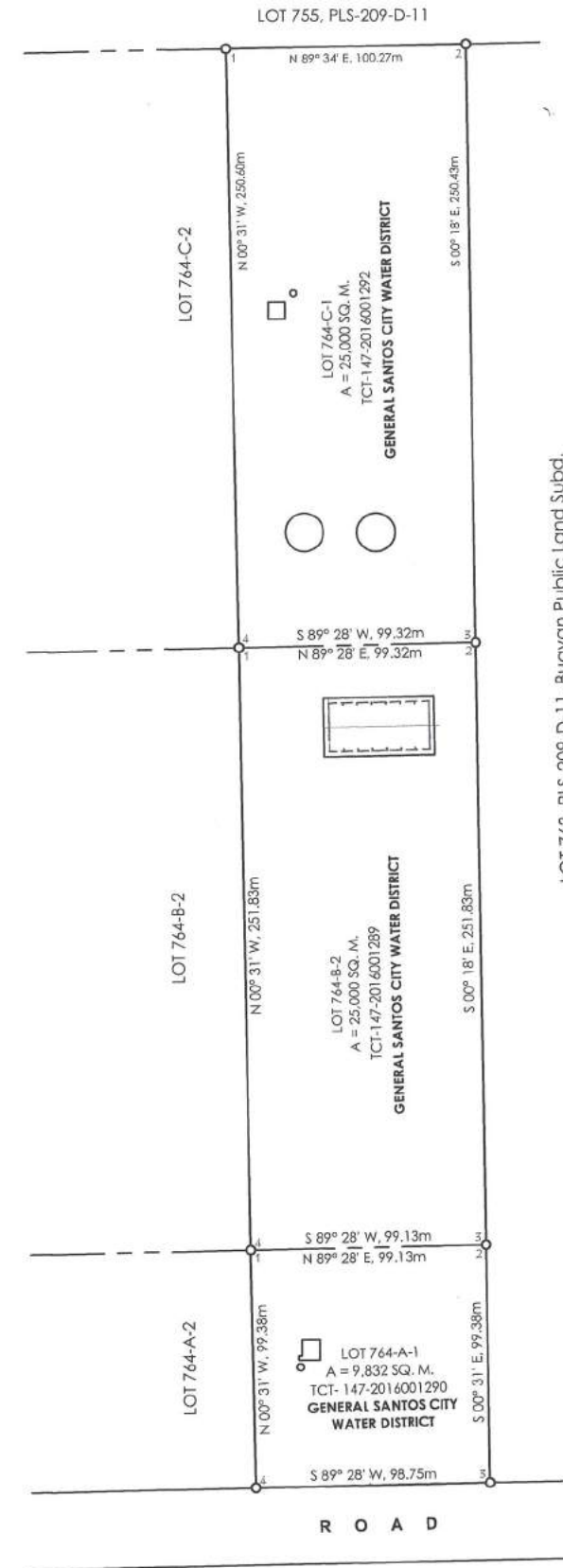




01 PERSPECTIVE
A-01 SCALE: 1:100 M
THIS SITE



02 VICINITY MAP
A-01 SCALE: 1:40,000 M



03 SITE DEVELOPMENT PLAN
A-01 SCALE: 1:5,000 M



REPUBLIC OF THE PHILIPPINES
CITY OF GENERAL SANTOS
OFFICE OF THE CITY ENGINEER

OFFICE OF THE BUILDING OFFICIAL

LAND USE & ZONING

LINE AND GRADE

ARCHITECTURAL

STRUCTURAL

SANITARY

ELECTRICAL

ELECTRONICS

MECHANICAL

SHEET CONTENTS SHEET NO.

AS SHOWN

A-01

DRAWN BY: RRA REV. NO.
CHECKED BY: ESA DATE: Oct. 2021

01 29

GENERAL SANTOS CITY WATER DISTRICT
E. FERNANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY
ENGINEERING & CONSTRUCTION DEPARTMENT
PLANNING AND DESIGN DIVISION
TEL. NO.: (083) 552-3824

DANILO M. HORLADOR, JR.
CIVIL ENGINEER

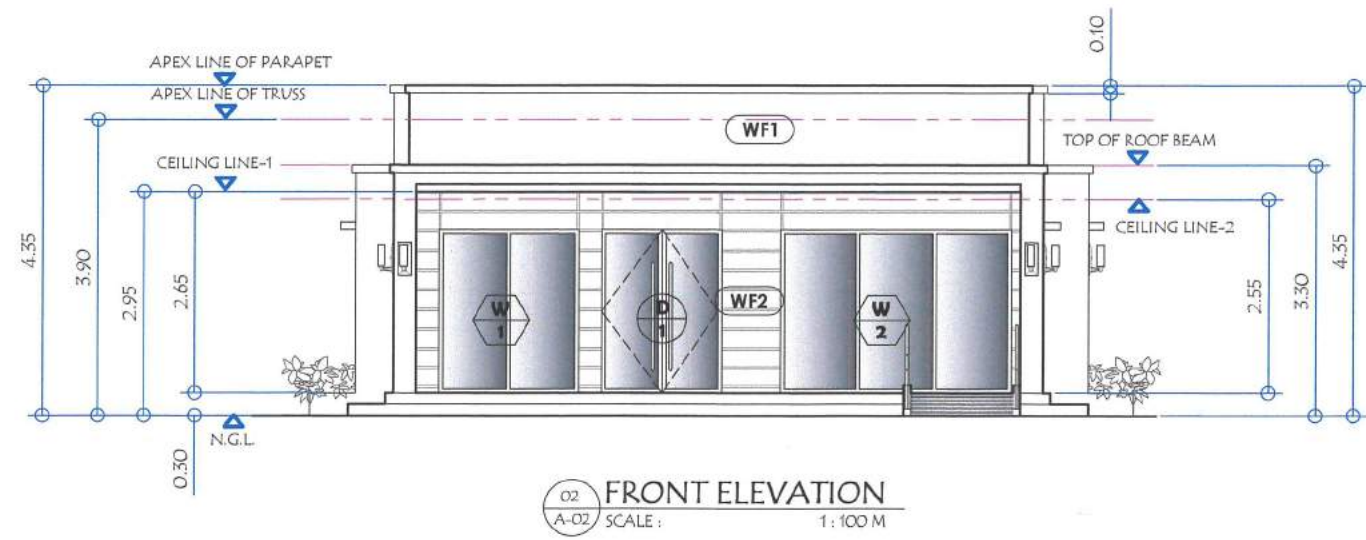
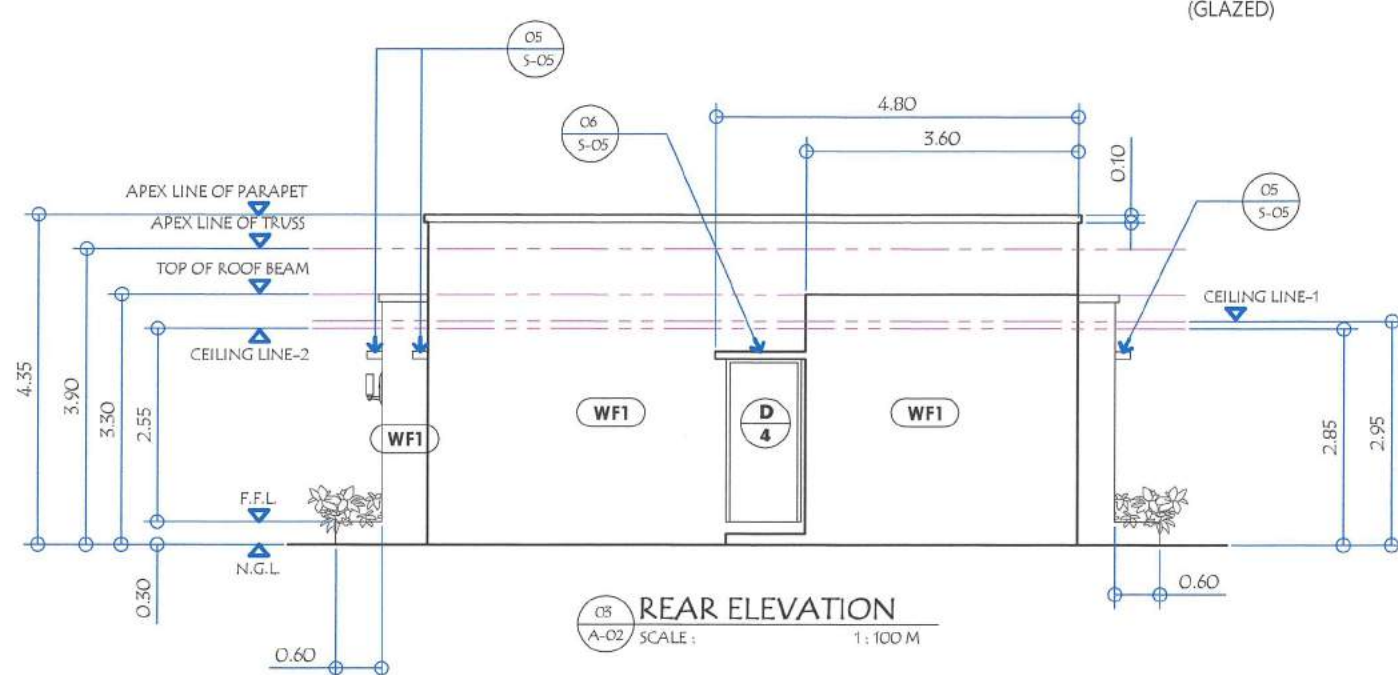
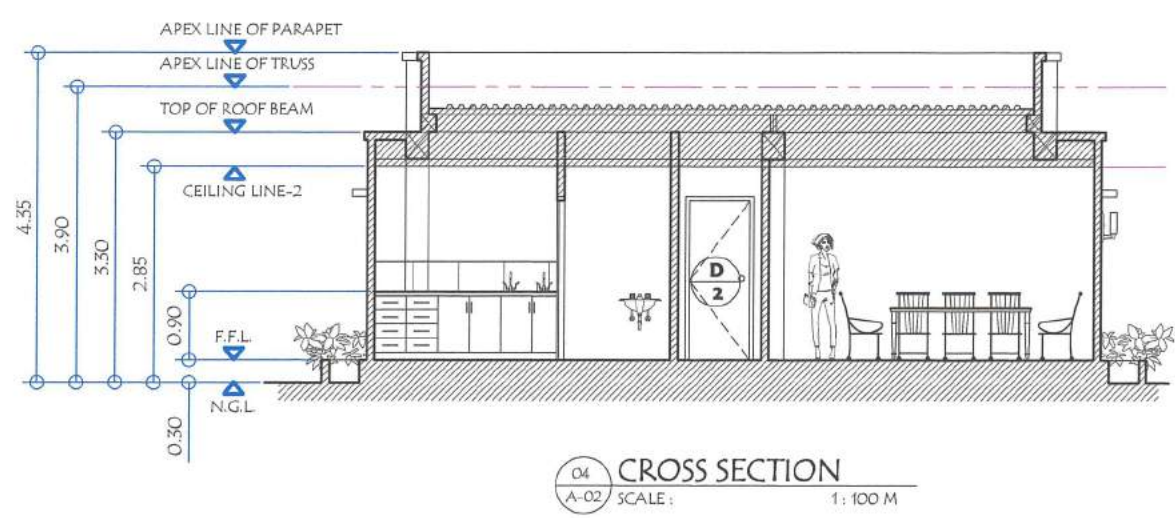
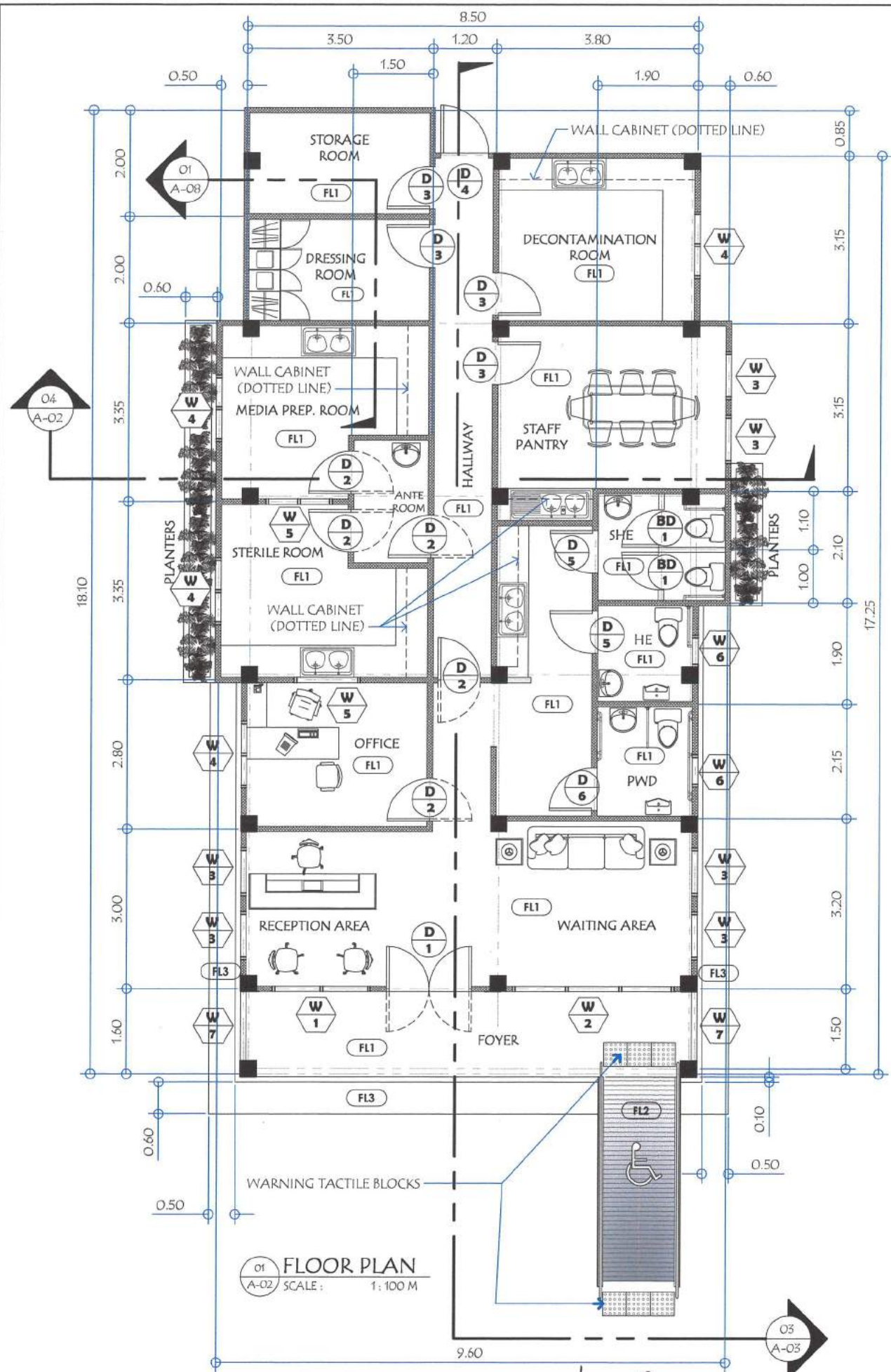
REG. NO. 0107545 TIN. NO. 291-941-997
PTR. NO. 61873A DATE: 01/12/2022

PROJECT AND LOCATION
PROPOSED CONSTRUCTION OF
ONE-STORY WATER TESTING
LABORATORY
LOCATION: PUROK UDAGR1, BRGY. CONEL, GEN. SANTOS CITY

CHECKED:
ENGR. MARIA CELIA N. DANDAN
OIC - PDD

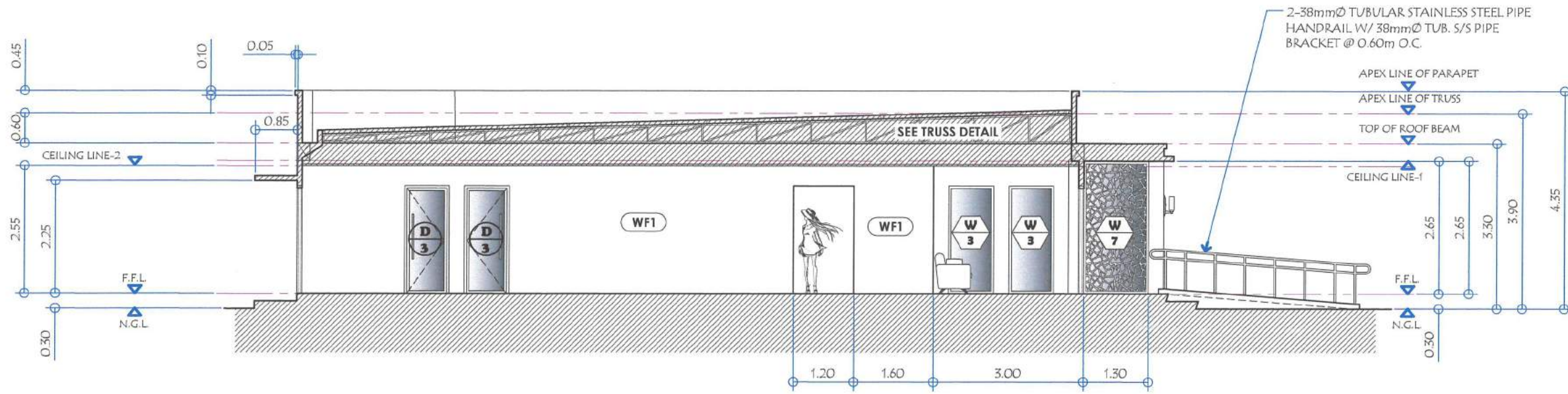
REVIEWED:
ENGR. ROGELIO A. BESANA, JR.
AGM, OPERATION & TECHNICAL SERVICES

APPROVED:
ENGR. ARN B. GELLANGARIN
GENERAL MANAGER A

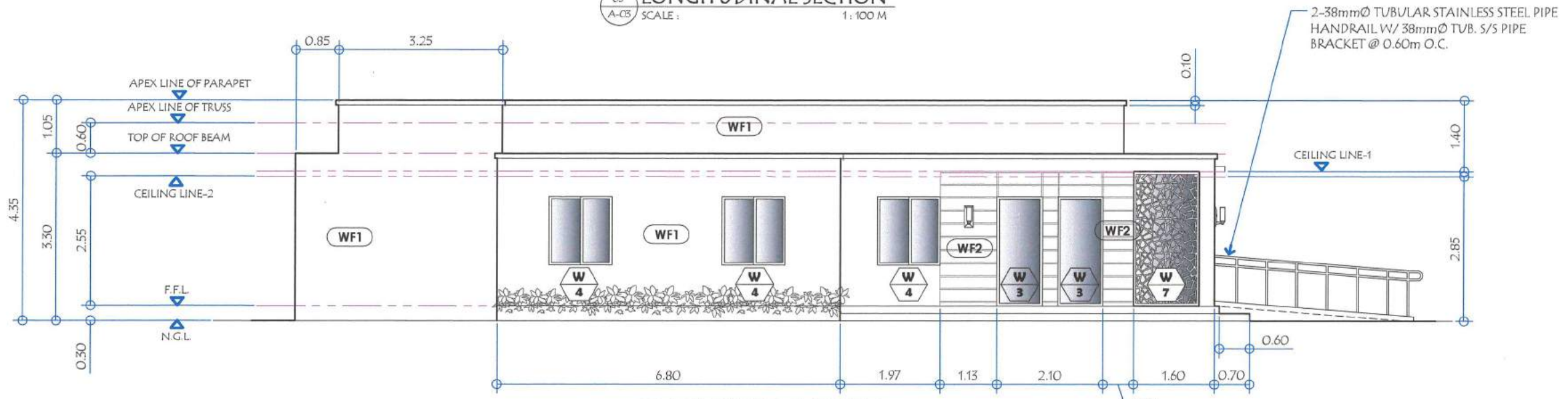


SCHEDULE OF FINISH

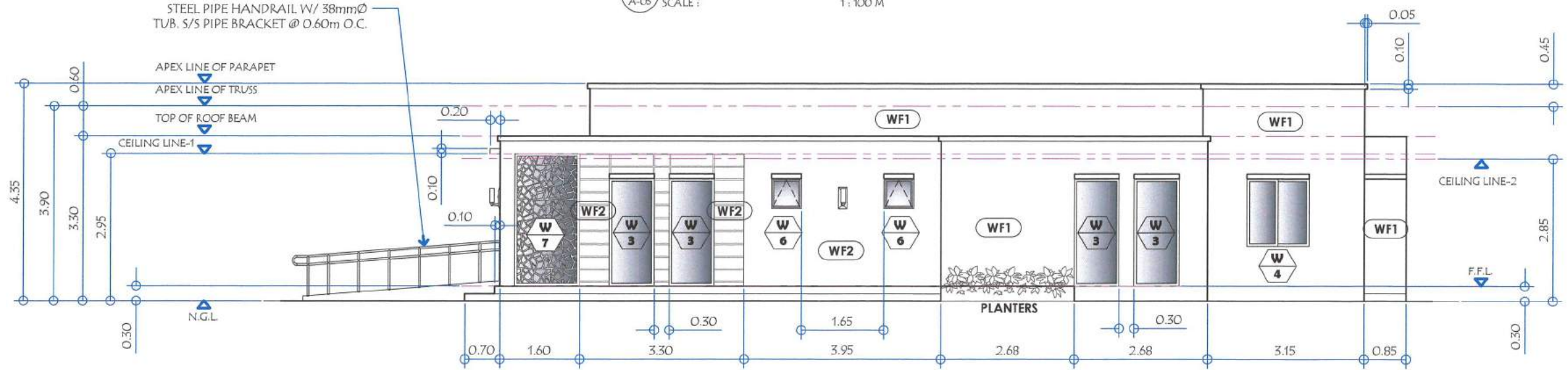
- FLOORS :**
- FL1** 600mm x 600mm CERAMIC FLOOR TILES (UNGLAZED)
 - FL2** NON SKID PLAIN CEMENT FLOOR FINISH WITH 12mm GROOVE @ EVERY 100mm O.C.
 - FL2** NON SKID PLAIN CEMENT FLOOR FINISH
- WALLS :**
- WF1** 100mm thk CHB WITH PLAIN CEMENT PLASTER (ACRYLIC PAINT FINISH)
 - WF2** 100mm thk CHB W/ BRICKS TYPE PLAIN CEMENT PLASTER (ACRYLIC PAINT FINISH)
 - WF3** 600mm x 600mm CERAMIC WALL TILES (GLAZED)



05 LONGITUDINAL SECTION
SCALE: 1:100 M

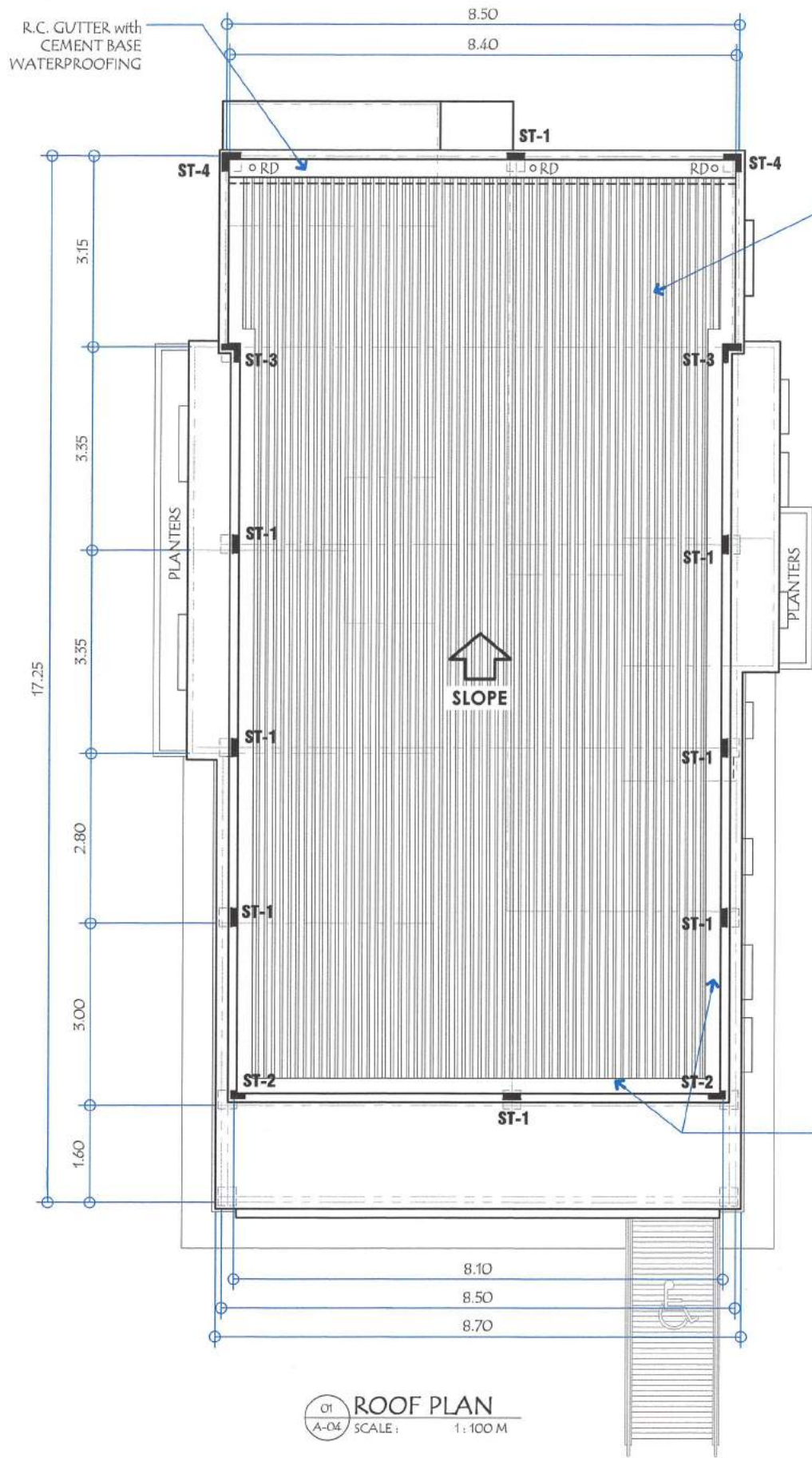


02 LEFT SIDE ELEVATION
SCALE: 1:100 M



01 RIGHT SIDE ELEVATION
SCALE: 1:100 M

<p>GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 552 - 3824</p>	 DANILO M. FORLADOR, JR. CIVIL ENGINEER	PROJECT AND LOCATION PROPOSED CONSTRUCTION OF ONE-STOUREY WATER TESTING LABORATORY	CHECKED: ENGR. MARIA CELIA N. DANDAN OIC - PDD	REVIEWED: ENGR. ROGELIO A. BESANA, JR. AGM, OPERATION & TECHNICAL SERVICES	APPROVED: ENGR. ARN B. GELLANGARIN GENERAL MANAGER A	SHEET CONTENTS AS SHOWN	SHEET NO. A-03	
	REG. NO. 0107545 PTR. NO. 61873A	TIN. NO. 291-941-997 DATE: 01/12/2022	LOCATION: PUROK UDAGRIL BRGY. CONEL GEN. SANTOS CITY				DRAWN BY: RRA CHECKED BY: ESA	REV. NO. DATE: Oct. 2021
							03	29



01 ROOF PLAN
A-04 SCALE: 1:100 M

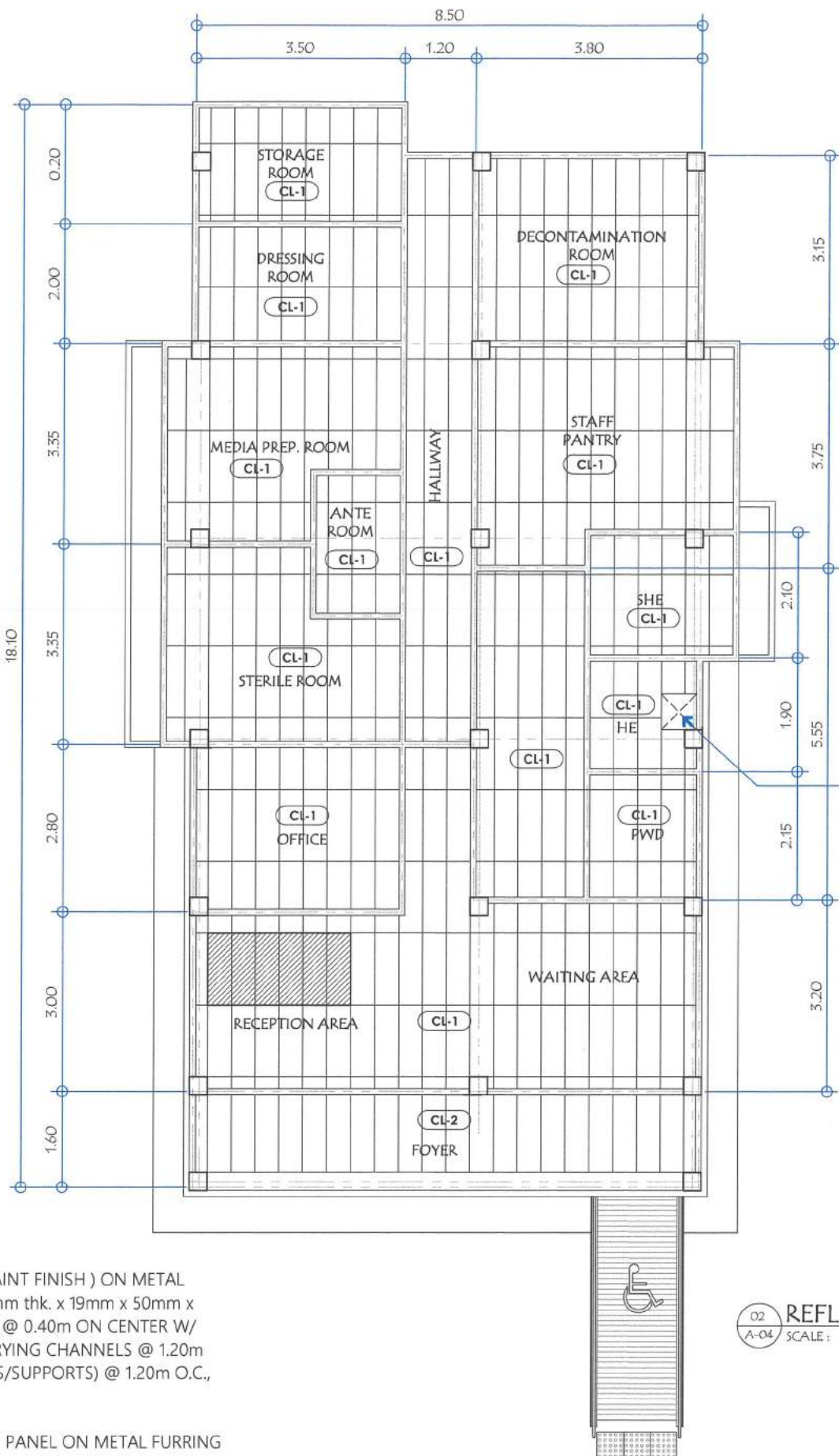
0.40mm thk RIB TYPE LONG SPAN PRE-PAINTED ROOFING

