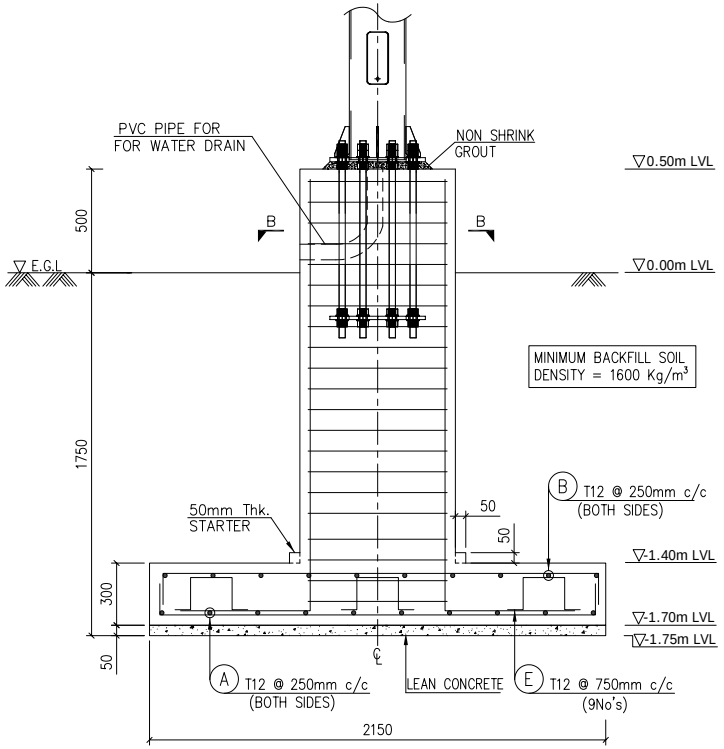
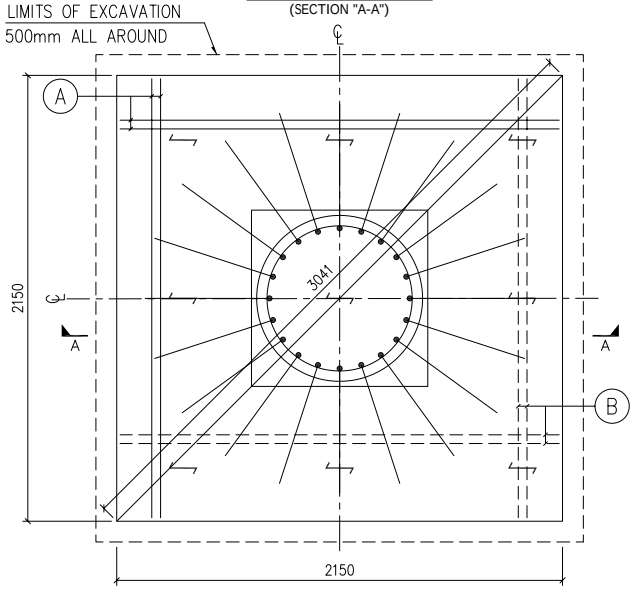
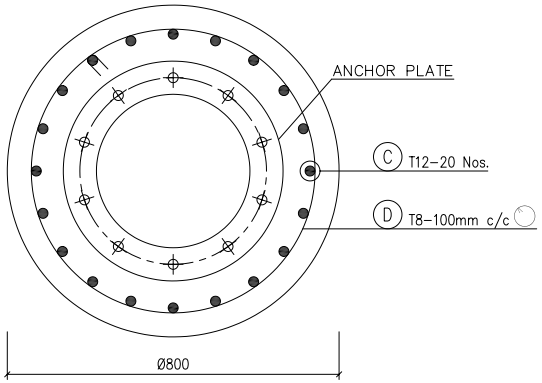
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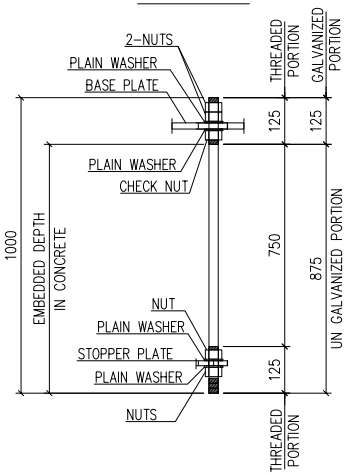
FOUNDATION DETAIL
(SECTION "A-A")



