

CORRIGENDUM - 1

Sl. No.	Section	Existing	Amended As
1	Section – 3 Qualification information/ Bidding Forms	<p style="text-align: right;">Form – BDF/ 1</p> <p style="text-align: center;">FORMAT OF BID SECURITY (BANK GUARANTEE)</p> <p>WHERE AS _____ having its registered office at _____ (hereinafter called the Bidder) has submitted his bid dated _____ for the work Construction of Boundary Wall, Watch Tower and other miscellaneous & associated works in Airforce Station at Jalahalli in connection with BSRP (hereinafter called "the Works") KNOW ALL PEOPLE by these presents that we, _____ having its registered office at _____ (hereinafter called the Bank) are bound unto the Managing Director, Rail Infrastructure Development Company Karnataka Ltd (K-RIDE), Bengaluru (hereinafter called "the Employer") in the sum of ₹. _____ (Rupees _____) for which payment well and truly to be made to the said Employer the Bank binds itself, his successors and assigns by these presents; SEALED with the Common Seal of the said Bank this day _____</p> <p>THE CONDITIONS OF THIS OBLIGATION ARE:</p> <ol style="list-style-type: none"> 1. If after Bid opening the Bidder withdraws his Bid during the period of Bids validity specified in the Form of Bid. <p style="text-align: center;">OR</p> <ol style="list-style-type: none"> 2. If the Bidder having been notified of the acceptance of his Bid by the Employer during the period of Bid Validity. <ol style="list-style-type: none"> a. Fails of confuses to execute the form of Agreement in accordance with the instructions to Bidders, if required; or b. Fails or refuse to furnish the Performance Security, in accordance with the instruction to Bidders; or c. Does not accept the correction of the Bid Price pursuant to clause 24. <p>We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the conditions of one or both of the two conditions, specifying the occurred condition or conditions.</p> <p>This Guarantee will remain in force up to and including the date 180 days after the deadline for submission of bids as such deadline is stated in the instructions to Bidders of as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date</p> <p>DATE _____</p> <p>SIGNATURE OF THE BANK _____</p>	<p style="text-align: right;">Form – BDF/ 1</p> <p style="text-align: center;">FORMAT OF BID SECURITY (BANK GUARANTEE)</p> <p>WHERE AS _____ having its registered office at _____ (hereinafter called the Bidder) has submitted his bid dated _____ for the work Construction of Boundary Wall, Watch Tower and other miscellaneous & associated works in Airforce Station at Jalahalli in connection with BSRP (hereinafter called "the Works") KNOW ALL PEOPLE by these presents that we, _____ having its registered office at _____ (hereinafter called the Bank) are bound unto the Managing Director, Rail Infrastructure Development Company Karnataka Ltd (K-RIDE), Bengaluru (hereinafter called "the Employer") in the sum of ₹. _____ (Rupees _____) for which payment well and truly to be made to the said Employer the Bank binds itself, his successors and assigns by these presents; SEALED with the Common Seal of the said Bank this day _____</p> <p>THE CONDITIONS OF THIS OBLIGATION ARE:</p> <ol style="list-style-type: none"> (1) If after Bid opening the Bidder withdraws his Bid during the period of Bids validity specified in the Form of Bid. <p style="text-align: center;">OR</p> <ol style="list-style-type: none"> (2) If the Bidder having been notified of the acceptance of his Bid by the Employer during the period of Bid Validity. <ol style="list-style-type: none"> a. Fails of refuses to execute the form of Agreement in accordance with the instructions to Bidders, if required; or b. Fails or refuses to furnish the Performance Security, in accordance with the instruction to Bidders; or c. Does not accept the correction of the Bid Price pursuant to clause 24. <p>We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the conditions of one or both of the two conditions, specifying the occurred condition or conditions.</p> <p>This Guarantee will remain in force up to and including the date 180 days after the deadline for submission of bids as such deadline is stated in the instructions to Bidders of as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date</p> <p>DATE _____</p> <p>SIGNATURE OF THE BANK _____</p>

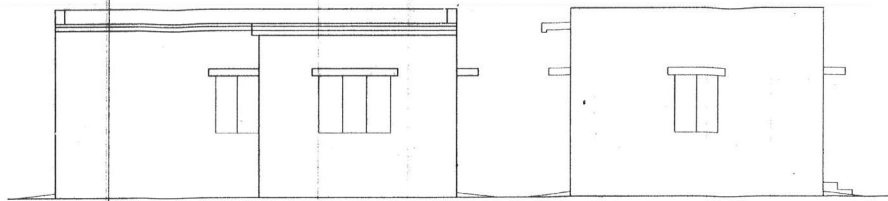
		WITNESS _____ SEAL _____					WITNESS _____ SEAL _____				
Section – 9		SCHEDULE – B					SCHEDULE – B				
PRICE SCHEDULE											
1	Sewage disposal - Material & Labour for RCC NP3 150 mm diameter Pipes laid on 150 mm thick bed with excavation in any type of soil including manholes/crop manhole of standard size made of Brick masonry/ RCC/Precast RCC with SFRC ventilating cover and frame. Includes all items. and activities to execute and make sewer line functional	RM	130.00	1,571.76	2,04,328.80	1	Sewage disposal - Material & Labour for RCC NP3 150 mm diameter Pipes laid on 150 mm thick bed with excavation in any type of soil including manholes/crop manhole of standard size made of Brick masonry/ RCC/Precast RCC with SFRC ventilating cover and frame. Includes all items. and activities to execute and make sewer line functional	RM	130.00	1,728.94	2,24,761.68
2	Septic tank- Material & Labour for RCC Septic tank designed to carry sewage and sullage water, excavation in any type of soil, PCC 1 4 8 below foundation RCC M-30 Design Mix in Walis Base Slab, Baffle walls and Roof Slab including beams etc with Vent shaft, manhole openings with cover connection etc., complete with effective depth of 1.5 meter and overall depth of 3 meter for	Each	4.00	7,44,139.86	29,76,559.44	2	Septic tank- Material & Labour for RCC Septic tank designed to carry sewage and sullage water, excavation in any type of soil, PCC 1 4 8 below foundation RCC M-30 Design Mix in Walis Base Slab, Baffle walls and Roof Slab including beams etc with Vent shaft, manhole openings with cover connection etc., complete with effective depth of 1.5 meter and overall depth of 3 meter for	Each	4.00	8,18,553.85	32,74,215.38
3	Soak well - Soak well 3.0 M dia and 3.00 mtr deep Soakage wells excavation, in any type of soil, foundation in PCC 1:3:6, walls of honey combed masonry with top ring of M25 concrete including intercepting chamber and screen chamber made of Brick masonry in CM, RCC cover slab in M25/ SFRC cover, interconnecting pipes of RCC/DWC complete filled with brick bats of Size	Each	4.00	94,585.26	3,78,341.04	3	Soak well - Soak well 3.0 M dia and 3.00 mtr deep Soakage wells excavation, in any type of soil, foundation in PCC 1:3:6, walls of honey combed masonry with top ring of M25 concrete including intercepting chamber and screen chamber made of Brick masonry in CM, RCC cover slab in M25/ SFRC cover, interconnecting pipes of RCC/DWC complete filled with brick bats of Size	Each	4.00	1,04,043.79	4,16,175.14
4	Supply and installation of silent Diesel Engine driven generating set 415 volts, 3 phase 4 wire, engine as per IS: 10001/ 10002 and Alternator as per IS: 13364 complete with relay panel and switch gears for automatic starting on main failure, control panel having meter and sound proof canopy as per CPCB norms and foundation etc. of capacity 05 KVA (01 for WT 8, 01 for WT 9 and 01 for WT 10).	Each set	3.00	2,91,666.50	8,74,999.50	4	Supply and installation of silent Diesel Engine driven generating set 415 volts, 3 phase 4 wire, engine as per IS: 10001/ 10002 and Alternator as per IS: 13364 complete with relay panel and switch gears for automatic starting on main failure, control panel having meter and sound proof canopy as per CPCB norms and foundation etc. of capacity 05 KVA (01 for WT 8, 01 for WT 9 and 01 for WT 10).	Each set	3.00	3,20,833.15	9,62,499.45
5	Supply and installation of silent Diesel Engine driven generating set 415 volts, 3 phase , 4 wire, engine as per IS: 10001/10002 and Alternator as per IS: 13364 complete with relay panel and switch gears for automatic starting on main failure, control panel having meter and sound proof canopy as per CPCB norms and foundation etc. of capacity 10 KVA (01 for WT 1 and 01 for WT 03).	Each set	2.00	5,83,333.00	11,66,666.00	5	Supply and installation of silent Diesel Engine driven generating set 415 volts, 3 phase , 4 wire, engine as per IS: 10001/10002 and Alternator as per IS: 13364 complete with relay panel and switch gears for automatic starting on main failure, control panel having meter and sound proof canopy as per CPCB norms and foundation etc. of capacity 10 KVA (01 for WT 1 and 01 for WT 03).	Each set	2.00	6,41,666.30	12,83,332.60

		6	Supply and installation of silent Diesel Engine driven generating set 415 volts, 3 phase, 4wire, engine as per IS: 10001/10002 and Alternator as per IS: 13364 complete with relay and sound proof canopy as per CPCB norms and foundation etc. of capacity upto 12.5 KVA (for WT 7).	Each set	1.00	5,37,652.25	5,37,652.25		6	Supply and installation of silent Diesel Engine driven generating set 415 volts, 3 phase, 4wire, engine as per IS: 10001/10002 and Alternator as per IS: 13364 complete with relay and sound proof canopy as per CPCB norms and foundation etc. of capacity upto 12.5 KVA (for WT 7).	Each set	1.00	5,91,417.48	5,91,417.48											
		7	Earthing of machinery/ equipment installed at power house/ substation using 32 x 6 mm galvanized MS strip and MS galvanized plate of size 600 x 600 x 6 mm, as earth electrode.	Set of 2 earths	6.00	16,870.46	1,01,222.76		7	Earthing of machinery/ equipment installed at power house/ substation using 32 x 6 mm galvanized MS strip and MS galvanized plate of size 600 x 600 x 6 mm, as earth electrode.	Set of 2 earths	6.00	18,557.51	1,11,345.04											
							Total	62,39,769.79							Total	68,63,747.00									
							Total Schedule-B	62,39,770.00							Total Schedule-B	68,63,747.00									
		SCHEDULE – G												SCHEDULE – G											
		1	Surface dressing n exc 15 cm deep in soft/loose soil all as specified and directed	Sqm	600.00	31.74	19,045.20		1	Surface dressing n exc 15 cm deep in soft/loose soil all as specified and directed	Sqm	600.00	28.57	17,142.00											
		2	Excavation in trenches not exceeding 1.5m wide and not exceeding 1.5m deep for foundation etc. and getting out in hard/dense soil	Cum	16.00	796.50	12,744.00		2	Excavation in trenches not exceeding 1.5m wide and not exceeding 1.5m deep for foundation etc. and getting out in hard/dense soil	Cum	16.00	716.85	11,469.60											
		3	Material & Labour for morrum filling in floors or pavings, laid in layers n exc. 15 cm thick, spread, levelled and rammed including watering	Cum	45.00	1,463.32	65,849.31		3	Material & Labour for morrum filling in floors or pavings, laid in layers n exc. 15 cm thick, spread, levelled and rammed including watering	Cum	45.00	1,316.99	59,264.55											
		4	Rolling and consolidating formation surfaces in cutting with hard roller of capacity of 0.2 to 0.5 tonne (Hand Roller)	Ten Sqm	30.00	95.11	2,853.24		4	Rolling and consolidating formation surfaces in cutting with hard roller of capacity of 0.2 to 0.5 tonne (Hand Roller)	Ten Sqm	30.00	85.60	2,568.00											
		5	Material & Labour Hardcore of gauge n exc. 63 mm, with broken stone boulders, deposited, spread and levelled in layers n exc. 15 cm thick, watered and rammed to a true surface	Cum	30.00	2,443.54	73,306.32		5	Material & Labour Hardcore of gauge n exc. 63 mm, with broken stone boulders, deposited, spread and levelled in layers n exc. 15 cm thick, watered and rammed to a true surface	Cum	30.00	2,199.19	65,975.70											
		6	Material & Labour for 100mm thick cement concrete type C-2, 1:3:6 (Using 40mm graded stone aggregate) as in sub base all as specified and directed.	Sqm	300.00	674.25	2,02,275.60		6	Material & Labour for 100mm thick cement concrete type C-2, 1:3:6 (Using 40mm graded stone aggregate) as in sub base all as specified and directed.	Sqm	300.00	606.83	1,82,049.00											
		7	Material & Labour for 40mm thick layer of sand filling under floors or in foundations including watering and consolidation all as directed	Cum	12.00	2,329.67	27,956.09		7	Material & Labour for 40mm thick layer of sand filling under floors or in foundations including watering and consolidation all as directed	Cum	12.00	2,096.71	25,160.52											
		8	M&L Machine pressed precast concrete interlocking paver block with grey cement and pigment any shape and size confirming to IS 15658-2006 of 60 mm thickness, M-35 Grade	Sqm	300.00	913.79	2,74,137.60		8	M&L Machine pressed precast concrete interlocking paver block with grey cement and pigment any shape and size confirming to IS 15658-2006 of 60 mm thickness, M-35 Grade	Sqm	300.00	822.41	2,46,723.00											
		9	Material & Labour for providing, cement concrete type B-0, 1:2:4 (using 12.5mm graded stone aggregate) as in kerbs stone, rounded or chamfered on edges	Cum	16.00	10,112.48	1,61,799.71		9	Material & Labour for providing, cement concrete type B-0, 1:2:4 (using 12.5mm graded stone aggregate) as in kerbs stone, rounded or chamfered on edges	Cum	16.00	9,101.23	1,45,619.68											