0.6mm thk. PREFORMED PREPAINTED G.I. END FLASHING, TYPICAL AT THE OTHER SIDE

SCHEDULE OF FINISH

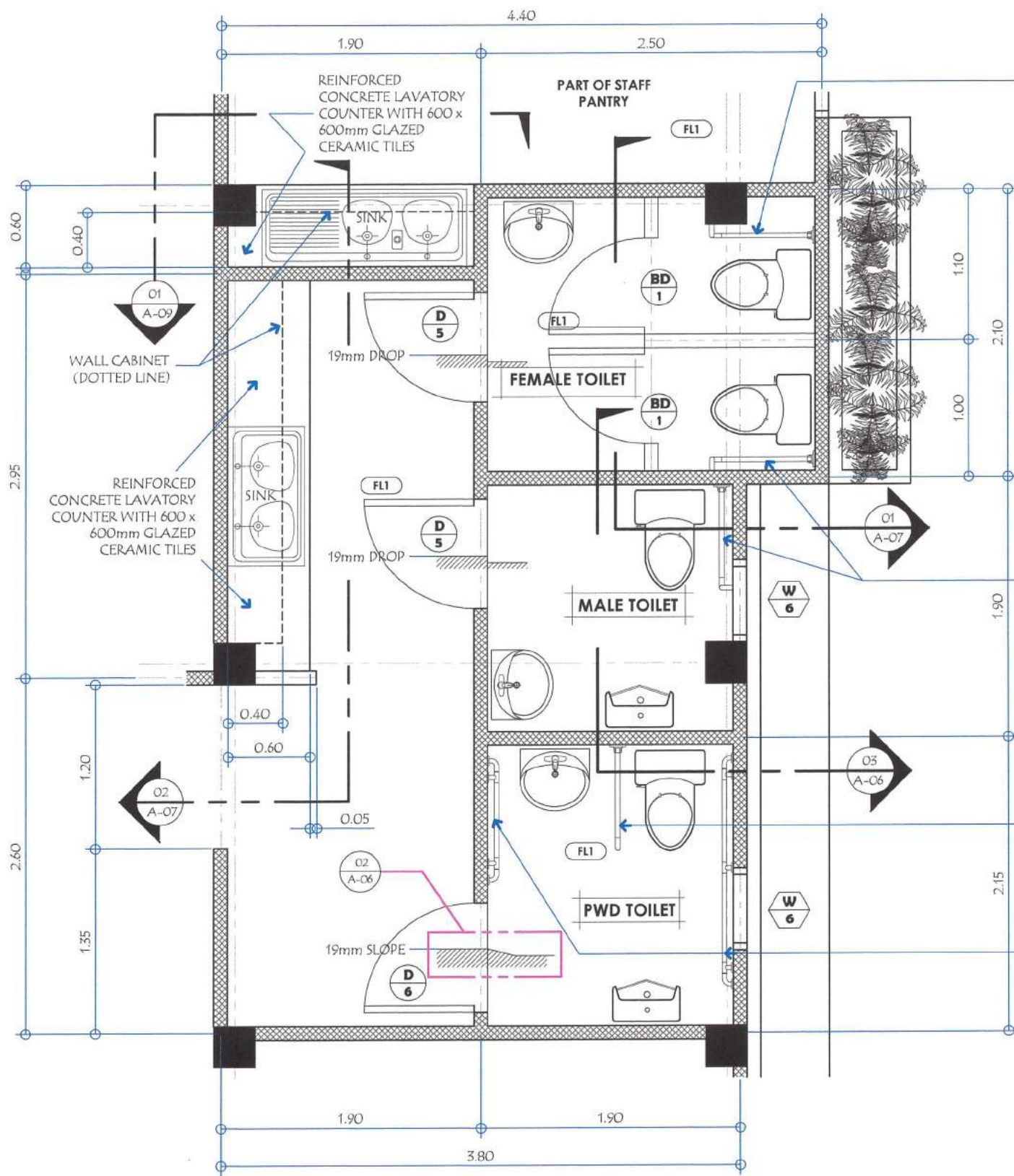
CEILING :

- (CL1)** 4.5mm thk FIBER CEMENT BOARD (PAINT FINISH) ON METAL FURRING CEILING FRAMES. USE 0.60mm thk. x 19mm x 50mm x 5000m DOUBLE FURRING CHANNELS @ 0.40m ON CENTER W/ 0.60mm thk. x 38mm x 5000mm CARRYING CHANNELS @ 1.20m ON CENTERS & ROD JOINER (HANERS/SUPPORTS) @ 1.20m O.C., SHORTER SPAN
- (CL2)** 3048mm(L) x 178mm(W) PVC CEILING PANEL ON METAL FURRING @ 0.60m x 1.20m

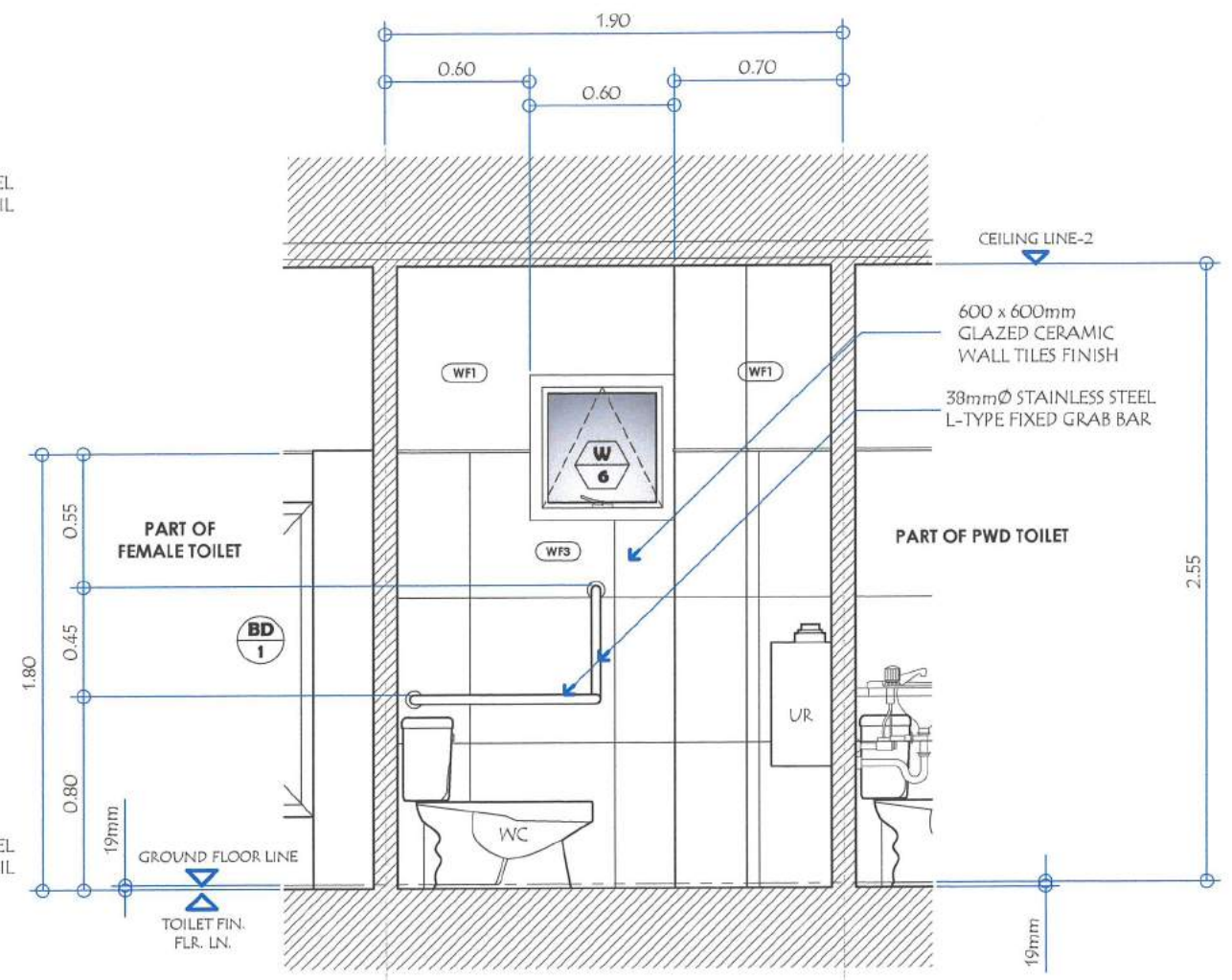


600mm x 600mm MANHOLE OPENING W/ 4.5mm thk. FIBER CEMENT CEILING BOARD REMOVABLE COVER (PAINT FINISH)

02 REFLECTED CEILING PLAN
A-04 SCALE: 1:100 M



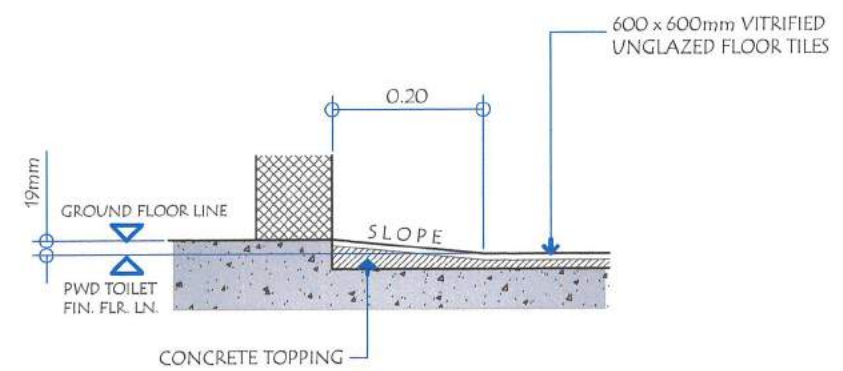
O1 **DETAIL PLAN OF TOILET**
SCALE: 1:40 M



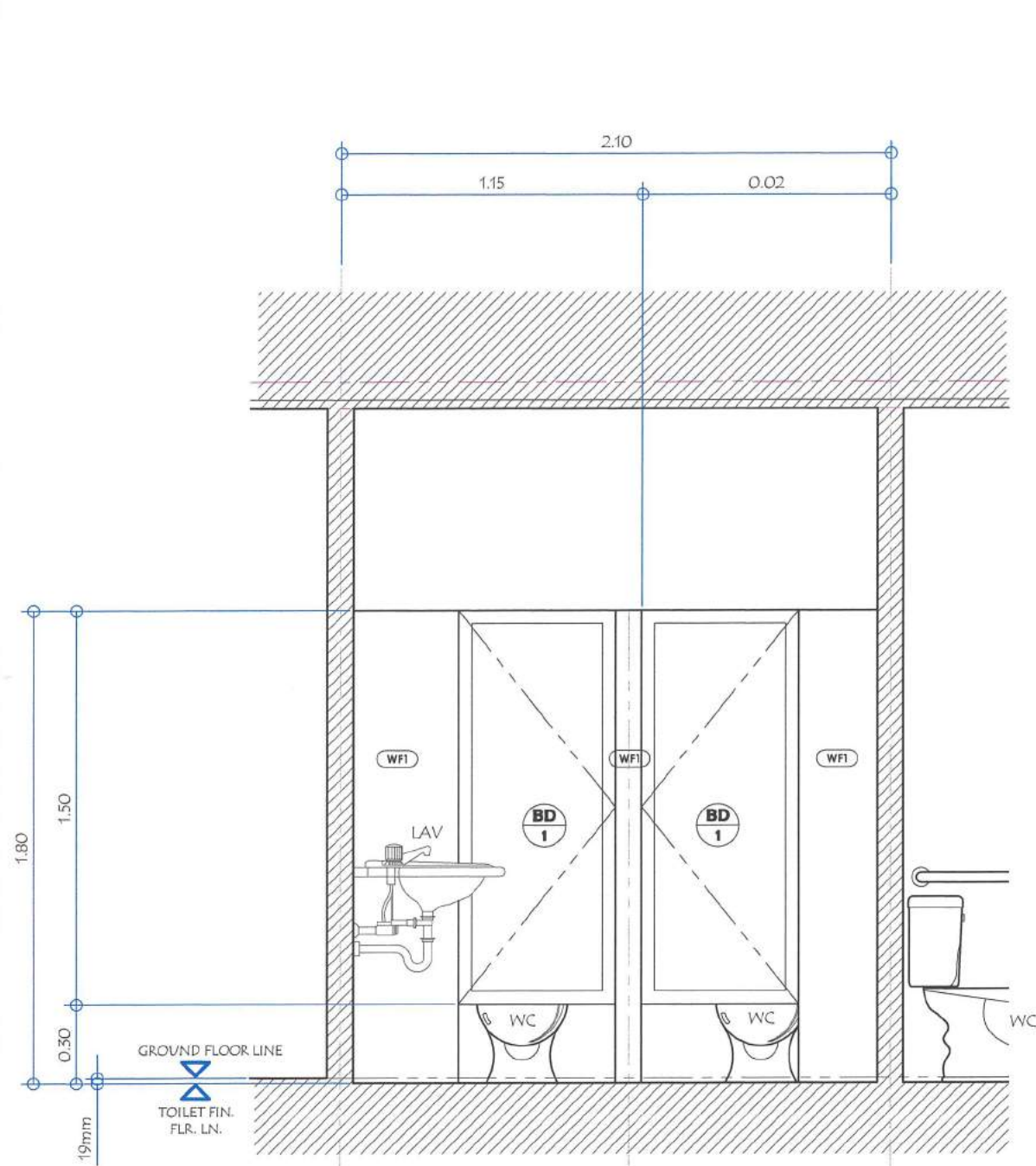
O5 **DETAIL SECTION (MALE TOILET)**
SCALE: 1:50 M

38mmØ STAINLESS STEEL MOVABLE (FLIP-UP/DROP-DOWN) GRAB BAR (750mm HIGH FROM CENTER LINE OF GRAB BAR TO FLOOR LEVEL)

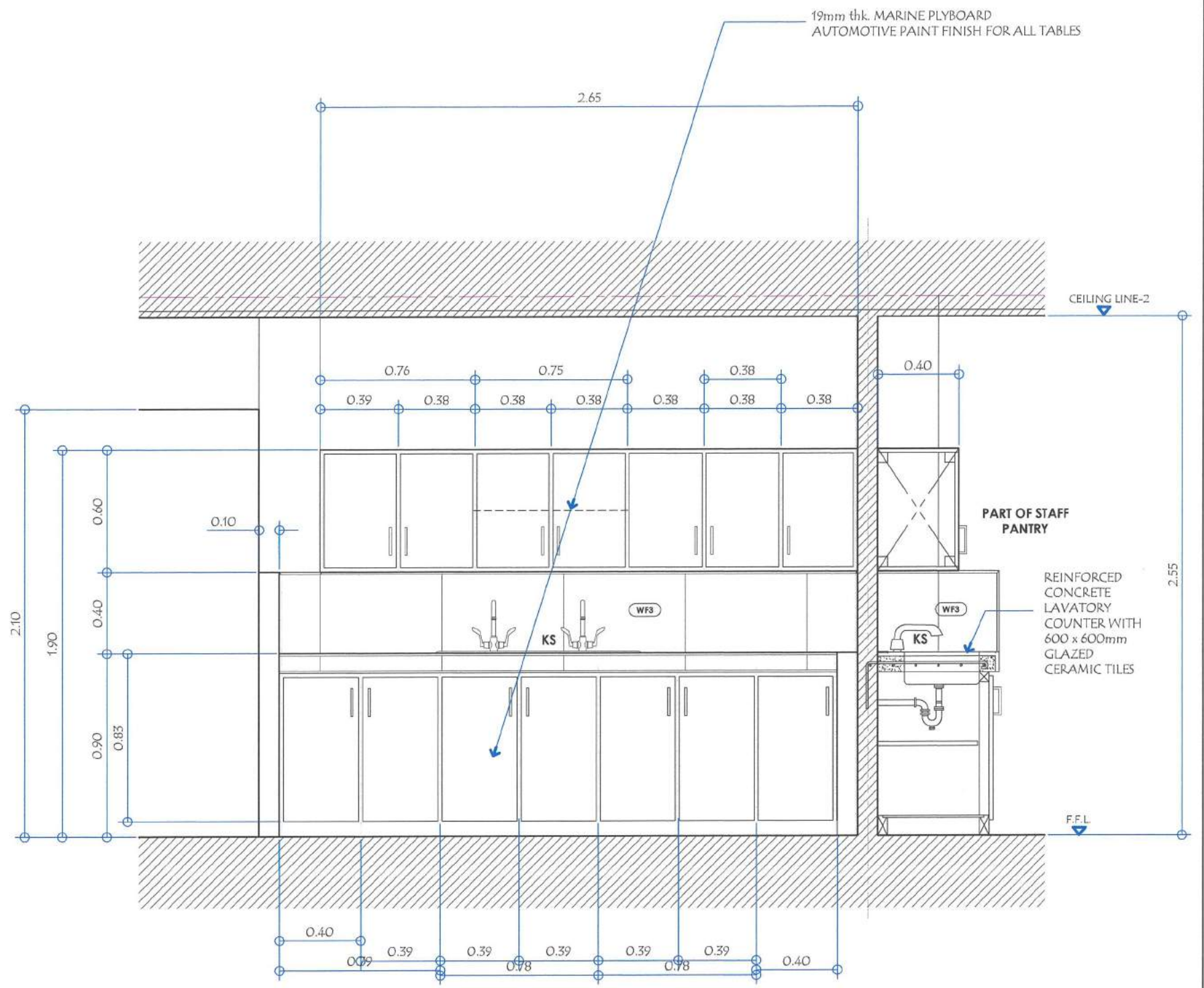
38mmØ STAINLESS STEEL L-TYPE FIXED GRAB RAIL



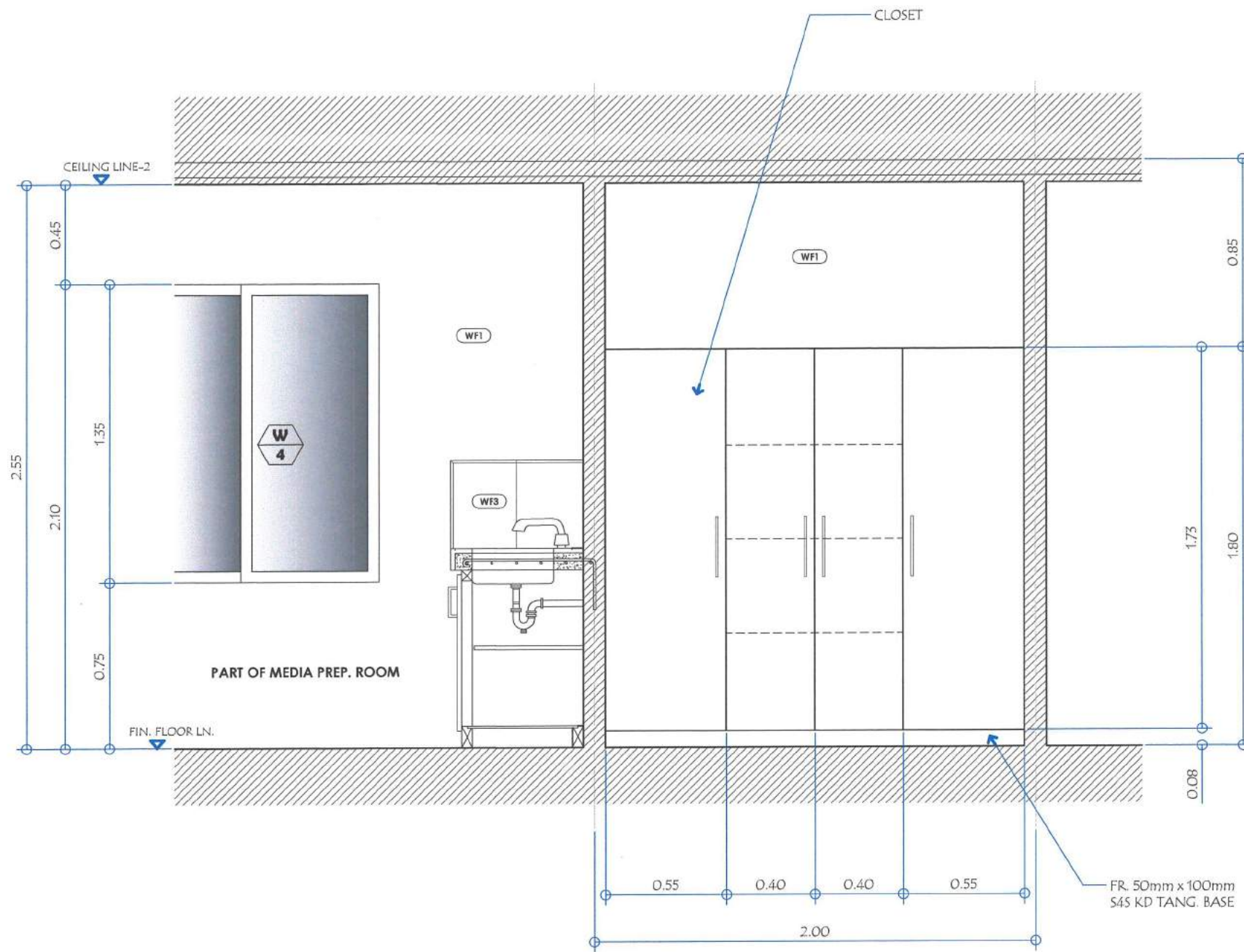
O2 **BLOW-UP DETAIL (PWD TOILET RAMP)**
SCALE: 1:10 M



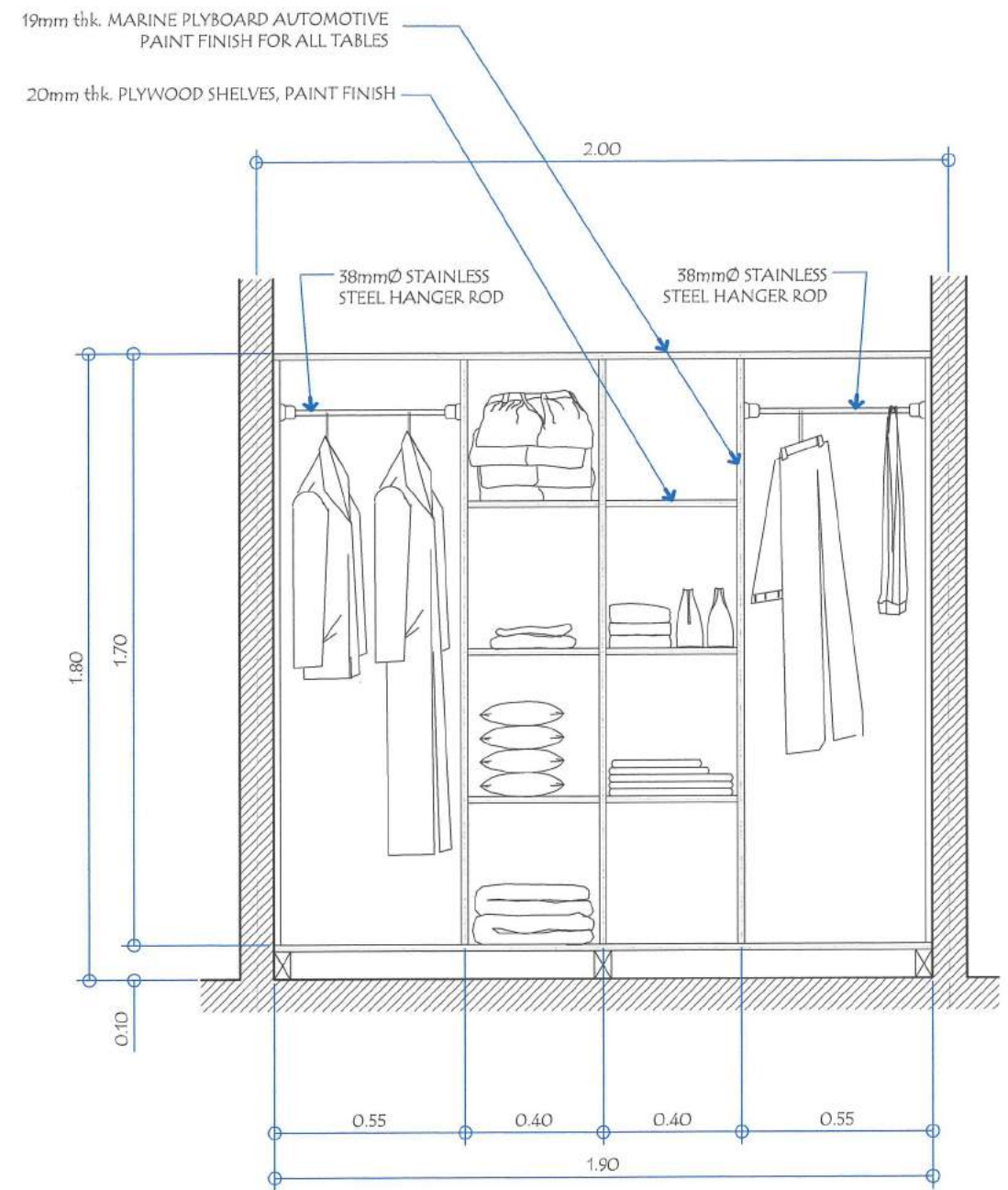
01 DETAIL SECTION (FEMALE TOILET)
A-07 SCALE: 1:25 M



