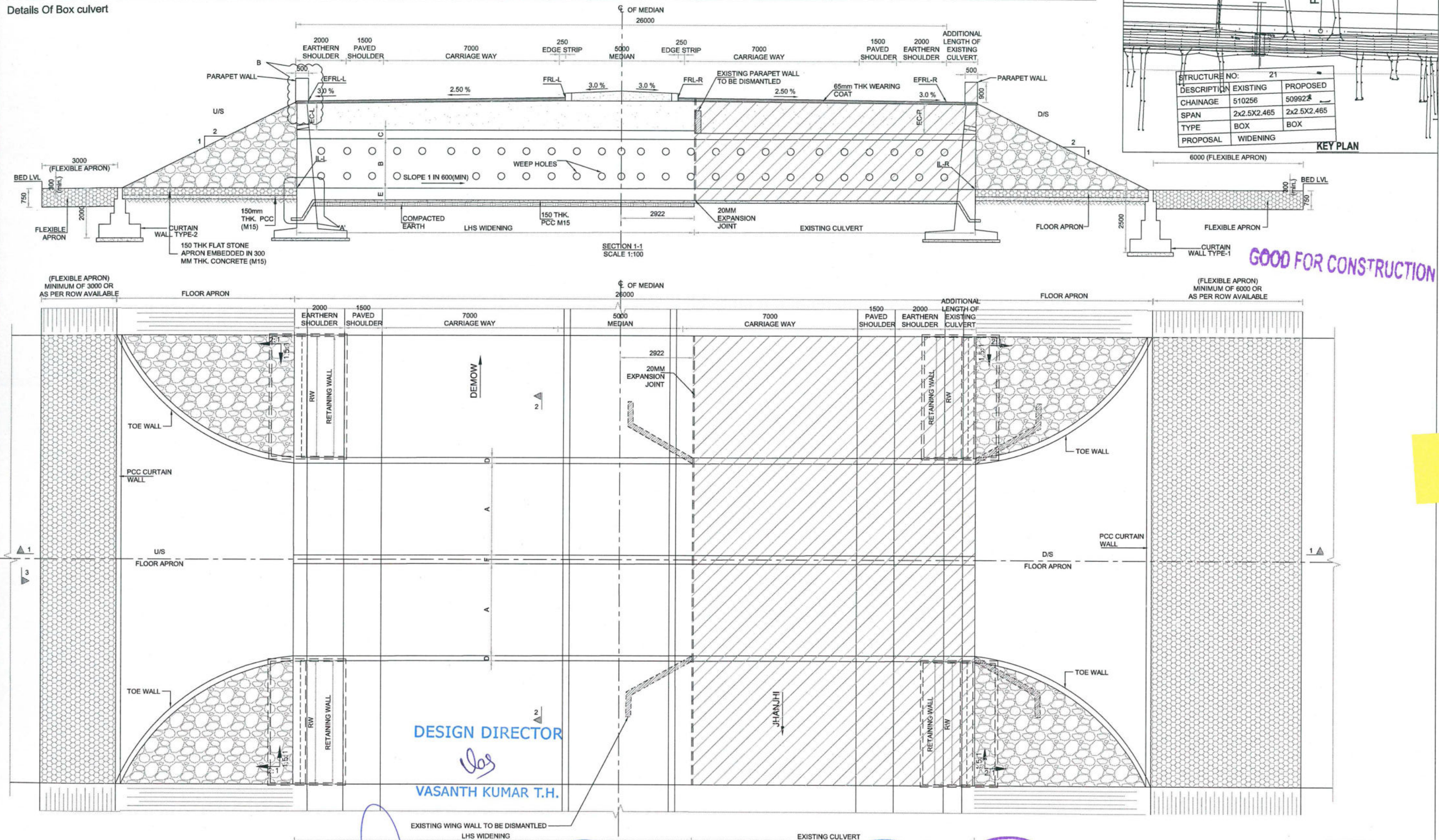


EXISTING CHAINAGE	DESIGN CHAINAGE	SPAN	FRL-L	FRL-R	EFRL-L	EFRL-R	EC-L	EC-R	IL-L	IL-R	CLEAR WIDTH (A)	CLEAR HEIGHT (B)	TOP SLAB THICKNESS (C)	WALL THICKNESS (D)	BOTTOM RAFT THICKNESS (E)	INNER WALL THICKNESS (F)	RW	FLOW DIRECTION	LHS WIDENING
510+256	509+922	2X2.5X2.465	91.998	91.998	91.726	91.726	0.962	0.962	88.096	88.049	2.500	2.465	0.25	0.35	0.30	0.25	5.5	L-R	15.922

Details Of Box culvert



**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**  
Gannon Dunkerley & Co. Ltd.  
88A, TOPSIA ROAD (SOUTH)  
HAUTE STREET, 7th FLOOR  
KOLKATA - 700046

