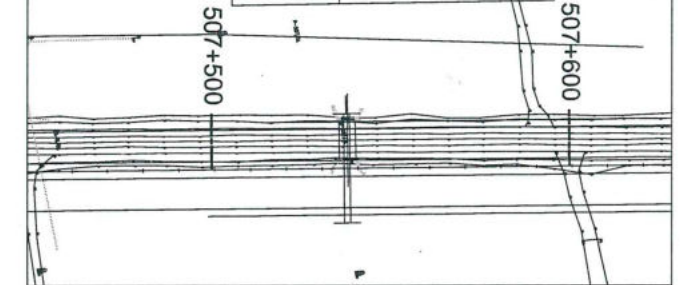


Details Of Box culvert:

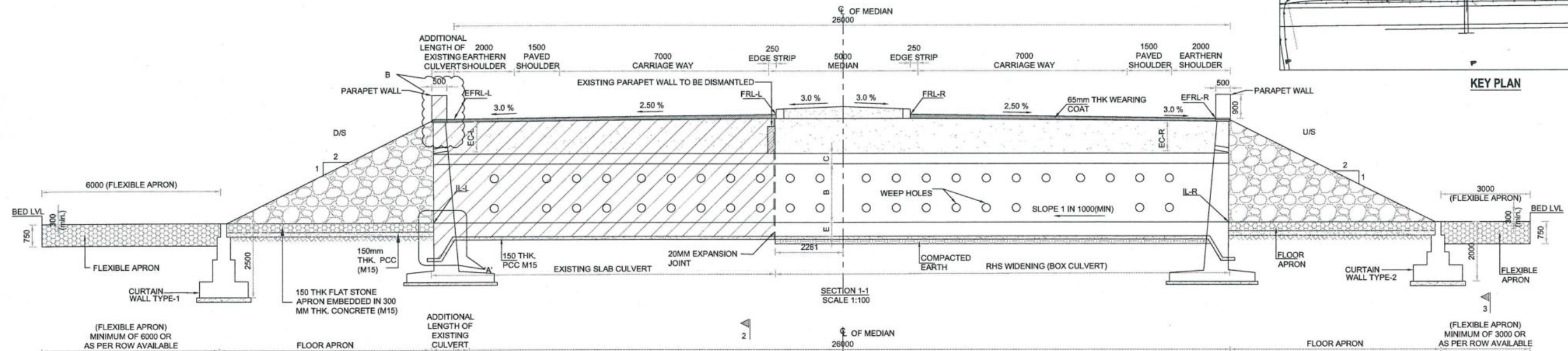
EXISTING CHAINAGE	DESIGN CHAINAGE	SPAN	FRL-L	FRL-R	EFRL-L	EFRL-R	EC-L	EC-R	IL-L	IL-R	CLEAR WIDTH (A)	CLEAR HEIGHT (B)	TOP SLAB THICKNESS (C)	WALL THICKNESS (D)	BOTTOM RAFT THICKNESS (E)	RW	FLOW DIRECTION	RHS
507+882	507+537	1X4.5X3.137	92.442	92.442	92.170	92.170	1.233	1.233	87.705	87.731	4.500	3.137	0.35	0.35	0.35	6.7	R-L	15.281

