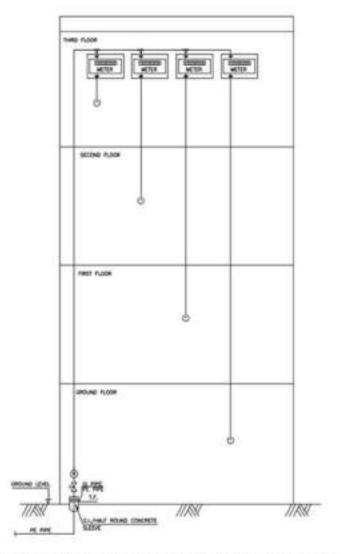


INDICATIVE RISER ARRANGEMENT IN BUILDING, IF METER IS INSTALLED AT GROUND FLOOR

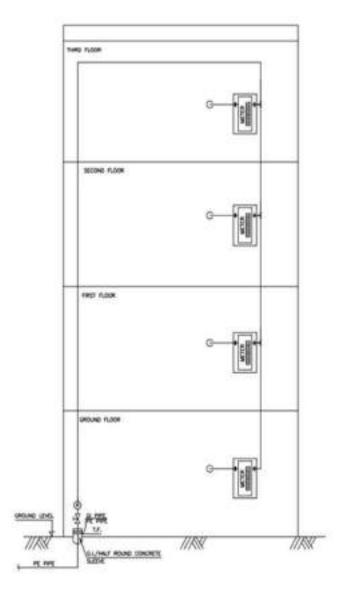
- -
- ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING. PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN. 2.
- ×.,
- RISER LENGTH (FROM OUTLET OF TRANSITION FITTING TO INLET OF ISOLATION VALVE) SHALL BE 1.5m. HOWEVER IT SHALL BE TAKEN APPROVAL FROM OWNER BEFORE STARTING THE EXECUTION.
- 5. IT SHALL BE DECIDED BY OWNER/OWNER'S REPRESENTATIVE AS PER SITE CONDITIONS.
- IF COPPER PIPE GOES TO THE APPLIANCE VALVE THAN BRASS FITTING SHALL BE USED AT THE OUTLET OF METER OR GI PIPE GOES TO THE APPLIANCE VALVE THAN GIFTTING SHALL BE USED AT THE OUTLET THE METER. 6. 1F
- 7. TAPPING SHALL BE LEFT NEAR THE OUTSIDE KITCHEN AS DIRECTED BY OWNER/OWNER'S REPRESENTATIVE.
- MAXIMUM DISTANCE BETWEEN CLAMPS SHALL BE 1.5M PIPE GOES IN THE STRAIGHT LENGTH, IF ANY TEE OR ANY FITTING USE IN BETWEEN THE PIPE THAN CLAMP SHALL BE PLACED 150MM FAR AWAY FROM CENTER LINE OF FITTINGS AT EVERY SIDE. HOW EVER THE SAME MAY BE CHANGES AS PER SITE CONDITIONS/AS DIRECTED BY EIC.
- 9. FROM THE TRANSITION FITTING TO THE ISOLATION VALVE SHALL BE CONSIDERED IN THE OUTSIDE KITCHEN PIPING.
- AT THE TIME OF MEASURING LENGTH OG GI/COPPER PIPE, GI/CU FITTINGS SHALL BE COUNTED IN THE PIPE LENGTH. 10.



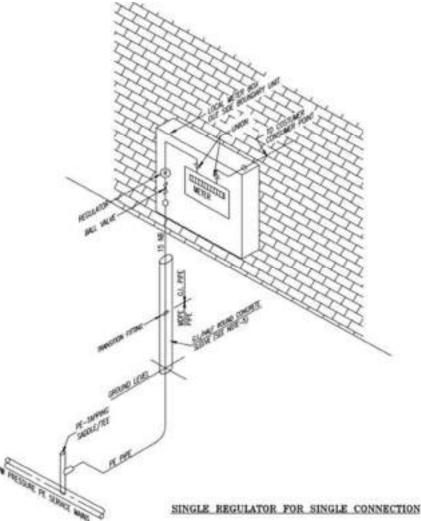
INDICATIVE RISER ARRANGEMENT IN BUILDING. IF METER IS INSTALLED AT TOP OF FLOOR

NOTES :--

- 1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE. 2. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING. 3. PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN.
- RISER LENGTH (FROM OUTLET OF TRANSITION FITTING TO INLET OF ISOLATION VALVE) SHALL BE 1.5m. HOWEVER IT SHALL BE TAKEN APPROVAL FROM OWNER BEFORE STARTING THE EXECUTION. .
- IT SHALL BE DECIDED BY OWNER/OWNER'S REPRESENTATIVE AS PER SITE CONDITIONS. 5.
- IF COPPER PIPE GOES TO THE APPLIANCE VALVE THAN BRASS FITTING SHALL BE USED AT THE OUTLET OF METER OR GI PIPE GOES TO THE APPLIANCE VALVE THAN GIFTTING SHALL BE USED AT THE OUTLET THE METER. 5.
- 7. TAPPING SHALL BE LEFT NEAR THE OUTSIDE KITCHEN AS DIRECTED BY OWNER/OWNER'S REPRESENTATIVE.
- MAXIMUM DISTANCE BETWEEN CLAMPS SHALL BE 1.5M PIPE GOES IN THE STRAIGHT LENGTH, IF ANY TEE OR ANY FITTING USE IN BETWEEN THE PIPE THAN CLAMP SHALL BE PLACED 150MM FAR AWAY FROM CENTER LINE OF FITTINGS AT EVERY SIDE. HOW EVER THE SAME MAY BE CHANGES AS PER SITE CONDITIONS/AS DIRECTED BY EIC. 8.
- 9. FROM THE TRANSITION FITTING TO THE ISOLATION VALVE SHALL BE CONSIDERED IN THE OUTSIDE KITCHEN PIPING.
- 10. AT THE TIME OF MEASURING LENGTH OG GI/COPPER PIPE, GI/CU FITTINGS SHALL BE COUNTED IN THE PIPE LENGTH.



- ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING. 2
- PIPING DOWN STREAM METER SH INSTALLED WITHIN THE KITCHEN. 3. SHALL BE OF COPPER IN CASE METER IS
- RISER LENGTH (FROM OUTLET OF TRANSITION FITTING TO INLET OF ISOLATION VALVE) SHALL BE 1.5m. HOWEVER IT SHALL BE TAKEN APPROVAL FROM OWNER BEFORE STARTING THE EXECUTION.
- T SHALL BE DECIDED BY OWNER/OWNER'S REPRESENTATIVE AS PER SITE 5.
- COPPER PIPE GOES TO THE APPLIANCE VALVE THAN BRASS FITTING ALL BE USED AT THE OUTLET OF METER OR GI PIPE GOES TO THE PLIANCE VALVE THAN GIFITTING SHALL BE USED AT THE OUTLET THE METER. б.
- PPING SHALL BE LEFT NEAR THE OUTSIDE KITCHEN AS DIRECTED BY TAPPING SHALL 7 O'
- MAXIMUM DISTANCE BETWEEN CLAMPS SHALL BE 1.5M PIPE GOES IN THE STRAIGHT LENGTH, IF ANY TEE OR ANY FITTING USE IN BETWEEN THE PIPE THAN CLAMP SHALL BE PLACED 150MM FAR AWAY FROM CENTER LINE OF FITTINGS AT EVERY SIDE. HOW EVER THE SAME MAY BE CHANGES AS PER SITE CONDITIONS/AS DIRECTED BY EIC. 8.
- FROM THE TRANSITION FITTING TO THE ISOLATION VALVE SHALL BE CONSIDERED IN THE OUTSIDE KITCHEN PIPING. 9.
- AT THE TIME OF MEASURING LENGTH OG GI/COPPER PIPE, GI/CU FITTINGS SHALL BE COUNTED IN THE PIPE LENGTH. 10.

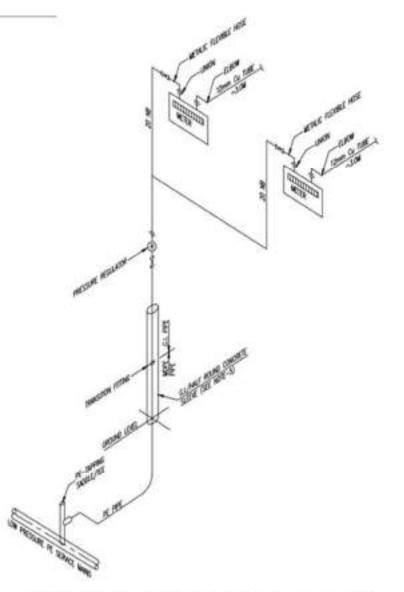


- 1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
- 2. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING.
- 3. PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN.
- 4. TENTATIVE RISER LENGTH (FROM OUTLET OF TRANSITION FITTING TO INLET OF ISOLATION VALVE) SHALL BE 1.5m. ANY CHANGES IN RISER LENGTH SHALL BE AFTER APPROVED FROM EIC.
- 5. G.I. INSTALLATION/METER INSTALLATION SHALL BE DECIDED BY OWNER/ OWNER'S REPRESENTATIVE AS PER SITE CONDITIONS.
- 6. IF COPPER PIPE GOES TO THE APPLIANCE VALVE THAN BRASS FITTING SHALL BE USED AT THE OUTLET OF METER OR GI PIPE GOES TO THE APPLIANCE VALVE THAN GIFITTING SHALL BE USED AT THE OUTLET THE METER.
- 7. MAXIMUM DISTANCE BETWEEN CLAMPS SHALL BE 1.5M PIPE GOES IN THE STRAIGHT LENGTH, IF ANY TEE OR ANY FITTING USE IN BETWEEN THE PIPE THAN CLAMP SHALL BE PLACED 150MM FAR AWAY FROM CENTER LINE OF FITTINGS AT EVERY SIDE. HOW EVER THE SAME MAY BE CHANGES AS PER SITE CONDITIONS/AS DIRECTED BY EIC.

