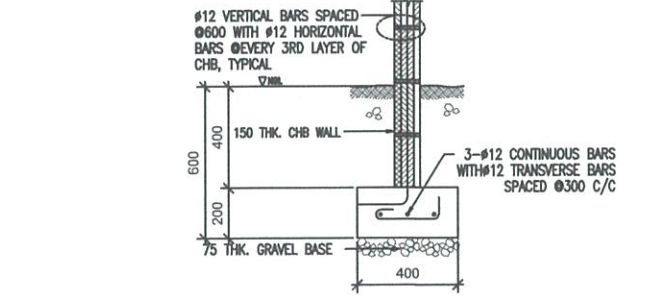


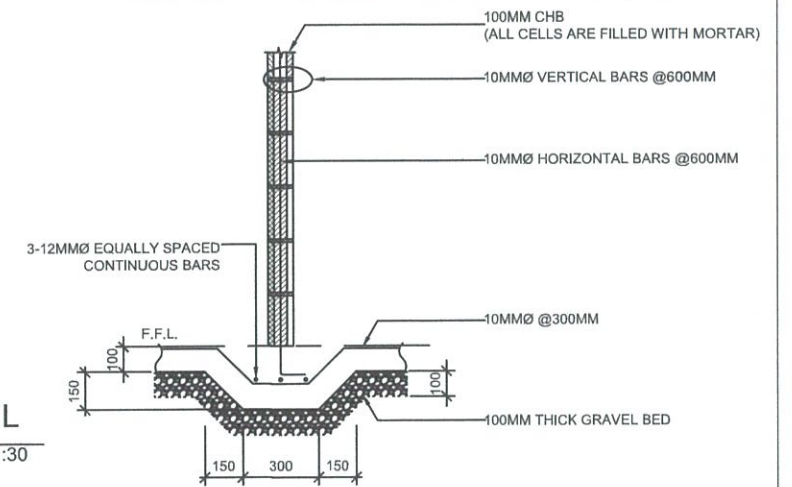
TYPICAL STAIR DETAIL

SCALE: 1:50



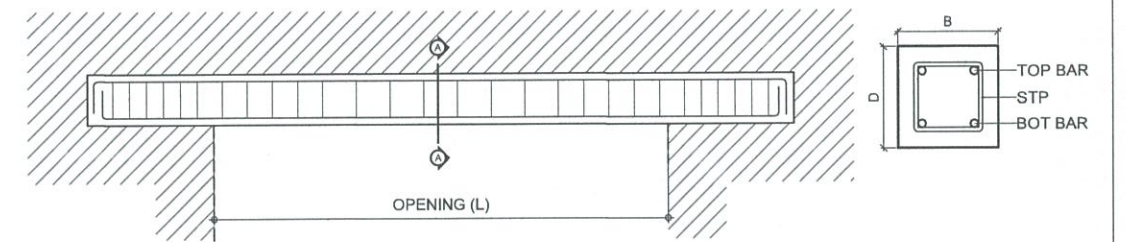
EXTERIOR WALL FOOTING DETAIL

SCALE: 1:30



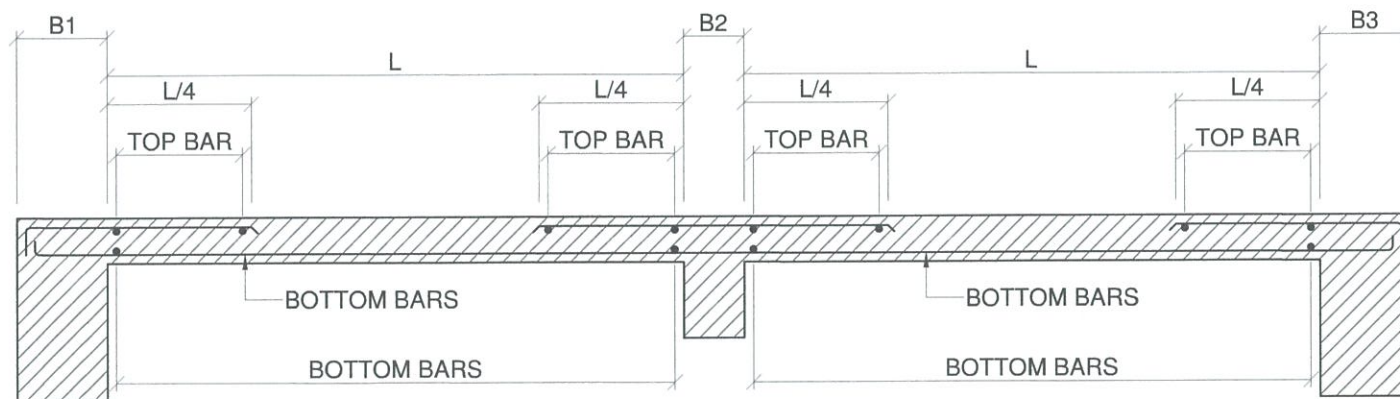
TYPICAL WALL FOOTING DETAIL

SCALE: 1:30



TYPICAL SLAB SECTION DETAIL

SCALE: NTS




TYPICAL SLAB SECTION DETAIL

SCALE: NTS

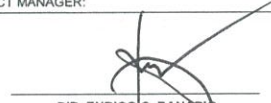
OPENING (L)	DIMENSION	REINFORCEMENT		
		TOP	BOTTOM	STIRRUPS
UP TO 1200 mm		2-10mm	2-10mm	8mm @ 180mm O.C.
UP TO 1200 mm (115mm THK WALL)		2-10mm	2-10mm	8mm @ 150mm O.C.
1300 mm TO 1650mm		2-10mm	3-10mm	8mm @ 180mm O.C.
1800 mm TO 2100mm		2-10mm	3-12mm	8mm @ 180mm O.C.
2250 mm TO 2700mm		2-10mm	2-16mm	8mm @ 200mm O.C.
MAIN CANOPY LB-1	SEE LB-1 AT BEAM SCHEDULE (2F)			


FOR APPROVAL PLANS OF REGIONAL TVET INNOVATION CENTERS (RTICs) 2023

PROJECT OWNER:  
  
**TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY**  
MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road SLEX, Taguig City

PROJECT TITLE:  
**PROPOSED TESDA SFIST INNOVATION CENTER**  
LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY, SAN FRANCISCO, MALABON, ALABAY CITY

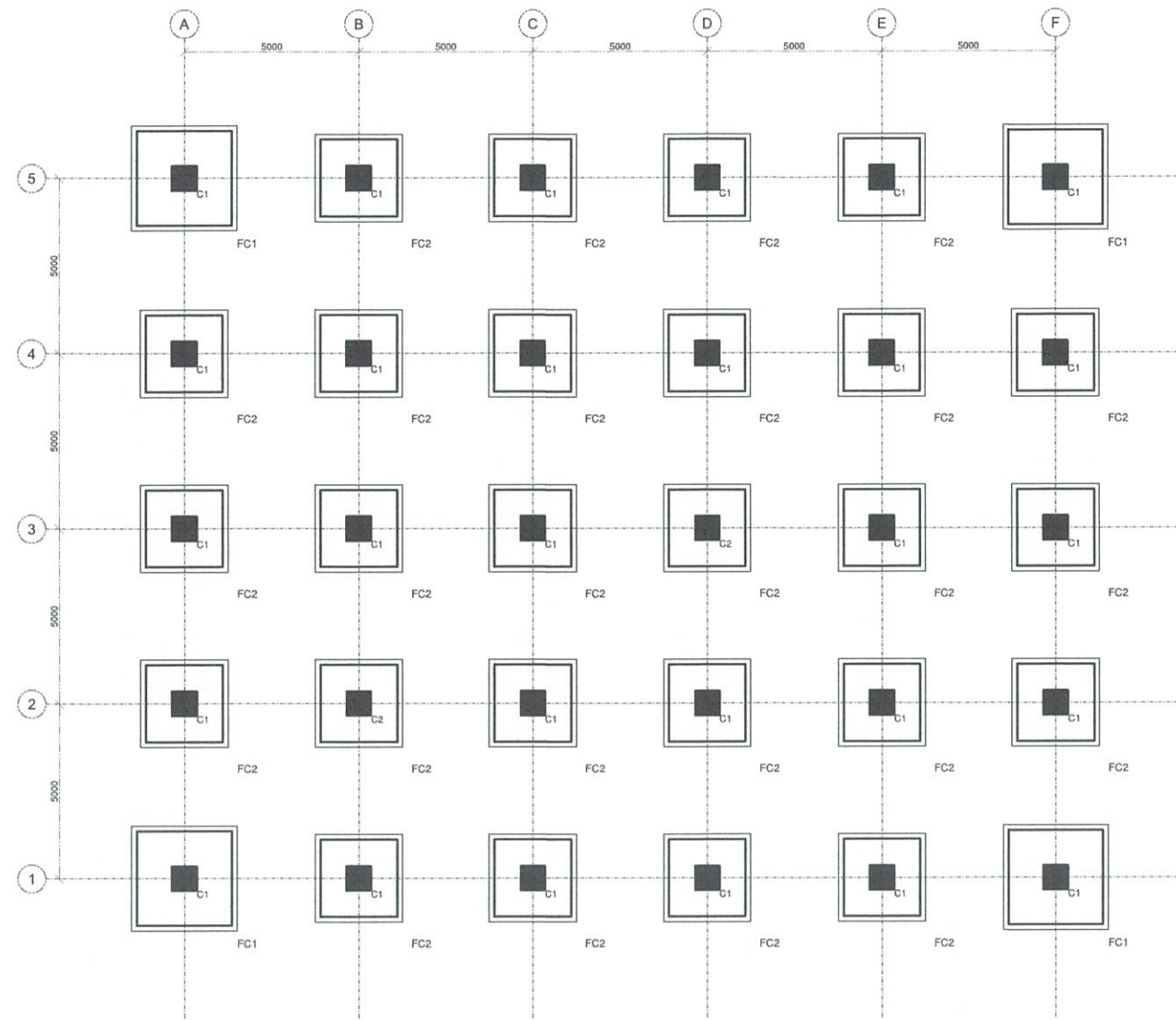
CIVIL ENGINEER:  
  
**ENGR. ENRIQUE G. DELA TORRE**  
 PMU-SIPTVETS  
 ENGINEERING SECTION

PROJECT MANAGER:  
  
**DIR. ENRICO C. BANARUA**  
 PMU-SIPTVETS

PROJECT DIRECTOR:  
  
**SEC. SUHARTO T. MANGUDATU, Ph.D.**  
 PMU-SIPTVETS  
 SECRETARY, TESDA

SHEET CONTENTS:  
 TYPICAL STAIR DETAIL  
 TYPICAL SLAB SECTION DETAIL  
 LINTEL BEAM DETAIL

SHEET NO.  
**S-7**



**FOUNDATION PLAN**  
 SCALE: \_\_\_\_\_ 1:200 MTS

**FOR APPROVAL PLANS OF  
REGIONAL TVET INNOVATION  
CENTERS (RTICs) 2023**

PROJECT OWNER:

**TECHNICAL EDUCATION  
AND  
SKILLS DEVELOPMENT  
AUTHORITY**

MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road SLEX, Taguig City.

PROJECT TITLE:

**PROPOSED TESDA SFIST  
INNOVATION CENTER**

LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY  
SAN FRANCISCO, MARIKINA CITY

CIVIL ENGINEER:

ENGR. ENRIQUE G. DELA TORRE  
PMU-SIPTVETS  
ENGINEERING SECTION

PROJECT MANAGER:

DIR. ENRICO C. BANARID  
PMU-SIPTVETS

PROJECT DIRECTOR:

SEC. SUHARTO T. MANGUDATU, Ph.D.  
PMU-SIPTVETS  
SECRETARY, TESDA

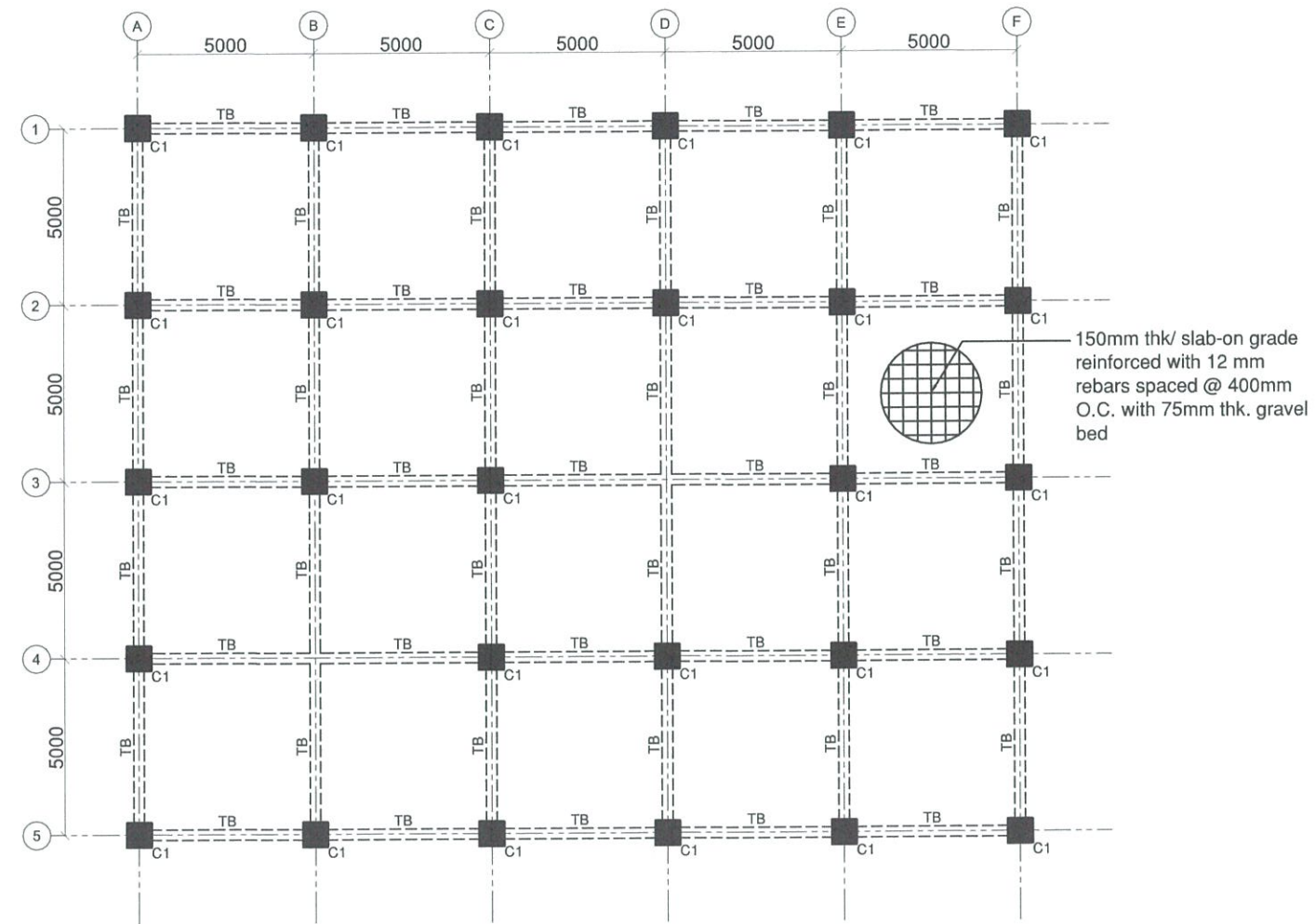
SHEET CONTENTS:

FOOTING SCHEDULE

SHEET NO.

**S-8**





GROUND FLOOR FRAMING PLAN  
SCALE: 1:200 MTS


FOR APPROVAL PLANS OF  
REGIONAL TVET INNOVATION  
CENTERS (RTICs) 2023

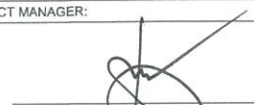
PROJECT OWNER:  
 TECHNICAL EDUCATION  
AND  
SKILLS DEVELOPMENT  
AUTHORITY


MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road BLEX, Taguig City.

