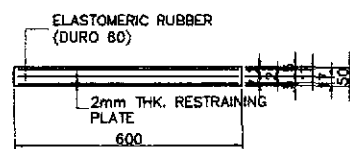
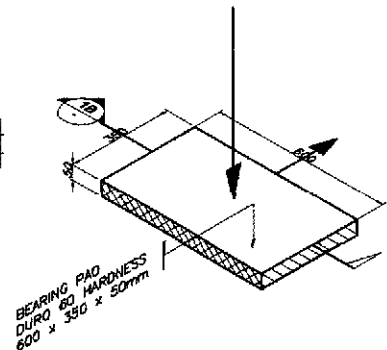


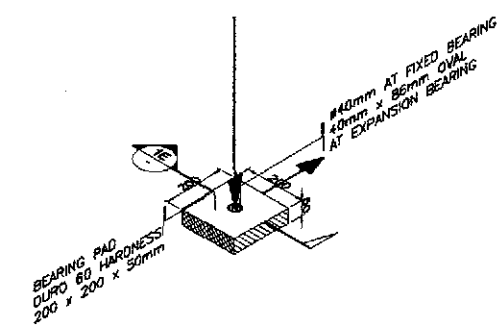
1A PLAN SCALE 1:10



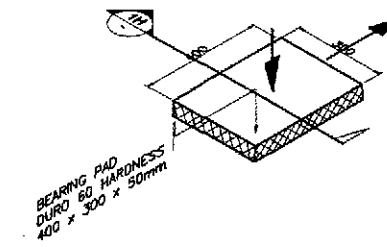
1B ELEVATION SCALE 1:10



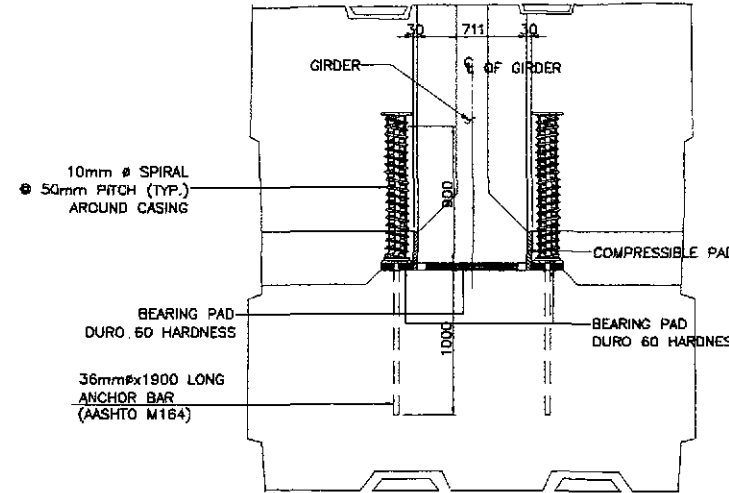
1C ISOMETRIC VIEW



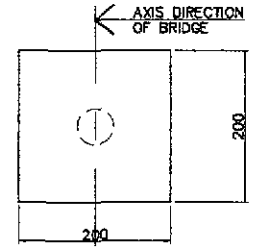
1F ISOMETRIC VIEW



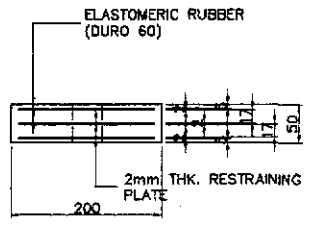
1I ISOMETRIC VIEW



3A ANCHOR BAR SCALE 1:25



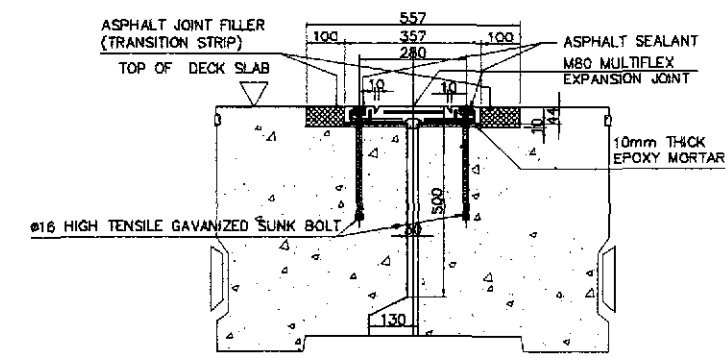
1D PLAN SCALE 1:5



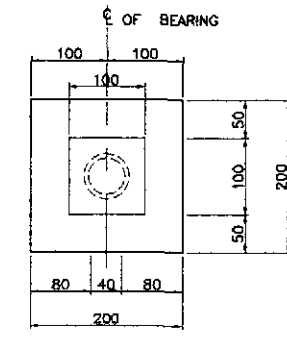
1E ELEVATION SCALE 1:5

1C ISOMETRIC VIEW

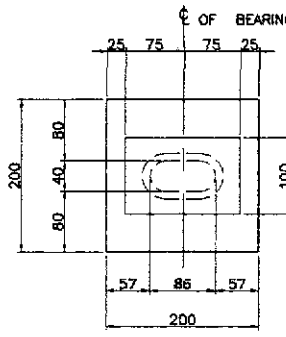
1 BEARING PAD DETAIL SCALE AS SHOWN



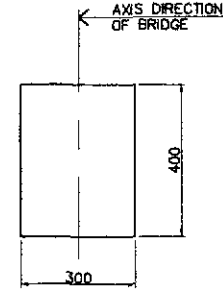
2B SECTION (TYPE A) SCALE 1:10



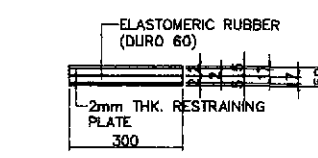
PLAN



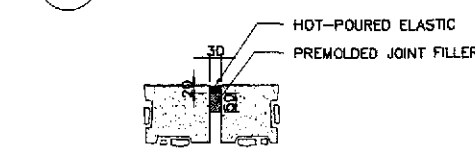
PLAN



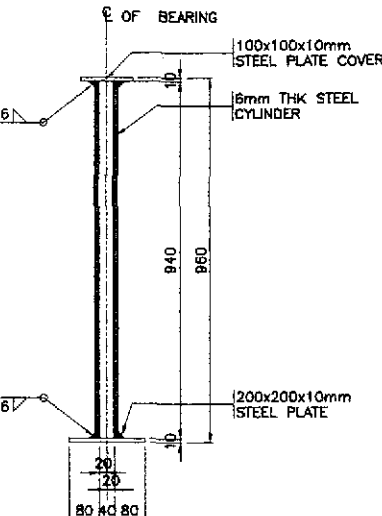
1G PLAN SCALE 1:5



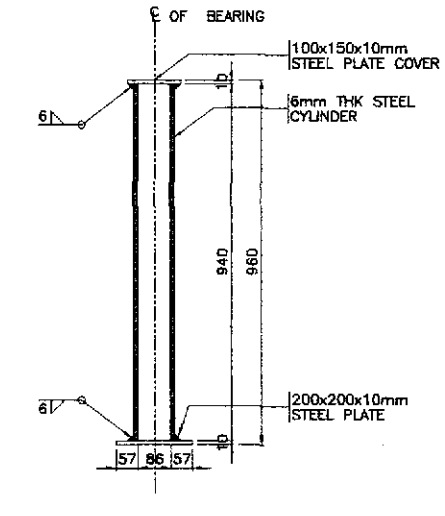
1H ELEVATION SCALE 1:5



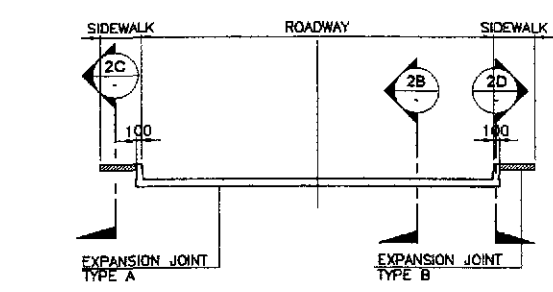
2C SECTION (TYPE B) SCALE 1:10



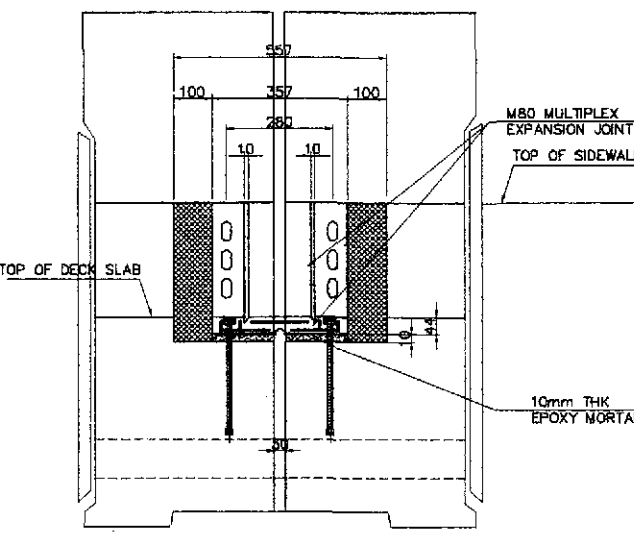
3B FIXED BEARING SCALE 1:10



3C EXPANSION BEARING SCALE 1:10



2A ELEVATION



2D SECTION (TYPE A) SCALE 1:10

3 BEARING SLEEVE AND ANCHOR BAR DETAIL SCALE AS SHOWN

2 EXPANSION JOINT DETAIL SCALE AS SHOWN

A.) QUALITY TESTING OF RUBBER COMPOUND

PROPERTIES	SPECIFICATION
HARDNESS (SHORE A)	50 ± 5
TENSILE STRENGTH (MPa)	13 MIN
ELONGATION AT BREAK (%)	400 MIN
COMPRESSION SET (AFTER 22h AT 70°C)	20% MAX
OZONE RESISTANCE (AFTER 72h AT 40°C, 20% STRAIN 100 ppm)	NO CRACK
OIL RESISTANCE IN ASTM NO. 3 OIL (168h AT 25°C VOLUME CHANGE)	15% MAX

B.) DIMENSION CHECK ON METAL PLATES

DIMENSION	SPECIFICATION
LENGTH	± 1
WIDTH	0 TO -1.5 MIN
THICKNESS	±0.5 MIN

C.) QUALITY CHECK

PROPERTY	SPECIFICATION
DIMENSION	ACCORDING TO PRODUCT DRAWING
SURFACE APPEARANCE	NO VISIBLE CRACK
RUBBER COVER HARDNESS (SHORE A)	50 ± 5

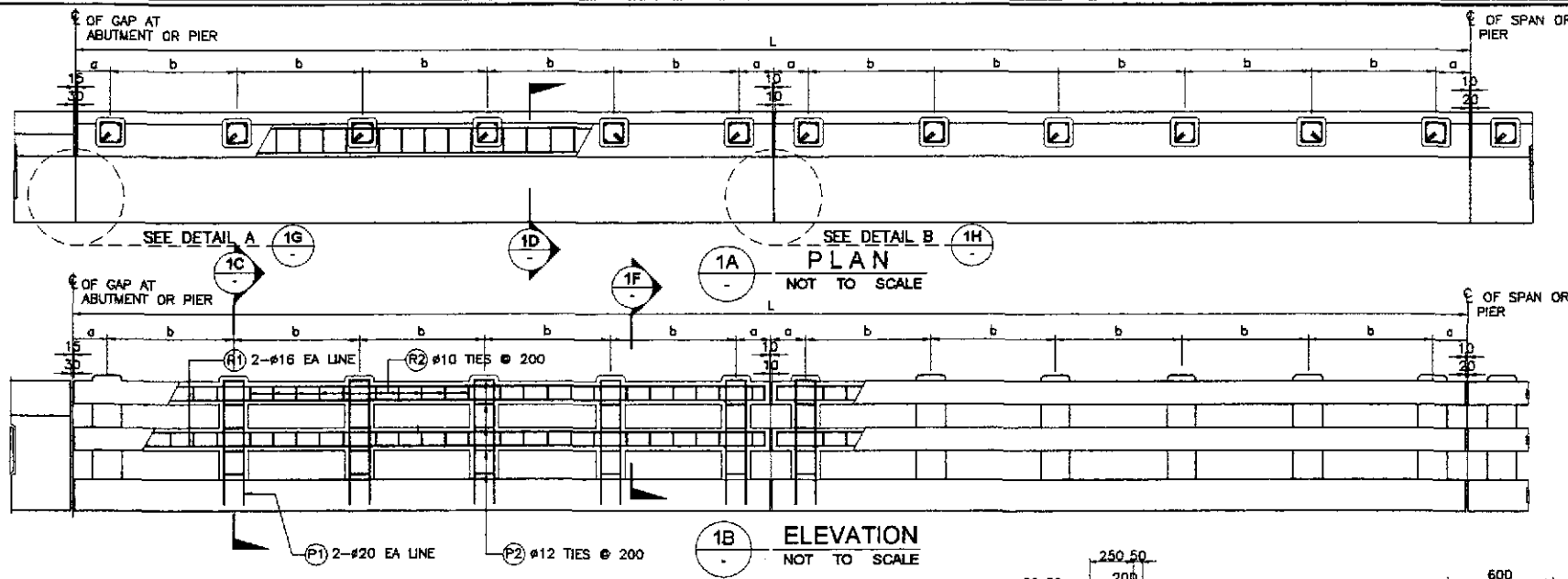
INSTALLATION MATERIALS

- EPOXY BEDDING
- EPOXY NOSING
- BOLT/NUTS
- SEALANT

LOCATION	EXPANSION JOINT TYPE	MOVEMENT (mm)	LENGTH (m)
BRIDGE 1	MULTIFLEX 80	30	26
BRIDGE 2	MULTIFLEX 80	30	26
BRIDGE 3	MULTIFLEX 80	30	26
BRIDGE 4	MULTIFLEX 80	30	26

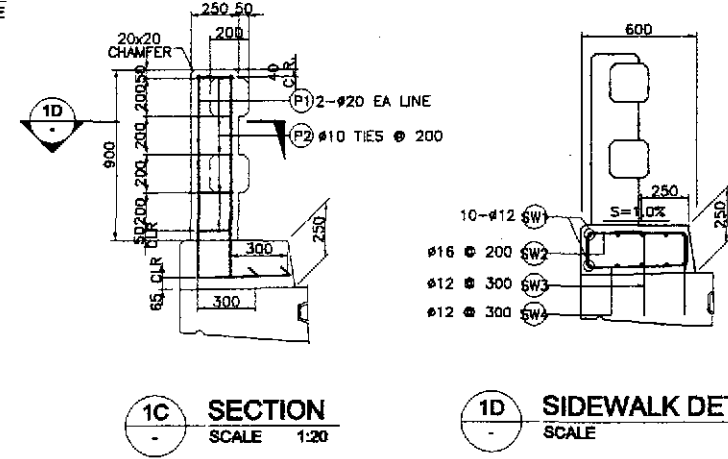
LOCATION	ELASTOMERIC BEARING PAD SIZE	QUANTITY
BRIDGE 1	600x350x50	12 PCS.
BRIDGE 2	600x350x50	12 PCS.
BRIDGE 3	600x350x50	12 PCS.
BRIDGE 4	400x300x50	12 PCS.

	DESIGNED: 9/2/02 CHECKED: 9/4/02 SUBMITTED: 9/4/02	DATE: 9/2/02 SIGNATURE: E. N. SALLAN TEAM LEADER		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN OFFICE OF THE SECRETARY	PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO. 1, 2, 3 & 4 TYP. BEARING PAD, EXPANSION JOINT, BEARING SLEEVE & ANCHOR BAR DET. (INITIAL STAGE)	SHEET NO. : BS-01
	DANIL C. TRAJANO Project Director	ADRIANO M. DORAY Chief, Bridges Division	GILBERTO S. REYES Director IV (DC)	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary			

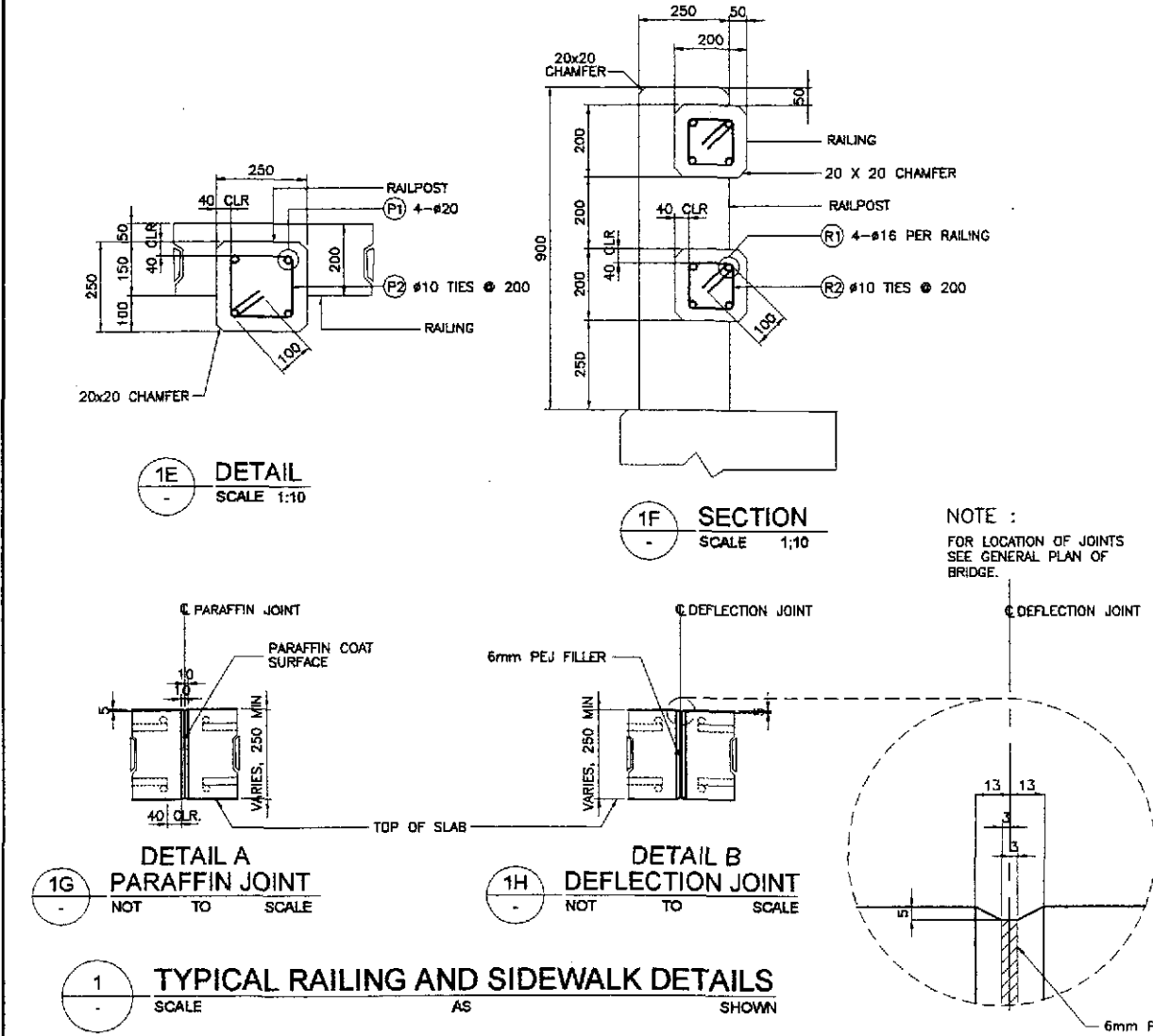


RAILING FOR BRIDGES

BRIDGE NO.	SPAN LENGTH (m)	NO. OF EXP. JT. INSIDE SPAN	NO. OF POST W/IN EXP. JT.	NO. OF RAIL POST PER SPAN	L (mm)	a (mm)	b (mm)
BR.1 TO BR.3	40.00	3	6	48	20015	250	1902
BR. 4	15.75	1	5	20	15765	250	1846
	21.00	2	5	30	21000	250	1625



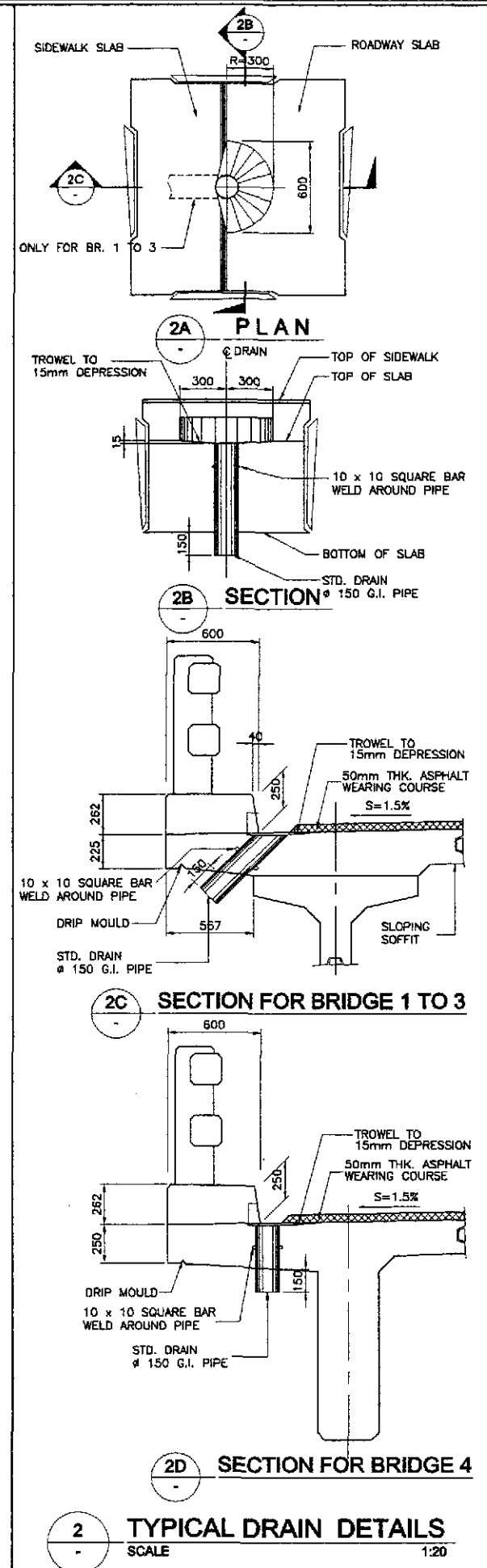
NOTE : SIDEWALK SHALL BE PLACED AFTER THE SHORING UNDER THE SUPERSTRUCTURE HAS BEEN RELEASED SUFFICIENTLY TO PERMIT THE SPANS TO ATTAIN FULL DEAD LOAD DEFLECTION.

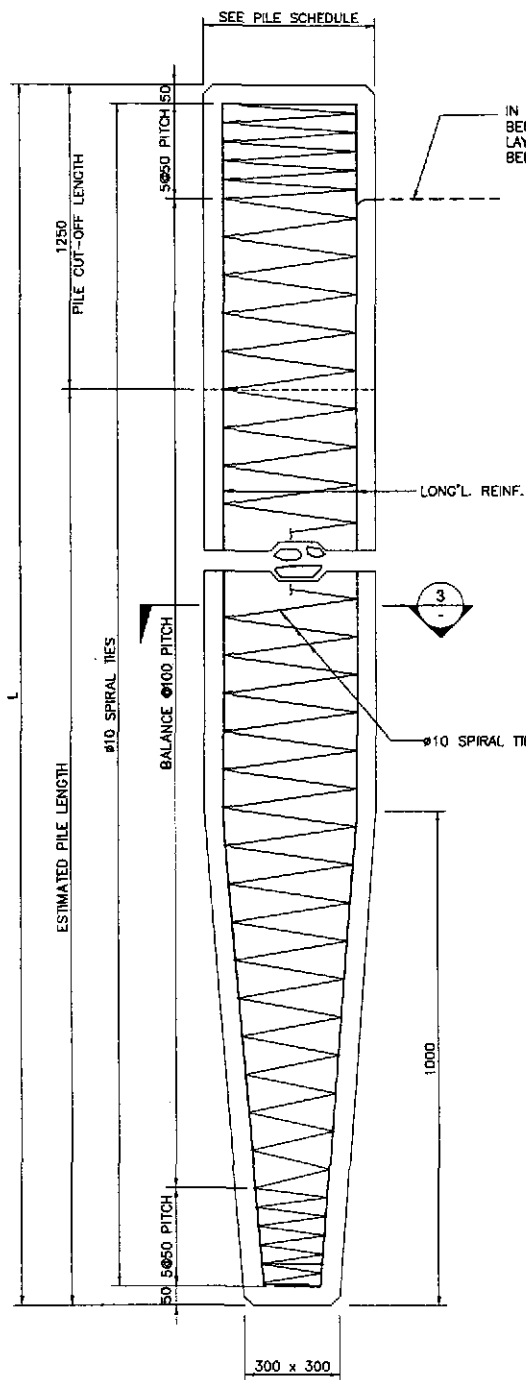


BAR BENDING DIAGRAM

SCHEDULE OF REINFORCEMENT (POST, RAILING AND SIDEWALK)

LOCATION	CONCRETE VOLUME (m ³)	BAR MARK	BAR SIZE	QTY.	SPACING	BAR SHAPE	DIMENSIONS (mm) OUT TO OUT				LENGTH EA. BAR (mm)	TOTAL LENGTH (m)	UNIT WT. (kg/m)	WEIGHT (kg)	REBAR RATIO (kg/m ³)	
							a	b	c	d						
POST	2.70	P1	20	192	AS SHOWN	(B)	1045	450	-	-	1495	287.04	2.466	708	310.74	
		P2	10	240	200	(C)	170	170	100	-	880	211.20	0.616	131		
RAILING	6.40	R1	16	16	AS SHOWN	(A)	40000	-	-	-	40000	640.00	1.579	1011	210.63	
		R2	10	804	200	(C)	120	120(ave)	100	-	680	546.72	0.616	337		
SIDEWALK	12.00	SW1	12	20	AS SHOWN	(A)	40000	-	-	-	40000	800.00	0.888	711	146.67	
		SW2	16	400	200	(D)	170	520	400	-	1090	436.00	1.579	689		
		SW3	12	268	300	(B)	400	250	-	-	650	174.20	0.888	155		
		SW4	12	268	300	(E)	170	520	170	-	860	230.48	0.888	205		
TOTAL	21.10															
											PER BRIDGE		GRADE 40 TOTAL = 3,239 kgs.		GRADE 60 TOTAL = 708 kgs.	
POST	3.94	P1	20	280	AS SHOWN	(B)	1045	450	-	-	1495	418.60	2.466	1033	310.41	
		P2	10	350	200	(C)	170	170	100	-	880	308.00	0.616	190		
RAILING	8.40	R1	16	16	AS SHOWN	(A)	52500	-	-	-	52500	840.00	1.579	1327	210.36	
		R2	10	1050	200	(C)	120	120(ave)	100	-	680	714.00	0.616	440		
SIDEWALK	15.75	SW1	12	20	AS SHOWN	(A)	52500	-	-	-	52500	1050.00	0.888	933	146.67	
		SW2	16	526	200	(D)	170	520	400	-	1090	573.34	1.579	906		
		SW3	12	350	300	(B)	400	250	-	-	650	227.50	0.888	203		
		SW4	12	350	300	(E)	170	520	170	-	860	301.00	0.888	268		
TOTAL	28.09															
											PER BRIDGE		GRADE 40 TOTAL = 4,267 kgs.		GRADE 60 TOTAL = 1,033 kgs.	



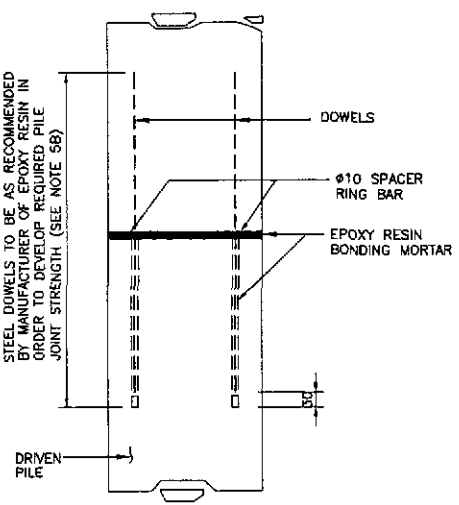


1 PILE ELEVATION
NOT TO SCALE

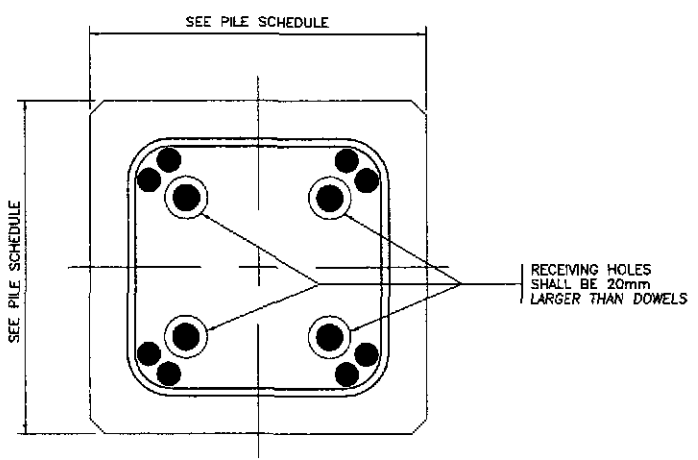
PILE SCHEDULE				
TYPE	SIZE (mm)	LONGITUDINAL REINF.		ALLOWABLE BEARING CAPACITY (kN)
		QTY.	BAR SIZE	
I	450 x 450	8	28	680
II	450 x 450	8	32	680
III	400 x 400	8	28	490

IN FLAT SLAB BRIDGES, BEND BARS INTO A LAYER IMMEDIATELY BELOW TOP SLAB STEEL

DIAMETER AND LENGTH OF REINFORCED STEEL DOWELS TO BE AS RECOMMENDED BY MANUFACTURER OF EPOXY RESIN IN ORDER TO DEVELOP REQUIRED PILE JOINT STRENGTH (SEE NOTE 5B)

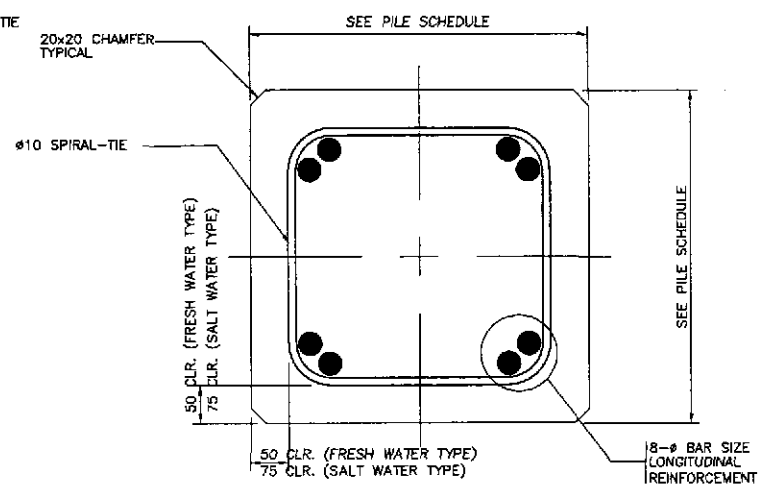


2A ELEVATION
N T S

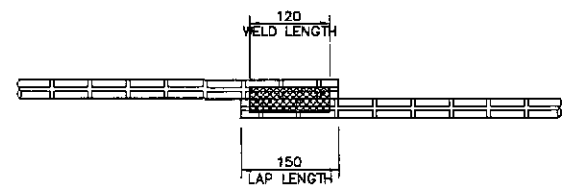


2B SECTION
N T S

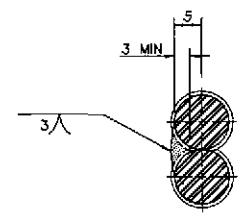
2 PILE SPLICE DETAIL
NOT TO SCALE



3 SECTION
NOT TO SCALE

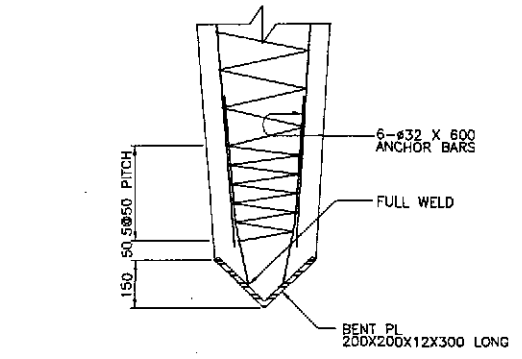


5A ELEVATION
N T S



5B SECTION
N T S

5 WELDED SPIRAL TIE SPLICE DETAIL
NOT TO SCALE



4 PILE TIP FOR HARD DRIVING
NOT TO SCALE

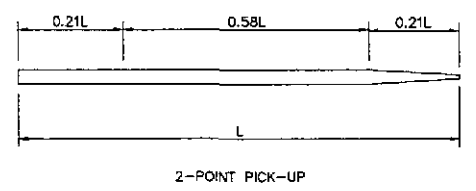
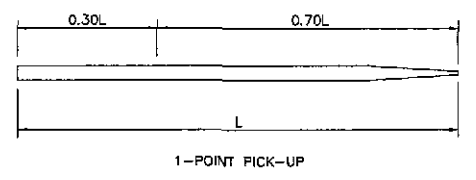
NOTES

- CONCRETE :
CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF CLASS AA CONCRETE WITH 28 MPa CYLINDER STRENGTH AND 19.0mm MAXIMUM AGGREGATE SIZE.
- REINFORCEMENT :
A. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASSHTO M31 (ASTM A615) GRADE 40 AND 60.
B. SPLICES OF ADJACENT LONGITUDINAL STEEL SHALL BE STAGGERED 100 BAR DIAMETERS APART. LENGTH OF SPLICES SHALL BE 1000mm FOR #28 AND 1300mm FOR #28 AND 1700mm FOR #32.
C. SPIRAL-TIES SHALL BE WELDED AT SPLICES.
- DRIVING :
A. PILE HEADS SHALL BE PROTECTED FROM DIRECT IMPACT OF THE HAMMER BY CUSHION BLOCKS CONSISTING OF SEVERAL BLOCKS OF WOOD OR OF OTHER APPROVED MATERIALS.
B. PILES SHALL BE DRIVEN TO A DEPTH THAT WILL PRODUCE THE REQUIRED ALLOWABLE BEARING CAPACITY.
- PILE FOUNDATION DESIGN:
A. IN PILE-BENT PIERS, PILE LENGTHS SHALL BE DETERMINED BY THE ENGINEER/CONSULTANT BASED ON THE ALLOWABLE PILE BEARING CAPACITY SPECIFIED BELOW.
B. IN COLUMN-BENT PIERS, THE NUMBER, LOCATION AND LENGTH OF PILES SHALL BE DETERMINED BY THE ENGINEER/CONSULTANT BASED ON THE LOADING INFORMATION GIVEN IN THE PIER DETAILS.
- PILE SPLICE :
A. PILES MAY BE SPLICED ONLY IF STRICTLY NECESSARY AND APPROVED BY THE ENGINEER/CONSULTANT. PILE SPLICES SHALL BE LOCATED AT LEAST 10m BELOW THE EXISTING GROUND LEVEL.
B. PILE SPLICE SHALL DEVELOP 100% AXIAL AND 50% BENDING OF THE CAPACITY OF THE PILE SECTION WHERE THE SPLICE IS LOCATED.
- ALLOWABLE PILE BEARING CAPACITY : (SEE PILE SCHEDULE)
- MINIMUM HAMMER ENERGY RATING = 55 kN-m
- BASIS FOR COMPUTING ALLOWABLE PILE BEARING CAPACITY:

$$P_{all} = \left(\frac{167 e_h E_h}{S + 2.54} \right) \left(\frac{W_r + D.16 W_p}{W_r + W_p} \right)$$

WHERE:
 P_{all} = ALLOWABLE PILE BEARING CAPACITY (kN)
 e_h = HAMMER EFFICIENCY
 E_h = HAMMER ENERGY RATING (kN-m)
 W_r = WEIGHT OF RAM (kN)
 W_p = WEIGHT OF PILE AND OTHER DRIVEN WEIGHTS (kN)
 S = AVERAGE PENETRATION PER BLOW FOR THE LAST 150mm OF DRIVING (mm)

- TEST PILES
TEST PILES SHALL BE DRIVEN WITH THE SAME HAMMER USED FOR DRIVING REGULAR PILES AND MAY BE PART OF FOUNDATION IF APPROVED BY THE ENGINEER/CONSULTANT.
- PICK-UP POINTS :
PICK-UP POINTS SHALL BE MARKED ON ALL PILES AND ALL LIFTING SHALL BE DONE AT THESE POINTS.

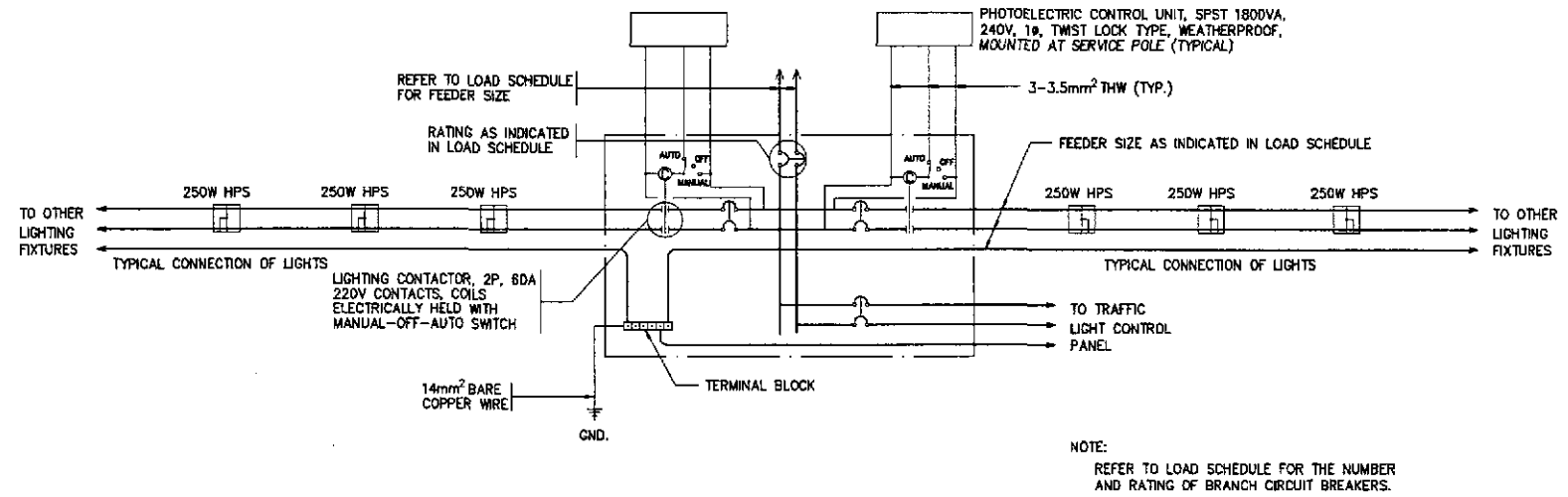


THE USE OF SPECIAL EMBEDDED OR ATTACHED LIFTING DEVICES SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER/CONSULTANT.