ATE FOR 3 RELION With States SINGLE REGULATOR & SINGLE CONNECTION ON GROUND FLOOR & FIRST FLOOR

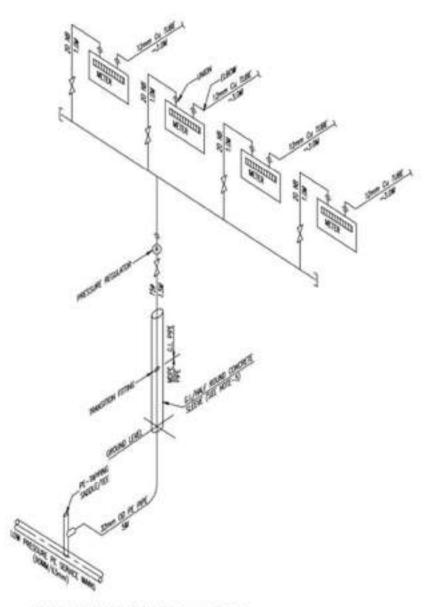
TYPICAL DOMESTIC CONNECTION LAYOUT OF NG DISTRIBUTION

- ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING.
- PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN.
- TENTATIVE RISER LENGTH (FROM OUTLET OF TRANSITION FITTING TO INLET OF ISOLATION VALVE) SHALL BE 1.5m. ANY CHANGES IN RISER LENGTH SHALL BE AFTER APPROVED FROM EIC.
- G.I. INSTALLATION/METER INSTALLATION SHALL BE DECIDED BY OWNER/ OWNER'S REPRESENTATIVE AS PER SITE CONDITIONS. 5.
- IF COPPER PIPE GOES TO THE APPLIANCE VALVE THAN BRASS FITTING SHALL BE USED AT THE OUTLET OF METER OR GI PIPE GOES TO THE APPLIANCE VALVE THAN GIFITTING SHALL BE USED AT THE OUTLET THE METER. б. IF
- MAXIMUM DISTANCE BETWEEN CLAMPS SHALL BE 1.5M PIPE GOES IN THE STRAIGHT LENGTH, IF ANY TEE OR ANY FITTING USE IN BETWEEN THE PIPE THAN CLAMP SHALL BE PLACED 150MM FAR AWAY FROM CENTER LINE OF FITTINGS AT EVERY SIDE. HOW EVER THE SAME MAY BE CHANGES AS PER SITE CONDITIONS/AS DIRECTED BY EIC. 7.



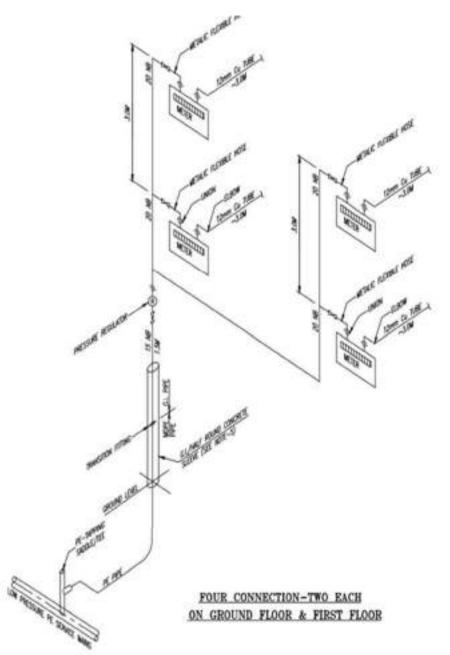
SINGLE REGULATOR & DOUBLE CONNECTION ON GROUND FLOOR

- 1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
- 2. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING.
- 3. PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN.
- 4. TENTATIVE RISER LENGTH (FROM OUTLET OF TRANSITION FITTING TO INLET OF ISOLATION VALVE) SHALL BE 1.5m. ANY CHANGES IN RISER LENGTH SHALL BE AFTER APPROVED FROM EIC.
- 5. G.I. INSTALLATION/METER INSTALLATION SHALL BE DECIDED BY OWNER/ OWNER'S REPRESENTATIVE AS PER SITE CONDITIONS.
- 6. IF COPPER PIPE GOES TO THE APPLIANCE VALVE THAN BRASS FITTING SHALL BE USED AT THE OUTLET OF METER OR GI PIPE GOES TO THE APPLIANCE VALVE THAN GIFITTING SHALL BE USED AT THE OUTLET THE METER.
- 7. MAXIMUM DISTANCE BETWEEN CLAMPS SHALL BE USED AT THE OUTLET THE METER. STRAIGHT LENGTH, IF ANY TEE OR ANY FITTING USE IN BETWEEN THE PIPE THAN CLAMP SHALL BE PLACED ISOMM FAR AWAY FROM CENTER LINE OF FITTINGS AT EVERY SIDE. HOW EVER THE SAME MAY BE CHANGES AS PER SITE CONDITIONS/AS DIRECTED BY EIC.



FOUR CONNECTION ON GROUND FLOOR

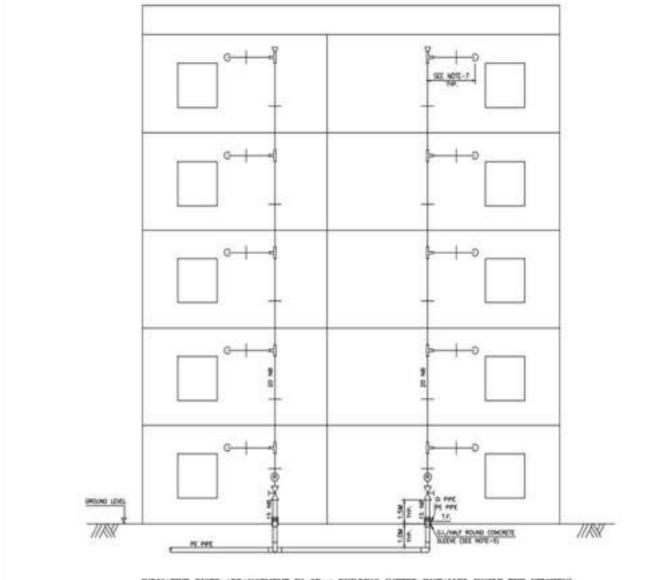
- ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING.
- PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN.
- TENTATIVE RISER LENGTH (FROM OUTLET OF TRANSITION FITTING TO INLET OF ISOLATION VALVE) SHALL BE 1.5m. ANY CHANGES IN RISER LENGTH SHALL BE AFTER APPROVED FROM EIC.
- G.I.
- G.I. INSTALLATION/METER INSTALLATION SHALL BE DECIDED BY OWNER/ OWNER'S REPRESENTATIVE AS PER SITE CONDITIONS. IF COPPER PIPE GOES TO THE APPLIANCE VALVE THAN BRASS FITTING SHALL BE USED AT THE OUTLET OF METER OR GI PIPE GOES TO THE APPLIANCE VALVE THAN GIFITTING SHALL BE USED AT THE OUTLET THE ME METER.
- MAXIMUM DISTANCE BETWEEN CLAMPS SHALL BE USED AT THE OUTLET THE METER STRAIGHT LENGTH, IF ANY TEE OR ANY FITTING USE IN BETWEEN THE PIPE THAN CLAMP SHALL BE PLACED 150MM FAR AWAY FROM CENTER LINE OF FITTINGS AT EVERY SIDE. HOW EVER THE SAME MAY BE CHANGES AS PER SITE CONDITIONS/AS DIRECTED BY EIC. 7.



NOTES :-

Page 8 of 43

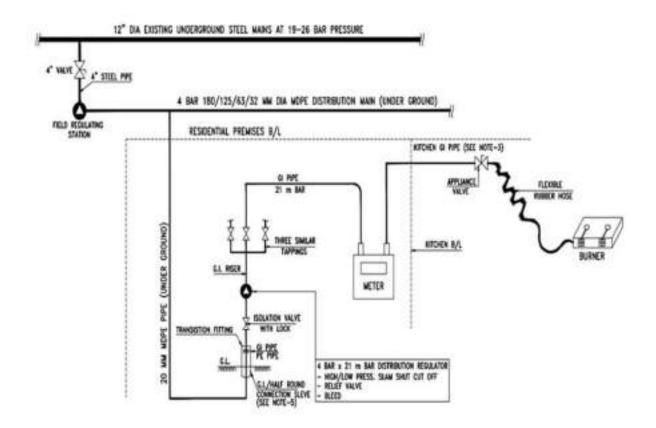
- ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING. 2.
- WITHIN THE KITCHEN. DOWN 3. ING STALLED
- TENTATIVE RISER LENGTH (FROM OUTLET OF TRANSITION FITTING TO INLET OF ISOLATION VALVE) SHALL BE 1.5m. ANY CHANGES IN RISER LENGTH SHALL BE AFTER APPROVED FROM EIC.
- INSTALLATION/METER INSTALLATION SHALL BE D BE DECIDED BY OWNER/ 5.
- COPPER PIPE GOES TO THE APPLIANCE 6. IF VALVE THAN BRASS FITTING AT THE OUTLET OF METER OR GI PIPE GOES TO THE THAN GIFITTING SHALL BE USED AT THE OUTLET THE TO THE -51 APPLIANCE VALVE METER.
- MAXIMUM DISTANCE BETWEEN CL STRAIGHT LENGTH, IF ANY TEE BE 7. AMPS SHAL 1.5M PIPE GOES THE IN STRAIGHT LENGTH, IF ANY TEE OR ANY FITTING USE IN BETWEEN THE PIP THAN CLAMP SHALL BE PLACED 150MM FAR AWAY FROM CENTER LINE OF FITTINGS AT EVERY SIDE. HOW EVER THE SAME MAY BE CHANGES AS PER USE IN BETWEEN PIPE FITTINGS AT EVERY SIDE. HOW EVER THE SITE CONDITIONS/AS DIRECTED BY EIC. AS PER



INDICATIVE RISER ARRANGEMENT IN GR+4 BUILDING (METER INSTALLED INSIDE THE KITCHEN)