GOOD FOR CONSTRUCTION

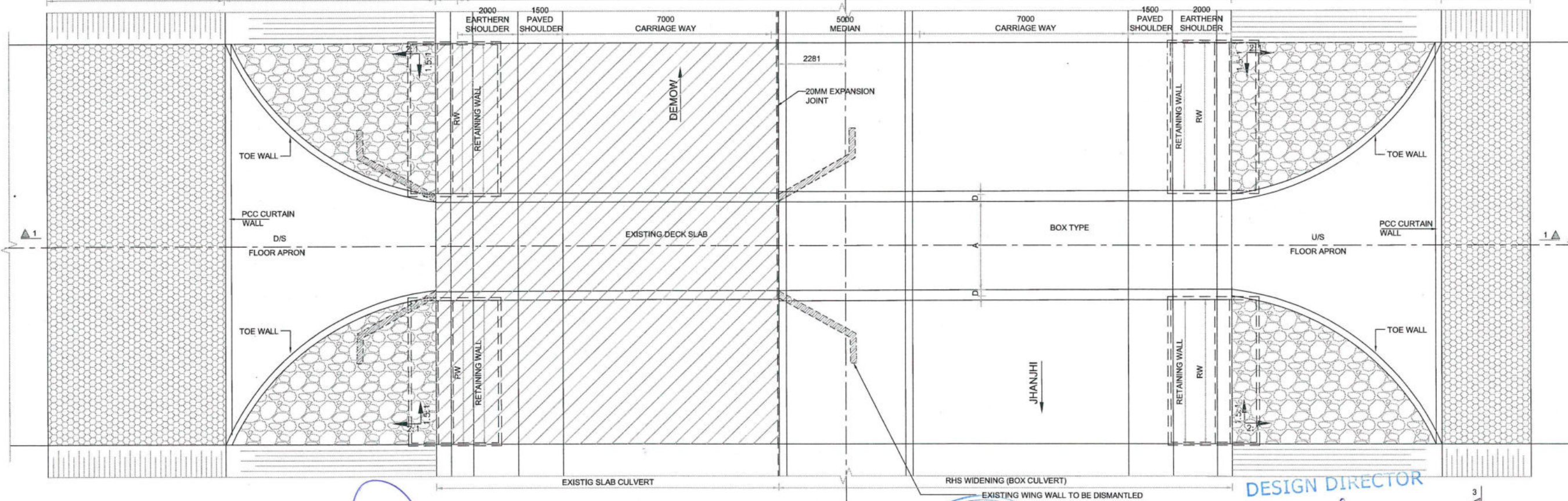
STRUCTURE NO:		17
DESCRIPTION	EXISTING	PROPOSED
CHAINAGE	507882	507537
SPAN	1X4.5X3.317	1X4.5X3.317
TYPE	SLAB	BOX
PROPOSAL	WIDENING	



