



P E R S P E C T I V E

TABLE CONTENTS

•A1	PERSPECTIVE	1	•A26	TYPICAL BLEACHER PLAN TYPICAL BLEACHER FRAMING SECTION	26	•P9	FLOOR DRAIN DETAIL CATCH BASIN DETAIL	51
•A2	VICINITY MAP / LOCATION MAP	2	•A27	BLEACHER STEEL FRAMING ISOMETRIC VIEW	27	•P10	ISOMETRIC VIEW SANITARY LINE LAYOUT	52
•A3	PROPOSED SITE DEVELOPMENT PLAN	3	•A28	BLEACHER BAY 1 PLAN BLEACHER BAY 2 PLAN BLEACHER BAY 1 ISOMETRIC BLEACHER BAY 2 ISOMETRIC	28	•P11	ISOMETRIC VIEW WATER LINE LAYOUT	53
•A4	EXISTING FLOOR PLAN	4	•A29	BLEACHER BAY 3 PLAN BLEACHER BAY 4 PLAN BLEACHER BAY 3 ISOMETRIC BLEACHER BAY 4 ISOMETRIC	29	•P12	ISOMETRIC VIEW DRAIN LINE LAYOUT	54
•A5	PROPOSED GROUND FLOOR	5	•S1	STRUCTURAL GENERAL NOTES	30	•E1	GROUND FLOOR LIGHTING LAYOUT	55
•A6	FRONT ELEVATION REAR ELEVATION	6	•S2	TYPICAL DETAIL OF WALL TO SLAB CONNECTION	31	•E2	GROUND FLOOR POWER LAYOUT	56
•A7	RIGHT SIDE ELEVATION LEFT SIDE ELEVATION	7	•S3	TYPICAL DETAIL OF WALL TO SLAB CONNECTION	32	•E3	MAIN FEEDER LINE	57
•A8	SECTION THRU X SECTION THRU Y	8	•S4	ROOF BEAM PLAN BAY SECTION "A" TYPICAL DETAIL OF LINTEL BEAM TIE BEAM LAYOUT (@ STAGE)	33	•E4	SERVICE ENTRANCE DETAIL UPPER PEDESTAL DETAIL LOWER PEDESTAL DETAIL	58
•A9	STAIR RAILING A BLOW UP DETAIL PLAN STAIR RAILING B BLOW UP DETAIL PLAN SECTION THRU A SECTION THRU B	9	•S5	SCHEDULE OF FOOTINGS TYPICAL DETAIL OF FOOTINGS TYPICAL STIFFENER COLUMN DETAIL TYPICAL DETAIL OF COLUMN TYPICAL STRAP FOOTING DETAIL CS-F1 PEDESTAL DETAIL TYPICAL DETAIL OF BEAMS	34	•E5	GENERAL NOTES AND SPECIFICATION CONCRETE PULLBOX DETAILS CONCRETE ENCASMENT DETAILS	59
•A10	SCHEDULE OF DOORS	10	•S6	ROOF FRAMING PLAN	35	•E6	LOAD SCHEDULE PANEL BOARD DETAILS VOLTAGE DROP CALCULATION	60
•A11	SCHEDULE OF WINDOWS	11	•S7	TRUSS - 1 DETAILS TRUSS - 2 DETAILS RAFTER DETAILS DETAIL OF ROOF GUTTER @ COURT DETAIL OF ROOF GUTTER @ EXTENSION	36	•E7	SHORT CIRCUIT CALCULATION	61
•A12	TYPICAL SIGNAGE DETAIL CHED LOGO BLOW UP DETAIL TSU LOGO BLOW UP DETAIL PGT LOGO BLOW UP DETAIL	12	•S8	ROOF FLASHING DETAIL END FLASHING DETAIL WALL FLASHING DETAIL A WALL FLASHING DETAIL B	37	•E8	SHORT CIRCUIT CALCULATION	62
•A13	FICEM BOARD/PVC DECORATIVE CEILING DETAIL SECTION DETAIL A SECTION DETAIL B FIBER CEMENT BOARD CEILING DETAIL	13	•S9	CONNECTION DETAIL TO EXISTING TRUSS	38	•E9	AUXILIARY LAYOUT	63
•A14	REFLECTED CEILING PLAN	14	•S10	SCHEDULE OF STEEL BEAMS SCHEDULE OF STEEL COLUMN DETAIL OF STAIR (@ STAGE) CONNECTION - 2 DETAIL	39	•E10	AUXILIARY LAYOUT	64
•A15	FLOOR PATTERN LAYOUT	15	•S11	CONNECTION - 1 DETAIL CONNECTION - 2 DETAIL STEEL PLATE DETAIL	40	•E11	AUXILIARY LAYOUT	65
•A16	RAMP DETAILED PLAN WALKWAY DETAIL PLAN RAMP FRONT ELEVATION RAMP LEFT SIDE ELEVATION PLANTBOX CHB FOOTING DETAILS	16	•S12	EXISTING TRUSS DIAGRAM ARC FRAMING DETAIL	41			
•A17	ROOF PLAN	17	•S13	FRAMING DETAIL 1 FRAMING DETAIL 2 ARC DETAIL BLOW UP DETAIL	42			
•A18	ROOF PLAN (EXISTING)	18	•P1	VICINITY MAP SITE DEVELOPMENT PLAN (SAN ISIDRO CAMPUS)	43			
•A19	ROOF PLAN (PROPOSED EXTENSION)	19	•P2	GROUND FLOOR SANITARY LINE LAYOUT	44			
•A20	TOILET KEY PLAN TOILET BLOW UP DETAIL PLAN	20	•P3	GROUND FLOOR WATER LINE LAYOUT	45			
•A21	FEMALE TOILET BLOW UP DETAIL PLAN FLOOR FINISH LAYOUT REFLECTED CEILING PLAN SECTION THRU A-A SECTION THRU B-B SECTION THRU C-C SECTION THRU D-D TILE CORNER DETAIL	21	•P4	GROUND FLOOR STORM DRAIN LAYOUT	46			
•A22	MALE TOILET BLOW UP DETAIL PLAN FLOOR FINISH LAYOUT REFLECTED CEILING PLAN SECTION THRU A-A SECTION THRU B-B SECTION THRU C-C SECTION THRU D-D TILE CORNER DETAIL	22	•P5	ROOF STORM DRAIN LAYOUT	47			
•A23	PWD/LGBT TOILET BLOW UP DETAIL PLAN FLOOR FINISH LAYOUT REFLECTED CEILING PLAN SECTION THRU A-A SECTION THRU B-B SECTION THRU C-C SECTION THRU D-D	23	•P6	BLOW-UP GROUND FLOOR SANITARY LINE	48			
•A24	SHOWER ROOM KEY PLAN SHOWER ROOM BLOW UP DETAIL PLAN	24	•P7	BLOW-UP GROUND FLOOR WATER LINE	49			
•A25	SHOWER ROOM BLOW UP DETAIL PLAN FLOOR FINISH LAYOUT REFLECTED CEILING PLAN SECTION THRU A-A SECTION THRU B-B SECTION THRU C-C SECTION THRU D-D	25	•P8	SEPTIC TANK DETAIL WATER METER DETAIL	50			

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS
AND HIGHWAYS
OFFICE OF THE
BUILDING OFFICIALS

DISTRICT / CITY / MUNICIPALITY

LAND USE & ZONING

LINE & GRADE

ARCHITECTURAL

STRUCTURAL

SANITARY

MECHANICAL



TARLAC STATE UNIVERSITY
Facilities Development and
Management Office
Romulo Boulevard, Tarlac City, Philippines 2100

PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

ARCHITECT
AR. MARCO F. BILDAN

PRC NO: 0015392
PTR NO: 1971212 P
ISSUED AT: PGT TARLAC CITY
IAPCA: 9973-414524-103123

VALIDITY: 10/24/2026
DATE ISSUED: 01/24/2024
TIN: 120-051-183-000
DATE ISSUED: 10/31/2023

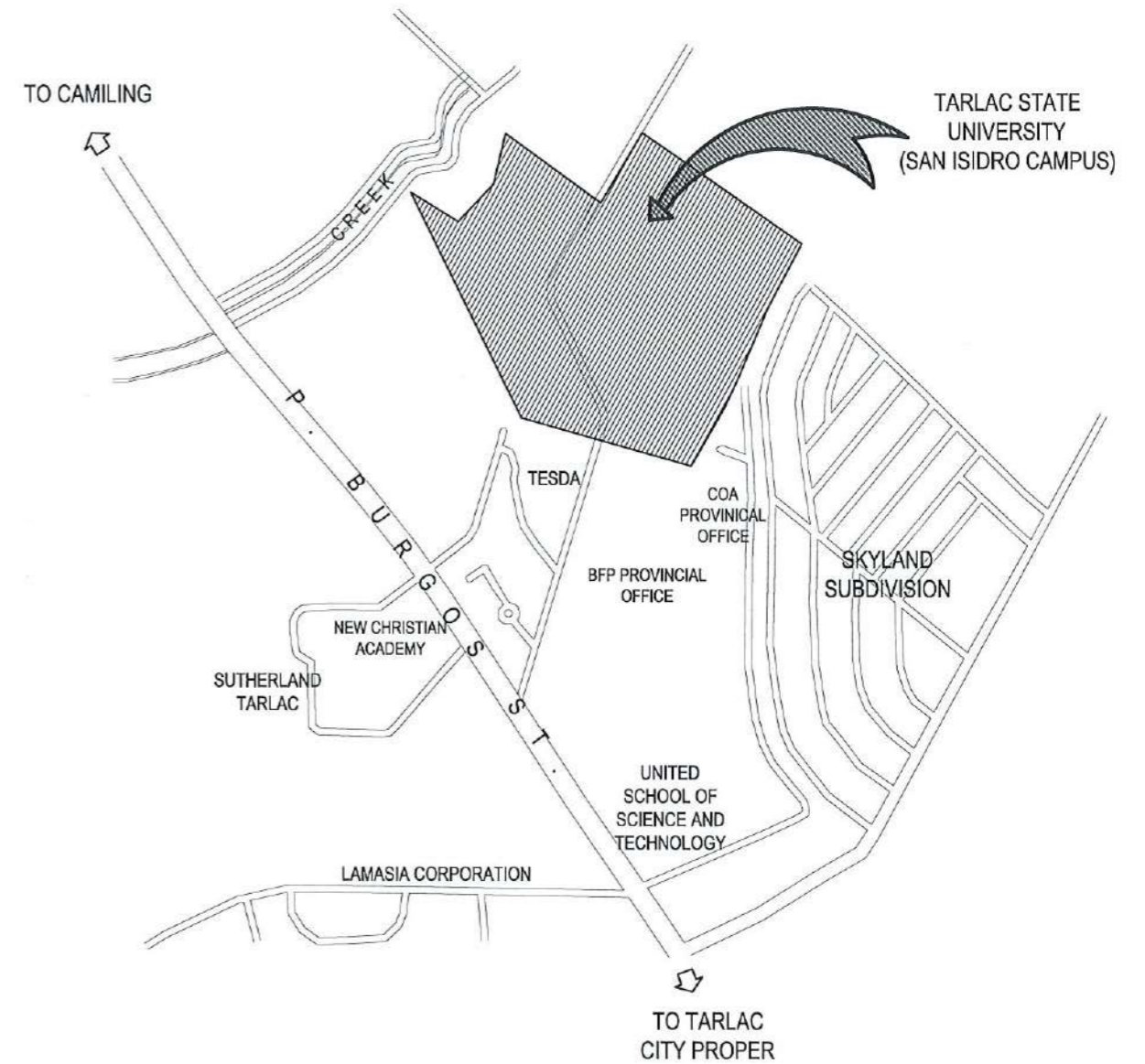
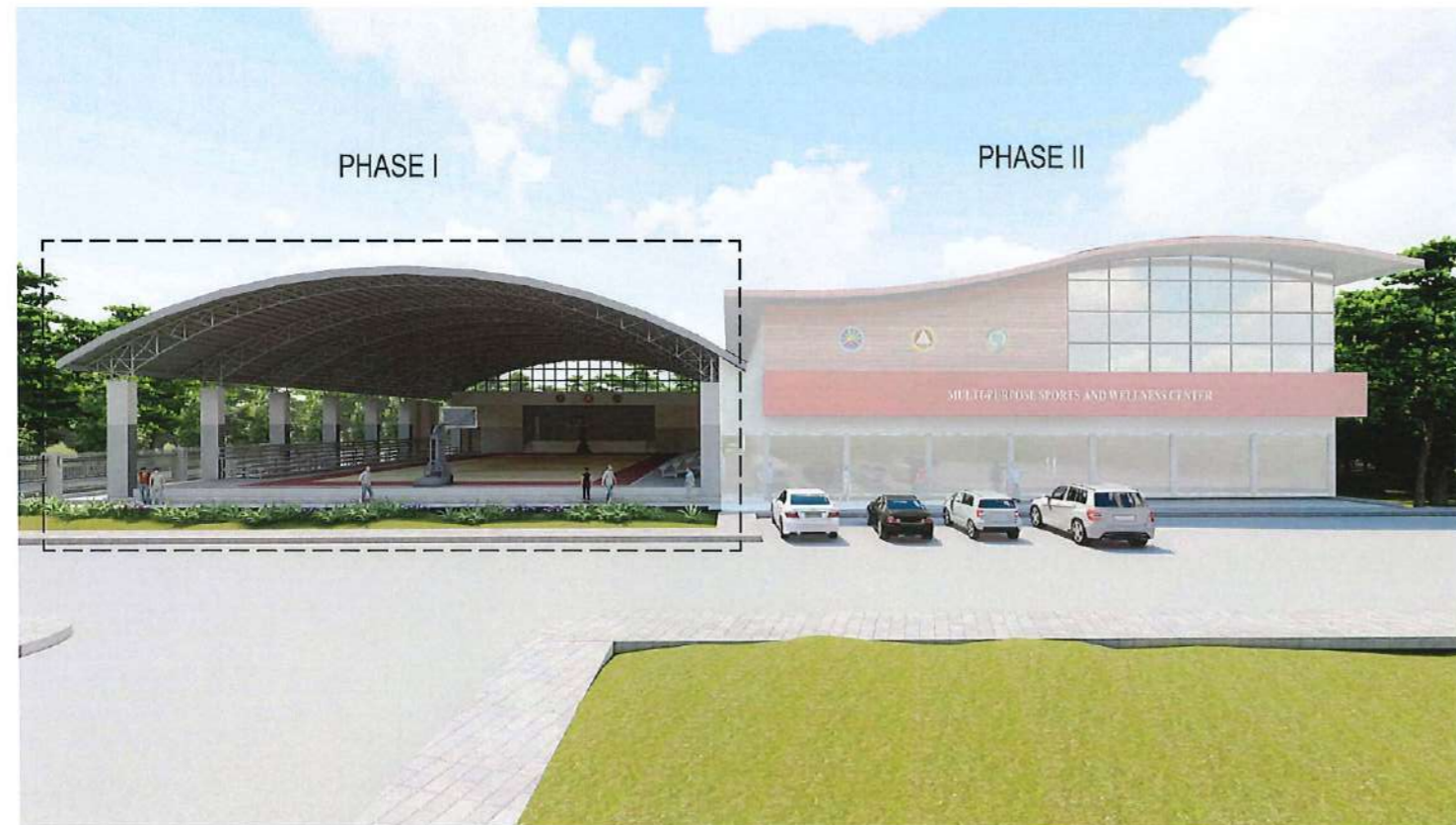
OWNER:
DR. ARMOZD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN

SHEET NO:
A-01

PAGE NO:
01/65

DATE: MARCH 2024



VICINITY MAP
SCALE: NTS.



TARLAC STATE UNIVERSITY
Facilities Development and
Management Office
Rommel Boulevard, Tarlac City, Philippines 2300

PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

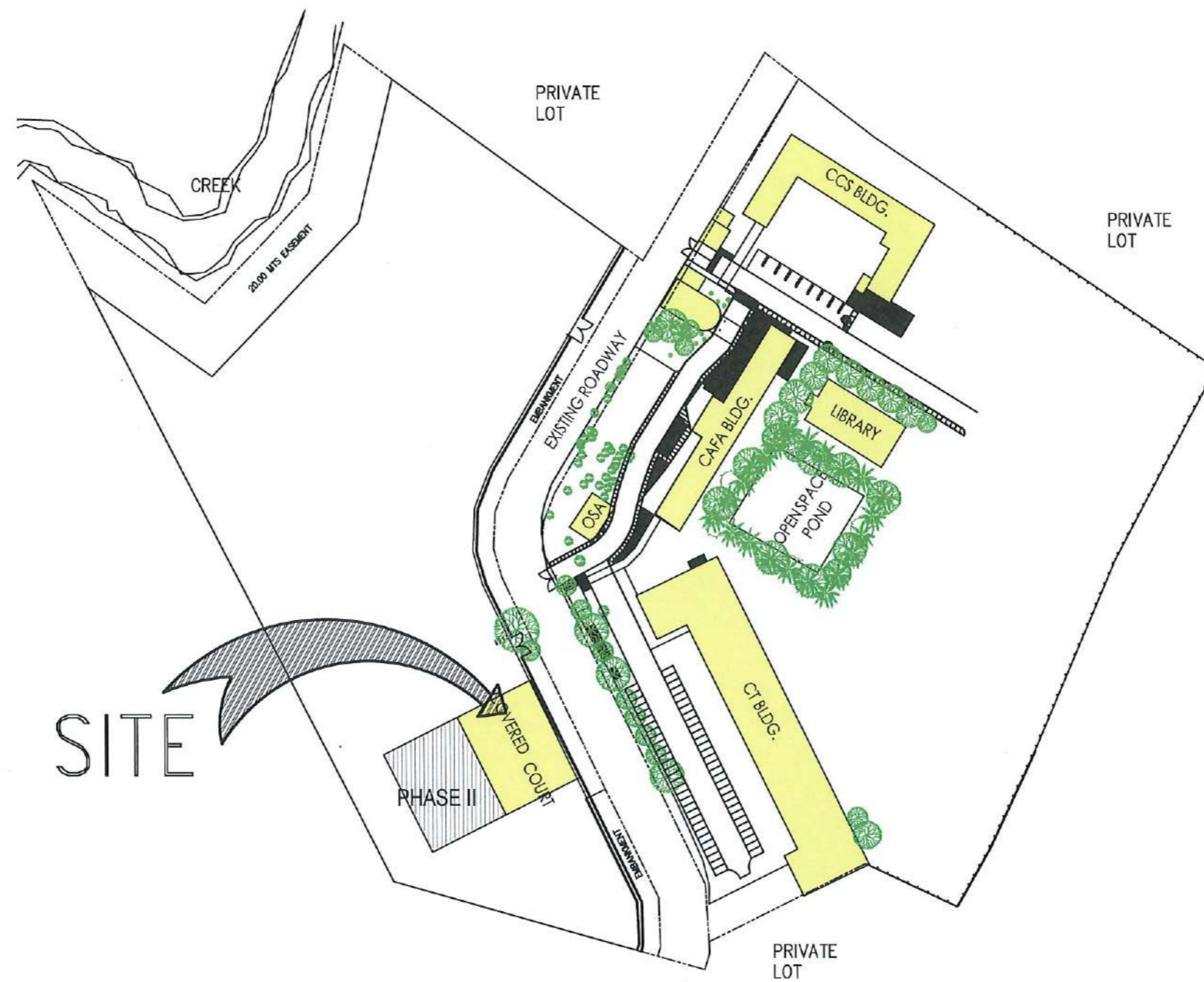
ARCHITECT
AR. MARCO F. BILDAN

PRC NO : 0015392 VALIDITY: 10/24/2026
PTR NO : 1971212 P DATE ISSUED: 01/24/2024
ISSUED AT: PGT TARLAC CITY TIN : 120-051-183-000
IAPQA: 9973-414524-103123 DATE ISSUED: 10/31/2023

OWNER:
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN
DATE: MARCH 2024

SHEET NO:
A-02
PAGE NO:
02/65



SITE DEVELOPMENT PLAN (SAN ISIDRO CAMPUS)

SCALE:

1:2000M



TARLAC STATE UNIVERSITY
Facilities Development and
Management Office
Romulo Boulevard, Tarlac City, Philippines 2309

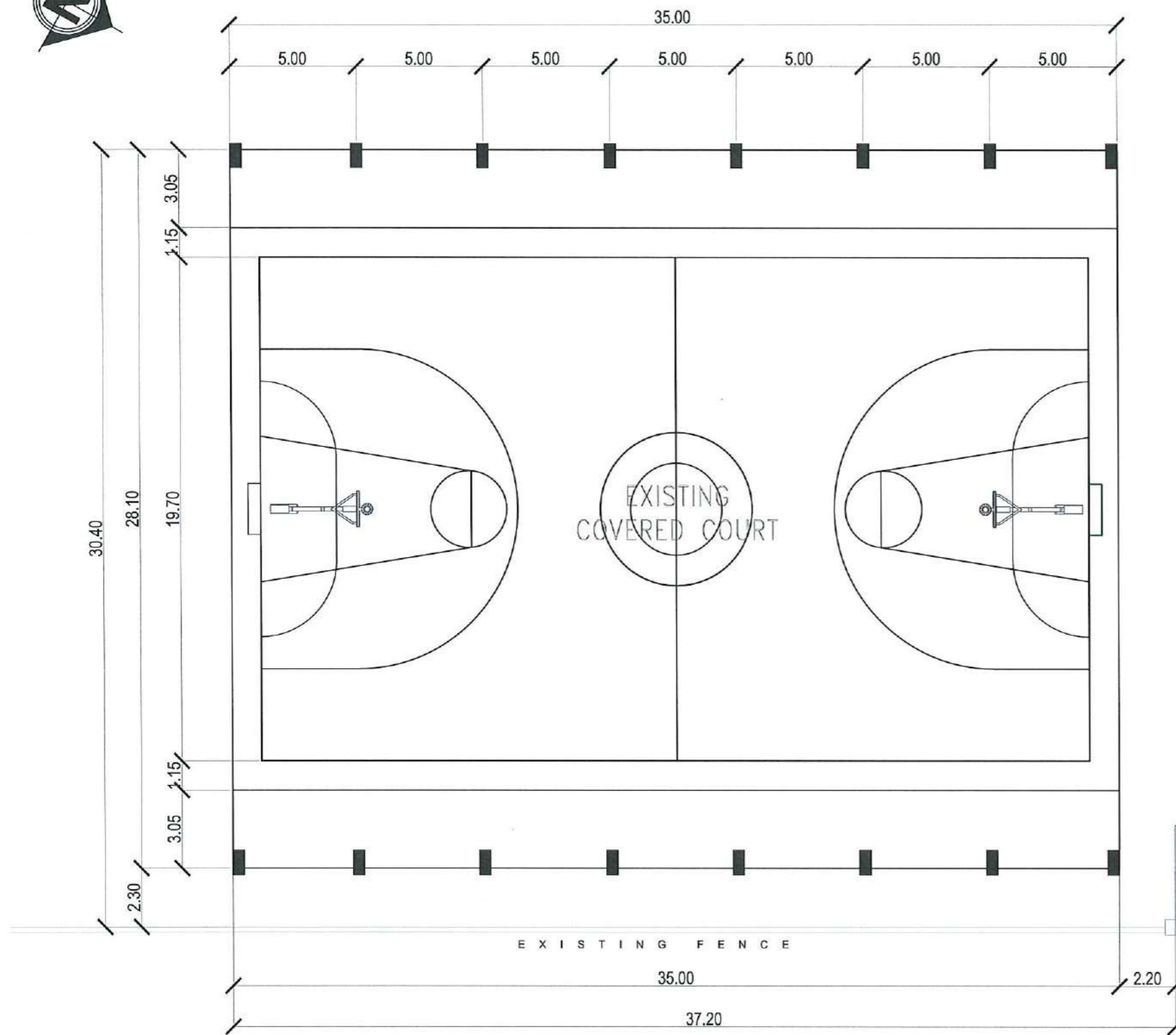
PROJECT TITLE:	REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION:	SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

ARCHITECT	AR. MARCO F. BILDAN
-----------	---------------------

PRC NO : 0015392	VALIDITY: 10/24/2026
PTR NO : 1971212 P	DATE ISSUED: 01/24/2024
ISSUED AT : PGT TARLAC CITY	TIN : 120-051-183-000
IAPOA: 9973-414524-103123	DATE ISSUED: 10/31/2023

OWNER:	DR. ARNOLD E. VELASCO PRESIDENT
--------	------------------------------------

SHEET CONTENTS:	AS SHOWN
DATE:	MARCH 2024
SHEET NO:	A-03
PAGE NO:	03/65



EXISTING FLOOR PLAN
SCALE: 1:200M



PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

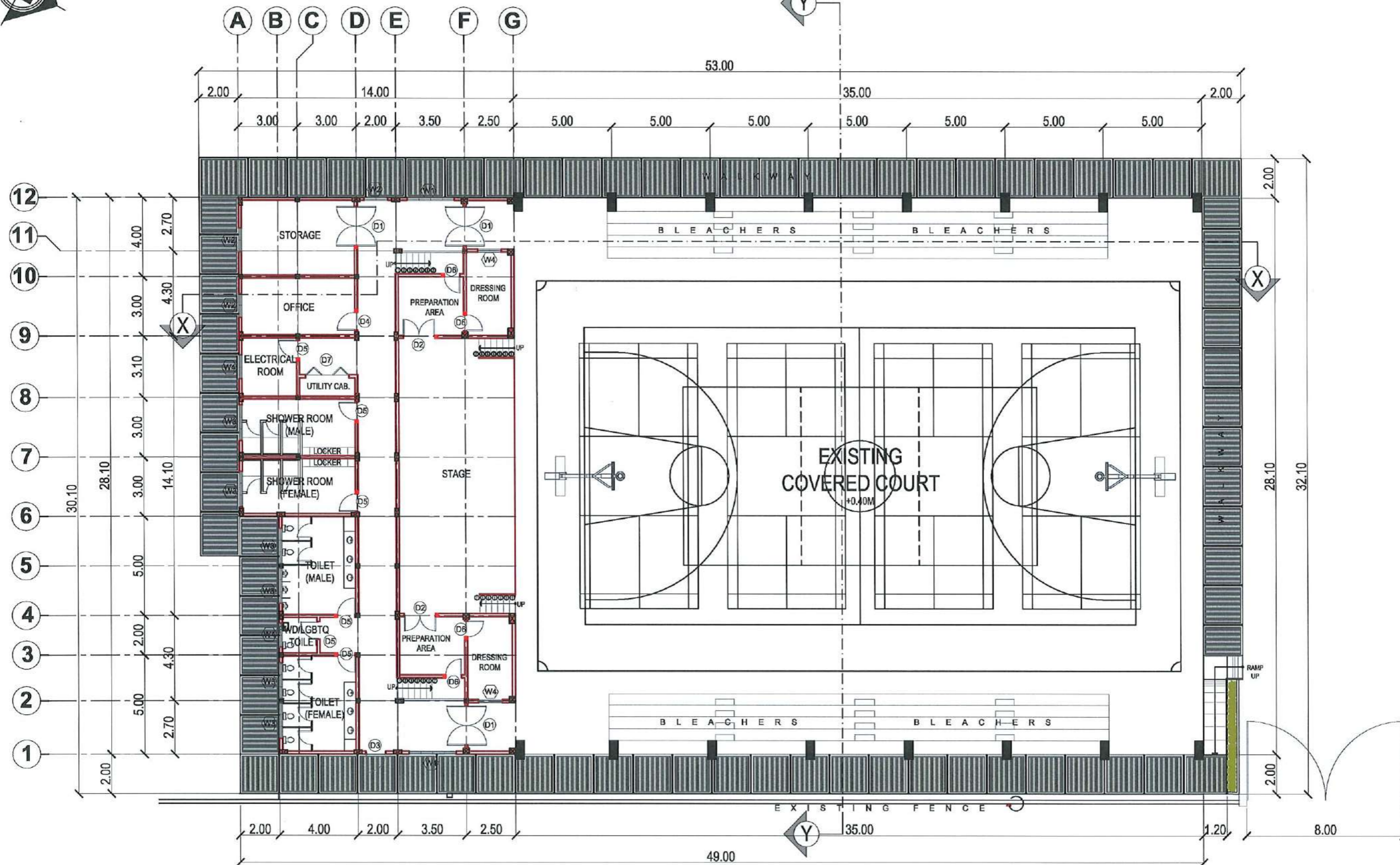
ARCHITECT: AR. MARCO F. BILDAN

PRC NO: 0016392
PTR NO: 1971212 P
ISSUED AT: PGT TARLAC CITY
IAPOA: 9973-414624-103123
VALIDITY: 10/24/2026
DATE ISSUED: 01/24/2024
TIN: 120-051-183-000
DATE ISSUED: 10/31/2023

OWNER: DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS: AS SHOWN
DATE: MARCH 2024

SHEET NO: A-04
PAGE NO: 04/65



PROPOSED GROUND FLOOR PLAN

SCALE: 1:200M



TARLAC STATE UNIVERSITY
Facilities Development and
Management Office
Romulo Boulevard, Tarlac City, Philippines 2300

PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

ARCHITECT
AR. MARCO F. BILDAN

PRC NO: 0015392
PTR NO: 1971212 P
ISSUED AT: PGT TARLAC CITY
IAPOA: 9973-414524-103123

VALIDITY: 10/24/2026
DATE ISSUED: 01/24/2024
TIN: 120-051-183-000
DATE ISSUED: 10/31/2023

OWNER:
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN

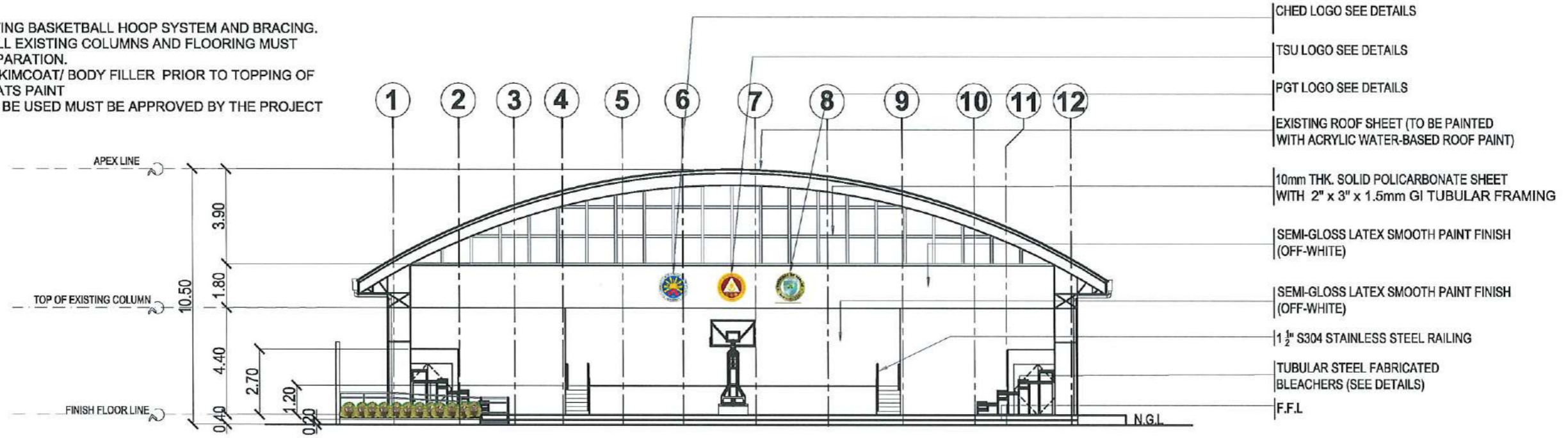
DATE: MARCH 2024

SHEET NO:
A-05

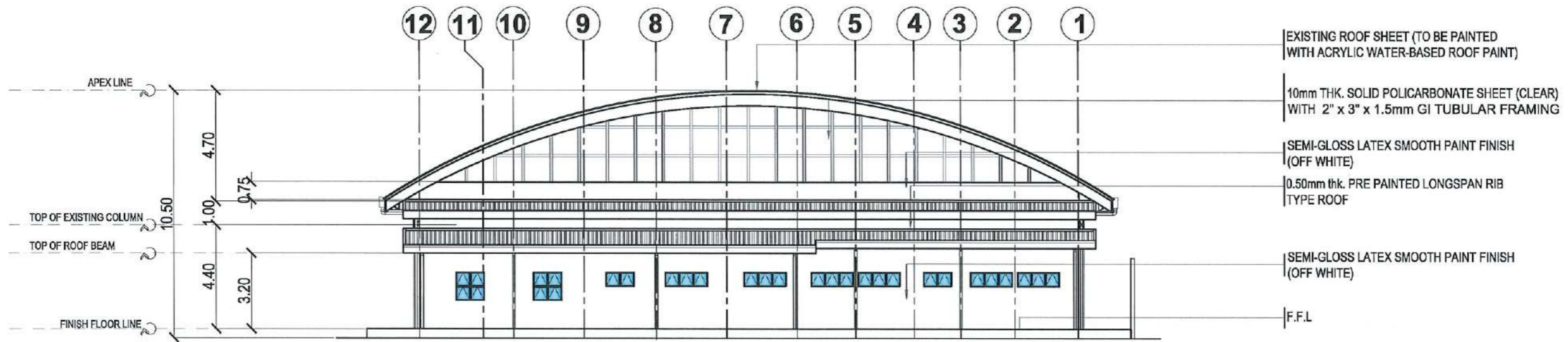
PAGE NO:
05/65

NOTE :

1. REMOVAL OF EXISTING BASKETBALL HOOP SYSTEM AND BRACING.
2. RE-PAINTING OF ALL EXISTING COLUMNS AND FLOORING MUST HAVE SURFACE PREPARATION.
3. APPLICATION OF SKIMCOAT/ BODY FILLER PRIOR TO TOPPING OF PRIMER AND TOPCOATS PAINT
4. TYPE OF PAINT TO BE USED MUST BE APPROVED BY THE PROJECT IN-CHARGE.



FRONT ELEVATION
SCALE: 1:200M



REAR ELEVATION
SCALE: 1:200M



TARLAC STATE UNIVERSITY
Facilities Development and Management Office
Romulo Boniferril, Tarlac City, Philippines 2100

PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

ARCHITECT: **AR. MARCO F. BILDAN**

PRC NO: 0015392 VALIDITY: 10/24/2026
PTR NO: 1971212 P DATE ISSUED: 01/24/2024
ISSUED AT: PGT TARLAC CITY TIN: 120-051-183-000
IAPOA: 9973-414524-103123 DATE ISSUED: 10/31/2023

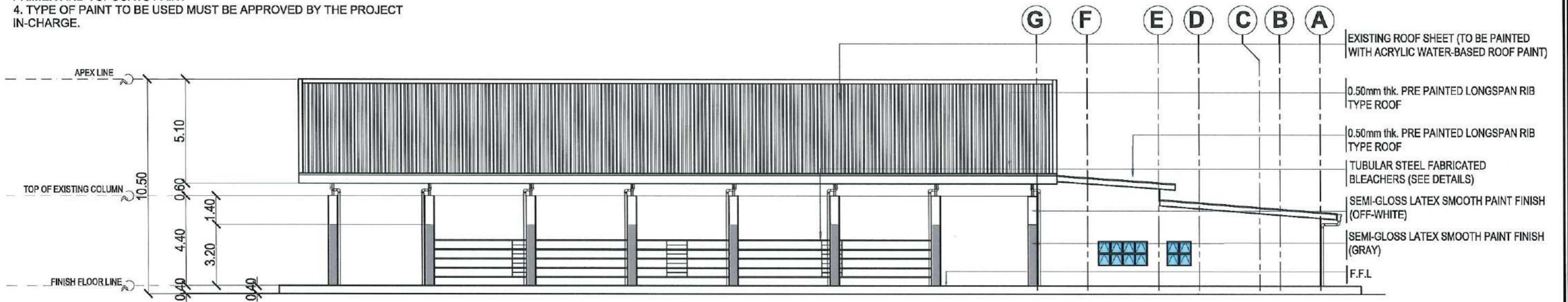
OWNER: **DR. ARNOLD E. VELASCO**
PRESIDENT

SHEET CONTENTS: AS SHOWN
DATE: MARCH 2024

SHEET NO: **A-06**
PAGE NO: **06/65**

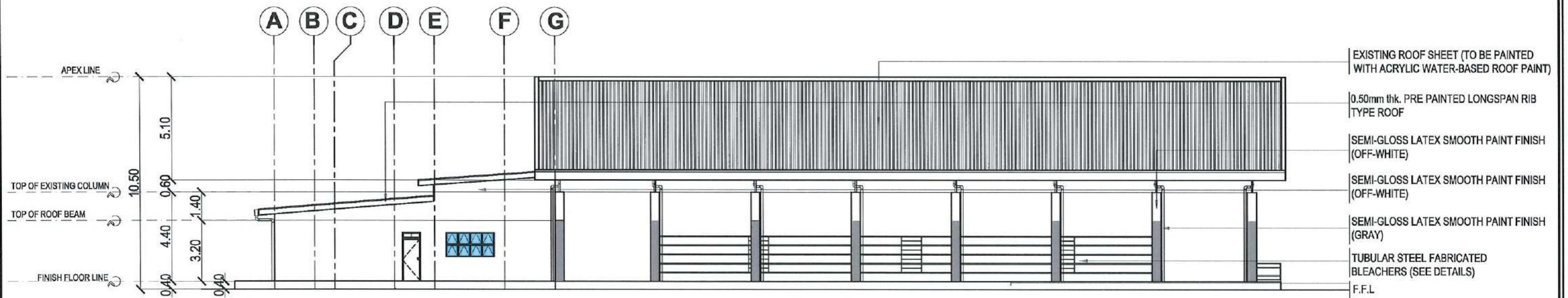
NOTE :

1. REMOVAL OF EXISTING BASKETBALL HOOP SYSTEM AND BRACING.
2. RE-PAINTING OF ALL EXISTING COLUMNS AND FLOORING MUST HAVE SURFACE PREPARATION.
3. APPLICATION OF SKIMCOAT/ BODY FILLER PRIOR TO TOPPING OF PRIMER AND TOPCOATS PAINT
4. TYPE OF PAINT TO BE USED MUST BE APPROVED BY THE PROJECT IN-CHARGE.



RIGHT SIDE ELEVATION

SCALE: 1:200M



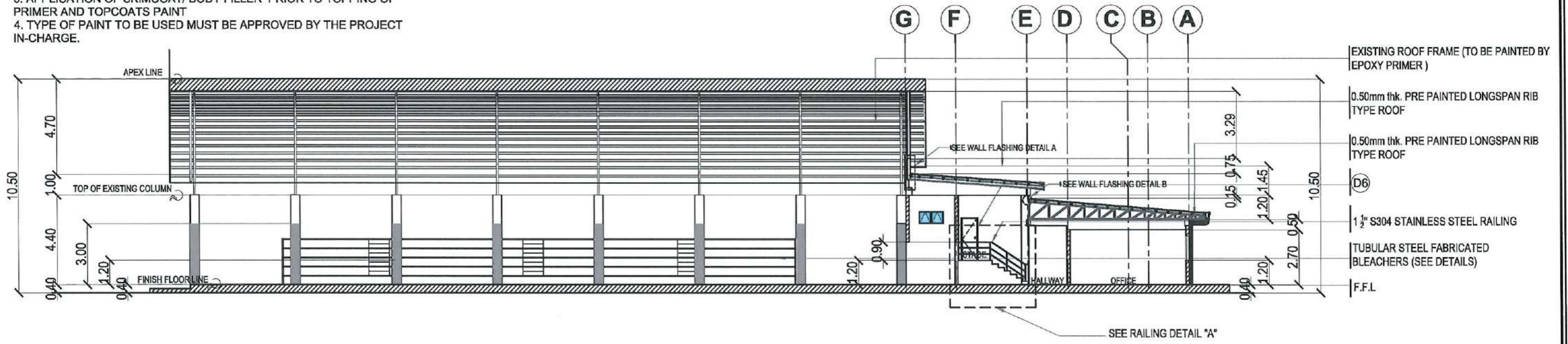
LEFT SIDE ELEVATION

SCALE: 1:200M

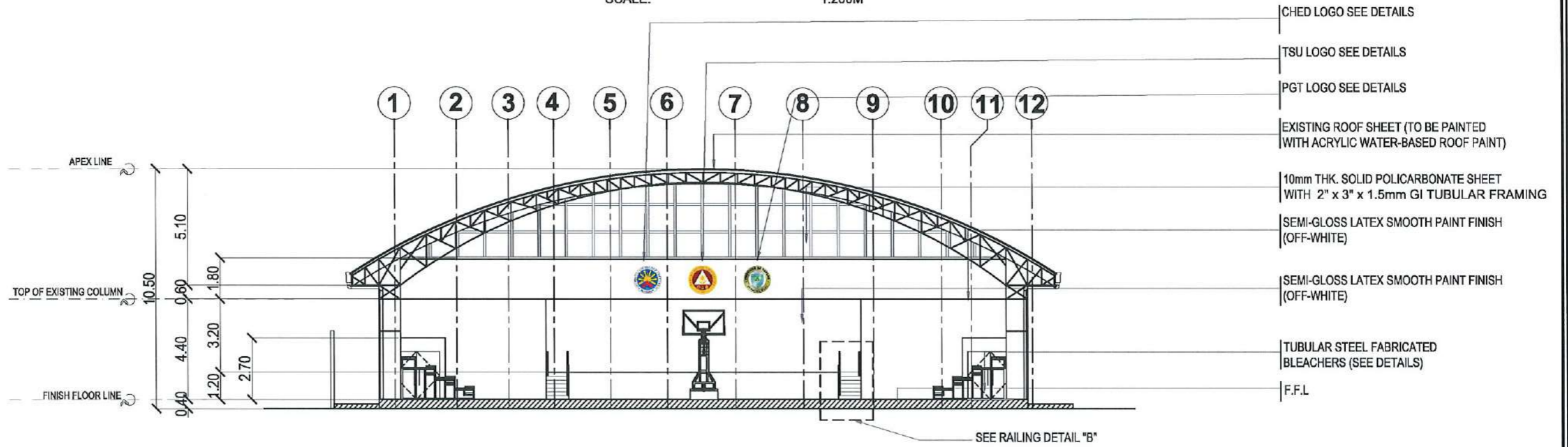
	PROJECT TITLE:	ARCHITECT	PRC NO : 0015392	VALIDITY: 10/24/2026	OWNER:	SHEET CONTENTS:	SHEET NO:
	REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER	 AR. MARGO F. BILDAN	PTR NO : 1971212 P	DATE ISSUED: 01/24/2024	 DR. ARNOLD E. VELASCO PRESIDENT	AS SHOWN	A-07
	PROJECT LOCATION:		SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY	ISSUED AT : PGT TARLAC CITY		TIN : 120-051-183-000	DATE: MARCH 2024
			IAPCA: 9973-414524-103123	DATE ISSUED: 10/31/2023			

NOTE :

1. REMOVAL OF EXISTING BASKETBALL HOOP SYSTEM AND BRACING.
2. RE-PAINTING OF ALL EXISTING COLUMNS AND FLOORING MUST HAVE SURFACE PREPARATION.
3. APPLICATION OF SKIMCOAT/ BODY FILLER PRIOR TO TOPPING OF PRIMER AND TOPCOATS PAINT
4. TYPE OF PAINT TO BE USED MUST BE APPROVED BY THE PROJECT IN-CHARGE.



SECTION THRU "X"
SCALE: 1:200M



SECTION THRU "Y"
SCALE: 1:200M



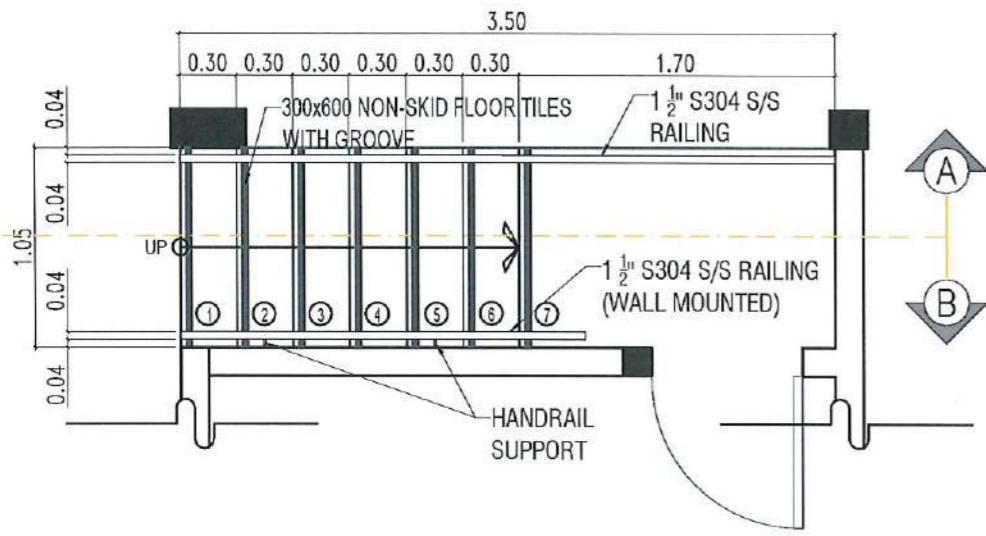
PROJECT TITLE: **REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER**
PROJECT LOCATION: **SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY**

ARCHITECT: **AR. MARCO F. BILDAN**

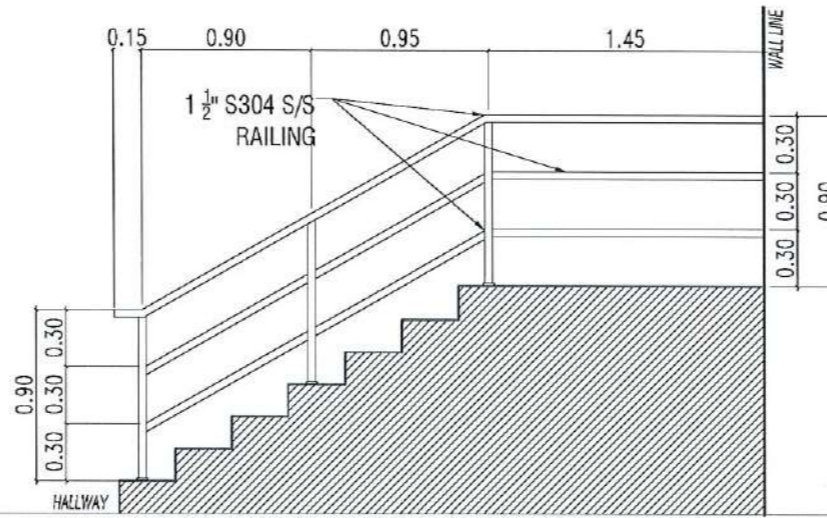
PRC NO: 0016392 VALIDITY: 10/24/2026
PTR NO: 1971212 P DATE ISSUED: 01/24/2024
ISSUED AT: PGT TARLAC CITY TIN: 120-061-183-000
IAPOA: 9973-414524-103123 DATE ISSUED: 10/31/2023

OWNER: **DR. ARNOLD E. VELASCO**
PRESIDENT

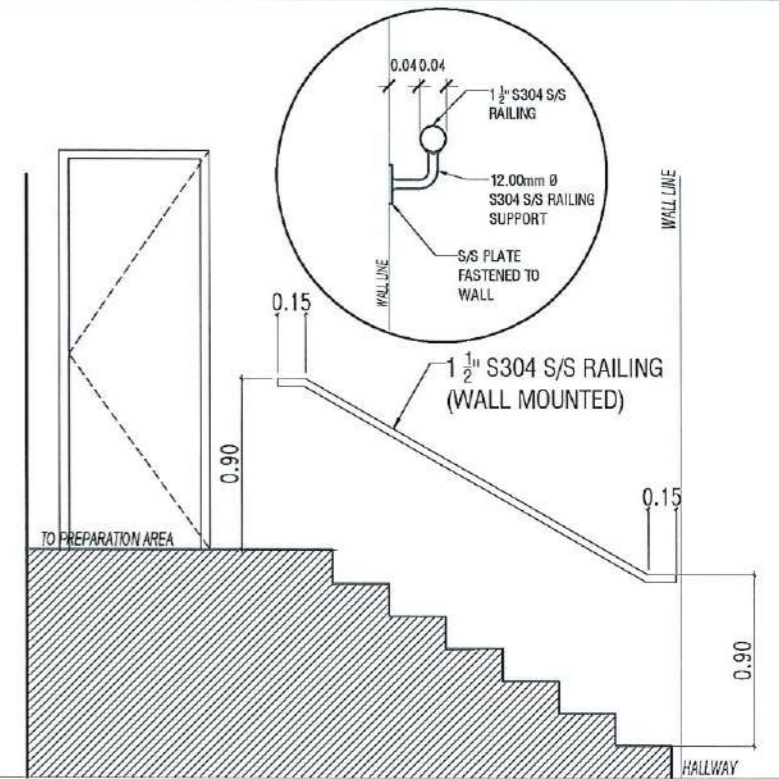
SHEET CONTENTS: **AS SHOWN**
DATE: **MARCH 2024**
SHEET NO: **A-08**
PAGE NO: **08/65**



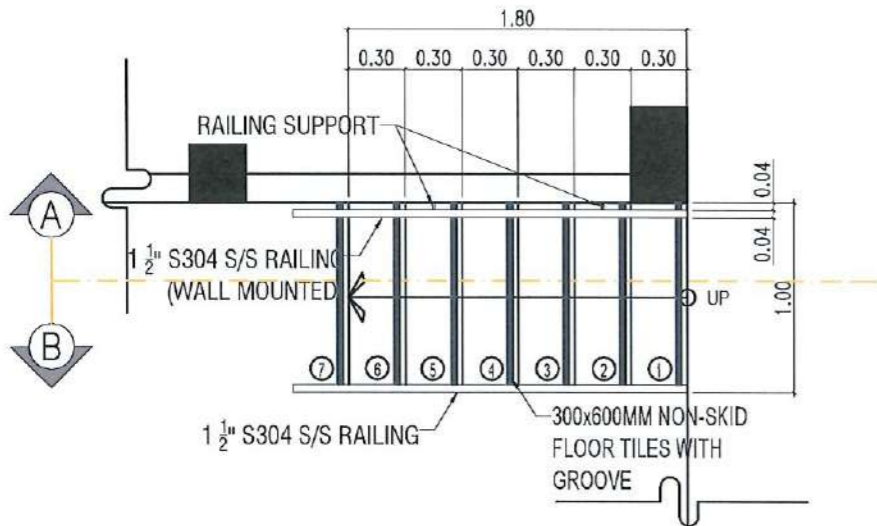
**STAIR RAILING "A"
BLOW UP DETAIL PLAN**
SCALE 1:40 MTS.



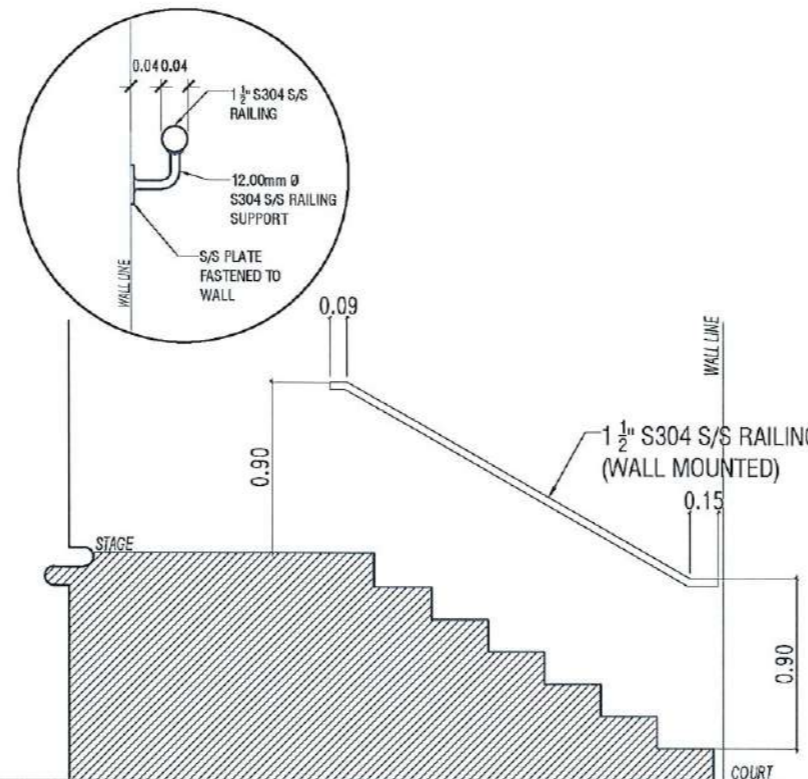
**STAIR RAILING "A"
SECTION THRU A-A**
SCALE 1:40 MTS.



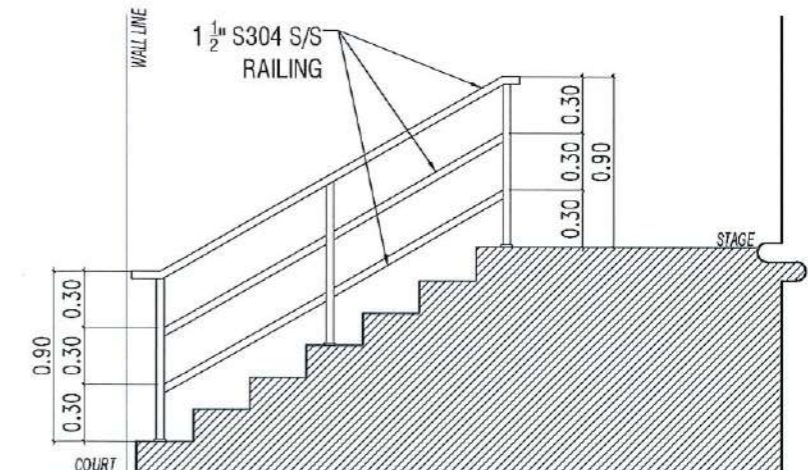
**STAIR RAILING "A"
SECTION THRU B-B**
SCALE 1:40 MTS.



