







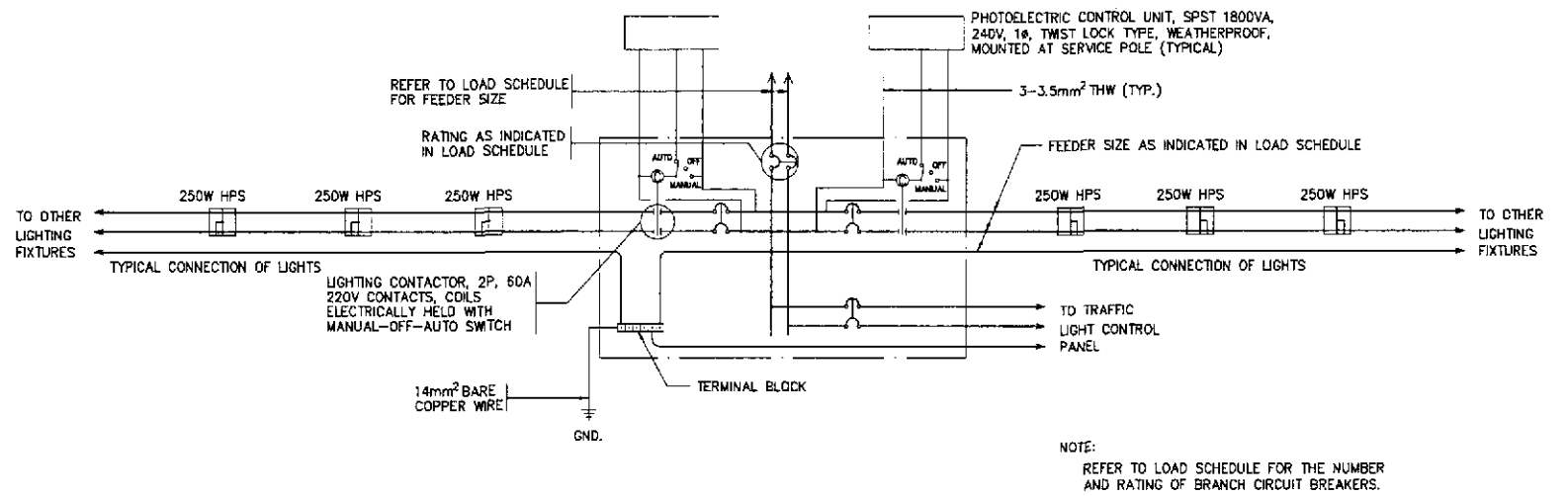


ELECTRICAL

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 III MEDIUM SEMI CUT-OFF, SIMILAR TO GE M250A2
-  -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



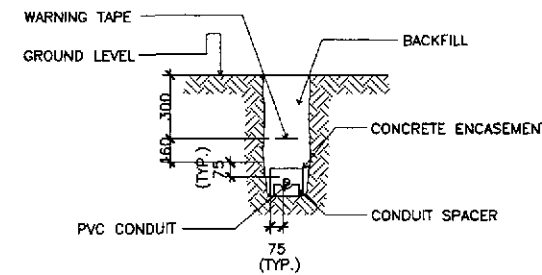
2 SCHEMATIC CONTROL DIAGRAM
ES-01 SCALE 1-20

GENERAL NOTES:

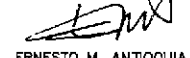
1. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODE, ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER COMPANY. THE ELECTRICAL WORK SHALL BE DONE UNDER THE DIRECT SUPERVISION 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 ENGINEERS FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETED WORK.
3. THE POWER SERVICE VOLTAGE SHALL BE 240V, 1Ø, 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 POLYTHELENE 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 RAINIGHT, 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 18) 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.

