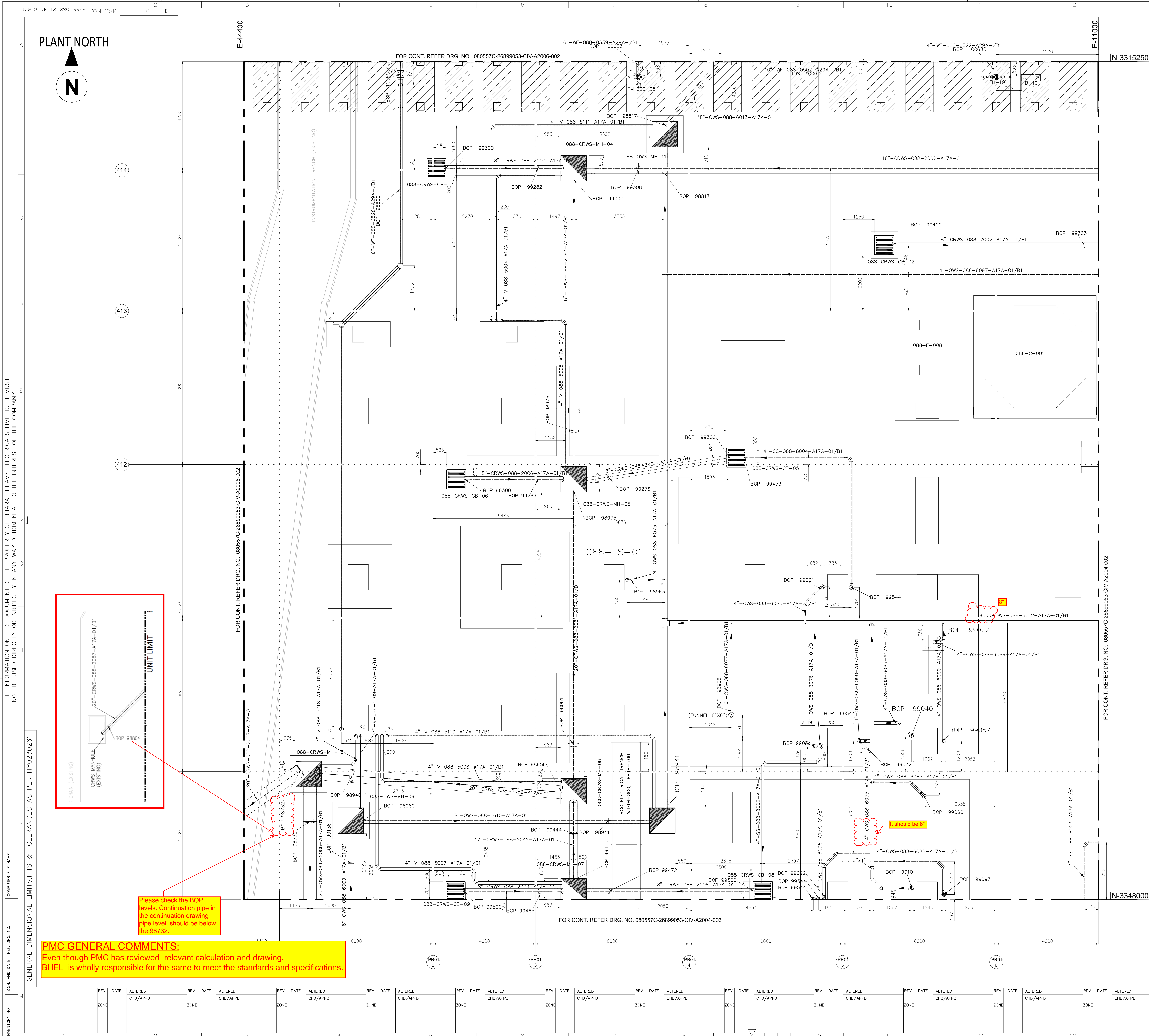


DATE	REF. DRG. NO.	COMPUTER FILE NAME

GENERAL DIMENSIONAL LIMITS, FITS & TOLERANCES AS PER HY0230261




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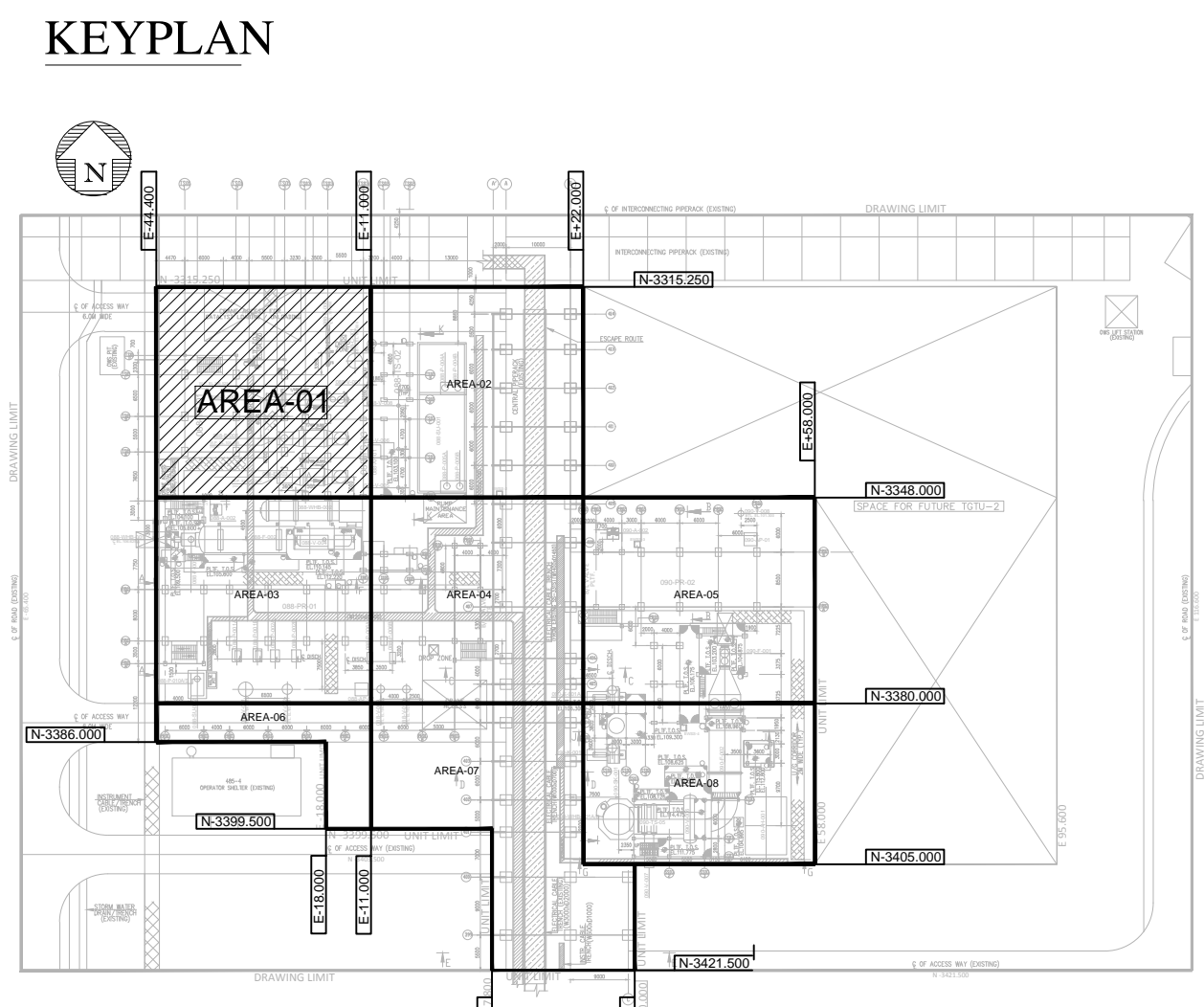












NOTES:-

1. ALL DIMENSIONS, LEVELS & CO-ORDINATES ARE IN MM EXCEPT DIAMETER OF PIPES WHICH ARE IN INCHES. ALL LEVELS ARE WITH RESPECT TO HIGHEST POINT OF PAVEMENT LEVEL 100300, WHICH CORRESPONDS TO 4360 mm ABOVE INDIAN MEAN SEA LEVEL.
2. FOR STANDARD ABBREVIATIONS, LEGENDS AND SYMBOLS FOR GENERAL CIVIL WORKS REFER DWG. NO. 080557-000-STD-1490-001.
3. UNDERGROUND PIPING WHEREVER PASSING OVER FOUNDATION RAFT SHALL BE LAID AFTER CONSTRUCTION OF FOUNDATION.
4. A MINIMUM CUSHION COVER FOR PIPES IN PAVED AREA SHOULD BE PROVIDED AS FOLLOWS.
 - a) SIZE UP TO 6" = 300 mm (FOR EQUIPMENT DRAIN POINT TO NEAREST MAIN HEADER)
 - b) 6" AND ABOVE = 450 mm.
 - c) CRANE/TRUCK MOVEMENT AREA = 750 mm (PIPE SHOULD ALSO BE ENCASED WITH 150 mm THICK CONCRETE)