**STAIR RAILING "B"
BLOW UP DETAIL PLAN**
SCALE 1:40 MTS.



**STAIR RAILING "B"
SECTION THRU A-A**
SCALE 1:40 MTS.



**STAIR RAILING "B"
SECTION THRU B-B**
SCALE 1:40 MTS.



TARLAC STATE UNIVERSITY
Facilities Development and
Management Office
Romulo S. Coliver, Tarlac City, Philippines 2300

PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

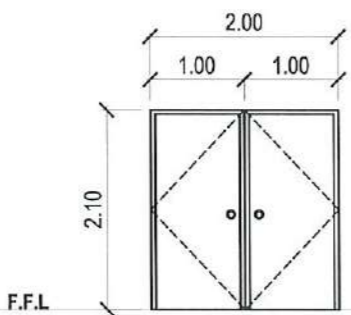
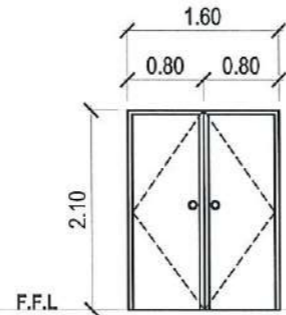
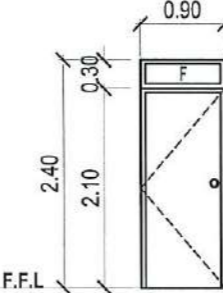
ARCHITECT
AR. MARCO F. BILDAN

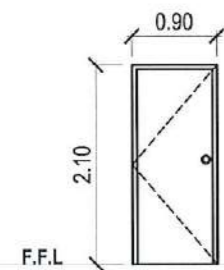
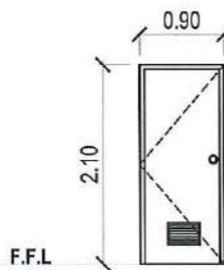
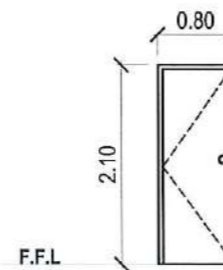
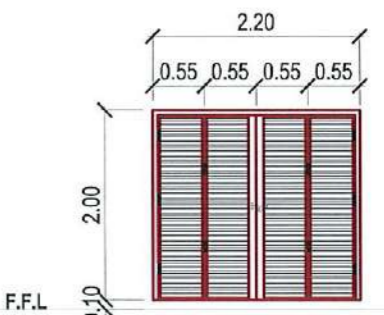
PRC NO : 0015392
PTR NO : 1971212 P
ISSUED AT : PGT TARLAC CITY
IAPOA : 9973-414524-103123
VALIDITY : 10/24/2026
DATE ISSUED : 01/24/2024
TIN : 120-051-183-000
DATE ISSUED : 10/31/2023

OWNER:
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN
DATE: MARCH 2024

SHEET NO:
A-09
PAGE NO:
09/65

														
<table border="1"> <tr><td>QUANTITY :</td><td>3 SETS</td></tr> <tr><td>LOCATION :</td><td>HALLWAY, STORAGE ROOM</td></tr> </table>	QUANTITY :	3 SETS	LOCATION :	HALLWAY, STORAGE ROOM	<table border="1"> <tr><td>QUANTITY :</td><td>2 SETS</td></tr> <tr><td>LOCATION :</td><td>PREPARATION AREA</td></tr> </table>	QUANTITY :	2 SETS	LOCATION :	PREPARATION AREA	<table border="1"> <tr><td>QUANTITY :</td><td>1 SET</td></tr> <tr><td>LOCATION :</td><td>EXIT</td></tr> </table>	QUANTITY :	1 SET	LOCATION :	EXIT
QUANTITY :	3 SETS													
LOCATION :	HALLWAY, STORAGE ROOM													
QUANTITY :	2 SETS													
LOCATION :	PREPARATION AREA													
QUANTITY :	1 SET													
LOCATION :	EXIT													
DESCRIPTION : DOUBLE SWING STEEL DOOR 0.50mm thk. WITH SURFACE BOLT(SMOOTH PAINT FINISH) STEEL JAMB : 0.50mm thk. KNOB: HEAVY DUTY DOME TYPE HINGES: HEAVY DUTY STAINLESS	DESCRIPTION : DOUBLE SWING STEEL DOOR 0.50mm thk. WITH SURFACE BOLT (SMOOTH PAINT FINISH) STEEL JAMB : 0.50mm thk. KNOB: HEAVY DUTY DOME TYPE HINGES: HEAVY DUTY STAINLESS	DESCRIPTION : SINGLE SWING STEEL DOOR 0.50mm thk. (SMOOTH PAINT FINISH) STEEL JAMB : 0.50mm thk. KNOB: HEAVY DUTY DOME TYPE HINGES: HEAVY DUTY STAINLESS												

																			
<table border="1"> <tr><td>QUANTITY :</td><td>1 SET</td></tr> <tr><td>LOCATION :</td><td>OFFICE</td></tr> </table>	QUANTITY :	1 SET	LOCATION :	OFFICE	<table border="1"> <tr><td>QUANTITY :</td><td>6 SETS</td></tr> <tr><td>LOCATION :</td><td>TOILETS (MALE, FEMALE, PWD/LGBTQ), SHOWER ROOM (MALE, FEMALE), ELECTRICAL ROOM</td></tr> </table>	QUANTITY :	6 SETS	LOCATION :	TOILETS (MALE, FEMALE, PWD/LGBTQ), SHOWER ROOM (MALE, FEMALE), ELECTRICAL ROOM	<table border="1"> <tr><td>QUANTITY :</td><td>4 SETS</td></tr> <tr><td>LOCATION :</td><td>PREPARATION AREA, DRESSING ROOM</td></tr> </table>	QUANTITY :	4 SETS	LOCATION :	PREPARATION AREA, DRESSING ROOM	<table border="1"> <tr><td>QUANTITY :</td><td>1 SET</td></tr> <tr><td>LOCATION :</td><td>UTILITY CABINET</td></tr> </table>	QUANTITY :	1 SET	LOCATION :	UTILITY CABINET
QUANTITY :	1 SET																		
LOCATION :	OFFICE																		
QUANTITY :	6 SETS																		
LOCATION :	TOILETS (MALE, FEMALE, PWD/LGBTQ), SHOWER ROOM (MALE, FEMALE), ELECTRICAL ROOM																		
QUANTITY :	4 SETS																		
LOCATION :	PREPARATION AREA, DRESSING ROOM																		
QUANTITY :	1 SET																		
LOCATION :	UTILITY CABINET																		
DESCRIPTION : SINGLE SWING STEEL DOOR 0.50mm thk. (SMOOTH PAINT FINISH) STEEL JAMB : 0.50mm thk. KNOB: HEAVY DUTY DOME TYPE HINGES: HEAVY DUTY STAINLESS	DESCRIPTION : SINGLE SWING STEEL DOOR WITH LOUVERS 0.50mm thk. (SMOOTH PAINT FINISH) DOOR & JAMB: 0.50mm thk. W/ SOUND PROOF SEAL STRIP(SELF ADHESIVE RUBBER) KNOB: HEAVY DUTY DOME TYPE HINGES: HEAVY DUTY STAINLESS	DESCRIPTION : SINGLE SWING STEEL DOOR 0.50mm thk. (SMOOTH PAINT FINISH) STEEL JAMB : 0.50mm thk. KNOB: HEAVY DUTY DOME TYPE HINGES: HEAVY DUTY STAINLESS	DESCRIPTION : FOLDING LOUVER STEEL DOOR WITH SURFACE BOLT(SMOOTH PAINT FINISH) STEEL JAMB : 0.50mm thk. KNOB: STAINLESS DOOR LOCK BOLT SLIDE LATCH HINGE : HEAVY DUTY STAINLESS																

SCHEDULE OF DOORS

SCALE: 1:80M

W1	QUANTITY : 2 SETS LOCATION : HALLWAY	W2	QUANTITY : 3 SETS LOCATION : HALLWAY, STORAGE ROOM, OFFICE
DESCRIPTION : WHITE POWDER COATED ALUMINUM AWNING WINDOW WITH 6mm THK. ONE WAY REFLECTIVE GLASS (EXTERIOR) WITH COMPLETE ACCESSORIES		DESCRIPTION : WHITE POWDER COATED ALUMINUM AWNING WINDOW WITH 6mm THK. ONE WAY REFLECTIVE GLASS (EXTERIOR) WITH COMPLETE ACCESSORIES	
W3	QUANTITY : 6 SETS LOCATION : TOILETS AND SHOWER ROOM (MALE, FEMALE)	W4	QUANTITY : 4 SETS LOCATION : PWD/LGBTQ TOILET , ELECTRICAL ROOM, DRESSING ROOM
DESCRIPTION : WHITE POWDER COATED ALUMINUM AWNING WINDOW WITH 6mm THK. ONE WAY REFLECTIVE GLASS (EXTERIOR) WITH COMPLETE ACCESSORIES		DESCRIPTION : WHITE POWDER COATED ALUMINUM AWNING WINDOW WITH 6mm THK. ONE WAY REFLECTIVE GLASS (EXTERIOR) WITH COMPLETE ACCESSORIES	

SCHEDULE OF WINDOWS

SCALE: 1:80M



TARLAC STATE UNIVERSITY
Facilities Development and
Management Office
Romulo Boulevard, Tarlac City, Philippines 2300

PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

ARCHITECT

AR. MARCO F. BILDAN

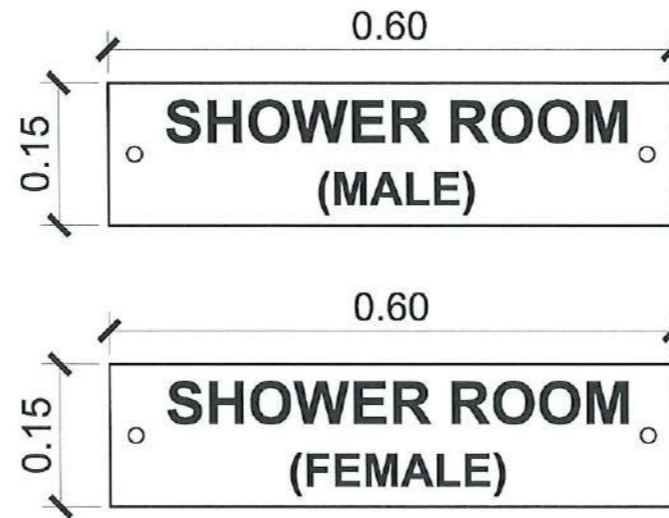
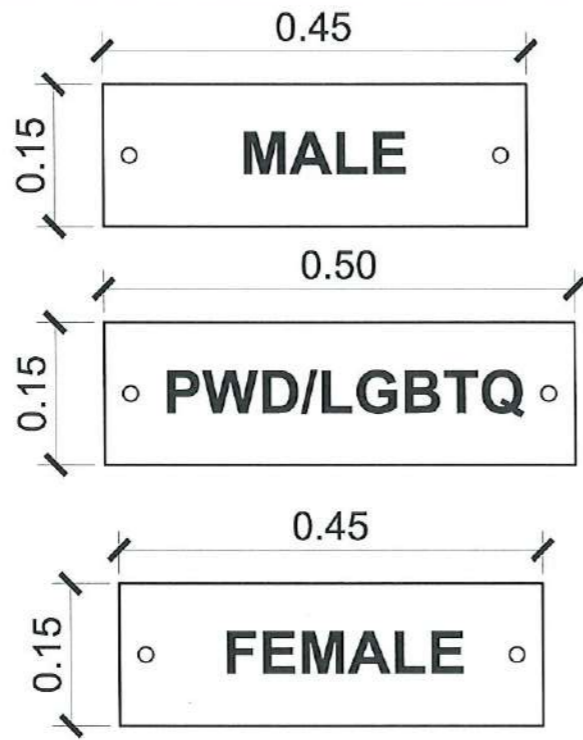
PRC NO : 0015392 VALIDITY: 10/24/2026
PTR NO : 1971212 P DATE ISSUED: 01/24/2024
ISSUED AT : PGT TARLAC CITY TIN : 120-051-163-000
IAPOA: 9973-414524-103123 DATE ISSUED: 10/31/2023

OWNER:

DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN
DATE: MARCH 2024

SHEET NO:
A-11
PAGE NO:
11/65

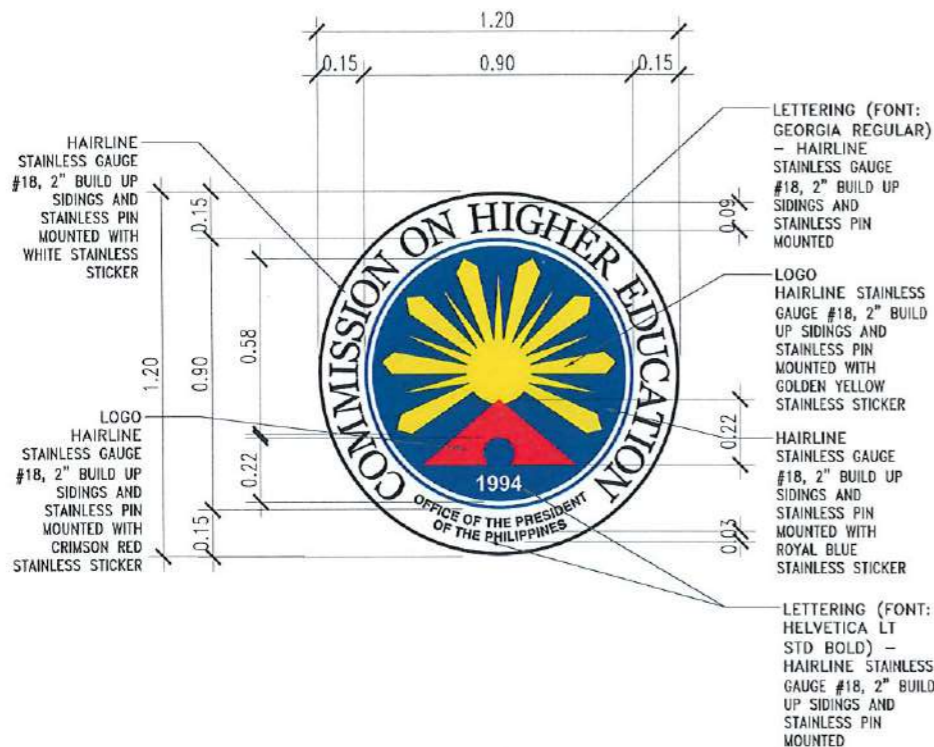


TYPICAL SIGNAGE DETAIL
SCALE: 1:8M

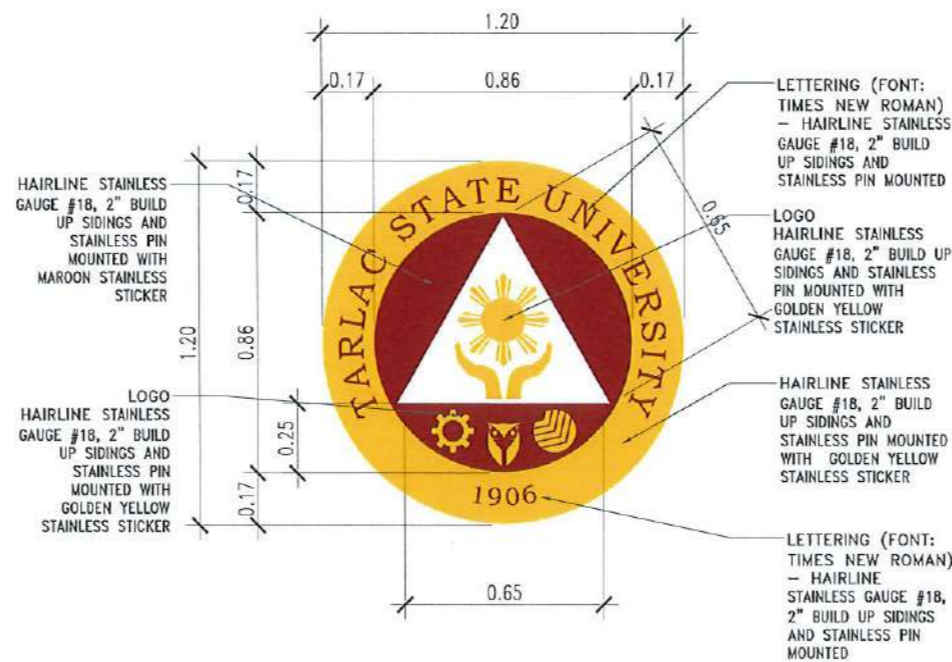
ACRYLIC CLEAR GLASS SIGNAGE

SIGNAGE SPECIFICATION:
PROPORTIONED LETTERING ON
3mm thk. CLEAR ACRYLIC GLASS
WITH 2pcs. 8mmx17mm ACRYLIC
GLASS FIXING BOLT SCREWS

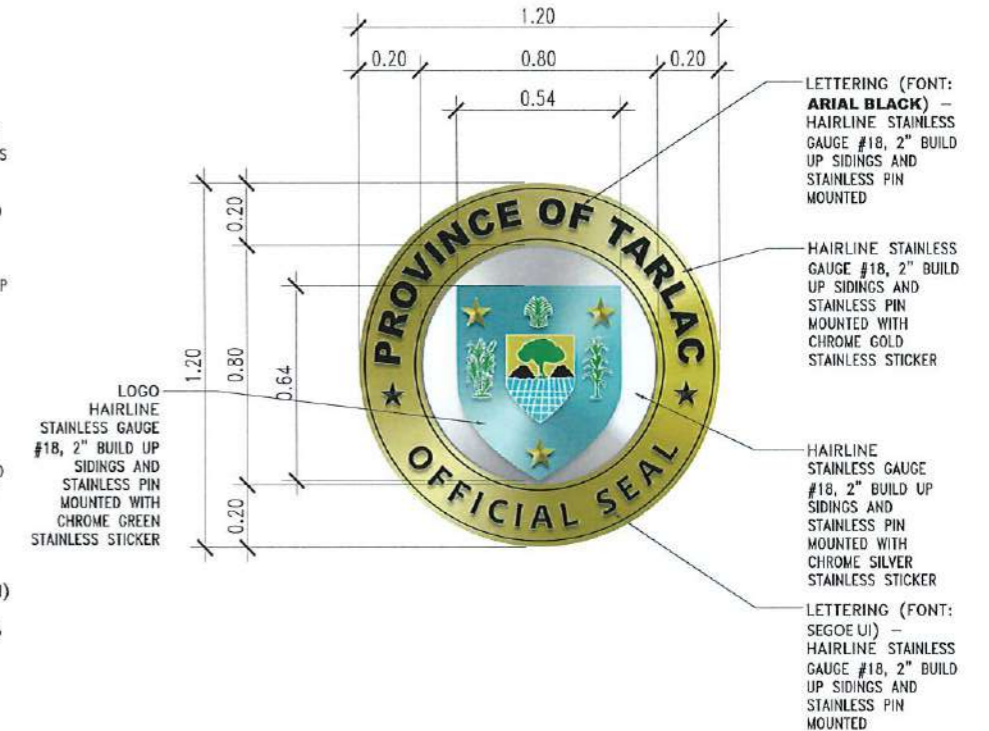
NOTE: THE FONT STYLE, FONT SIZE, TEXT CONTENT
SHALL BE FOR APPROVAL.



CHED LOGO BLOW UP DETAIL
SCALE 1:25MTS.



TSU LOGO BLOW UP DETAIL
SCALE 1:25MTS.



PGT LOGO BLOW UP DETAIL
SCALE 1:25MTS.



PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

ARCHITECT
AR. MARCO F. BILDAN

PRC NO: 0015302
PTR NO: 1971212 P
ISSUED AT: PGT TARLAC CITY
IAPOA: 9973-414524-103123

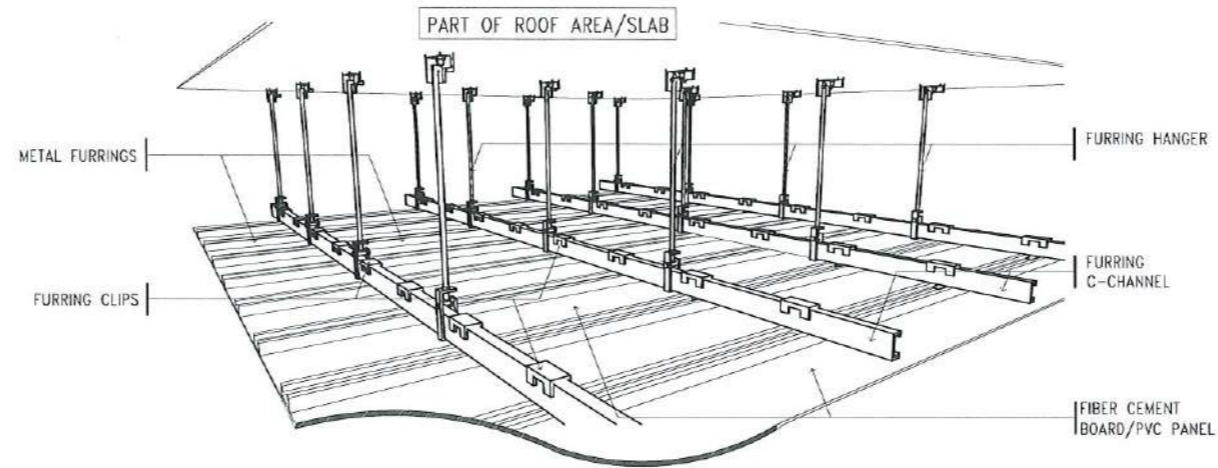
VALIDITY: 10/24/2026
DATE ISSUED: 01/24/2024
TIN: 120-051-183-000
DATE ISSUED: 10/31/2023

OWNER:
DR. ARNOLD E. VELASCO
PRESIDENT

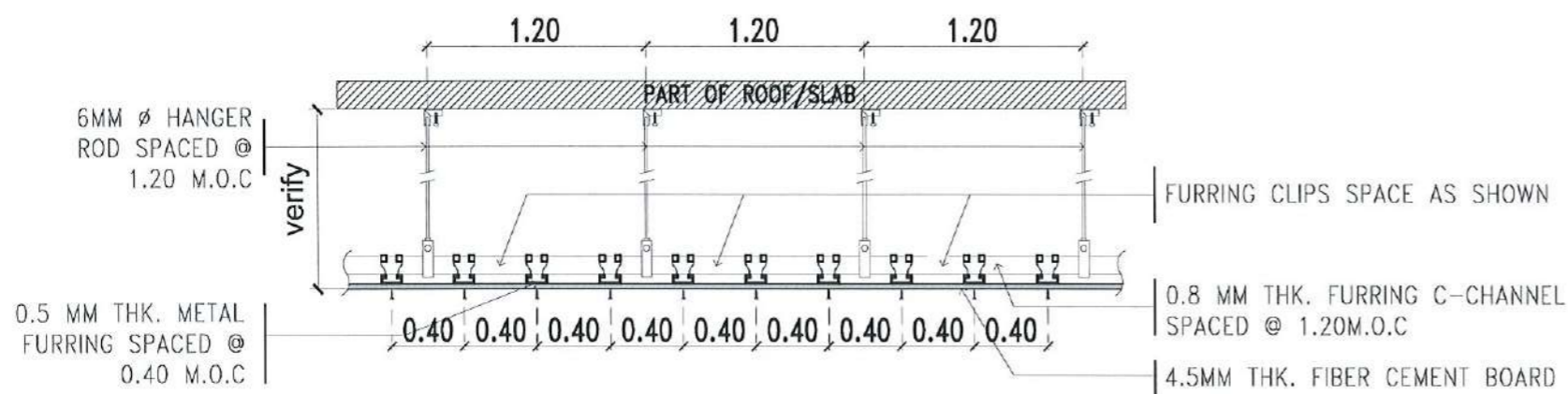
SHEET CONTENTS:
AS SHOWN

DATE: MARCH 2024

SHEET NO:
A-12
PAGE NO:
12/65

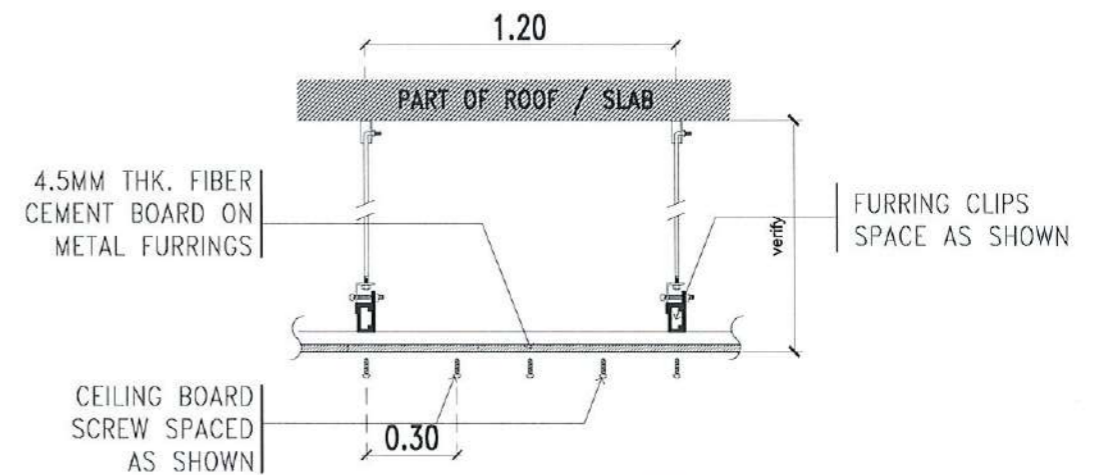


FICEM BOARD / PVC DECORATIVE CEILING DETAIL



SECTION DETAIL A

SCALE 1:40MTS.



SECTION DETAIL B

SCALE 1:40MTS.

FIBER CEMENT BOARD CEILING DETAIL



TARLAC STATE UNIVERSITY
Facilities Development and Management Office
Romulo Boulevard, Tarlac City, Philippines 2300

PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

ARCHITECT
AR. MARCO F. BILDAN

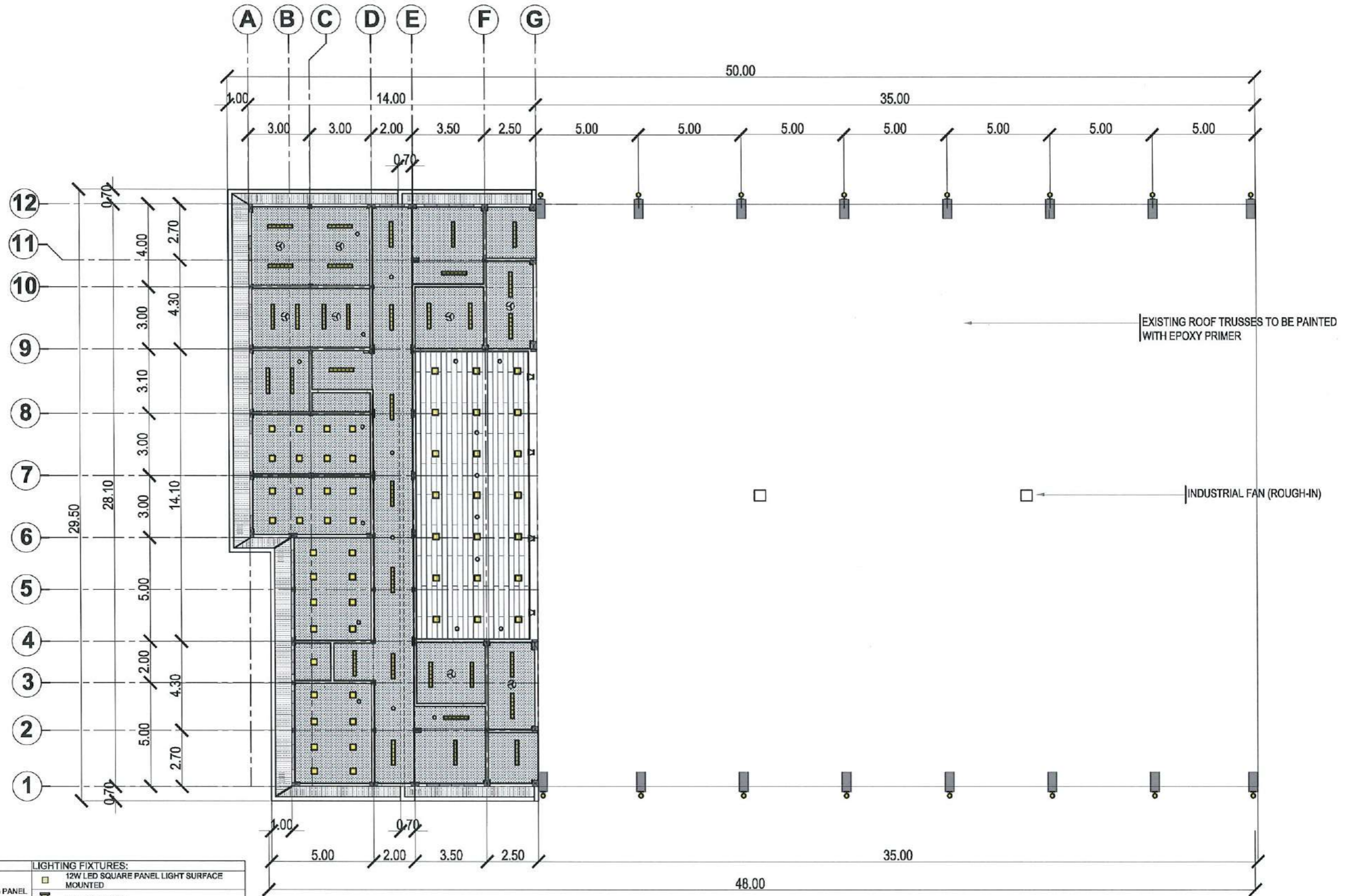
PRC NO : 0015392 VALIDITY: 10/24/2026
PTR NO : 1971212 P DATE ISSUED: 01/24/2024
ISSUED AT : PGT TARLAC CITY TIN : 120-051-183-000
IAPQA: 9973-414524-103123 DATE ISSUED: 10/31/2023

OWNER:
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN

DATE: MARCH 2024

SHEET NO:
A-13
PAGE NO:
13/65



LEGENDS

CEILING FINISHES:	LIGHTING FIXTURES:
- 2.95M X 0.25M X 8MM PVC CEILING PANEL (WOOD FINISH)	12W LED SQUARE PANEL LIGHT SURFACE MOUNTED
- 4.5MM FIBER CEMENT BOARD (FLAT LATEX PAINT)	LED SPOTLIGHT
0.50 MM THK. PRE-PAINTED SPANDREL INCLUDING FRAMING AND MOULDINGS	2 X 5W COB WARM WHITE WALL LAMP
	1 - 18W T8 LED TUBE IN LOUVER HOUSING SURFACE MOUNTED
	UFO EMERGENCY LIGHT CEILING MOUNTED
	CEILING FAN

REFLECTED CEILING PLAN

SCALE: 1:200M



PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

ARCHITECT:
AR. MARCO F. BILDAN

PRC NO : 0015392 VALIDITY: 10/24/2026

PTR NO : 1971212 P DATE ISSUED: 01/24/2024

ISSUED AT: PGT TARLAC CITY TIN : 120-051-183-000

IAPOA: 9973-414524-103123 DATE ISSUED: 10/31/2023

OWNER:
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN

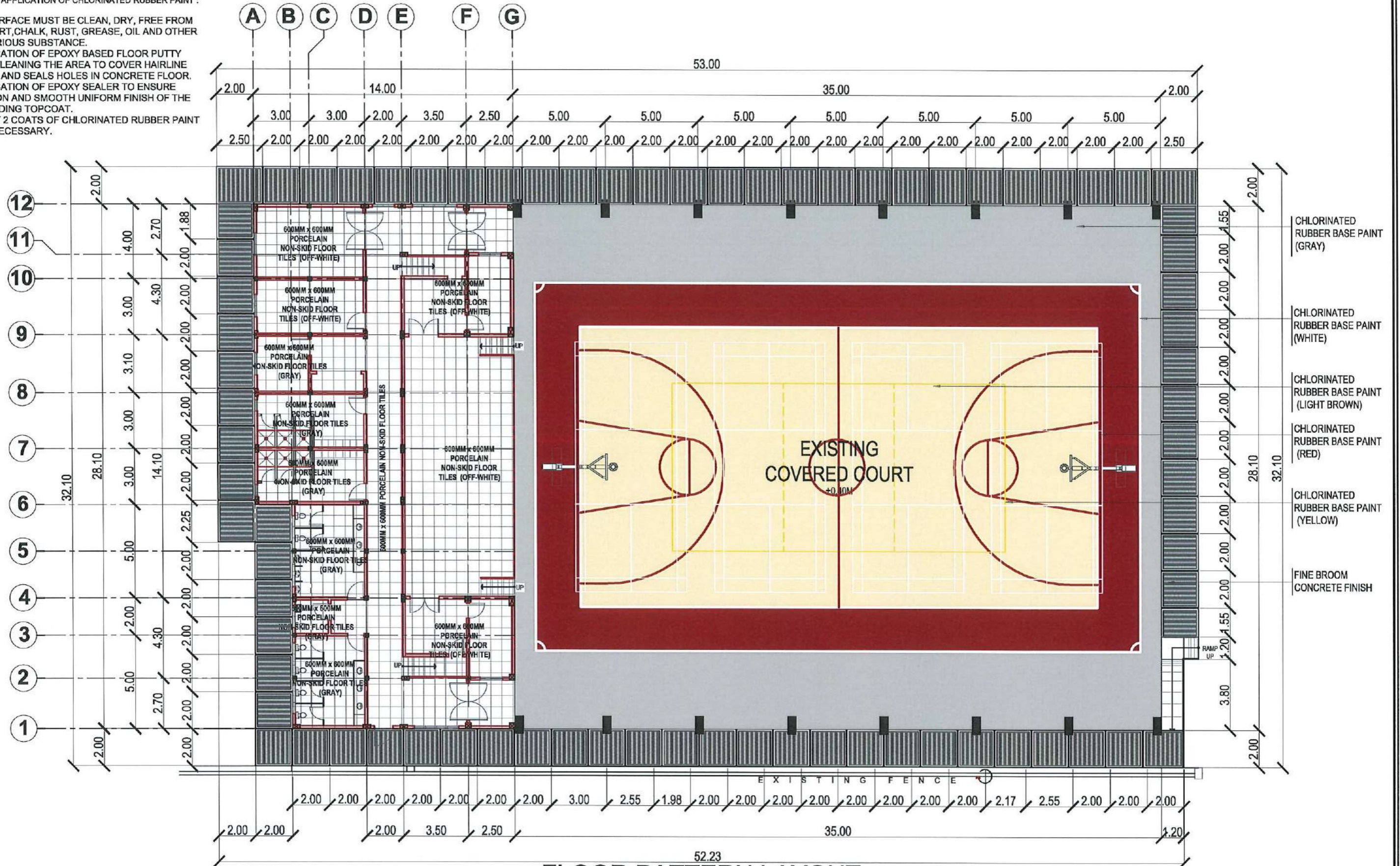
DATE: MARCH 2024

SHEET NO:
A-14

PAGE NO:
14/65

NOTE :
 *FOR THE APPLICATION OF CHLORINATED RUBBER PAINT :

1. ALL SURFACE MUST BE CLEAN, DRY, FREE FROM DUST, DIRT, CHALK, RUST, GREASE, OIL AND OTHER DELETERIOUS SUBSTANCE.
2. APPLICATION OF EPOXY BASED FLOOR PUTTY AFTER CLEANING THE AREA TO COVER HAIRLINE CRACKS AND SEALS HOLES IN CONCRETE FLOOR.
3. APPLICATION OF EPOXY SEALER TO ENSURE ADHESION AND SMOOTH UNIFORM FINISH OF THE SUCCEEDING TOPCOAT.
4. APPLY 2 COATS OF CHLORINATED RUBBER PAINT OR AS NECESSARY.



FLOOR PATTERN LAYOUT
 SCALE: 1:200M



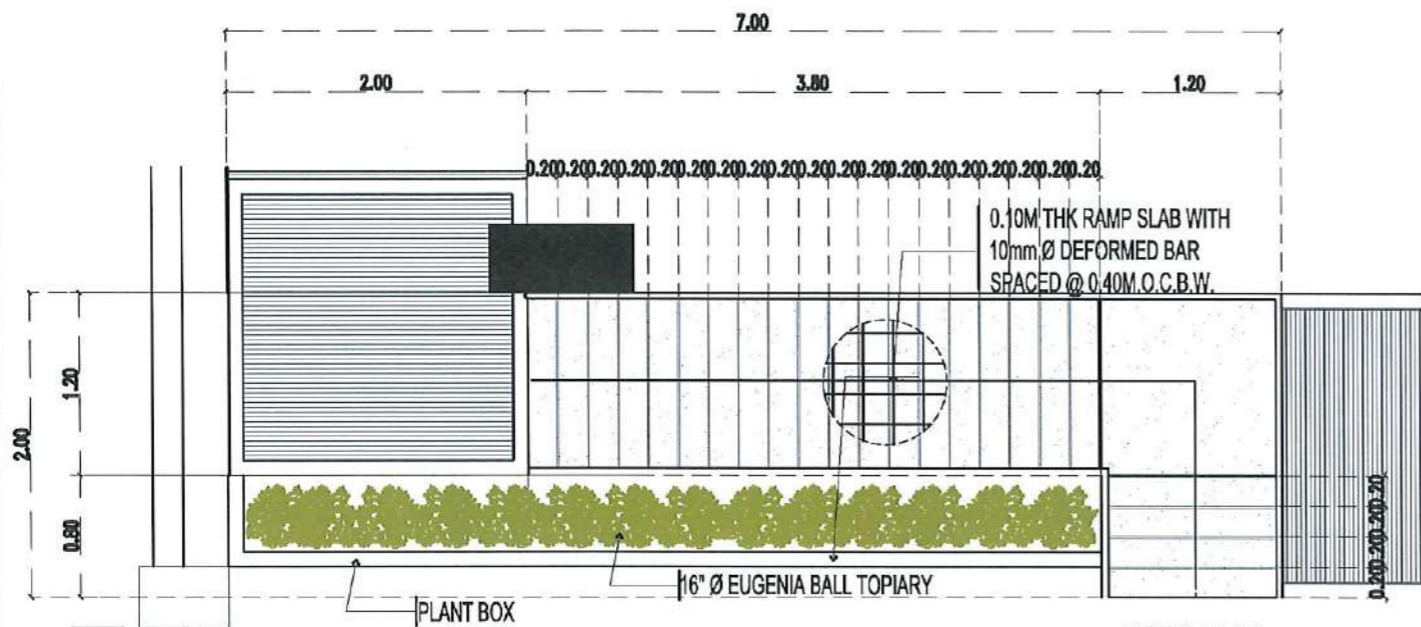
PROJECT TITLE: **REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER**
 PROJECT LOCATION: **SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY**

ARCHITECT: **AR. MARCO F. BILDAN**

PRC NO: 0016392
 PTR NO: 1971212 P
 ISSUED AT: PGT TARLAC CITY
 IAPOA: 9973-414524-103123
 VALIDITY: 10/24/2026
 DATE ISSUED: 01/24/2024
 TIN: 120-051-183-000
 DATE ISSUED: 10/31/2023

OWNER: **DR. ARNOLD E. VELASCO**
 PRESIDENT

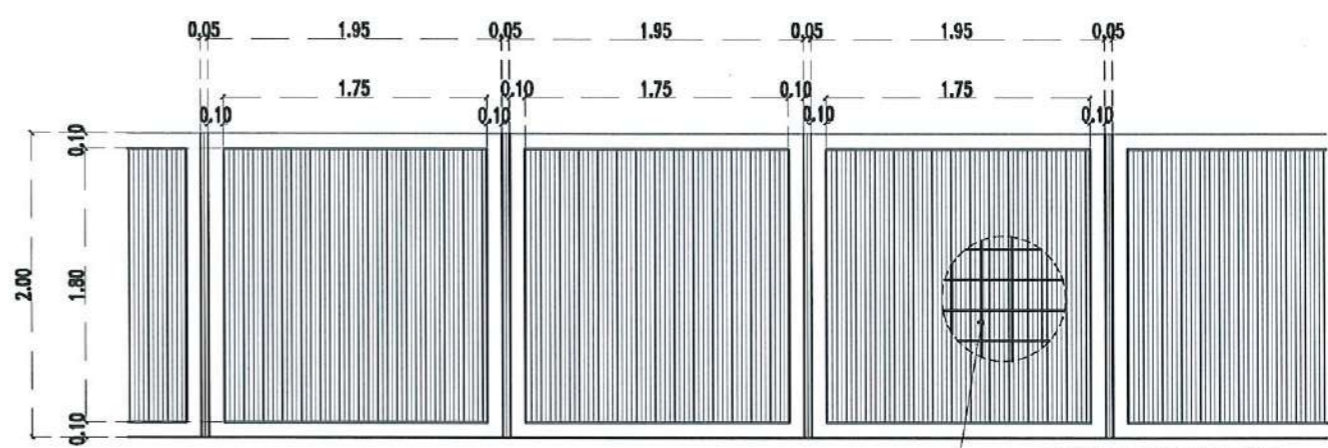
SHEET CONTENTS: **AS SHOWN**
 DATE: MARCH 2024
 SHEET NO: **A-15**
 PAGE NO: **15/65**



RAMP DETAILED PLAN

SCALE: 1:50M

RAMP UP

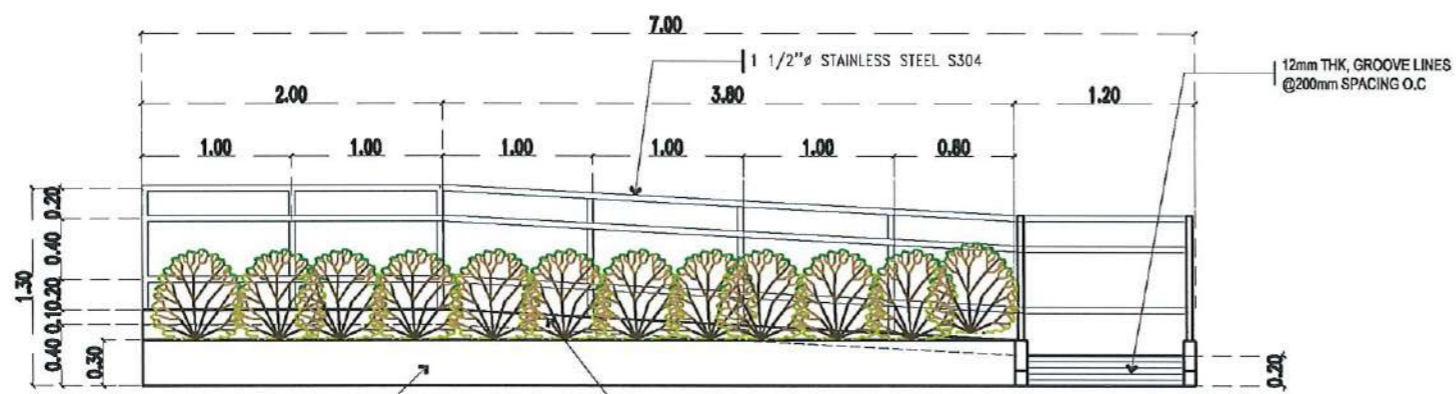


WALKWAY DETAILED PLAN

SCALE: 1:50M

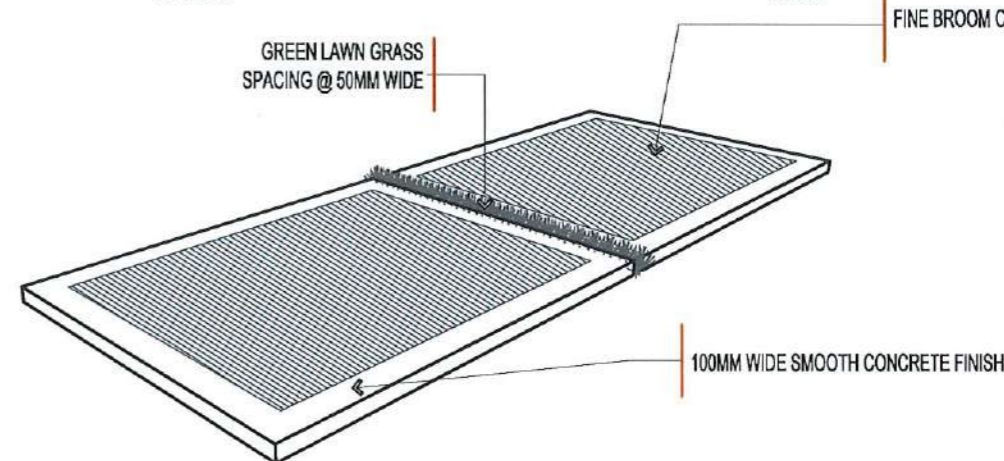
0.10M THK RAMP SLAB WITH 10mm Ø DEFORMED BAR SPACED @ 0.40M O.C.B.W.

FINE BROOM CONCRETE FINISH



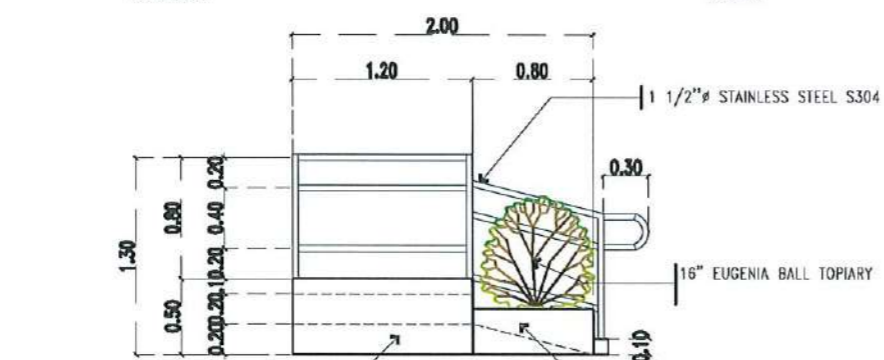
RAMP FRONT ELEVATION

SCALE: 1:50M



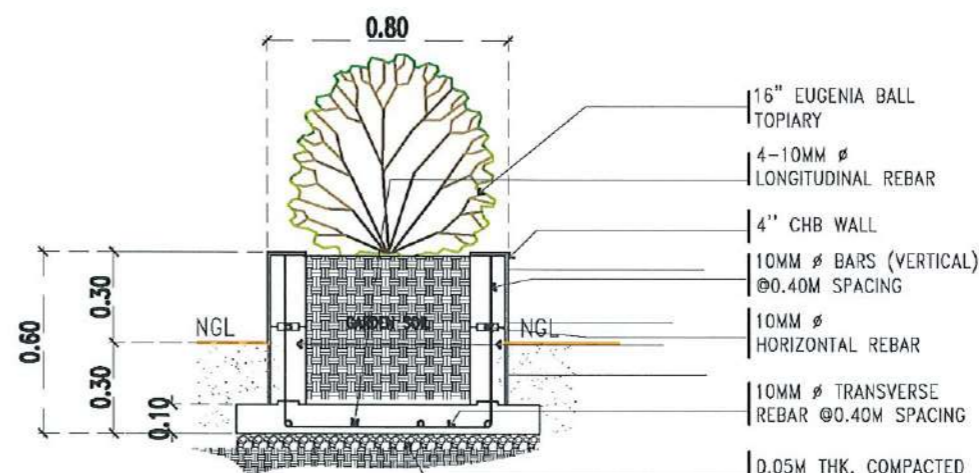
WALKWAY ISOMETRIC PLAN

SCALE: 1:50M



RAMP LEFT SIDE ELEVATION

SCALE: 1:50M



PLANTBOX CHB FOOTING DETAILS

SCALE: 1:25M



TARLAC STATE UNIVERSITY
Facilities Development and Management Office
Ronsulo Road, Tarlac City, Philippines 2300

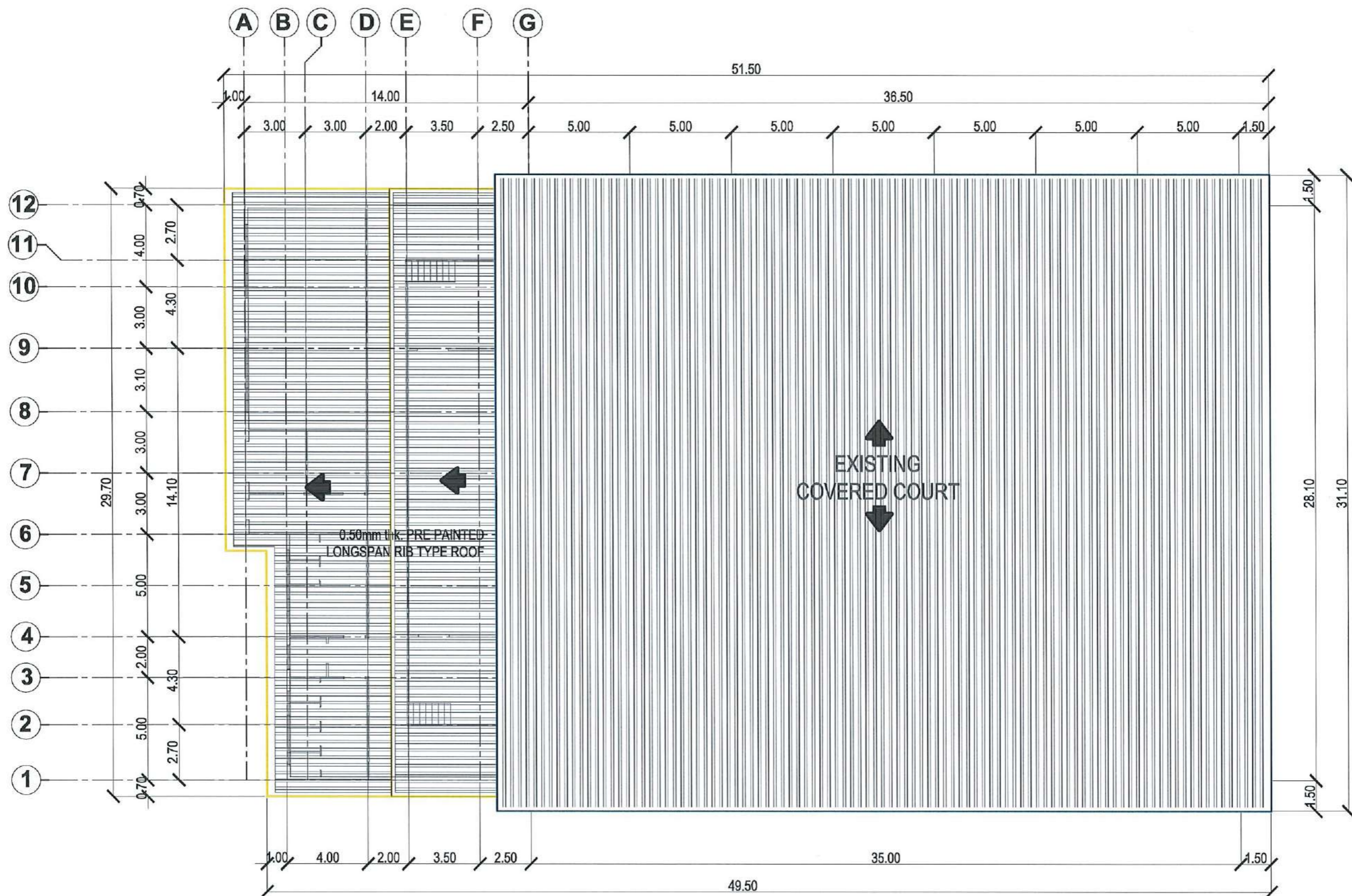
PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

ARCHITECT: AR. MARCO F. BILDAN

PRC NO: 0015392 VALIDITY: 10/24/2026
PTR NO: 1971212 P DATE ISSUED: 01/24/2024
ISSUED AT: PGT TARLAC CITY TIN: 120-051-183-000
IAPDA: 9973-414524-103123 DATE ISSUED: 10/31/2023

OWNER: DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS: AS SHOWN
DATE: MARCH 2024
SHEET NO: A-16
PAGE NO: 16/65



ROOF PLAN
SCALE: 1:200M



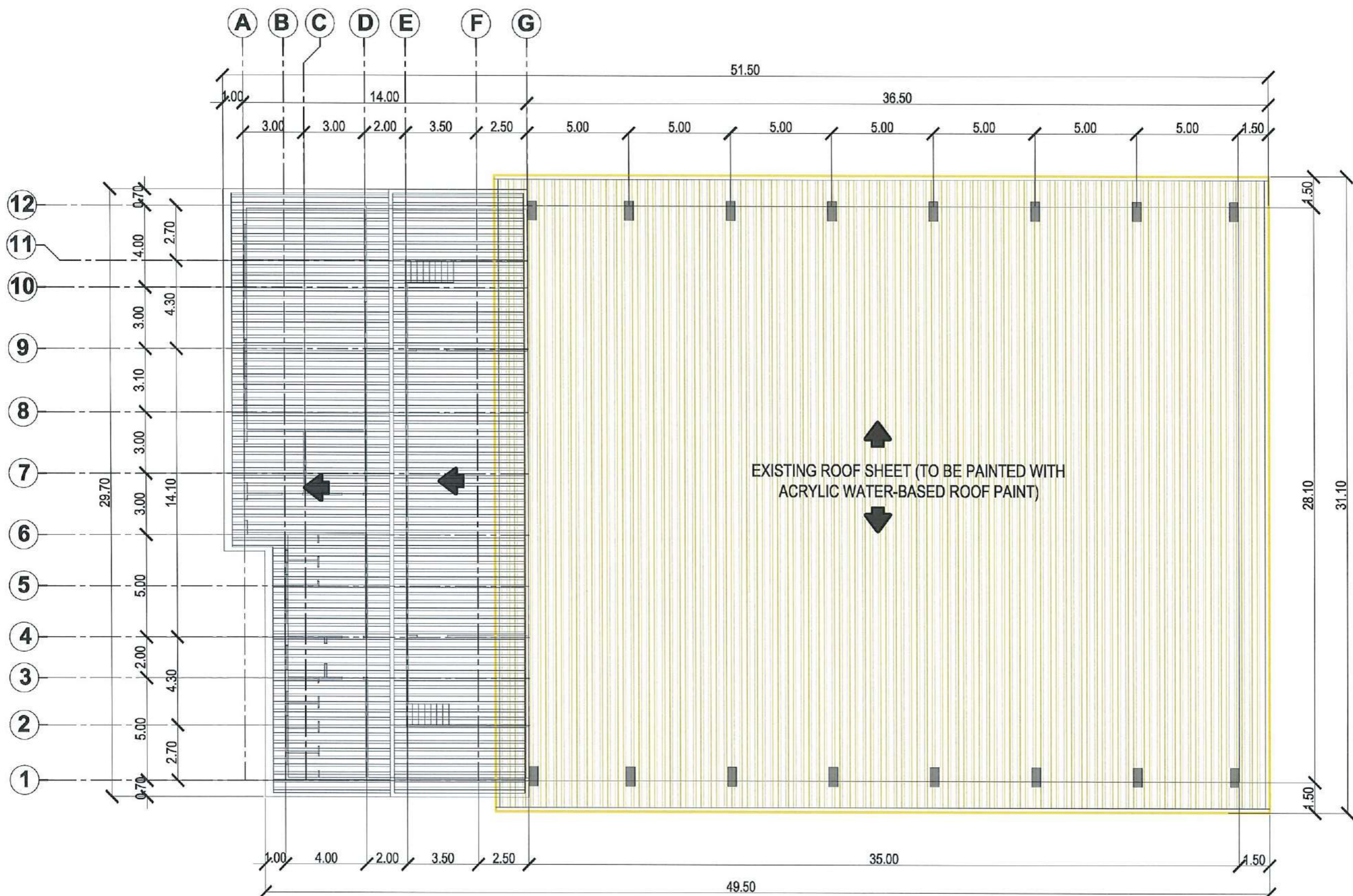
PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
 PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

ARCHITECT: AR. MARCO F. BILDAN

PRC NO: 0016392
 PTR NO: 1971212 P
 ISSUED AT: PGT TARLAC CITY
 IAPOA: 9973-414524-103123
 VALIDITY: 10/24/2026
 DATE ISSUED: 01/24/2024
 TIN: 120-051-183-000
 DATE ISSUED: 10/31/2023

OWNER: DR. ARNOLD E. VELASCO
 PRESIDENT

SHEET CONTENTS: AS SHOWN
 DATE: MARCH 2024
 SHEET NO: A-17
 PAGE NO: 17/65



ROOF PLAN (EXISTING)

SCALE: 1:200M



PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

ARCHITECT
AR. MARCO F. BILDAN

PRC NO: 0016392
PTR NO: 1971212 P
ISSUED AT: PGT TARLAC CITY
IAPOA: 9973-414524-103123

VALIDITY: 10/24/2026
DATE ISSUED: 01/24/2024
TIN: 120-051-183-000
DATE ISSUED: 10/31/2023

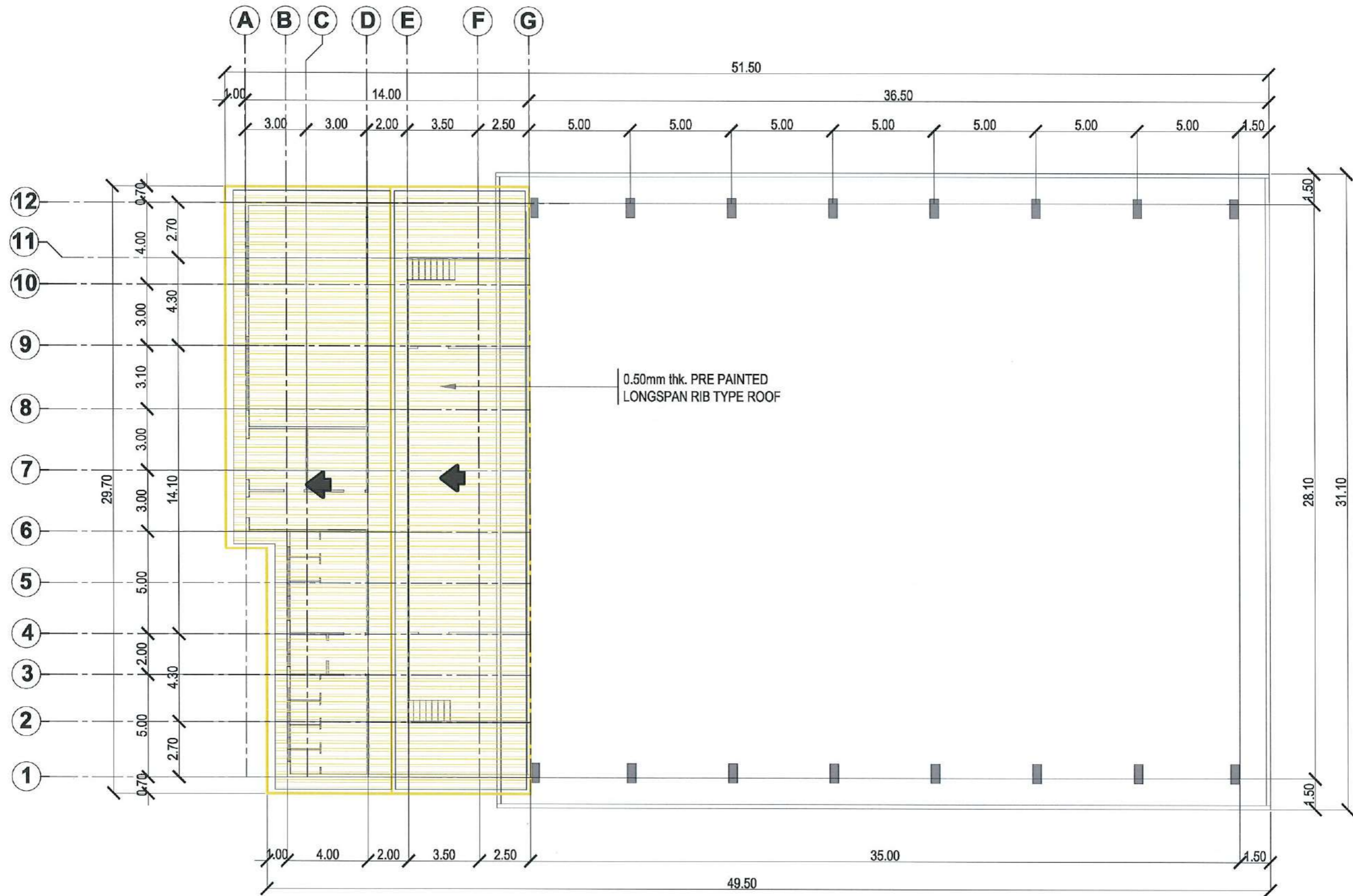
OWNER:
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN

SHEET NO:
A-18

PAGE NO:
18/65

DATE: MARCH 2024



ROOF PLAN (PROPOSED EXTENSION)

SCALE: 1:200M



TARLAC STATE UNIVERSITY
Facilities Development and Management Office
Romulo Boulevard, Tarlac City, Philippines 2300

PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

ARCHITECT
AR. MARCO F. BILDAN

PRC NO : 0015392 VALIDITY: 10/24/2026
PTR NO : 1971212 P DATE ISSUED: 01/24/2024
ISSUED AT : PGT TARLAC CITY TIN : 120-051-163-000
IAPOA: 9973-414524-103123 DATE ISSUED: 10/31/2023

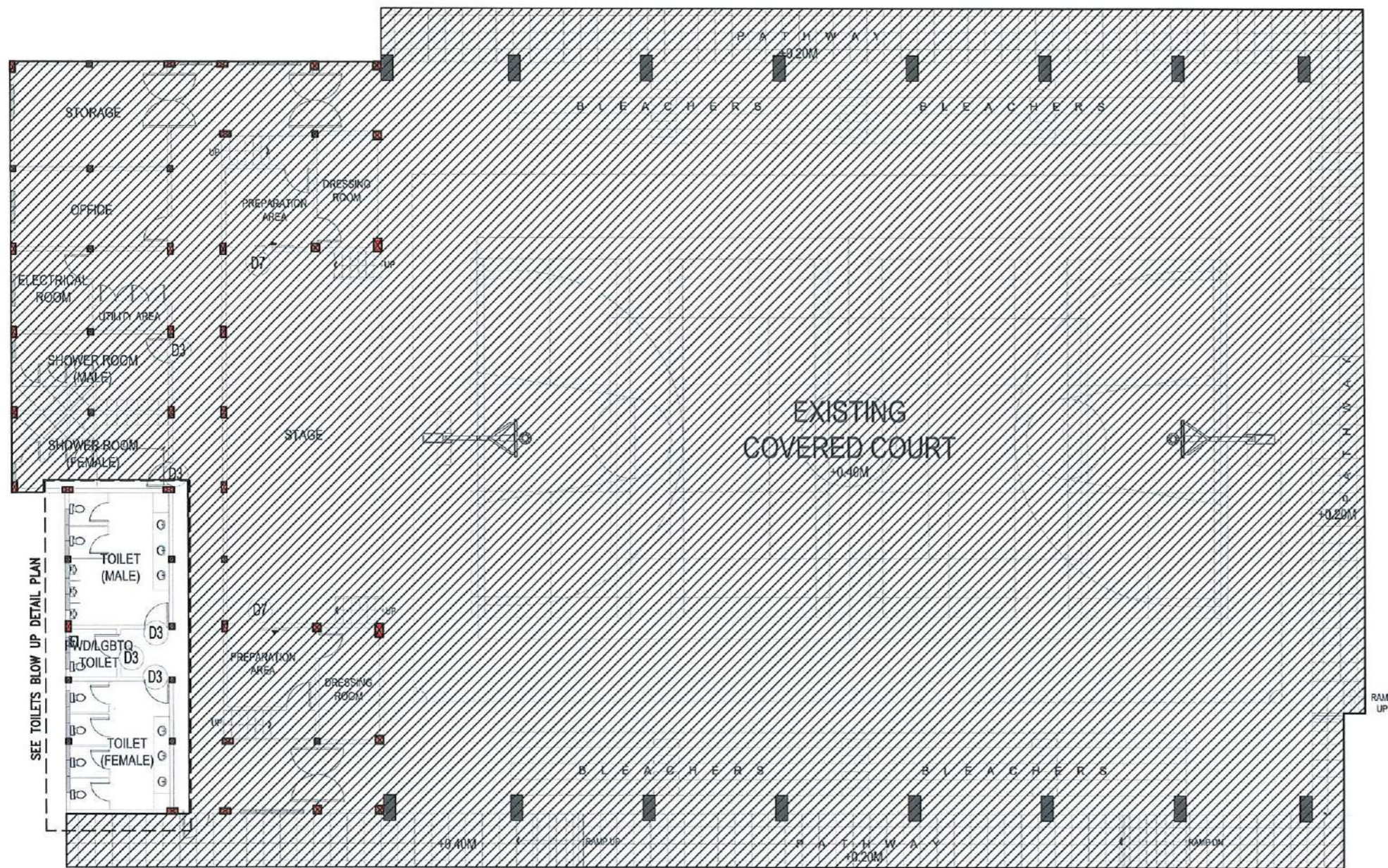
OWNER:
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN

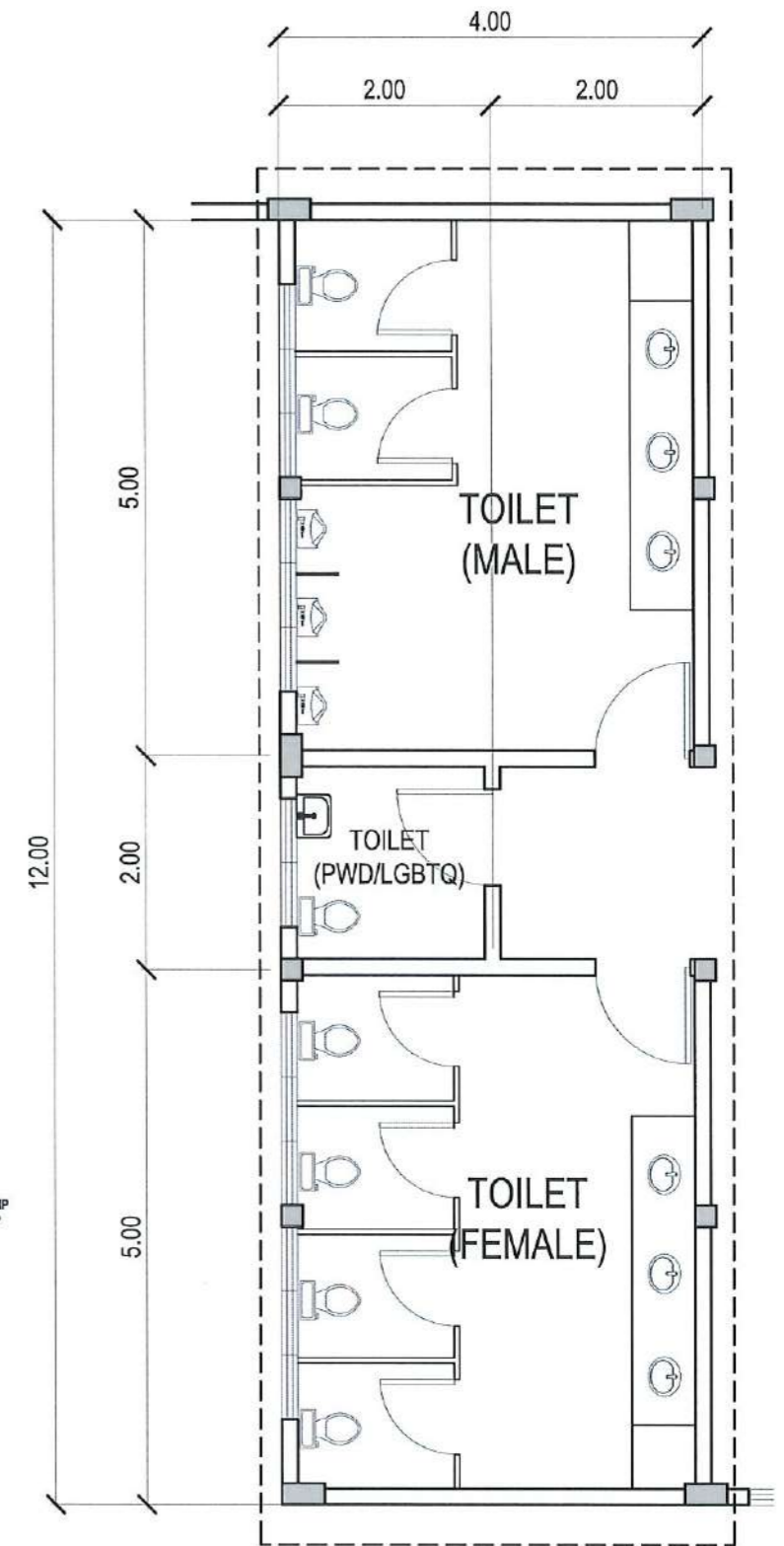
DATE: MARCH 2024

SHEET NO:
A-19

PAGE NO:
19/65



TOILET KEY PLAN
SCALE 1:200 MTS.