PROJECT TITLE:  
PROPOSED TESDA SFIST  
INNOVATION CENTER

LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY  
SAN FRANCISCO, MALABON CITY

CIVIL ENGINEER:  
  
ENGR. ENRIQUE G. DELA TORRE  
PMU-SIPTVETS  
ENGINEERING SECTION

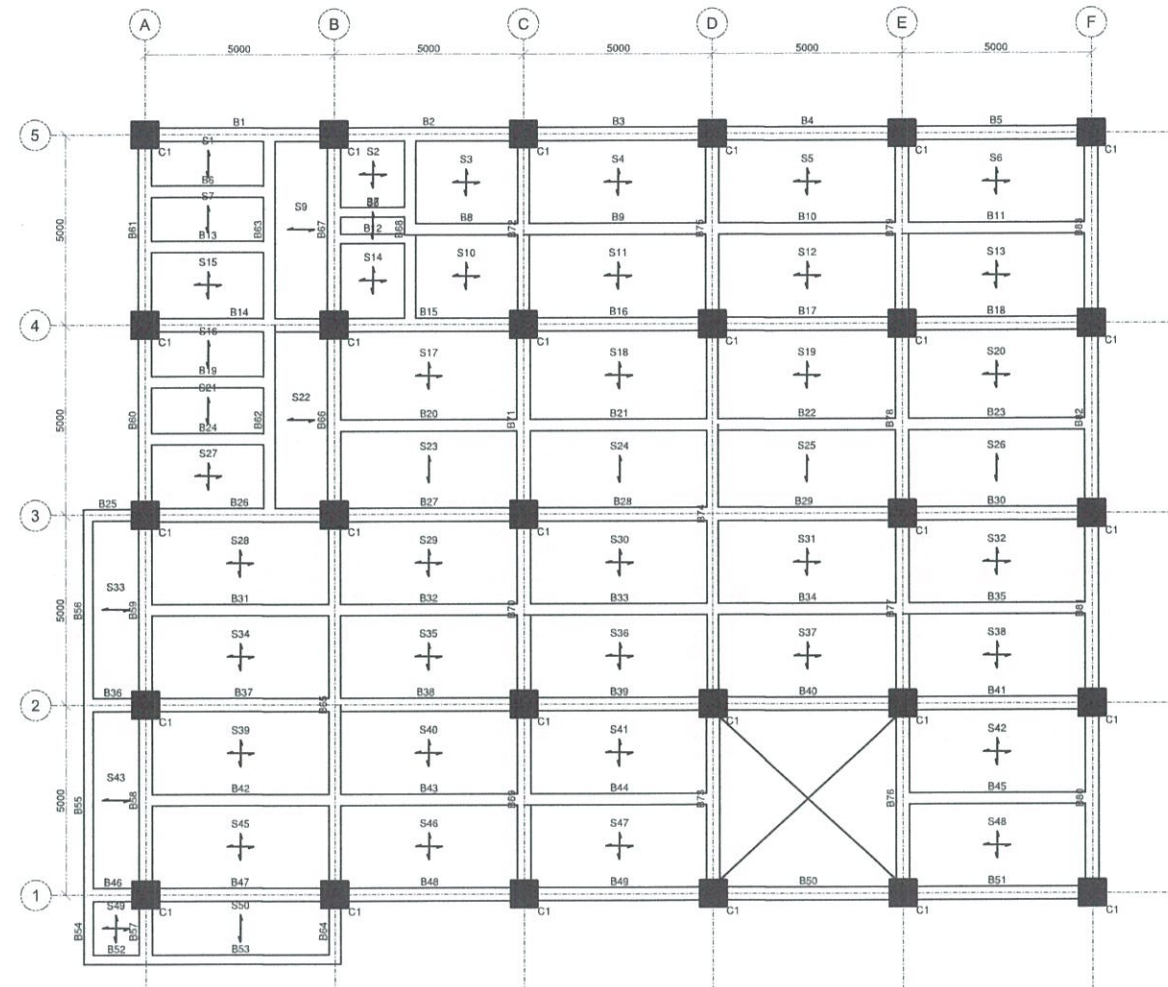
PROJECT MANAGER:  
  
DIR. ENRICO C. BANANO  
PMU-SIPTVETS

PROJECT DIRECTOR:  
  
SEC. SUHARTO T. MANGUDADATU, Ph.D.  
PMU-SIPTVETS  
SECRETARY, TESDA

SHEET CONTENTS:  
GROUND FLOOR FRAMING PLAN

SHEET NO.

S-9



**SECOND FLOOR FRAMING PLAN**  
 SCALE: 1:200 MTS

**FOR APPROVAL PLANS OF  
REGIONAL TVET INNOVATION  
CENTERS (RTICs) 2023**

PROJECT OWNER:

**TECHNICAL EDUCATION  
AND  
SKILLS DEVELOPMENT  
AUTHORITY**

MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road SLEX, Taguig City.

PROJECT TITLE:

**PROPOSED TESDA SFIST  
INNOVATION CENTER**

LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY  
SAN FRANCISCO, MALABON/OT, ALABAY CITY.

CIVIL ENGINEER:

**ENGR. ENRIQUE G. DELA TORRE**  
PMU-SIPTVETS  
ENGINEERING SECTION

PROJECT MANAGER:

**DIR. ENRICC C. BANARIO**  
PMU-SIPTVETS

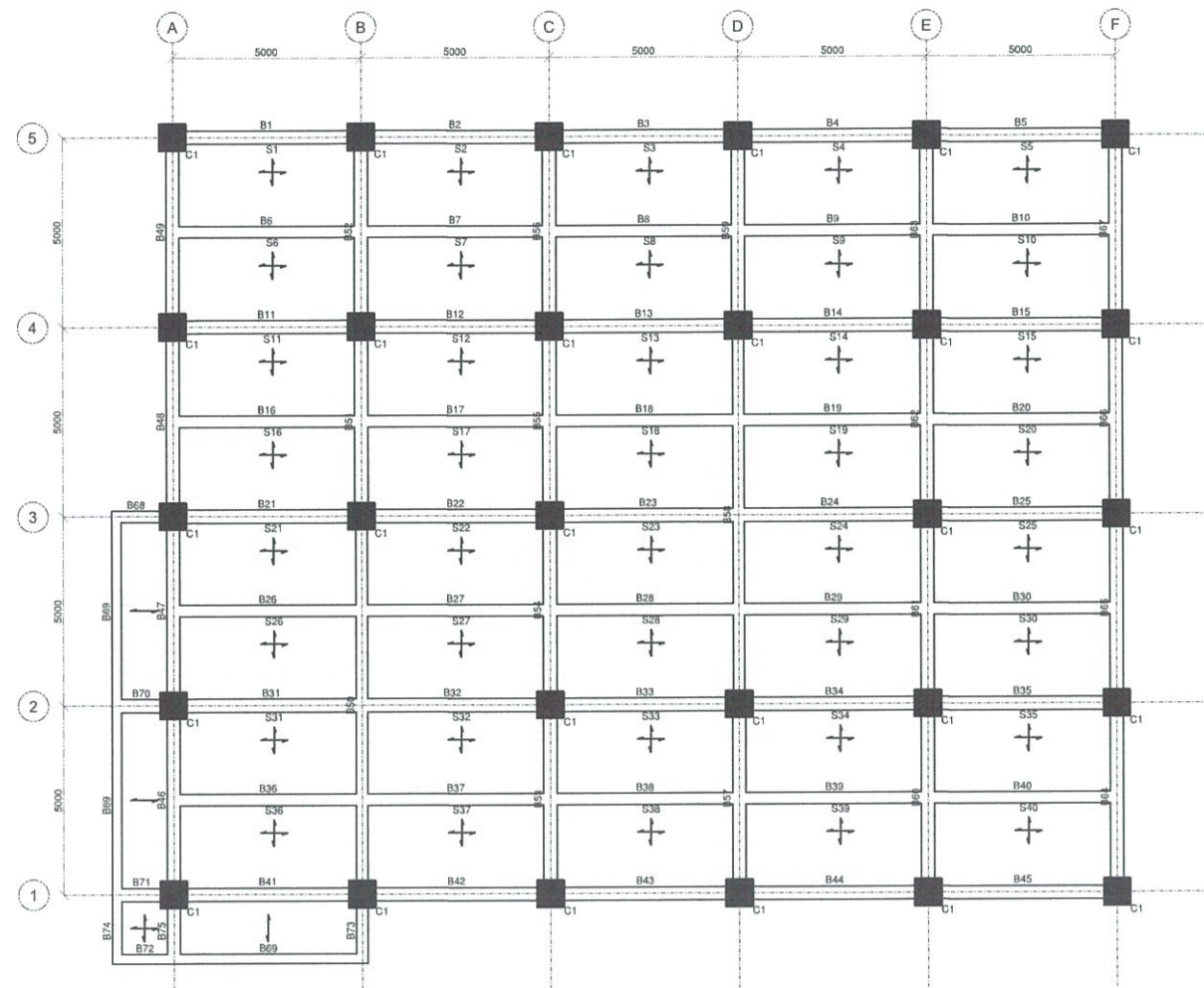
PROJECT DIRECTOR:

**SEC. SUHARTO T. MANGUDADATU, Ph.D.**  
PMU-SIPTVETS  
SECRETARY, TESDA

SHEET CONTENTS:  
SECOND FLOOR FRAMING PLAN

SHEET NO.  
**S-10**





ROOF DECK FLOOR FRAMING PLAN  
SCALE: 1:200 MTS

FOR APPROVAL PLANS OF  
REGIONAL TVET INNOVATION  
CENTERS (RTICs) 2023



MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road BLEX, Taguig City

PROJECT TITLE:  
**PROPOSED TESDA SFIST  
INNOVATION CENTER**

LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY  
SAN FRANCISCO, MUALAPOT, ALBAY CITY

CIVIL ENGINEER:  
  
**ENGR. ENRIQUE G. DELA TORRE**  
PMU-SIPTVETS  
ENGINEERING SECTION

PROJECT MANAGER:  
  
**DIR. ENRICO C. BANARIG**  
PMU-SIPTVETS

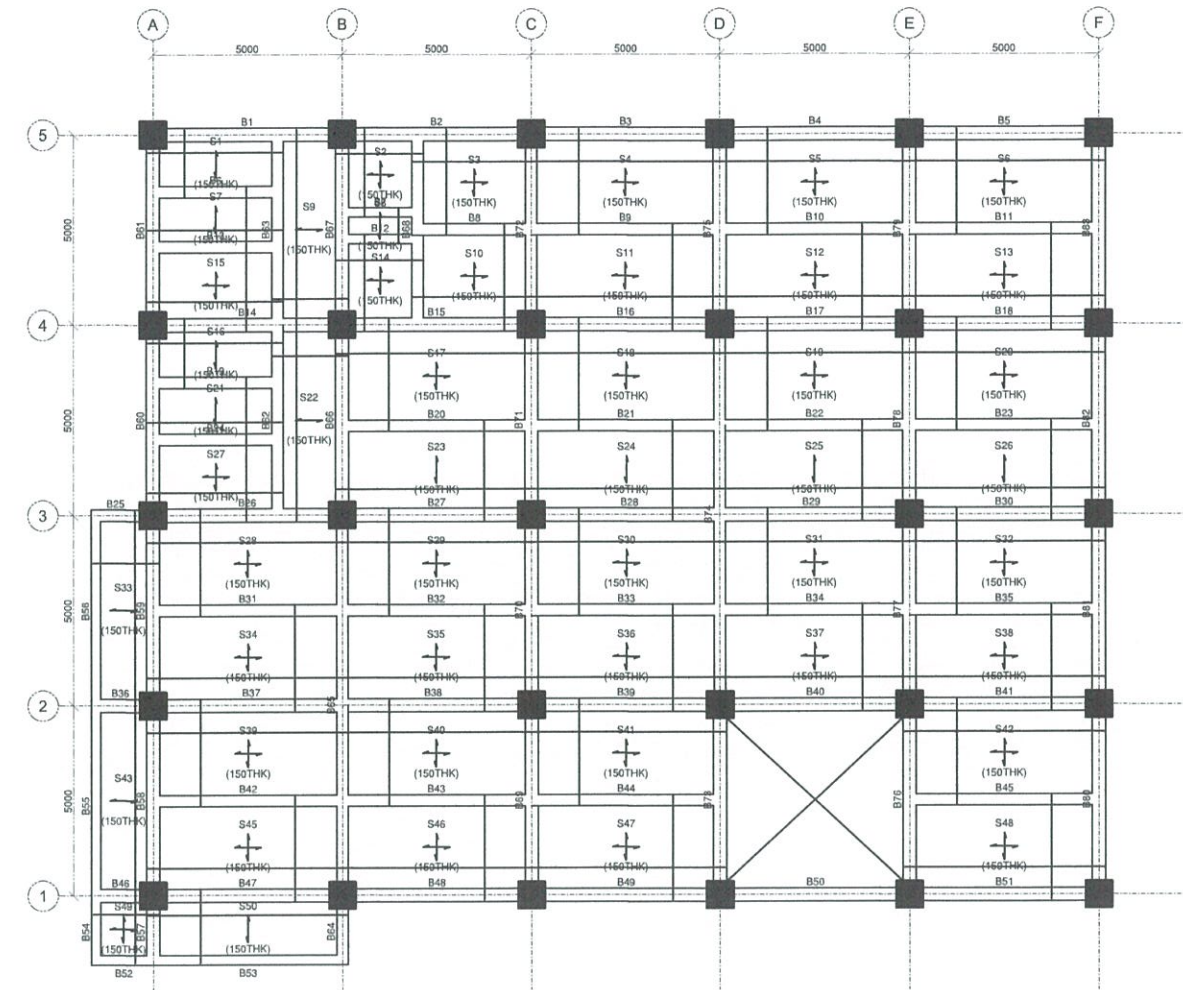
PROJECT DIRECTOR:  
  
**SEC. SUHARTO T. MANGUDATU, Ph.D.**  
PMU-SIPTVETS  
SECRETARY, TESDA

SHEET CONTENTS:  
ROOF DECK FLOOR FRAMING PLAN

SHEET NO.  
**S-11**

SLAB SCHEDULE (C28 : FY275) (LEVEL : 5.6M)

SLAB MARKED	SLAB THICKNESS	BOTTOM REINFORCEMENT		TOP REINFORCEMENT				DISTRIBUTION
		ALONG SHORT SPAN	ALONG LONG SPAN	OVER LONG SUPPORT		OVER SHORT SUPPORT		
		FULL LENGTH	FULL LENGTH	CONTINUOUS SUPPORT	END SUPPORT	CONTINUOUS SUPPORT	END SUPPORT	
S1, S33, S43 S50	150	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	---	Ø12 @ 225 C/C	Ø12 @ 225 C/C
S2, S13, S15 S20, S27, S32 S38, S41	150	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	---	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C
S3, S4, S5, S6 S37, S46, S47 S49	150	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C
S7, S8, S9, S16 S21, S22, S23 S24, S25, S26	150	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	---	---	Ø12 @ 225 C/C	Ø12 @ 225 C/C
S10, S11, S12 S14, S17, S18 S19, S28, S29 S30, S31, S34 S35, S36, S39 S40, S45	150	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	---	Ø12 @ 225 C/C	---	Ø12 @ 225 C/C
S42	150	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	---	---	Ø12 @ 225 C/C	Ø12 @ 225 C/C
S48	150	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	---	Ø12 @ 225 C/C	Ø12 @ 225 C/C



SCALE:  SLAB SCHEDULE - 5.6M  
NTS

SCALE:  BOTTOM REINFORCEMENT LAYOUT - 5.6 M  
1:200 MTS

**FOR APPROVAL PLANS OF  
REGIONAL TVET INNOVATION  
CENTERS (RTICs) 2023**

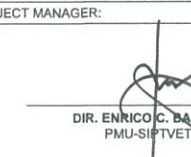



MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road SLEX, Taguig City

PROJECT TITLE:  
**PROPOSED TESDA SFIST  
INNOVATION CENTER**

LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY  
SAN FRANCISCO, MALABON, ALABAY CITY

CIVIL ENGINEER:  
  
**ENGR. ENRIQUE G. DELA TORRE**  
PMU-SIPTVETS  
ENGINEERING SECTION

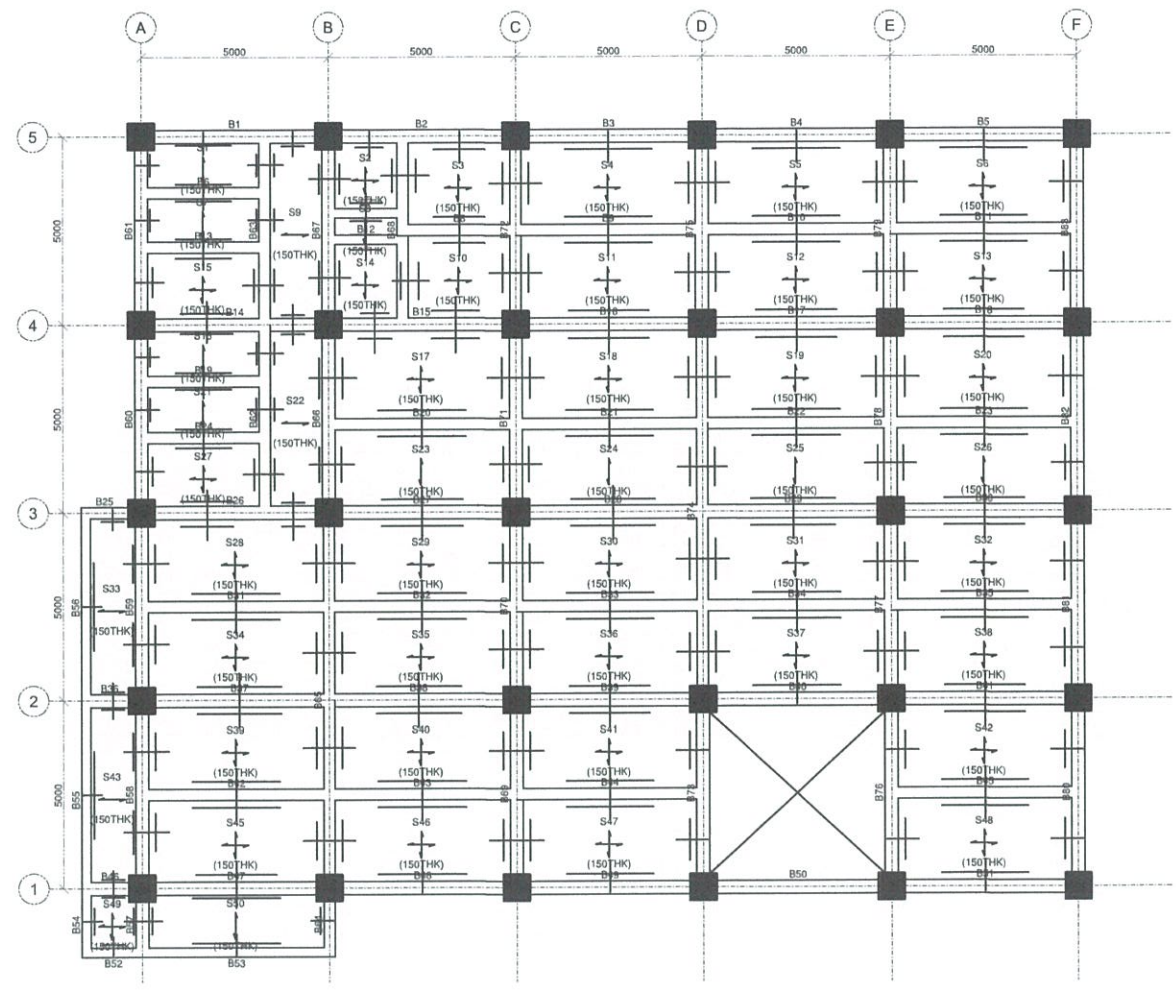
PROJECT MANAGER:  
  