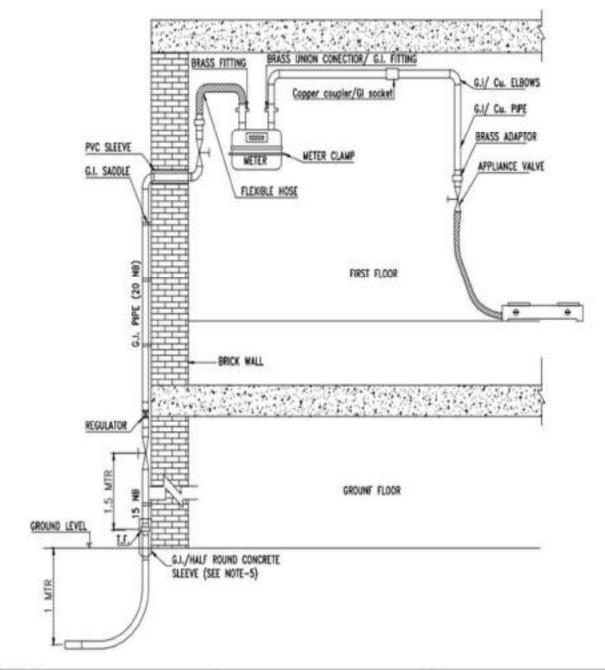
- 1.
- ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING. PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN. 2.
- 74
- TATIVE RISER LENGTH (FROM OUTLET OF TRANSITION FITTING TO INLET ISOLATION VALVE) SHALL BE 1.5m. ANY CHANGES IN RISER LENGTH 4. TENTATIVE SHALL BE AFTER APPROVED FROM EIC.
- G.I. INSTALLATION/METER INSTALLATION SHALL BE DECIDED BY OWNER/ OWNER'S REPRESENTATIVE AS PER SITE CONDITIONS. 5.
- IF COPPER PIPE GOES TO THE APPLIANCE VALVE THAN BRASS FITTING SHALL BE USED AT THE OUTLET OF METER OR GI PIPE GOES TO THE APPLIANCE VALVE THAN GIFITTING SHALL BE USED AT THE OUTLET THE METER.
- MAXIMUM DISTANCE BETWEEN CLAMPS SHALL BE 1.5M PIPE GOES IN THE STRAIGHT LENGTH, IF ANY TEE OR ANY FITTING USE IN BETWEEN THE PIPE THAN CLAMP SHALL BE PLACED ISOMM FAR AWAY FROM CENTER LINE OF FITTINGS AT EVERY SIDE. HOW EVER THE SAME MAY BE CHANGES AS PER SITE CONDITIONS/AS DIRECTED BY EIC. 7.
- TAPPING SHALL BE LEFT NEAR THE OUTSIDE KITCHEN AS DIRECTED BY OWNER/OWNER'S REPRESENTATIVE.

SCHEMATIC DRAWING FOR DOMESTIC CONNECTION



- 1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE. 2. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING.
- PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN. 3
- TENTATIVE RISER LENGTH (FROM OUTLET OF TRANSITION FITTING TO INLET OF ISOLATION VALVE) SHALL BE 1.5m. ANY CHANGES IN RISER LENGTH SHALL BE AFTER APPROVED FROM EIC.
- G.I. INSTALLATION/METER INSTALLATION SHALL BE DECIDED BY OWNER/ OWNER'S REPRESENTATIVE AS PER SITE CONDITIONS.
- IF COPPER PIPE GOES TO THE APPLIANCE VALVE THAN BRASS FITTING SHALL BE USED AT THE OUTLET OF METER OR GI PIPE GOES TO THE APPLIANCE VALVE THAN GIFITTING SHALL BE USED AT THE OUTLET THE METER.
 MAXIMUM DISTANCE BETWEEN CLAMPS SHALL BE 1.5M PIPE GOES IN THE STRAIGHT LENGTH, IF ANY TEE OR ANY FITTING USE IN BETWEEN THE PIPE
- THAN CLAMP SHALL BE PLACED 150MM FAR AWAY FROM CENTER LINE OF FITTINGS AT EVERY SIDE. HOW EVER THE SAME MAY BE CHANGES AS PER SITE CONDITIONS/AS DIRECTED BY EIC.

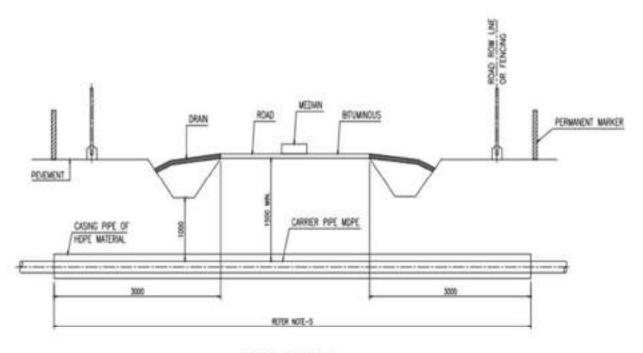
TYPICAL NATURAL GAS INSTALLATION INSIDE KITCHEN



3:

- DECIDED
- з. -DE 0 COF 10 127
- 4 (FROM OUT EIC.
- OVED FROM DECIDED BY 5. BΕ OWNER ATION NDITIC PER CO
- б. OES Ŧ
- THE GOES 7. 1 THE --E. • ED CI CHANGES AS PER ECTED EIC
- 0 HER. VNER'S REPRESENT TIVE o'

ROAD /HIGHWAY CASED CROSSING FOR MDPE PIPE

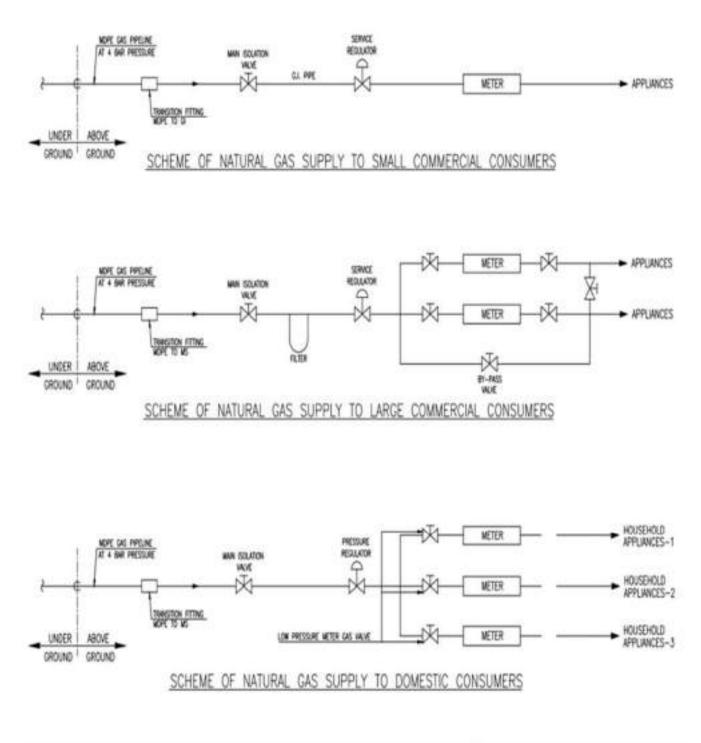


TYPICAL SECTION



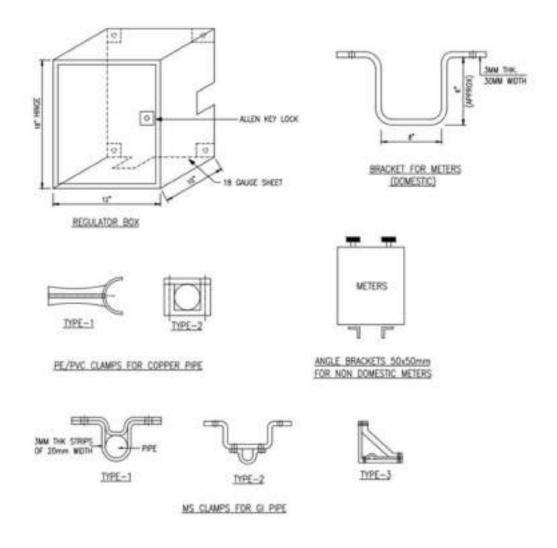
- 1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
- 2. ROAD HIGHWAY CROSSING SHALL BE RESTORED TO ORIGINAL CONDITION TO THE ENTIRE SATISFACTION OF OWNER AND CONCERNED AUTHORITIES HAVING CORISDICTION.
- 3. REFER API RP 1102 FOR OTHER DESIGN AND INSTALLATION REQUIREMENTS.
- ANGLE OF INTERSECTION BETWEEN PIPELINE AND THE ROAD/ HIGHWAY SHALL BE AS CLOSED TO 90" AS POSSIBLE BUT IN NO CASE LESS THAN 30".
- 5. CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS WITH RESPECT TO SURVEY DETAILS OF EACH ROAD/HIGHWAY CROSSING AND PREPARE DETAILED DRAWINGS FOR INDIVIDUAL CROSSING TAKE ENGINEER-IN-CHARGE AND CLIENTS APPROVAL BEFORE COMMERNCEMENT OF CONSTRUCTION.
- 6. THE CASING PIPE SHALL BE OF SIZE MAINTAINED AT CLAUSE NO.19 OF TECHNICAL SPECIFICATION FOR PE LAYING.