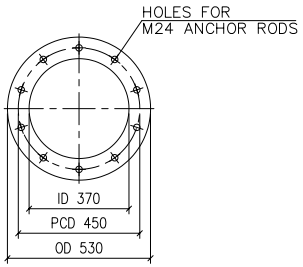
FOUNDATION & EXCAVATION PLAN
(SHOWING BOTTOM & TOP REINFORCEMENT DETAILS)



SECTION B-B



24Ø - 1000 Lg.(10 Nos)
ANCHOR BOLT
(REFER IMPORTANT NOTE)



ANCHOR PLATE 12 x 530 OD
(REFER IMPORTANT NOTE)

IMPORTANT NOTE
DETAIL SHOWN HERE ARE INDICATIVE AND SHALL REFER TO DRAWING No:–
MS12T1–C–123, REV–0, DATED :2018–08–28

NOTES ON GENERIC FOUNDATION DRAWING

1. THIS IS A GENERIC FOUNDATION DRAWING.
2. THE FOLLOWING ARE THE ASSUMED PARAMETERS CONSIDERED DURING FOUNDATION DESIGN
   - NET SAFE BEARING CAPACITY (NSBC) = 10 T/m²
   - GROUND WATER TABLE = NOT APPLICABLE
   - DEPTH OF FOUNDATION = 1.75m FROM FGL
   - DRY DENSITY OF SOIL (r_d) = 1.6 T/m³
   - ANGLE OF INTERNAL FRICTION (ø) = 10°
3. BEFORE COMMENCEMENT OF CONSTRUCTION WORK USING THESE DESIGNS, THE OWNER/CLIENT/CIVIL CONTRACTOR SHALL CARRY OUT DETAILED SOIL INVESTIGATION OF EVERY SITE.
4. FURTHER, THE SOIL INVESTIGATION REPORT SHALL BE REVIEWED BY A CONSULTANT AND CERTIFICATION SHALL BE OBTAINED TO ENSURE CONFORMITY BETWEEN ASSUMED PARAMETERS AND SOIL REPORT VALUES BEFORE START OF CONSTRUCTION.
5. THE FOUNDATION DESIGN IS APPLICABLE ONLY WHEN THE CONSIDERED NSBC IS AVAILABLE AT OR WITHIN 1.75m DEPTH FROM FGL. IN BOTH CASES THE MINIMUM FOUNDATION DEPTH SHALL BE 1.75m FROM FGL.
   IN CASE THE REQUIRED NSBC IS AVAILABLE BEYOND 1.75m DEPTH, THIS FOUNDATION DESIGN DOES NOT STAND APPLICABLE.
6. THIS FOUNDATION DESIGN SHALL NOT BE USED IN CASE ORGANIC SILT, ORGANIC CLAY OR PEAT LAYERS ARE FOUND AT ANY DEPTHS DURING SOIL INVESTIGATION.
7. THIS FOUNDATION DESIGN SHALL NOT BE ADOPTED AT SITES WHERE TO GROUND IMPROVEMENT/LIQUIFICATION AND IN THIS CASE SPECIAL FOUNDATION SHALL BE DONE.
8. ANY DISCREPANCY IN THE DRAWING & SITE CONDITIONS SHALL BE BROUGHT TO THE NOTICE OF SITE ENGINEER & CONSULTANT.
9. IN CASE TOP OF PEDESTAL IS FOUND TO BE LOWER THAN THE ROAD LEVEL/HIGH FLOOD LEVEL, THEN BASE PLATE ENCASEMENT SHALL BE TAKEN UP IN CONSULTATION WITH THE SITE ENGINEER/INCHARGE/CONSULTANT.
10. IN CASE GROUND WATER TABLE IS FOUND WITHIN THE FOUNDATION DEPTH. THIS FOUNDATION DESIGN DOES NOT STAND APPLICABLE.