		10	Returning, filling in, including spreading, levelling, watering and well ramming in layers not exc 25 cm of excavated hard/dense soil	Cum	5.00	164.14	820.69	10	Returning, filling in, including spreading, levelling, watering and well ramming in layers not exc 25 cm of excavated hard/dense soil	Cum	5.00	147.72	738.60
		11	Removal of excavated material not exc. 50m and depositing where directed at a level n exc. 1.5 m above the starting point complete all as specified	Cum	11.00	378.07	4,158.79	11	Removal of excavated material not exc. 50m and depositing where directed at a level n exc. 1.5 m above the starting point complete all as specified	Cum	11.00	340.15	3,741.65
		12	Material & Labour for 150mm dia. PVC (SWR), pipes single socketed in any length with rubber ring joints, laid in trenches or in floors	RM	37.00	305.73	11,311.87	12	Material & Labour for 150mm dia. PVC (SWR), pipes single socketed in any length with rubber ring joints, laid in trenches or in floors	RM	37.00	275.15	10,180.55
		Total					8,56,258.42	Total					7,70,633.00
		Total Schedule-G					8,56,258.00	Total Schedule-G					7,70,633.00
		SCHEDULE – K						SCHEDULE – K					
		1	Preparation and approval of preliminary and definitive design, Construction Drawings and as built Drawings asper direction of the KRIDE and Engineer in charge along with necessary Soil Investigations and Sub Soil Investigations and submission of soil report required for the foundation design etc.	LS	1.00	76,46,240.00	76,46,240.00	1	Preparation and approval of preliminary and definitive design, Construction Drawings and as built Drawings asper direction of the KRIDE and Engineer in charge along with necessary Soil Investigations and Sub Soil Investigations and submission of soil report required for the foundation design etc.	LS	1.00	74,18,392.00	74,18,392.00
		Total					76,46,240.00	Total					74,18,392.00
		Total Schedule-K					76,46,240.00	Total Schedule-K					74,18,392.00
	Section – 11 DRAWINGS							As per Annexure - 1					

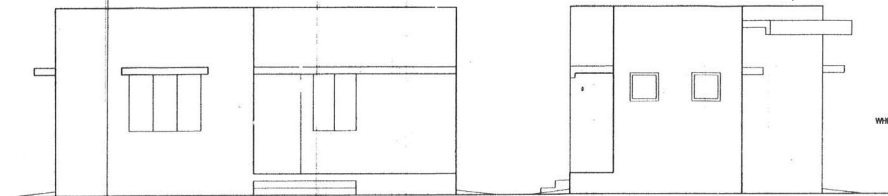
Annexure - 1

Drawing(s) related to Guard Rest House



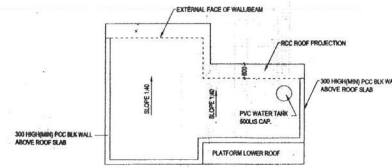
REAR ELEVATION

LEFT SIDE ELEVATION



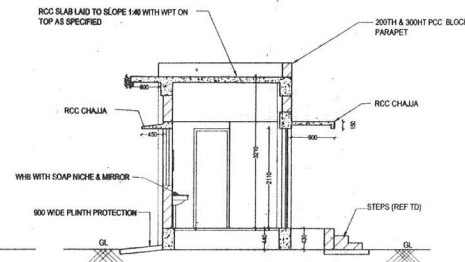
FRONT ELEVATION

RIGHT SIDE ELEVATION



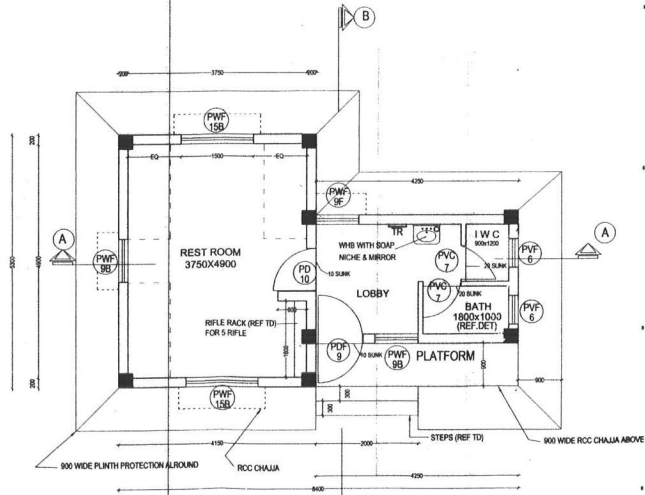
ROOF PLAN

SCALE - 1:100

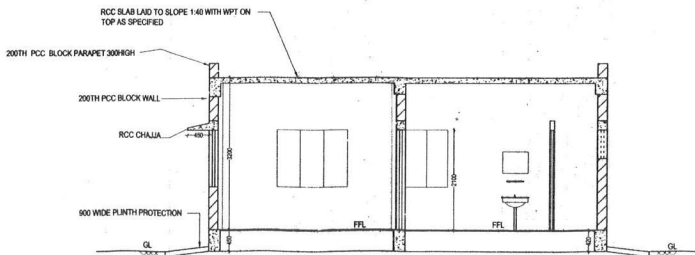


SECTION AT B - B

SCALE - 1:50



GROUND FLOOR PLAN
SCALE - 1:50



SECTION AT A - A

SCALE - 1:50

NOTES

- CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK
- FIGURED DIMENSIONS SHALL BE FOLLOWED
- ALL DIMENSIONS ARE GIVEN IN MILLIMETRES UNLESS OTHERWISE SPECIFIED
- EXECUTIVE AUTHORITY SHALL CHECK THE DRG BEFORE TAKING EXECUTION IN HAND

REFERENCE TO DRAWINGS

SL. No.	DESCRIPTION	DRG No.	SHT No.
1	GUARD REST ROOM	AFB/TD/317/09	1/2 & 3/2
2	DETAILS OF PANELLED AIRLY PROOF DOOR	AFB/TD/001	1/6 & 6/6
3	TY. DETAILS OF STEEL WINDOWS & VENTS	AFB/TD/003(R)	1/12 & 12/2
4	MISCELLANEOUS DETAILS	AFB/TD/019	1/3 & 3/3
5	DETAILS OF FORMAT	AFB/TD/022	1/1
6	ARCHITECTURAL NORMS FOR FIXING HEIGHTS OF LAV & KITCHEN	AFB/TD/028	1/1
7	BATH/WC / FOLET FITTINGS	AFB/TD/031	1/4 & 4/4
8	FIXING DETAILS OF PVC WATER TANK	AFB/TD/150	1/1
9	TY. DETAILS OF PVC WATER TANK	AFB/TD/190(R)	1/1
10	WATER SUPPLY SYSTEM FOR CONCRETE MIX	AFB/TD/233(R)	1/1
11	PROV. OF WPT FOR DIFFERENT TYPE OF ROOF	AFB/TD/269(R)	1/1
12	TD OF ARM RACK FOR S RIFLE	CE/PMT/028	1/1
13	DETAILS OF LEAKAGE AND SEEPAGE PREVENTION AND CURE	AFB/TD/039	1/3 & 3/3
14	TD OF WIRE CLOTH IN BETWEEN WALL/BEAM	AFB/TD/062	1/1

GUARD REST ROOM

GROUND FLOOR PLAN, SECTIONS, ELEVATIONS, AND ROOF PLAN.

DATE	13-11-09	SHEET NO.	
DRN	SHANKAR	<p>CHIEF ENGINEER (AIR FORCE) BANGALORE</p> <p>1/2</p>	
TCD			
CKD			
SCALE	1:100	REF.DRG.NO AFB / TD / 317 / 09	

Shankar
ADD ARCH

Shankar
DY. DIRECTOR (AFPH) FOR CHIEF ENGINEER

21.09
11.79
33-38

SCHEDULE OF FINISHES

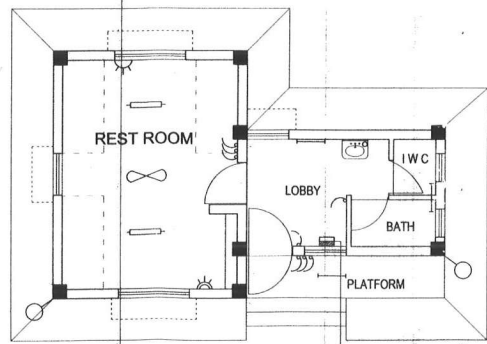
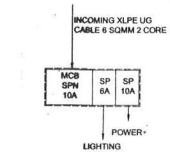
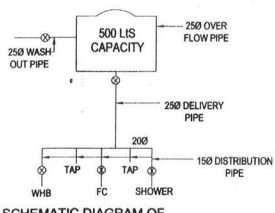
SL NO	NAME OF ROOMS	FLOORS							SKIRTING	DADO	WALLS		CEILING	ROOF	SURFACE FINISHES			REMARKS
		1	2	3	4	5	6	7			INTERNAL	EXTERNAL			17	18	19	
1	REST ROOM	X	X	X	X	X	X	X	X	X	X	X	X	X	T1	T2	T3	HT. OF DADO BATH - 2100 mm ALROUND W.C / W.C - 900 mm ALROUND LOBBY - 1500 mm BEHIND WIRING SKIRTING OF 150 mm HIGH ALROUND @ - BUT OVER STEPS IN LIEU OF RCC SLAB
2	LOBBY	X	X	X	X	X	X	X	X	X	X	X	X	X	T1	T2	T3	
3	BATH	X	X	X	X	X	X	X	X	X	X	X	X	X	T1	T2	T3	
4	WC	X	X	X	X	X	X	X	X	X	X	X	X	X	T1	T2	T3	
5	PLATFORM	X	X	X	X	X	X	X	X	X	X	X	X	X	T1	T2	T3	
6	STEPS	X	X	X	X	X	X	X	X	X	X	X	X	X	T1	T2	T3	

LEGEND	
TREATMENT	DESCRIPTION
[Symbol]	INDICATED MATERIAL TO BE USED
T1	3 COATS OF WHITE WASH INCLUDING PREPARATION
T2	2 COATS OF CEMENT BASED PAINT OVER A COAT OF PRIMER
T3	2 COATS OF SYNTHETIC ENAMEL PAINT OVER ONE COAT OF PRIMER / RED OXIDE PRIMER

NOTES	
1	2 COATS OF OBD WITH PRIMER TO BE PROVIDED INSIDE THE CURBOARD.
2	PLASTER ON INTERNAL SURFACE OF EXTERIOR WALL OF THE CURBOARD SHALL BE DONE USING WPC AS PER MANUFACTURER'S INSTRUCTIONS.

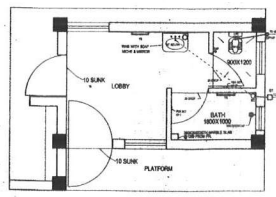
NOTES

- EXECUTION OF WORK
- 2 FIGURED DIMENSIONS SHALL BE FOLLOWED
- 3 ALL DIMENSIONS ARE GIVEN IN MILLIMETRES UNLESS OTHERWISE SPECIFIED
- 4 EXECUTIVE AUTHORITY SHALL CHECK THE DRG BEFORE TAKING EXECUTION IN HAND



INT. ELECTRIFICATION PLAN
SCALE - 1:50

LEGEND	
1	SWITCH PIANO FLUSH BUTTON SP ONE WAY 5A
2	CEILING FAN 1200 mm SWEEP
3	SOCKET OUTLET 3 PIN 5A
4	SOCKET OUTLET 3 PIN 15A
5	CFL WALL MOUNTING TYPE FITTING 1 X 11W
6	FLUORESCENT TUBE LIGHT FITTING T-5 1 X28W
7	CFL STREET LIGHT FITTING 2X11W CFL
8	MCB DB SPN 4 WAY
9	EARTHING





DETAILED PLAN OF WC & BATH

GUARD REST ROOM

INT. ELECTRIFICATION PLAN, SCHEMATIC DIAGRAM OF INT. ELECTRIFICATION WATER SUPPLY, DETAILED PLAN OF WC & BATH AND SCHEDULE OF FINISHES