SCHEME OF GAS SUPPLY TO SMALL/LARGE/DOMESTIC CONSUMERS



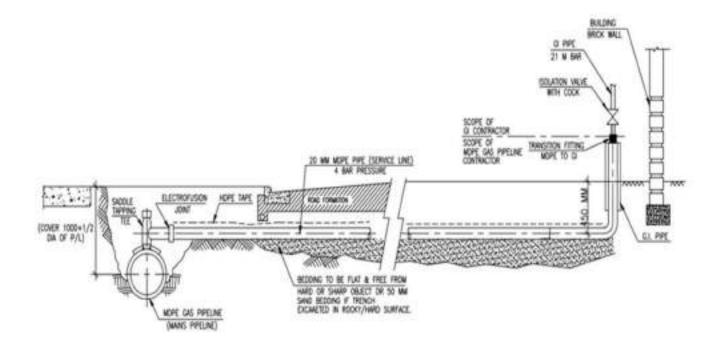
N	OTES:-	
1.	ALL DIMENSIONS ARE IN MM. UNLES	S NOTED OTHERWISE.
2.	SIZE OF LINE, VALVE ETC. SHALL B	E DECIDED AT THE TIME OF EXECUTION
AS DED THE INSTRUCTIONS OF OWNER /OWNER'S DEPOESENTATIVE		

SKETCH FOR REGULATOR BOX, BRACKETS & CLAMPS



- 1. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
- CLAMP, REGULATOR BOX AND METER BRACKET ARE TO BE MADE AS PER DIRECTION AND APPROVAL OF EIC.
 CLAMPS/BOXES BRACKETS TO BE TIGHTLY SECURED TO THE WALL WITH
- 3. CLAMPS/BOXES BRACKETS TO BE TIGHTLY SECURED TO THE WALL WITH PROPER ROWEL PLUGS, SCREWS ETC. WOODEN BLOCK TO BE USED IN CASE ROWEL PLUGS DO NOT HOLD. PROPER THE AREA.
- 4. PAINTING WITH ONE COAT OF ZINC PRIMER AND THREE COATS OF SYNTHETIC ENAMEL PAINT OF REPUTED MAKE (ASIAN PAINT, BERGER, NEROLAC) TO BE USED.
- 5. CLAMPS ON PIPES TO BE FIXED AT MAXIMUM DISTANCE OF 1.5 mins AND AT BENDS.

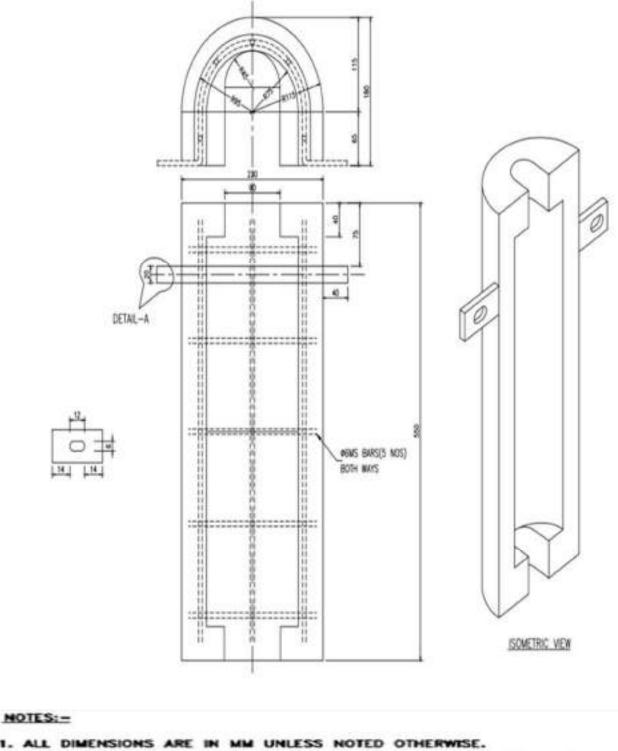
SCHEME OF HIGH-PRESSURE SERVICE INSTALLATION



GENERAL NOTES

- 1. FOR CLAMPING TO BRICK WALL USE SUITABLE WALL BRACKETS.
- TRENCH BACK FILL TO BE FREE FROM STONES OR SHARP OBJECTS. CARE TO BE EXERCISED WHEN CONSOLIDATING BACK FILL TO AVOID DAMAGING PLASTIC PIPE.
- THIS SKETCH IS INDICATIVE AND FINAL LAYING WILL BE DECIDED BY ENGINEER-IN-CHARGE.

HALF-ROUND CONCRETE SLEEVE



- IT SHALL BE TAKEN APPROVAL FROM OWNER/OWNER'S REPRESENTATIVE. 2.
- BEFORE STARTING THE PROCUREMENT. SIZES ARE SHOWN AS A TENTATIVE ONLY.
- 3.

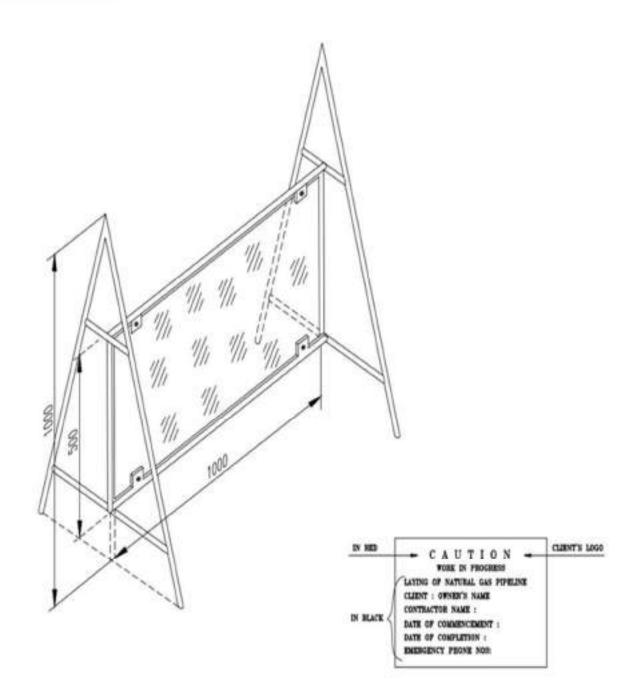
1.

BARRICADING

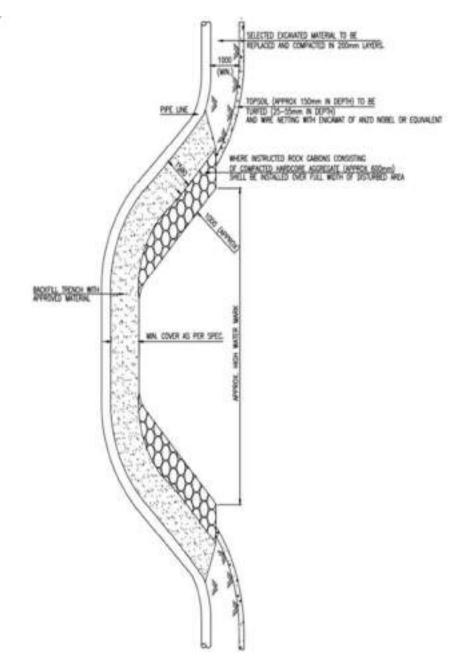


SCHEMATIC LAYOUT OF CAUTION BOARDS AND BARRICADDING

CAUTION BOARD

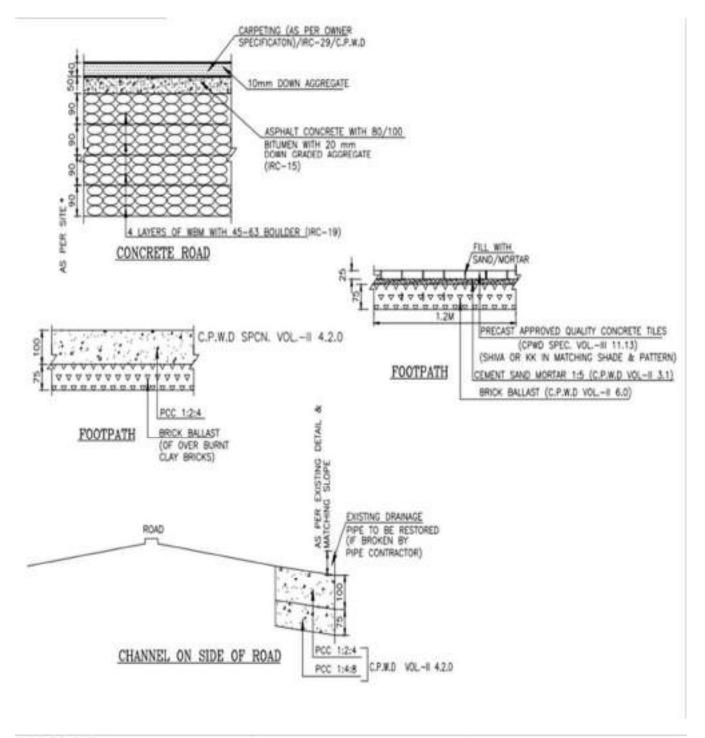


STANDARD DETAIL OF BACKFILL, FOR DRAIN CROSSING

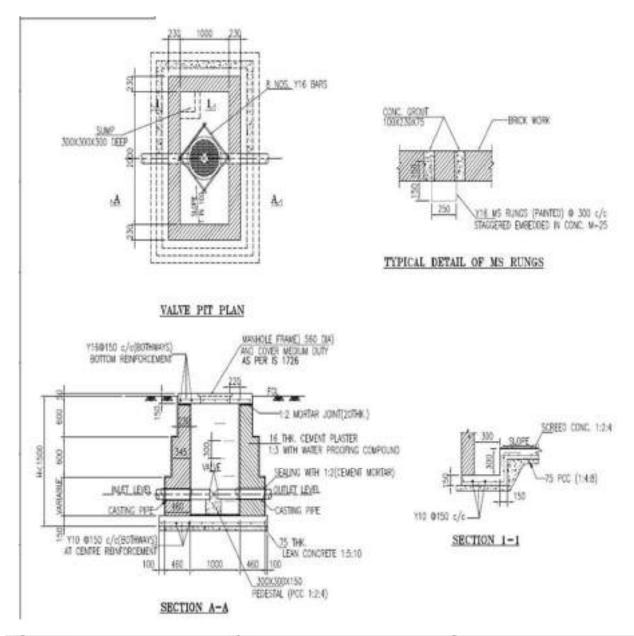


- 1. BACKFILLING OF THE DISTURBED BANK AREA SHALL BE FINISHED A MINIMUM OF 100mm ABOVE THE ADJACENT UNDISTURBED BANK LEVELS.
- 2. BACKFILLING SHALL BE FINISHED FLUSH WITH INVERT AND BANK SLOPES EXCEPT THE REINSTATED SLOPE WHICH SHALL NOT EXCEED 40° IN WHICH CASE THE SLOPE SHALL BE EQUAL TO ADJACENT UNDISTURBED BANKS.
- 3. MIN. COVER 1.5M BELOW SCAMING DEPTH.