5. FOR UNDERGROUND CROWS, OWS, SS SHALL BE PROVIDED WITH EXTENDING 3LPE COATING AS PER JOB SPECIFICATION NO. 080557-000-JSS-1300-001. THE FINAL COATING OF PIPING FOR UNDERGROUND PIPING SHALL BE UP TO A HEIGHT OF MINIMUM 500 MM ABOVE/BEYOND HPP.
6. ALL SEALED MANHOLES SHALL BE PROVIDED WITH VENT PIPES OF DIAMETER 4". VENT PIPE SHALL BE TAKEN TO ATLEAST 1M ABOVE THE TOP TIER OF PIPE RACK OR NEARBY PLANT (WITHIN 15M RADIUS OF MANHOLE).
7. RCC PAVEMENT SHALL BE MADE ONLY AFTER CASTING OF FOUNDATIONS, LAYING ALL UNDERGROUND PIPING, UNDERGROUND PORTION OF VENT PIPES, ELECTRICAL SLEEVES, ELECTRICAL EARTHING ETC. IN POSITION.
8. OWS/SS SHALL BE CONNECTED TO UNDERGROUND HEADER THROUGH A FUNNEL OF 6" x 4" (EXCEPT AS MENTIONED IN DRAWING).
9. FOR DETAILS OF RCC PAVEMENT REFER STANDARD NO. 080557-000-STD-1490-003.
10. PIPING MATERIAL CLASS SHALL BE AS FOLLOWS:-
 - CROWS= A17A
 - OWS/SS/VENT= A17A
 - WCR= A30A
 - UNDERGROUND FIRE WATER= A30A
 - ABOVEGROUND FIRE WATER= A32A
11. FOR LOCATION OF APPROACH ROAD, PAVEMENT, CATCHMENT AREA FOR CATCH BASIN ETC. REFER PAVEMENT LAYOUT DRAWING 080557C-26899053-CW-A2401-043.