KEY PLAN



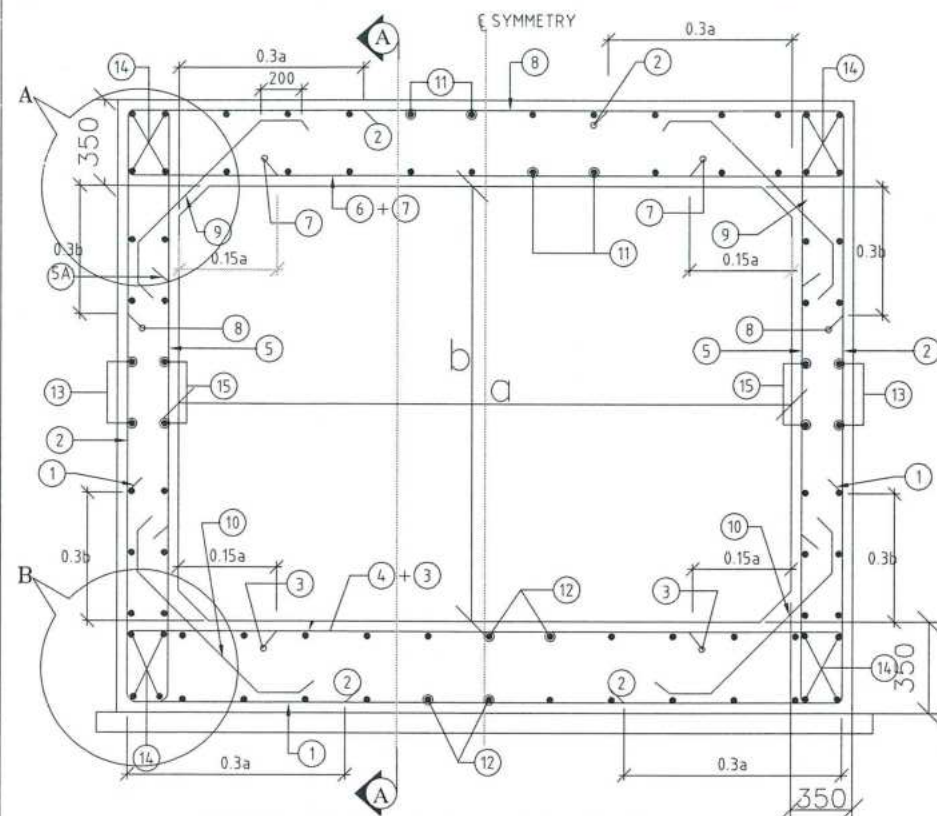
SECTION 1-1
SCALE 1:100



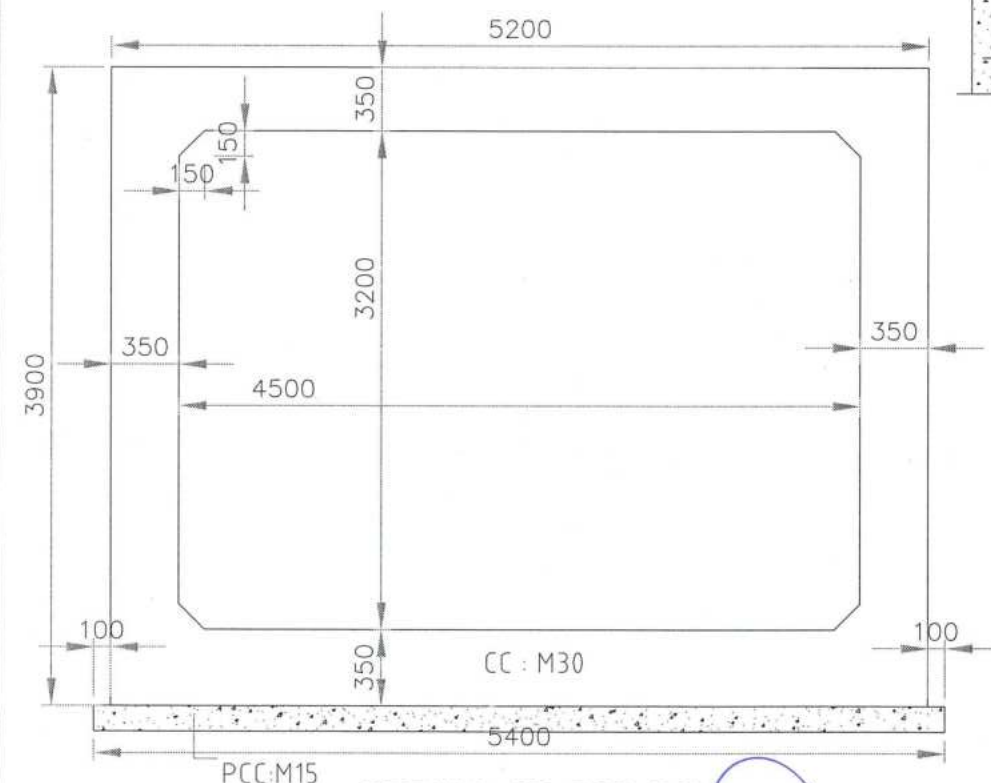
PLAN
SCALE 1:100

DESIGN DIRECTOR

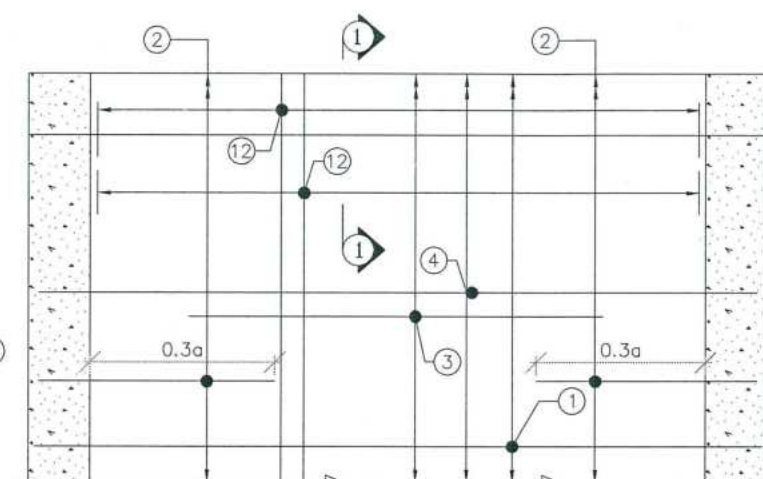
PROJECT FOUR LANING OF JHANJHI TO DEMOW SECTION OF NH-37 FROM EXISTING CH. Km 491+050 TO Km 535+250 (DESIGN CH. Km 490+800 TO Km 534+800) IN THE STATE OF ASSAM UNDER EPC MODE.	CLIENT National Highways infrastructure Development Corporation Ltd. Ministry of Road Transport & Highways, Government of India Branch office : House No.1, Panipath, Ambikagiri Nagar, Zoo road, Guwahati-24	CONTRACTOR GARDNER & THEOBALD 88A, TOPSIA ROAD (SOUTH) HATIE STREET, 7th FLOOR KOLKATA - 700046	DESIGN CONSULTANT PROFESSIONAL CIVIL INFRA PVT. LTD. # 1838, GROUND FLOOR, SIR. M VISVESWARAYA LAYOUT, NAGADEVANAHALLI, BANGALORE - 560 056	