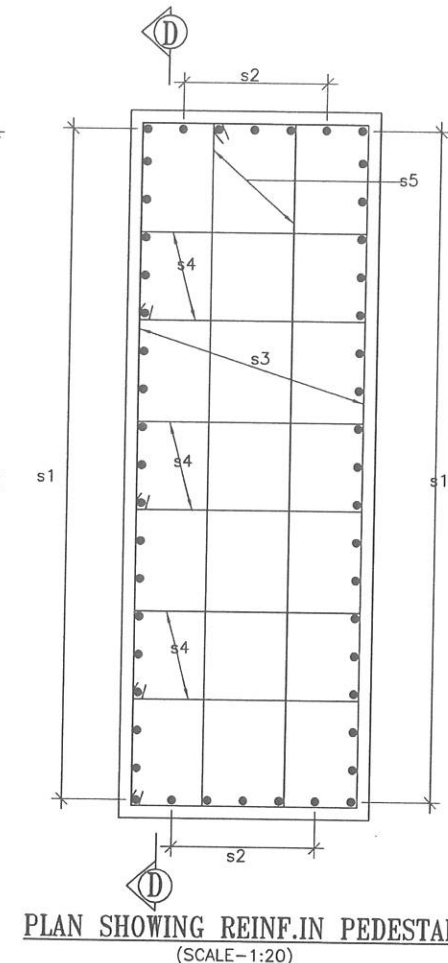
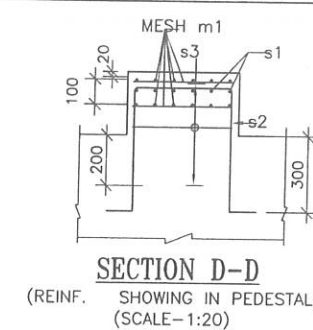
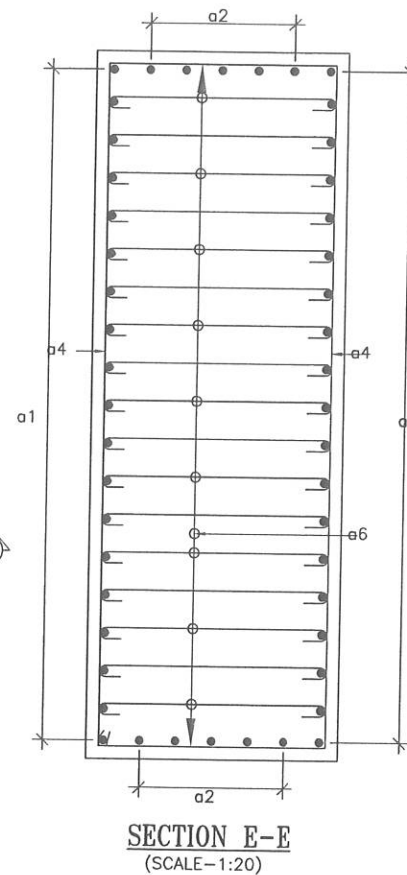
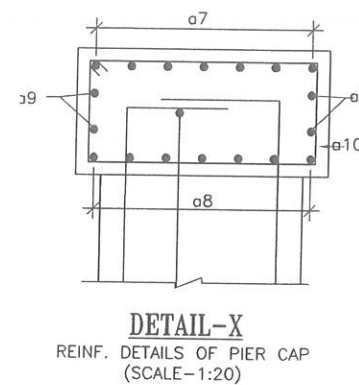
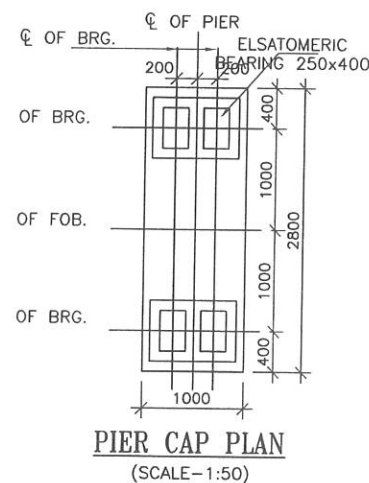
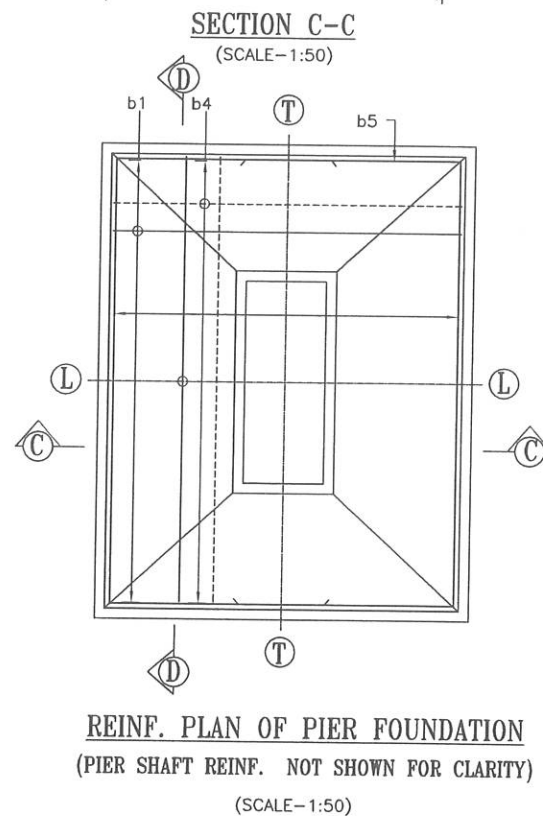
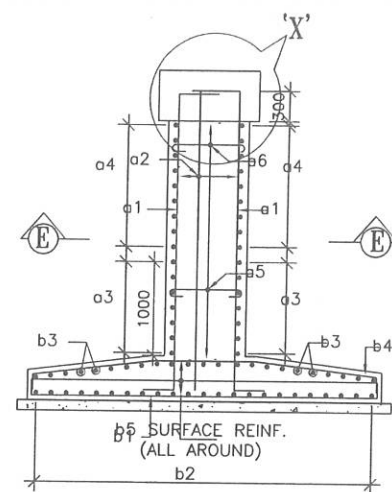
