PEZA

Republic of the Philippines

Philippine Economic Zone Authority

Baguio City Economic Zone

LOAKAN ROAD, BAGUIO CITY

SUPPLY, DELIVERY AND INSTALLATION OF GENERATOR SET, ACCESSORIES AND HOUSING FOR THE MULTIPURPOSE BUILDING (MPB)

PREPARED BY:

ANJEE ANNE D. MONTERO
ESO III / ARCHITECT

JEREMY JOSHUA L. DUPLI
ESO II / CIVIL ENGINEER

AMADEO G. DALISAY
ESO II / ELECTRICAL ENGINEER

CHECKED AND VERIFIED BY:

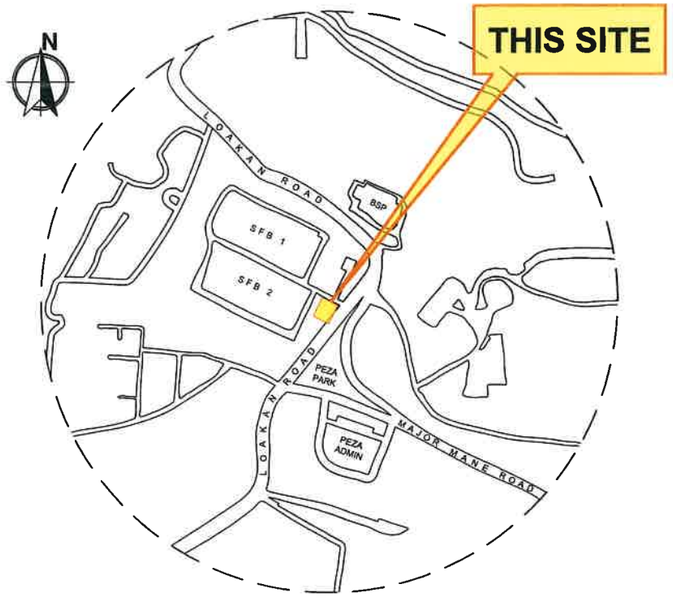
DANIEL M. PECSOY
ACTING DIVISION CHIEF, EMD

RECOMMENDING APPROVAL:

MARY JANE G. SANCHEZ
ACTING DEPUTY ZONE ADMINISTRATOR

APPROVED BY:

ATTY. ABDULLAH ADEL-KHAN P. ALUG
ZONE ADMINISTRATOR - BAGUIO CITY ECONOMIC ZONE AND CLUSTER III



1 A 01 VICINITY MAP
SCALE NTS

2 A 01 LOCATION MAP
SCALE NTS

3 A 01 PERSPECTIVE
SCALE NTS

TABLE OF CONTENTS

A01	VICINITY MAP
	LOCATION MAP
	PERSPECTIVE
	TABLE OF CONTENTS
A02	SITE DEVELOPMENT PLAN
A03	GROUND FLOOR PLAN
	FRONT ELEVATION
	REAR ELEVATION
A04	LEFT ELEVATION
	RIGHT ELEVATION
	CROSS SECTION
	LONGITUDINAL SECTION
A05	WINDOW SCHEDULE
	DOOR SCHEDULE
S01	GENERAL CONSTRUCTION NOTES (1/2)
S02	GENERAL CONSTRUCTION NOTES (2/2)
S03	FOUNDATION PLAN
	GROUND FLOOR FRAMING PLAN
S04	ROOF BEAM PLAN
	ROOF FRAMING PLAN
	ROOF PLAN
S05	COLUMN SCHEDULE
	FOOTING DETAILS AND SCHEDULE
	TYPICAL BEAM DETAILS
	BEAM SCHEDULE
	SLAB SCHEDULE
	STAIR DETAILS
S06	ROOF TRUSS DETAILS
	BASE PLATE DETAILS
	WATERLINE ENCLOSURE DETAILS
S07	MANHOLE 1 ADJUSTMENT DETAILS
	MANHOLE 2 ADJUSTMENT DETAILS
E01	ELECTRICAL GENERAL NOTES
	RISER DIAGRAM & LOAD SCHEDULE
	LIGHTING AND POWER LAYOUT

4 A 01 TABLE OF CONTENTS
SCALE NTS

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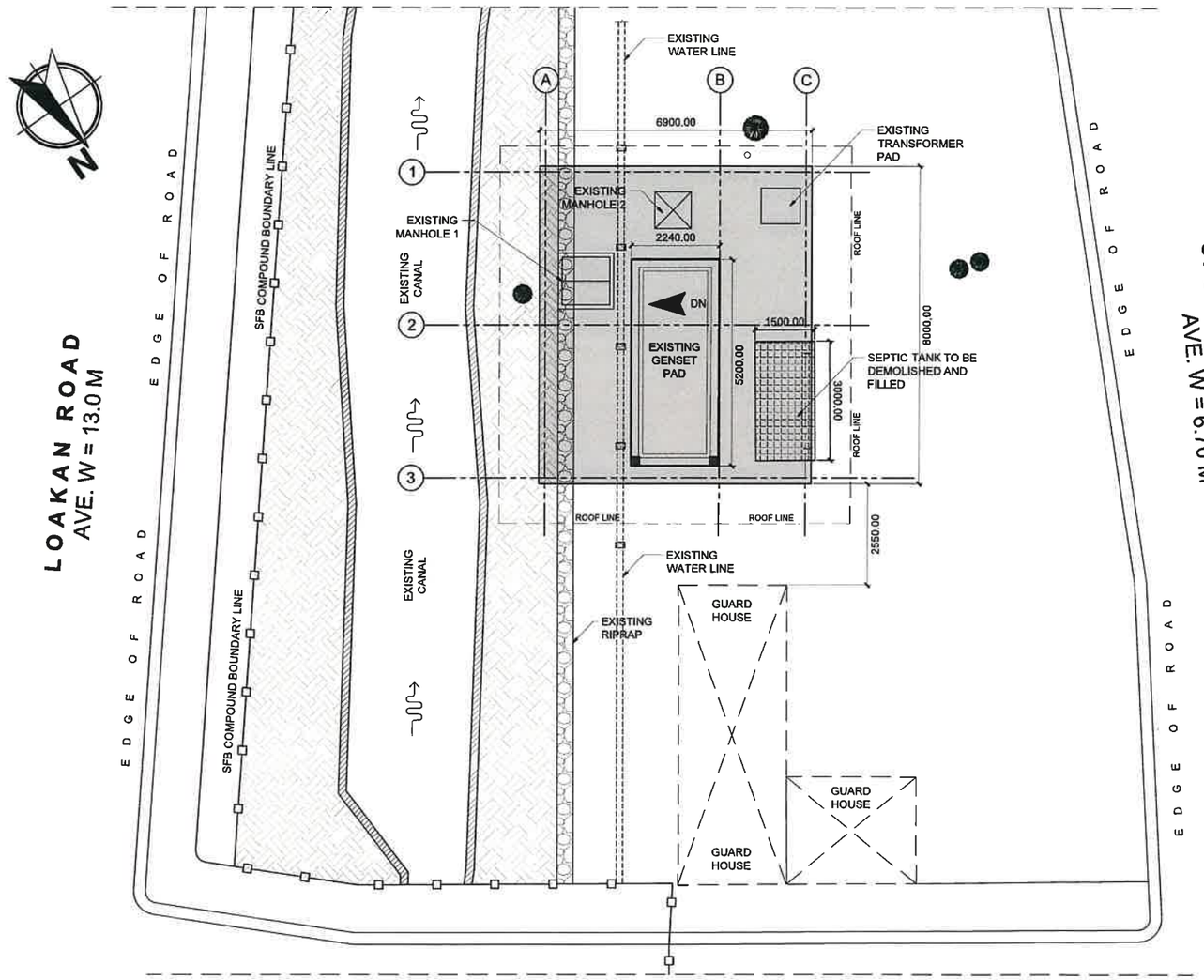
SUPPLY, DELIVERY AND INSTALLATION OF GENERATOR SET, ACCESSORIES AND HOUSING FOR THE MULTIPURPOSE BUILDING (MPB)	VICINITY MAP LOCATION MAP PERSPECTIVE TABLE OF CONTENTS	ANJEE ANNE D. MONTERO ECO III / Architect DATE:	DANIEL N. PECSOY ACTING DIVISION CHIEF, ENGINEERING AND MAINTENANCE DIVISION DATE:	MARYJANE G. SANCHEZ ACTING DEPUTY ZONE ADMINISTRATOR DATE:	ATTY. ABDULLAH ADEL-KHAN P. ALUG ZONE ADMINISTRATOR - BAGUIO CITY ECONOMIC ZONE DATE:	A01	1 / 13



LEGEND:

- FLOW OF WATER
- EXISTING FENCE
- EXISTING CANAL WALLS
- EXISTING EARTH / EMBANKMENT
- PROPOSED GENSET HOUSING
- EXISTING RIPRAP
- PROPOSED BUILDING ROOF LINE
- EXISTING STRUCTURE
- TREES
- EXISTING WATERLINE

1 / A 02 SITE DEVELOPMENT PLAN

SCALE 1:80

EXISTING SITE CONDITION

IN PHOTO:
- EXISTING GENSET PAD
- GENSET PAD COLUMNS TO BE DEMOLISHED
- EXISTING SEPTIC TANK TO BE DEMOLISHED AND FILLED
- EXISTING TRANSFORMER PAD AND CONDUIT PROVISION

IN PHOTO:
- EXISTING GENSET PAD
- GENSET PAD COLUMNS TO BE DEMOLISHED
- EXISTING WATERLINE TO BE ENCLOSED

IN PHOTO:
- EXISTING ELECTRICAL MANHOLE TO BE ADJUSTED
- EXISTING WATERLINE TO BE ENCLOSED
- EXISTING GENSET PAD

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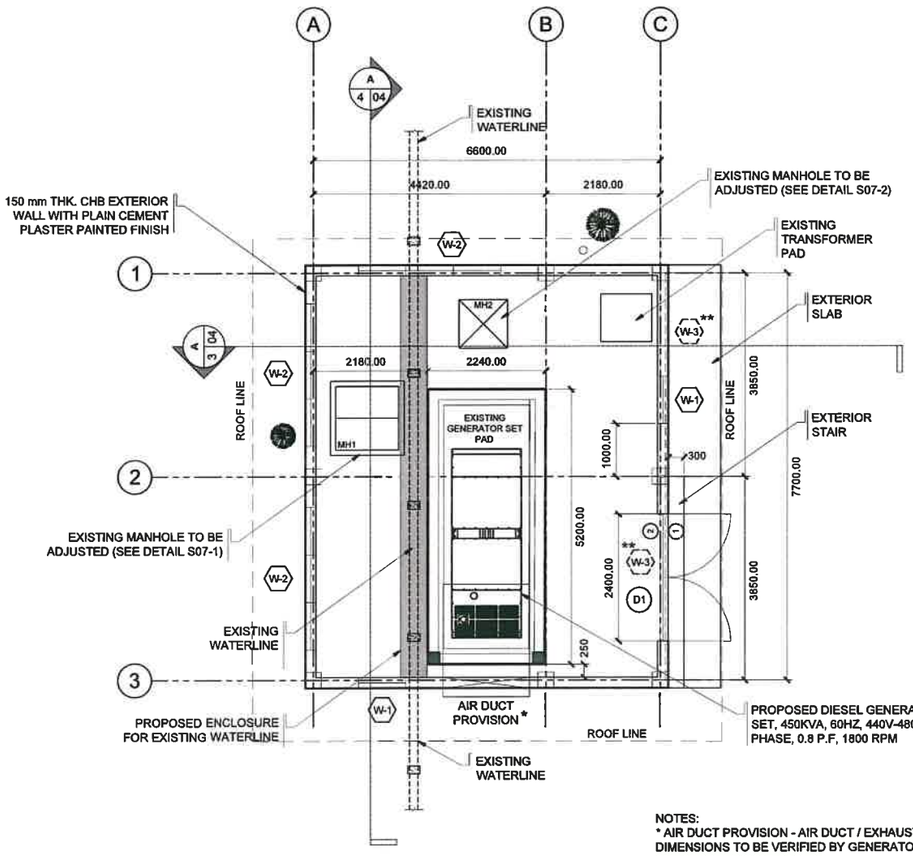
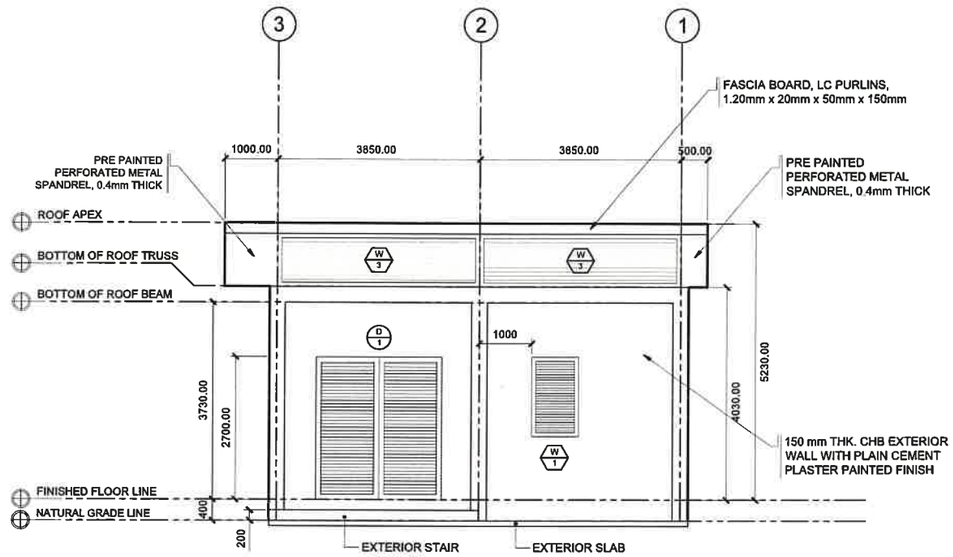


NOTES:
* AIR DUCT PROVISION - AIR DUCT / EXHAUST DIMENSIONS TO BE VERIFIED BY GENERATOR SET SUPPLIER/CONTRACTOR
** W3 - CLERESTORY STEEL LOUVER (SEE WINDOW SCHEDULE)

1 / A 03 GROUND FLOOR PLAN

SCALE 1:80



2 / A 03 FRONT ELEVATION

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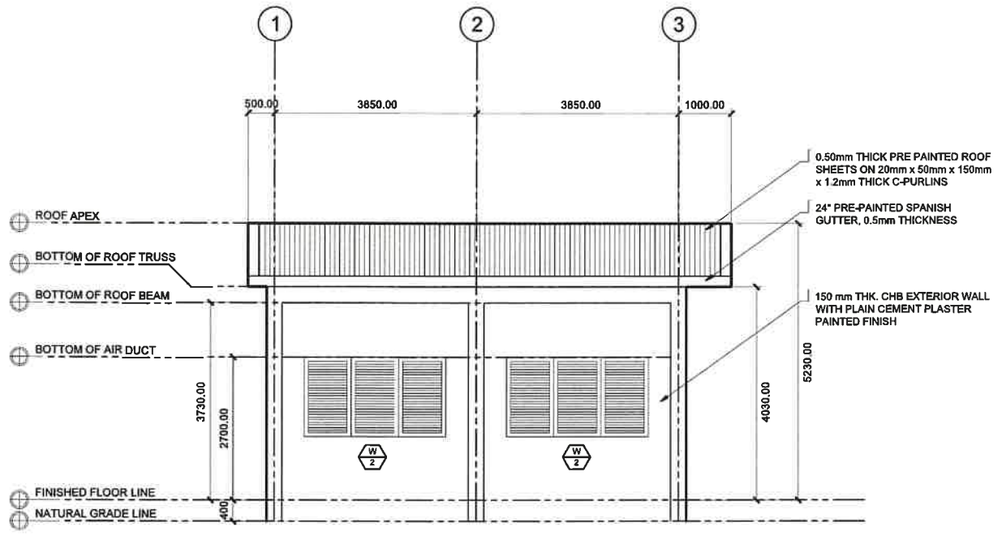