PROOF CONSULTANT CHETAN INFRA TECH CONSULTANTS (P) LTD. 7th, 1st FLOOR, 13TH MAIN, SRINAGAR, OPP. PES. COLLEGE, BENGALURU-560050	SAFETY CONSULTANT SMART SAFETY SERVICES # 8-6 & 7, HARI HARA NIVAS, GUMMAKONDA COLONY, HYDERGUDA, HYDERABAD - 500048	AUTHORITY ENGINEER VOYANTS SOLUTIONS PVT. LTD. 403, 4th Floor, BPTP Park Centre, Block A, Jal Vayu Vihar, Sector 30, Gurgaon, Haryana 122001	DESIGN DIRECTOR VASANTH KUMAR PROOF CONSULTANT SAFETY CONSULTANT AUTHORITY CONSULTANT	NAME SHEET SIZE A2 SCALE AS SHOWN SHEET No. 01 OF 02	TITLE: GENERAL ARRANGEMENT DRAWING OF BOX CULVERT (WIDENING) AT DESIGN CH 507+537 (EXISTING CH 507+882) DRAWING No. PCIPL/NH-37/J-D/STR/BC/06 REV. 00
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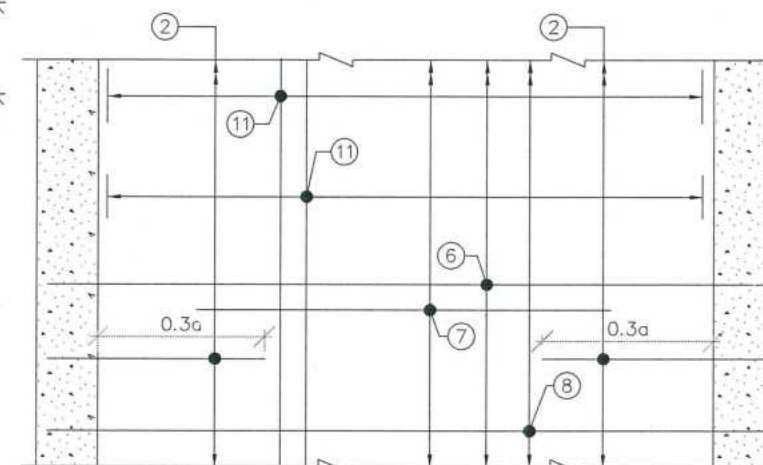
REINFORCEMENT DETAILS OF RCC BOX
(SCALE 1:20)