TOILET BLOW UP DETAIL PLAN
SCALE 1:70 MTS.



TARLAC STATE UNIVERSITY
Facilities Development and
Management Office
Romulo Solorzano, Tarlac City, Philippines 2300

PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

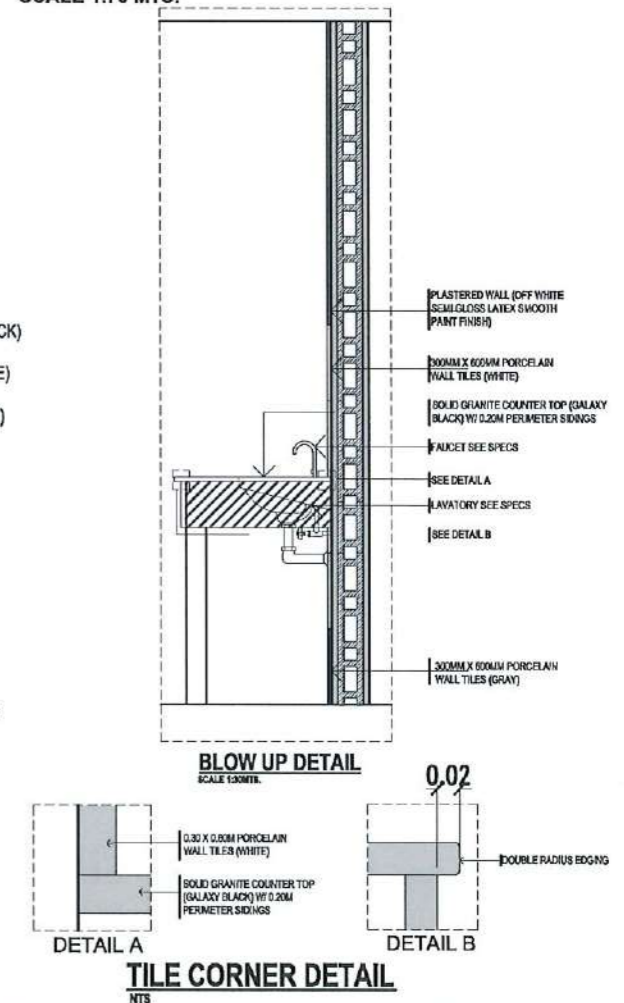
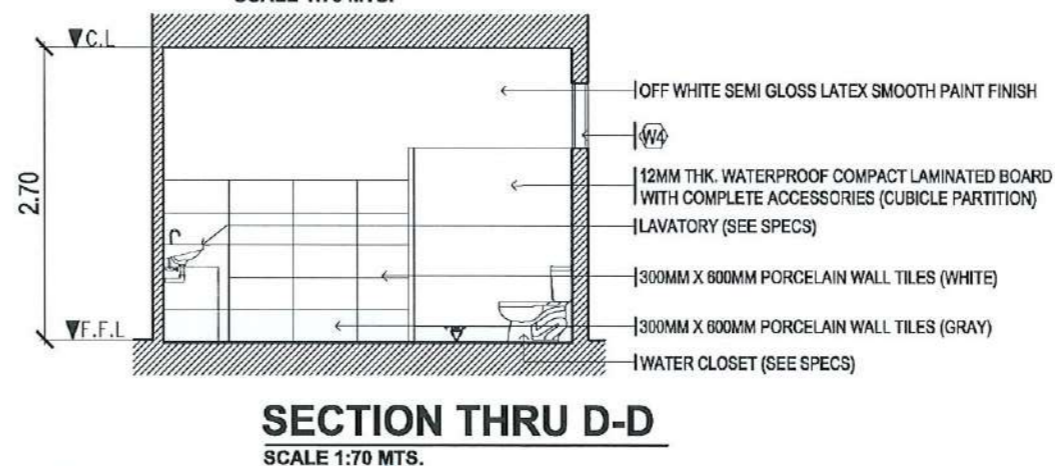
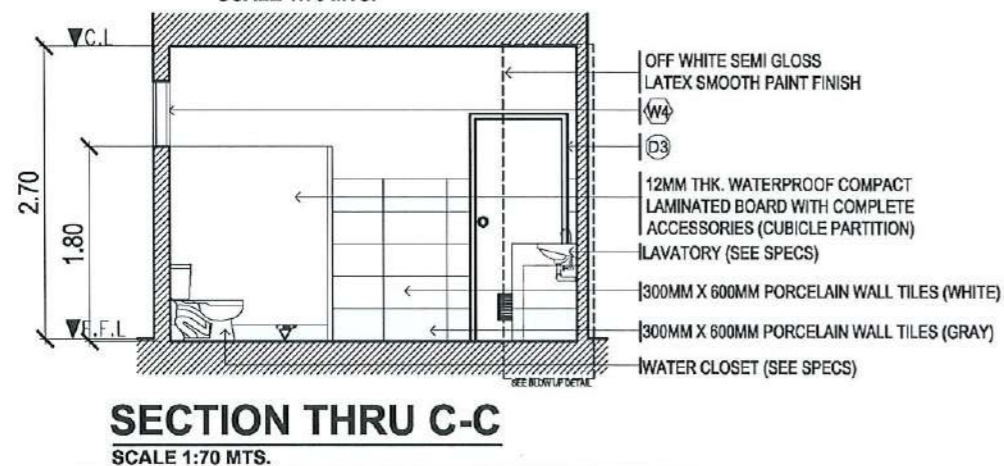
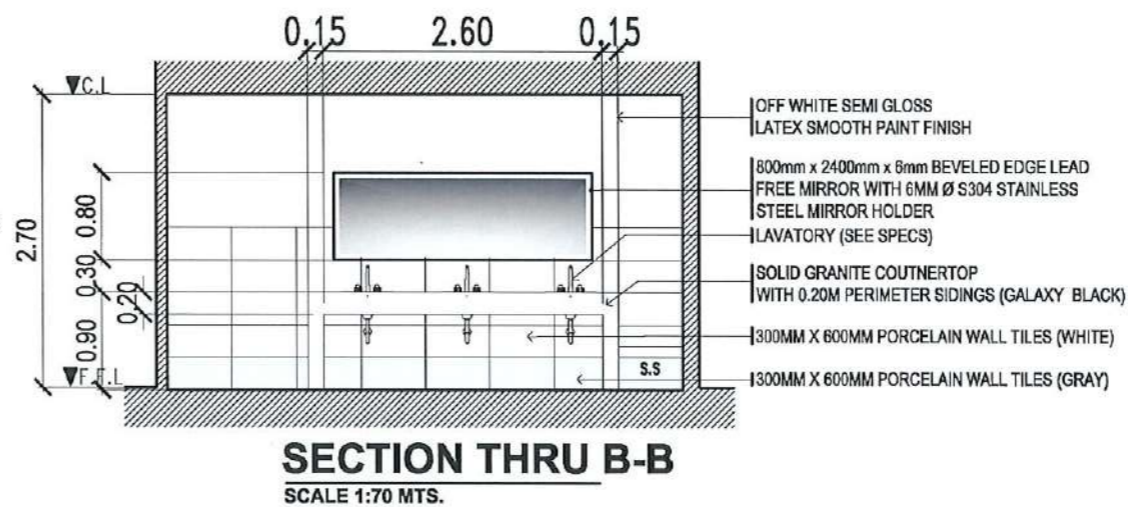
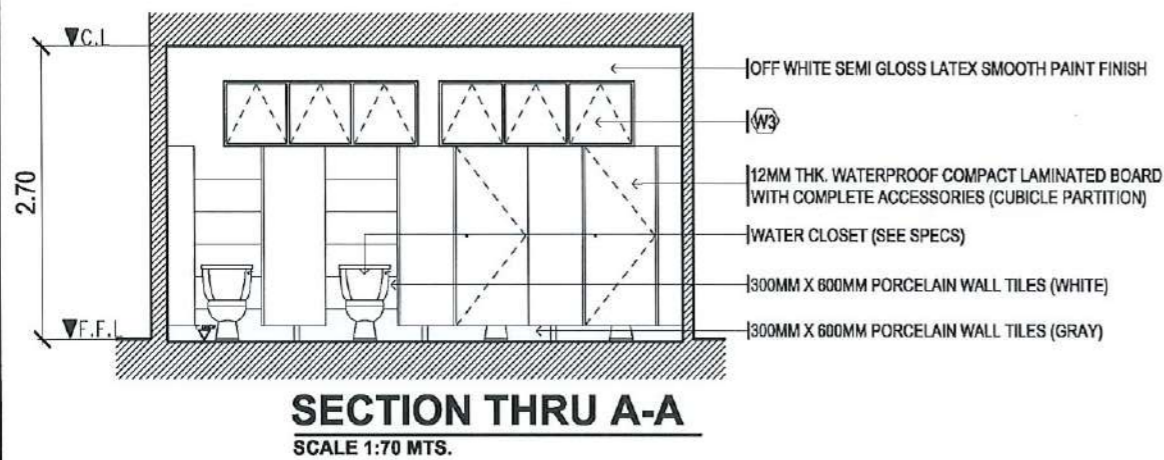
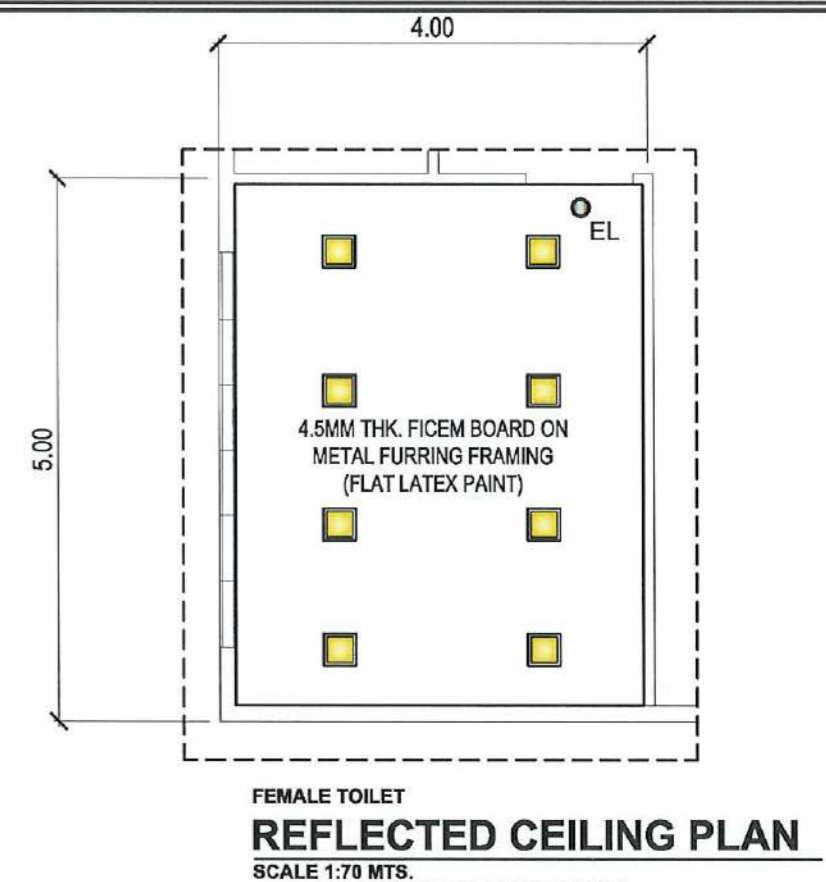
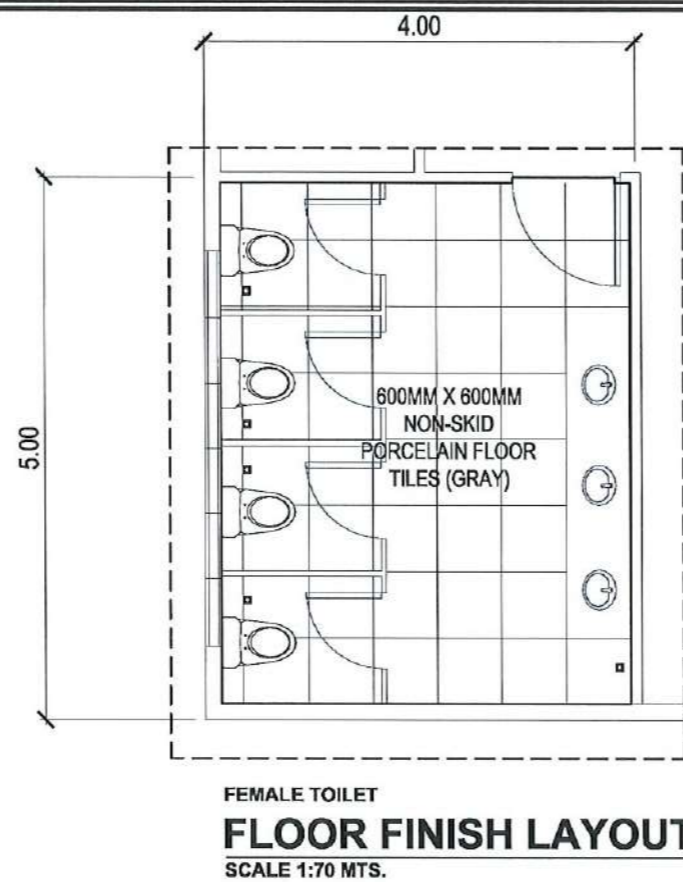
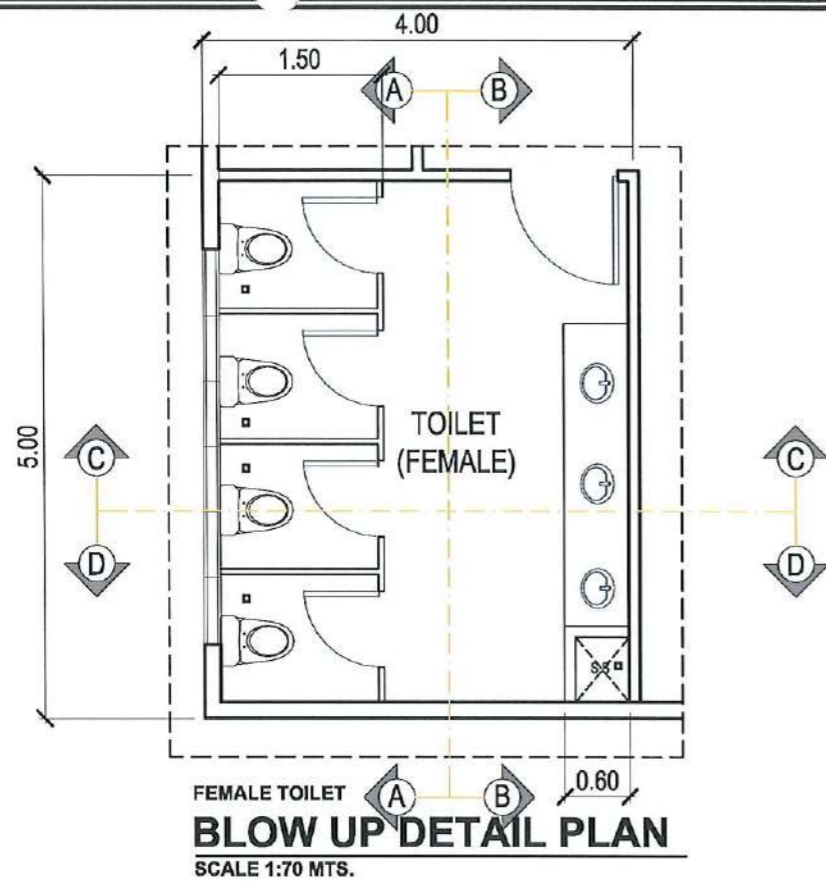
ARCHITECT
AR. MARCO F. BILDAN

PRC NO : 0015392 VALIDITY: 10/24/2026
PTR NO : 1971212 P DATE ISSUED: 01/24/2024
ISSUED AT: PGT TARLAC CITY TIN : 120-051-183-000
IAPOA: 9973-414524-103123 DATE ISSUED: 10/31/2023

OWNER:
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN
DATE: MARCH 2024

SHEET NO:
A-20
PAGE NO:
20/65



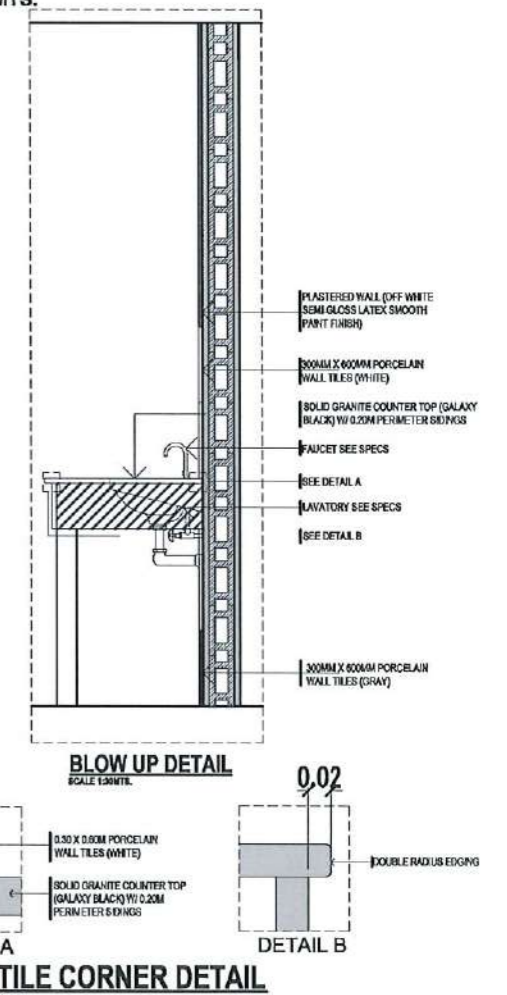
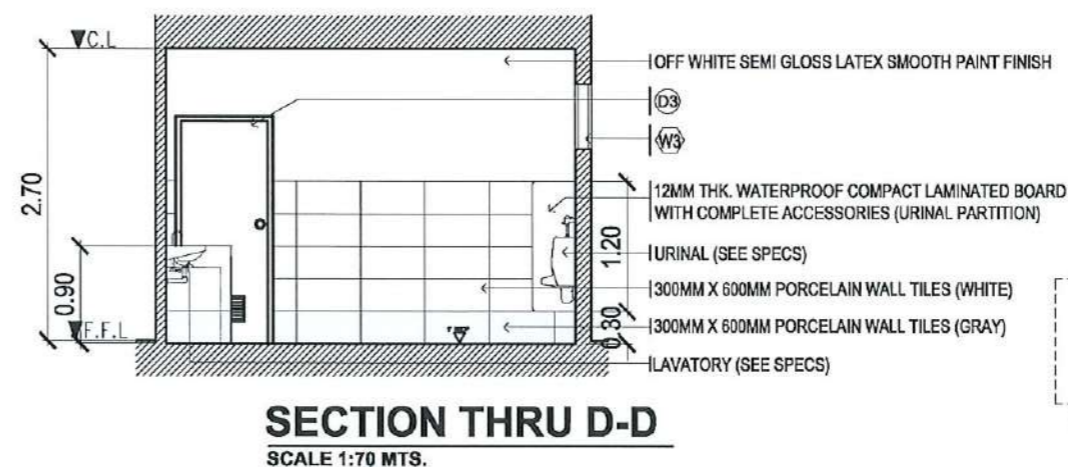
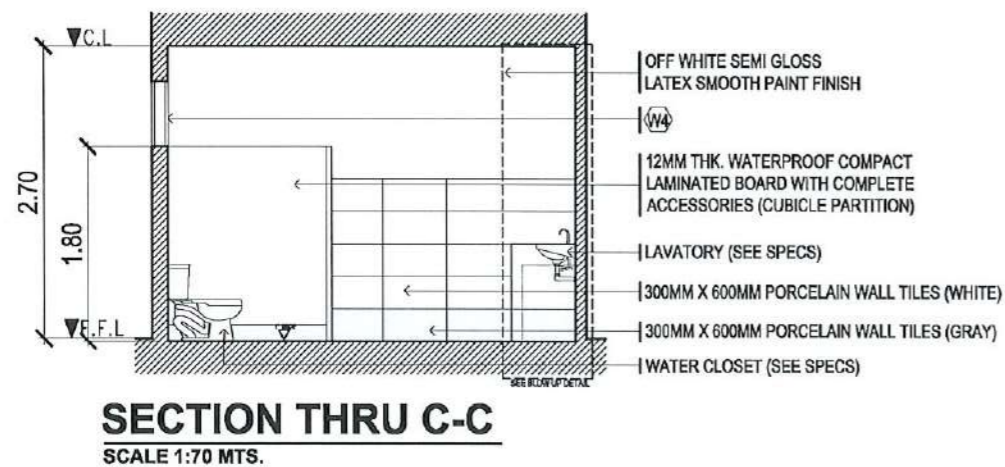
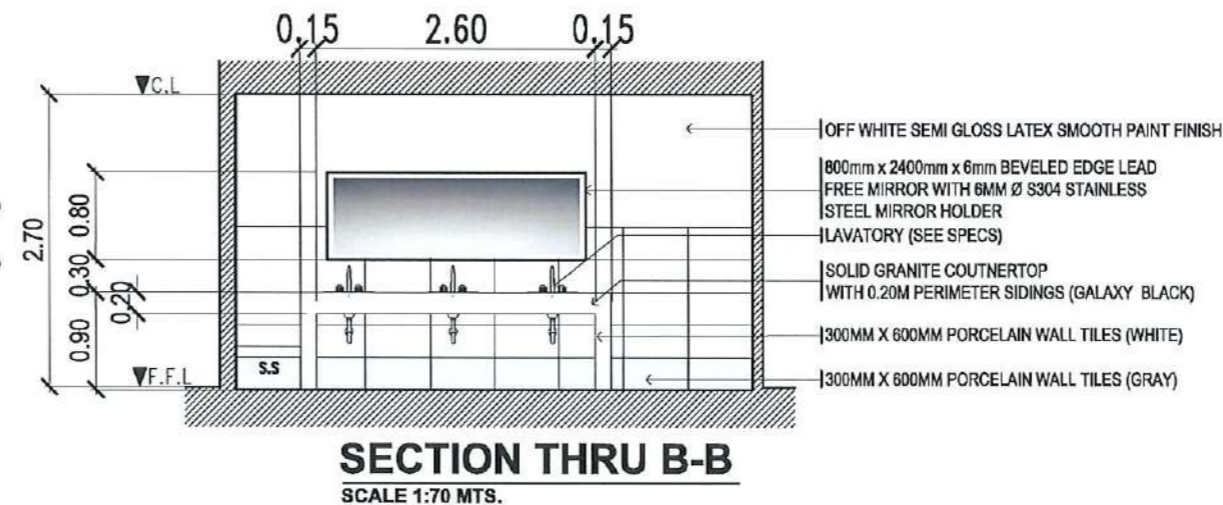
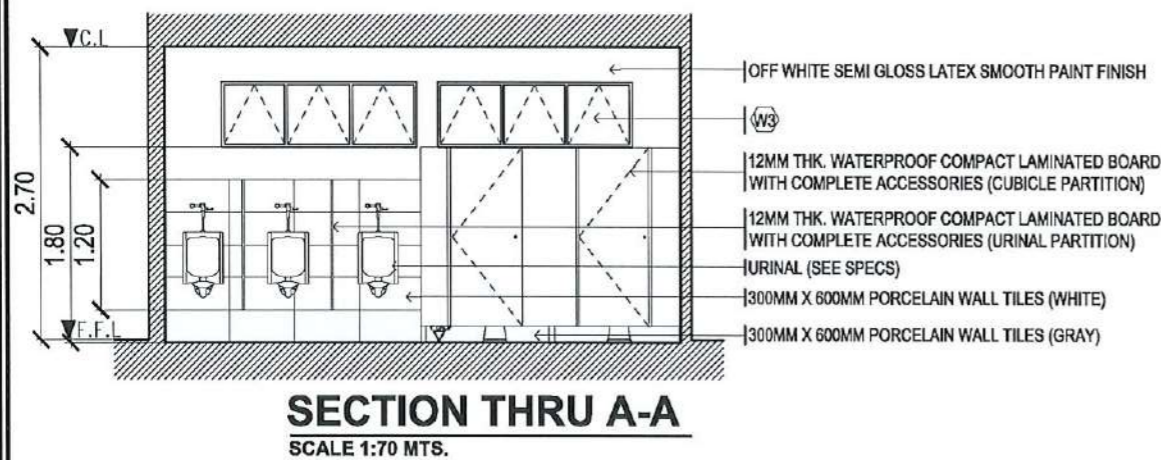
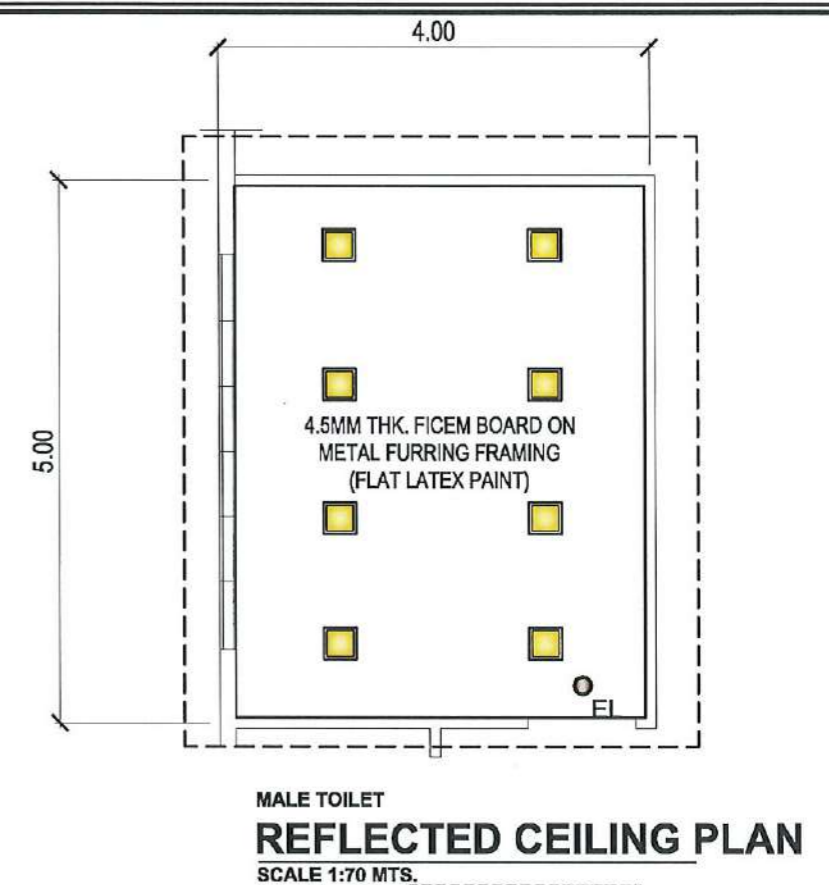
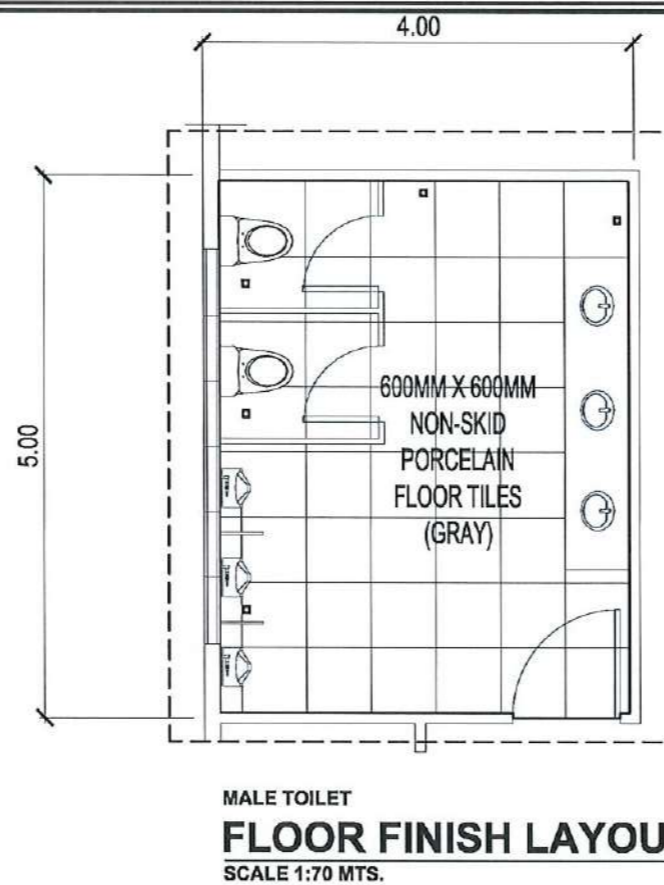
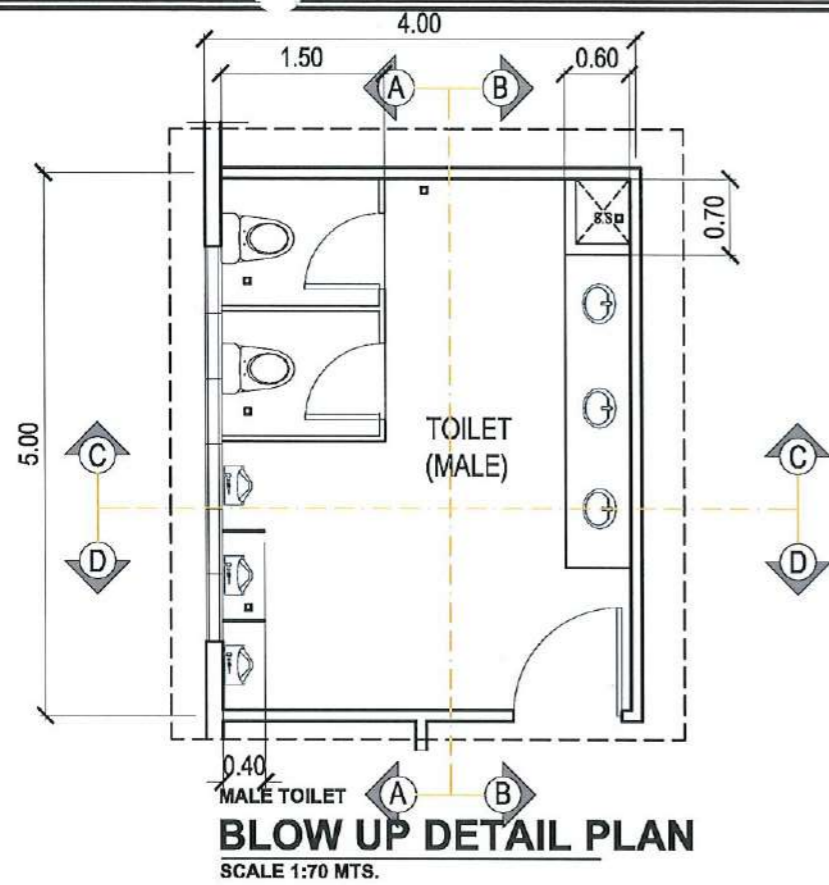
PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
 PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

ARCHITECT: AR. MARCO F. BILDAN

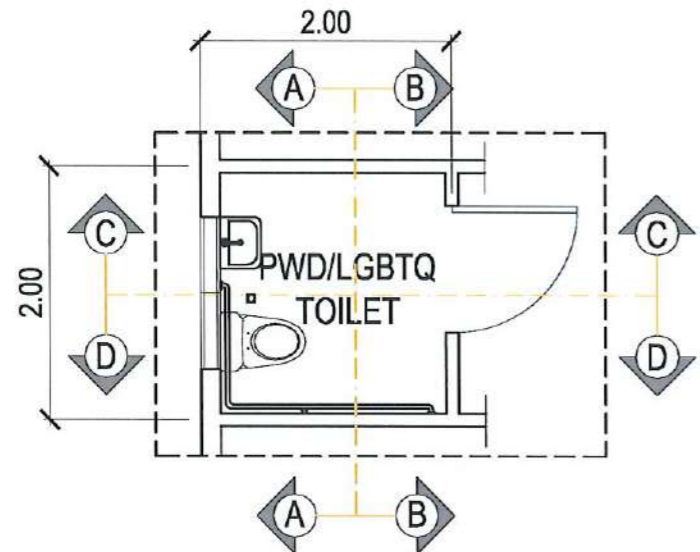
PRC NO: 0015392
 PTR NO: 1971212 P
 ISSUED AT: PGT TARLAC CITY
 IAPOA: 9973-414524-103123

VALIDITY: 10/24/2026
 DATE ISSUED: 01/24/2024
 TIN: 120-051-183-000
 DATE ISSUED: 10/31/2023

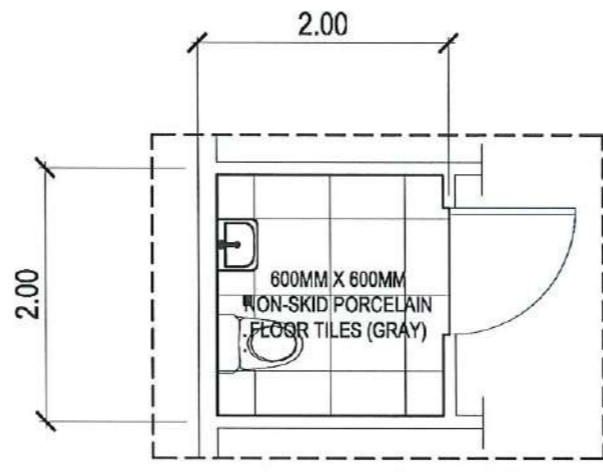
OWNER: DR. ARNOLD E. VELASCO, PRESIDENT
 SHEET CONTENTS: AS SHOWN
 SHEET NO: A-21
 PAGE NO: 21/65
 DATE: MARCH 2024



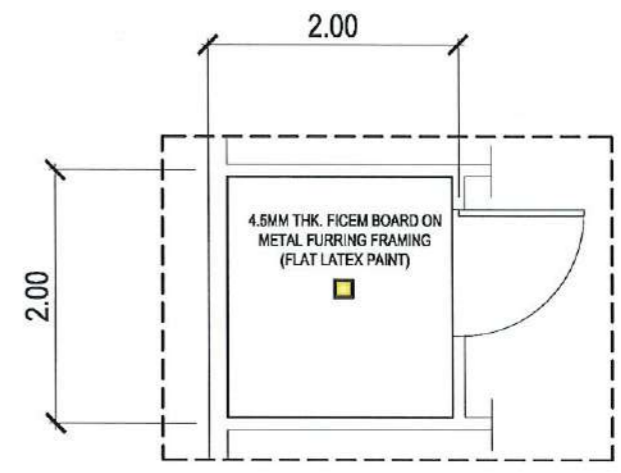
TARLAC STATE UNIVERSITY Facilities Development and Management Office Formosa Boulevard, Tarlac City, Philippines 2300	PROJECT TITLE:	ARCHITECT:	PRC NO : 0015302	VALIDITY: 10/24/2026	OWNER:	SHEET CONTENTS:	SHEET NO:
	REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER	AR. MARCO F. BILDAN	PTIR NO : 1071212 P	DATE ISSUED: 01/24/2024	DR. ARNOLD E. VELASCO PRESIDENT	AS SHOWN	A-22
PROJECT LOCATION:	SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY	ISSUED AT : PGT TARLAC CITY	TIN : 120-051-183-000			DATE: MARCH 2024	PAGE NO:
		IAPCA: 9973-414524-103123	DATE ISSUED: 10/31/2023				22/65



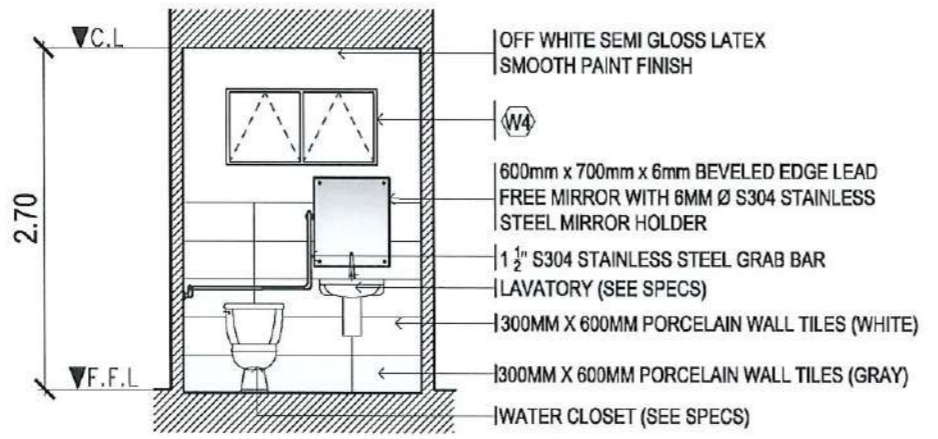
PWD/LGBTQ TOILET
BLOW UP DETAIL PLAN
 SCALE 1:60 MTS.



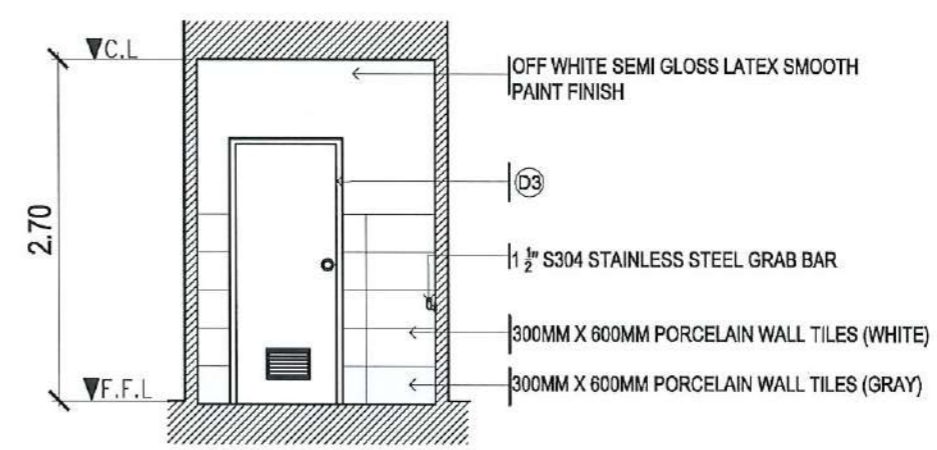
PWD/LGBTQ TOILET
FLOOR FINISH LAYOUT
 SCALE 1:60 MTS.



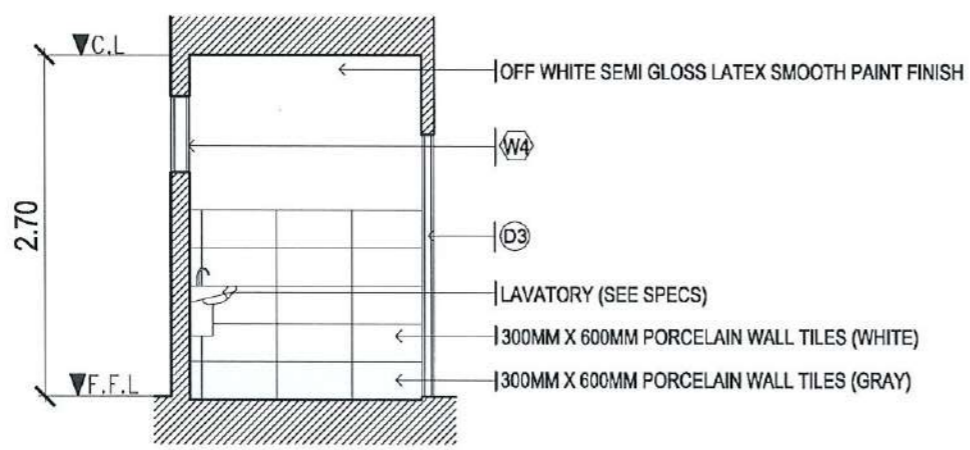
PWD/LGBTQ TOILET
REFLECTED CEILING PLAN
 SCALE 1:60 MTS.



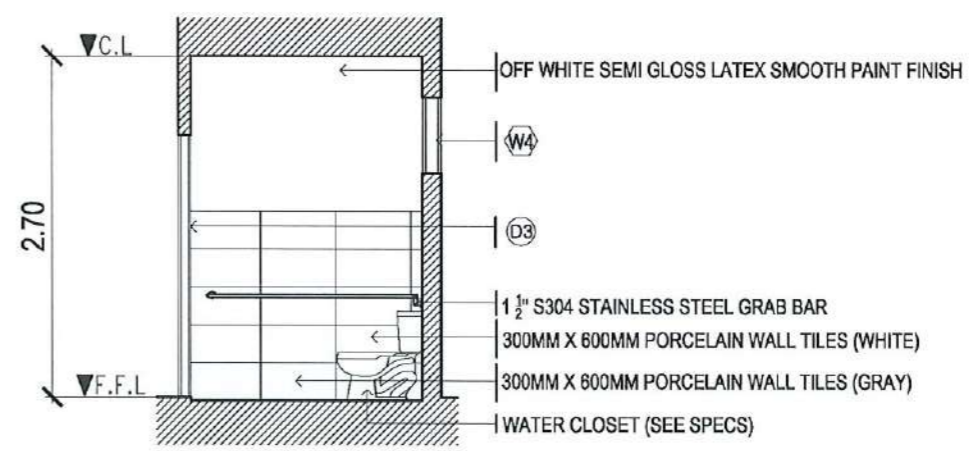
SECTION THRU A-A
 SCALE 1:60 MTS.



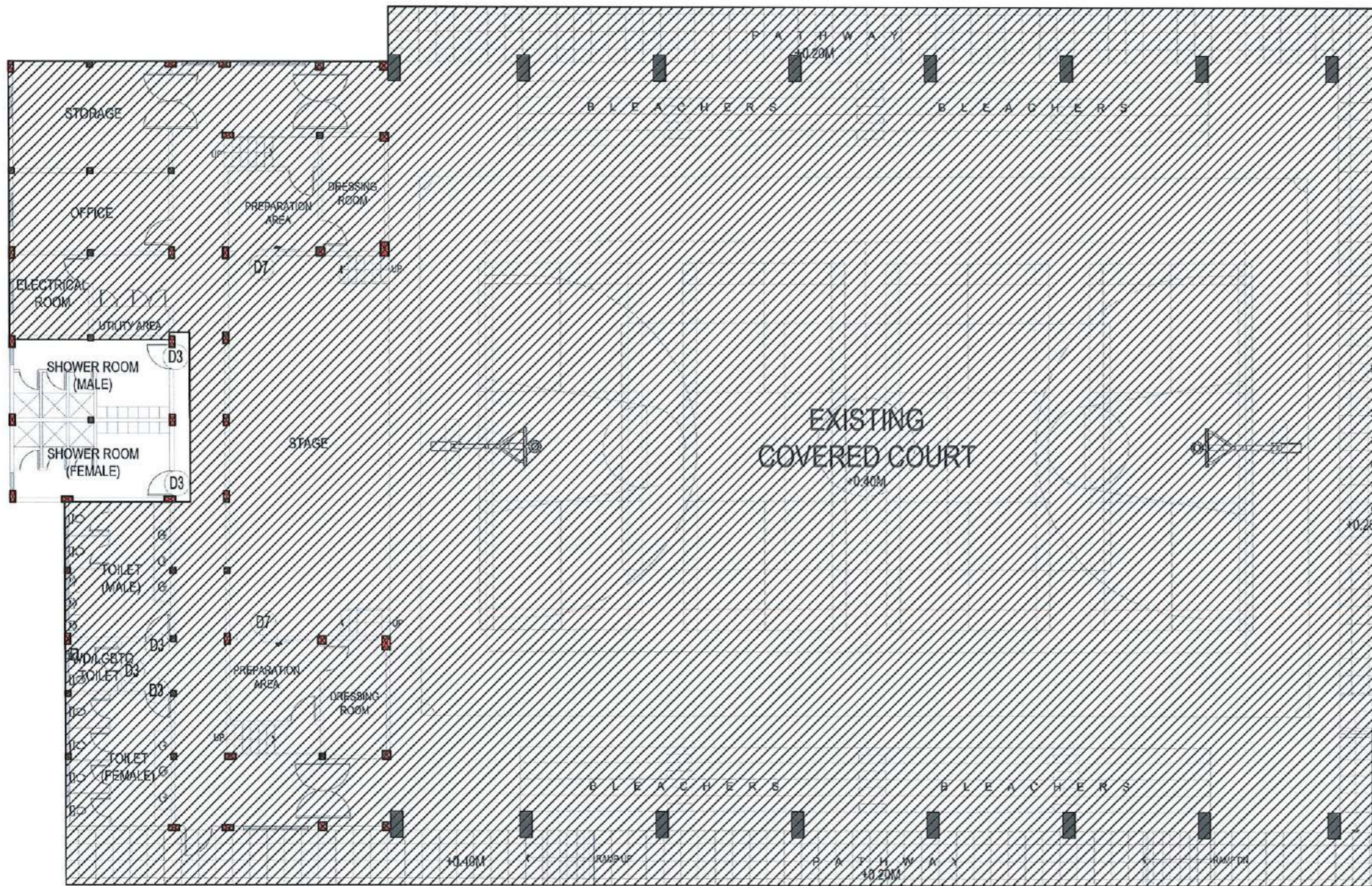
SECTION THRU B-B
 SCALE 1:60 MTS.



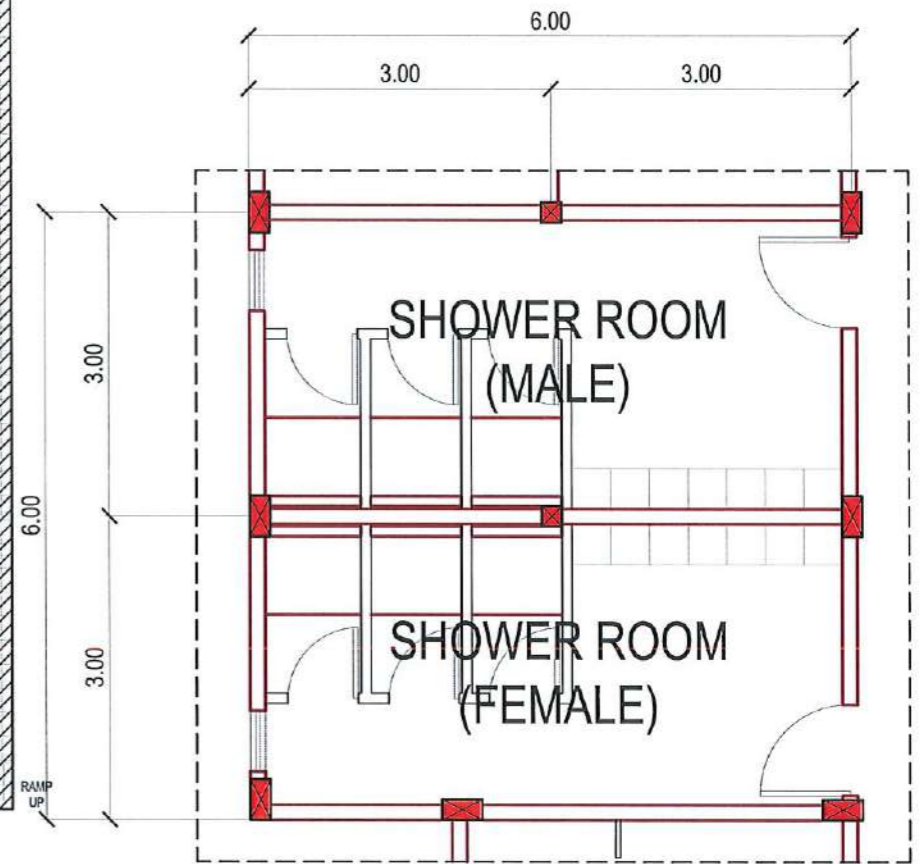
SECTION THRU C-C
 SCALE 1:60 MTS.



SECTION THRU D-D
 SCALE 1:60 MTS.



SHOWER ROOM KEY PLAN
SCALE 1:200 MTS.



SHOWER ROOM BLOW UP DETAIL PLAN
SCALE 1:75 MTS.



TARLAC STATE UNIVERSITY
Facilities Development and
Management Office
Bomolo Boulevard, Tarlac City, Philippines 2300

PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

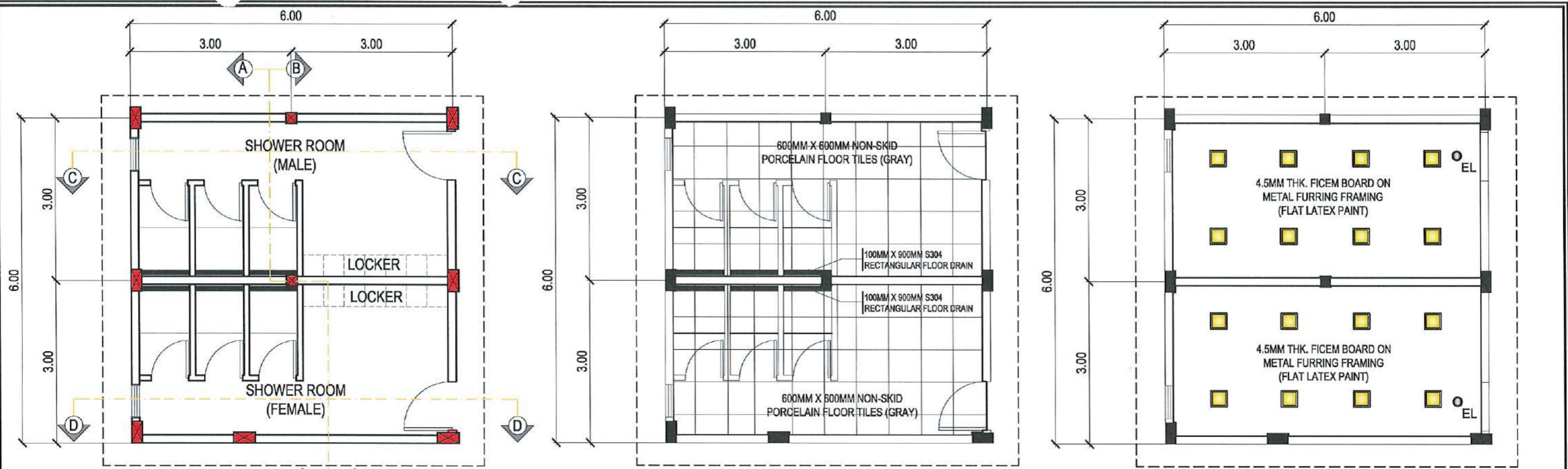
ARCHITECT
AR. MARCO F. BILDAN

PRC NO : 0015392 VALIDITY: 10/24/2026
PTR NO : 1971212 P DATE ISSUED: 01/24/2024
ISSUED AT : PGT TARLAC CITY TIN : 120-051-163-000
IAPCA: 9973-414624-103123 DATE ISSUED: 10/31/2023

OWNER:
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN
DATE: MARCH 2024

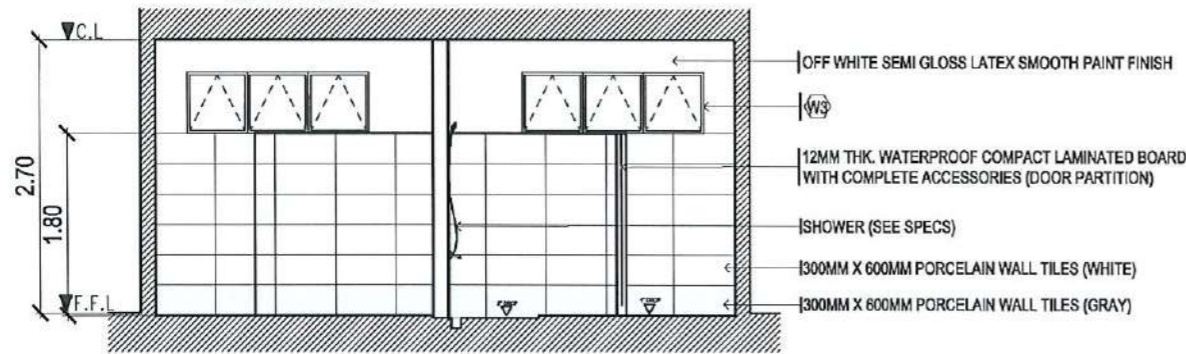
SHEET NO:
A-24
PAGE NO:
24/65



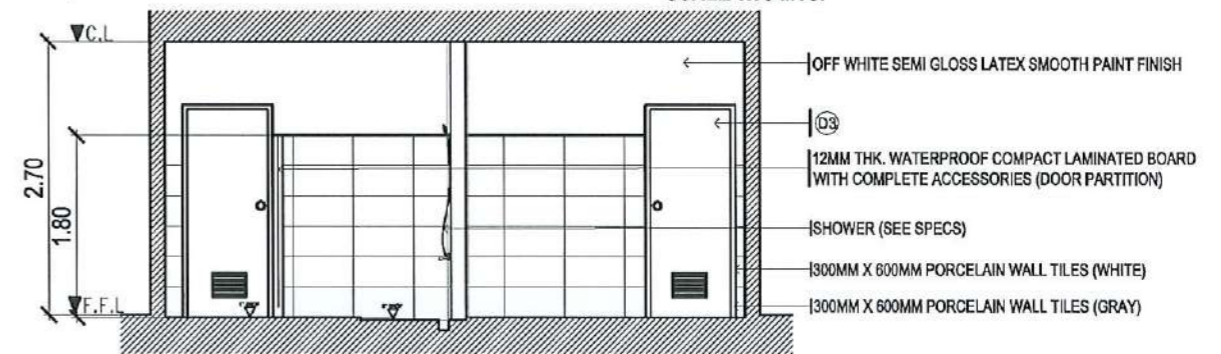
SHOWER ROOM
BLOW UP DETAIL PLAN
 SCALE 1:75 MTS.

SHOWER ROOM
FLOOR FINISH LAYOUT
 SCALE 1:75 MTS.

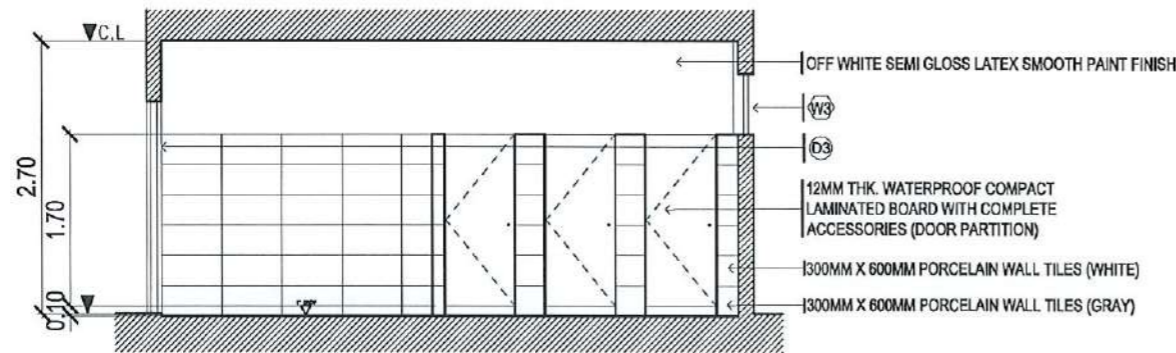
SHOWER ROOM
FLOOR FINISH LAYOUT
 SCALE 1:75 MTS.



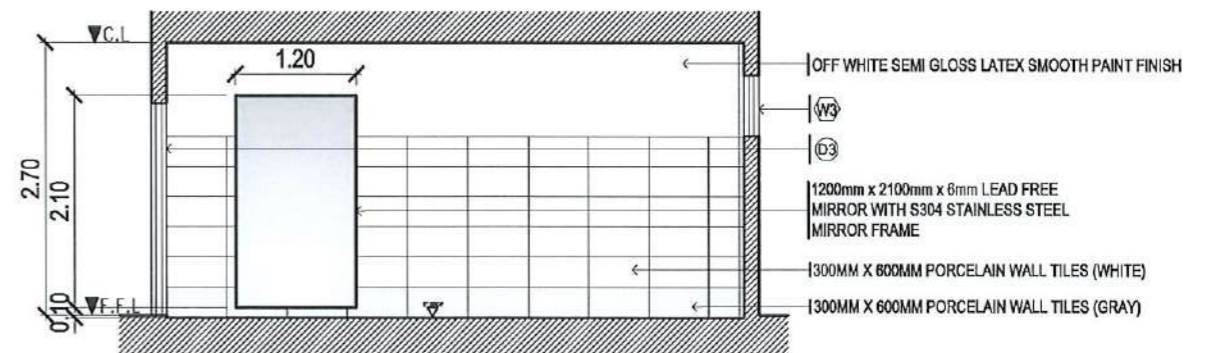
SECTION THRU A-A
 SCALE 1:75 MTS.



SECTION THRU B-B
 SCALE 1:75 MTS.