POLE FOUNDATION QUANTITIES		
DESCRIPTION		QUANTITY
CONCRETE	(cum)	2.35
LEAN CONCRETE	(cum)	0.23
REINFORCEMENT	(Kg.)	150.6
EXCAVATION	(cum)	17.4

ISSUED FOR APPROVAL

DISCLAIMER:
THE RESPONSIBILITY OF M/s RAMBOLL INDIA TELECOM, HYDERABAD IS LIMITED ONLY TO THE TECHNICAL CONTENT OF THIS DRAWING. CO–RELATION OF THIS DOCUMENT WITH SITE DATA, ALL PROCEDURAL/LEGAL/OPERATIONAL MATTERS WOULD BE RESPONSIBILITY OF THE CLIENT. M/s RAMBOLL INDIA TELECOM, HYDERABAD SHALL NOT IN ANY WAY BE RESPONSIBLE FOR THE CONSEQUENTIAL EFFECTS (IF ANY) DUE TO THE USAGE OF THIS DRAWING CONTENT AND SHALL NOT BE LIABLE TO CARRY OUT ANY POST IMPLEMENTATION STUDIES INCLUDING DAMAGE STUDIES (IF ANY).

DATE	REVISION	REVISION DESCRIPTION	CHECKED	APPROVED
14.09.18	0	ISSUED FOR APPROVAL	RAJEEV	SSR

ENGINEERING BY :- RAMBOLL
RAMBOLL INDIA PVT. LTD.
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Tel:+91–40–40322000, Fax:+91–40–40322003, Email:services@ramboll.in, www.ramboll.in

PROJECT :- **GENERIC FOUNDATION FOR GROUND BASED MW POLE**
(POLE TYPE : SLIP JOINT MONOPOLE - MS12T1)

	NAME	DATE
DSGN	RAJEEV	14.09.18
DRWN	TGS	14.09.18
CHKD	RAJEEV	14.09.18
APPD	SSR	14.09.18

TITLE : **GENERIC ISOLATED FOUNDATION DRAWING FOR 12m MONOPOLE SBC : 10 T/m² (WITH OUT WATER TABLE)**

SCALE: NTS.
SHEET: 1 OF 2

DRG. No. 18RIT–070–12m–MS12T1–10NWT
SIZE A3 | REV. 0

RELEASED FOR ☐ PRELIMINARY ☐ TENDER ☐ INFORMATION ■ APPROVAL ☐ CONSTRUCTION

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GENERAL NOTES

1. GENERAL & MATERIAL

1.1 ALL DIMENSIONS ARE IN "mm" U.O.S.
1.2 RCC & LEAN CONCRETE SHALL BE OF GRADE M20 & M10 RESPECTIVELY.
1.3 FOR AGGRESSIVE SOIL/EXPOSURE CONDITIONS, MINIMUM GRADE OF CONCRETE SHALL BE REFFERED AS PER 'IS456 2000, TABLE 3 AND 5'.
1.4 LEAN CONCRETE SHALL BE OF GRADE M10 WITH MIX PROPORTION OF 1:3:6
1.5 STEEL GRADE IS Fe415 U.O.S. AS PER IS 1786 / IS 1159
1.6 IF ANY LEVEL DIFFERENCE IN EXISTING GROUND IS FOUND, THEN SOIL EXCAVATION FOR FOUNDATION SHALL BE STARTED WITH REFERENCE TO THE LOWER LEVEL AND THE SOIL SHALL BE BACK FILLED AND COMPACTED UPTO THE TOP MOST LEVEL OF NATURAL GROUND LEVEL TO AVOID SOIL EROSION.
1.7 VERIFY THE ADJACENT SITE FEATURES BEFORE EXCAVATION, PROPER CARE SHALL BE TAKEN TO AVOID DAMAGE TO ADJACENT STRUCTURE.
1.8 ANY DISCREPANCY IN THE DRAWING (VS) SITE CONDITIONS SHALL BE BROUGHT TO THE NOTICE OF SITE ENGINEER & CONSULTANT (Ramboll India Pvt. Ltd.)