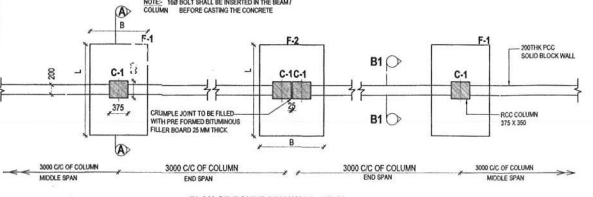
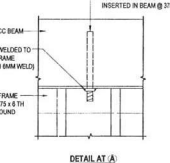
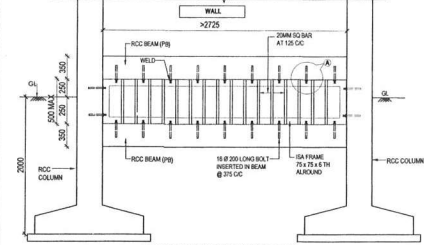
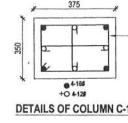
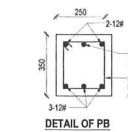
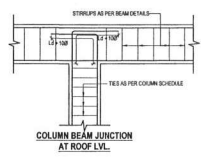
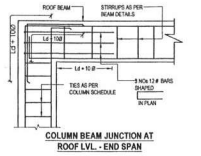
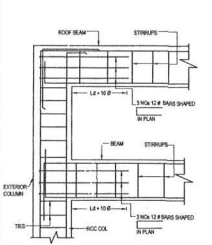
DATE	13-11-09	SHEET NO	
DRN	SHANKAR	CHIEF ENGINEER (AIR FORCE) BANGALORE	2/2
TCD			
CND			
SCALE	1:100	REF.DRG.NO	AFB / TD / 317 /09


 S. SHANKAR
 801000

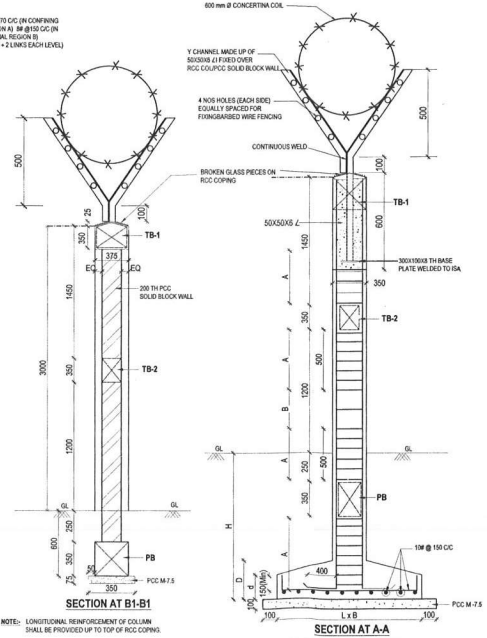

 DIRECTOR (PLD)
 FOR CHIEF ENGINEER

**Drawing(s) related to
High Security Wall**

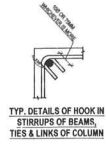
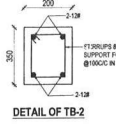
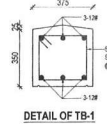
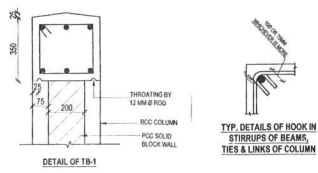
SCHEDULE OF ISOLATED COLUMN FOOTINGS (REFER DETAILS)																
WIND SPEED	SL NO	FOOTING NO	DEPTH OF FOOTING BELOW AVERAGE GROUND LEVEL 'F'	LENGTH (L)	WIDTH (B)	THICKNESS		BOTTOM REINFORCEMENT				TOP REINFORCEMENT				REMARKS
						D	d	ALONG LONG SPAN		ALONG SHORT SPAN		ALONG LONG SPAN		ALONG SHORT SPAN		
								DIA	SPACING	DIA	SPACING	DIA	SPACING	DIA	SPACING	
44 MS	1	F-1	1500	2600	1700	400	250	10#	150	10#	150	-	-	-	-	
	2	F-2	1500	2700	2000	500	350	10#	150	10#	150	-	-	-	-	
33 MS	1	F-1	1500	2200	1450	400	250	10#	150	10#	150	-	-	-	-	
	2	F-2	1500	2200	2000	400	200	10#	150	10#	150	-	-	-	-	



NOTE: AT EVERY 30.0M INTERVALS CRUMPLE JOINT SHALL BE PROVIDED.



NOTE: LONGITUDINAL REINFORCEMENT OF COLUMN SHALL BE PROVIDED UP TO TOP OF RCC CORING.



NOTES

- ALL DIMENSIONS ARE GIVEN IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
- FIGURED DIMENSIONS SHALL BE FOLLOWED.
- CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE STARTING EXECUTION OF THE WORK.
- GRADE OF CONCRETE FOR ALL RCC WORKS SHALL BE M25 DESIGN MIX AS PER IS 456:2000.
- EXECUTIVES SHALL CHECK THE DRAWING BEFORE EXECUTION OF WORK AND IF ANY DISCREPANCY IS OBSERVED THE SAME SHALL BE REPORTED TO ACCEPTING OFFICER FOR CLARIFICATION/REVISION.
- CEMENT SHALL BE 43 GRADE ORDINARY PORTLAND CEMENT CONFORMING TO IS: 8110:2013. CEMENT SHALL BE ISI MARKED.
- REINFORCEMENT BARS SHALL BE TMT BARS GRADE Fe 500 CONFORMING TO IS: 1786:2008. BARS SHALL BE ISI MARKED. MINIMUM ELONGATION SHALL BE 10%.
- CLEAR COVER TO REINFORCEMENT BAR SHALL BE AS UNDER:
 - FOOTING & BEAMS SURFED IN SOL. = 50MM
 - COLUMNS, MAIN LONGITUDINAL BAR = 50MM
 - BEAMS: (i) STIRRUPS BAR = 30MM (ii) LONGITUDINAL BAR = 30MM+SHA OF STIRRUPS
- WATER TO BE USED FOR CONCRETING SHALL MEET ALL REQUIREMENTS OF CLAUSE 6.4 OF IS: 456:2000. SOURCE OF WATER SHALL BE APPROVED BY GE AND TESTING OF WATER SHALL BE DONE FOR ITS SUITABILITY. BEAM BARS SHALL ALWAYS PASS THROUGH INNER SIDE OF THE COLUMN BARS.
- HOOKS OF REINFORCEMENT BARS OF STIRRUPS IN BEAMS AND TIES / LINKS IN COLUMNS SHALL BE BENT TO AN ANGLE OF 135° HOOK LENGTH SHALL BE 8 TIMES DIA OF BAR OR 75MM WHICHEVER IS MORE.
- TO ENSURE PROPER COVER TO REINFORCEMENT, COVER BLOCKS OF PCC OR OTHER MATERIALS AS APPROVED BY GE SHALL BE PROVIDED. MAX OF PCC COVER BLOCK WHEREVER PROVIDED SHALL BE SAME AS THAT OF RCC.
- PCC SOLID BLOCK TO BE USED IN MASONRY SHALL BE OF GRADE C (S) AS PER IS: 2185 (PART 02)005 WITH COMPRESSIVE STRENGTH OF 50MGP/CM2.
- PROPER DRAINAGE AROUND THE WALL SHALL BE ENSURED TO AVOID INGRESS OF WATER IN FOUNDATION.
- AT EVERY 30.0M INTERVALS CRUMPLE JOINT SHALL BE PROVIDED AT CRUMPLE JOINT.
- WEEP HOLES IN THE FORM OF 100.00 PCC PIPE 50MM GRADE (100MGP/CM2 PRESSURE) SHALL BE PROVIDED IN WALL AT EVERY 3.0M AT GL.
- PREFORMED BITUMINOUS FILLER BOARD 25MM THK SHALL BE PROVIDED AT CRUMPLE JOINT.
- CONCRETE COIL WITH ANGLE IRON FRAME / GLASS COPING (IF ANY) SHALL BE PROVIDED AS PER ARCH DGS.
- ONLY STEEL PROPS SHALL BE USED. NO WOODEN BALLETS SHALL BE USED ONLY STEEL FORM WORK SHALL BE USED. GE TO PERSONALLY ENSURE THIS BEFORE APPROVAL OF FORM WORK. FORM WORK SHALL BE WELL DESIGNED, MADE AND ERECTED IN ACCORDANCE TO THE RELEVANT IS CODE AND SHALL BE APPROVED BY GE.
- PLINTH BEAM SHALL BE CASTED USING FORM WORK ON ALL THREE FACES (INCLUDING BOTTOM).
- IF ANY DETAILS OF REINFORCEMENT IS NOT SHOWN IN THE DRS, THE PROVISIONS GIVEN IN HANDBOOK FOR DETAILING OF REINFORCEMENT (SP-34) AND IS: 1302:2015 SHALL BE FOLLOWED.

REFERENCE TO DRO

Sl. No.	DESCRIPTION	REF. NO.
1	HIGH SECURITY WALL 3.0M	AFB / TD / 418 / 2023 (S) SHT NO - 1 & 2
2	HIGH SECURITY WALL 3.0M (WHERE ROAD OR EXTERNAL SIDE IS WITHIN 1M DISTANCE FROM WALL)	AFB / TD / 418 / 2023 (S) SHT NO - 2 & 3
3	LOW SECURITY WALL 3.1M HEIGHT AND WALL UP TO 2.1M HEIGHT OVER RETAINING WALL 1.5M TO 3.5M HEIGHT	AFB / TD / 418 / 2023 (S) SHT NO - 3 & 4
4	HIGH SECURITY WALL 3.0M WITH PCC BLOCK MASONRY IN FALL PANELS	AFB / TD / 418 / 2023 (S) SHT NO - 4 & 5
5	HIGH SECURITY WALL 3.0M WITH PCC BLOCK INFILL PANELS	AFB / TD / 418 / 2023 (S) SHT NO - 3 & 5

WIND SPEED - 33MS (BANGALORE)
44 MS (HYDERABAD)
SFC - 15 TSDM @ 1500 MM DEPTH
EQ ZONE - II

01 15 FEB 23 CORRECTED UPTD DATE MARKED AS 02

SECURITY WALL REVISIONS
HIGH SECURITY WALL 3.0M

DATE: 04 JUN 2023
DRN: HAVI ZONE KARNATAKA
SCALE: AS SHOWN

CHIEF ENGINEER (AIR FORCE) BANGALORE

SHEET No: 1/5

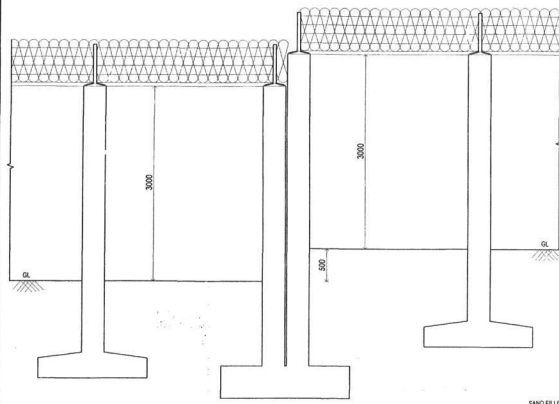
DRG NO. AFB / TD / 418 / 2023 (S)

DESIGNED BY: Kaveri
CHECKED BY: Kaveri

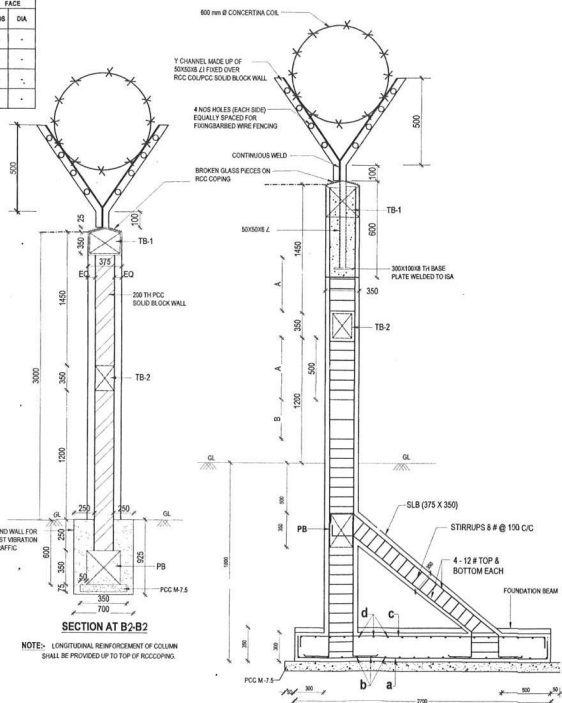
DESIGNED BY: KANAR HANU, CIVIL
CHECKED BY: KANAR HANU, CIVIL

DESIGNED BY: KANAR HANU, CIVIL
CHECKED BY: KANAR HANU, CIVIL

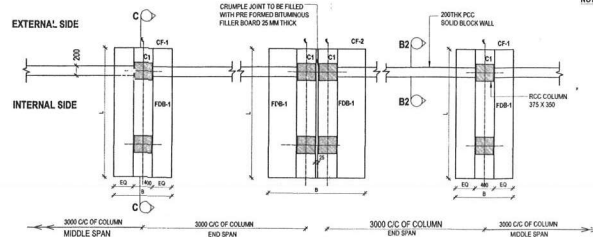
WIND SPEED	NO. OF	FOOTING NO.	FOOTING WIDTH (M)	ORIGINAL LENGTH (M)	DEPTH OF FOOTING BELOW AVERAGE GROUND LEVEL (M)	SLAB THICKNESS (M)	REIN. OF FOUNDATION SLABS				FOUNDATION BEAM				SIDE FACE REIN. ON EACH VERTICAL FACE							
							AT BOTTOM		AT TOP		TYPE	WIDTH (M)	DEPTH (M)	AT BOTTOM		AT TOP		STIRRUPS				
							ALONG WIDTH % BARS	ALONG LENGTH % BARS	ALONG WIDTH % BARS	ALONG LENGTH % BARS				NOS		DIA	NOS		DIA	NOS	DIA	
44 MS	1	CF-1	1600	2700	1800	300	12# @150 C/C	12# @150 C/C	12# @150 C/C	12# @150 C/C	FDB-1	400	350	4	20#	4	20#	4L	10#	80	-	-
		CF-2	2000	2700	1800	300	12# @150 C/C	12# @150 C/C	12# @150 C/C	12# @150 C/C	FDB-1	400	350	4	20#	4	20#	4L	10#	80	-	-
33 MS	1	CF-1	1600	2800	1800	300	12# @150 C/C	12# @150 C/C	12# @150 C/C	12# @150 C/C	FDB-1	400	350	4	20#	4	20#	4L	10#	80	-	-
		CF-2	2000	2800	1800	300	12# @150 C/C	12# @150 C/C	12# @150 C/C	12# @150 C/C	FDB-1	400	350	4	20#	4	20#	4L	10#	80	-	-



TYPICAL C/S OF ELEVATION OF WALL IN SLOPING GROUND



NOTE: LONGITUDINAL REINFORCEMENT OF COLUMN SHALL BE PROVIDED UP TO TOP OF FOOTING.