ELECTRICAL

LEGEND AND SYMBOLS:

- STREET LIGHTING POLE WITH 1 x 250 WATTS, 240 VOLTS HIGH PRESSURE SODIUM LUMINAIRE SINGLE BRACKET / SINGLE ARM, LOCATED AT 180° ON CENTER IES TYPE II MEDIUM SEMI CUT-OFF, SIMILAR TO GE M25DA2
- DITTO- DOUBLE ARM LIGHT POLE WITH 2 x 250 WATTS HPS LAMP
- SERVICE ENTRANCE AND METERING PEDESTAL WITH LIGHTING CONTACTOR PANEL AS SHOWN IN THE DRAWINGS.
- CIRCUIT BREAKER, RATING AS SHOWN
- UNDERGROUND CONDUIT WITH CONCRETE ENVELOPE
- UNDERGROUND CONDUIT WITH STEEL REINFORCED CONCRETE ENVELOPE
- KILOWATT HOUR METER, SINGLE-PHASE, 240V, 60 Hz
- CIRCUIT HOMERUN



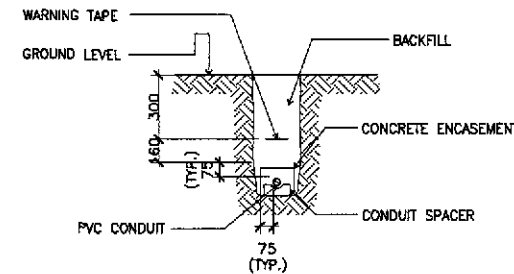
2 SCHEMATIC CONTROL DIAGRAM
ES-01 SCALE 1-20

GENERAL NOTES:

1. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODE, ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER COMPANY. THE ELECTRICAL WORK SHALL BE DONE UNDER THE DIRECT SUPERVISION OF A DULY REGISTERED ELECTRICAL ENGINEER.
2. THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND FURNISH THE OWNER, THROUGH THE ENGINEER'S FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETED WORK.
3. THE POWER SERVICE VOLTAGE SHALL BE 240V, 1φ, 2W, 60 Hz. ALL MATERIALS TO BE USED AND EQUIPMENT TO BE INSTALLED SHALL BE BRAND NEW AND MUST BE OF THE APPROVED TYPES FOR THE PARTICULAR LOCATION AND PURPOSE INTENDED.
4. ALL WIRES SHALL BE COPPER, THERMOPLASTIC INSULATED TYPE THW, 600V, UNLESS OTHERWISE INDICATED. BRAND SHALL BE PHELPS DODGE, DURAFLEX OR APPROVED EQUAL.
5. UNLESS OTHERWISE INDICATED, THE MINIMUM SIZE OF CIRCUIT CONDUCTORS FROM STEEL POLE JUNCTION BOX/HANDHOLE TO EACH LUMINAIRE SHALL BE 2-3.5mm² THW & 1-3.5mm² TW(GND) INSIDE STEEL POLE.
6. UNLESS OTHERWISE INDICATED ALL CONDUIT PIPES SHALL BE UNPLASTICIZED POLYVINYL CHLORIDE CONDUIT SCHEDULE 40 OR POLYETHYLENE PIPE AS MANUFACTURED BY MOLDEX, NELTEX OR APPROVED EQUAL. THE CONDUIT SIZE INDICATED IS THE INSIDE DIAMETER OF CONDUIT.
7. THE CONTRACTOR SHALL VERIFY AND COORDINATE TO LOCAL UTILITY COMPANY THE ACTUAL LOCATION OF THE SERVICE ENTRANCE FOR CONNECTION TO THE POWER SUPPLY. LIKEWISE, THE CONCRETE PEDESTAL SHALL BE PROVIDED BY THE CONTRACTOR.
8. ALL NON-CURRENT CARRYING PARTS OF EVERY ELECTRICAL EQUIPMENT/FIXTURE SHALL BE GROUNDED EFFECTIVELY.
9. UNDERGROUND CONDUIT RUN SHALL BE BURIED A MINIMUM OF 460mm BELOW GROUND LEVEL. UNLESS OTHERWISE INDICATED, CONDUIT RUN CROSSING STREET SHALL BE ENCASED IN STEEL REINFORCED 2500 PSI CONCRETE WITH MINIMUM OF 75mm (3 INCHES) THICKNESS COVERED ALL AROUND.
10. UNPROTECTED CONDUIT RISERS AND EXPOSED CONDUIT RUNS SHALL BE RIGID STEEL CONDUIT.
11. ALL PANELBOARD ENCLOSURES SHALL BE RAIN-TIGHT, NEMA 4X ENCLOSURE (1.5mm THICK MINIMUM GAUGE 14 FOR BOX AND COVER) WITH CONCEALED HINGE AND FLUSH LOCK KEY.
12. ALL STREET LUMINAIRE ASSEMBLY INCLUDING POLE AND FOUNDATION SHALL WITHSTAND WINDS UP TO 250 KPH PER HOUR GUSTING WITHOUT PERMANENT DEFORMATION.
13. DO NOT INSTALL POLE WITHOUT COMPLETE INSTALLATION/CONNECTION OF THE LUMINAIRE ASSEMBLY.
14. ALL CIRCUIT BREAKERS SHALL BE UL LISTED AS SWD (SWITCHING DUTY) SUITABLE FOR HIGH INITIAL INRUSH CURRENT FOR SWITCHING THE PRESSURE SODIUM LUMINAIRES. SIEMENS-ITE, SQUARE D, WESTINGHOUSE BRANDS SHALL BE USED OR APPROVED EQUIVALENT.
15. CONCRETE HANDHOLES OR OUTDOOR TYPE PULLBOXES OF CODE 1.61mm (GAGE 16) MINIMUM SHALL BE PROVIDED BY THE CONTRACTOR, WHENEVER NECESSARY, TO FACILITATE WIRE PULLING EVEN IF THESE ITEMS ARE NOT SHOWN IN THE PLANS.

NOTES:

1. UNLESS OTHERWISE SPECIFIED, TOP OF CONCRETE ENVELOPE SHALL NOT BE LESS THAN 460mm BELOW FINISHED GRADE LINE EXCEPT, THAT UNDER ROAD AND PAVEMENT, IT SHALL BE NOT LESS THAN 600mm.
2. PROVIDE STEEL REBAR REINFORCEMENT ON PAVED AREA.
3. ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE F_c SHALL BE 13.8MPa (2000PSI)
4. REINFORCING BARS SHALL CONFORM TO PS GRADE 227, F_y=227MPa (33,000PSI)
5. MAXIMUM SPACING OF PRECAST SPACER SHALL BE 1.5 METERS.
6. ALL DIMENSIONS ARE IN MILLIMETER, UNLESS OTHERWISE SPECIFIED.

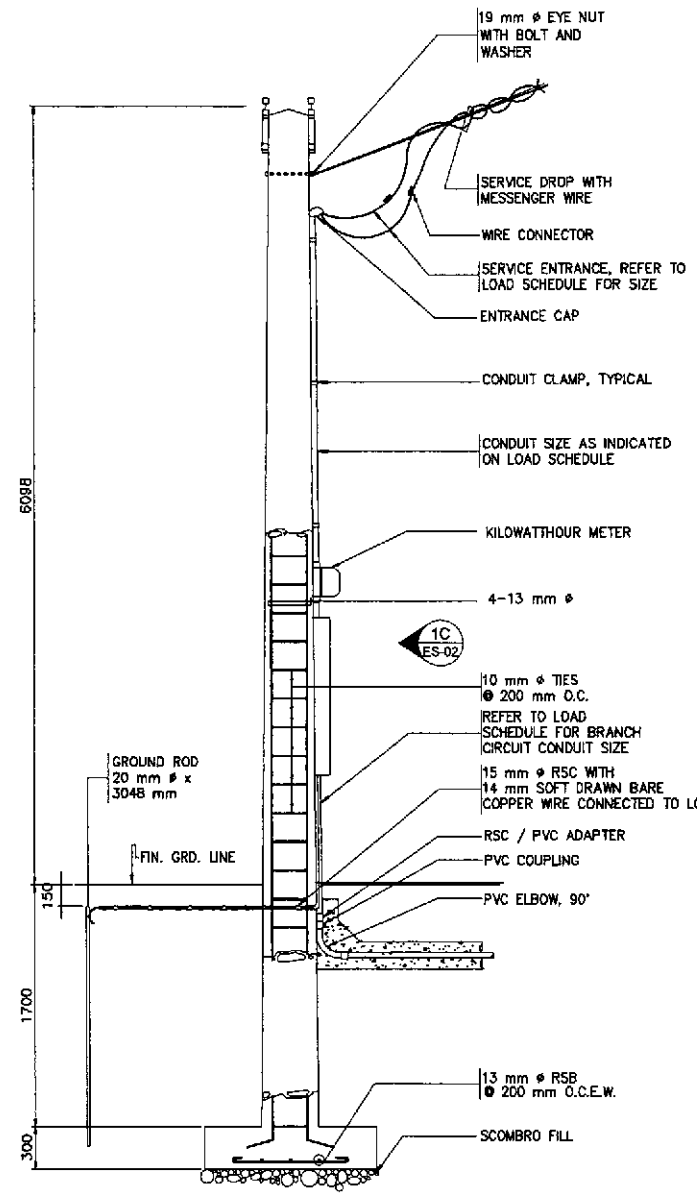


1 TYPICAL DUCT SECTION
ES-01 NOT TO SCALE

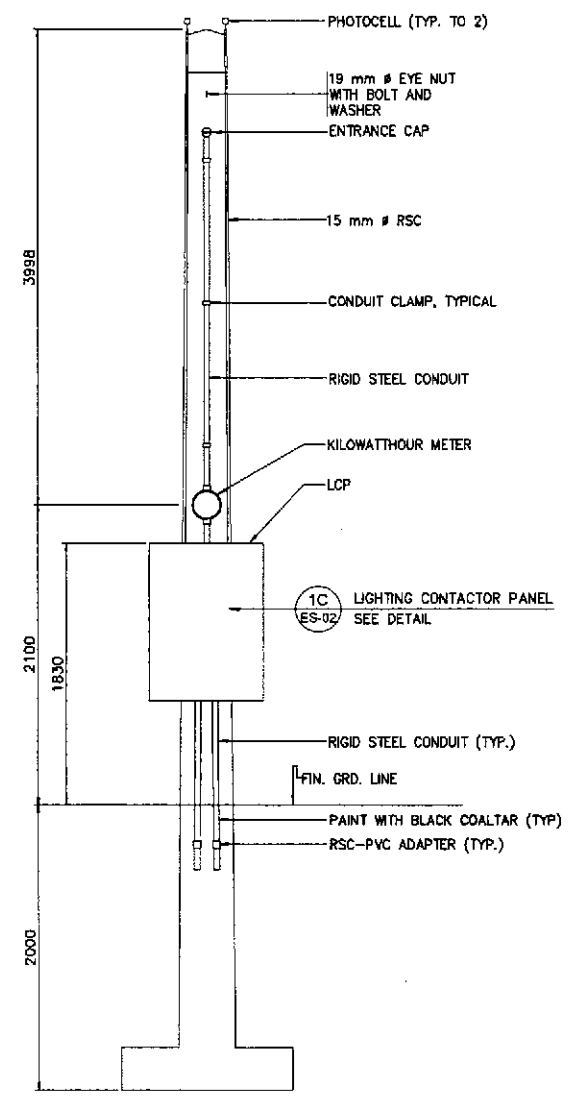
ERNESTO M. ANTIOQUIA
ENGINEER

PTR. NO. 7403664 P.E.E. NO. 2913
ISSUED ON 01/02/2002 ISSUED AT CABUYAO, LAAGUNA
T.I.N. 109-382-379

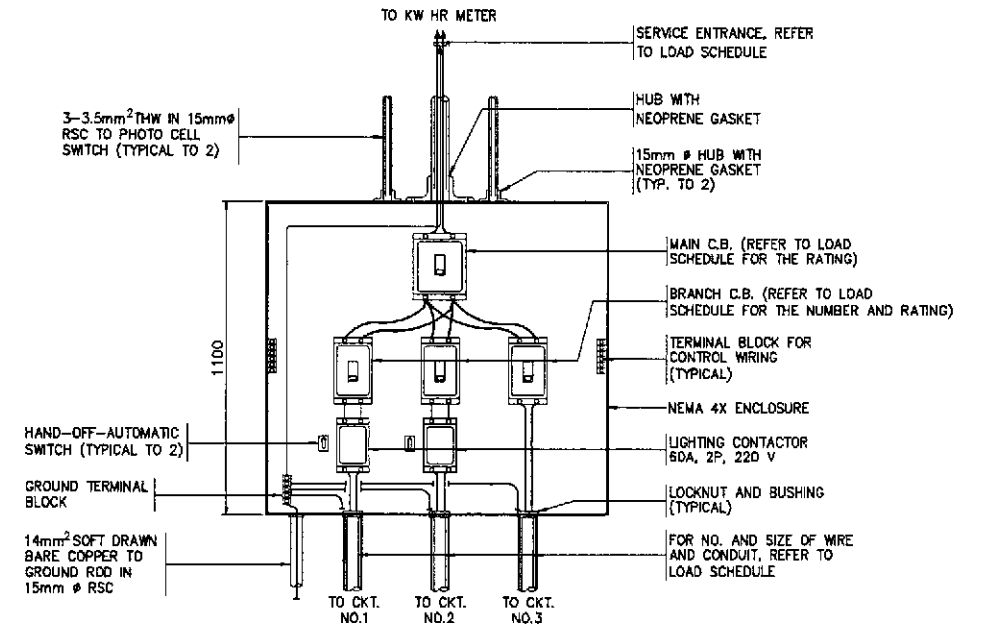
	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : NOTES AND LEGENDS, DUCT BANK SECTION & SCHEMATIC CONTROL DIAG. INTERSECTION A-1, A-4 & A-9	SHEET NO. : ES-01					
	CHECKED	DATE	SIGNATURE						SUBMITTED BY: DANILLO C. TRAJANG Project Director	REVIEWED BY: FE M. BARRIENTOS Chief, Mech-Elect Division	RECOMMENDED BY: GILBERTO S. REYES OIC, Director IV	RECOMMENDED BY: MANUEL M. BONDAN Undersecretary	APPROVED BY: SIMEON A. DATUMANONG Secretary
	DATE	SIGNATURE	DATE						SIGNATURE	DATE	SIGNATURE	DATE	SIGNATURE



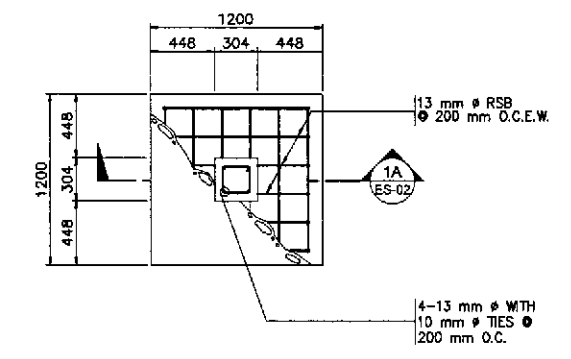
1A SECTION
ES-02



1B ELEVATION
ES-02



1C DETAIL
ES-02 SCALE 1:20



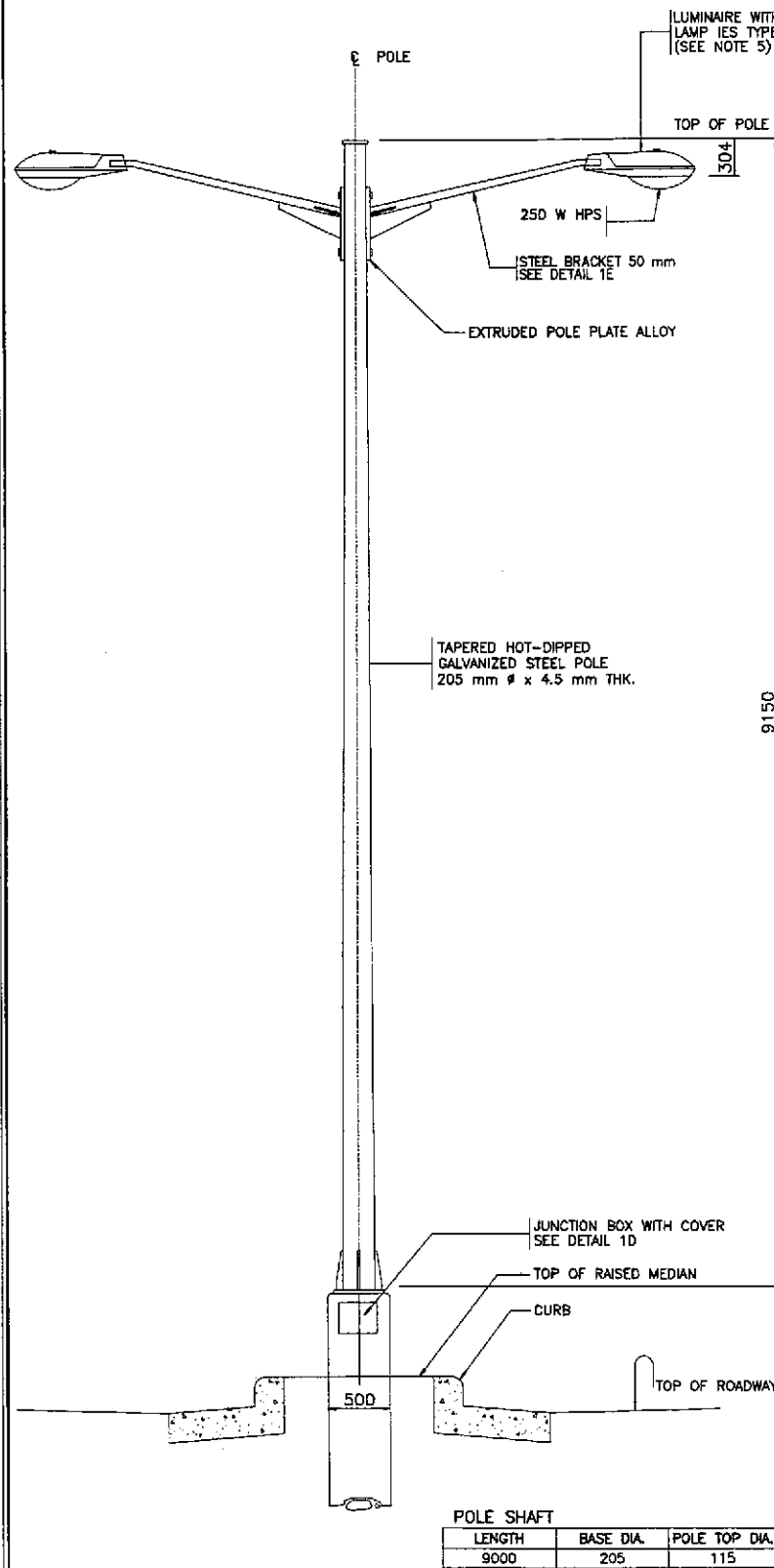
1D FOOTING PLAN
ES-02 SCALE 1:20

1 SERVICE POLE DETAILS
ES-02 SCALE 1:20

Ernesto M. Antioquia
ERNESTO M. ANTIOQUIA
ENGINEER

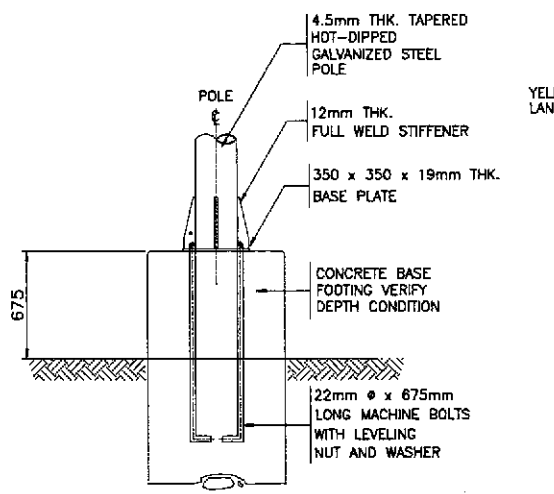
PTR. NO. 7403664 P.E.E. NO. 2913
ISSUED ON 01/02/2002 ISSUED AT CABUYAO, LAGUNA
T.I.N. 109-382-378

	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/2/02	<i>E.M. Antioquia</i>	BUREAU OF DESIGN				THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	SERVICE POLE DETAILS INTERSECTION A-1, A-4 & A-9	ES-02
	SUBMITTED	9/6/02	<i>Ernesto M. Antioquia</i>	Submitted By:	Reviewed By:	Recommended By:	Approved By:	FULL SIZE A1			
			DANILO C. TRAJANO Project Director	FE. M. BARRIENTOS Chief, Mech/Elect Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary				

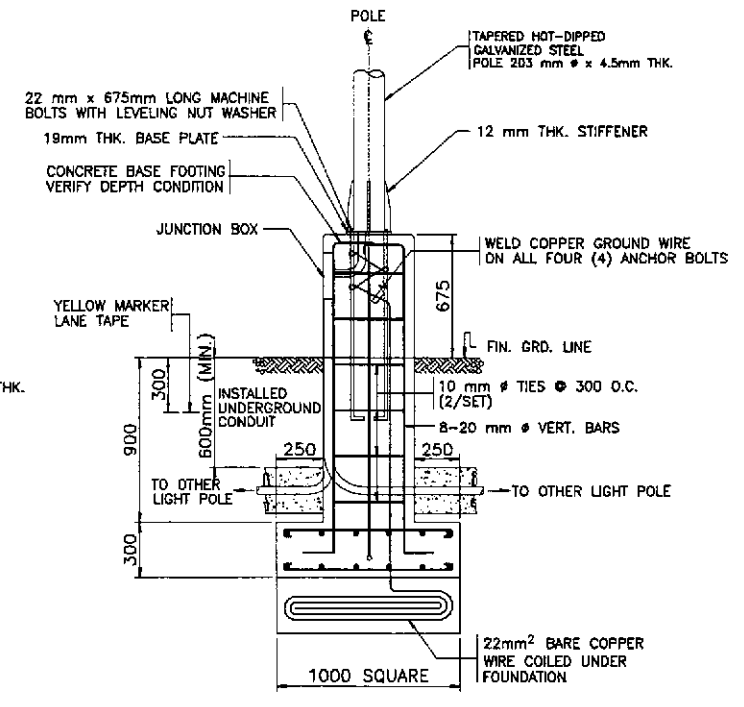


1A ELEVATION
ES-03

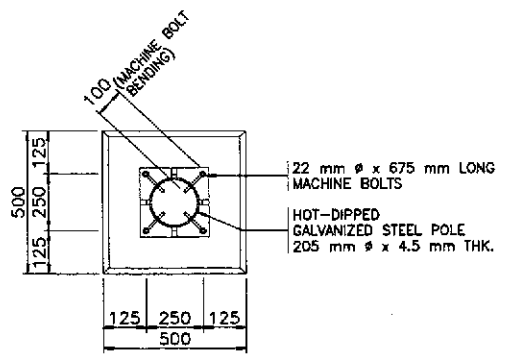
- NOTES:
1. CONCRETE MIXTURE SHOULD BE 211 kg./cm (3000 PSI)
 2. PAINT ALL JOINTS IN BOX AND CONDUIT WITH RED LEAD PRIMER BEFORE POURING CONCRETE.
 3. FOR CONDUIT LARGER THAN 40mm Ø, KNOCKOUTS AND HOLES SHALL HAVE TO BE WIDENED BY THE USER TO THE DESIRED DIAMETER.
 4. FOR LOAM AND MUDDY SOIL, REFER TO CIVIL ENGINEERING FOR PROPER FOUNDATION DEPTH.
 5. LUMINAIRE LAMP SHALL BE 250W HIGH PRESSURE SODIUM WITH DIFFUSE FINISH AND INITIAL LUMENS OF 26,000. BALLAST SHALL BE UL LISTED, CONSTANT WATTAGE TRANSFORMER CWA OR REGULATOR, HIGH POWER FACTOR TYPE RATED 240V, 60 Hz WITH ALLOWABLE LINE VOLTAGE VARIATION OF ±10%.
 6. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.



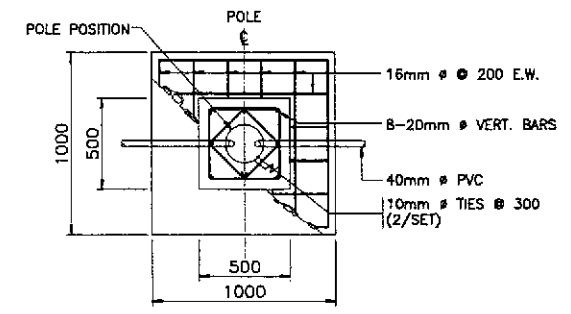
1B BASE PLATE DETAILS
ES-03



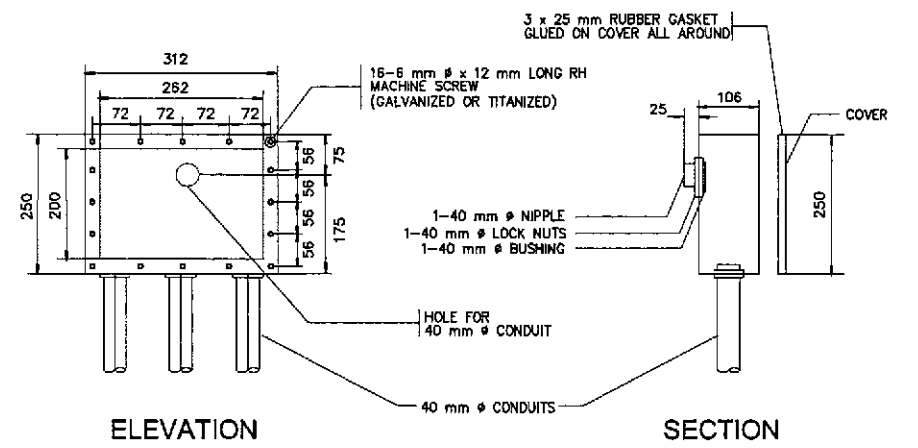
1C STANDARD FOOTING DETAILS
ES-03



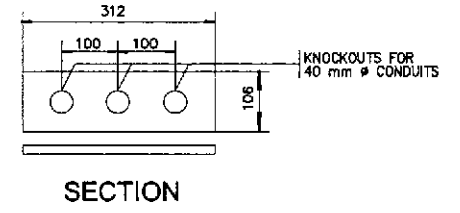
PLAN



PLAN



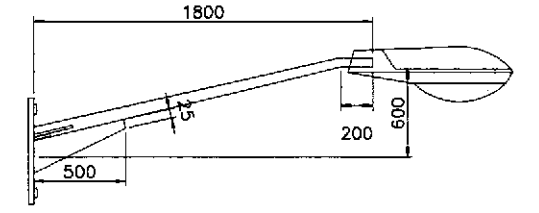
ELEVATION SECTION



SECTION

MATERIAL:
JUNCTION BOX - 50 mm THICK CAST ALUMINUM FOR BOX AND COVER
ANCHOR BOLT - ASTM A-36
FINISH:
ANCHOR BOLT - ASTM A-153

1D JUNCTION BOX DETAILS
ES-03



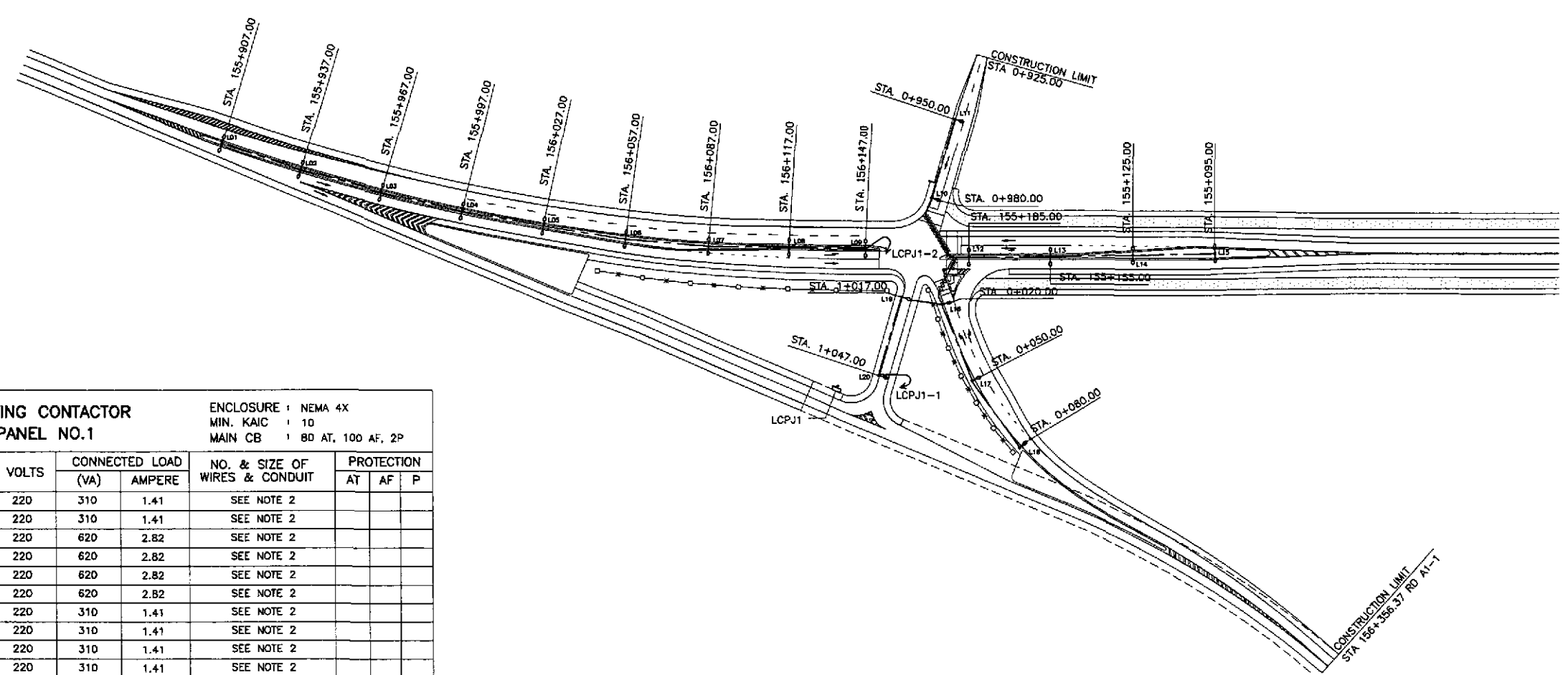
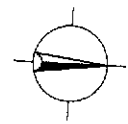
1E MAST ARM ELEVATION
ES-03

MATERIAL:
MAST ARM - B.I. PIPE AS PER PMS 26: 1984 (MEDIUM SERIES)
POLE SHAFT AS PER ASTM A-53 MOUNTING PLATE AND STIFFENERS
MACHINE BOLT - ANSI-C135.
FINISH:
HOT-DIP GALVANIZED PER LATEST EDITION OF ASTM A-123
MACHINE BOLT - ASTM A-153

1 STREET LIGHT POLE DETAILS
ES-03 NOT TO SCALE

ERNESTO M. ANTIOQUIA
ENGINEER
PTR. NO. 7403664 P.E.E. NO. 2913
ISSUED ON 01/02/2002 ISSUED AT CABUYAO, LAGUNA
T.I.N. 109-382-379

	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :				SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/2/02	E.M. ANTIOQUIA		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)				NOT TO SCALE	STREET LIGHT POLE DETAILS INTERSECTION A-1, A-4 & A-9	ES-03
	SUBMITTED	9/4/02	E.M. ANTIOQUIA		SAN JOSE BYPASS				FULL SIZE A1		
Submitted By:		Reviewed By:		Recommended By:		Approved By:					
DANILO C. TRAJANO Project Director		FE M. BARRIENTOS Chief, Mech'l-Elect'l Division		GILBERTO S. REYES OC, Director IV		MANUEL M. BONDAN Undersecretary		SIMEON A. DATUMANONG Secretary			



LOAD SCHEDULE

CKT. NO.	LOAD DESCRIPTION	VOLTS	CONNECTED LOAD		NO. & SIZE OF WIRES & CONDUIT	PROTECTION		
			(VA)	AMPERE		AT	AF	P
1	L10 (1 x 250 W HPS)	220	310	1.41	SEE NOTE 2			
	L11 (1 x 250 W HPS)	220	310	1.41	SEE NOTE 2			
	L12 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L13 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L14 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L15 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L16 (1 x 250 W HPS)	220	310	1.41	SEE NOTE 2			
	L17 (1 x 250 W HPS)	220	310	1.41	SEE NOTE 2			
	L18 (1 x 250 W HPS)	220	310	1.41	SEE NOTE 2			
	L19 (1 x 250 W HPS)	220	310	1.41	SEE NOTE 2			
	SUB-TOTAL		4650	21.15	2-30 mm² THW & 1-8.0 mm² TW(G) IN 40 mmϕ CONDUIT	30	100	2
2	L01 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L02 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L03 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L04 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L05 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L06 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L07 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L08 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L09 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	SUB-TOTAL		5580	25.38	2-30 mm² THW & 1-8.0 mm² TW(G) IN 40 mmϕ CONDUIT	40	100	2
3	TRAFFIC LIGHTS	220	3450	15	WIRES AND CONDUIT (BY OTHERS)	30	100	2
	TOTAL		13680	61.53	2-38 mm² THW IN 40 mmϕ CONDUIT	80	100	2

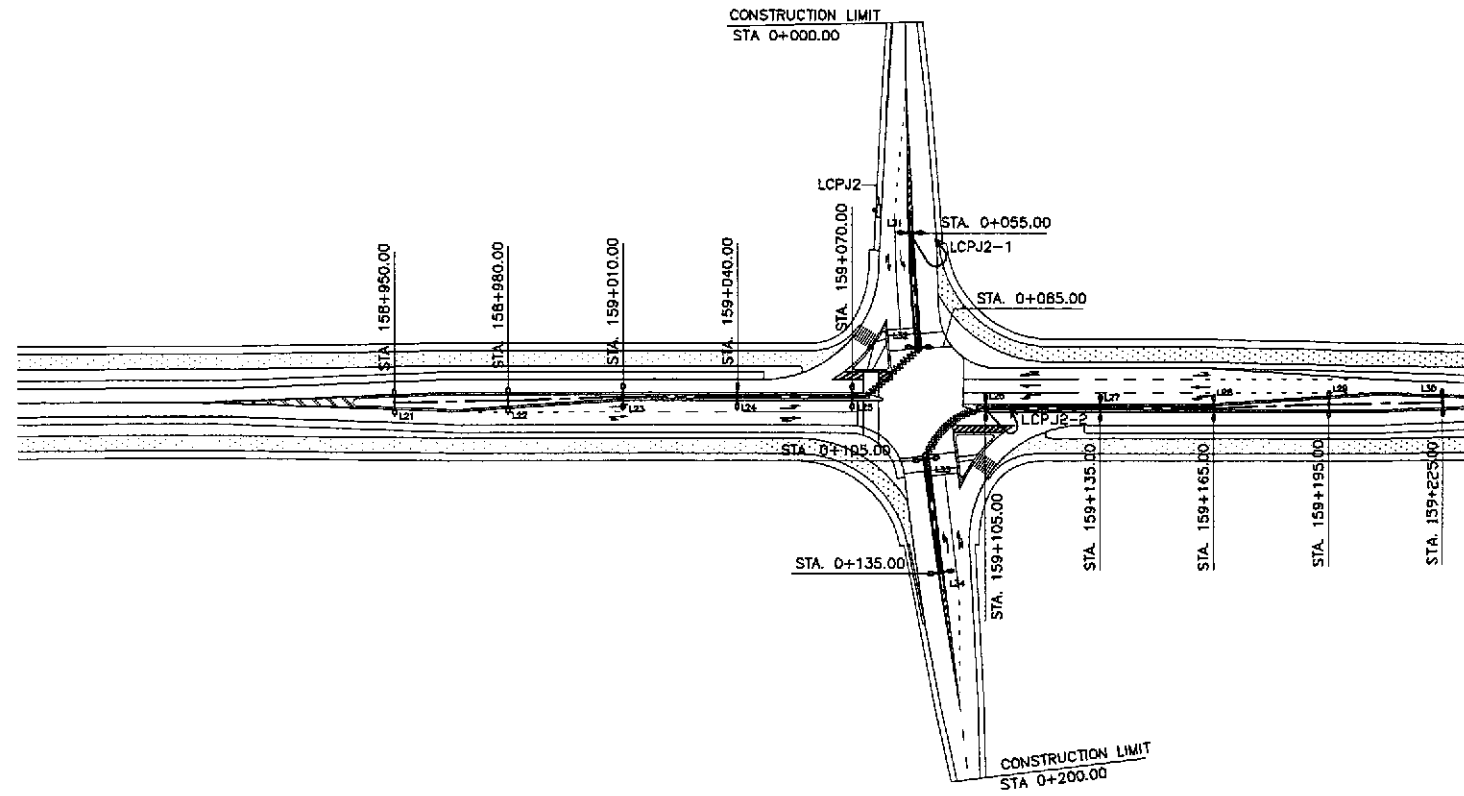
- NOTES:
- ARM LENGTH OF ALL LIGHTING FIXTURES SHALL BE 1800mm.
 - UNLESS OTHERWISE INDICATED, THE MINIMUM SIZE OF CIRCUIT CONDUCTORS FROM STEEL POLE JUNCTION BOX/HANDHOLE TO EACH LUMINAIRE SHALL BE 2-3.5mm THW & 1-3.5mm² TW(GND) INSIDE STEEL POLE.

