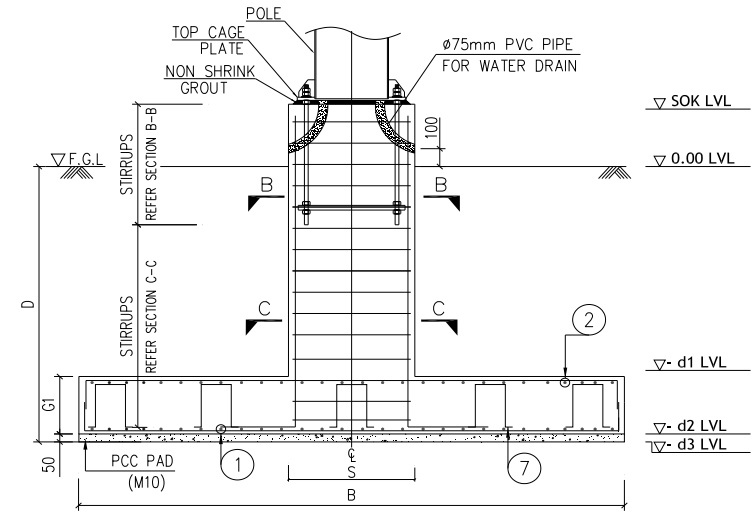
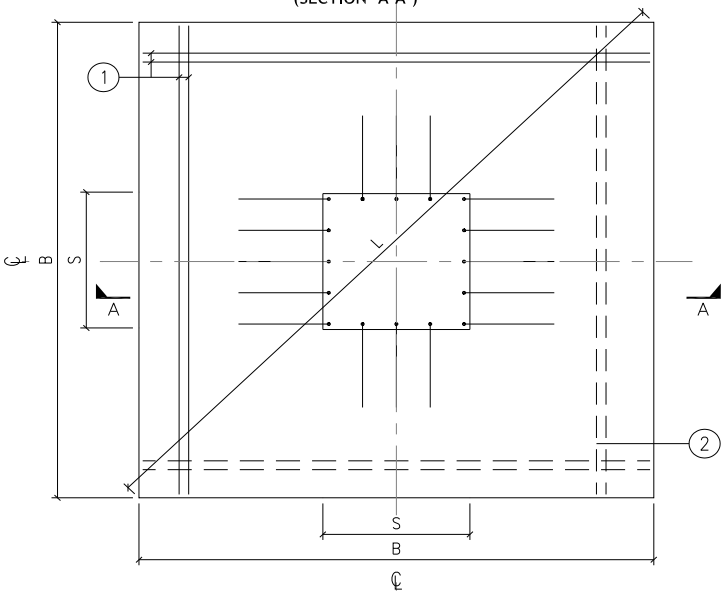
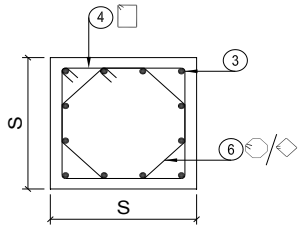


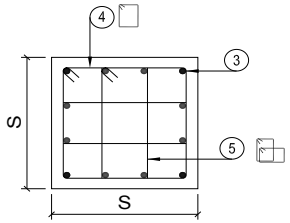
FOUNDATION DETAIL
(SECTION "A-A")



FOUNDATION PLAN
(SHOWING BOTTOM & TOP REINFORCEMENT DETAILS)



SECTION "B-B"



SECTION "C-C"

Dimensions	
L	3.748 m
B	2.650 m
S	0.850 m
D	1.750 m
d1	1.450 m
d2	1.450 m
d3	1.700 m
SOK lvl	0.500 m
Section B-B	600 mm
Section C-C	1530 mm

Assumed parameters considered in foundation design:

Allowable Net safe bearing capacity (NSBC) ≥ 10 T/m^2)

Ground water level : : Nil

Depth of foundation : 1.75m

Frustum angle ≥ 10 deg.

Density of back filling material ≥ 1600 kg/m^3

Notes on foundation drawing:

1. This is a generic foundation drawing.
2. Before commencement of construction work using these designs, the owner/client/civil contractor shall carry out detailed soil investigation of every site.
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.
3. The foundation design is applicable only when the assumed SBC is available at (or) within the 1.75m depth from E.G.L. In both cases the minimum foundation depth shall be 1.75m from E.G.L.
4. In case the required SBC is not available at/beyond 1.75m depth, this foundation design does not stand applicable.
5. This foundation design shall not be used in case of organic silt, organic clay or peat layers are found upto depth "2b" from founding level during soil investigation (where b= pad/raft width).
6. This foundation design shall not be adopted at sites where soil is subjected to ground improvements/Liquefaction.In this case special foundation shall be done.
7. In case ground water table is found within the foundation depth. This foundation design does not stand applicable.