PLAN OF BOUNDARY WALL AT GL (WHERE ROAD EXTERNAL SIDE IS WITHIN 1 M FROM WALL)

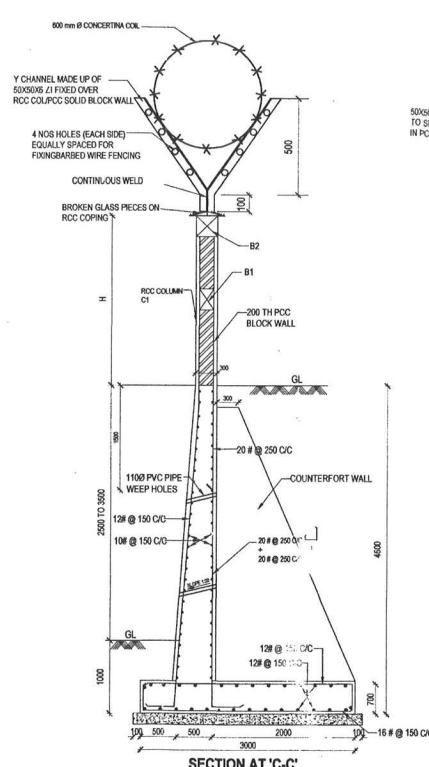
NOTE: AT EVERY 30 M INTERVALS CRUMPLE JOINT SHALL BE PROVIDED.

NOTE
1. FOR NOTES AND STRUCTURAL DRGS REF DRG. NO. AFB/TD/418/2023 (S) & SHT No. 12

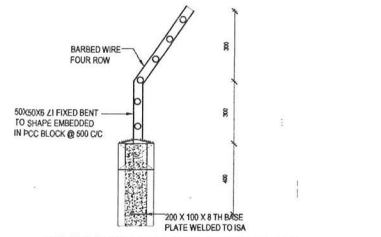
WIND SPEED - 33MS (BANGALORE)
44 MS (HYDERABAD)
SSC - 15 TROM @ 1500 MM DEPTH
EQ ZONE - II

SL NO.	DATE	DESCRIPTIONS	SCALE	SHEET NO.
1	04 JAN 2023	SECURITY WALL HIGH SECURITY WALL 3.0M (WHERE ROAD ON EXTERNAL SIDE IS WITHIN 1 M DISTANCE FROM WALL)	AS SHOWN	2 / 5
DRN	JON KUMAR	CHIEF ENGINEER (AIR FORCE) BANGALORE		
SCALE	AS SHOWN			
DRG. NO. AFB / TD / 418 / 2023 (S)				
DESIGNED BY	DESIGNED BY	CHECKED BY		
(SUDHAKAR)	(KARAN N. NAR, DSG)	(KARAN N. NAR, DSG)		
TO	BY DR (DESIGN)	TO		
AND ARCHD		BY DR (DESIGN)		

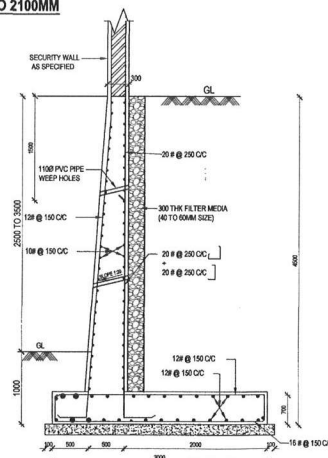
SER NO	H	COL C 1	D 1	D 2
B1	2100	<p>10# @ 100 CC (IN CONFINING REGION A) 10# @ 100 CC (IN NORMAL REGION B) (1 TIE = 2 LINKS EACH LEVEL)</p> <p>● 8-12#</p>	<p>STIRRUPS 8# @ 70 CC NEAR SUPPORT FOR 750MM / 10# @ 100 CC IN MIDDLE PORTION</p>	<p>STIRRUPS 8# @ 70 CC NEAR SUPPORT FOR 750MM / 10# @ 100 CC IN MIDDLE PORTION</p>
B2	2101-2700	<p>10# @ 100 CC (IN CONFINING REGION A) 10# @ 100 CC (IN NORMAL REGION B) (1 TIE = 2 LINKS EACH LEVEL)</p> <p>● 4-12# ○ 4-16#</p>	<p>STIRRUPS 8# @ 70 CC NEAR SUPPORT FOR 750MM / 10# @ 100 CC IN MIDDLE PORTION</p>	<p>STIRRUPS 8# @ 70 CC NEAR SUPPORT FOR 750MM / 10# @ 100 CC IN MIDDLE PORTION</p>



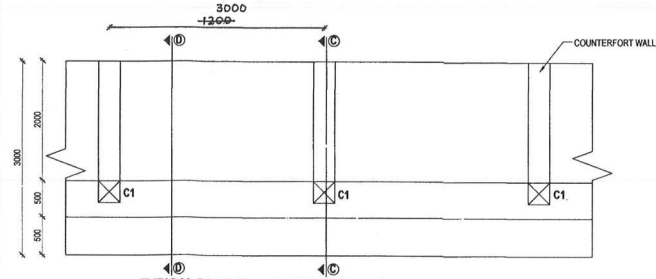
SECTION AT 'C-C'



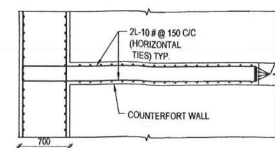
DETAIL OF BARBED WIRE WITH ANGLE IRON OVER COLUMN C1 IN LIEU OF CONCRETINA COIL. FOR WALL HEIGHT UPTO 2100MM



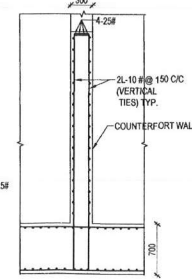
SECTION AT 'D-D'



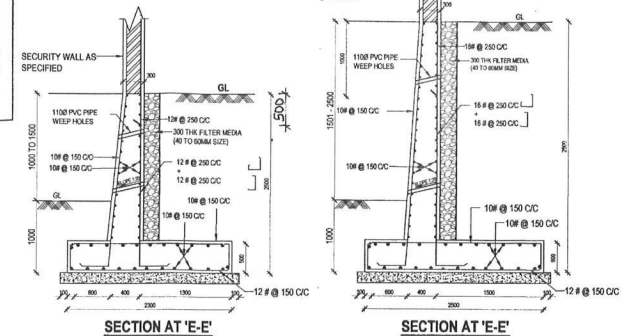
TYPICAL PLAN OF BOUNDARY WALL OVER COUNTERFORT RETAINING WALL OF 2501 TO 3500 MM HEIGHT



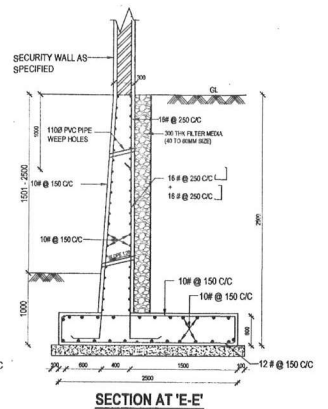
VIEW B-B



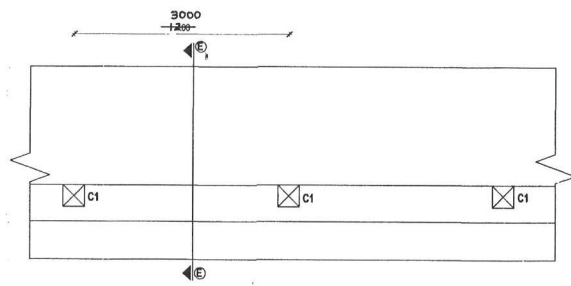
VIEW A-A



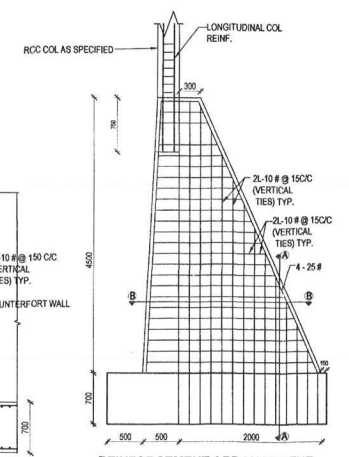
SECTION AT 'E-E'



SECTION AT 'E-E'



TYPICAL PLAN BOUNDARY WALL OVER RETAINING WALL OF HEIGHT 1000-1500 & 1501-2500 MM



REINFORCEMENT ARRANGEMENT IN COUNTER FORT WALL

NOTES

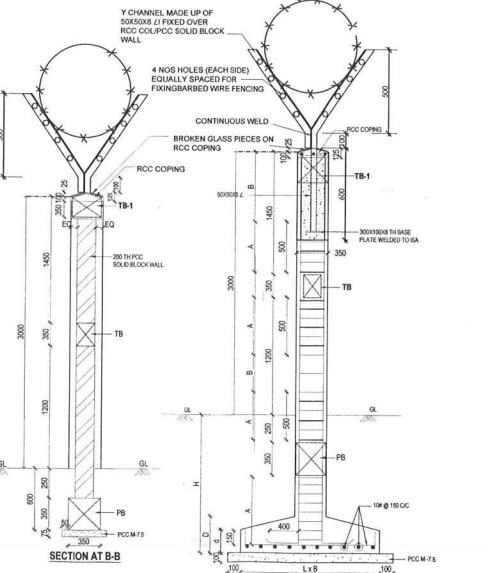
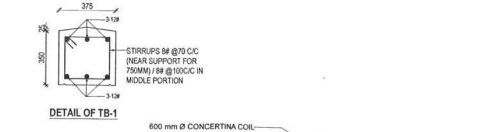
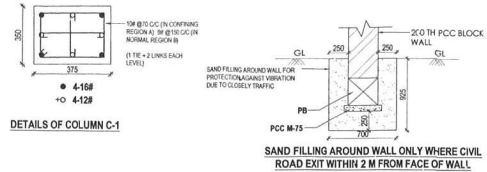
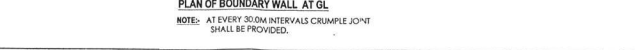
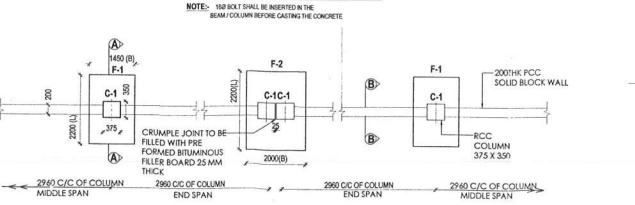
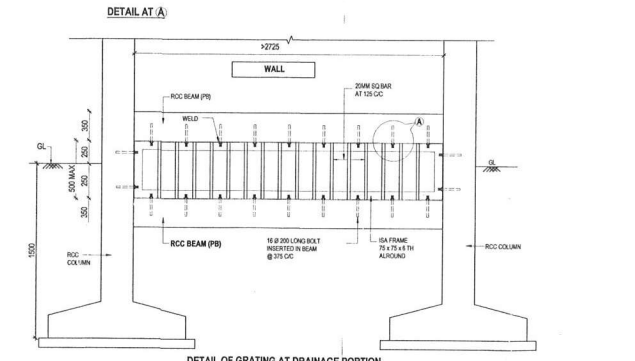
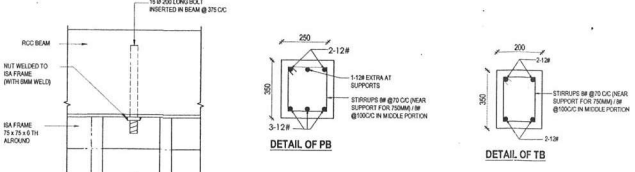
- FOR NOTES AND STRUCTURAL DRS REF DRS No. AF/10/418/2023 (S) 4/SHT No. 15
- FACTOR OF SAFETY ADOPTED IN DESIGN IS AS UNDER -
(a) FOS AGAINST OVERTURNING : 2.0
(b) FOS AGAINST SLIDING : 1.5
- RETAINING WALL HAVE BEEN DESIGNED FOR COHESION LESS SOIL IN THE BACK FILL HAVING PROPERTIES AS UNDER -
(a) SATURATED DENSITY OF SOIL : 20 T/M³
(b) ANGLE OF INTERNAL FRICTION : 30°
(c) COEFF OF FRICTION BETWEEN BASE OF RETAINING WALL AND SOIL : 0.5
- WEEP HOLES - PVC PIPE OF 110 DIA SHALL BE PROVIDED IN WEEP HOLES. WEEP HOLES SHALL BE PROVIDED AT SPACING OF 2.0 M C/C HORIZONTALLY AND 1.0 M C/C VERTICALLY IN STAGGERED MANNER. FIRST ROW WEEP HOLES SHALL BE KEPT AT 150MM ABOVE G.L. WEEP HOLES SHALL BE EXTENDED THROUGH FULL WIDTH OF WALL. SLOPE OF WEEP HOLES SHALL BE 1 VERTICAL TO 20 HORIZONTAL TOWARDS DRAINING FACE.
- SOIL IN BACKFILL IN WALL AS WELL AS REFILL OVER THE TOE SLAB/HEEL SHALL BE COMPACTED TO ACHIEVE DRY DENSITY OF ATLEAST 1.1 T/M³. ONLY GRANULAR SOIL SHALL BE USED IN BACKFILL AND REFILL. SOIL BEHIND THE RETAINING WALL SHOULD BE COMPACTED IN LAYERS NOT EXCEEDING 15 CM EACH LAYER, SLOPING AWAY FROM THE WALL.
- FILTER MEDIA -
(a) FILTER MEDIA BEHIND BACK OF WALL SHALL BE BROKEN STONE OR BULLDOZERS OF GAUGE NOT EXCEEDING 40 TO 10MM. FILTER MATERIAL SHALL BE WELL PACKED. FILTER MATERIAL SHALL BE PACKED WITH SMALLER SIZE TOWARDS THE SOIL AND BIGGER SIZE TOWARDS THE WALL. FILTER MEDIA SHALL BE PLACED CAREFULLY NEAR THE WEEP HOLES SO THAT PASSAGE OF WATER IS NOT BLOCKED.