1 ROADWAY LIGHTING PLAN
 EI-01 SCALE 1:1000

EMX
 ERNESTO M. ANTIOQUIA
 ENGINEER

PTR. NO. 7403664 P.E.E. NO. 2913
 ISSUED ON 01/02/2002 ISSUED AT CABUYAO, LAGUNA
 T.I.N. 100-382-379

	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/2/02	E.M. ANTIOQUIA		Submitted By:	Reviewed By:	Recommended By:	Recommended By:	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	1:1000	ROADWAY LIGHTING PLAN INTERSECTION A-1	EI-01
	SUBMITTED	9/4/02	M. M. ...		DANILO C. TRAJANO Project Director	FE M. BARRIENTOS Chief, Mech'-Elect' Division	GILBERTO S. REYES Dir. Director IV	MANUEL M. BONOAN Undersecretary	SIMEON A. DATUMANONG Secretary	FULL SIZE A1		




LOAD SCHEDULE



PANEL ID: LCPJ2		ENCLOSURE NEMA 4X						
FEED: TOP		MIN. KAIC: 10						
MOUNTING SURFACE		MAIN CB: 70 AT, 100 AF, 2P						
LIGHTING CONTACTOR PANEL NO.2								
CKT. NO.	LOAD DESCRIPTION	VOLTS	CONNECTED LOAD		NO. & SIZE OF WIRES & CONDUIT	PROTECTION		
			(VA)	AMPERE		AT	AF	P
1	L21 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L22 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L23 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L24 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L25 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L31 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L32 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	SUB-TOTAL		4340	19.74	2-30 mm² THW & 1-8.0 mm² TW(G) IN 40 mmϕ CONDUIT	30	100	2
2	L26 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L27 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L28 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L29 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L30 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L33 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	SUB-TOTAL		4340	19.74	2-30 mm² THW & 1-8.0 mm² TW(G) IN 40 mmϕ CONDUIT	30	100	2
3	TRAFFIC LIGHTS	220	3450	15	WIRES AND CONDUIT (BY OTHERS)	30	100	2
	TOTAL		12130	54.48	2-38 mm² THW & IN 40 mmϕ CONDUIT	70	100	2

NOTES:

- ARM LENGTH OF ALL LIGHTING FIXTURES SHALL BE 1800mm.
- UNLESS OTHERWISE INDICATED, THE MINIMUM SIZE OF CIRCUIT CONDUCTORS FROM STEEL POLE JUNCTION BOX/HANDHOLE TO EACH LUMINAIRE SHALL BE 2-3.5mm THW & 1-3.5mm² TW(GND) INSIDE STEEL POLE.

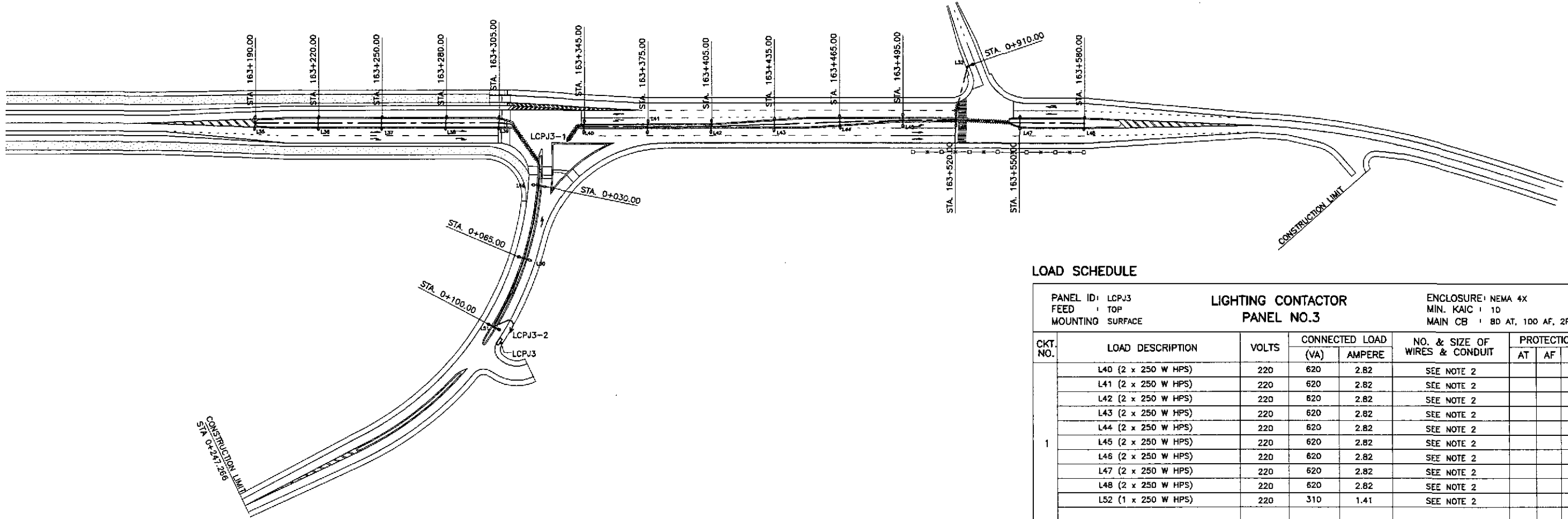
1 ROADWAY LIGHTING PLAN
 EI-02 SCALE 1:1000


ERNESTO M. ANTIOQUIA
 ENGINEER
 PTR. NO. 7403664 P.E.E. NO. 2913
 ISSUED ON 01/02/2002 ISSUED AT CAGAYAN DE ORO
 T.I.N. 109-382-379

		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :		SCALE :	SHEET CONTENTS :	SHEET NO. :
	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Paridel, Cabanatuan and San Jose Bypasses)		SAN JOSE BYPASS		1:1000	ROADWAY LIGHTING PLAN INTERSECTION A-4	EI-02
	DESIGNED: 9/2/02 E.M. ANTIOQUIA CHECKED: 9/4/02 E.M. ANTIOQUIA SUBMITTED: 9/6/02 M. BONDAN		P.H.L. - P.W.D. Submitted By: DANILLO C. TRAJANO, Project Director Reviewed By: FE M. BARRIENTOS, Chief, Mech-Elect Division Recommended By: GILBERTO S. REYES, OIC, Director IV Recommended By: MANUEL M. BONDAN, Undersecretary Approved By: SIMEON A. DATUMANONG, Secretary		FULL SIZE A1		




- NOTES:
1. ARM LENGTH OF ALL LIGHTING FIXTURES SHALL BE 1800mm.
 2. UNLESS OTHERWISE INDICATED, THE MINIMUM SIZE OF CIRCUIT CONDUCTORS FROM STEEL POLE JUNCTION BOX/HANDHOLE TO EACH LUMINAIRE SHALL BE 2-3.5mm THW & 1-3.5mm² TW(GND) INSIDE STEEL POLE.




LOAD SCHEDULE

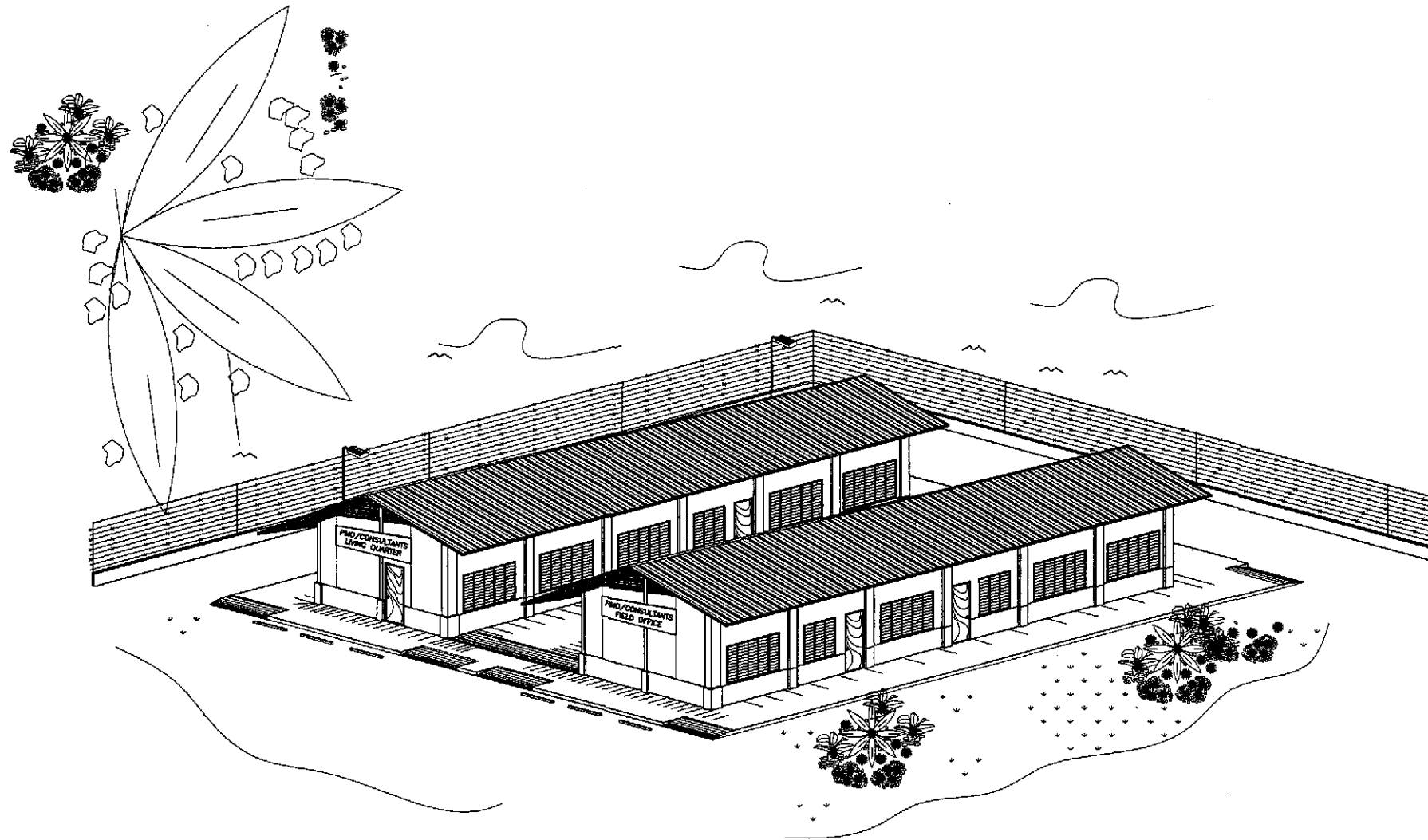
CKT. NO.	LOAD DESCRIPTION	VOLTS	CONNECTED LOAD		NO. & SIZE OF WIRES & CONDUIT	PROTECTION		
			(VA)	AMPERE		AT	AF	P
1	L40 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L41 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L42 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L43 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L44 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L45 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L46 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L47 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L48 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L52 (1 x 250 W HPS)	220	310	1.41	SEE NOTE 2			
	SUB-TOTAL		5890	25.38	2-38 mm² THW & 1-8.0 mm² TW(G) IN 40 mmϕ CONDUIT	40	100	2
2	L35 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L36 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L37 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L38 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L39 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L49 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L50 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	L51 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 2			
	SUB-TOTAL		4960	22.56	2-30 mm² THW & 1-8.0 mm² TW(G) IN 40 mmϕ CONDUIT	30	100	2
3	TRAFFIC LIGHTS	220	3450	15	WIRES AND CONDUIT (BY OTHERS)	30	100	2
	TOTAL		14300	62.94	2-38 mm² THW & IN 40 mmϕ CONDUIT	80	100	2

1 ROADWAY LIGHTING PLAN
EI-03 SCALE 1:1000


ERNESTO M. ANTIOQUIA
 ENGINEER
 PTR. NO. 7403664 P.E.E. NO. 2913
 ISSUED ON 01/02/2002 ISSUED AT CABUYAO, LAGUNA
 T.I.N. 109-382-379

	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/2/02	E.M. ANTIOQUIA	BUREAU OF DESIGN OFFICE OF THE SECRETARY				THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	1:1000	ROADWAY LIGHTING PLAN INTERSECTION A-9	EI-03
	SUBMITTED	9/6/02	M. S. SANCHEZ	Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: FE. M. BARRIENTOS Chief, Mech ^l -Elec ^l Division	Recommended By: GILBERTO S. REYES OIC, Director IV	Recommended By: MANUEL M. BONGAON Undersecretary	Approved By: SIMEON A. DATUMANONG Secretary	FULL SIZE A1		

ENGR'S FIELD OFFICE & LIVING QUARTERS

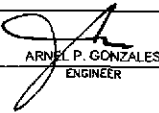




PERSPECTIVE

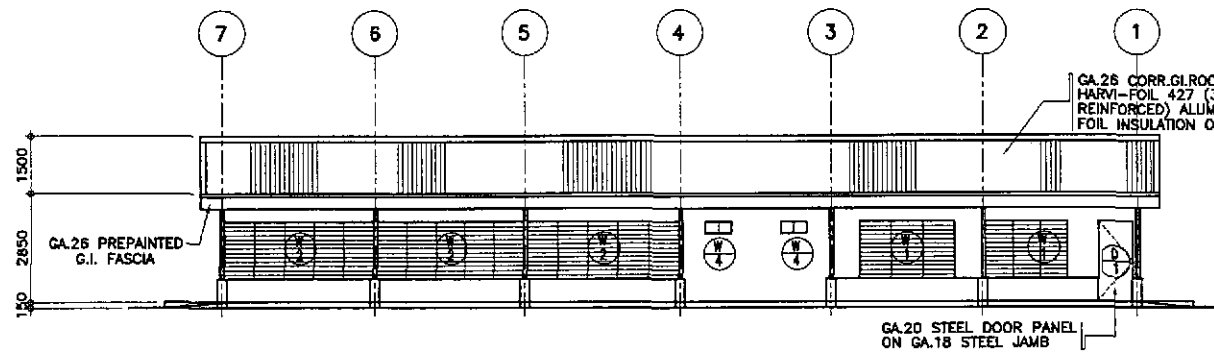
GENERAL NOTES :

IT IS THE INTENTION OF THE DPWH THAT AFTER COMPLETION OF THE AND ENGINEER'S QUARTERS BUILDINGS BE DONATED TO THE NEAREST PUBLIC SCHOOL. THESE AFOREMENTIONED BUILDINGS SHOULD THEREFORE BE LOCATED WITHIN A PUBLIC SCHOOL COMPOUND OR ON A GOVERNMENT LOT THAT COULD BE EASILY ACQUIRED BY THE DEPARTMENT OF EDUCATION, FOR NEW SCHOOL SITE. IF NONE IS AVAILABLE, THEN THE PRE-FABRICATED METAL COMPONENTS SHALL BE DISMANTLED AFTER COMPLETION OF THE PROJECT FOR DONATION TO THE NEAREST PUBLIC SCHOOL AUTHORITIES OR TO THE LOCAL GOVERNMENT UNIT WHERE SAID PROJECT IS LOCATED.

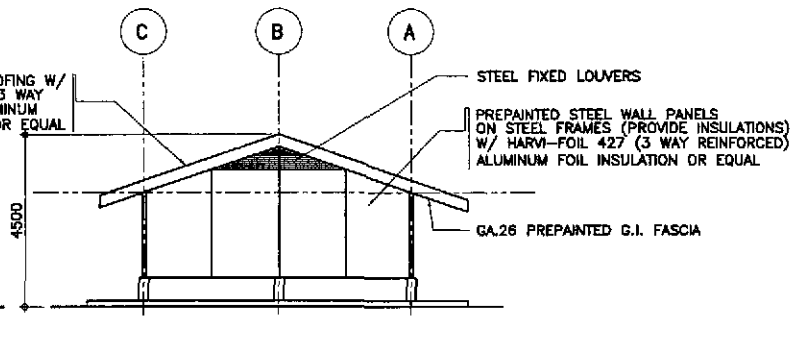
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		CITY / DISTRICT / MUNICIPALITY
ARCHITECTURAL :		LAND USE and ZONING
FA-01 PERSPECTIVE TABLE OF CONTENTS		
02 ENGINEER'S FIELD OFFICE/LABORATORY FLOOR PLAN FRONT & REAR ELEV. LEFT & RIGHT SIDE ELEV. LONGITUDINAL & CROSS SECT. REFLECTED CEILING PLAN		LINE and GRADE
03 ENGINEER'S LIVING QUARTERS FLOOR PLAN FRONT & REAR ELEV. LEFT & RIGHT SIDE ELEV. LONGITUDINAL & CROSS SECT. REFLECTED CEILING PLAN		ARCHITECTURAL
04 ENGINEER'S FIELD OFFICE/LABORATORY ROOF PLAN DET. CROSS SECTION SCHEDULE OF DOORS & WINDOWS		STRUCTURAL
05 ENGINEER'S LIVING QUARTERS ROOF PLAN DET. CROSS SECTION SCHEDULE OF DOORS & WINDOWS		STRUCTURAL
STRUCTURAL :		STRUCTURAL
FA-06 FOUNDATION PLAN, R.C. RAMP DETAIL DET. OF F-1, P-1, WF-1 DESIGN CRITERIA		STRUCTURAL
07 ENGINEER'S FIELD OFFICE/LABORATORY ELEV. OF STEEL STUD FRAMES FRAMES SCHEMATIC DIAGRAMS		STRUCTURAL
08 ENGINEER'S LIVING QUARTERS ELEV. OF STEEL STUD FRAMES FRAMES SCHEMATIC DIAGRAMS		STRUCTURAL
09 ENGINEER'S FIELD OFFICE/LABORATORY REAR AND LEFT SIDE ELEVATION OF STEEL STUD FRAMES, AND SCHEMATIC DIAGRAMS		STRUCTURAL
10 ENGINEER'S LIVING QUARTERS REAR AND LEFT SIDE ELEVATION OF STEEL STUD FRAME, AND SCHEMATIC DIAGRAMS		STRUCTURAL
11 DETAIL CONNECTIONS, DETAILS 1 TO 15		STRUCTURAL
12 ROOF FRAMING PLAN SCHEM. DIAGRAM (INT. WALLS) PURLIN CONNECTION CROSS BRACING CONNECTION		STRUCTURAL
ELECTRICAL :		SANITARY
FE-01 ENGINEER'S FIELD OFFICE/LABORATORY LIGHTING LAYOUT POWER LAYOUT ELECT'L. SYMBOLS & GEN. NOTES		SANITARY
02 ENGINEER'S LIVING QUARTERS LIGHTING LAYOUT POWER LAYOUT ELECT'L. SYMBOLS & GEN. NOTES		SANITARY
03 SCHEDULE OF LOADS AND COMPUTATIONS ELECT'L. RISER DIAGRAMS		SANITARY
PLUMBING :		SANITARY
FP-01 SEWER AND WATER LINE LAYOUT ISOMETRIC DIAGRAM		SANITARY
02 SEPTIC TANK DETAILS		SANITARY
EXTERNAL :		MECHANICAL
FX-01 PLOT PLAN ELEV - FENCE & GATE FOUNDATION DETAIL		MECHANICAL


 ARNEL P. GONZALES
 ENGINEER
 PTR. NO. 5846340 P.R.C. NO. 53457
 ISSUED ON 04/26/2002 T.I.N. 138-062-882
 ISSUED AT SAN JUAN, M.M.

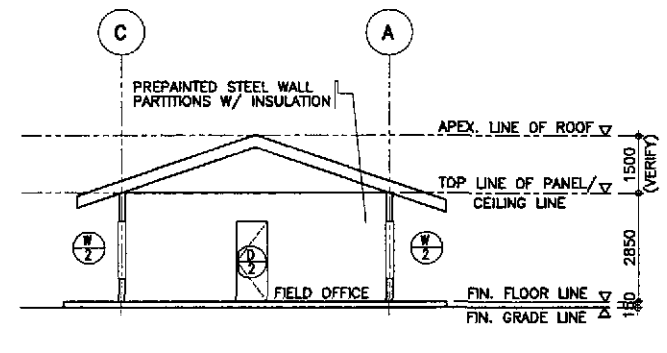
 JAPAN INTERNATIONAL COOPERATION AGENCY		 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS		PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS		SCALE : NOT TO SCALE FULL SIZE A1	SHEET CONTENTS : ENGINEER'S FIELD OFFICE AND LIVING QUARTERS PERSPECTIVE AND TABLE OF CONTENTS	SHEET NO. : FA-01
DESIGNED	DATE: 7/2/02 SIGNATURE: [Signature]	Submitted By:	Reviewed By:	Recommended By:	Recommended By:			
CHECKED	DATE: 7/4/02 SIGNATURE: [Signature]	DANILO C. TRAJANO Project Director	EMMANUEL P. CUNTAPAY Chief, Architectural Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary			
SUBMITTED	DATE: 7/6/02 SIGNATURE: [Signature]			SIMON A. DATUMANONG Secretary				



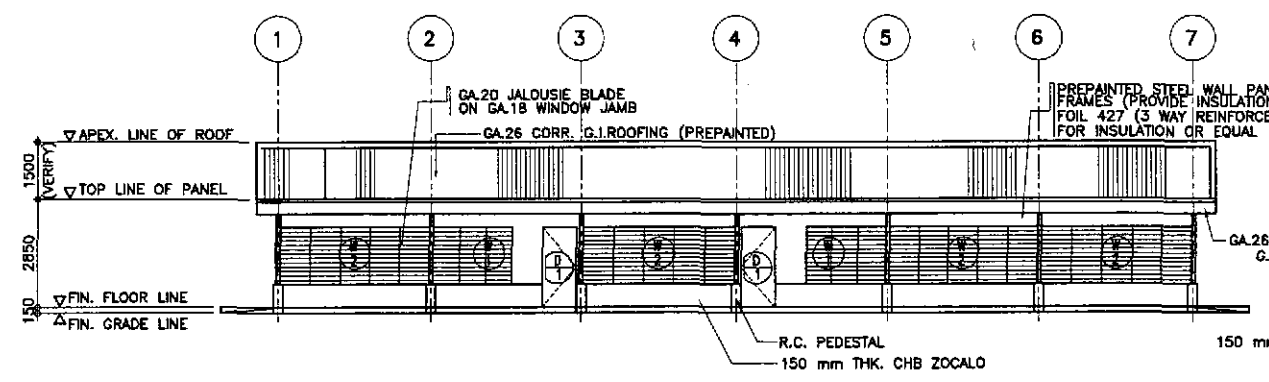
3 REAR ELEVATION
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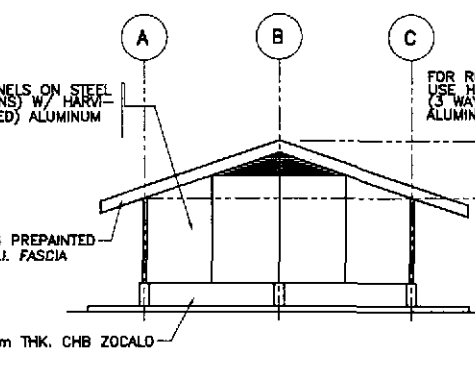
5 LEFT SIDE ELEVATION
FA-02 SCALE 1:100



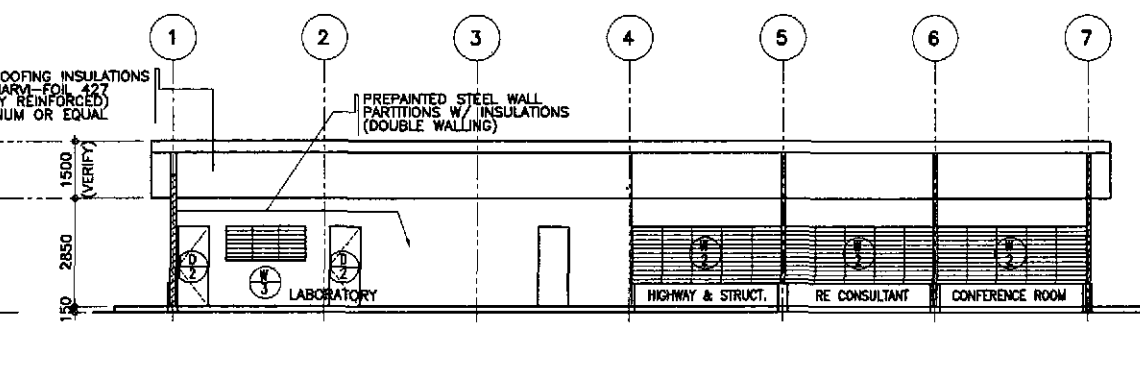
8 CROSS SECTION
FA-02 SCALE 1:100



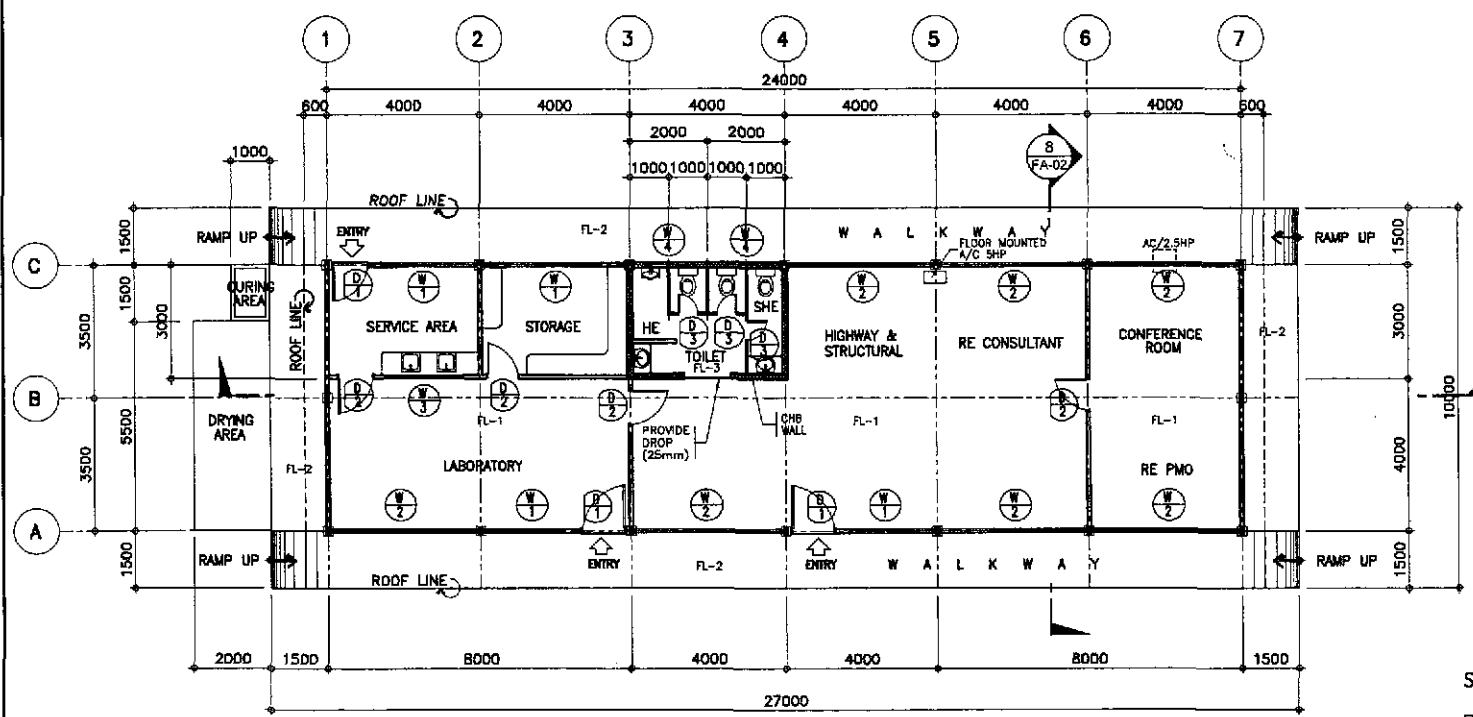
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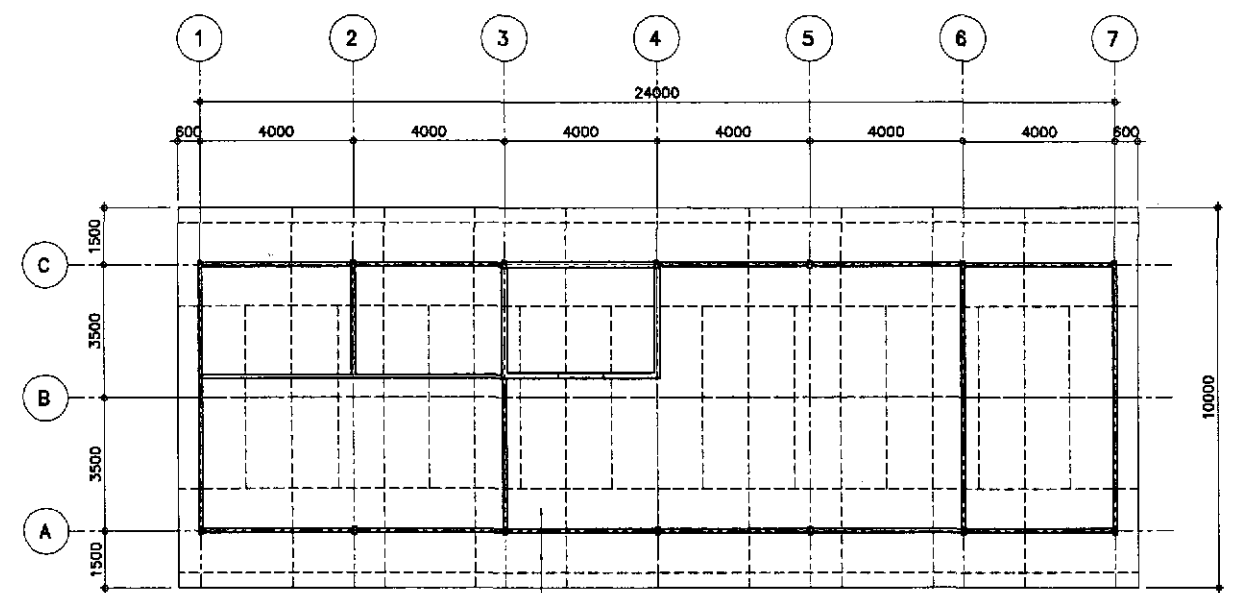
4 RIGHT SIDE ELEVATION
FA-02 SCALE 1:100



7 LONGITUDINAL SECTION
FA-02 SCALE 1:100



1 FLOOR PLAN FOR ENGINEER'S FIELD OFFICE/LABORATORY
FA-02 SCALE 1:100



6 REFLECTED CEILING PLAN
FA-02 SCALE 1:100

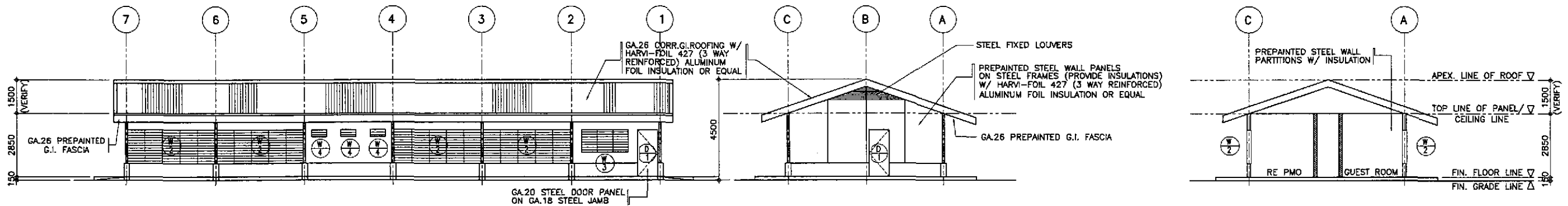
SCHEDULE OF FLOOR FINISHES

- FL-1 = PLAIN CEMENT FLOOR FINISH
- FL-2 = PLAIN CEMENT FLOOR FINISH WITH NON SKID CEMENT WITH GROOVE LINES
- FL-3 = UNGLAZED TILE FINISH, 200x200mm

ARDEL P. GONZALES
ENGINEER

PTR. NO. 5846340 P.R.C. NO. 53457
ISSUED ON 04/28/2002 T.I.N. 138-062-682
ISSUED AT SAN JUAN, M.M.

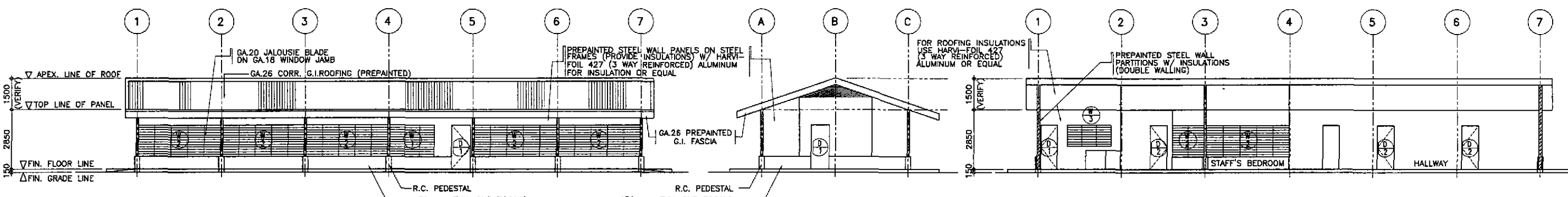
	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/4/02	A.P. GONZALES	BUREAU OF DESIGN OFFICE OF THE SECRETARY			THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	ENGR'S FIELD OFFICE / LABORATORY FLOOR PLAN, ELEVATIONS, CROSS-SECTIONS AND REFLECTED CEILING PLAN	FA-02
	SUBMITTED	9/4/02	M. TRAJANO	Submitted By:	Reviewed By:	Recommended By:	SAN JOSE BYPASS	FULL SIZE A1		
				DANILO C. TRAJANO Project Director	EMMANUEL P. CUNTAPEY Chief, Architectural Division	GILBERTO S. REYES OC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary		



3 REAR ELEVATION
FA-03 SCALE 1:100

5 LEFT SIDE ELEVATION
FA-03 SCALE 1:100

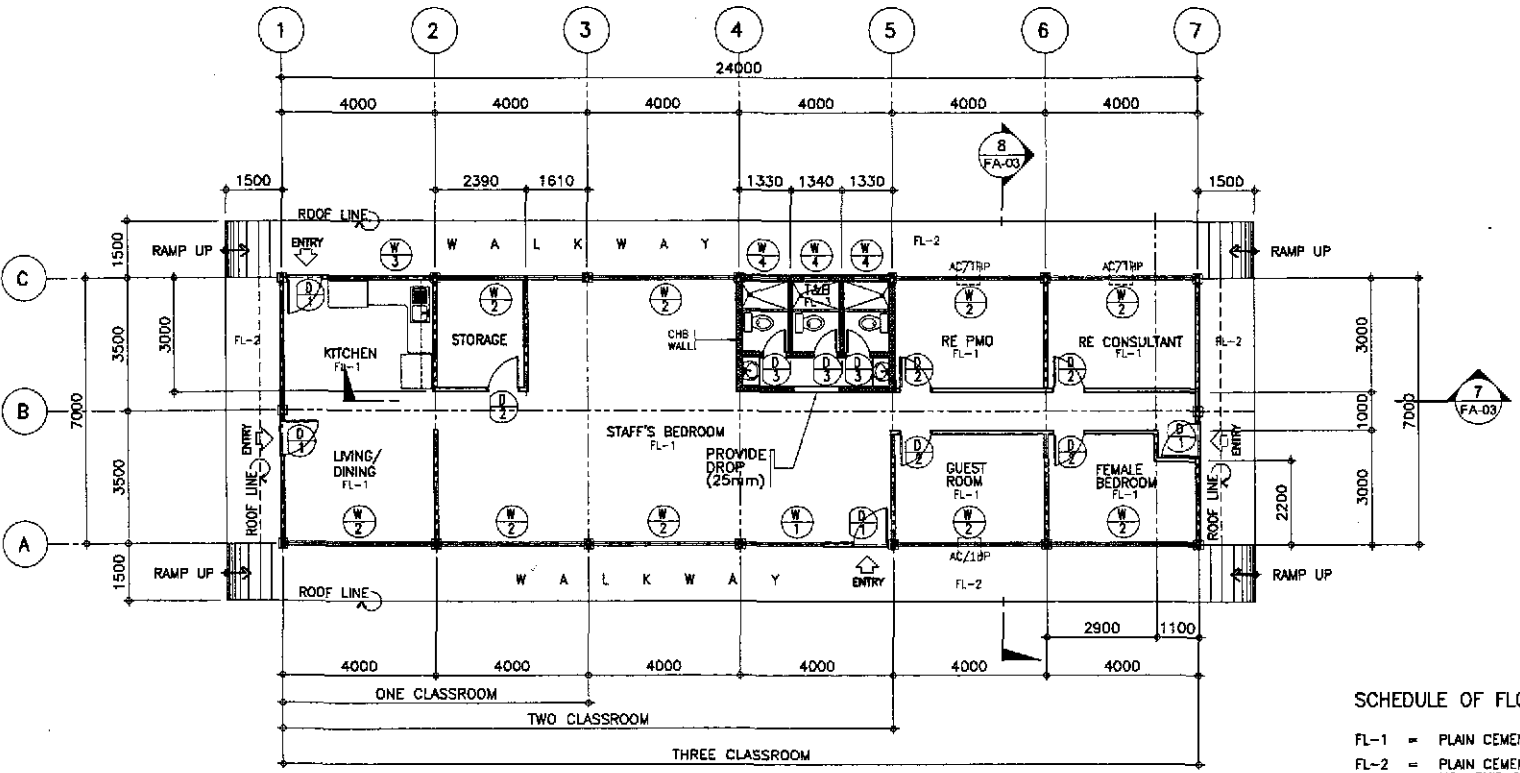
8 CROSS SECTION
FA-03 SCALE 1:100



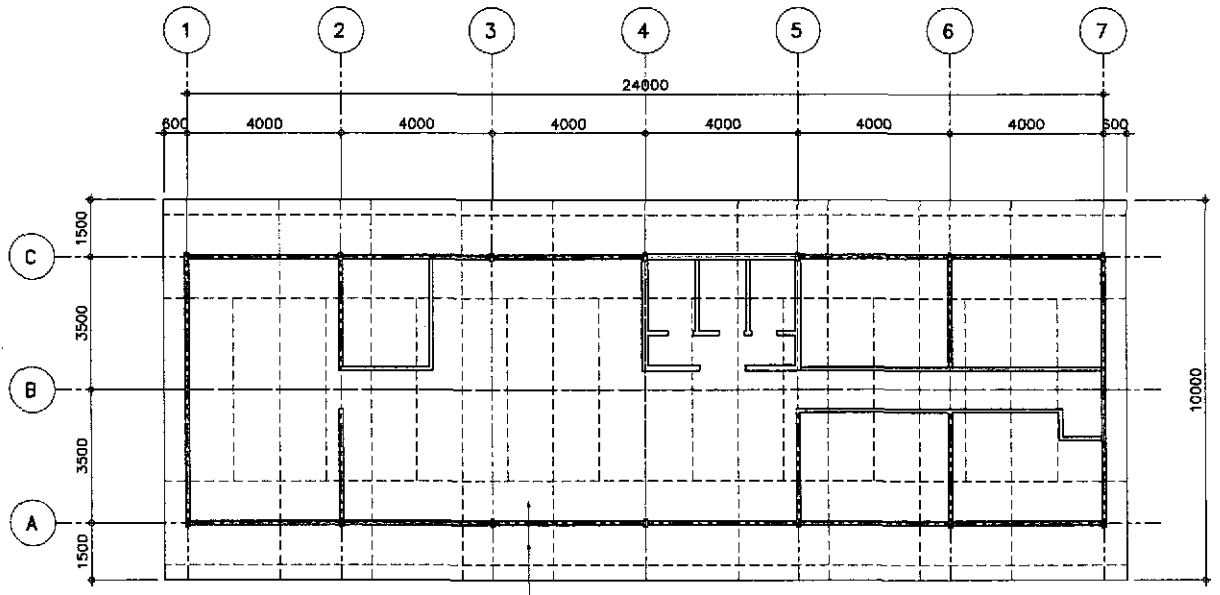
2 FRONT ELEVATION
FA-03 SCALE 1:100

4 RIGHT SIDE ELEVATION
FA-03 SCALE 1:100

7 LONGITUDINAL SECTION
FA-03 SCALE 1:100



1 FLOOR PLAN FOR ENGINEER'S LIVING QUARTER
FA-03 SCALE 1:100



6 REFLECTED CEILING PLAN
FA-03 SCALE 1:100

SCHEDULE OF FLOOR FINISHES

- FL-1 = PLAIN CEMENT FLOOR FINISH
- FL-2 = PLAIN CEMENT FLOOR FINISH WITH NON SKID CEMENT WITH GROOVE LINES
- FL-3 = UNGLAZED TILE FINISH, 200x200mm

ARDEL P. GONZALES
ENGINEER
PTR. NO. 5846340 P.R.C. NO. 53457
ISSUED ON 04/26/2002 T.I.N. 138-062-682
ISSUED AT SAN JUAN, M.M.