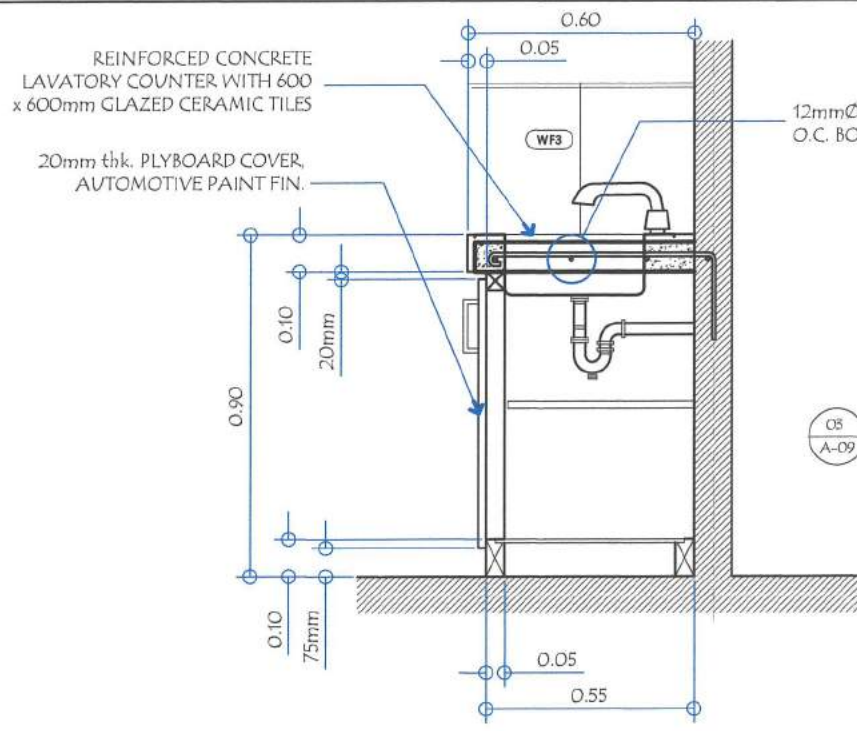
02 DETAIL SECTION
A-07 SCALE: 1:25 M



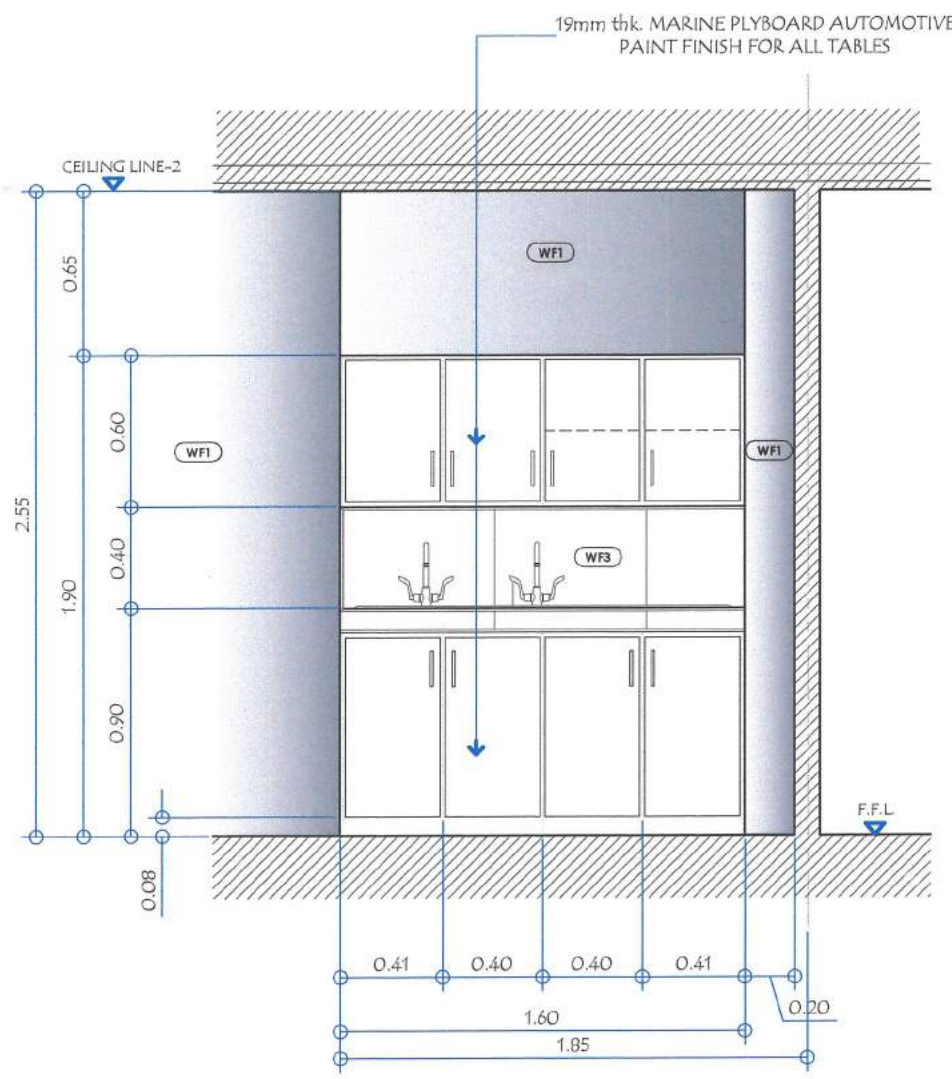
01 DETAIL SECTION
SCALE: 1:25 M



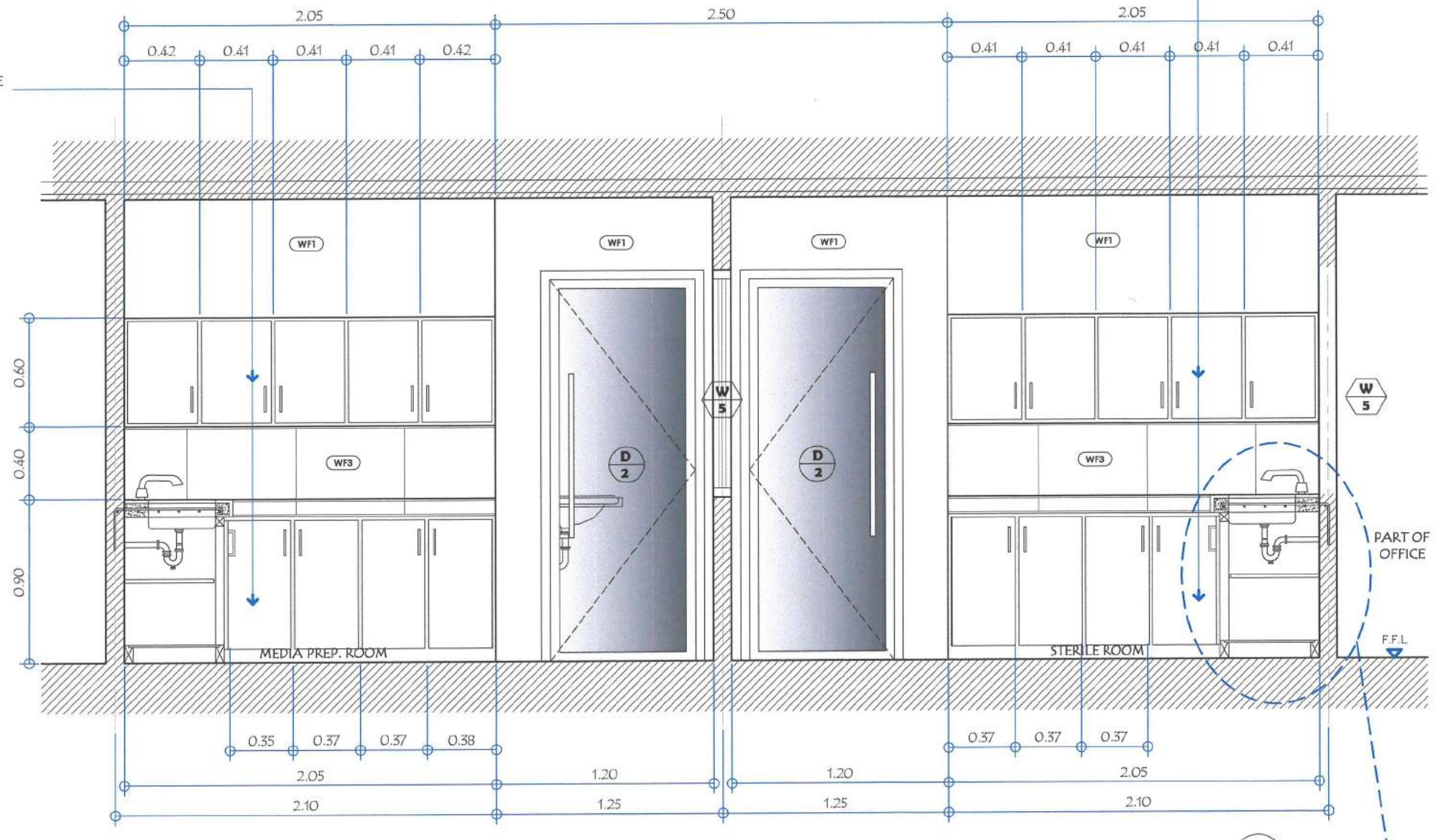
02 DETAIL OF CLOSET
SCALE: 1:20 M



05
A-09
SCALE: 1:20 M
DETAIL SECTION

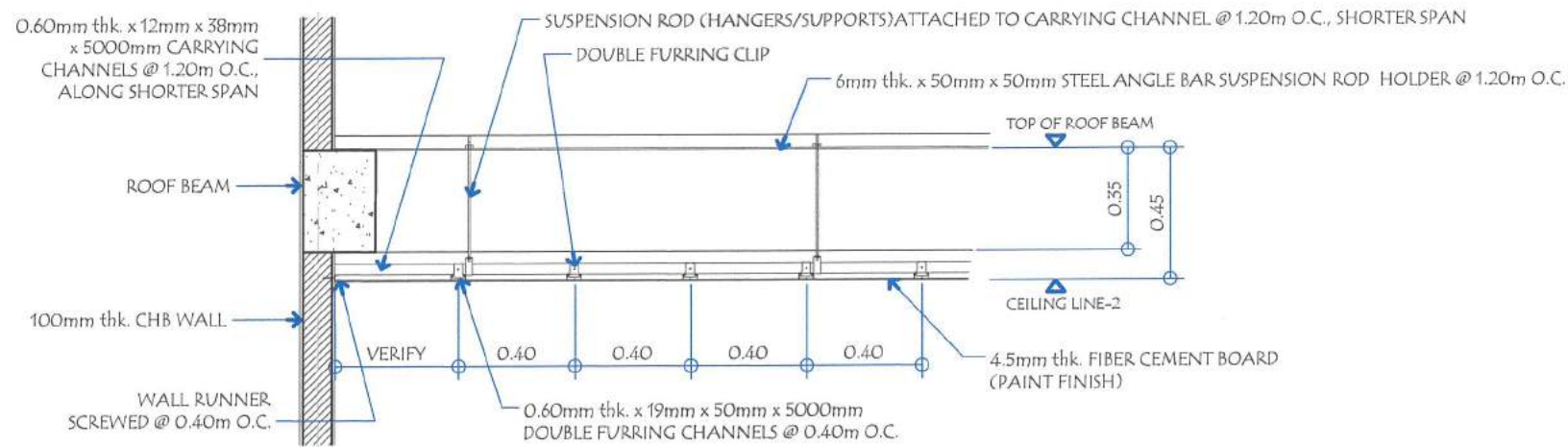


01
A-09
SCALE: 1:30 M
DETAIL OF CABINETS (STAFF PANTRY)

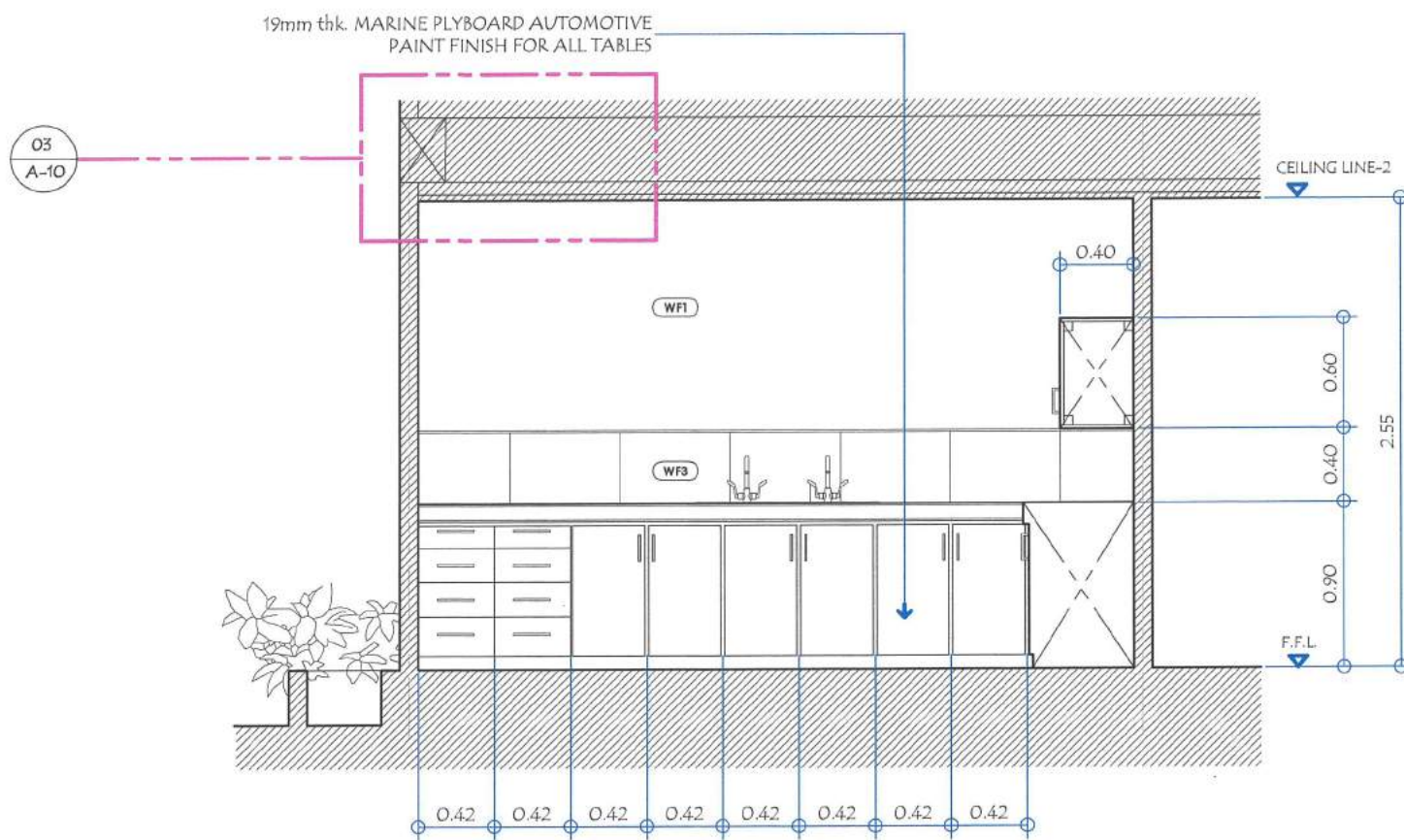


02
A-09
SCALE: 1:30 M
DETAIL OF CABINETS (MEDIA PREP. ROOM & STERILE ROOM)

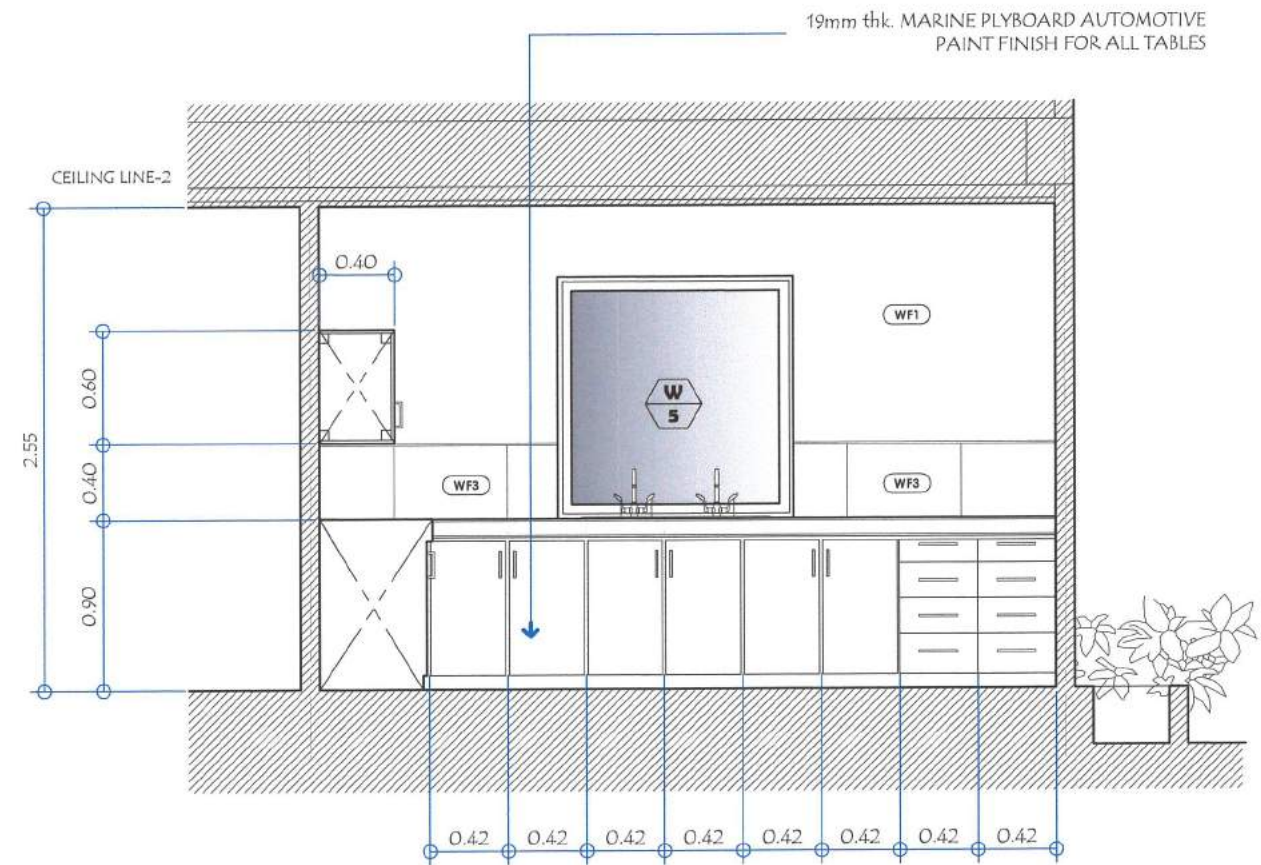
03
A-09



05 SPOT DETAIL SECTION (METAL FURRING CONNECTION)
SCALE: 1:25 M

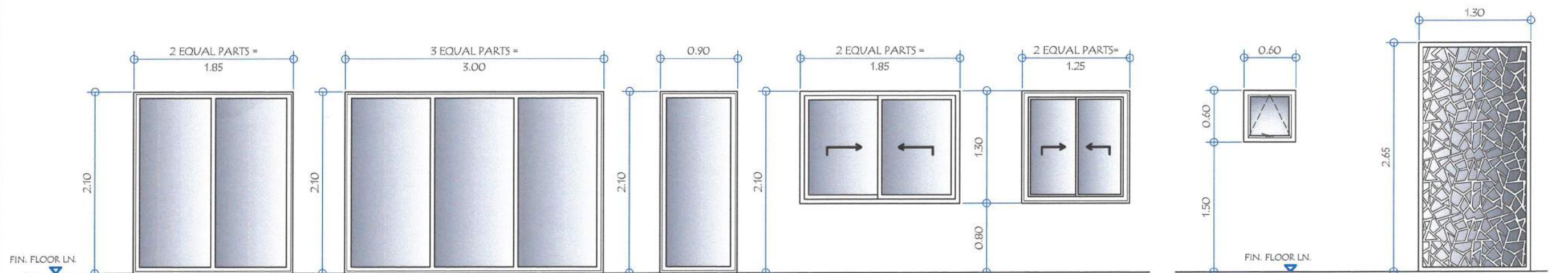


01 LONGITUDINAL SECTION (MEDIA PREP. ROOM)
SCALE: 1:40 M



02 LONGITUDINAL SECTION (STERILE ROOM)
SCALE: 1:40 M

<p>GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 552-3824</p>	<p>DANILO M. HORLADOR, JR. CIVIL ENGINEER</p> <p>REG. NO. 0107545 TIN. NO. 291-941-997 PTR. NO. 61873A DATE: 01/12/2022</p>	PROJECT AND LOCATION	CHECKED:	REVIEWED:	APPROVED:	SHEET CONTENTS	SHEET NO.
		PROPOSED CONSTRUCTION OF ONE-STOREY WATER TESTING LABORATORY	ENGR. MARIA CELIA N. DANDAN	ENGR. ROGELIO A. BESANA, JR.	ENGR. ARN B. GELLANGARIN	AS SHOWN	A-10
		LOCATION: PUROK UDAGRI, BRGY. CONEL, GEN. SANTOS CITY	OIC - PDD	AGM, OPERATION & TECHNICAL SERVICES	GENERAL MANAGER A	DRAWN BY: RRA REV. NO. CHECKED BY: ESA DATE: Oct. 2021	10 29



FIXED WINDOW IN POWDER COATED FINISH ALUMINUM FRAME WITH 6mm thk TEMPERED TINTED GLASS PANEL WITH COMPLETE ACCESSORIES

ONE (1) SET

FIXED WINDOW IN POWDER COATED FINISH ALUMINUM FRAME WITH 6mm thk TEMPERED TINTED GLASS PANEL WITH COMPLETE ACCESSORIES

ONE (1) SET

FIXED WINDOW IN POWDER COATED FINISH ALUMINUM FRAME WITH 6mm thk TEMPERED TINTED GLASS PANEL WITH COMPLETE ACCESSORIES

SIX (6) SETS

SLIDING WINDOW IN POWDER COATED FINISH ALUMINUM FRAME WITH 6mm thk TEMPERED TINTED GLASS PANEL WITH COMPLETE ACCESSORIES

FOUR (4) SETS

SLIDING WINDOW IN POWDER COATED FINISH ALUMINUM FRAME WITH 6mm thk TEMPERED TINTED GLASS PANEL WITH COMPLETE ACCESSORIES

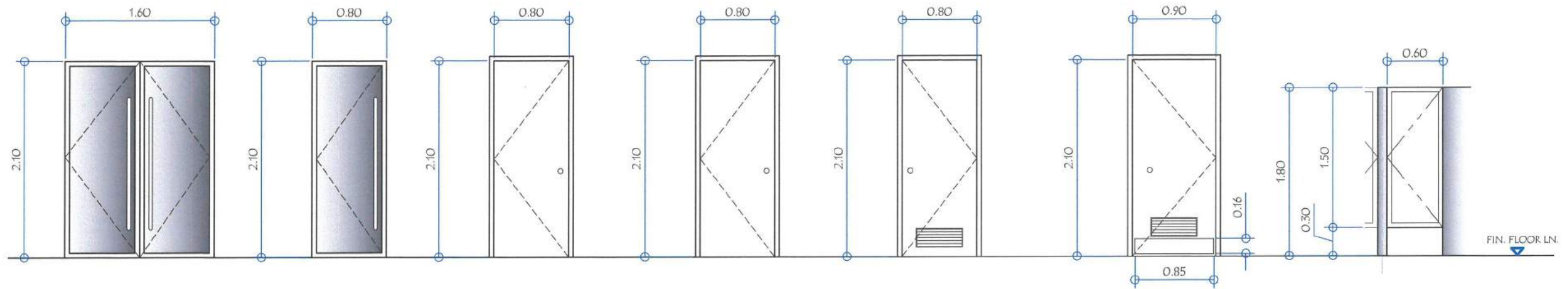
TWO (2) SETS

AWNING WINDOW IN POWDER COATED FINISH ALUMINUM FRAME WITH 6mm thk TEMPERED TINTED GLASS PANEL ON STEEL JAMB/FRAMING WITH COMPLETE ACCESSORIES

TWO (2) SETS

FIXED GLASS WINDOW ALUMINUM FRAME WITH 6mm thk. CLEAR GLASS AND WOODEN DECORATIVE PANEL

TWO (2) SETS



TWO-WAY DOUBLE SWING DOOR IN POWDER COATED FINISH ALUMINUM FRAMED WITH 10mm thk FIXED TEMPERED TINTED GLASS PANELS

ONE (1) SET

TWO-WAY DOOR IN POWDER COATED FINISH ALUMINUM FRAMED WITH 10mm thk FIXED TEMPERED TINTED GLASS PANELS

FIVE (5) SETS

40mm thk HOLLOW CORE FLUSH DOOR TYPE IN 50 x 150 KD DOOR JAMB WITH 6mm thk MARINE PLYWOOD DOUBLE FACING PAINT FINISH WITH COMPLETE ACCESSORIES

FOUR (4) SETS

STEEL DOOR, FIRE EXIT DOOR FULL FLUSH COMPLETE ACCESSORIES

TWO (2) SETS

PVC TOILET DOOR W/ LOUVER SET PLAIN AND COMPLETE HARDWARE ACCESSORIES

TWO (2) SETS

40mm thk HOLLOW CORE FLUSH DOOR TYPE IN 50 x 150 KD DOOR JAMB WITH 6mm thk MARINE PLYWOOD DOUBLE FACING PAINT FINISH WITH COMPLETE ACCESSORIES

ONE (1) SET

HOLLOW CORE FLUSH TYPE BAR DOOR (CUBICLE) ON 50mm x 100mm CONCRETE DOOR JAMB COMPLETE WITH HARDWARE ACCESSORIES

TWO (2) SETS

01 SCHEDULE OF DOORS & WINDOWS
A-11 SCALE: 1:50 M

<p>GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 552 - 3824</p>	 <p>DANILO M. HORLADOR, JR. CIVIL ENGINEER</p>	PROJECT AND LOCATION	CHECKED:	REVIEWED:	APPROVED:	SHEET CONTENTS	SHEET NO.		
		REG. NO. 0107545	TIN. NO. 291-941-997	PROPOSED CONSTRUCTION OF ONE-STORY WATER TESTING LABORATORY	ENGR. MARIA CELIA N. DANDAN	ENGR. ROGELIO A. BESANA, JR.	ENGR. ARN B. GELLANGARIN	AS SHOWN	A-11
		PTR. NO. 61873A	DATE: 01/12/2022	LOCATION: PUROK UDAGRI, BRGY. CONEL, GEN. SANTOS CITY	OIC - PDD	AGM, OPERATION & TECHNICAL SERVICES	GENERAL MANAGER A	DRAWN BY: RRA CHECKED BY: ESA	REV. NO. DATE: Oct. 2021

GENERAL CONSTRUCTION NOTES

GENERAL NOTES

- IN THE INTERPRETATION OF THE DRAWING, INDICATED DIMENSIONS SHALL GOVERN AND DISTANCES AND SIZES SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES.
- IN REFERENCE TO OTHER DRAWINGS, SEE ARCHITECTURAL DRAWINGS FOR DEPRESSIONS IN FLOOR SLABS, OPENINGS IN THE WALLS AND SLABS, INTERIOR PARTITIONS, LOCATION OF DRAINS ETC.
- IN CASE OF DISCREPANCIES AS TO THE LAYOUT, DIMENSIONS, AND ELEVATIONS BETWEEN THE STRUCTURAL PLANS, AND ARCHITECTURAL DRAWINGS, THE CONTRACTOR SHALL NOTIFY BOTH THE STRUCTURAL ENGINEER AND THE ARCHITECT.
- ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH THE 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.
- ACI REFERS TO AMERICAN CONCRETE INSTITUTE, AISC TO AMERICAN INSTITUTE OF STEEL CONSTRUCTION AND ASTM TO AMERICAN SOCIETY FOR TESTING MATERIALS.
- CONSTRUCTION NOTES AND TYPICAL DETAILS APPLY TO ALL DRAWINGS UNLESS OTHERWISE SHOWN OR NOTED. MODIFY TYPICAL DETAILS AS DIRECTED TO MEET SPECIAL CONDITIONS.
- SHOP DRAWINGS WITH ERECTION AND PLACING DIAGRAMS OF ALL STRUCTURAL STEELS, MISCELLANEOUS IRON, PRE-CAST CONCRETE, ETC. SHALL BE SUBMITTED FOR ENGINEERS APPROVAL BEFORE FABRICATION.
- CONTRACTOR SHALL NOTE AND PROVIDE ALL MISCELLANEOUS CURBS, SILLS, STOOLS, EQUIPMENTS AND MECHANICAL BASES THAT ARE REQUIRED BY THE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS.
- ALL RESULTS OF MATERIAL TESTING FOR CONCRETE, REINFORCING BARS, & STRUCTURAL STEEL MUST BE NOTED & APPROVED BY THE STRUCTURAL DESIGNER.

NOTES ON CONCRETE MIXES & PLACING

- 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)	20mm	100mm
COLUMNS	4000 PSI (27.6 MPa)	20mm	100mm
BEAMS, SLABS	4000 PSI (27.6 MPa)	20mm	100mm
SLAB ON FILL	4000 PSI (27.6 MPa)	20mm	100mm
- MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS.

SUSPENDED SLABS	20mm
SLAB ON GRADE	40mm
WALLS ABOVE GRADE	25mm
BEAM STIRRUPS AND COLUMN TIES	40mm
WHERE CONCRETE IS EXPOSED TO EARTH BUT POURED AGAINST FORMS	50mm
WHERE CONCRETE IS DEPOSITED DIRECTLY AGAINST EARTH	75mm
- CONCRETE SHALL BE DEPOSITED IN ITS FINAL POSITION WITHOUT SEGREGATION. RE-HANDLING OR PLACING SHALL BE DONE PREFERABLY WITH BUEGIES, BUCKETS OR WHEELBARROWS. NO CHUTES WILL BE ALLOWED EXCEPT TO TRANSFER CONCRETE FROM HOPPERS TO BUEGIES, WHEELBARROWS OR BUCKETS IN WHICH CASE THEY SHALL NOT EXCEED SIX (6) METERS IN AGGREGATE LENGTH.
- 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 ARE EXTREMELY DIFFICULT TO ACCOMPLISH.
- ALL ANCHOR BOLTS, DOWELS, AND OTHER INSERTS, SHALL BE PROPERLY POSITIONED & SECURED IN PLACE PRIOR TO PLACING OF CONCRETE.
- 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.
- STRIPPING OF FORMS AND SHORES:

FOUNDATION	24 HRS.
SUSPENDED SLAB EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED	8 DAYS
WALLS	21 DAYS
BEAMS	14 DAYS
COLUMNS	21 DAYS
- 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.
- THE CONTRACTOR SHALL FURNISH AND MAINTAIN ADEQUATE FORMS AND SHORINGS UNTIL THE CONCRETE MEMBERS HAVE ATTAINED THEIR WORKING CONDITION AND STRENGTH.

NOTES ON FOOTINGS

- FOOTINGS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 96 KPa (2500 psf). CONTRACTOR SHALL REPORT TO THE ENGINEER, IN WRITING, THE ACTUAL SOIL CONDITIONS UNCOVERED AND CONFIRM ACTUAL BEARING CAPACITY OF SOIL BEFORE DEPOSITING CONCRETE.
- FOOTING SHALL REST AT LEAST 1500mm BELOW NATURAL GRADE LINE UNLESS OTHERWISE INDICATED IN PLANS. NO FOOTING SHALL REST ON FILL.
- MINIMUM CONCRETE PROTECTION FOR REINFORCEMENTS SHALL BE 75mm CLEAR FOR CONCRETE DEPOSITED THE GROUND AND 50mm FOR CONCRETE DEPOSITED AGAINST A FORMWORK.

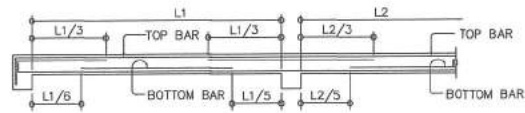
NOTES ON REINFORCEMENT

- 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. COLUMNS 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)
- ALL REINFORCING BARS SIZE 10mm OR LARGER SHALL BE DEFORMED IN ACCORDANCE WITH ASTM A 706. BARS SMALLER THAN 10mm MAY BE PLAIN.
- SPICES SHALL BE SECURELY WIRED TOGETHER & SHALL LAP OR EXTEND IN ACCORDANCE W/ TABLE A & TABLE B (TABLE OF LAP SPICE & ANCHORAGE LENGTH) UNLESS OTHERWISE SHOWN ON DRAWINGS, SPICES SHALL BE STAGGERED WHENEVER POSSIBLE.

NOTES ON CONCRETE SLABS

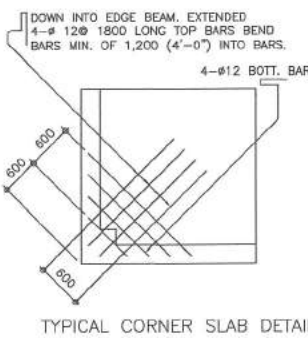
- ALL SLAB REINFORCEMENTS SHALL BE 20mm CLEAR MINIMUM FROM BOTTOM AND FROM THE TOP OF SLAB.
- UNLESS OTHERWISE SHOWN, REINFORCEMENT IN CONTINUOUS ELEVATED SLAB SHALL BE CUT AS FOLLOWS:



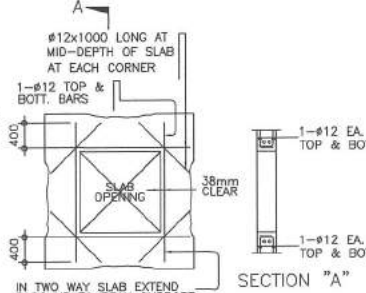
TYPICAL BAR BENDING AND CUTTING DETAILS FOR SLABS

- IF SLABS ARE REINFORCED BOTHWAYS, BARS ALONG THE SHORTER SPAN SHALL BE PLACED BELOW THOSE ALONG THE LONG 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 1/2) SLAB THICKNESS.
- 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 # @ 250mm EACH WAY
125 mm	10 mm # @ 225mm EACH WAY
150 mm	10 mm # @ 185mm EACH WAY
175 mm	10 mm # @ 150mm EACH WAY
200 mm	10 mm # @ 140mm EACH WAY



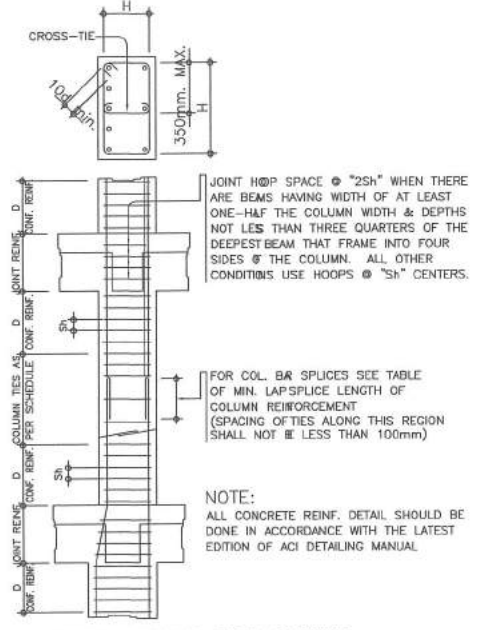
TYPICAL CORNER SLAB DETAIL



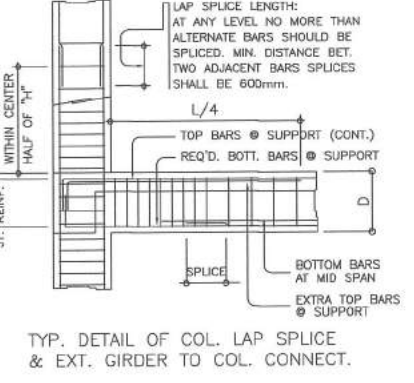
TYPICAL SLAB OPENING DET.