3 / A 03 REAR ELEVATION

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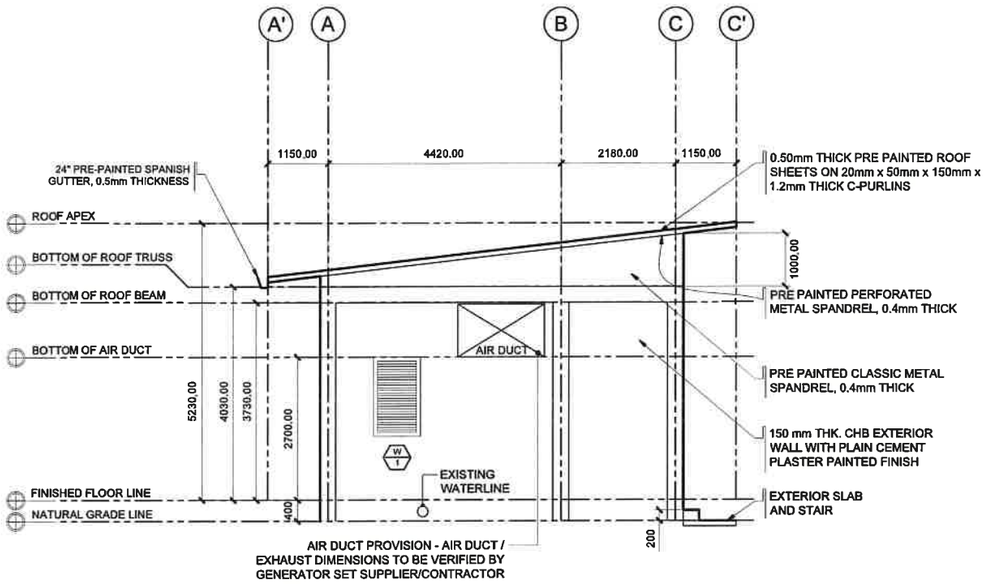

1 A 04 **LEFT ELEVATION**

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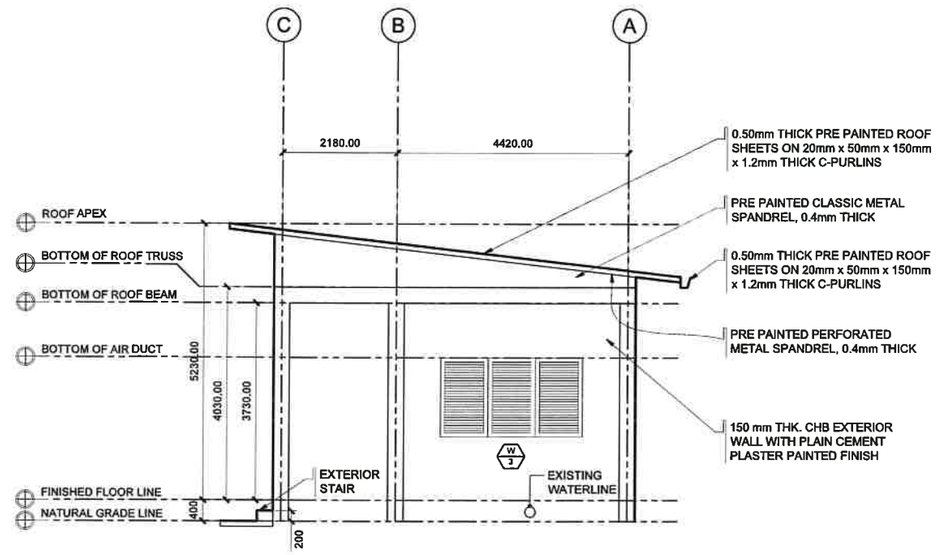

2 A 04 **RIGHT ELEVATION**

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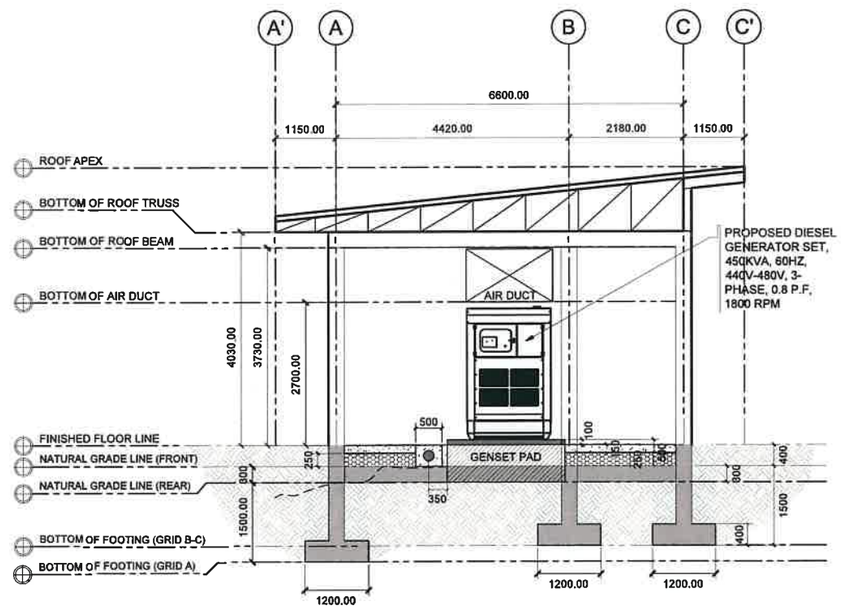

3 A 04 **CROSS SECTION**

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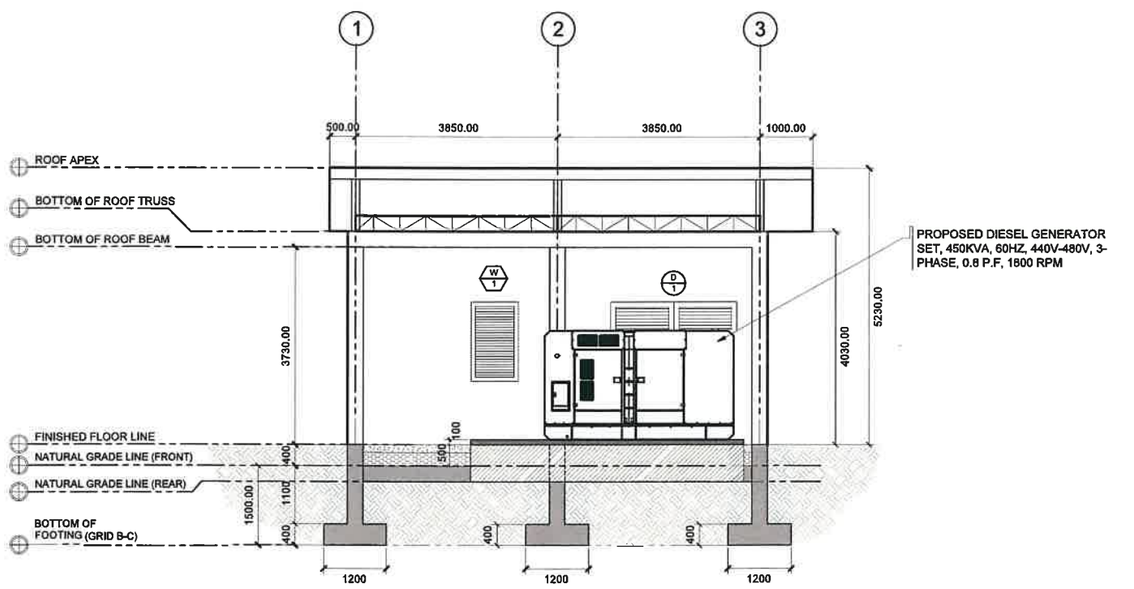

4 A 04 **LONGITUDINAL SECTION**

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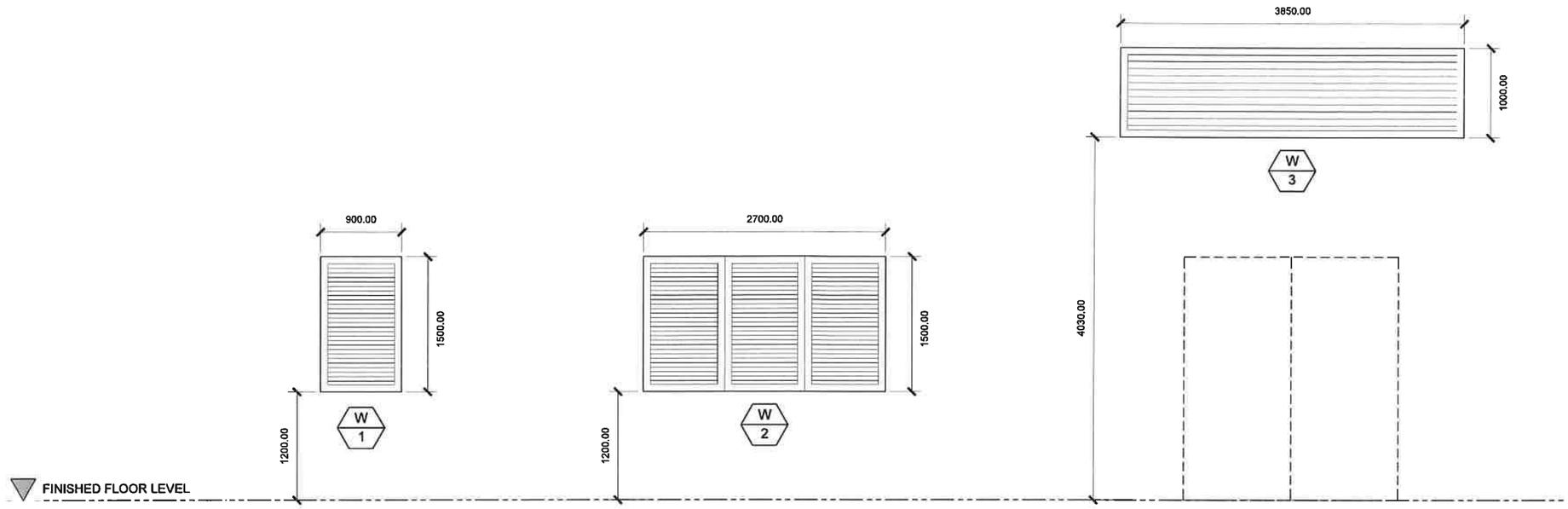

FIXED STEEL LOUVER WINDOW
WITH EPOXY PRIMER PAINT FINISH
GA#18 Z-SECTION LOUVER BLADES
GA#16 TUBULAR FRAMES
SETS: 2

FIXED STEEL LOUVER WINDOW
WITH EPOXY PRIMER PAINT FINISH
GA#18 Z-SECTION LOUVER BLADES
GA#16 TUBULAR FRAMES
SETS: 3

CLERESTORY STEEL LOUVER WINDOW
WITH EPOXY PRIMER PAINT FINISH
GA#18 Z-SECTION LOUVER BLADES
GA#16 TUBULAR FRAMES
SETS: 1

1 / A 05 WINDOW SCHEDULE

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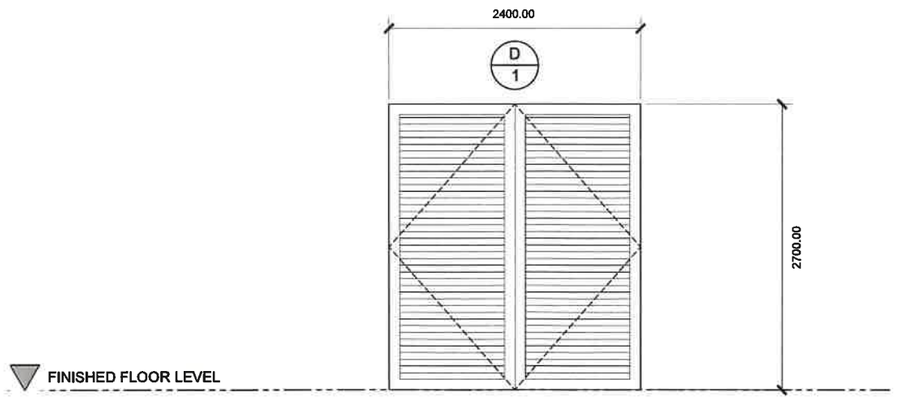

DOUBLE LEAF FULL LOUVER STEEL DOOR
WITH EPOXY PRIMER PAINT FINISH
GA#18 Z-SECTION LOUVER BLADES
GA#16 TUBULAR FRAMES
SETS: 1

2 / A 05 DOOR SCHEDULE

SCALE 1:40

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GENERAL CONSTRUCTION NOTES

GENERAL NOTES

1. IN THE INTERPRETATION OF THE DRAWING, INDICATED DIMENSIONS SHALL GOVERN AND DISTANCES AND SIZES SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES.
2. IN REFERENCE TO OTHER DRAWINGS, SEE ARCHITECTURAL DRAWINGS FOR DEPRESSIONS IN FLOOR SLABS, OPENINGS IN THE WALLS AND SLABS, INTERIOR PARTITIONS, LOCATTION OF DRAINS ETC.
3. IN CASE OF DISCREANCIES AS TO THE LAYOUT, DIMENSIONS, AND ELEVATIONS BETWEEN THE STRUCTURAL PLANS, AND ARCHITECTURAL DRAWINGS, THE CONTRACTOR SHALL NOTIFY BOTH THE STRUCTURAL ENGINEER AND ARCHITECT.
4. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI.318 95 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND ALL STRUCTURAL STEEL WORK ACCORDING WITH AISC SPECIFICATION (9th EDITION) IN SO FAR AS THEY DO NOT CONFLICT WITH THE LOCAL BUILDING CODE REQUIREMENT.
5. ACI REFERS TO AMERICAN CONCRETE INSTITUE, AISC TO AMERICAN INSTITUTE OF STEEL CONSTRUCTION AND ASTM TO AMERICAN SOCIETY FOR TESTING MATERIALS.
6. CIONSTRUCTION NOTES AND TYPICAL DETAILS APPLY TO ALL DRAWINGS UNLESS OTHERWISE SHOWN OR NOTED MODIFY TYPICAL DETAILS AS DIRECTED TO MEET SPECIAL CONDITIONS.
7. SHOP DRAINGS WITH ERECTION AND PLACING DIAGRAMS OF ALL STRUCTURAL STEELS, MISCELLANEOUS IRON, PRE-CAST CONCRETE, ETC. SHALL BE SUBMITTED FOR ENGINEERS.
8. CONTRUCTOR SHALL NOTE AND PROVIDE ALL MISCELLANEOUS CURBS, SILLS, STOOLS, EQUIPMENT'S AND MECHANICAL BASES THAT ARE REQUIRED BY THE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS.
9. ALL RESULTS OF MATERIAL TESTING FOR CONCRETE, REINFORCING BARS & STRUCTURAL STEEL MUST BE NOTED & APPROVED BY THE STRUCTURAL DESIGNER.