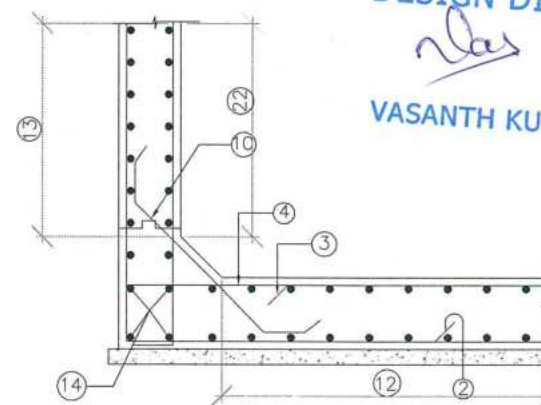
DETAILS OF RCC BOX
(SCALE 1:30)



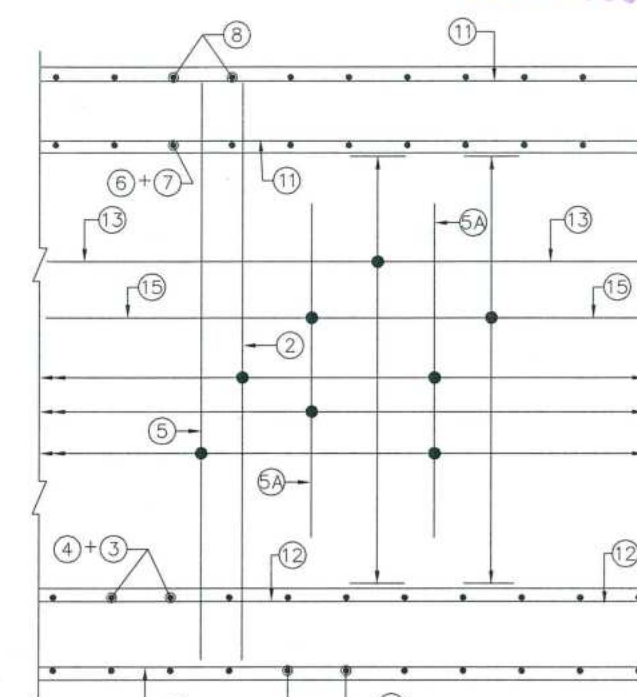
REINFORCEMENT DETAILS OF BOTTOM SLAB
HAUNCH BAR NOT SHOWN IN PLAN FOR CLARITY
(SCALE 1:25)



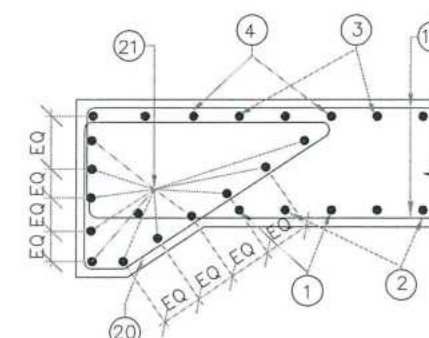
REINFORCEMENT DETAILS OF TOP SLAB
HAUNCH BAR NOT SHOWN IN PLAN FOR CLARITY
(SCALE 1:25)



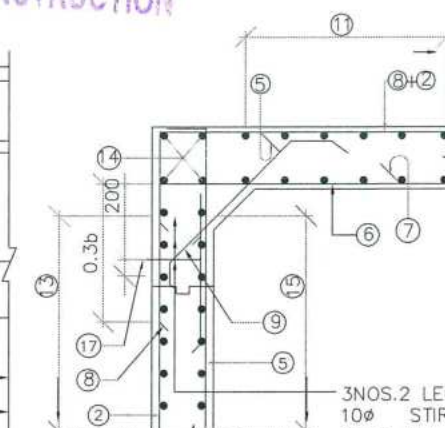
DETAIL -B
(SCALE 1:50)



SECTION A-A
(SCALE 1:25)



SECTION 1-1
(SCALE 1:30)



DETAIL -A
(SCALE 1:50)

DESIGN CH: 507+537
SCHEDULE OF REINFORCEMENT

BAR MARK	SHAPE OF BARS (NOT TO SCALE)	BAR DIA IN mm	SPACING OR NO. OF BAR
1		16	150 C/C
2		16	150 C/C
3		10	100 C/C
4		12	100 C/C
5		12	175 C/C
5A		12	100 C/C
6		16	150 C/C
7		12	150 C/C
8		16	150 C/C
9		12	200
10		12	200
11		12	200
12		12	200
13		12	200
14		12	16 NOS.
15		12	200
16		12	200
17		12	250
18		12	200
19		12	200
20		12	150
21		12	20 NOS.