LEGENDS :-

FM-XX	- DOUBLE HEADED FIRE HYDRANT
FM-XX	- WATER CUM FOM MONITOR (500-1000 GPM CAPACITY)
HB-XX	- HOSE BOX
U/G	- UNDER GROUND
A/G	- ABOVE GROUND
N	- ISOLATION VALVE
HPH(100-300)	- HIGHEST PAVEMENT POINT
LPF(100-150)	- LOWEST PAVEMENT POINT
BL	- BED LEVEL
BOP	- BOTTOM OF PIPE
	- SEALED MANHOLE
	- CATCH BASIN
	- BARRICADING FOUNDATION (TEMPORARY STRUCTURE)





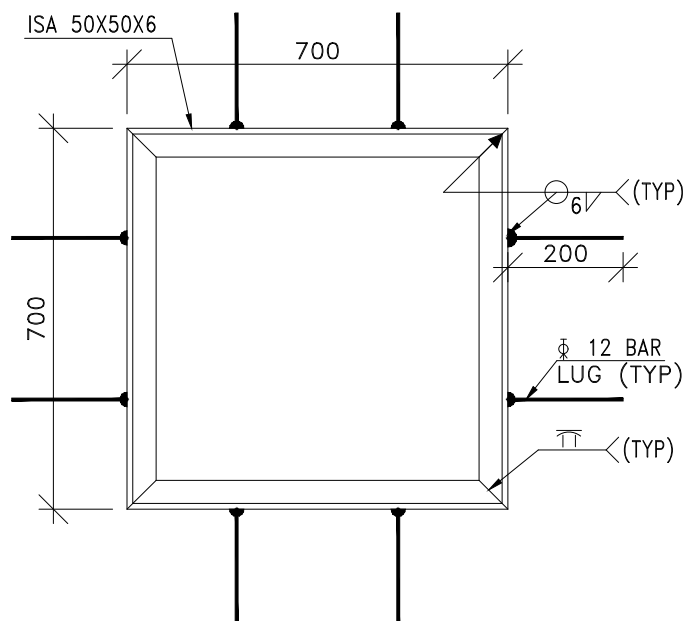
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CLIENT				INDIAN OIL CORPORATION LIMITED PARADIP REFINERY PROJECT PARADIP, ORISSA																			
CONSULTANT				TECHNIP ENERGIES																			
PROJECT		525 TPD STANDBY SRU PROJECT IOCL PARADIP REFINERY, ODISHA, INDIA																					
		BHARAT HEAVY ELECTRICALS LTD. HYDERABAD		<table><tr><th>NAME</th><th>SIGN.</th><th>DATE</th><th>NO OF VAR.</th></tr><tr><td>DRN. EIL</td><td></td><td>11.11.21</td><td></td></tr><tr><td>CHD. DPK</td><td></td><td>15.11.21</td><td></td></tr><tr><td>APPD. GVP</td><td></td><td>15.11.21</td><td></td></tr></table>		NAME	SIGN.	DATE	NO OF VAR.	DRN. EIL		11.11.21		CHD. DPK		15.11.21		APPD. GVP		15.11.21			
NAME	SIGN.	DATE	NO OF VAR.																				
DRN. EIL		11.11.21																					
CHD. DPK		15.11.21																					
APPD. GVP		15.11.21																					
DEPT.	UNITS, DMS, OR 	SCALE 1:50	WEIGHT (KG)	REF. TO ASSY. DCR.	ITEM NO.	NO OF ITEMS																	
TITLE UNDERGROUND PIPING LAYOUT AREA-A			CARD CODE BHEL DRG NO B390-008-81-41-04601 CUST DRG NO 0055576-2889903-CIV-A2004-0	SHT. NO.	NO. OF SHT.	REV. 0																	

PMC GENERAL COMMENTS:
Even though PMC has reviewed relevant calculation and drawing, BHEL is wholly responsible for the same to meet the standards and specifications.

