	STRUCTURAL SERIES			
	NO. DRAWING TITLE	DWG NO.	REV.	REMARKS
01	DRAWING LIST	G-1.00	00	
02	GENERAL NOTES	G-1.01	00	
03	ARCHITECTURAL DRAWINGS	G-1.02	00	
04	STRUCTURAL DRAWINGS	G-1.03	00	
05	ARCHITECTURAL AND STRUCTURAL DETAILS	G-1.04	00	
06	SERVICES DRAWINGS	G-1.05	00	

DRAWING LIST

SCALE NTS



PROJECT:
R. VANDHOO
PROJECT: SOLID WASTE
MANAGEMENT FACILITY
CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY

DRAWN BY: ARIF
CHECKED BY: HUSSAIN SHAHEED
TITLE: AS GIVEN
SCALE: AS GIVEN
DATE:19.01.201

14B = GENERAL WASTE

CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
CONSULTANT: HUSSAIN SHAHEED

GENERAL NOTES

GENERAL

- THE CONTRACTOR IS REQUIRED TO SUBMIT COORDINATED M&E PENETRATION DRAWINGS FOR APPROVAL.
 ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND SERVICE DRAWINGS, SPECIFICATIONS AND WRITTEN INSTRUCTIONS IF ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFEREED FOR DECISION BEFORE PROCEEDING WITH THE WORK. IF A CONFLICT OCCURS BETWEEN GENERAL SPECIFICATIONS AND ANY OF THESE DRAWINGS, THE INDIVIDUAL DRAWINGS SHALL GOVERN.
- THE DRAWINGS SHALL NOT BE SCALED. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED.
- DURING THE CONSTRUCTION PERIOD THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE STABILITY OF STRUCTURE AND ENSURE THAT NO STRUCTURAL ELEMENT BE OVERSTRESSED UNDER CONSTRUCTION ACTIVITIES.
 WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE RELEVANT RECENT BS CODES OR OTHER ACCEPTABLE STANDARDS

- BASED ON THE DRAWINGS AND SPECIFICATIONS THE CONTRACTOR SHALL PRODUCE STRUCTURAL SHOP DRAWINGS FOR APPROVAL IF REQUESTED. ALL DIMENSIONS TO STRUCTURAL DRAWINGS ARE IN MILLIMETERS UNLESS STATED OTHERWISE. ALL LEVELS ARE EXPRESSED IN METERS.
- THE REINFORCED CONCRETE DESIGN IS BASED ON BS 8110 'STRUCTURAL USE OF CONCRETE' REFER TO STANDARD AND TYPICAL DETAILS AS SHOWN IN THE TYPICAL DRAWINGS FOR DETAILS NOT SHOWN SPECIFICALLY.
- ALL PROPS AND FRAMEWORK FOR BEAMS AND SLABS SHALL BE REMOVED BEFORE CONSTRUCTION OF ANY MASONRY WALLS OR OTHER PERMANENT LOADING ON THE SLAB.
- ALL NON-LOAD BEARING WALLS SHALL BE KEPT CLEAR OFF THE UNDERSIDE OF SLABS AND BEAMS BY 30MM. THE JOINT SHALL BE FILLED WITH FIBRE BOARD OR COMPRESSIBLE MATERIAL PRESSED METAL COVERING BOTH SIDES OF THE JOINT, AND THE METAL COVERING SHALL BE FIXED TO SOFFIT OF THE BEAM OR SLAB
- 12. THE CONTRACTOR IS REQUIRED TO SUBMIT A DRAWING SHOWING THE INTENDED SEQUENCE OF POURING, LOCATION AND DETAILS OF CONSTRUCTION JOINTS TO MINIMIZE THE POSSIBILITY OF OCCURRENCE OF SHRINKAGE CRACKS.
- 13. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL SUBMIT THE FOLLOWING FOR THE APPROVAL BY THE EMPLOYER'S PERSONNEL
- METHOD AND SEQUENCE OF CONSTRUCTION.
- DESIGN AND CALCULATION OF TEMPORARY SUPPORT TO EXCAVATION PREPARED AND APPROVED BY AN ACCREDITED GEOTECHNICAL ENGINEER.
- INSTRUMENTATION PROGRAMME TO MONITOR SOIL MOVEMENT, WATER TABLE AND SETTLEMENT.
- EFFECTS OF GROUND WATER LEVEL DRAW-DOWN.