DESIGN DIRECTOR

VASANTH KUMAR T.H.

- NOTES:
- ALL DIMENSIONS ARE IN MILLIMETERS & LEVELS ARE IN METERS.
 - DIMENSIONS ARE NOT TO BE SCALED, ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.
 - GRADE OF CONCRETE : M30 FOR BOX.
 - GRADE OF STEEL : Fe500.
 - CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS.
TOP SLAB = 75mm (TOP FACE); 50mm (BOTTOM FACE)
BOTTOM SLAB = 50mm (TOP FACE); 75mm (BOTTOM FACE)
OUTER WALL = 75mm (EARTH FACE); 50mm (WATER FACE).
 - ANCHORAGE LENGTH SHALL BE 40x BAR DIA (Ø)
 - LAP LENGTH OF THE STEEL SHALL BE PROVIDED AS BELOW.
LAP LENGTH = K x l
K = 1.00 (<25% LAPPED BAR RELATIVE TO TOTAL CROSS SECTIONAL AREA.)
K = 1.15 (33% LAPPED BAR RELATIVE TO TOTAL CROSS SECTIONAL AREA.)
K = 1.40 (50% LAPPED BAR RELATIVE TO TOTAL CROSS SECTIONAL AREA.)
ALTERNATIVELY BAR SPLICE COUPLER CAN BE USED FOR REBAR LAPPING AND SPLICING.
 - NOT MORE THAN 50% OF BARS CAN BE LAPPED AT A SECTION AND LAPS SHALL BE STAGGERED.
 - FOR DETAILS OF APPROACH SLAB, HAND RAILING RETAINING WALL, REFER SEPARATE MISCELLANEOUS DRAWINGS.
 - SBC OF SOIL BELOW THE BOX STRUCTURE SHALL NOT BE LESS THAN 12.0 T/Sq.m

FOR APPROVAL

PROJECT FOUR LANE OF JHANJHI TO DEMOW SECTION OF NH-37 FROM EXISTING CH. Km 491+050 TO Km 535+250 (DESIGN CH. Km 490+800 TO Km 534+800) IN THE STATE OF ASSAM UNDER EPC MODE.	CLIENT National Highways Infrastructure Development Corporation Ltd. Ministry of Road Transport & Highways, Government of India Branch office : House No.1, Panipath, Ambikagiri Nagar, Zoo road, Guwahati-781004	CONTRACTOR Ganesh Dutt & Co. Ltd. 100, TOPSI ROAD (SOUTH) CHATEAU STREET, 7th FLOOR KOLKATA - 700048	DESIGN CONSULTANT PROFESSIONAL CIVIL INFRA PVT. LTD. # 1838, GROUND FLOOR, SIR M. VISVESWARAYA LAYOUT, NAGADEVANAHALLI, BANGALORE - 560096	PROOF CONSULTANT CHETAN INFRA TECH CONSULTANTS (P) LTD., 7/11, 1ST FLOOR, 1316 MAIN, SRINAGAR OPP. PES COLLEGE, BANGALURU-560096	SAFETY CONSULTANT SMART SAFETY SERVICES 403, 4th Floor, BPTP Park Centre, Block A, Al Vayu Vihar, Sector 30, Gurgaon, Haryana 122001	AUTHORITY ENGINEER VOYANTS SOLUTIONS PVT. LTD. 403, 4th Floor, BPTP Park Centre, Block A, Al Vayu Vihar, Sector 30, Gurgaon, Haryana 122001	NAME SCALE AS SHOWN SHEET No. 01 OF 01	SHEET SIZE A2	TITLE: REINFORCEMENT DETAILS OF BOX CULVERT (1X4.5X3.2) AT DESIGN CHAINAGE 507+537 (EXISTING CHAINAGE 507+882) DRAWING No. PC/PL/NH-37/JD/BC/STR/REIN/06 REV. 00
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