WIND SPEED - 33M/S (BANGALORE)
SBC - 12 T/SOM @ 1000 MM DEPTH
EQ ZONE - II

01 06/02 DISTANCE BETWEEN COLUMN C1 IS AMENDED TO 3000

S.No.	DATE	DESCRIPTION	REVISIONS	INITIAL
<p>SECURITY WALL</p> <p>LOW SECURITY WALL 2.1 M HEIGHT AND WALL UPTO 2.7 M HEIGHT OVER RETAINING WALL 1.0 M TO 3.5 M HEIGHT</p>				
DATE	04 JAN 2023	<p>CHIEF ENGINEER (AIR FORCE) BANGALORE</p>		SHEET No.
DRN	NAV JYOTI KUMAR			3/5
SCALE	AS SHOWN			
<p>DRS CHECKED BY</p>		<p>DRG. NO. AF/10/418/2023 (S)</p>		
<p>DESIGNED BY</p>		<p>CHECKED BY</p>		
<p>TO AND (M/S)</p>		<p>(M/S) R. N. K. (S)</p> <p>CE (M/S)</p> <p>DIY OR (DESIGN)</p>		

SCHEDULE OF ISOLATED COLUMN FOOTINGS (REFER DETAILS)																	
SL. NO	FOOTING NO	DEPTH OF FOOTING BELOW AVERAGE GROUND LEVEL 'F'	LENGTH (L)	WIDTH (B)	THICKNESS				BOTTOM REINFORCEMENT				TOP REINFORCEMENT				REMARKS
					D	d	ALONG LONG SPAN	ALONG SHORT SPAN	ALONG LONG SPAN	ALONG SHORT SPAN	ALONG LONG SPAN	ALONG SHORT SPAN	ALONG LONG SPAN	ALONG SHORT SPAN			
1	F-1	1500	2200	1450	400	250	10#	175	10#	175	-	-	-	-	-	-	-
2	F-2	1500	2000	2000	400	200	10#	175	10#	175	-	-	-	-	-	-	-



- NOTES**
- CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE STARTING EXECUTION OF THE WORK.
 - FOOTED DIMENSIONS SHALL BE FOLLOWED.
 - ALL DIMENSIONS ARE GIVEN IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
 - GRADE OF CONCRETE FOR ALL RCC WORKS SHALL BE M 20 DESIGN MIX AS PER IS 456:2000.
 - EXECUTING SHALL CHECK THE DRAWING BEFORE EXECUTION OF WORK AND IF ANY DISCREPANCY IS OBSERVED THE SAME SHALL BE REPORTED TO A SUPERVISOR FOR CLARIFICATION/DECISION.
 - CEMENT SHALL BE 43 GRADE ORDINARY PORTLAND CEMENT CONFORMING TO IS 8112:2017. CEMENT SHALL BE 5% MARKED.
 - REINFORCEMENT BARS SHALL BE TMT BARS GRADE Fe 500 D CONFORMING TO IS 1786:2008. BARS SHALL BE 10% MARKED. MINIMUM ELONGATION SHALL BE 10%.
 - CLEAR COVER TO REINFORCEMENT BAR SHALL BE AS UNDER:
 - (a) FOOTING & BEAMS BURIED IN SOIL = 50MM
 - (b) COLUMNS- MAIN LONGITUDINAL BAR = 50MM
 - (c) BEAMS- (i) STRIPS/BARS = 20MM (ii) LONGITUDINAL BAR = 30MM-ØA OF STRIPS/BARS
 - ACCEPTANCE CRITERIA FOR CONCRETE AS LAD DOWN IN CLAUSE 10 AND TABLE 11 OF IS 456:2000 SHALL BE STRICTLY FOLLOWED.
 - VARIOUS QUALITY ASSURANCE MEASURES AS LAD DOWN IN CLAUSE 10, 11, 12, 13, 15, 17 OF IS 456:2000 SHALL BE STRICTLY FOLLOWED.
 - WATER TO BE USED FOR CONCRETING SHALL MEET ALL REQUIREMENTS OF CLAUSE 5.4 OF IS 456:2000. SOURCE OF WATER SHALL BE APPROVED BY GE AND TESTING OF WATER SHALL BE GOT DONE FOR ITS SUITABILITY.
 - DEVELOPMENT LENGTH (LD) FOR REINFORCEMENT BAR SHALL BE EQUAL TO 45 TIMES DIA OF BAR IN BEAMS, COLUMNS, SLABS AND ANY OTHER RCC MEMBER.
 - FOUNDATION HAS BEEN DESIGNED FOR ASSUMED NET SBC OF 10.0 T/M² AT 1500MM BELOW AVERAGE G.L. GE VERIFY THE SAME BEFORE EXECUTION OF WORK. MINIMUM DEPTH IN ORIGINAL SOIL SHALL BE 1.2 MTR.
 - BEAM BARS SHALL ALWAYS PASS THROUGH INNER SIDE OF THE COLUMN BARS.
 - HOOKS OF REINFORCEMENT BARS OF STRIPS IN BEAMS AND TIES / LINKS IN COLUMNS SHALL BE BENT TO AN ANGLE OF 135°. HOOK LENGTH SHALL BE 4 TIMES ØA OF BARS OR 20MM WHICHEVER IS MORE.
 - TO ENSURE PROPER COVER TO REINFORCEMENT, COVER BLOCKS OF PCC OR OTHER MATERIAL AS APPROVED BY GE SHALL BE PROVIDED. MAX OF PCC COVER BLOCK WHEREVER PROVIDED SHALL BE SAME AS THAT OF RCC.
 - PCC SOLID BLOCK TO BE USED IN MASONRY SHALL BE OF GRADE C (ØA) AS PER IS 2185 PART 1:2000 WITH COMPRESSIVE STRENGTH OF 50N/CM².
 - PROPER DRAINAGE AROUND THE WALL SHALL BE ENSURED TO AVOID INGRESS OF WATER IN FOUNDATION.
 - AT EVERY 30.0M INTERVALS CRUMPLE JOINT SHALL BE PROVIDED.
 - WEEP HOLES IN THE FORM OF 100 UPVC PIPE DIAW GRADE 100G/CM² PRESSURES SHALL BE PROVIDED IN WALL AT EVERY 3.0M AT G.L.
 - PREFORMED BITUMINOUS FILLER BOARD 20MM THK SHALL BE PROVIDED AT CRUMPLE JOINT.
 - 100% THICKENING SHALL BE PROVIDED WHILE CASTING THE RCC COPING.

WIND SPEED - 33MS (BANGALORE)

SBC - 15 T/ØM @ 1500 MM DEPTH

EQ ZONE - II

SECURITY WALL

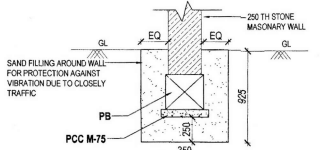
HIGH SECURITY WALL 3.0M WITH PCC BLOCK IN FILL PANELS

APPLICABLE FOR AREAS WHERE CIVIL ROAD EXIST AT 1-2 M FROM FACE OF WALL.

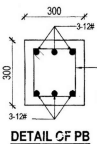
DATE	04 JAN 2023		SHEET No.	
DRN	REV JON KEMAR			5/5
SCALE	AS SHOWN			
DRG NO.	AFB / TD / 418 / 2023 (S)			
DESIGNED BY	DESIGNED BY	CHECKED BY		
DRG NO.	AFB / TD / 418 / 2023 (S)	DRG NO.	AFB / TD / 418 / 2023 (S)	

SCHEDULE OF ISOLATED COLUMN FOOTINGS (REFER DETAILS)

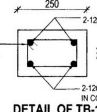
SL NO	FOOTING NO	DEPTH OF FOOTING BELOW AVERAGE GROUND LEVEL 'T'	LENGTH (L)	WIDTH (B)	THICKNESS		BOTTOM REINFORCEMENT				TOP REINFORCEMENT				REMARKS
					D	d	ALONG LONG SPAN		ALONG SHORT SPAN		ALONG LONG SPAN		ALONG SHORT SPAN		
							DIA	SPACING	DIA	SPACING	DIA	SPACING	DIA	SPACING	
1	F-1	1500	1700	1400	400	250	10#	175	10#	175	-	-	-	-	
2	F-2	1500	1900	1800	400	250	10#	175	10#	175	-	-	-	-	



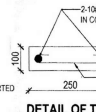
SAND FILLING AROUND WALL ONLY WHERE CIVIL ROAD EXIT WITHIN 2 M FROM FACE OF WALL