RESTORATION OF ROADS, FOOTPATHS & CHANNEL



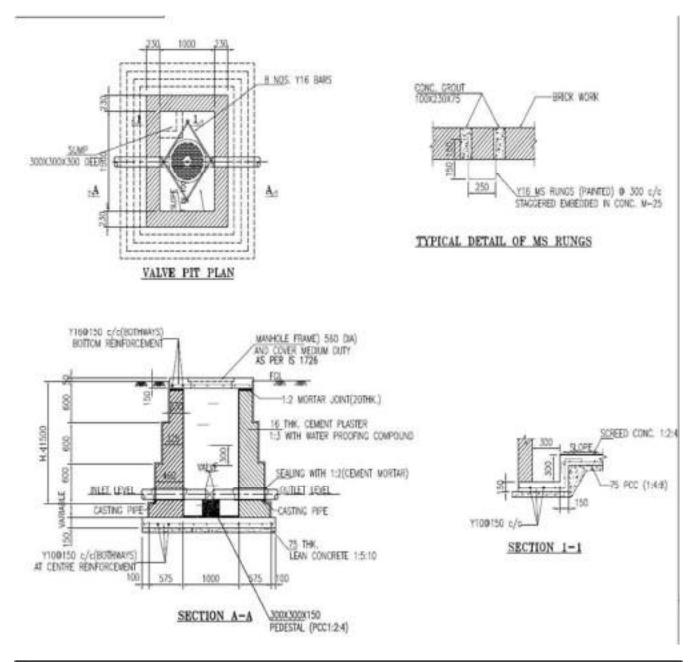
- 1. ALL DIMENSIONS ARE IN mm & LEVELS ARE IN METRE.
- 2. ONLY FIGURED DIMENSIONS ARE TO BE FOLLOWED.
- THESE ARE INDICATIVE SCHEME ONLY. ACTUAL WORK TO FOLLOW AS PER CPWD/PWD CONCERNED AUTHORITIES REQUIREMENTS IN RESPECTIVE AREA.



STD. DETAILS OF BRICK VALVE CHAMBER (TYPE I)

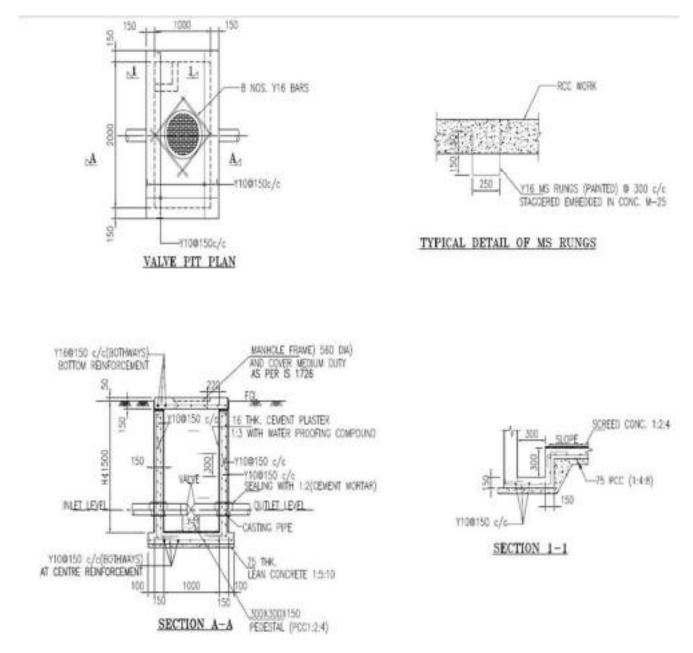
- 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- 2. FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE THE DIMENSIONS.
- 3. CLEAT COVER TO MAIN REINFORCEMENT SHALL BE (a) SLAB = 20mm.
- 4. GRADE OF CONCRETE BE M-25.
- 5. REINFORCEMENT SHALL BE OF HYSD (GRADE Fe 415) CONFORMING IS:1786.

STD. DETAILS OF BRICK VALVE CHAMBER (TYPE II)



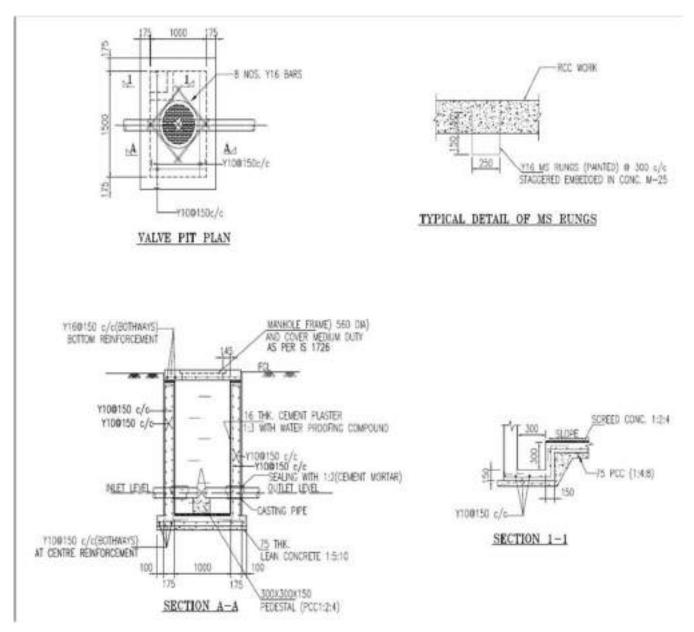
- 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- 2. FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE THE DIMENSIONS.
- 3. CLEAT COVER TO MAIN REINFORCEMENT SHALL BE (a) SLAB = 20mm.
- 4. GRADE OF CONCRETE BE M-25.
- 5. REINFORCEMENT SHALL BE OF HYSD (GRADE Fe 415) CONFORMING IS:1786.

STD. DETAILS OF RCC VALVE CHAMBER (TYPE-I)



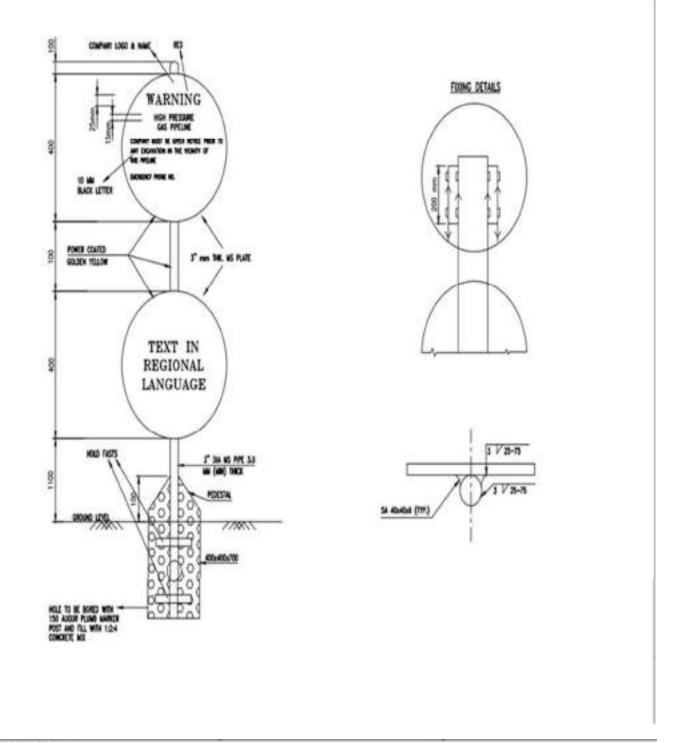
- 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- 2. FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE THE DIMENSIONS.
- 3. CLEAT COVER TO MAIN REINFORCEMENT SHALL BE (a) SLAB = 20mm.
- GRADE OF CONCRETE BE M-25.
- 5. REINFORCEMENT SHALL BE OF HYSD (GRADE Fe 415) CONFORMING IS:1786.

STD. DETAILS OF BRICK RCC CHAMBER (TYPE –II)



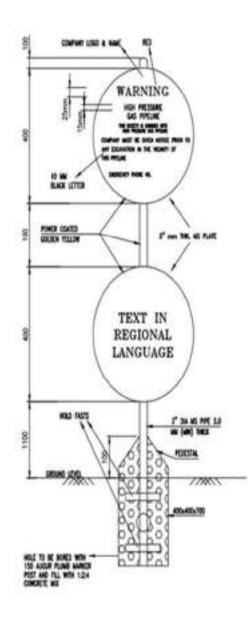
- 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- 2. FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE THE DIMENSIONS.
- 3. CLEAT COVER TO MAIN REINFORCEMENT SHALL BE (a) SLAB = 20 mm.
- 4. GRADE OF CONCRETE BE M-25.
- 5. REINFORCEMENT SHALL BE OF HYSD (GRADE Fe 415) CONFORMING IS:1786.

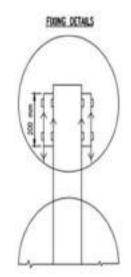
POLE MARKER WITH FOUNDATION

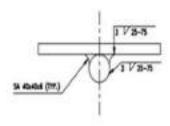


- 1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
- THE FULL WORKING AND SIZES ARE ONLY INDICATIVE AND ARE SUBJECT TO THE APPROVAL BY OWNER/OWNER'S REPRESENTATIVE BEFORE FABRICATION. 2.
- SCHEME FOR POWDER COATING AND COLOURING ONE COAT OF PRIMER & TWO COATS OF SPECIFIED PANTS ALL LETTERS EXCEPT "WARNING" TO BE PAINTED BLACK. 3.
- APPROVAL OF WARNING MARKER DESIGN SHALL BE OBTAINED BEFORE THE COMMENCEMENT OF WORK. 4.