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL
YEO YACHIYO ENGINEERING CO., LTD.

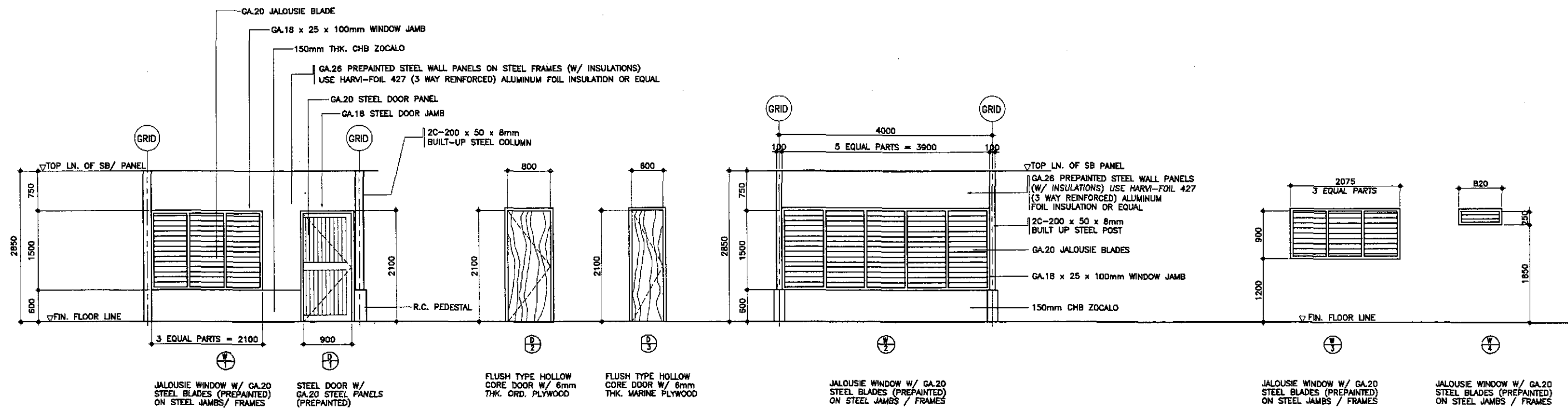
DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				
9/2/02		A.P. GONZALES	BUREAU OF DESIGN		OFFICE OF THE SECRETARY		
9/14/02		A.P. GONZALES	Submitted By:	Reviewed By:	Recommended By:	Recommended By:	Approved By:
7/10/02		M. RANAN	DANILO C. TRAJANO Project Director	EMMANUEL P. CUNTAPAY Chief, Architectural Division	GILBERTO S. REYES D/C, Director IV	MANUEL M. BONOAN Undersecretary	SIMEON A. DATUMANONG Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pinarid, Cabanatuan and San Jose Bypasses)
SAN JOSE BYPASS

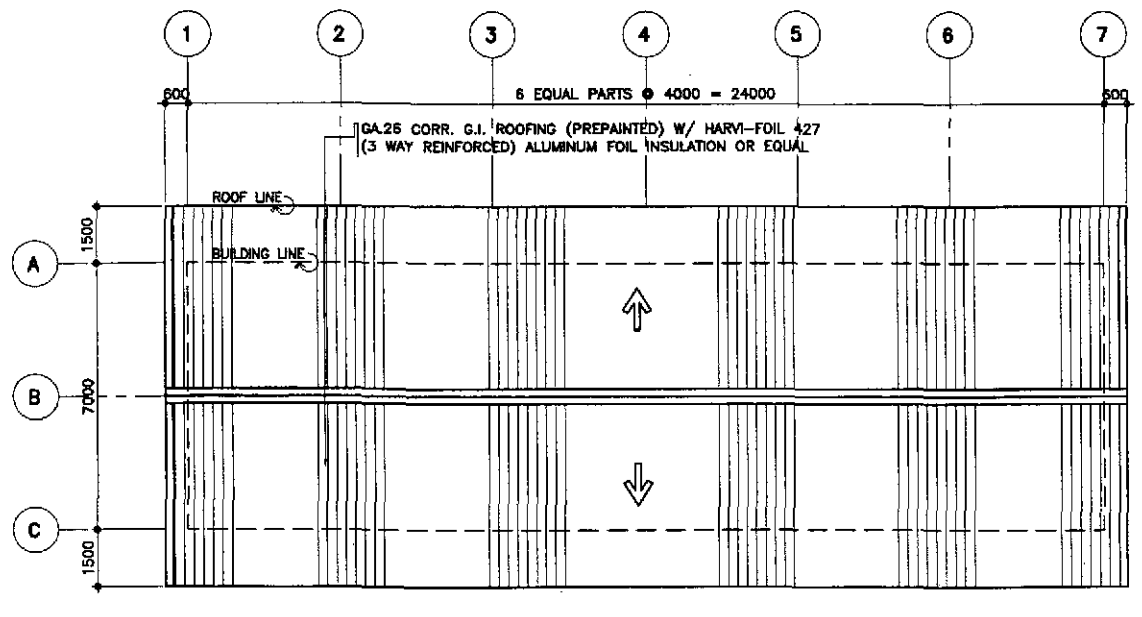
SCALE :
AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
ENGINEER'S LIVING QUARTERS FLOOR PLAN, ELEVATIONS, CROSS-SECTION AND REFLECTED CEILING PLAN

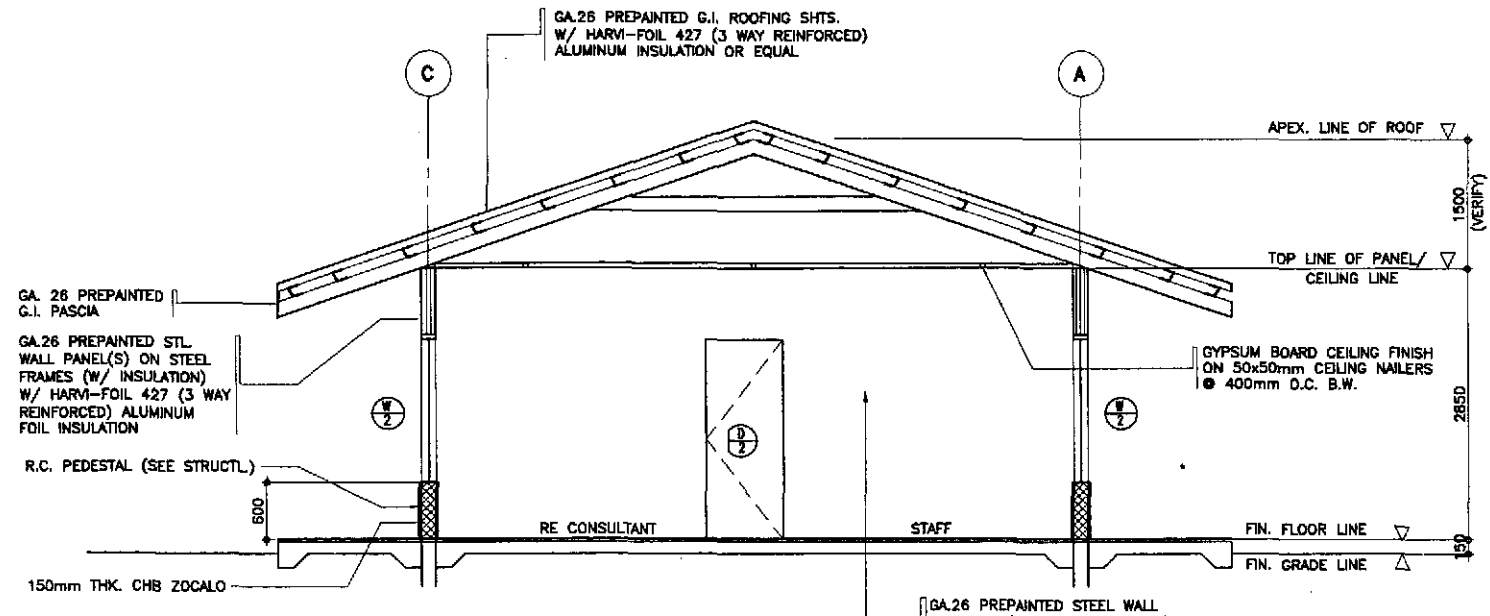
SHEET NO. :
FA-03



3 FOR ENGINEER'S FIELD OFFICE
SCHEDULE OF DOORS & WINDOWS
 FA-04 SCALE 1:40



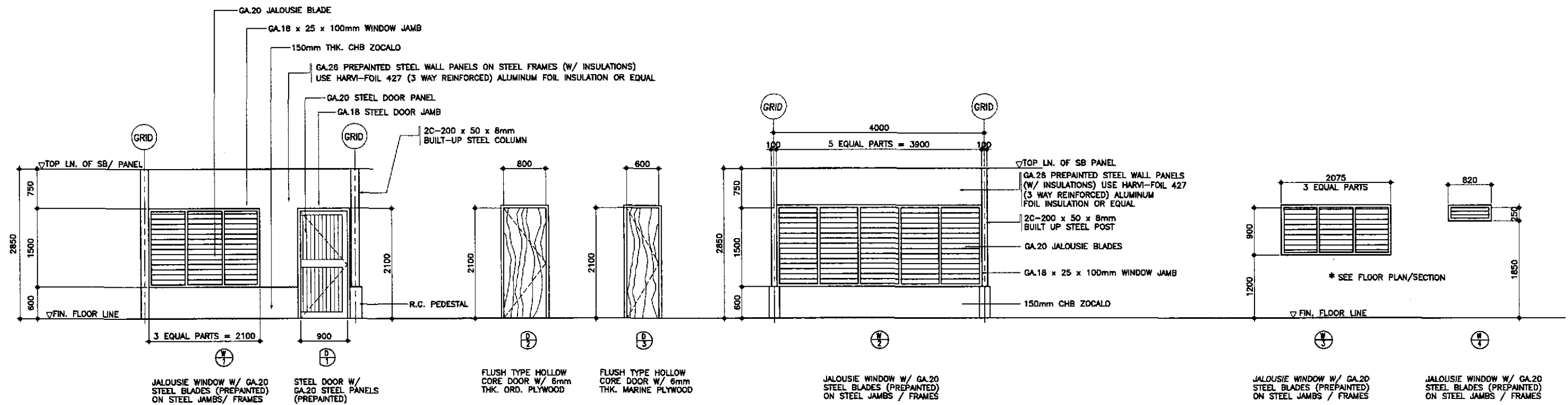
1 **ROOF PLAN**
 FA-04 SCALE 1:100



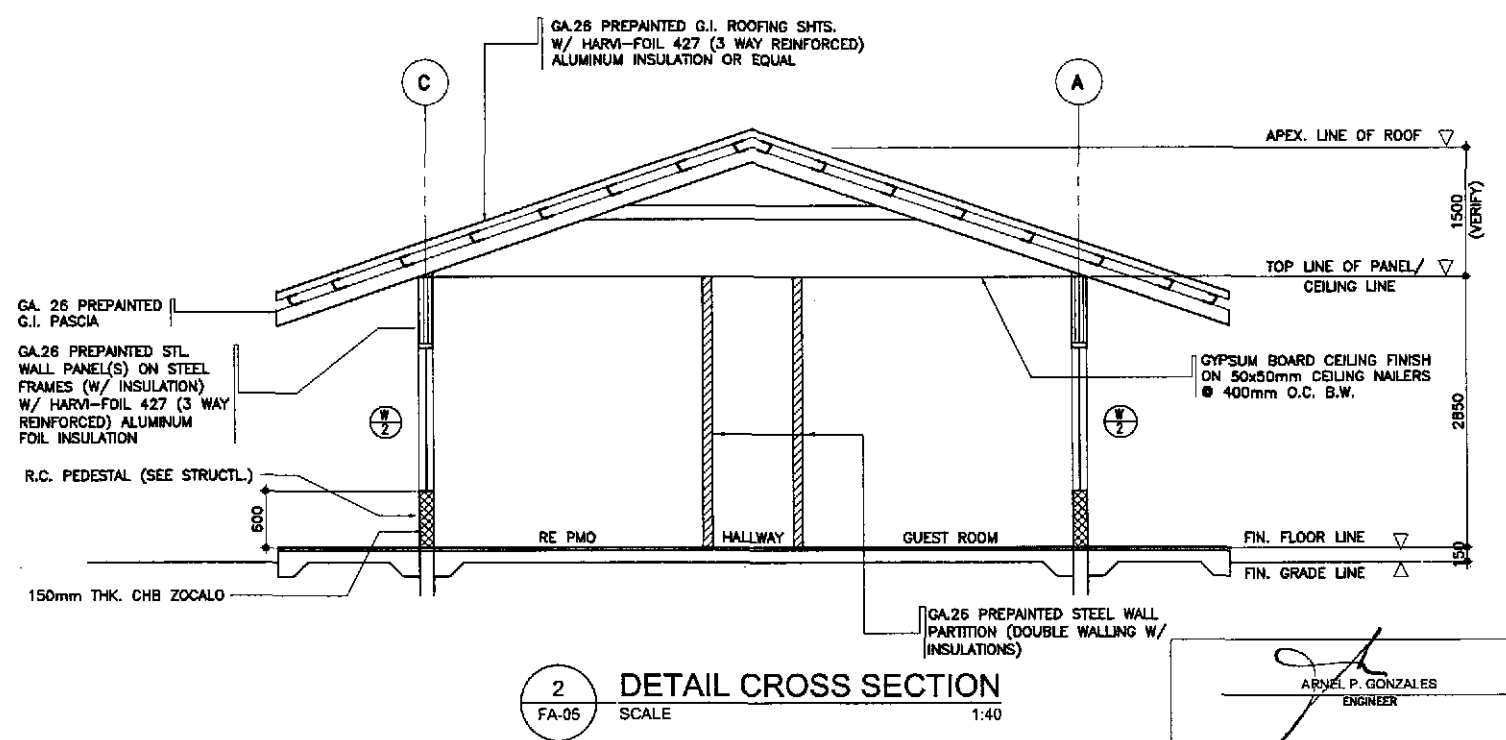
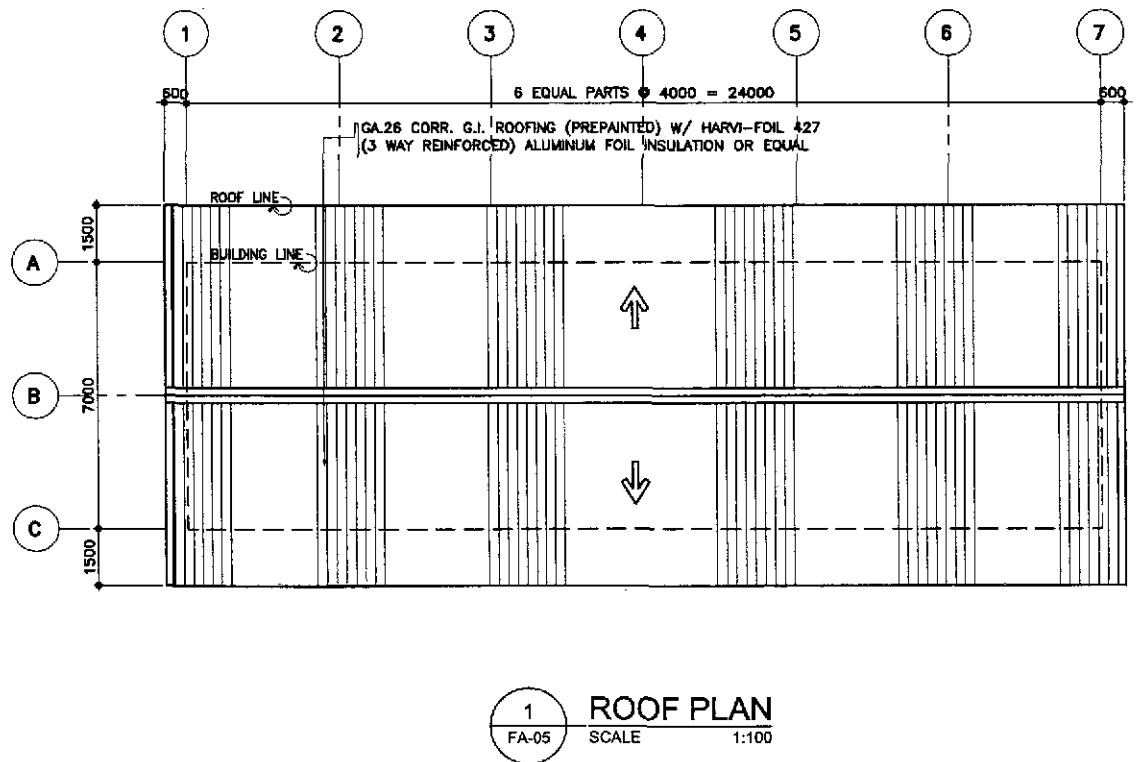
2 **DETAIL CROSS SECTION**
 FA-04 SCALE 1:40

ARIEL P. GONZALES
 ENGINEER
 PTR. NO. 5845340 P.R.C. NO. 53457
 ISSUED ON 04/28/2002 T.I.N. 138-062-682
 ISSUED AT SAN JUAN, M.M.

		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS		SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : ENGR'S FIELD OFFICE / LABORATORY ROOF PLAN, CROSS-SECTION AND SCHEDULE OF DOORS & WINDOWS	SHEET NO. : FA-04	
DESIGNED	DATE	SIGNATURE	SUBMITTED BY:		REVIEWED BY:	RECOMMENDED BY:	APPROVED BY:				
CHECKED	9/4/02	A.P. GONZALES	DANILO C. TRAJANO Project Director		EMMANUEL P. CUNTAPAY Chief, Architectural Division	GILBERTO S. REYES D/C, Director IV	MANUEL M. BORDAN Undersecretary	SIMEON A. DATUMANONG Secretary			
SUBMITTED	9/6/02	A.P. GONZALES TEAM LEADER									

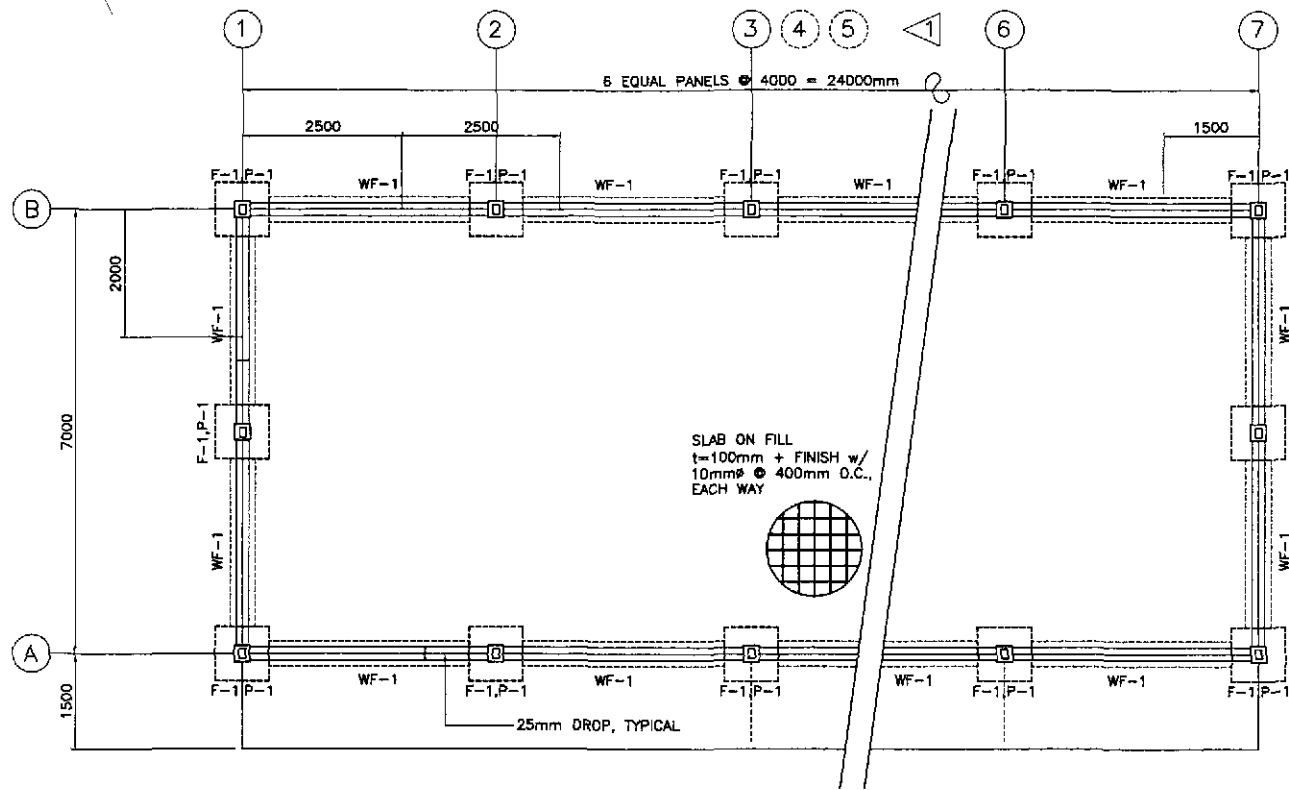


3 FOR ENGINEER'S LIVING QUARTERS
 SCHEDULE OF DOORS & WINDOWS
 FA-05 SCALE 1:40

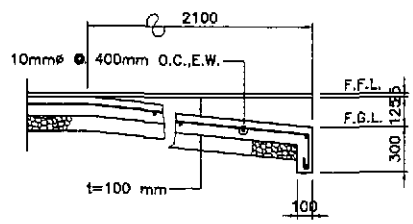


ARNEL P. GONZALES
 ENGINEER
 PTR. NO. 5846340 P.R.C. NO. 53457
 ISSUED ON 04/26/2002 T.I.N. 138-062-682
 ISSUED AT SAN JUAN, M.M.

 JAPAN INTERNATIONAL COOPERATION AGENCY		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS		SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : ENGINEER'S LIVING QUARTERS ROOF PLAN, CROSS-SECTION AND SCHEDULE OF DOORS & WINDOWS	SHEET NO. : FA-05
DESIGNED	DATE	SIGNATURE	P.M.H. - PMO BUREAU OF DESIGN		OFFICE OF THE SECRETARY					
CHECKED	9/2/02	A. P. GONZALES	Submitted By:	Reviewed By:	Recommended By:	Approved By:				
SUBMITTED	9/4/02	A. P. GONZALES	DANILO C. TRAJANO Project Director	EMMANUEL P. CUNTAPEY Chief, Architectural Division	GILBERTO S. REYES Dir. Director IV	MANUEL M. BONGAN Undersecretary	SIMEON A. DATUMANONG Secretary			



1 FOUNDATION PLAN
FA-06 SCALE 1:25



4 R.C. RAMP DETAIL
FA-06 SCALE 1:25

DESIGN CRITERIA :

- I. LIVE LOAD
 - ROOF 0.58 KPa
 - OFFICE/LABORATORY 2.40 KPa
- II. DEAD LOAD
 - CONCRETE 24 KN/m³
 - STEEL 76.10 KN/m³
 - CHB 2.73 KPa
- III. WIND LOAD

$p = C_e C_q Q_s I$
 WHERE :
 p = ACTUAL WIND PRESSURE
 C_e = GUST FACTOR COEFFICIENT (EXPOSURE B=0.63)
 C_q = PRESSURE COEFFICIENT
 $Q_s = 1.50$ KPa FOR ZONE 2&3, $Q_s=1.92$ FOR ZONE 1
 I = OCCUPANCY IMPORTANCE = 1.00

- IV. ALLOWABLE STRESSES
 1. CONCRETE (ALLOWABLE COMPRESSIBLE STRENGTH @ 28 DAYS)
 - a.) FOR FOOTINGS AND PEDESTAL COLUMN
 - $f_c' = 20.70$ mpa $f_c = 9.31$ mpa
 - b.) FOR SLAB ON FILL
 - $f_c' = 17.26$ mpa $f_c = 7.76$ mpa
 2. REINFORCING STEEL BARS (STRUCTURAL GRADE 33 DEFORMED BARS)
 - $f_y = 227.0$ mpa $f_{st} = 124.02$ mpa
 3. STRUCTURAL LIGHT GAGE COLD FORMED STEEL
 - STIFFENED LIGHT GAGE CHANNEL FOR RAFTERS, STUD & WALLS
 - $f_s = 124.0$ mpa (18,000 psi)
 4. STRUCTURAL BUILT-UP STEEL PLATES (ASTM A-36)
 - FOR STEEL BOX COLUMN
 - $f_y = 248.0$ mpa (36,000 psi)
 5. WELDS
 - USE E-60 XX ELECTRODES
 - $f_v = 93.76$ mpa
 6. BOLTS (ASTM A-307)
 - $f_v = 89$ mpa $f_{st} = 96.60$ mpa
 7. CONCRETE MASONRY UNITS (NON-LOAD BEARING CHB)
 - $f_m' = 3.41$ mpa (500 psi)
 8. ASSUMED ALLOWABLE SOIL BEARING CAPACITY OF 95.76 KPa (2,000 psf)

NOTES ON FOUNDATION :

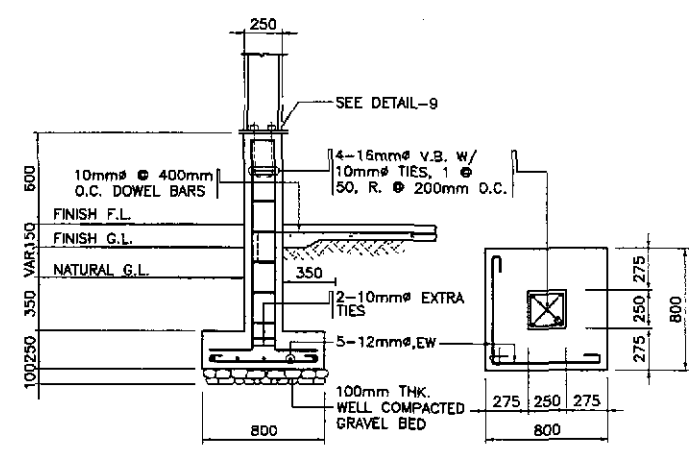
1. IN CASE THE ACTUAL SOIL BEARING PRESSURE IS FOUND LESS THAN THE ASSUMED VALUE OF 95.76 KPa, NOTIFY THE DIRECTOR, BUREAU OF DESIGN FOR PROPER REVISION OF FOOTINGS.
2. NO FOOTINGS SHALL REST ON FILL.

MATERIAL SPECIFICATIONS :

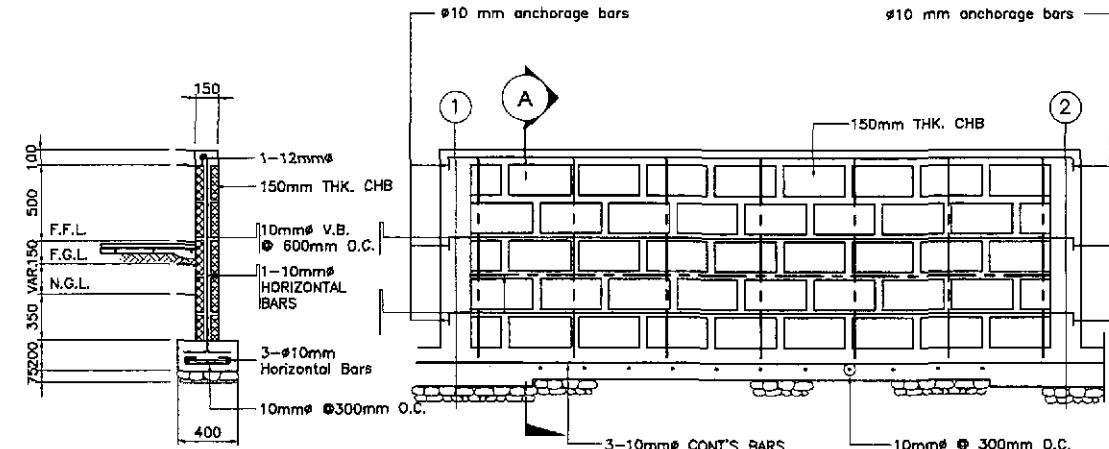
1. FOR ROOFING SHEETS :
0.6mm THICK (GA.26) PREPAINTED CORRUGATED G.I. ROOFING SHEET, LONG SPAN.
2. FOR WALLING SHEETS : USE ALUMINUM FOIL INSULATION HARVI-FOIL 427 (3-WAY REINFORCED OR EQUAL), DOUBLE WALL 0.6mm THICK (GA.26) HIGH TENSILE STEEL SHEET WALLING/CLADDING W/ ALUMINUM FOIL FOR INSULATION. HARVI-FOIL 427 (3-WAY REINFORCED OR EQUAL). BASE STEEL WITH 550 MPa YIELD STRESS. THE VERTICAL AND HORIZONTAL STUDS AND RAFTERS SHALL CONFORM WITH THE AMERICAN IRON AND STEEL INSTITUTE (AISI), SPECIFICATION OF LIGHT GAGE COLD-FORMED STEEL STRUCTURAL MEMBERS AS PER ASTM A246-LIGHT GAGE STRUCTURAL QUALITY FLAT ROLLED CARBON STEEL SHEET.
4. ALL METAL PARTS SHALL BE GIVEN TWO(2) COATS OF ANTI-CORROSIIVE PAINT OF APPROVED QUALITY WITH A MINIMUM TOTAL THICKNESS OF 3mm. FINISHING PAINT SHALL BE 2-COATS OF GLOSS OF APPROVED QUALITY, WEATHER RESISTANT AND OF THE SAME COLOR AS THE PREPAINTED SHEETINGS. BASE OF SIDINGS AND DOOR AND WINDOW JAMBS SHALL BE GIVEN ANOTHER TWO COATS OF BROWN OR MAHOGANY COLORED ENAMEL PAINT.

NOTES :

1. ALL LOCATION OF ANCHOR BOLTS AND BOLT HOLES SHALL BE VERIFIED ON THE SITE PRIOR TO INSTALLATION / ASSEMBLY.
2. HOLES FOR ALL BOLTS SHALL BE 1.6mm LARGER IN DIAMETER THAN BOLTS. BOLTS SHALL BE FITTED WITH STANDARD NUTS AND WASHERS TO ENSURE TIGHT FIT.
3. THE STEEL MANUFACTURER / FABRICATOR / CONTRACTOR SHALL SUBMIT SHOP / FABRICATION DRAWINGS TO INCLUDE MATERIAL SCHEDULES, ASSEMBLY PROCEDURE, CONNECTIONS AND SPLICES AS PER APPROVED PLANS FOR REVIEW AND APPROVAL OF THE DIRECTOR, BUREAU OF DESIGN.



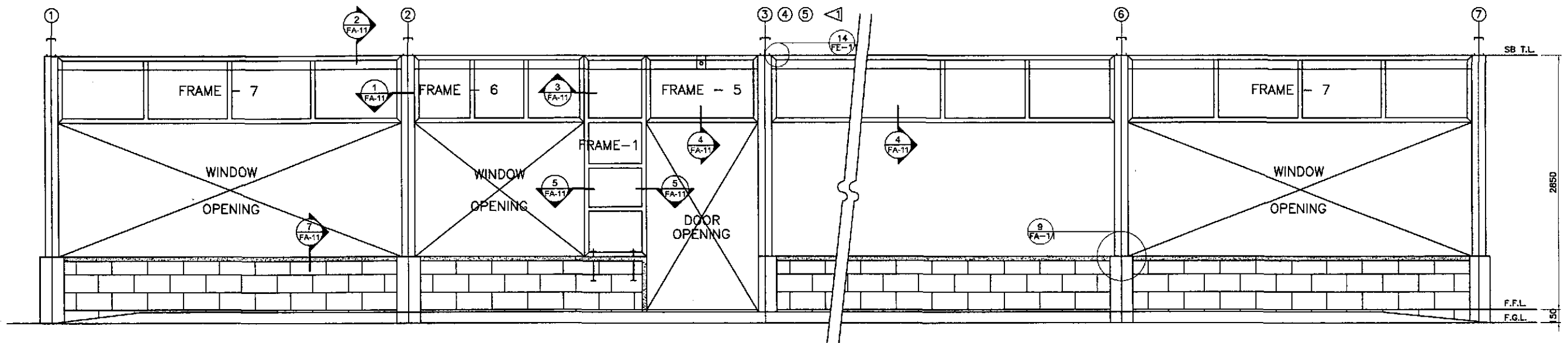
2 F-1, P-1
FA-06 SCALE 1:25



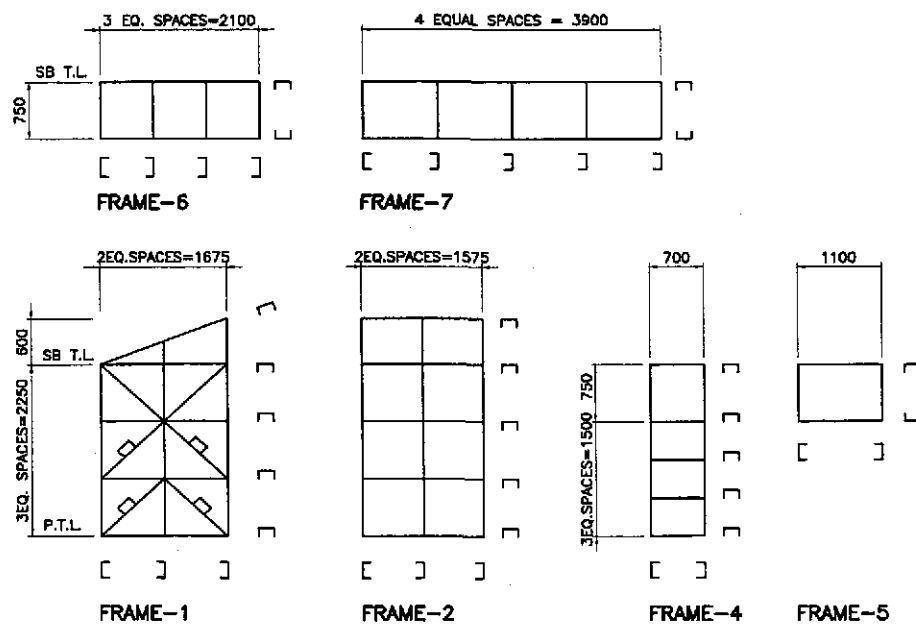
3 WF-1
FA-06 SCALE 1:25

ARNEL P. GONZALES
ENGINEER
PTR. NO. 5846340 P.R.C. NO. 53457
ISSUED ON 04/28/2002 T.I.N. 138-D62-682
ISSUED AT SAN JUAN, M.M.