NOTES ON CONCRETE MIXES & PLACING

1. ALL CONCRETE SHALL DEVELOP A MIN COMPRESSIVE STRENGTH AT THE END OF TWENTY EIGHT (28) DAYS W/ CORRESPONDING MAXIMUM SIZE AGGREGATE & SLUMPS AS FOLLOWS:

LOCATION	28 DAYS STRENGTH	MAX. SIZE OF AGGREGATE	MAX. SLUMP
ALL OTHERS, INCLUDING SUSPENDED SLABS	4000 PSI (27.6 MPa)	20 mm	100 mm
COLUMNS	4000 PSI (27.6 MPa)	20 mm	100 mm
BEAMS, SLABS	4000 PSI (27.6 MPa)	20 mm	100 mm
SLAB ON FILL	5000 PSI (27.6 MPa)	20 mm	100 mm

2. MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS:
   - SUSPENDED SLABS — 20 mm
   - SLAB ON GRADE — 40 mm
   - WALLS ABOVE GRADE — 25 mm
   - BEAM STIRRUPS AND COLUMN TIES — 40 mm
   - WHERE CONCRETE IS EXPOSED TO EARTH BUT POURED AGAINST FORMS — 50 mm
   - WHERE CONCRETE IS DEPOSITED DIRECTLY AGAINST EARTH — 75 mm
3. CONCRETE SHALL BE DEPOSITED IN ITS FINAL POSITION WITHOUT SEGREGATION. RE-HANDLING OR PLACING SHALL BE DONE PREFERABLY WITH BUGGIES. BUCKETS OR WHEELBARROWS, NO CHUTES WILL BE ALLOWED EXCEPT TO TRANSFER CONCRETE FROM HOPPERS TO BUGGIES, WHEELBARROWS OR BUCKETS IN WHICH CASE THEY SHALL NOT EXCEED SIX (6) METERS IN AGGREGATE LENGTH.
4. NO DEPOSITING OF CONCRETE SHALL BE ALLOWED WITHOUT THE USE OF VIBRATORS UNLESS AUTHORIZED IN WRITING BY THE DESIGNERS AND ONLY FOR UNUSUAL CONDITIONS WHERE VIBRATIONS IS EXTREMELY DIFFICULT TO ACCOMPLISH.
5. ALL ANCHOR BOLTS, DOWELS, AND OTHER INSERTS, SHALL BE PROPERLY POSITIONED & SECURED IN PLACE PRIOR TO PLACING OF CONCRETE.
6. ALL CONCRETE SHALL BE KEPT MOIST FOR A MINIMUM OF SEVEN CONSECUTIVE DAYS IMMEDIATELY AFTER POURING BY THE USE OF WET BURLAP, FOG SPRAYING, CURING COMPOUNDS OR OTHER APPROVED METHODS.
7. STRIPPING OF FORMS AND SHORES:
   - FOUNDATION — 24 HRS.
   - SUSPENDED SLAB EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED — 8 DAYS
   - WALL — 21 DAYS
   - BEAMS — 14 DAYS
   - COLUMNS — 21 DAYS
8. THE CONTRACTOR SHALL SUBMIT THE SCHEDULE OF POURING AND THE LOCATION OF THE CONSTRUCTION JOINTS TO THE STRUCTURAL ENGINEER AT LEAST (4) DAYS PRIOR TO THE POURING FOR APPROVAL.
9. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ADEQUATE FORMS AND SHORING UNTIL THE CONCRETE MEMBERS HAVE ATTAINED THEIR WORKING CONDITION AND STRENGTH.

NOTES ON FOOTING

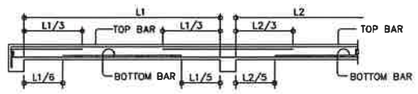
1. FOOTINGS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 150 KPa (3231.82 psf). CONTRACTOR SHALL REPORT TO THE ENGINEER. IN WRITING, THE ACTUAL SOIL CONDITIONS UNCOVERED AND CONFIRM ACTUAL BEARING CAPACITY OF SOIL BEFORE DEPOSITING CONCRETE.
2. FOOTING SHALL REST AT LEAST 1500mm BELOW NATURAL GRADE LINE UNLESS OTHERWISE INDICATED IN PLANS. NO FOOTING SHALL REST ON FILL.
3. MINIMUM CONCRETE PROTECTION FOR REINFORCEMENTS SHALL BE 75mm CLEAR FOR CONCRETE DEPOSITED THE GROUND AND 50mm FOR CONCRETE DEPOSITED AGAINST A FORMWORK.

NOTES ON REINFORCEMENT

1. UNLESS OTHERWISE NOTED IN PLANS, THE YIELD STRENGTH OF REINFORCING BARS SHALL BE:
   A. FOOTINGS, FOOTING BEAMS AND GIRDERS --------fy = 275 MPa (40, 000 psi)
   B. CLUMNS AND SHEAR WALLS ---------- fy = 275 MPa (40, 000 psi)
   C. BEAMS AND GIRDER ---------- fy = 275 MPa (40, 000 psi)
   D. NON-LOAD BEARING WALL PARTITIONS, BEDDED SLABS, FLOOR & ROOF SLABS, PARAPETS, CATCH BASIN. SIDE WALK. ---------- fy = 227.5 MPa (33, 000 psi)
2. ALL REINFORCING BARS SIZE 10mm OR LARGER SHALL BE DEFORMED IN ACCORDANCE WITH ASTM A 706. ABRS SMALLER THAN 10mm MAY BE PLAIN.
3. SPLICES SHALL BE SECURELY WIRED TOGETHER & SHALL LAP OR EXTEND IN ACCORDANCE W/ TABLE A & TABLE B (TABLE OF LAP SPLICE & ANCHORAGE LEGTH) UNLESS OTHERWISE SHOWN ON DRAWINGS, SPLICES SHALL BE STAGGERED WHENEVER POSSIBLE.

NOTES ON CONCRETE SLABS

1. ALL SLAB REINFORCEMENTS SHALL BE 20mm CLEAR MINIMUM FROM BOTTOM AND FROM TE TOP OF SLAB.
2. UNLESS OTHERWISE SHOWN, REINFORCEMENT IN CONTINUOUS ELEVATED SLAB SHALL BE CUT AS FOLLOWS:

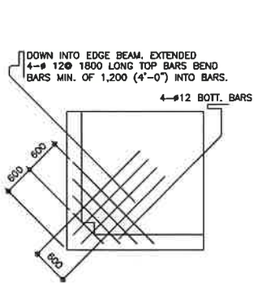


TYPICAL BAR BENDING AND CUTTING DETAILS FOR SLABS

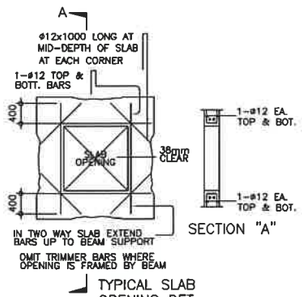
3. IF SLABS ARE REINFORCED BOTHWAYS BARS ALON THE SHORTER SPAN SHALL BE PLACED BELOW THOSE ALONG THE SPAN AT THE CENTER AND OVER THE LONGER SPAN FOR REINFORCING BARS NEAR THE SUPPORTS. THE SPACING OF THE BARS AT THE COLUMN STRIPS SHALL NOT BE MORE THAN ONE AND A HALF (1 ½) SLAB THICKNESS.
4. TEMPERATURE BARS FOR SLAB SHALL BE GENERALLY PLACED NEAR THE FACE IN TENSION AND SHALL NOT BE LESS THAN 0.0025 x GROSS CROSS-SECTIONAL AREA (Ag) OF THE SLAB (SEE SCHEDULE BELOW)

SCHEDULE OF MINIMUM SLAB REINFORCEMENT	
THICKNESS	MINIMUM TEMPERATURE BARS
100 mm	10 mm ø @ 250mm EACH WAY
125 mm	10 mm ø @ 225mm EACH WAY
150 mm	10 mm ø @ 185mm EACH WAY
175 mm	10 mm ø @ 150mm EACH WAY
200 mm	10 mm ø @ 140mm EACH WAY

5. UNLESS OTHERWISE NOTED IN THE PLANS ALL BEDDED SLABS SHALL BE REINFORCED WITH 10mm ø AT 250mm O.C. EACH WAY TO CENTER OF SLAB AND CONSTRUCTION JOINTS FOR SAME SHALL NOT BE LESS THAN 3.65 METER APART
6. PROVIDE EXTRA REINFORCEMENTS FOR CORNER SLAB (TWO ADJACENT DISCONTINUOUS EDGES) AS SHOWN BELOW.
7. CONCRETE SLAB REINFORCEMENTS SHALL BE PROPERLY SUPPORTED WITH 10mm ø STEEL CHAIR OR APPROVED EQUIVALENT SPACED AT 1.0 METER ON CENTER BOTHWAYS



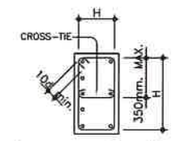
TYPICAL CORNER SLAB DETAIL

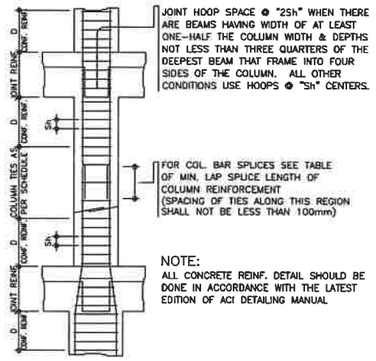


TYPICAL SLAB OPENING DET.

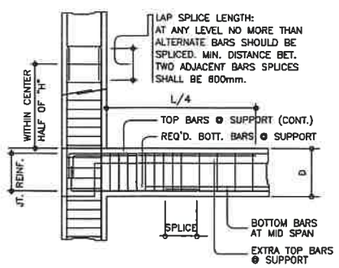
NOTES ON COLUMNS

1. PROVIDE EXTRA SETS OF TIES AT 100mm O.C. FOR TIED COLUMN REINFORCEMENT ABOVE AND BELOW BEAM-COLUMN CONNECTIONS FOR A DISTANCE FROM FACE OF CONNECTION EQUAL TO THE GREATER OF THE OVERALL THICKNESS OF COLUMN, ⅙ HE CLEAR HEIGHT OF COLUMN OR 450 mm.
2. COLUMN TIES SHALL BE PROTECTED EVERYWHERE BY A COVERING OF CONCRETE CAST MONOLITHICALLY WITH THE MINIMUM THICKNESS OF 40mm AND NOT LESS THAN 40 TIMES THE MAXIMUM SIZE OF COARSE AGGREGATE IN MILLIMETERS.
3. WHERE COLUMNS CHANGE IN SIZE VERTICAL REINFORCEMENTS SHALL BE OFFSET AT A SLOPE OF NOT MORE THAN 1 IN 6 EXTRA 10mm TIES AT 100mm SHALL BE PROVIDED THRU OUT THE OFFSET REGION.
4. UNLESS OTHERWISE INDICATED IN THE PLANS, LAP SPLICES FOR VERTICAL COLUMN REINFORCEMENT SHALL BE MADE WITHIN THE CENTER HALF OF THE COLUMN HEIGHT, AND THE SPLICE LENGTH SHALL NOT BE LESS THAN 40 BAR DIAMETERS, WELDING OR APPROVED MECHANICAL DEVICES MAY BE USED PROVIDED THAT NOT MORE THAN ALTERNATE BARS ARE WELDED OR MECHANICALLY SPLICED AT ANY LEVEL AND THE VERTICAL DISTANCES BETWEEN THESE WELDS OR SPLICES OF ADJACENT BARS IS NOT LESS THAN 600mm.





TYPICAL COLUMN ELEV. SHOWING DOWELS AND TIES SPACING



TYP. DETAIL OF COL LAP SPLICE & EXT. GIRDER TO COL. CONNECT.

NOTE:
PURSUANT TO SECTION 4 OF ANNEX "A" OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, APPROVAL BY THE AUTHORIZED DPWH OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGN UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGN NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

THE DESIGN CONSULTANT SHALL BE HELD FULLY RESPONSIBLE FOR THE FAILURE OF THE FACILITY/IES/STRUCTURES DUE TO FAULTY DESIGN EXCEPT FOR THE CHANGES MADE WITHOUT THE CONFORMITY OF THE CONSULTANTS.

NOTES ON BEAMS AND GIRDERS

1. UNLESS, OTHERWISE NOTED IN PLANS, CAMBER ALL BEAMS AND GIRDER AT LEAST 6mmø FOR EVERY 4.50M OF SPAN, EXCEPT CANTILEVERS FOR WHICH THE CAMBER SHALL BE AS NOTED IN PLANS OR AS ORDERED BY THE ENGINEER BUT IN NO CASE LESS THAN 20mm FOR EVERY 3.0M OF FREE SPAN.
2. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1.

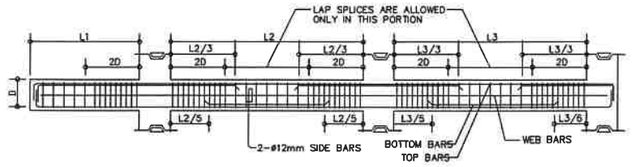


FIG. B-1

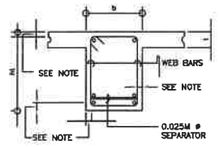
TABLE 'A' TENSIONS BARS EMBEDMENT LENGTHS AND LAPPED SPLICED IN MILLIMETERS				
BAR SIZE (DEFORMED)	fc'= 20.7MPa(3000psi)		fc'= 27.6MPa(4000psi)	
	EMBEDMENT	LAPPED	EMBEDMENT	LAPPED
10mm ø	300	300	300	300
12mm ø	300	300	300	300
16mm ø	300	400	300	300
20mm ø	400	550	350	500
25mm ø	600	800	550	750
28mm ø	750	1000	650	850
32mm ø	950	1300	850	1100

NOTE: TOP PLAIN BARS, MULTIPLY VALUE BY 2

TABLE 'B' TENSIONS BARS EMBEDMENT LENGTHS AND LAPPED SPLICED IN MILLIMETERS				
BAR SIZE (DEFORMED)	fc'= 20.7MPa(3000psi)		fc'= 27.6MPa(4000psi)	
	EMBEDMENT	LAPPED	EMBEDMENT	LAPPED
10mm ø	225	300	200	300
12mm ø	275	300	250	300
16mm ø	350	400	325	400
20mm ø	450	500	475	500
25mm ø	550	625	550	625
28mm ø	625	675	625	675
32mm ø	700	775	700	775

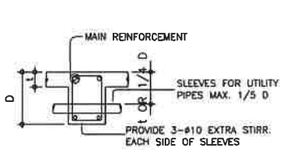
NOTE: TOP PLAIN BARS, MULTIPLY VALUE BY 2 VALUES GIVEN ABOVE ALSO BE USED FOR COLUMNS

3. IF THE BEAM REINFORCING BARS END IN A WALL THE CLEAR DISTANCE FROM THE BAR TO THE FARTHER FACE OF THE WALL NOT BE LESS THAN 25mm. EMBEDMENT LENGTH SHALL BE AS SHOWN IN A TABLE 'A' FOR TENSION BARS AND TABLE 'B' FOR COMPRESSION BARS UNLESS SPECIFIED IN PLAN. TOP BAR SHALL NOT BE SPLICED WITHIN THE COLUMN OR WITHIN A DISTANCE TWICE THE MEMBER DEPTH FROM THE FACE OF THE COLUMN. AT LEAST TWO STIRRUPS SHALL BE PROVIDED AT ALL SPLICES.
4. IF THERE ARE TWO OR MORE LAYERS OF REINFORCING BARS, USE 25mmø BAR SEPARATORS SPACED AT 1.0M ON CENTER. IN NO CASE SHALL THERE BE LESS THAN TWO (2) SEPARATORS BETWEEN TWO LAYERS OF BARS.
5. MINIMUM CONCRETE PROTECTION FOR REINFORCING BARS OR STEEL SHAPES SHALL BE AS SHOWN IN FIG. B-2 UNLESS SPECIFIED ELSEWHERE.