**DIR. ENRICO C. BANARIO**  
PMU-SIPTVETS

PROJECT DIRECTOR:  
  
**SEC. SUHARTO T. MANGUDADATU, Ph.D.**  
PMU-SIPTVETS  
SECRETARY, TESDA


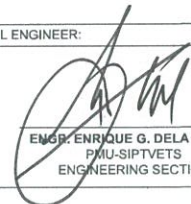


SHEET CONTENTS:  
SLAB SCHEDULE - 5.6M  
BOTTOM REINFORCEMENT  
LAYOUT - 5.6M

SHEET NO.  
**S-12**



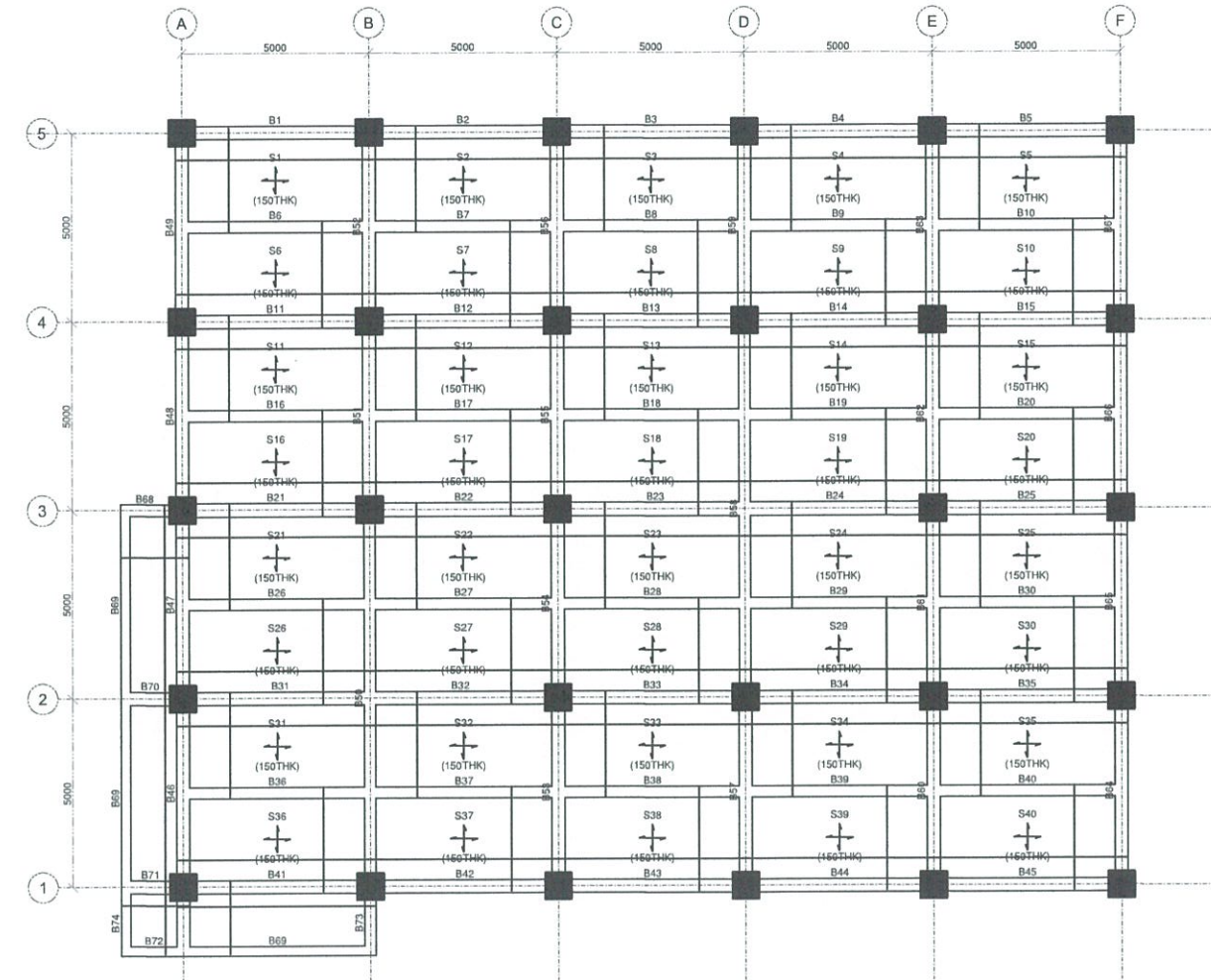



**TOP REINFORCEMENT LAYOUT - 5.6 M**  
 SCALE: 1:200 MTS

<p><b>FOR APPROVAL PLANS OF REGIONAL TVET INNOVATION CENTERS (RTICs) 2023</b></p>	<p>PROJECT OWNER:</p>  <p><b>TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY</b></p> <p><small>MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road BLEX, Taguig City</small></p>	<p>PROJECT TITLE:</p> <p><b>PROPOSED TESDA SFIST INNOVATION CENTER</b></p> <p><small>LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY SAN FRANCISCO, MINEPOST, ALABAY CITY</small></p>	<p>CIVIL ENGINEER:</p>  <p><b>ENGR. ENRIQUE G. DELA TORRE</b> PMU-SIPTVETS ENGINEERING SECTION</p>	<p>PROJECT MANAGER:</p>  <p><b>DIR. ENRICO C. BANARIO</b> PMU-SIPTVETS</p>	<p>PROJECT DIRECTOR:</p>  <p><b>SEC. SUHARTO T. MANGUDATU, Ph.D.</b> PMU-SIPTVETS SECRETARY, TESDA</p>	<p>SHEET CONTENTS:</p> <p>TOP REINFORCEMENT LAYOUT - 5.6M</p>	<p>SHEET NO.</p> <p><b>S-13</b></p>
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SLAB SCHEDULE (C28 : FY275) (LEVEL : 9.2M)

SLAB MARKED	SLAB THICKNESS	BOTTOM REINFORCEMENT		TOP REINFORCEMENT				DISTRIBUTION
		ALONG SHORT SPAN	ALONG LONG SPAN	OVER LONG SUPPORT		OVER SHORT SUPPORT		
		FULL LENGTH	FULL LENGTH	CONTINUOUS SUPPORT	END SUPPORT	CONTINUOUS SUPPORT	END SUPPORT	
S1, S2, S3, S4 S5, S36, S37 S38, S39, S40	150	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C
S6, S10, S11 S15, S16, S20 S21, S25, S26 S30, S31, S35	150	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	---	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C
S7, S8, S9, S12 S13, S14, S17 S18, S19, S22 S23, S24, S27 S28, S29, S32 S33, S34	150	Ø12 @ 225 C/C	Ø12 @ 225 C/C	Ø12 @ 225 C/C	---	Ø12 @ 225 C/C	---	Ø12 @ 225 C/C



SLAB SCHEDULE - 9.2 M  
SCALE: \_\_\_\_\_ NTS

BOTTOM REINFORCEMENT LAYOUT - 9.2 M  
SCALE: \_\_\_\_\_ 1:200 MTS

**FOR APPROVAL PLANS OF  
REGIONAL TVET INNOVATION  
CENTERS (RTICs) 2023**



MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road BLDG. Taguig City

PROJECT TITLE:  
**PROPOSED TESDA SFIST  
INNOVATION CENTER**

LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY  
SAN FRANCISCO, MALABON CITY

CIVIL ENGINEER:  
  
ENGR. ENRIQUE G. DELA TORRE  
PMU-SIPTVETS  
ENGINEERING SECTION

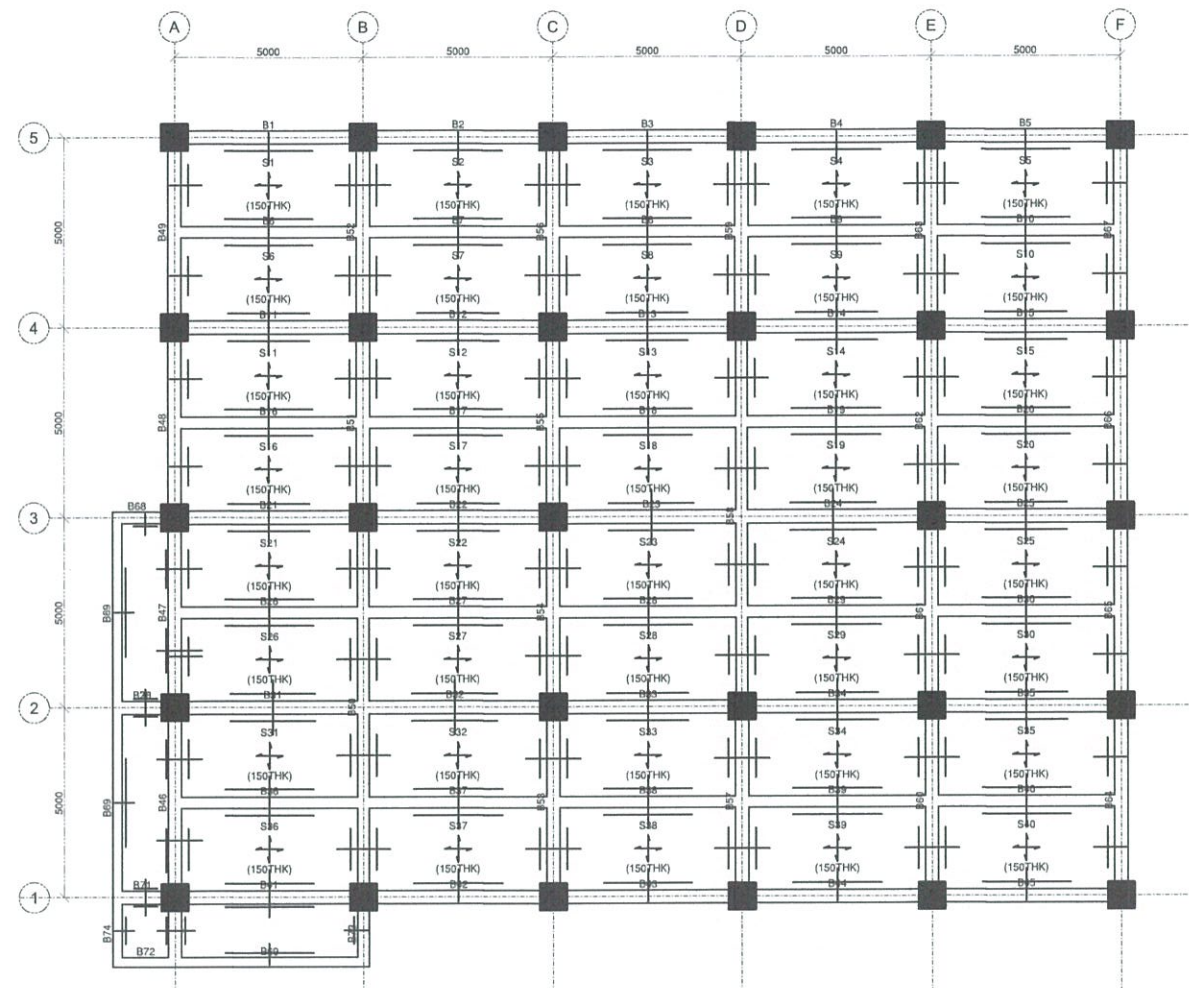
PROJECT MANAGER:  
  
DIR. ENRICO C. BANARIO  
PMU-SIPTVETS

PROJECT DIRECTOR:  
  
SEC. SUHARTO T. MANGUDATU, Ph.D.  
PMU-SIPTVETS  
SECRETARY, TESDA

SHEET CONTENTS:  
SLAB SCHEDULE 9.2  
BOTTOM REINFORCEMENT  
LAYOUT -9.2M

SHEET NO.  
**S-14**






**TOP REINFORCEMENT LAYOUT - 9.2 M**  
 SCALE: \_\_\_\_\_ 1:200 MTS

**FOR APPROVAL PLANS OF  
REGIONAL TVET INNOVATION  
CENTERS (RTICs) 2023**


PROJECT OWNER:  

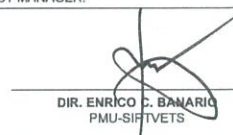
**TECHNICAL EDUCATION  
AND  
SKILLS DEVELOPMENT  
AUTHORITY**


MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road SLEX, Taguig City.

PROJECT TITLE:  
**PROPOSED TESDA SFIST  
INNOVATION CENTER**

LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY  
SAN FRANCISCO, MALUPBOT, ALAY CITY.

CIVIL ENGINEER:  
  
**ENGR. ENRIQUE G. DELA TORRE**  
 PMU-SIPTVETS  
 ENGINEERING SECTION

PROJECT MANAGER:  
  
**DIR. ENRICO P. BANARIO**  
 PMU-SIPTVETS

PROJECT DIRECTOR:  
  
**SEC. SUHARTO T. MANGUDADATU, Ph.D.**  
 PMU-SIPTVETS  
 SECRETARY, TESDA

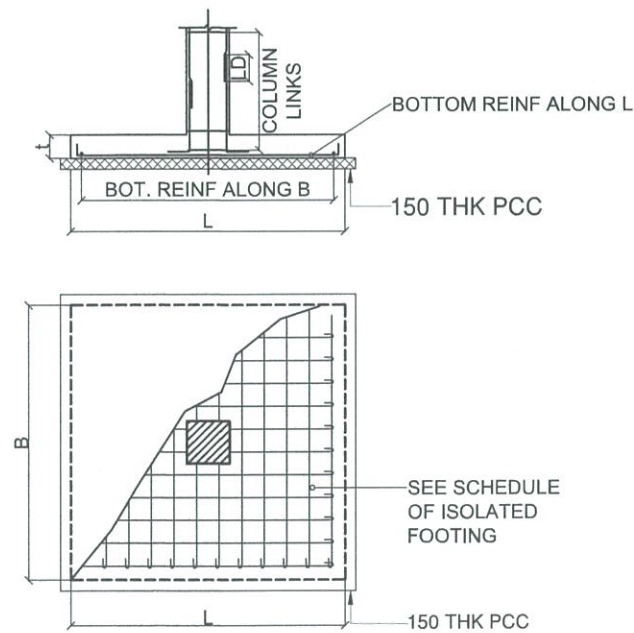
SHEET CONTENTS:  
 TOP REINFORCEMENT LAYOUT  
 - 9.2M

SHEET NO.  
**S-15**

FOOTING SCHEDULE (C28:Fy414)

FOOTING NUMBERS	COLUMN NUMBERS	FOOTING TYPE	FOOTING DIMENSION			FOOTING REINFORCEMENT	
			L	B	D	BOTTOM	
						ALONG B	ALONG L
FC1	C1	Pad	3000	3000	350	#25@300 C/C	#25@300 C/C
FC2	C1,C2	Pad	2500	2500	350	#25@300 C/C	#25@300 C/C

FOOTING SCHEDULE  
SCALE: \_\_\_\_\_ NTS



ISOLATED FOOTING DETAIL  
SCALE: \_\_\_\_\_ NTS

5.6M	C28 : Fy414 , COVER = 50MM CONFINING ZONE = 700 MM		C28 : Fy414 , COVER = 50MM CONFINING ZONE = 700 MM	
TO	Z1 MAIN LINK Ø12 @ 150	Z1 OTHERS Ø10 @ 150	Z2 LINKS Ø10 @ 150	Z1 MAIN LINK Ø12 @ 150
9.2M				
TO	Z1 MAIN LINK Ø12 @ 150	Z1 OTHERS Ø10 @ 150	Z2 LINKS Ø10 @ 150	Z1 MAIN LINK Ø12 @ 150
2.4M	C28 : Fy414 , COVER = 50MM CONFINING ZONE = 700 MM		C28 : Fy414 , COVER = 50MM CONFINING ZONE = 700 MM	
TO	Z1 MAIN LINK Ø12 @ 150	Z1 OTHERS Ø10 @ 150	Z2 LINKS Ø10 @ 150	Z1 MAIN LINK Ø12 @ 150
0M	C28 : Fy414 , COVER = 50MM CONFINING ZONE = 700 MM		C28 : Fy414 , COVER = 50MM CONFINING ZONE = 700 MM	
TO	Z1 MAIN LINK Ø12 @ 150	Z1 OTHERS Ø10 @ 150	Z2 LINKS Ø10 @ 150	Z1 MAIN LINK Ø12 @ 150
2.4M				
TO	Z1 MAIN LINK Ø12 @ 150	Z1 OTHERS Ø10 @ 150	Z2 LINKS Ø10 @ 150	Z1 MAIN LINK Ø12 @ 150
COLUMN MARKED	C1		C2	

COLUMN AND WALL SCHEDULE

(SCALE 1:25)

NOTES:

1. BE = BOUNDARY ELEMENT AS PER ACI 318M - 2014. PROVIDE CONFINING REINFORCEMENT ACROSS ENTIRE HEIGHT OF WALL IN THE BOUNDARY ELEMENT
2. Z1 = SPECIAL CONFINING ZONE AS PER ACI 318M - 2014. Z2 = REMAINING ZONES AS PER ACI 318M - 2014

COLUMN AND WALL SCHEDULE  
SCALE: \_\_\_\_\_ NTS

FOR APPROVAL PLANS OF  
REGIONAL TVET INNOVATION  
CENTERS (RTICs) 2023

PROJECT OWNER:  
 TECHNICAL EDUCATION  
AND  
SKILLS DEVELOPMENT  
AUTHORITY  
MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road BLEX, Taguig City

PROJECT TITLE:  
PROPOSED TESDA SFIST  
INNOVATION CENTER  
LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY  
SAN FRANCISCO, MUNICIPALITY, ALBAY CITY

CIVIL ENGINEER:  
  