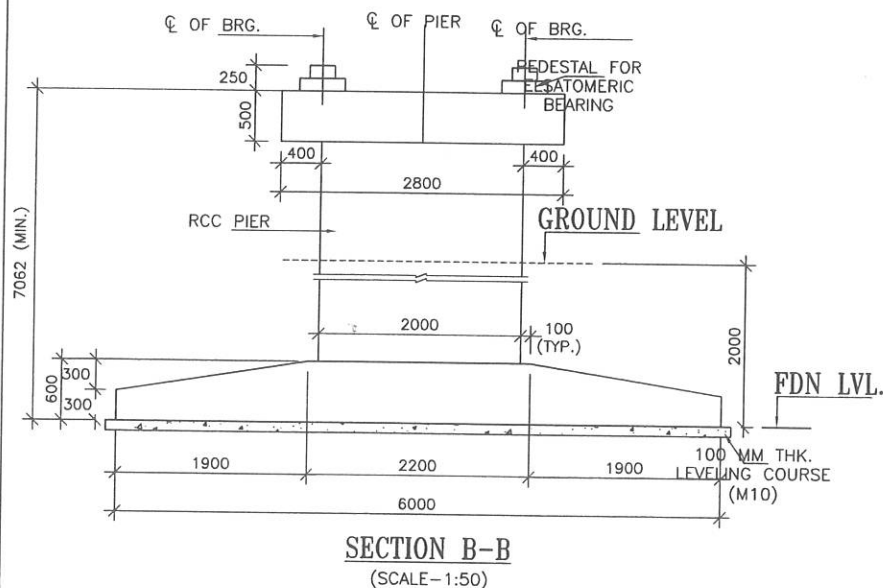
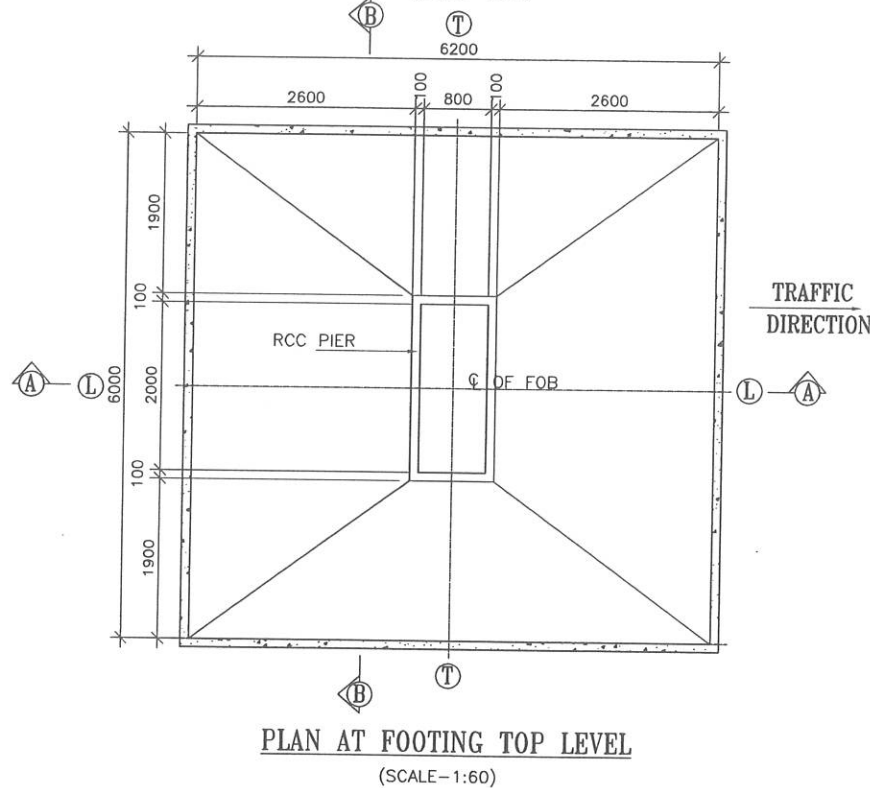
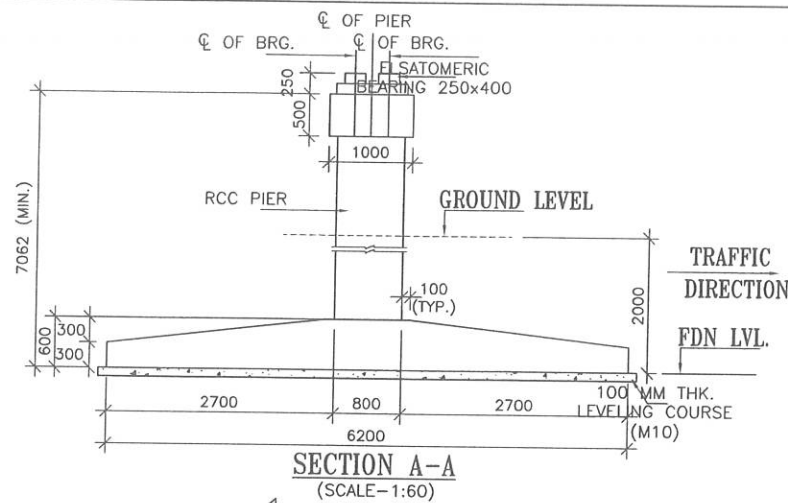
CONSULTANCY SERVICES FOR PREPERATION OF DETAIL PROJECT REPORT
OF CRITICAL INFRASTRUCTURE IN ARUNACHAL PRADESH
SH: FOOT TRACKS ,PATROL ROUTES & FSB