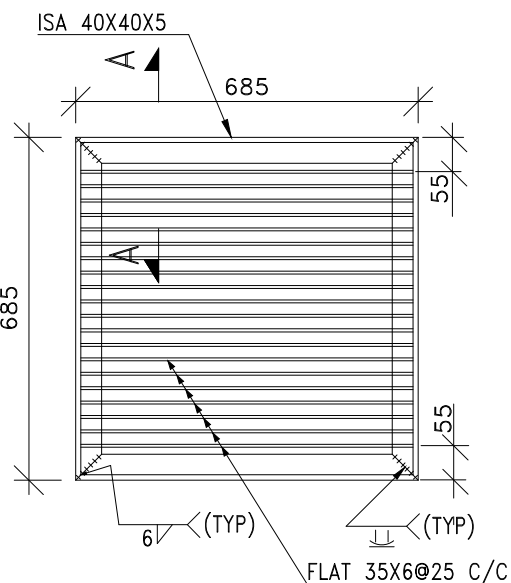
B.H.E.L. HYDERABAD- 500032
PROJECT ENGINEERING DEPARTMENT
RELEASED FOR CONSTRUCTION
DATE: 23.12.2021
SIGN: *[Signature]*


ENGINEERS INDIA LIMITED
 NEW DELHI

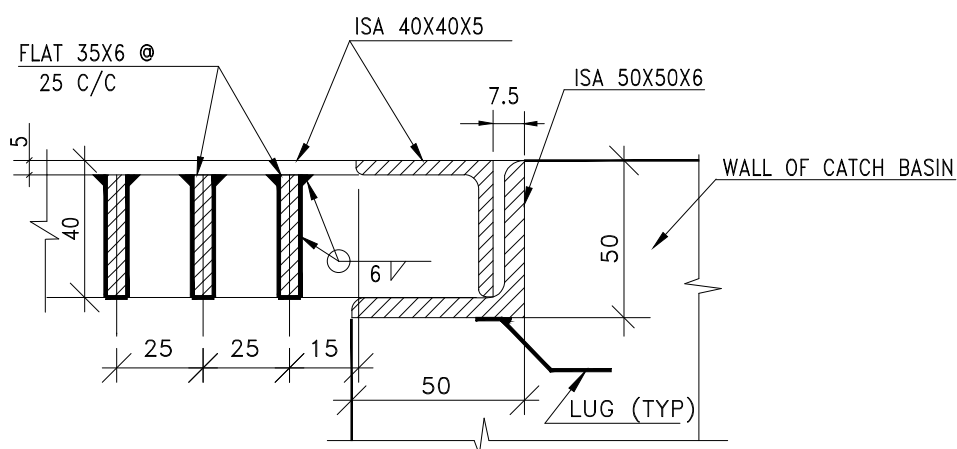
		KHARAT HWY ELECTRICALS LTD. HYDERABAD		NAME EIL CHD. APPD.		SIGN. EIL CHD. GPK		DATE 11.21 15.11 15.11 15.11		NO. OF V.	
DEPT. UNTO. DIMS. OF 		SCALE 1:50		WEIGHT (KG) -N-A-		REF. TO ASSY. DRG. -N-A-		ITEM NO. -N-A-		NO. OF ITEMS	
TITLE UNDERGROUND PIPING LAYOUT AREA-01				CARD NO. 08057C-26899053-AG-A204-010		BUEL DRG. NO. 300-1058-01-41-04601 CUST DRG. NO. 08057C-26899053-AG-A204-010		REV. 0 NO. OF SHIT, 1		REV. 0 NO. OF SHIT, 1	