ENGR. ENRIQUE G. DELA TORRE  
PMU-SIPTVETS  
ENGINEERING SECTION

PROJECT MANAGER:  
  
DIR. ENRICO C. BANAROD  
PMU-SIPTVETS

PROJECT DIRECTOR:  
  
SEC. SUHARTO T. MANGUDADATU, Ph.D.  
PMU-SIPTVETS  
SECRETARY, TESDA

SHEET CONTENTS:  
ISOLATED FOOTING DETAIL  
COLUMN SCHEDULE

SHEET NO.  
**S-16**



BEAM SCHEDULE (C28:Fy414) (LEVEL: 2.4m)

BEAM NUMBERS	SIZE		BOTTOM REINFORCEMENT			TOP REINFORCEMENT			SHEAR STIRRUPS		
	B	D	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT
TB	300	500	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	11-2L-Ø10@105 C/C	10-2L-Ø10@215 C/C	11-2L-Ø10@105 C/C

BEAM SCHEDULE (C28:Fy414) (LEVEL: 5.6m)


BEAM NUMBERS	SIZE		BOTTOM REINFORCEMENT			TOP REINFORCEMENT			SHEAR STIRRUPS			SFR	REMARKS
	B	D	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT		
B1,B2,B58,B59,B60,B61,B66,B67,B73,B76,B78,B80,B81,B83	350	600	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	11-2L-Ø10@130 C/C	9-2L-Ø10@200 C/C	11-2L-Ø10@130 C/C	2-Ø16EF	-
B3,B4,B5,B47,B48,B49,B50,B51,B75,B77,B79,B82	350	600	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	11-2L-Ø10@130 C/C	9-2L-Ø10@200 C/C	11-2L-Ø10@130 C/C	-	-
B6,B13,B19,B24	300	500	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	8-2L-Ø10@165 C/C	6-2L-Ø10@165 C/C	8-2L-Ø10@165 C/C	-	-
B7,B12	250	300	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	7-2L-Ø10@100 C/C	5-2L-Ø10@100 C/C	7-2L-Ø10@100 C/C	-	-
B8	300	500	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	7-2L-Ø10@165 C/C	5-2L-Ø10@165 C/C	7-2L-Ø10@165 C/C	-	-
B9,B10,B11,B20,B21,B22,B23,B31,B32,B33,B34,B35,B42,B43,B44,B45,B62,B63	300	500	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	11-2L-Ø10@165 C/C	9-2L-Ø10@165 C/C	11-2L-Ø10@165 C/C	-	-
B14	350	600	3-Ø25	3-Ø25	3-Ø25	4-Ø25	4-Ø25	4-Ø25	11-2L-Ø10@125 C/C	14-2L-Ø10@135 C/C	12-2L-Ø10@110 C/C	-	-
B15,B26	350	600	3-Ø25	3-Ø25	3-Ø25	4-Ø25	4-Ø25	4-Ø25	11-2L-Ø10@130 C/C	9-2L-Ø10@200 C/C	11-2L-Ø10@130 C/C	2-Ø16EF	-
B16,B17,B18,B40,B41,B69,B70	350	600	3-Ø25	3-Ø25	3-Ø25	4-Ø25	4-Ø25	4-Ø25	11-2L-Ø10@130 C/C	9-2L-Ø10@200 C/C	11-2L-Ø10@130 C/C	-	-
B25	300	500	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	4-2L-Ø10@165 C/C	2-2L-Ø10@165 C/C	4-2L-Ø10@165 C/C	1-Ø16EF	CANTILEVERED
B27	350	600	3-Ø25	3-Ø25	3-Ø25	4-Ø25	4-Ø25	4-Ø25	11-2L-Ø10@130 C/C	9-2L-Ø10@200 C/C	11-2L-Ø10@120 C/C	-	-
B28,B37	350	600	3-Ø25	3-Ø25	3-Ø25	4-Ø25	4-Ø25	4-Ø25	9-2L-Ø10@200 C/C	7-2L-Ø10@200 C/C	9-2L-Ø10@200 C/C	-	-
B29,B38	350	600	3-Ø25	3-Ø25	3-Ø25	4-Ø25	4-Ø25	4-Ø25	9-2L-Ø10@200 C/C	7-2L-Ø10@200 C/C	9-2L-Ø10@200 C/C	-	-
B30,B39	350	600	3-Ø25	3-Ø25	3-Ø25	4-Ø25	4-Ø25	4-Ø25	11-2L-Ø10@120 C/C	9-2L-Ø10@200 C/C	11-2L-Ø10@130 C/C	-	-
B36	350	600	3-Ø25	3-Ø25	3-Ø25	4-Ø25	4-Ø25	4-Ø25	3-2L-Ø10@200 C/C	1-2L-Ø10@200 C/C	3-2L-Ø10@200 C/C	2-Ø16EF	CANTILEVERED
B46	350	600	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-2L-Ø10@200 C/C	1-2L-Ø10@200 C/C	3-2L-Ø10@200 C/C	2-Ø16EF	CANTILEVERED
B52	250	300	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	6-2L-Ø10@100 C/C	4-2L-Ø10@100 C/C	6-2L-Ø10@100 C/C	1-Ø16EF	CANTILEVERED
B53,B55,B56	250	300	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	17-2L-Ø10@100 C/C	15-2L-Ø10@100 C/C	17-2L-Ø10@100 C/C	-	-
B54	250	300	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	6-2L-Ø10@100 C/C	4-2L-Ø10@100 C/C	6-2L-Ø10@100 C/C	1-Ø16EF	-
B57	350	600	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	4-2L-Ø10@200 C/C	2-2L-Ø10@200 C/C	4-2L-Ø10@200 C/C	2-Ø16EF	CANTILEVERED
B64	300	500	2-Ø25	2-Ø25	2-Ø25	3-Ø25	3-Ø25	3-Ø25	4-2L-Ø10@165 C/C	2-2L-Ø10@165 C/C	4-2L-Ø10@165 C/C	1-Ø16EF	CANTILEVERED
B65	300	500	3-Ø25	2-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	11-2L-Ø10@105 C/C	44-2L-Ø10@165 C/C	11-2L-Ø10@105 C/C	-	-
B68	300	500	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	11-2L-Ø10@165 C/C	9-2L-Ø10@165 C/C	11-2L-Ø10@165 C/C	1-Ø16EF	-
B71	350	600	3-Ø25	3-Ø25	3-Ø25	4-Ø25	4-Ø25	4-Ø25	11-2L-Ø10@125 C/C	9-2L-Ø10@200 C/C	11-2L-Ø10@120 C/C	-	-
B72	300	500	2-Ø25	2-Ø25	2-Ø25	3-Ø25	3-Ø25	3-Ø25	11-2L-Ø10@105 C/C	13-2L-Ø10@165 C/C	11-2L-Ø10@105 C/C	-	-
B74	300	500	2-Ø25	2-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	11-2L-Ø10@105 C/C	44-2L-Ø10@165 C/C	11-2L-Ø10@105 C/C	-	-

BEAM SCHEDULE (C28:Fy414) (LEVEL: 9.2m)


BEAM NUMBERS	SIZE		BOTTOM REINFORCEMENT			TOP REINFORCEMENT			SHEAR STIRRUPS			SFR	REMARKS
	B	D	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT		
B1,B2,B3,B4,B5,B11,B12,B13,B14,B15,B41,B42,B43,B44,B45,B51,B52,B53,B54,B55,B56,B57,B59,B60,B61,B62,B63	350	600	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	11-2L-Ø10@130 C/C	9-2L-Ø10@200 C/C	11-2L-Ø10@130 C/C	-	-
B6,B8,B9,B10	300	500	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	11-2L-Ø10@165 C/C	9-2L-Ø10@165 C/C	11-2L-Ø10@165 C/C	-	-
B7	300	500	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	9-2L-Ø10@215 C/C	7-2L-Ø10@215 C/C	9-2L-Ø10@215 C/C	-	-
B16,B17,B20,B30,B38,B39,B40	300	500	2-Ø25	2-Ø25	2-Ø25	3-Ø25	3-Ø25	3-Ø25	11-2L-Ø10@165 C/C	9-2L-Ø10@165 C/C	11-2L-Ø10@165 C/C	-	-
B18,B19,B26,B27,B28,B29,B36,B37	300	500	2-Ø25	2-Ø25	2-Ø25	3-Ø25	3-Ø25	3-Ø25	11-2L-Ø10@165 C/C	9-2L-Ø10@165 C/C	11-2L-Ø10@165 C/C	1-Ø16EF	-
B21,B34,B35	350	600	3-Ø25	3-Ø25	3-Ø25	4-Ø25	4-Ø25	4-Ø25	11-2L-Ø10@130 C/C	9-2L-Ø10@200 C/C	11-2L-Ø10@130 C/C	-	-
B22	350	600	3-Ø25	3-Ø25	3-Ø25	4-Ø25	4-Ø25	4-Ø25	11-2L-Ø10@130 C/C	9-2L-Ø10@200 C/C	11-2L-Ø10@120 C/C	-	-
B23	350	600	3-Ø25	3-Ø25	3-Ø25	4-Ø25	4-Ø25	4-Ø25	9-2L-Ø10@200 C/C	7-2L-Ø10@200 C/C	9-2L-Ø10@200 C/C	-	-
B24	350	600	3-Ø25	3-Ø25	3-Ø25	4-Ø25	4-Ø25	4-Ø25	9-2L-Ø10@200 C/C	7-2L-Ø10@200 C/C	9-2L-Ø10@200 C/C	-	-
B25,B33	350	600	3-Ø25	3-Ø25	3-Ø25	4-Ø25	4-Ø25	4-Ø25	11-2L-Ø10@120 C/C	9-2L-Ø10@200 C/C	11-2L-Ø10@130 C/C	-	-
B31	350	600	4-Ø25	4-Ø25	4-Ø25	4-Ø25	4-Ø25	4-Ø25	9-2L-Ø10@190 C/C	7-2L-Ø10@200 C/C	9-2L-Ø10@200 C/C	-	-
B32	350	600	4-Ø25	4-Ø25	4-Ø25	4-Ø25	4-Ø25	4-Ø25	9-2L-Ø10@200 C/C	7-2L-Ø10@200 C/C	10-2L-Ø10@185 C/C	-	-
B46,B47,B48,B49,B64,B65,B66,B67	350	600	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	11-2L-Ø10@130 C/C	9-2L-Ø10@200 C/C	11-2L-Ø10@130 C/C	2-Ø16EF	-
B50	300	500	3-Ø25	2-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	11-2L-Ø10@105 C/C	47-2L-Ø10@155 C/C	11-2L-Ø10@105 C/C	-	-
B58	300	500	2-Ø25	2-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	11-2L-Ø10@105 C/C	44-2L-Ø10@165 C/C	11-2L-Ø10@105 C/C	-	-
B68	300	500	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	4-2L-Ø10@165 C/C	2-2L-Ø10@165 C/C	4-2L-Ø10@165 C/C	1-Ø16EF	CANTILEVERED
B69	250	300	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	17-2L-Ø10@100 C/C	15-2L-Ø10@100 C/C	17-2L-Ø10@100 C/C	-	-
B70	350	600	3-Ø25	3-Ø25	3-Ø25	4-Ø25	4-Ø25	4-Ø25	3-2L-Ø10@200 C/C	1-2L-Ø10@200 C/C	3-2L-Ø10@200 C/C	2-Ø16EF	CANTILEVERED
B71	350	600	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-2L-Ø10@200 C/C	1-2L-Ø10@200 C/C	3-2L-Ø10@200 C/C	2-Ø16EF	CANTILEVERED
B72	250	300	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	6-2L-Ø10@100 C/C	4-2L-Ø10@100 C/C	6-2L-Ø10@100 C/C	1-Ø16EF	-
B73	300	500	2-Ø25	2-Ø25	2-Ø25	3-Ø25	3-Ø25	3-Ø25	4-2L-Ø10@165 C/C	2-2L-Ø10@165 C/C	4-2L-Ø10@165 C/C	1-Ø16EF	-
B74	250	300	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	2-Ø25	6-2L-Ø10@100 C/C	4-2L-Ø10@100 C/C	6-2L-Ø10@100 C/C	1-Ø16EF	-
B75	350	600	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	3-Ø25	4-2L-Ø10@200 C/C	2-2L-Ø10@200 C/C	4-2L-Ø10@200 C/C	2-Ø16EF	CANTILEVERED

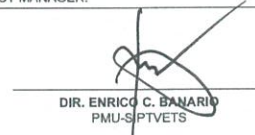
BEAM SCHEDULE  
SCALE: NTS


FOR APPROVAL PLANS OF REGIONAL TVET INNOVATION CENTERS (RTICs) 2023

PROJECT OWNER:  

**TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY**  
MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road BLEX, Taguig City.

PROJECT TITLE:  
**PROPOSED TESDA SFIST INNOVATION CENTER**  
LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY SAN FRANCISCO, MUNICIPALITY, ALBAY CITY.

CIVIL ENGINEER:  
  
**ENGR. ENRIQUE G. DELA TORRE**  
 PMU-SIPTVETS  
 ENGINEERING SECTION

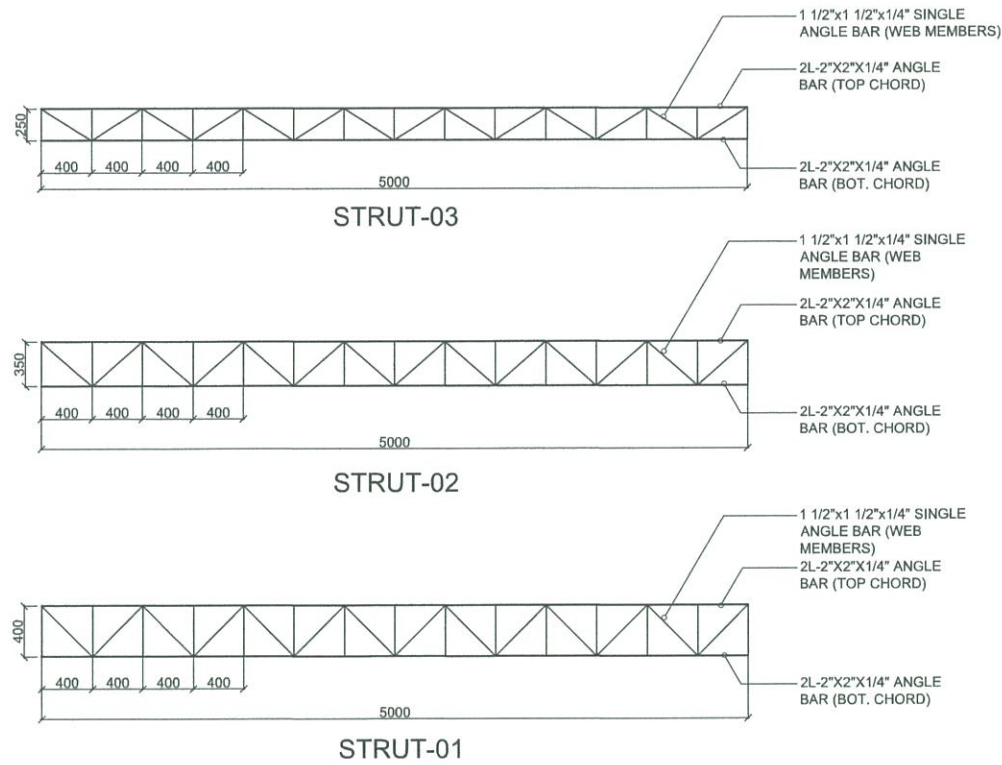
PROJECT MANAGER:  
  
**DIR. ENRIQUE C. BANARUN**  
 PMU-SIPTVETS

PROJECT DIRECTOR:  
  