NOTES ON COLUMNS

- 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, 1/6 THE CLEAR HEIGHT OF COLUMN OR 450mm.
- COLUMN TIES SHALL BE PROTECTED EVERYWHERE BY A COVERING OF CONCRETE CAST MONOLITHICALLY WITH THE CORE WITH THE MINIMUM THICKNESS OF 40mm AND NOT LESS THAN 40 TIMES THE MAXIMUM SIZE OF COARSE AGGREGATE IN MILLIMETERS.
- WHERE COLUMNS CHANGE IN SIZE, VERTICAL REINFORCEMENTS SHALL BE OFFSET AT A SLOPE OF NOT MORE THAN 1 IN 6 AND EXTRA 10mm TIES AT 100mm SHALL BE PROVIDED THRU OUT THE OFFSET REGION.
- UNLESS OTHERWISE INDICATED IN THE PLANS, LAP SPICES FOR VERTICAL COLUMN REINFORCEMENT SHALL BE MADE WITHIN THE CENTER HALF OF COLUMN HEIGHT, AND THE SPICE 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 SPICED AT ANY LEVEL AND THE VERTICAL DISTANCES BETWEEN THESE WELDS OR SPICES OF ADJACENT BARS IS NOT LESS THAN 600mm.



TYPICAL COLUMN ELEV. SHOWING DOWELS AND TIES SPACING



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

NOTES ON BEAMS AND GIRDERS

- UNLESS OTHERWISE NOTED IN PLANS, CAMBER ALL BEAMS AND GIRDER AT LEAST 6mm# 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.
- TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1.

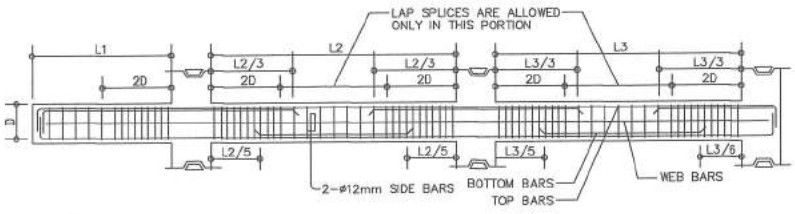


FIG. B-1

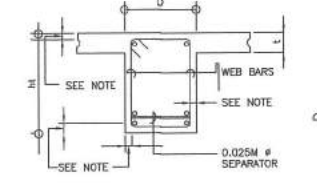
TABLE 'A' TENSION BARS EMBEDMENT LENGTHS AND LAPPED SPICED IN MILLIMETERS				
BAR SIZE (DEFORMED)	fc = 20.7MPa(3000psi)		fc = 27.6MPa(4000psi)	
	EMBEDMENT	LAPPED	EMBEDMENT	LAPPED
10mm #	300	300	300	300
12mm #	300	300	300	300
16mm #	300	400	300	400
20mm #	400	550	350	500
25mm #	600	800	550	750
28mm #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

NOTE: TOP PLAIN BARS, MULTIPLY VALUE BY 2

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

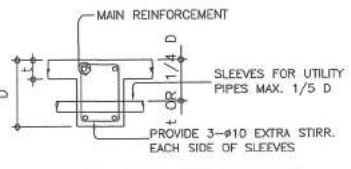
NOTE: TOP PLAIN BARS, MULTIPLY VALUE BY 2
VALUES GIVEN ABOVE CAN ALSO BE USED FOR COLUMNS.

- IF THE BEAM REINFORCING BARS END IN A WALL THE CLEAR DISTANCE FROM THE BAR TO THE FURTHER 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 SPICED 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 SPICES.
- IF THERE ARE TWO OR MORE LAYERS OF REINFORCING BARS, USE 25mm# BAR SEPARATORS SPACED AT 1.0M ON CENTER. IN NO CASE SHALL THERE BE LESS THAN TWO (2) SEPARATORS BETWEEN TWO LAYERS OF BARS.
- MINIMUM CONCRETE PROTECTION FOR REINFORCING BARS OR STEEL SHAPES SHALL BE AS SHOWN IN FIG. B-2 UNLESS SPECIFIED ELSEWHERE.



TYP. DET. FOR SLEEVES THRU CONCRETE BEAM

FIG. B-2



TYP. DET. FOR SLEEVES THRU CONCRETE BEAM

FIG. B-3

- WHEN A BEAM CROSSES A GIRDER, REST BEAM ON TOP OF GIRDER BARS. BEAM REINFORCING BAR SHALL BE SYMMETRICAL ABOUT CENTER LINE WHENEVER POSSIBLE.
- GENERALLY NO SPICES SHALL BE PERMITTED AT POINTS WHERE CRITICAL BENDING STRESSES OCCUR. SPICES WHERE SO PERMITTED SHALL BE INDICATED IN THE TABLE 'A' AND 'B'. WELDED SPICES 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 SPICED THEREIN.

GENERAL CONSTRUCTION NOTES

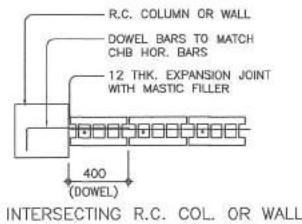
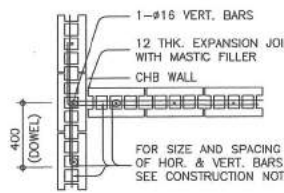
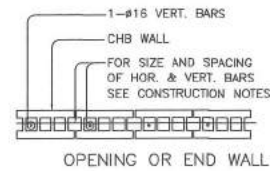
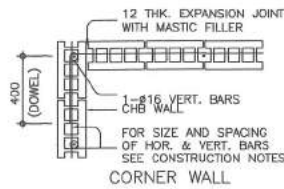
NOTES ON CONCRETE HOLLOW BLOCK WALLS

- 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.
- PROVIDE 150mm x 300mm STIFFENER COLUMN REINFORCED WITH 4-12mm WITH 6mm# TIES AT 150mm ON CENTER WHERE CONCRETE HOLLOW BLOCK TERMINATES AND AT EVERY 3.0M LENGTH OF CONCRETE HOLLOW BLOCK WALLS UNLESS NOTED IN STRUCTURAL PLANS.

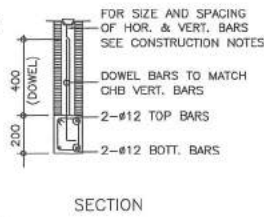
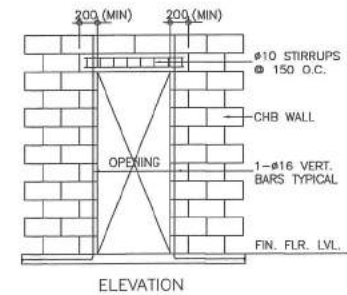
BLOCK THICKNESS	REINFORCEMENT		NOTES
	HORIZONTAL	VERTICAL	
75 mm	10mm# @ 600mm O.C.	10mm# @ 600mm O.C.	A. MINIMUM LAPS AT SPICE = 0.25M B. PROVIDE RIGHT ANGLED REINFORCEMENT AT CORNERS 0.25M LONG
125 mm	10mm# @ 600mm O.C.	10mm# @ 600mm O.C.	C. WHERE CHB OR CER. BLK. WALL DOWELS JOIN COL. R.C. BEAMS AND WALL DOWELS WITH THE SAME SIZE AS VERT. OR HOR. REINFORCEMENTS SHALL BE PROVIDED
150 mm	10mm# @ 600mm O.C.	10mm# @ 600mm O.C.	
200 mm	12mm# @ 600mm O.C.	12mm# @ 600mm O.C.	

REINFORCING CONCRETE LINTEL BEAM IN CONCRETE BLOCK WALLS

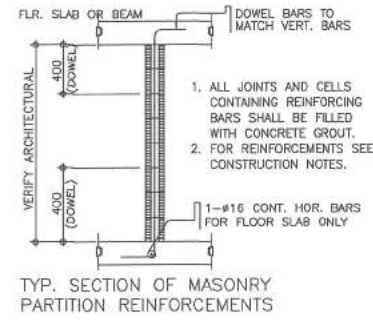
CLEAR SPAN LENGTH (L)	TOTAL LENGTH (L+0.40M)	MIN. HEIGHT OF LINTEL (MM)	REINFORCEMENT		
			BOTTOM	TOP	STIRRUPS
1.20M	1.60M	140	1-#10	1-#10	#6mm @ 200mm
1.50M	1.90M	200	1-#10	1-#10	#6mm @ 200mm
1.80M	2.20M	200	1-#12	1-#10	#6mm @ 200mm
2.10M	2.50M	250	1-#12	1-#10	#6mm @ 200mm
2.40M	2.90M	250	1-#12	1-#10	#6mm @ 200mm
2.70M	3.10M	250	1-#16	1-#12	#10mm @ 200mm
3.00M	3.40M	300	1-#16	1-#12	#10mm @ 200mm
3.30M	3.70M	300	1-#16	1-#12	#10mm @ 200mm
3.60M	4.00M	300	1-#20	1-#12	#10mm @ 200mm



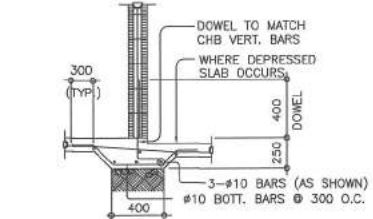
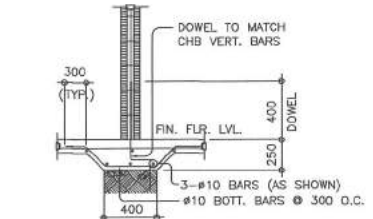
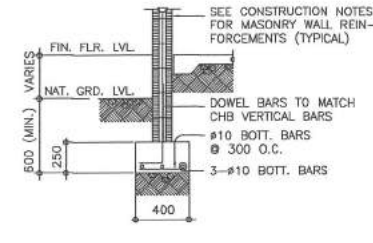
TYPICAL CONNECTION DETAIL OF MASONRY WALL



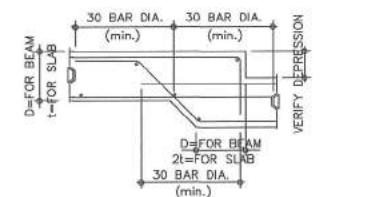
TYP. DET. OF LINTEL BEAM AT CHB WALL OPENING



TYP. SECTION OF MASONRY PARTITION REINFORCEMENTS



TYPICAL CHB FOOTING DETAILS (WHERE APPLICABLE)



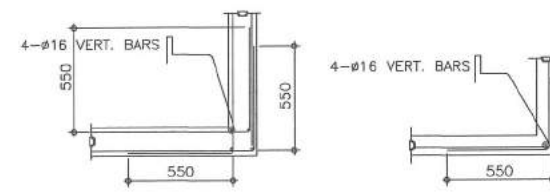
TYPICAL DETAIL FOR BEAM OR SLAB CHANGE SOFFIT

NOTES ON CONCRETE WALLS

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

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

- 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 50mm CLEAR.
- 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 WIRE SECURELY WITH 16 G.L. WIRE PROVIDED THAT SPLICES IN ADJACENT BARS ARE STAGGERED AT LEAST 1.50M O.C.
- UNLESS OTHERWISE NOTED IN THE PLANS, ALL OPENINGS IN WALLS 250mm OR THICKER SHALL BE REINFORCED AROUND WITH 2-20mm# BARS FOR 225mm, 200mm, 175mm, 150mm, USE 2-16mm# FOR 125mm AND 100mm WALLS, USE 2-12mm# 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

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

NOTES ON STRUCTURAL STEEL

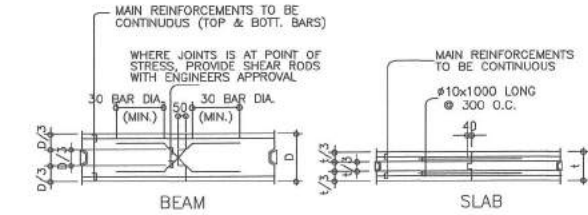
- STRUCTURAL STEEL TO BE USED FOR FABRICATION AND ERECTION OF THIS STRUCTURE SHALL COMPLY WITH ALL THE PERTINENT PROVISION OF AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDING LATEST EDITION.
- ALL STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A36 STRUCTURAL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

NOTES ON EMBEDDED PIPES

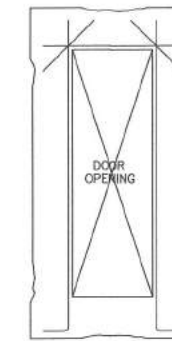
- ALL EMBEDDED PIPES FOR UTILITIES, ETC. THAT PASS THRU BEAMS SHALL NOT EXCEED 100mm IN DIAMETER OR 1/3 BEAM DEPTH WHICHEVER IS LESS, UNLESS OTHERWISE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.
- NO PIPES SHALL BE ALLOWED TO PASS THRU BEAMS VERTICALLY.
- NO PIPES SHALL BE EMBEDDED IN COLUMNS.

NOTES ON CONSTRUCTION JOINTS IN CONCRETE

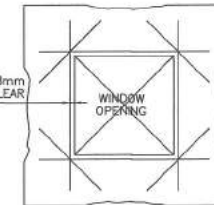
- WHERE A CONSTRUCTION JOINT IS TO BE MADE, THE SURFACE OF CONCRETE SHALL BE CLEANED AND ALL LANTAGE AND STANDING WATER REMOVED. SHEAR KEY SHALL BE PROVIDED AT THE JOINT.



TYPICAL SLAB & BEAM CONSTRUCTION JOINT DET.



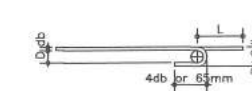
NOTE:
PROVIDE THESE ADDITIONAL BARS FOR ALL OPENINGS PLUS BARS (NOT SHOWN) PARALLEL TO SIDE OF OPENING EQUAL TO THE NUMBER OF TERMINATED BARS AT OPENING
SEE ARCHITECTURAL & MECHANICAL PLANS FOR SLAB OPENING LOCATION.



TYP. EXTERIOR WINDOW & DOOR OPENING

NOTES OF STIRRUPS

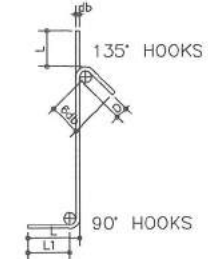
- ALL REINFORCEMENT SHALL BE BENT COLD UNLESS OTHERWISE PERMITTED BY THE STRUCTURAL ENGINEER.
- REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FILLED BENT, EXCEPT AS SHOWN IN THE DESIGN DRAWINGS OR PERMITTED BY THE STRUCTURAL ENGINEER.
- TIES & CLOSE STIRRUPS MUST BE BENT AT 135°.



180° END HOOKS



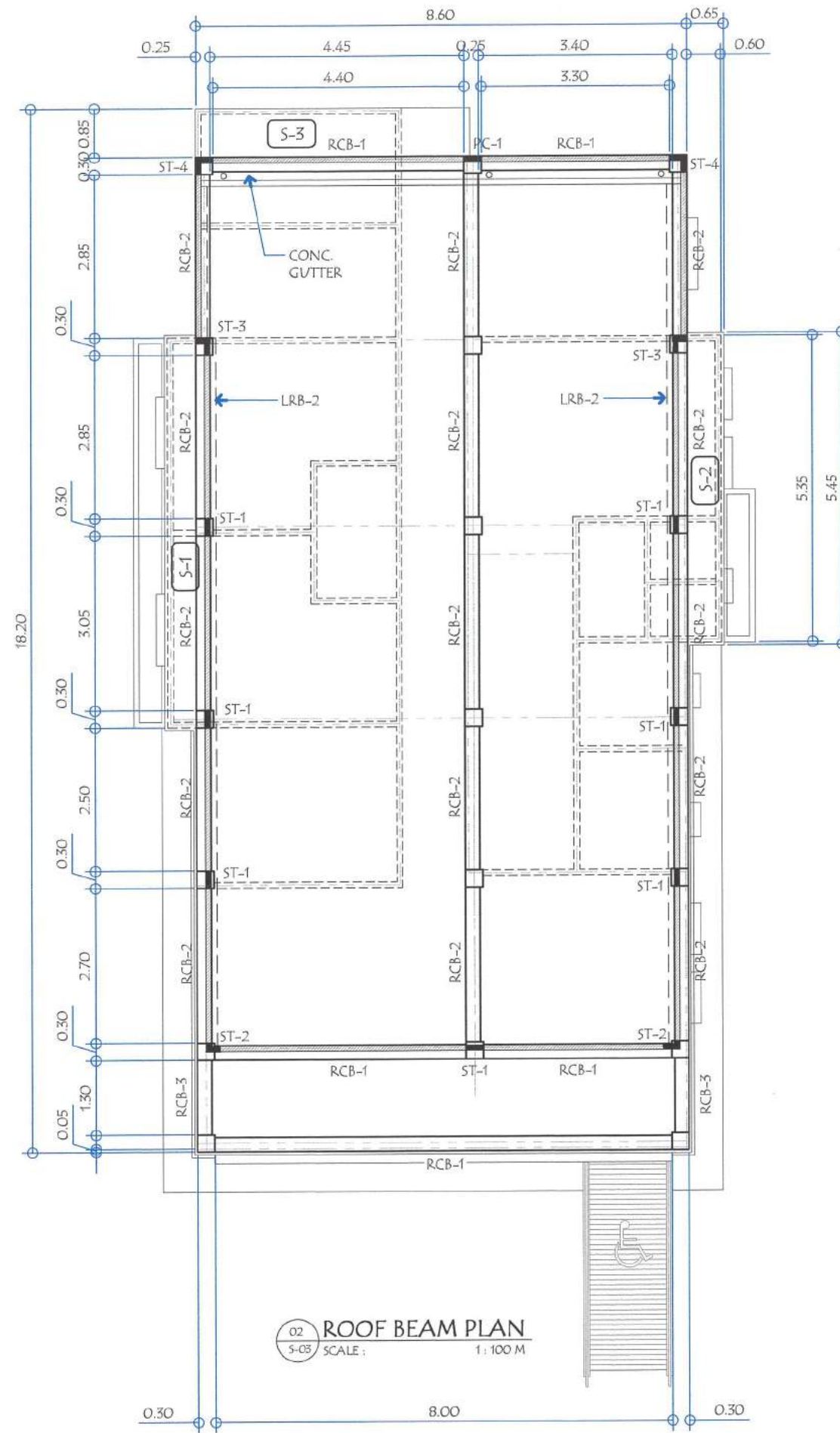
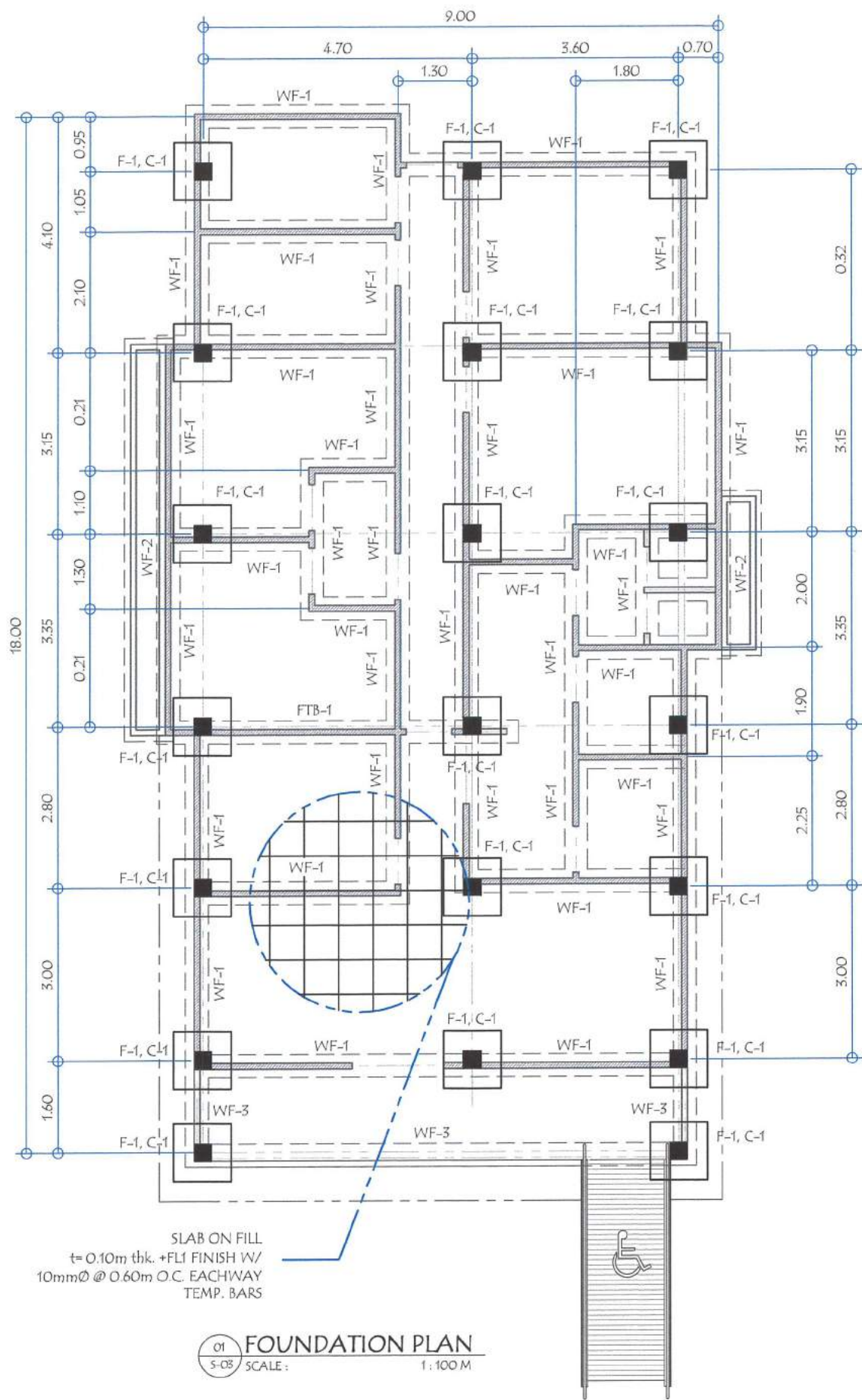
90° END HOOKS

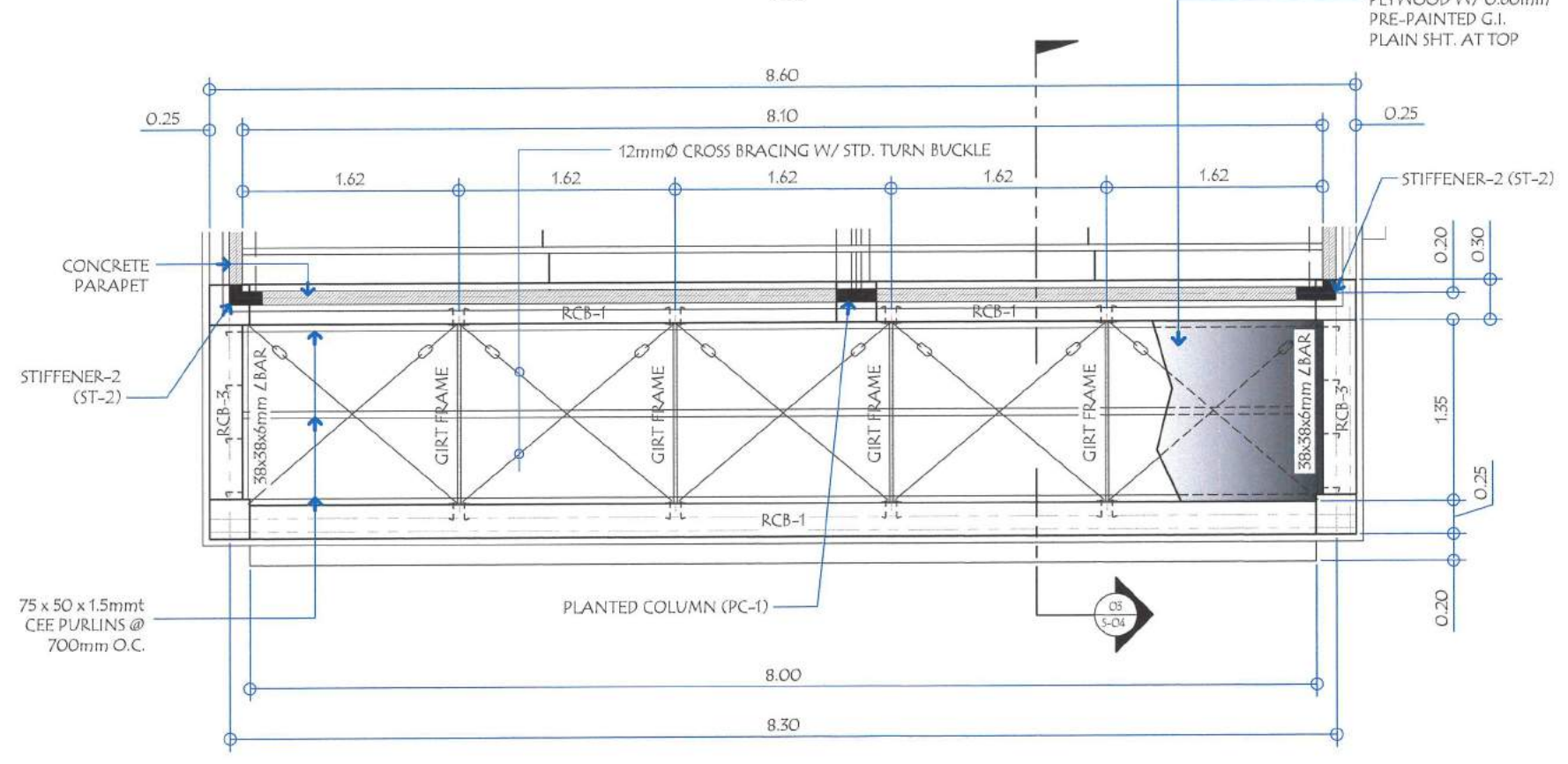
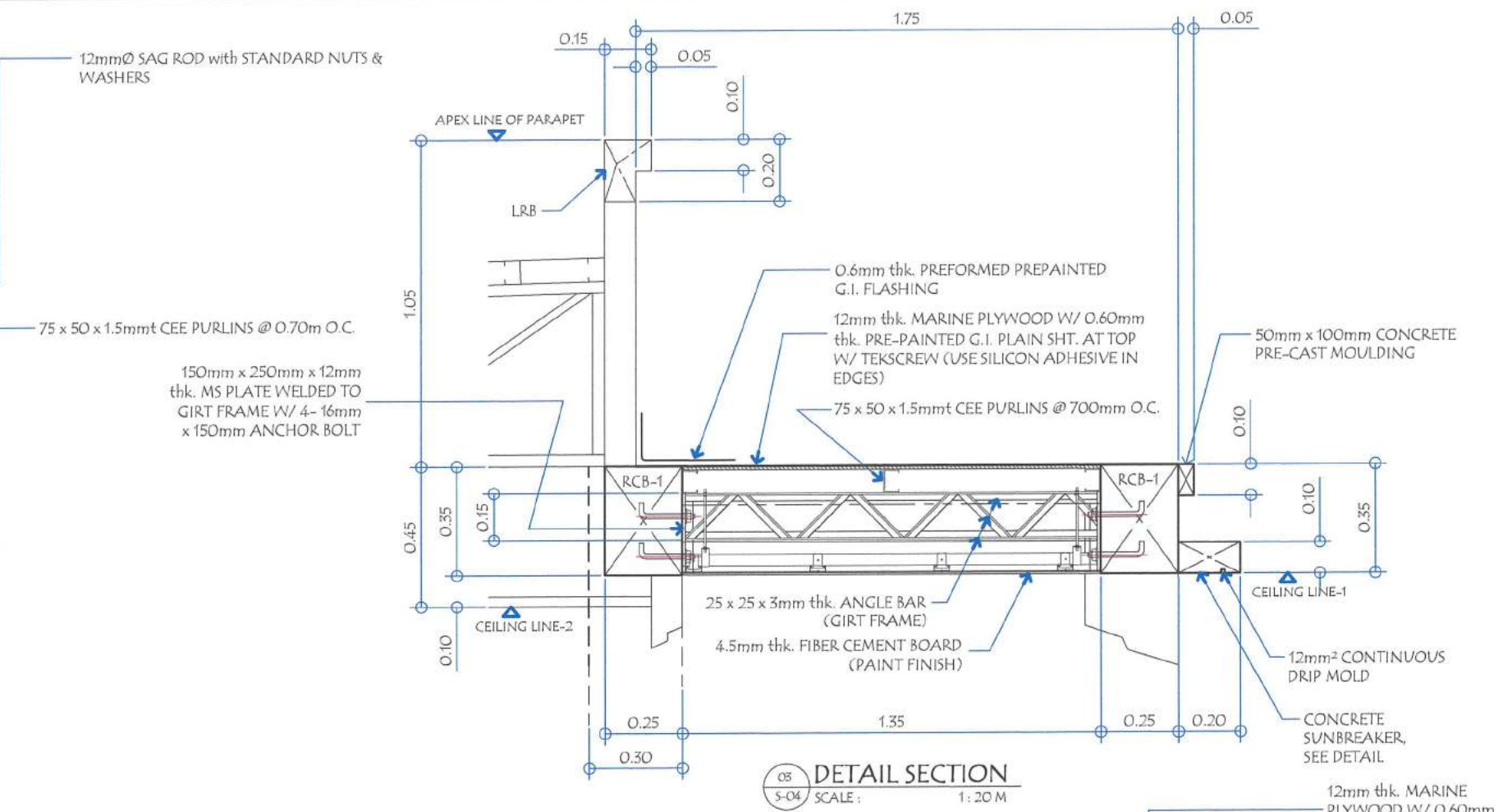
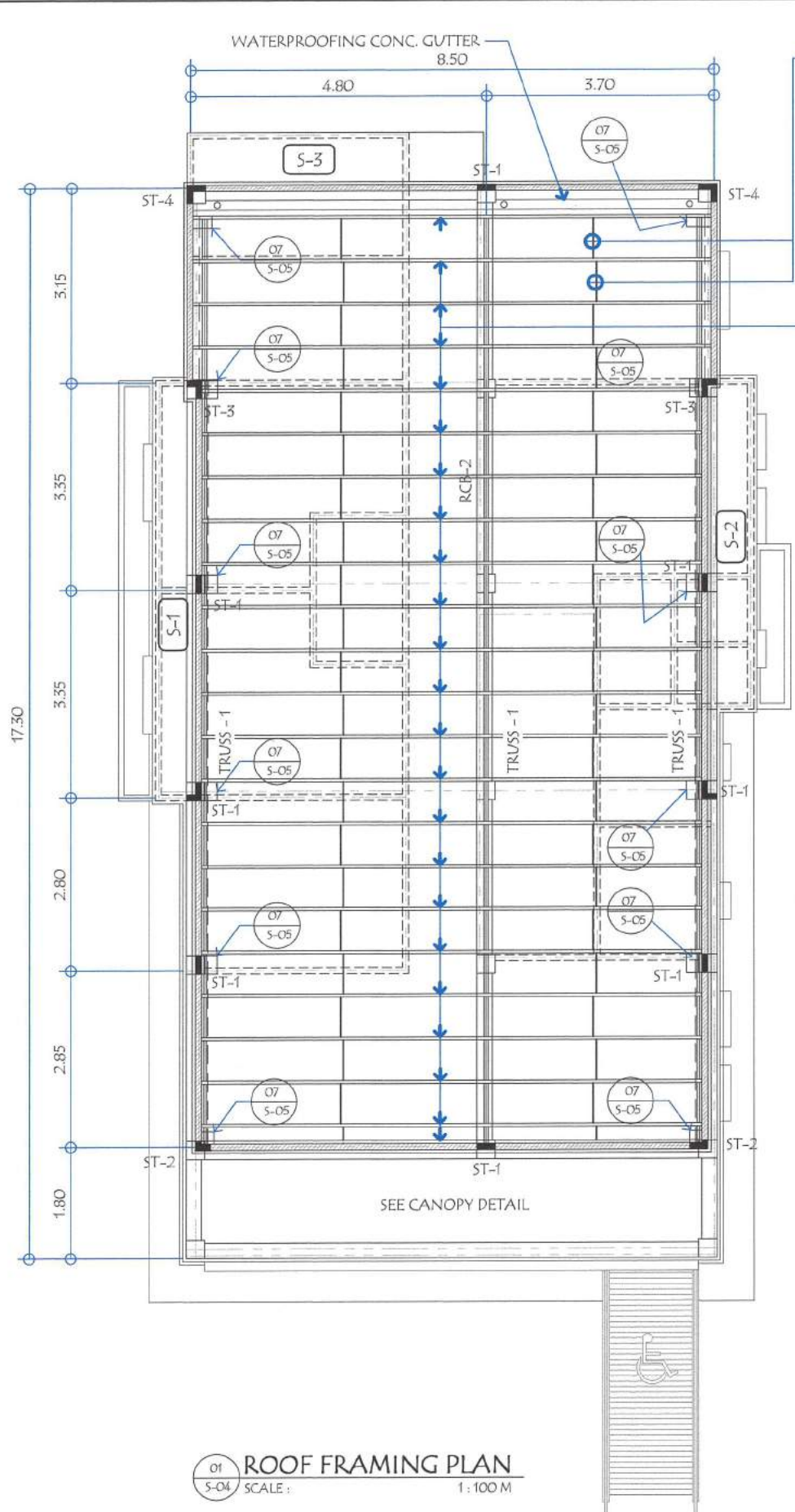