 PRECAUTIONARY MEASURES TO AVOID DAMAGE TO NEIGHBORING BUILDING STRUCTURES.

FOUNDATIONS

- ALL FOUNDATIONS HAS BEEN DESIGNED FOR SAFE GROUND PRESSURE OF 150 kN/m²
- ALL BACKFILL SHOULD BE DONE WITH APPROVED MATERIAL AND SOURCE. ALL BACKFILL SHOULD BE STRUCTURAL FILL, COMPACTED IN LAYERS AS SPECIFIED.
- WEAK POCKETS FOUND BELOW THE ASSUMED FOUNDATION LEVELS SHALL BE REMOVED AND REPLACED BY PLAIN CONCRETE. IN CASE OF EXCAVATIONS BELOW THE ASSUMED LEVEL OF THE FOUNDATION, THE SOIL SHALL BE REPLACED BY PLAIN CONCRETE
- IN CASE GROUND WATER IS PRESENT ABOVE FOUNDATION LEVEL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING THE SITE, AND LOWERING THE GROUND WATER TO AT LEAST 70 cm BELOW LEVEL OF FOUNDATIONS.
- THE CONTRACTOR SHALL MAINTAIN DRY WORKING CONDITIONS THROUGHOUT THE CONSTRUCTION PERIOD. RESTORING WATER TABLE CAN BE DONE AFTER BACKFILLING AND COMPACTION UP TO THE SLAB ON GRADE LEVEL, OR AS DIRECTED BY THE ENGINEER.
- NO BACK FILLING SHALL BE PLACED AGAINST WALLS RETAINING EARTH, UNLESS THE WALLS ACHIEVE SUFFICIENT STRENGTH TO PREVENT MOVEMENT OR STRUCTURAL DAMAGE.

CONCRETE

- CEMENT SHALL BE ORDINARY PORTLAND CEMENT TO BS 12.
- CONCRETE GRADE:
- ALL IN-SITU STRUCTURAL CONCRETE SHALL HAVE MINIMUM 28 DAYS CUBE STRENGTH OF 30 N/mm² TO THE RELEVANT CLAUSES OF BS5328.
 ALL PLAIN CONCRETE (OR BLINDING) SHALL HAVE MINIMUM 28 DAYS CUBE STRENGTH OF 15 N/mm², TO THE RELEVANT CLAUSES OF BS5328.

- AGGREGATES SHALL BE TO BS 882 WITH A NOMINAL SIZE OF 20 mm
 SULPHATE RESISTING CEMENT SHALL BE USED FOR ALL CONCRETE IN CONTACT WITH GARBAGE.
 NO OPENINGS, HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE IN THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL
- CONSTRUCTION AND EXPANSION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE SHOWN OR SPECIFICALLY APPROVED.
- NO ELECTRICAL CONDUIT AND PIPES ARE TO BE CAST IN COLUMNS OR THROUGH BEAMS WITHOUT PRIOR APPROVAL UNLESS OTHERWISE SHOWN IN THE DRAWINGS.
- OPENING IN SLABS
- FOR OPENING LESS THAN 300 x 300 mm. BARS SHALL BE RE-ARRANGED AROUND THE OPENING
- FOR OPENINGS GREATER THAN 300 x 300 mm BUT LESS THAN 450 x 450 mm AND NOT SHOWN ON PLAN, PROVIDE 2 DIA 12 TOP AND BOTTOM ALONG EACH SIDE AND T16 DIAGONALLY AT CORNERS OR AS OTHERWISE DETAILED. AMOUNT OF BARS DISCONTINUED DUE TO THE OPENING SHALL BE PLACED AT THE
- OPENINGS GREATER THAN 450 x 450 mm AND NOT SHOWN ON PLAN SHALL BE APPROVED.
- SHEAR KEY SHALL BE PROVIDED AT ALL CONSTRUCTION JOINTS.
- 10. WATERPROOFING SYSTEM AS SPECIFIED IN THE SPECIFICATIONS SHALL BE USED IN STRUCTURAL ELEMENTS WHICH ARE CONTINUOUSLY IN CONTACT WITH SOIL OR WATER ON LIFT PIT, ROOF SLAB, R.C. RETAINING WALL AND RAFT ETC.
- 11. TO PROVIDE INTEGRAL SEALING BETWEEN CONCRETE CAST IN-SITU IN SEPARATE POUR, APPROVED WATERSTOP HAS TO BE INSTALLED FOR ALL CONSTRUCTION JOINTS IN CONTACT WITH WATER AND SOIL
- 12. SPECIAL RULES REGARDING CONCRETING IN HOT WEATHER SHALL BE OBSERVED.