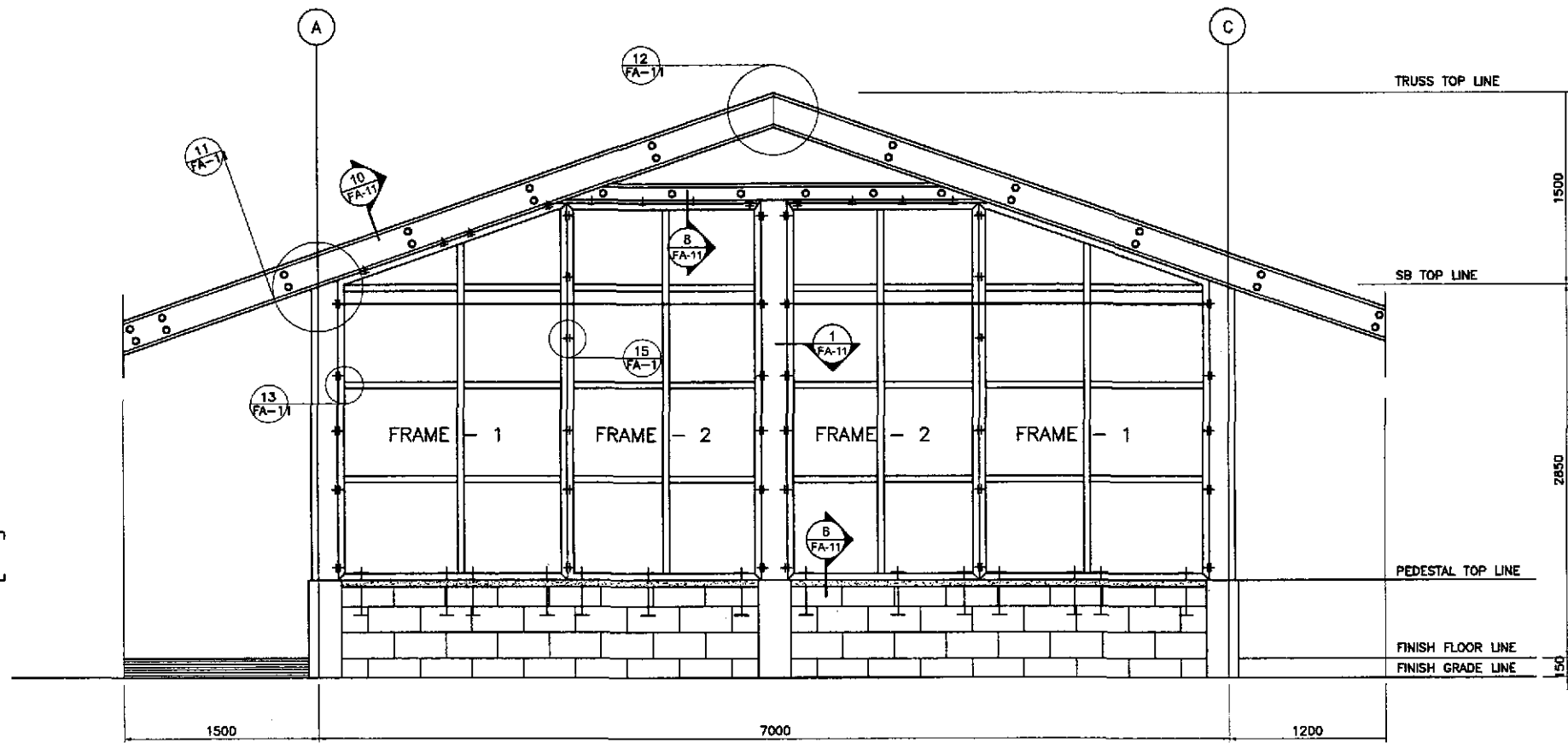
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	CHECKED	9/14/02	ARNEL P. GONZALES			Submitted By:			Reviewed By:	AS SHOWN
	SUBMITTED	9/16/02	ARNEL P. GONZALES			DANILO C. TRAJANO Project Director			WILFREDO S. LOPEZ Chief, Structural Division	GILBERTO S. REYES Dir., Director IV



2 FRONT ELEVATION
FA-07 SCALE 1:25



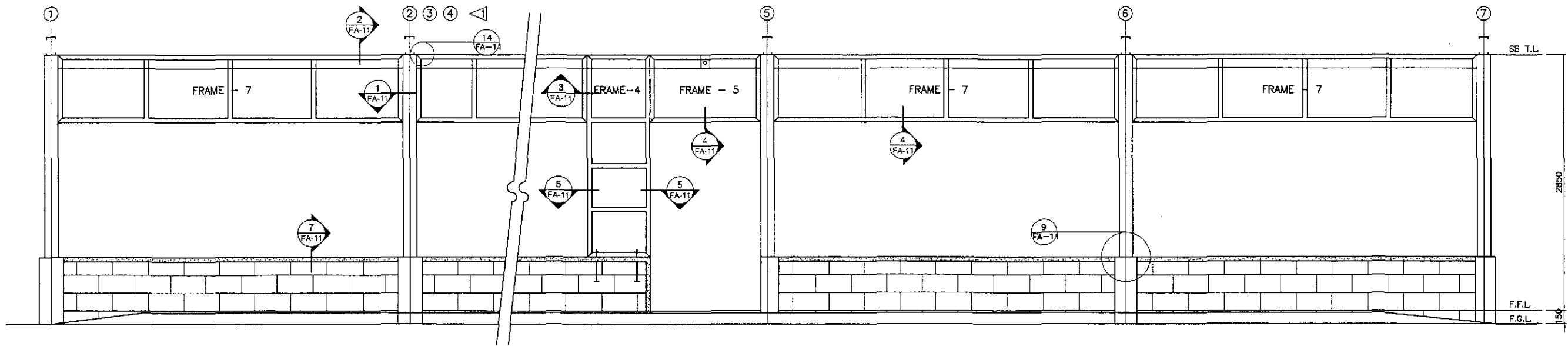
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FA-07 SCALE 1:50



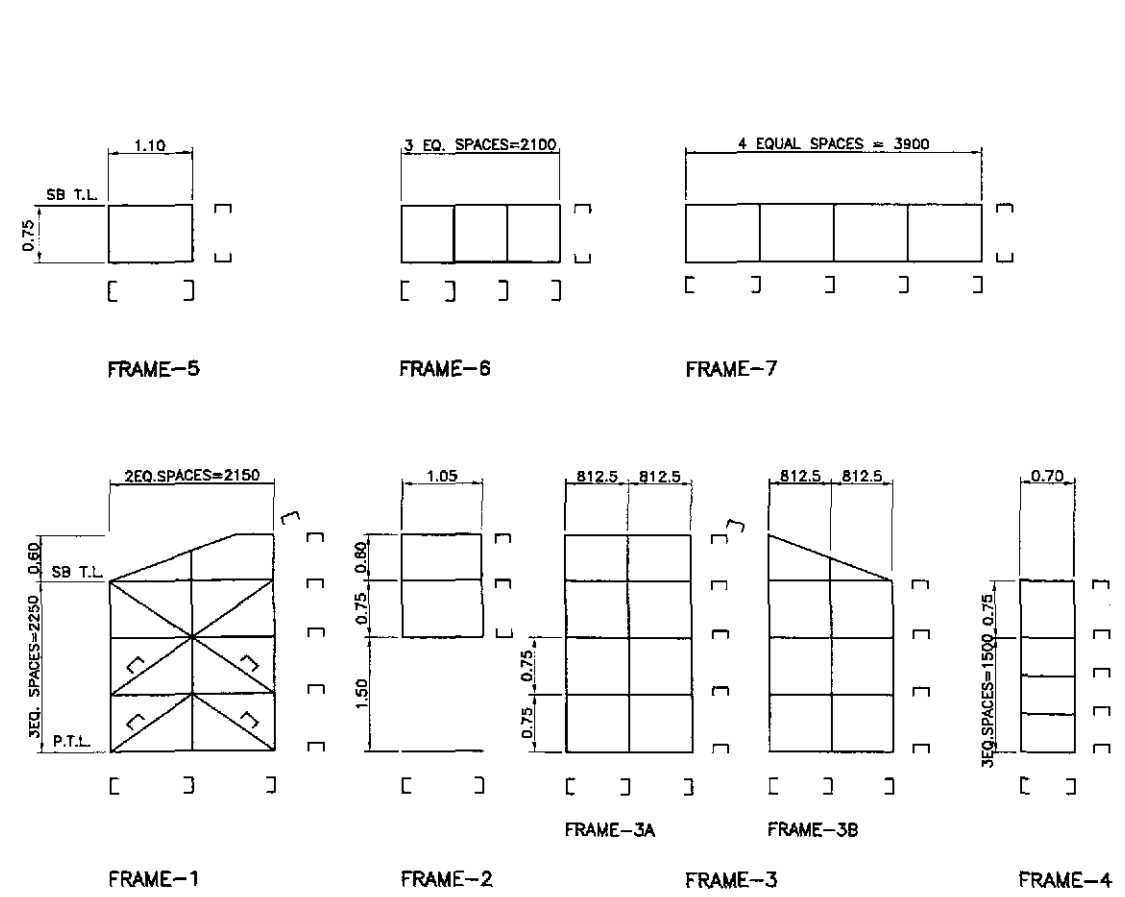
3 RIGHT SIDE ELEVATION
FA-07 SCALE 1:25

ARNEL P. GONZALES
ENGINEER
PTR. NO. 5846340 P.R.C. NO. 53457
ISSUED ON 04/28/2002 T.I.N. 138-082-682
ISSUED AT SAN JUAN, M.M.

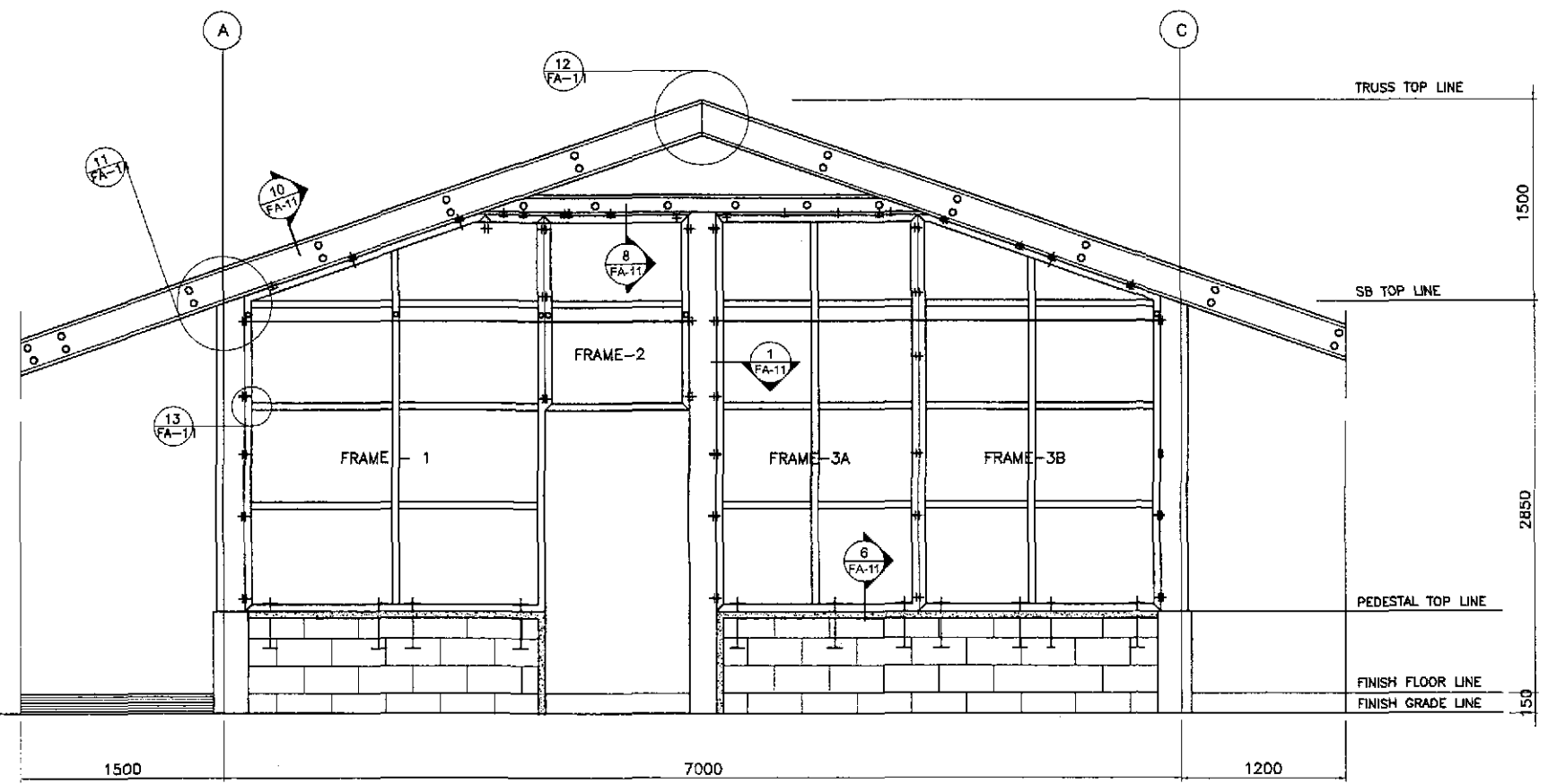
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	CHECKED	9/4/02	A. P. GONZALES						BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO, Project Director Reviewed By: WILFREDO S. LOPEZ, Chief, Structural Division Recommended By: GILBERTO S. REYES, OIC, Director IV Recommended By: MANUEL M. BONDAN, Undersecretary Approved By: SIMEON A. DATUMANONG, Secretary
	SUBMITTED	9/4/02	A. P. GONZALES						



2 FRONT ELEVATION
FA-08 SCALE 1:25



1 FRAMES SCHEMATIC DIAGRAMS
FA-08 SCALE 1:50



3 RIGHT SIDE ELEVATION
FA-08 SCALE 1:25

ARNEL P. GONZALES
ENGINEER
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ISSUED AT SAN JUAN, M.M.

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JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
YECO YACHIYO ENGINEERING CO., LTD.

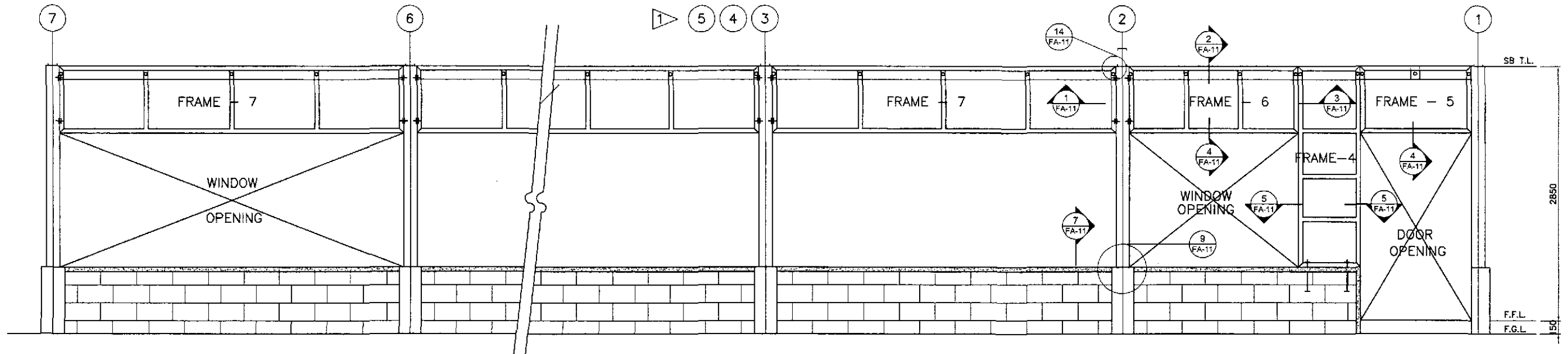
DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			
9/2/02		A. P. GONZALES	BUREAU OF DESIGN			
9/4/02		A. P. GONZALES	Submitted By:	Reviewed By:	Recommended By:	Approved By:
9/6/02		A. P. GONZALES	DANILO C. TRAJANO Project Director	WILFREDO S. LOPEZ Chief, Structural Division	GILBERTO S. REYES OK, Director IV	MANUEL M. BONGAN Undersecretary SIMEDON A. DATUMANONG Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Pilaridel, Cabanatuan and San Jose Bypasses)
SAN JOSE BYPASS

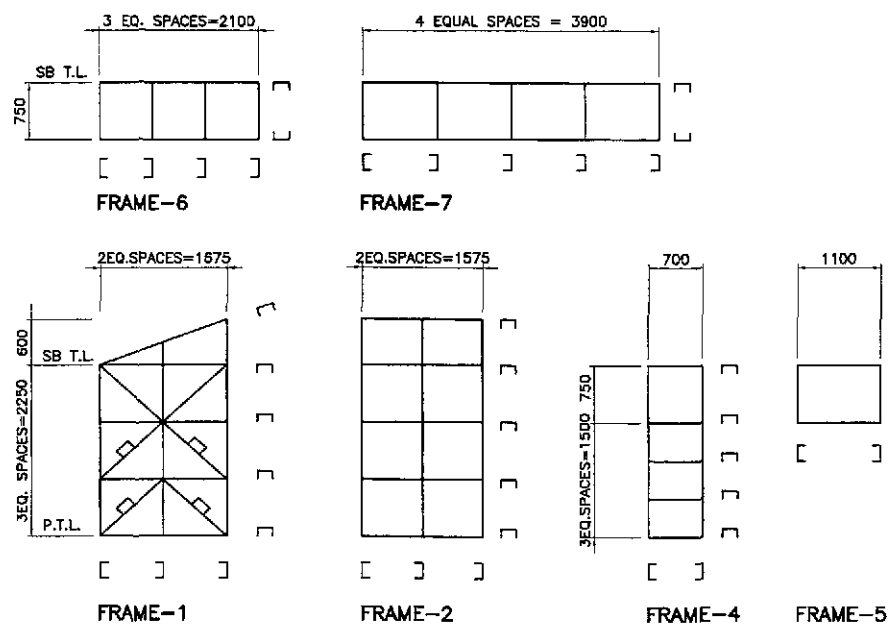
SCALE :
AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
ENGINEER'S LIVING QUARTERS
FRONT AND RIGHT SIDE ELEVATION OF STEEL
STUD FRAMES & SCHEMATIC DIAGRAM

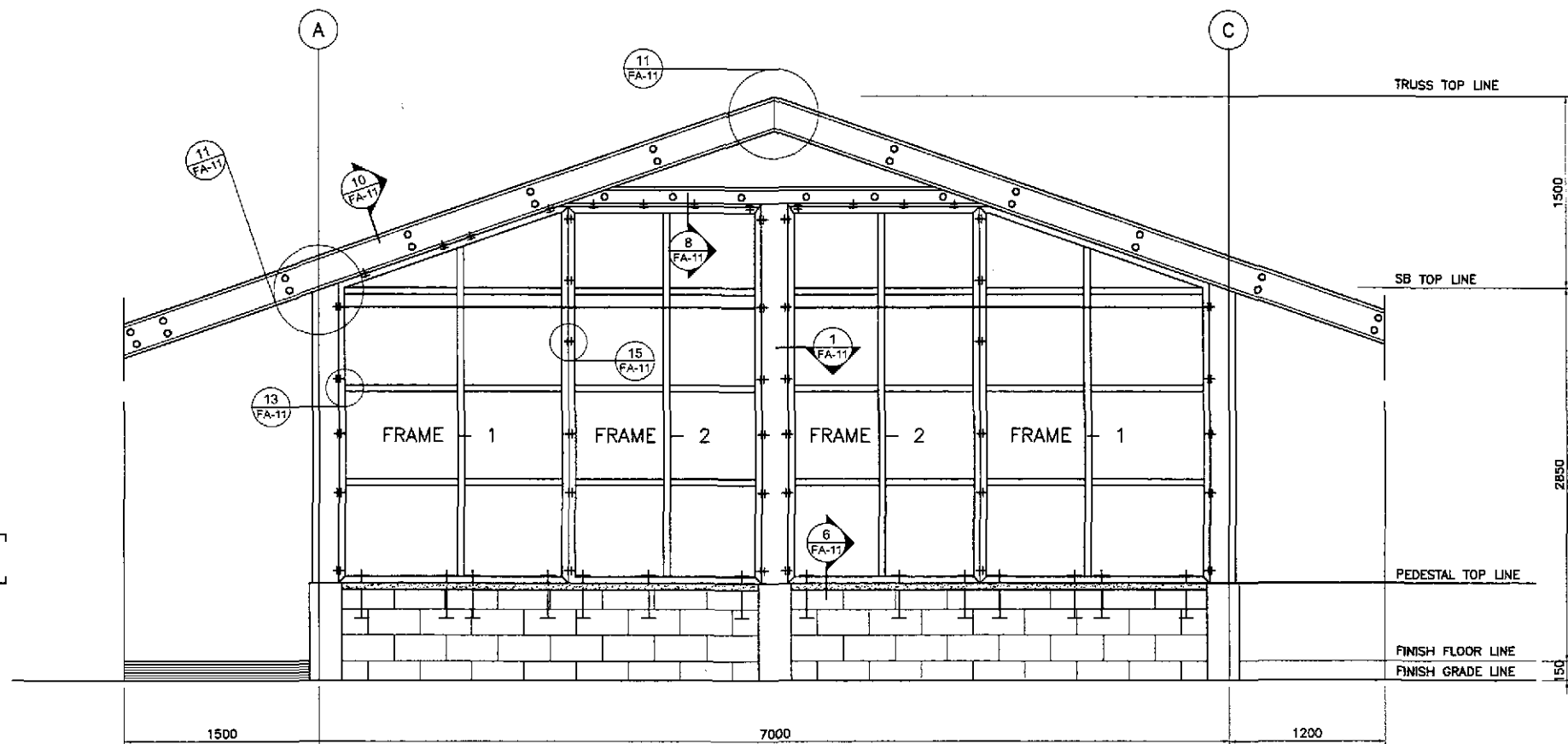
SHEET NO. :
FA-08



2 RIGHT ELEVATION
FA-09 SCALE 1:25



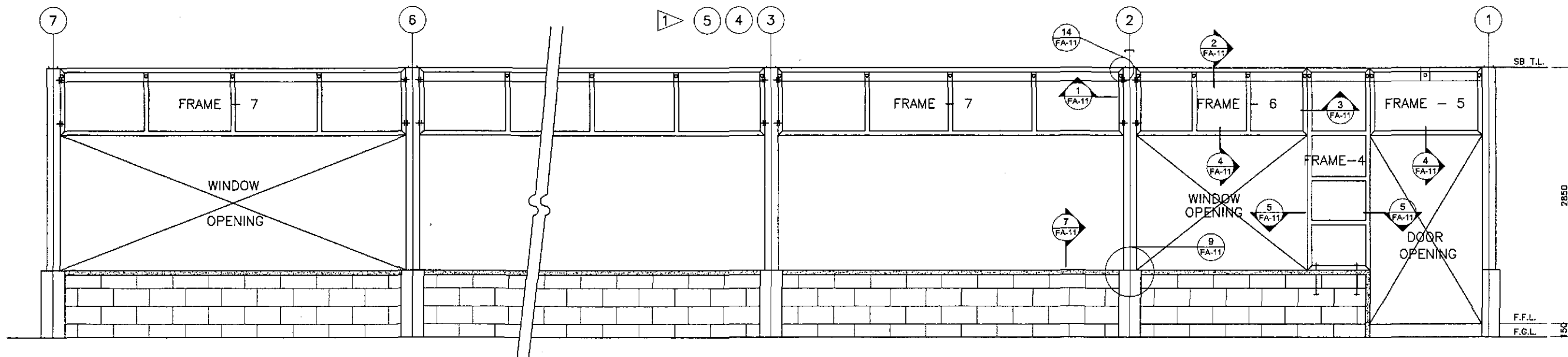
1 FRAMES SCHEMATIC DIAGRAMS
FA-09 SCALE 1:50



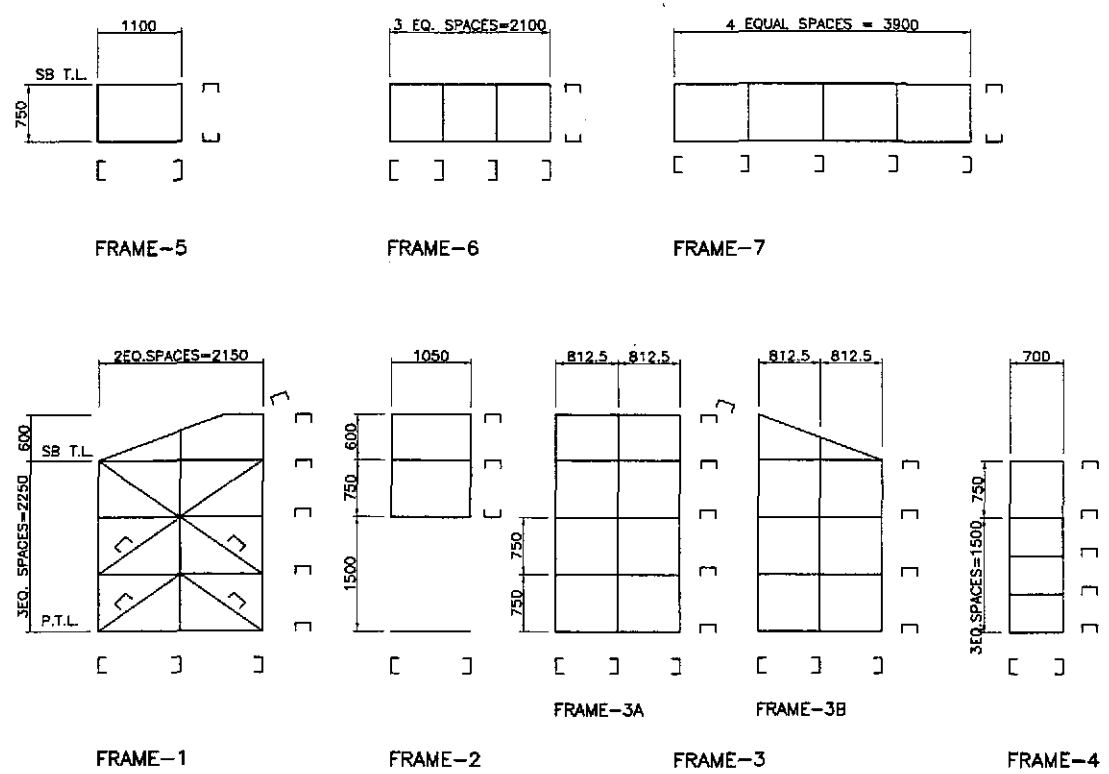
3 LEFT SIDE ELEVATION
FA-09 SCALE 1:25

M. P. Gonzales
MANUEL P. GONZALES
ENGINEER
PTR. NO. 5846340 P.R.C. NO. 53457
ISSUED ON 04/26/2002 T.I.N. 138-062-682
ISSUED AT SAN JUAN, M.M.

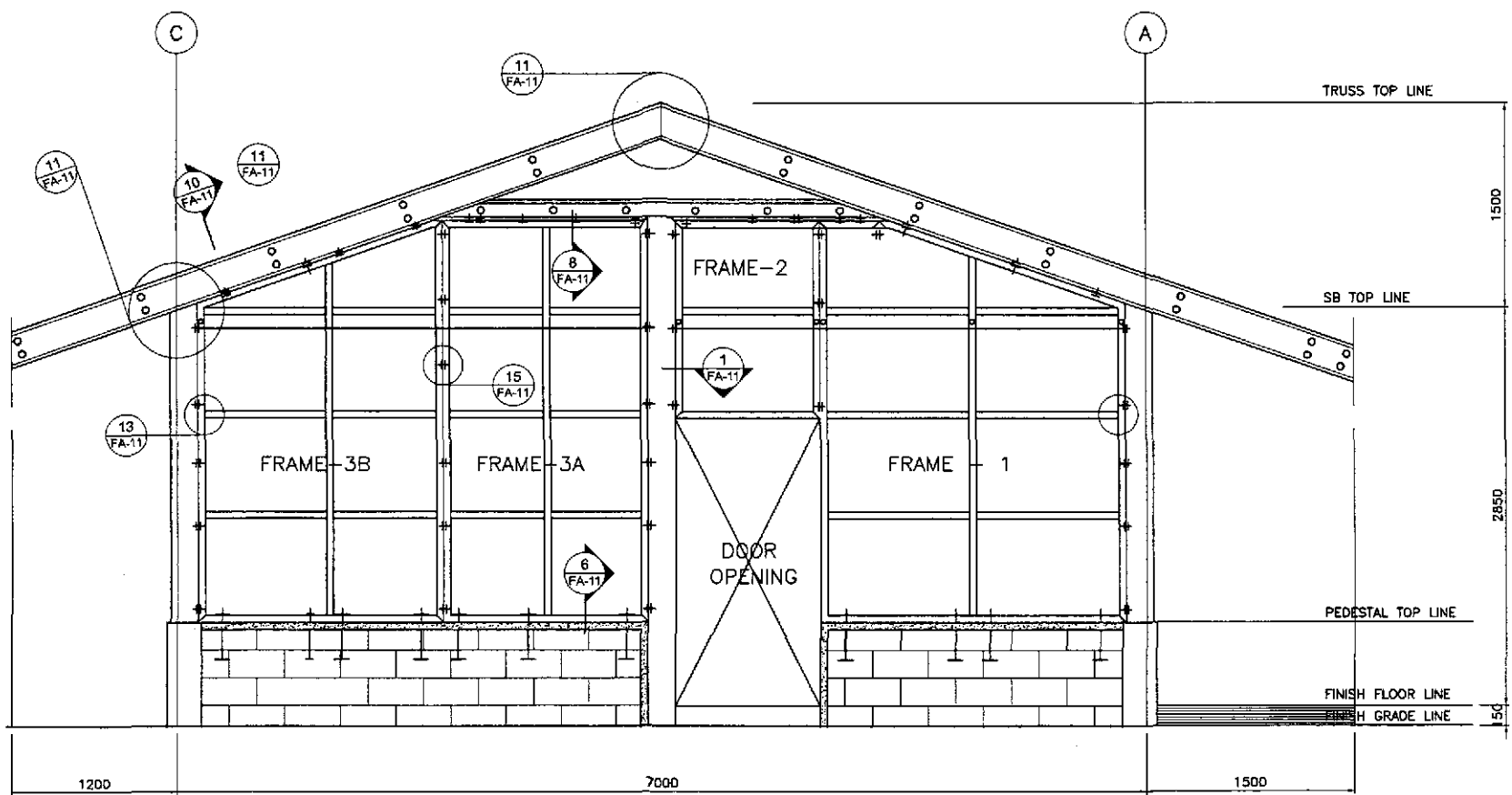
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS		SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : ENGR'S FIELD OFFICE / LABORATORY REAR AND LEFT SIDE ELEVATION OF STEEL STUD FRAMES & SCHEMATIC DIAGRAM	SHEET NO. : FA-09
DESIGNED	DATE	SIGNATURE	SUBMITTED BY: PUHL - PMO DANILDO C. TRAJANO Project Director		REVIEWED BY: WILFREDO S. LOPEZ Chief, Structural Division		RECOMMENDED BY: GILBERTO S. REYES DIC, Director IV		OFFICE OF THE SECRETARY Recommended By: MANUEL M. BONOAN Undersecretary Approved By: SIMEON A. DATUMANONG Secretary	
CHECKED	7/2/02	M. P. GONZALES	Submitted By: M. P. GONZALES YACHYO ENGINEERING CO., LTD.		Reviewed By: M. P. GONZALES YACHYO ENGINEERING CO., LTD.		Recommended By: M. P. GONZALES YACHYO ENGINEERING CO., LTD.		Approved By: M. P. GONZALES YACHYO ENGINEERING CO., LTD.	
SUBMITTED	7/6/02	M. P. GONZALES	Submitted By: M. P. GONZALES YACHYO ENGINEERING CO., LTD.		Reviewed By: M. P. GONZALES YACHYO ENGINEERING CO., LTD.		Recommended By: M. P. GONZALES YACHYO ENGINEERING CO., LTD.		Approved By: M. P. GONZALES YACHYO ENGINEERING CO., LTD.	



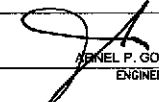
2 REAR ELEVATION
FA-10 SCALE 1:25



1 FRAMES SCHEMATIC DIAGRAMS
FA-10 SCALE 1:50



3 LEFT SIDE ELEVATION
FA-10 SCALE 1:25


 DANIEL P. GONZALES
 ENGINEER
 PTR. NO. 5846340 P.R.C. NO. 53457
 ISSUED ON 04/28/2002 T.I.N. 138-082-682
 ISSUED AT SAN JUAN, M.M.


 JAPAN INTERNATIONAL COOPERATION AGENCY

 KATAHIRA & ENGINEERS INTERNATIONAL

 YEO YACHIYO ENGINEERING CO., LTD.

DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			
9/1/02	9/1/02	D. P. GONZALES	BUREAU OF DESIGN			
9/1/02	9/1/02	D. P. GONZALES	Submitted By:		Reviewed By:	
7/6/02	7/6/02	D. P. GONZALES	DANILLO C. TRAJANO Project Director		WILFREDO S. LOPEZ Chief, Structural Division	
			Recommended By:		Approved By:	
			GILBERTO S. REYES OIC, Director IV		SIMEON A. DATUMANONG Secretary	

PROJECT AND LOCATION :
 THE DETAILED DESIGN STUDY ON
 UPGRADING INTER-URBAN HIGHWAY SYSTEM
 ALONG THE PAN-PHILIPPINE HIGHWAY
 (Piaridel, Cabanatuan and San Jose Bypasses)
 SAN JOSE BYPASS

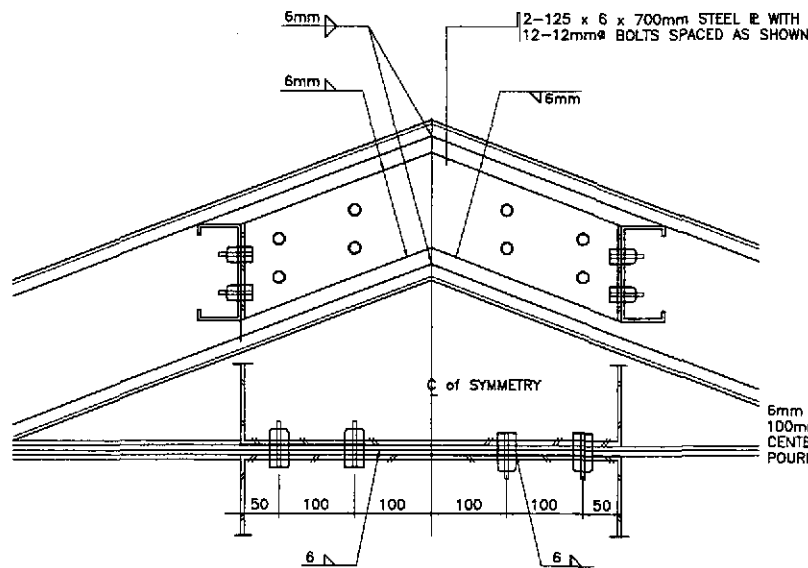
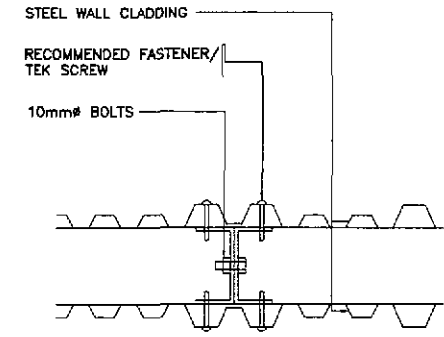
SCALE :
 AS SHOWN
 FULL SIZE A1

SHEET CONTENTS :
 ENGINEER'S LIVING QUARTERS
 REAR AND LEFT SIDE ELEVATION OF STEEL
 STUD FRAMES & SCHEMATIC DIAGRAMS

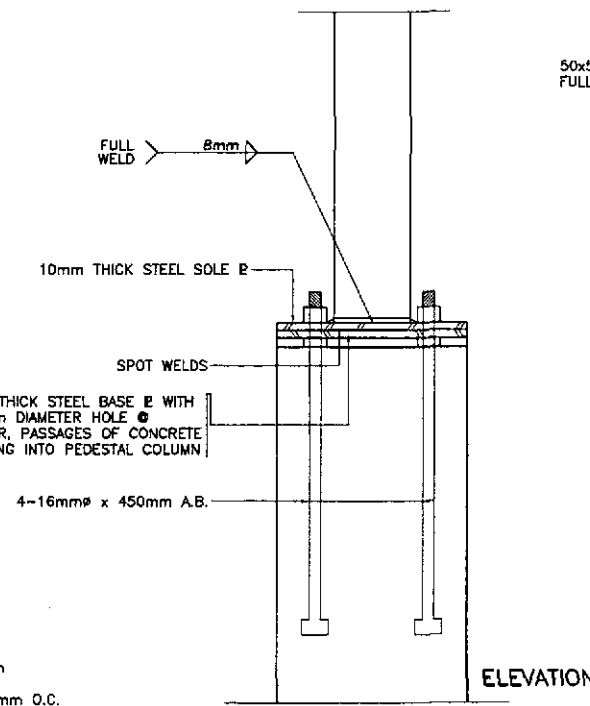
SHEET NO. :
 FA-10

NOTES :

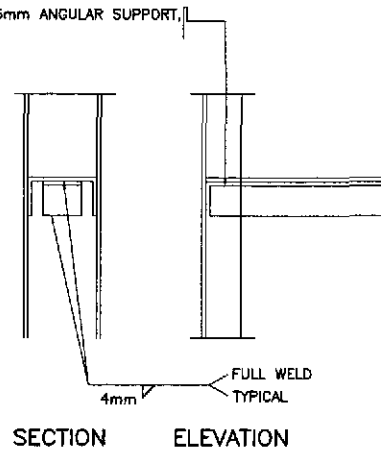
1. ALL VERTICAL AND HORIZONTAL STUDS SHALL BE 100x50x2mm UNSTIFFENED FLANGED UNLESS OTHERWISE SPECIFIED.
2. HORIZONTAL STUDS MUST BE INSERTED TO AND WELDED IN THE VERTICAL STUDS UNLESS OTHERWISE SPECIFIED.
3. REVISION IN THE ATTACHMENT/ CONNECTIONS THAT WILL IMPROVE DESIGN MAYBE DONE W/ PRIOR APPROVAL OF FABRICATION DRAWINGS.