2. TECHNICAL SPECS

2.1 MINIMUM COVER TO THE MAIN REINFORCEMENT
FOR COLUMNS 50mm FOR PAD 50mm
2.2 THE LAP LENGTH/DEVELOPMENT LENGTH OF BARS SHOULD BE 50ø AND STAGGERED. HOWEVER, IT IS PREFERABLE TO WELD BARS IN CHIMNEY/COLUMN. WELD SHALL BE CONTINUOUS FOR A MINIMUM LENGTH OF 450mm PER EACH BAR WITH 10mm THICK WELD ON BOTH SIDES.
2.3 NO CONSTRUCTION JOINT SHALL BE ALLOWED OTHER THAN SPECIFIED.
2.4 CONSTRUCTION SHALL BE CARRIED OUT IN ACCORDANCE TO VARIOUS PROVISIONS LAID DOWN IN IS:456/IS:800 STANDARDS.
2.5 STRIPPING OF FORMWORK SHALL BE CARRIED AS PER THE PROVISIONS OF IS:456.

3. EXCAVATION & BACKFILLING

3.1 THE SIDE SLOPES FOR EXCAVATION SHALL BE DIVIDED AS PER THE FOLLOWING GUIDELINES.
a) FOR SANDY SOILS, SLOPE IV:2H
b) FOR CLAYEY SOILS, SLOPE IV:1H
c) FOR HARD STRATA, VERTICAL CUT
ALTERNATIVELY, SUFFICIENT SHEET PILES/SHORING SHALL BE USED DURING EXCAVATION TO PREVENT SIDE COLLAPSE.
3.2 SAND BEDDING/STONE BEDDING SHALL BE PROVIDED IN FOUNDATIONS OF MARSHLY AND WET BLACK COTTON SOIL.
3.3 IN CASE OF NO GROUND WATER, ALL FOUNDATION PITS SHALL BE SOAKED WITH WATER FOR 24 HOURS AND COMPACTED WELL BEFORE PLACING LEAN CONCRETE.
3.4 LOOSE POCKETS OF SOIL, (IF ANY FOUND) IN FOUNDATION PITS SHALL BE COMPLETELY REMOVED FOR LOOSE MATERIAL AND FILLED WITH LEAN CONCRETE & COMPACTED WELL BEFORE FOUNDATIONS IS LAID.
3.5 FOUNDATION PIT SHALL BE KEPT DRY (FREE FROM WATER) DURING LAYING OF LEAN CONCRETE & RCC AND FURTHER TO A PERIOD OF 48 HOURS (MIN.) FROM THE CONCRETE LAYING TIME.
3.6 ALL BACK FILLING OF FOUNDATION SHOULD BE DONE WITH WELL COMPACTED MURRUM SOIL.
3.7 THE BACK FILLING MATERIALS SHOULD BE CLEAN AND FREE FROM ORGANIC OR OTHER FOREIGN MATERIALS.
3.8 SOIL BACK FILL SHALL BE DONE IN LAYERS OF APPROX. 150–200mm, EACH LAYERS SHALL BE DENSELY COMPACTED BY SPRINKLING MINIMUM QUANTITY OF WATER AS NECESSARY FOR PROPER COMPACTION AND MINIMUM BACKFILL SOIL DENSITY SHALL BE 1700 kg/m^3
3.9 CARE SHALL BE TAKEN THAT THE BACK FILLING IS STARTED FROM THE CENTRE TOWARDS THE OUTER ENDS
3.10 AFTER BACK FILLING 50mm HIGH EARTHEN EMBANRSCENT(BUND) TO BE MADE ALONG THE SIDES OF EXCAVATED PITS AND SUFFICIENT WATER WILL BE POURED OVER THE BACK FILLED EARTH FOR ATLEAST 24HRS.