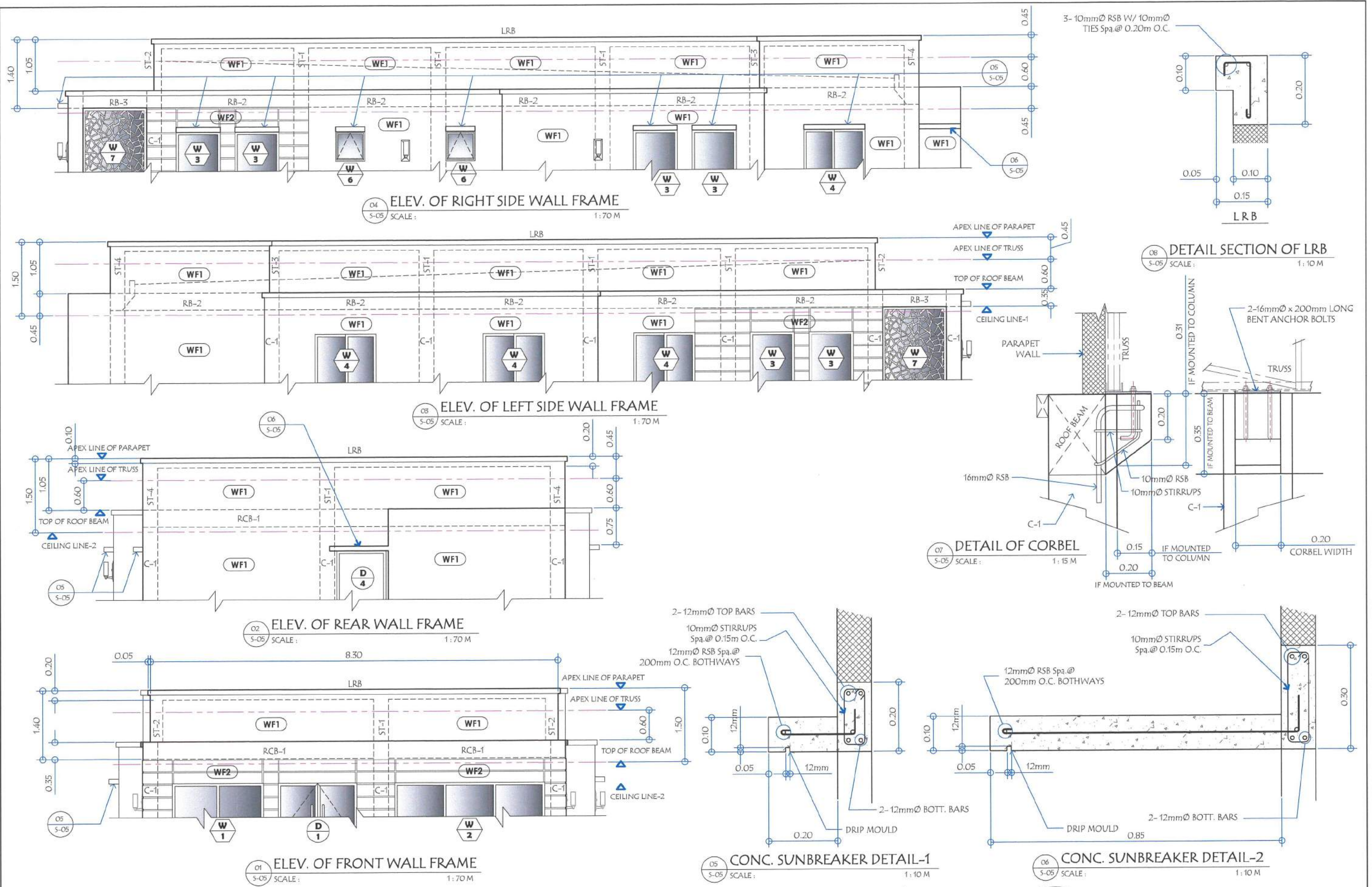
135° HOOKS

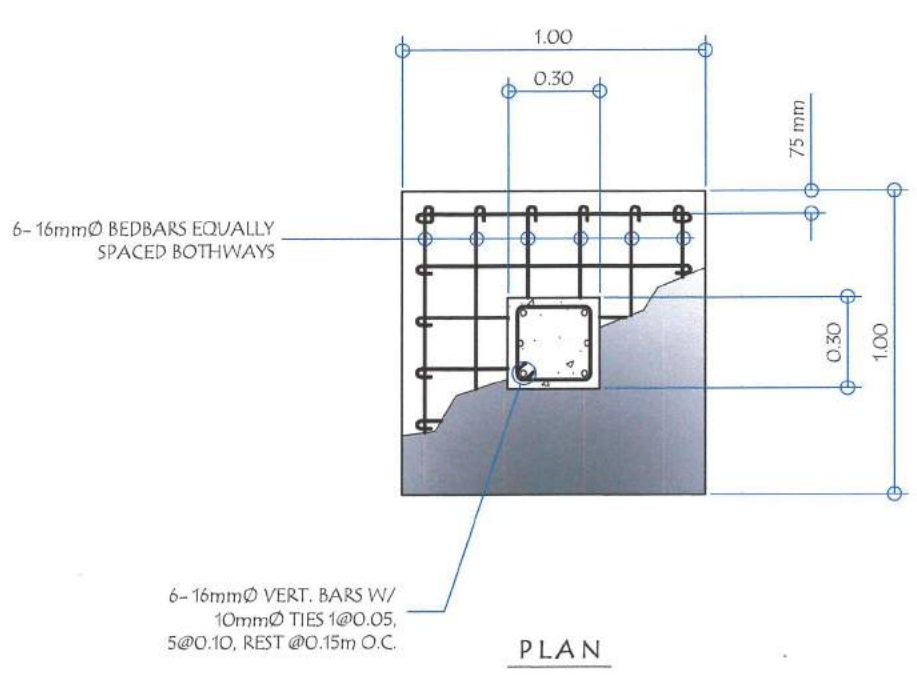
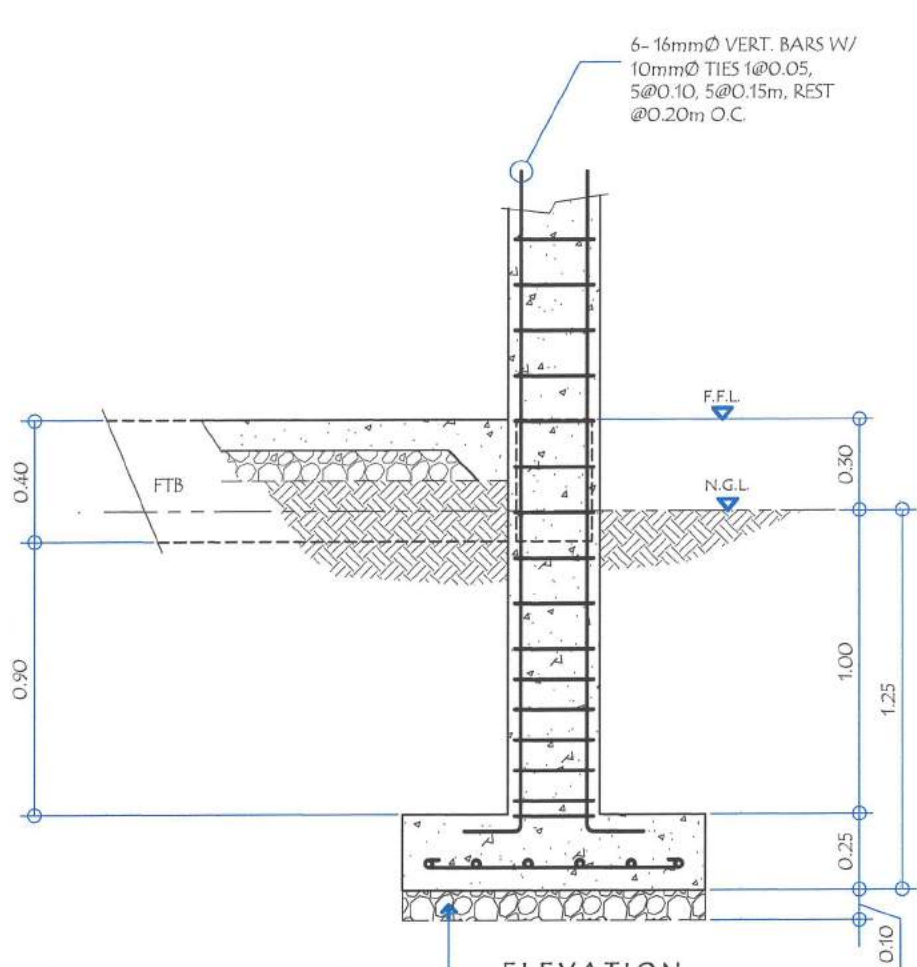
BAR SIZE (DEFORMED)	DIAMETER (mm)	180° HOOK		90° HOOK	
		D+2db	L	L	L
10mm #	80	75	125	150	150
12mm #	75	100	150	200	200
16mm #	95	125	175	250	250
20mm #	115	150	200	300	300
25mm #	150	200	230	450	450
28mm #	240	300	350	550	550
32mm #	300	335	450	600	600

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

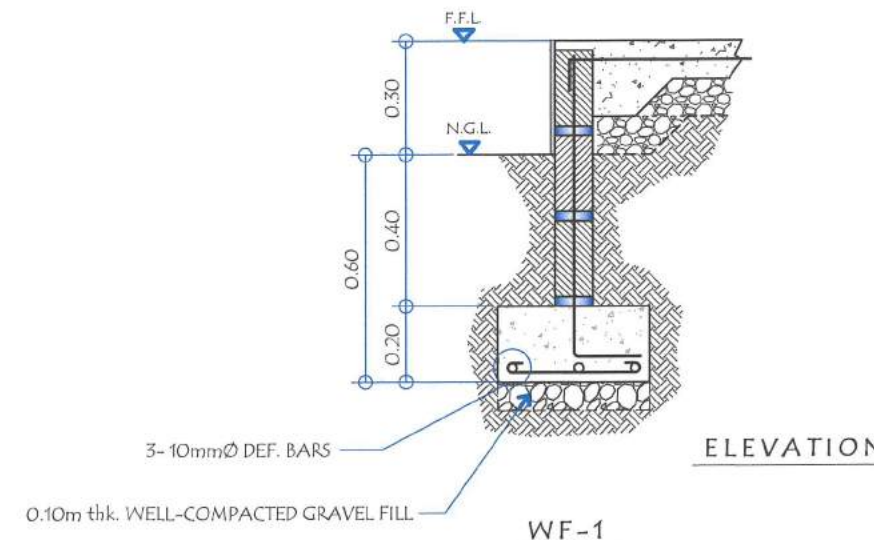




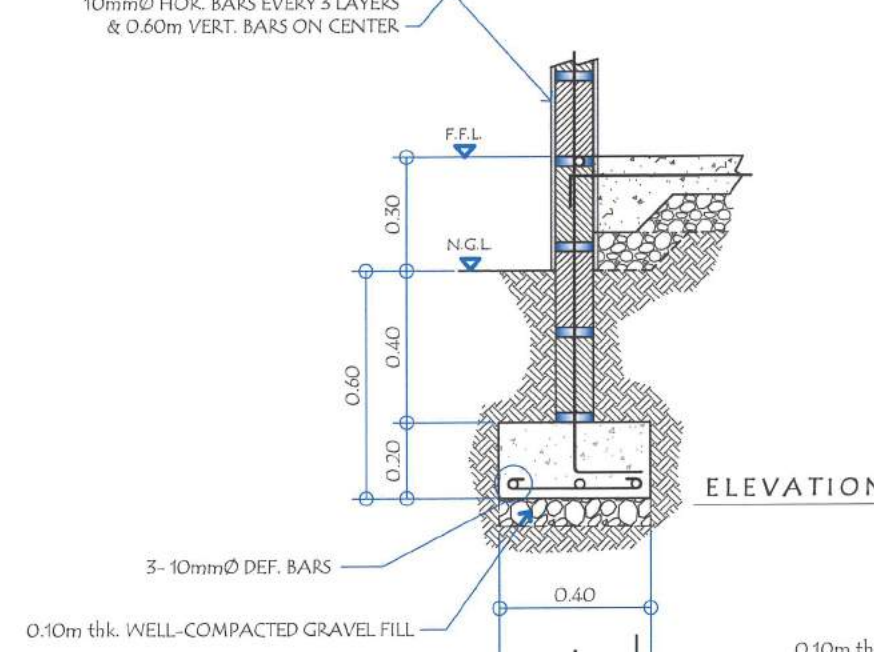




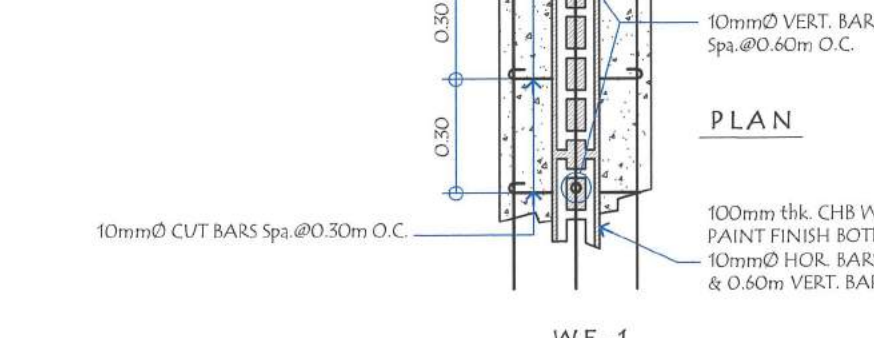
01
S-06
SCALE: 1:25 M
DETAIL OF COLUMN & FOOTING (F1, C1)



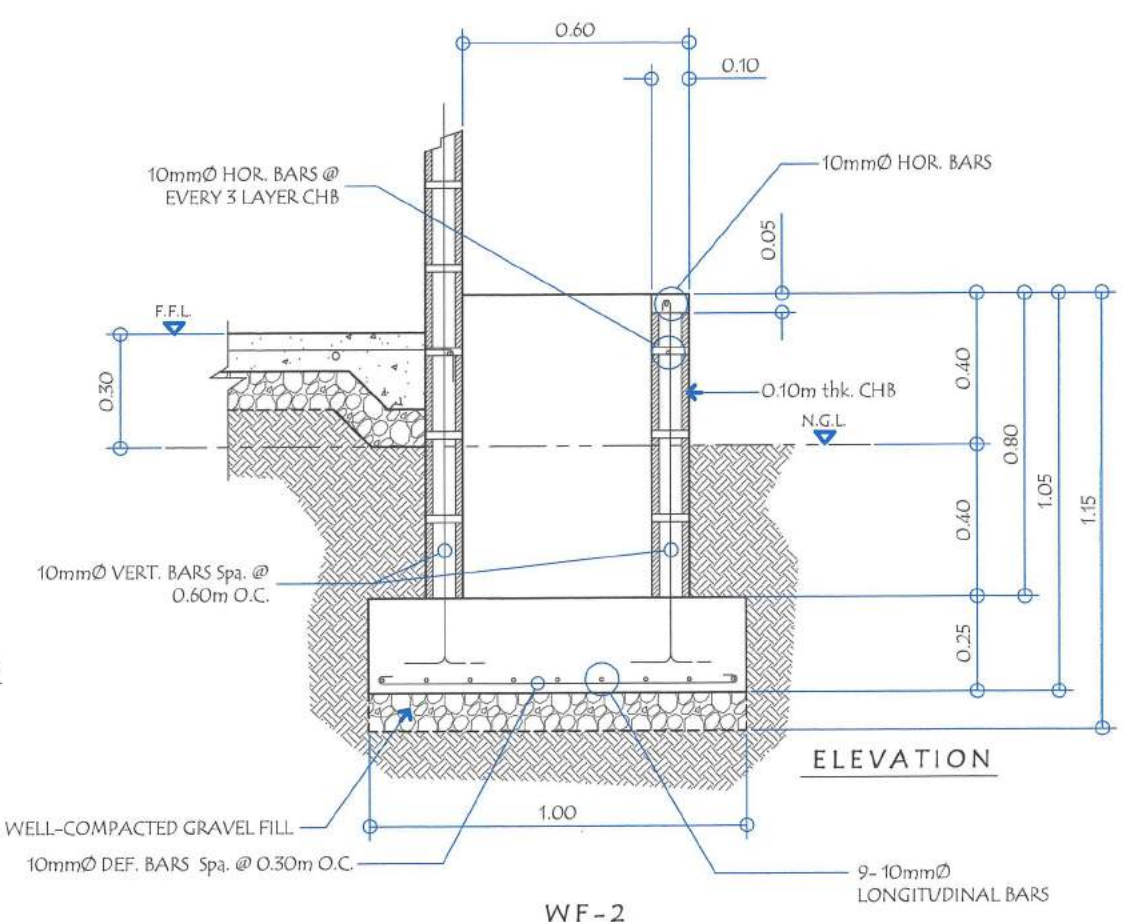
WF-1
ELEVATION
0.10m thk. WELL-COMPACTED GRAVEL FILL



WF-1
ELEVATION
0.10m thk. WELL-COMPACTED GRAVEL FILL



WF-1
PLAN
100mm thk. CHB WALL, PLASTER & PAINT FINISH BOTH SIDE W/ 10mmØ HOR. BARS EVERY 3 LAYERS & 0.60m VERT. BARS ON CENTER



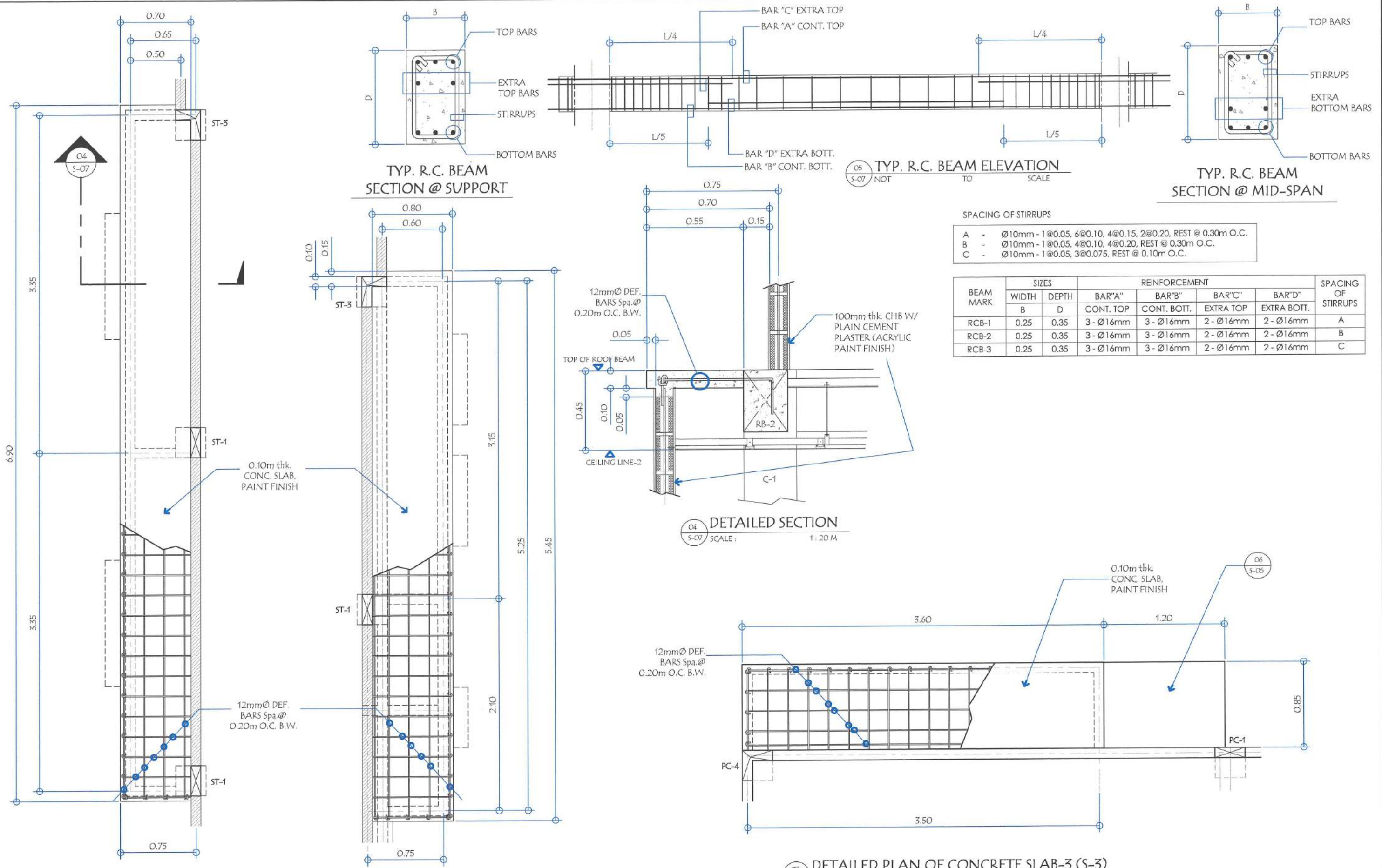
WF-2
ELEVATION
0.10m thk. WELL-COMPACTED GRAVEL FILL



WF-2
PLAN
100mm thk. CHB WALL, PLASTER & PAINT FINISH BOTH SIDE W/ 10mmØ HOR. BARS EVERY 3 LAYERS & 0.60m VERT. BARS ON CENTER

05
S-06
SCALE: 1:20 M
DETAIL OF WALL FOOTINGS

<p>GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 552-3824</p>	<p>DANILO M. HORLADOR, JR. CIVIL ENGINEER</p>		PROJECT AND LOCATION	CHECKED:	REVIEWED:	APPROVED:	SHEET CONTENTS	SHEET NO.	
	REG. NO. 0107545	TIN. NO. 291-941-997	PROPOSED CONSTRUCTION OF ONE-STOREY WATER TESTING LABORATORY	ENGR. MARIA CELIA N. DANDAN	ENGR. ROGELIO A. BESANA, JR.	ENGR. ARN B. GELLANGARIN	AS SHOWN	S-06	
	PTR. NO. 61873A	DATE: 01/12/2022	LOCATION: PUROK UDAGRI BRGY. CONEL, GEN. SANTOS CITY	OIC - PDD	AGM, OPERATION & TECHNICAL SERVICES	GENERAL MANAGER A	DRAWN BY: RRA	REV. NO.	17
							CHECKED BY: ESA	DATE: Oct. 2021	



SPACING OF STIRRUPS

A - Ø10mm - 1@0.05, 6@0.10, 4@0.15, 2@0.20, REST @ 0.30m O.C.
 B - Ø10mm - 1@0.05, 4@0.10, 4@0.20, REST @ 0.30m O.C.
 C - Ø10mm - 1@0.05, 3@0.075, REST @ 0.10m O.C.

BEAM MARK	SIZES		REINFORCEMENT				SPACING OF STIRRUPS
	WIDTH	DEPTH	BAR "A" CONT. TOP	BAR "B" CONT. BOT.	BAR "C" EXTRA TOP	BAR "D" EXTRA BOT.	
RCB-1	0.25	0.35	3 - Ø16mm	3 - Ø16mm	2 - Ø16mm	2 - Ø16mm	A
RCB-2	0.25	0.35	3 - Ø16mm	3 - Ø16mm	2 - Ø16mm	2 - Ø16mm	B
RCB-3	0.25	0.35	3 - Ø16mm	3 - Ø16mm	2 - Ø16mm	2 - Ø16mm	C

01 DETAILED PLAN OF CONCRETE SLAB-1 (S-1)
 SCALE: 1:55 M

02 DETAILED PLAN OF CONCRETE SLAB-2 (S-2)
 SCALE: 1:55 M

03 DETAILED PLAN OF CONCRETE SLAB-3 (S-3)
 SCALE: 1:55 M

GENERAL SANTOS CITY WATER DISTRICT
 E. FERNANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY
 ENGINEERING & CONSTRUCTION DEPARTMENT
 PLANNING AND DESIGN DIVISION
 TEL. NO.: (083) 552 - 3824

DANILO M. HORLADOR, JR.
 CIVIL ENGINEER

REG. NO. 0107545 TIN. NO. 291-941-997
 PTR. NO. 61873A DATE: 01/12/2022

PROJECT AND LOCATION

PROPOSED CONSTRUCTION OF ONE-STOREY WATER TESTING LABORATORY

LOCATION: PUROK UDAGRI, BRGY. CONEL, GEN. SANTOS CITY

CHECKED: ENGR. MARIA CELIA N. DANDAN
 OIC - PDD

REVIEWED: ENGR. ROGELIO A. BESANA, JR.
 AGM, OPERATION & TECHNICAL SERVICES

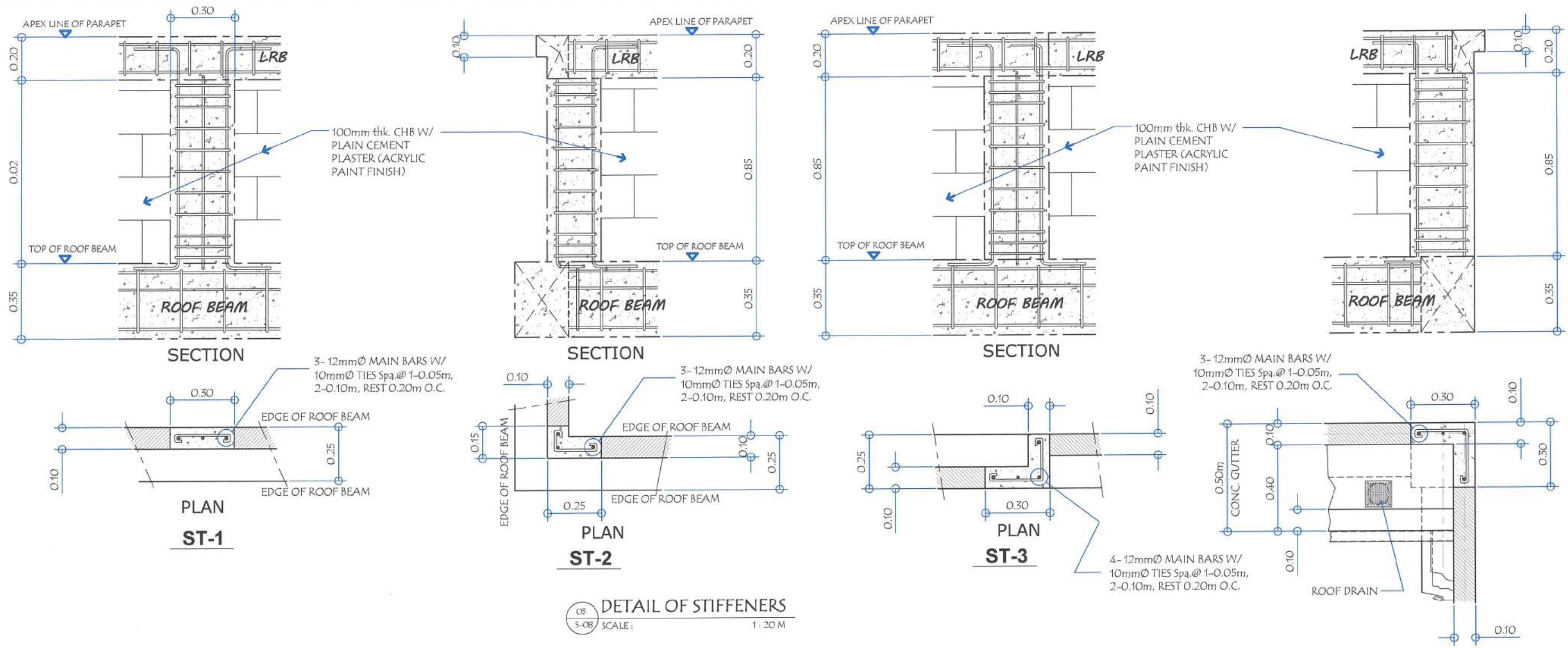
APPROVED: ENGR. ARN B. GELLANGARIN
 GENERAL MANAGER A