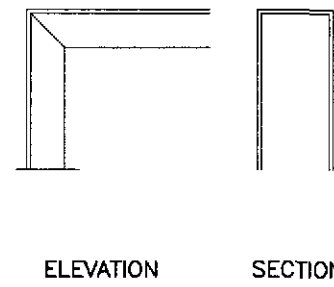
3 DETAIL - 12
FA-11 SCALE 1:5



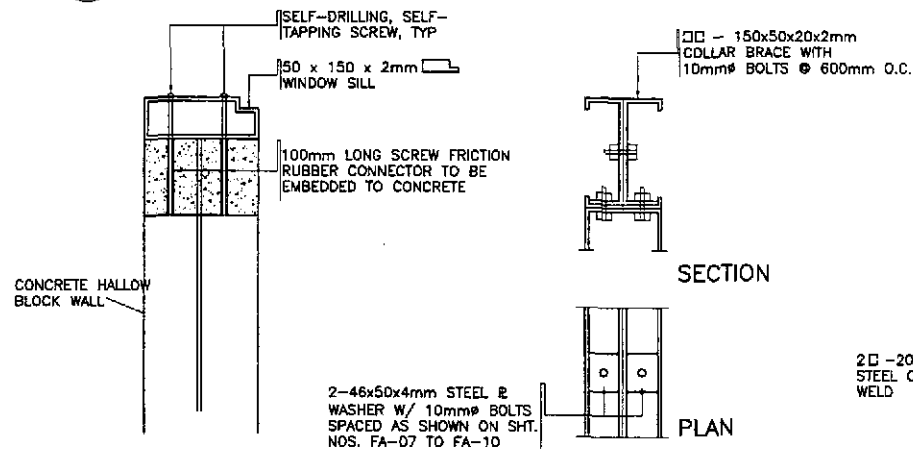
10 DETAIL - 13
FA-11 SCALE 1:5



13 DETAIL - 14
FA-11 SCALE 1:5

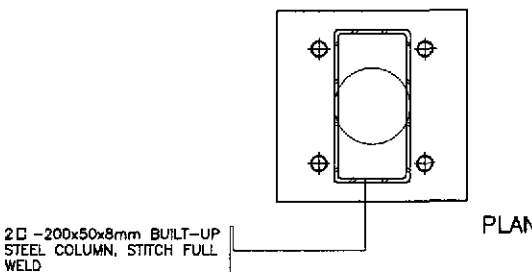


15 DETAIL - 15
FA-11 SCALE 1:5

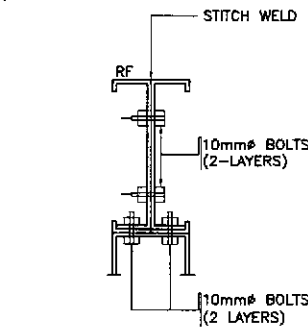


2 DETAIL - 7
FA-11 SCALE 1:5

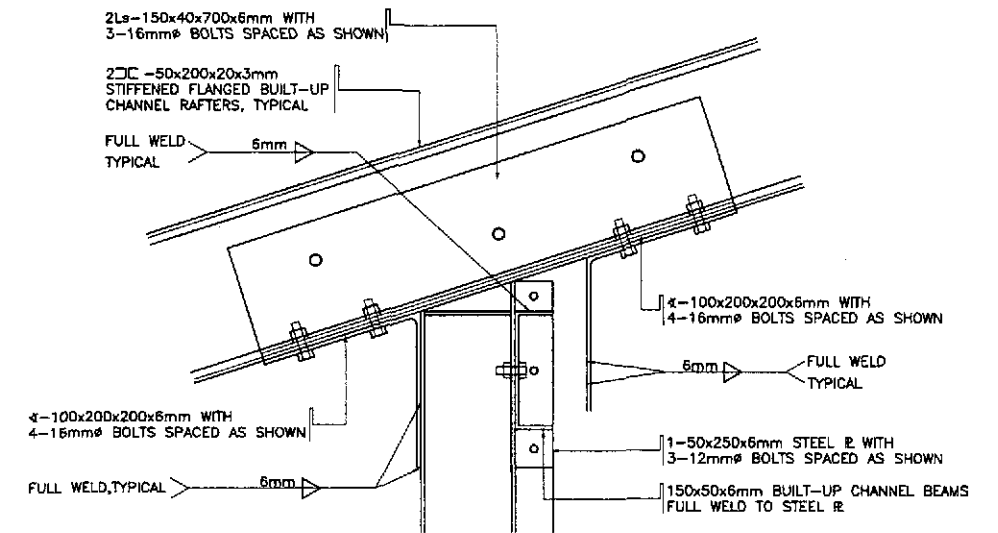
5 DETAIL - 8
FA-11 SCALE 1:5



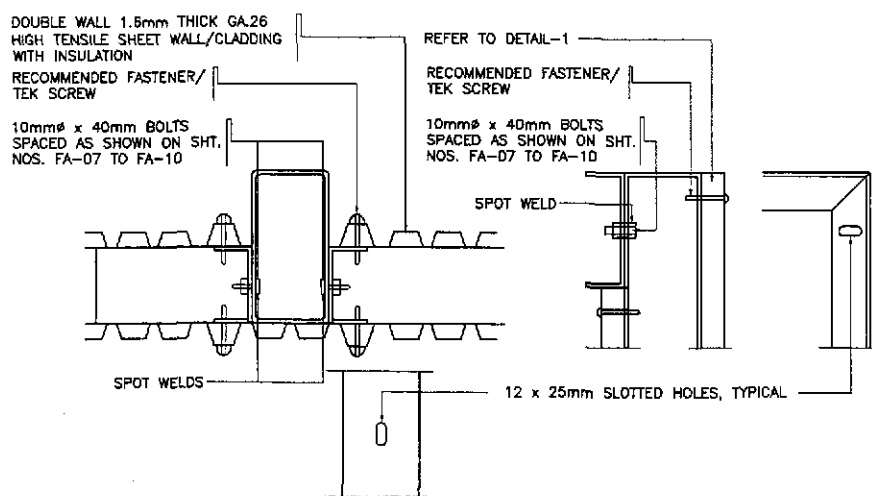
7 DETAIL - 9
FA-11 SCALE 1:5



9 DETAIL - 10
FA-11 SCALE 1:5

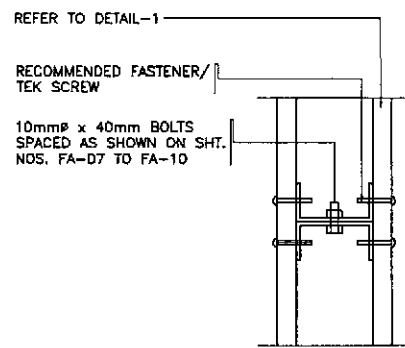


12 DETAIL - 11
FA-11 SCALE 1:5

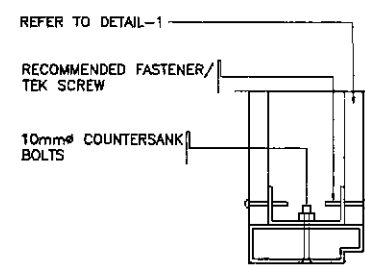


1 DETAIL - 1
FA-11 SCALE 1:5

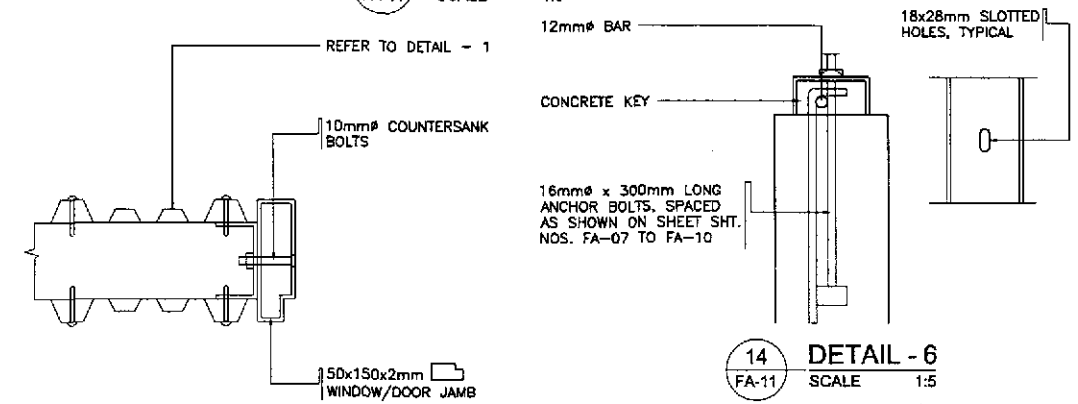
4 DETAIL - 2
FA-11 SCALE 1:5



6 DETAIL - 3
FA-11 SCALE 1:5



8 DETAIL - 4
FA-11 SCALE 1:5



14 DETAIL - 6
FA-11 SCALE 1:5

11 DETAIL - 5
FA-11 SCALE 1:5

ARDEL P. GONZALES
ENGINEER
PTR. NO. 2846340 P.R.C. NO. 53457
ISSUED ON 04/26/2002 T.I.N. 138-D62-682
ISSUED AT SAN JUAN, M.M.

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
YEO YACHIYO ENGINEERING CO., LTD.

DESIGNED	CHECKED	SUBMITTED	DATE	SIGNATURE
			9/1/02	ARDEL P. GONZALES
			9/1/02	ARDEL P. GONZALES
			9/1/02	ARDEL P. GONZALES

REPUBLIC OF THE PHILIPPINES		DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	
BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Approved By:
DANILO C. TRAJANO Project Director	WILFREDO S. LOPEZ Chief, Structural Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BORDAN Undersecretary

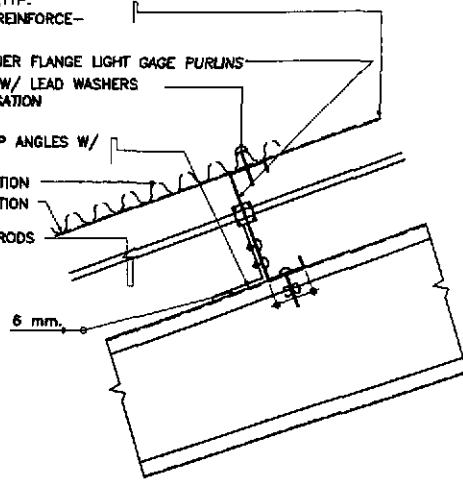
PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Piaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN FULL SIZE A1	ENGINEER'S FIELD OFFICE AND LIVING QUARTERS DETAILS OF CONNECTIONS DETAIL 1 TO 15	FA-11

ALUMINUM FOIL INSULATION, TYP.
USE HAVIFOIL 427 (3-WAY REINFORCE-
MENT) OR EQUAL

[-150x50x15x2mm. STIFFENER FLANGE LIGHT GAGE PURLINS
6 mm. # 1 - HOOK BOLTS W/ LEAD WASHERS
@ EVERY 5 - UPPER CORRUGATION

1 - 75x75x50x6.0mm. CLIP ANGLES W/
2 - 10mm. # BOLTS

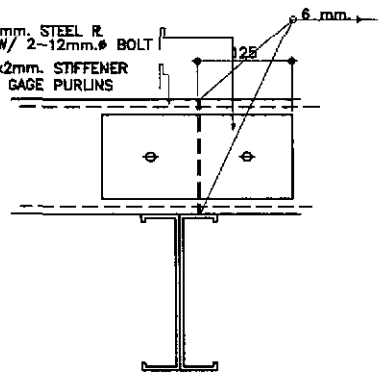
UPPER CORRUGATION
LOWER CORRUGATION
10mm # SAG RODS



ELEVATION

2-125x250x6mm. STEEL R.
CONNECTION W/ 2-12mm. # BOLT

[-150x50x15x2mm. STIFFENER
FLANGE LIGHT GAGE PURLINS

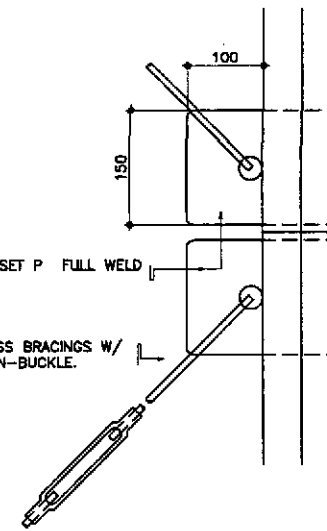


SECTION, SPLICE CONNECTION

2 PURLIN CONNECTION
FA-12 SCALE 1:5

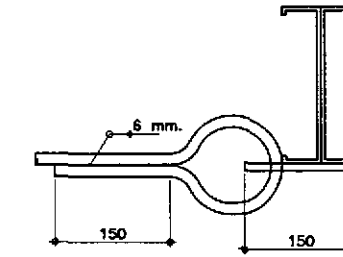
10 mm Thk. GUSSET P FULL WELD
TO RF.

16 mm. # CROSS BRACINGS W/
STANDARD TURN-BUCKLE.



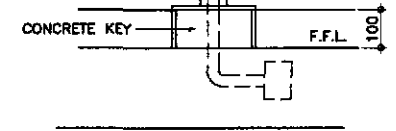
PLAN

4 CROSS-BRACING CONNECTION
FA-12 SCALE 1:5

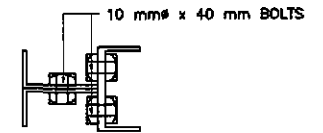


SECTION

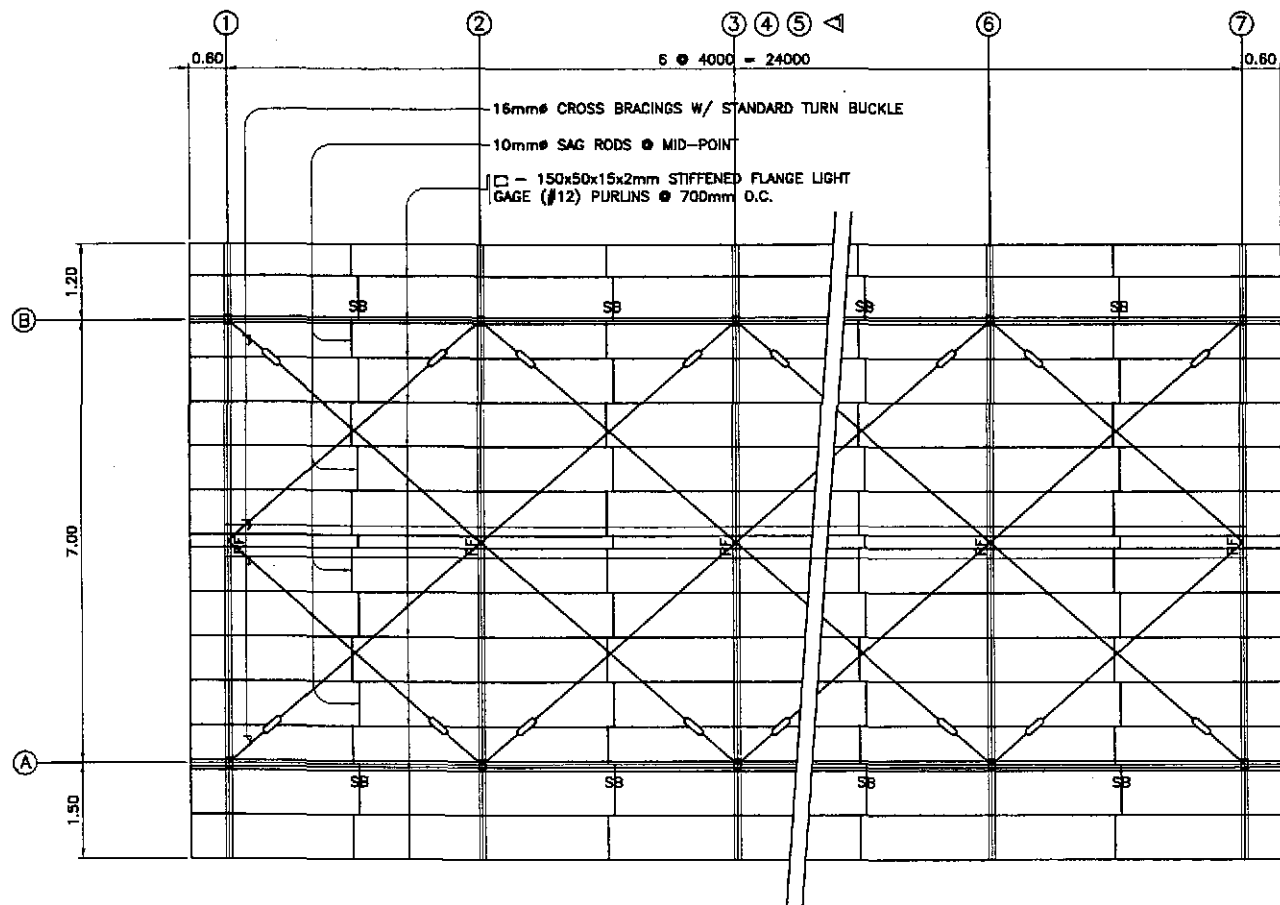
16 mm # x 200mm LONG
ANCHOR BOLTS SPACED
AS SHOWN ON SCHEM.
DIAG. OF INT. WALLS.



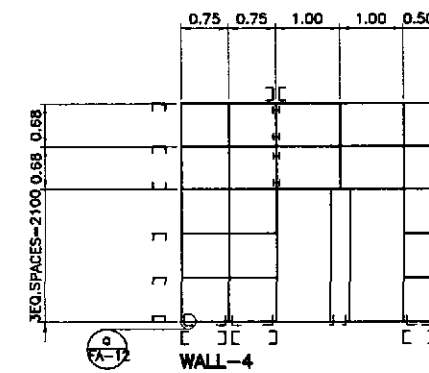
5 DETAIL - a
FA-12 SCALE 1:5



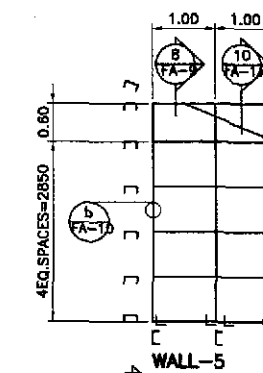
6 DETAIL - b
FA-12 SCALE 1:5



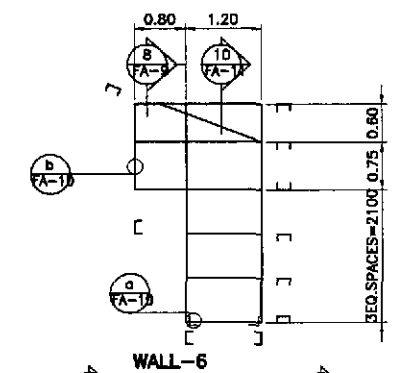
1 ROOF FRAMING PLAN
FA-12 SCALE 1:60



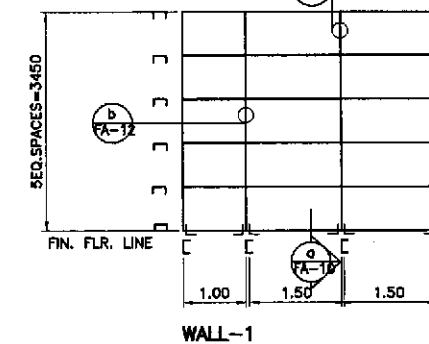
WALL-4



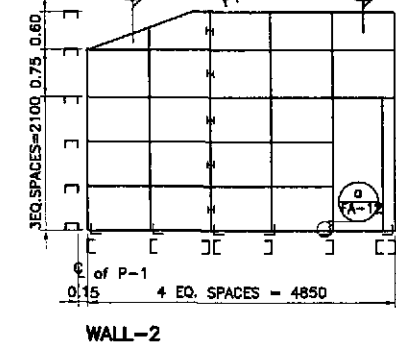
WALL-5



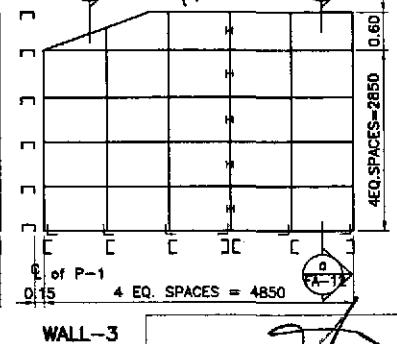
WALL-6



WALL-1



WALL-2



WALL-3

3 SCHEMATIC DIAGRAMS OF INTERIOR WALLS
FA-12 SCALE 1:60

ARNEL P. GONZALES
ENGINEER

PTR. NO. 5846340 P.R.C. NO. 53457
ISSUED ON 04/26/2002 T.I.N. 138-062-682
ISSUED AT SAN JUAN, M.M.

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL
YEO YACHIYO ENGINEERING CO., LTD.

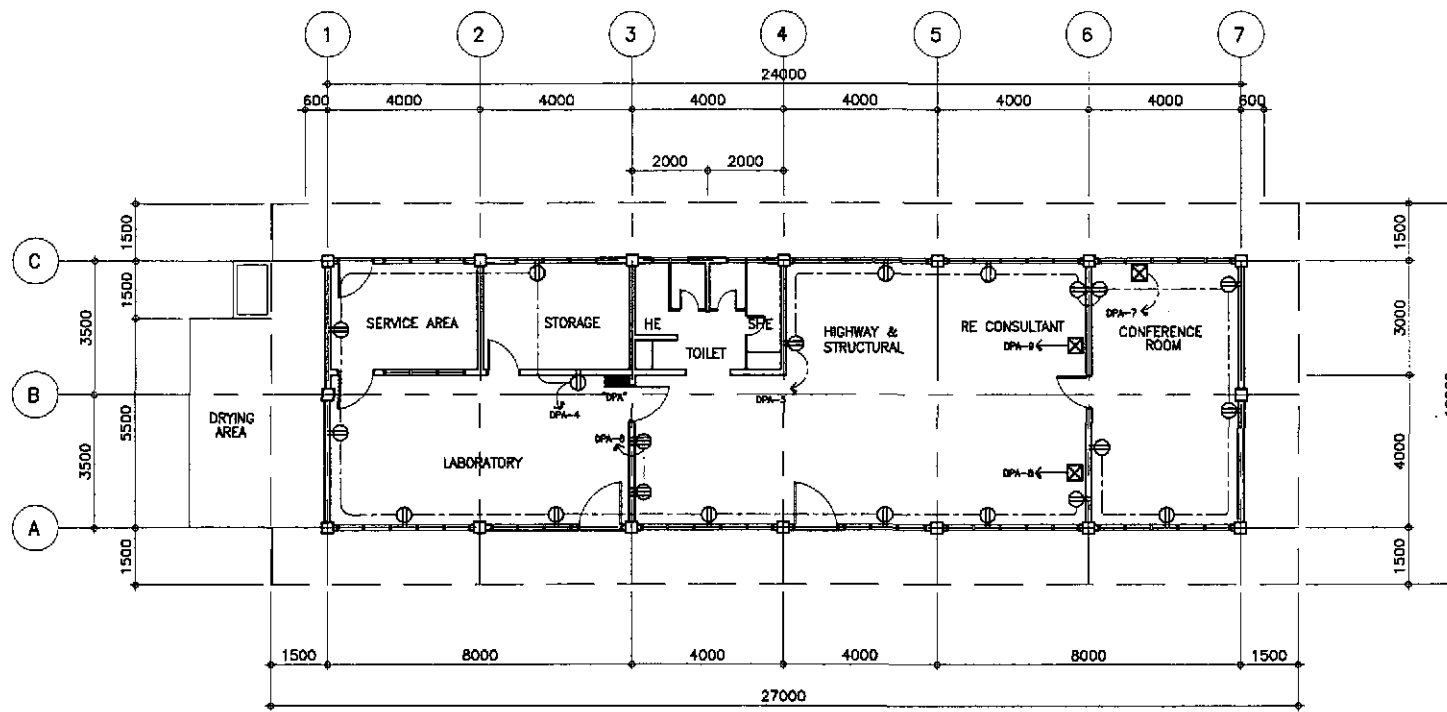
DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			
9/2/02		A.P. GONZALES	BUREAU OF DESIGN			
9/9/02		A.P. GONZALES	Submitted By:		Reviewed By:	
9/10/02		A.P. GONZALES	DANILO C. TRAJANO Project Director		WILFREDO S. LOPEZ Chief, Structural Division	
			Recommended By:		Approved By:	
			GILBERTO S. REYES OIC, Director IV		SIMEON A. DATUMANONG Secretary	

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
SAN JOSE BYPASS

SCALE :
AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
**ENGINEER'S FIELD OFFICE
AND LIVING QUARTERS**
ROOF FRAMING PLAN, SCHEMATIC DIAGRAM
PURLIN CONN. & CROSS-BRACING CONN.

SHEET NO. :
FA-12



2 POWER LAYOUT OF THE ENGINEER'S FIELD OFFICE / LABORATORY
FE-01 SCALE 1:100

GENERAL NOTES:

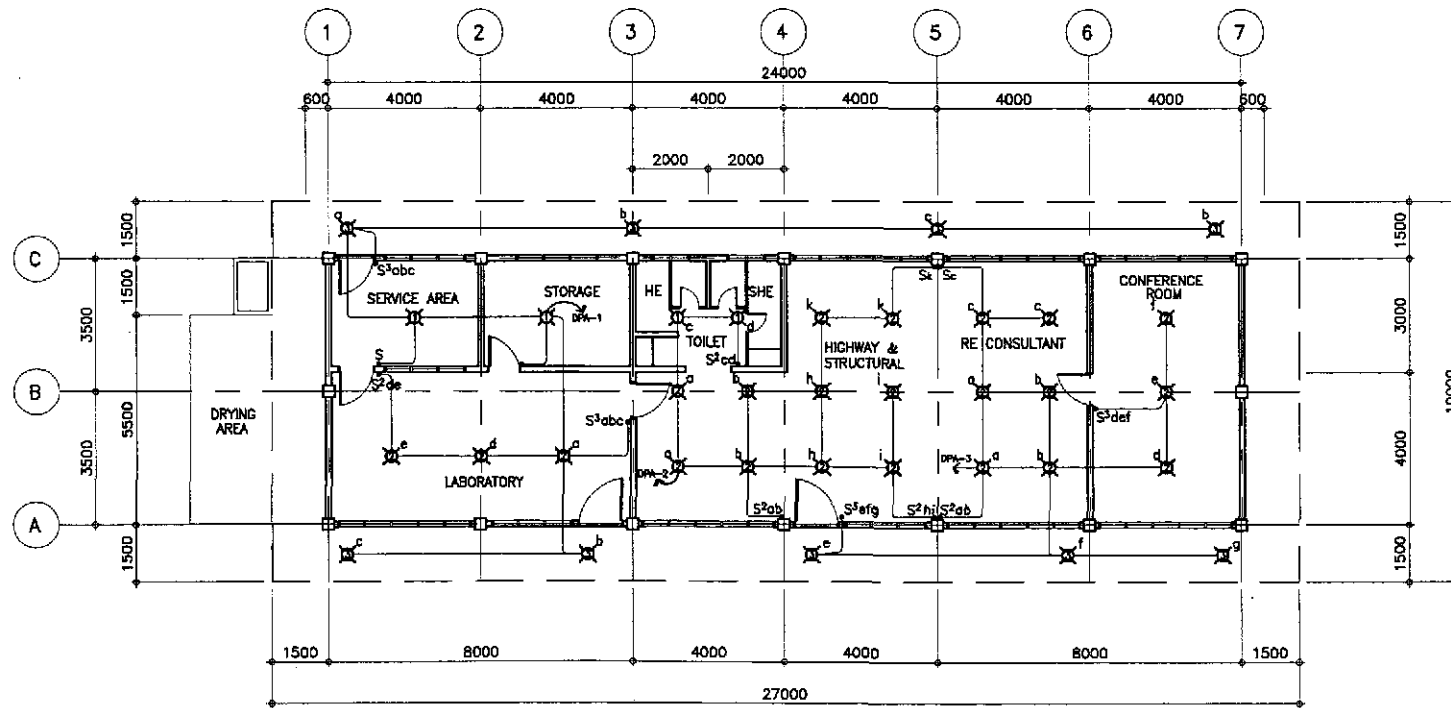
- ALL ELECTRICAL WORKS SHALL BE DONE IN STRICT COMPLIANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHIL. ELECT. CODE, EXISTING APPLICABLE ORDINANCES, RULES AND REGULATIONS OF THE LOCAL GOVERNMENT AND THE REQUIREMENTS OF THE POWER COMPANY.
- THE TYPE OF POWER SERVICE TO USED SHALL BE SINGLE-PHASE 2-WIRE, 240 VOLTS, 60Hz, AC.
- ALL WIRINGS SHALL BE INSTALLED IN STANDARD GALVANIZED RIGID STEEL CONDUIT, RUN EMBEDDED INSIDE THE CONCRETE AND HOLLOW BLOCK STRUCTURES, SLABS, COLUMNS, WALLS PARTITIONS AND/OR RUN BETWEEN DOUBLE WALL WOODED PARTITIONS OR INSIDE THE CEILING SPACES.
- ALL LIGHTING CIRCUIT HOMERUNS AND CONVENIENCE OUTLETS SHALL BE WIRED WITH NOT LESS THAN 3.5mm IN SIZE.
- THE MINIMUM SIZES OF WIRE AND CONDUIT TO BE USED SHALL BE 2.0mm² AND 15mm NOMINAL DIAMETER, RESPECTIVELY.
- ALL NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE IV OF THE PHIL. ELECT. CODE, PART I, LATEST EDITION.
- WHENEVER REQUIRED AND NECESSARY, PULL BOXES OF PROPER SIZES SHALL BE INSTALLED AT CONVENIENT AND INCONSPICUOUS LOCATIONS, ALTHOUGH SUCH BOXES ARE NOT SHOWN ON THE PLAN IS NOR MENTIONED IN THE SPECIFICATIONS.
- ALL WALL OUTLETS SHALL BE INSTALLED AT THE FOLLOWING HEIGHT ABOVE THE FINISHED FLOOR LEVEL, UNLESS OTHERWISE NOTED.
A. WALL SWITCHES1200 mm
B. CONVENIENCE OUTLETS300 mm
C. AIR CONDITIONING OUTLETSAT CONVENIENT HEIGHT NEAR THE EQUIPMENT
- STANDARD TYPE OF ACCESSORIES, SPlicing DEVICES, TERMINATORS AND OTHER APPURTENANCES FOR THE ENTIRE ELECTRICAL INSTALLATION SHALL BE USED.
- ALL MATERIALS TO BE USED SHALL BE BRAND NEW AND OF THE APPROVED TYPE FOR THE LOCATION AND PURPOSE.
- THE CONTRACTOR SHALL VERIFY AND ORIENT THE ACTUAL LOCATION OF THE SERVICE ENTRANCE FOR CONNECTION TO POWER COMPANY SERVICE POINT.
- ALL ELECTRICAL WORKS SHALL BE DONE UNDER THE STRICT SUPERVISION OF A DULY REGISTERED ELECTRICAL ENGINEER.

NOTE:

ALL FLUORESCENT LIGHTING FIXTURES SHALL BE EQUIPPED WITH A HIGH POWER FACTOR PRE-HEAT WITH STARTER TYPE BALLAST, COMPLETE WITH ALL NECESSARY ACCESSORIES, WIRED AND READY FOR SERVICE USED.

ELECTRICAL SYMBOLS:

- CEILING LIGHT; REFER TO SCHEDULE OF LIGHTING FIXTURES AND LAMPS
- ELECTRICAL RISER
- ONE-WAY WALL SWITCH, 15A, 250V
- 2 ONE-WAY WALL SWITCHES ON ONE-GANG PLATE, 15A, 250V
- 3 ONE-WAY WALL SWITCHES ON ONE-GANG PLATE, 15A, 250V
- DUPLEX CONVENIENCE OUTLET, GROUNDING TYPE, 20A, 250V
- HEAVY DUTY CONVENIENCE OUTLETS, SINGLE-GROUNDING TYPE, 30A, 250V
- AIR CONDITIONING OUTLET GROUNDING TYPE WITH AUTOMATIC CIRCUIT BREAKER IN ONE ENCLOSURE
- ENCLOSED AUTOMATIC CIRCUIT BREAKER (ACB) 70AT, 100AF, 2P, 240V
- DISTRIBUTION PANEL BOARD
- PULL BOX OR JUNCTION BOX
- ELECTRIC SERVICE METER
- PROPOSED SERVICE ENTRANCE WITH CAP
- CONCEALED OR EMBEDDED CONDUIT RUN
- UNDERGROUND OR UNDER FLOOR CONDUIT RUN
- CIRCUIT HOMERUN TO PANEL BOARD

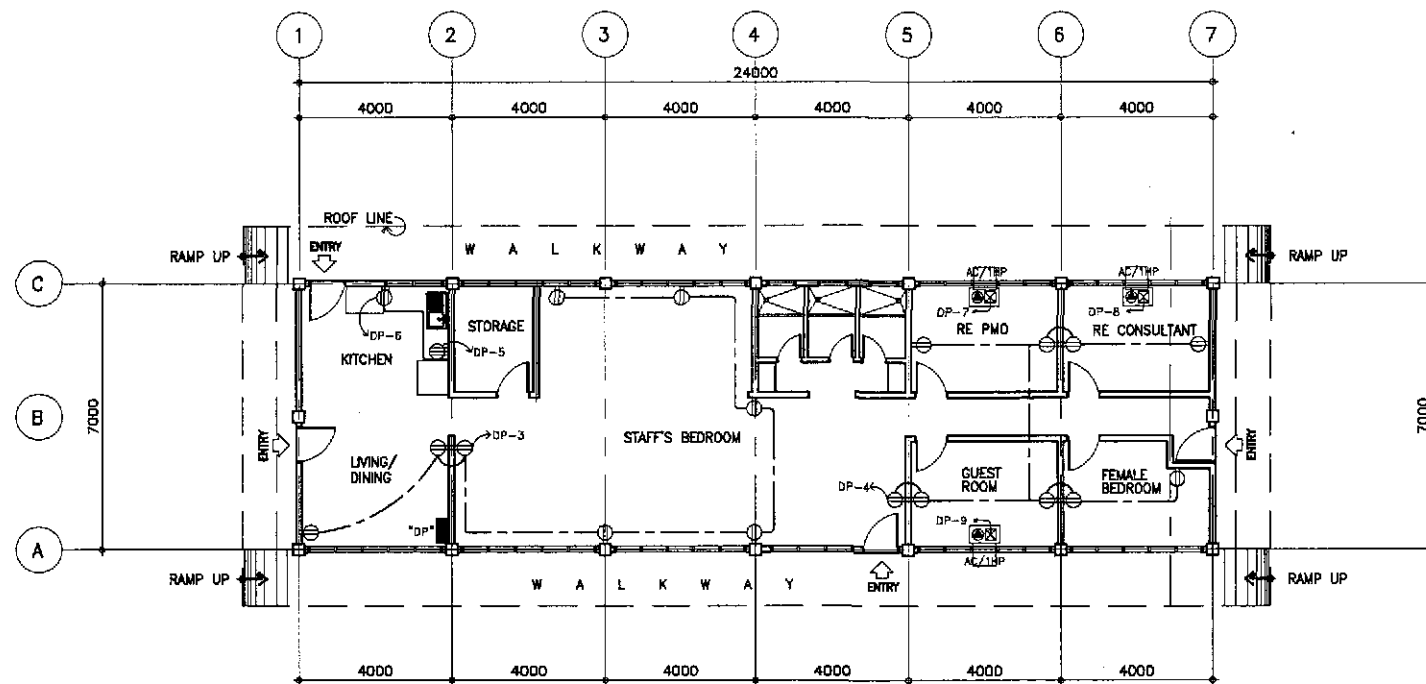


2 LIGHTING LAYOUT OF THE ENGINEER'S FIELD OFFICE / LABORATORY
FE-01 SCALE 1:100

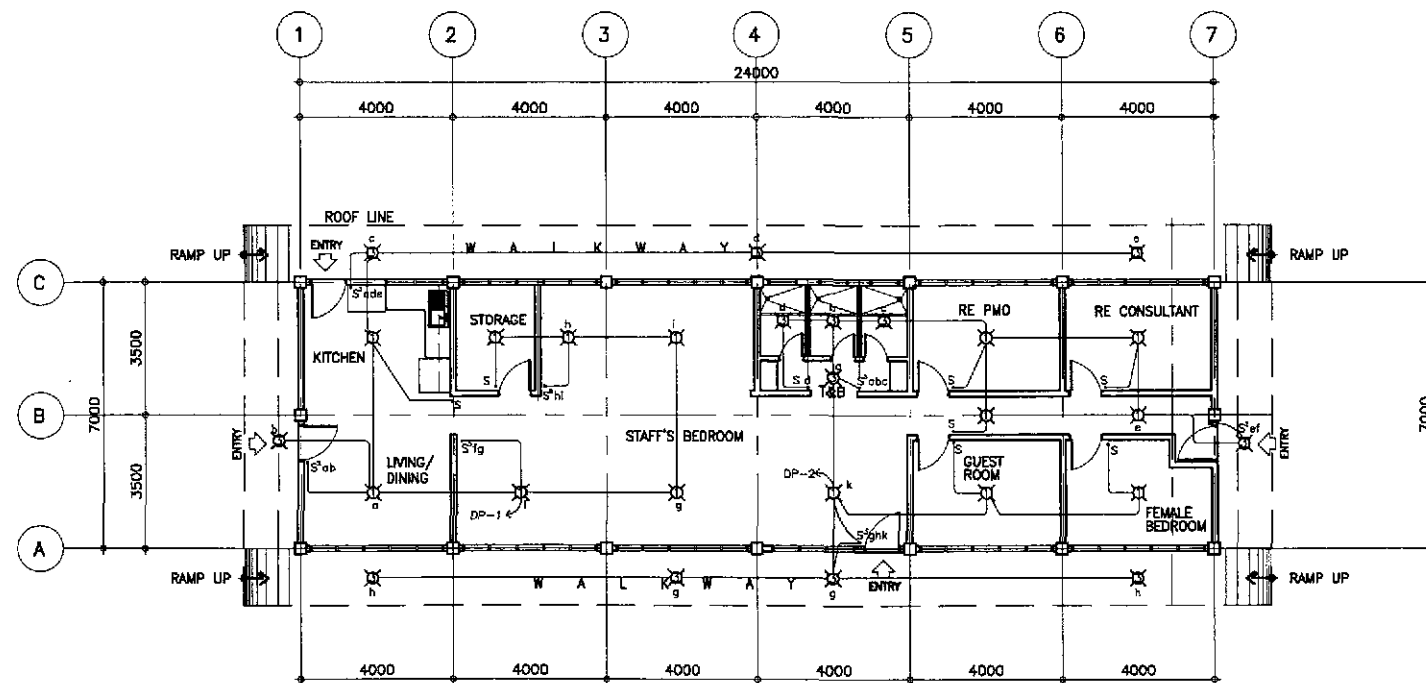
ERNESTO M. ANTIOQUIA
ENGINEER

PTR. NO. 7403664 P.E.E. NO. 2913
ISSUED ON 01/02/2002 ISSUED AT CABUYAO, LAGUNA
T.I.N. 109-382-379

		DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS						
	DESIGNED	9/2/02		P.U.H. - PMD	BUREAU OF DESIGN	OFFICE OF THE SECRETARY	PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/4/02		Submitted By:	Reviewed By:	Recommended By:	Recommended By:	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	ENGR'S FIELD OFFICE / LABORATORY LIGHTING LAYOUT, POWER LAYOUT ELECTRICAL SYMBOLS & GENERAL NOTES
SUBMITTED	9/6/02		DANILO C. TRIAND Project Director	FE M. BARRIENTOS Chief, Mech'-Elect' Division	GILBERTO S. REYES DIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary	SAN JOSE BYPASS	FULL SIZE A1	



2 POWER LAYOUT FOR ENGINEER'S LIVING QUARTER
FE-02 SCALE 1:100



1 LIGHTING LAYOUT FOR ENGINEER'S LIVING QUARTER
FE-02 SCALE 1:100

GENERAL NOTES:

1. ALL ELECTRICAL WORKS SHALL BE DONE IN STRICT COMPLIANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHIL. ELECT. CODE, EXISTING APPLICABLE ORDINANCES, RULES AND REGULATIONS OF THE LOCAL GOVERNMENT AND THE REQUIREMENTS OF THE POWER COMPANY.
2. THE TYPE OF POWER SERVICE TO USED SHALL BE SINGLE-PHASE 2-WIRE, 240 VOLTS, 60Hz, AC.
3. ALL WIRINGS SHALL BE INSTALLED IN STANDARD GALVANIZED RIGID STEEL CONDUIT, RUN EMBEDDED INSIDE THE CONCRETE AND HOLLOW BLOCK STRUCTURES, SLABS, COLUMNS, WALLS PARTITIONS AND/OR RUN BETWEEN DOUBLE WALL WOODED PARTITIONS OR INSIDE THE CEILING SPACES.
4. ALL LIGHTING CIRCUIT HOMERUNS AND CONVENIENCE OUTLETS SHALL BE WIRED WITH NOT LESS THAN 3.5mm IN SIZE.
5. THE MINIMUM SIZES OF WIRE AND CONDUIT TO BE USED SHALL BE 2.0mm² AND 15mm NOMINAL DIAMETER, RESPECTIVELY.
6. ALL NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE IV OF THE PHIL. ELECT. CODE, PART I, LATEST EDITION.
7. WHENEVER REQUIRED AND NECESSARY, PULL BOXES OF PROPER SIZES SHALL BE INSTALLED AT CONVENIENT AND INCONSPICUOUS LOCATIONS, ALTHOUGH SUCH BOXES ARE NOT SHOWN ON THE PLAN IS NOT MENTIONED IN THE SPECIFICATIONS.
8. ALL WALL OUTLETS SHALL BE INSTALLED AT THE FOLLOWING HEIGHT ABOVE THE FINISHED FLOOD LEVEL, UNLESS OTHERWISE NOTED.
A. WALL SWITCHES1200 mm
B. CONVENIENCE OUTLETS300 mm
C. AIR CONDITIONING OUTLETSAT CONVENIENT HEIGHT NEAR THE EQUIPMENT
9. STANDARD TYPE OF ACCESSORIES, SPLICING DEVICES, TERMINATORS AND OTHER APPURTENANCES FOR THE ENTIRE ELECTRICAL INSTALLATION SHALL BE USED.
10. ALL MATERIALS TO BE USED SHALL BE BRAND NEW AND OF THE APPROVED TYPE FOR THE LOCATION AND PURPOSE.
11. THE CONTRACTOR SHALL VERIFY AND ORIENT THE ACTUAL LOCATION OF THE SERVICE ENTRANCE FOR CONNECTION TO POWER COMPANY SERVICE POINT.
12. ALL ELECTRICAL WORKS SHALL BE DONE UNDER THE STRICT SUPERVISION OF A DULY REGISTERED ELECTRICAL ENGINEER.