**DESIGN CONSULTANT**  
PROFESSIONAL CIVIL INFRA PVT. LTD.  
#1838, GROUND FLOOR  
SIR. M.VISVESWARAYALAYOUT,  
NAGADEVANAHALLI  
BANGALORE - 560 066

**PROOF CONSULTANT**  
CHETAN INFRA TECH  
CONSULTANTS (P) LTD.  
#11, 1ST FLOOR  
13TH MAIN, SRINAGAR,  
CHAPES COLLEGE  
BANGALURU-560053

**SAFETY CONSULTANT**  
SMART SAFETY SERVICES  
#3-5 & 7, HARI HARA NIVAS,  
GUMMAKONDA COLONY,  
HYDERGUDA,  
HYDERABAD - 500048

**AUTHORITY ENGINEER**  
VOYANTS SOLUTIONS PVT. LTD.  
Date.....  
#103, 11th Floor, BPTP Park  
Centre, Block A, Jai Vayu  
Vihar, Sector 30,  
Gurgaon, Haryana 122001

NAME	SHEET SIZE
DESIGN DIRECTOR	A2
PROOF CONSULTANT	SCALE
SAFETY CONSULTANT	AS SHOWN
AUTHORITY CONSULTANT	SHEET No. 01 OF 02

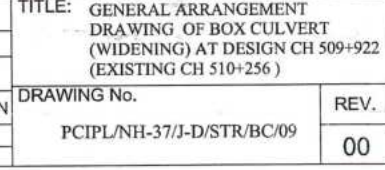
**TITLE:** GENERAL ARRANGEMENT  
DRAWING OF BOX CULVERT  
(WIDENING) AT DESIGN CH 509+922  
(EXISTING CH 510+256)