**SEC. SUHARTO T. MANGUDATU, Ph.D.**  
 PMU-SIPTVETS  
 SECRETARY, TESDA

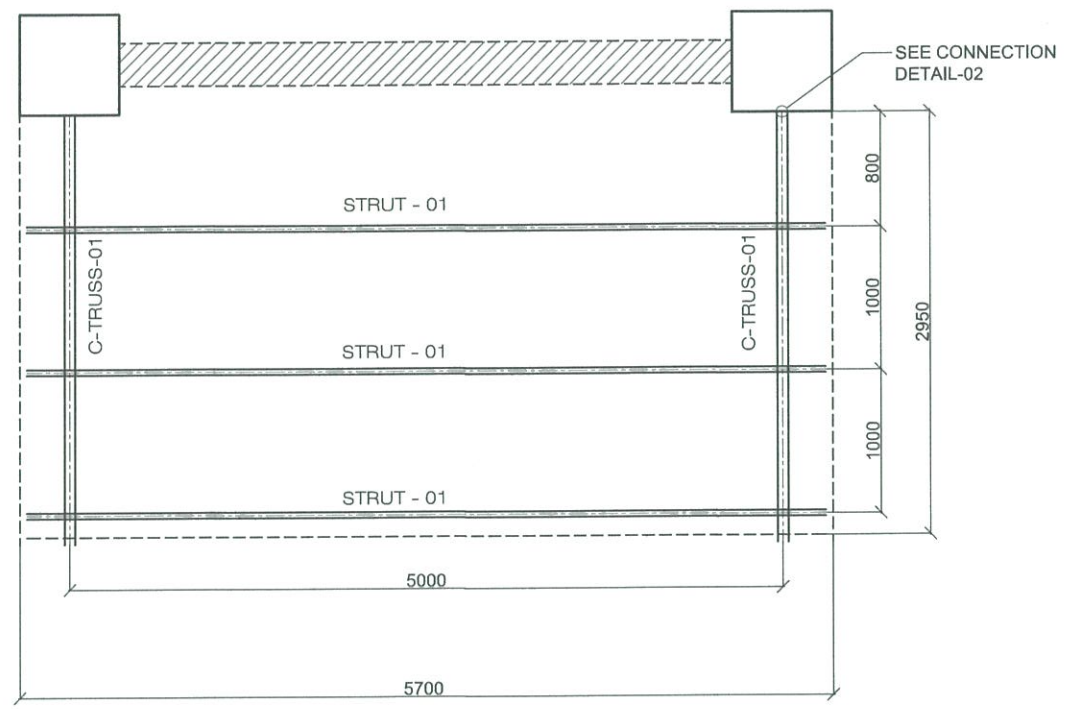
SHEET CONTENTS:  
 BEAM SCHEDULE

SHEET NO.  
**S-17**

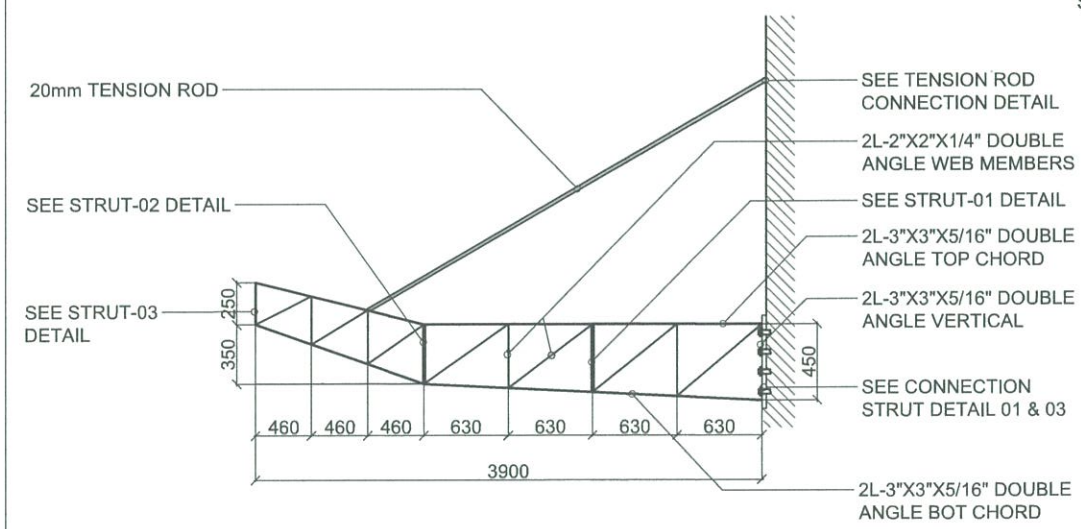
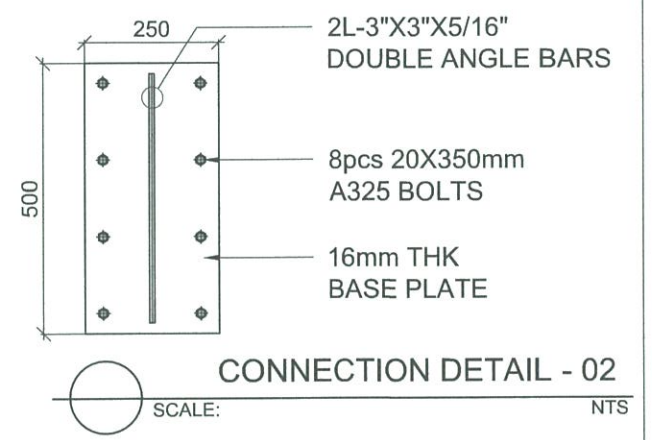
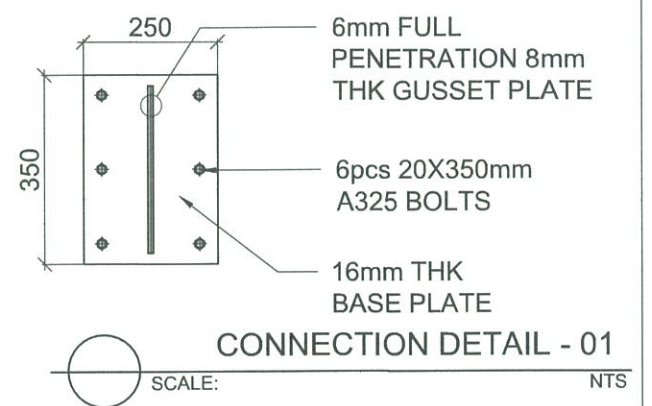




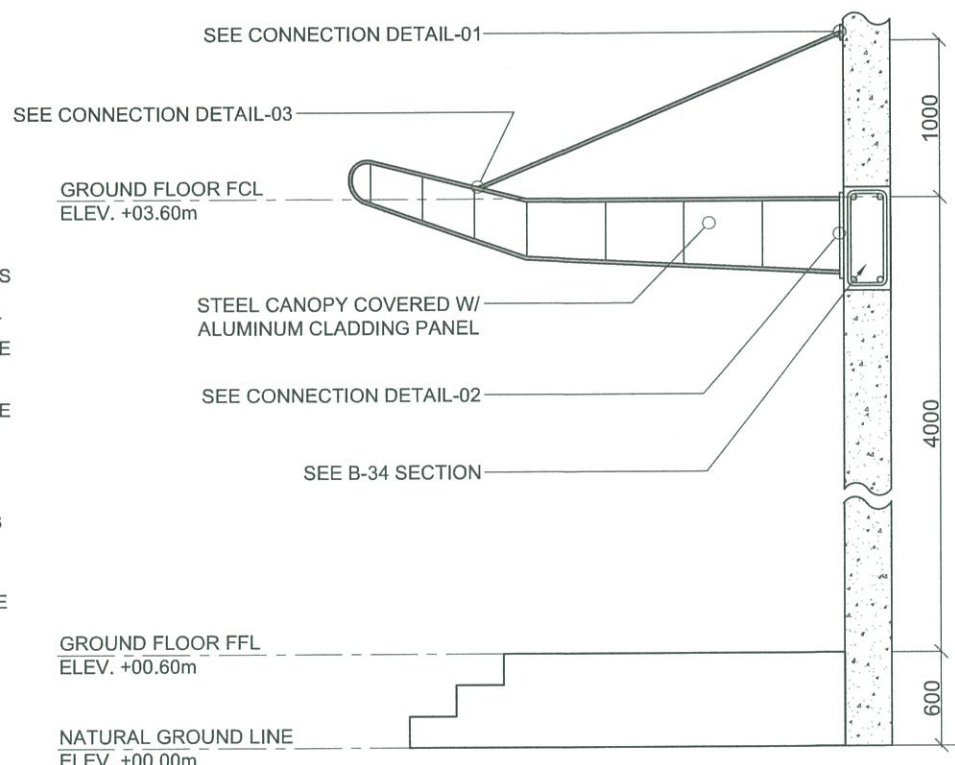
**STRUT DETAIL**  
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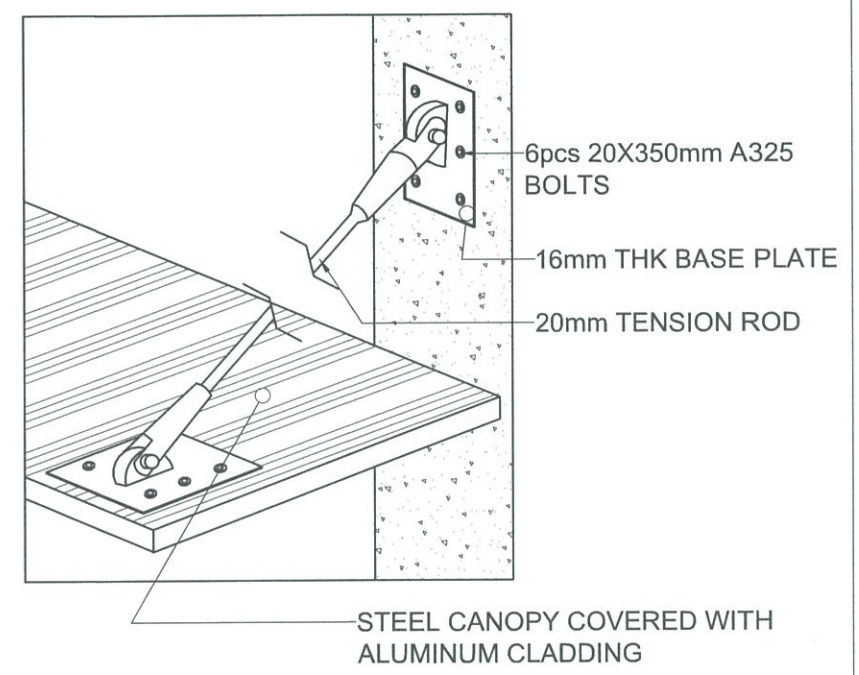
**CANOPY PLAN**  
 SCALE: NTS



**C-TRUSS DETAIL**  
 SCALE: NTS



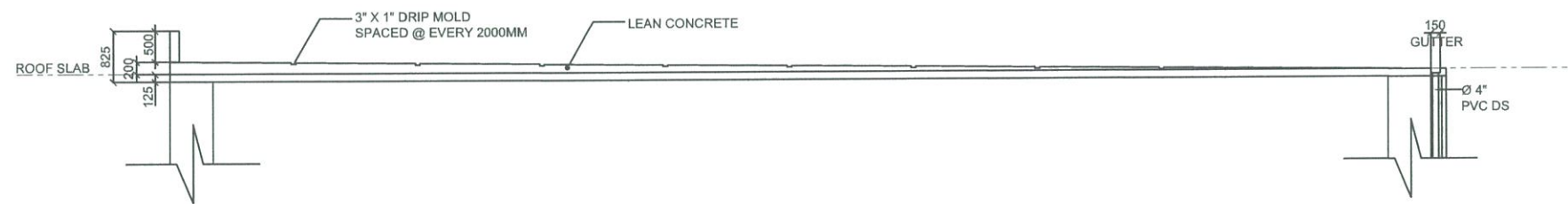
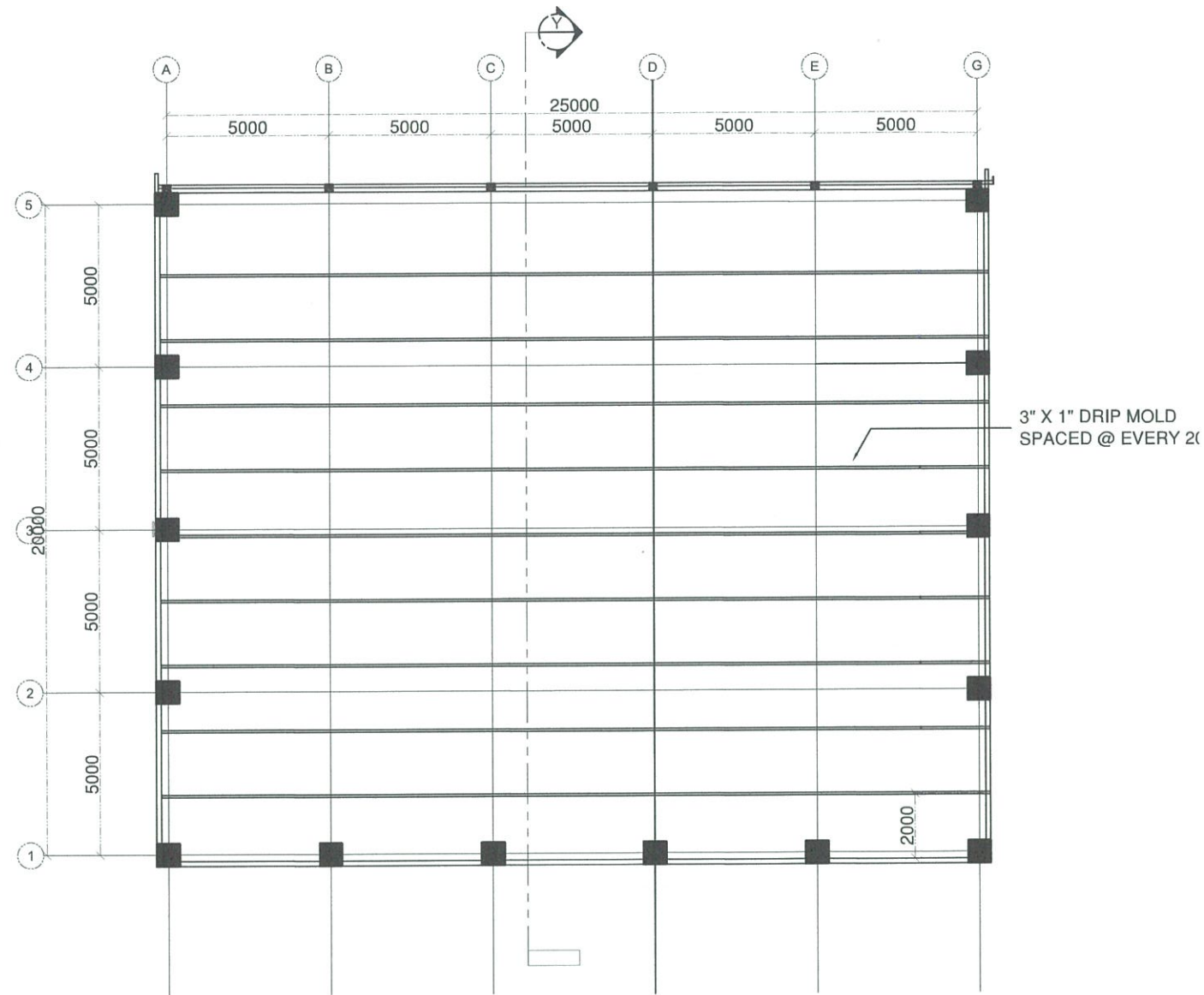
**CANOPY ELEVATION / SECTION DETAIL**  
 SCALE: NTS



**CONNECTION DETAIL - 03**  
 SCALE: NTS

<b>FOR APPROVAL PLANS OF REGIONAL TVET INNOVATION CENTERS (RTICs) 2023</b>	<p>TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY</p>	<p>PROJECT TITLE:</p> <p><b>PROPOSED TESDA SFIST INNOVATION CENTER</b></p>	<p>CIVIL ENGINEER:</p> <p><i>[Signature]</i>          ENGR. ENRIQUE G. DELA TORRE          PMU-SIPTVETS          ENGINEERING SECTION</p>	<p>PROJECT MANAGER:</p> <p><i>[Signature]</i>          DIR. ENRICO C. BANARAO          PMU-SIPTVETS</p>	<p>PROJECT DIRECTOR:</p> <p><i>[Signature]</i>          SEC. SUHARTO T. MANGUDADATU, Ph.D.          PMU-SIPTVETS          SECRETARY, TESDA</p>	<p>SHEET CONTENTS:</p> <p>STRUT DETAIL          C-TRUSS DETAIL          CANOPY PLAN          CANOPY ELEVATION PLAN          CONNECTION DETAIL - 01          CONNECTION DETAIL - 02          CONNECTION DETAIL - 03</p>	<p>SHEET NO.</p> <p><b>S-18</b></p>
	<p>MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road Bldg., Taguig City.</p>		<p>LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY          SAN FRANCISCO, MALABON CITY.</p>				





**ROOF DECK SECTION PLAN**  
 SCALE:  1:200 MTS

**FOR APPROVAL PLANS OF  
REGIONAL TVET INNOVATION  
CENTERS (RTICs) 2023**

PROJECT OWNER:  
**TECHNICAL EDUCATION  
AND  
SKILLS DEVELOPMENT  
AUTHORITY**  
MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road BLDG. Taguig City

PROJECT TITLE:  
**PROPOSED TESDA SFIST  
INNOVATION CENTER**  
LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY  
SAN FRANCISCO, MARUBIOT, ALABAY CITY

CIVIL ENGINEER:  
  
**ENGR. ENRIQUE G. DELA TORRE**  
 PMU-SIPTVETS  
 ENGINEERING SECTION

PROJECT MANAGER:  
  
**DIR. ENRICO C. BANARIO**  
 PMU-SIPTVETS

PROJECT DIRECTOR:  
  