DETAIL OF PB

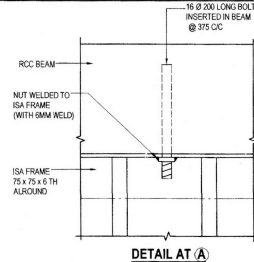


DETAIL OF TB-1



DETAIL OF TB-2

DETAIL OF COPING SEPARATED BY COLUMN BY 20MM ON EITHER ENDS



DETAIL AT A

- 23. NOTES FOR RANDOM RUBBLE MASONRY:-**
- (a) STONE SHALL BE HARD, SOUND, DURABLE AND FREE FROM WEATHERING, DECAY AND DEFECTS. STONE SHALL BE OF UNIFORM COLOUR AND TEXTURE. TYPE OF STONE SHALL BE GRANITE TRAP/BASALT. WATER ABSORPTION OF STONE SHALL NOT EXCEED 5%.
 - (b) SIZE OF STONE SHALL NOT BE LESS THAN 15CM IN ANY DIRECTION. HEIGHT OF STONE MAY BE UP TO 30 CM. AVERAGE BREADTH SHOULD NOT BE LESS THAN HEIGHT AND AVERAGE LENGTH SHALL NOT BE LESS THAN 1/2 TIMES THE HEIGHT OF STONES UP TO 20CM HEIGHT AND 1/3 TIMES THE HEIGHT FOR STONES LARGER THAN 20CM HEIGHT. MAXIMUM LENGTH OF STONE SHALL NOT EXCEED 3 TIMES THE HEIGHT.
 - (c) STONE MASONRY SHALL BE CARRIED OUT IN CM 1:6 MASONRY SHALL BE BROUGHT TO COURSE TYPE. MASONRY SHALL BE LEVELLED TO COURSES AT INTERVALS VARYING FROM 30CM TO 60 CM IN HEIGHT.
 - (d) HEIGHT OF CONSTRUCTION IN A DAY SHOULD NOT EXCEED 1 METER. CONNECTED MASONRY SHOULD BE RAISED UNIFORMLY ALL OVER. HOWEVER, IF ONE PART OF MASONRY IS TO BE LEFT BEHIND, THE WALL SHOULD BE RAKED AT AN ANGLE NOT STEEPER THAN 45 DEGREES. TIGHTENING IN STONE MASONRY SHOULD NOT BE ALLOWED.
 - (e) **DRESSING OF STONES** - STONES SHALL BE HAMMER DRESSED ON THE FACE, THE SIDES AND THE BEDS TO BE ABLE TO COME IN PROMINITY WITH THE NEIGHBORING STONES. MAXIMUM DEPRESSION SHALL NOT BE MORE THAN 40MM ON AN EXPOSED FACE.
 - (f) **LAYING OF STONES** - STONES SHOULD BE WETTED BEFORE USE. LAID ON THEIR NATURAL QUARRY BED AND SOLIDLY BEDDED IN MORTAR BY HAMMERING THEM DOWN TO POSITION WITH A WOODEN MALLET. NO FINISHING SHOULD BE DONE IN THE FACE. EVERY STONE SHALL BE CAREFULLY FITTED TO THE ADJACENT STONE SO AS TO FORM NEAT AND CLOSE JOINT. FACE STONE SHALL EXTENDED AND BOND WELL IN THE BACK. THESE SHALL BE ARRANGED TO BREAK JOINTS AS MUCH AS POSSIBLE AND TO AVOID LOW VERTICAL LINES OF JOINTS. THICKNESS OF JOINTS SHALL NOT EXCEED 25MM.
 - (g) **INSERTION OF CHIPS** - CHIPS AND SPALLS OF STONE SHALL BE USED WHEREVER NECESSARY TO AVOID THICK MORTAR BEDS OR JOINTS AND IT SHALL BE ENSURED THAT NO HOLLOW SPACES ARE LEFT ANYWHERE IN THE MASONRY. CHIPS SHALL NOT BE USED BELOW HEARTING STONES TO BRING THESE UP TO THE LEVEL OF FACE STONES. THE USE OF CHIPS AND SPALLS SHALL BE RESTRICTED TO THE FILLING OF INTERSTICES BETWEEN THE ADJACENT STONES IN HEARTING AND THESE SHALL NOT EXCEED 20 PERCENT OF THE QUANTITY OF STONE MASONRY.
 - (h) **BOND STONES** - (i) BOND STONE SHALL BE OF PRECAST CEMENT CONCRETE PCC 13:8 TYPE C-1 USING 20MM GRADED STONE AGGREGATE. CROSS SECTION OF PCC BOND STONE SHALL BE 17.5 CM X 17.5 CM AND LENGTH EQUAL TO THE THICKNESS OF WALL. (ii) PCC BOND STONES SHALL BE PROVIDED @ 2 NOS PER SQUARE METER OF FACE AND STAGGERED. THE BOND STONE SHALL BE MARKED BY A DISTINGUISHING LETTER FOR SUBSEQUENT VERIFICATION. (iii) JOINTS SHALL BE FLUSH POINTED WITH CEMENT MORTAR 1:3 FOR THIS PURPOSE. MORTAR JOINTS SHOULD BE RAKED TO A DEPTH OF 15MM AT THE TIME OF LAYING MASONRY WHILE THE MORTAR IS GREEN. (iv) PCC COPING 150 THICK IN CEMENT CONCRETE M-10 SHALL BE PROVIDED AT THE TOP OF MASONRY WALL FOR ENTIRE WIDTH OF WALL. PCC COPING SHALL HAVE CONTROL JOINTS AT MAXIMUM 3.0M INTERVAL. (i) FOR ALL OTHER PROVISIONS OF RANDOM RUBBLE STONE MASONRY, RELEVANT CLAUSES OF MESS SSR-2009 (PART-I SPECIFICATION) AND IS:1597(PART-I) 1992 (REAFFIRMED 2002) SHALL BE FOLLOWED.

NOTES

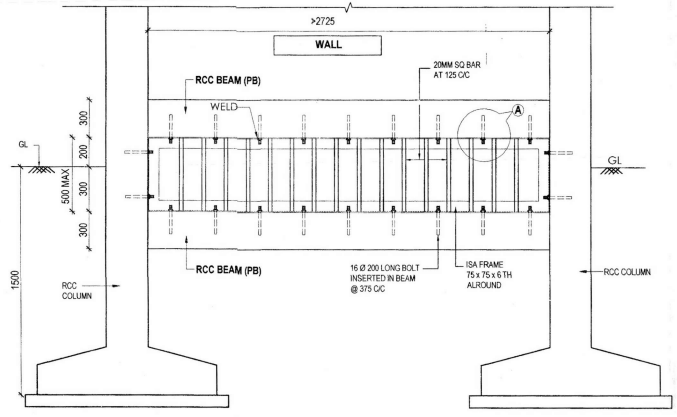
- CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE STARTING EXECUTION OF THE WORK.
- FIGURED DIMENSIONS SHALL BE FOLLOWED.
- ALL DIMENSIONS ARE GIVEN IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
- GRADE OF CONCRETE FOR ALL RCC WORKS SHALL BE M-25 DESIGN MIX AS PER IS:456-2000.
- EXECUTIVES SHALL CHECK THE DRAWING BEFORE EXECUTION OF WORK AND IF ANY DISCREPANCY IS OBSERVED THE SAME SHALL BE REPORTED TO ACCEPTING OFFICER FOR CLARIFICATION/DECISION.
- CEMENT SHALL BE 43 GRADE ORDINARY PORTLAND CEMENT CONFORMING TO IS: 8112-2015. CEMENT SHALL BE ISI MARKED.
- REINFORCEMENT BARS SHALL BE TMT BARS GRADE F4 500 CONFORMING TO IS:1786-2008. BARS SHALL BE ISI MARKED. MINIMUM ELONGATION SHALL BE 18%.
- CLEAR COVER TO REINFORCEMENT BAR SHALL BE AS UNDER: (a) FOOTING & BEAMS BURIED IN SOIL = 50MM (b) COLUMNS: MAIN LONGITUDINAL BAR = 50MM (c) BEAMS: (i) STIRRUPS BAR = 30MM (ii) LONGITUDINAL BAR = 30MM+DIA OF STIRRUPS
- ACCEPTANCE CRITERIA FOR CONCRETE AS LAID DOWN IN CLAUSE 16 AND TABLE 11 OF IS:456-2000 SHALL BE STRICTLY FOLLOWED.
- VARIOUS QUALITY ASSURANCE MEASURE AS LAID DOWN IN CLAUSE 10, 11, 12, 15, 16, 17 OF IS:456-2000 SHALL BE STRICTLY FOLLOWED.
- WATER TO BE USED FOR CONCRETING SHALL MEET ALL REQUIREMENTS OF CLAUSE 5.4 OF IS: 456-2000. SOURCE OF WATER SHALL BE APPROVED BY GE AND TESTING OF WATER SHALL BE GOT DONE FOR ITS SUITABILITY. DEVELOPMENT LENGTH (LD) FOR REINFORCEMENT BAR SHALL BE EQUAL TO 48.5 TIMES DIA OF BAR IN BEAMS, COLUMNS, SLABS AND ANY OTHER RCC MEMBER.
- FOUNDATION HAS BEEN DESIGNED FOR ASSUMED NET SBC OF 10.0 T/M² AT 1500MM BELOW AVERAGE GL. GE VERIFY THE SAME BEFORE EXECUTION OF WORK. MINIMUM DEPTH IN ORIGINAL SOIL SHALL BE 1.2 MTR.
- BEAM BARS SHALL ALWAYS PASS THROUGH INNER SIDE OF THE COLUMN BARS.
- HOOKS OF REINFORCEMENT BARS OF STIRRUPS IN BEAMS AND TIES / LINKS IN COLUMNS SHALL BE BENT TO AN ANGLE OF 135°. HOOK LENGTH SHALL BE 5 TIMES DIA OF BAR OR 75MM WHICHEVER IS MORE.
- TO ENSURE PROPER COVER TO REINFORCEMENT, COVER BLOCKS OF PCC OR OTHER SEATINGS AS APPROVED BY GE SHALL BE PROVIDED. MIX OF PCC COVER BLOCK WHEREVER PROVIDED SHALL BE SAME AS THAT OF RCC.
- PCC SOLID BLOCK TO BE USED IN MASONRY SHALL BE OF GRADE C (5.0) AS PER IS: 2185 (PART-I) 2005 WITH COMPRESSIVE STRENGTH OF 50MKG/CM².
- PROPER DRAINAGE AROUND THE WALL SHALL BE ENSURED TO AVOID INGRESS OF WATER IN FOUNDATION.
- AT EVERY 30.0M INTERVALS CRUMPLE JOINT SHALL BE PROVIDED.
- WEEP HOLES IN THE FORM OF 1100 UPVC PIPE SWR GRADE (10KG/M² PRESSURE) SHALL BE PROVIDED IN WALL AT EVERY 3.0M AT GL.
- PRE-FORMED BITUMINOUS FILLER BOARD 25MM THK SHALL BE PROVIDED AT CRUMPLE JOINT.
- 120 THROATINGS SHALL BE PROVIDED WHILE CASTING THE RCC COPING.

WIND SPEED - 33M/S (BANGALORE)

SBC - 15 T/SQM @ 150 MM DEPTH EQ ZONE - II

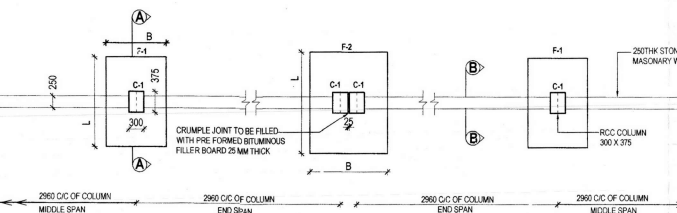
TOP PANEL OF STONE MASONRY IS SACRIFICIAL PANEL DESIGNED TO OFFLOAD EXCESSIVE WIND LOAD

THIS DRG SUPERSEEDS DRG NO AFB/TD/418/2023(S) SHT NO. 4/5 DATED 04 JAN 2023.



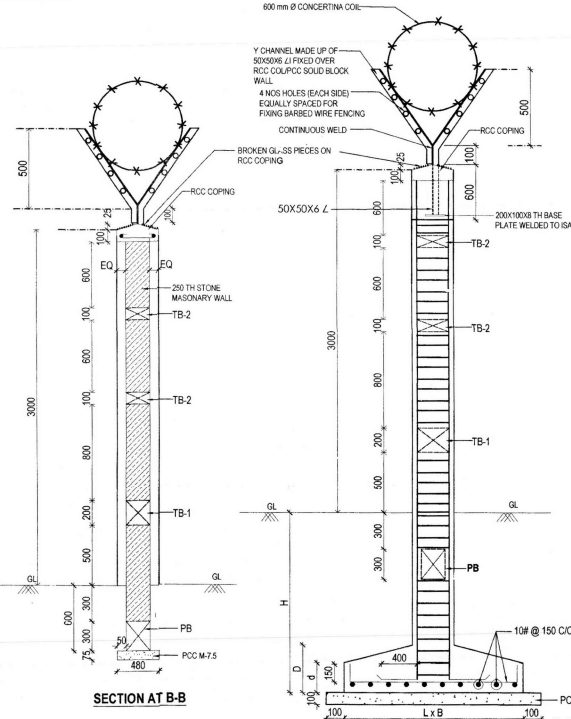
DETAIL OF GRATING AT DRAINAGE PORTION

NOTE:- 16# BOLT SHALL BE INSERTED IN THE BEAM / COLUMN BEFORE CASTING THE CONCRETE



PLAN OF BOUNDARY WALL AT GL

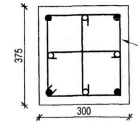
NOTE:- AT EVERY 30.0M INTERVALS CRUMPLE JOINT SHALL BE PROVIDED



SECTION AT B-B

SECTION AT A-A

NOTE:- LONGITUDINAL REINFORCEMENT OF COLUMN SHALL BE PROVIDED UP TO TOP OF RCC COPING.