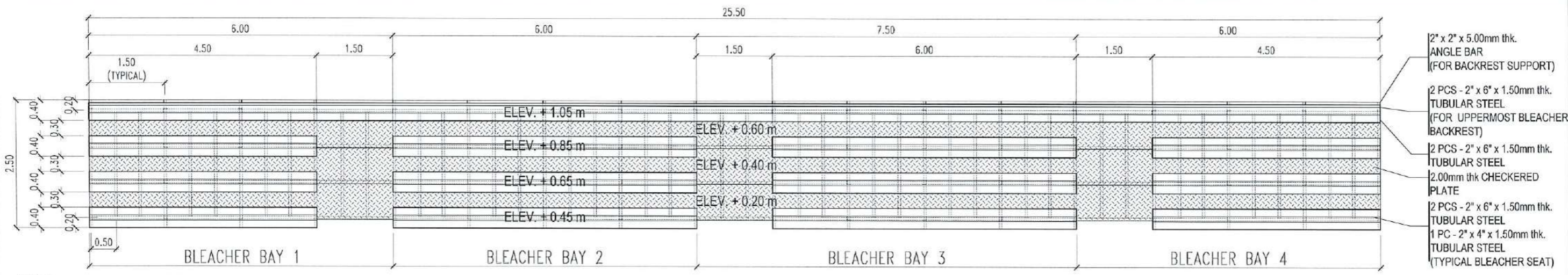


SECTION THRU C-C
 SCALE 1:75 MTS.



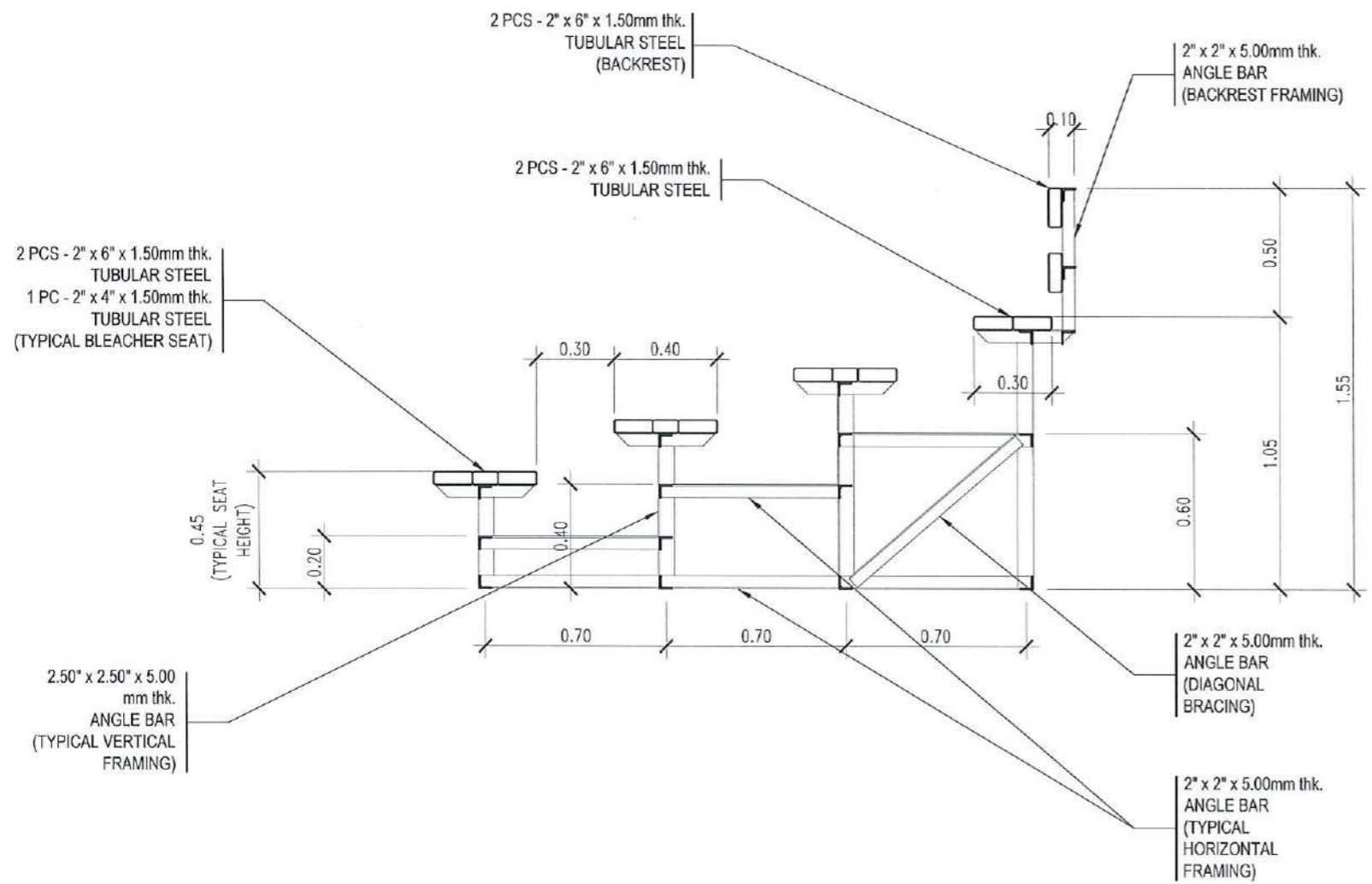
SECTION THRU D-D
 SCALE 1:75 MTS.

TARLAC STATE UNIVERSITY Facilities Development and Management Office Romulo Boulevard, Tarlac City, Philippines 2300	PROJECT TITLE:	ARCHITECT:	PRC NO: 0015392	VALIDITY: 10/24/2026	OWNER:	SHEET CONTENTS:	SHEET NO:
	REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER	AR. MARCO F. BILDAN	PTR NO: 1971212 P	DATE ISSUED: 01/24/2024	DR. ARNOLD E. VELASCO PRESIDENT	AS SHOWN	A-25
PROJECT LOCATION:	SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY	ISSUED AT: PGT TARLAC CITY	TIN: 120-051-183-000				PAGE NO:
		IAPOA: 9973-414524-103123	DATE ISSUED: 10/31/2023			DATE: MARCH 2024	25/65

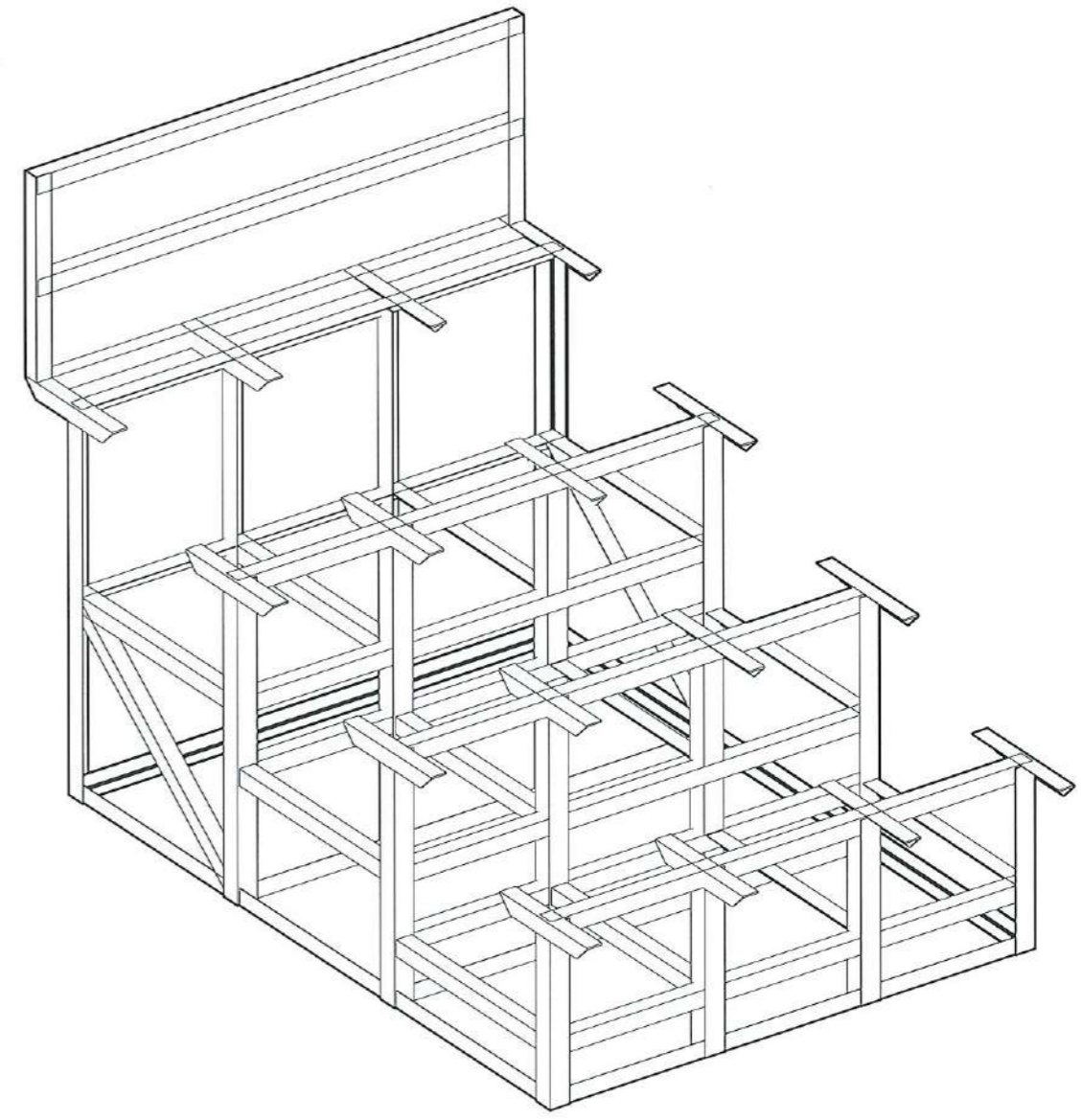


NOTE:
 STEEL BLEACHERS SHOULD BE PAINTED FINISH
 (EPOXY PRIMER - GRAY
 TOP COAT - GRAY QUICK DRY ENAMEL)

TYPICAL BLEACHER PLAN
 SCALE: 1:80M



TYPICAL BLEACHER FRAMING SECTION
 SCALE: 1:25M



TYPICAL BLEACHER FRAMING SPACED @ 1.50m
 SCALE: NTS



PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

ARCHITECT: AR. MARCO F. BILDAN

PRC NO: 0015392 VALIDITY: 10/24/2026

PTR NO: 1971212 P DATE ISSUED: 01/24/2024

ISSUED AT: PGT TARLAC CITY TIN: 120-051-183-000

IAPCA: 9973-414524-103123 DATE ISSUED: 10/31/2023

OWNER: DR. ARNOLD E. VELASCO, PRESIDENT

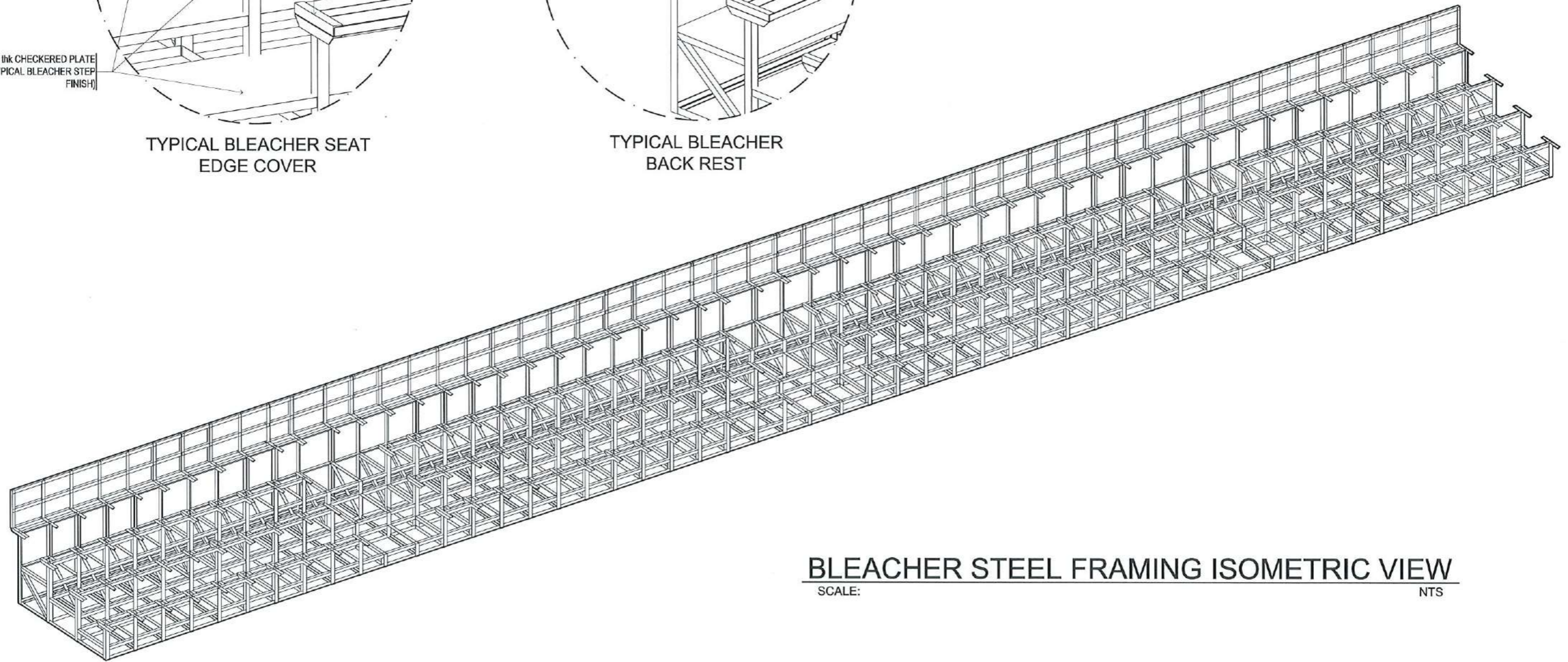
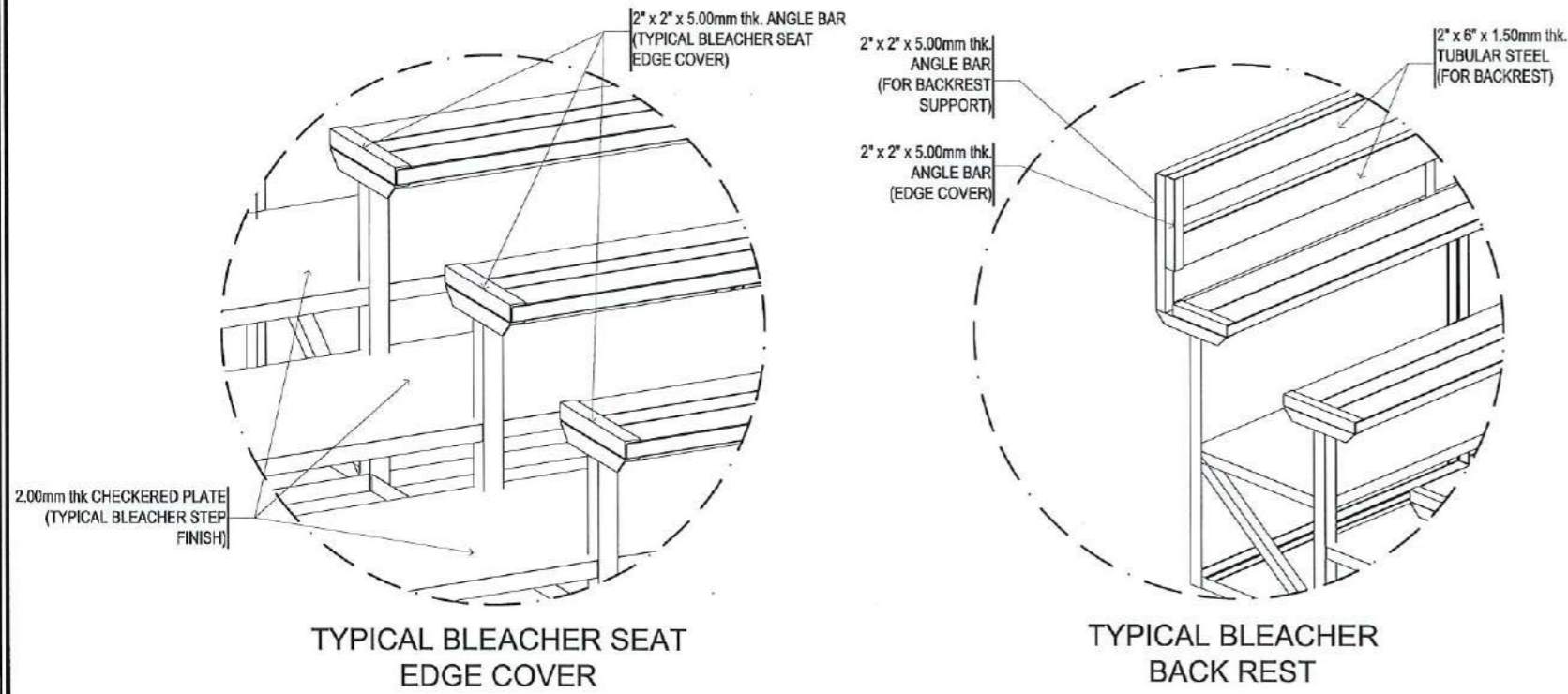
SHEET CONTENTS: AS SHOWN

SHEET NO: A-26

PAGE NO: 26/65

DATE: MARCH 2024

NOTE:
 STEEL BLEACHERS SHOULD BE
 PAINTED FINISH
 (EPOXY PRIMER - GRAY
 TOP COAT - GRAY QUICK DRY ENAMEL)



BLEACHER STEEL FRAMING ISOMETRIC VIEW

SCALE:

NTS



PROJECT TITLE:
 REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
 PROJECT LOCATION:
 SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

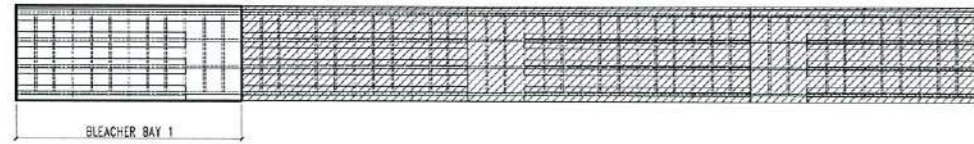
ARCHITECT
 AR. MARCO F. BILDAN

PRC NO : 0015392 VALIDITY: 10/24/2026
 PTR NO : 1971212 P DATE ISSUED: 01/24/2024
 ISSUED AT : PGT TARLAC CITY TIN : 120-051-183-000
 IAPDA: 9973-414524-103123 DATE ISSUED: 10/31/2023

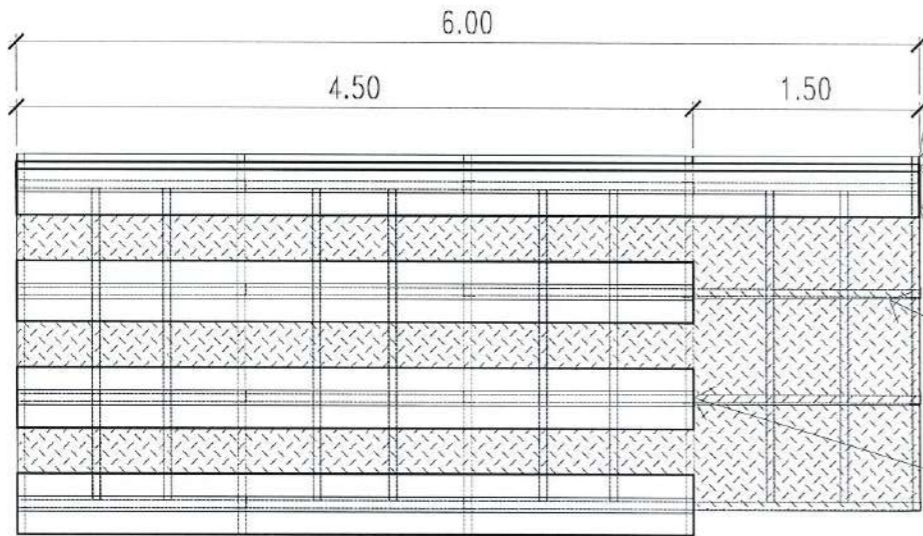
OWNER:
 DR. ARNOLD E. VELASCO
 PRESIDENT

SHEET CONTENTS:
 AS SHOWN
 DATE: MARCH 2024

SHEET NO:
 A-27
 PAGE NO:
 27/65



KEYPLAN



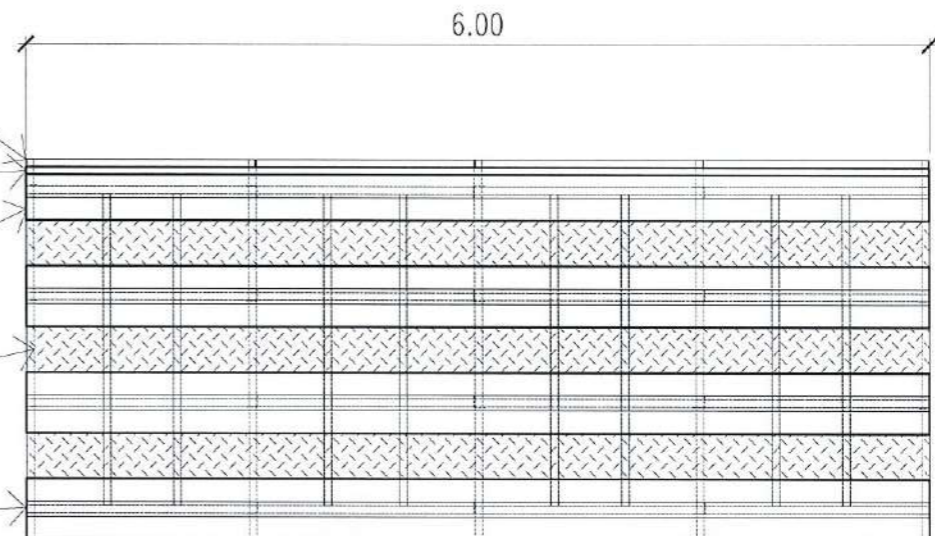
BLEACHER BAY 1 PLAN

SCALE: 1:50M

NOTE:
STEEL BLEACHERS SHOULD BE
PAINTED FINISH
(EPOXY PRIMER - GRAY
TOP COAT - GRAY QUICK DRY ENAMEL)



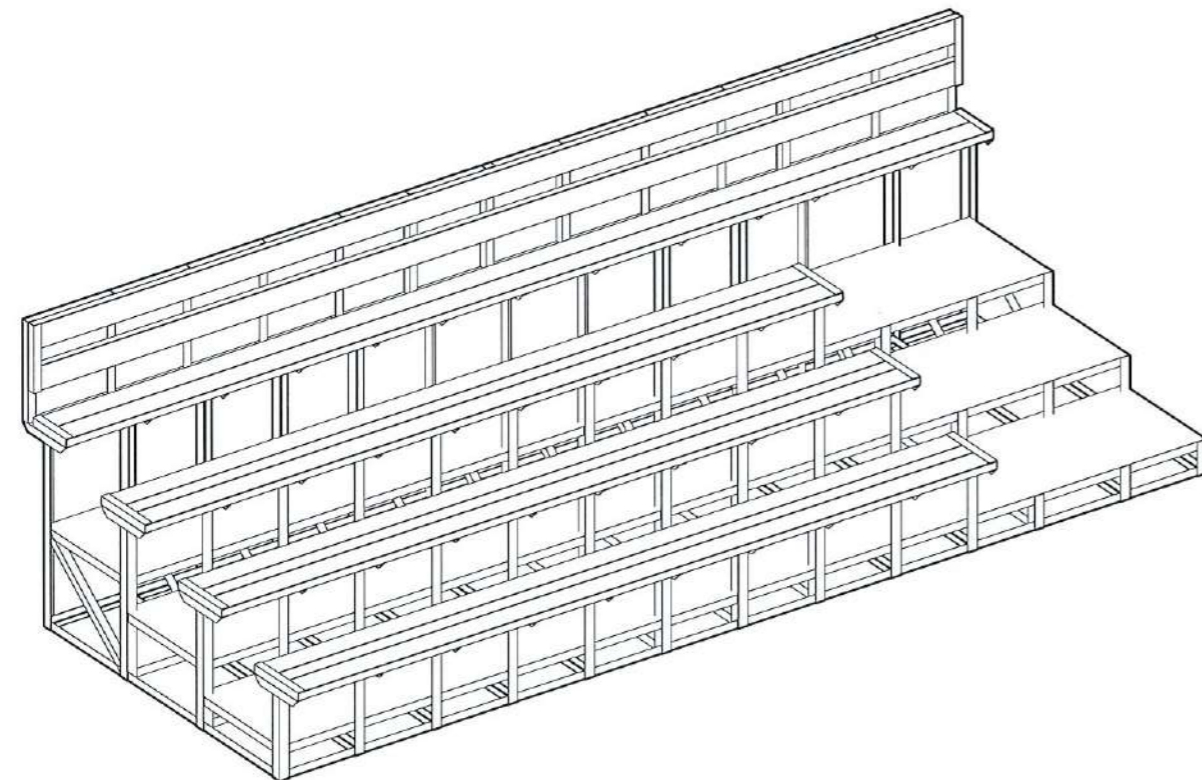
KEYPLAN



BLEACHER BAY 2 PLAN

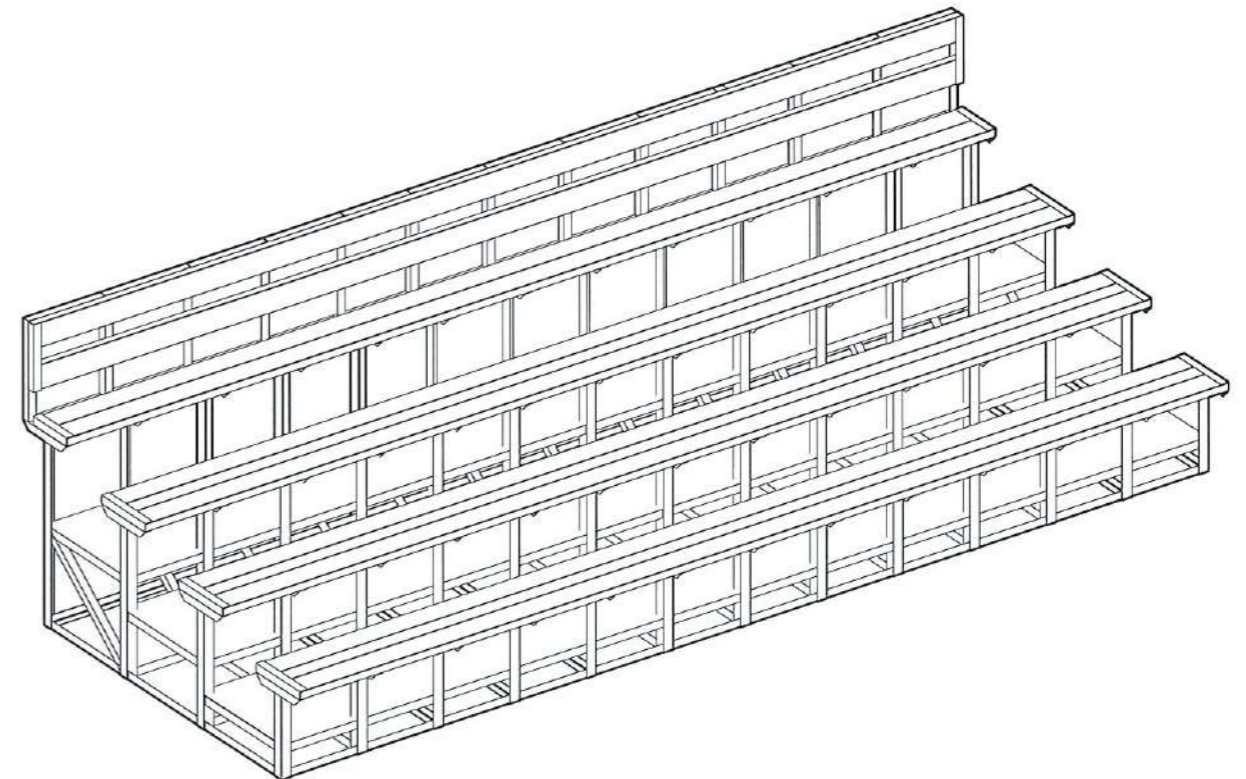
SCALE: 1:50M

- 2" x 2" x 5.00mm thk. ANGLE BAR (FOR BACKREST SUPPORT)
- 2 PCS - 2" x 6" x 1.50mm thk. TUBULAR STEEL (FOR UPPERMOST BLEACHER BACKREST)
- 2 PCS - 2" x 6" x 1.50mm thk. TUBULAR STEEL
- 2.00mm thk CHECKERED PLATE
- 2 PCS - 2" x 6" x 1.50mm thk. TUBULAR STEEL
- 1 PC - 2" x 4" x 1.50mm thk. TUBULAR STEEL (TYPICAL BLEACHER SEAT)



BLEACHER BAY 1 ISOMETRIC

SCALE: NTS



BLEACHER BAY 2 ISOMETRIC

SCALE: NTS



TARLAC STATE UNIVERSITY
Facilities Development and
Management Office
Romulo Boulevard, Tarlac City, Philippines 2300

PROJECT TITLE:	REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION:	SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

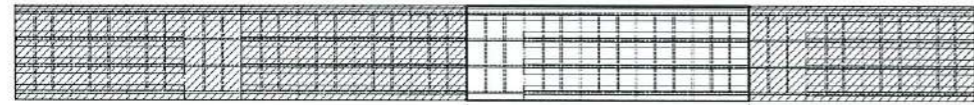
ARCHITECT	AR. MARCO F. BILDAN
-----------	---------------------

PRC NO : 0015392	VALIDITY: 10/24/2026
PTR NO : 1971212 P	DATE ISSUED: 01/24/2024
ISSUED AT : PGT TARLAC CITY	TIN : 120-051-183-000
IAPOA: 9973-414524-103123	DATE ISSUED: 10/31/2023

OWNER:	DR. ARNOLD E. VELASCO PRESIDENT
--------	------------------------------------

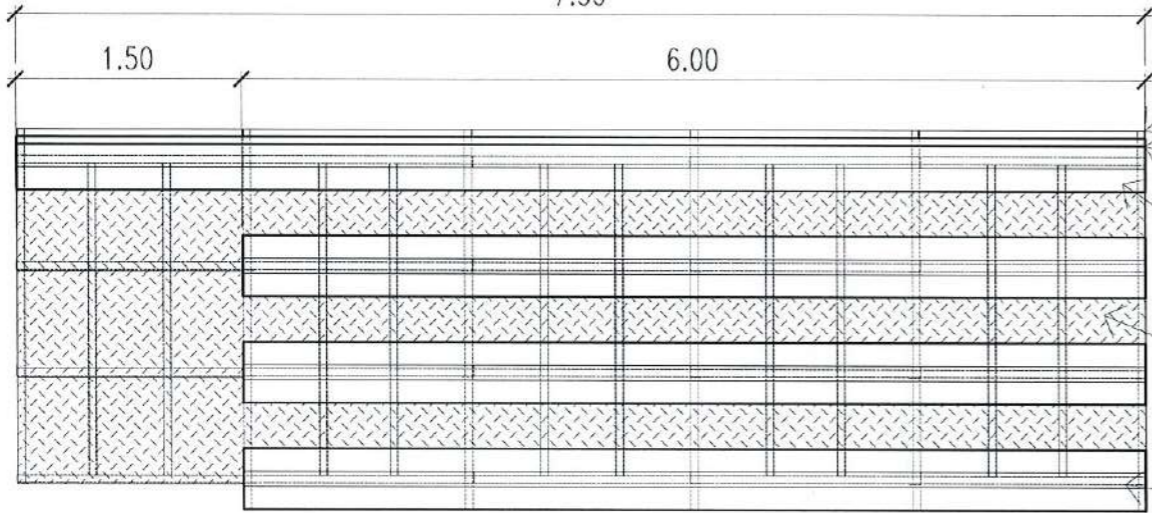
SHEET CONTENTS:	AS SHOWN
DATE:	MARCH 2024

SHEET NO:	A-28
PAGE NO:	28/65



KEYPLAN

7.50



BLEACHER BAY 3 PLAN

SCALE:

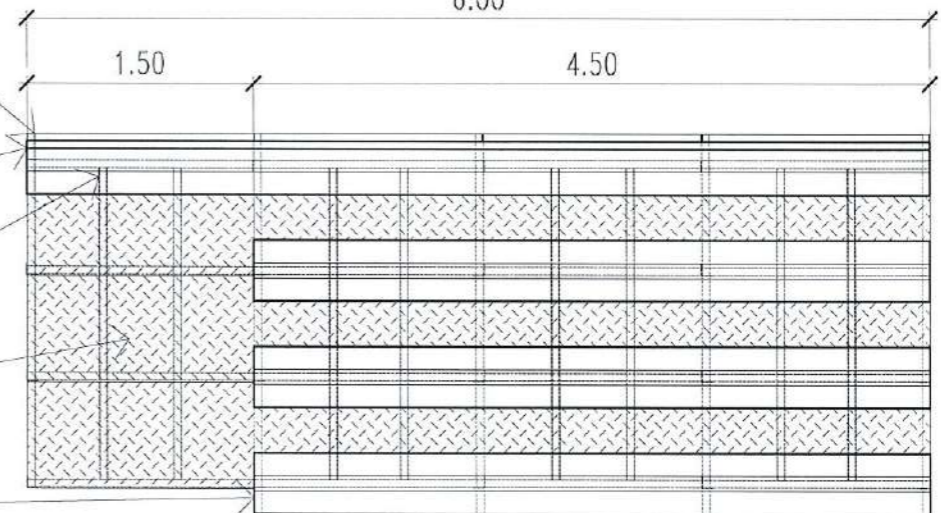
1:50M

NOTE:
STEEL BLEACHERS SHOULD BE
PAINTED FINISH
(EPOXY PRIMER - GRAY
TOP COAT - GRAY QUICK DRY ENAMEL)



KEYPLAN

6.00

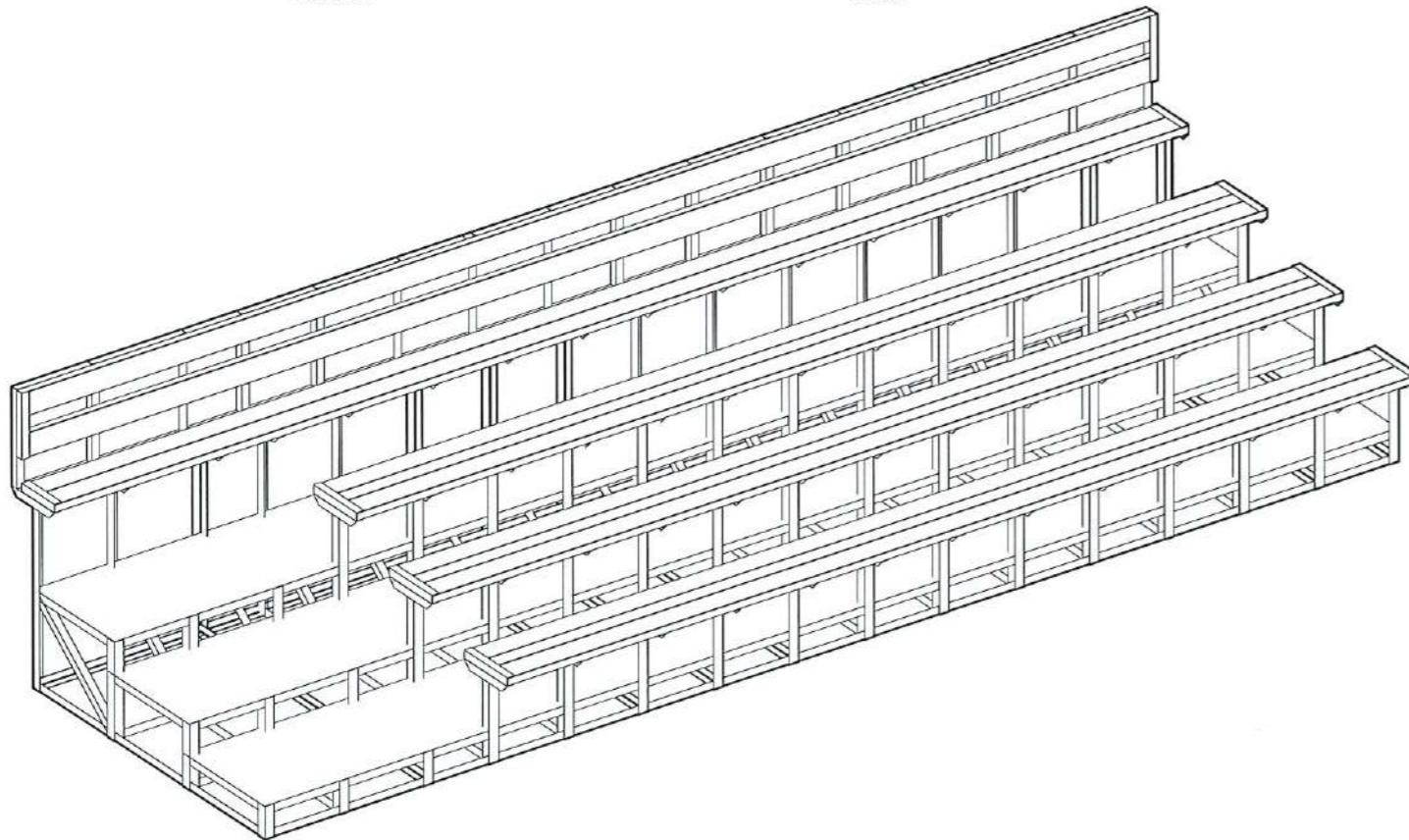


BLEACHER BAY 4 PLAN

SCALE:

1:50M

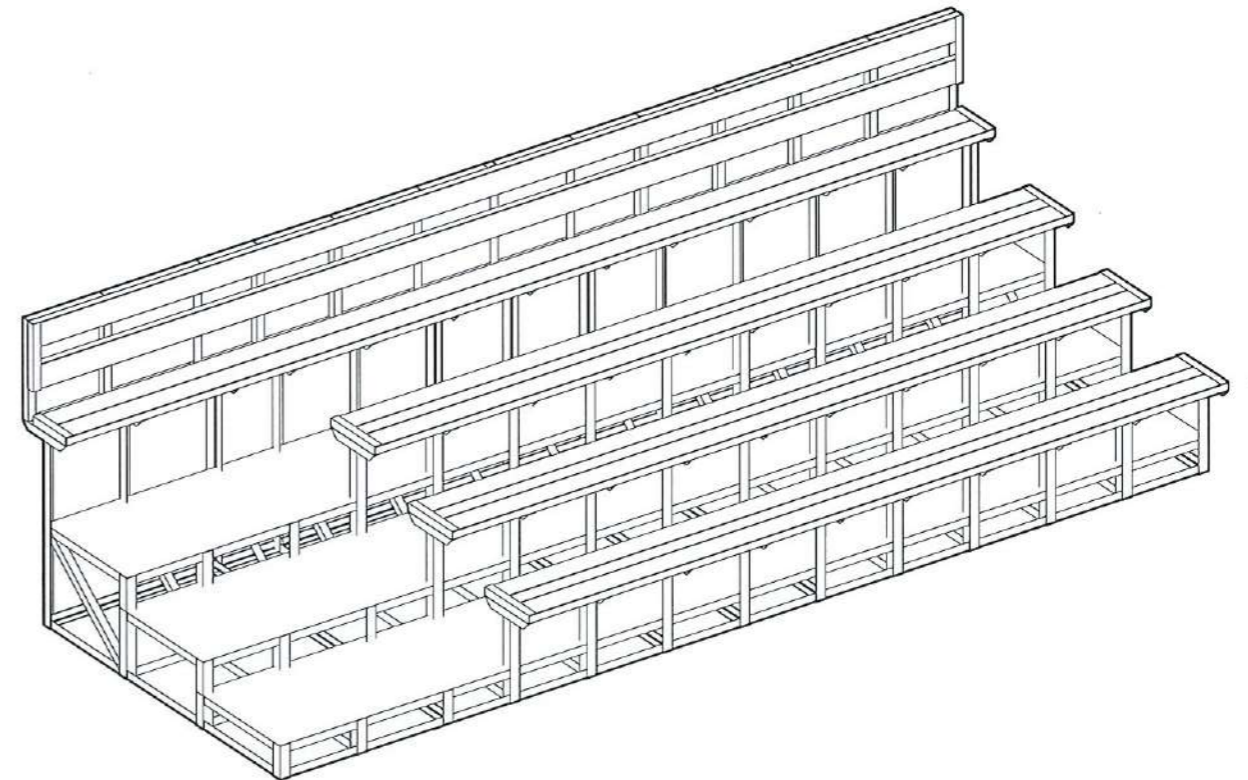
- 2" x 2" x 5.00mm thk. ANGLE BAR (FOR BACKREST SUPPORT)
- 2 PCS - 2" x 6" x 1.50mm thk. TUBULAR STEEL (FOR UPPERMOST BLEACHER BACKREST)
- 2 PCS - 2" x 6" x 1.50mm thk. TUBULAR STEEL
- 2.00mm thk CHECKERED PLATE
- 2 PCS - 2" x 6" x 1.50mm thk. TUBULAR STEEL
- 1 PC - 2" x 4" x 1.50mm thk. TUBULAR STEEL (TYPICAL BLEACHER SEAT)



BLEACHER BAY 3 ISOMETRIC

SCALE:

NTS



BLEACHER BAY 4 ISOMETRIC

SCALE:

NTS



TARLAC STATE UNIVERSITY
Facilities Development and
Management Office
Romulo Boulevard, Tarlac City, Philippines 2300

PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

ARCHITECT
AR. MARCO F. BILDAN

PRC NO : 0015392 VALIDITY: 10/24/2026
PTR NO : 1971212 P DATE ISSUED: 01/24/2024
ISSUED AT : PGT TARLAC CITY TIN : 120-051-183-000
IAPOA: 9973-414524-103123 DATE ISSUED: 10/31/2023

OWNER:
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN
DATE: MARCH 2024

SHEET NO:
A-29
PAGE NO:
29/65

STRUCTURAL - GENERAL NOTES

A. GENERAL

- A.1 THESE GENERAL NOTES ARE NOT INTENDED TO REPLACE SPECIFICATIONS. SEE SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO GENERAL NOTES. NONETHELESS, SPECIFIC NOTES AND DETAILS SHALL PRECEDE OVER GENERAL NOTES AND TYPICAL DETAILS.
- A.2 THE STRUCTURAL DRAWINGS SHALL BE UTILIZED IN CONJUNCTION WITH OTHER DESIGN DRAWINGS (ARCHITECTURAL, ELECTRICAL, PLUMBING, MECHANICAL, ETC.). IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE REQUIREMENTS OF THE DRAWINGS INTO THEIR SHOP DRAWINGS AND CONSTRUCTION.
- A.3 CONTRACTOR SHALL STUDY THE DRAWINGS AND SPECIFICATIONS, VERIFY ALL DIMENSIONS, AND INSPECT THE FIELD CONDITIONS, REPORTING ANY DISCREPANCIES TO THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH ANY PHASE OF THE WORK.
- A.4 THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.
- A.5 THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES AND NOTIFY ANY CONFLICTS TO THE ARCHITECT/ENGINEER PRIOR TO COMMENCEMENT OF EXCAVATION.
- A.6 DEMOLITION OF EXISTING STRUCTURES IF ANY SHALL NOT BE COMMENCED UNTIL PROTECTIVE MEASURES ARE SET IN PLACE; PLANS, METHODS, AND SCHEDULES OF DEMOLITION SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER.
- A.7 THE STRUCTURE HAS BEEN DESIGNED TO RESIST DESIGN LOADS ONLY AS A COMPLETED STRUCTURE. APPLICATIONS OF CONSTRUCTION LOADS TO THE PARTIALLY COMPLETED STRUCTURE SHALL BE CONSIDERED BY THE CONTRACTOR AND SO INCLUDED IN THE DESIGN OF SHORING, BRACING, FORMWORK, AND ANY OTHER SUPPORTING ELEMENTS PROVIDED FOR CONSTRUCTION OF THE STRUCTURE. DURING ERECTION AND UNTIL ALL PERMANENT CONNECTIONS ARE MADE, THE CONTRACTOR MUST PROVIDE TEMPORARY BRACING FOR THE STRUCTURE.
- A.8 THE CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL, ELECTRICAL, PLUMBING AND MECHANICAL DRAWINGS FOR REQUIRED OPENINGS. MOREOVER, SEE ARCHITECTURAL DRAWINGS FOR FLOOR ELEVATIONS AND LOCATION OF DEPRESSED FLOOR AREAS.
- A.9 DO NOT SCALE ANY DIMENSION FROM DRAWINGS. THE CONTRACTOR SHALL REQUEST FROM THE ARCHITECT/ENGINEER THE NECESSARY DIMENSIONS NOT SHOWN ON THE DRAWINGS.
- A.10 SHOP DRAWINGS OF STRUCTURAL ITEMS FOR STEEL AND CONCRETE MEMBERS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO THE FABRICATION AND CONSTRUCTION.

B. REFERENCES

- B.1 ALL CONCRETE WORKS SHALL BE DONE IN ACCORDANCE WITH:
 - THE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-14)
 - DETAILS AND DETAILING OF CONCRETE REINFORCEMENT (ACI 315-99)
 - JOINTS IN CONCRETE CONSTRUCTION (ACI 224.3R-95)
- B.2 ALL STRUCTURAL STEEL WORKS SHALL DONE IN ACCORDANCE WITH:
 - SPECIFICATION FOR STRUCTURAL STEEL BUILDING (ANSI/AISC 360-16)
 - STEEL CONSTRUCTION MANUAL, 14TH EDITION

C. CONCRETE

- C.1 UNLESS OTHERWISE INDICATED IN PLANS OR NOTED IN THE STRUCTURAL SPECIFICATIONS, THE MINIMUM 28th DAYS COMPRESSIVE CYLINDER STRENGTH OF CONCRETE WITH CORRESPONDING MAXIMUM AGGREGATE SIZE AND SLUMP SHALL BE AS FOLLOWS:

ELEMENT	28 th DAY STRENGTH	MAX. AGGREGATE SIZE	SLUMP
FOUNDATION & WALLS	3000 PSI	3/4 in.	4 in.
COLUMNS & PEDESTALS	3000 PSI	3/4 in.	4 in.
BEAMS & GIRDERS	3000 PSI	3/4 in.	4 in.
SUSPENDED SLABS	3000 PSI	3/4 in.	4 in.
SLAB ON GRADE	2500 PSI	1 in.	4 in.
NON-STRUCTURAL ELEMENTS	2500 PSI	3/4 in.	4 in.
- C.2 CONCRETE-MIX DESIGNS ALONG WITH TEST DATA SHALL BE SUBMITTED BY THE CONTRACTOR PRIOR TO CONCRETE POURING.
- C.3 PRIOR TO PLACING OF CONCRETE, ALL REINFORCING STEEL BARS, ANCHOR BOLTS, DOWELS, EMBEDDED STRUCTURAL STEELS, PLATES, OR OTHER INSERTS, SHALL BE SECURED IN POSITION AND APPROVED BY THE ENGINEER.
- C.4 CONCRETE SHALL BE DEPOSITED IN ITS FINAL POSITION WITHOUT SEGREGATION, REHANDLING OR FLOWING. PLACING SHALL BE DONE PROPERLY WITH BUGGIES, BUCKETS OR WHEEL-BORROWS.

- C.5 NO DEPOSITING OF CONCRETE SHALL BE ALLOWED WITHOUT THE USE OF VIBRATORS UNLESS AUTHORIZED BY THE ENGINEER.
- C.6 ALL CONCRETE SHALL BE CURED IMMEDIATELY AFTER FINISHING OPERATIONS BY KEEPING THE CONCRETE ELEMENT MOIST FOR AT LEAST 7 DAYS OR APPLYING LIQUID CURING COMPOUND.
- C.7 CONCRETE CYLINDERS SHALL BE FABRICATED PER EACH 40 CU.M. OR FRACTION THEREOF MIXED EACH DAY FOR EACH CLASS CONCRETE PLACED FOR EACH STRUCTURE.
- C.8 GROUT UNDER BASE PLATES SHALL BE APPROVED NON-SHRINK WITH STRENGTH AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED.

D. REINFORCING BARS

- D.1 REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO ASTM 615 AS FOLLOWS:

DIAMETER	GRADE
10mmØ	GRADE 40 (276 MPa)
12mmØ	GRADE 40 (276 MPa)
16mmØ & ABOVE	GRADE 60 (420 MPa)

- D.2 USE GAUGE #16 OR HEAVIER FOR TIE WIRE.
- D.3 NO BARS PARTIALLY EMBEDDED IN CONCRETE SHALL BE FIELD BENT, EXCEPT AS SHOWN ON PLANS OR PERMITTED BY THE ENGINEER.
- D.4 BARS SHALL NOT BE WELDED UNLESS AUTHORIZED BY THE ENGINEER.
- D.5 ALL REINFORCING BARS SHALL BE CLEANED THOROUGHLY OF ALL LOOSE RUST, SOIL OR OTHER MATERIAL PRIOR TO CONCRETE POURING.
- D.6 MAINTAIN MINIMUM CONCRETE COVER TO TRAVERSE BARS AS FOLLOWS:

ELEMENT	CONCRETE COVER
BELOW GRADE - FOUNDATIONS & WALLS	75mm
BELOW GRADE - COLUMNS, BEAMS, GIRDERS & PEDESTALS	75mm
ABOVE GRADE - COLUMNS, BEAMS, GIRDERS & PEDESTALS	50mm
ABOVE GRADE - SUSPENDED SLABS AND WALLS	20mm
SLAB ON GRADE	40mm

- D.7 ALL LAP SPLICES OF REBARS SHALL CONFORM TO CLASS B TENSION LAP SPLICE AS SHOWN ON THE LAP SPLICE SCHEDULE, UNLESS NOTED OTHERWISE.
- D.8 ALL HOOK ENDS SHOWN ON THE DRAWINGS SHALL BE STANDARD HOOKS. ALL STIRRUPS/TIES SHALL HAVE 135° SEISMIC HOOKS, UNLESS NOTED OTHERWISE. CROSS TIES SHALL HAVE STANDARD 90° HOOK ON ONE END AND 135° SEISMIC HOOK ON THE OTHER END.
- D.9 CONSECUTIVE CROSS TIES WITH 90° AND 135° HOOK ENDS SHALL BE ALTERNATED.

E. FORMS AND SHORES

- E.1 FORMS AND SHORES SHALL BE DESIGNED TO CARRY THE LOADS COMING ONTO OR AGAINST THEM WITHOUT EXCESSIVE DEFLECTION.
- E.2 STRIPPING OF FORMS AND SHORES SHALL BE AS FOLLOWS:

FOUNDATION	1 DAY
WALLS & COLUMNS	2 DAYS
BEAMS	14 DAYS
SUSPENDED SLABS EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED	14 DAYS

F. MASONRY

- F.1 ALL MASONRY UNITS SHALL BE APPROVED QUALITY, SOUND, FREE FROM CRACKS AND OTHER IMPERFECTIONS.
- F.2 NON-LOAD BEARING CONCRETE HOLLOW BLOCKS SHALL BE USED WITH A MINIMUM COMPRESSIVE STRENGTH OF 500 PSI.

- F.3 METHOD OF SAMPLING FOR QUALITY TEST SHALL BE ONE (1) QUALITY TEST FOR EVERY 10,000 UNITS OR FRACTION THEREOF, WITH THREE (3) SPECIMENS FOR COMPRESSION TEST.




- F.4 CHB WALLS SHALL BE REINFORCED AS FOLLOWS:

THICKNESS	HORIZONTAL REINFORCEMENT	VERTICAL REINFORCEMENT
100mm	10mmØ @ 600mm O.C.	10mmØ @ 600mm O.C.
125mm	10mmØ @ 600mm O.C.	10mmØ @ 600mm O.C.
150mm	10mmØ @ 400mm O.C.	10mmØ @ 400mm O.C.
200mm	10mmØ @ 400mm O.C.	10mmØ @ 400mm O.C.

- F.5 ALL MASONRY WORKS SHALL BE LAID TRUE TO LINE, LEVEL, PLUMB AND NEAT IN ACCORDANCE WITH THE PLANS. DAMAGED UNITS SHALL NOT BE USED. UNITS SHALL BE CUT ACCURATELY TO FIT ALL PLUMBING DUCTS, AND OPENING FOR ELECTRICAL WORKS; ALL HOLES SHALL BE NEATLY PATCHED.
- F.6 NO CONSTRUCTION SUPPORT SHALL BE ATTACHED TO THE CHB WALL EXCEPT WHERE SPECIFICALLY PERMITTED BY THE ENGINEER.
- F.7 UNITS SHALL BE PLACED WHILE THE MORTAR IS SOFT AND PLASTIC, AND SHALL BE USED WITHIN 2.5 HOURS OF INITIAL MIXING. MORTAR THAT HAS STIFFENED SHOULD NOT BE USED. ANY UNIT DISTURBED TO THE EXTENT THAT THE INITIAL BOND IS BROKEN AFTER INITIAL POSITIONING SHALL BE REMOVED AND RE-LAID IN FRESH MORTAR.
- F.8 MORTAR FOR CELLS OF CONCRETE HOLLOW BLOCKS SHALL CONSIST OF ONE (1) PART CEMENT TO THREE (3) PARTS SAND BY VOLUME WITH SUFFICIENT WATER. IT SHALL BE A WORKABLE CEMENT-SAND MIXTURE ATTAINING A 28th DAY COMPRESSIVE STRENGTH OF 1500 PSI.
- F.9 ALL CELLS OF CHB UNITS SHALL BE FULLY GROUTED.
- F.10 WHERE CHB WALLS ADJOIN COLUMNS, BEAMS, AND WALLS, DOWELS WITH THE SAME SIZE AS THE VERTICAL OR HORIZONTAL REINFORCEMENTS SHALL BE PROVIDED.
- F.11 MORTAR FOR PLASTERING SHALL BE PROPORTIONED ONE (1) PART CEMENT TO TWO (2) PARTS SAND WITH SUFFICIENT WATER.

G. STRUCTURAL STEEL

- G.1 ALL STRUCTURAL STEELS SHALL CONFORM TO ASTM A36 HAVING A MINIMUM YIELD STRENGTH OF 36 KSI, UNLESS NOTED OTHERWISE.
- G.2 ANCHOR BOLTS SHALL CONFORM TO ASTM F1654.
- G.3 HIGH STRENGTH BOLTS SHALL BE USED SHALL CONFORM TO ASTM A325 OR ASTM A490.
- G.4 ALL WASHERS SHALL CONFORM TO ASTM F436.
- G.5 ALL NUTS SHALL SHALL CONFORM TO ASTM A563.
- G.6 USE E70XX OR E71XX, 70 KSI STRENGTH ELECTRODES, UNLESS NOTED OTHERWISE. TEMPORARY WELDS AND ASSEMBLY ATTACHMENTS SHALL BE KEPT TO A MINIMUM
- G.7 WELDING SHALL BE DONE IN ACCORDANCE WITH APPROPRIATE WELD PROCEDURE SPECIFICATIONS (WPS).
- G.8 WELDING SHALL CONFORM TO BE DONE WITH AMERICAN WELDING SOCIETY (AWS) STANDARDS.
- G.9 FABRICATORS SHALL BE QUALIFIED WELDERS WITH AUTHENTIC CERTIFICATES.
- G.10 SPLICING OF STRUCTURAL STEEL MEMBERS IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE ENGINEER AS TO LOCATION AND TYPE OF SPLICE TO BE MEMBER. ANY MEMBER HAVING A SPLICE NOT SHOWN AND DETAILED ON SHOP DRAWINGS WILL BE REJECTED.
- G.11 THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO THE FABRICATION AND ERECTION.
- G.12 STEEL MEMBERS TO BE ENCASE IN CONCRETE SHALL NOT BE PAINTED. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL HAVE AT LEAST TWO COATS OF APPROVED PRIMER PAINT.
- G.13 CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AND SAFETY PROTECTION FOR ERECTION.

 <p>TARLAC STATE UNIVERSITY Facilities Development and Management Office Remulo Boulevard, Tarlac City, Philippines 2100</p>	PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER	CIVIL ENGINEER:  ENGR. JOHN DANIEL I. UMALI	PRC NO : 0179300 PTR NO : 5632903 ISSUED AT : PAMPANGA	VALIDITY: 12/17/2024 DATE ISSUED: 01/16/2024 TIN : 392-651-272-000	OWNER:  DR. ARNOLD E. VELASCO PRESIDENT	SHEET CONTENTS: AS SHOWN	SHEET NO: S-01
	PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY						DATE: MARCH 2024

TENSION LAP SPLICE LENGTHS

BAR SIZE	$f_c' = 3,000$ PSI				$f_c' = 4,000$ PSI			
	TOP BARS		OTHER BARS		TOP BARS		OTHER BARS	
	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2
10mm	490	740	380	570	430	640	330	490
12mm	590	880	460	680	510	770	400	590
16mm	790	1,200	610	910	680	1,100	530	790
20mm	1,000	1,500	760	1,200	850	1,300	660	980
25mm	1,600	2,400	1,200	1,800	1,400	2,100	1,100	1,600
28mm	1,700	2,700	1,300	2,100	1,500	2,300	1,200	1,800
32mm	1,900	3,000	1,500	2,300	1,700	2,600	1,300	2,000
36mm	2,200	3,400	1,700	2,600	1,900	3,000	1,500	2,300

NOTES:

- TABULATED VALUES ARE CLASS B TENSION LAP SPLICE LENGTHS BASED ON UNCOATED GRADE 40 REINFORCING BARS AND NORMAL-WEIGHT CONCRETE.
- TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE BASED ON ACI 318-14, SECTIONS 25.4.2.2 AND 25.5.2.1, RESPECTIVELY. TABULATED VALUES FOR BEAMS OR COLUMNS ARE BASED ON TRAVERSE REINFORCEMENT AND CONCRETE COVER MEETING THE MINIMUM CODE REQUIREMENTS. LENGTHS ARE IN MILLIMETERS.
- TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
- OTHER BARS ARE THE HORIZONTAL BARS LOCATED WITHIN 12 INCHES DEPTH FROM THE BOTTOM OF SLABS OR FOOTINGS, OR THE VERTICAL BARS OF COLUMN OR WALLS.
- WHEN CLASS A LAP SPLICES ARE TO BE USED, DIVIDE THE TABULATED VALUES BY 1.3.
- CASES 1 AND 2, WHICH DEPEND ON THE TYPE OF STRUCTURAL ELEMENT, CONCRETE COVER, AND THE CENTER TO CENTER SPACING OF BARS, ARE DEFINED AS:

FOR BEAMS OR COLUMNS:

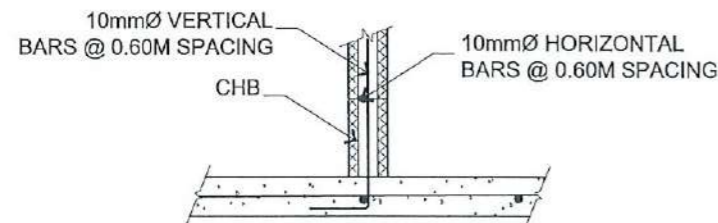
- CASE 1 - COVER AT LEAST $1.0d_b$ AND CENTER TO CENTER SPACING AT LEAST $2d_b$
- CASE 2 - COVER LESS THAN $1.0d_b$ OR CENTER TO CENTER SPACING LESS THAN $2d_b$

FOR FOOTINGS OR WALLS:

- CASE 1 - COVER AT LEAST $1.0d_b$ AND CENTER TO CENTER SPACING AT LEAST $3d_b$
- CASE 2 - COVER LESS THAN $1.0d_b$ OR CENTER TO CENTER SPACING LESS THAN $3d_b$

FOR SLABS (USE CLASS A LAP SPLICES):

- CASE 1 - COVER AT LEAST $1.0d_b$ AND CENTER TO CENTER SPACING AT LEAST $3d_b$
- CASE 2 - COVER LESS THAN $1.0d_b$ OR CENTER TO CENTER SPACING LESS THAN $3d_b$



TYPICAL DETAIL OF WALL TO SLAB CONNECTION

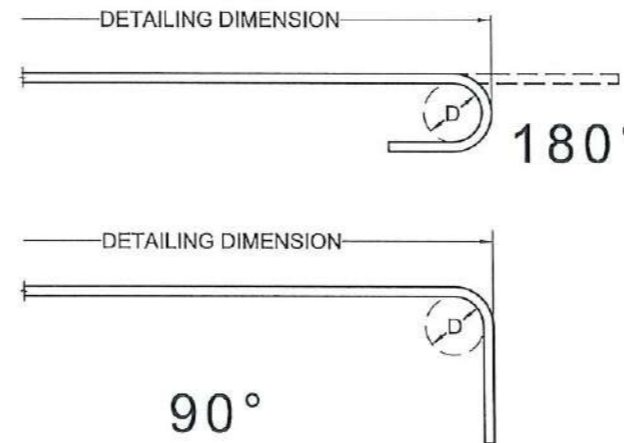
SCALE N.T.S.