DRAWN BY P.D
DESIGN BY Y.B
APPROVED BY S.G

REVISION : R0
SHEET:
DEC : 2019
SIZE : A3

TITLE:-
GENERAL ARRANGEMENT DRAWING
OF REINFORCEMENT 90.0M

DRAWING NO : HEC/CPWD/AP/FOOT TRACK/03



NOTE:-

- CONCRETE SHALL BE DESIGN Mx WITH MINIMUM 28 DAYS CHARACTERISTIC STRENGTH OF 35 Mpa FOR ALL COMPONENTS.
- THE REINFORCING BARS SHALL BE H.Y.S.D/THERMO MECHANICALLY TREATED (TMT) (GRADE DESIGNATION Fe-500D) CONFORMING TO IS:1786 STANDARDS.
- MINIMUM CLEAR COVER TO OUTER MOST REINFORCEMENT SHALL BE AS UNDER:-
 - a. FOUNDATION - 75MM
 - b. SHAFT DIRT WALL & RETURN WALL - 50MM
 - c. DIRT WALL & CAP - 40MM
- MAXIMUM LAP LENGTH SHALL BE 72 TIMES OF BAR TO BE LAPPED. MINIMUM LAP LENGTH OF REINFORCEMENT FOR FAVOURABLE CONDITION SHALL BE AS UNDER:
 - CONCRETE GRADE - M-30 - 56 x DIA OF BAR
 - CONCRETE GRADE - M-35 - 51 x DIA OF BAR
 - CONCRETE GRADE - M-40 - 48 x DIA OF BAR
 - CONCRETE GRADE - M-45 - 45 x DIA OF BAR
- HOK AND OVERLAPS TO BE STANDARD DIMENSION.
- THE MAXIMUM PRESSURE COMING BENEATH FOUNDATION IS 16 t/M²