DETAIL OF FRAME



DETAIL OF GRATING



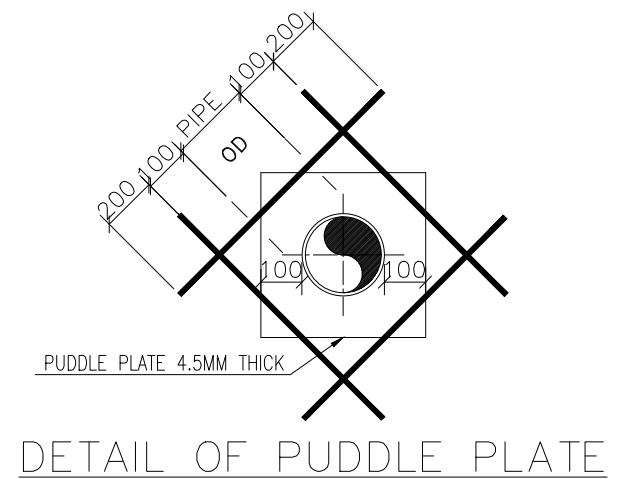
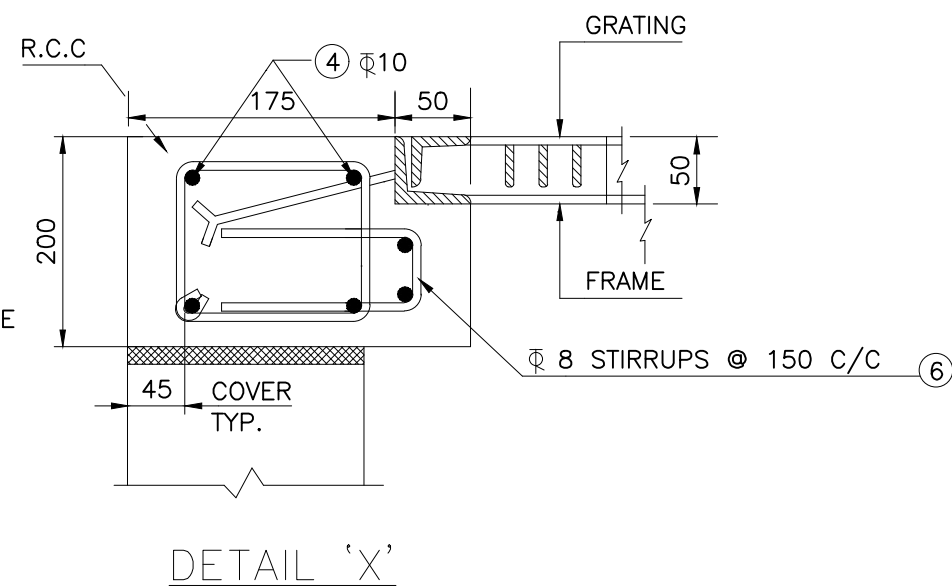