REINFORCEMENT

- HIGH STRENGTH DEFORMED BARS DENOTED T SHALL CONFIRM TO BS-4449 WITH MINIMUM YIELD STRENGTH Fy= 460 N/mm², MILD STEEL DENOTED R SHALL HAVE 250 N/mm² YIELD STRENGTH, WELDED WIRE MESH SHALL COMPLY WITH BS-4483
- SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITION SHOWN OR AS OTHERWISE APPROVED
- SPACER BARS SHALL BE PROVIDED AT 100cm CENTERS WHEREVER REINFORCEMENT IS PLACED IN MORE THAN ONE LAYER, UNLESS STATED OTHERWISE WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED. IF REINFORCEMENT SHOULD BE WELDED, APPROVAL IS REQUIRED.

- ALL REINFORCEMENT SHALL BE SUPPORTED IN ITS CORRECT POSITION DURING CONCRETING BY APPROVED BAR CHAIRS, SPACERS, OR SUPPORT BARS. TYPICAL DEVELOPMENT AND SPLICES OF DEFORMED BARS WITH Fy = 460 N/mm² AND Fcu = 30 N/mm², (CUBE STRENGTH) SHALL BE AS FOLLOWS, UNLESS
- OTHERWISE MENTIONED IN DRAWINGS:

 1. BASIC TENSION DEVELOPMENT LENGTH, LD = 56 x BAR DIA
- 6.2. MINIMUM COMPRESSION DEVELOPMENT LENGTH, LDC = 40 x BAR DIA (OR 300mm WHICH EVER IS MORE)

 7. BENDING OF REINFORCEMENTS SHALL BE IN ACCORDANCE WITH BS 4466.

ABBREVIATIONS

CO-ORD

APPROX -APPROXIMATE -BOTH WAYS BOT OR BTM -BOTTOM BOB -BOTTOM OF BASE BOS -BOTTOM OF STEEL BOT -BOTTOM OF TRUSS

-BOTTOM STEEL BOTTOM REINFORCEMENT (B1) -BOTTOM STEEL TOP REINFORCEMENT (B2)

BI DG -BUILDING -CENTER LINE -CENTER TO CENTER C/C -COLUMN

-CO-ORDINATE -DAMP PROOF COURSE DPC DET OR DTL -DETAIL

-DIAMETER DIA -DISTRIBUTION BAR D/B DWG -DRAWING

EF -EACH FACE EW -EACH WAY -ELEVATION (HEIGHT) EL

-ELEVATION (VIEW) ELEV FF -FAR FACE FS -FAR SIDE FW -FILLET WELD

FFI -FINISHED FLOOR LEVEL FDN OR FND -FOUNDATION FB -FOUNDATION BEAM

-GENERAL ARRANGEMENT GA

-GAI VANIZED IRON G.I. -INVERT I EVEL I G -LONG OR LENGTH MAX -MAXIMUM -MARKED MKD

MIN -MINIMUM MISC -MISCELLANEOUS N/F -NEAR FACE N/S -NEAR SIDE NOM -NOMINAI NTS -NOT TO SCALE

Nos -NUMBERS O/D -OUTSIDE DIAMETER -PAVEMENT I EVEL PI PRO.I -PROJECTION QTY -QUANTITY -RADIUS RAD

-REINFORCED CONCRETE R.C.

REQ'D -REQUIRED -SHEAR WALL SW STIFF -STIFFENER

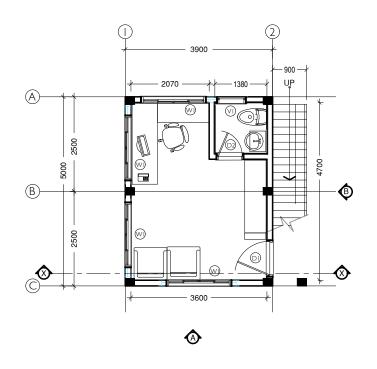
SQ -SQUARE

SFL -STRUCTURAL FINISH LEVEL THK -THICK (NESS) TEMP -TEMPORARY -TOP OF BEAM TOB TOC -TOP OF COLUMN TOG -TOP OF GROUT TO Platf -TOP OF PLATFORM TS -TOP OF SLAB TOS -TOP OF STEEL TOT -TOP OF TRUSS TYP -TYPICAI -UNDERSIDE