**DRAWING No.**  
PCIPL/NH-37/J-D/STR/BC/09

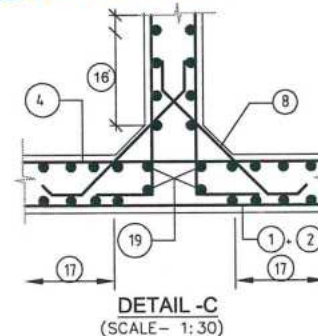
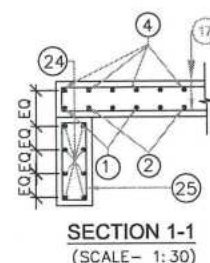
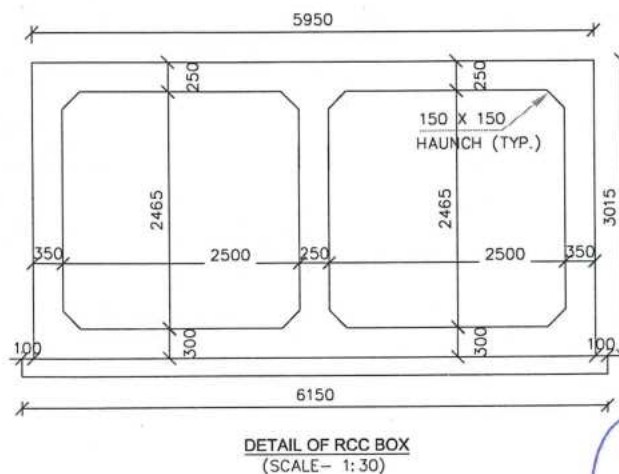
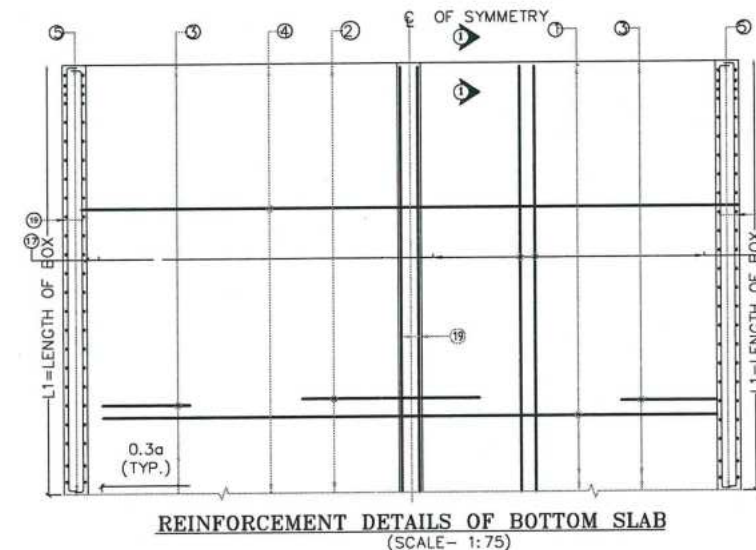
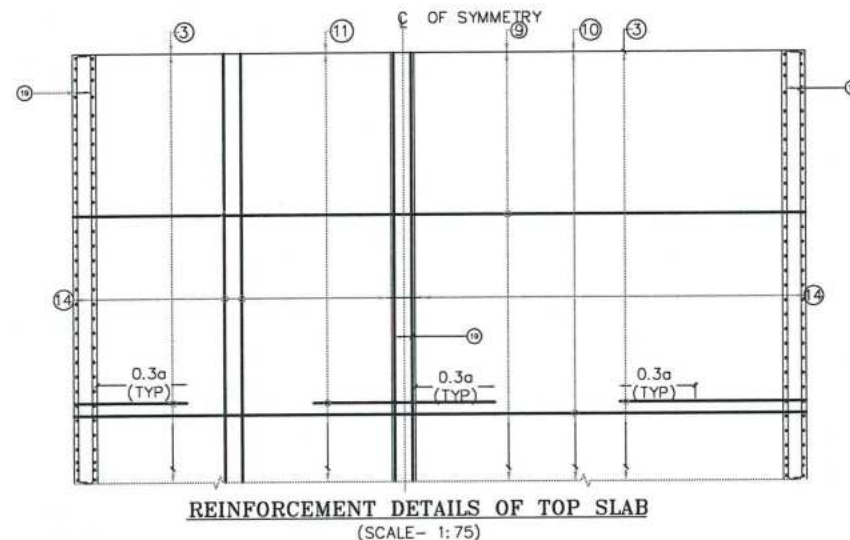
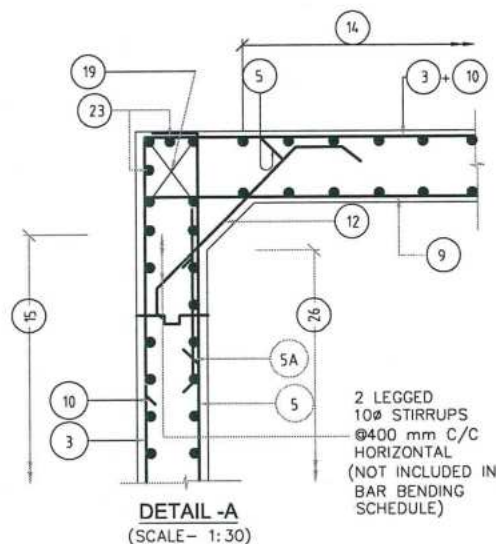
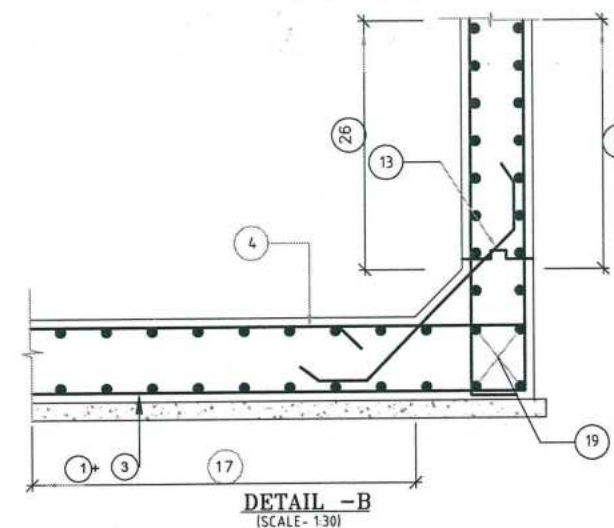
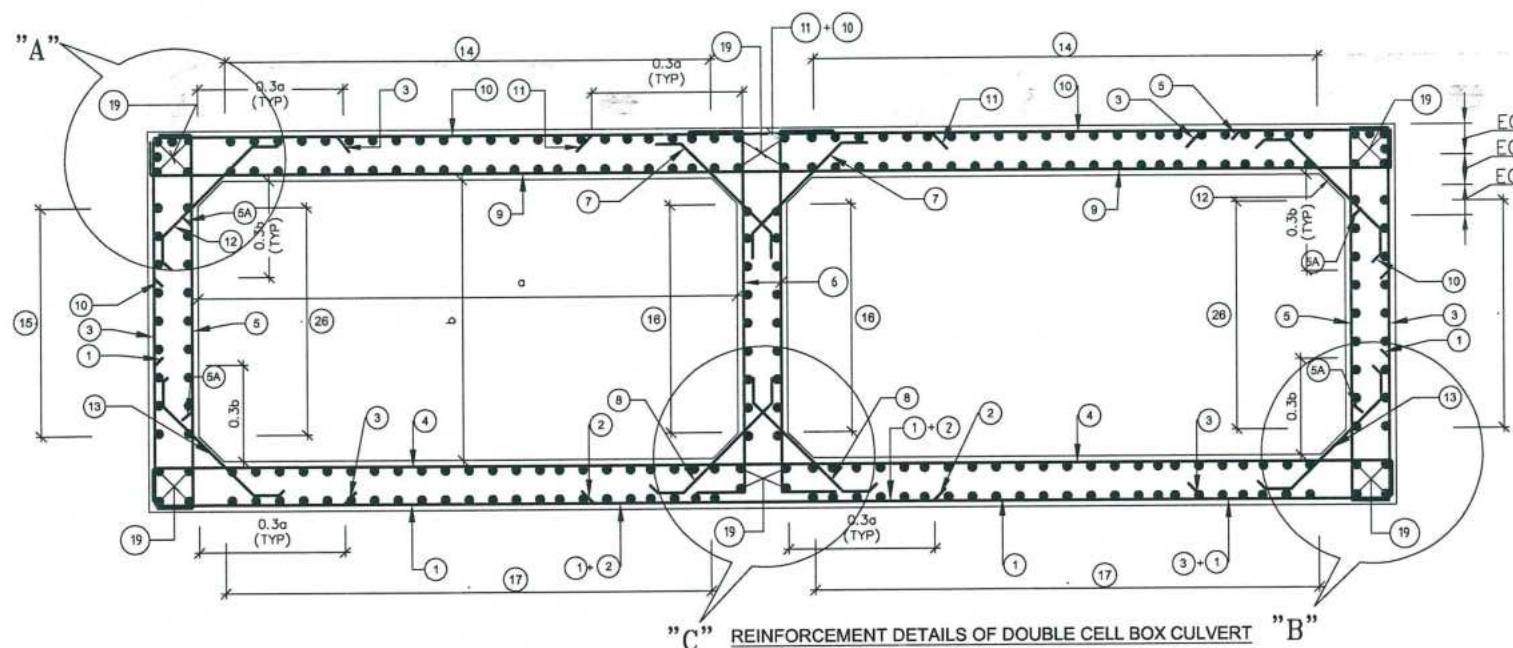
**REV.**  
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FOR APPROVAL