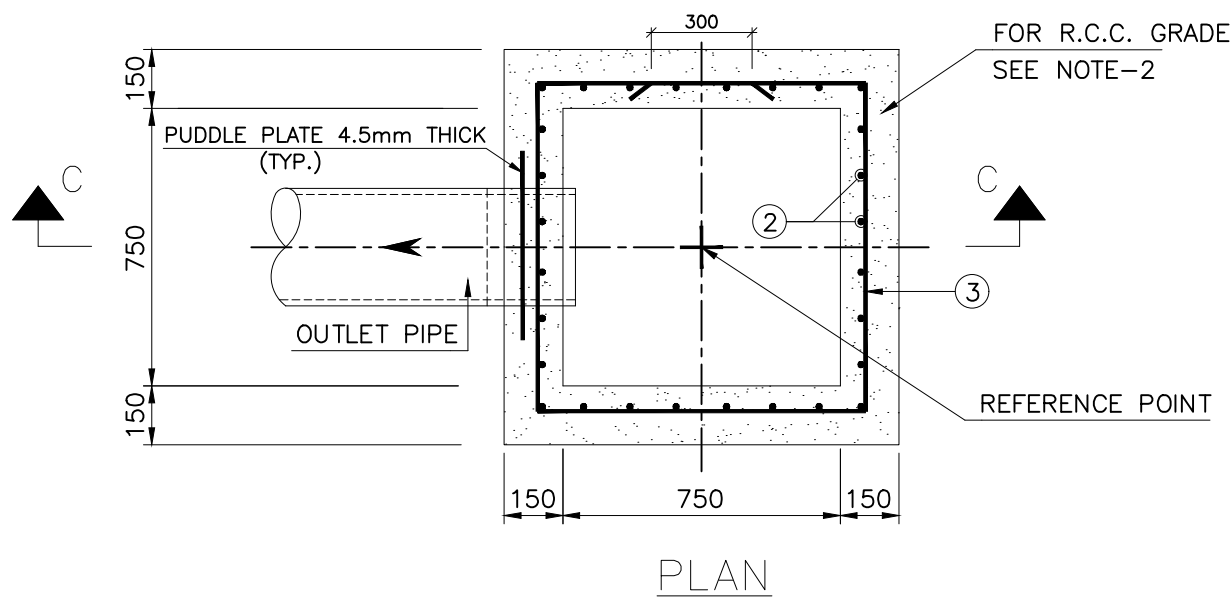
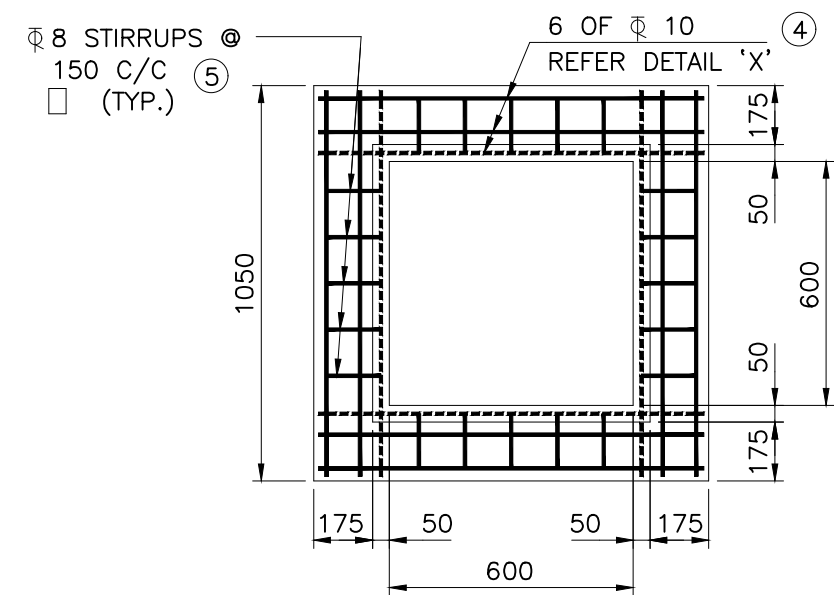
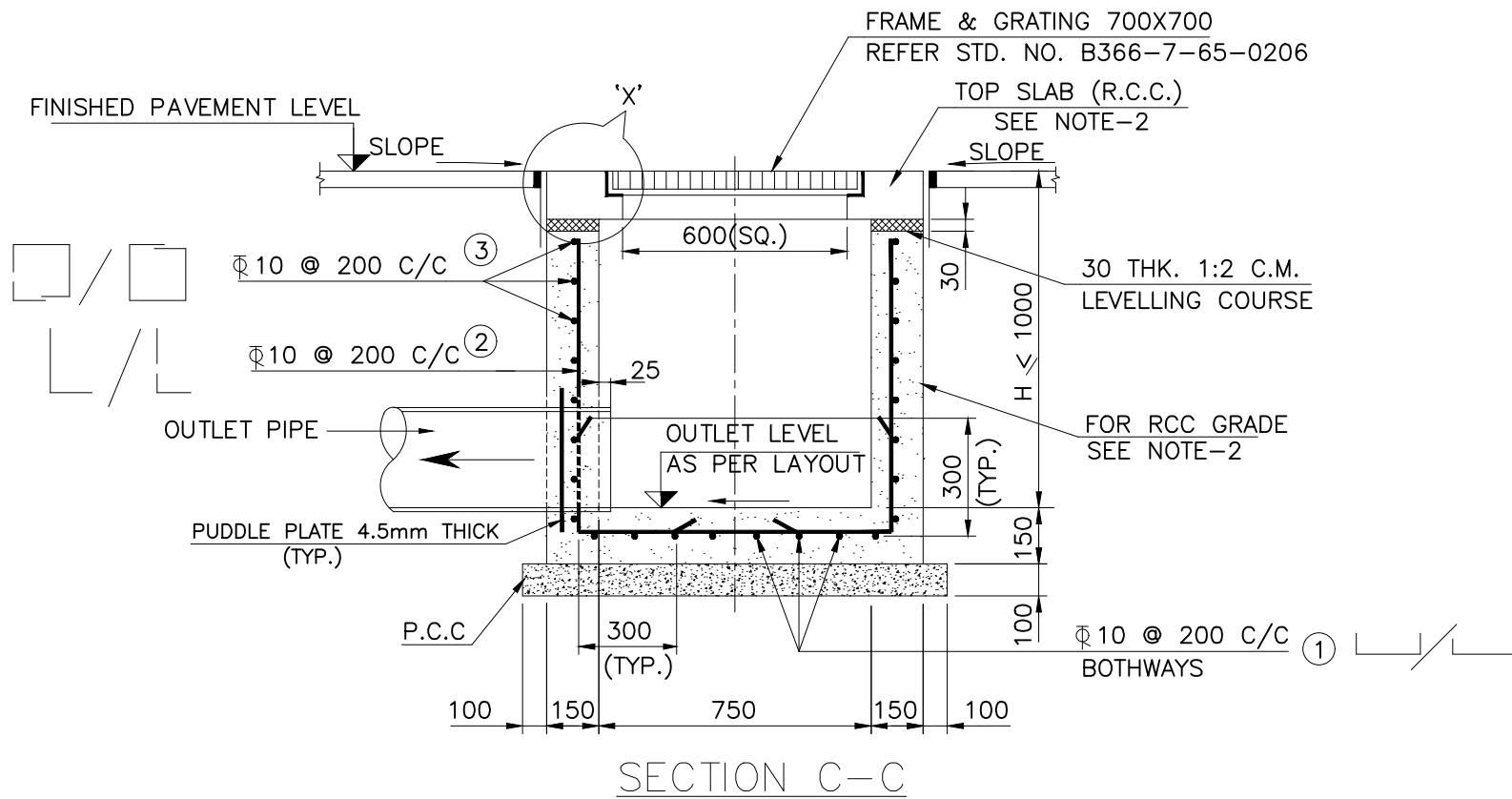
SEC. A-A