DETAILS OF COLUMN C-1

SECURITY WALL HIGH SECURITY WALL 3.0M WITH STONE MASONRY IN FILL PANELS

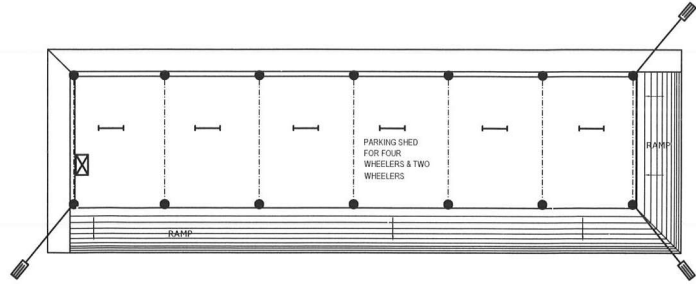
DATE	07 FEB 2023	CHIEF ENGINEER (AIR FORCE) BANGALORE	SHEET No.
DRN	NR T MURTHY		4/R/5
SCALE	AS SHOWN		

DRG.NO. AFB / TD / 418 / 2023 (S)

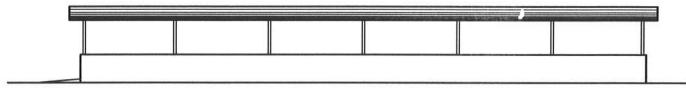
DESIGNED BY: *Karar Naik* (KARAR NAIK, ISE) EE DY/DN (DESIGN)

CHECKED BY: *Karar Naik* (KARRA NAIK SEKHAR) CE (INFL) DIRECTOR (DESIGN)

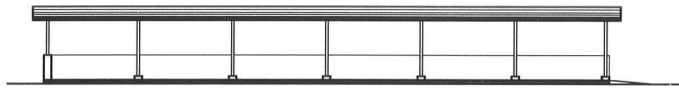
Drawing(s) related to Parking Shed



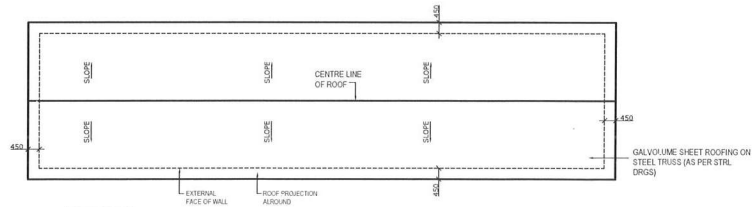
INTERNAL ELECTRIFICATION PLAN
SCALE 1:100



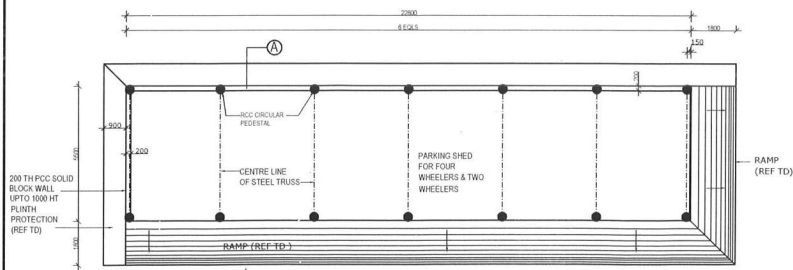
REAR ELEVATION
SCALE 1:100



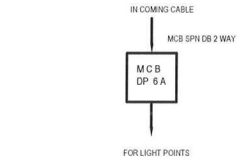
FRONT ELEVATION
SCALE 1:100



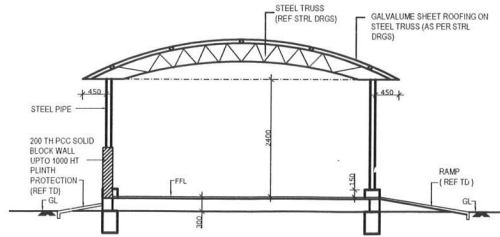
ROOF PLAN
SCALE 1:100



PLAN
SCALE 1:100



SCH. DIAGRAM FOR INT. ELECT.



SECTION AT A-A
SCALE 1:50

SL NO	NAME OF ROOMS	GENERAL CONSTRUCTION											REMARKS
		FLOORS		WALLS		SKIRTING	DADO	CEILING	ROOF	SURFACE FINISHES			
		INT	EXT	INT	EXT								
1	2												
1	RAMP												

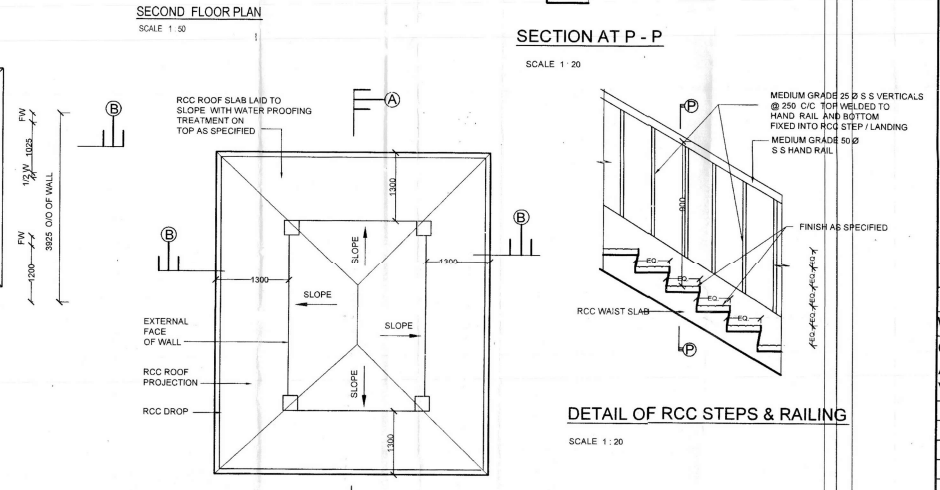
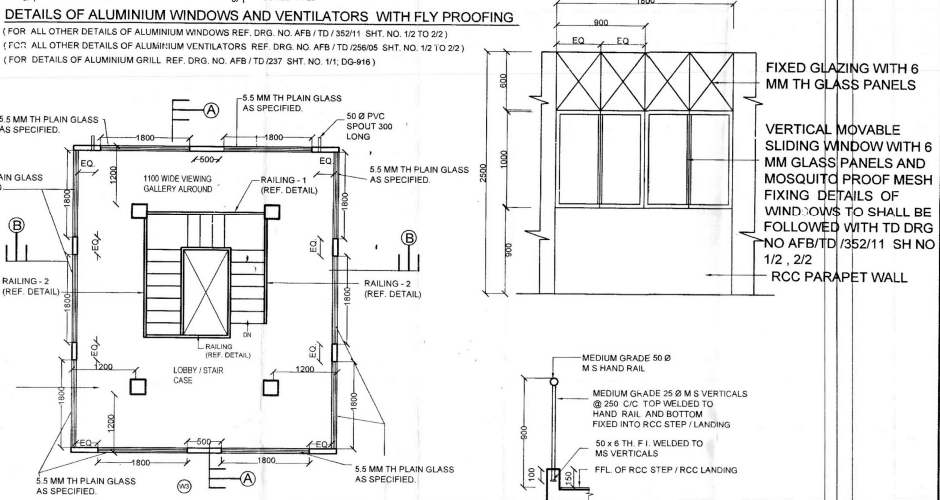
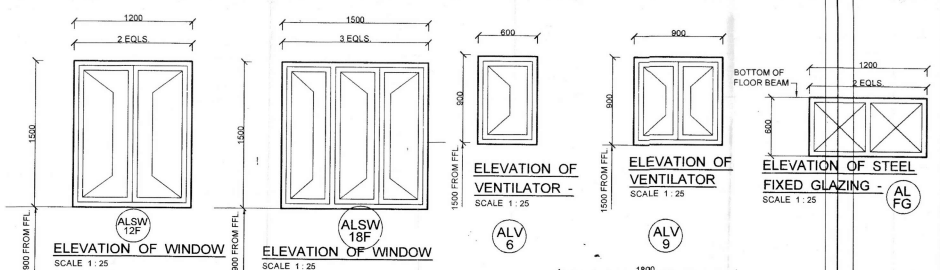
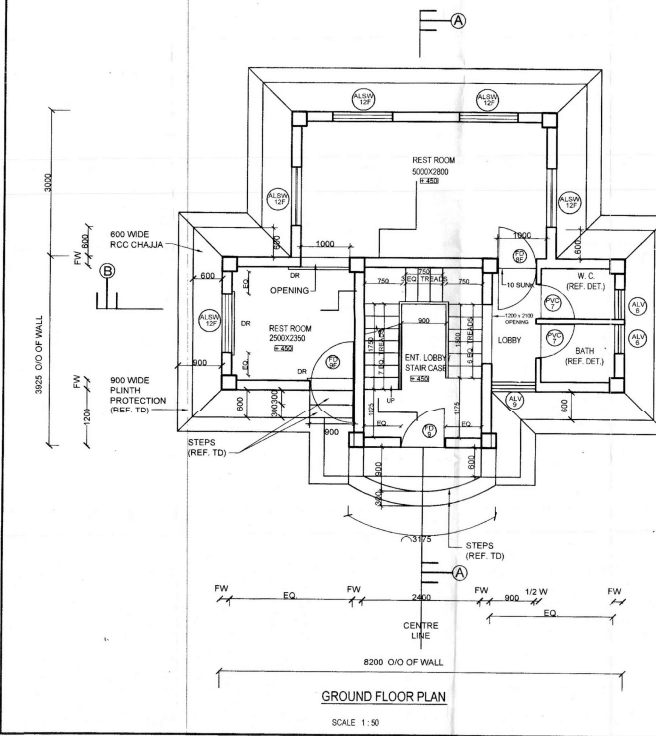
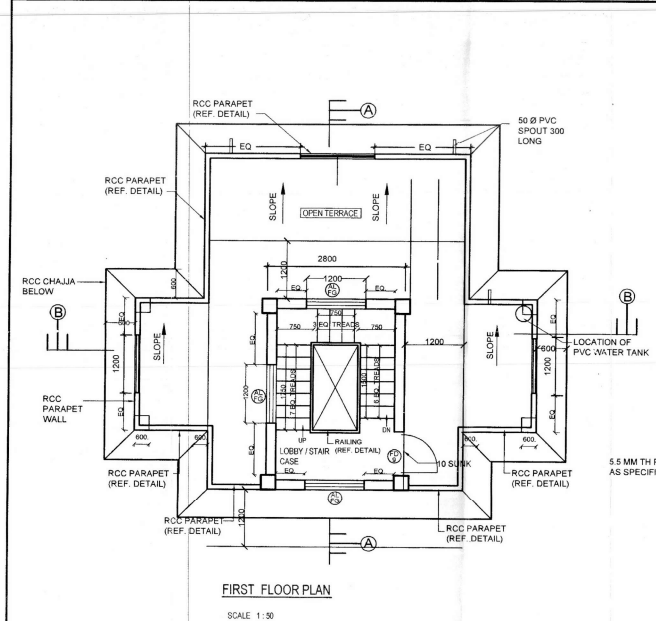
NOTES	
1	F/R NOTES AND REFERENCE TO DRGS. REFER NOTES AND REFERENCE TO DRAWINGS OF THIS PROJECT.
2	THE LOCATION OF FITTINGS / FIXTURES MARKED ARE TENTATIVE. THE SAME WILL BE DECIDED BY ENGINEER-IN-CHARGE.

LEGEND		
SL NO	DESCRIPTION	SYMBOL
1	FLUORESCENT LIGHT FITTING 1.5 x 28 w	
2	C.F.L. STREET LIGHT FITTING 2 x 15 w	
3	SUB MAIN DB	

SURFACE FINISHES		
DESCRIPTION	TREATMENT	
1	THREE COATS OF WHITE WASH	T-1
2	TWO COATS OF CEMENT BASED PAINT OVER A COAT OF PRIMER	T-2
3	TWO COATS OF SYNTHETIC EMAMEL PAINT OVER ONE COAT OF RED OXIDE PRIMER FOR STEEL SURFACES AND PINK PRIMER FOR WOODEN SURFACES.	T-3
4	ALL HIDDEN SURFACES OF WOOD / STEEL JOINERY SHALL BE TREATED WITH TWO COATS OF COAL TAR.	T-4
5	INDICATED MATERIAL TO BE USED	

SL NO	DATE	DESCRIPTION	SIGN
REVISIONS			
PROVN OF INFRASTRUCTURE FOR DOPPLER WEATHER RADAR AT AFA HYDERABAD			
PARKING SHED FOR FOUR WHEELERS & TWO WHEELERS			
PLAN, ROOF PLAN, ELEVATIONS, SECTION AT A-A, SCH. OF FINISHES AND INT. ELECT. PLAN			
DATE	CHIEF ENGINEER		SHT. NO.
DRN	K. USHA		19 /
TCD	AIR FORCE		
CKD	BANGALORE		
SCALE	AS SHOWN DRG. NO. AFB / WD / 0 / 2013		
AAD (ARCH)	AAD (PLG)	BY DIRECTOR (ARCH)	S O I (EM)
AAD (EM)	ASST. DIR. (ARCH)	DIRECTOR (PLG) FOR CHIEF ENGINEER	

Drawing(s) related to Watch Tower



NOTES

- FOR NOTES AND REFERENCE TO DRGS. REFER NOTES AND REFERENCE TO DRAWINGS OF THIS PROJECT.
- THE HEIGHT OF ALSW 18A / ALSW 20A ARE AS SHOWN IN SECTIONS AND ALL OTHER DETAILS ARE SAME AS ALSW 18A / ALSW 20A.