Rev	Date	Prepared	Approved
0	12-03-2020	GVR	SSR

RAMBOLL

Monopole model : Slip joint Monopole

Depth of Foundation : 1.75 m

Net SBC : 10 T/m^2

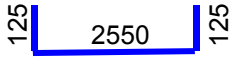
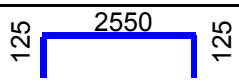
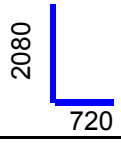
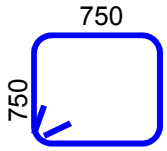
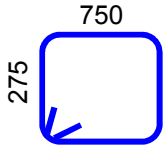
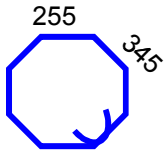
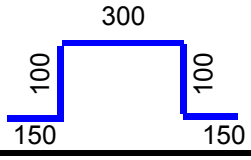
Isolated Foundation Structural drawing

DWG No: 18RIT-70-15m monopole-10NWT

Sheet 1 of 3

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BAR BENDING SCHEDULE

#	Shape of Bar	Length of Bar (mm)	Dia. of Bar (mm)	Spacing (mm)	No.of Bars	Unit Weight	Total Weight per Pole
1		2800	12	130	42	0.89	104.7
2		2800	12	250	24	0.89	59.8
3		2800	20	-	12	2.47	83.0
4		3200	8	150	15	0.39	18.7
5		2250	8	150	44	0.39	38.6
6		2600	8	150	5	0.39	5.1
7		800	12	750	16	0.89	11.4

Weight of steel (kg)	321.3
Wastage and splices (kg)	16.1
Total Steel Quantity (kg)	337.3

Foundation Quantity

Items	Pole	Units
Concrete	3.16	cum
PCC	0.4	cum
Steel	337.3	kg
Shuttering	9.3	sq.m
Excavation	23.4	cum

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RAMBOLL

Monopole model : Slip joint Monopole

Depth of Foundation : 1.75 m

Net SBC : 10 T/m^2

Isolated Foundation Structural drawing

DWG No: 18RIT-70-15m monopole-10NWT

Issued for Approval

GENERAL NOTES

1. GENERAL & MATERIAL

1.1 ALL DIMENSIONS ARE IN 'mm' AND LEVELS ARE 'METERS' U.O.S.
1.2 DO NOT SCALE DRAWING.
1.3 RCC & LEAN CONCRETE SHALL BE OF GRADE M25 & M10 RESPECTIVELY.
1.4 FOR AGGRESSIVE SOIL/ EXPOSURE CONDITIONS, MINIMUM GRADE OF CONCRETE SHALL BE REFERRED AS PER IS456 2000, TABLE "3 AND 5".
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 AT SITE, THEN SOIL EXCAVATION FOR FOUNDATION SHALL BE STARTED WITH REFERENCE TO THE LOWER LEVEL AND THE SOIL SHALL BE BACK FILLED, COMPACTED UPTO THE TOP MOST LEVEL OF NATURAL GROUND AND TO AVOID SOIL EROSION (SUFFICIENT PROTECTION ARRANGEMENT SHALL BE MADE).
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 & SITE CONDITIONS SHALL BE BROUGHT TO THE NOTICE OF SITE ENGINEER & CONSULTANT.
1.9 THIS FOUNDATION SHALL NOT BE USED IN CASE ORGANIC SILT, ORGANIC CLAY OR PEAT LAYERS ARE FOUND AT ANY DEPTH.
1.10 THIS FOUNDATION DESIGN SHALL NOT BE ADOPTED AT SITES WHERE SOIL IS SUBJECTED TO GROUND IMPROVEMENT/LIQUIFICATION. AND IN THIS CASES SPECIAL FOUNDATION SHALL BE DONE.
1.11 THE VENDOR/CONTRACTOR SHALL DESIGN THE TEMPORARY WORK SUCH AS SCAFFOLDING AND SHUTTERING TO HAVE ADEQUATE STRENGTH, AND STABILITY TO SUIT THE DRAWING REQUIREMENTS. IF ANY SPECIFIC CASE ARISE AT SITE, A DETAILED DESIGN SHALL BE SUBMITTED FOR CONSULTANT VERIFICATION BEFORE USING AT SITE.
1.12 NO FURTHER EXCAVATION/CONSTRUCTION IS ALLOWED WITHIN ZONE OF FOUNDATION AND IF ANY SHALL BE VALIDATED BY CONSULTANT.
1.13 REINFORCEMENT SHALL BE SUITABLY ADJUSTED AT SITE TO CLEAR POCKETS, BOLTS, OPENINGS, CUTOUT, ETC. AS APPROVED BY SITE ENGINEER UNLESS OTHERWISE SHOWN IN DRAWING.
1.14 THE CONTRACTOR/CLIENT SHALL VERIFY ALL QUANTITY, DIMENSION AND CONDITION WITH SITE AND NOTIFY THE ENGINEER/CONSULTANT. IF ANY DISCREPANCY IN DRAWING AND/OR SPECIFICATION BEFORE PROCEEDING THE WORK.
1.15 THE TOTAL LENGTH OF BARS (CUTTING LENGTH) SHALL BE CALCULATED ON THE BASIS OF THE APPROPRIATE BENDING DIMENSIONS WITH CORRECTIONS FOR BENDS AND ALLOWANCES FOR ANCHORAGES.