(FIXING DETAIL OF FRAME OVER THE
VERTICAL WALL OF THE CATCH BASIN)

NOTES:

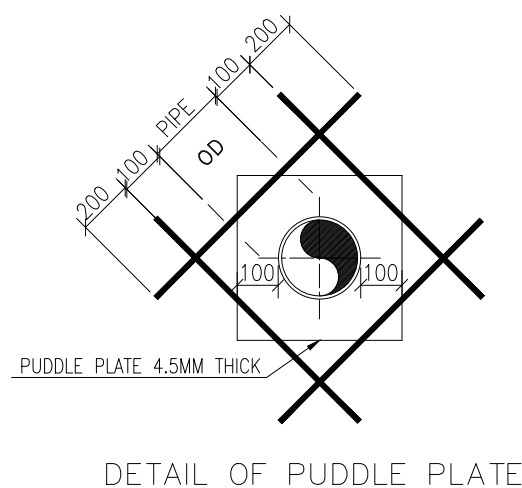
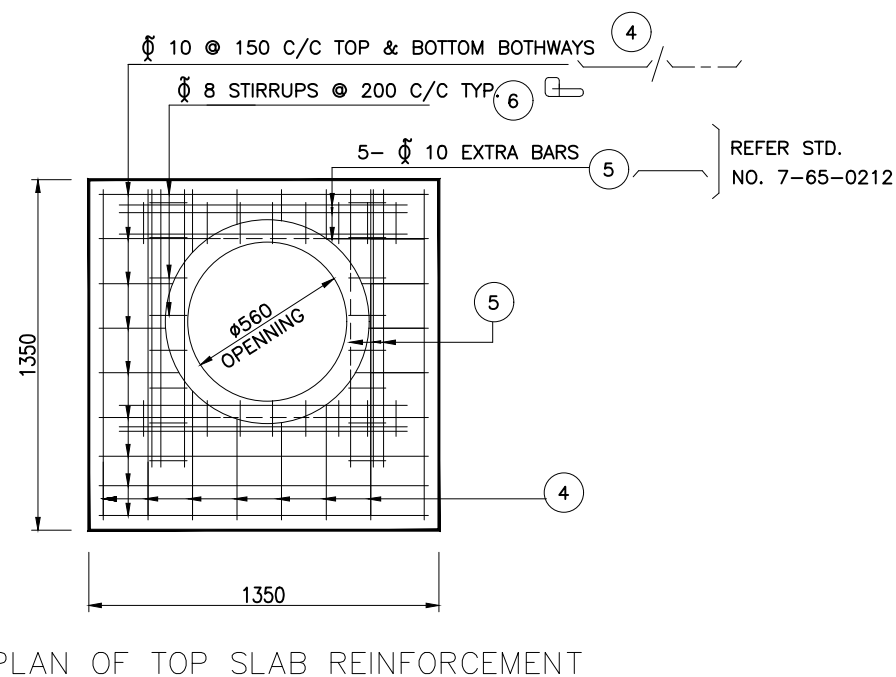
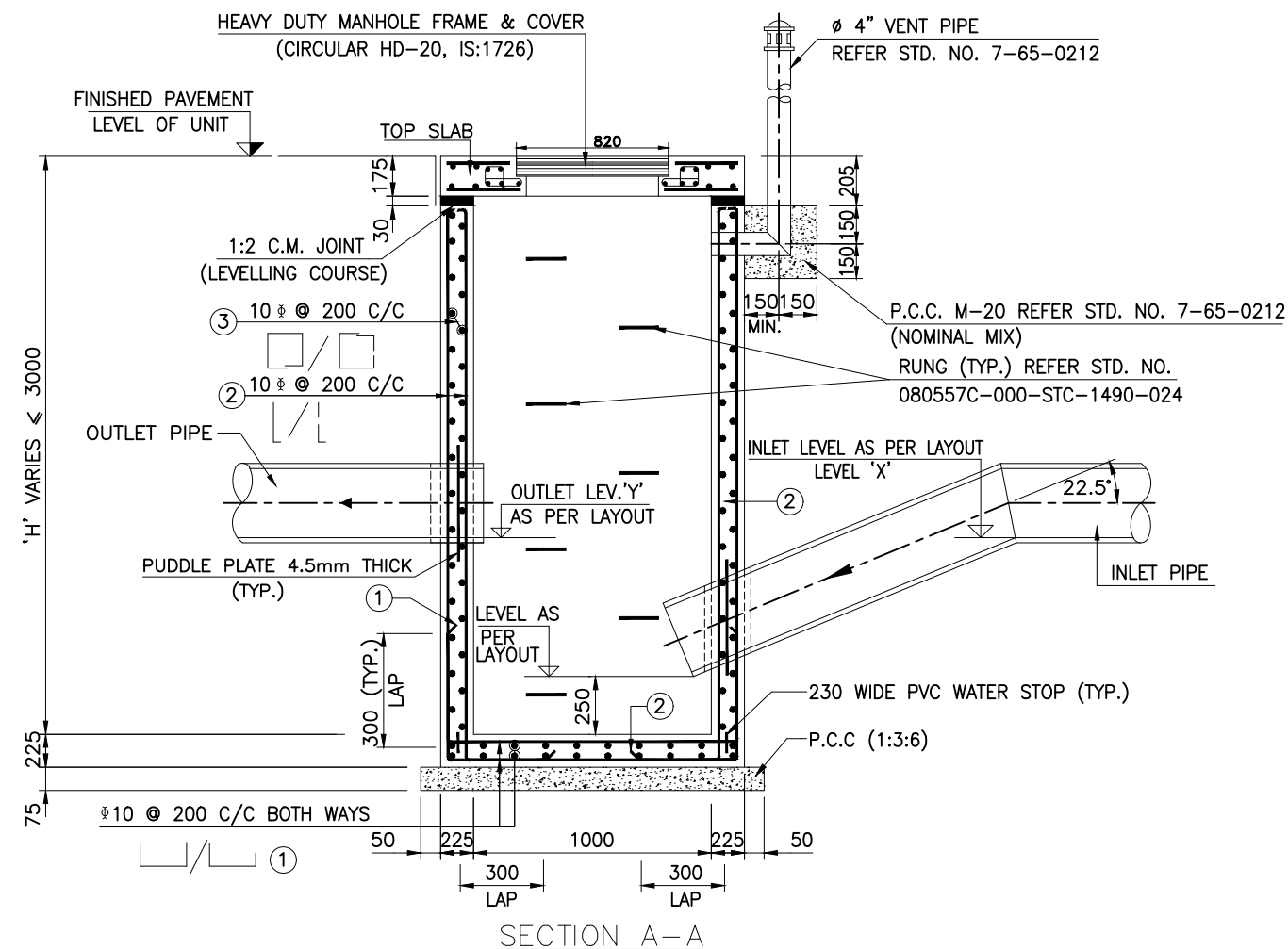
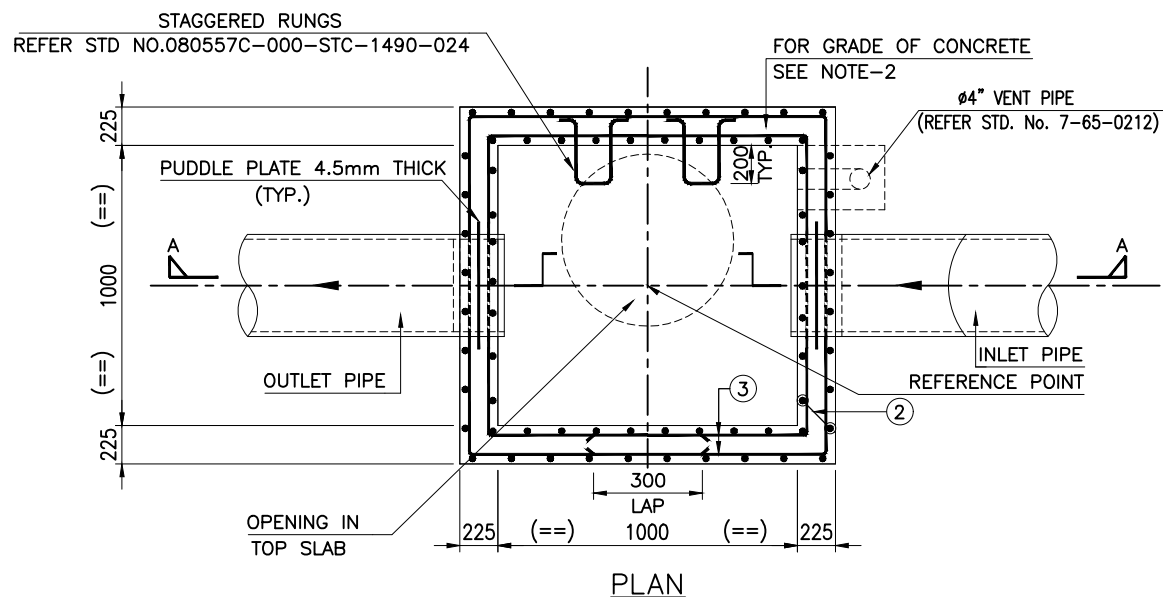
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. CATCH BASIN FRAME AND GRATING SHALL BE HOT DIP GALVANISED ACCORDING TO IS: 2629 AND THE QUANTITY OF ZINC COATING SHALL BE 900gms/sq.m OF SURFACE AREA (0.12mm UNIFORM THICKNESS).