**SEC. SUHARTO T. MANGUDADATU, Ph.D.**  
 PMU-SIPTVETS  
 SECRETARY, TESDA

SHEET CONTENTS:  
 ROOF DECK SECTION PLAN

SHEET NO.  
**S-19**



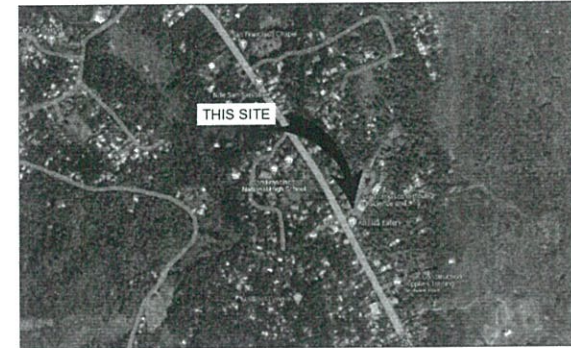
**GENERAL NOTES AND SPECIFICATIONS**

- ALL ELECTRICAL WORKS TO BE UNDERTAKEN HERE IN SHALL BE DONE IN ACCORDANCE WITH THE PROVISION OF THE LATEST APPROVED EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS, THE EXISTING ORDINANCES, RULES AND REGULATIONS OF CITY ENGINEER'S OFFICE, THE BUILDING ADMINISTRATION OFFICE AND INDUSTRIAL SAFETY AS WELL AS THE REQUIREMENTS OF THE UTILITY COMPANY.
- ALL MATERIALS AND REQUIREMENTS TO BE USED HEREIN SHALL BE NEW AND OF THE APPROVED TYPE FOR ITS LOCATION AND PURPOSE.
- NO OF BRANCH CIRCUIT WIRING IN LIGHTING AND POWER SHALL HAVE A LOAD MORE THAN BOX OF ITS RATING.
- LIGHT CONTROL SWITCHES SHALL BE RATED 16 AMPERES, 230 V<sub>ac</sub>.
- UNLESS OTHERWISE SPECIFIED PULLBOXES OR JUNCTION BOXES SHALL BE PROVIDED WHENEVER REQUIRED AND NECESSARY, ALTHOUGH SUCH BOXES ARE NOT INDICATED ON PLANS.
- FOR EACH SPARE CIRCUIT IN PANELBOARD, PROVIDE AN EMPTY CONDUIT 20mm(3/4") DIA. TERMINATING TO A COVERED SQUARED BOX.
- ALL EQUIPMENT AND/NON CURRENT CARRYING METAL FRAME, SHALL BE PROVIDED WITH ADEQUATE AND EFFECTIVE GROUNDING SYSTEM.
- STANDARD TYPE OF ACCESSORIES, SPLICING DEVICES, TERMINATION AND OTHER APPURTENANCES SHALL BE USED FOR THE ENTIRE ELECTRICAL INSTALLATION.
- POWER SUPPLY SHALL BE 230 VOLTS, 3 $\phi$ , 3 WIRE PLUS NEUTRAL PLUS GROUND, 60 HERTZ.
- THE ENTIRE ELECTRICAL INSTALLATION SHALL BE DONE UNDER THE DIRECT SUPERVISION OF A DULY LICENSED AND REGISTERED ELECTRICAL ENGINEER OR MASTER ELECTRICIAN
- UNLESS OTHERWISE INDICATED, MOUNTING HEIGHTS SHALL BE AS FOLLOWS:
  - A. PANELBOARDS.....1.80m CENTER OF ENCLOSURE
  - B. CONVENIENCE OUTLET.....0.3m CENTER OF THE BOX
  - C. SWITCH OUTLET.....1.30m CENTER OF THE BOX
  - D. CATHY OUTLET.....0.30m CENTER OF THE BOX
  - E. GFI COUNTERTOP.....0.30m FROM TOP OF LAVATORY
  - F. COUNTERTOP OUTLET.....0.30m FROM TOP OF KITCHEN SINK
  - G. TEL./DATA OUTLET.....0.30m CENTER OF THE BOX
- THE JOB SHALL BE EXECUTED IN THE MOST THROUGH PROMPT AND WORKMAN LIKE MANNER, EMPLOYING STANDARD TOOLS, EQUIPMENT, METHODS AND GOOD ENGINEERING PRACTICES. THE JOB SHALL BE DONE COMPLETE IN ALL ASPECTS AS REQUIRED IN PLANS AND SPECIFICATIONS AND READY FOR OPERATION.
- ADDITIONAL MATERIALS SPECIFICATIONS:
  - A. CONDUIT....."PANASONIC", "MC GILL", "SMARTUBE" OR APPROVED EQUAL.
  - B. WIRES AND CABLES....."PHILIPS DODGE", "PHILFLEX", "DURAFLEX"
  - C. CIRCUIT BREAKER BOARD....."ABB", "GE", "SCHNEIDER ELECTRIC" BOLT-ON TYPE
  - D. WIRING DEVICES....."PANASONIC", "LEVITON", "SCHNEIDER ELECTRIC"
- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE PROPER IDENTIFICATION AND LABELING OF ALL CIRCUIT BREAKER. EACH PANEL WILL BE APPROVED WITH A TYPED CIRCUIT DIRECTORY.
- WIRES SHALL BE COLOR CODED:
  - THREE PHASE
  - LINE 1.....RED
  - LINE 2.....YELLOW
  - LINE 3.....BLUE
  - GROUND.....GREEN
  - SINGLE PHASE
  - LINE 1,2,3.....RED
  - GROUND.....GREEN
- NO REVISION IN DESIGN SHALL BE DONE WITHOUT THE PRIOR KNOWLEDGE AND APPROVAL OF THE DESIGNER AND THE OWNER, ANY SUCH REVISION DONE WITHOUT THE APPROVAL SHALL CAUSE RESPONSIBILITY OF THE DESIGNER TO CEASE A WHOLE.
- ALL WEATHER-EXPOSED INSTALLATIONS SHALL USE WEATHERPROOF TYPE MATERIALS, ESPECIALLY WEATHERPROOF CONVENIENCE OUTLET, CAST-BOXES, JUNCTION BOXES SUBMIT SAMPLE FOR APPROVAL.

**ABBREVIATIONS**

CO	CONVENIENCE OUTLET
MM	MILLIMETER
EF	EXHAUST FAN
FCU	FAN COOL UNIT
ACCU	AIR-COOLED CONDENSING UNIT
ECB	ENCLOSED CIRCUIT BREAKER
MCB	MINIATURE CIRCUIT BREAKER
TX	TRANSFORMER
ATS	AUTOMATIC TRANSFER SWITCH
A, AMP	AMPERE
AF	AMPERE FRAME
AT	AMPERE TRIP
IMC	INTERMEDIATE METALLIC CONDUIT
J	JUNCTION BOX
KAC	KILOAMPERE INTERRUPTING CAPACITY
KVA	KILOVOLT-AMPERE
KWHR	KILOWATT-HOUR
KW	KILOWATT
KV	KILOVOLT
LA	LIGHTNING ARRESTER
LV	LOW VOLTAGE
3P	THREE POLE
UPVC	UNPLASTICIZED POLYVINYL CHLORIDE
V	VOLT
CB	CIRCUIT BREAKER
Ckt	CIRCUIT
C.L.	CONNECTED LOAD
#	DIAMETER
DIST	DISTRIBUTION
DF	DEMAND FACTOR
DL	DEMAND LOAD
DP	DOUBLE POLE
ENCL	ENCLOSURE, ENCLOSED
G, GND	GROUND
HZ	HERTZ
M	METER
MTD	MOUNTED
MTG	MOUNTING
MCB	MAIN CIRCUIT BREAKER
MCCB	MOLDED CASE CIRCUIT BREAKER
MSB	MAIN SWITCH BOARD
NO./ #	NUMBER
P	POLE
PH	PHASE
PVC	POLYVINYL CHLORIDE
IMC	INTERMEDIATE METALLIC CONDUIT
THWN	MOISTURE & HEAT RESISTANT THERMOPLASTIC
TYP	TYPICAL
TW	MOISTURE RESISTANT THERMOPLASTIC
LVSG	LOW VOLTAGE SWITCH GEAR
SP	SYNCHRONIZING PANEL
EE	ELECTRICAL EQUIPMENT
PP	POWER PANEL
LP	LIGHTNING PANEL
DP	DISTRIBUTION PANEL
DS	DISCONNECT SWITCH
RD	RISER DOWN
RU	RISER UP
PFC	POWER FACTOR CONTROLLER
PFI	POWER FACTOR INDICATOR
AHU	AIR HANDLING UNIT

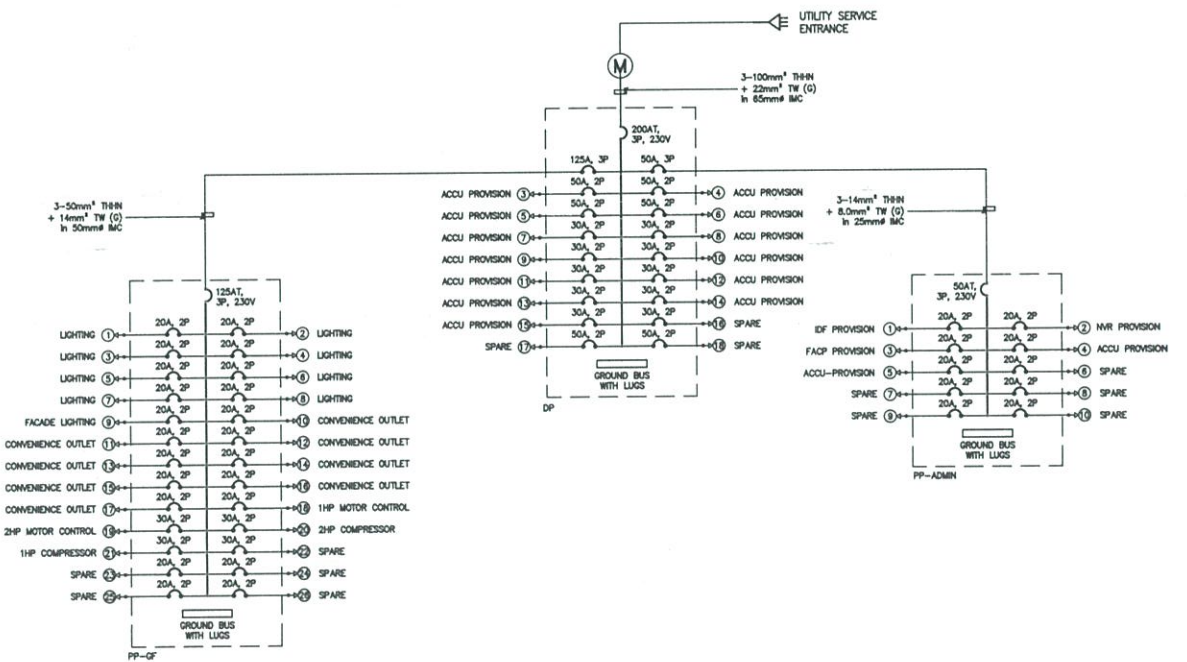
LEGENDS AND SYMBOLS	
	DUPLEX CONVENIENCE OUTLET
	FLOOR MOUNTED CONVENIENCE OUTLET
	SIMPLEX CONVENIENCE OUTLET
	HAND DRYER PROVISION
	SPECIAL PURPOSE OUTLET
	JUNCTION BOX
	DISCONNECT SWITCH
	ENCLOSED CIRCUIT BREAKER
	DISTRIBUTION PANEL
	PANELBOARD
	GROUND BAR
	GROUND ROD WITH TESTING PIT
	GROUND ROD
	RISER UP/DOWN
	EARLY STREAMER EMISSION LIGHTNING PROTECTION
	DUPLEX CONVENIENCE OUTLET
	FLOOR MOUNTED CONVENIENCE OUTLET
	SIMPLEX CONVENIENCE OUTLET
	HAND DRYER PROVISION
	SPECIAL PURPOSE OUTLET
	JUNCTION BOX
	DISCONNECT SWITCH
	ENCLOSED CIRCUIT BREAKER
	DISTRIBUTION PANEL
	PANELBOARD
	GROUND BAR
	GROUND ROD WITH TESTING PIT
	GROUND ROD
	RISER UP/DOWN
	EARLY STREAMER EMISSION LIGHTNING PROTECTION



LOCATION MAP  
SCALE: \_\_\_\_\_ NTS



VICINITY MAP  
SCALE: \_\_\_\_\_ NTS



PANELBOARD DIAGRAM  
SCALE: \_\_\_\_\_ NTS

**FOR APPROVAL PLANS OF REGIONAL TVET INNOVATION CENTERS (RTICs) 2023**

PROJECT OWNER:  
**TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY**  
MAIN OFFICE ADDRESS: TESDA COMPLEX, EDSA CORNER NLEX, TAGUIG CITY

PROJECT TITLE:  
**PROPOSED TESDA SFIST INNOVATION CENTER**  
LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY, SAN FRANCISCO, MALLAPIT, ALABY CITY

ELECTRICAL ENGINEER:  
  
**ENGR. JOHN ADRIAN C. SANTOS**  
 PMU-SIPTVETS  
 ENGINEERING SECTION

PROJECT MANAGER:  
  
**DIR. ENRICO C. BANARIO**  
 PMU-SIPTVETS

PROJECT DIRECTOR:  
  
**SEC. SUHARTO T. MANGUDATU, Ph.D.**  
 PMU-SIPTVETS

SHEET CONTENTS:  
 GENERAL NOTES  
 ABBREVIATION  
 LOCATION & VICINITY MAP  
 PANELBOARD DIAGRAM

SHEET NO.  
**E-0A**



PANEL NAME: DP		LOCATION: ELECTRICAL ROOM																			
FED FROM: UTILITY COMPANY		MOUNTING: WALL MOUNTED																			
SYSTEM: 230VAC, 3ø, 4W-G, 60Hz		ENCLOSURE: NEMA 1																			
CRT NO.	DESCRIPTION	CONV. LOAD	DEMAND FACTOR	DEMAND LOAD	VOLT	3Ø	ØAB	ØBC	ØCA	AT	AF	POLE	KAIC	TYPE	PHASE	CABLE SIZE	GROUND	SIZE	TYPE		
1	PP-GF	23,215	0.71	16,408	230																
2	PP-GF ADMIN	4,295	0.91	3,907	230																
3	ACCU PROVISION (MULTIFUNCTION HALL)	4,375	0.70	3,063	230																
4	ACCU PROVISION (MULTIFUNCTION HALL)	4,375	0.70	3,063	230																
5	ACCU PROVISION (BUSINESS INCUBATION)	4,375	0.70	3,063	230																
6	ACCU PROVISION (BUSINESS INCUBATION)	4,375	0.70	3,063	230																
7	ACCU PROVISION (COMPUTER AREA)	2,650	0.70	1,855	230																
8	ACCU PROVISION (PROTOTYPING AREA)	2,650	0.70	1,855	230																
9	ACCU PROVISION (RESEARCH LABORATORY)	2,650	0.70	1,855	230																
10	ACCU PROVISION (RESEARCH LABORATORY)	2,650	0.70	1,855	230																
11	ACCU PROVISION (TRAINING ROOM)	2,650	0.70	1,855	230																
12	ACCU PROVISION (LECTURE ROOM)	2,650	0.70	1,855	230																
13	ACCU PROVISION (LEARNING RESOURCE)	2,650	0.70	1,855	230																
14	ACCU PROVISION (COMPUTER ROOM)	2,650	0.70	1,855	230																
15	ACCU PROVISION (COMPUTER ROOM)	2,650	0.70	1,855	230																
16	SPARE																				
17	SPARE																				
18	SPARE																				
TOTAL CONNECTED LOAD		68,800	0.72	49,259	400	0.00	99.50	110.19	89.71	200	225	3	22	MCCB	3-100mm <sup>2</sup> THWN	1-22mm <sup>2</sup> TW		75	PVC		
DEMAND FACTOR		0.72																			
DEMAND LOAD		49,259 VA																			
TOTAL CURRENT		123.65 AMPS																			
										MAIN CIRCUIT BREAKER		MAIN FEEDER									
										200 AT 150 AF 3 POLE, 230V		3-100mm <sup>2</sup> THWN									
										PHASE: 3-100mm <sup>2</sup> THWN		GROUND: 1-22mm <sup>2</sup> TW									
										CONDUIT: 75 mm Ø IMC CONDUIT											

PANEL NAME: PP-GF		LOCATION: EE ROOM																			
FED FROM: DP		MOUNTING: WALL MOUNTED																			
SYSTEM: 230VAC, 3ø, 4W-G, 60Hz		ENCLOSURE: NEMA 1																			
CRT NO.	DESCRIPTION	CONV. LOAD	DEMAND FACTOR	DEMAND LOAD	VOLT	3Ø	ØAB	ØBC	ØCA	AT	AF	POLE	KAIC	TYPE	PHASE	CABLE SIZE	GROUND	SIZE	TYPE		
1	LIGHTING	330	0.90	297	230																
2	LIGHTING	355	0.90	320	230																
3	LIGHTING	1,096	0.90	986	230																
4	LIGHTING	629	0.90	566	230																
5	LIGHTING	120	0.90	108	230																
6	LIGHTING	175	0.90	158	230																
7	LIGHTING	1,272	0.90	1,145	230																
8	LIGHTING	807	0.90	726	230																
9	FACE LIGHTING	711	0.90	639	230																
10	CONVENIENCE LAYOUT	900	0.60	540	230																
11	CONVENIENCE LAYOUT	1,260	0.60	756	230																
12	CONVENIENCE LAYOUT	1,080	0.60	648	230																
13	CONVENIENCE LAYOUT	1,620	0.60	972	230																
14	CONVENIENCE LAYOUT	900	0.60	540	230																
15	CONVENIENCE LAYOUT	720	0.60	432	230																
16	CONVENIENCE LAYOUT	1,080	0.60	648	230																
17	CONVENIENCE LAYOUT	1,260	0.60	756	230																
18	2HP MOTOR CONTROL MODULE	1,840	0.70	1,288	230																
19	2HP MOTOR CONTROL MODULE	2,760	0.70	1,932	230																
20	2HP COMPRESSOR PROVISION	2,760	0.70	1,932	230																
21	1HP COMPRESSOR PROVISION	1,840	0.70	1,288	230																
22	SPARE																				
23	SPARE																				
24	SPARE																				
25	SPARE																				
26	SPARE																				
TOTAL CONNECTED LOAD		23,215	0.71	16,408	230																
DEMAND FACTOR		0.71																			
DEMAND LOAD		16,408 VA																			
TOTAL CURRENT		41.19 AMPS																			
										MAIN CIRCUIT BREAKER		MAIN FEEDER									
										125 AT 150 AF 3 POLE, 230V		3-50mm <sup>2</sup> THWN									
										PHASE: 3-50mm <sup>2</sup> THWN		GROUND: 1-14mm <sup>2</sup> TW									
										CONDUIT: 50 mm Ø IMC CONDUIT											

PANEL NAME: PP-GF ADMIN		LOCATION: ADMIN OFFICE																			
FED FROM: DP		MOUNTING: WALL MOUNTED																			
SYSTEM: 230VAC, 3ø, 4W-G, 60Hz		ENCLOSURE: NEMA 1																			
CRT NO.	DESCRIPTION	CONV. LOAD	DEMAND FACTOR	DEMAND LOAD	VOLT	3Ø	ØAB	ØBC	ØCA	AT	AF	POLE	KAIC	TYPE	PHASE & NEUTRAL	CABLE SIZE	GROUND	SIZE	TYPE		
1	IDF PROVISION	1,000	1.00	1,000	230																
2	NVR PROVISION	1,000	1.00	1,000	230																
3	FACE PROVISION	1,000	1.00	1,000	230																
4	ACCU PROVISION	540	0.70	378	230																
5	ACCU PROVISION	648	0.70	453	230																
6	SPARE																				
7	SPARE																				
8	SPARE																				
9	SPARE																				
10	SPARE																				
TOTAL CONNECTED LOAD		4,295	0.91	3,907	230																
DEMAND FACTOR		0.91																			
DEMAND LOAD		3,907 VA																			
TOTAL CURRENT		9.81 AMPS																			
										MAIN CIRCUIT BREAKER		MAIN FEEDER									
										50 AT 100 AF 3 POLE, 230V		3-14mm <sup>2</sup> THWN									
										PHASE & NEUTRAL: 3-14mm <sup>2</sup> THWN		GROUND: 1-8.0mm <sup>2</sup> TW									
										CONDUIT: 32 mm Ø IMC CONDUIT											