NOTE:

ALL FLUORESCENT LIGHTING FIXTURES SHALL BE EQUIPPED WITH A HIGH POWER FACTOR PRE-HEAT WITH STARTER TYPE BALLAST. COMPLETE WITH ALL NECESSARY ACCESSORIES, WIRED AND READY FOR SERVICE USED.

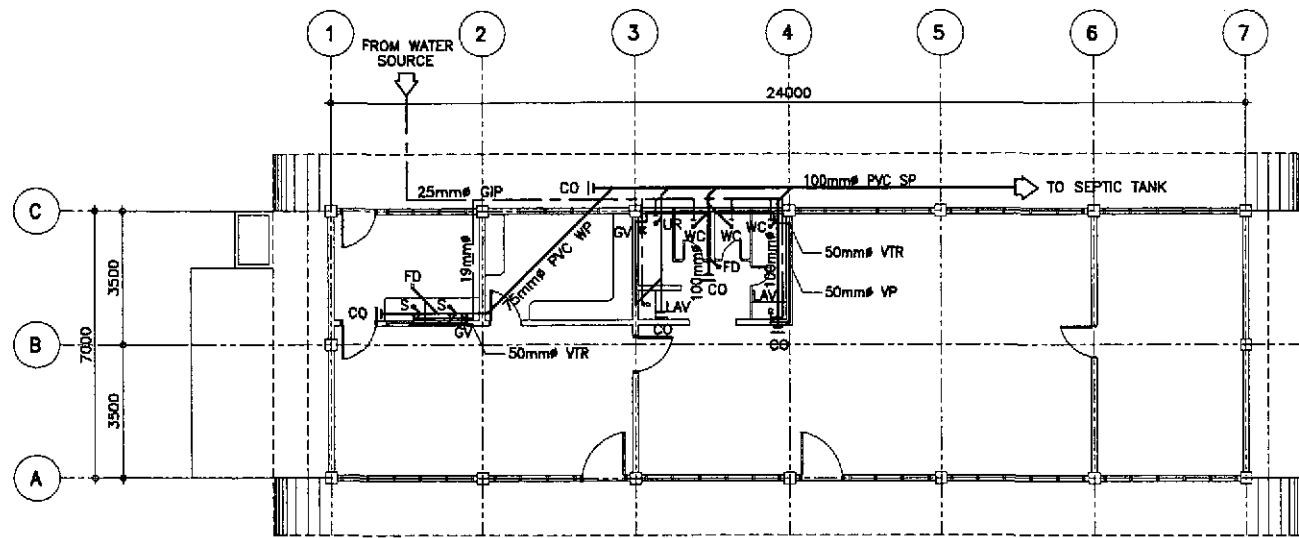
ELECTRICAL SYMBOLS:

- CEILING LIGHT; REFER TO SCHEDULE OF LIGHTING FIXTURES AND LAMPS
- ELECTRICAL RISER
- ONE-WAY WALL SWITCH, 15A, 250V
- 2 ONE-WAY WALL SWITCHES ON ONE-GANG PLATE, 15A, 250V
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- DUPLEX CONVENIENCE OUTLET, GROUNDING TYPE, 20A, 250V
- HEAVY DUTY CONVENIENCE OUTLETS, SINGLE-GROUNDING TYPE, 30A, 250V
- AIR CONDITIONING OUTLET GROUNDING TYPE WITH AUTOMATIC CIRCUIT BREAKER IN ONE ENCLOSURE
- ENCLOSED AUTOMATIC CIRCUIT BREAKER (ACB) 70AT, 100AF, 2P, 240V
- DISTRIBUTION PANEL BOARD
- PULL BOX OR JUNCTION BOX
- ELECTRIC SERVICE METER
- PROPOSED SERVICE ENTRANCE WITH CAP
- CONCEALED OR EMBEDDED CONDUIT RUN
- UNDERGROUND OR UNDER FLOOR CONDUIT RUN
- CIRCUIT HOMERUN TO PANEL BOARD

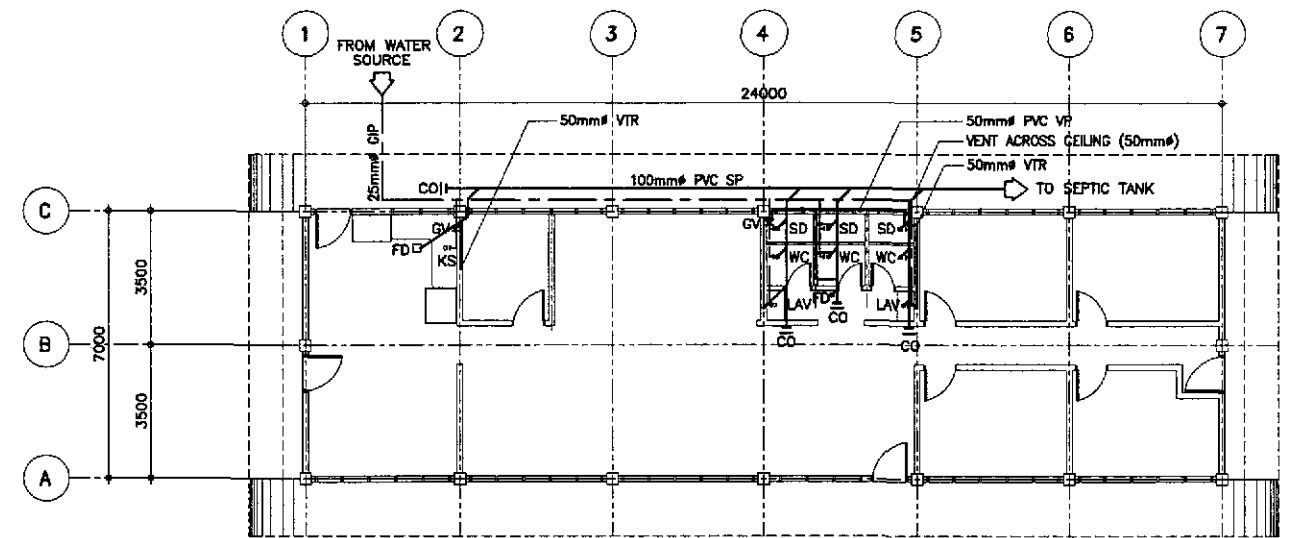
EMX
ERNESTO M. ANTIQUA
ENGINEER

PTR. NO. 7403664 P.E.E. NO. 2913
ISSUED ON 01/02/2002 ISSUED AT CABUYAO, LAGUNA
T.I.N. 109-382-379

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL YACHIYO ENGINEERING CO., LTD.	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS 	PROJECT AND LOCATION :		SCALE :	SHEET CONTENTS :	SHEET NO. :	
	CHECKED	9/2/02	<i>E.M. Antiqua</i>		Submitted By:	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)		AS SHOWN	ENGINEER'S LIVING QUARTERS LIGHTING LAYOUT, POWER LAYOUT ELECTRICAL SYMBOLS & GENERAL NOTES	FE-02
	SUBMITTED	9/6/02	<i>E.M. Antiqua</i>		Reviewed By:	SAN JOSE BYPASS		FULL SIZE A1		
				PUHL - PMO DANILO C. TRAJANO Project Director	Chief, Mech'-Elect'l Division FE. M. BARRIENTOS	Recommended By: GILBERTO S. REYES OIC, Director IV	Approved By: (See cover sheet for Signature/Approval) MANUEL M. BONOAN Undersecretary	Approved By: (See cover sheet for Signature/Approval) SIMON A. DATUMANONG Secretary		

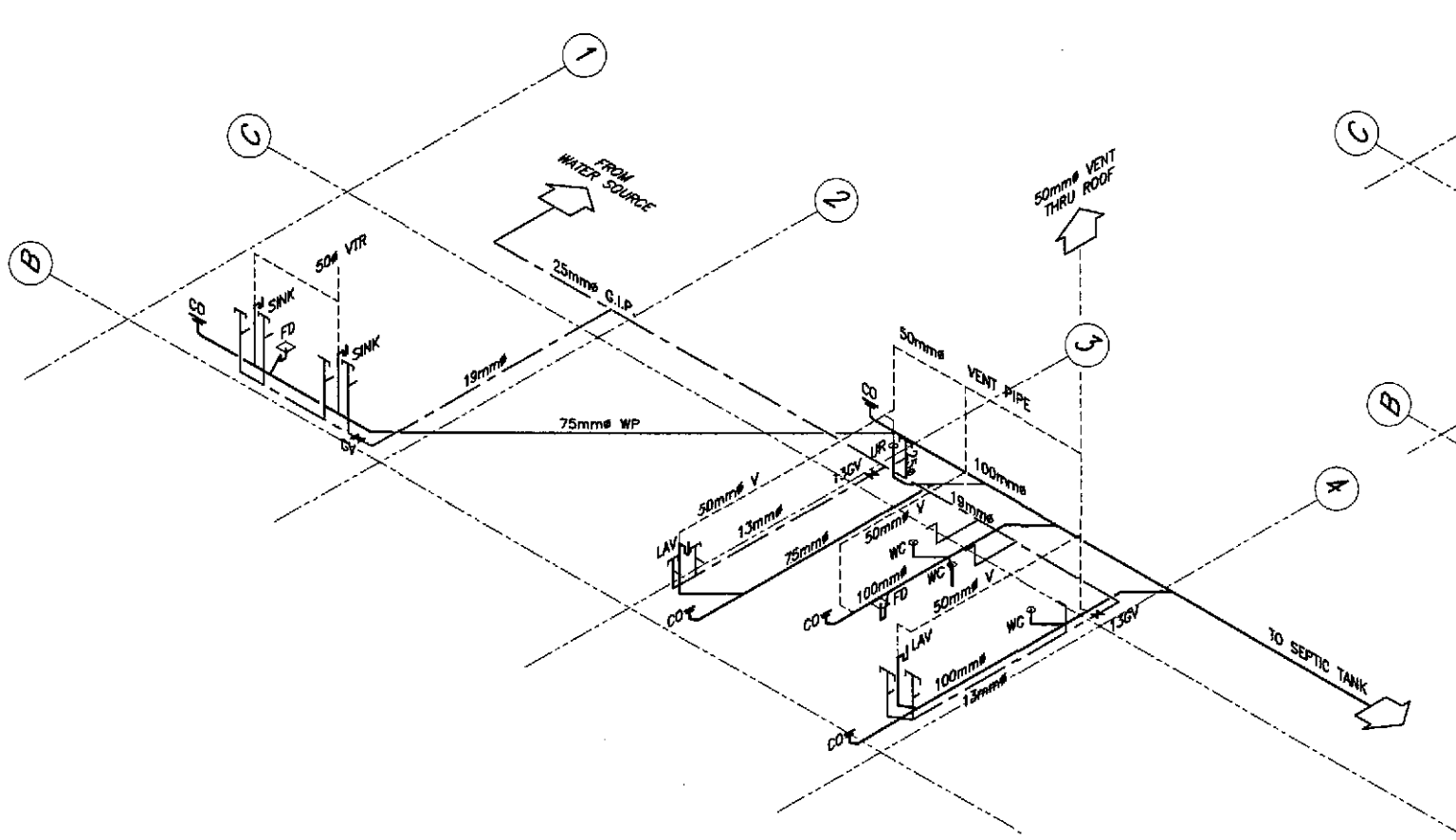


1 ENGINEER'S FIELD OFFICE
SEWER AND WATER LINE LAYOUT
FP-01 SCALE 1:100

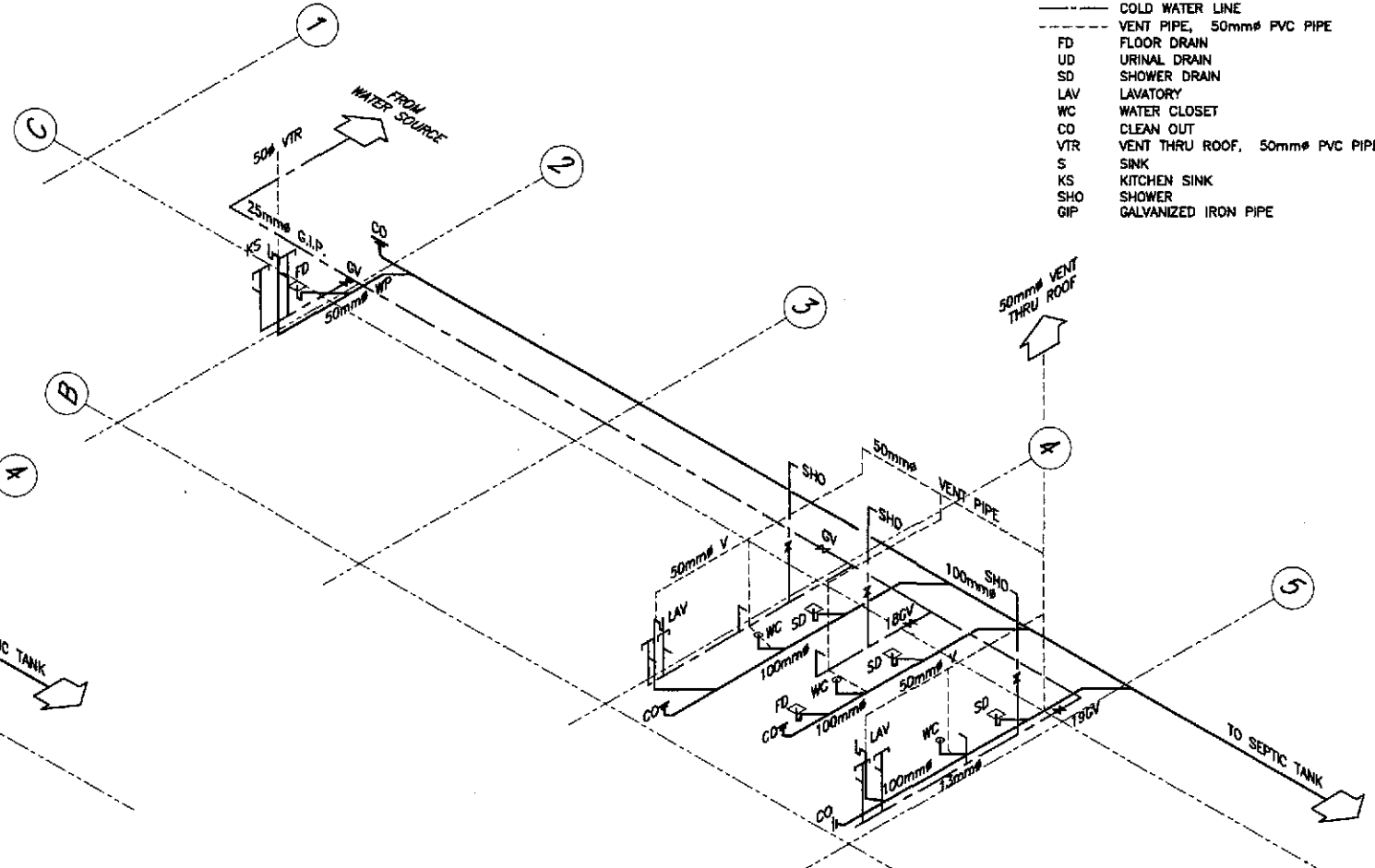


2 ENGINEER'S LIVING QUARTER
SEWER AND WATER LINE LAYOUT
FP-01 SCALE 1:100

- LEGEND :
- SEWER LINE
 - - - COLD WATER LINE
 - - - VENT PIPE, 50mm# PVC PIPE
 - FD FLOOR DRAIN
 - UD URINAL DRAIN
 - SD SHOWER DRAIN
 - LAV LAVATORY
 - WC WATER CLOSET
 - CO CLEAN OUT
 - VTR VENT THRU ROOF, 50mm# PVC PIPE
 - S SINK
 - KS KITCHEN SINK
 - SHO SHOWER
 - GIP GALVANIZED IRON PIPE



3 (SHOWING SEWER AND WATER LINE)
ISOMETRIC DIAGRAM
FP-01 SCALE 1:50

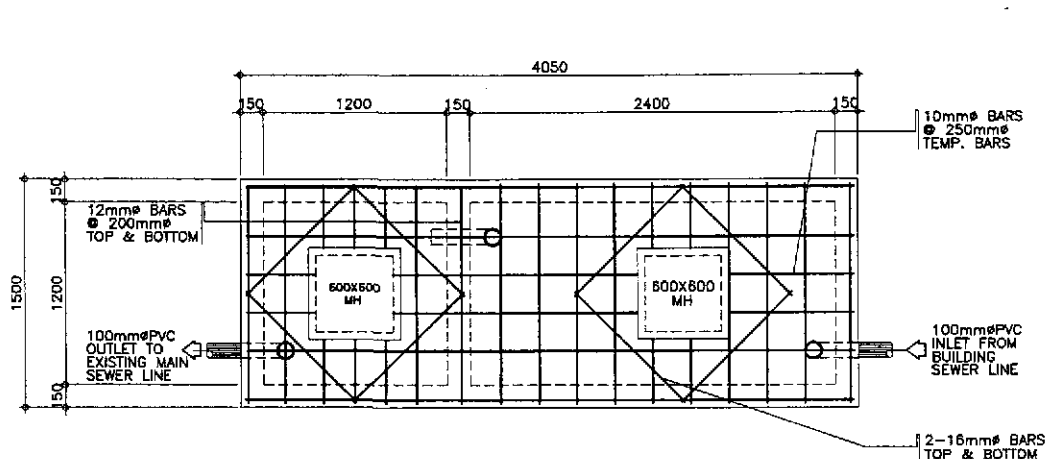


4 (SHOWING SEWER AND WATER LINE)
ISOMETRIC DIAGRAM
FP-01 SCALE 1:50

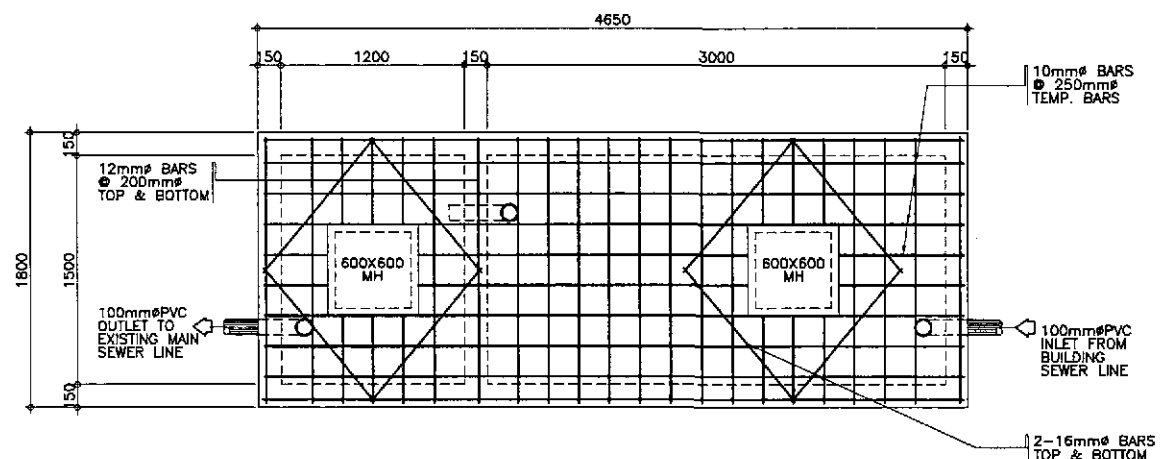
[Signature]
SANITARY ENGINEER

PTR. NO. DOB3138 P.R.C. NO. 0000695
ISSUED ON 05/28/2002 T.I.N. 119-878-225
ISSUED AT SAN MATEO, RIZAL

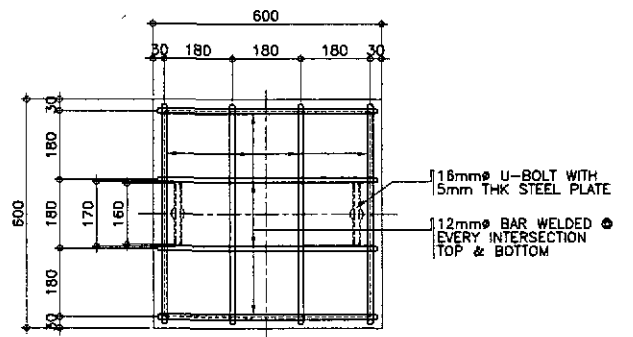
	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/4/02	<i>[Signature]</i>		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pilaridel, Cabanatuan and San Jose Bypasses)			AS SHOWN	ENGINEER'S FIELD OFFICE AND LIVING QUARTERS SEWER AND WATER LINE LAYOUT AND ISOMETRIC DIAGRAM	FP-01
	SUBMITTED	9/6/02	<i>[Signature]</i>		SAN JOSE BYPASS			FULL SIZE A1		
Submitted By:		BUREAU OF DESIGN		OFFICE OF THE SECRETARY						
DANILO C. TRAJANO Project Director		EMMANUEL P. CUNTAPAY Chief, Architectural Division		GILBERTO S. REYES D/C, Director IV		MANUEL M. BONGAN Undersecretary		SIMEON A. DATUMANONG Secretary		



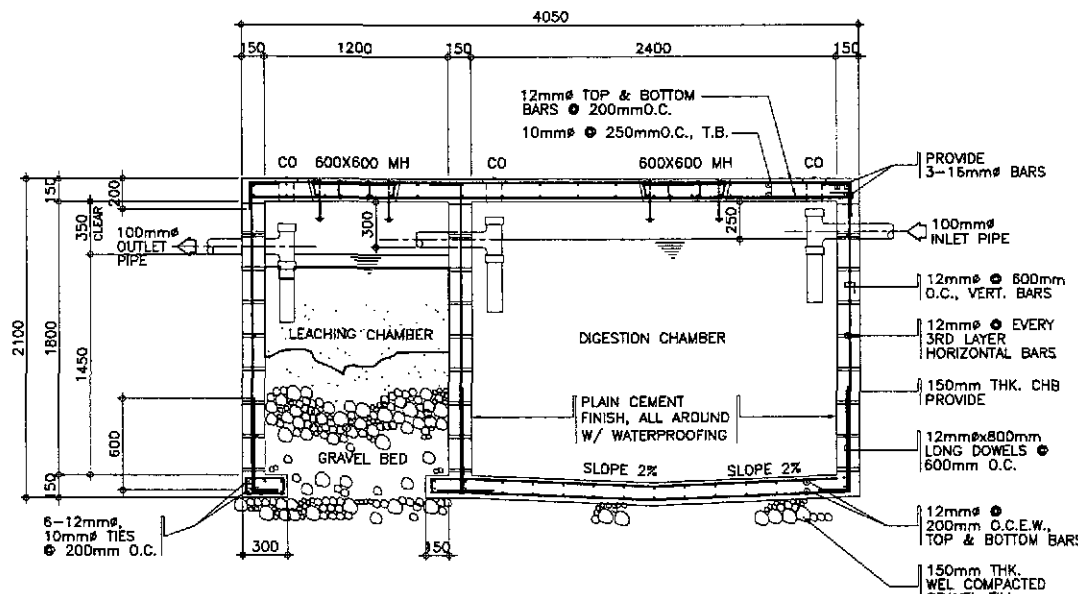
1A PLAN
FP-02 SCALE 1:20



1C PLAN
FP-02 SCALE 1:20

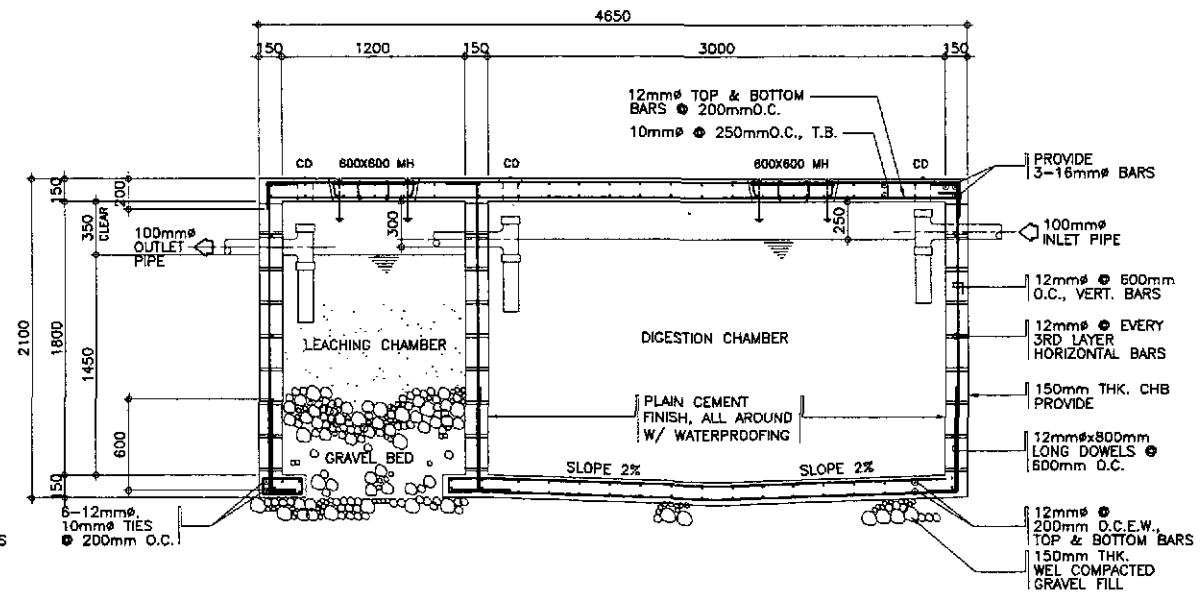


2A PLAN
FP-02 SCALE 1:20



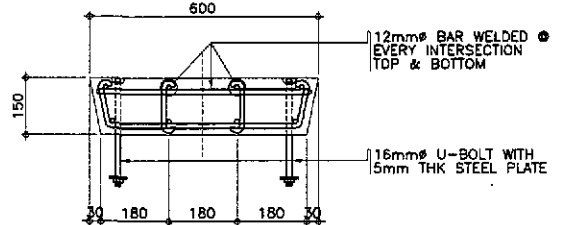
1B SECTION
FP-02 SCALE 1:20

ENGINEER'S FIELD OFFICE



1D SECTION
FP-02 SCALE 1:20

ENGINEER'S LIVING QUARTER



2B SECTION
FP-02 SCALE 1:20

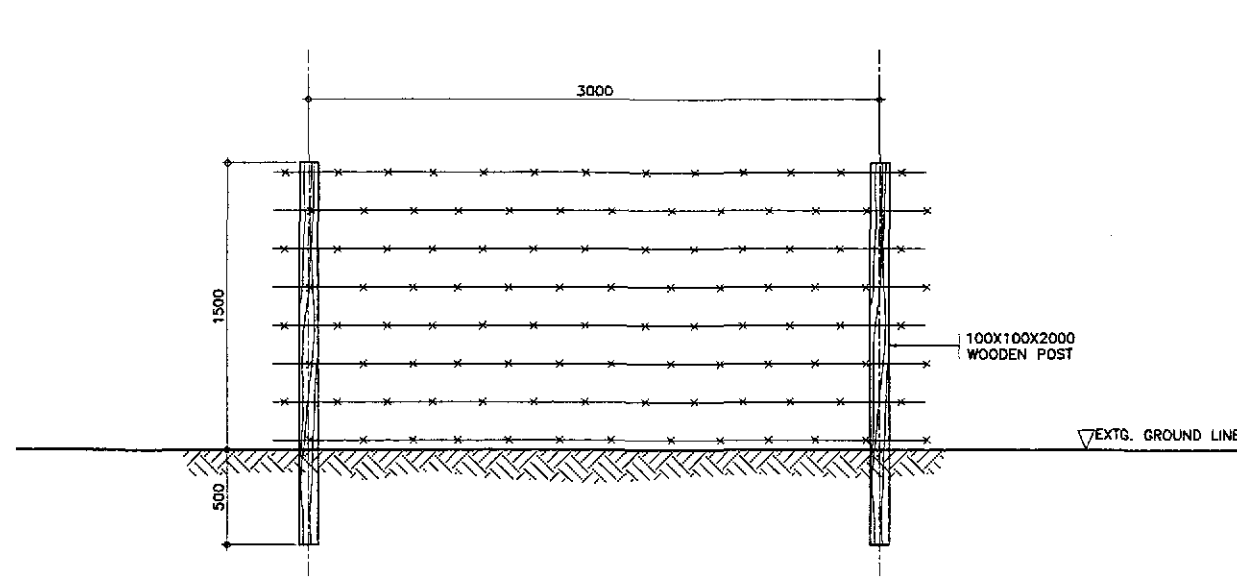
2 CONCRETE COVER DETAIL
FP-02 SCALE AS SHOWN

- GENERAL NOTES:
1. ALL PLUMBING WORKS INCLUDED HEREIN EXECUTED ACCORDING TO THE PROVISIONS AND REQUIREMENTS OF THE PHILIPPINE NATIONAL PLUMBING CODE.
 2. SOIL AND WASTE PIPE LINE SHALL BE PVC, SIZE AS IN DRAWING.
 3. ALL WATER LINES SHALL BE G.I. PIPE SCHEDULE 40 AND SIZE OF PIPES TO THE FIXTURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
 4. PROVIDE 2% SLOPE FOR HOUSE AND SEWER LINES.
 5. ALL G.I. PIPES AND FITTINGS BURIED UNDERGROUND SHALL BE LEAD COATED OR TAR COATED.
 6. VENT THRU ROOF PIPE SHALL BE AT LEAST 0.30m ABOVE ROOF.
 7. ALL DOWNSPOUTS SHALL BE PVC PIPES 75mm (3") UNLESS OTHERWISE SPECIFIED.

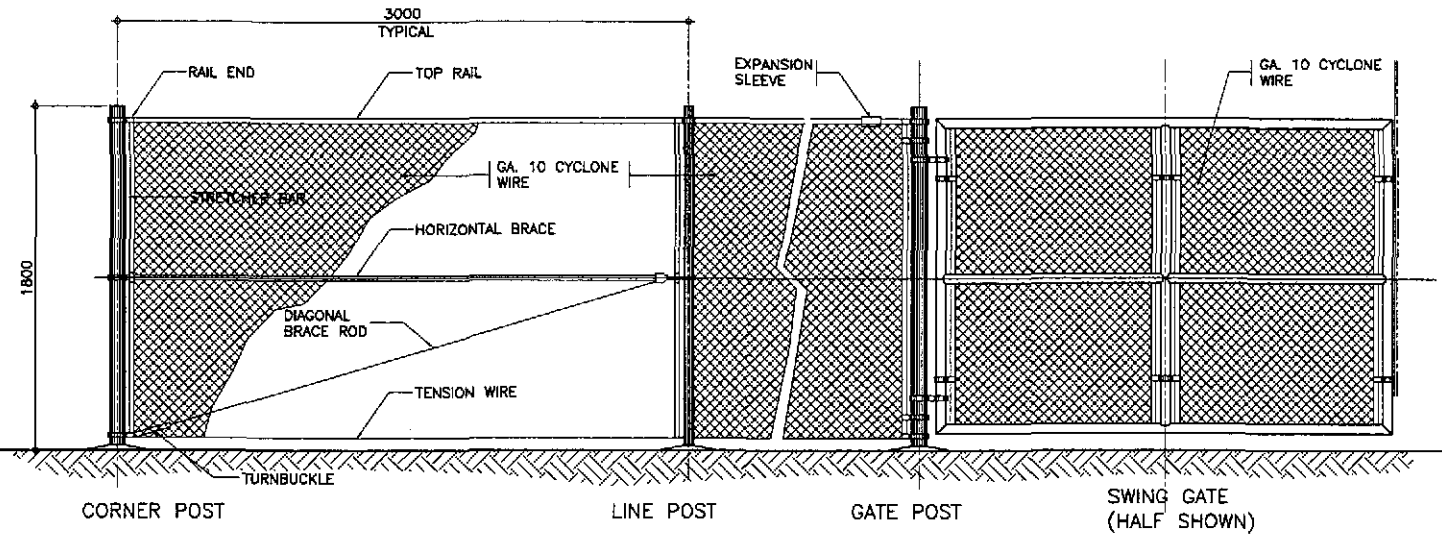
1 SEPTIC TANK DETAILS
FP-02 SCALE AS SHOWN

FAUSTINO A. STA. MARIA
SANITARY ENGINEER
PTR. NO. 0083138 P.R.C. NO. 0000695
ISSUED ON 03/28/2002 T.I.N. 119-878-225
ISSUED AT SAN MATEO, RIZAL

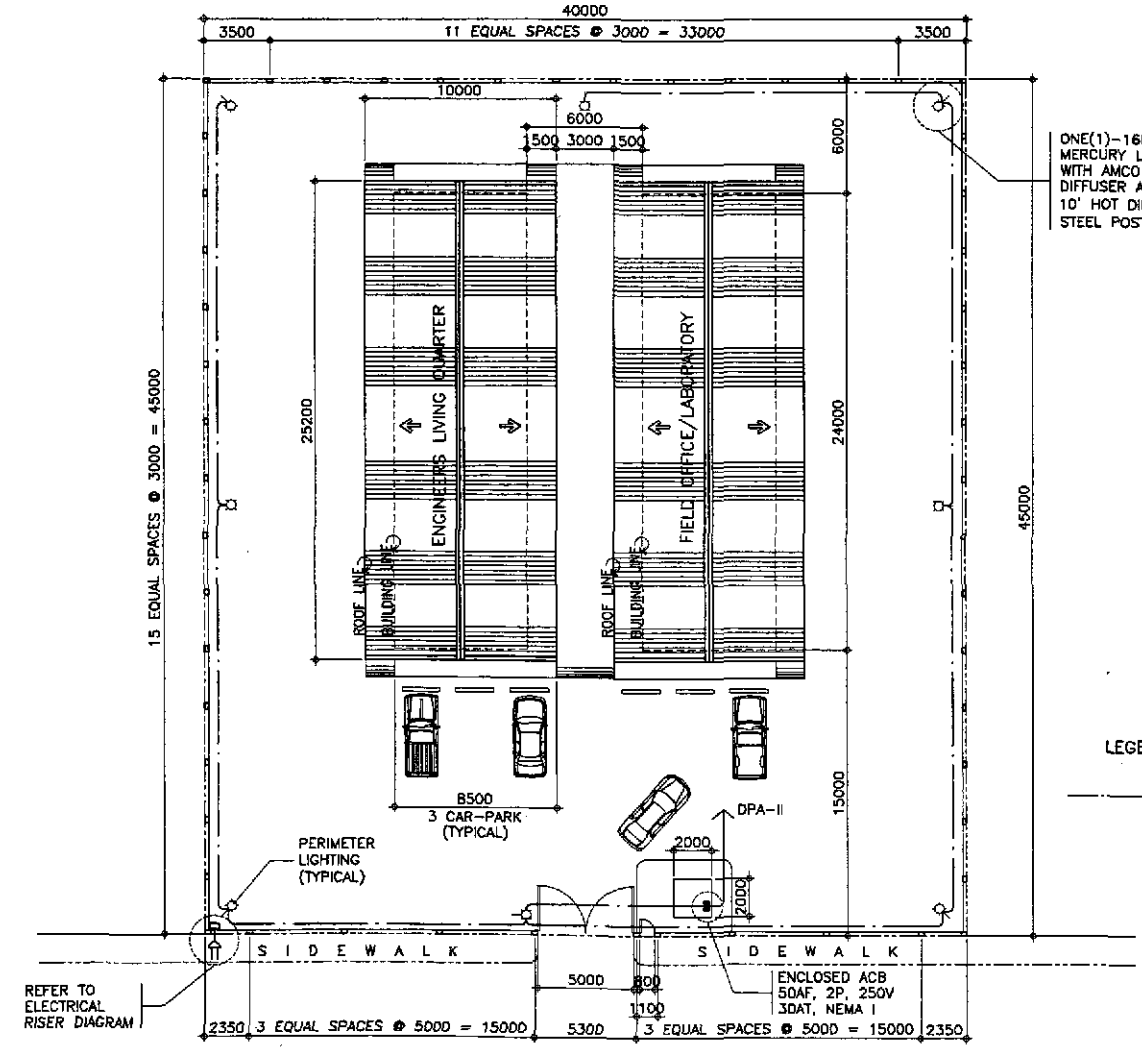
	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	9/2/02	[Signature]	BUREAU OF DESIGN				THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	ENGINEER'S FIELD OFFICE AND LIVING QUARTERS SEPTIC TANK DETAILS	FP-02
	CHECKED	9/4/02	[Signature]	Submitted By:	Reviewed By:	Recommended By:	Approved By:	FULL SIZE A1			
	SUBMITTED	9/6/02	[Signature]	DANILO C. TRAJANO Project Director	EMMANUEL P. CUNTAPOY Chief, Architectural Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary			



3 TYPICAL ELEVATION FENCE (REAR & SIDE)
 FX-01 SCALE 1:20

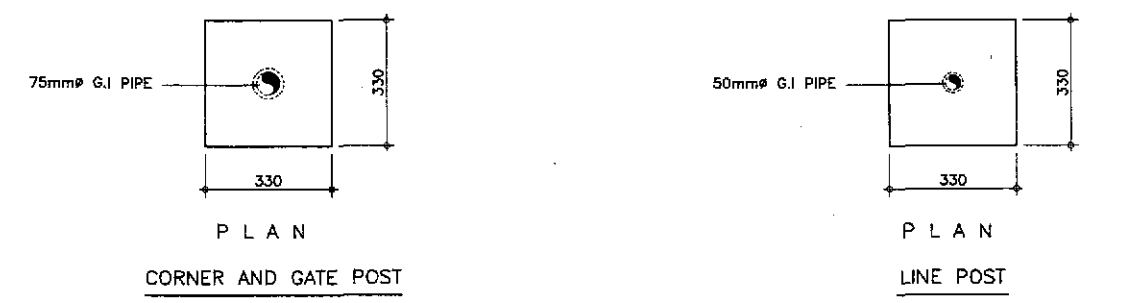
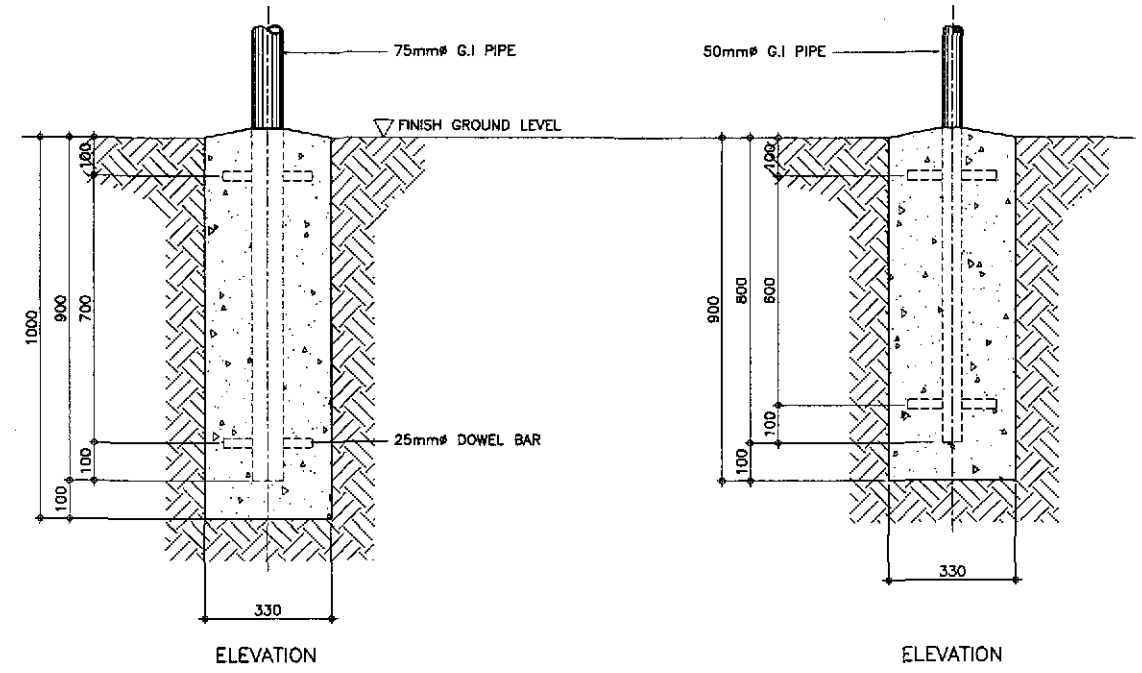