0	24.10.2021	ISSUED AS JOB STANDARD	MG	RR	GYAS
Rev. No.	Date	Purpose	Prepared by	Checked by	Approved by



NOTES: —

- ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
- REFER STRUCTURAL GENERAL NOTES OF THE PROJECT FOR REINFORCED CONCRETE STRUCTURES FOR THE FOLLOWING :
 - GRADE OF CONCRETE (MINIMUM M30 GRADE)
 - GRADE AND TYPE OF CEMENT
 - REINFORCEMENT STEEL BARS
 - CLEAR COVER IN R.C.C. WORKS.
- BAR BENDING SHALL CONFORM TO IS:2502.



NOTES: —

- ALL DIMENSIONS ARE IN MM.
- REFER STRUCTURAL GENERAL NOTES OF THE PROJECT FOR REINFORCED CONCRETE STRUCTURES FOR THE FOLLOWING :
 - GRADE OF CONCRETE (MINIMUM M35 GRADE)
 - GRADE AND TYPE OF CEMENT
 - REINFORCEMENT STEEL BARS
 - CLEAR COVER IN CONCRETE WORKS.
- BAR BENDING SHALL CONFORM TO IS:2502
- THIS STANDARD SHALL BE READ ALONG WITH STD. NOS. 7-65-0212, 7-65-0230, 080557C-000-STC-1490-024, 080557C-000-STC-1490-025.
- TOP SLAB SHALL BE CAST-IN-SITU AND REINFORCEMENT ON WALL SIDE OF MANHOLE OPENING SHALL BE ADJUSTED AT SITE.
- LEVEL 'Y' SHOULD ALWAYS BE LOWER THAN LEVEL 'X'.
- CONSTRUCTION OF MANHOLE SHALL BE LEAK RESISTANT.