SHEET CONTENTS: AS SHOWN

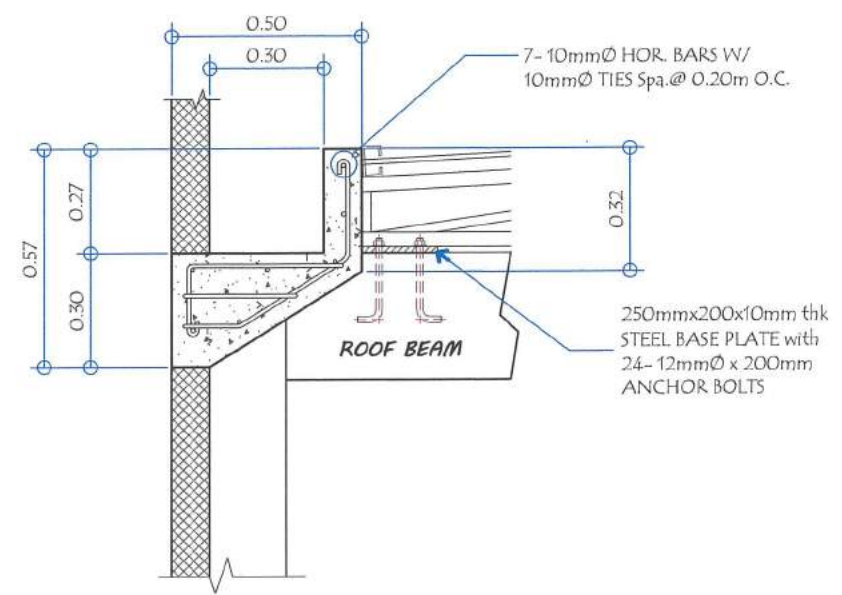
DRAWN BY: RRA REV. NO.
 CHECKED BY: ESA DATE: Oct. 2021

SHEET NO. S-07

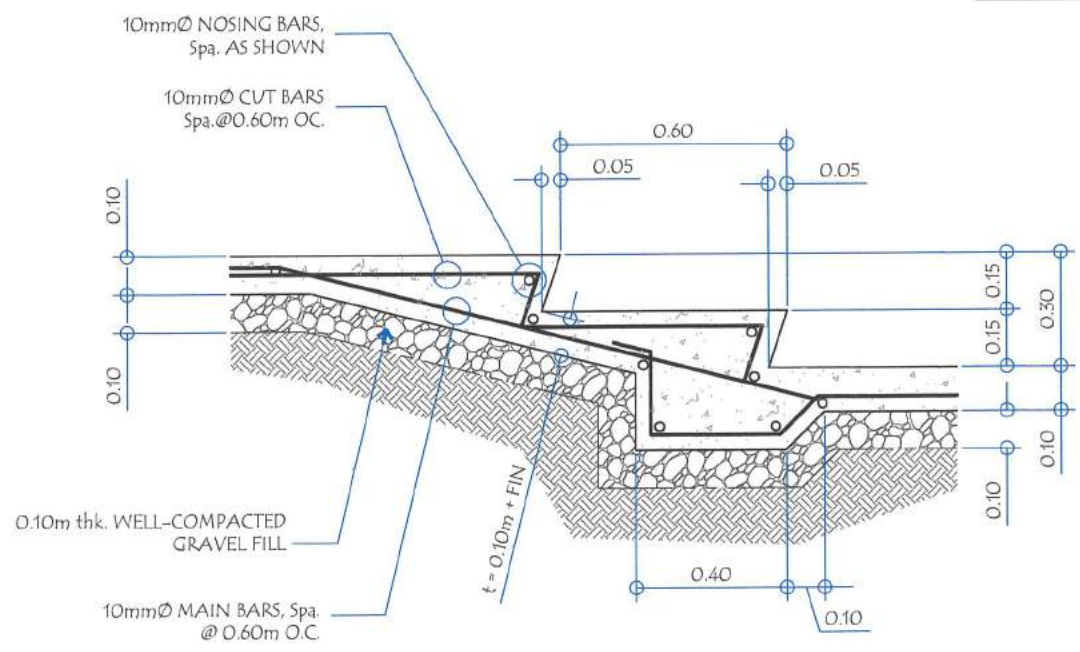
18 29



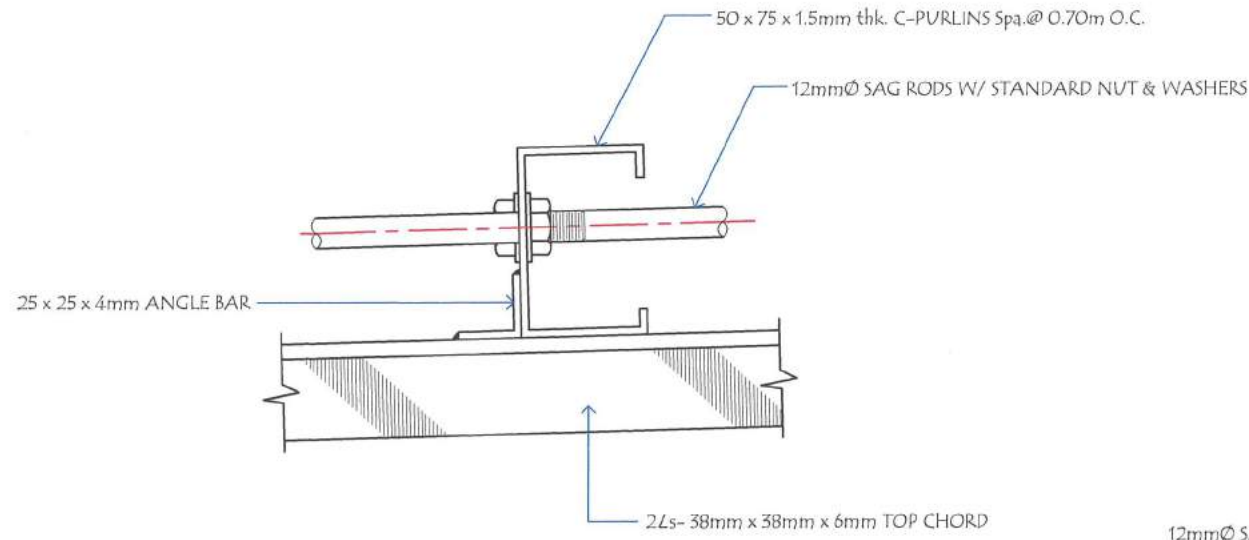
05
5-08
SCALE: 1:20 M
DETAIL OF STIFFENERS



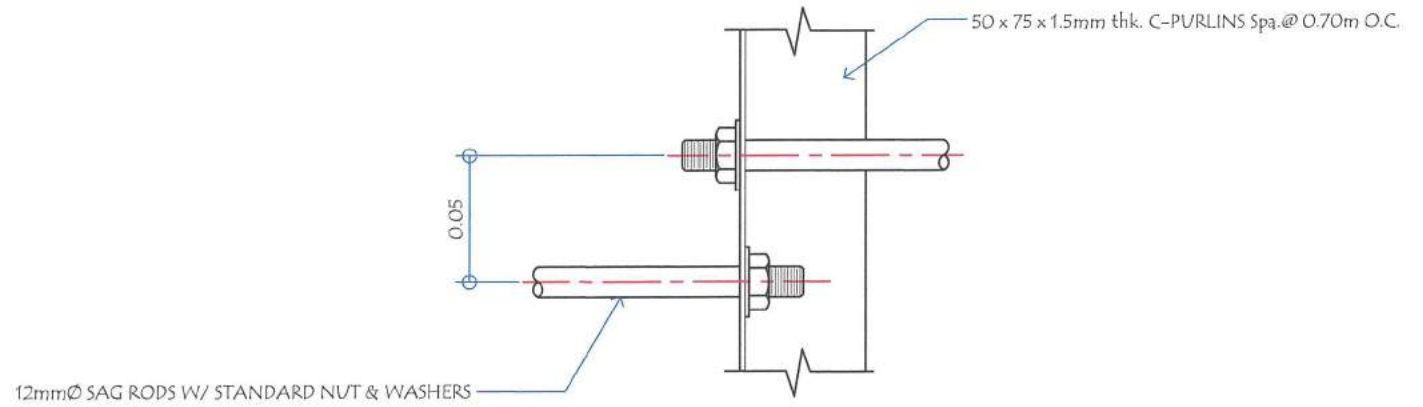
01
5-08
SCALE: 1:20 M
DETAIL OF CONC. GUTTER



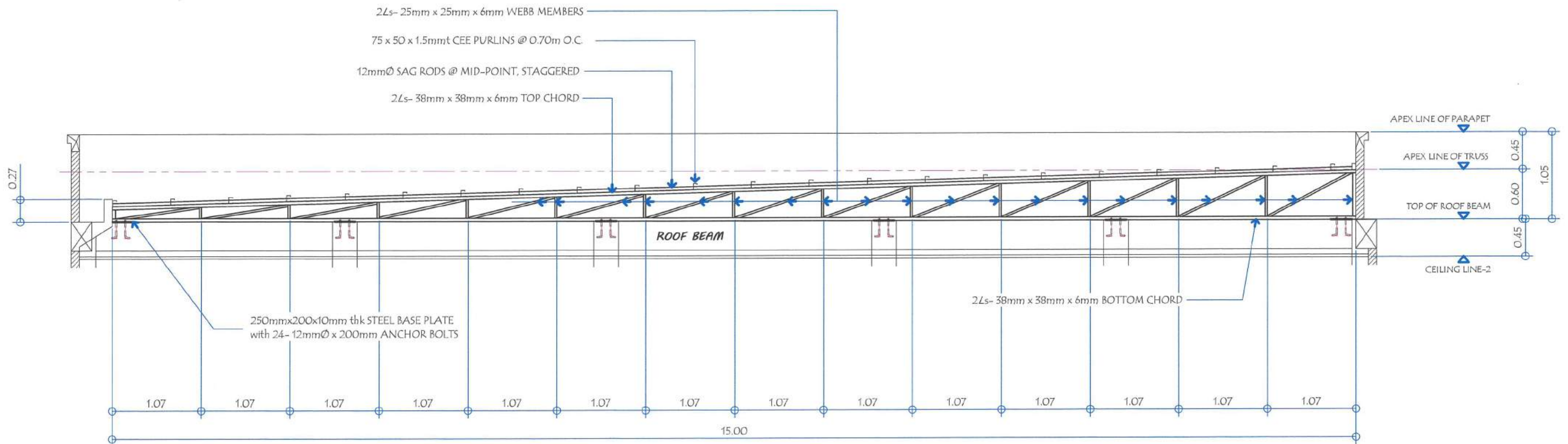
02
5-08
SCALE: 1:20 M
DETAIL OF STAIR ON GRADE



02
5-09 PURLIN CONNECTION DETAIL
SCALE: 1:3 M



05
5-09 DETAIL CONNECTION OF PURLIN TO SAG ROD
SCALE: 1:3 M



01
5-09 DETAIL ELEVATION OF TRUSS
SCALE: 1:30 M



GENERAL SANTOS CITY WATER DISTRICT
E. FERNANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY
ENGINEERING & CONSTRUCTION DEPARTMENT
PLANNING AND DESIGN DIVISION
TEL. NO.: (083) 552-3824

DANILO M. HORLADOR, JR.
CIVIL ENGINEER

REG. NO. 0107545 TIN. NO. 291-941-997
PTR. NO. 61873A DATE: 01/12/2022

PROJECT AND LOCATION

PROPOSED CONSTRUCTION OF
ONE-STOREY WATER TESTING
LABORATORY

LOCATION: PUROK UDAGRL BRGY. CONEL, GEN. SANTOS CITY

CHECKED:

ENGR. MARIA CELIA N. DANDAN
OIC - PDD

REVIEWED:

ENGR. ROGELIO A. BESANA, JR.
AGM. OPERATION & TECHNICAL SERVICES

APPROVED:

ENGR. ARN B. GELLANGARIN
GENERAL MANAGER A

SHEET CONTENTS

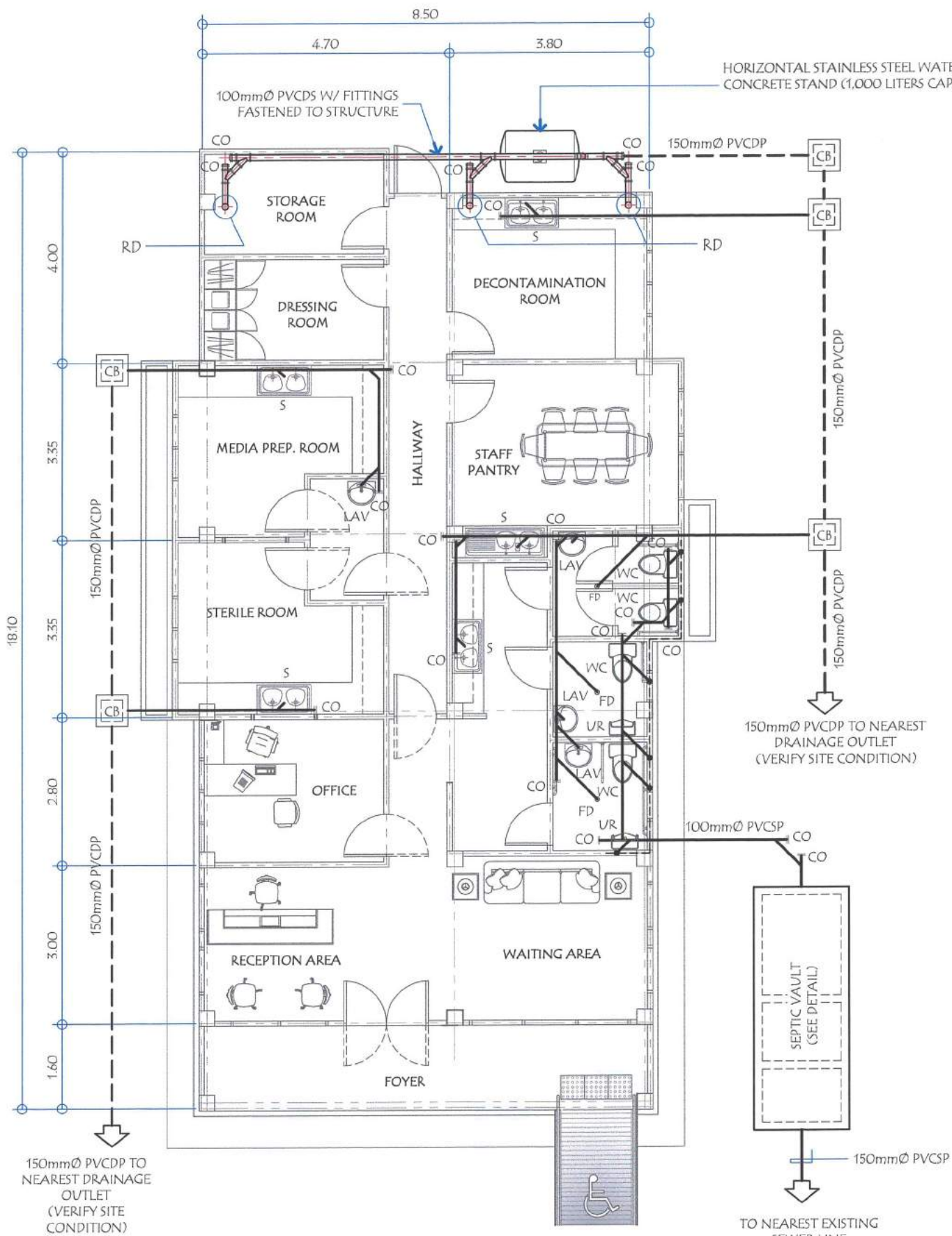
AS SHOWN

DRAWN BY: RRA REV. NO.
CHECKED BY: ESA DATE: Oct. 2021

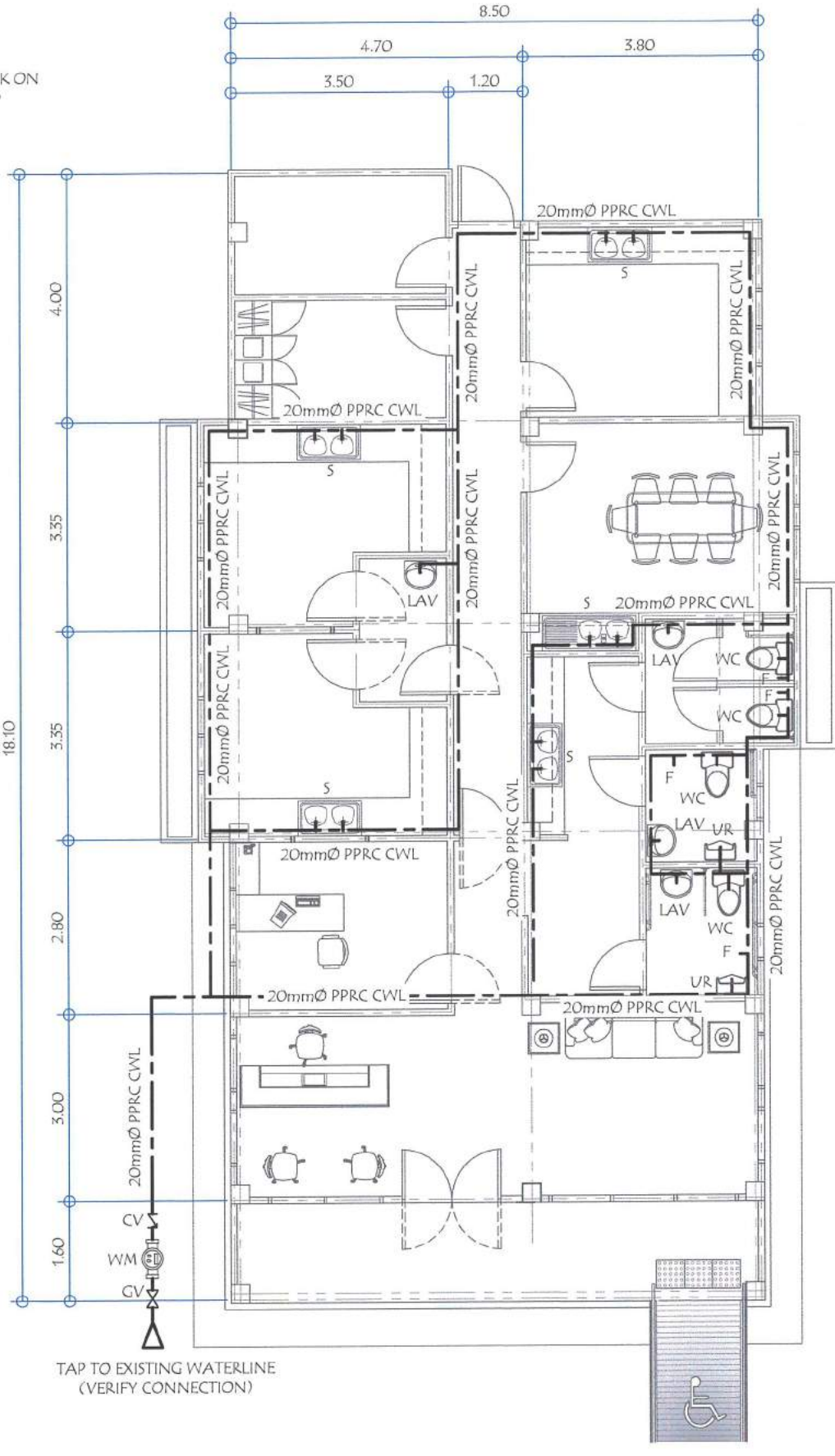
SHEET NO.

S-09

20 29

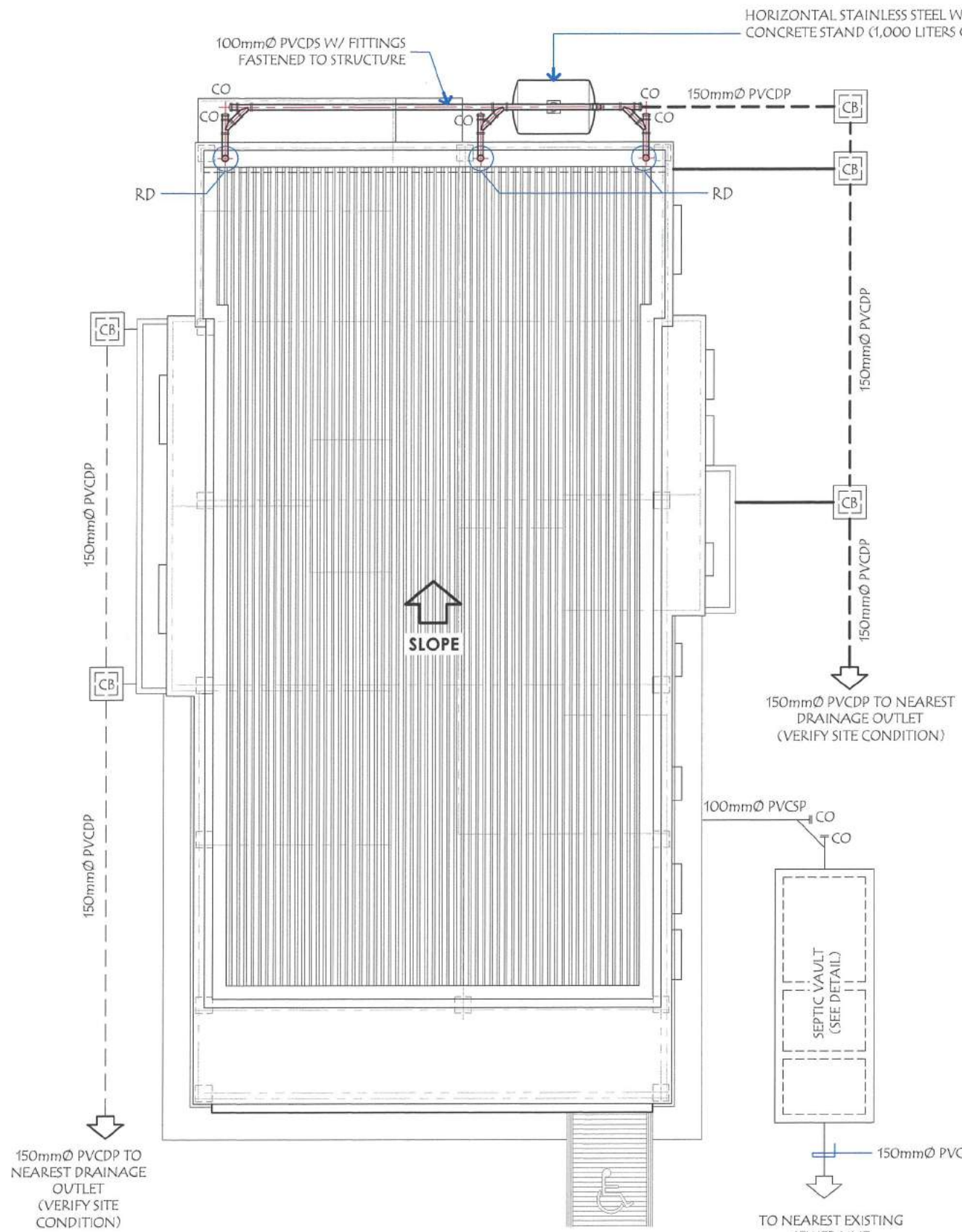


01 FLOOR PLAN (SEWER & DRAINAGE LAY-OUT)
 P-01 SCALE: 1:100 M

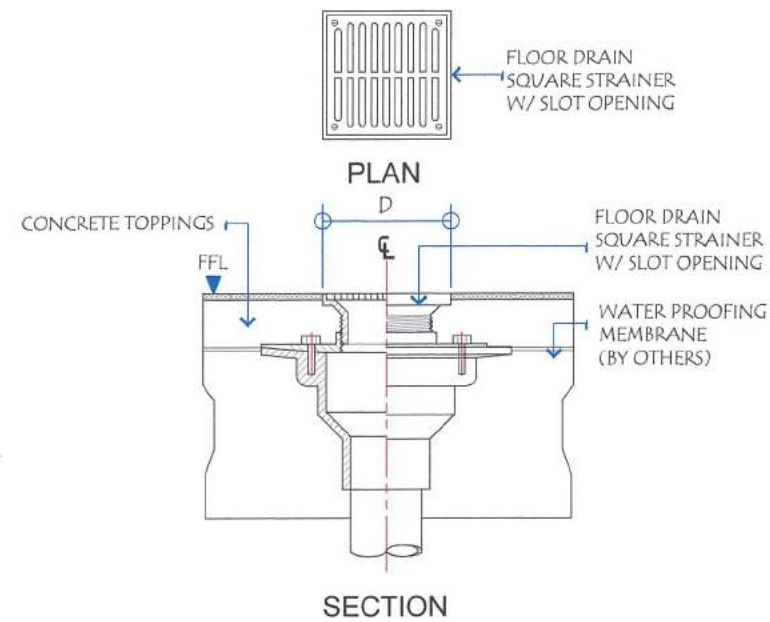


02 FLOOR PLAN (WATERLINE LAY-OUT)
 P-01 SCALE: 1:100 M

<p>GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 552-3824</p>	<p>DANILO M. HORLADOR, JR. CIVIL ENGINEER</p>	<p>PROJECT AND LOCATION</p> <p>PROPOSED CONSTRUCTION OF ONE-STORY WATER TESTING LABORATORY</p>	<p>CHECKED:</p> <p>ENGR. MARILYN CELIA N. DANDAN OIC - PDD</p>	<p>REVIEWED:</p> <p>ENGR. ROGELIO A. BESANA, JR. AGM, OPERATION & TECHNICAL SERVICES</p>	<p>APPROVED:</p> <p>ENGR. ARN B. GELLANGARN GENERAL MANAGER A</p>	<p>SHEET CONTENTS</p> <p>AS SHOWN</p>	<p>SHEET NO.</p> <p>P-01</p>	
	<p>REG. NO: 0107545 PTR. NO. 61873A</p>	<p>TIN. NO: 291-941-997 DATE: 01/12/2022</p>	<p>LOCATION: PUROK UDAGRI, BRGY. CONEL, GEN. SANTOS CITY</p>				<p>DRAWN BY: RRA CHECKED BY: ESA</p>	<p>REV. NO.</p> <p>DATE: Oct. 2021</p>
							<p>21</p>	<p>29</p>



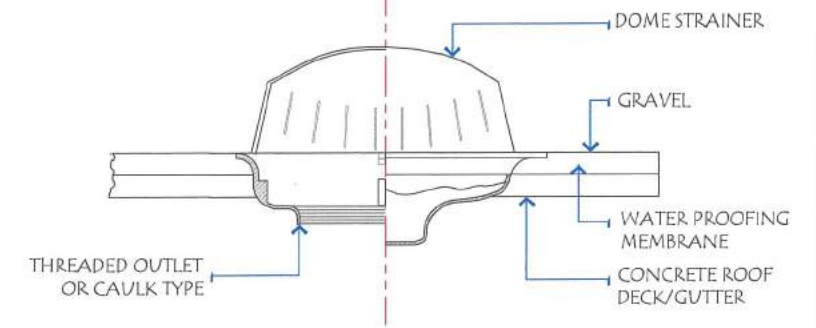
01 ROOF PLAN (SEWER & DRAINAGE LAY-OUT)
SCALE: 1:100 M



SCHEDULE OF DIMENSIONS

PIPE SIZE IN 'A'	DIMENSION IN MM	
	D	F
50	100x100	225.42
75	125x125	225.42
100	150x150	225.42
150	200x200	282.57

05 FLOOR DRAIN DETAIL
SCALE: NTS



04 FLOOR DRAIN DETAIL
SCALE: NTS

SPECIFICATIONS:

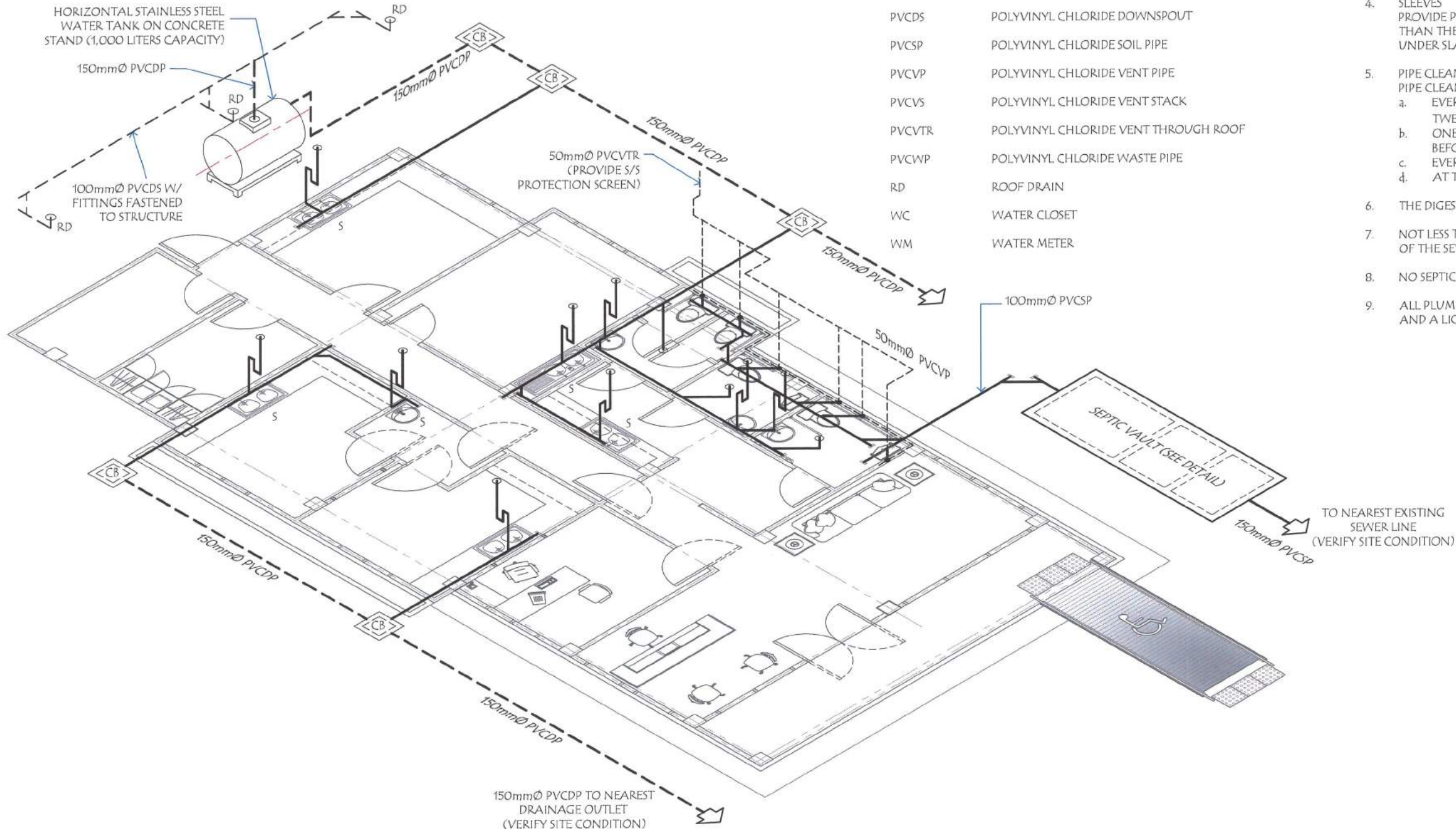
ALL PLUMBING WORKS AND INSTALLATION SHALL CONFORM WITH THE LATEST EDITION OF NATIONAL PLUMBING CODE RULES AND REGULATION OF THE ENFORCING AUTHORITY CONCERNED AND CITY