RECOMMENDED END HOOKS

ALL GRADES: D = FINISHED BEND DIAMETER

BAR SIZE	D* (mm)	180° HOOK		90° HOOK
		A or G (mm)	J (mm)	A or G (mm)
10mm	60	150	80	150
12mm	80	175	105	200
16mm	100	200	130	250
20mm	135	250	180	375
25mm	155	275	205	425
28mm	240	375	300	475
32mm	275	425	335	550
36mm	305	475	375	625

*FINISHED BEND DIAMETERS INCLUDE "SPRING BACK" EFFECT WHEN BARS STRAIGHTEN OUT SLIGHTLY AFTER BEING BENT AND ARE SLIGHTLY LARGER THAN MINIMUM BEND DIAMETER IN ACI.

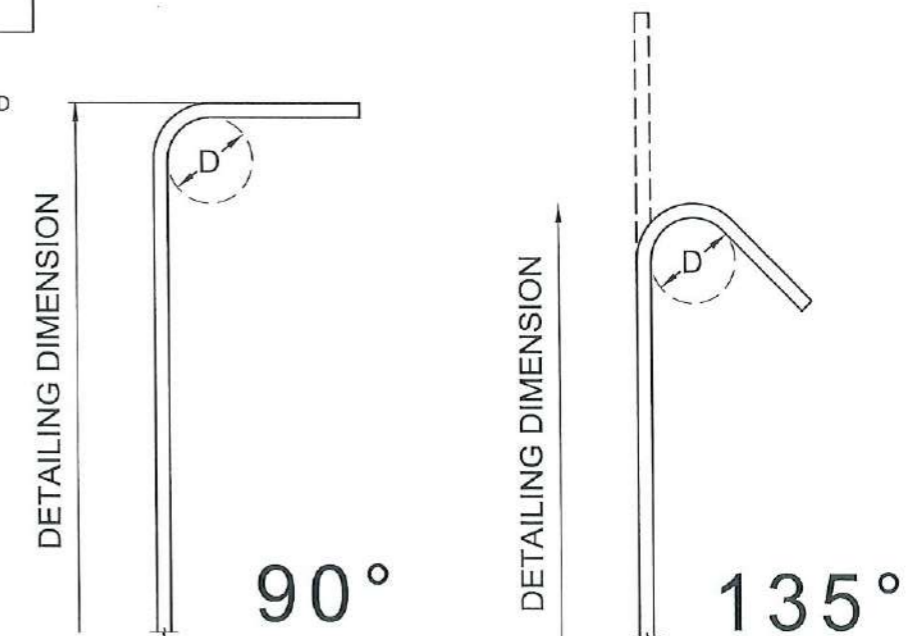


STANDARD STIRRUP/TIE HOOKS

ALL GRADES: D = FINISHED BEND DIAMETER

BAR SIZE	D (mm)	135° HOOK		90° HOOK
		A or G (mm)	H* (mm)	A or G (mm)
10mm	40	105	65	105
12mm	50	115	80	115
16mm	65	140	95	155
20mm	120	230	135	355
25mm	155	270	155	410

*H DIMENSION IS APPROXIMATE



DEVELOPMENT LENGTH FOR STANDARD HOOKS IN TENSION

BAR SIZE	$f_c' = 2,500$ PSI	$f_c' = 3,000$ PSI	$f_c' = 4,000$ PSI
10mm	180	150	150
12mm	200	180	160
16mm	260	250	210
20mm	320	300	260
25mm	400	380	320
28mm	450	430	369
32mm	520	480	410
36mm	580	530	460

NOTES:

- TABULATED VALUES ARE BASED ON UNCOATED GRADE 40 REINFORCING BARS AND NORMAL-WEIGHT CONCRETE.
- DEVELOPMENT LENGTHS FOR STANDARD HOOKS IN TENSION ARE BASED ON ACI 318-14, SECTIONS 25.4.3. LENGTHS ARE IN MILLIMETERS.

SEISMIC STIRRUP/TIE HOOKS

ALL GRADES: D = FINISHED BEND DIAMETER

BAR SIZE	D (mm)	135° SEISMIC HOOK	
		A or G (mm)	H* (mm)
10mm	40	110	80
12mm	50	115	80
16mm	65	140	95
20mm	120	230	135
25mm	155	270	155

*H DIMENSION IS APPROXIMATE



PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

CIVIL ENGINEER: ENGR. JOHN DANIEL I. UMALI

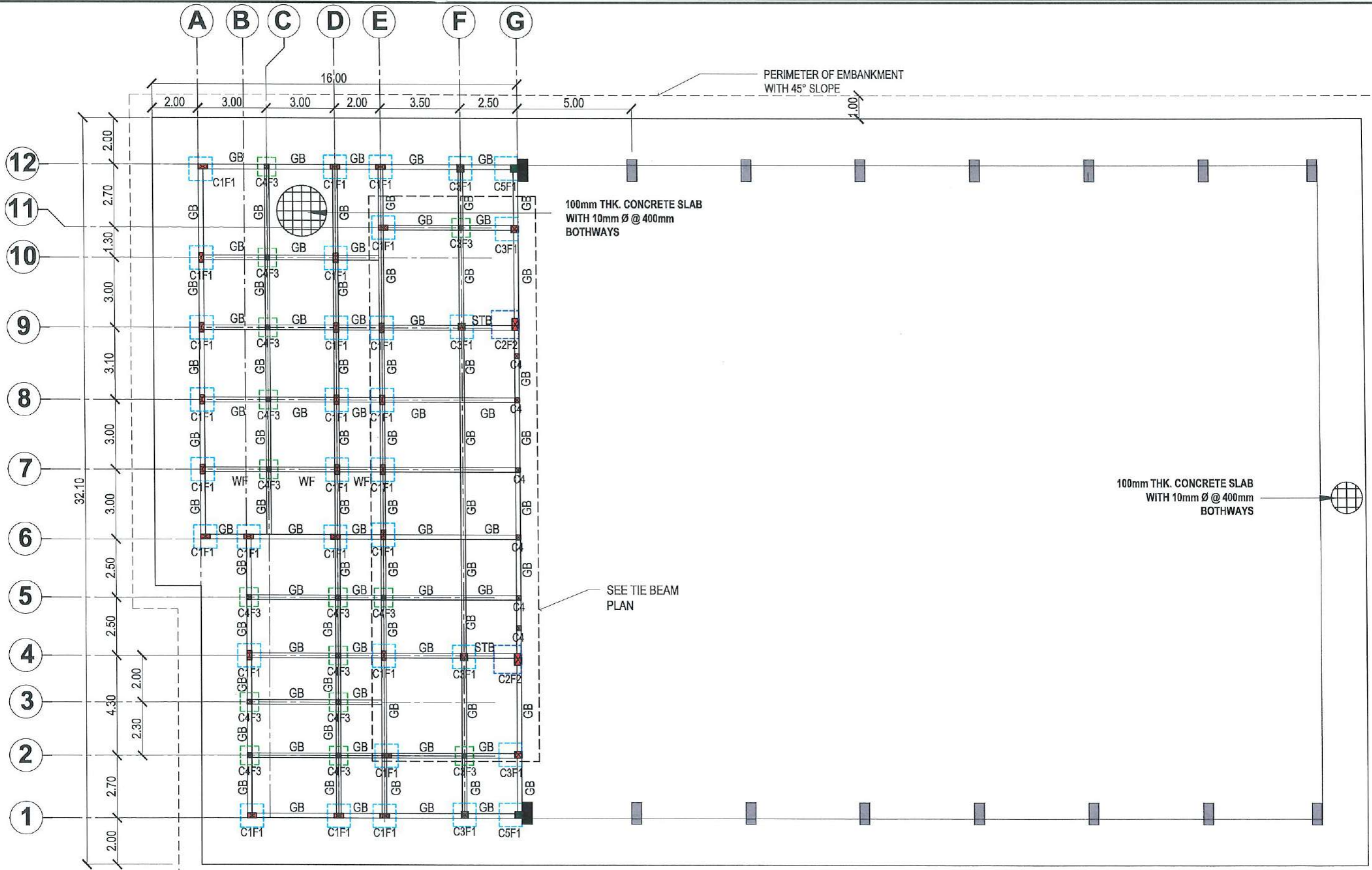
PRC NO: 0179300
PTR NO: 5632903
ISSUED AT: PAMPANGA

VALIDITY: 12/17/2024
DATE ISSUED: 01/16/2024
TIN: 392-651-272

OWNER: DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS: AS SHOWN
DATE: MARCH 2024

SHEET NO: S-02
PAGE NO: 31/65



FOUNDATION PLAN

SCALE: 1:160M



PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

CIVIL ENGINEER:
John Daniel I. Umali
ENGR. JOHN DANIEL I. UMALI

PRC NO : 0179300
PTR NO : 5632903
ISSUED AT : PAMPANGA

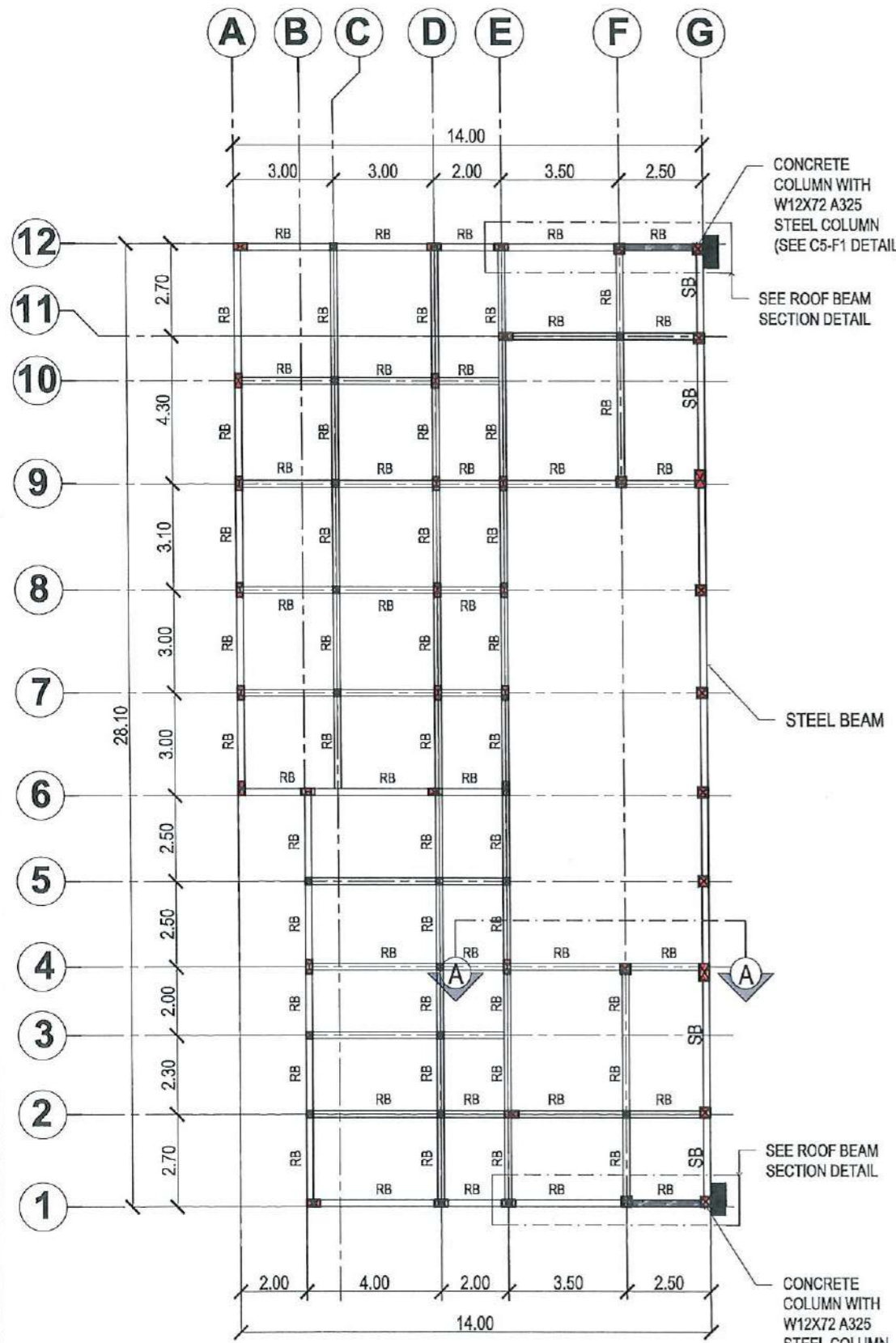
VALIDITY : 12/17/2024
DATE ISSUED : 01/16/2024
TIN : 392-651-272

OWNER:
Dr. Arnold E. Velasco
DR. ARNOLD E. VELASCO
PRESIDENT

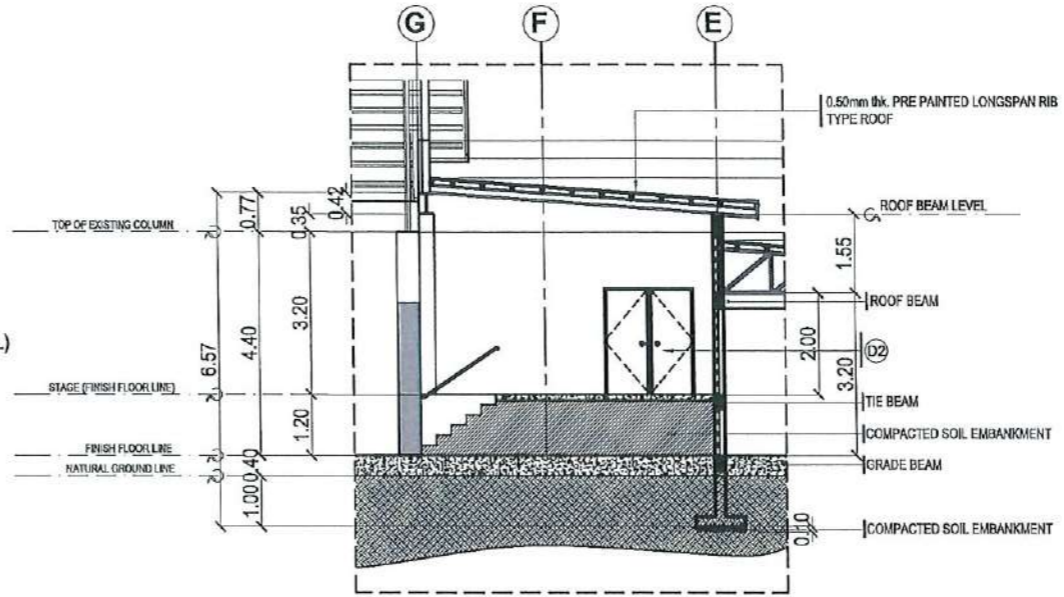
SHEET CONTENTS:
AS SHOWN

DATE: MARCH 2024

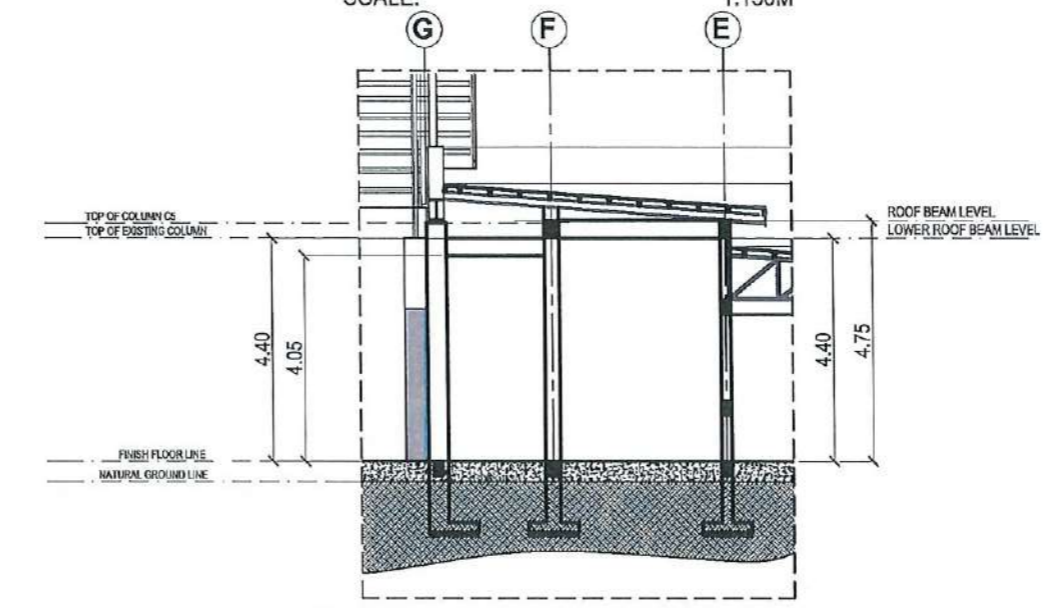
SHEET NO:
S-03
PAGE NO:
32/65



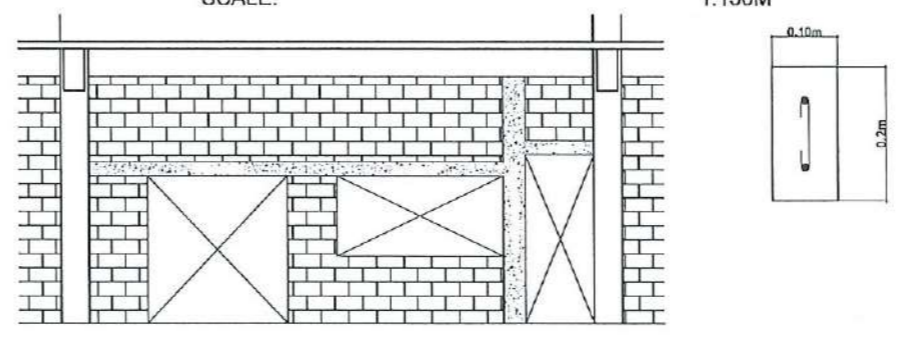
ROOF BEAM PLAN
SCALE: 1:180M



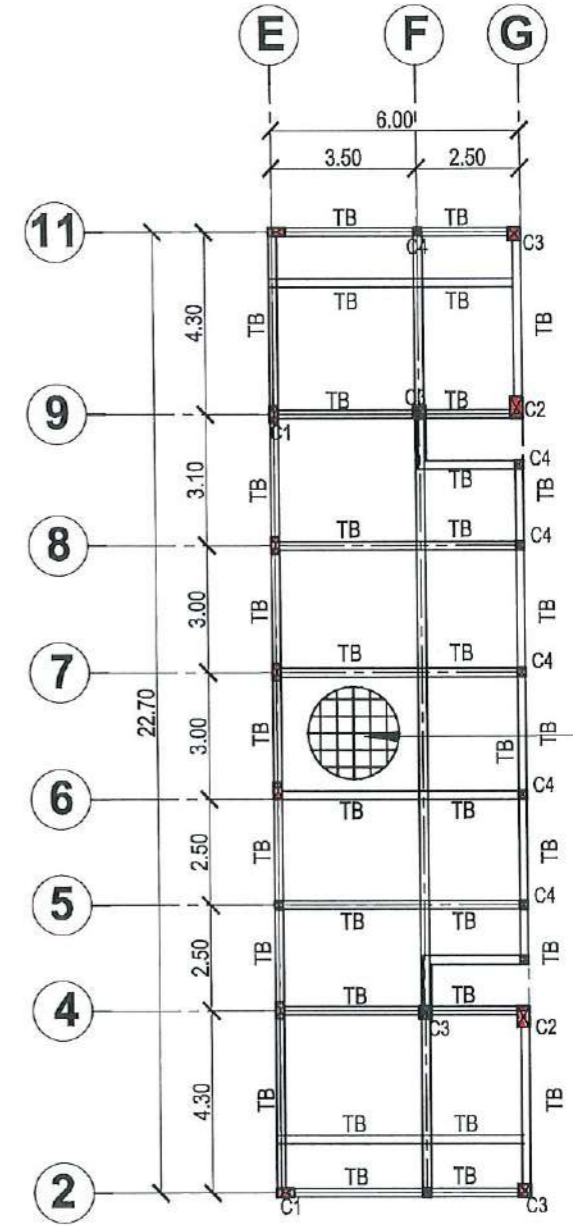
BAY SECTION "A"
SCALE: 1:150M



ROOF BEAM SECTION DETAIL
SCALE: 1:150M



TYPICAL DETAIL OF LINTEL BEAM
SCALE: NTS



TIE BEAM LAYOUT (@ STAGE)
SCALE: 1:180M



PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

CIVIL ENGINEER: ENGR. JOHN DANIEL I. UMALI

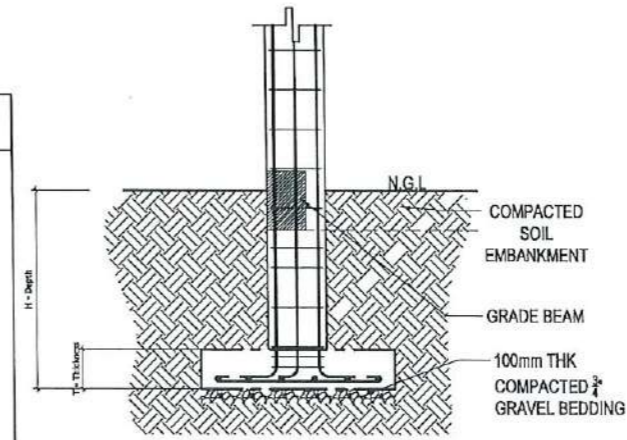
PRC NO: 0179300
PTR NO: 5632903
ISSUED AT: PAMPANGA

VALIDITY: 12/17/2024
DATE ISSUED: 01/16/2024
TIN: 392-651-272

OWNER: DR. ARNOLD E. VELASCO, PRESIDENT
SHEET CONTENTS: AS SHOWN
DATE: MARCH 2024
SHEET NO: S-04
PAGE NO: 33/65

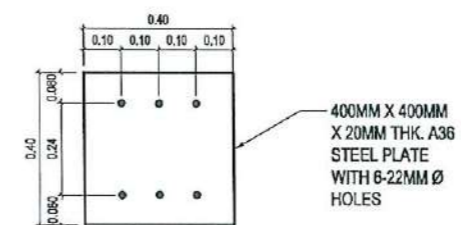
SCHEDULE OF FOOTINGS

Mark	F1	F2	F3
Footing Layout			
Size	1000x1000	1200x1200	800x800
Reinforcement	6-12mmØ	6-16mmØ	5-12mmØ
Depth	1000 mm	1200 mm	800 mm
Thickness	300 mm	400 mm	275 mm



TYPICAL DETAIL OF FOOTINGS

SCALE: NTS.

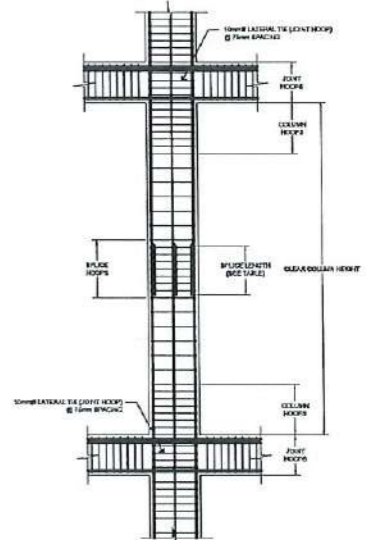
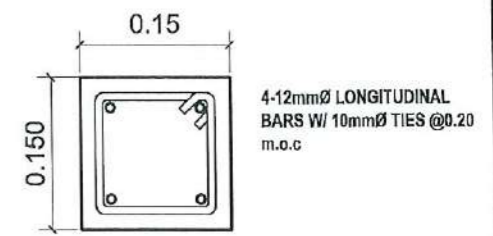


BASEPLATE DETAIL

SCALE: 1:20MTS

TYPICAL STIFFENER COLUMN DETAIL

SCALE: 1:5M



TYPICAL DETAIL OF COLUMN

SCALE: NTS

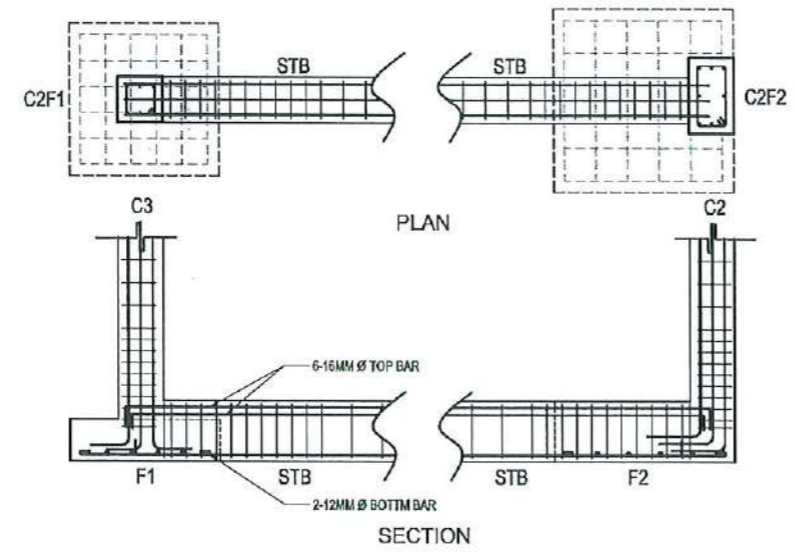
SCHEDULE OF COLUMNS

SCALE: 1:40M

NO.	REINFORCEMENT	LATERAL TIES		CONCRETE BEAM	CONT. BARS	EXT SUPPORT		MIDSPAN		INT SUPPORT		STIRRUPS			REMARKS	
		TIE DIA.	SPACING			SECTION	REINF	SECTION	REINF	SECTION	REINF	DIA	NO.	SPACING		
C1	6-12mmØ	TIE DIA.	10mm	GB/TB/RB	2-16mm top 2-16mm mid. 2-16mm bot.	200x350	200x350	200x350	10mm	2	50	REST	150	100		
		TIE NO.	2													
		SPACING	50													
		REST	150													
C2	8-16mmØ	TIE DIA.	10mm	STB	6-16mm top 2-12mm bot.	300x350	200x350	200x350	10mm	2	50	REST	200	100	100	
		TIE NO.	2													
		SPACING	50													
		REST	150													
C3	8-12mmØ	TIE DIA.	10mm			300x400	300x400	300x400	10mm	2	50	REST	150	100		
		TIE NO.	2													
		SPACING	50													
		REST	150													
C4	4-12mmØ	TIE DIA.	10mm			200x200			10mm	2	50	REST	150	100		
		TIE NO.	2													
		SPACING	50													
		REST	150													
C5	8-16mmØ	TIE DIA.	10mm			400x400			10mm	2	50	REST	150	100		
		TIE NO.	2													
		SPACING	50													
		REST	150													

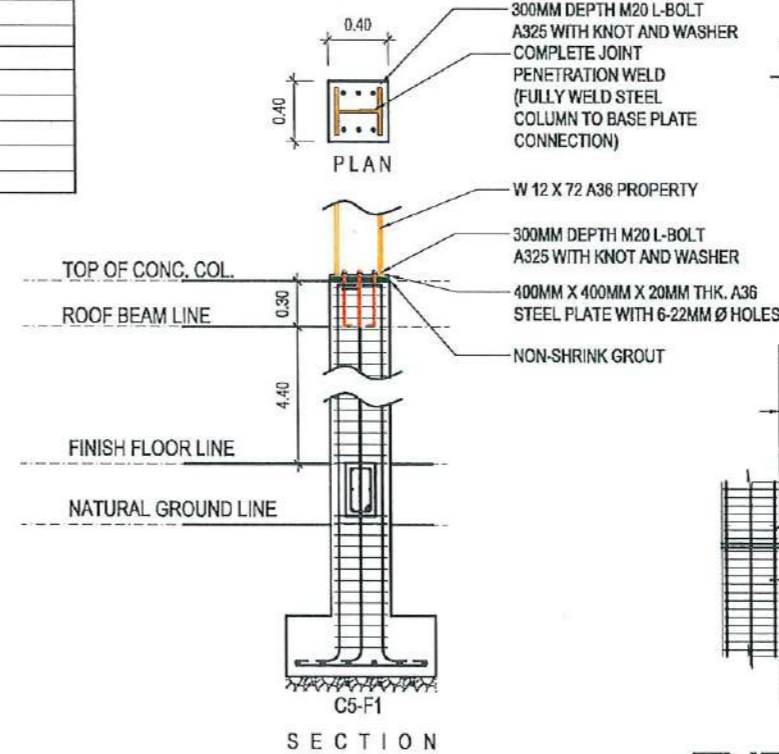
SCHEDULE OF BEAMS

SCALE: 1:40M



TYPICAL STRAP FOOTING DETAIL

SCALE: 1:40M

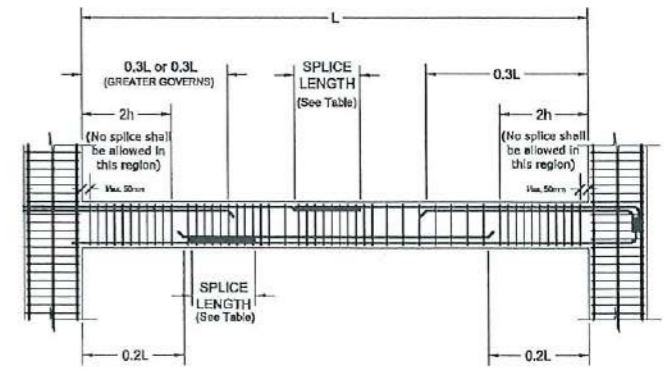


C5-F1 TYPICAL DETAIL

SCALE: 1:50MTS

TYPICAL DETAIL OF BEAMS

SCALE: 1:20MTS



TARLAC STATE UNIVERSITY
Facilities Development and Management Office
Romulo Boqueron, Tarlac City, Philippines 2300

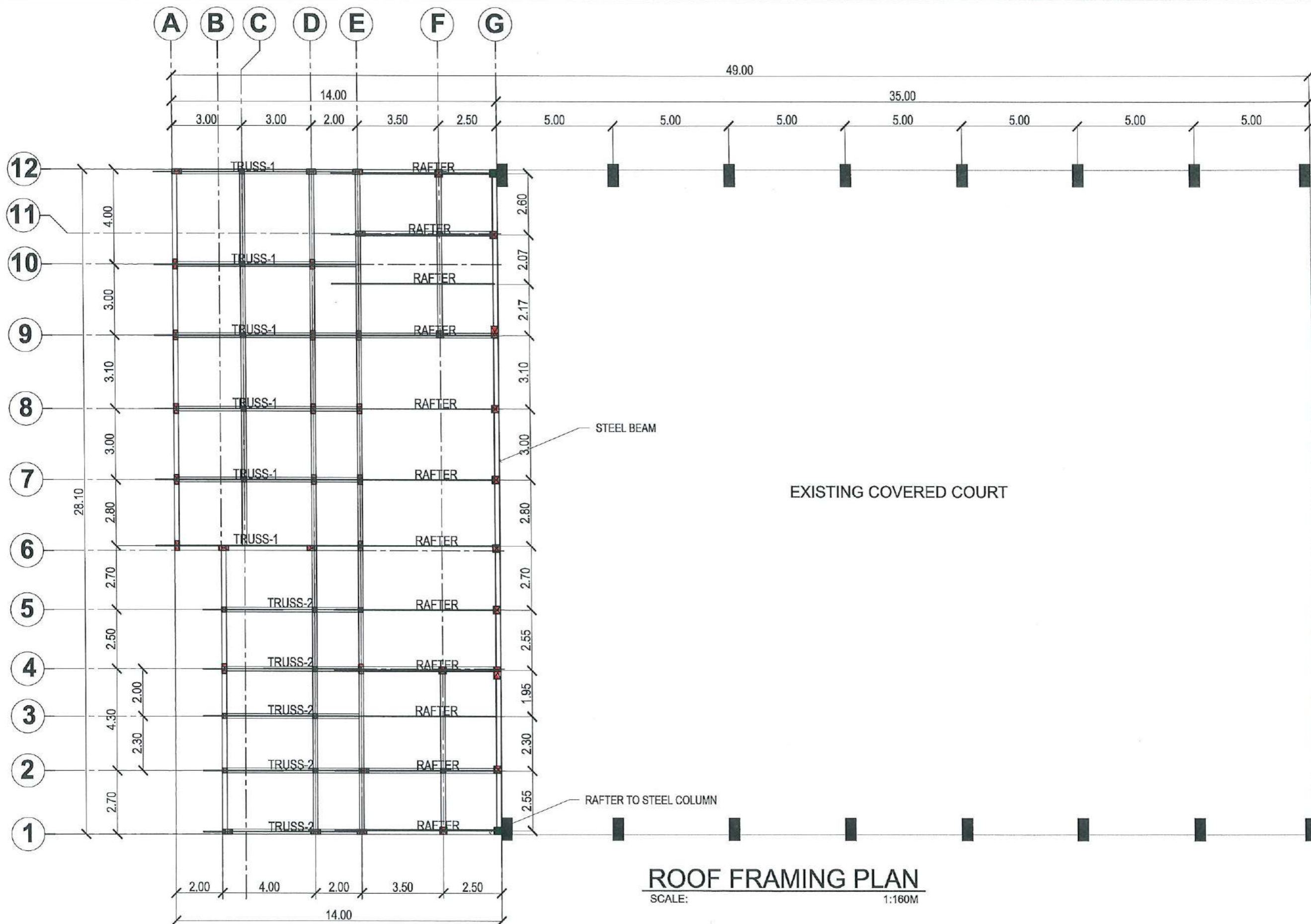
PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

CIVIL ENGINEER:
ENGR. JOHN DANIEL I. UMALI

PRC NO: 0179300 VALIDITY: 12/17/2024
PTR NO: 5632803 DATE ISSUED: 01/16/2024
ISSUED AT: PAMPANGA TIN: 392-651-272

OWNER: DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS: AS SHOWN
DATE: MARCH 2024
SHEET NO: S-05
PAGE NO: 34/65



ROOF FRAMING PLAN
SCALE: 1:160M



TARLAC STATE UNIVERSITY
Facilities Development and Management Office
Nornela Boulevard, Tarlac City, Philippines 2300

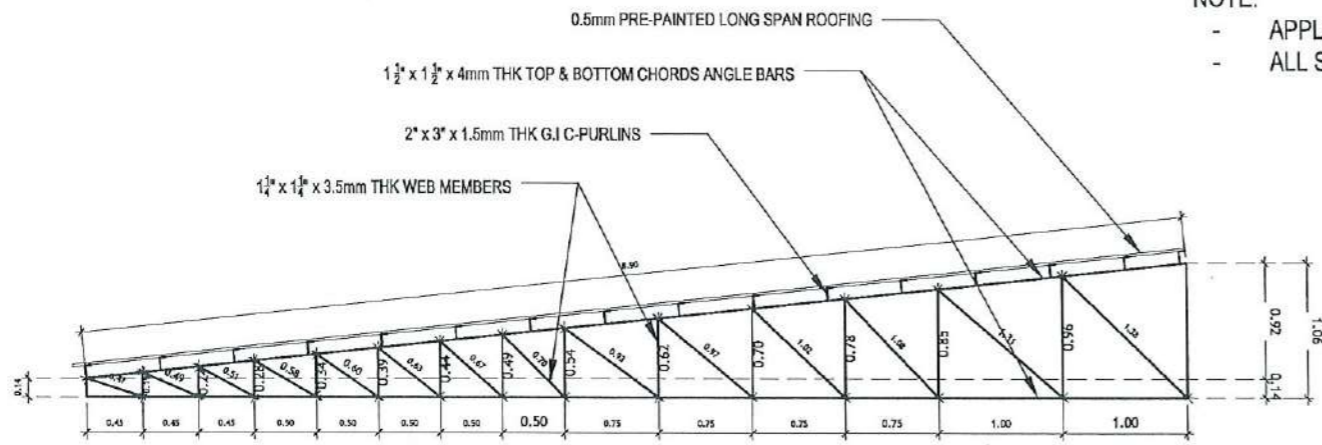
PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

CIVIL ENGINEER:
Ugali
ENGR. JOHN DANIEL I. UMALI

PRC NO : 0179300 VALIDITY: 12/17/2024
PTR NO : 5632903 DATE ISSUED: 01/16/2024
ISSUED AT : PAMPANGA TIN : 392-651-272

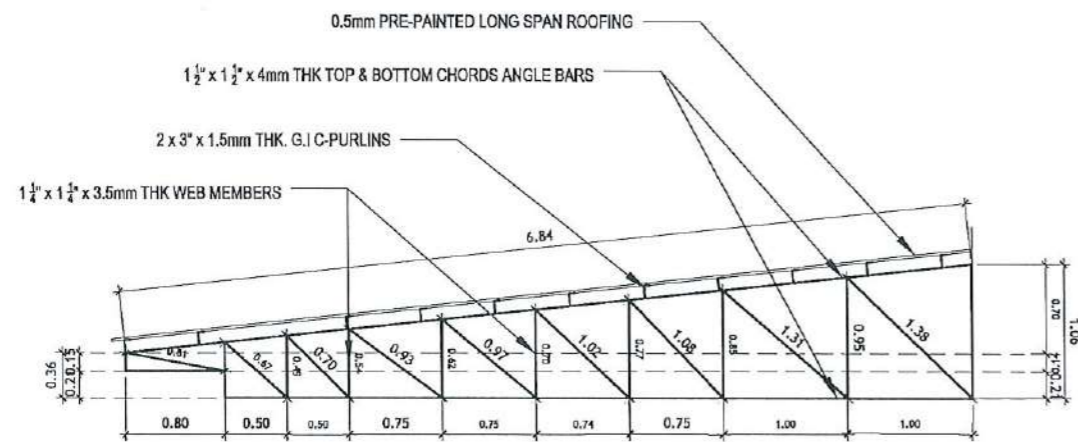
OWNER:
Dr. Arnold E. Velasco
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN
DATE: MARCH 2024
SHEET NO:
S-06
PAGE NO:
35/65



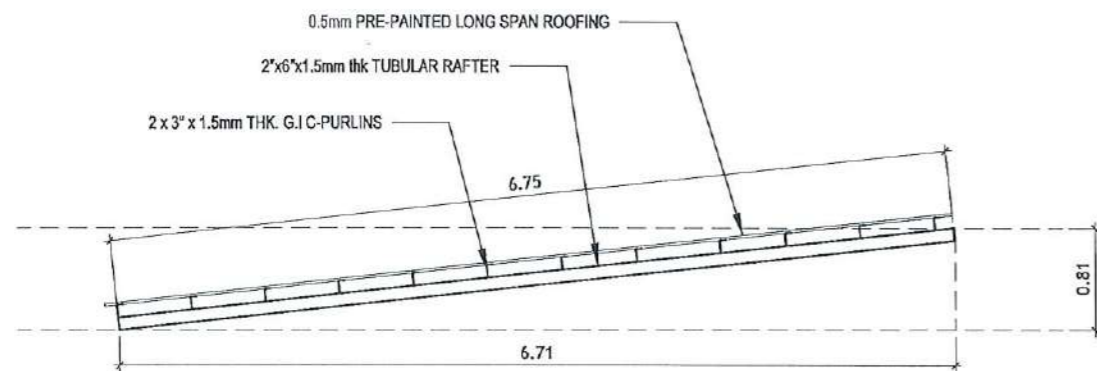
TRUSS - 1 DETAILS

SCALE : 1:60M



TRUSS - 2 DETAILS

SCALE : 1:60M

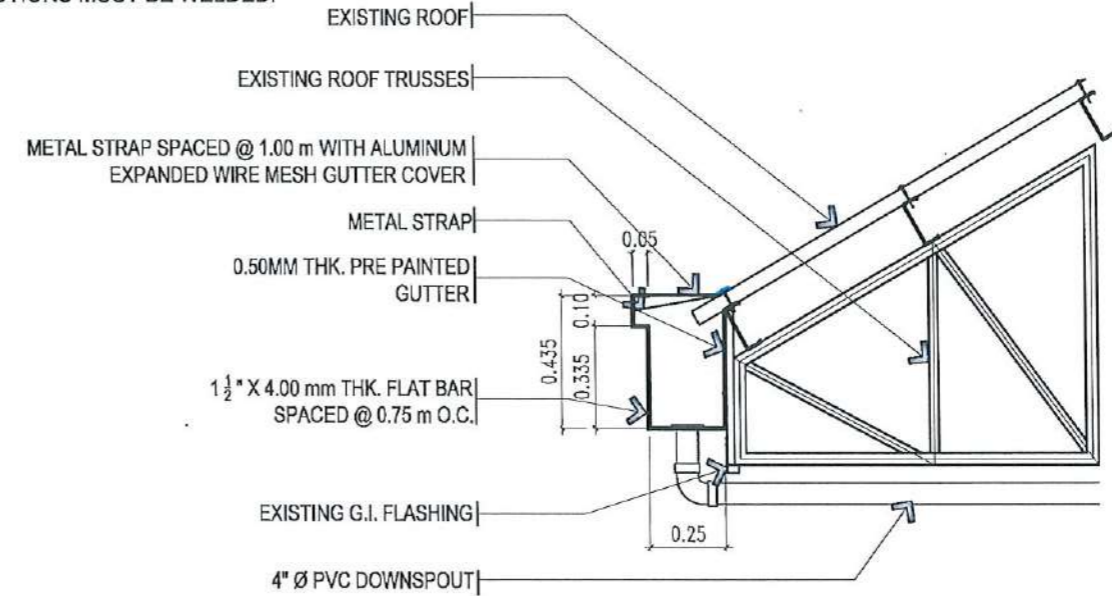


RAFTER DETAILS

SCALE : 1:60M

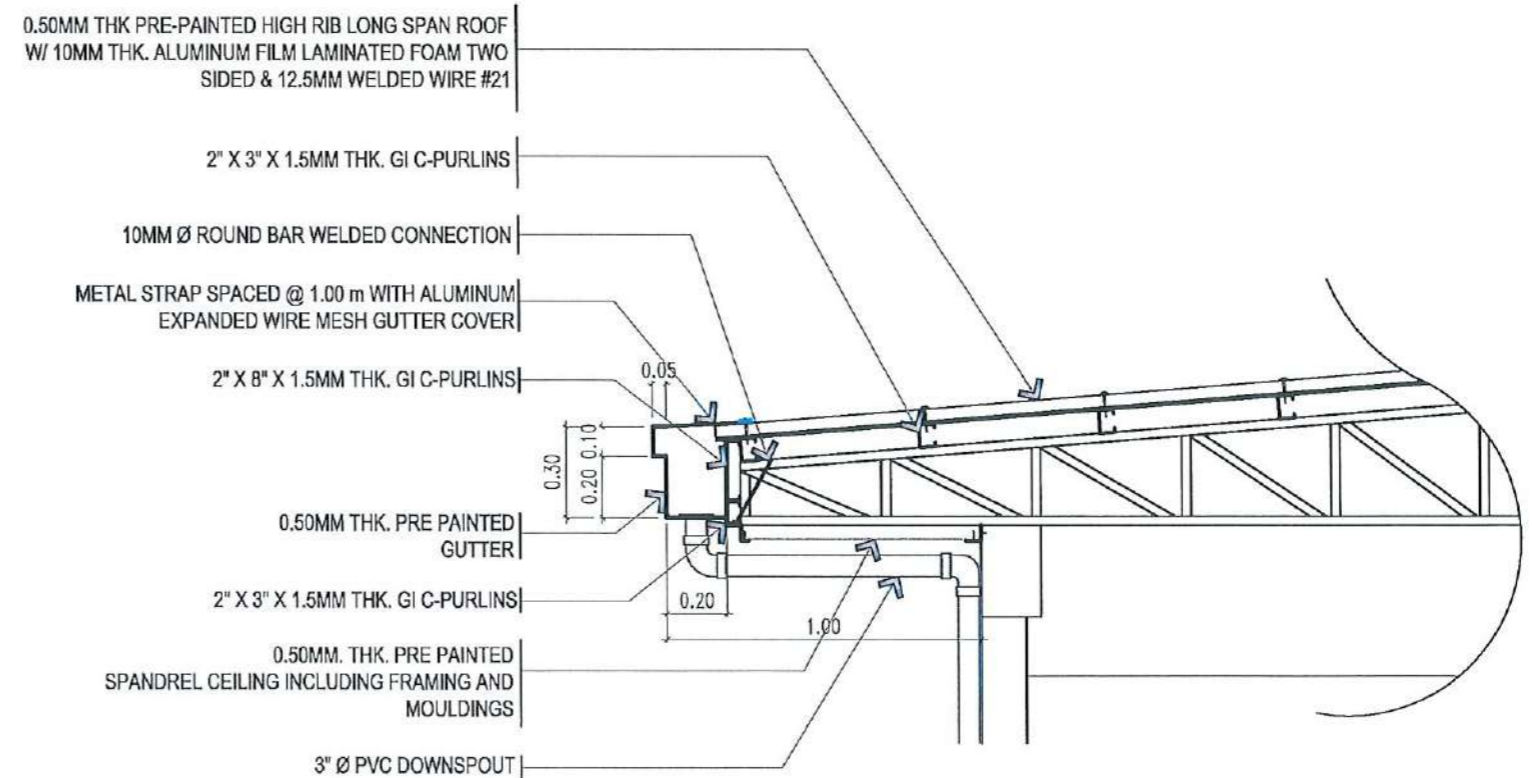
NOTE:

- APPLY METAL PRIMER ON ALL STEEL FRAME MEMBERS.
- ALL STEEL CONNECTIONS MUST BE WELDED.



DETAIL OF ROOF GUTTER @ COURT

SCALE : 1:25M



DETAIL OF ROOF GUTTER @ EXTENSION

SCALE : 1:25M



TARLAC STATE UNIVERSITY
Facilities Development and Management Office
Romulo Boulevard, Tarlac City, Philippines 2100

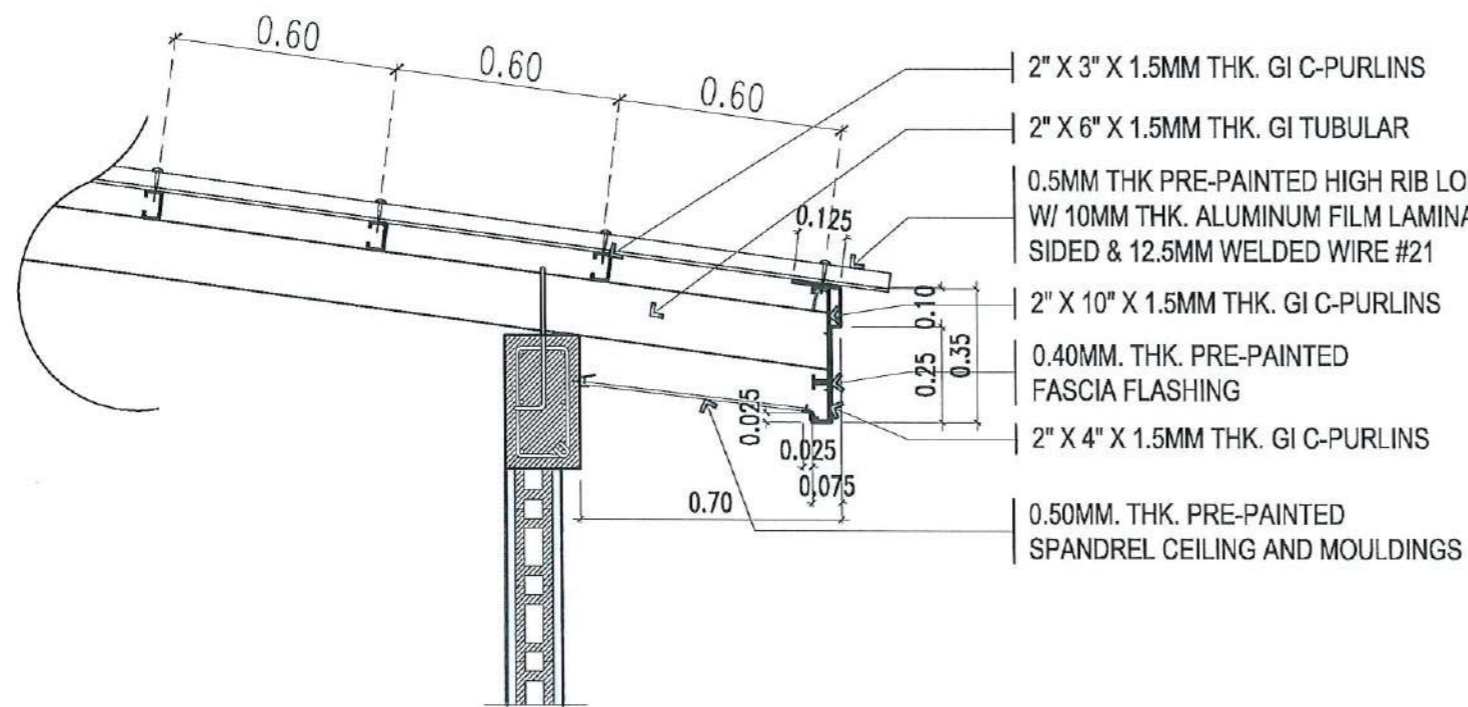
PROJECT TITLE:	REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION:	SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

CIVIL ENGINEER:	 ENGR. JOHN DANIEL I. UMALI
-----------------	--------------------------------

PRG NO: 0179300	VALIDITY: 12/17/2024
PTR NO: 5632903	DATE ISSUED: 01/16/2024
ISSUED AT: PAMPANGA	TIN: 392-651-272

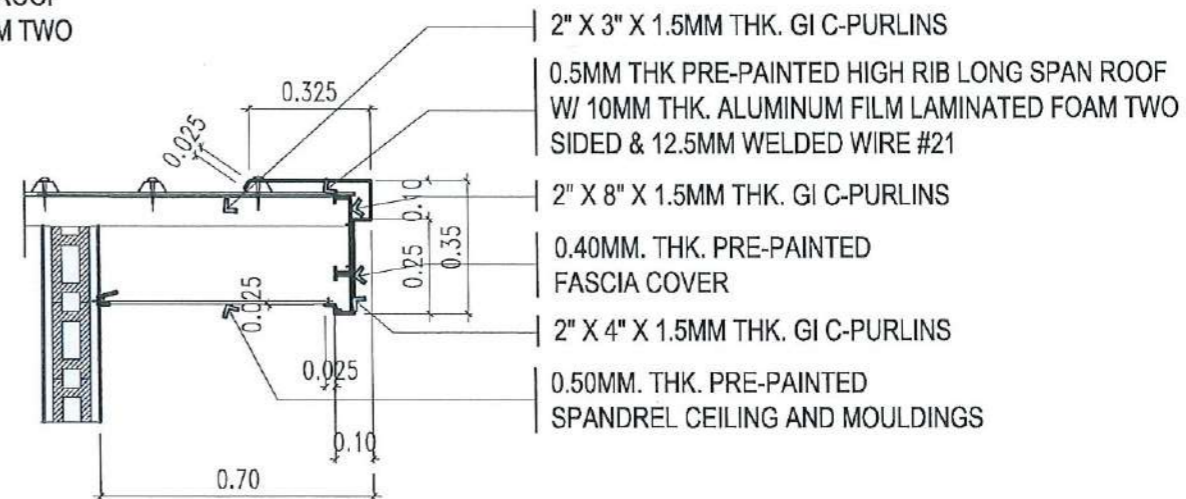
OWNER:	 DR. ARNOLD E. VELASCO PRESIDENT
--------	--

SHEET CONTENTS:	AS SHOWN	SHEET NO:	S-07
DATE:	MARCH 2024	PAGE NO:	36/65



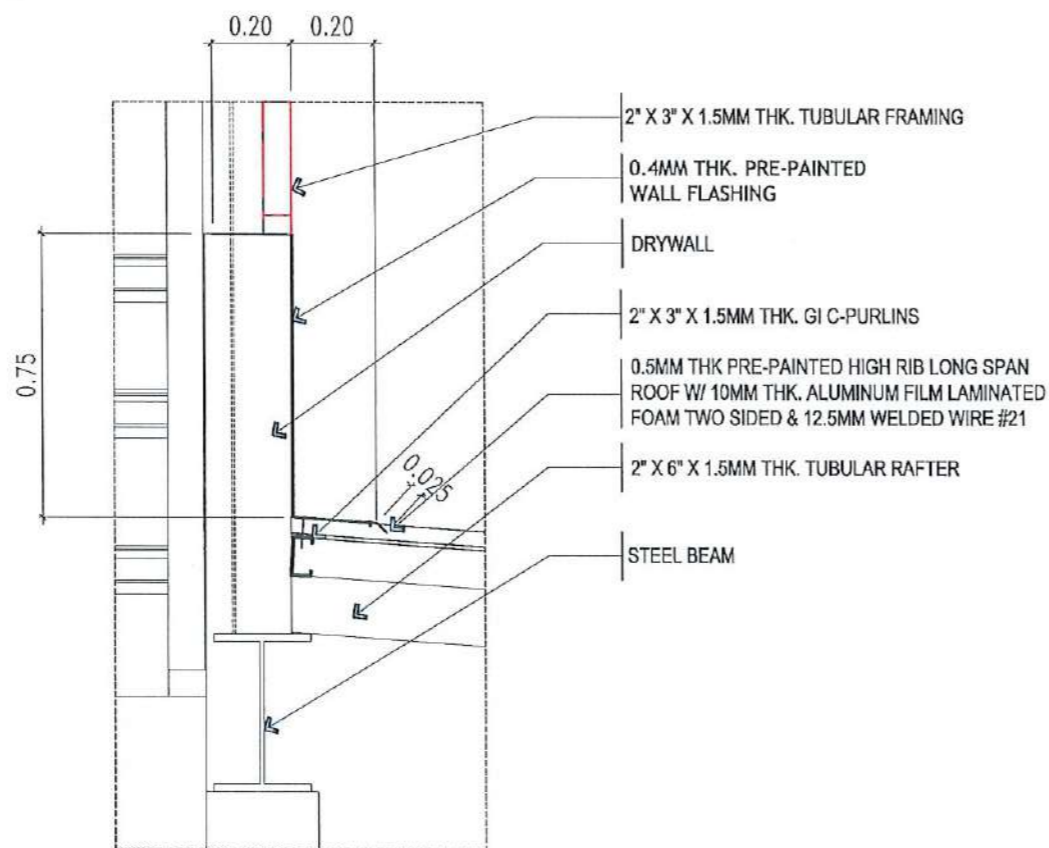
ROOF FLASHING DETAIL

SCALE 1:20 MTS.



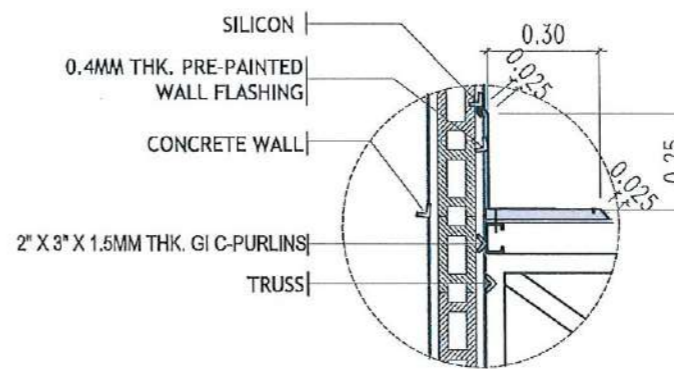
END FLASHING DETAIL

SCALE 1:20 MTS.



WALL FLASHING DETAIL A

SCALE 1:20 MTS.



WALL FLASHING DETAIL B

SCALE 1:20 MTS.