POLE MARKER WITH FOUNDATION (INDIVIDUAL **SOCIETIES/AREAS)**

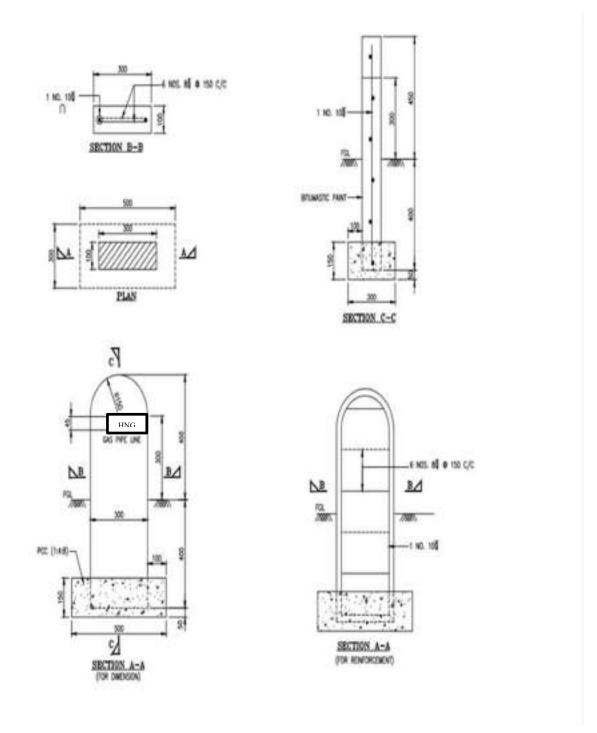






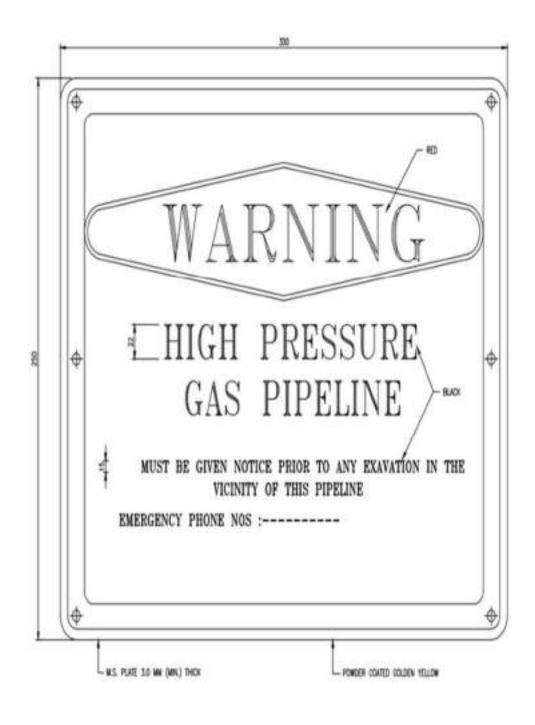
- 1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
- THE FULL WORKING AND SIZES ARE ONLY INDICATIVE AND ARE SUBJECT TO THE APPROVAL BY OWNER/OWNER'S REPRESENTATIVE BEFORE FABRICATION. 2.
- SCHEME FOR POWDER COATING AND COLOURING ONE COAT OF PRIMER & TWO COATS OF SPECIFIED PANTS ALL LETTERS EXCEPT "WARNING" TO BE PAINTED BLACK.
 APPROVAL OF WARNING MARKER DESIGN SHALL BE OBTAINED BEFORE THE COMMENCEMENT OF WORK. 3.

SKETCH FOR RCC ROUTE MARKER



- 1. DRAWING IS NOT TO SCALE.
- ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED. 2.
- MARKERS SHALL BE INSTALLED IN EVERY 50M INTERVAL AS PER 3. INSTRUCTION OF ENGINEER-IN-CHARGE.
- ALL BOUNDARY MARKERS SHALL BE PRECAST AND INSCRIPTIONS SHALL BE ENGRAVED 5mm DEEP IN THE MOULD ON BOTH FACE. 5. CONCRETE FOR BOUNDARY MARKER SHALL BE M20.

PLATE MARKER

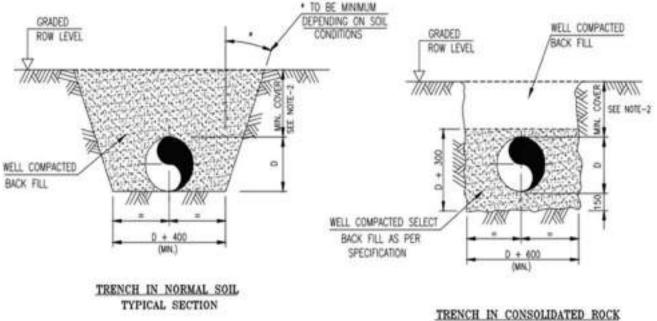


NOTES:-

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.

2. FOLLOW WRITEN DIMENSION ONLY. DO NOT SCALE.

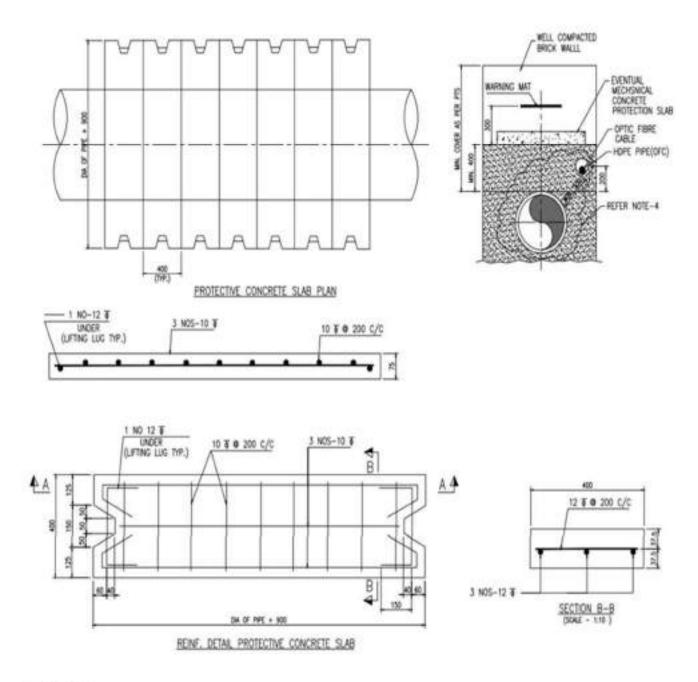
TYPICAL TRENCH DIMENSIONS FOR PIPELINE



TYPICAL SECTION

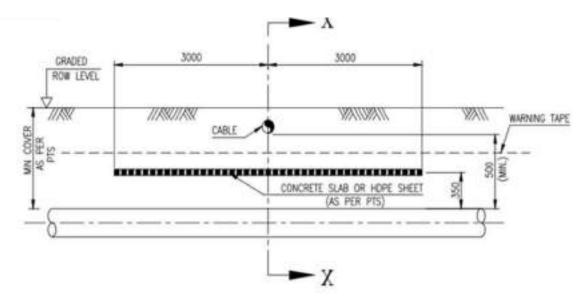
- 1. ALL DIMENSIONS ARE IN MM. UNLESS SPECIFIED OTHERWISE.
- 2. FOR ALL PIPELINES TO BE CONSTRUCTED IN THE LAND UNDER JURISDITION OF GOVT. OF INDIA THE MINIMUM COVER TO BE ADOPTED SHALL BE 1000 MM. IN ACCORDANCE WITH GOVT. OF INDIA PETROLEUM PIPELINES (AQUISITION OF RIGHT OF USER IN LAND) ACT NO. 50,1962 AND AMENDMENT ACT NO. 13,1977. ANY EXTRA REQUIRMENT SHALL BE IN ACCORDANCE WITH SPECIFICATIONS.
- 3. MINIMUM COVER REQUIREMENT SHALL BE SUBJECTED TO APPROVAL OF CONCERNED AUTHORITIES WHEREVER REQUIRED.
- 4. EXTRA COVER REQUIRMENT SHALL BE ESTABLISEHED AT ALL COVER BENDS. SAG BENDS AND HORIZONTAL BENDS WHEREVER REQUIRED.
- 5. FOR MINIMUM COVER REQUIRMENT AT PIPELINES CROSSING ROADS, RAILWAY TRACKS, RIVERS, MARSHY AREASETC, REFER RELEVENT STANDARDS.

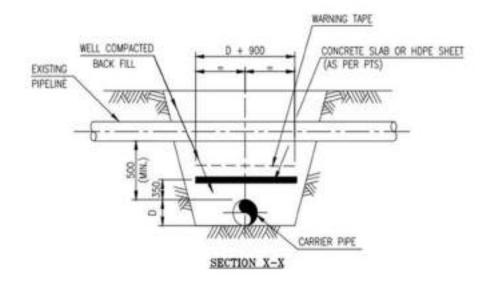
TYPICAL MECHANICAL PROTECTION CONCRETE SLAB DETAILS



- 1. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
- 2. MINIMUM COVER OVER LINE PIPE SHALL BE AS PER SPECIFICATION AND REQUIRMENT OF CONCERNED AUTHOTITIES.
- 3. THIS SKETCH IS INDICATIVE ONLY.
- 4. TYPE OF TRENCHING SHALL BE AS PER PTS AND APPROVED PROCEDURE.
- 5. CONCRETE MIX M20 SHALL BE USED.