2. TECHNICAL SPECIFICATION

2.1 MINIMUM COVER TO THE MAIN REINFORCEMENT
COLUMNS 50mm, FOR PAD 50mm
2.2 THE LAP LENGTH/DEVELOPMENT LENGTH OF BARS SHOULD BE 50ø AND STAGGERED REFERANCE SHALL BE MADE TO IS:456
2.3 NO HONEYCOMB/GAP SHALL BE PERMITTED WHILE CONCRETING.
2.4 NO CONSTRUCTION JOINT ARE ALLOWED OTHER THAN SPECIFIED.
2.5 CONSTRUCTION ARE CARRIED OUT IN ACCORDANCE TO VARIOUS PROVISIONS LAID DOWN IN IS:456/IS:800 STANDARDS.
2.6 STRIPPING OF FORMWORK AND CURING SHALL BE CARRIED OUT AS PER PROVISION IN 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 FOUNDATIONS.
3.3 IN CASE OF NO GROUND WATER, ALL FOUNDATION PITS SHALL BE SOAKED WITH WATER FOR 24 HOURS AND COMPACT WELL BEFORE PLACING LEAN CONCRETE.
3.4 LOOSE POCKETS OF SOIL FOUND, (IF ANY) IN FOUNDATION PITS IT SHALL BE COMPLETELY REMOVED AND FILLED WITH LEAN CONCRETE AND COMPACTED WELL BEFORE FOUNDATIONS ARE LAID.
3.5 FOUNDATION PIT SHALL BE KEPT DRY (FREE FROM WATER) DURING LAYING OF LEAN CONCRETE, PLACING STEEL AND CONCRETING WORK.
3.6 ALL BACK FILLING OF FOUNDATION SHOULD BE DONE WITH WELL COMPACTED SOIL(MORRUM PREFERABLY)
3.7 THE BACK FILLING MATERIAL 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 1600 Kg/m³
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 EMBANKMENT(BUND) TO BE MADE ALONG THE SIDES OF EXCAVATED PITS AND SUFFICIENT WATER WILL BE POURED OVER THE BACK FILLED EARTH FOR ATLEAST 24HRS.
3.11 FINISHED GROUND LEVEL AT COLUMN/CHIMNEY SHOULD BE SLOPED AWAY, WITH SLOPE OF 1:3 TO PREVENT ACCUMULATION OR PONDING OF WATER
3.12 SURFACE DRAINAGE OF THE PLOT SHOULD BE MADE SO AS TO AVOID WATER LOGGING IN THE PLOT, IN PARTICULAR AROUND THE FOUNDATION
3.13 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.
3.14 EXCAVATION PLAN & VOLUME SHOWN IN DRAWING IS INDICATIVE ONLY & THIS IS APPLICABLE FOR NORMAL SOIL CONDITIONS. IT MAY VARY, AS PER SITE CONDITION & STRATA ENCOUNTERED.

4. TEMPLATE ASSEMBLY/ GROUTING

4.1 VERIFY BOLT, NUT SIZE AND LENGTH AS PER TEMPLATE/BASE ASSEMBLY DRAWING.
4.2 CHECK THE INTEGRITY OF BOLT AND NUT BEFORE EXECUTION AT SITE. IF ANY PLAY FOUND, CONSULT SITE ENGINEER/CONSULTANT.
4.3 GROUTING UNDER BASE PLATE HAS TO BE DONE WITH FREE FLOW NON SHRINK GROUT HAVING MINIMUM STRENGTH AS THAT OF COLUMN CONCRETE.

LEGEND

U O S – UNLESS OTHERWISE SPECIFIED
F.G.L – FINISHED GROUND LEVEL
E.G.L – EXISTING GROUND LEVEL
B B S – BAR BENDING SCHEDULE
T & B – TOP & BOTTOM
⟌ – CHAIRS

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RAMBOLL

Monopole model : Slip joint Monopole
Depth of Foundation : 1.75 m
Net SBC : 10 T/m^2
Isolated Foundation Structural drawing

Client : Reliance Jio Infocomm Ltd
DWG No: 18RIT-70-15m monopole-10NWT
Sheet 3 of 3
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