NOTE 1
20 mm CLEAR FOR JOIST
40 mm CLEAR FOR BEAMS AND GIRDERS

FIG. B-2



TYP. DET. FOR SLEEVES THRU CONCRETE BEAM

FIG. B-3

6. WHEN A BEAM CROSSES A GIRDER, REST BEAM ON TOP OF GIRDER BARS, BEAM REINFORCING BAR SHALL BE SYMMETRICAL ABOUT LINE WHENEVER POSSIBLE.
7. GENERALLY NO SPLICES SHALL BE PERMITTED AT POINTS WHERE CRITICAL BENDING STRESSES OCCUR, SPLICES WHERE SO PERMITTED SHALL BE INDICATED IN THE TABLE 'A' AND 'B' WELDED SPLICES SHALL DEVELOP IN TENSION AT LEAST 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR. NOT MORE THAN 50% OF THE BARS AT ANY ONE SECTION IS ALLOWED TO BE SPLICED THEREIN.

1 / S 01 — GENERAL CONSTRUCTION NOTES (1/2)
SCALE NTS

REPUBLIC OF THE PHILIPPINES
PHILIPPINE ECONOMIC ZONE AUTHORITY
BAGUIO CITY ECONOMIC ZONE
ENGINEERING AND MAINTENANCE DIVISION
LOAKAN ROAD, BAGUIO CITY

PROJECT TITLE/LOCATION:	SHEET CONTENT:	PREPARED:	CHECKED AND VERIFIED:	RECOMMENDING APPROVAL:	APPROVED:	SHEET NO.	PAGE
SUPPLY, DELIVERY AND INSTALLATION OF GENERATOR SET, ACCESSORIES AND HOUSING FOR THE MULTIPURPOSE BUILDING (MPB)	GENERAL CONSTRUCTION NOTES (1/2)	JEREMY JOSHUA L. DUPLI, ESO II / Civil Engineer, DATE:	DANIEL M. PECSOY, ACTING DIVISION CHIEF, ENGINEERING AND MAINTENANCE DIVISION, DATE:	MARY JANE G. SANCHEZ, ACTING CEZA ZONE ADMINISTRATOR, DATE:	ATTY. ABDULLAH ADEC-KHAN P. ALUG, ZONE ADMINISTRATOR - BAGUIO CITY ECONOMIC ZONE, DATE:	S01	6 / 13

GENERAL CONSTRUCTION NOTES

NOTES ON CONCRETE HOLLOW BLOCK WALLS

1. UNLESS, OTHERWISE SHOWN IN PLANS ALL CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCKS SHALL BE REINFORCED AS SHOWN IN THE SCHEDULE OF CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCK REINFORCEMENT.
2. PROVIDE 150mm X 300mm STIFFENER COLUMN REINFORCED WITH 4–12mm WITH 6mmø TIES AT 150mm ON CENTER WHERE CONCRETE HOLLOW BLOCK TERMINATES AND AT EVERY 3.0 LENGTH OF CONCRETE HOLLOW BLOCK WALLS UNLESS NOTED IN STRUCTURAL PLANS.

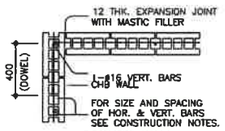
SCHEDULE OF CONCRETE HOLLOW BLOCK AND CERAMIC BLOCK REINFORCEMENT

BLOCK THICKNESS	REINFORCEMENT		NOTES
	HORIZONTAL	VERTICAL	
10mm ø	10mm ø 600mm O.C.	10mm ø 600mm O.C.	A. MINIMUM LAPS AT SPLICE = 025M B. PROVIDE RIGHT ANGLED REINFORCEMENT AT CORNERS 0.92M LONG C. WHERE CHB OR CER. BLK. WALL DOWELS JOIN COL. R.C. BEAMS AND WALL DOWELS WITH THE SAME SIZE AS VERT. OR HOR. REINFORCEMENT SHALL BE PROVIDED
125mm ø	10mm ø 600mm O.C.	10mm ø 600mm O.C.	
150mm ø	10mm ø 600mm O.C.	10mm ø 600mm O.C.	
200mm ø	12mm ø 600mm O.C.	12mm ø 600mm O.C.	

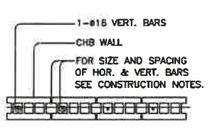
REINFORCING CONCRETE LINTEL BEAM IN CONCRETE BLOCK WALLS

LINTELS IN BLOCK WALLS

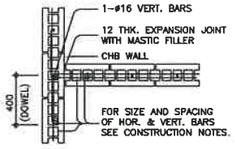
CLEAR SPAN ("L")	TOTAL LENGTH (L+0.40M)	MIN. f'c (MPa)	HEIGHT OF LINTEL (MM)	REINFORCEMENT		
				BOTTOM	TOP	STIRRUPS
1.20M 1.50M 1.80M	1.60M 1.90M 2.20M	14.0	200 200 200	1–#10 1–#10 1–#12	1–#10 1–#10 1–#10	ø8mm @ 200mm ø8mm @ 200mm ø8mm @ 200mm
2.10M 2.40M 2.70M	2.50M 2.90M 3.10M	17.0	250 250 250	1–#12 1–#12 1–#16	1–#10 1–#10 1–#12	ø8mm @ 200mm ø8mm @ 200mm #10mm @ 200mm
3.00 3.30 3.60	3.40M 3.70M 4.00M	20.0	300 300 300	1–#16 1–#16 1–#20	1–#12 1–#12 1–#12	#10mm @ 200mm #10mm @ 200mm #10mm @ 200mm



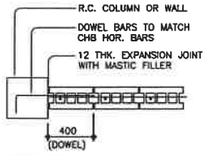
CORNER WALL



OPENING OR END WALL

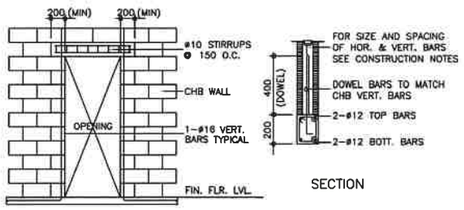


INTERSECTION WALL



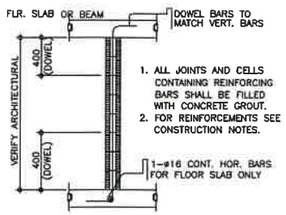
INTERSECTING R.C. COL. OR WALL

TYPICAL CONNECTION DETAIL OF MASONRY WALL

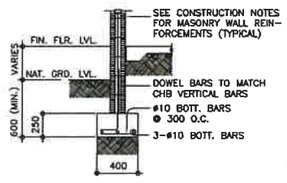


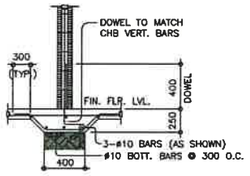
ELEVATION SECTION

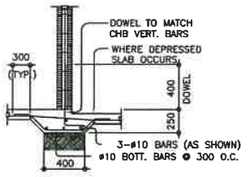
TYP. DET. OF LINTEL BEAM AT CHB WALL OPENING



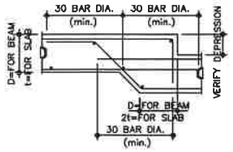
TYP. SECTION OF MASONRY PARTITION REINFORCEMENTS







TYPICAL CHB FOOTING DETAILS (WHERE APPLICABLE)



TYPICAL DETAIL FOR BEAM OR SLAB CHANGE SOFFIT

NOTE:
PURSUANT TO SECTION 4 OF ANNEX "A" OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, APPROVAL BY THE AUTHORIZED DPWH OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGN UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGN NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

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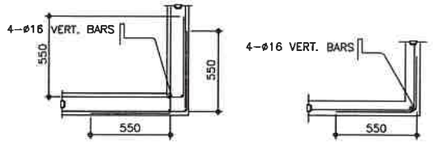
NOTES ON CONCRETE WALLS

1. ALL WALLS SHALL BE REINFORCED ACCORDING TO THE FOLLOWING SCHEDULE OF WALL REINFORCEMENT UNLESS OTHERWISE INDICATED IN THE PLANS.

WALL THICKNESS	REINFORCEMENT			VERTICAL SECTION
	HORIZONTAL	VERTICAL	REMARKS	
100mm 125mm 150mm	#10mm @ 250mm O.C. #10mm @ 200mm O.C. #12mm @ 250mm O.C.	#10mm @ 300mm O.C. #10mm @ 250mm O.C. #12mm @ 300mm O.C.	HORIZONTAL BARS AT CENTERS VERTICAL BARS STAGGERED OUT	VERT. BARS HORIZ. BARS

REINFORCING BARS SHALL HAVE 25mm CLEAR CONCRETE COVER FROM FACE OF WALL EXCEPT FOR WALLS IN CONTACT WITH THE GROUND WHERE A MINIMUM OF 60mm SHALL BE PROVIDED, AND FOR EXPOSED FACES OF FORMED WALLS WHERE THE MINIMUM SHALL BE 30mm CLEAR.

2. CARRY VERTICAL BARS AT LEAST 60mm ABOVE FLOOR LEVEL TO PROVIDE FOR SPLICES WHEN NECESSARY STOP AT 50mm BELOW TOP SLAB OR SOLID BAND WHERE THE WALL ENDS VERTICAL AND HORIZONTAL BARS SHALL BE SPLICED BY LAPPING A DISTANCE EQUAL TO 30 DIAMETERS AND WIRED SECURELY WITH 16 G.I. WIRE PROVIDED THAT SPLICES IN ADJACENT BARS ARE STAGGERED AT LEAST 1.50M.O.C.
3. UNLESS OTHERWISE NOTED IN THE PLANS, ALL OPENINGS IN WALLS 250mm OR THICKER SHALL BE REINFORCED AROUND WITH 2–20mmø BARS FOR 225mm, 200mm, 175mm, 150mm, USE 2–16mmø. FOR 125mm AND 100mm WALLS, USE 2–12mmø BARS. ALL WALLS SPANNING SHALL HAVE VERTICAL REINFORCEMENT BENT TO A U–FORM LIKE STIRRUPS AND SPACED ACCORDING TO THE SCHEDULE UNLESS OTHERWISE NOTED (SEE FIG.1)



TYPICAL CONNECTION DETAIL OF R.C. WALL AT CORNERS

NOTES ON WELDS

1. USE E70xx ELECTRODES FOR ALL MEMBERS WELDED.
2. WELDS SHALL DEVELOP THE FULL STRENGTH OF MEMBERS JOINED UNLESS OTHERWISE SHOWN OR DETAILED IN THE DRAWINGS.

NOTES ON STRUCTURAL STEEL

1. STRUCTURAL STEEL TO BE USED FOR FABRICATION AND ERECTION OF THIS STRUCTURE SHALL COMPLY WITH ALL THE PERTINENT PROVISION OF NSC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDING LATEST EDITION.
2. ALL STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A36 STRUCTURAL STEEL UNLESS OTHERWISE INDICATED.
3. ALL WELDED CONNECTIONS SHALL DEVELOP THE FULL STRENGTH OF THE MEMBERS CONNECTED.
4. UNLESS OTHERWISE SPECIFIED ALL WELDING RODS SHALL CONFORM AWS E60 ELECTRODES.
5. ALL BOLTS USED UNLESS OTHERWISE SPECIFIED SHALL BE ASTM A 307 BOLTS.

NOTES ON EMBEDED PIPES

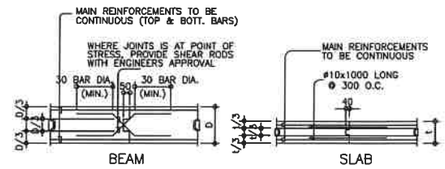
A. ALL EMBEDED PIPES FOR UTILITIES, ETC. THAT PASS THRU BEAMS SHALL NOT EXCEED 100mm IN DIAMETER OR 1/3 BEAM DEPTH WHICHEVER IS LESS, UNLESS OTHERWISE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.
B. NO PIPES SHALL BE ALLOWED TO PASS THRU BEAMS VERTICALLY.
C. NO PIPES SHALL BE EMBEDDED IN COLUMNS.

DESIGN CRITERIA

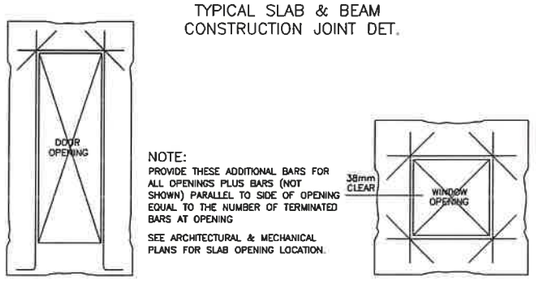
1. LOADINGS
   A. DEAD LOAD
      CONCRETE −24.00 kN/m³
      STEEL −77.00 kN/m³
      150mm THK. CHB WALL −3.10 kPa
      100mm THK. CHB WALL −3.00 kPa
   B. LIVE ROAD
      ROOF −1.00 kPa
   C. WIND LOAD (NSCP 2015)
      BASIC WIND VELOCITY, V = 250 KPH
      P = qh [(GCpf)−(GCpi)] (DESIGN WIND PRESSURE)
      WHERE: qh = VELOCITY PRESSURE, kPa)
      GCpf = EXTERNAL PRESSURE COEFFICIENT
      GCpi = INTERNAL PRESSURE COEFFICIENT
   D. SEISMIC LOAD (NSCP 2015)
      $V = \frac{Cvl}{RT} W$ (DESIGN BASE SHEAR)
      $Vmax = \frac{2.50\ Ca}{R} W$ Vmin = 0.11 CaIW
      $Vmin = \frac{0.80\ ZNv}{R} W$ (ZONE 4)
      WHERE: W = TOTAL DEAD LOAD
      T = NATURAL PERIOD = $C_t (h_n)^{\ }$;
      WHERE: C = NUMERICAL COEFFICIENT
      h = BUILDING HEIGHT
      I = IMPORTANCE FACTOR = 1.50
      R = NUMERICAL FACTOR = 8.50
      SEISMIC COEFFICIENT Cv = 0.768
      Ca = 0.44
      NEAR SOURCE FACTOR (10km) Nv = 1.2
      Na = 1.0
      Z = SEISMIC ZONE = 0.40 (ZONE 4)
      S = SOIL TYPE = D
2. DESIGN STRESSES
   A. CONCRETE
      COMPRESSIVE STRENGTH @ 28 DAYS f'c = 27.58 MPa (4,000 psi)
   B. REINFORCING BARS
      a. FOR BARS 16mm ø AND GREATER fy = 414 MPa (60,000 psi)
      b. FOR BARS LESS THAN 16mm ø fy = 274 MPa (40,000 psi)
   C. STRUCTURAL STEEL, ASTM–A36
      FOR TRUSSES, BRACINGS, & STRUTS fy = 248 MPa (36,000 psi)
   D. PURLINS
      COLD FORMED LIGHT GAGE SHAPES fy = 248 MPa (36,000 psi)
   E. MASONRY UNIT (CHB)
      NON–LOAD BEARING CHB WALLS f'm' = 3.45 MPa (500 psi)
   F. WELDS–USED E–60xx ELECTRODE
   G. STRUCTURAL BOLTS, ASTM–A307
      a. Ft = 96.60 MPa (14,000 psi) b. Fv = 69 MPa (10,000 psi)

NOTES ON CONSTRUCTION JOINTS IN CONCRETE

1. WHERE A CONSTRUCTION JOINT IS TO BE MADE, THE SURFACE OF CONCRETE SHALL BE CLEANED AND ALL LAITANCE AND STANDING WATER REMOVED. SHEAR KEY SHALL BE PROVIDED AT THE JOINT.