TARLAC STATE UNIVERSITY
Facilities Development and Management Office
Remulo Boulevard, Tarlac City, Philippines 2100

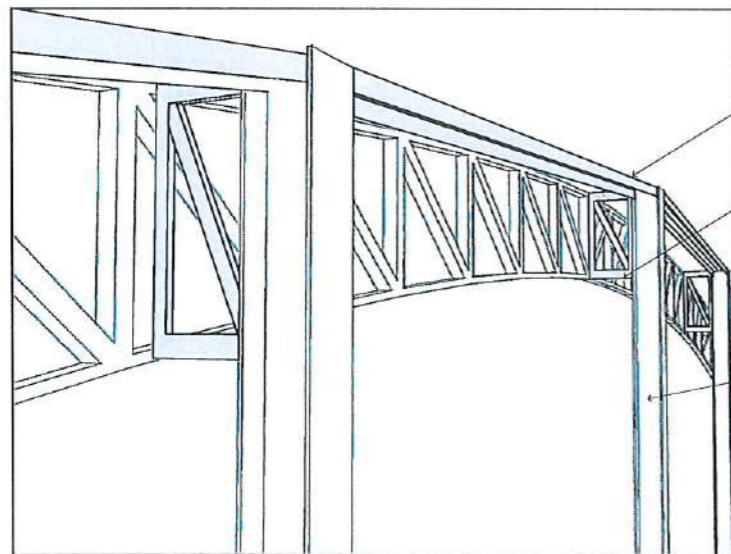
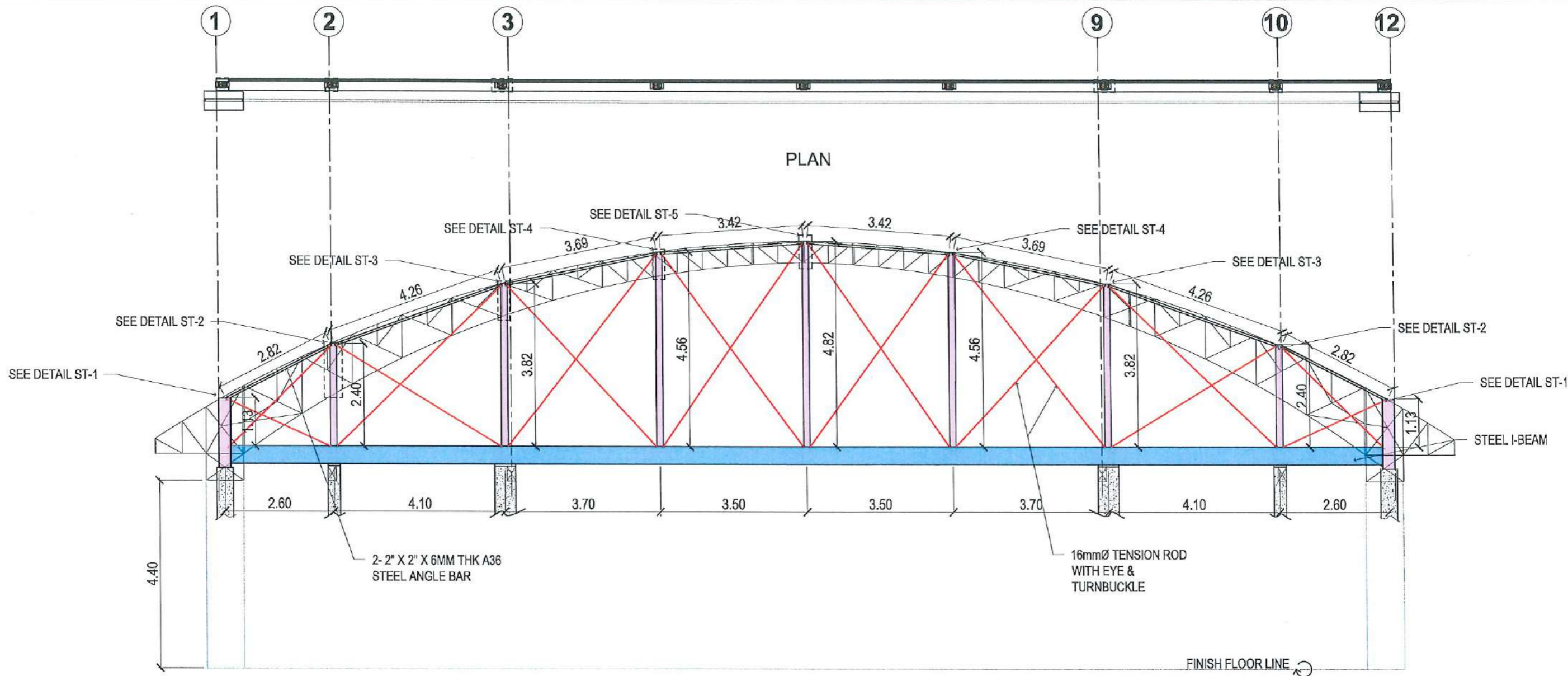
PROJECT TITLE:	REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION:	SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

CIVIL ENGINEER:
[Signature]
ENGR. JOHN DANIEL I. UMALI

PRC NO : 0179300	VALIDITY: 12/17/2024
PTR NO : 5632903	DATE ISSUED: 01/16/2024
ISSUED AT : PAMPANGA	TIN : 392-651-272

OWNER:
[Signature]
DR. ARNOLD E. VELASCO
PRESIDENT

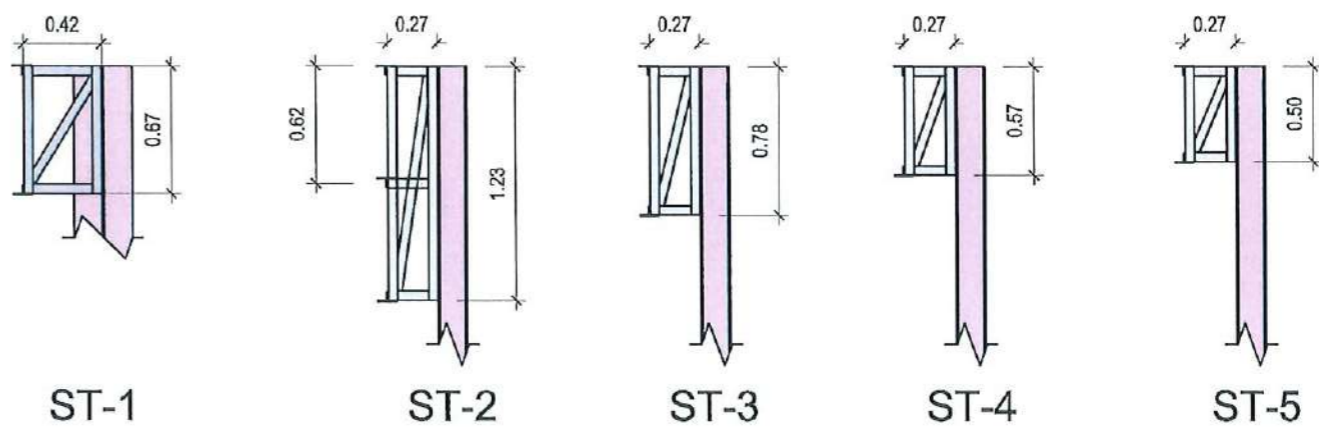
SHEET CONTENTS:	SHEET NO:
AS SHOWN	S-08
DATE: MARCH 2024	PAGE NO:
	37/65



2- 2" X 2" X 6MM THK A36
STEEL ANGLE BAR

2- 2" X 2" X 6MM THK A36
STEEL ANGLE BAR

W6X20 A36 PROPERTY



CONNECTION DETAIL TO EXISTING TRUSS
SCALE: 1:30M



PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

CIVIL ENGINEER:
John Daniel I. Umali
ENGR. JOHN DANIEL I. UMALI

PRC NO: 0179300 VALIDITY: 12/17/2024
PTR NO: 5632903 DATE ISSUED: 01/16/2024
ISSUED AT: PAMPANGA TIN: 392-651-272

OWNER:
Dr. Arnold E. Velasco
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN

DATE: MARCH 2024

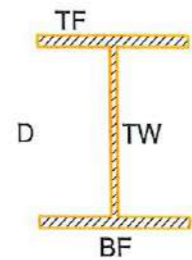
SHEET NO:
S-09
PAGE NO:
38/65

SCHEDULE OF STEEL BEAMS

SCALE: NTS.

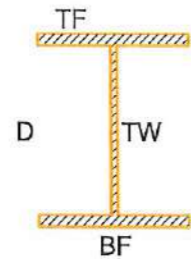
W6X20 A36 PROPERTY

Sx= 218.80x10³mm³
 D= 157.50mm
 BF= 152.9mm
 TF= 9.30mm
 TW= 6.60mm



W18X76 A36 PROPERTY

Sx= 2,393.90x10³mm³
 D= 462.50mm
 BF= 280.30mm
 TF= 17.30mm
 TW= 10.80mm

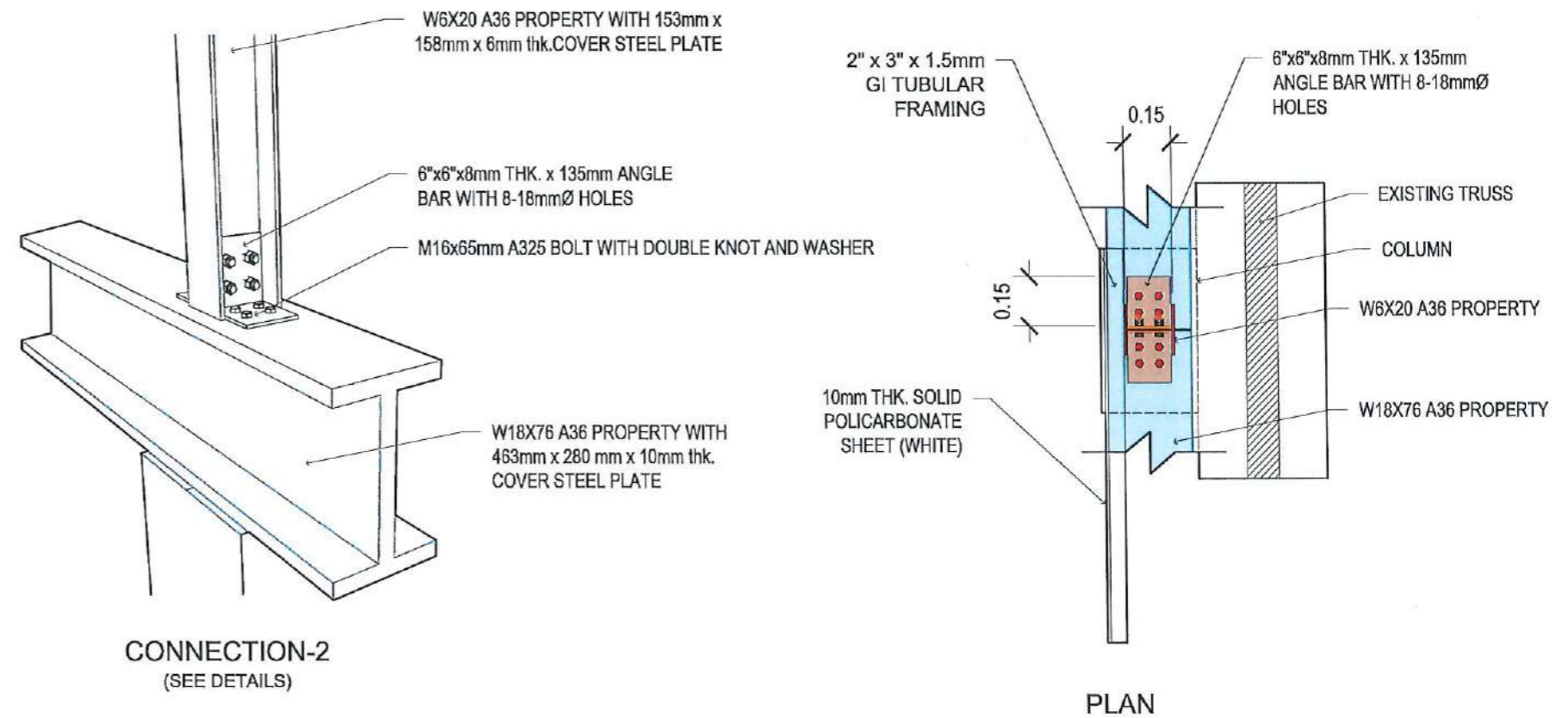
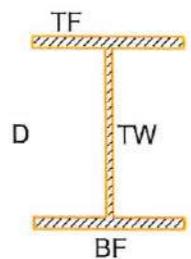


SCHEDULE OF STEEL COLUMN

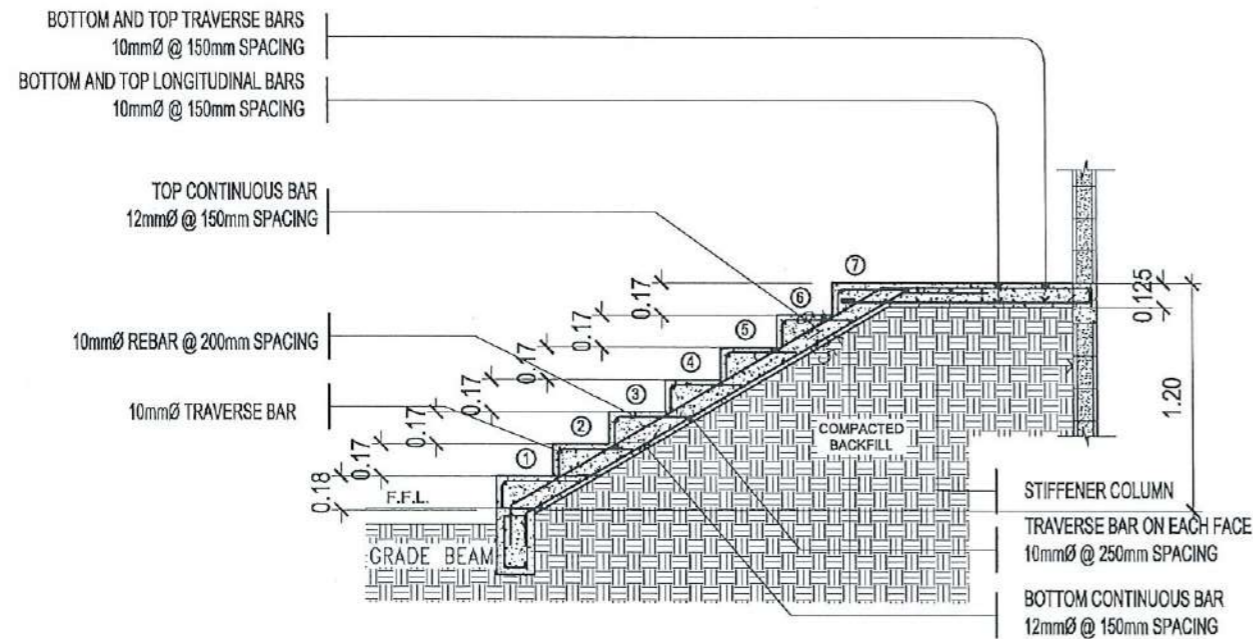
SCALE: NTS.

W12X72 A36 PROPERTY

Sx= 1,597x10³mm³
 D= 311.20mm
 BF= 305.80mm
 TF= 17.00mm
 TW= 10.90mm

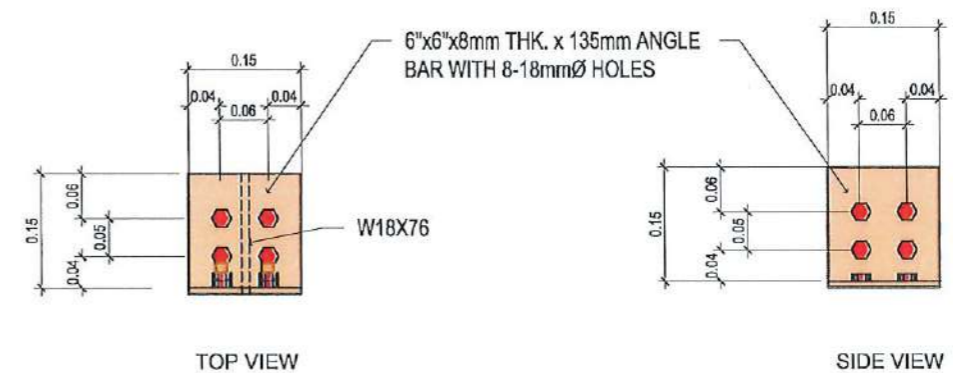


CONNECTION-2
(SEE DETAILS)



DETAIL OF STAIR (@ STAGE)

SCALE: 1:40M



CONNECTION-2 DETAIL

SCALE: 1:20M



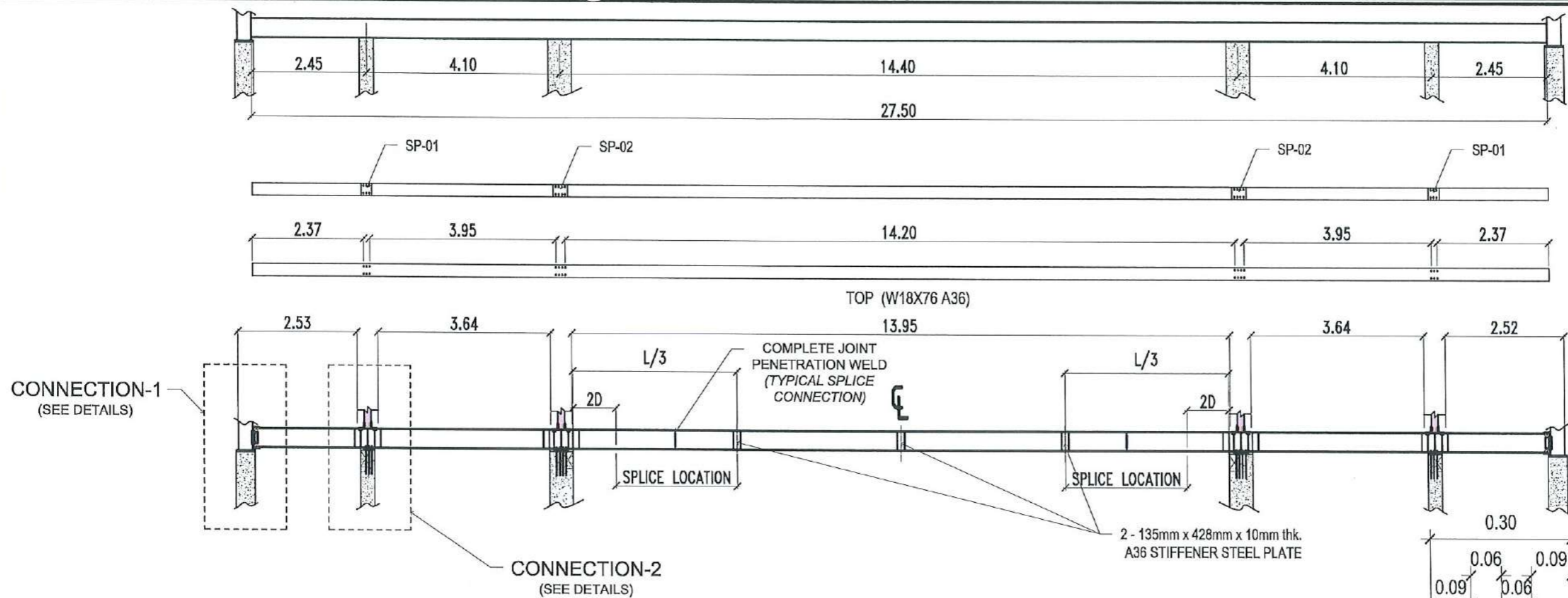
PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
 PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

CIVIL ENGINEER: ENGR. JOHN DANIEL I. UMALI

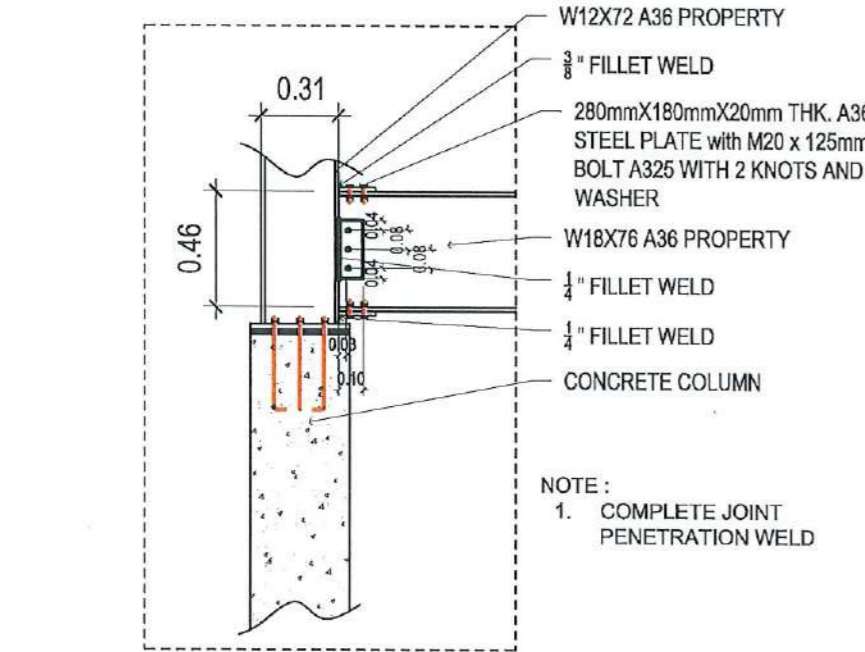
PRC NO : 0179300 VALIDITY: 12/17/2024
 PTR NO : 5632903 DATE ISSUED: 01/16/2024
 ISSUED AT : PAMPANGA TIN : 392-651-272

OWNER: DR. ARNOLD E. VELASCO
 PRESIDENT

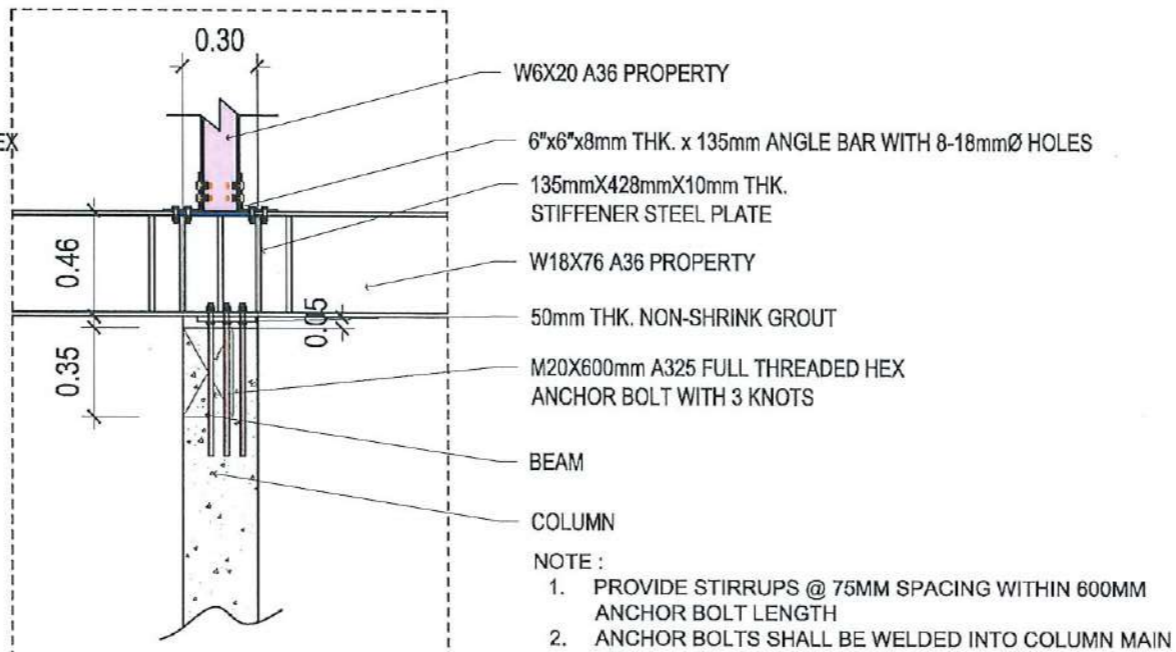
SHEET CONTENTS: AS SHOWN
 DATE: MARCH 2024
 SHEET NO: S-10
 PAGE NO: 39/65



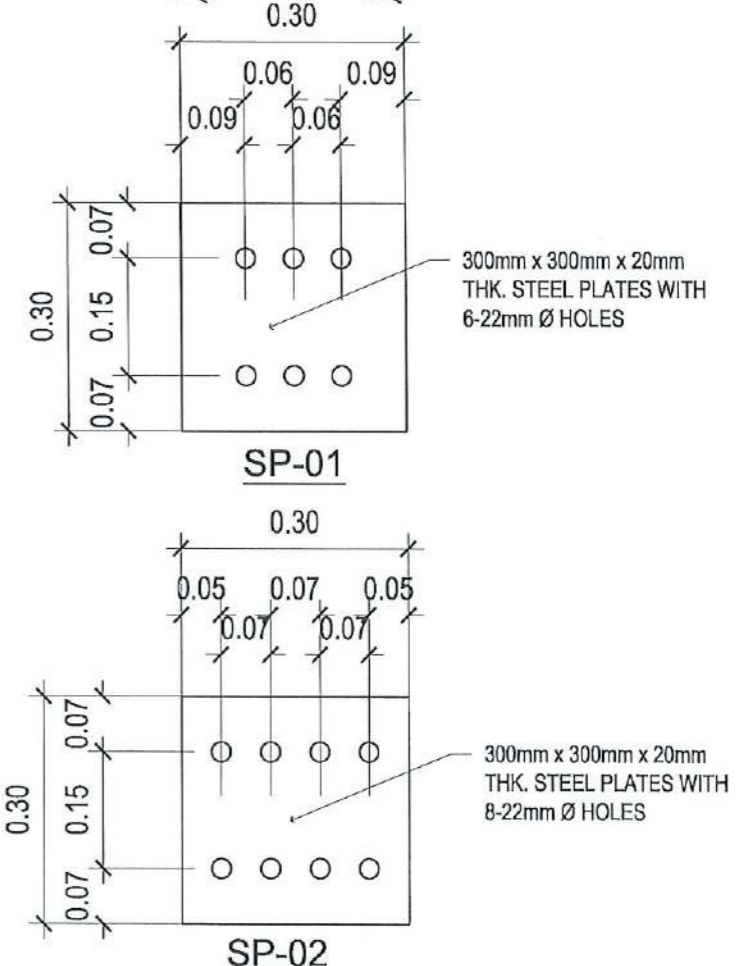
- NOTE:
1. PROVIDE STIRRUPS @ 75MM SPACING WITHIN 600MM ANCHOR BOLT LENGTH
 2. ANCHOR BOLTS SHALL BE WELDED INTO COLUMN MAIN BARS
 3. ALL STEEL TO STEEL CONNECTION SHALL HAVE COMPLETE JOINT PENETRATION WELD ASIDE FROM BOLT CONNECTION



CONNECTION-1 DETAIL
SCALE: 1:30M



CONNECTION-2 DETAIL
SCALE: 1:30M



STEEL PLATE DETAIL
SCALE: 1:10M



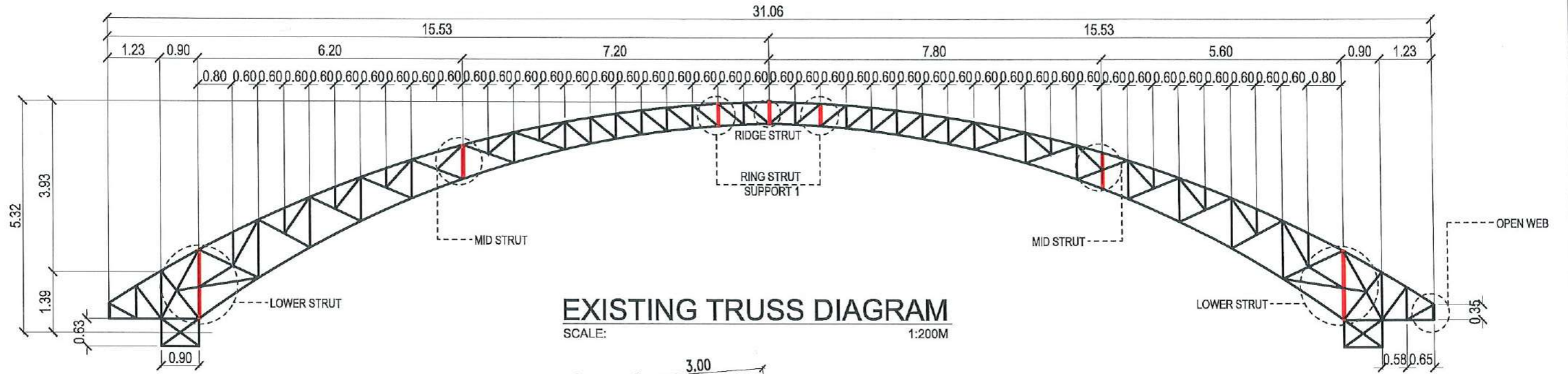
PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

CIVIL ENGINEER: ENGR. JOHN DANIEL I. UMALI

PRC NO: 0179300 VALIDITY: 12/17/2024
PTR NO: 5632903 DATE ISSUED: 01/16/2024
ISSUED AT: PAMPANGA TIN: 392-651-272

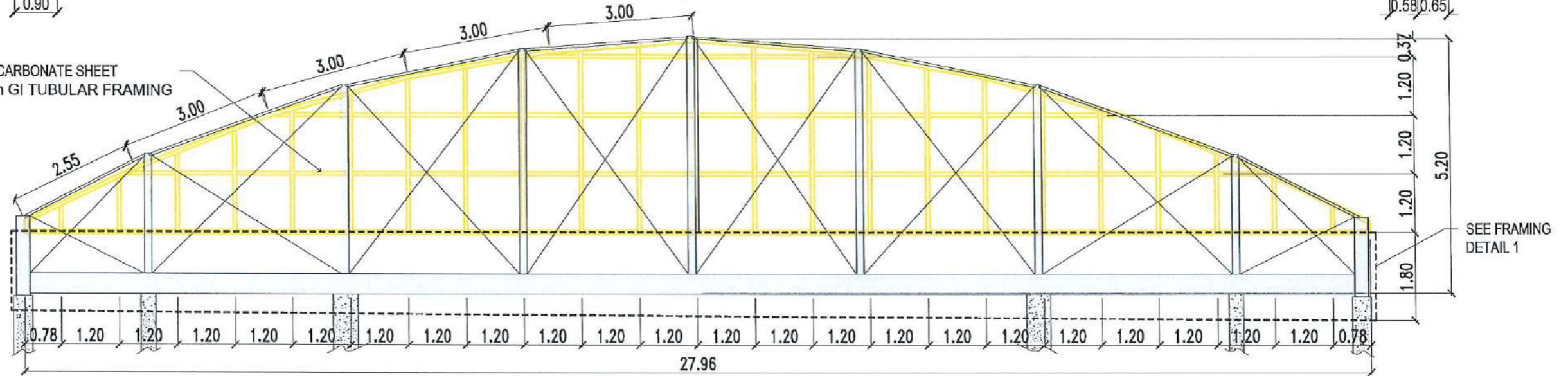
OWNER: DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS: AS SHOWN
DATE: MARCH 2024
SHEET NO: S-11
PAGE NO: 40/65

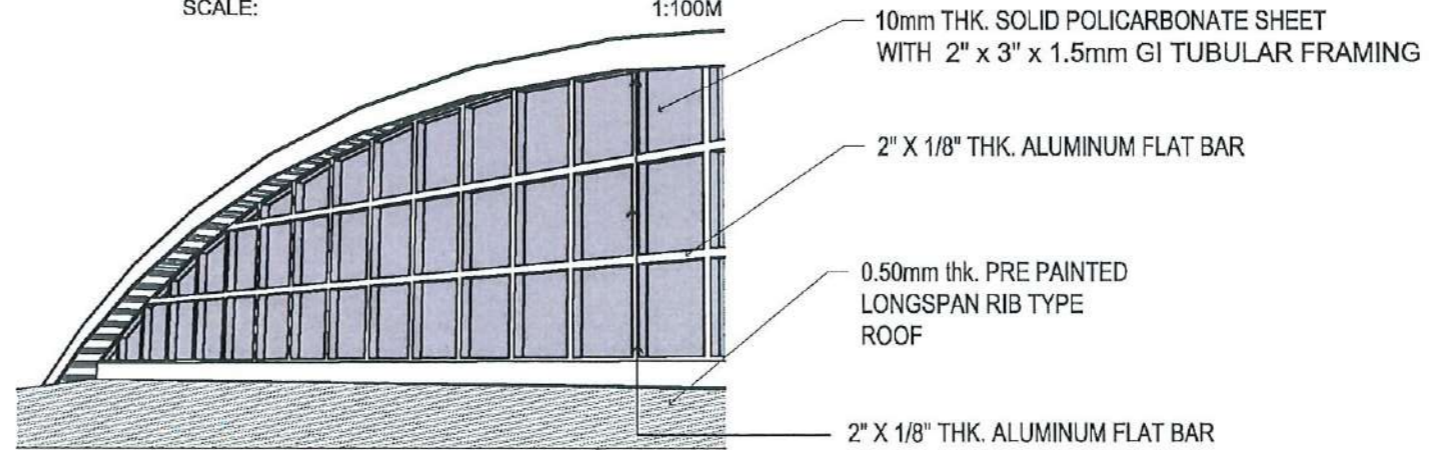


EXISTING TRUSS DIAGRAM
SCALE: 1:200M

10mm THK. SOLID POLICARBONATE SHEET
WITH 2" x 3" x 1.5mm GI TUBULAR FRAMING



ARC FRAMING DETAIL
SCALE: 1:100M



ARC DETAIL
SCALE: NTS.



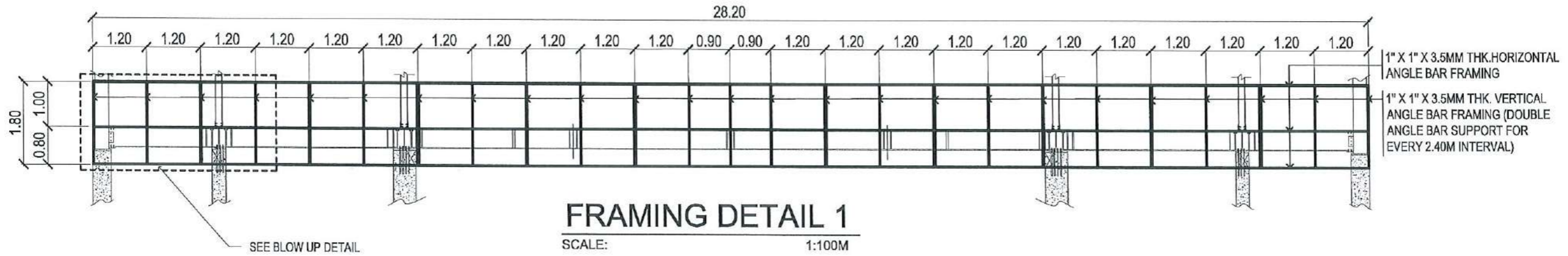
PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

CIVIL ENGINEER: *Udji*
ENGR. JOHN DANIEL I. UMALI

PRC NO: 0179300 VALIDITY: 12/17/2024
PTR NO: 5632903 DATE ISSUED: 01/16/2024
ISSUED AT: PAMPANGA TIN: 392-651-272

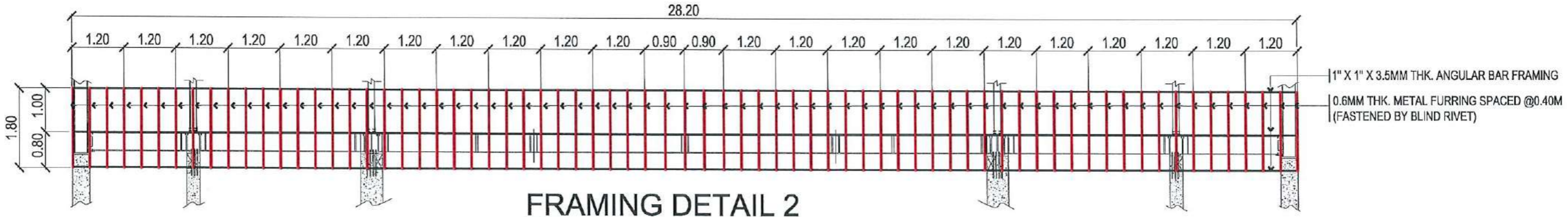
OWNER: DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS: AS SHOWN
DATE: MARCH 2024
SHEET NO: S-12
PAGE NO: 41/65



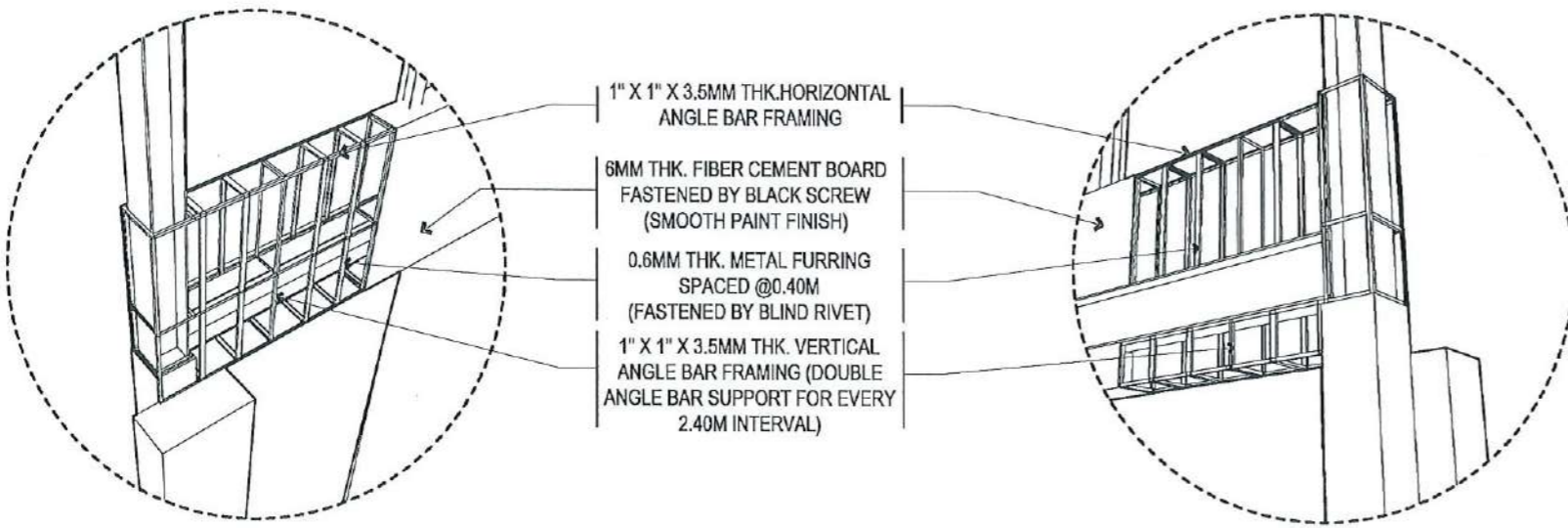
FRAMING DETAIL 1

SCALE: 1:100M



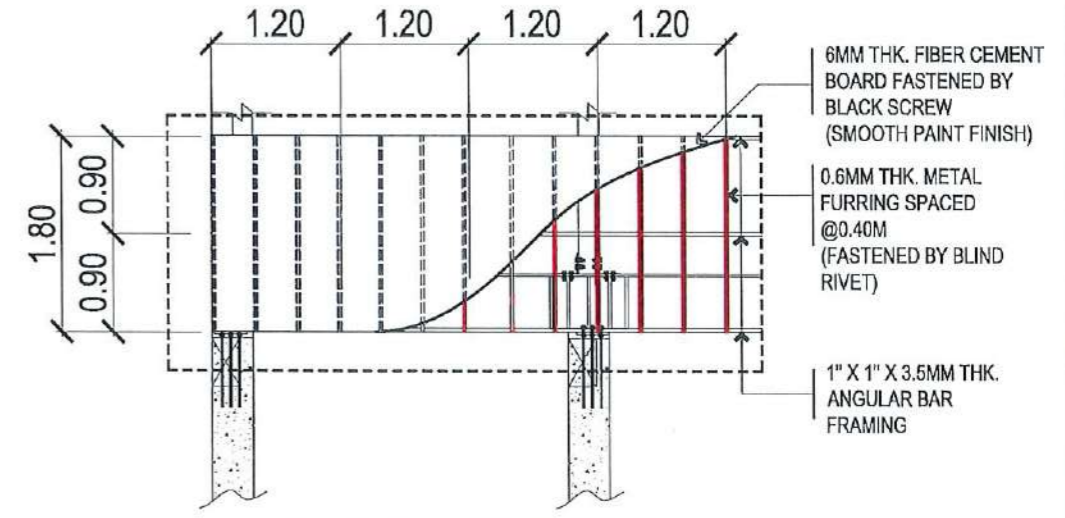
FRAMING DETAIL 2

SCALE: 1:100M



FRAMING ISOMETRIC DETAIL

SCALE: NTS



BLOW UP DETAIL

SCALE: 1:70M



PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

CIVIL ENGINEER:
U. Umali
ENGR. JOHN DANIEL I. UMALI

PRC NO : 0179300
PTR NO : 5632903
ISSUED AT : PAMPANGA

VALIDITY: 12/17/2024
DATE ISSUED: 01/16/2024
TIN : 392-651-272

OWNER:
Dr. Arnold E. Velasco
DR. ARNOLD E. VELASCO
PRESIDENT

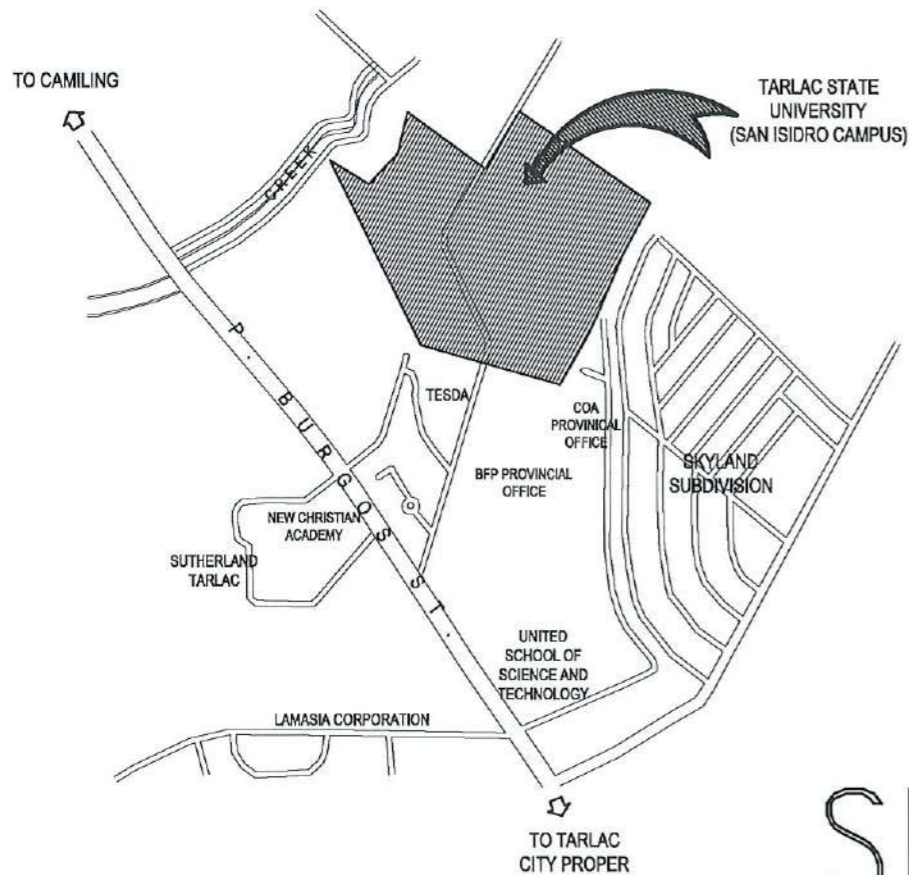
SHEET CONTENTS:
AS SHOWN

DATE: MARCH 2024

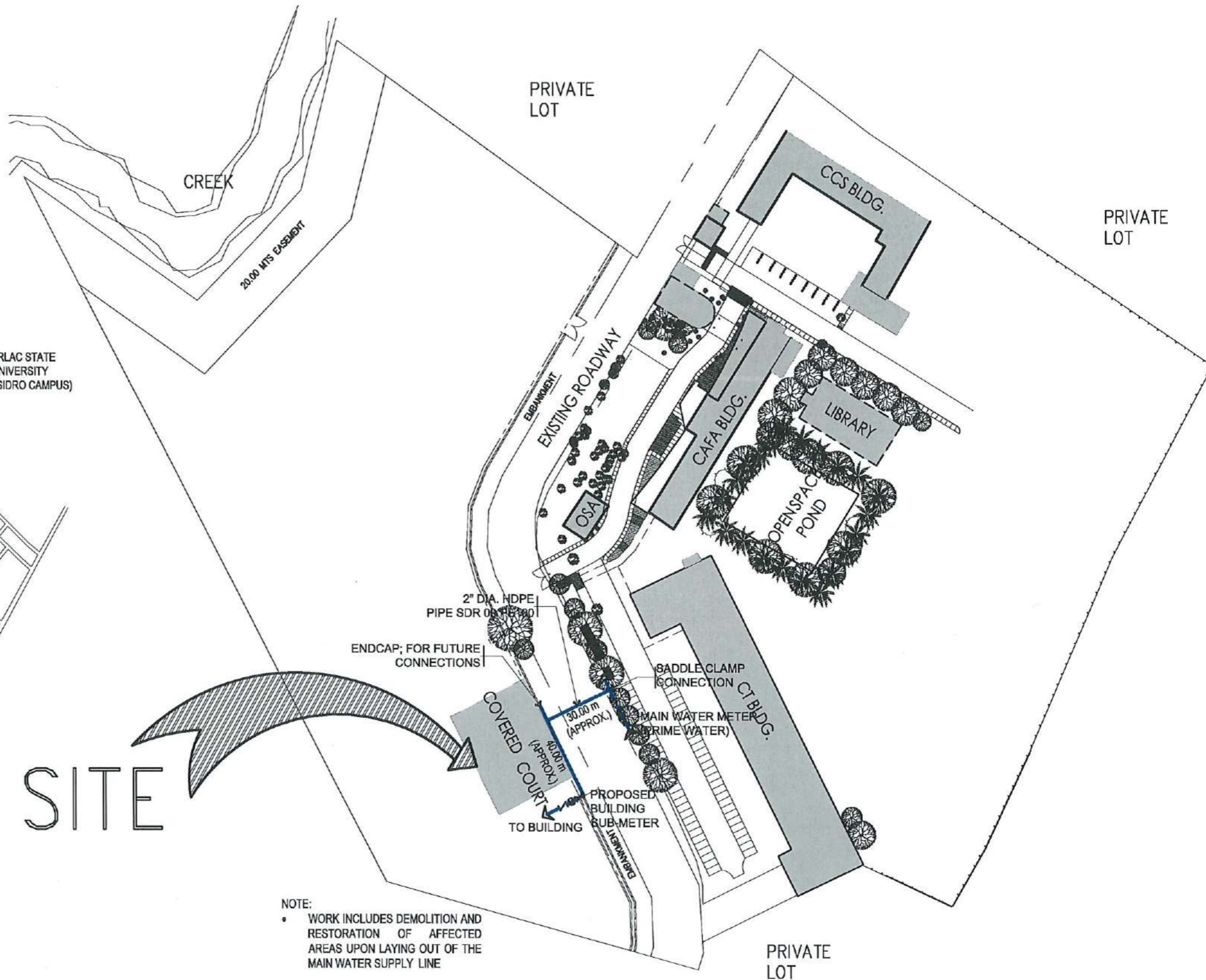
SHEET NO:
S-13
PAGE NO:
42/65



TO CAMILING



VICINITY MAP
SCALE: NTS.



SITE

- NOTE:
- WORK INCLUDES DEMOLITION AND RESTORATION OF AFFECTED AREAS UPON LAYING OUT OF THE MAIN WATER SUPPLY LINE

SITE DEVELOPMENT PLAN (SAN ISIDRO CAMPUS)
SCALE: NTS



TARLAC STATE UNIVERSITY
Facilities Development and Management Office
Remacle Boulevard, Tarlac City, Philippines 2300

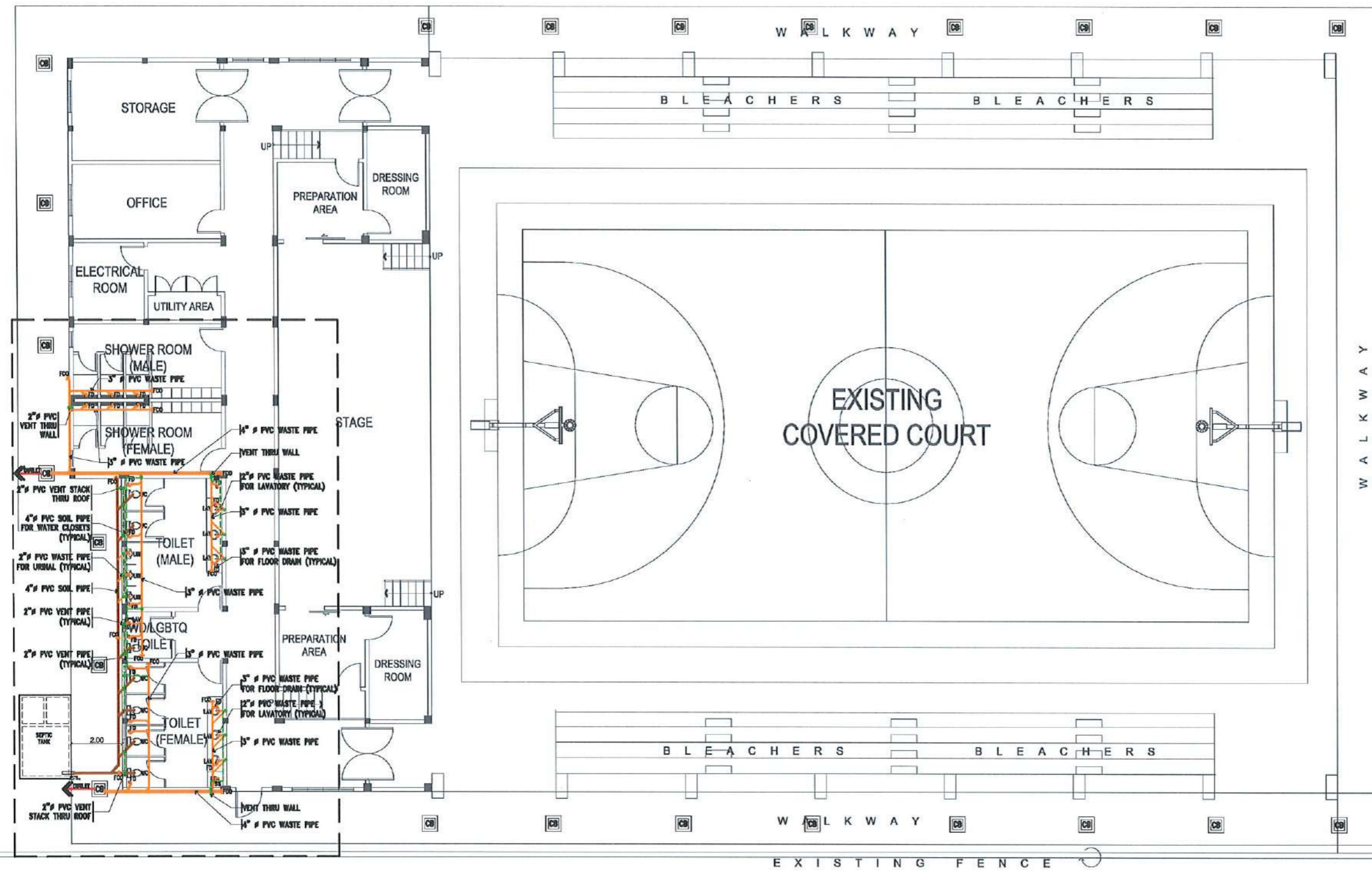
PROJECT TITLE:	REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION:	SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

MASTER PLUMBER:
[Signature]
AR: REX-B. BICAT JR.

PRC NO : 0009199	VALIDITY: 11/23/2025
PTR NO : 1959426 P	DATE ISSUED: 01/08/2024
ISSUED AT : PGT TARLAC CITY	TIN : 469-786-926-000

OWNER:
[Signature]
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:	SHEET NO:
AS SHOWN	P-01
DATE: MARCH 2024	PAGE NO:
	43/65



GROUND FLOOR SANITARY LINE LAYOUT

SCALE:

1:175M



TARLAC STATE UNIVERSITY
 Facilities Development and
 Management Office
 Romulo Boulevard, Tarlac City, Philippines 2100

PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

MASTER PLUMBER:

AR. REX B. SICAT JR.

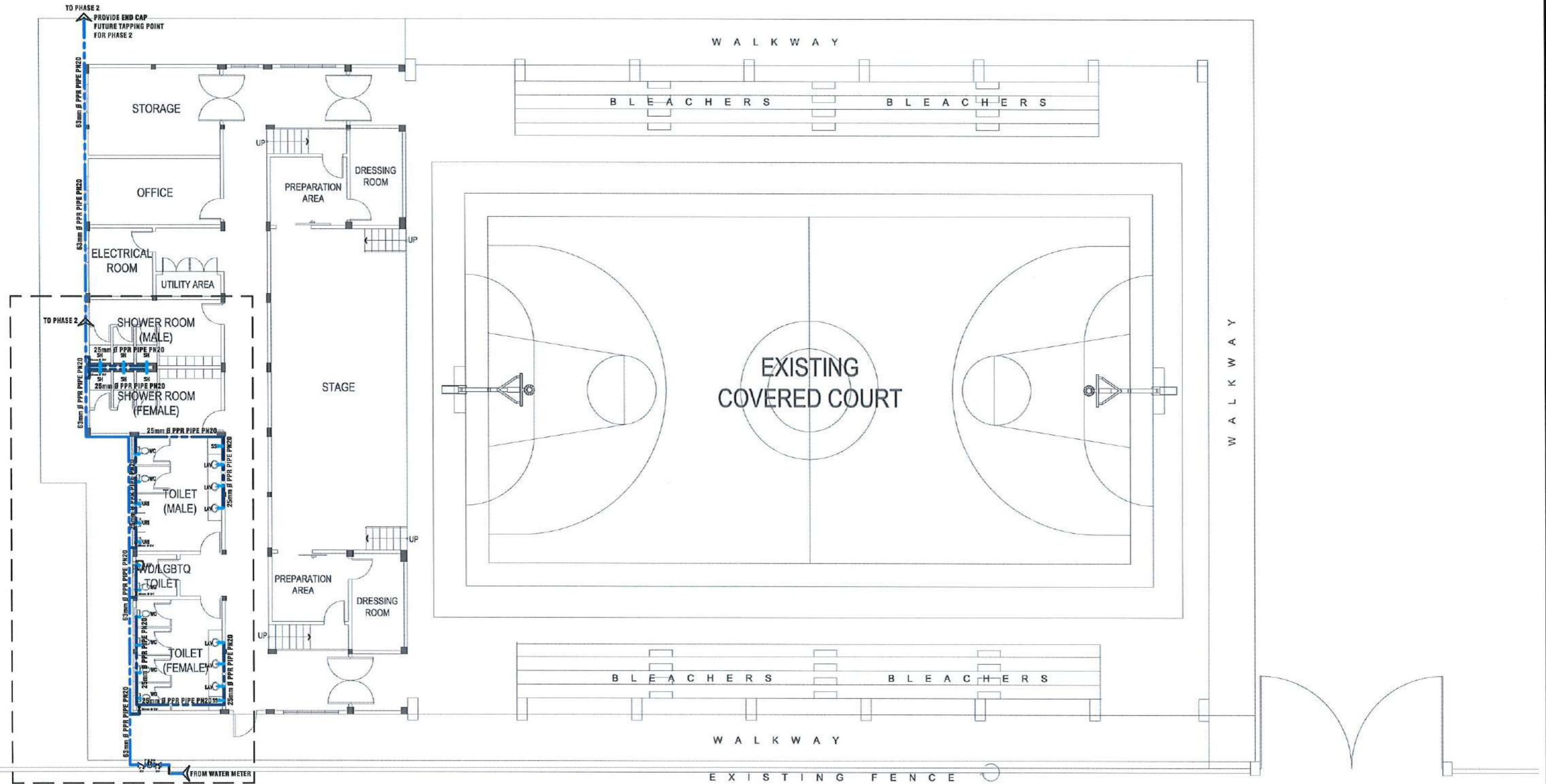
PRC NO: 0009199 VALIDITY: 11/23/2025
 PTR NO: 1859426 P DATE ISSUED: 01/08/2024
 ISSUED AT: PGT TARLAC CITY TIN: 469-786-926-000

OWNER:

DR. ARNOLD E. VELASCO
 PRESIDENT

SHEET CONTENTS:
AS SHOWN
 DATE: MARCH 2024

SHEET NO:
P-02
 PAGE NO:
44/65



- NOTE:
- ALL FIXTURE SUPPLY PIPES WILL BE 20MM Ø PPR PIPE PN20.
 - PROVIDE 300MM HIGH 25MM Ø PPR PIPE PN20 AIR CHAMBER WITH END CAP FOR EVERY LAVATORY, KITCHEN SINK, AND HOSE BIBBS.

GROUND FLOOR WATER LINE LAYOUT

SCALE:

1:175M



PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

MASTER PLUMBER:
AR. REX B. SICAT JR.

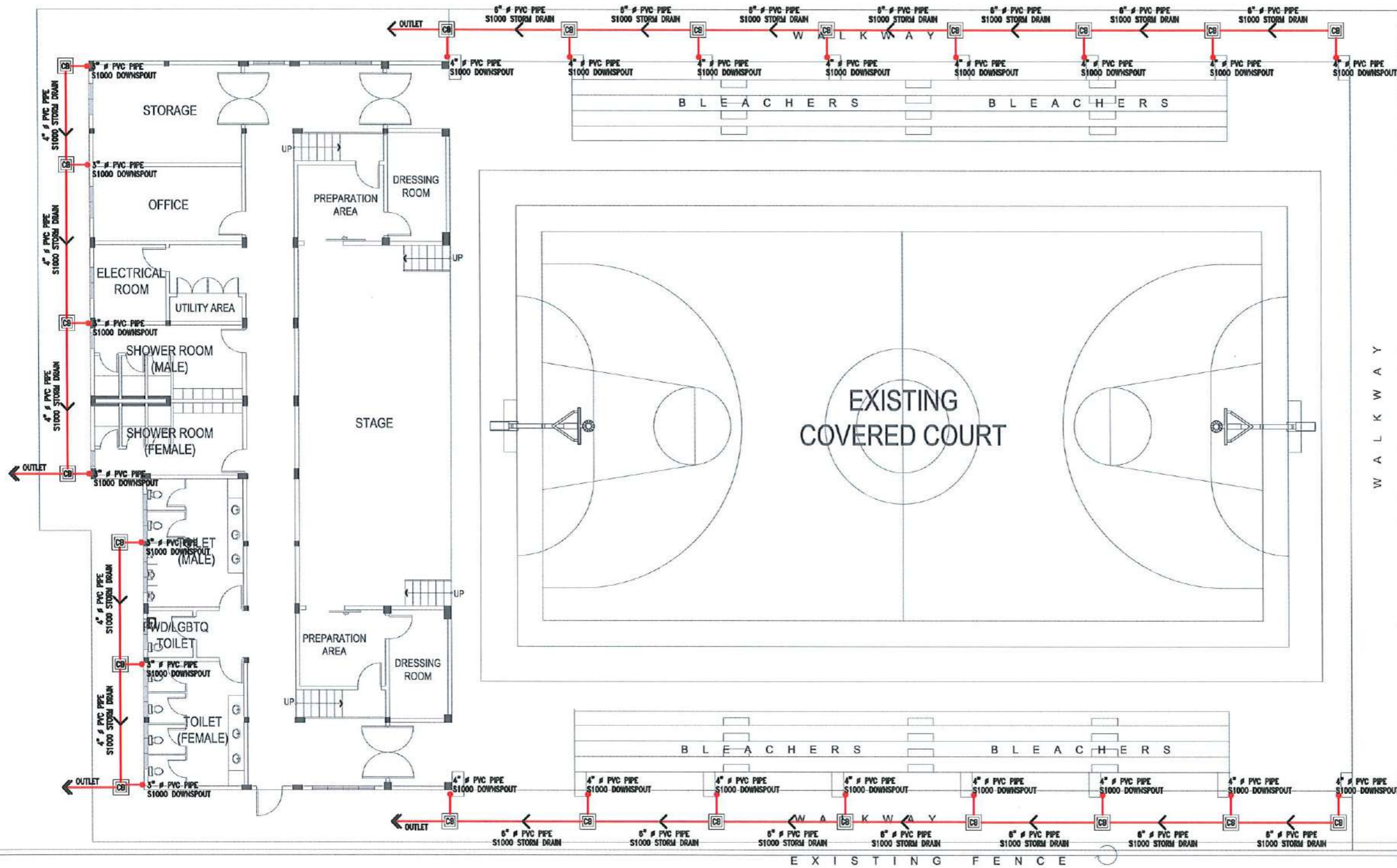
PRC NO : 0009199 VALIDITY: 11/23/2025
 PTR NO : 1959426 P DATE ISSUED: 01/08/2024
 ISSUED AT : PGT TARLAC CITY TIN : 469-786-926-000

OWNER:
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN

DATE: MARCH 2024

SHEET NO:
P-03
PAGE NO:
45/65



GROUND FLOOR STORM DRAIN LAYOUT

SCALE:

1:175M



TARLAC STATE UNIVERSITY
Facilities Development and Management Office
Romulo Soliverd, Tarlac City, Philippines 2100

PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

MASTER PLUMBER:
[Signature]
MR. REX B. BICAT JR.