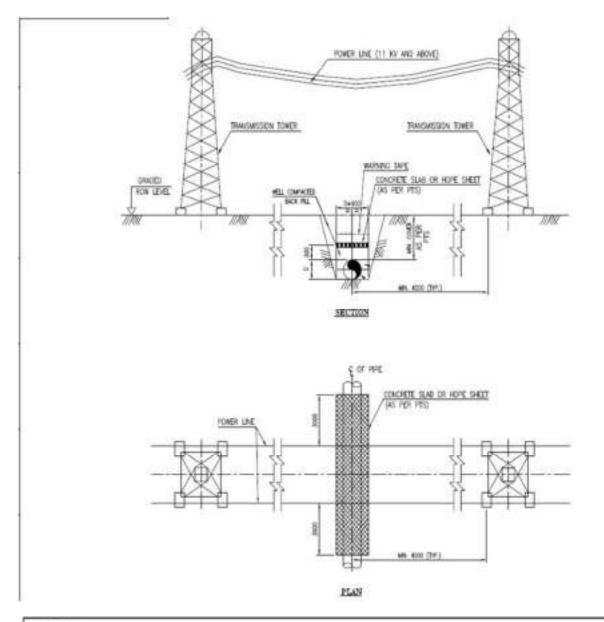
TYPICAL UNDERGROUND CABLE CROSSING DETAILS



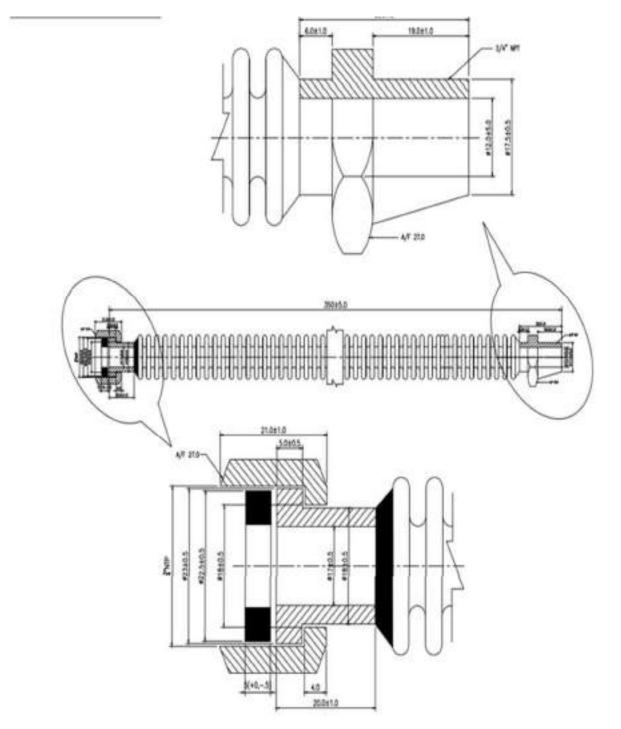


- ۰. ALL DIMENSIONS ARE IN MM. UNLESS SPECIFIED OTHERWISE.
- A MODIFIED PIPELINE WARNING SIGN SHALL BE INSTALLED CLOSE TO THE 2. CROSSING.
- IN CASE OF ARMOUREWD OFC CABLE, CP BONDING IS NOT BE PROVIDED 3. BETWEEN PIPELINE AN CABLE ARMOUR IN CASE OF UNARMOURED CABLE ARRANGEMENT FOR SHIELDIND (BY PROVIDING CASING ON EITHE SIDE OF THE PIPELINE OR CABLE) SHALL BE CONSIDERED. FOR APPROVAL OF XING SHALL BE OBTAINED FROM CONCERNED
- FOR AUTHORITIES.
- FOR CONCRETE SLAB SHALL BE REFER STD. DRG. NO. MEC/TYP/05/28/STD/0007 5.

TYPICAL OVERHEAD POWER LINE CROSSING DETAILS



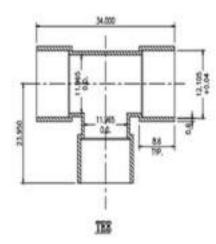
- 1. ALL DIMENSIONS ARE IN MM. UNLESS SPECIFIED OTHERWISE.
- 2. SUITABLE MEASURE SHALL BE TAKEN FOR THE PROTECTION OF THE LINE AND SECURITY OF PERSONNEL WHEREVER FOUND NECESSARY.
- 3. APPROVAL OF THE CROSSING MAY HAVE TO BE OBTAINED FROM CONCERNED AUTHORITIES.
- FOR CONCRETE SLAB SHALL BE REFER STD. DRG. NO. MEC/TYP/05/28/STD/0007
- THIS CONCRETE SLAB/HDPE SHEET PROTECTION SHALL BE PROVEDE FOR VOLTAGE OF 11 KV AND ABOVE.

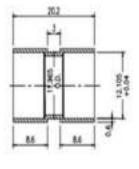


HOSE ASSEMBLY FOR NATURAL GAS SERVICE

- 1. ALL DIMENSIONS ARE IN MM.
- 2. FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE.

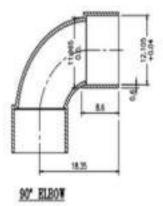
COPPER FITTING FOR NATURAL GAS SERVICE





COUPLER

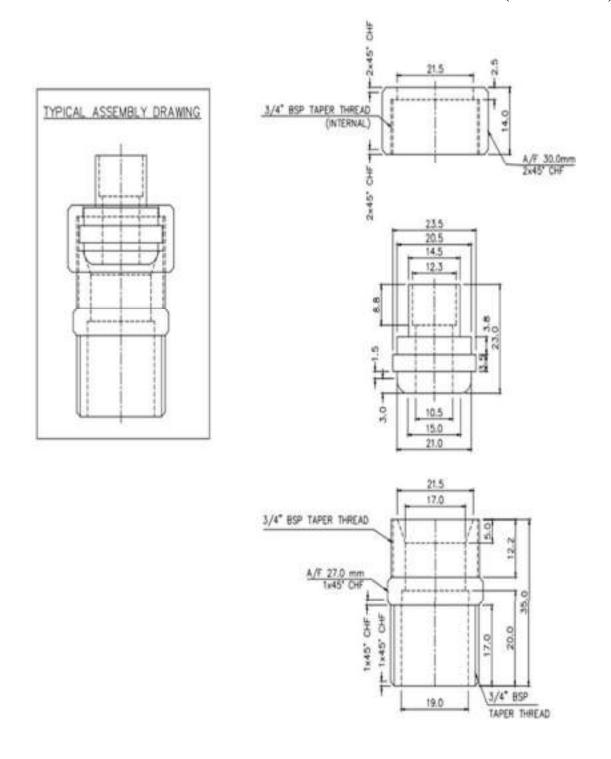
FITTING AS PER EN 1254 PART-1



FITTING AS PER EN 1254 PART-1

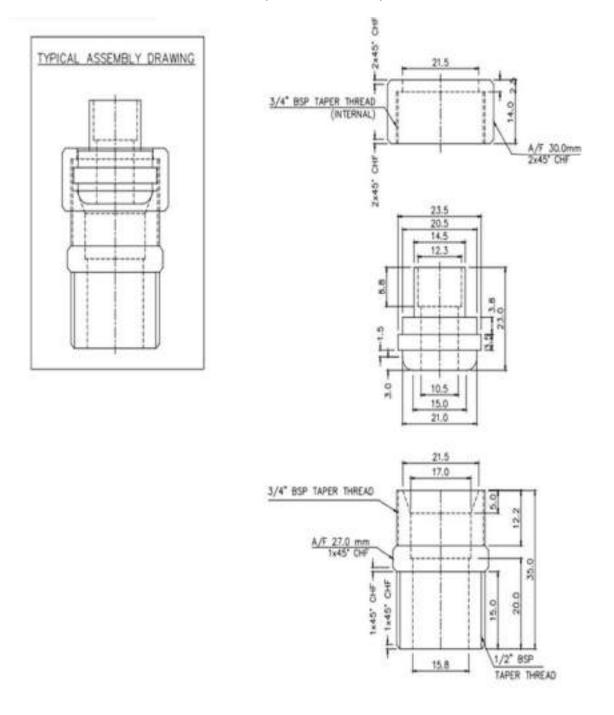
NOTES:-1. ALL DIMENSIONS ARE IN MM. 2. FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE. 3. OPEN TOLRENCES ON DIMENSIONS SHALL BE AS PER EN 1254. 4. FOR DETAIL REFER SPEC NO. 5. THESE DRAWINGS ARE INDICATIVE ONLY. DETAIL DRAWING TO BE PREPARED BY THE VENDOR AS PER DESIGN CODE/MANUFACTURING STANDARD.

BRASS DISCONNECTING UNION 3/4" BSPT * 12MM (STRAIGHT)

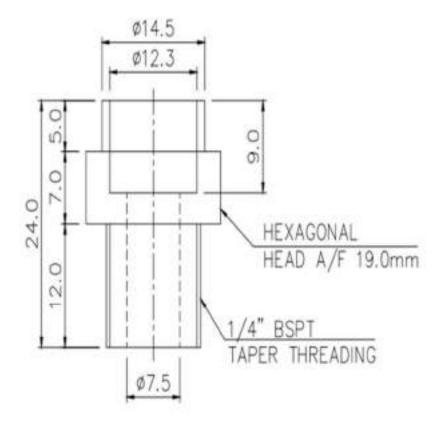


- MATERIAL S SHALL CONFORM TO 319 : FREE CUTTING EXTRUDED
- 2. DIMENSIONS TOLERENCES SHALL BE AS PER BS 864 AND BS 21.
- 3. OPEN TOLERENCES ON DIMENSIONS SHALL BE +/- 0.1 mm.
- 4. THREADIND SHALL BE DONE AS PER BS 21.
- 5. ALL UNIONS BE LEAK TESTED AT 1 BAR.
- 6. ALL DIMENSIONS ARE IN MM.