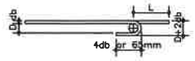
TYPICAL SLAB & BEAM CONSTRUCTION JOINT DET.



TYP. EXTERIOR WINDOW & DOOR OPENING

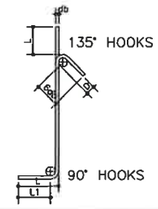
NOTES OF STIRRUPS

1. ALL REINFORCEMENT SHALL BE BENT COLD UNLESS OTHERWISE PERMITTED BY THE STRUCTURAL ENGINEER.
2. REINFORCEMENT PARCIALLY EMBEDED IN CONCRETE SHALL NOT BE FILLED BENT, EXCEPT AS SHOWN IN THE DESIGN DRAWINGS OR PERMITTED BY THE STRUCTURAL ENGINEER.
3. TIES & CLOSE STIRRUPS MUST BE BENT AT 135°.



180° END HOOKS

90° END HOOKS



MAIN BAR END HOOKS (ALL GRADES)

BAR SIZE (DEFORMED)	DIAMETER (mm)	180° HOOK		90° HOOK
		D+2db	L	L
10mm ø	60	75	125	150
12mm ø	75	100	150	200
16mm ø	95	125	175	250
20mm ø	115	150	200	300
25mm ø	150	200	230	450
28mm ø	240	300	350	550
32mm ø	300	335	450	800

STIRRUP AND TIE HOOKS (ALL GRADES)

BAR SIZE (DEFORMED)	DIAMETER (mm)	180° HOOK		90° HOOK
		D+2db	L	L
10mm ø	40	125	85	100
12mm ø	50	165	115	115
16mm ø	65	200	140	150
20mm ø	115	250	185	300
25mm ø	150	365	230	405

1 / S 02 **GENERAL CONSTRUCTION NOTES (2/2)**
SCALE NTS

REPUBLIC OF THE PHILIPPINES
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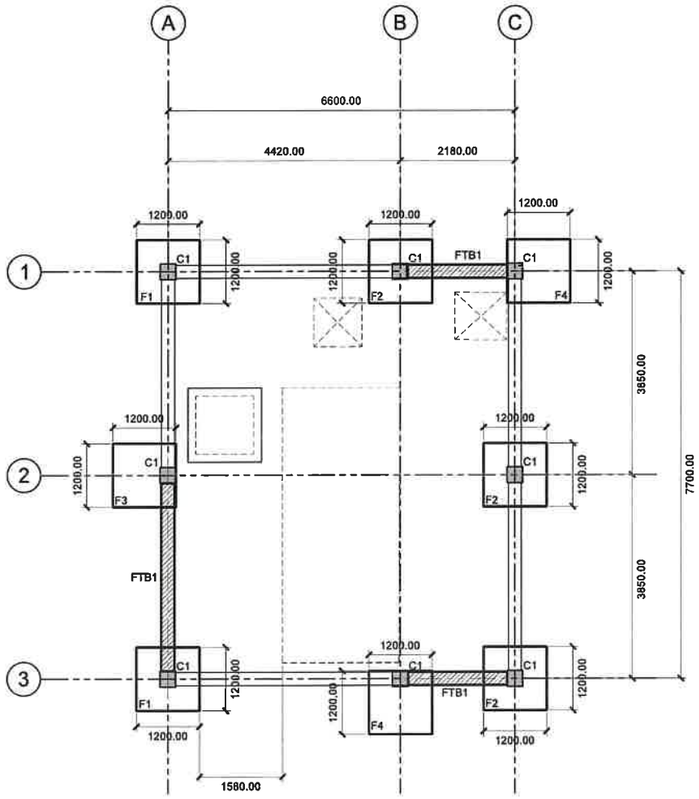
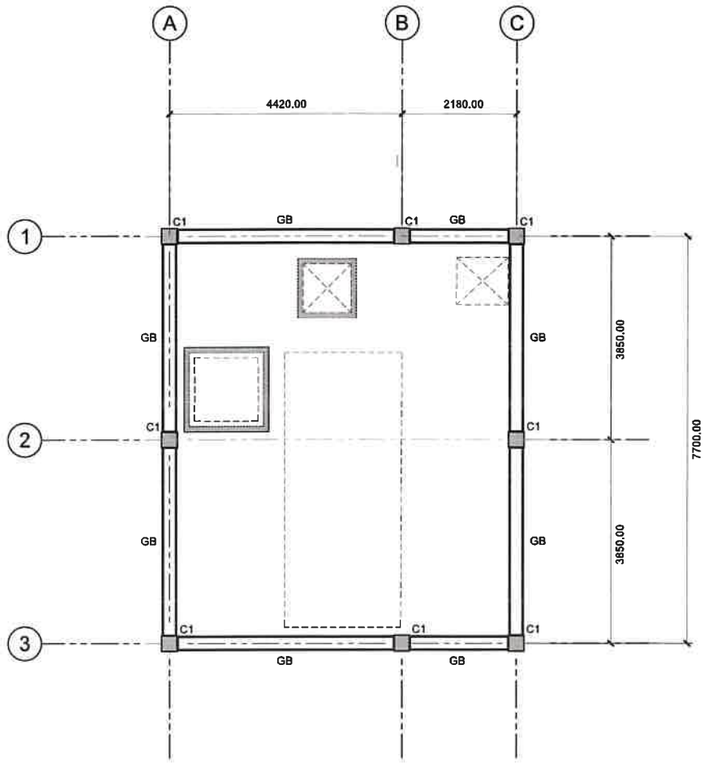
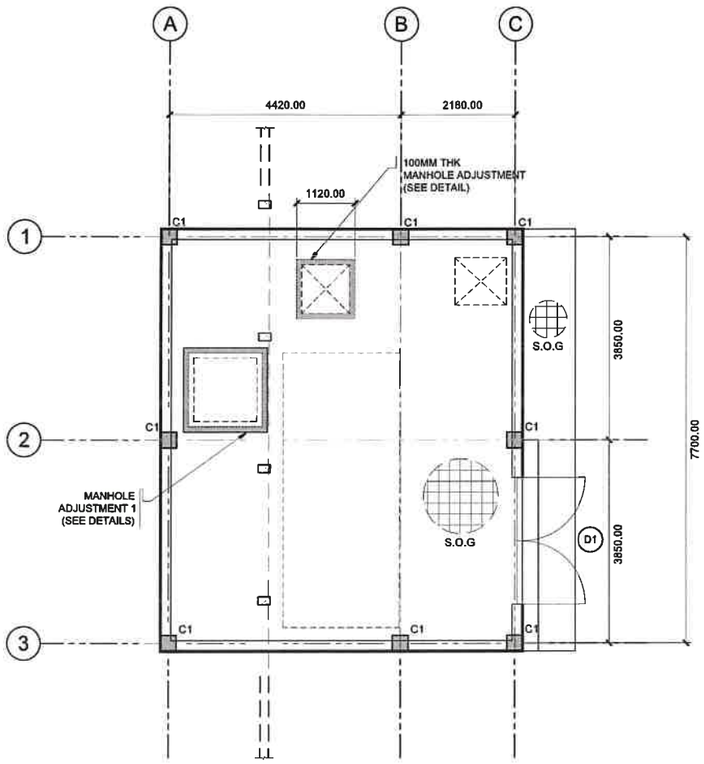
SUPPLY, DELIVERY AND INSTALLATION OF GENERATOR SET, ACCESSORIES AND HOUSING FOR THE MULTIPURPOSE BUILDING (MPB)	GENERAL CONSTRUCTION NOTES (2/2)	JEREMY JOSHUA L. DUPLI ISO II / Civil Engineer DATE:	DANIEL M. PECSOY ACTING DIVISION CHIEF, ENGINEERING AND MAINTENANCE DIVISION DATE:	MARY JANE C. SANCHEZ ACTG. DEPUTY ZONE ADMINISTRATOR DATE:	ATTY. ABDULLAH ADEL-KHAN P. ALUG ZONE ADMINISTRATOR - BAGUIO CITY ECONOMIC ZONE DATE	S02	7 / 13



1 S 03 FOUNDATION PLAN
SCALE 1:80



2 S 03 GRADE BEAM PLAN
SCALE 1:80



3 S 03 GROUND FLOOR FRAMING PLAN
SCALE 1:80

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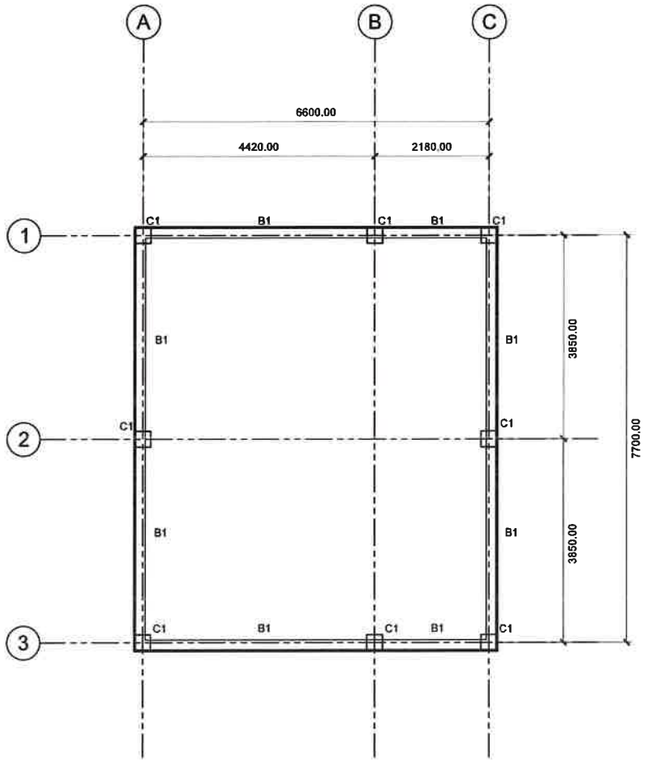
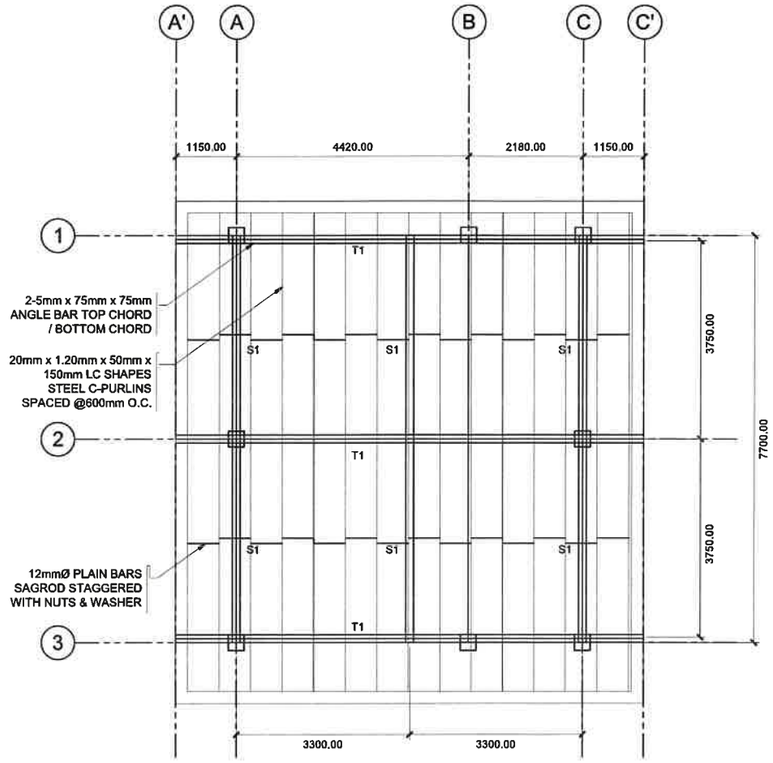
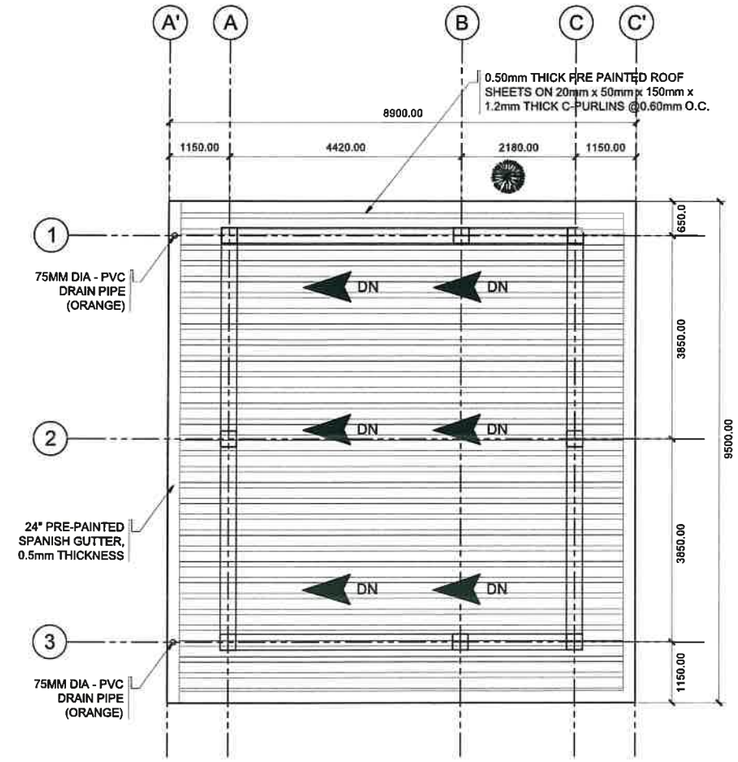
SUPPLY, DELIVERY AND INSTALLATION OF GENERATOR SET, ACCESSORIES AND HOUSING FOR THE MULTIPURPOSE BUILDING (MPB)	FOUNDATION PLAN GROUND FLOOR FRAMING PLAN	JEREMY JOSHUA L. DUPLI ESO II / Civil Engineer DATE:	DANIEL M. PECSOY ACTING DIVISION CHIEF, ENGINEERING AND MAINTENANCE DIVISION DATE:	MARY JANE G. SANCHEZ ACTING DEPUTY ZONE ADMINISTRATOR DATE:	ATTY. ABDULLAH ADEL-KHAN P. ALUG ZONE ADMINISTRATOR - BAGUIO CITY ECONOMIC ZONE DATE:	S03	8 / 13