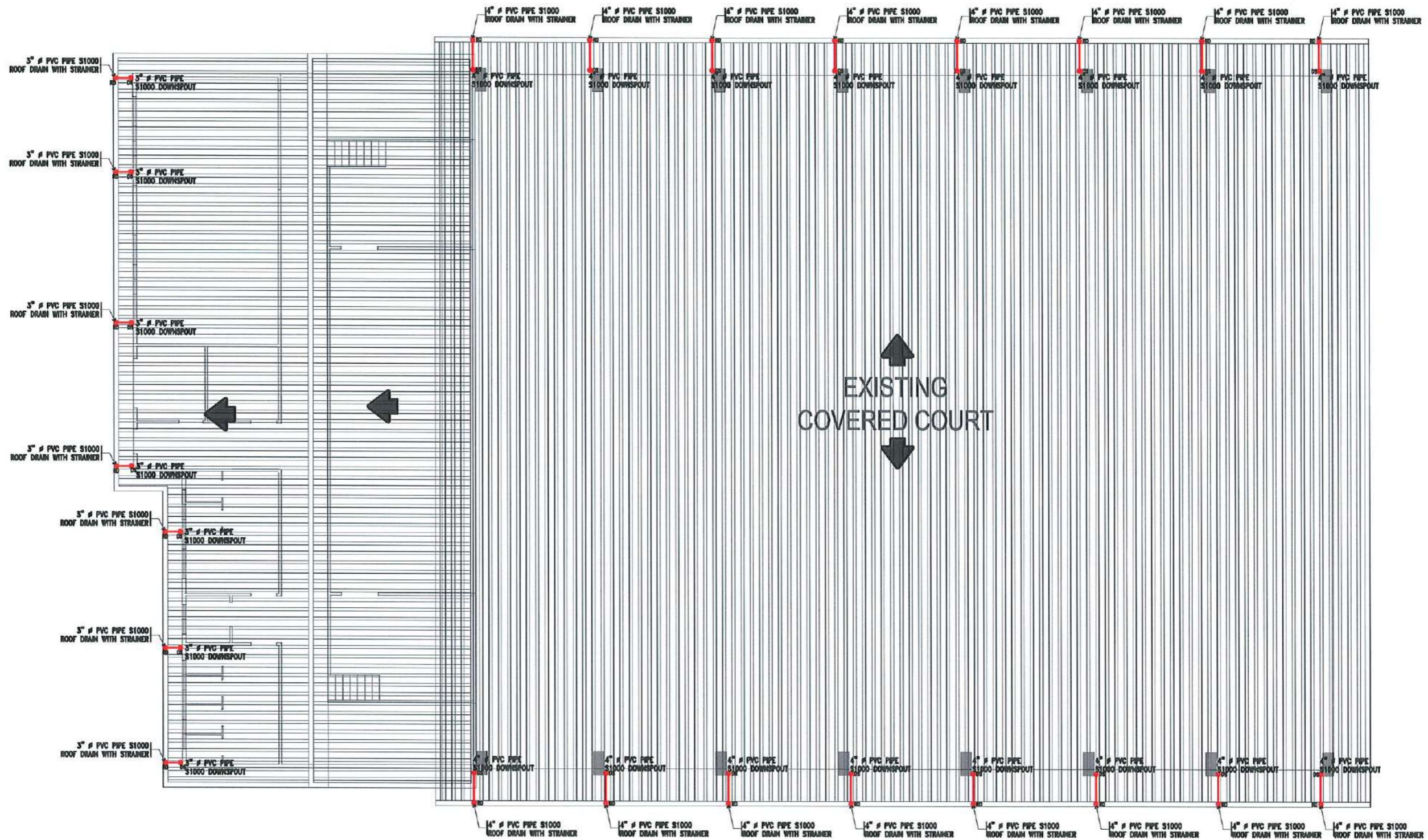
PRC NO : 0009199 VALIDITY: 11/23/2025
PTR NO : 1959426 P DATE ISSUED: 01/08/2024
ISSUED AT : PGT TARLAC CITY TIN : 469-786-926-000

OWNER:
[Signature]
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN

DATE: MARCH 2024

SHEET NO:
P-04
PAGE NO:
46/65



ROOF STORM DRAIN LAYOUT

SCALE:

1:175M



PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

MASTER PLUMBER:
[Signature]
AR. REX B. SIGAT JR.

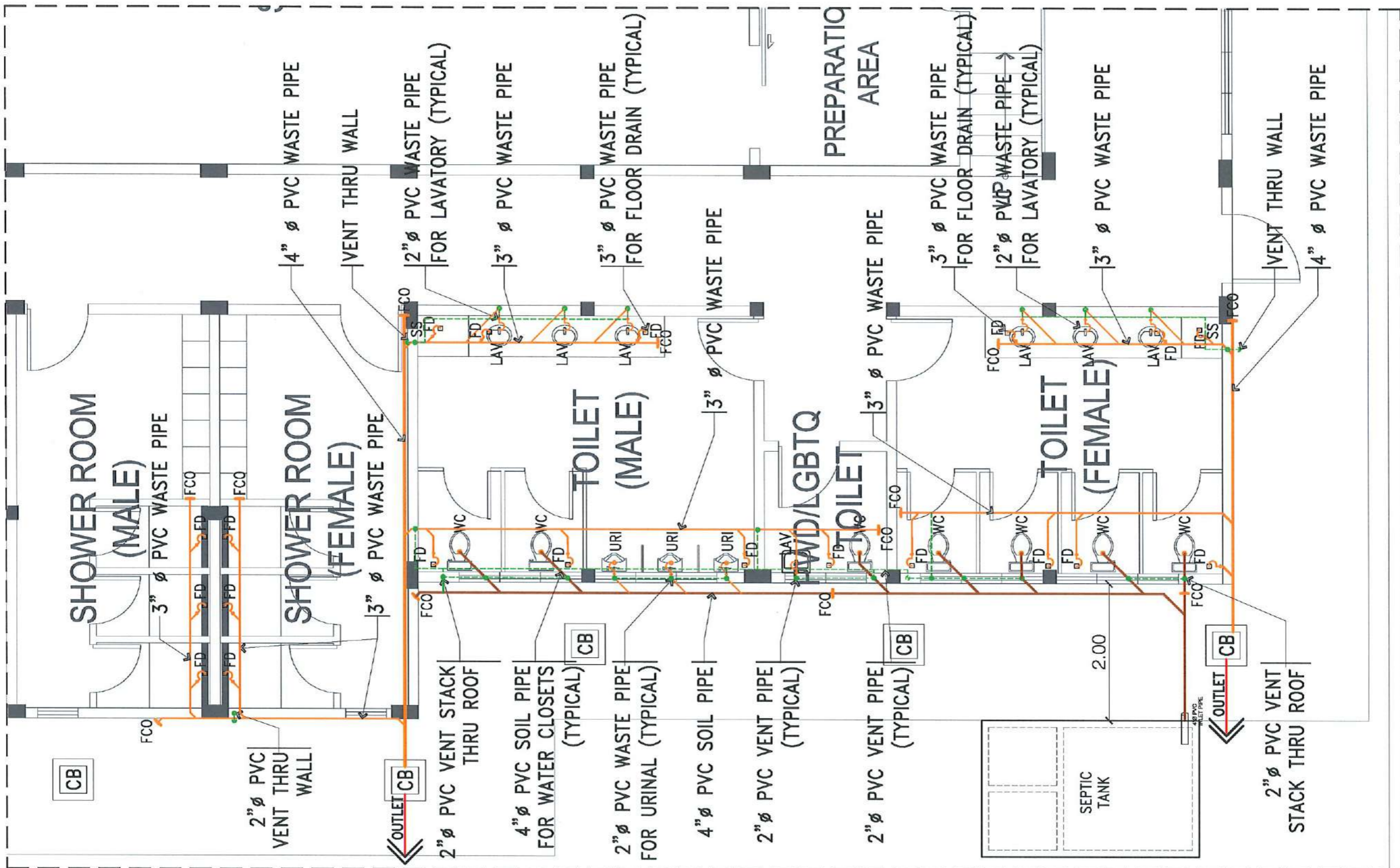
PRC NO : 0009199
PTR NO : 1959426 P
ISSUED AT : PGT TARLAC CITY

VALIDITY: 11/23/2025
DATE ISSUED: 01/08/2024
TIN : 469-786-926-000

OWNER:
[Signature]
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN
DATE: MARCH 2024

SHEET NO:
P-05
PAGE NO:
47/65



BLOW-UP GROUND FLOOR SANITARY LINE

SCALE: 1:60M



PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
 PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

MASTER PLUMBER: *[Signature]*
 MR. REX B. SICAT JR.

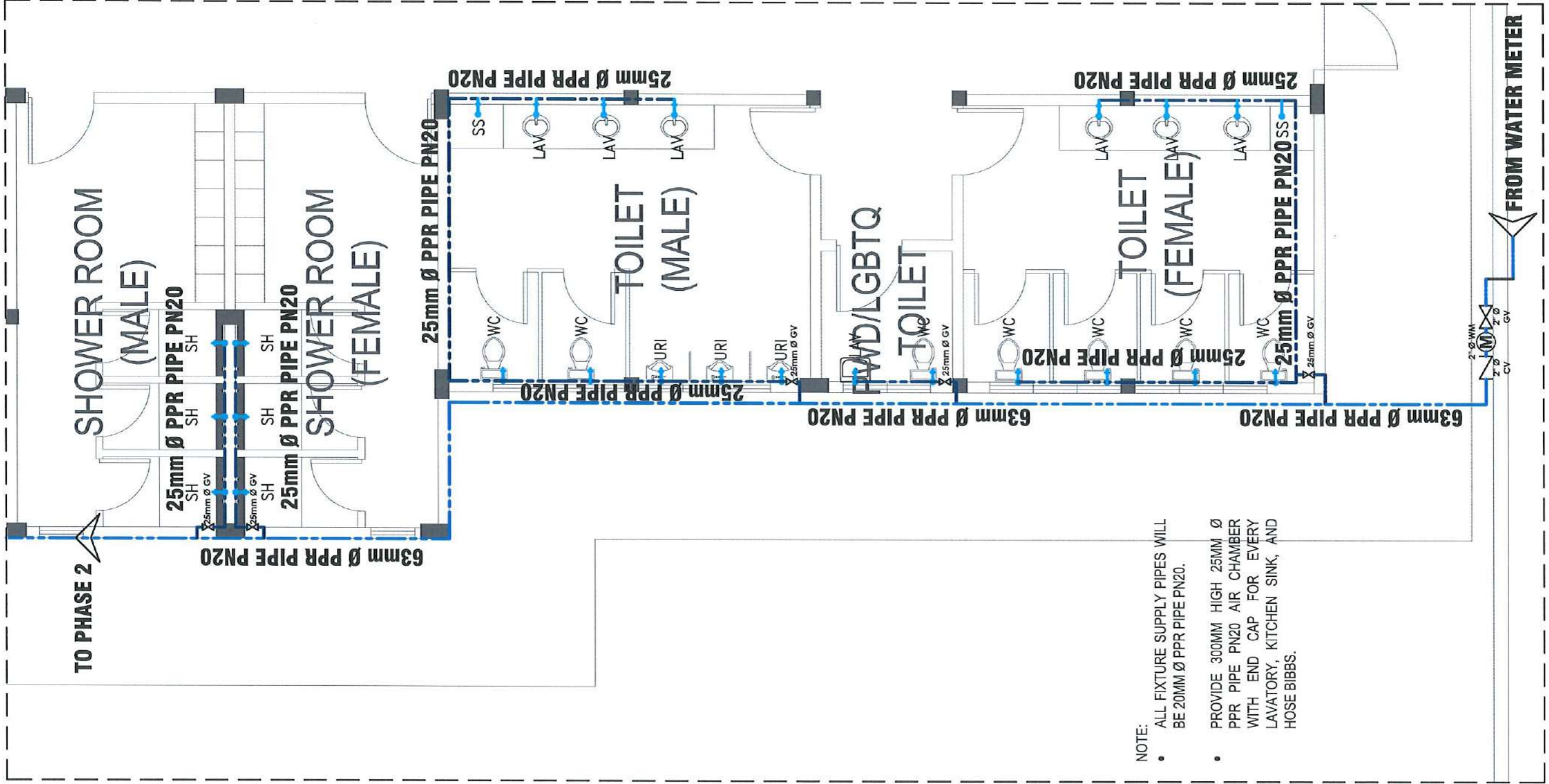
PRC NO: 0009199
 PTR NO: 1959426 P
 ISSUED AT: PGT TARLAC CITY

VALIDITY: 11/23/2025
 DATE ISSUED: 01/08/2024
 TIN: 469-786-926-000

OWNER: DR. ARNOLD E. VELASCO
 PRESIDENT

SHEET CONTENTS: AS SHOWN
 DATE: MARCH 2024

SHEET NO: P-06
 PAGE NO: 48/65



- NOTE:
- ALL FIXTURE SUPPLY PIPES WILL BE 20MM Ø PPR PIPE PN20.
 - PROVIDE 300MM HIGH 25MM Ø PPR PIPE PN20 AIR CHAMBER WITH END CAP FOR EVERY LAVATORY, KITCHEN SINK, AND HOSE BIBBS.

BLOW-UP GROUND FLOOR WATER LINE

SCALE: 1:60M



PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

MASTER PLUMBER:
[Signature]
AR/ REX B. SICAT JR.

PRC NO : 0009199 VALIDITY: 11/23/2025

PTR NO : 1959426 P DATE ISSUED: 01/08/2024

ISSUED AT : PGT TARLAC CITY TIN : 469-786-926-000

OWNER:
[Signature]
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN

DATE: MARCH 2024

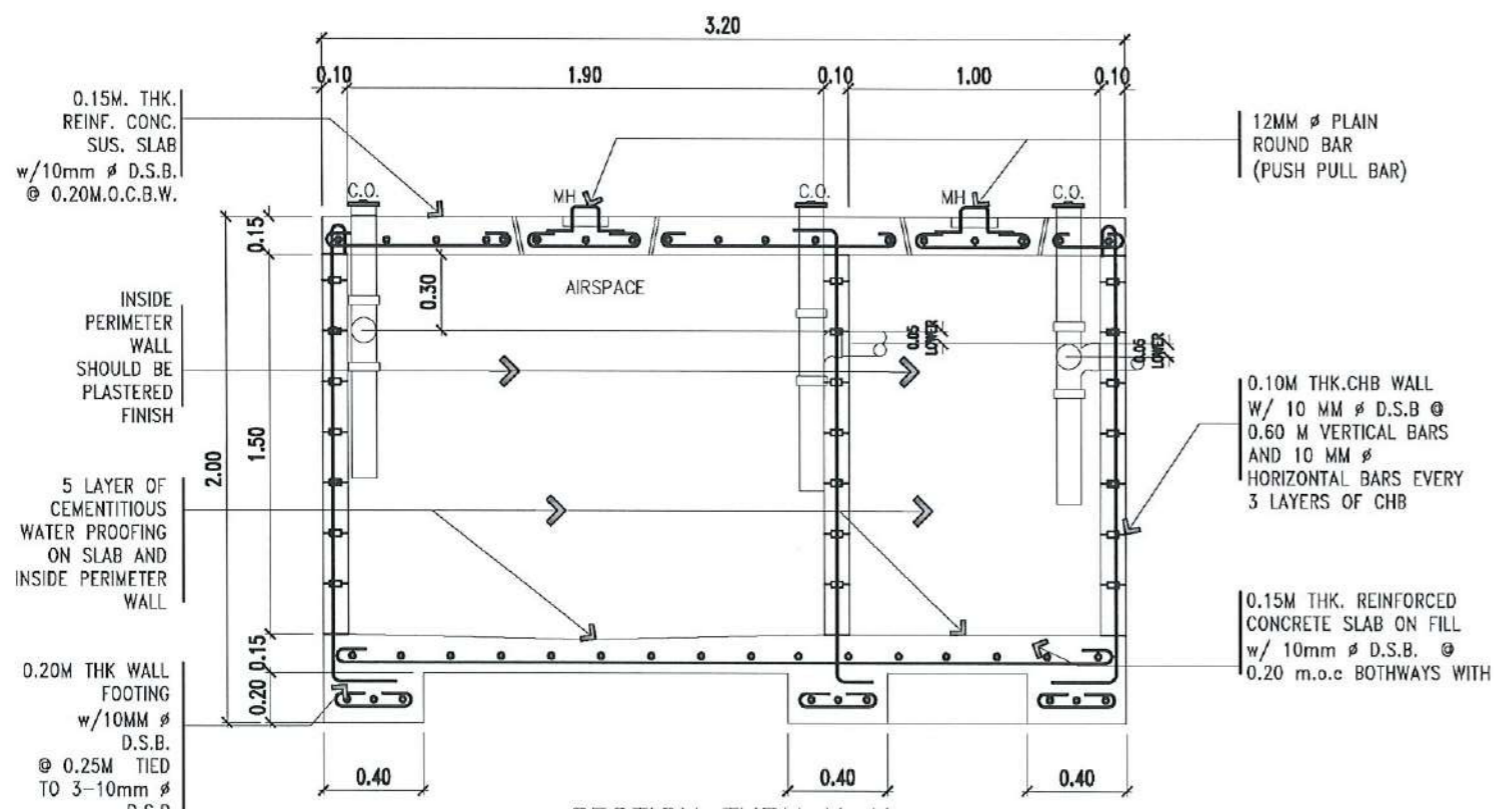
SHEET NO:
P-07
PAGE NO:
49/65



PLAN

LEGENDS

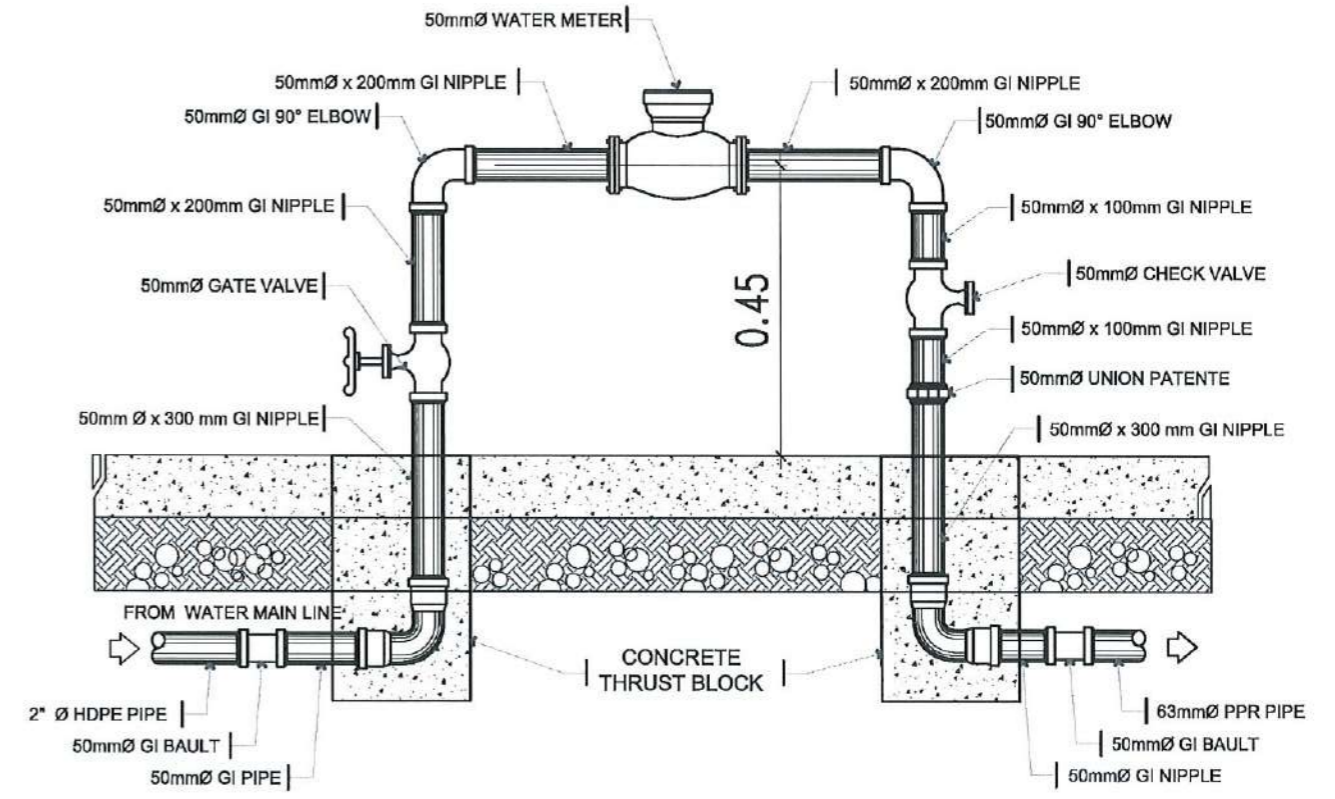
WC	WATER CLOSET	4" Ø PVC (SOIL PIPE)
LAV	LAVATORY	4" Ø PVC ORANGE (WASTE PIPE)
FD	FLOOR DRAIN	3" Ø PVC ORANGE (WASTE PIPE)
RD	ROOF DRAIN	2" Ø PVC ORANGE (VENT PIPE)
SS	SLOP SINK	PPR PIPE WATER LINE
FCO	FLOOR CLEANOUT	PVC ORANGE (STORM DRAIN PIPE)
DS	DOWNSPOUT	
VSTR	VENT STACK THRU ROOF	
WM	WATER METER	
CV	CHECK VALVE	
VS	VENT STACK	
	URI	URINAL
	SV	SEPTIC VAULT
	CB	CATCH BASIN
	GV	GATE VALVE



SECTION THRU X-X

SEPTIC TANK DETAIL

SCALE 1:30 M.



WATER METER DETAIL

SCALE NTS



PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
 PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

MASTER PLUMBER: AR. REX B. SICAT JR.

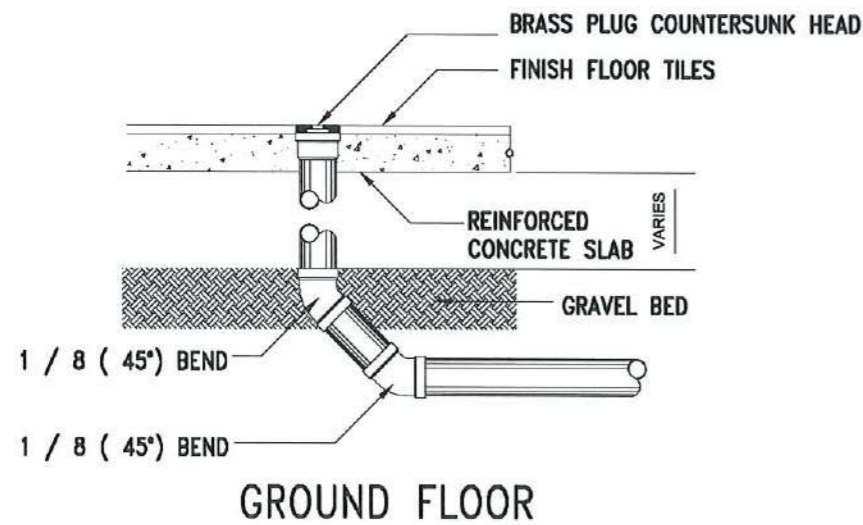
PRC NO: 0008199
 PTR NO: 1959426 P
 ISSUED AT: PGT TARLAC CITY

VALIDITY: 11/23/2025
 DATE ISSUED: 01/08/2024
 TIN: 469-786-926-000
 OWNER: DR. ARNOLD E. VELASCO, PRESIDENT

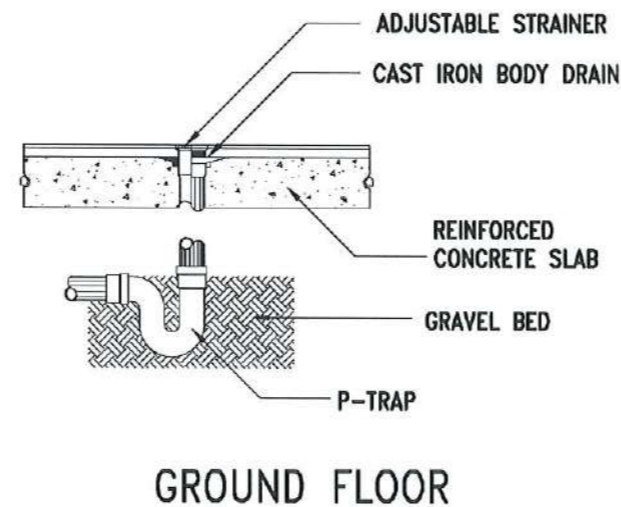
SHEET CONTENTS: AS SHOWN
 DATE: MARCH 2024
 SHEET NO: P-08
 PAGE NO: 50/65

GENERAL NOTES

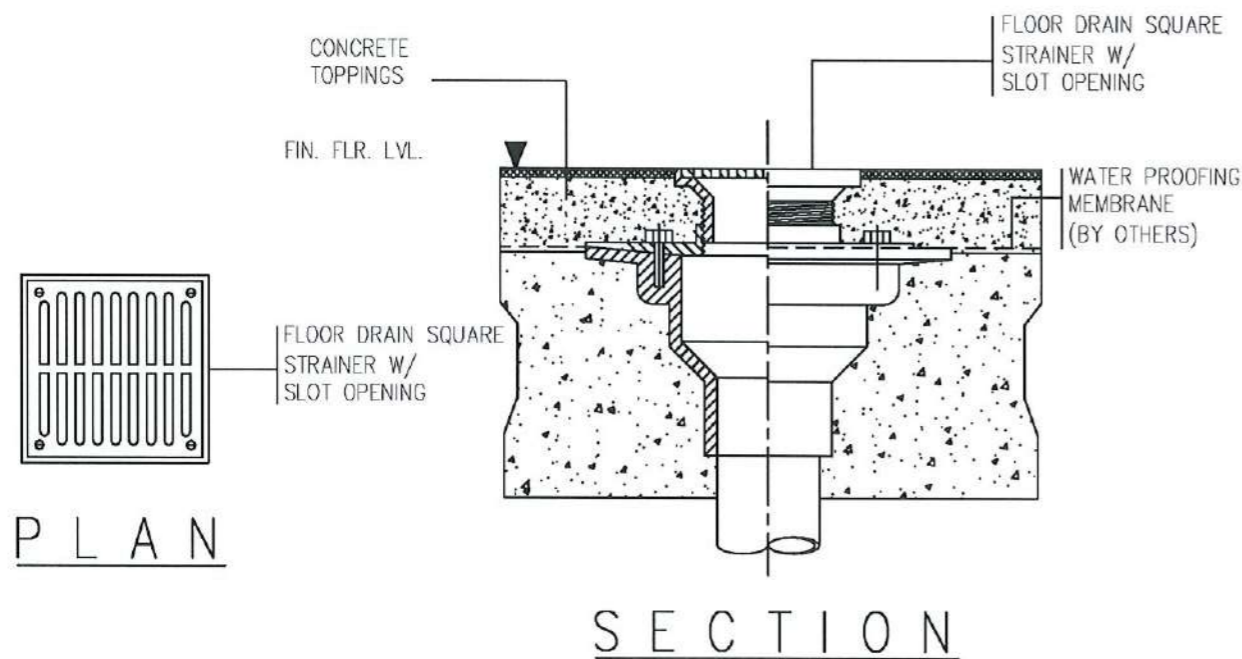
- GRADE OF THE HORIZONTAL PIPING:**
RUN ALL HORIZONTAL PIPING IN PERFECT ALIGNMENT AT THE UNIFORM GRADE OF NOT LESS THAN (2%).
- CHANGES IN DIRECTION:**
ALL CHANGES IN DIRECTION SHALL BE MADE BY THE APPROPRIATE USE OF 45° WYE, LONG SWEEP QUATER BEND, SIXTH, EIGHT, OR SIXTEENTH BENDS, WHEN THE CHANGE OF FLOW IS FROM HORIZONTAL TO VERTICAL. A SINGLE 1/8 BEND COMBINATION MAY BE USED ON WASTE, LINES, TEES AND CROSSES MAY BE USED ON VENT PIPES.
- PROHIBITED FITTINGS:**
NO DOUBLE TEE BRANCHES SHALL BE USED ON HORIZONTAL SOIL OR WASTE LINES, DRILLING & TRAPPINGS OF HOUSE DRAINS, WASTE OR VENT PIPES AND USE OF SADDLE HUB AND BENDS ARE PROHIBITED.
- SLEEVES:**
PROVIDE THE PIPE SLEEVES AT WALLS, COLUMNS OR SLAB ON SIZED BIGGER THAN THE ACTUAL SIZE OF THE PIPE PASSING THROUGH WALLS OR UNDER SLABS TO PROTECT PIPES FROM BREAKAGE.
- PIPES CLEANOUTS:**
CLEANOUTS ARE REQUIRED EVERY CHANGE IN HORIZONTAL DIRECTION EXCEEDING TWENTY - TWO AND HALF DEGREES (22 1/2°).
- DEAD ENDS AVOIDED:**
IN THE INTALLATIONS OF PLUMING SYSTEM DEAD ENDS SHALL BE AVOIDED.
- ALL PLUMBING WORKS:**
ALL PLUMBING WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE NATIONAL PLUMBING CODE, REQUIREMENTS OF THE PLUMBING INSPECTION OFFICE AND PERTINENT PROVISIONS OF THE NATIONAL BUILDING CODE.



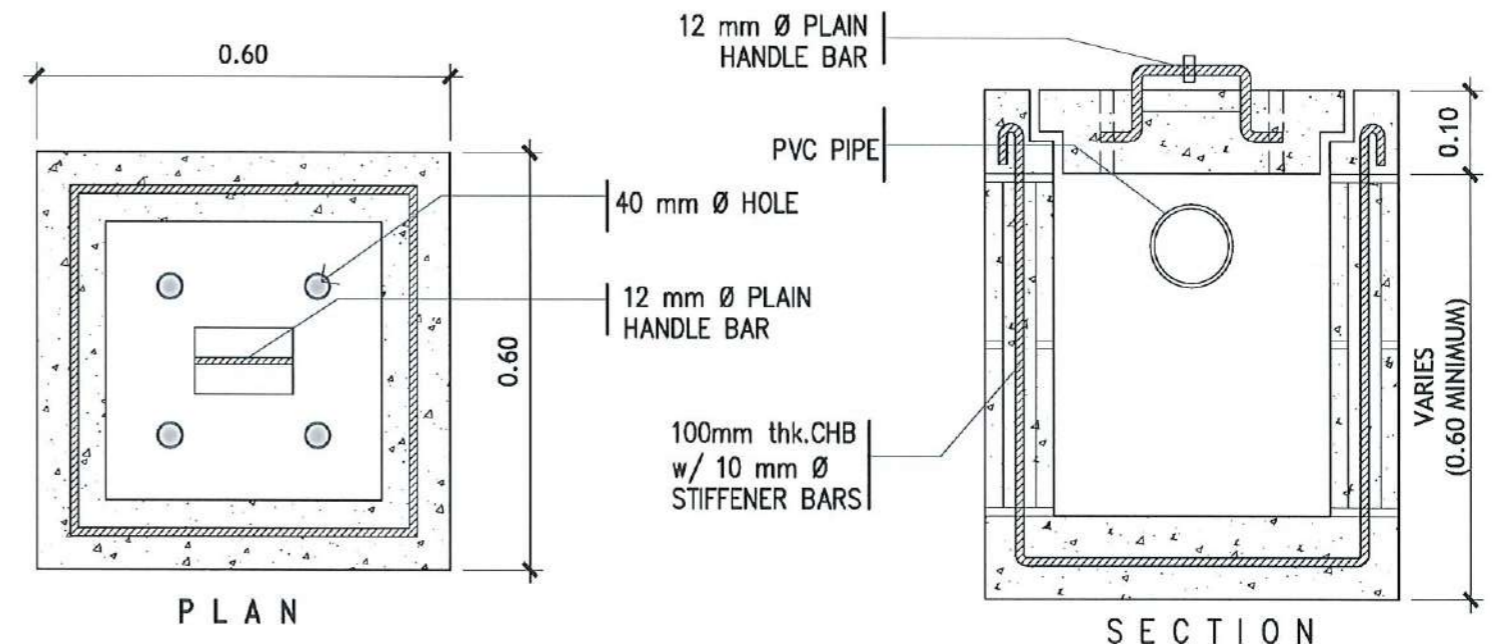
FLOOR CLEAN-OUT DETAIL
SCALE: NTS



FLOOR DRAIN DETAIL
SCALE: NTS



FLOOR DRAIN DETAIL
SCALE: NTS



CATCH BASIN DETAIL
SCALE: NTS



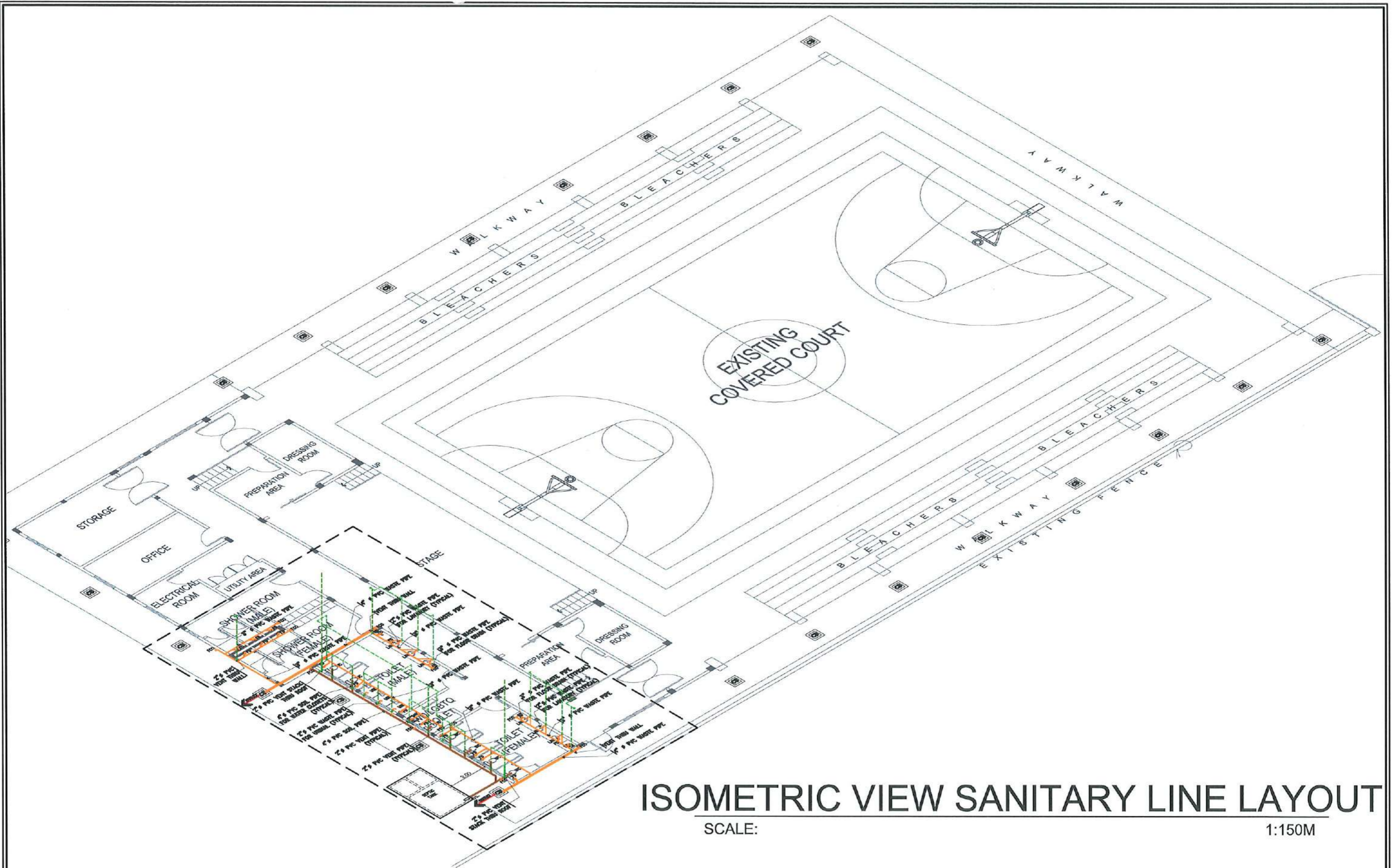
PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

MASTER PLUMBER: AR, REX B. SICAT JR.

PRC NO: 0009199
PTR NO: 1959426 P
ISSUED AT: PGT TARLAC CITY
VALIDITY: 11/23/2025
DATE ISSUED: 01/08/2024
TIN: 469-788-928-000

OWNER: DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS: AS SHOWN
DATE: MARCH 2024
SHEET NO: P-09
PAGE NO: 51/65



ISOMETRIC VIEW SANITARY LINE LAYOUT

SCALE:

1:150M



TARLAC STATE UNIVERSITY
Facilities Development and
Management Office
Remulo Boulevard, Tarlac City, Philippines 2100

PROJECT TITLE:	REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION:	SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

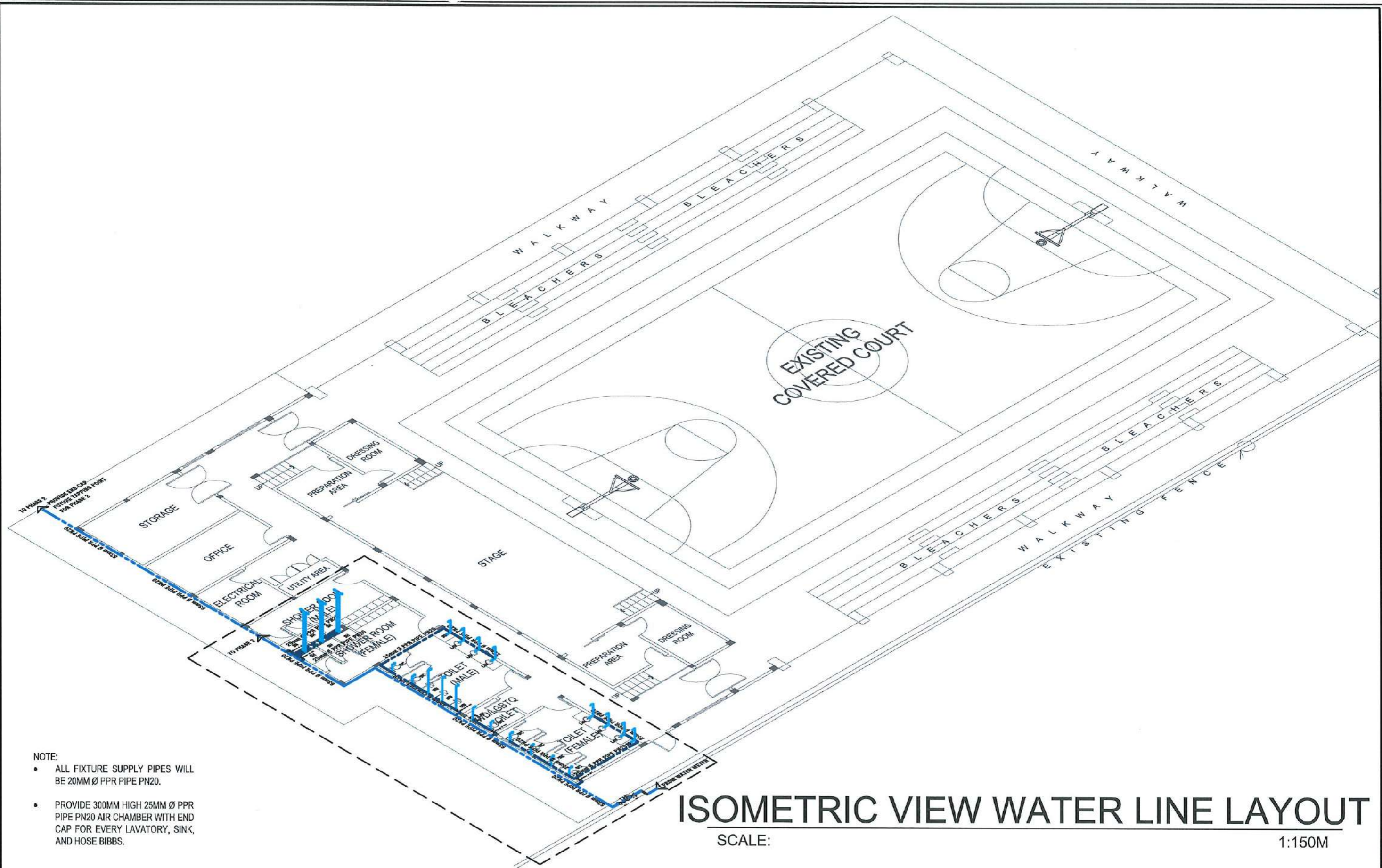
MASTER PLUMBER:	<i>AR. REX B. SICAT JR.</i> AR. REX B. SICAT JR.
-----------------	---

PRC NO : 0009199	VALIDITY: 11/23/2025
PTR NO : 1959426 P	DATE ISSUED: 01/08/2024
ISSUED AT : PGT TARLAC CITY	TIN : 469-786-926-000

OWNER:	<i>DR. ARNOLD E. VELASCO</i> DR. ARNOLD E. VELASCO PRESIDENT
--------	--

SHEET CONTENTS:	AS SHOWN
DATE:	MARCH 2024

SHEET NO:	P-10
PAGE NO:	52/65

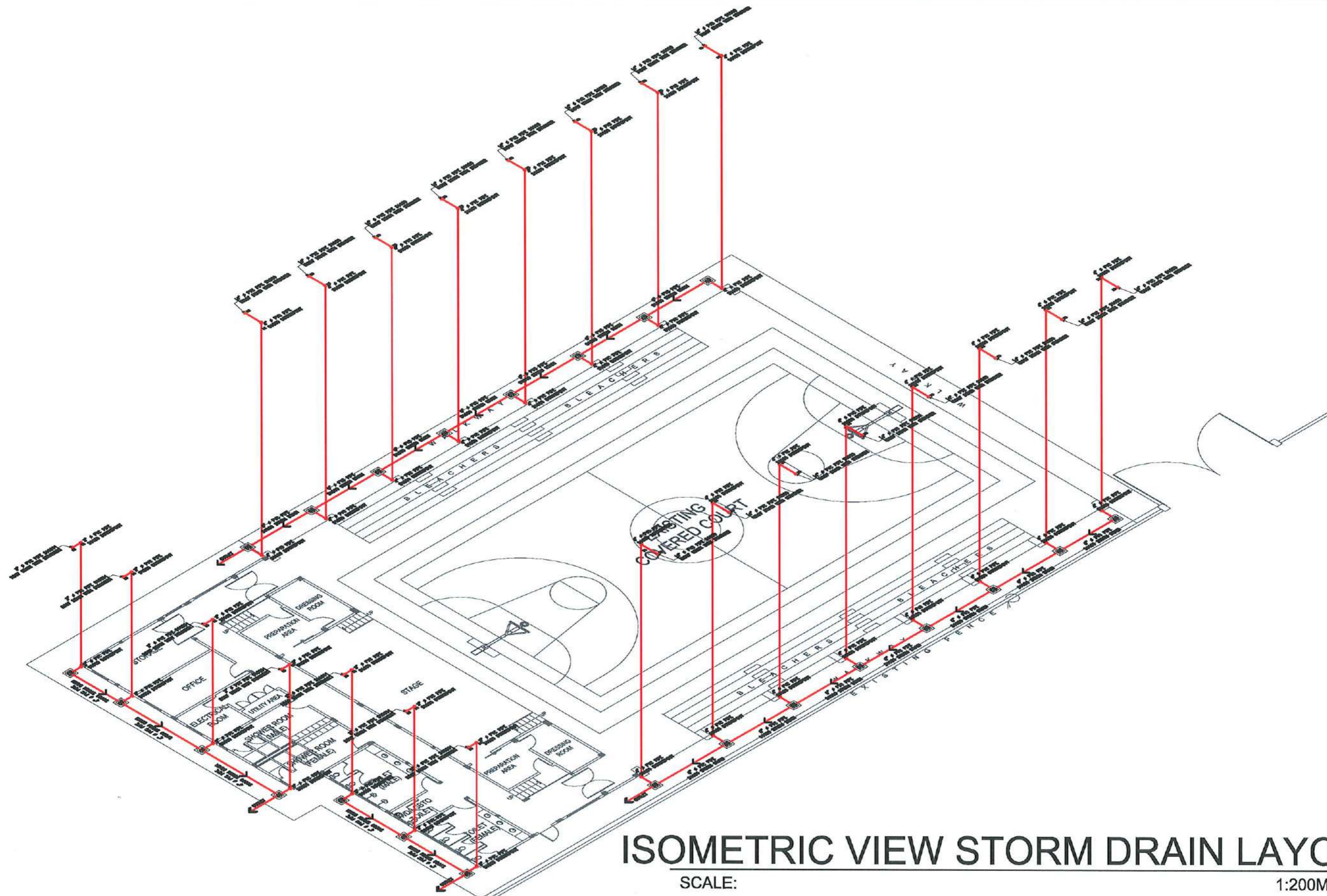


- NOTE:
- ALL FIXTURE SUPPLY PIPES WILL BE 20MM Ø PPR PIPE PN20.
 - PROVIDE 300MM HIGH 25MM Ø PPR PIPE PN20 AIR CHAMBER WITH END CAP FOR EVERY LAVATORY, SINK, AND HOSE BIBBS.

ISOMETRIC VIEW WATER LINE LAYOUT

SCALE: 1:150M

 TARLAC STATE UNIVERSITY Facilities Development and Management Office Romulo Boulevard, Tarlac City, Philippines 2300	PROJECT TITLE:	MASTER PLUMBER:	PRC NO : 0009199	VALIDITY: 11/23/2025	OWNER:	SHEET CONTENTS:	SHEET NO:
	REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER	 AR. REX B. SICA JR.	PTR NO : 1959426 P	DATE ISSUED: 01/08/2024	DR. ARNOLD E. VELASCO PRESIDENT	AS SHOWN	P-11
PROJECT LOCATION:	SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY	ISSUED AT : PGT TARLAC CITY	TIN : 469-786-926-000	DATE: MARCH 2024		53/65	



ISOMETRIC VIEW STORM DRAIN LAYOUT

SCALE:

1:200M



TARLAC STATE UNIVERSITY
Facilities Development and
Management Office
Narnalia Boulevard, Tarlac City, Philippines 2300

PROJECT TITLE:	REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION:	SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

MASTER PLUMBER:	<i>[Signature]</i> AR. REX B. SICAT, JR.
-----------------	---

PRC NO : 0009199	VALIDITY: 11/23/2025
PTR NO : 1859426 P	DATE ISSUED: 01/08/2024
ISSUED AT : PGT TARLAC CITY	TIN : 469-706-926-000














OWNER:	<i>[Signature]</i> DR. ARNOLD E. VELASCO PRESIDENT
--------	--

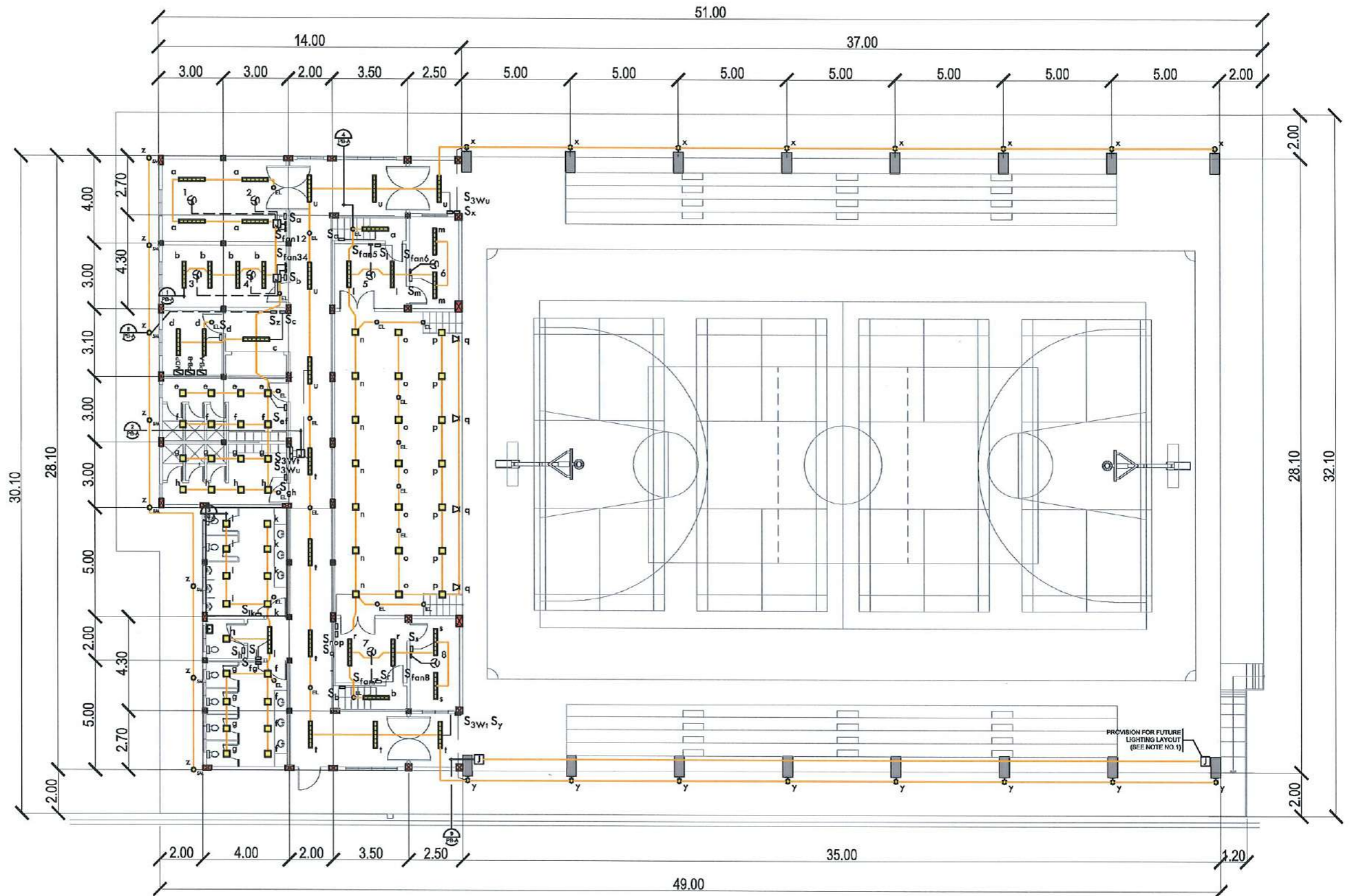
SHEET CONTENTS:	SHEET NO:
AS SHOWN	P-12
DATE: MARCH 2024	PAGE NO:
	54/65

NOTES:

1. PROVIDE WIRES FOR HOMERUN CIRCUIT NUMBER 9 FOR FUTURE LIGHTING OUTLET ON THE ENTRANCE.
2. WALL LAMP MOUNTING HEIGHT SHALL BE 2200mm FROM F.F.L.

LEGENDS

-  12W LED SQUARE PANEL LIGHT SURFACE MOUNTED
-  PIN LIGHT ROUND SURFACE MOUNTED WITH 12W LED BULB
-  LED SPOTLIGHT
-  2 X 5W COB WARM WHITE WALL LAMP
-  1 - 18W T8 LED TUBE IN LOUVER HOUSING SURFACE MOUNTED
-  UFO EMERGENCY LIGHT CEILING MOUNTED
-  CEILING FAN
-  ONE GANG SWITCH
-  TWO GANG SWITCH
-  THREE GANG SWITCH
-  ONE GANG 3-WAY SWITCH
-  CEILING FAN SWITCH CONTROLLER
-  CIRCUIT HOMERUN



GROUND FLOOR LIGHTING LAYOUT
SCALE: 1:200M



PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

PROFESSIONAL ELECTRICAL ENGINEER
ENGR. HAROLD KING C. HAYANA

PRC NO: 0004934 VALIDITY: 12/16/2024
PTR NO: 1970883 P DATE ISSUED: 01/17/2024
ISSUED AT: PGT TARLAC CITY TIN: 297-820-637-000







OWNER: DR. ARNOLD E. VELASCO
PRESIDENT

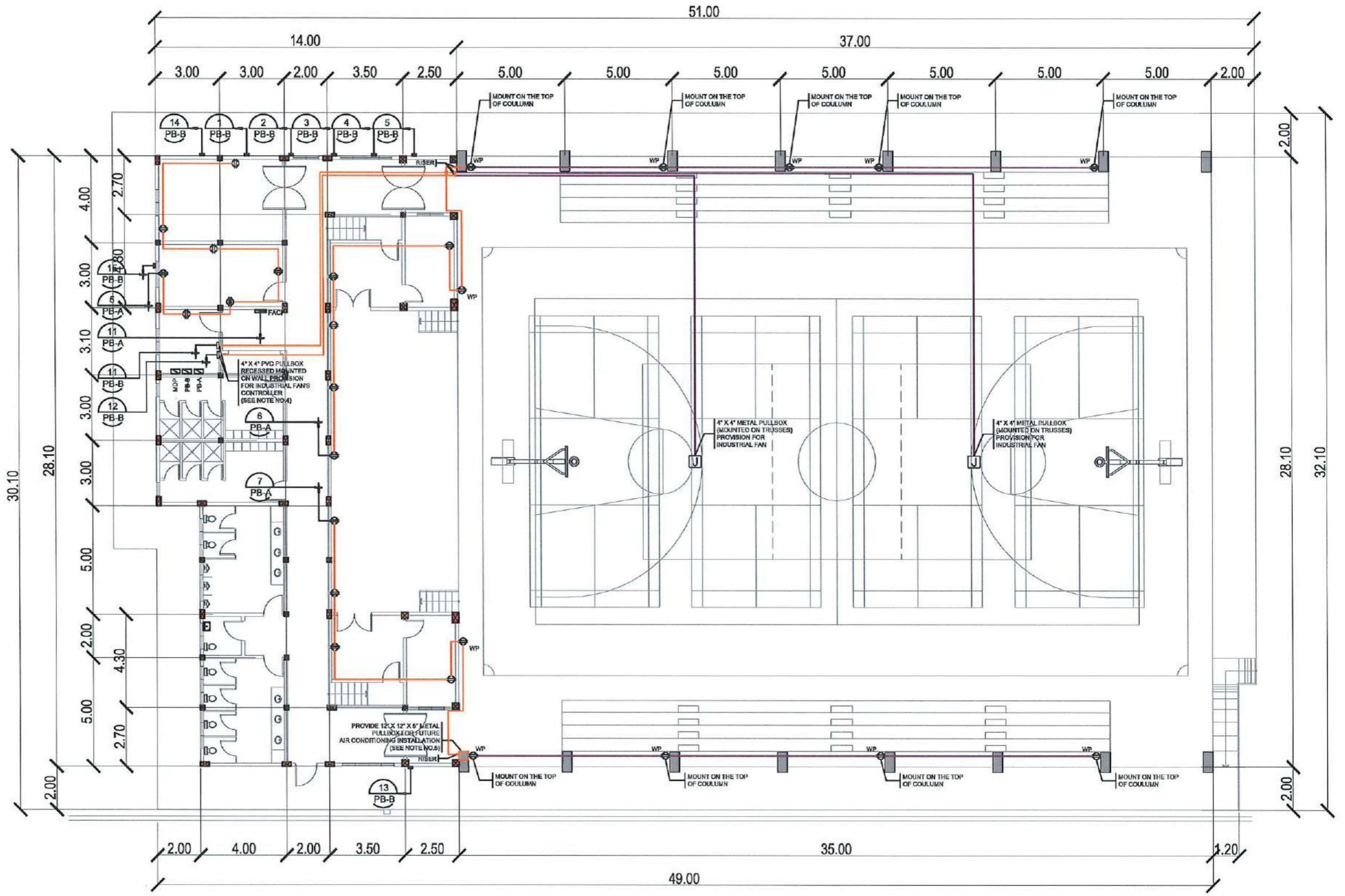
SHEET CONTENTS: AS SHOWN
DATE: MARCH 2024
SHEET NO: E-01
PAGE NO: 55/65

NOTES:

1. CONCEAL ALL PIPES WITH ROUGH-IN INSIDE THE WALL, FLOOR AND CEILING. EXPOSED PIPES SHALL BE IMC PIPES.
2. ALL EXPOSED PIPES FOR PROVISION OF AIR CONDITION DISCONNECTING MEANS SHALL BE RUN UP TO CEILING GOING TO THE PANELBOARD.
3. MOUNTING HEIGHT FOR DISCONNECTING MEANS FOR FUTURE AIR CONDITION CONDENSER SHALL BE 300MM FROM FINISHED FLOOR LINE.
4. FUTURE INDUSTRIAL FAN CONTROLLER MOUNTING HEIGHT SHALL BE 1400MM FROM FINISHED FLOOR LINE.
5. CIRCUIT NUMBERS 6 TO 10 OF PB-B SHALL PROVIDED PVC CONDUITS WITH CONDUCTORS FROM PANELBOARD TO 12" X 12" X 5" METAL PULLBOX (SEE POWER LAYOUT) FOR FUTURE AIR CONDITIONING UNITS INSTALLATION.

LEGENDS

-  UNIVERSAL CONVENIENCE OUTLET
-  WEATHERPROOF UNIVERSAL CONVENIENCE OUTLET
-  CIRCUIT HOMERUN
-  IMC PIPE
-  PANELBOARD
-  NEMA 3R ENCLOSURE WITH CIRCUIT BREAKER



GROUND FLOOR POWER LAYOUT
SCALE: 1:200M



PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

PROFESSIONAL ELECTRICAL ENGINEER
ENGR. HARROLD KING C. HAYANA

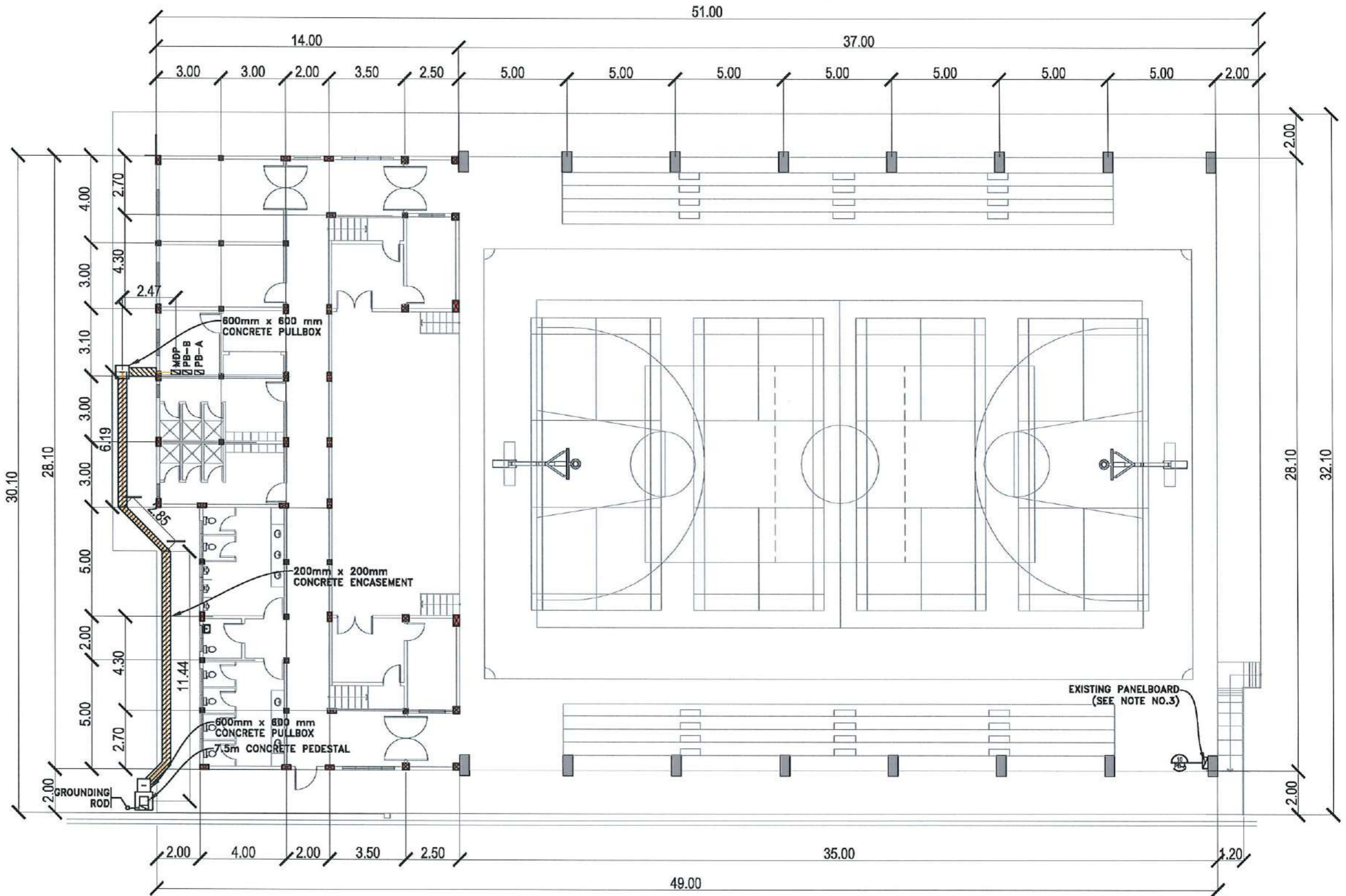
PRC NO: 0004934 VALIDITY: 12/16/2024
PTR NO: 1970883 P DATE ISSUED: 01/17/2024
ISSUED AT: PGT TARLAC CITY TIN: 297-820-537-000

OWNER: DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS: AS SHOWN
DATE: MARCH 2024
SHEET NO: E-02
PAGE NO: 56/65

NOTES:

1. ALL PANELBOARD SHALL BE FLUSH MOUNTED.
2. ALL PIPES SHALL BE EMBEDDED ON FLOOR AND WALL.
3. EXISTING FEEDER LINE SHALL BE REMOVE AND REPLACE WITH NEW AND WILL RUN TO PB-A AT ELECTRICAL ROOM.