ALL HORIZONTAL PIPINGS SHALL RUN IN PRACTICAL ALIGNMENT AND SHALL BE PROVIDED WITH SLOPE OF NOT LESS THAN 1% SLOPE AND SUPPORTED OR ANCHORED EVERY 3.00m INTERVALS

ALL MATERIALS SHALL BE NEW AND APPROVED TYPES:

- a. FOR SANITARY LINES:
2"Ø PVC PIPES FOR VENTS AND FIXTURES
4"Ø PVC PIPES FOR WC, FD, CO.
- b. FOR WATER LINES:
½"Ø G.I. PIPE FOR FIXTURES
¾"Ø G.I. PIPE FOR BRANCHES
1"Ø G.I. PIPE FOR MAINLINE SUPPLY

ALL PLUMBING WORKS AND INSTALLATION SHALL BE STRICTLY SUPERVISED BY A DULY REGISTERED MASTER PLUMBER



PLUMBING LEGEND:

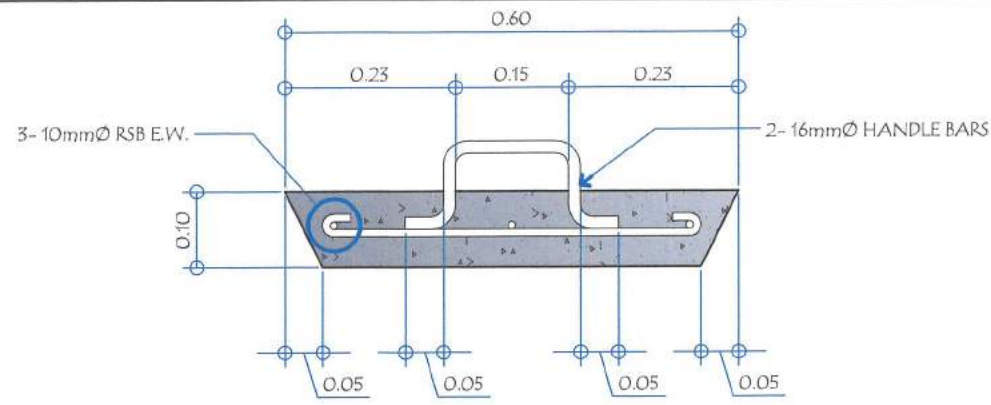
- CB CATCH BASIN
- CO CLEAN OUT
- CV CHECK VALVE
- FD FLOOR DRAIN
- GV GATE VALVE
- LAV LAVATORY
- MH MANHOLE
- PPRC CWL POLYPROPYLENE RANDOM COPOLYMER COLD WATER LINE
- PVCDP POLYVINYL CHLORIDE DRAINAGE PIPE
- PVCD S POLYVINYL CHLORIDE DOWNSPOUT
- PVCSP POLYVINYL CHLORIDE SOIL PIPE
- PVCVP POLYVINYL CHLORIDE VENT PIPE
- PVCVS POLYVINYL CHLORIDE VENT STACK
- PVCVTR POLYVINYL CHLORIDE VENT THROUGH ROOF
- PVCWP POLYVINYL CHLORIDE WASTE PIPE
- RD ROOF DRAIN
- WC WATER CLOSET
- WM WATER METER

PLUMBING NOTES:

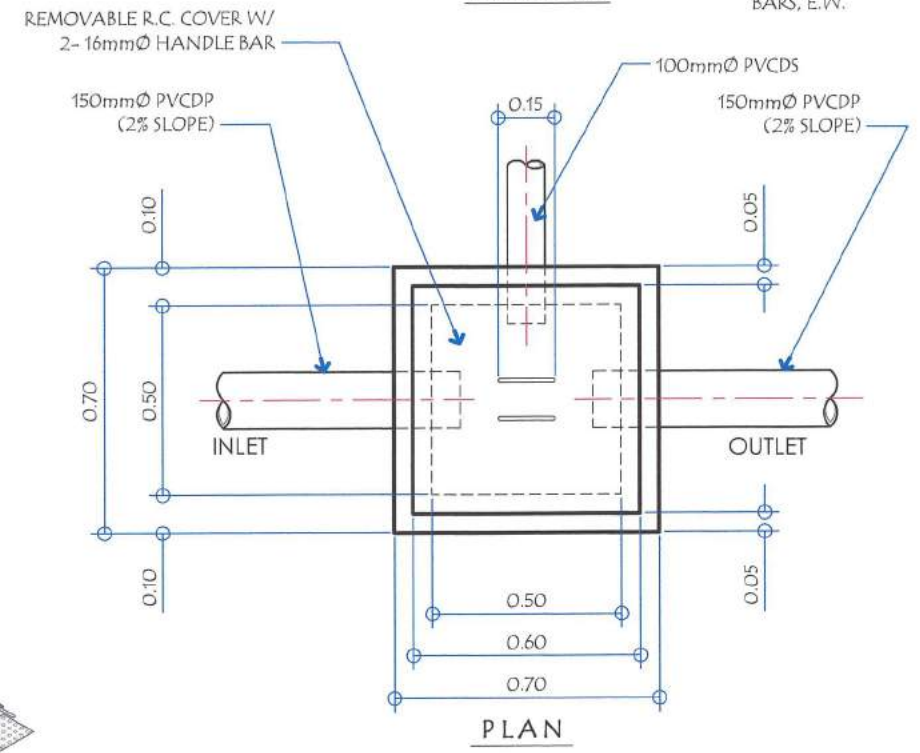
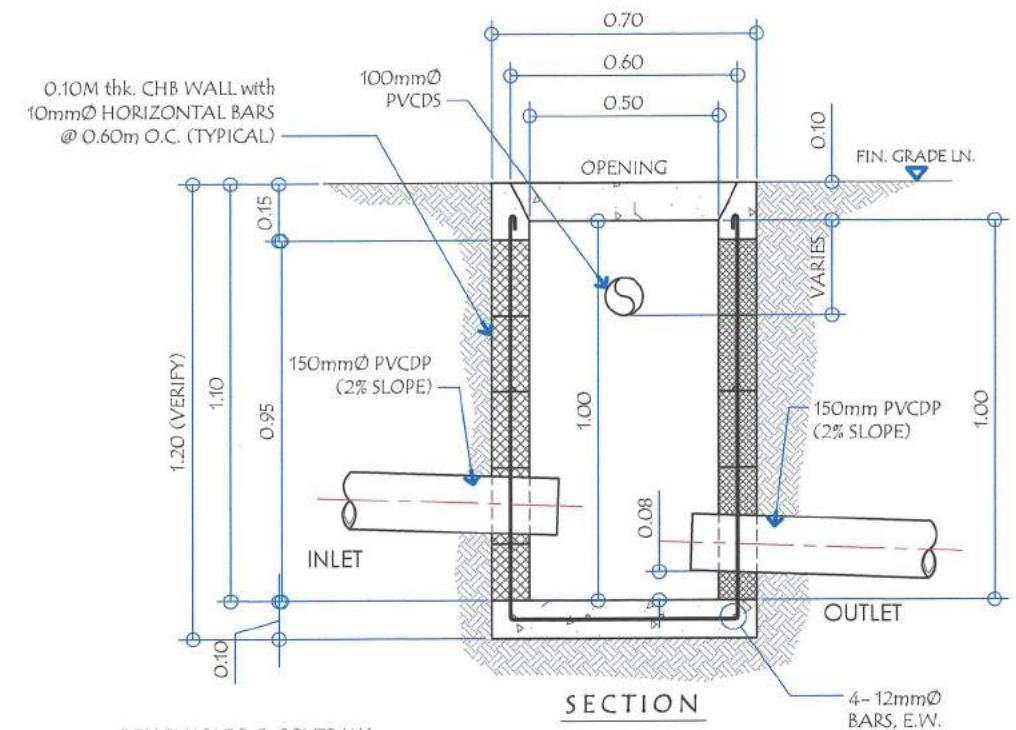
1. GRADES OF HORIZONTAL PIPING
RUN ALL HORIZONTAL PIPINGS IN PERFECT ALIGNMENT AND AT A FORM GRADE OF NOT LESS THAN TWO PERCENT (2%)
2. CHANGE IN DIRECTION
ALL CHANGE IN DIRECTION SHALL BE MADE BY APPROPRIATE USE OF FORTY FIVE DEGREES (45°) WYES, LONG SWEEP QUARTER BEND, SIX-EIGHT OR SIXTEENTH BENDS. WHEN THE CHANGE OF FLOW IS FROM HORIZONTAL TO VERTICAL, 1/8 BEND COMBINATION MAYBE USED ON VERTICAL STACKS AND SHORT QUARTER BENDS MAYBE USED ON WASTE LINE. TEE AND CROSSES MAYBE USED IN VENT PIPES.
3. PROHIBITED FITTINGS
NO DOUBLE HUB OR TEE BRANCH SHALL BE USED ON HORIZONTAL WASTE LINES. THE DRILLINGS AND TAPPINGS OF HOUSE DRAIN, WASTE OR VENT PIPES AND USE OF SADDLE HUB AND BEND ARE PROHIBITED.
4. SLEEVES
PROVIDE PIPE SLEEVES AT WALLS, COLUMNS OR SLABS ONE SIZE BIGGER THAN THE ACTUAL SIZE PASSING THROUGH THE WALLS, COLUMNS OR UNDER SLAB TO PROTECT PIPE FROM LEAKAGE.
5. PIPE CLEAN-OUTS
PIPE CLEAN-OUTS ARE REQUIRED UNDER THE FOLLOWING CONDITIONS:
a. EVERY CHANGE IN HORIZONTAL DIRECTIONS EXCEEDING TWENTY-TWO AND ONE-HALF DEGREES (22 ½°).
b. ONE AND ONE-HALF METERS (1.50 m) INSIDE THE PROPERTY LINE BEFORE THE HOUSE DRAINAGE CONNECTION.
c. EVERY FIFTEEN METERS (15.00 m) IN HORIZONTAL RUN OF PIPES.
d. AT THE END OF ANY HORIZONTAL PIPE LINES.
6. THE DIGESTION CHAMBER OF SEPTIC VAULT MUST BE WATERPROOFED.
7. NOT LESS THAN 300 mm OF AIR SPACE MUST BE LEFT BETWEEN THE TOP OF THE SEWAGE AND THE UNDER PART OF THE VAULT ROOF SLAB.
8. NO SEPTIC VAULT MUST BE CONSTRUCTED UNDER THE BUILDING.
9. ALL PLUMBING WORKS SHALL BE DONE BY A LICENSED MASTER PLUMBER AND A LICENSED PLUMBING CONTRACTOR.

ISOMETRIC DIAGRAM (SEWER & DRAINAGE LINE LAY-OUT)
SCALE: NTS

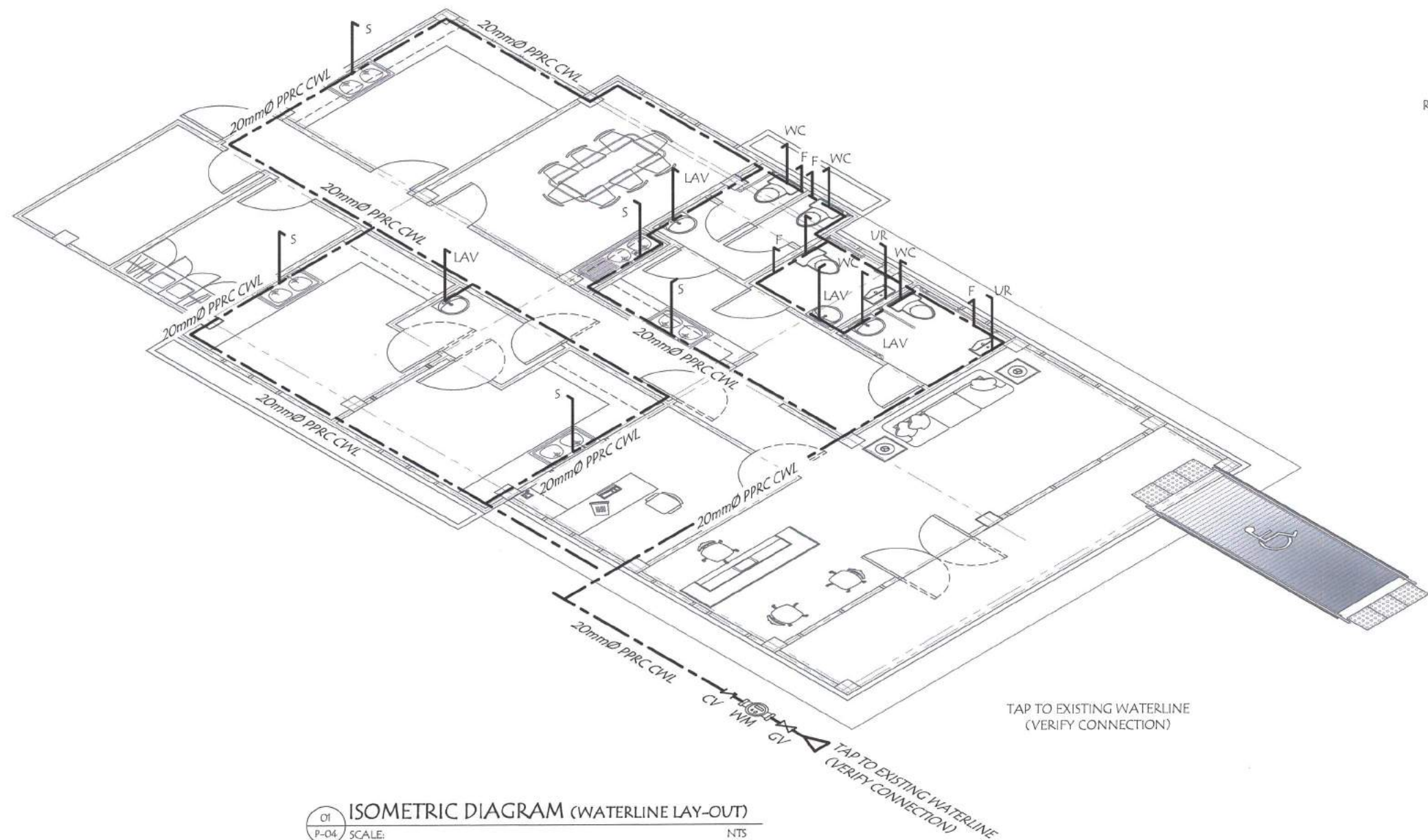
<p>GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 552 - 3824</p>	<p>ENGR. ROGELIO A. BESANA, JR. REGISTERED MASTER PLUMBER</p>	<p>PROJECT AND LOCATION PROPOSED CONSTRUCTION OF ONE-STOREY WATER TESTING LABORATORY</p>	<p>CHECKED: ENGR. MARIA CELIA N. DANDAN OIC - PDD</p>	<p>REVIEWED: ENGR. ROGELIO A. BESANA, JR. AGM, OPERATION & TECHNICAL SERVICES</p>	<p>APPROVED: ENGR. ARN B. GELLANGARIN GENERAL MANAGER A</p>	<p>SHEET-CONTENTS AS SHOWN</p>	<p>SHEET NO. P-03</p>	
	<p>REG. NO. 2672 PTR. NO. 61872A</p>	<p>TIN. NO. 190-455-622 DATE: 01/12/2022</p>	<p>LOCATION: PUROK UDAGR, BRGY. CONEL, GEN. SANTOS CITY</p>				<p>DRAWN BY: RRA CHECKED BY: ESA</p>	<p>REV. NO. DATE: Oct. 2021</p>
							<p>23</p>	<p>29</p>



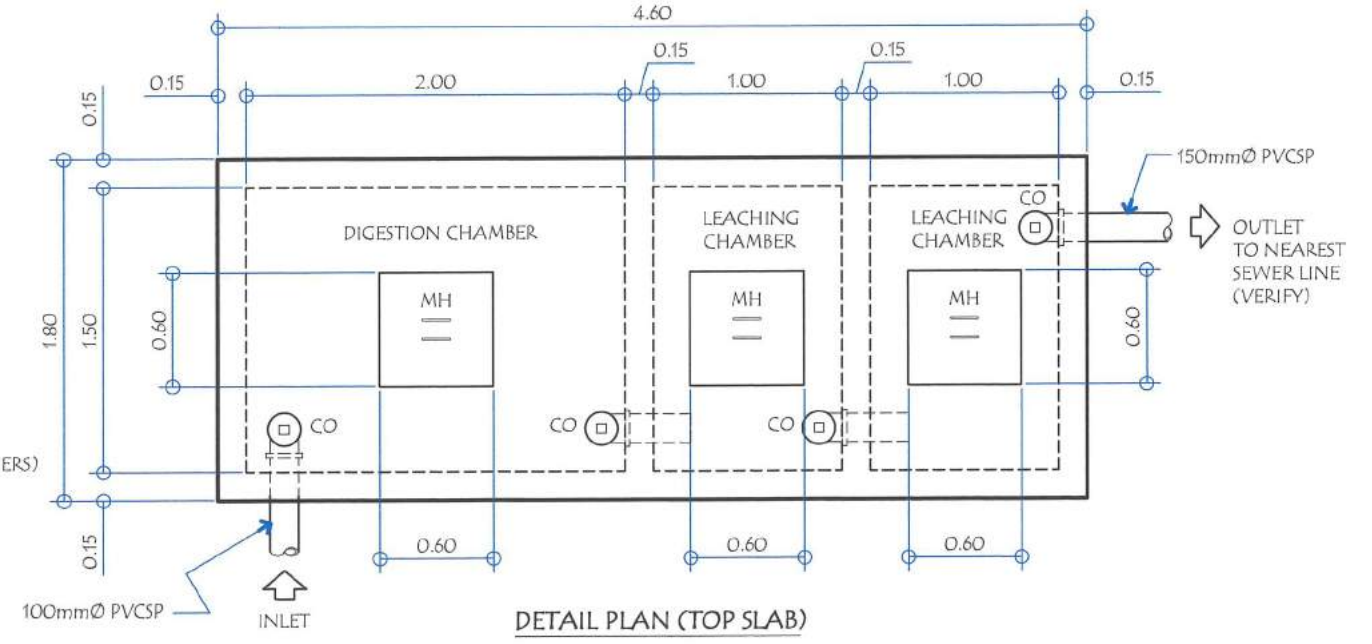
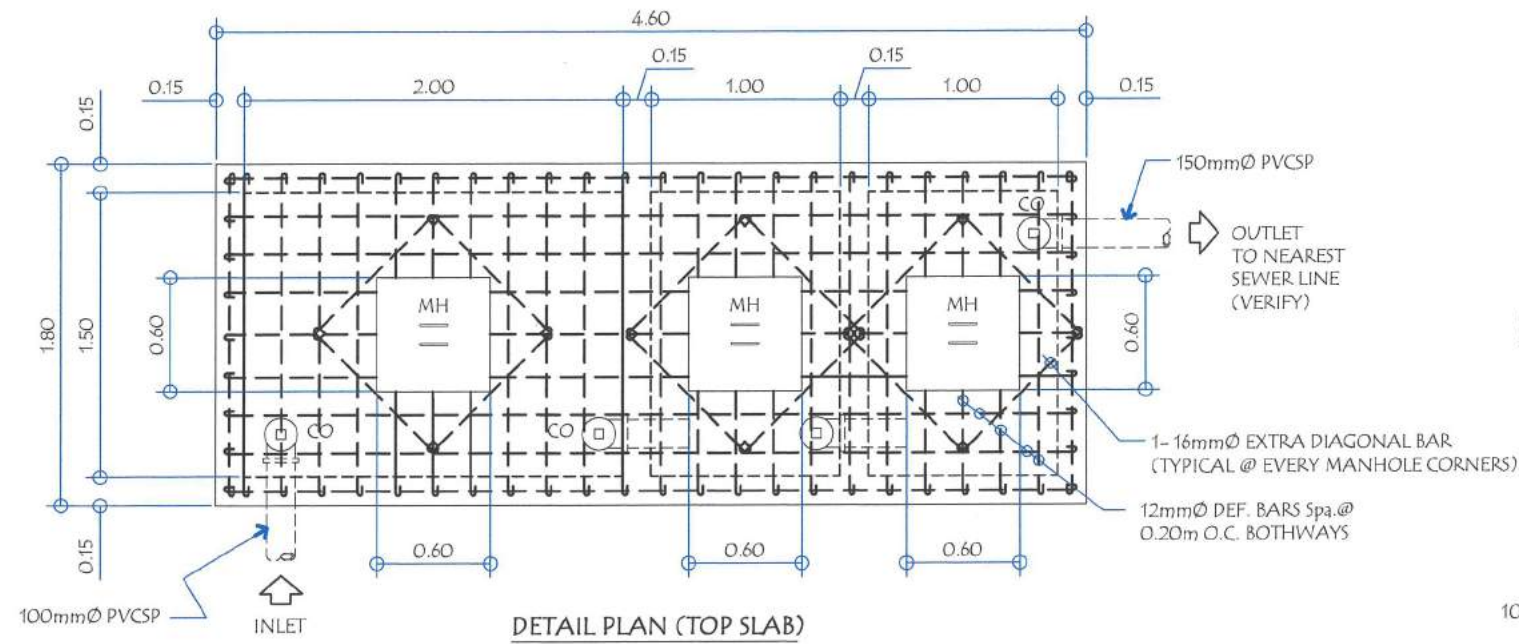
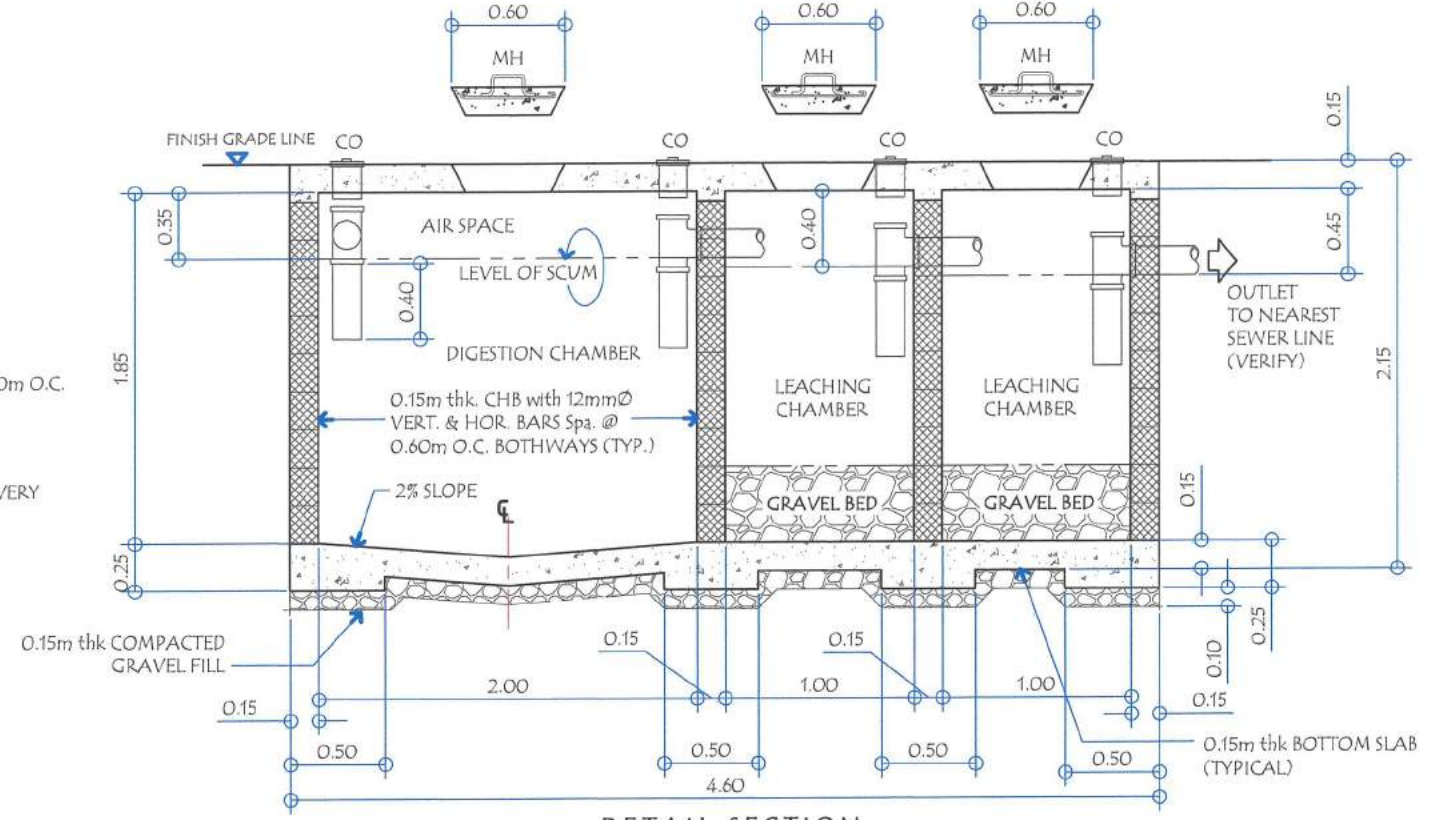
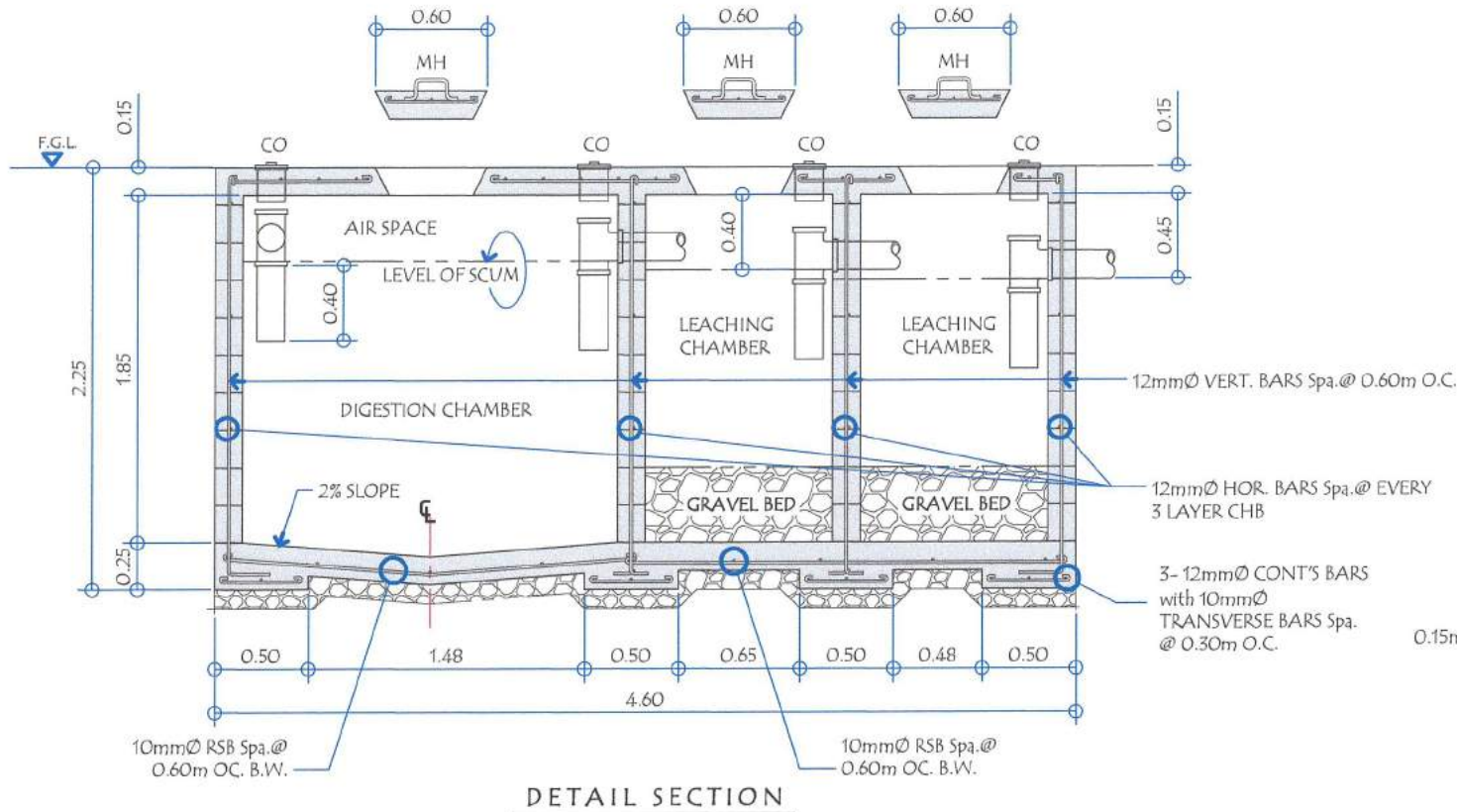
05
P-04
REMOVABLE R.C. COVER DETAIL
SCALE: 1:10 m