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

DESIGN CH: 509+922

#### REINFORCEMENT DETAILS:-

BAR MKD.	SHAPE	DIA (mm)	SPACING/ Nos.
1		16	100 C/C
2		10	100 C/C
3		10	100 C/C
4		12	100 C/C
5		10	125 C/C
5A		10	125 C/C
6		10	200 C/C
7		10	125 C/C
8		10	100 C/C
9		12	125 C/C
10		16	100 C/C
11		16	100 C/C
12		10	125 C/C
13		10	100 C/C
14		10	200 C/C
15		10	200 C/C
16		10	200 C/C
17		10	200 C/C
18	--	--	NOT USED
19		10	24 NOS.
20		10	10 NOS.
21		--	NOT USED
22	--	--	NOT USED
23		10	4 NOS.
24		10	200 C/C
25		10	20 NOS.
26		10	200 C/C

FOR APPROVAL

<b>PROJECT</b> 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.	<b>CLIENT</b> 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	<b>CONTRACTOR</b> Gannon Dunkerley & Co. Ltd. 16A, TOPSIA ROAD (SOUTH), HAUTE STREET, 7th FLOOR KOLKATA - 700046	<b>DESIGN CONSULTANT</b> PROFESSIONAL CIVIL INFRA PVT. LTD. # 1838, GROUND FLOOR, SIR, M. VISVESWARAYA LAYOUT, NAGADEVANAHALLI, BANGALORE - 560 056	<b>PROOF CONSULTANT</b> CHETAN INFRA-TECH CONSULTANTS (P) LTD. 7/11, 1ST FLOOR, 13TH MAIN, SINGAR, OPP. PES COLLEGE, BENGALURU-560050	<b>SAFETY CONSULTANT</b> SMART SAFETY SERVICES # 3-5-6 & 7, HARI HARA NIVAS, GUMMAKONDA COLONY, HYDERABAD - 500048	<b>AUTHORITY ENGINEER</b> VOYANTS SOLUTIONS PVT. LTD. Date... 403, 4th Floor, BPTP Park Central, Block A, Jai Mayu Vihar, Sector 50, Gurgaon, Haryana 122001	<b>NAME</b> SHEET SIZE DESIGN DIRECTOR A2 PROOF CONSULTANT SCALE SAFETY CONSULTANT AS SHOWN AUTHORITY ENGINEER SHEET No. CONSULTANT 01 OF 01	<b>TITLE:</b> REINFORCEMENT DETAILS OF BOX CULVERT (2X2.5X2.465) AT DESIGN CHAINAGE 509+922 (EXISTING CHAINAGE 510+256) <b>DRAWING No.</b> PCIL/NH-37/ID/BC/STR/REIN/09 <b>REV.</b> 00
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