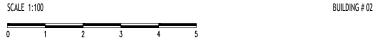
U/S UNO -UNI ESS NOTED OTHERWISE -TOP STEEL TOP REINFORCEMENT (T1) -TOP STEEL BOTTOM REINFORCEMENT (T2)

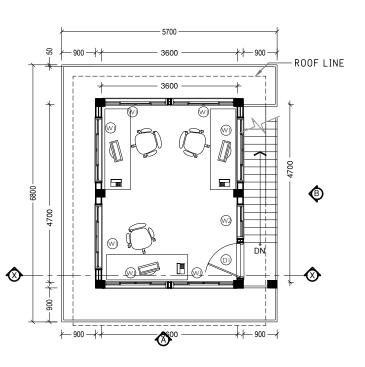
-UPSTAND BEAM (UPB)

PROJECT: R. VANDHOO PROJECT: SOLID WASTE MANAGEMENT FACILITY	DRAWN BY : ARIF CHECKED BY : HUSSAIN SHAHEED TITLE : AS GIVEN SCALE : AS GIVEN DATE:19.01.2019	DWG NO: VAN-TD-02-G-1.01-R0 REV. NO: R0-190119/01 REV. NOTES	APPROVED BY:
CLIENT : MINISTRY OF ENVIRONMENT AND ENERGY		<u>-</u>	
CONSULTANT: HUSSAIN SHAHEED	PG NO.	<u>-</u>	APPROVED DATE:

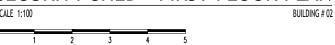


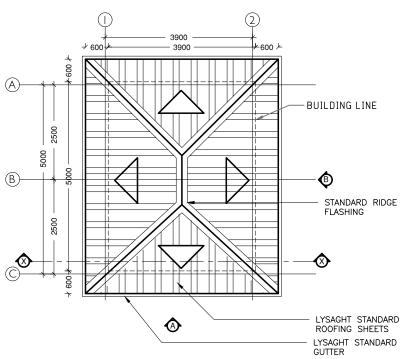
SECURITY SHED - GROUND FLOOR PLAN



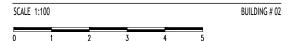


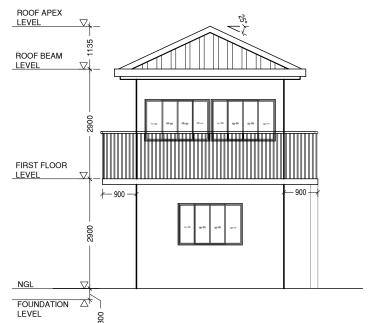
SECURITY SHED - FIRST FLOOR PLAN





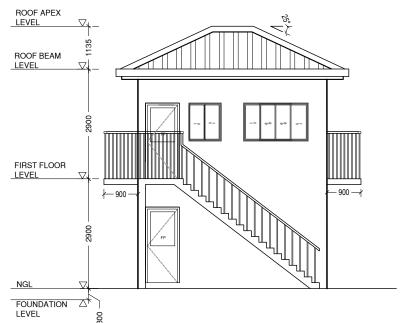
SECURITY SHED - ROOF PLAN





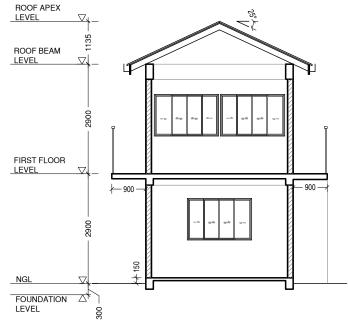
SECURITY SHED - ELEVATION A





SECURITY SHED -ELEVATION B





SECURITY SHED -SECTION X:X



PROJECT: R. VANDHOO PROJECT: SOLID WASTE MANAGEMENT FACILITY
PROJECT: SOLID WASTE
MANAGEMENT FACILITY

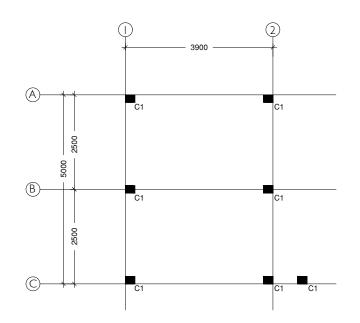
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CONSULTANT: HUSSAIN SHAHEED PG NO.