02
P-04
DETAIL OF CATCH BASIN
SCALE: 1:20 m



01
P-04
ISOMETRIC DIAGRAM (WATERLINE LAY-OUT)
SCALE: NTS

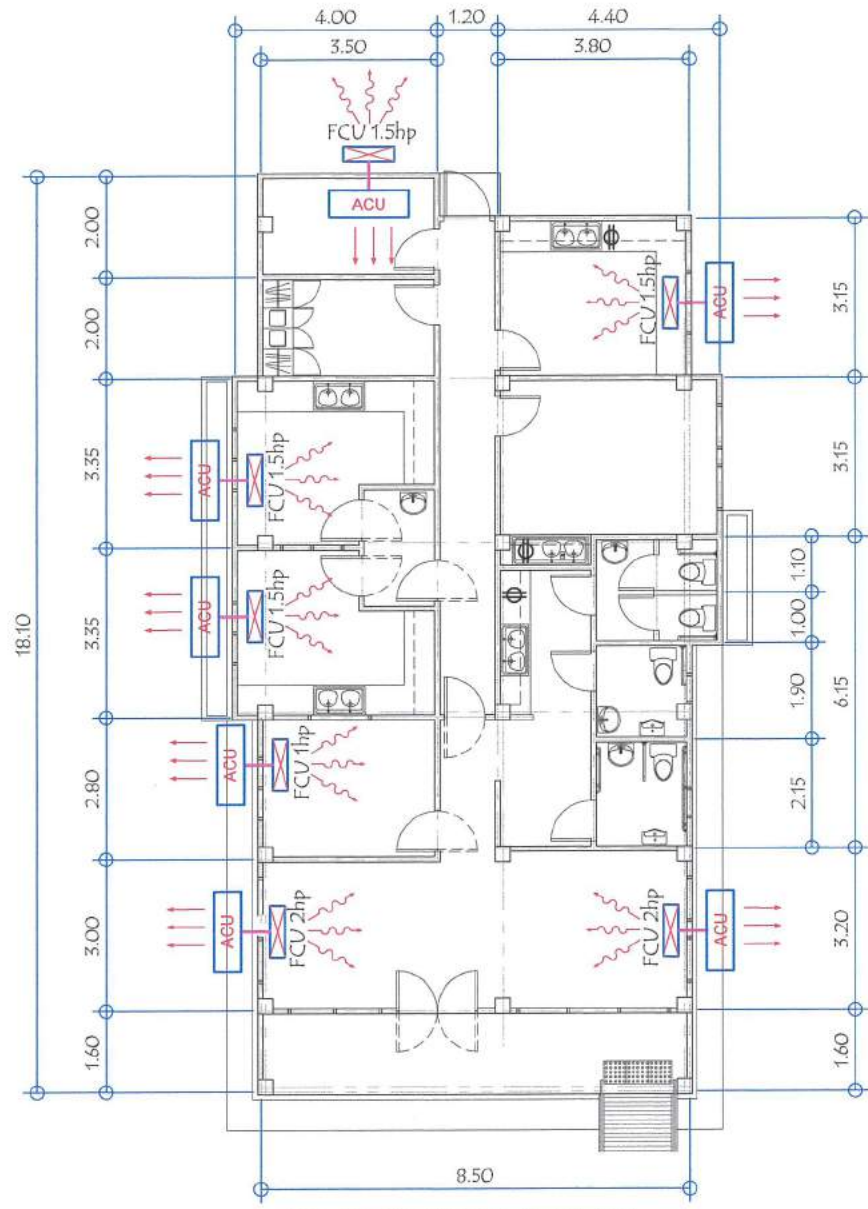


01 OF P-05 SCALE: 1:40 m DETAIL OF SEPTIC VAULT (with REINFORCING BARS)

02 OF P-05 SCALE: 1:40 m DETAIL OF SEPTIC VAULT

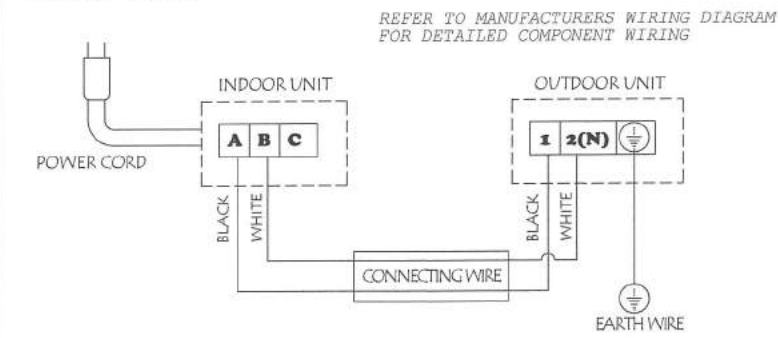
MECHANICAL GENERAL NOTES:

1. ALL AIR-CONDITIONING AND VENTILATING UNITS SHALL BE NEW AND THE APPROVED PRODUCTS OF REPUTABLE MANUFACTURERS
2. FAN COIL UNITS SHALL BE SUM MODEL MOUNTED AND MUST BE PROVIDED WITH BLUE PVC DRAIN PIPE.
3. REFRIGERANT SUCTION LINES SHALL BE INSULATED WITH 13MM THK. ELASTOMERIC PRE-MOLDED RUBBER INSULATION.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE HIS WORK WITH THE OTHER TRADES CONCERNED AND WITH THE OTHER PROJECT ENGINEER.
5. THE WORKS THROUGHOUT SHALL BE EXECUTED IN THE MOST THROUGH MANNER KNOWN TO THE TRADE AND TO THE SATISFACTION OF THE ARCHITECT/ENGINEER.
6. PROVIDE PROPER FOUNDATION FOR THE MOUNTING OF EQUIPMENT FOUNDATION FOR THE FCU SHALL BE AT LEAST 100MM FROM FINISHED FLOOR LINE.
7. ALL AIR-CONDITIONING UNITS SHALL BE PROVIDED WITH THE AUTOMATIC MOTOR PROTECTOR TO BE INSTALLED BESIDE THE ACCU.
8. REFRIGERANT PIPES FOR SPLIT TYPE AIR-CON SHALL BE CLAD WITH A 4"Ø PVC PIPE PRIOR TO BEING EMBEDDED.
9. ALL REFRIGERANT PIPES SHALL BE LOCATED AT THE REAR OF THE FCU'S AND NOT ON THE USUAL SIDE LOCATION.
10. HANGER/SUPPORT MUST BE PAINTED WITH DOUBLE COAT OF RUST PROTECTIVE PAINT.
11. VERIFY ALL DIMENSIONAL LOCATION OF EQUIPMENT ON THE DRAWINGS OF RELATED TRADES AND INVESTIGATE ALL POSSIBLE INTERFERENCE AND CONDITION AFFECTING THE MECHANICAL WORK.
12. UPON THE COMPLETION OF THE A/C EQUIPMENT INSTALLATION, TEST ALL FACTORY AND FIELD INSTALLED REFRIGERANT PIPING WITH A LEAK DETECTOR TO ACQUIRE A LEAK-TIGHT CORRECT AND RE-TEST THE SYSTEM FOLLOWING THE MANUFACTURER'S RECOMMENDATIONS.
13. THE CONTRACTOR SHALL SUBMIT MANUFACTURER'S WARRANTY CERTIFICATE UPON THE COMPLETION OF THE PROJECT.



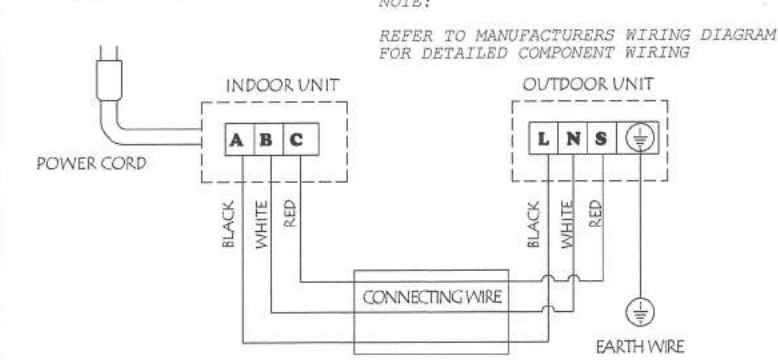
01 MECHANICAL PLAN
M-01 SCALE: 1:150 M

UNITS: 3/4 TO 2.0 HP



NOTE:
REFER TO MANUFACTURERS WIRING DIAGRAM FOR DETAILED COMPONENT WIRING

UNITS: 2.5 TO 6.0 HP



NOTE:
REFER TO MANUFACTURERS WIRING DIAGRAM FOR DETAILED COMPONENT WIRING

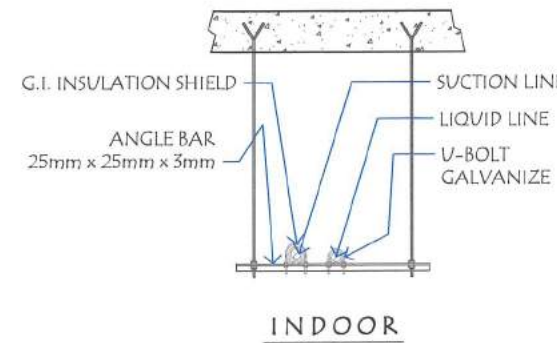
SEQUENCE OF OPERATION

1. WHEN SELECTOR SWITCH IS IN ON POSITION, POWER TO FCU, ACCU & CONTROL SYSTEM SHALL BE MADE ENERGIZED.
2. WHEN SELECTOR SWITCH IS IN FAN POSITION, FAN SHALL START TO OPERATE.
3. WHEN SELECTOR SWITCH IS IN "COOL" POSITION, FCU & ACCU CONTROL SYSTEM SHALL BE MADE ENERGIZED.
4. THERMOSTAT SHALL MAINTAIN THE DESIRED ROOM AIR CONDITION BY CONTROLLING THE OPERATION OF THE COMPRESSOR.

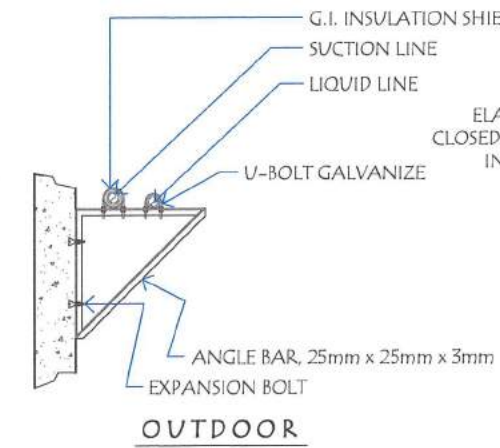
04 WIRING DIAGRAM
M-01 SCALE: NTS

RECOMMENDED SUPPORT SPACING FOR COPPER TUBING

TUBE O.D. (mm)	DISTANCE BETWEEN SUPPORT (M)
16	1.89
22-29	2.44
35-54	3.05



INDOOR



OUTDOOR

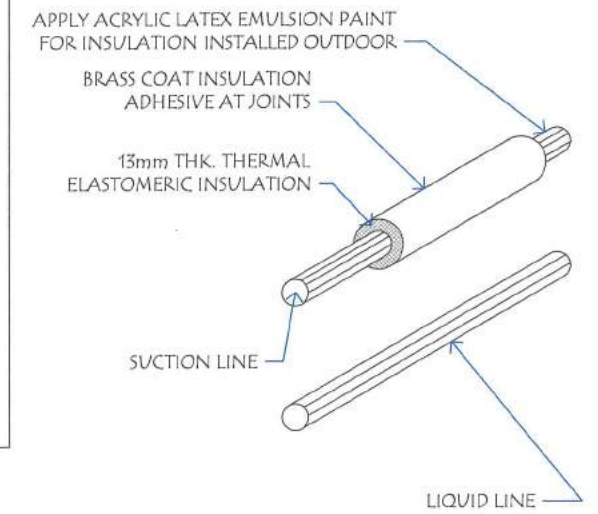
02 PIPE HANGER DETAIL
M-01 SCALE: NTS

LEGEND & ABBRE.

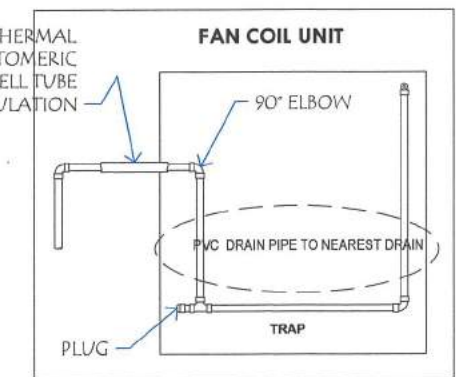
- FCU ----- FAN COIL UNIT
- HP ----- HORSEPOWER
- Ø ----- DIAMETER
- FCU (with wavy lines) ----- FAN COIL UNIT WALL MOUNTED with MAGNETIC SWITCH
- ACU (with wavy lines) ----- AIR CONDITIONING UNIT
- INSULATED REFRIGERANT PIPELINE

NOTE:

1. ADHESIVE & LATEX PAINT SHOULD BE COMPATIBLE WITH THE INSULATION.
2. LIQUID LINE EXPOSED TO DIRECT SUNLIGHT SHALL BE PROVIDED WITH INSULATION.
3. PROVIDE #24 INSULATION SHIELD AT THE POINT OF SUPPORT.

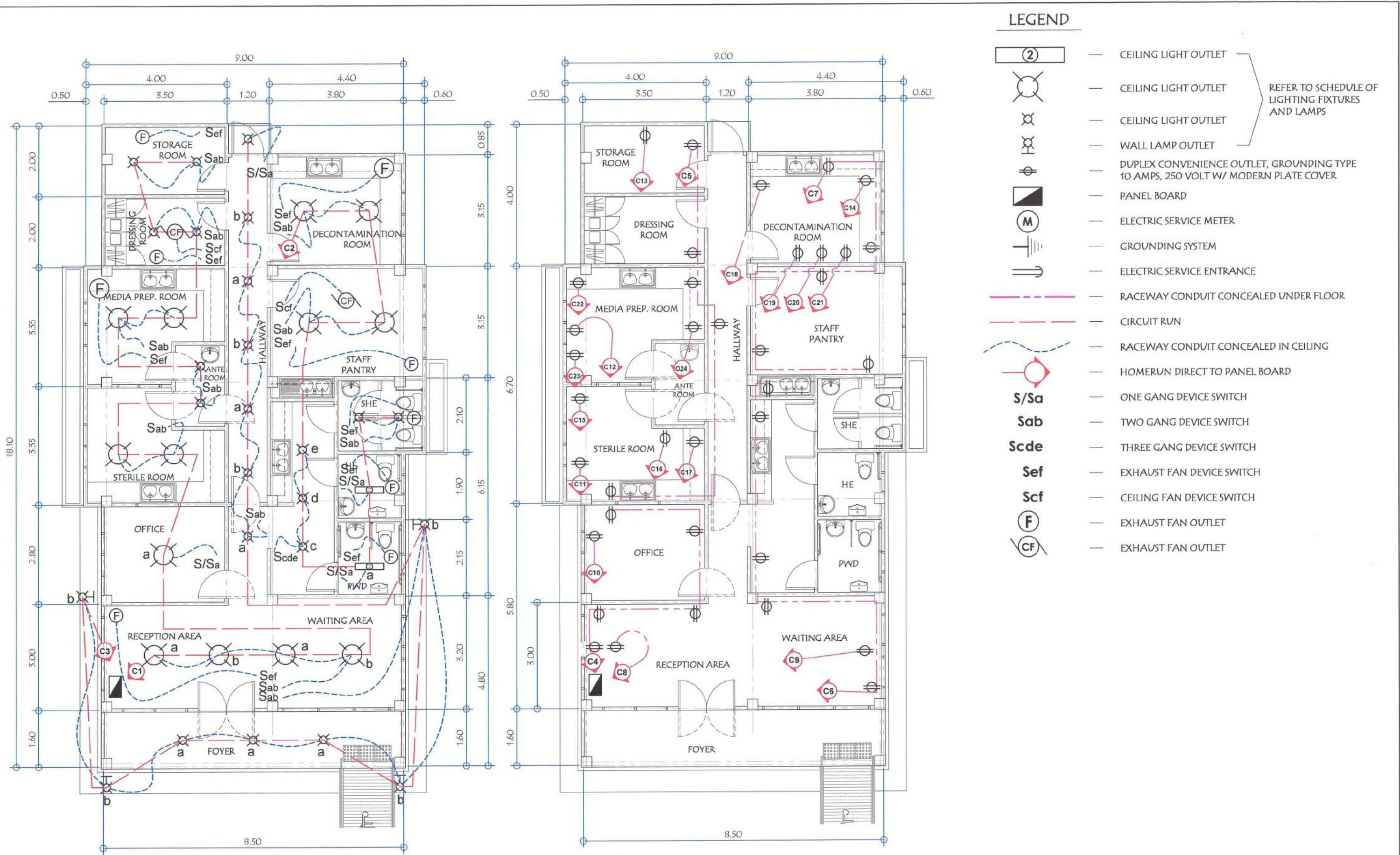


05 PIPE INSULATION DETAIL
M-01 SCALE: NTS



03 CONDENSE DRAIN PIPE
M-01 SCALE: NTS

<p>GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 552-3824</p>	<p>ENGR. ARN B. GELLANGARIN PROFESSIONAL MECHANICAL ENGINEER</p>	PROJECT AND LOCATION	CHECKED:	REVIEWED:	APPROVED:	SHEET CONTENTS	SHEET NO.
	<p>REG. NO. 3758 TIN. NO. 138-365-602</p>	PROPOSED CONSTRUCTION OF ONE-STOREY WATER TESTING LABORATORY	 ENGR. MARIA CELIA N. DANDAN OIC - PDD	 ENGR. ROGELIO A. BESANA, JR. AGM, OPERATION & TECHNICAL SERVICES	 ENGR. ARN B. GELLANGARIN GENERAL MANAGER A	AS SHOWN	M-01
	<p>PTR. NO. DATE:</p>	LOCATION: PUROK UDAGRI, BRGY. CONEL, GEN. SANTOS CITY				<p>DRAWN BY: RRA REV. NO.</p> <p>CHECKED BY: ESA DATE: Nov. 2021</p>	26 29



- ### LEGEND
- CEILING LIGHT OUTLET
 - CEILING LIGHT OUTLET
 - CEILING LIGHT OUTLET
 - WALL LAMP OUTLET
 - DUPLEX CONVENIENCE OUTLET, GROUNDING TYPE 10 AMPS, 250 VOLT W/ MODERN PLATE COVER
 - PANEL BOARD
 - ELECTRIC SERVICE METER
 - GROUNDING SYSTEM
 - ELECTRIC SERVICE ENTRANCE
 - RACEWAY CONDUIT CONCEALED UNDER FLOOR
 - CIRCUIT RUN
 - RACEWAY CONDUIT CONCEALED IN CEILING
 - HOMERUN DIRECT TO PANEL BOARD
 - S/Sa** — ONE GANG DEVICE SWITCH
 - Sab** — TWO GANG DEVICE SWITCH
 - Scde** — THREE GANG DEVICE SWITCH
 - Sef** — EXHAUST FAN DEVICE SWITCH
 - Scf** — CEILING FAN DEVICE SWITCH
 - F** — EXHAUST FAN OUTLET
 - CF** — EXHAUST FAN OUTLET
- REFER TO SCHEDULE OF LIGHTING FIXTURES AND LAMPS

01 LIGHTING LAYOUT
E-01 SCALE: 1:100 m

02 POWER LAYOUT
E-01 SCALE: 1:100 m

<p>GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 552 - 3824</p>	<p>PROFESSIONAL ELECTRICAL ENGINEER</p>		<p>PROJECT AND LOCATION</p> <p>PROPOSED CONSTRUCTION OF ONE-STOREY WATER TESTING LABORATORY</p>	<p>CHECKED:</p> <p>ENGR. MARTA CELIA N. DANDAN OIC - PDD</p>	<p>REVIEWED:</p> <p>ENGR. ROGELIO A. BESANA, JR. AGM, OPERATION & TECHNICAL SERVICES</p>	<p>APPROVED:</p> <p>ENGR. ARN B. GELLANGARIN GENERAL MANAGER A</p>	<p>SHEET CONTENTS</p> <p>AS SHOWN</p>	<p>SHEET NO.</p> <p>E-01</p>
	<p>REG. NO.</p> <p>PTR. NO.</p>	<p>TIN. NO.</p> <p>DATE:</p>	<p>LOCATION: PUROK UDAGRI, BRGY. CONEL, GEN. SANTOS CITY</p>	<p>DRAWN BY: RRA</p> <p>CHECKED BY: ESA</p>	<p>REV. NO.</p> <p>DATE: Nov. 2021</p>	<p>27</p>	<p>29</p>	

SCHEDULE OF LOADS:

CIRCUIT No.	PARTICULARS	NO. OF OUTLET	WATTS	PHASE	VOLTS	AMPERE	CB RATING	WIRE SIZE AND CONDUIT
1	CEILING LIGHT OUTLETS (MODERN LAMP) - 9 CEILING LIGHT OUTLETS (PIN LIGHTS) - 6	15	1,500	1	230	6.52	15 AT	2-3.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
2	CEILING LIGHT OUTLETS (MODERN LAMP) - 4 CEILING LIGHT OUTLETS (PIN LIGHTS) - 5 CEILING LIGHT OUTLETS (FLUORESCENT) - 2	11	1,100	1	230	4.78	15 AT	2-3.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
3	CEILING LIGHT OUTLETS (PIN LIGHTS) - 14	14	1,400	1	230	6.09	15 AT	2-3.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
4	CONVENIENCE OUTLET	5	1,800	1	230	7.83	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
5	CONVENIENCE OUTLET	5	1,800	1	230	7.83	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
6	CONVENIENCE OUTLET	5	1,800	1	230	7.83	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
7	CONVENIENCE OUTLET	5	1,800	1	230	7.83	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
8	ACU, 2 hp (Magnetic Switch w/ Built-in 3-Prong Outlet	1	1,492	1	230	6.49	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
9	ACU, 2 hp (Magnetic Switch w/ Built-in 3-Prong Outlet	1	1,492	1	230	6.49	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
10	ACU, 1 hp (Magnetic Switch w/ Built-in 3-Prong Outlet	1	746	1	230	3.24	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
11	ACU, 1.5 hp (Magnetic Switch w/ Built-in 3-Prong Outlet	1	1,119	1	230	4.87	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
12	ACU, 1.5 hp (Magnetic Switch w/ Built-in 3-Prong Outlet	1	1,119	1	230	4.87	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
13	ACU, 1.5 hp (Magnetic Switch w/ Built-in 3-Prong Outlet	1	1,119	1	230	4.87	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
14	ACU, 1.5 hp (Magnetic Switch w/ Built-in 3-Prong Outlet	1	1,119	1	230	4.87	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
15	CONVENIENCE OUTLET	1	2,000	1	230	8.70	30 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
16	CONVENIENCE OUTLET	1	2,000	1	230	8.70	30 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
17	CONVENIENCE OUTLET	1	2,000	1	230	8.70	30 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
18	CONVENIENCE OUTLET	1	2,000	1	230	8.70	30 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
19	CONVENIENCE OUTLET	1	2,000	1	230	8.70	30 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
20	CONVENIENCE OUTLET	1	2,000	1	230	8.70	30 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
21	CONVENIENCE OUTLET	1	2,000	1	230	8.70	30 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
22	CONVENIENCE OUTLET	1	2,000	1	230	8.70	30 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
23	CONVENIENCE OUTLET	1	2,000	1	230	8.70	30 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
24	CONVENIENCE OUTLET	1	2,000	1	230	8.70	30 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
25	SPARE	1	2,000	1	230	8.70	30 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
26	SPARE	1	2,000	1	230	8.70	30 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND.) IN 15mmØ CONDUIT
			43,406			188.72		


COMPUTATION: @ 80 % Demand Factor
Demand load = (43,406 / 230) 0.8DF = 150.98 A

Total Current = 150.98 A
Main = 200 Amps, 1φ, 230V

kVA = 150.98 x 230 / 1000
kVA = 34.73

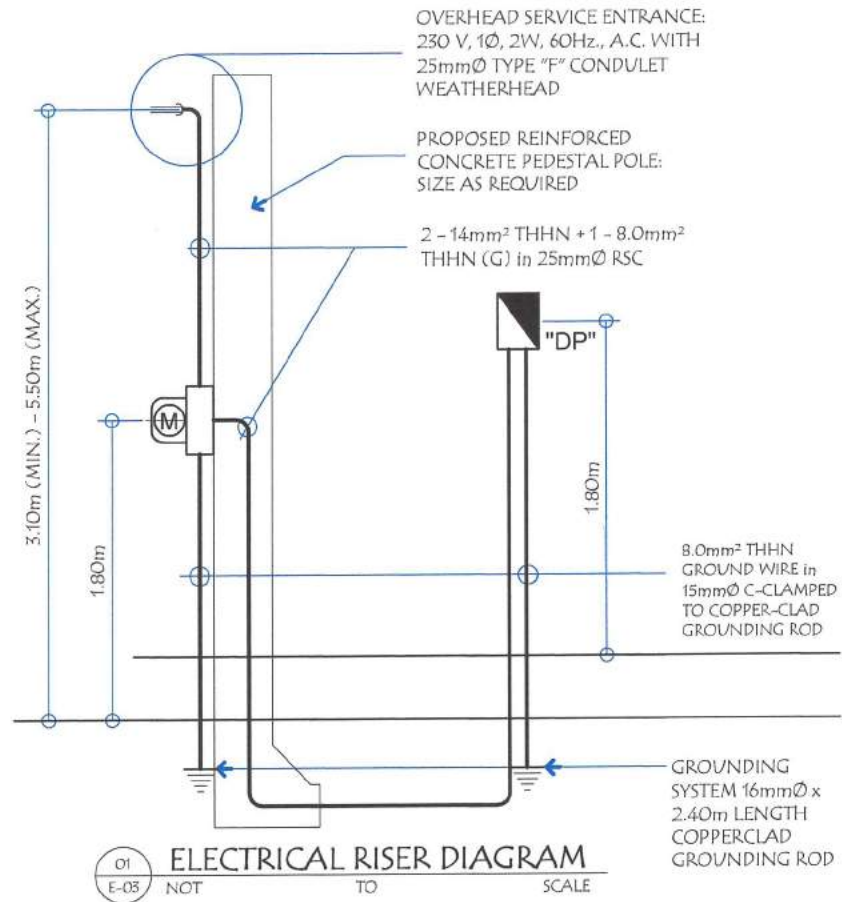
USE: 50 kVA POLE MOUNTED SINGLE PHASE TRANSFORMER, 2 - 80mm² THWN
wire, 1 - 8.0mm² TW (GND) WIRE in 40mmØ CONDUIT

MAIN: 200 Amp, 1φ, 230V

 GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 552 - 3824	PROFESSIONAL ELECTRICAL ENGINEER		PROJECT AND LOCATION	CHECKED:	REVIEWED:	APPROVED:	SHEET CONTENTS	SHEET NO.
	REG. NO.	TIN. NO.	PROPOSED CONSTRUCTION OF ONE-STOREY WATER TESTING LABORATORY	ENGR. MARIA CELIA N. DANDAN	ENGR. FOGELIO A. BESANA, JR.	ENGR. ARN B. GELLANGARIN	AS SHOWN	E-02
	PTR. NO.	DATE:	LOCATION: PUROK UDAGRI, BRGY. CONEL, GEN. SANTOS CITY	OIC - PDD	AGM, OPERATION & TECHNICAL SERVICES	GENERAL MANAGER A	DRAWN BY: RRA CHECKED BY: ESA	REV. NO. DATE: Nov, 2021

SCHEDULE OF LIGHTING FIXTURES AND LAMPS

SYMBOLS	DESCRIPTION	INSTALLATION/MOUNTING
②	TWO (2) - 36W, 230V, 60Hz AC, FLUORESCENT LIGHTING FIXTURE, BOX TYPE	SURFACED CEILING MOUNTING
⊗	ONE (1) - 40W, 230V, 60Hz AC, ULTRA THIN LED CEILING LIGHTS LIGHTING FIXTURES MODERN LAMP	SURFACED CEILING MOUNTING
⊗	ONE (1) - 5W, 230V, 6" DIA., LED DOWNLIGHT INDOOR CEILING PIN LIGHT	RECESSED TYPE
⊗	ONE (1) - 7WATTS DAYLIGHT, 230V, BLACK, LED WALL LAMP/OUTDOOR FIXTURE	WALL MOUNTING
NOTE: ALL FLUORESCENT LIGHTING FIXTURES SHALL BE EQUIPPED WITH A HIGH POWER FACTOR, PRE-HEAT WITH STARTER AND THERMALLY PROTECTED BALLAST, COMPLETE WITH ALL NECESSARY ACCESSORIES, WIRED AND READY FOR USE.		



GENERAL NOTES:

1. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISION OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, EXISTING APPLICABLE ORDINANCES, RULES AND REGULATIONS OF THE LOCAL GOVERNMENT AND WITH THE REQUIREMENTS OF THE LOCAL POWER COMPANY.
2. THE TYPE OF SERVICE POWER SUPPLY TO BE USED SHALL BE SINGLE-PHASE, 2-WIRE, 230V, 60 HERTZ, A.C
3. THE CONTRACTOR SHALL VERIFY AND ORIENT THE ACTUAL LOCATION OF SERVICE ENTRANCE FOR CONNECTION TO THE POWER COMPANY SERVICE POINT.
4. UNLESS OTHERWISE SPECIFIED, THE MINIMUM SIZES OF WIRE AND GALVANIZED RIGID STEEL CONDUIT TO BE USED SHALL BE 3.5mm², THHN AND 15mm NOMINAL DIAMETER, RESPECTIVELY. LIKEWISE ALL ELECTRICAL WIRES SHALL BE COLOR-CODED.
5. ALL LIGHTING CIRCUIT HOME RUNS AND CONVENIENCE OUTLETS SHALL BE WIRED WITH NOT LESS THAN 3.5 mm² IN SIZE.
6. WHEREVER REQUIRED AND NECESSARY, PULL OR JUNCTION BOXES SHALL BE INSTALLED AT CONVENIENT AND INCONSPICUOUS LOCATION, ALTHOUGH SUCH BOXES ARE NOT SHOWN ON THE PLAN NOR MENTIONED IN THE SPECIFICATIONS.
7. ALL NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE.
8. ALL MATERIALS TO BE USED SHALL BE BRAND NEW AND OF THE APPROVED TYPE FOR LOCATION AND PURPOSE.
9. STANDARD TYPE OF ACCESSORIES, SPLICING DEVICES, TERMINATIONS AND OTHER APPURTENANCES FOR THE ENTIRE ELECTRICAL INSTALLATION SHALL BE USED.
10. ALL WALL OUTLETS SHALL BE INSTALLED AT THE FOLLOWING HEIGHTS ABOVE THE FINISHED FLOOR LEVEL, UNLESS NOTED IN THE PLAN.
 - a) WALL SWITCHES @ 1300mm
 - b) WALL CONVENIENCE OUTLETS @ 300 mm
11. ALL ELECTRICAL WORKS SHALL BE DONE UNDER THE DIRECT AND IMMEDIATE SUPERVISION OF A DULY REGISTERED ELECTRICAL ENGINEER.

MOUNTING HEIGHTS:

CONVENIENCE OUTLETS	: 300mm FROM BOTTOM OF OUTLET TO FINISH FLOOR LEVEL
WALL SWITCHES	: 1,370mm FROM BOTTOM OF SWITCH TO FINISH FLOOR LEVEL
PANEL BOARD	: 1,850mm FROM TOP OF PANEL TO FINISH FLOOR LEVEL
KILOWATT HOUR METER	: 1,850mm FROM CENTER OF DEVICES TO FINISH GRADE LEVEL

GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 552-3824	_____ PROFESSIONAL ELECTRICAL ENGINEER	PROJECT AND LOCATION PROPOSED CONSTRUCTION OF ONE-STOREY WATER TESTING LABORATORY	CHECKED: ENGR. MARIA CECILIA N. DANDAN OIC - PDD	REVIEWED: ENGR. ROGELIO A. BESANA, JR. AGM, OPERATION & TECHNICAL SERVICES	APPROVED: ENGR. ARN B. GELLANGARIN GENERAL MANAGER A	SHEET CONTENTS AS SHOWN	SHEET NO. E-03	
	REG. NO. _____ PTR. NO. _____	TIN. NO. _____ DATE: _____	LOCATION: PUROK UDAGRI, BRGY. CONEL, GEN. SANTOS CITY				DRAWN BY: RRA CHECKED BY: ESA	REV. NO. _____ DATE: Nov. 2021
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