LEGEND:-

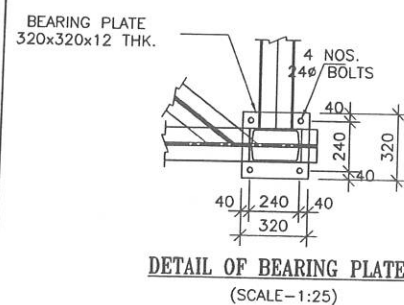
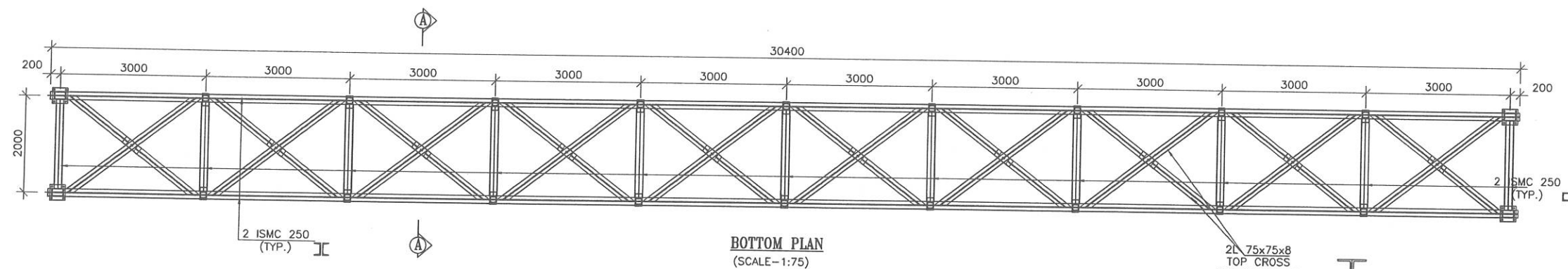
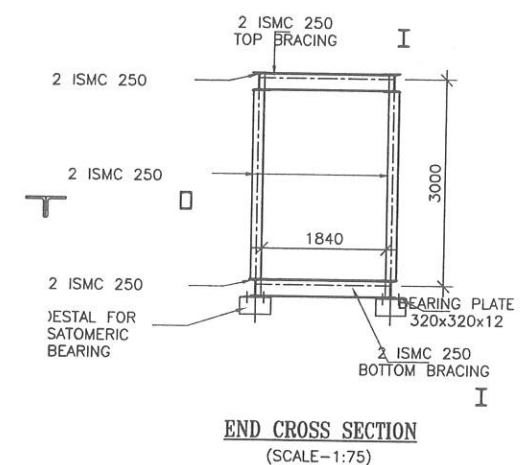
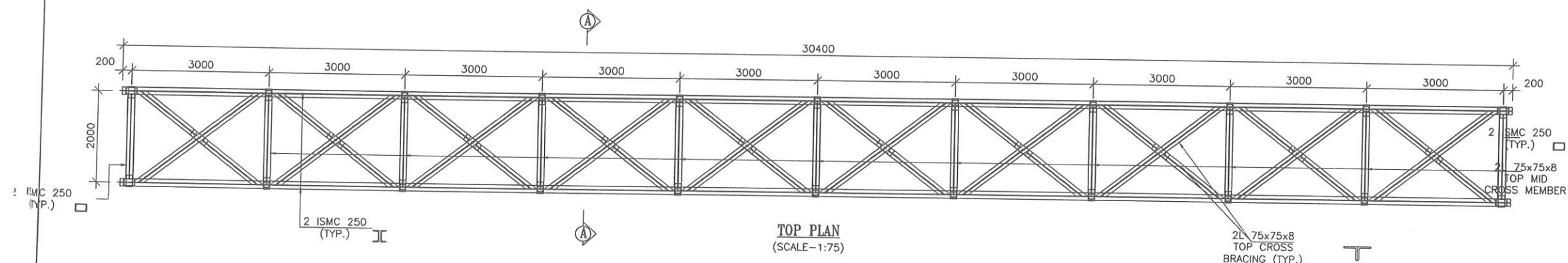
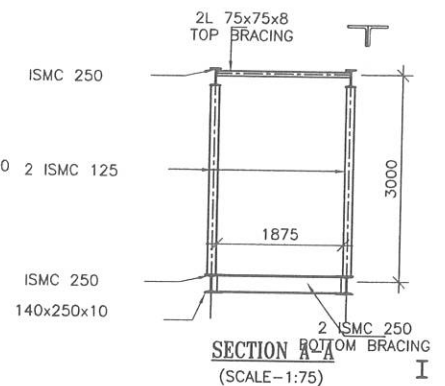
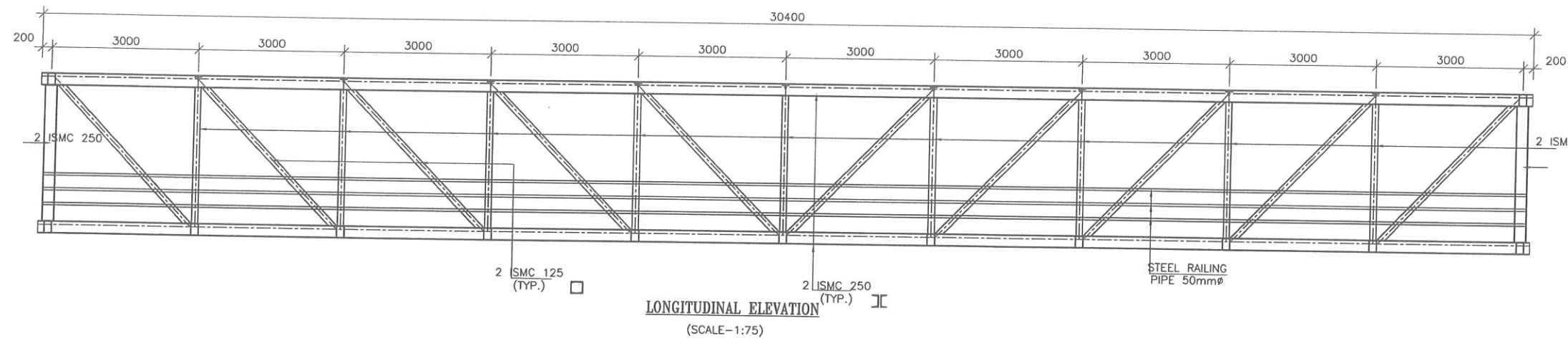
—— TOP BAR/OUTER FACE
 —— BOTTOM BAR/EARTH FACE
 LV. LENGTH VARIES