1 S 04 ROOF BEAM PLAN
SCALE 1:80

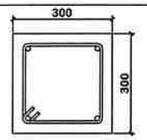


2 S 04 ROOF FRAMING PLAN
SCALE 1:80



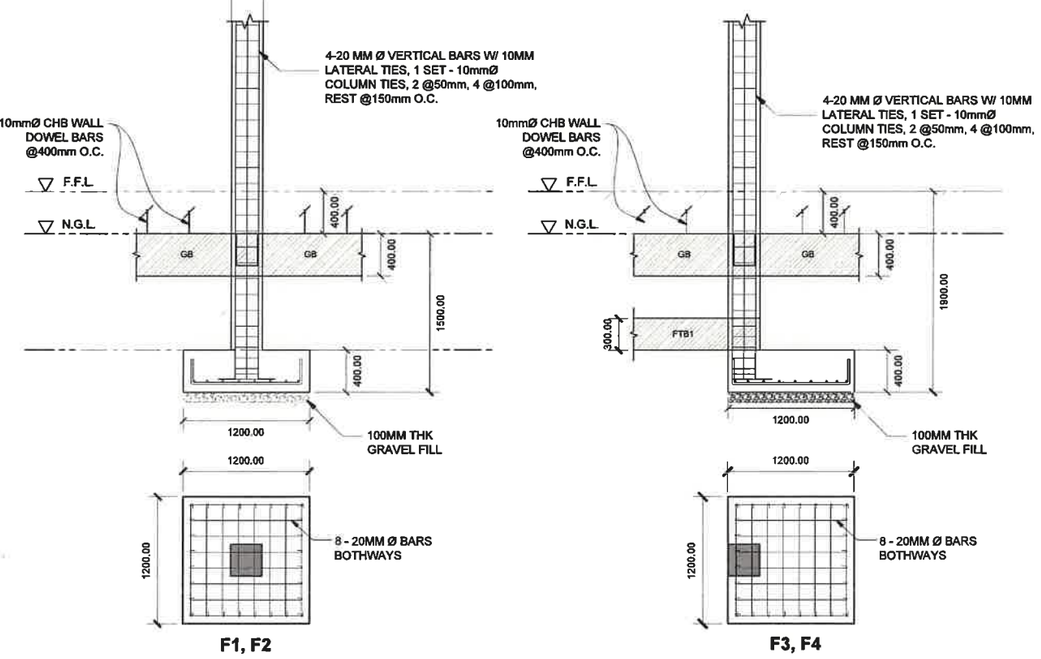
3 S 04 ROOF PLAN
SCALE 1:80

REPUBLIC OF THE PHILIPPINES **PHILIPPINE ECONOMIC ZONE AUTHORITY** **BAGUIO CITY ECONOMIC ZONE** **ENGINEERING AND MAINTENANCE DIVISION** LOAKAN ROAD, BAGUIO CITY	PROJECT TITLE/LOCATION: **SUPPLY, DELIVERY AND INSTALLATION OF GENERATOR SET, ACCESSORIES AND HOUSING FOR THE MULTIPURPOSE BUILDING (MPB)**	SHEET CONTENT: ROOF BEAM PLAN ROOF FRAMING PLAN ROOF PLAN	PREPARED: JEREMY JOSHUA L. DUPLI ESO II / Civil Engineer DATE:	CHECKED AND VERIFIED: DANIEL M. PECSOY ACTING DIVISION CHIEF, ENGINEERING AND MAINTENANCE DIVISION DATE:	RECOMMENDING APPROVAL: MARY DIANE G. SANCHEZ ACTING DEPUTY ZONE ADMINISTRATOR DATE:	APPROVED : ATTY. ABDULLAH ADEL KHAN P. ALUG ZONE ADMINISTRATOR - BAGUIO CITY ECONOMIC ZONE DATE:	SHEET NO. S04	PAGE 9 / 13

C1	COLUMN 1 (300 x 300 mm)	LOCATION: GROUND FLOOR
	CONCRETE COVER	40mm
	MAIN REINFORCEMENT	4 - 20mmØ COLUMN REBARS
	LATERAL TIES	1 SET - 10mmØ COLUMN TIES, 2 @50mm, 4 @100mm, REST @150mm O.C.

1 S 05 COLUMN SCHEDULE

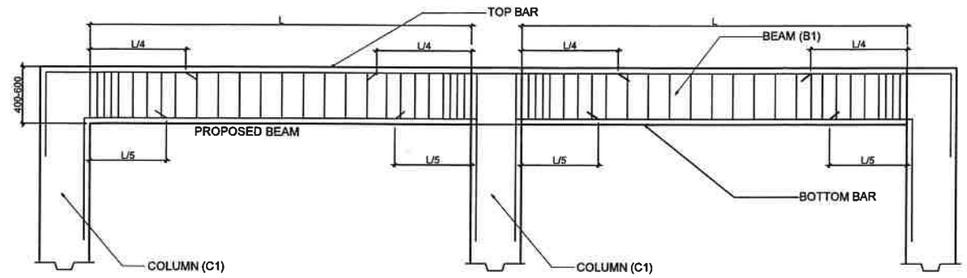
SCALE 1:100



SCHEDULE OF FOOTING											
FOOTING DIMENSIONS (MM)						REINFORCEMENT					NO. OF FOOTING
FOOTING MARK	WIDTH	LENGTH	THICKNESS	FOUNDING DEPTH	CONC. COVER	SPACING	BAR-X		BAR-Y		
							TOP	BOTTOM	TOP	BOTTOM	
F-1	1200	1200	400	1900	75	150		20mm dia.		20mm dia.	5
F-2	1200	1200	400	1500	75	150		20mm dia.		20mm dia.	3
F-3	1200	1200	400	1500	75	150		20mm dia.		20mm dia.	3
F-4	1200	1200	400	1500	75	150		20mm dia.		20mm dia.	3

2 S 05 FOOTING DETAILS AND SCHEDULE

SCALE 1:100



3 S 05 TYPICAL BEAM DETAILS

SCALE NTS

MARK	BEAM DIMENSION D (mm)	BEAM DIMENSION H (mm)	REBARS Ø mm	LEFT	MIDSPAN	RIGHT	STIRRUPS
FTB1	250	300	20 mm	250, 300, 2 - Ø20, 2 - Ø20, 40	250, 300, 2 - Ø20, 2 - Ø20, 40	250, 300, 2 - Ø20, 2 - Ø20, 40	10 mm Ø 4 @ 50 mm, 4 @ 100 mm, REST @ 150 mm O.C.
GB	250	400	20 mm	250, 400, 2 - Ø20, 2 - Ø20, 40	250, 400, 2 - Ø20, 2 - Ø20, 40	250, 400, 2 - Ø20, 2 - Ø20, 40	10 mm Ø 4 @ 50 mm, 4 @ 100 mm, REST @ 150 mm O.C.
B1	250	400	20 mm	250, 400, 3 - Ø20, 2 - Ø20, 40	250, 400, 2 - Ø20, 3 - Ø20, 40	250, 400, 3 - Ø20, 2 - Ø20, 40	10 mm Ø 4 @ 50 mm, 4 @ 100 mm, REST @ 150 mm O.C.

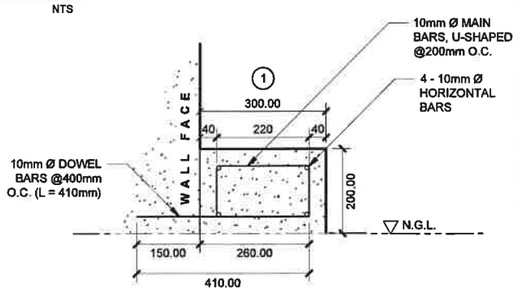
4 S 05 BEAM SCHEDULE

SCALE NTS

MARK		THICKNESS mm	REINFORCEMENT	GRADE
SOG	SLAB ON GRADE	100	12mm Ø @ 200 B.W.	40

5 S 05 SLAB SCHEDULE

SCALE NTS



6 S 05 STAIR DETAILS

SCALE 1:10

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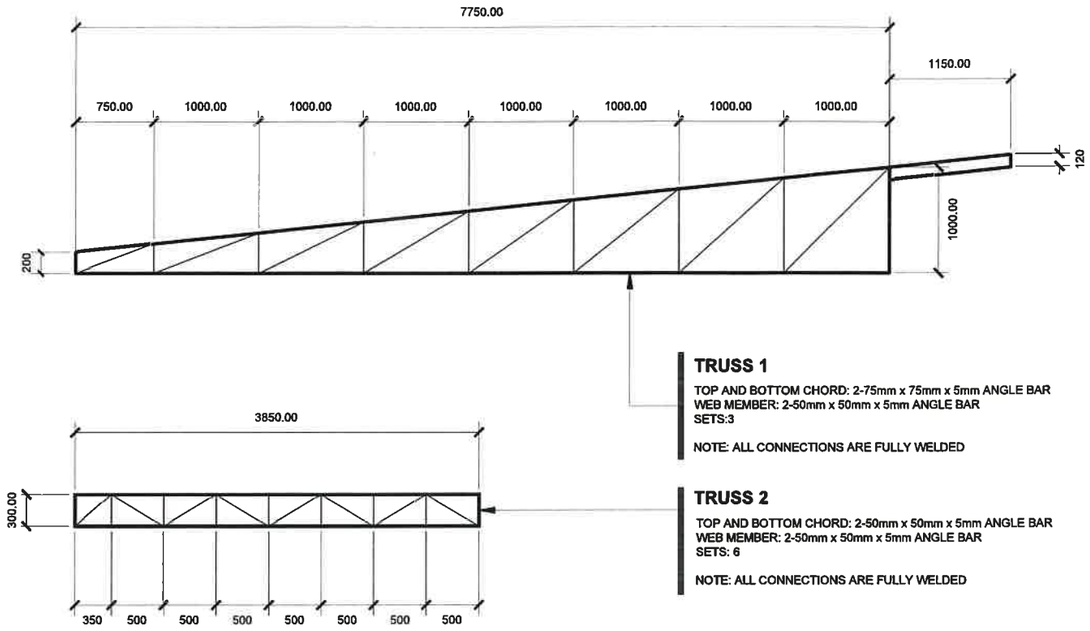


TRUSS 1

TOP AND BOTTOM CHORD: 2-75mm x 75mm x 5mm ANGLE BAR
WEB MEMBER: 2-50mm x 50mm x 5mm ANGLE BAR
SETS:3

NOTE: ALL CONNECTIONS ARE FULLY WELDED

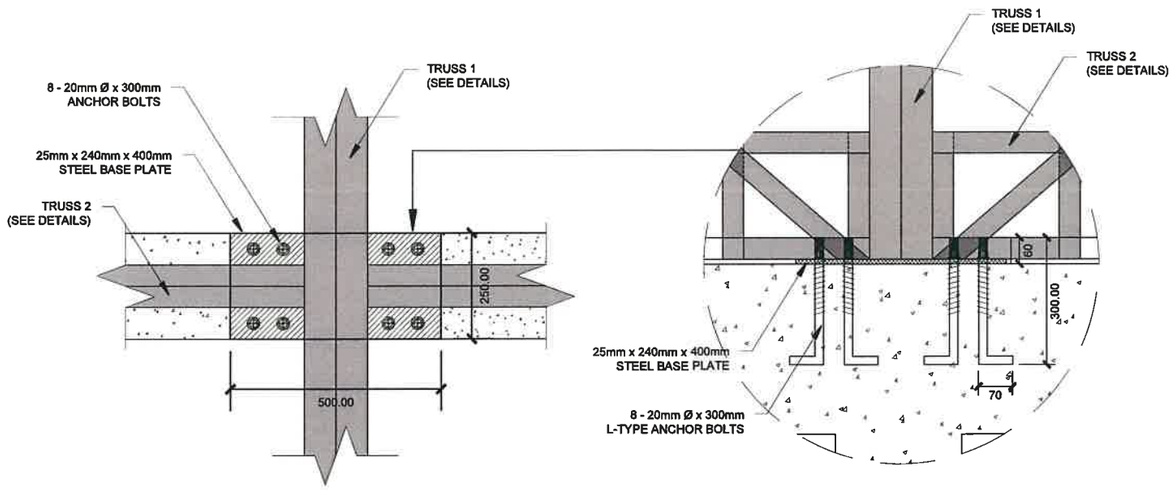
TRUSS 2

TOP AND BOTTOM CHORD: 2-50mm x 50mm x 5mm ANGLE BAR
WEB MEMBER: 2-50mm x 50mm x 5mm ANGLE BAR
SETS: 6