4. CURING

4.1 CURING OF FOUNDATIONS SHALL BE CARRIED OUT OVER A MINIMUM PERIOD OF 7 DAYS. IN THE FOLLOWING MANNER.
a) BASE RAFT, BEAM SHALL BE KEPT CONTINOUSLY IN DAMP OR WET CONDITION BY PONDING OR BY COVERING WITH SACKING FOR A MINIMUM PERIOD OF 2 DAYS AFTER FINAL SETTING TIME OF CONCRETE (≃12 HRS)
b) BACK FILLING SHALL START AFTER 72 HRS OF CONCRETING.
c) AFTER COMPLETION OF BACK FILLING THE SOIL SHALL BE KEPT MOIST/DAMP/WET CONDITION UPTO 7 DAYS FROM CONCRETING.
4.2 POLE ERECTION SHALL START AFTER 7 DAYS OF CONCRETING AND OR MIN. 3 DAYS AFTER ANCHOR BOLT SETTING.
4.3 IN CASE TOP OF PEDESTAL IS FOUND TO BE LOWER THAN THE ROAD LEVEL/HIGH FLOOD LEVEL, THEN BASE PLATE ENCASEMENT SHALL BE TAKEN UP IN CONSULTATION WITH THE SITE ENGINEER/INCHARGE/CONSULTANT.

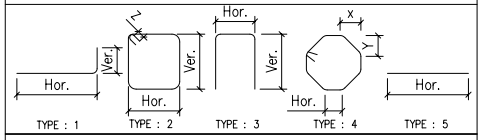
5. TEMPLATE ASSEMBLY/ GROUTING

5.1 GROUTING UNDER BASE PLATE HAS TO BE DONE WITH FREE FLOW NON SHRINK GROUT HAVING MINIMUM STRENGTH AS THAT OF CONCRETE .

LEGEND

U.O.S. – UNLESS OTHERWISE SPECIFIED.
⟷ – INDICATES CHAIR LOCATIONS
F.G.L – FINISHED GROUND LEVEL
E.G.L – EXISTING GROUND LEVEL
T & B – TOP AND BOTTOM

TYPICAL BENDING SHAPES



BAR BENDING SCHEDULE
(FOR MONOPOLE FOUNDATION)

MARK	DIA (mm)	DESCRIPTION	LENGTH (mm)	NOS./ POLE	UNIT WT. Kg/m	TOTAL WEIGHT
A	12	150 — 2050 — 150	2350	20	0.89	41.8
B	12	150 — 2050 — 150	2350	20	0.89	41.8
C	12	2075 — 600	2675	20	0.89	47.6
D	8	100 Ø700	2400	11	0.39	10.3
E	12	300; 150; 150; 270; 270	1140	9	0.89	9.1

TOTAL STEEL WT. PER POLE = 150.6 kg

ISSUED FOR APPROVAL

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14.09.18	0	ISSUED FOR APPROVAL	RAJEEV	SSR

ENGINEERING BY :- RAMBOLL
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(POLE TYPE : SLIP JOINT MONOPOLE - MS12T1)

	NAME	DATE
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DRWN	TGS	14.09.18
CHKD	RAJEEV	14.09.18
APPD	SSR	14.09.18

TITLE : **GENERIC ISOLATED FOUNDATION DRAWING FOR 12m MONOPOLE SBC : 10 T/m² (WITH OUT WATER TABLE)**

SCALE: NTS.
SHEET: 2 OF 2

DRG. No. 18RIT-070-12m-MS12T1-10NWT
SIZE A3 REV. 0

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