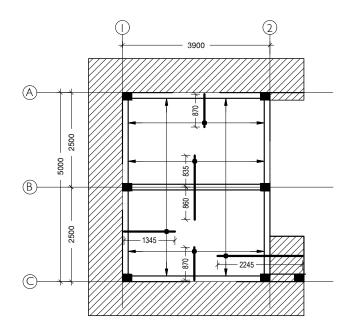
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SCALE: AS GIVEN DATE:19.01.2019	-
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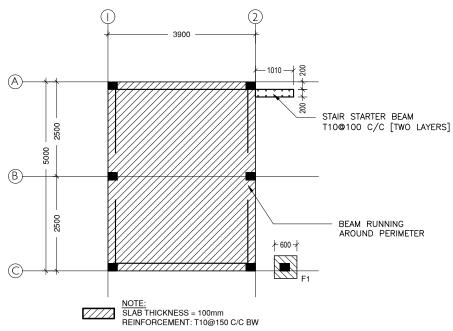
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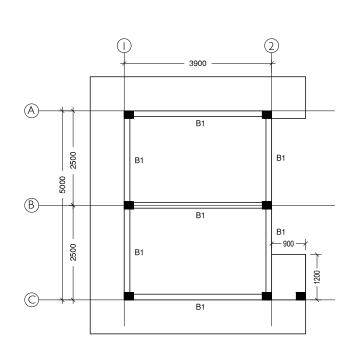
COLUMN LOCATION PLAN SCALE 1:100



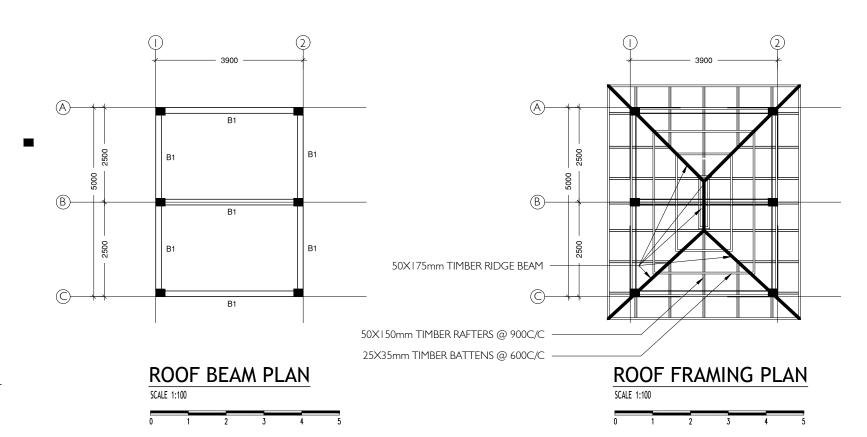
FIRST FLOOR SLAB REINFORCEMENT PLAN



FOUNDATION PLAN



FIRST FLOOR BEAM PLAN



PROJECT:
PROJECT : R. VANDHOO
PROJECT: SOLID WASTE
MANAGEMENT FACILITY

CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY

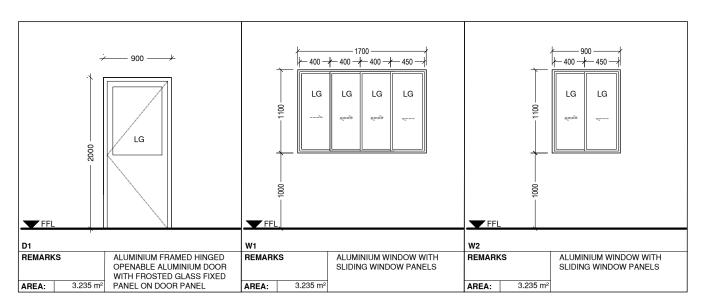
CONSULTANT: HUSSAIN SHAHEED

DRAWN BY : ARIF CHECKED BY : HUSSAIN SHAHEED

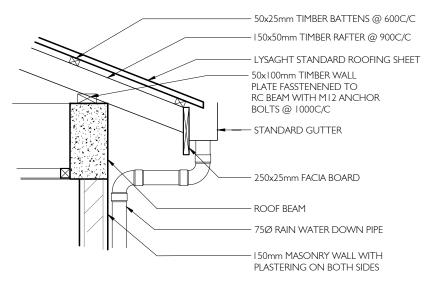
TITLE: AS GIVEN SCALE: AS GIVEN

DATE:19.01.2019

DWG NO: VAN-TD-02-G-1.03-R0 APPROVED BY: REV. NO: R0-190119/01 REV. NOTES APPROVED DATE:



LG - LAMINATED GLASS



RC NOTE

- I. All concrete element design conforms to BS8 I I 0.
- 2. Minimum compressive strength of concrete to be 25 N/sqmm.
- 3. Concrete mix ratio 1:2:3
- 4. Main reinforcement steel to be high strength deformed bars.
- 5. River sand and granite to be used as aggregates.
- 6. Use water free of salt and any other impurities.
- 7. All reinforcement shall be supported in its correct position when concreting by using spacers.
- 8. Laps = $45 \, \varnothing$, Bends at end support = $12 \, \varnothing$ (\varnothing = Bar diameter)
- 9. Cover to reinforcement as given below unless noted otherwise

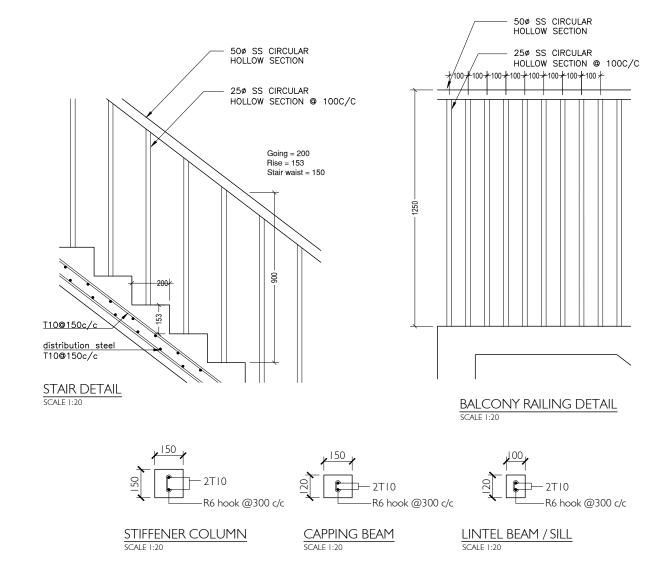
Footing = 50mm Tie beams = 40mm

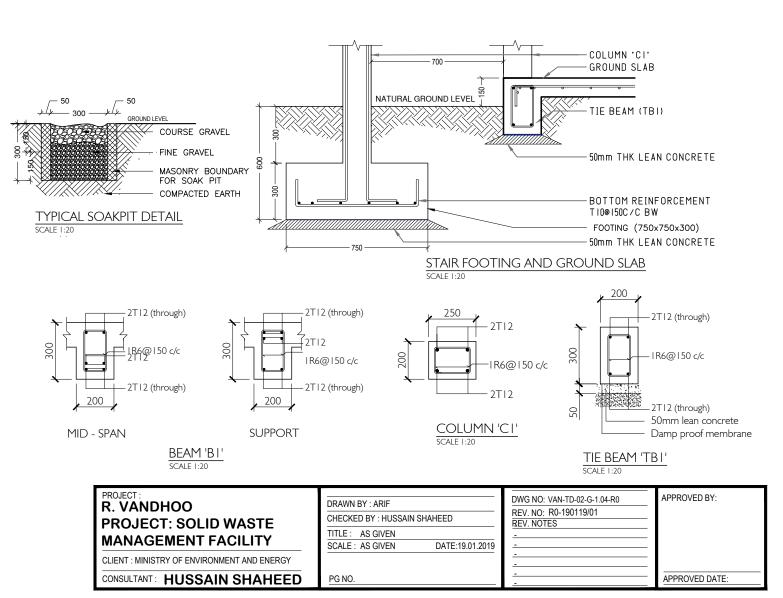
Floor beams = 40mm (top, bot), 40mm (sides)

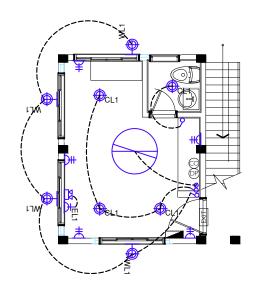
Roof beams = 40mm (top, bot), 40mm (sides)

Column = 30mm

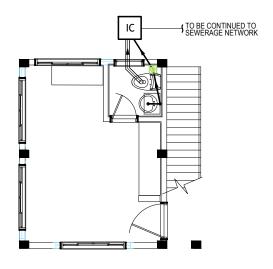
Slab = 25mm (top, bot)