2 TYPICAL ELEVATION - FENCE AND GATE
 FX-01 SCALE 1:20



1 PLOT PLAN
 FX-01 SCALE 1:200

LEGEND :
 ——— 2-5.5mm² THW
 - - - 1-3.5mm² THW(G)
 in 25mm ϕ C

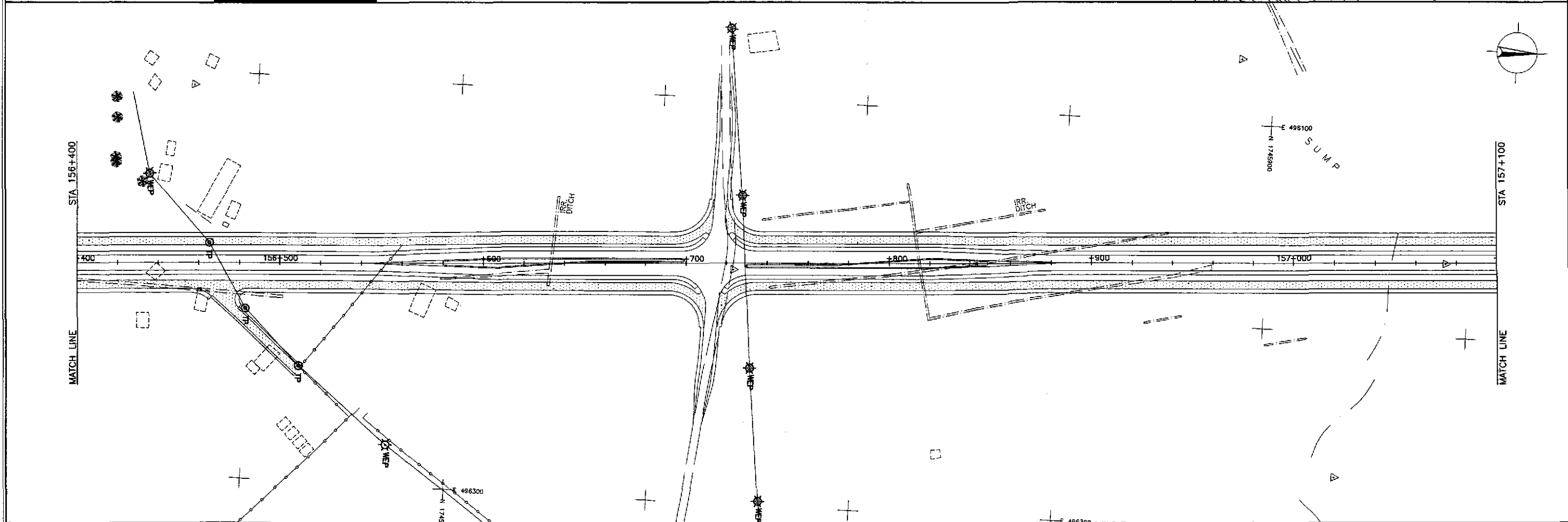
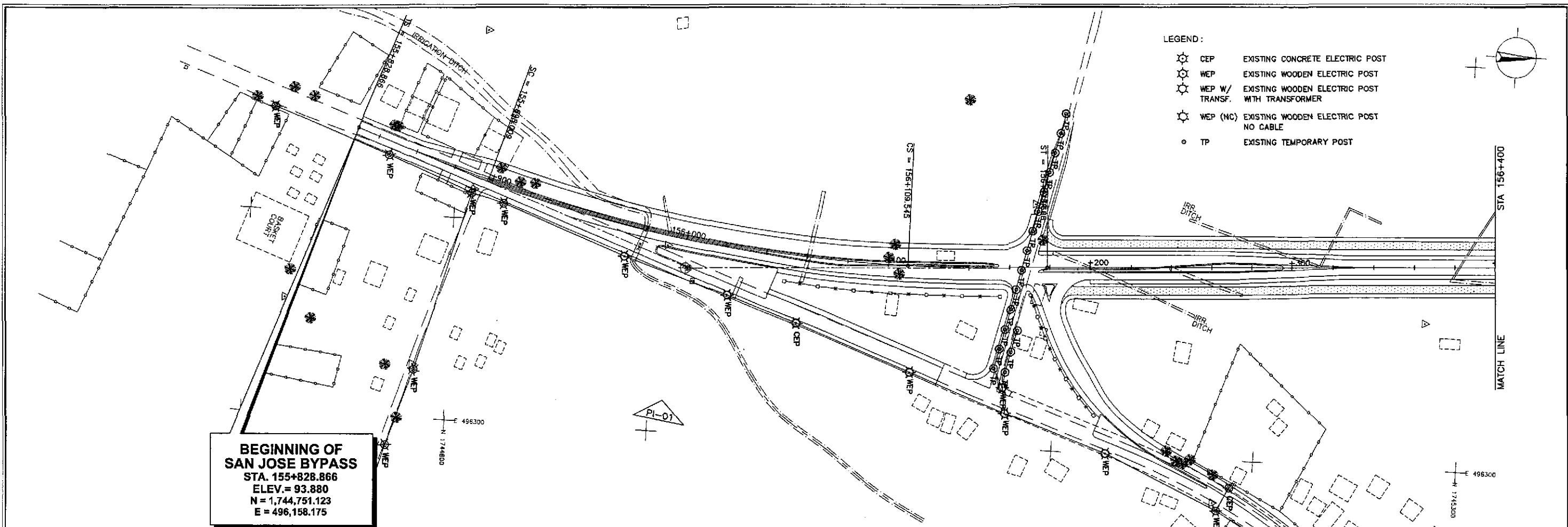


4 TYPICAL FOUNDATION DETAIL
 FX-01 SCALE 1:10

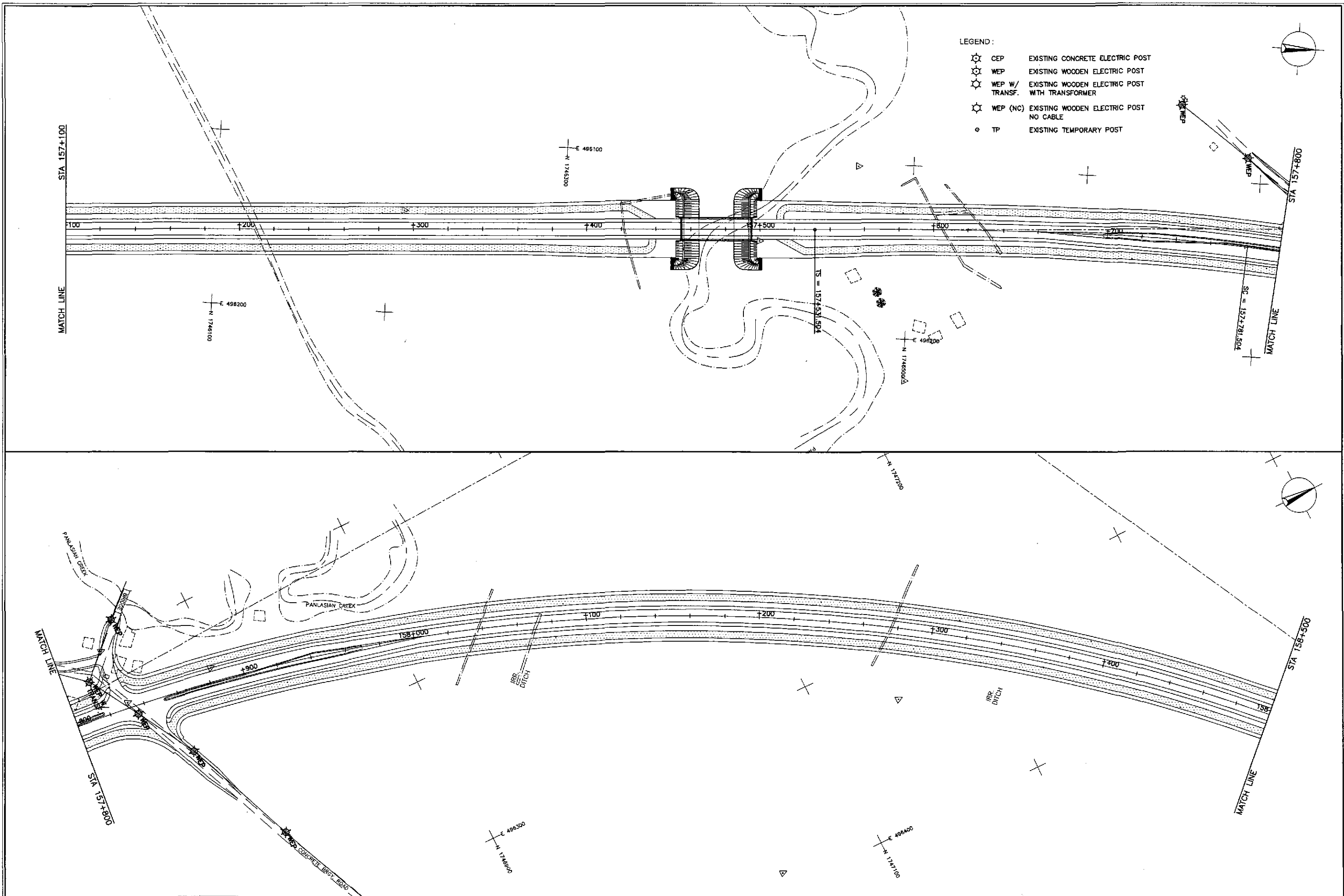
[Signature]
ARWEL P. GONZALES
 ENGINEER
 PTR. NO. 5846340 P.R.C. NO. 53457
 ISSUED ON 04/26/2002 T.I.N. 138-082-682
 ISSUED AT SAN JUAN, M.M.

	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	7/2/02	ARWEL P. GONZALES		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pilaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS			AS SHOWN	ENGINEER'S FIELD OFFICE AND LIVING QUARTERS PLOT PLAN, ELEVATION OF FENCE & GATE TYPICAL FOUNDATION DETAILS	FX-01
	SUBMITTED	9/6/02	ARWEL P. GONZALES TEAM LEADER		Submitted By: DANILLO C. TRAJANO Project Director Reviewed By: EMMANUEL P. CUNTAPAY Chief, Architectural Division Recommended By: GILBERTO S. REYES CIC, Director IV Recommended By: MANUEL M. BONDAN Undersecretary Approved By: SIMEDON A. DATUMANONG Secretary	FULL SIZE A1				

OTHERS

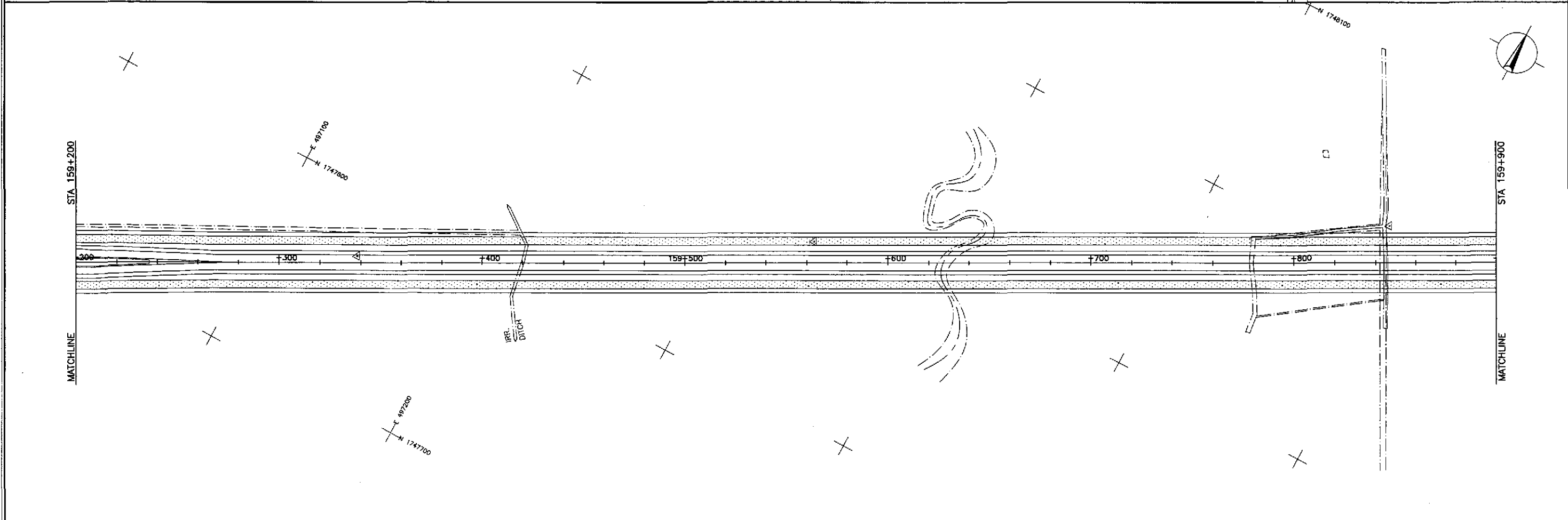
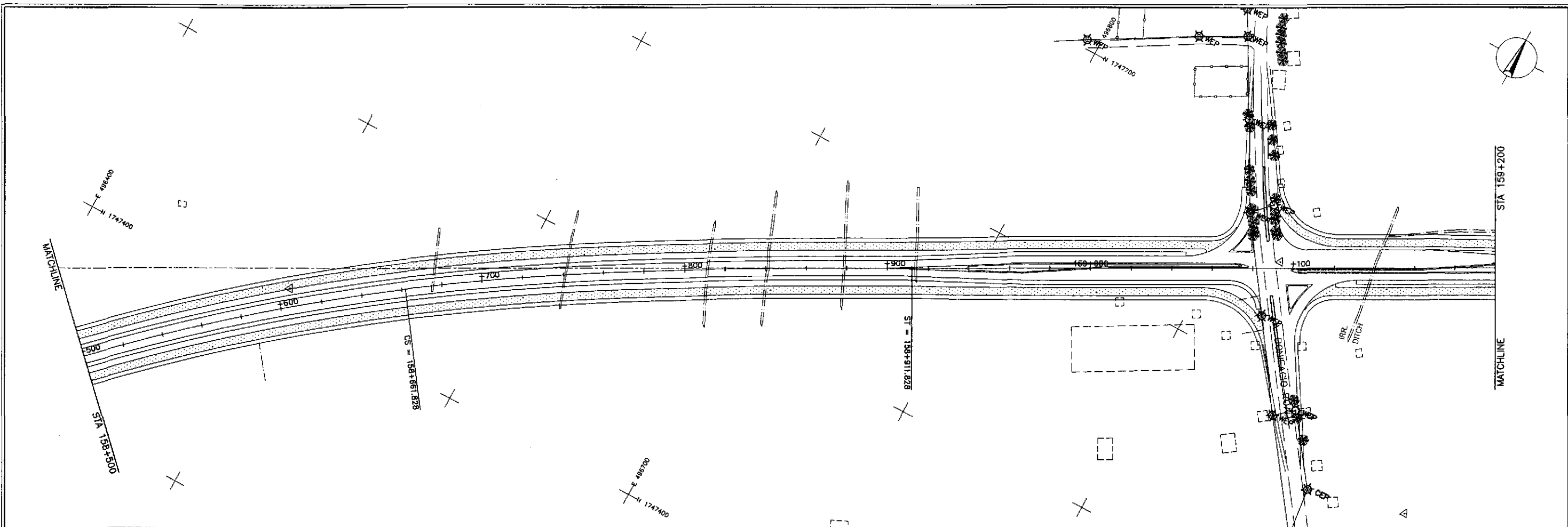


	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : UTILITY RELOCATION REFERENCE LAYOUT PLAN ALONG BYPASS STA. 155+828.866 - STA. 157+100.00	SHEET NO. : OE-01
	CHECKED	9/4/02	S. JOSE	BUREAU OF DESIGN OFFICE OF THE SECRETARY							
	SUBMITTED	9/6/02	M. K. K.	Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES OIC, Director IV	Recommended By: (See cover sheet for Signature) MANUEL M. BONGAN Undersecretary				

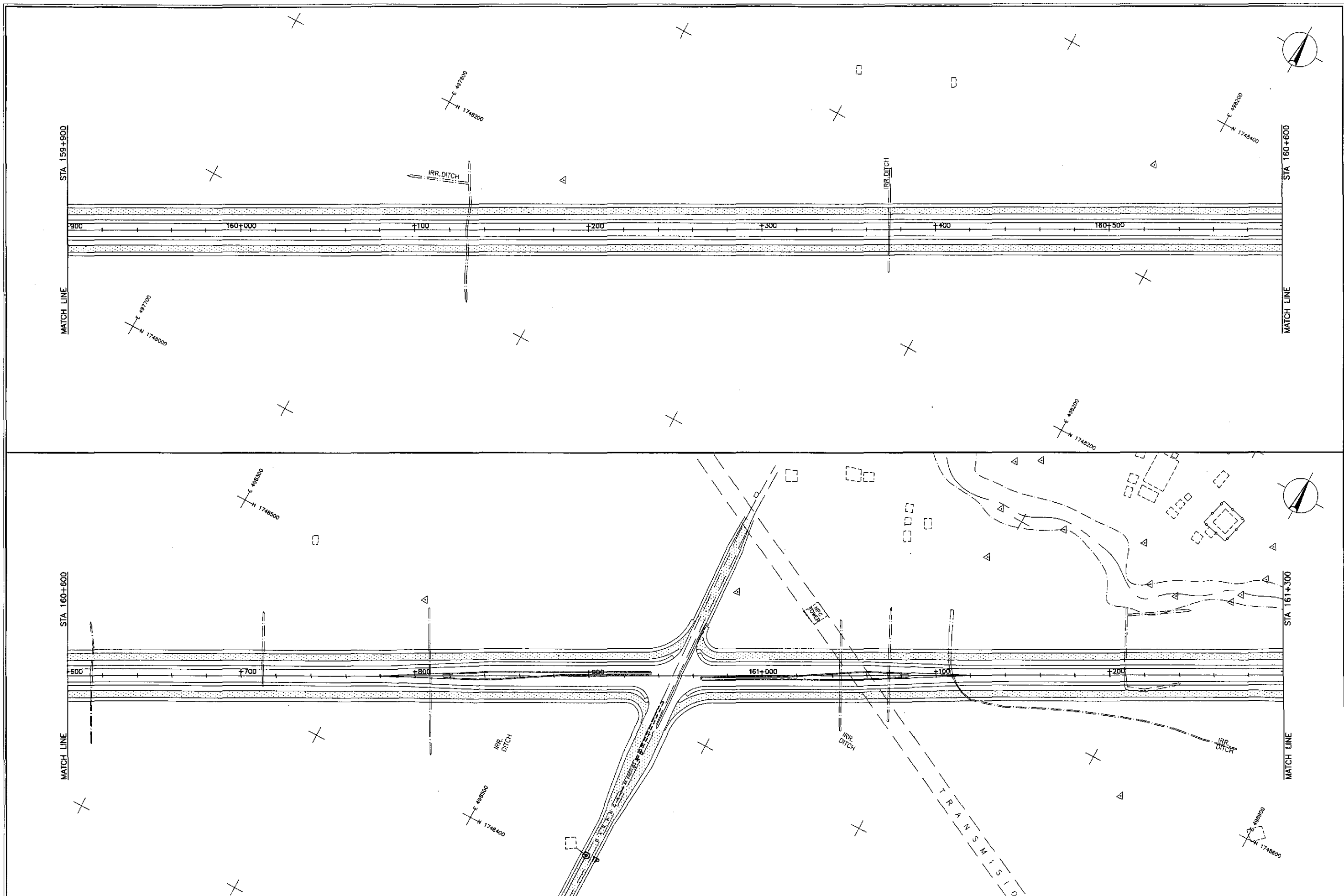


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 - ⊗ WEP EXISTING WOODEN ELECTRIC POST
 - ⊗ WEP W/ TRANSF. WITH TRANSFORMER
 - ⊗ WEP (NC) EXISTING WOODEN ELECTRIC POST NO CABLE
 - TP EXISTING TEMPORARY POST

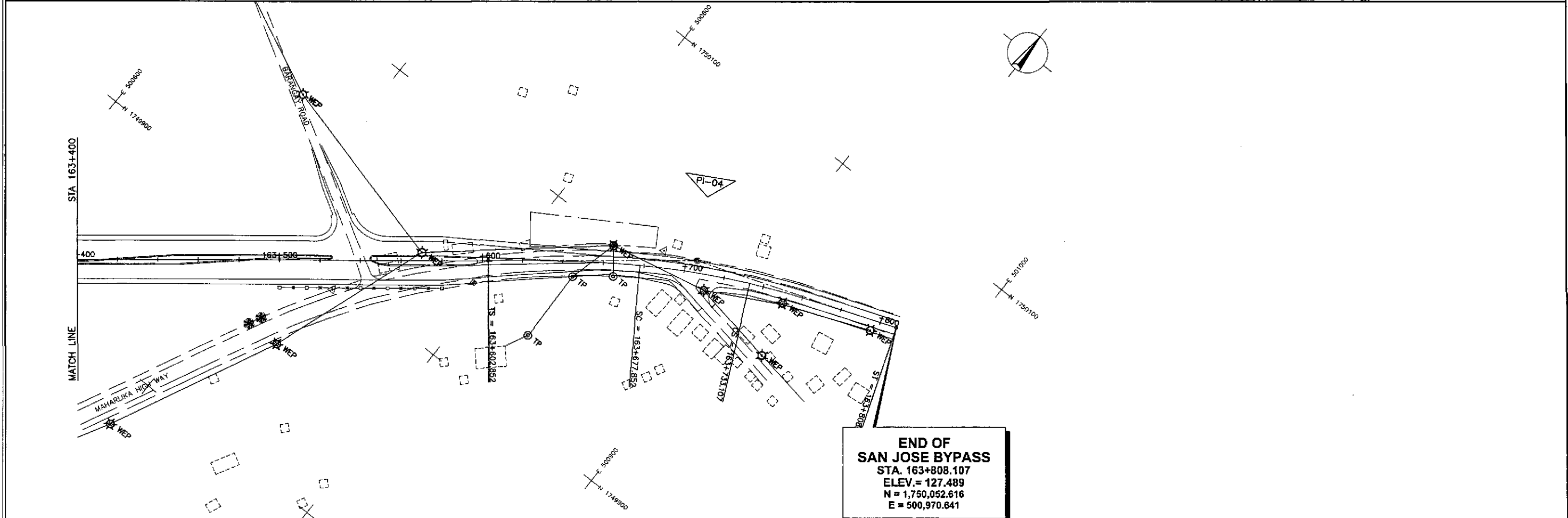
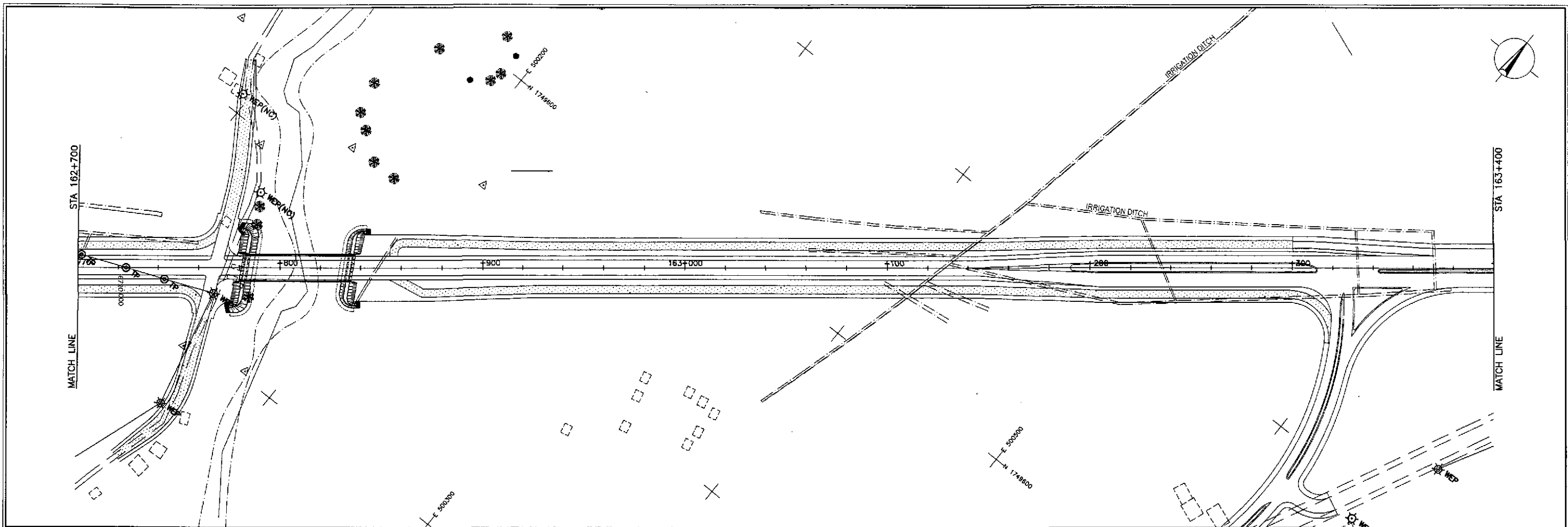
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	CHECKED	9/4/02	<i>[Signature]</i> ROSE	BUREAU OF DESIGN OFFICE OF THE SECRETARY								
	SUBMITTED	9/6/02	<i>[Signature]</i> TEAM LEADER	Submitted By:	Reviewed By:	Recommended By:					Recommended By:	Approved By:
				DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV					MANUEL M. BONGAN Undersecretary	SIMEON A. DATUMANONG Secretary



	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : UTILITY RELOCATION REFERENCE LAYOUT PLAN ALONG BYPASS STA. 158+500.00 - STA. 159+900.00	SHEET NO. : OE-03		
	CHECKED	9/4/02	S. ROSE	Submitted By:	Reviewed By:	Recommended By:						
	SUBMITTED	9/6/02	Mr. [Signature]	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES DIC, Director IV					MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary
				BUREAU OF DESIGN OFFICE OF THE SECRETARY								

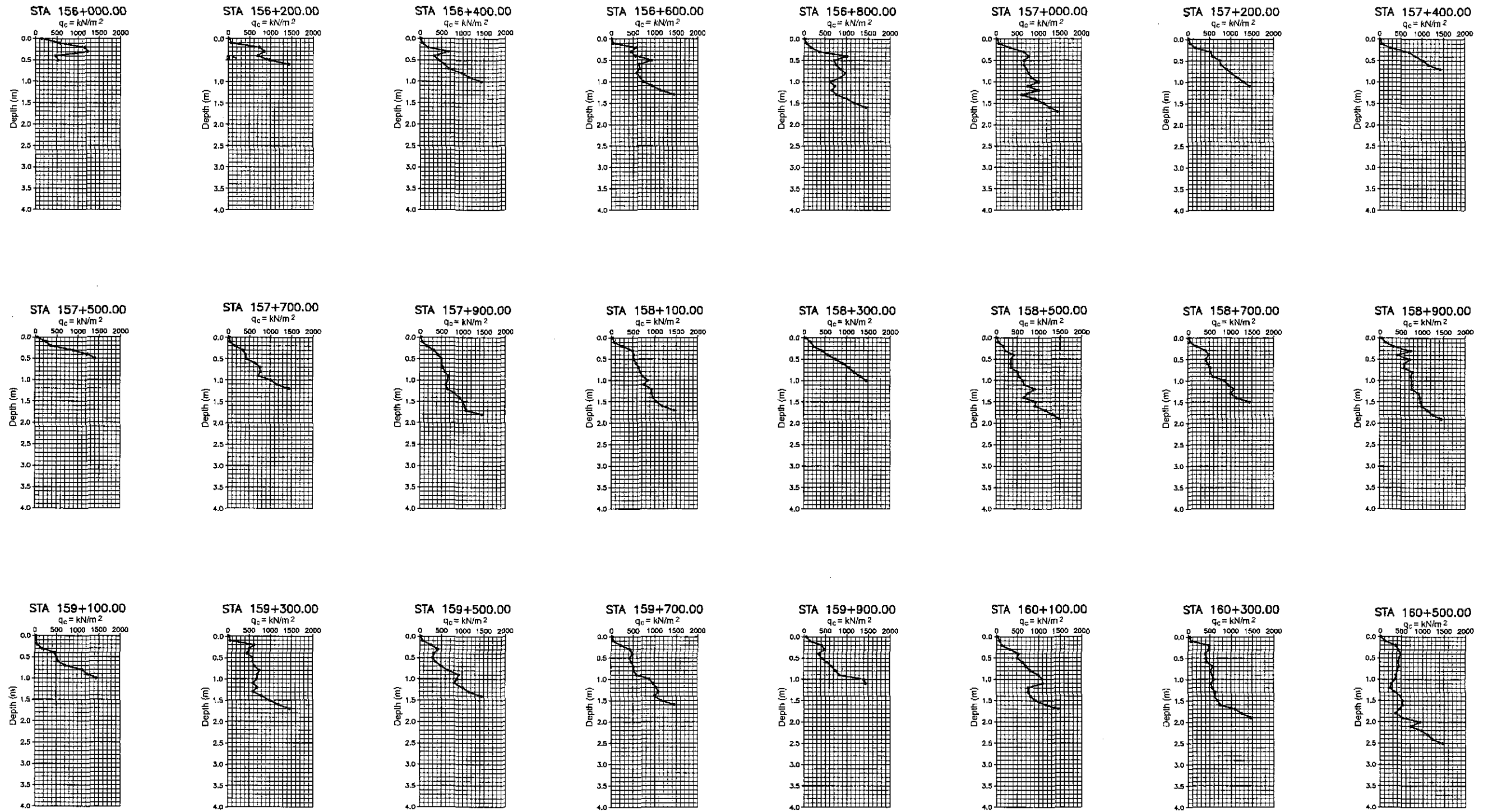


	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Piaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : UTILITY RELOCATION REFERENCE LAYOUT PLAN ALONG BYPASS STA. 159+900.00 - STA. 1161+300.00	SHEET NO. : OE-04
	CHECKED	9/14/02	S. ROSE	Submitted By:	Reviewed By:	Recommended By:	Office of the Secretary				
	SUBMITTED	9/16/02	Mr. K. K. K.	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary				



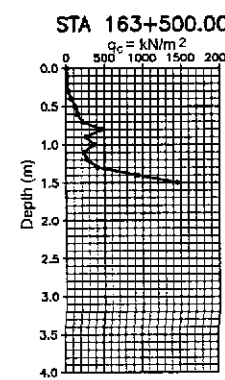
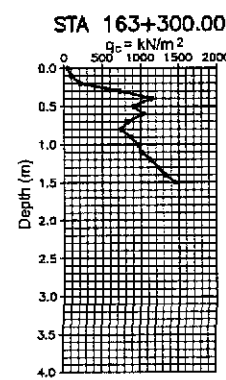
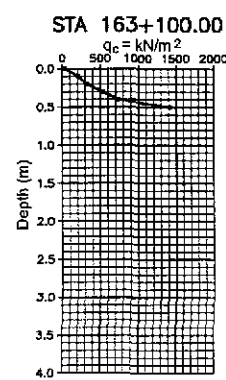
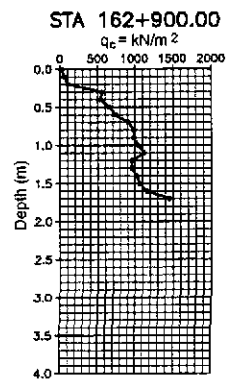
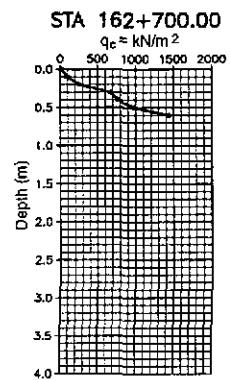
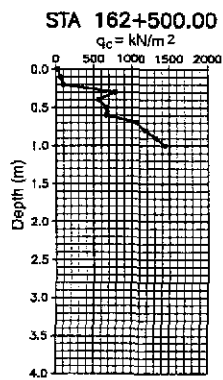
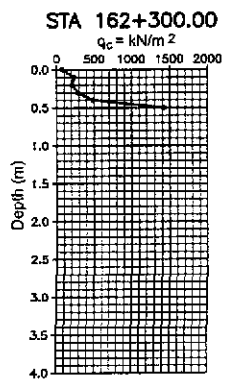
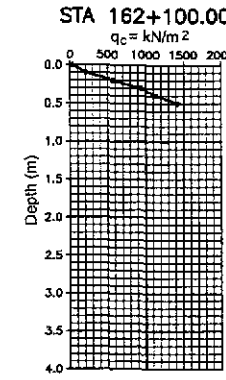
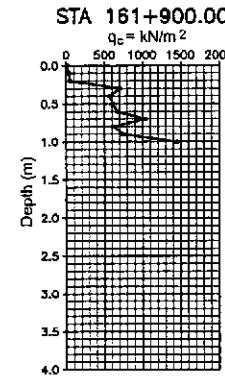
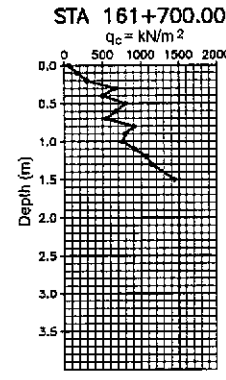
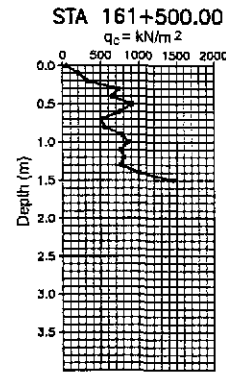
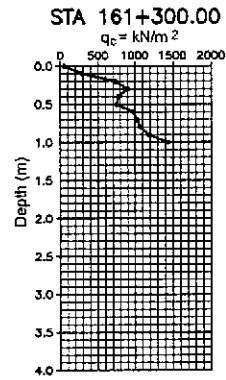
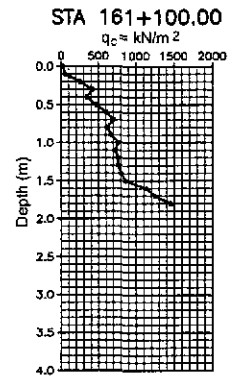
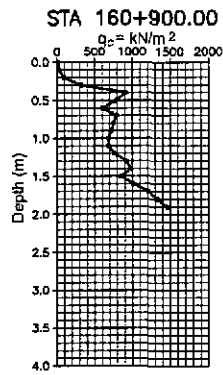
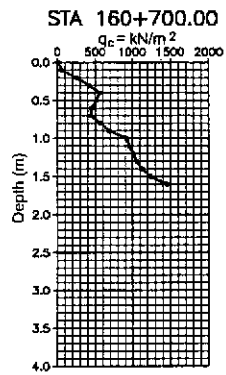
**END OF
SAN JOSE BYPASS**
 STA. 163+808.107
 ELEV. = 127.489
 N = 1,750,052.616
 E = 500,970.641

 JAPAN INTERNATIONAL COOPERATION AGENCY		 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS					PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS		SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : UTILITY RELOCATION REFERENCE LAYOUT PLAN ALONG BYPASS STA. 162+700.00 - STA. 163+808.107	SHEET NO. : OE-06
DESIGNED 9/2/02 ACACIO	DATE 9/2/02	SIGNATURE 	P.H.I. - PMD Submitted By:	BUREAU OF DESIGN Reviewed By:	OFFICE OF THE SECRETARY Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)				
CHECKED 9/9/02 ROSE	DATE 9/9/02	SIGNATURE 	DANILLO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary				
SUBMITTED 9/6/02	DATE 9/6/02	SIGNATURE 									



1
 GEOTECHNICAL SURVEY - PORTABLE CONE PENETRATION TEST (CPT)
 TO
SCALE

 JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL YACHIYO ENGINEERING CO., LTD.	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :	
	CHECKED	9/14/02	<i>[Signature]</i>		BUREAU OF DESIGN	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	NOT TO SCALE	PORTABLE CONE PENETRATION TEST (CPT) PROFILE ALONG BYPASS STA. 156+000.00 - STA 160+500.00	OC-01
	SUBMITTED	9/6/02	<i>[Signature]</i>		OFFICE OF THE SECRETARY	SAN JOSE BYPASS	FULL SIZE A1		
			PUHL - PMD Submitted By:	Chief, Highways Division Reviewed By:	Recommended By:	Approved By:			
			DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONOAN Undersecretary	SIMEON A. DATUMANONG Secretary		



2
 OC-02

GEOTECHNICAL SURVEY - PORTABLE CONE PENETRATION TEST (CPT)

NOT TO SCALE

JICA
 JAPAN INTERNATIONAL COOPERATION AGENCY
 KATAHIRA & ENGINEERS INTERNATIONAL
 YEO YACHIYO ENGINEERING CO., LTD.

DATE	SIGNATURE
DESIGNED 9/2/02	<i>S. Gose</i>
CHECKED 9/4/02	<i>S. Gose</i>
SUBMITTED 9/6/02	<i>M. Kuroda</i>

BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By: DANILO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALACAR Chief, Highways Division	Recommended By: GILBERTO S. REYES DIC, Director IV	Approved By: MANUEL M. BONDAN Undersecretary

PROJECT AND LOCATION :
 THE DETAILED DESIGN STUDY ON
 UPGRADING INTER-URBAN HIGHWAY SYSTEM
 ALONG THE PAN-PHILIPPINE HIGHWAY
 (Plaridel, Cabanatuan and San Jose Bypasses)
 SAN JOSE BYPASS

SCALE :
 NOT TO SCALE
 FULL SIZE A1

SHEET CONTENTS :
 PORTABLE CONE PENETRATION
 TEST (CPT) PROFILE
 ALONG BYPASS
 STA. 160+700.00 - STA 163+500.00

SHEET NO. :
 OC-02