NOTE: ALL CONNECTIONS ARE FULLY WELDED

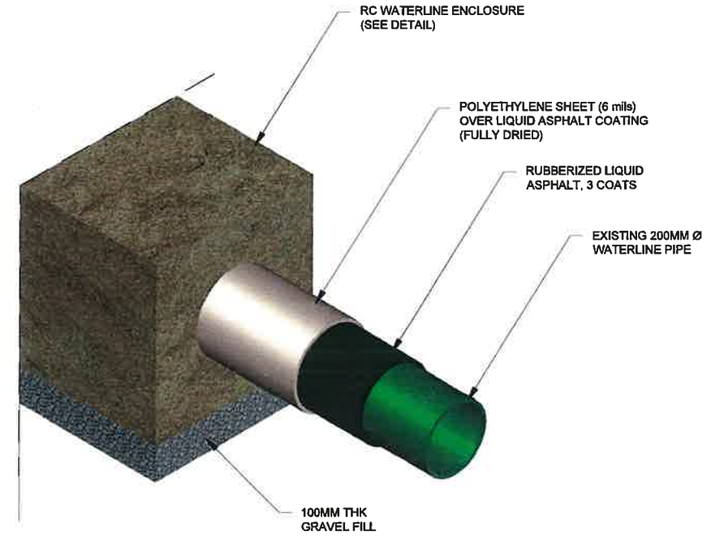
1 S 06 ROOF TRUSS DETAILS

SCALE 1:40

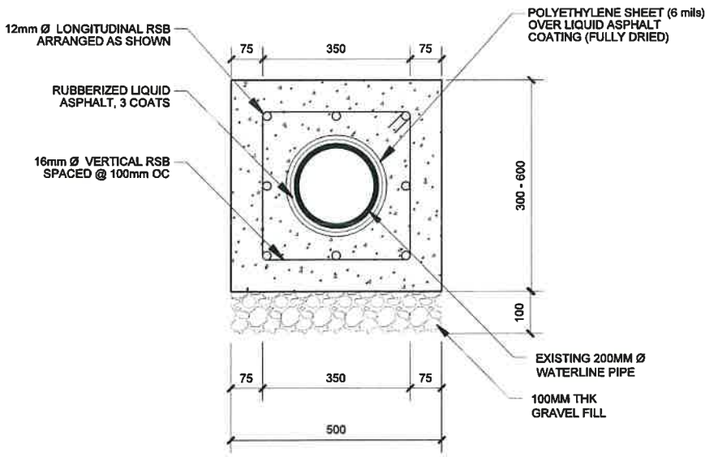


2 S 06 BASE PLATE DETAILS

SCALE 1:10



ISOMETRIC VIEW
SCALE: NTS



REINFORCEMENT DETAILS
SCALE 1:10

3 S 06 WATERLINE ENCLOSURE DETAILS

SCALE VARIES

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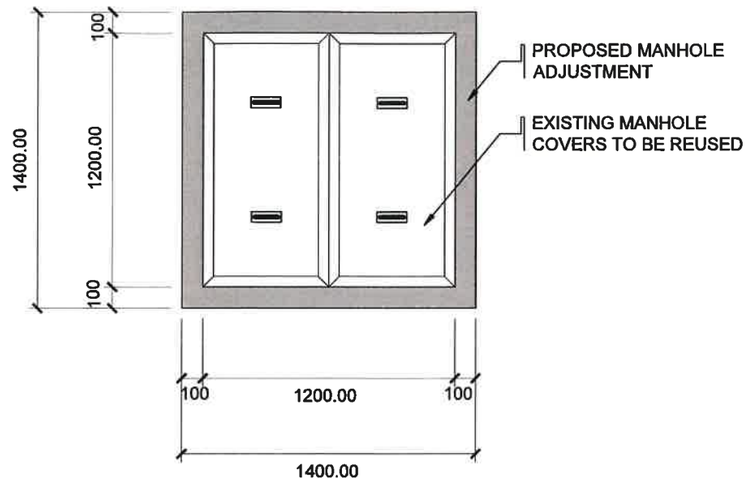
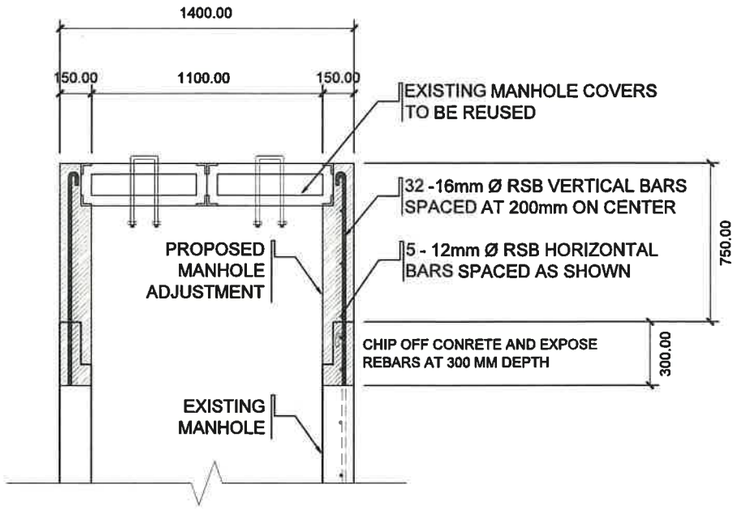
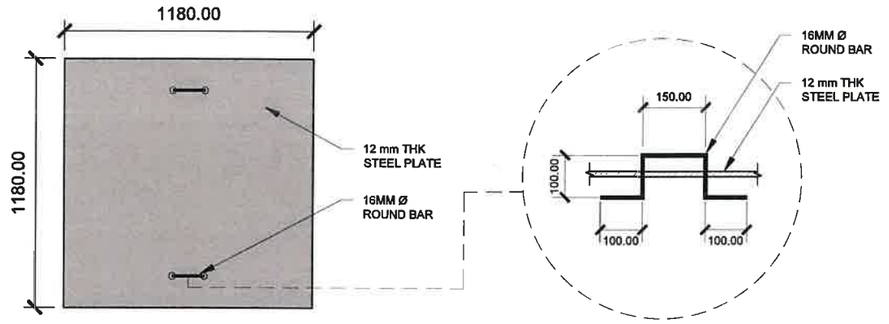


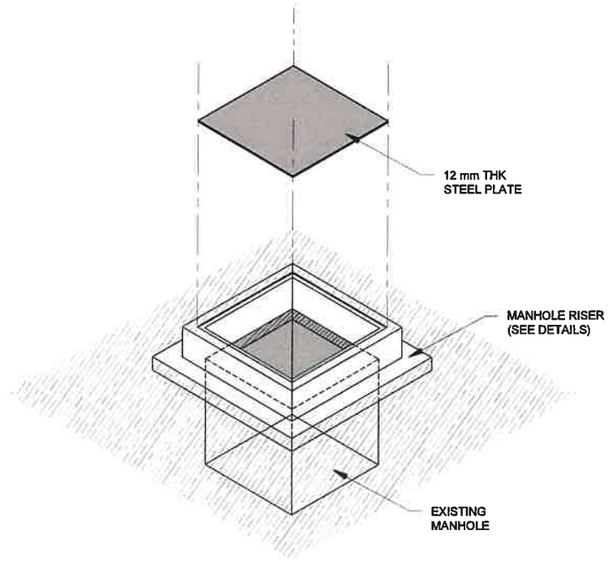


1 S 07 MANHOLE 1 ADJUSTMENT DETAILS

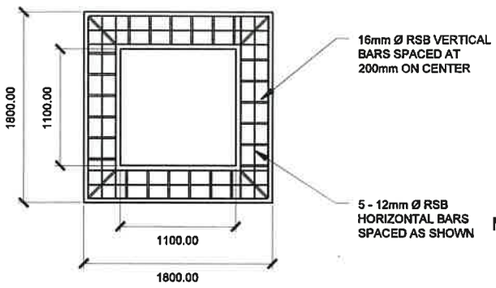
SCALE 1:100



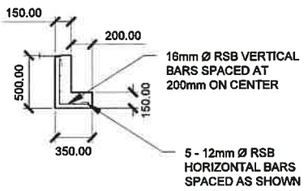
STEEL PLATE COVER DETAILS
(SCALE 1:20)



ISOMETRIC VIEW



MANHOLE RISER PLAN



MANHOLE RISER SECTION

1 S 07 MANHOLE 2 ADJUSTMENT DETAILS

SCALE 1:40

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SUPPLY, DELIVERY AND INSTALLATION OF GENERATOR SET, ACCESSORIES AND HOUSING FOR THE MULTIPURPOSE BUILDING (MPB)	MANHOLE 1 ADJUSTMENT DETAILS MANHOLE 2 ADJUSTMENT DETAILS	JEREMY JOSHUA L. DUPLI ESO II / Civil Engineer DATE:	DANIEL M. PACSOY ACTING DIVISION CHIEF, ENGINEERING AND MAINTENANCE DIVISION DATE:	MARY JANE G. SANCHEZ ACTING ENTITY ZONE ADMINISTRATOR DATE:	ATTY. ABDULLAH ABDEL-KHAN P. ALUG ZONE ADMINISTRATOR - BAGUIO CITY ECONOMIC ZONE DATE:	S07	12 / 13

1.0 ALL ELECTRICAL INSTALLATION HEREIN AND OTHER RELATED WORKS TO BE DONE ON THIS BUILDING SHALL CONFORM IN ACCORDANCE WITH THE PROVISIONS AND CODE STANDARD OF THE FOLLOWING:

1.1 LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE (PEC/NEC)
1.2 REPUBLIC ACT 7920 OTHERWISE KNOWN AS THE NEW ELECTRICAL ENGINEERING LAW
1.3 NATIONAL BUILDING CODE
1.4 FIRE CODE OF THE PHILIPPINES
1.5 EXISTING LOCAL UTILITY COMPANY
1.6 EXISTING CITY / MUNICIPALITY ORDINANCES AND THE
1.7 REQUIREMENTS OF THE BUREAU OF LABOR STANDARDS

2.0 ELECTRICAL INSTALLATION HEREIN SHALL BE DONE UNDER THE DIRECT SUPERVISION OF A DULY REGISTERED ELECTRICAL ENGINEER. THE ELECTRICAL ENGINEER SHALL BE RESPONSIBLE I N THE INTERPRETATION OF THE DESIGN INTENT, PLANS AND SPECIFICATIONS AND THE REQUIRED STANDARD OF THE ELECTRICAL CODE.

3.0 SERVICE ENTRANCE TO THE BUILDING SHALL BE THREE PHASE (1 Ø), 2-WIRE + 1-GROUND WIRE, 60HZ, 230V, THROUGH 100 KVA TRANSFORMER BANK.

4.0 MATERIALS AND EQUIPMENT TO BE USED (BALLAST, FLUORESCENT TUBE, WIRING DEVICES, CIRCUIT BREAKERS, CONDUIT AND PIPES, ENCLOSURES, WIRES AND CABLES, ETC...) SHALL HAVE IMPORTED COMMODITY CLEARANCE (ICC) LABEL FOR FOREIGN MADE PRODUCTS AND P.S. MARK FOR LOCAL IN NATURE OF THE BUREAU OF PRODUCT STANDARDS (BPS).

5.0 PROVIDE GROUNDING AND NEUTRAL WIRE TO ALL OUTLETS AND LIGHTING CIRCUITS. ALL NON-CURRENT CARRYING METAL PARTS SHALL BE GROUNDED AND BONDED.

6.0 ALL PANEL BOARDS, MAIN DISTRIBUTIONS PANEL, ETC SHALL HAVE GROUNDING BUS FOR BRANCH CIRCUITS AND SUB-FEEDER GROUNDING SYSTEM, MAIN GROUNDING SYSTEM SHALL BE BONDED TO THE NEAREST METAL WATER PIPE IN SERVICE.

7.0 MOUNTING HEIGHTS FOR ALL WIRING DEVICES AND PANEL BOARDS SHALL BE AS FOLLOWS:

7.1 LIGHTING SWITCHES	1.4m ABOVE FLOOR FINISH
7.2 CONVENIENCE OUTLET	0.3m ABOVE FLOOR FINISH
7.3 TELEPHONE OUTLET	0.3m ABOVE FLOOR FINISH
7.4 PANEL BOARDS AND CABINETS	1.8m ON TOP ABOVE FLOOR FINISH
7.5 MOTOR CONTROL AND ECB	1.8m ON TOP ABOVE FLOOR FINISH
7.6 MANUAL TRANSFER SWITCH	1.8m ON TOP ABOVE FLOOR FINISH
7.7 EMERGENCY LIGHT FIXTURE	0.2m BELOW CEILING LINE

8.0 WIRING METHOD SHALL BE AS FOLLOWS

8.1 FEEDER AND RISER ——— INTERMEDIATE METALLIC CONDUIT (IMC)
8.2 LIGHTING AND POWER SYSTEM ——— ELECTRICAL METALLIC TUBING (EMT) - FOR EXPOSED CONDUITS OR USED ABOVE CEILING AND WOODEN PARTITIONS, POLYVINYL CHLORIDE (PVC) - IF EMBEDDED IN CONCRETE.
8.3 ALL VIBRATING EQUIPMENT ——— LIQUID TIGHT FLEXIBLE CONDUIT
8.4 JUNCTION BOX TO LIGHTING FIXTURE AND HEAT ——— FLEXIBLE METAL CONDUIT, 10mm Ø (WITH SMOKE DETECTOR CONNECTORS)

* NOTE: ALL INDICATED CONDUIT SIZES ARE INSIDE DIAMETERS.

9.0 LIGHTING FIXTURES WITH FLUORESCENT TUBE SHALL HAVE THERMAL PROTECTOR HIGH-POWER FACTOR BALLAST (PRE-HEAT)

10.0 ALL CABLE SPLICES AND TERMINATIONS AT BUSBARS AND CIRCUIT BREAKERS SHALL BE CRIMP-TYPE TERMINAL LUGS.

11.0 MECHANICAL EQUIPMENT WITH HIGH VIBRATION MOVEMENTS SHALL HAVE FLEXIBLE CONDUIT CONNECTION FROM MOTOR TERMINAL BOX TO OVERCURRENT DEVICE ENCLOSURE (ECB).

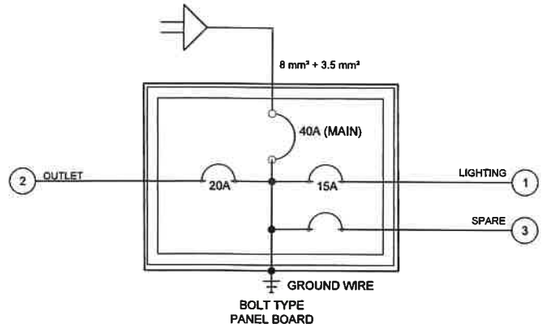
12.0 PRIOR TO ITS MOUNTING AND TERMINATION OF LIGHTING FIXTURES, WIRING DEVICES, EQUIPMENT, ETC. CONTRACTOR SHALL ENGAGE WITH THE CONSULTANT OR OWNER'S REPRESENTATIVE FOLLOWING FIELD ACCEPTANCE TEST AND MATERIAL INSPECTION:

12.1 BRANCH CIRCUITS AND SUB-FEEDER INSULATION RESISTANCE TEST MEASUREMENT
12.2 POLARITY TEST ON WIRING DEVICES
12.3 GROUND RESISTANCE TEST MEASUREMENT
12.4 MATERIALS QUALITY INSPECTION AS REQUIRED IN THE ABOVE SPECIFICATION
12.5 GROUND WELL RESISTANCE TEST MEASUREMENT FOR THE LIGHTNING SYSTEM

13.0 NO CHANGE AND MODIFICATION SHALL BE MADE WITHOUT THE CONSULTANT / DESIGNER'S WRITTEN CONSENT.

14.0 ALL WORKS SHALL BE EXECUTED IN A WORKMANSHIP MANNER AND SHALL PRESENT A NEAT AND ORDERLY ACCEPTANCE ALL WIRINGS SHALL BE CONCEALED AS MUCH AS POSSIBLE.

1 E 01 ELECTRICAL GENERAL NOTES
SCALE NTS



LOAD SCHEDULE

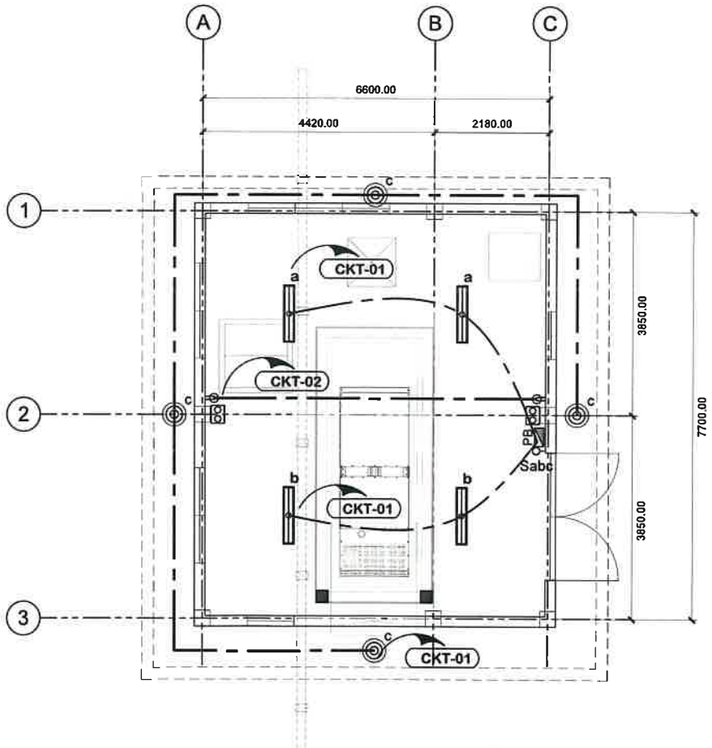
CIRCUIT NO.	LOAD DESCRIPTION	LOAD IN WATTS	AMPERES (A)	CIRCUIT BREAKER	WIRE (THHN)	CONDUIT
1	LIGHTING OUTLET	380	1.62	15 A	3.5 mm²	20mm(PVC)
2	CONVENIENCE OUTLET	3,000	13.04	20 A	3.5 mm²	20mm(PVC)
3	SPARE					

LOAD COMPUTATION

TOTAL WATTS = 380 + 3,000 + 3,000 (SPARE)
= 6,380 W
AMPERE = 27.39 A

USE:
40 A, MAIN BREAKER (2-POLE)
2 - 8.0mm² THHN FEEDER LINE
1 - 3.5mm² THHN GROUND WIRE (GREEN)

2 E 01 RISER DIAGRAM AND LOAD SCHEDULE
SCALE NTS



GENERATOR SET REQUIREMENT

DIESEL GENERATOR SET, 450KVA, 60HZ, 440V-480V, 3PHASE, 0.8 P.F, 1800 RPM, CLASS INSULATION - H, BRAND NEW, WEATHERPROOF, SOUNDPROOF, BUILT-IN CIRCUIT BREAKER (750-800A)-UL LISTED AND WITH TIME DELAY.