### DESIGN LOAD ANALYSIS

#### 1. Air-Condition Loads

- a. Four (4) - 4375 VA Air Cooled Conditioning Unit (ACCU)
- b. Nine (9) - 2650 VA Air Cooled Conditioning Unit (ACCU)
- c. Two (2) - 648 VA Air Cooled Conditioning Unit (ACCU)

Provide: Four (4) 50-Ampere Circuit, 2Pole, 230V  
 Provide: Nine (9) 30-Ampere Circuit, 2Pole, 230V  
 Provide: Two (2) 20-Ampere Circuit, 2Pole, 230V

#### 2. Lighting and Receptacle Loads

Lighting Based on Required No. of Fixtures and Rating of Fixtures:

Convenience Outlet Based on no. of Receptacles and 180 VA each: (49 x 180VA = 8820 VA)

Provide Nine (9) 20-Ampere circuit for lighting each with a minimum wire size of 3.5 mm<sup>2</sup> THHN  
 Provide Eight (8) 20-Ampere circuit for convenience receptacle each with a minimum wire size of 3.5 mm<sup>2</sup> THHN

#### 3. Other Loads

- a. One (1) - 2HP Compressor  
Provide One (1) - 30-Ampere Circuit
- b. One (1) - 1HP Compressor  
Provide One (1) - 20-Ampere Circuit
- c. One (1) - 2HP Motor Control Module Provision  
Provide One (1) - 30-Ampere Circuit
- d. One (1) - 1HP Motor Control Module Provision  
Provide One (1) - 20-Ampere Circuit
- e. One (1) - Network Video Recorder @ 1kW  
Provide One (1) - 20-Ampere Circuit
- f. One (1) - Intermediate Distribution Frame @ 1kW  
Provide One (1) - 20-Ampere Circuit
- g. One (1) - Fire Alarm Control Panel @ 1kW  
Provide One (1) - 20-Ampere Circuit
- h. One (1) - Public Address Rack @ 1kW  
Provide One (1) - 20-Ampere Circuit

Application of Demand Factor @40%

#### 4. Circuit Requirement:

Main Feeder:

$$= [81849VA + 25\% \text{ of } 7125] / 230V / 1.732$$

Use 1 Set of 3 - 100mm<sup>2</sup> THWN for Phase Conductor

Main Feeder Protection:

Use One (1) - 200 Ampere Trip, 230 Volt, 3 Pole Molded Case Circuit Breaker



Volt-Ampere

17,500

23,850

1,296

42,646 VA

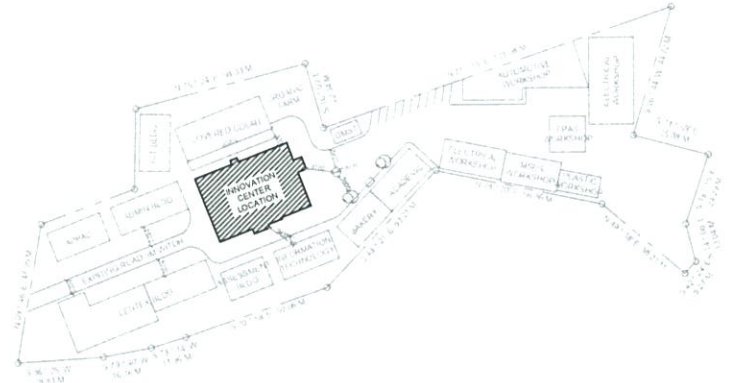
5,195 VA

8,820 VA

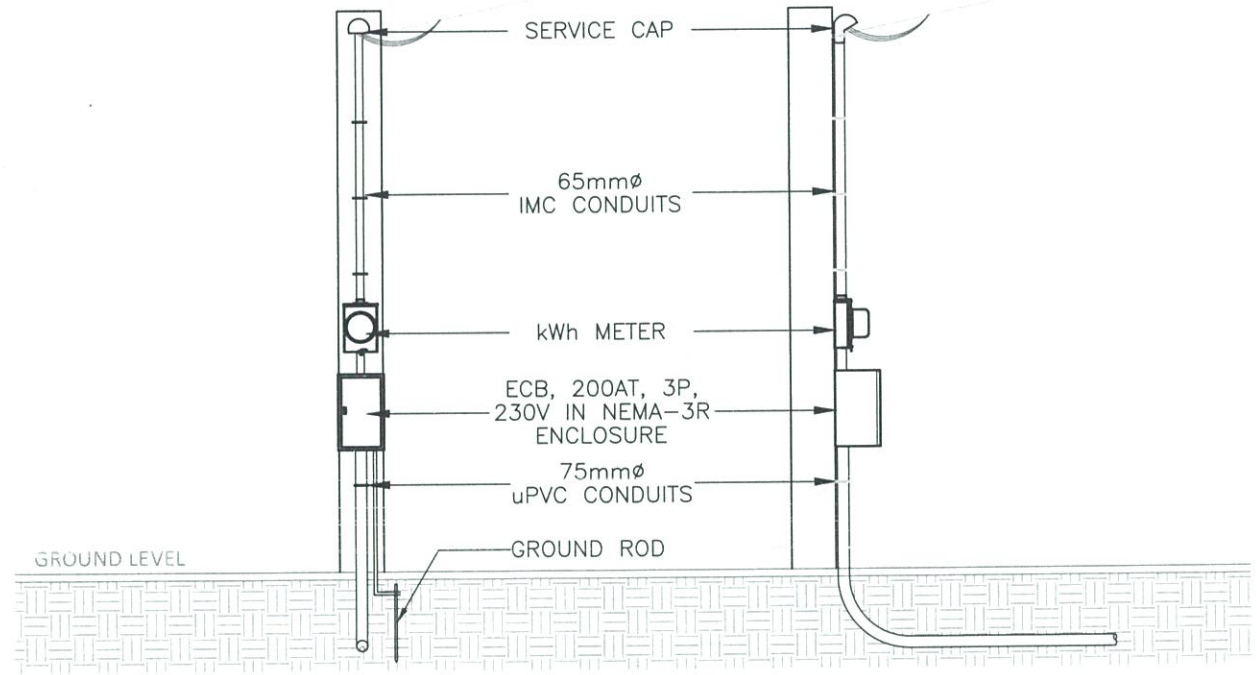
2,760

1,840

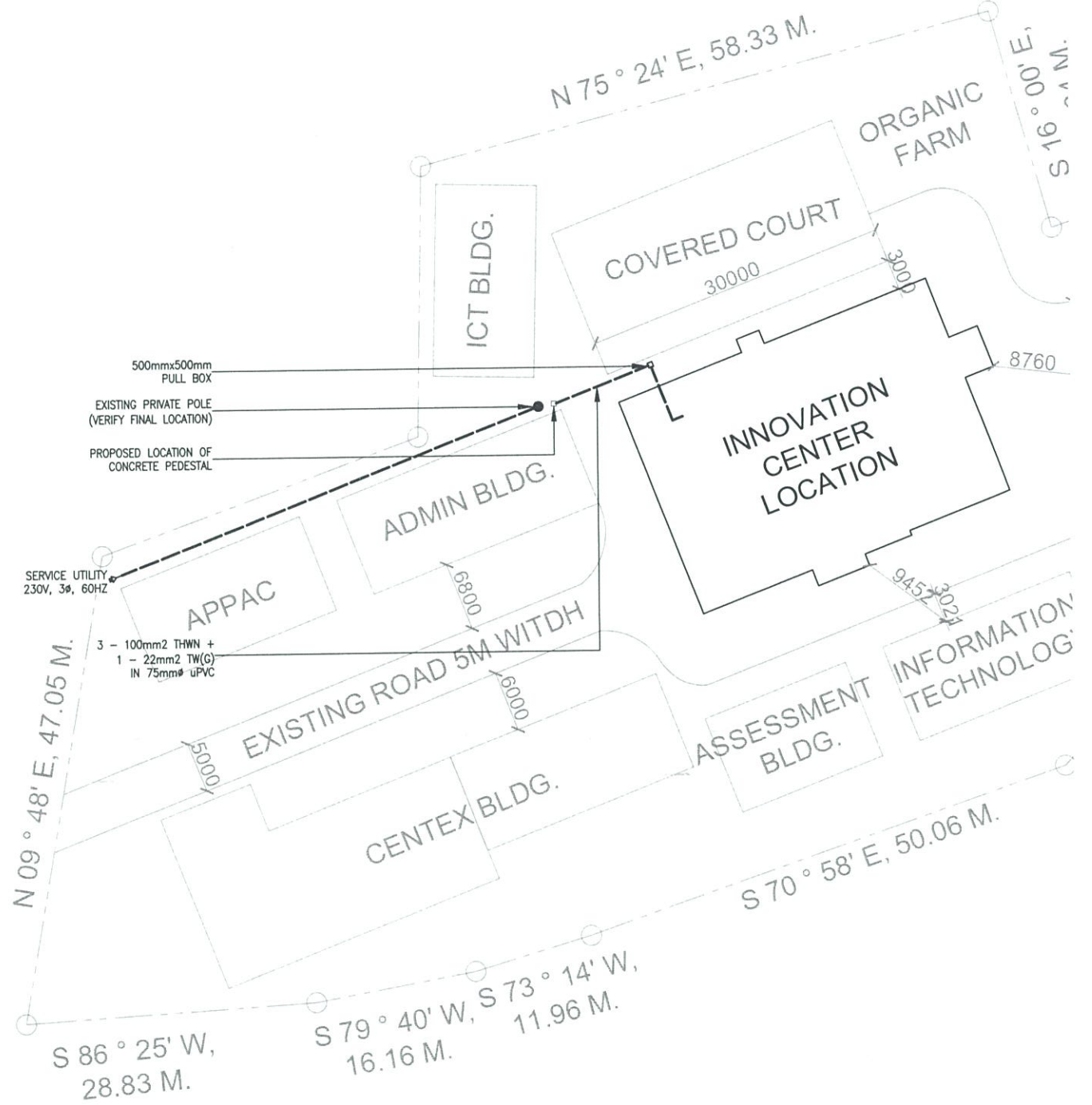




KEY PLAN




CONCRETE PEDESTAL DETAILS  
SCALE: 1:50MTS





ELECTRICAL SITE DEVELOPMENT PLAN  
SCALE: 1:600MTS


**FOR APPROVAL PLANS OF REGIONAL TVET INNOVATION CENTERS (RTICs) 2023**

PROJECT OWNER:  

**TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY**

PROJECT TITLE:  
**PROPOSED TESDA SFIST INNOVATION CENTER**

ELECTRICAL ENGINEER:  
  
**ENGR. JOHN ADRIAN C. SANTOS**  
 PMU-SIPTVETS  
 ENGINEERING SECTION

PROJECT MANAGER:  
  
**DIR. ENRICO E. BANARIO**  
 PMU-SIPTVETS

PROJECT DIRECTOR:  
  
**SEC. SUHARTO T. MANGUDADATU, Ph.D.**  
 PMU-SIPTVETS

SHEET CONTENTS:  
 SITE DEVELOPMENT PLAN

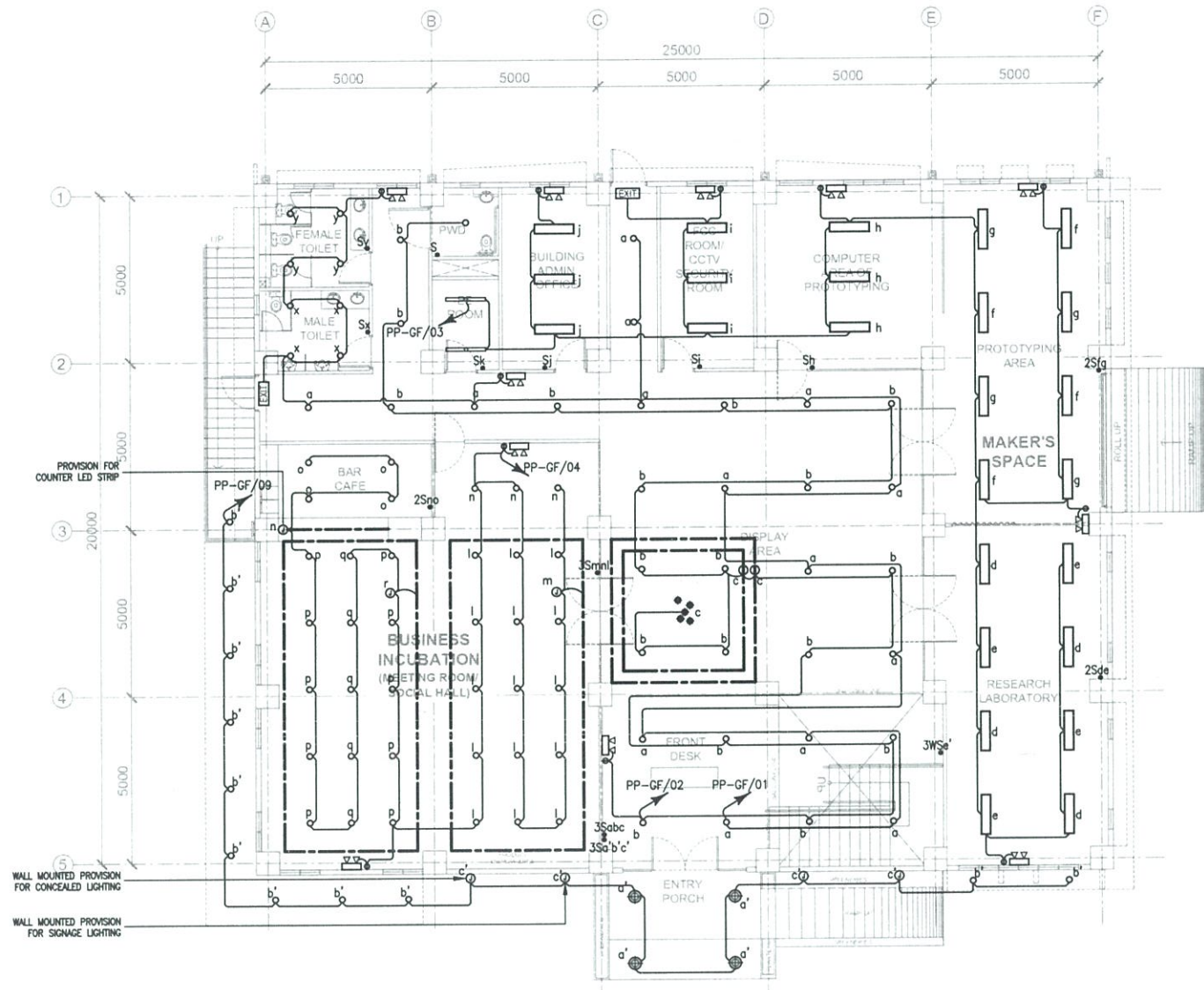
SHEET NO.  
**E-0C**

MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road Bldg. Taguig City

LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY  
 SAN FRANCISCO, MALABON CITY



LEGENDS AND SYMBOLS	
○	RECESSED MOUNTED, 13W LED DOWNLIGHT
⊙	RECESSED MOUNTED, 26W LED DOWNLIGHT
—	SURFACE MOUNTED, 1200mm, 20W LED FLUORESCENT LIGHT
▭	2x20W, 300mmx1200mm, CEILING RECESSED FLUORESCENT LIGHTING FIXTURE WITH ACRYLIC DIFFUSER
•••	PENDANT LIGHTING FIXTURE
—	TWIN-HEAD EMERGENCY LIGHT WITH 2HRS BATTERY BACK
EXIT	8W EXIT LIGHT WITH 2HRS BATTERY PACK
—	13W SUSPENDED LINEAR LIGHT
---	CONCEALED LIGHTING
•S	1 GANG, SINGLE POLE SINGLE THROW SWITCH, 15A, 230V
•2S	2 GANG, SINGLE POLE SINGLE THROW SWITCH, 15A, 230V
•3S	3 GANG, SINGLE POLE SINGLE THROW SWITCH, 15A, 230V
•RU/RD	RISER UP/DOWN
⊙	JUNCTION BOX (CONCEALED LIGHTING PROVISION/TAPPING POINT)




TESDA INNOVATION CENTER - SFIST  
GROUND FLOOR LIGHTING LAYOUT



SCALE:

1: 200 mm

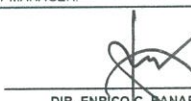
**FOR APPROVAL PLANS OF  
REGIONAL TVET INNOVATION  
CENTERS (RTICs) 2023**


PROJECT OWNER:  

**TECHNICAL EDUCATION  
AND  
SKILLS DEVELOPMENT  
AUTHORITY**  
MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road SLEX, Tagaytay City

PROJECT TITLE:  
**PROPOSED TESDA SFIST  
INNOVATION CENTER**

LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY  
SAN FRANCISCO MALL/POPT ALBAY CITY

ELECTRICAL ENGINEER:  
  
**ENGR. JOHN ADRIAN O. SANTOS**  
 PMU-SIPTVETS  
 ENGINEERING SECTION

PROJECT MANAGER:  
  