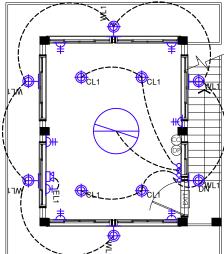




GROUND FLOOR FIRE SAFETY AND ELECTRICAL LAYOUT

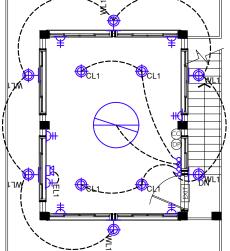


GROUND FLOOR WASTE WATER LAYOUT



FIRST FLOOR FIRE SAFETY AND **ELECTRICAL LAYOUT**





LEGEND - PLUMBING

- GENERAL NO 1. NO BRAN WHERE B
- INSPECT INSPECT
- SIDE SHALL BE INSTALLED

 3. ALL STORM WATER TO BE CONNECTED TO SOAK PIT AT GROUND LEVEL

LEGEND - ELECTRICAL

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
OI -	CLEANING / RODDING EYE		INHOUSE DISTRIBUTION BOARD
	FLOOR TRAP WITH GULLY	\bowtie	MAIN DISTRIBUTION BOARD
•	SHOWER	ø	FAN CONTROLLER
\longrightarrow	BIDET SHOWER	8	2WAY SWITCH SINGLE GANG (UOS)
-+	FAUCET	6	1WAY SWITCH SINGLE GANG
IMI	GATE VALVE / BALL VALVE	> ⊢	13A X 1G POWER SOCKET @ 300 FFL (UO
WM	SERVICE PROVIDER WATER METER	∑ #	13A X 2G POWER SOCKET @ 300 FFL (UO
()	ELECTRIC PUMP) #	15A X 1G POWER SOCKET @ CEILING LEV
	HDPE FRESH WATER PIPE	₽	DATA SOCKET (RJ45) @ 300 FFL (UOS)
	HDPE WELL WATER PIPE	\triangle	TELEPHONE COCKET (RJ11) @ 300 FFL (L
	Ø100mmUPVC RAIN WATER DOWN PIPE	$\frac{1}{1}$	TV SOCKET (RF) @ 300 FFL (UOS)
	Ø50mm UPVC VENT PIPE	├⊕ _{WL1}	WALL MOUNTED LIGHT FITTING
	Ø40mm UPVC WASTE WATER PIPE	⊕ _{CL1}	CEILING MOUNTED LIGHT FITTING
	Ø100mm UPVC SEWAGE PIPE	CL2	CF TUBE LIGHT (4')
IC	INSPECTION CHAMBER	CL3	CF TUBE LIGHT (4')
		≝差"	EMERGENCY LIGHT (2HR)
	TE: CH CONNECTIONS SHALL BE MADE BELOW GROUND, VER A BRANCH CONNECTION IS NECESSARY; AN		CEILING FAN
INSPECTION CHAMBER IS TO BE INSTALLED 2. INSPECTION CHAMBER ARE TO BE VENTED TO NEAREST INSPECTION CHAMBER (NOT SHOWN) OR VENT PIPE TO OUT SIDE SHALL BE INSTALLED 3. ALL STORM WATER TO BE CONNECTED TO SOAK PIT AT GROUND LEVEL			AC UNIT
		(**)	EXHAUST FAN
		EXIT	EXIT SIGN

(W)

(DP)

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GENERAL NOTE:
"UOS - UNLESS OTHERWISE STATED

1. ALL TOILET EXHAUSTS SHALL BE CONNECTED TO TOILET LIGHT

FIRE EXTINGUISHER - WATER

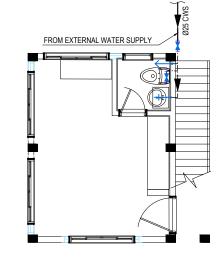
FIRE EXTINGUISHER - CO2

FIRE EXTINGUISHER - DRY POWDER

WATER SPRINKLER WITH IONIZATION SMOKE DETECTOR

APPROVED BY:

APPROVED DATE:



GROUND FLOOR WATER SUPPLY LAYOUT

PROJECT: R. VANDHOO
PROJECT: SOLID WASTE MANAGEMENT FACILITY
MANAGEMENT FACILITY
CLIENT : MINISTRY OF ENVIRONMENT AND ENERGY

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