LEGENDS

- CIRCUIT HOMERUN
- PANELBOARD

MAIN FEEDER LINE

SCALE: 1:200M



PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

PROFESSIONAL ELECTRICAL ENGINEER

ENGR. HAROLD KING C. HAYANA

PRC NO: 0004934 VALIDITY: 12/16/2024

PTR NO: 1970883 P DATE ISSUED: 01/17/2024

ISSUED AT: PGT TARLAC CITY TIN: 297-820-537-000

OWNER:

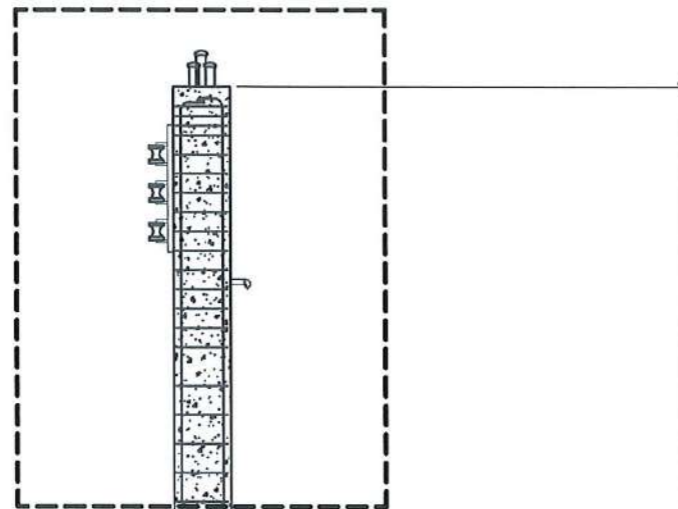
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN

DATE: MARCH 2024

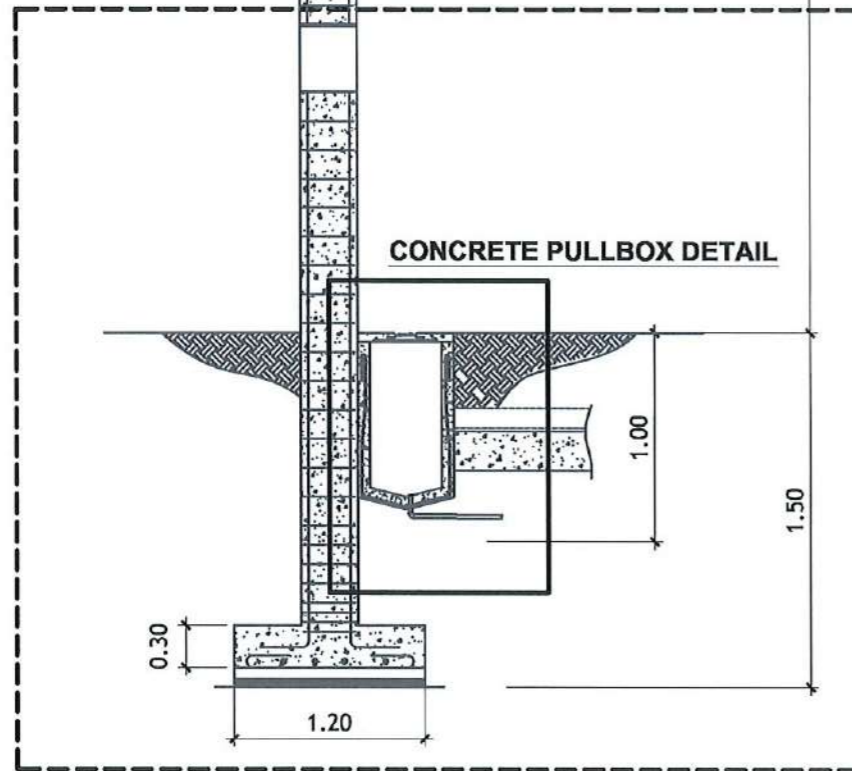
SHEET NO:
E-03
PAGE NO:
57/65

UPPER PEDESTAL DETAIL



7.50

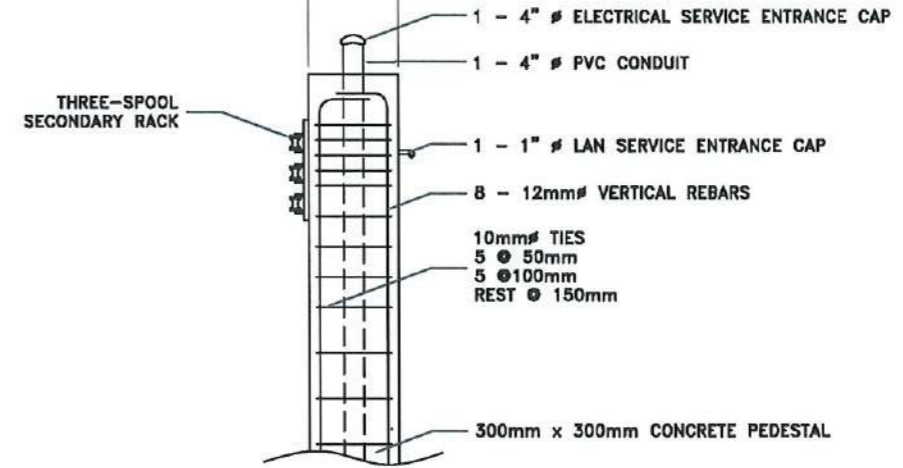
LOWER PEDESTAL DETAIL



SERVICE ENTRANCE PEDESTAL DETAIL

SCALE: NTS

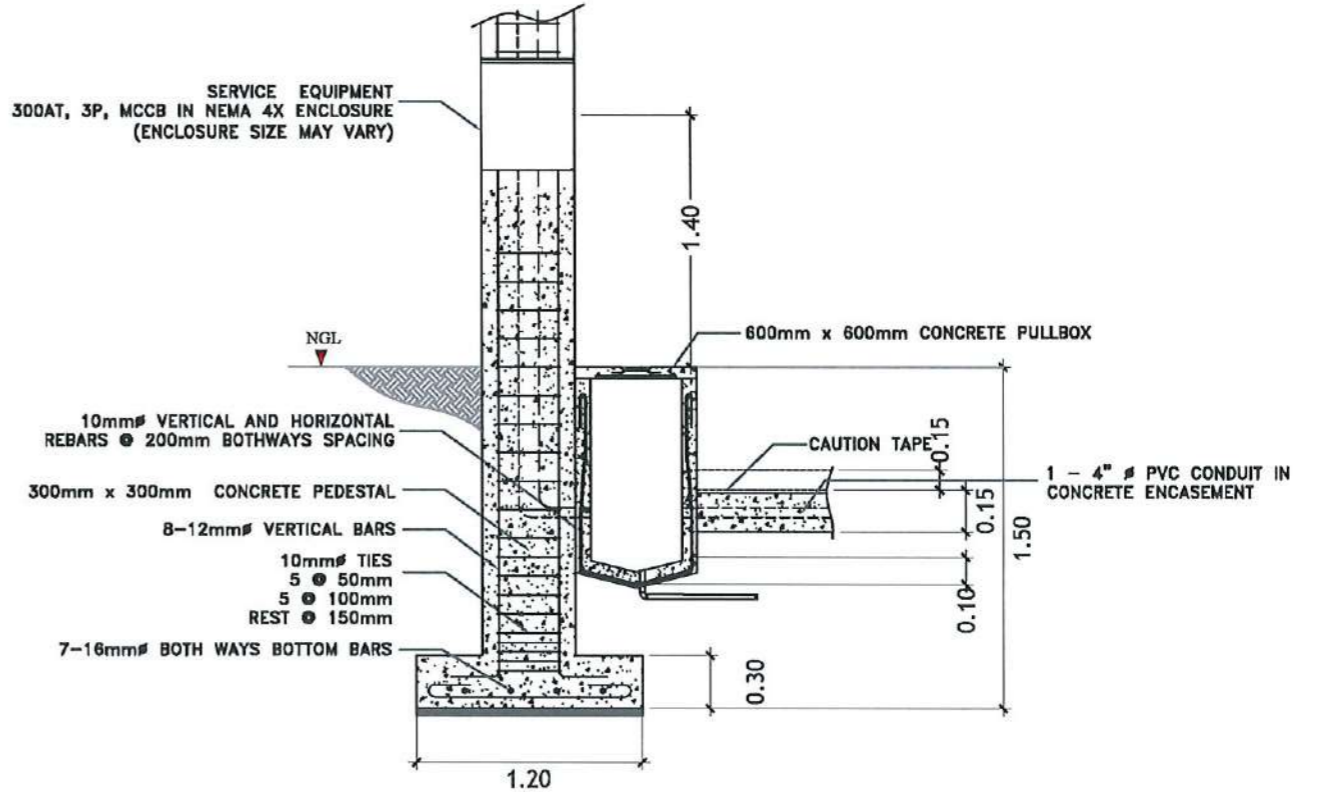
0.30



UPPER PEDESTAL DETAIL

SCALE: NTS

SERVICE EQUIPMENT
300AT, 3P, MCCB IN NEMA 4X ENCLOSURE
(ENCLOSURE SIZE MAY VARY)



LOWER PEDESTAL DETAIL

SCALE: NTS



PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

PROFESSIONAL ELECTRICAL ENGINEER

ENGR. HARROLD KING C. HAYANA

PRC NO: 0004834 VALIDITY: 12/16/2024

PTR NO: 1970883 P DATE ISSUED: 01/17/2024

ISSUED AT: PGT TARLAC CITY TIN: 297-820-537-000

OWNER:

DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN

DATE: MARCH 2024

SHEET NO:
E-04
PAGE NO:
58/65

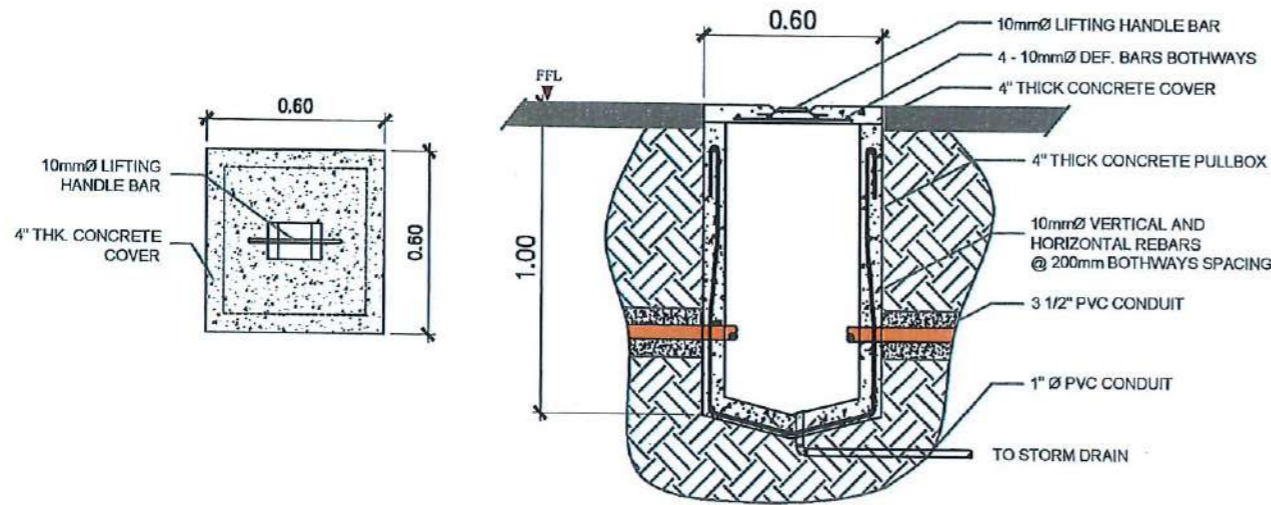
GENERAL NOTES AND SPECIFICATION

- ALL WORKS HEREIN SHALL COMPLY WITH THE LATEST PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE WITH THE RULES AND REGULATIONS OF THE NATIONAL AND LOCAL AUTHORITIES CONCERNED IN THE ENFORCEMENT OF ELECTRICAL LAWS AND ORDINANCES AND WITH RULES AND REGULATIONS OF THE POWER COMPANY CONCERNED.
- ALL WORKS HEREIN SHALL BE DONE UNDER THE DIRECT SUPERVISION OF A DULY QUALIFIED AND COMPETENT LICENSED ELECTRICAL ENGINEER.
- ALL MATERIALS AND EQUIPMENT TO BE USED SHALL BE NEW AND APPROVED TYPE FOR THE LOCATION AND PURPOSES.
- THE SERVICE ENTRANCE SHALL BE THREE-PHASE, FOUR-WIRES, 230 V, 60Hz.
- WHENEVER REQUIRED AND NECESSARY PVC PULL BOXES AND JUNCTION BOXES SHALL BE INSTALLED AT CONVENIENT SPACE AND LOCATION.
- MAIN CIRCUIT BREAKERS FOR MDP AND PB-B SHALL BE OF TYPE: LISTED FOR 100% OF ITS RATING TO SATISFY THE EXCEPTION IN PEC 2.15.1.3.
- PANELBOARDS SHALL BE RATED NOT LESS THAN 400 A FOR MDP, 400 A FOR PB-B, AND 150 A FOR PB-A.
- ALL PANEL BOARDS SHALL BE BREAKER TYPE ENCLOSED IN A METAL CABINET. ALL MAIN BRANCHES AND MOTOR PANEL SHALL BE BOLT-ON.
- ALL CONVENIENCE OUTLETS, 3 PRONG (PARALLEL SLOT, GROUNDING TYPE) AND LIGHTING SWITCHES SHALL BE RATED 15A, 240V, AND 10A, 240V RESPECTIVELY AS MANUFACTURED.
- ALL LINE CABLES SHALL HAVE 90°C RATED THHN/THWN-2 INSULATION.
- THE MINIMUM WIRE AND CONDUIT SIZE SHALL BE 3.5mm SQUARE THHN/THWN COPPER AND 20MM Ø RESPECTIVELY. (REFER TO THE LOAD SCHEDULE FOR THE OTHER WIRE AND CONDUIT SIZES).
- FOR EACH SPACE BRANCH CIRCUIT IN PANEL BOARD PROVIDE ONE EMPTY 20mm Ø CONDUIT CONNECTED TO AN OCTAGONAL BOX ABOVE THE CEILING.
- ALL SPECIFIED CONDUCTOR SHALL BE MADE OF COPPER.
- CONDUIT TRADE SIZES WERE SPECIFIED BASED ON INNER DIAMETER.
- ALL FEEDERS AND BRANCH CIRCUITS SHALL BE INSTALLED AS INDICATED ON PLAN. INDIVIDUAL CIRCUIT HOMERUNS TO PANEL BOARDS SHALL NOT BE COMBINED IN THE SAME RACEWAY UNLESS OTHERWISE INDICATED.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF THE SERVICE ENTRANCE FOR CONNECTION TO THE POWER SUPPLY AND ALSO THE ACTUAL LOCATION OF THE TELEPHONE SERVICE EQUIPMENT FOR THE CONNECTION TO MAIN TELEPHONE CABINET.
- THE METHOD OF WIRING SHALL BE AS FOLLOWS:

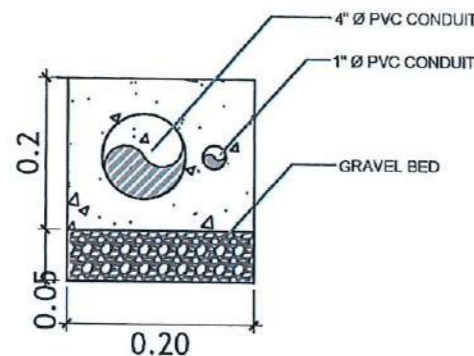
A. POWER SERVICE ENTRANCE:	PVC THICKWALL CONDUIT SCHEDULE 40 FOR EMBEDDED PIPES
B. MAIN FEEDER, FEEDER AND SUB FEEDER:	PVC THICKWALL CONDUIT SCHEDULE 40 FOR EMBEDDED PIPES
C. LIGHTING AND CONVENIENCE OUTLET:	PVC THICKWALL CONDUIT SCHEDULE 40
D. TELEPHONE	PVC THICKWALL CONDUIT SCHEDULE 40
- MOUNTING HEIGHTS SHALL BE AS FOLLOWS:

A. LIGHTING SWITCHES	1.40M ABOVE FINISHED FLOOR LINE
B. CONVENIENCE OUTLETS	0.30M ABOVE FINISHED FLOOR LINE
C. TELEPHONE OUTLETS	0.40M ABOVE FINISHED FLOOR LINE
D. PANEL BOARDS AND TELEPHONE CABINETS	1.40M ABOVE FINISHED FLOOR LINE
- ALL MOUNTING HEIGHTS ARE SUBJECT TO THE ARCHITECT'S APPROVAL PRIOR TO THE INSTALLATION.
- UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, THE FOLLOWING TESTS SHALL BE PERFORMED BY THE CONTRACTOR INCLUSIVE OF THE INSTALLATION TO BE REPORTED IN DETAILS ON FORMS APPROVED BY THE OWNER'S REPRESENTATIVE.

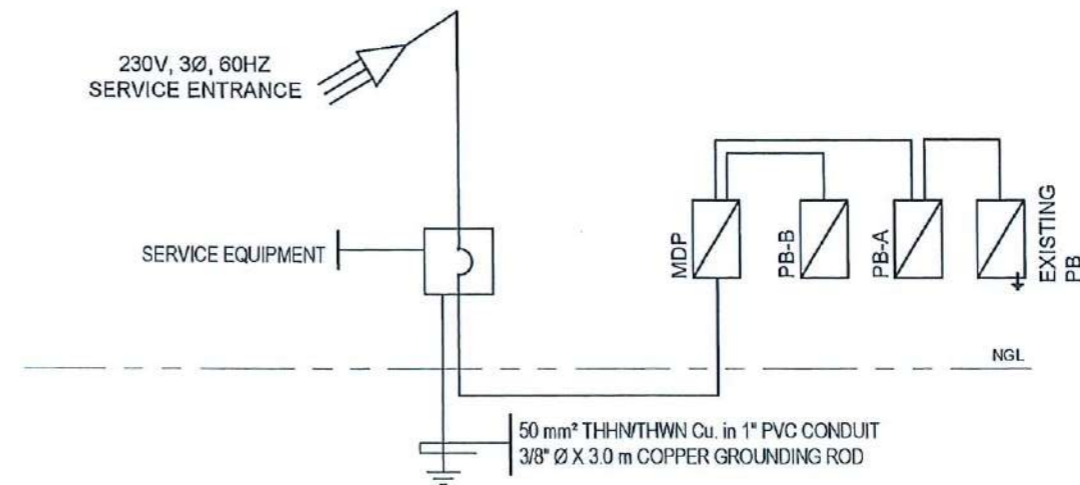
A. INSTALLATION RESISTANCE TEST	B. GROUND RESISTANCE TEST
C. OPERATIONAL TEST	D. SYSTEM TEST AND ACCEPTANCE
- WORKMANSHIP: THE WORK THROUGHOUT SHALL BE EXECUTED IN THE MOST AND THOROUGH MANNER KNOWN TO TRADE AND SATISFACTION OF THE ARCHITECT AND ENGINEER.



CONCRETE PULLBOX DETAILS
SCALE: 1:25M



CONCRETE ENCASEMENT DETAILS
SCALE: 1:10M



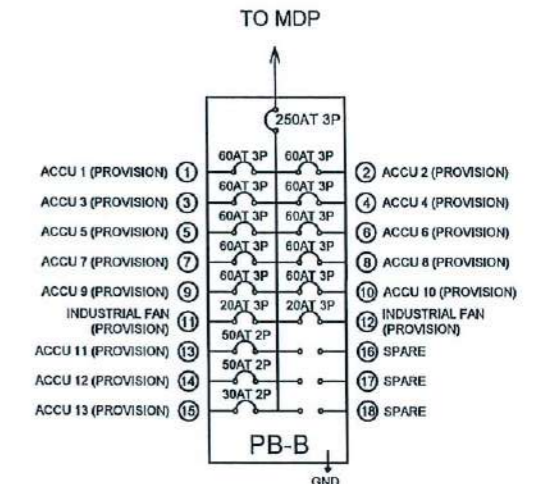
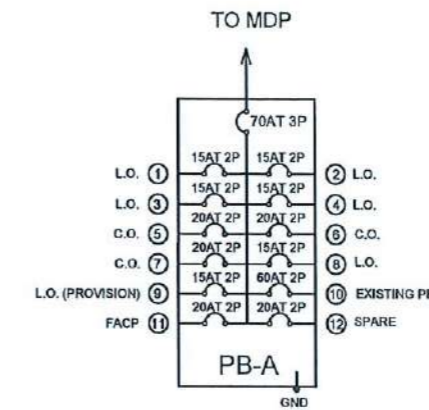
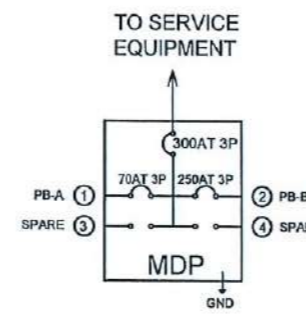
RISER DIAGRAM

LOAD SCHEDULE

PANEL BOARD FROM		MDP SERVICE ENTRANCE			LOCATION SYSTEM VOLTAGE				ELECTRICAL ROOM 3φ, 3 Wire, 230V				
CIRCUIT NUMBER	DESCRIPTION	AMPERE PER PHASE			CIRCUIT BREAKER			CONDUCTOR	TYPE OF WIRE	GROUND	CONDUIT		
		AB	BC	CA	ABC	AT	AF					POLE	
1	PB-A	10.31	18.25	27.13		70	100	3	3 - 22 mm ²	TWHTH3N	1 - 8.0 mm ²	1 1/2" φ PVC	
2	PB-B	23.52	23.52	18.52	245.60	250	400	3	3 - 150 mm ²	TWHTH3N	1 - 30 mm ²	3" φ PVC	
3	SPARE												
4	SPARE				7.53								
COMPUTATION													
TOTAL CONNECTED LOADS		33.83	41.78	45.65	260.66	Phase Multiplier			1.732	Voltage (V)			230
TOTAL LOAD CURRENT (A)		339.73			Demand Factor Applied			80%	Largest motor load (25%)			5.8	
TOTAL DEMAND LOAD CURRENT (A)		277.58			300	400	3	3 - 200 mm ²	TWHTH3N	1 - 50 mm ²	4" φ PVC IN CONCRETE ENCASUREMENT		
					ENCLOSURE			NEMA 1	MOUNTING			WALL MOUNTED	

PANEL BOARD FROM		PB-A MDP			LOCATION SYSTEM VOLTAGE				ELECTRICAL ROOM 3φ, 3 Wire, 230V					
CIRCUIT NUMBER	DESCRIPTION	NO. OF OUTLET	VOLT- AMPERE	AMPERE PER PHASE			CIRCUIT BREAKER			CONDUCTOR	TYPE OF WIRE	GROUND	CONDUIT	
				AB	BC	CA	ABC	AT	AF					POLE
1	LIGHTING OUTLET	16	236	1.03				15	50	2	2 - 3.5 mm ²	TWHTH3N	1 - 3.5 mm ²	3/4" φ PVC
2	LIGHTING OUTLET	34	419	1.82				15	50	2	2 - 3.5 mm ²	TWHTH3N	1 - 3.5 mm ²	3/4" φ PVC
3	LIGHTING OUTLET	26	232		1.01			15	50	2	2 - 3.5 mm ²	TWHTH3N	1 - 3.5 mm ²	3/4" φ PVC
4	LIGHTING OUTLET	33	468		2.03			15	50	2	2 - 3.5 mm ²	TWHTH3N	1 - 3.5 mm ²	3/4" φ PVC
5	CONVENIENCE OUTLET	7	1260			5.48		20	50	2	2 - 3.5 mm ²	TWHTH3N	1 - 3.5 mm ²	3/4" φ PVC
6	CONVENIENCE OUTLET	11	1980			8.61		20	50	2	2 - 3.5 mm ²	TWHTH3N	1 - 3.5 mm ²	3/4" φ PVC
7	CONVENIENCE OUTLET	9	1620	2.04				20	50	2	2 - 3.5 mm ²	TWHTH3N	1 - 3.5 mm ²	3/4" φ PVC
8	LIGHTING OUTLET	8	96	0.42				15	50	2	2 - 3.5 mm ²	TWHTH3N	1 - 3.5 mm ²	3/4" φ PVC
9	LIGHTING OUTLET (PROVISION)	1	500		2.17			15	50	2	2 - 3.5 mm ²	TWHTH3N	1 - 3.5 mm ²	3/4" φ PVC
10	EXISTING PANELBOARD	1	3000		13.04			60	100	2	2 - 14 mm ²	TWHTH3N	1 - 5.5 mm ²	3/4" φ PVC
11	FIRE ALARM CONTROL PANEL	1	1500			6.52		20	50	2	2 - 3.5 mm ²	TWHTH3N	1 - 3.5 mm ²	3/4" φ PVC
12	SPARE	1	1500			6.52		20	50	2	2 - 3.5 mm ²	TWHTH3N	1 - 3.5 mm ²	3/4" φ PVC
COMPUTATION														
TOTAL CONNECTED LOADS				10.31	18.26	27.13	Phase Multiplier			1.732	Voltage (V)			230
TOTAL LOAD CURRENT (A)				46.99			Demand Factor Applied			80%	Largest motor load (25%)			
TOTAL DEMAND LOAD CURRENT (A)				37.59			70	100	3	3 - 22 mm ²	TWHTH3N	1 - 8.0 mm ²	1 1/2" φ PVC	
							ENCLOSURE			NEMA 1	MOUNTING			WALL MOUNTED

PANEL BOARD FROM		PB-B MDP			LOCATION SYSTEM VOLTAGE				ELECTRICAL ROOM 3φ, 3 Wire, 230V						
CIRCUIT NUMBER	DESCRIPTION	NO. OF OUTLET	VOLT- AMPERE	AMPERE PER PHASE			CIRCUIT BREAKER			CONDUCTOR	TYPE OF WIRE	GROUND	CONDUIT		
				AB	BC	CA	ABC	AT	AF					POLE	
1	8 HP ACCU -1 (PROVISION)	1	9242				23.20	60	100	3	3 - 14 mm ²	TWHTH3N	1 - 8.0 mm ²	1 1/4" φ PVC	
2	8 HP ACCU -2 (PROVISION)	1	9242				23.20	60	100	3	3 - 14 mm ²	TWHTH3N	1 - 8.0 mm ²	1 1/4" φ PVC	
3	8 HP ACCU -3 (PROVISION)	1	9242				23.20	60	100	3	3 - 14 mm ²	TWHTH3N	1 - 8.0 mm ²	1 1/4" φ PVC	
4	8 HP ACCU -4 (PROVISION)	1	9242				23.20	60	100	3	3 - 14 mm ²	TWHTH3N	1 - 8.0 mm ²	1 1/4" φ PVC	
5	8 HP ACCU -5 (PROVISION)	1	9242				23.20	60	100	3	3 - 14 mm ²	TWHTH3N	1 - 8.0 mm ²	1 1/4" φ PVC	
6	8 HP ACCU -6 (PROVISION)	1	9242				23.20	60	100	3	3 - 14 mm ²	TWHTH3N	1 - 8.0 mm ²	1 1/4" φ PVC	
7	8 HP ACCU -7 (PROVISION)	1	9242				23.20	60	100	3	3 - 14 mm ²	TWHTH3N	1 - 8.0 mm ²	1 1/4" φ PVC	
8	8 HP ACCU -8 (PROVISION)	1	9242				23.20	60	100	3	3 - 14 mm ²	TWHTH3N	1 - 8.0 mm ²	1 1/4" φ PVC	
9	8 HP ACCU -9 (PROVISION)	1	9242				23.20	60	100	3	3 - 14 mm ²	TWHTH3N	1 - 8.0 mm ²	1 1/4" φ PVC	
10	8 HP ACCU -10 (PROVISION)	1	9242				23.20	60	100	3	3 - 14 mm ²	TWHTH3N	1 - 8.0 mm ²	1 1/4" φ PVC	
11	2HP INDUSTRIAL FAN (PROVISION)	1	2709				6.80	20	100	3	3 - 5.5 mm ²	TWHTH3N	1 - 3.5 mm ²	1" φ IMC	
12	2HP INDUSTRIAL FAN (PROVISION)	1	2709				6.80	20	100	3	3 - 5.5 mm ²	TWHTH3N	1 - 3.5 mm ²	1" φ IMC	
13	3HP ACCU -11 (PROVISION)	1	3910	17.00				50	100	2	2 - 8.0 mm ²	TWHTH3N	1 - 5.5 mm ²	1" φ PVC	
14	3HP ACCU -12 (PROVISION)	1	3910		17.00			50	100	2	2 - 8.0 mm ²	TWHTH3N	1 - 5.5 mm ²	1" φ PVC	
15	2 HP ACCU -12 (PROVISION)	1	2760			12.00		30	100	2	2 - 5.5 mm ²	TWHTH3N	1 - 3.5 mm ²	1" φ PVC	
16	SPARE		1500		6.52										
17	SPARE		1500			6.52									
18	SPARE		1500			6.52									
COMPUTATION															
TOTAL CONNECTED LOADS				23.52	23.52	18.52	245.60	Phase Multiplier			1.732	Voltage (V)			230
TOTAL LOAD CURRENT (A)				286.34			Demand Factor Applied			80%	Largest motor load (25%)			5.8	
TOTAL DEMAND LOAD CURRENT (A)				234.87			250	400	3	3 - 150 mm ²	TWHTH3N	1 - 30 mm ²	2 1/2" φ PVC		
							ENCLOSURE			NEMA 1	MOUNTING			WALL MOUNTED	



PANELBOARD DETAILS

SERVICE DROP TO MDP:
EFF. Z AT 85% PF: 0.049

$$VD = (1.732 \times 277.58 \times 35 \times 0.049) / 305 = 2.703 \text{ V}$$

MDP TO PB-B:
EFF. Z AT 85% PF: 0.059

$$VD = (1.732 \times 234.87 \times 1 \times 0.059) / 305 = 0.079 \text{ V}$$

MDP TO FARTHEST MOTOR LOAD:
EFF. Z AT 85% PF: 0.44

$$VD = (1.732 \times 23.2 \times 66 \times 0.44) / 305 = 3.826 \text{ V}$$

$$\text{TOTAL \%VD} = (2.703 + 0.079 + 3.826) / 230 \times 100 = 2.873\%$$

VOLTAGE DROP CALCULATION



PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

PROFESSIONAL ELECTRICAL ENGINEER:

ENGR. HAROLD KING C. HAYANA

PRC NO : 0004934
VALIDITY: 12/16/2024

PTR NO : 1970883 P
DATE ISSUED: 01/17/2024

ISSUED AT : PGT TARLAC CITY
TIN : 297-820-537-000

OWNER:

DR. ARNOLD E. VELASCO
PRESIDENT

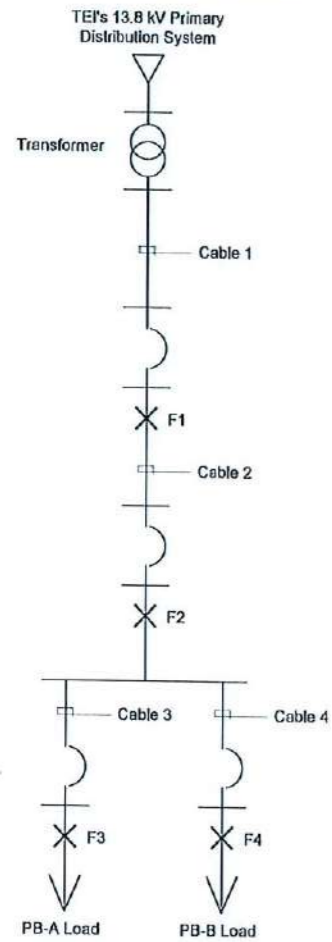
SHEET CONTENTS:
AS SHOWN

SHEET NO.:
E-06

PAGE NO.:
60/65

DATE: MARCH 2024

SINGLE-LINE DIAGRAM



Transformer = 3 x 50 kVA Single-Phase, 230 V, 60 Hz,
2% Impedance, 1.50 X/R

Utility Impedance from TEI: $R1 + jX1 = 2.1860 + j3.8483$ ohms at 13.8 kV

Cable 1 = 200 mm² at 3 meters, 0.000482 ohms

Cable 2 = 200 mm² at 32 meters, 0.005141 ohms

Cable 3 = 22 mm² at 1 meter, 0.000951 ohms

Cable 4 = 150 mm² at 1 meter, 0.000193 ohms

A. Base Values:

kVBase = 0.230

MVABase = 0.150

ZBase = $(0.230)^2 / 0.150$

ZBase = 0.3527 ohms

I_{Base} = $0.150 \times 1,000 / (1.732 \times 0.230)$

I_{Base} = 376.54 A

B. Impedance Per Unit Values:

For Utility

Z_{UTILITY} = $(2.1860 + j3.8483) \times (0.230 / 13.8)^2 / 0.3527$

Z_{UTILITY} = 0.001722 + j0.003031 p.u.

For Transformer

Z_{TR} = 2% at 1.50 X/R ratio

Z_{TR} = 0.011094 + j0.016641 p.u.

For Cable 1

Z_{CABLE1} = 0.000482 / 0.3527

Z_{CABLE1} = 0.001367 p.u.

For Cable 2

Z_{CABLE2} = 0.005141 / 0.3527

Z_{CABLE2} = 0.014576 p.u.

For Cable 3

Z_{CABLE3} = 0.000951 / 0.3527

Z_{CABLE3} = 0.002696 p.u.

For Cable 4

Z_{CABLE4} = 0.000193 / 0.3527

Z_{CABLE4} = 0.000547 p.u.

For PB-A Loads

I_{PB-A} = 12,811 / 150,000

I_{PB-A} = 0.085407 p.u.

Z_{PB-A} = 1 / 0.085407

Z_{PB-A} = 11.708642 p.u.

For PB-B Loads

For Motor Contribution to Short Circuit - Motor Loads will be treated as a single Lump load and is 400% x rated power.

Fault Contribution from PB-B = $400\% \times [(10 \times 9,242) + (2 \times 2,709) + (2 \times 3,910) + 2,760] + (3 \times 1,500)$

Fault Contribution from PB-B = 438,172 VA

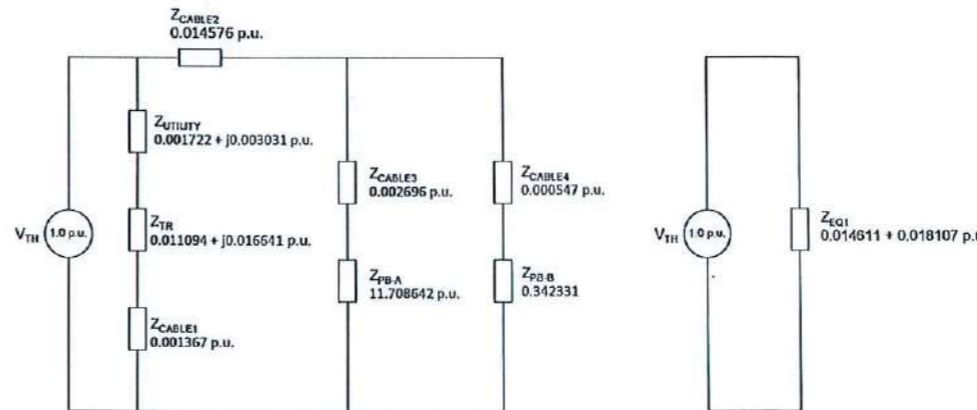
I_{PB-B} = 438,172 / 150,000

I_{PB-B} = 2.921147 p.u.

Z_{PB-B} = 1 / 2.921147

Z_{PB-B} = 0.342331 p.u.

@FAULT 1



For Fault at F1

Z_{EQ1} = 0.014611 + j0.018107 p.u.

I_{P1} = 1 / (0.014611 + j0.018107)

I_{P1} = 42.98 / -51.100

I_{F1} = 42.98 x 376.54

I_{F1} = 16,184 A

SHORT CIRCUIT CALCULATION



PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

PROFESSIONAL ELECTRICAL ENGINEER

ENGR. HARROLD KING C. HAYANA

PRC NO: 0004934 VALIDITY: 12/18/2024

PTR NO: 1970883P DATE ISSUED: 01/17/2024

ISSUED AT: PGT TARLAC CITY TIN: 297-820-537-000

OWNER:

DR. ARNOLD E. VELASCO
PRESIDENT

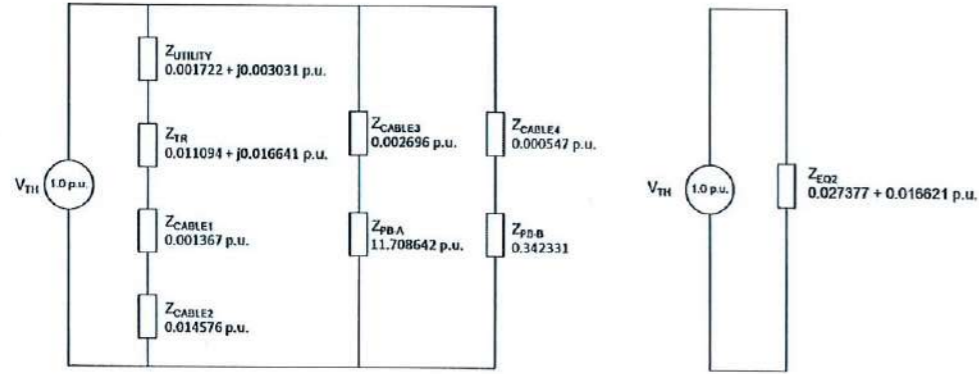
SHEET CONTENTS:
AS SHOWN

DATE: MARCH 2024

SHEET NO:
E-07

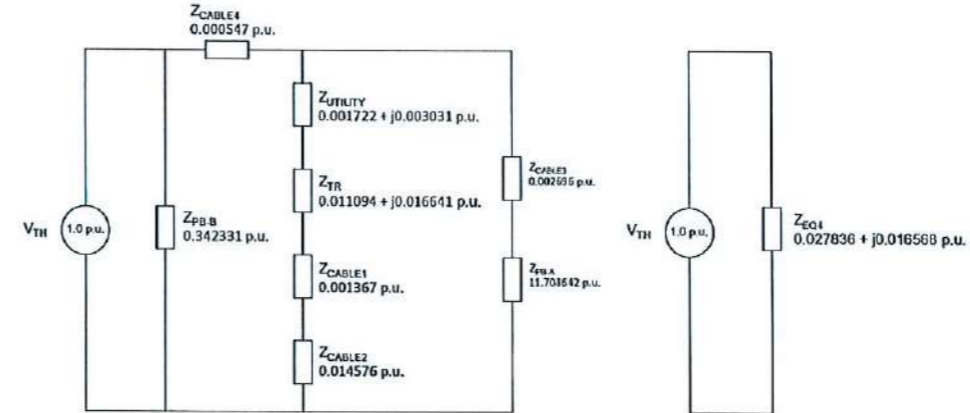
PAGE NO:
61/65

@FAULT 2



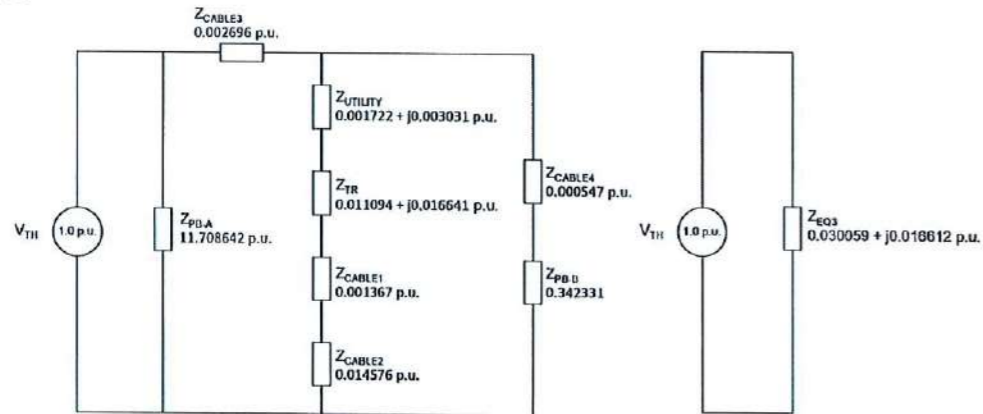
For Fault at F2
 $ZEQ2 = 0.027377 + 0.016621 \text{ p.u.}$
 $IPU2 = 1 / (0.027377 + 0.016621)$
 $IPU2 = 31.22 / -31.260$
 $IF2 = 31.22 \times 376.54$
 $IF2 = 11,756 \text{ A}$

@FAULT 4



For Fault at F4
 $ZEQ4 = 0.027836 + j0.016568 \text{ p.u.}$
 $IPU4 = 1 / (0.027836 + j0.016568)$
 $IPU4 = 30.87 / -30.760$
 $IF4 = 30.87 \times 376.54$
 $IF4 = 11,624 \text{ A}$

@FAULT 3



For Fault at F3
 $ZEQ3 = 0.030059 + j0.016612 \text{ p.u.}$
 $IPU3 = 1 / (0.030059 + j0.016612)$
 $IPU3 = 29.12 / -28.930$
 $IF3 = 29.12 \times 376.54$
 $IF3 = 10,964 \text{ A}$

KAIC Rating Specifications

Specified Minimum Values for Circuit Breaker KAIC ratings.

SERVICE EQUIPMENT CIRCUIT BREAKER	22 KAIC
MDP MAIN CIRCUIT BREAKER	22 KAIC
MDP BRANCH CIRCUIT BREAKER	22 KAIC
PB-A AND PB-B MAIN CIRCUIT BREAKER	14 KAIC
PB-A AND PB-B BRANCH CIRCUIT BREAKER	14 KAIC

SHORT CIRCUIT CALCULATION



TARLAC STATE UNIVERSITY
 Facilities Development and Management Office
 Romulo Boulevard, Tarlac City, Philippines 2100

PROJECT TITLE:	REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER
PROJECT LOCATION:	SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

PROFESSIONAL ELECTRICAL ENGINEER

 ENGR. HAROLD KING C. HAYANA

PRC NO: 0004834	VALIDITY: 12/16/2024
PTIR NO: 1970883 P	DATE ISSUED: 01/17/2024
ISSUED AT: PGT TARLAC CITY	TIN: 297-820-637-000

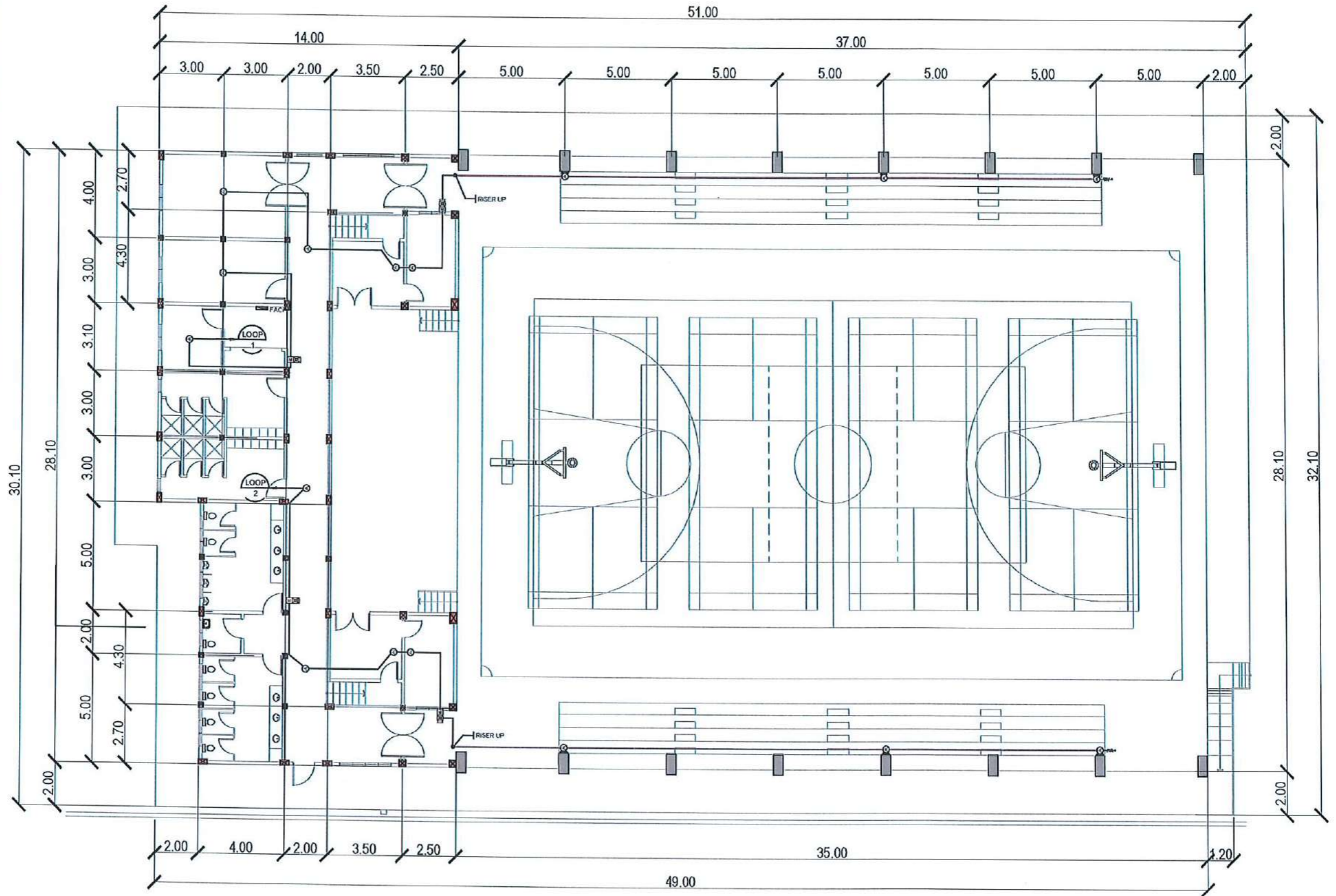
OWNER:

 DR. ARNOLD E. VELASCO
 PRESIDENT

SHEET CONTENTS:	SHEET NO:
AS SHOWN	E-08
DATE: MARCH 2024	PAGE NO:
	62/65

NOTES:

1. CONCEAL ALL PIPES WITH ROUGH-IN INSIDE THE WALL, FLOOR AND CEILING FOR FIRE DETECTION AND ALARM SYSTEM LAYOUT. EXPOSED PIPES SHALL BE IMC PIPES.
2. STROBE HORN SHALL BE MOUNTED 300mm BELOW THE CEILING.
3. MANUAL CALL POINT SHALL BE MOUNTED 1.4m ABOVE FINISHED FLOOR LINE.



LEGENDS

- 1/2" Ø IMC PIPE
- SD SMOKE DETECTOR
- HD HEAT DETECTOR
- FAC FIRE ALARM CONTROL PANEL
- END OF THE LINE RESISTOR
- ☒ STROBE HORN
- M MANUAL CALL POINT

AUXILIARY LAYOUT

SCALE: 1:200M



TARLAC STATE UNIVERSITY
Facilities Development and Management Office
Ponzo Boulevard, Tarlac City, Philippines 2300

PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

PROFESSIONAL ELECTRICAL ENGINEER

[Signature]
ENGR. HARROLD KING C. HAYANA

PRC NO: 0004834 VALIDITY: 12/16/2024

PTR NO: 1970883 P DATE ISSUED: 01/17/2024

ISSUED AT: PGT TARLAC CITY TIN: 297-820-537-000

OWNER:

[Signature]
DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS:
AS SHOWN

DATE: MARCH 2024







SHEET NO:
E-09

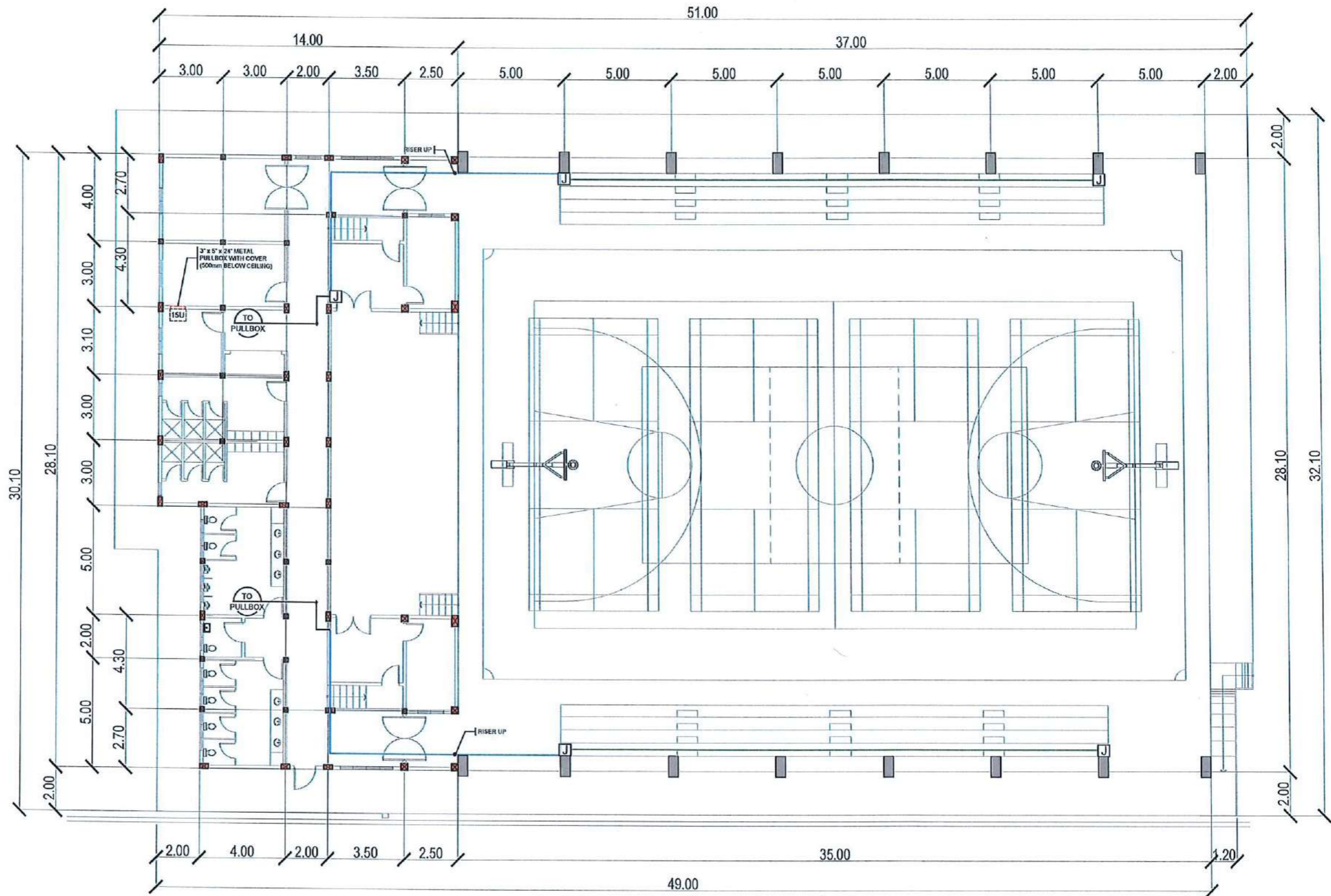
PAGE NO:
63/65

NOTES:

1. CONCEAL ALL PIPES WITH ROUGH-IN INSIDE THE WALL, FLOOR, AND CEILING FOR FUTURE INSTALLATION OF ACCESS POINTS. ALL EXPOSED PIPES AND PULLBOXES SHALL BE PAINTED WITH SEMI-GLOSS LATEX PAINT (GRAY).
2. PROVIDE UTILITY BOX WITH BLANK PLATE COVER ON CEILING AND SQUARE PULLBOX WITH COVER ON EXPOSED POSITION FOR ACCESS POINTS.
3. G.I. WIRE SHALL BE PROVIDED ON ALL PIPES FOR FUTURE CABLING PULLING.
4. METAL PULLBOX IS COMMON FOR CCTV AND STRUCTURE CABLING SYSTEM.
5. ALL PIPES THAT WILL RUN FROM EACH CIRCUIT TO THE METAL PULLBOX SHALL BE 1" Ø PVC PIPE.

LEGENDS

-  1/2" Ø PVC PIPE
-  3/4" Ø PVC PIPE
-  1" Ø PVC PIPE
-  PVC SQUARE PULLBOX
-  DATA CABINET (PROPOSE POSITION)
-  3" x 5" x 24" METAL PULLBOX WITH COVER



AUXILIARY LAYOUT

SCALE: 1:200M




TARLAC STATE UNIVERSITY
Facilities Development and Management Office
Pomelo Road, Tarlac City, Philippines 2100

PROJECT TITLE:
REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER

PROJECT LOCATION:
SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY

PROFESSIONAL ELECTRICAL ENGINEER



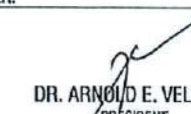
ENGR. HAROLD KING C. HAYANA

PRC NO: 0004834 VALIDITY: 12/18/2024

PTR NO: 1970883 P DATE ISSUED: 01/17/2024

ISSUED AT: PGT TARLAC CITY TIN: 297-620-537-000

OWNER:



DR. ARNOLD E. VELASCO
PRESIDENT

SHEET CONTENTS: AS SHOWN

DATE: MARCH 2024







SHEET NO: **E-10**

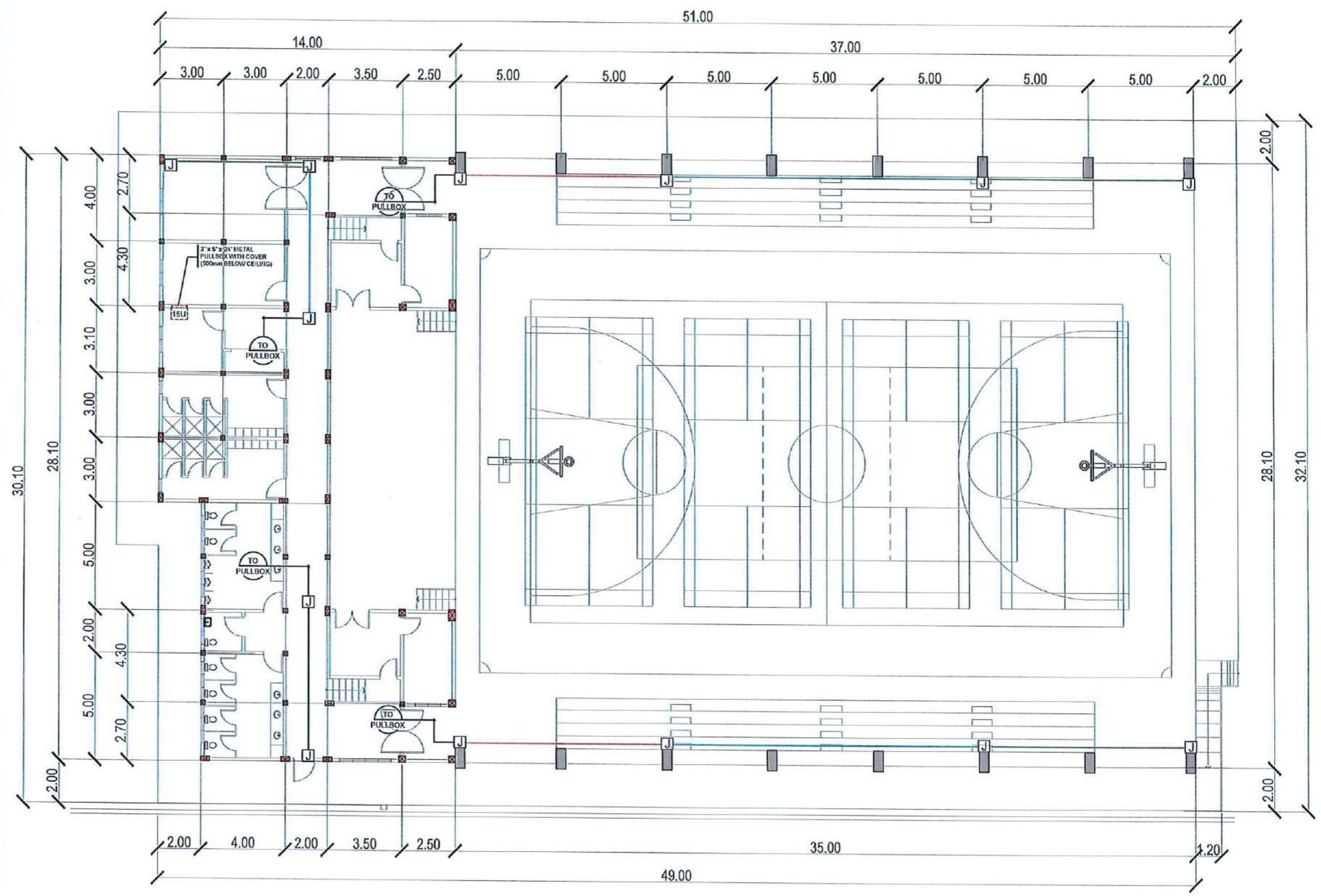
PAGE NO: **64/65**

NOTES:

1. CONCEAL ALL PIPES WITH ROUGH-IN INSIDE THE WALL, FLOOR, AND CEILING FOR FUTURE INSTALLATION OF CCTV. ALL EXPOSED PIPES AND PULLBOXES SHALL BE PAINTED WITH SEMI-GLOSS LATEX PAINT (GRAY).
2. PROVIDE UTILITY BOX WITH BLANK PLATE COVER ON CEILING AND SQUARE PULLBOX WITH COVER ON EXPOSED POSITION FOR ACCESS POINTS.
3. G.I. WIRE SHALL BE PROVIDED ON ALL PIPES FOR FUTURE CABLING PULLING.
4. METAL PULLBOX IS COMMON FOR CCTV AND STRUCTURE CABLING SYSTEM.
5. ALL PIPES THAT WILL RUN FROM EACH CIRCUIT TO THE METAL PULLBOX SHALL BE 1" Ø PVC PIPE.


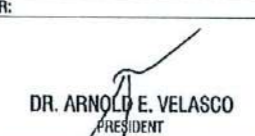
LEGENDS

-  1/2" Ø PVC PIPE
-  3/4" Ø PVC PIPE
-  1" Ø PVC PIPE
-  PVC SQUARE PULLBOX
-  DATA CABINET (PROPOSE POSITION)
-  3" x 5" x 24" METAL PULLBOX WITH COVER



AUXILIARY LAYOUT
SCALE: 1:200M



PROJECT TITLE: REFURBISHMENT OF MULTI-PURPOSE SPORTS AND WELLNESS CENTER	PROFESSIONAL ELECTRICAL ENGINEER	PRC NO: 0004834	VALIDITY: 12/16/2024	OWNER:	SHEET CONTENTS:	SHEET NO:
PROJECT LOCATION: SAN ISIDRO CAMPUS, TARLAC STATE UNIVERSITY	 ENGR. HAROLD KING C. HAYANA	PTR NO: 1070863 P	DATE ISSUED: 01/17/2024	 DR. ARNOLD E. VELASCO PRESIDENT	AS SHOWN	E-11
		ISSUED AT: PGT TARLAC CITY	TIN: 297-820-537-000		DATE: MARCH 2024	65/65