BRASS DISCONNECTING UNION 1/2" BSPT * 12MM (STRAIGHT)



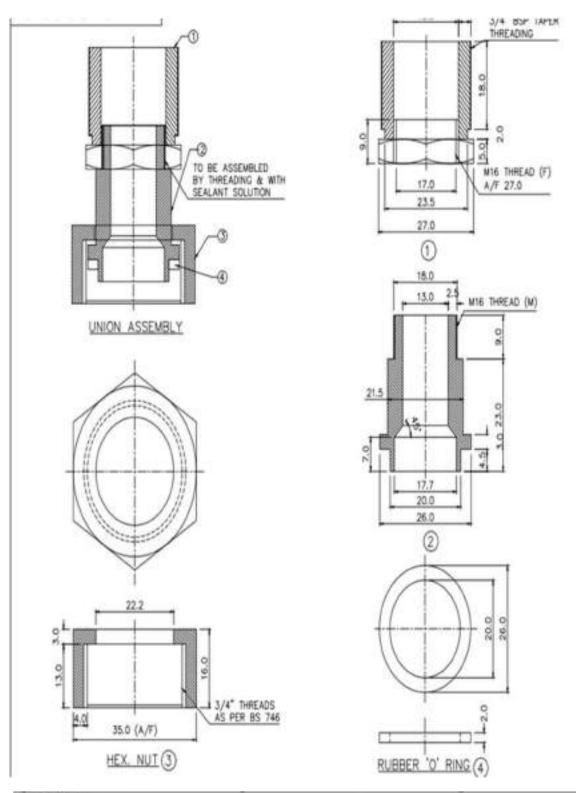
- BRASS ROD. SHALL CONFORM TO 319 : FREE CUTTING EXTRUDED 1
- DIMENSIONS TOLERENCES SHALL BE AS PER BS 864 AND BS 21. 2
- 3. OPEN TOLERENCES ON DIMENSIONS SHALL BE +/- 0.1 mm.
- 4. THREADIND SHALL BE DONE AS PER BS 21.
- ALL UNIONS BE LEAK TESTED AT 1 BAR. 5.
- 6. ALL DIMENSIONS ARE IN MM.



- MATERIAL SHALL CONFORM TO IS : 319 FREE CUTTING EXTRUDED BRASS RODS.
 DIMENSIONS TOLERENCES SHALL BE AS PER BS 864 AND BS 21.
 OPEN TOLERENCES ON DIMENSIONS SHALL BE +/- 0.1 mm.
 THREADIND SHALL BE DONE AS PER BS 21.
 ALL UNIONS BE LEAK TESTED AT 1 BAR.

- 6. ALL DIMENSIONS ARE IN MM.

METER INLET UNION 3/4 * 3/4

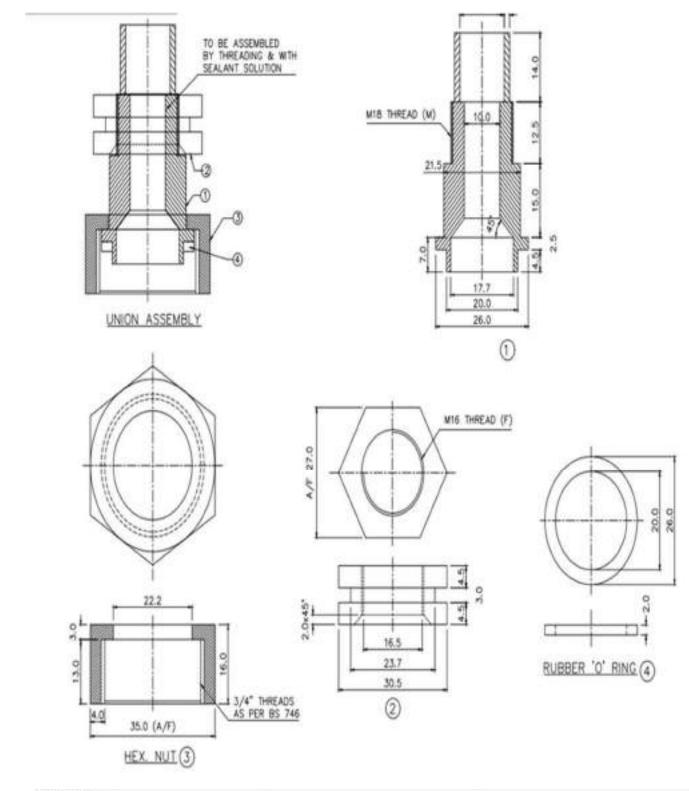


NOTES :-

- DIMENSIONS ARE IN MM. ALL
- MATERIAL SHALL BE EXTRUDED FREE CUTTING BRASS ROD AS PER IS 319/BS EQUIVALENT. RUBBER O RING MATERIAL WILL BE NITRAEL.
- -
- FOR DETAILS REFER TECHNICAL SPECIFICATION NO. MEC/TS/05/62/0208 4.

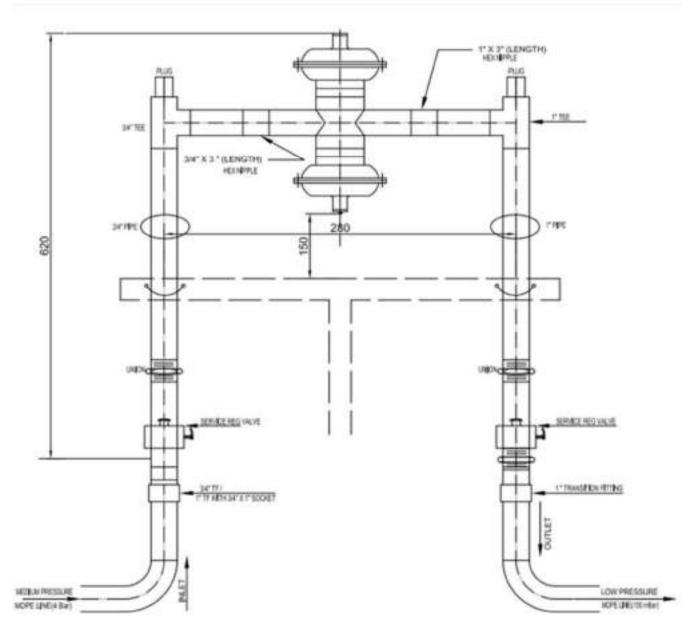
O RING MATERIAL &SEALANT SOLUTION SHOULD BE SUITABLE FOR NATURAL GAS SERVICE. 5.

METER OUTLET UNION 3/4 * 12MM (STRAIGHT)



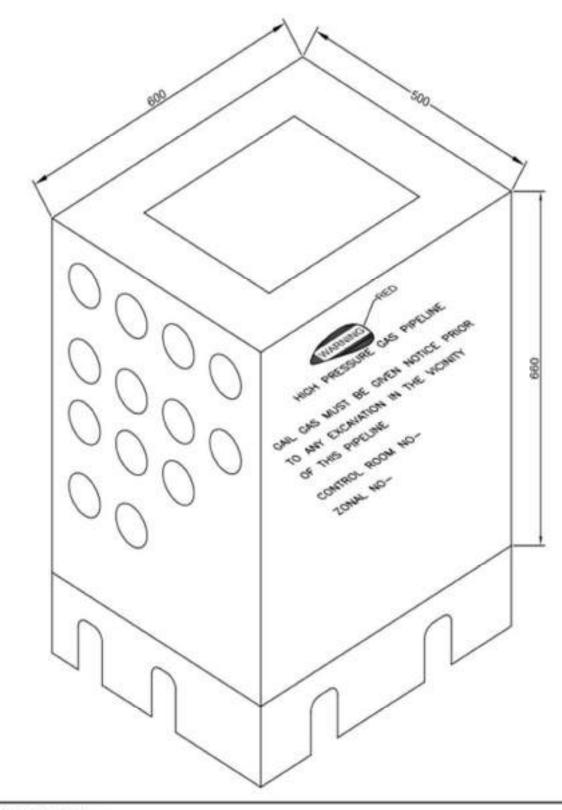
- CRADINGROUPS ARE IN AREA. 2
- MATERIAL SHALL BE EXTRUDED FREE CUTTING BRASS ROD AS PER IS 319/BS EQUIVALENT.
- RUBBER O RING MATERIAL WILL BE NITRAEL. 3
- 4. FOR DETAILS REFER TECHNICAL SPECIFICATION NO. MEC/TS/05/62/020B 5. O RING MATERIAL & SEALANT SOLUTION SHOULD BE SUITABLE FOR NATURAL GAS SERVICE.

SCHEMATIC DIAGRAM FOR SINGLE STREAM SERVICE REGULATOR



NOTE: ALL DIMENSION ARE IN mm.

SCHEMATIC DIAGRAM OF HOUSING FOR SINGLE SERVICE REGULATOR

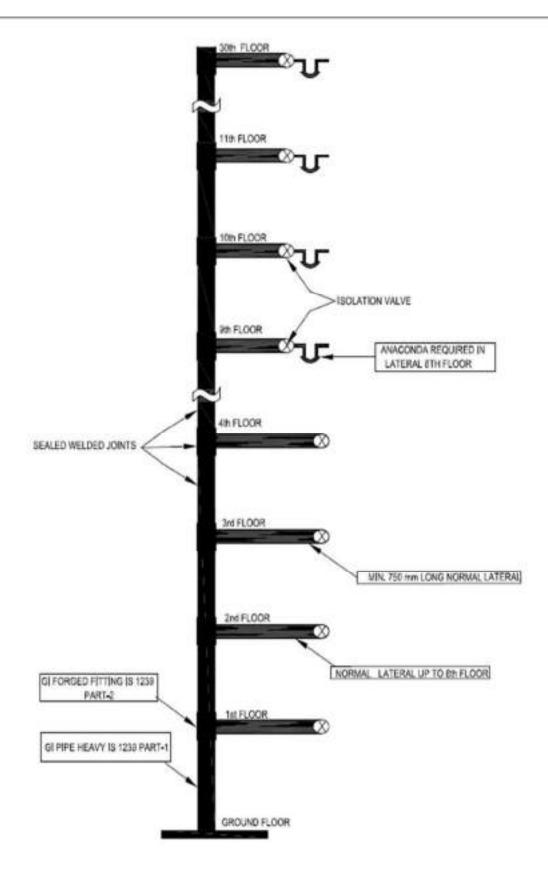


NOTE: ALL DIMENSION ARE IN mm.

40mm GROUTING WITH NON SHRIKAGE COMPUND SHALL BE PROVIDED AT BOTTOM OF SERVICE REGULATOR

THE HOUSING SHOULD BE OF FIBER REINFORCED PLASTIC (RFP)

SCHEMATIC REPRESENTATION OF WELDED RISER



SCHEMATIC DIAGRAM FOR SERVICE REGULATOR