FIXED GLAZING WITH 6 MM TH GLASS PANELS

VERTICAL MOVABLE SLIDING WINDOW WITH 6 MM GLASS PANELS AND MOSQUITO PROOF MESH

FIXING DETAILS OF WINDOWS TO SHALL BE FOLLOWED WITH TD DRG NO AFB/TD/352/11 SH NO 1/2, 2/2

RCC PARAPET WALL

MEDIUM GRADE 50 Ø M S HAND RAIL

MEDIUM GRADE 25 Ø M S VERTICALS @ 250 C/C TOP WELDED TO HAND RAIL AND BOTTOM FIXED INTO RCC STEP / LANDING

50 x 8 TH F 1 WELDED TO MS VERTICALS

F.FL OF RCC STEP / RCC LANDING

SECTION AT P - P

SCALE 1:20

MEDIUM GRADE 25 Ø S S VERTICALS @ 250 C/C TOP WELDED TO HAND RAIL AND BOTTOM FIXED INTO RCC STEP / LANDING

MEDIUM GRADE 50 Ø S S HAND RAIL

FINISH AS SPECIFIED

RCC WAIST SLAB

SL NO.	DATE	DESCRIPTION	SIGN.
REVISIONS			
WATCH TOWER WITH GUARD REST ROOM			
GROUND, FIRST, SECOND & ROOF PLANS AND DETAILS OF STEEL WINDOWS / VENTILATORS / FIXED GLAZING & RAILING			
DATE	05-07-2019	CHIEF ENGINEER	SHT. NO.
DRN	NR/Sgt	AIR FORCE	1/4
TCO	—	BANGALORE	
CKD	T.AHANDAN		
SCALE	AS SHOWN	DRG. NO. AFB / TD / 377 / 2019	

THIS DRG IS SUPERCEDED OF THE DRG NO AFB/TD/377/2014 SH. NO. 1/12 TO 1/12 ON 21-06-2019

[Signature]
DIRECTOR (ARCH) FOR CHIEF ENGINEER

SCHEDULE OF FINISHES

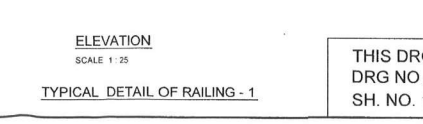
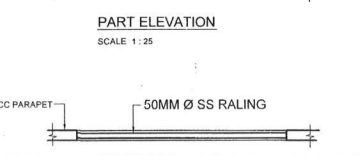
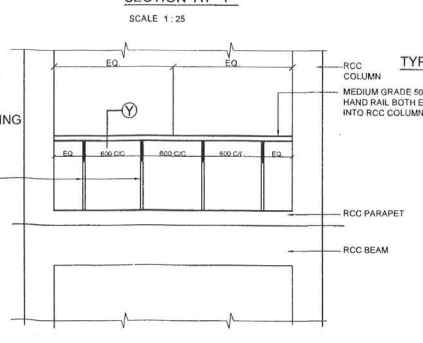
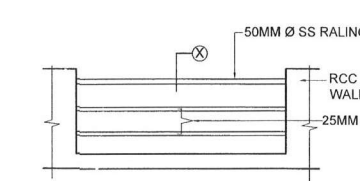
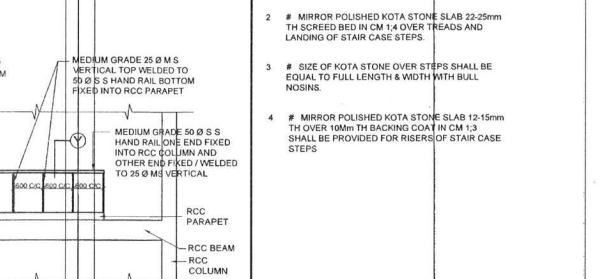
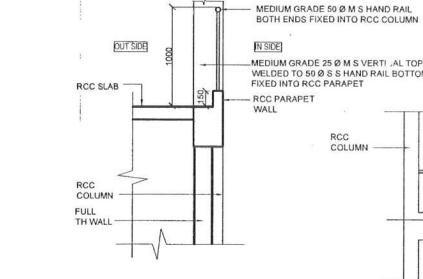
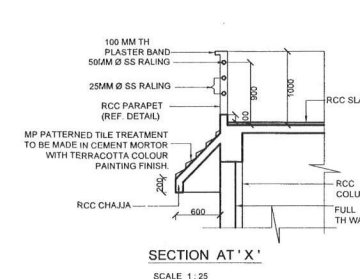
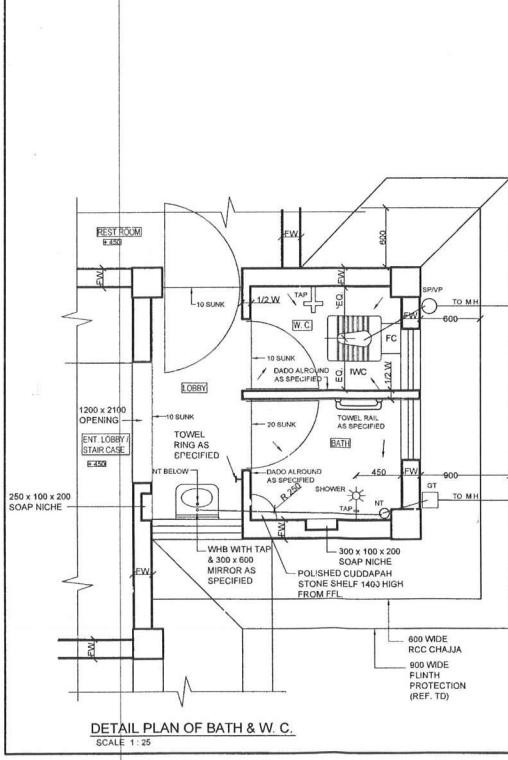
SL. NO	NAMES OF ROOMS	FLOORING					WALLS		SKIRTING	DADO	CEILING	ROOF	SURFACE FINISHES					REMARKS
		1	2	3	4	5	INT.	EXT.					17	18	19	20	21	
1	GROUND FLOOR																	
1	MASONRY STEPS																	
2	ENT. LOBBY																	
3	REST ROOM																	
4	LOBBY																	
5	BATH																	
6	W. C.																	
7	STAIR CASE																	
1	FIRST FLOOR																	
1	OPEN TERRACE																	
2	LOBBY																	
3	STAIR CASE																	
1	SECOND FLOOR																	
1	1200 WIDE VIEWING GALLERY																	
2	LOBBY																	
3	STAIR CASE																	

SL. NO.	NOTES
1	FOR NOTES AND REFERENCE TO DRGS. REFER NOTES AND REFERENCE TO DRAWINGS OF THIS PROJECT.
2	HEIGHT OF DADO I - W. C. = 1200 MM. II - BATH = 2100 MM. ALROUND III - W. B = 1500 MM. ALROUND

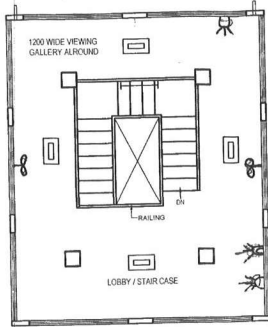
SURFACE FINISHES		
SL. NO.	DESCRIPTION	TREATMENT
1	3 COATS OF WHITE WASH	T-1
2	TWO COATS OF DRY DISTEMPER OVER A COAT OF PRIMER	T-2
3	TWO COATS OF CEMENT PAINT OVER A COAT OF PRIMER	T-3
4	TWO COATS OF SYNTHETIC ENAMEL PAINT OVER A COAT OF PINK PRIMER FOR WOOD WORK	T-4
5	TWO COATS OF SYNTHETIC ENAMEL PAINT OVER A COAT OF RED OXIDE / ZINC CHROMATE PRIMER FOR STEEL WORK	T-5
6	INDICATED MATERIAL SHALL BE USED	

- 1 @ 7.8 mm TH CERAMIC TILES OVER 10mm BAKING COAT IN CM 1:3 SHALL BE PROVIDED FOR RISERS AND SIDES OF STEPS
- 2 # MIRROR POLISHED KOTA STONE SLAB 22-25mm TH SCREED BED IN CM 1:4 OVER TREADS AND LANDING OF STAIR CASE STEPS.
- 3 # SIZE OF KOTA STONE OVER STEPS SHALL BE EQUAL TO FULL LENGTH & WIDTH WITH BULL NOSING.
- 4 # MIRROR POLISHED KOTA STONE SLAB 12-15mm TH OVER 10mm TH BAKING COAT IN CM 1:3 SHALL BE PROVIDED FOR RISERS OF STAIR CASE STEPS

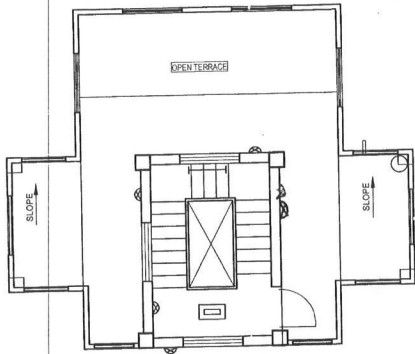
SL. NO.	DATE	DESCRIPTION	SIGN.
REVISIONS			
WATCH TOWER WITH GUARD REST ROOM			
DETAIL PLAN OF BATH & W. C., DETAILS OF RCC PARAPET, RAILING - 1 AND SCHEDULE OF FINISHES			
DATE	05-07-2019	CHIEF ENGINEER AIR FORCE BANGALORE	SHT. NO.
DRN	RG/Sup		3/4
TCO	Sa. Rishabh		
OKD	T. ANANDAN		
SCALE	AS SHOWN	DRG. NO. AFB / TD / 1407 / 2019	
AAD(PLG)		DIRECTOR (PLG)	



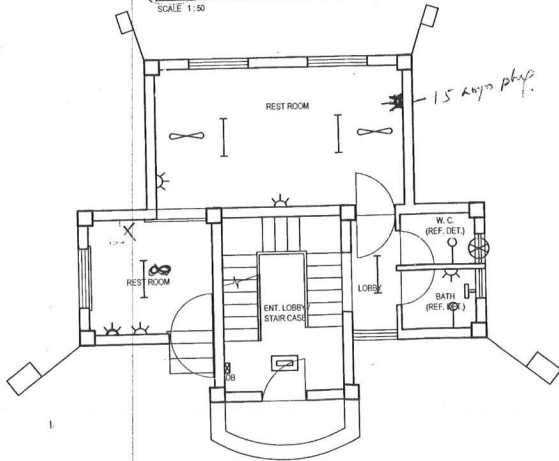
THIS DRG IS SUPERCEDED OF THE
DRG NO AFB/TD/377/2014
SH. NO. 1/2 TO 12/2 ON 21-06-2019



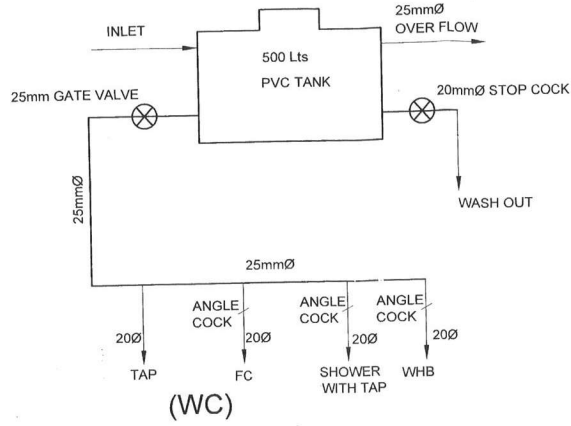
SECOND FLOOR PLAN SHOWING INTERNAL ELECTRIFICATION
SCALE 1:50



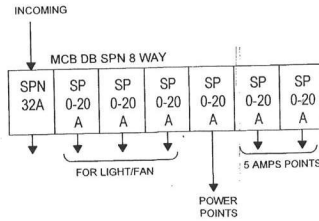
SECOND FLOOR PLAN SHOWING INTERNAL ELECTRIFICATION
SCALE 1:50



GROUND FLOOR PLAN SHOWING INTERNAL ELECTRIFICATION



(WC)
DIAGRAM OF INTERNAL WATER SUPPLY



NOTES			
1	FOR NOTES AND REFERENCE TO DRG. REFER TO NOTE AND REFERENCE TO DRAWINGS OF THIS PROJECT.		
2	THE LOCATION OF EM FITTINGS, FIXTURES AND ROUTING OF PIPES, CABLES AND DUCTS MARKED ARE TENTATIVE AND FOR GUIDANCE ONLY. THE LOCATION OF THE QUANTITIES AND LOCATION OF THE SAME WILL BE APPROVED BY THE ENGINEER-IN-CHARGE DURING THE EXECUTION OF THE WORK AS PER THE SITE REQUIREMENT.		
LEGEND			
SL. NO.	DESCRIPTION	SHOWN THUS	
1	LED LIGHT FITTING 1X20W		
2	LED LIGHT FITTING, 1X9W		
3	STREET LIGHT FITTING (1X20W LED)		
4	CEILING FAN POINT		
5	EXHAUST FAN 300MM SWEEP		
6	5 AMPS, SS COMBINED		
7	WASH HAND MIRROR FITTING 1 X 11 W LED		
8	SURFACE MOUNTED FITTING 0.19 W LED		
9	WALL MOUNTING FAN		
10	MAIN DB		
11	15A SS COMBINED		
12	BULK HEAD FITTING		
SL. NO.	DATE	DESCRIPTION	SIGN.
REVISIONS			
WATCH TOWER WITH GUARD REST ROOM			
GROUND, FIRST & SECOND FLOOR PLANS SHOWING INTERNAL ELECTRIFICATION AND SCHEMATIC DIAGRAM.			
DATE	05-07-2019	CHIEF ENGINEER	SHT. NO.
DRN	Nb/Sub SA Rashed	AIR FORCE	4/4
TCD		BANGALORE	
CKD			
SCALE	AS SHOWN	DRG. NO. AFB / TD 47/2019	
		AAD/EM	DIRECTOR (EM) FOR CHIEF ENGINEER

THIS DRG IS SUPERCEDED OF THE DRG NO AFB/TD/377/2014 SH. NO. 1/2 TO 1 1/2 ON 21-06-2019