**DIR. ENRICO C. BANARIO**  
 PMU-SIPTVETS

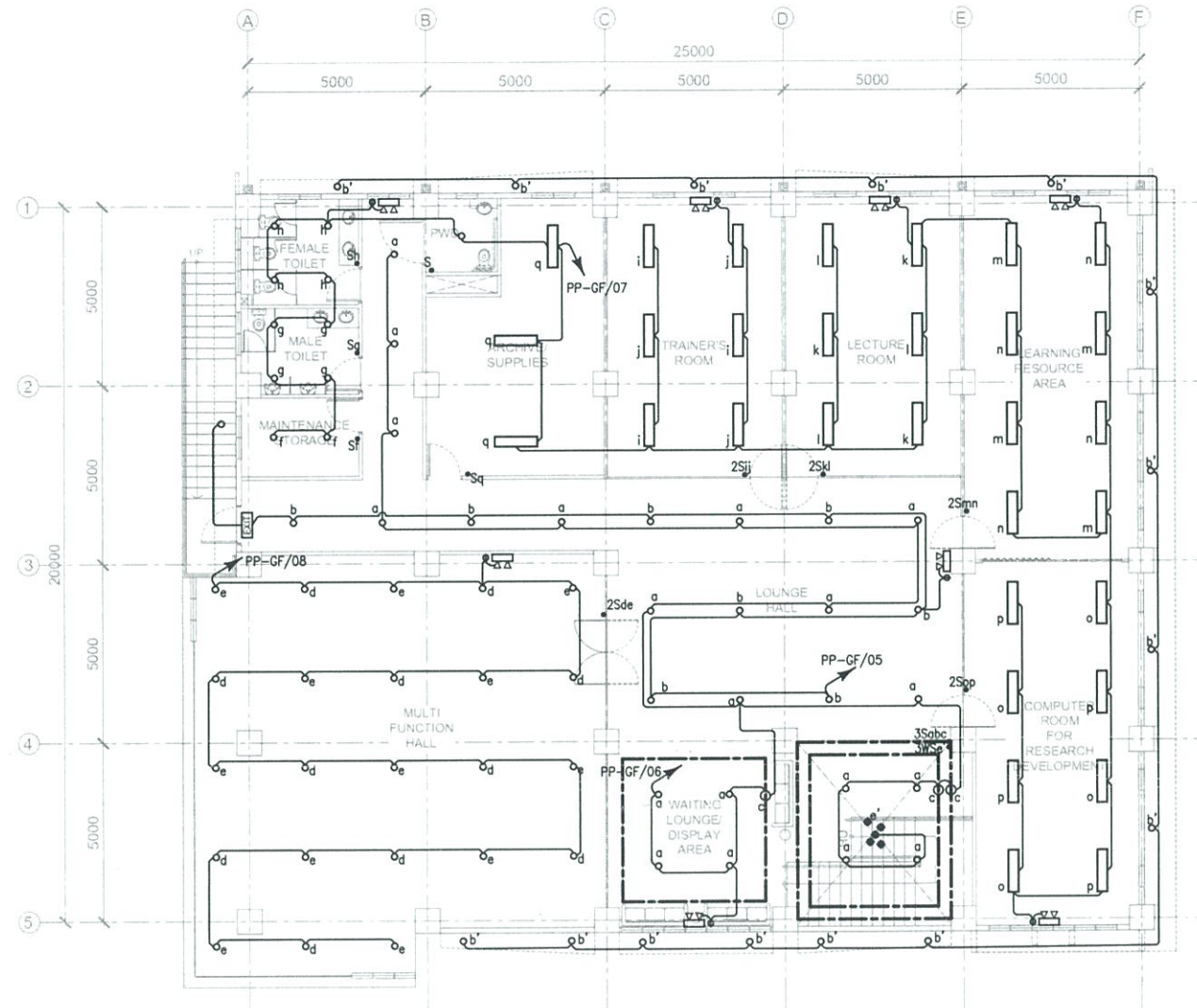
PROJECT DIRECTOR:  
  
**SEC. SUHARTO T. MANGUDATU, Ph.D.**  
 PMU-SIPTVETS

SHEET CONTENTS:  
 GROUND FLOOR LIGHTING LAYOUT

SHEET NO.

**E-1**

LEGENDS AND SYMBOLS	
○	RECESSED MOUNTED, 13W LED DOWNLIGHT
⊙	RECESSED MOUNTED, 26W LED DOWNLIGHT
—	SURFACE MOUNTED, 1200mm, 20W LED FLUORESCENT LIGHT
▭	2x20W, 300mmx1200mm, CEILING RECESSED FLUORESCENT LIGHTING FIXTURE WITH ACRYLIC DIFFUSER
⋈	PENDANT LIGHTING FIXTURE
—	TWIN-HEAD EMERGENCY LIGHT WITH 2HRS BATTERY BACK
EXIT	8W EXIT LIGHT WITH 2HRS BATTERY PACK
—	13W SUSPENDED LINEAR LIGHT
—	CONCEALED LIGHTING
•S	1 GANG, SINGLE POLE SINGLE THROW SWITCH, 15A, 230V
•2S	2 GANG, SINGLE POLE SINGLE THROW SWITCH, 15A, 230V
•3S	3 GANG, SINGLE POLE SINGLE THROW SWITCH, 15A, 230V
•RU/RD	RISER UP/DOWN
⊙	JUNCTION BOX (CONCEALED LIGHTING PROVISION/TAPPING POINT)




TESDA INNOVATION CENTER - SFIST  
**SECOND FLOOR LIGHTING LAYOUT**



SCALE:

1: 200 mm


**FOR APPROVAL PLANS OF  
 REGIONAL TVET INNOVATION  
 CENTERS (RTICs) 2023**


PROJECT OWNER:  
  
**TECHNICAL EDUCATION  
 AND  
 SKILLS DEVELOPMENT  
 AUTHORITY**  
MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road BLEX, Tagaytay City

PROJECT TITLE:  
**PROPOSED TESDA SFIST  
 INNOVATION CENTER**

LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY  
 SAN FRANCISCO MALLPLOT, ALBAY CITY

ELECTRICAL ENGINEER:  
  
**ENGR. JOHN ADRIAN C. SANTOS**  
 PMU-SIPTVETS  
 ENGINEERING SECTION

PROJECT MANAGER:  
  
**DIR. ENRICO C. BANARIO**  
 PMU-SIPTVETS

PROJECT DIRECTOR:  
  
**SEC. SUHARTO T. MANGUDADATU, PH.D.**  
 PMU-SIPTVETS

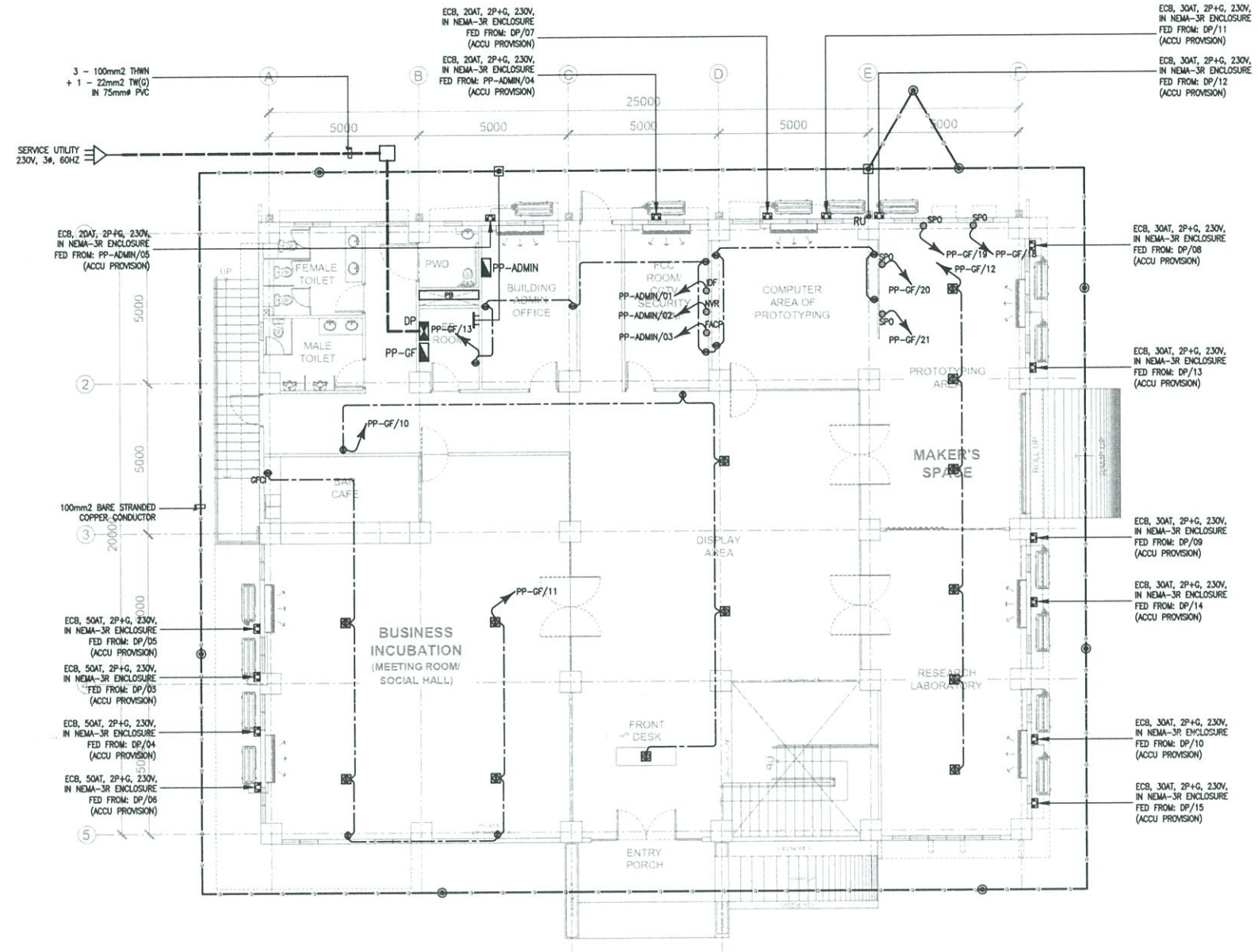
SHEET CONTENTS:  
 SECOND FLOOR LIGHTING LAYOUT

SHEET NO.

**E-2**



LEGENDS AND SYMBOLS	
	DUPLEX CONVENIENCE OUTLET
	FLOOR MOUNTED CONVENIENCE OUTLET
	SIMPLEX CONVENIENCE OUTLET
	HAND DRYER PROVISION
	SPECIAL PURPOSE OUTLET
	JUNCTION BOX
	DISCONNECT SWITCH
	ENCLOSED CIRCUIT BREAKER
	DISTRIBUTION PANEL
	PANELBOARD
	GROUND BAR
	GROUND ROD WITH TESTING PIT
	GROUND ROD
	RISER UP/DOWN
	EARLY STREAMER EMISSION LIGHTNING PROTECTION




TESDA INNOVATION CENTER - SFIST  
GROUND FLOOR GROUNDING & POWER LAYOUT




SCALE:


1: 200 mm


**FOR APPROVAL PLANS OF  
REGIONAL TVET INNOVATION  
CENTERS (RTICs) 2023**

PROJECT OWNER:  
 **TECHNICAL EDUCATION  
AND  
SKILLS DEVELOPMENT  
AUTHORITY**

PROJECT TITLE:  
**PROPOSED TESDA SFIST  
INNOVATION CENTER**

ELECTRICAL ENGINEER:  
  
**ENGR. JOHN ADRIAN G. SANTOS**  
PMU-SIPTVETS  
ENGINEERING SECTION

PROJECT MANAGER:  
  
**DIR. ENRICO C. BANARIO**  
PMU-SIPTVETS

PROJECT DIRECTOR:  
  
**SEC. SUHARTO T. MANGUDADATU, Ph.D.**  
PMU-SIPTVETS

SHEET CONTENTS:  
GROUND FLOOR GROUNDING &  
POWER LAYOUT

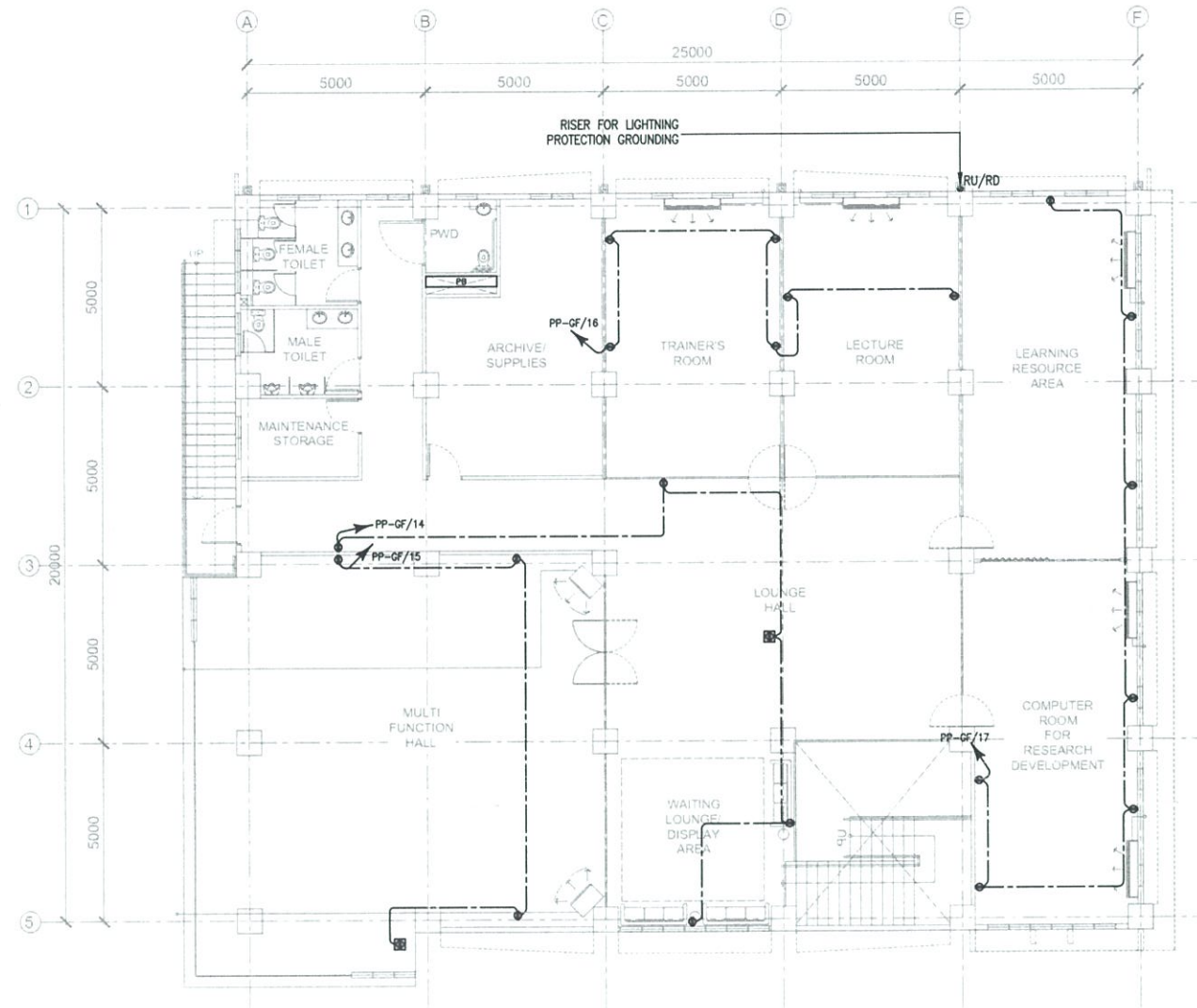
SHEET NO.

**E-3**

MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road 352A, Taguig City

LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY  
SAN FRANCISCO MALLPOT ALBAY CITY

LEGENDS AND SYMBOLS	
⊕	DUPLEX CONVENIENCE OUTLET
⊕	FLOOR MOUNTED CONVENIENCE OUTLET
⊕	SIMPLEX CONVENIENCE OUTLET
⊕ HD	HAND DRYER PROVISION
⊙	SPECIAL PURPOSE OUTLET
⊙	JUNCTION BOX
⊠	DISCONNECT SWITCH
⊠	ENCLOSED CIRCUIT BREAKER
⊠	DISTRIBUTION PANEL
⊠	PANELBOARD
⊠	GROUND BAR
⊠	GROUND ROD WITH TESTING PIT
⊙	GROUND ROD
⊕RU/RD	RISER UP/DOWN
←⊕→	EARLY STREAMER EMISSION LIGHTNING PROTECTION



TESDA INNOVATION CENTER - SFIST  
SECOND FLOOR POWER LAYOUT



SCALE:

1: 200 mm


**FOR APPROVAL PLANS OF  
REGIONAL TVET INNOVATION  
CENTERS (RTICs) 2023**


PROJECT OWNER:  
 **TECHNICAL EDUCATION  
AND  
SKILLS DEVELOPMENT  
AUTHORITY**


MAIN OFFICE ADDRESS: TESDA COMPLEX, East Service Road (LEX, Tagaytay City)

PROJECT TITLE  
**PROPOSED TESDA SFIST  
INNOVATION CENTER**

LOCATION: SAN FRANCISCO INSTITUTE OF SCIENCE AND TECHNOLOGY  
SAN FRANCISCO MALL/POT ALBAY CITY

ELECTRICAL ENGINEER:  
  
**ENGR. JOHN ADRIAN G. SANTOS**  
PMU-SIPTVETS  
ENGINEERING SECTION

PROJECT MANAGER:  
  
**DIR. ENRICO D. BANARIO**  
PMU-SIPTVETS

PROJECT DIRECTOR:  
  
**SEC. SUHARTO T. MANGUDATU, Ph.D.**  
PMU-SIPTVETS

SHEET CONTENTS:  
SECOND FLOOR POWER LAYOUT

SHEET NO.

**E-4**