REINFORCEMENT SCHEDULE

S.NO.	BAR MARKED.	DESCRIPTION	SHAPE
1	a1	22 Ø 12 NOS.	500 300
2	a2	25 Ø - 5 NOS.	500 300
3	a3	12 Ø @ 100c/c	
4	a4	10 Ø @ 150c/c	
5	a5	8 Ø @ LINK (HOR. STAGGERED) @100 c/c	
6	a6	8 Ø @ LINK (HOR. STAGGERED) @150 c/c	
7	a7	16 Ø - 8 NOS.	300
8	a8	12 Ø - 8 NOS.	300
9	a9	10 Ø - 2 NOS.	
10	a10	10 Ø @ 125c/c	

REINFORCEMENT SCHEDULE

S.NO.	BAR MARKED.	DESCRIPTION	SHAPE
1	b1	20 Ø @ 100 c/c	150
2	b2	20 Ø @ 150 c/c	150
3	b3	12 Ø @ 150c/c	150
4	b4	12 Ø @ 150c/c	LV
5	b5	10 Ø @ 200c/c	LV
6	s1	12 Ø @ 150 c/c	150
7	s2	12 Ø @ 150 c/c	150
8	s3	10 Ø @ 125 c/c	
9	s4	10 Ø @ 125 c/c	
10	s5	10 Ø @ 125 c/c	300



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