LEGEND:

- CIRCUIT LINE
- DUPLEX OUTLETS
- PB — PANEL BOARD, 40A, 1-20A, 1-15A, 1-15A (SPARE)
- LED DOWNLIGHT RECESSED, 10-15 W
- LED LIGHTING FIXTURE, 2 LED/SET
- EMERGENCY LIGHTS
- CKT-01 — CIRCUIT HOMERUN
- Sabc — LIGHTING SWITCH

3 E 01 LIGHTING AND POWER LAYOUT
SCALE 1:80

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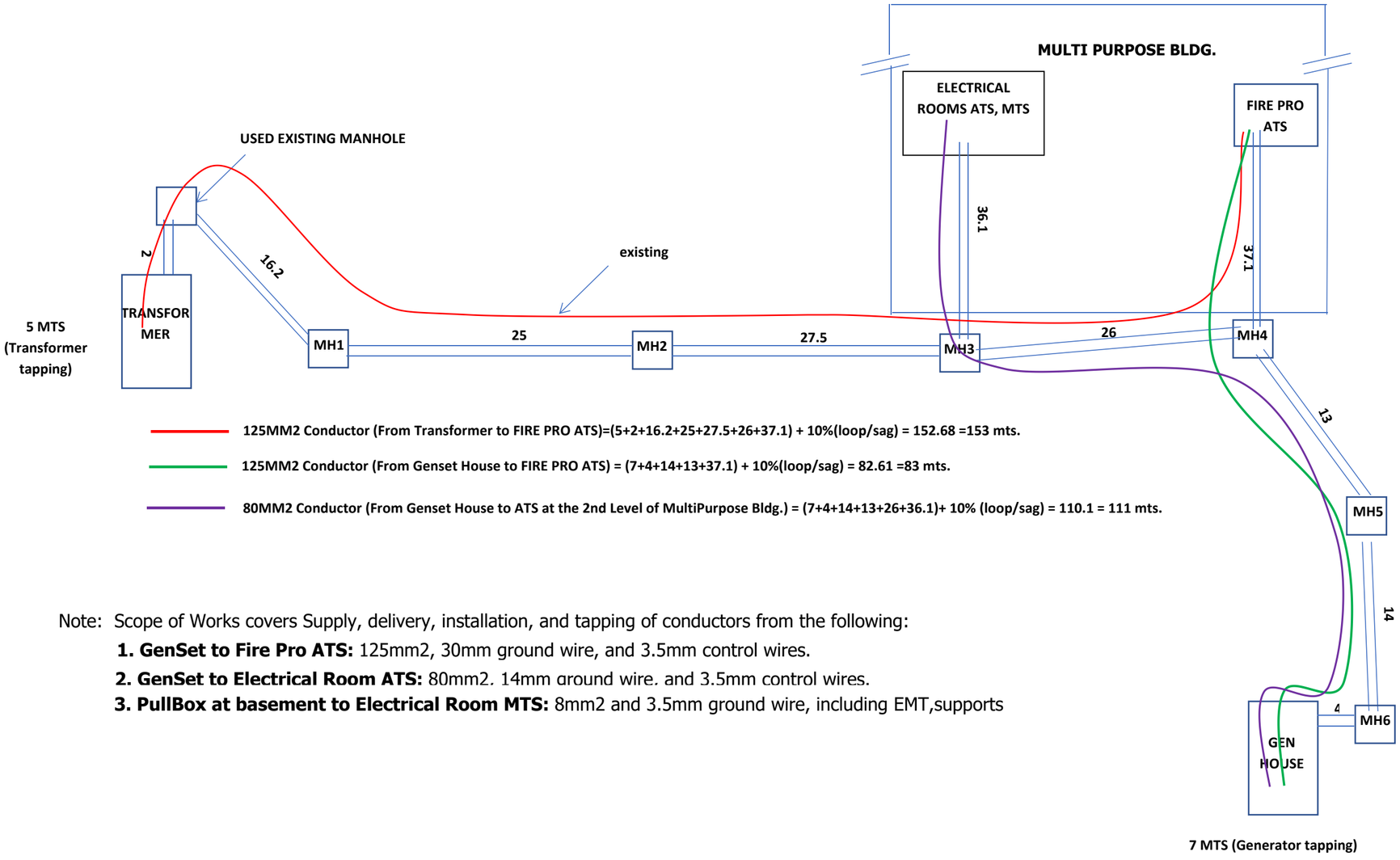
SUPPLY, DELIVERY AND INSTALLATION OF GENERATOR SET, ACCESSORIES AND HOUSING FOR THE MULTIPURPOSE BUILDING (MPB)

SHEET CONTENT:
ELECTRICAL GENERAL NOTES
RISER DIAGRAM & LOAD SCHEDULE
LIGHTING AND POWER LAYOUT

PREPARED: AMADEO G. DALISAY, ESO II (Electrical Engineer) — DATE:
CHECKED AND VERIFIED: DANIEL M. PECSOY, ACTING DIVISION CHIEF, ENGINEERING AND MAINTENANCE DIVISION — DATE:
RECOMMENDING APPROVAL: MARY JANE G. SANCHEZ, ACTING DEPUTY ZONE ADMINISTRATOR — DATE:
APPROVED: ATTY. ABDULLAH ADEL KHAN P. ALUG, ZONE ADMINISTRATOR / BAGUIO CITY ECONOMIC ZONE — DATE:

SHEET NO. E01
PAGE 13/13

CONDUCTOR'S LAY-OUT

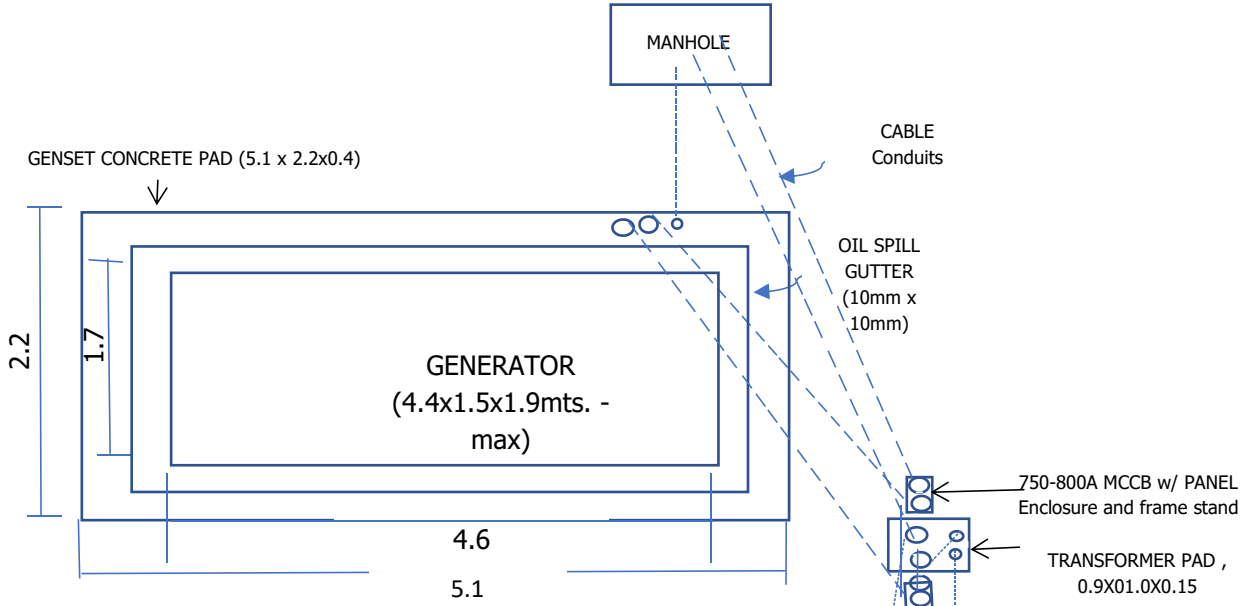


Note: Scope of Works covers Supply, delivery, installation, and tapping of conductors from the following:

1. **GenSet to Fire Pro ATS:** 125mm2, 30mm ground wire, and 3.5mm control wires.
2. **GenSet to Electrical Room ATS:** 80mm2, 14mm ground wire, and 3.5mm control wires.
3. **PullBox at basement to Electrical Room MTS:** 8mm2 and 3.5mm ground wire, including EMT,supports

Prepared By:	Recommending Approval:	Approved By:
DANIEL M. PECSOY	**MARY JANE G. SANCHEZ**	**ABDULLAH ADEL-KHAN P. ALUG**
Acting-EMD	Acting Deputy Zone Administrator	Zone Administrator

GENSET, MANHOLE, TRANSFORMER, BREAKERS WIRING LAY-OUT



Note: Scope of Works covers Supply, delivery, installation, and tapping of the following equipment as follows:

1. Gen-set, dry-type transformer, MCCB Panels, 125mm2 and 80mm2 conductors (with their ground wires), control wires
2. Ground Wire to ground rod.,etc.

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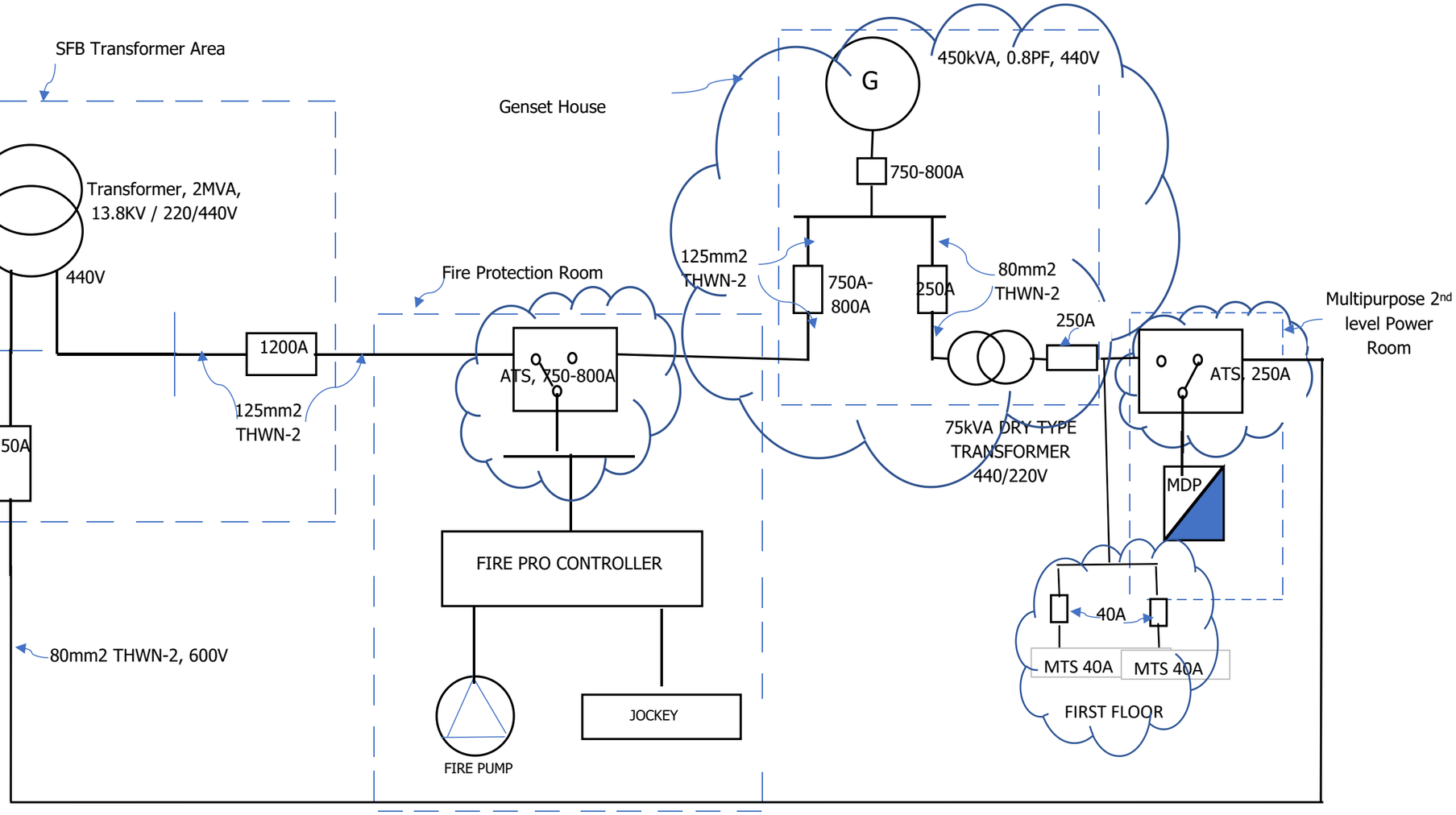
DANIEL M. PECSOY	**MARY JANE G. SANCHEZ**	**ABDULLAH ADEL-KHAN I**
Acting-EMD	Acting Deputy Zone Administrator	Zone Administrator

SINGLE LINE DIAGRAM OF MULTIPURPOSE GENSET PROJECT



Note: Scope of Works covers Supply, delivery, installation, tapping of the following as highlighted in cloud:

1. **@ Fire Protection Room: 750-800** ATS, 125mm2, and their ground wires .
2. **@ Gen-set House:** Generator set with built in 750-800A with time delay, 750-800A MCCB Panel , 2- 250A MCCB Panel,Dry-Type Transfor
3. **Multi-purpose 2nd level Power Room: 250**A ATS, 80mm2, ground and control wires.
4. **@ Ground Floor:** 8mm2 conductor and ground wire of 3.5mm2. Tapped from 80mm2 pullbox, 1st level to the 2-40A MTS at ground floor the lay-out of the 8mm2 EMT conduits and the installation of the 2-MTS, 2-40 A breakers etc.

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Acting-EMD	Acting Deputy Zone Administrator	Zone Administrator