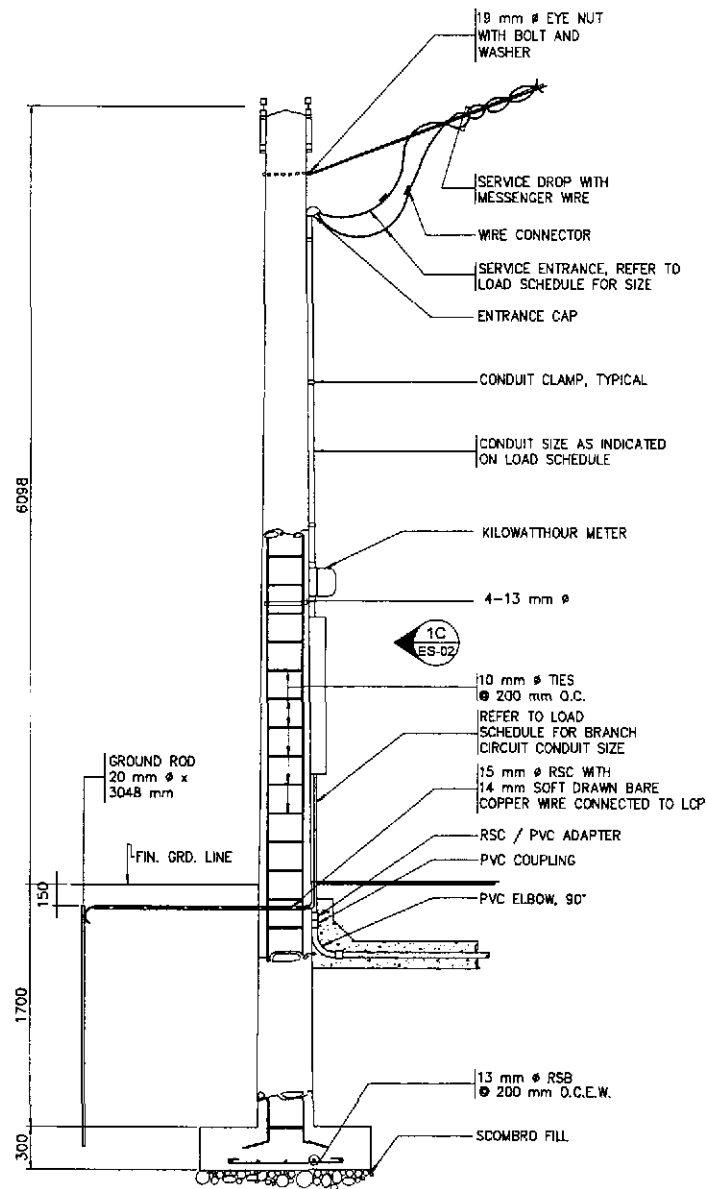


2 TYPICAL DUCT SECTION
ES-01 NOT TO SCALE

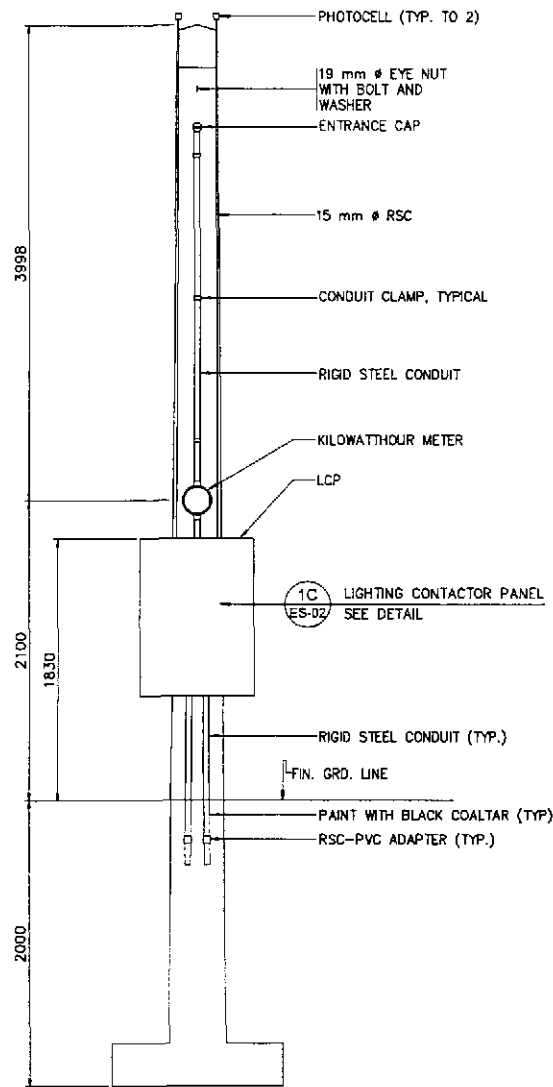

ERNESTO M. ANTIOQUIA
ENGINEER

PR. NO. 7403864 P.E.E. NO. 2813
ISSUED ON 01/03/2002 ISSUED AT CAGAYAN DE ORO
T.L.N. 109-382-379

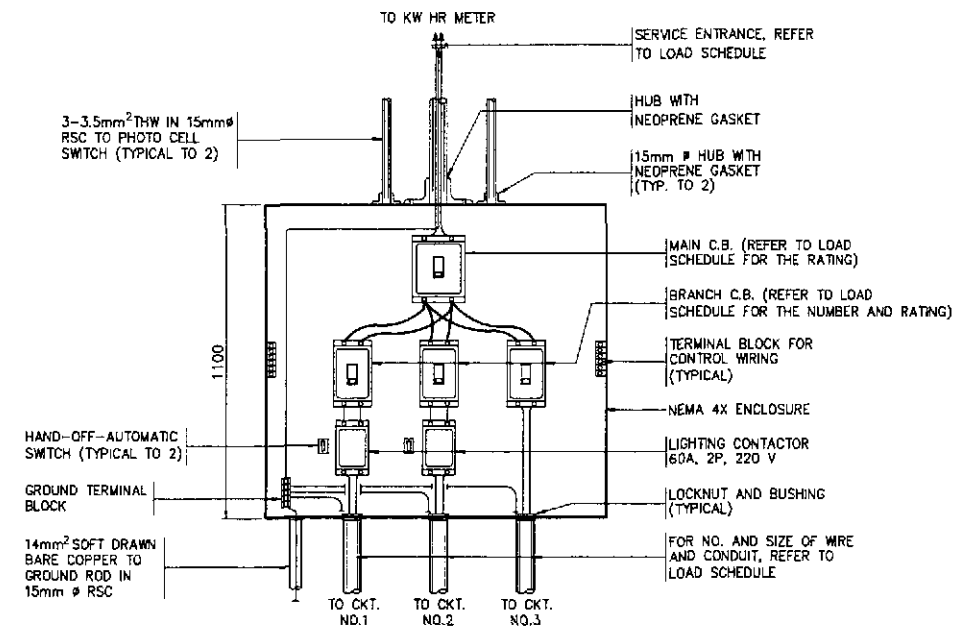
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	CHECKED	9/18/02			BUREAU OF DESIGN	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)			AS SHOWN	NOTES & LEGENDS, SCHEMATIC CONTROL DIAG. & DUCT SECTION ALL INTERSECTIONS (INITIAL STAGE)	ES-01
	SUBMITTED	9/18/02			OFFICE OF THE SECRETARY	PLARIDEL BYPASS - CONTRACT PACKAGE II			FULL SIZE A1		
Submitted By: DANILO C. TRAJANO, Project Director Reviewed By: FE M. BARRIENTOS, Chief, Mechanical-Elect. Div. Recommended By: GILBERTO S. REYES, OIC, Director IV Recommended By: MANUEL M. BONDAN, Undersecretary Approved By: SIMEON A. DATUMANONG, Secretary											



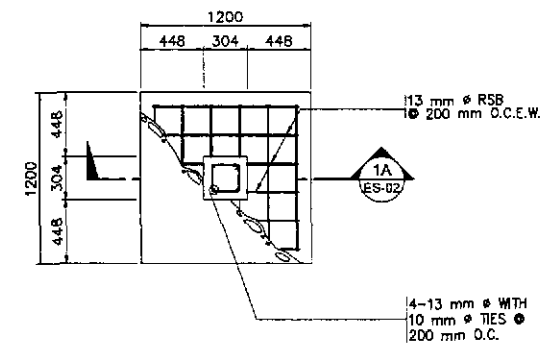
1A SECTION
ES-02



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

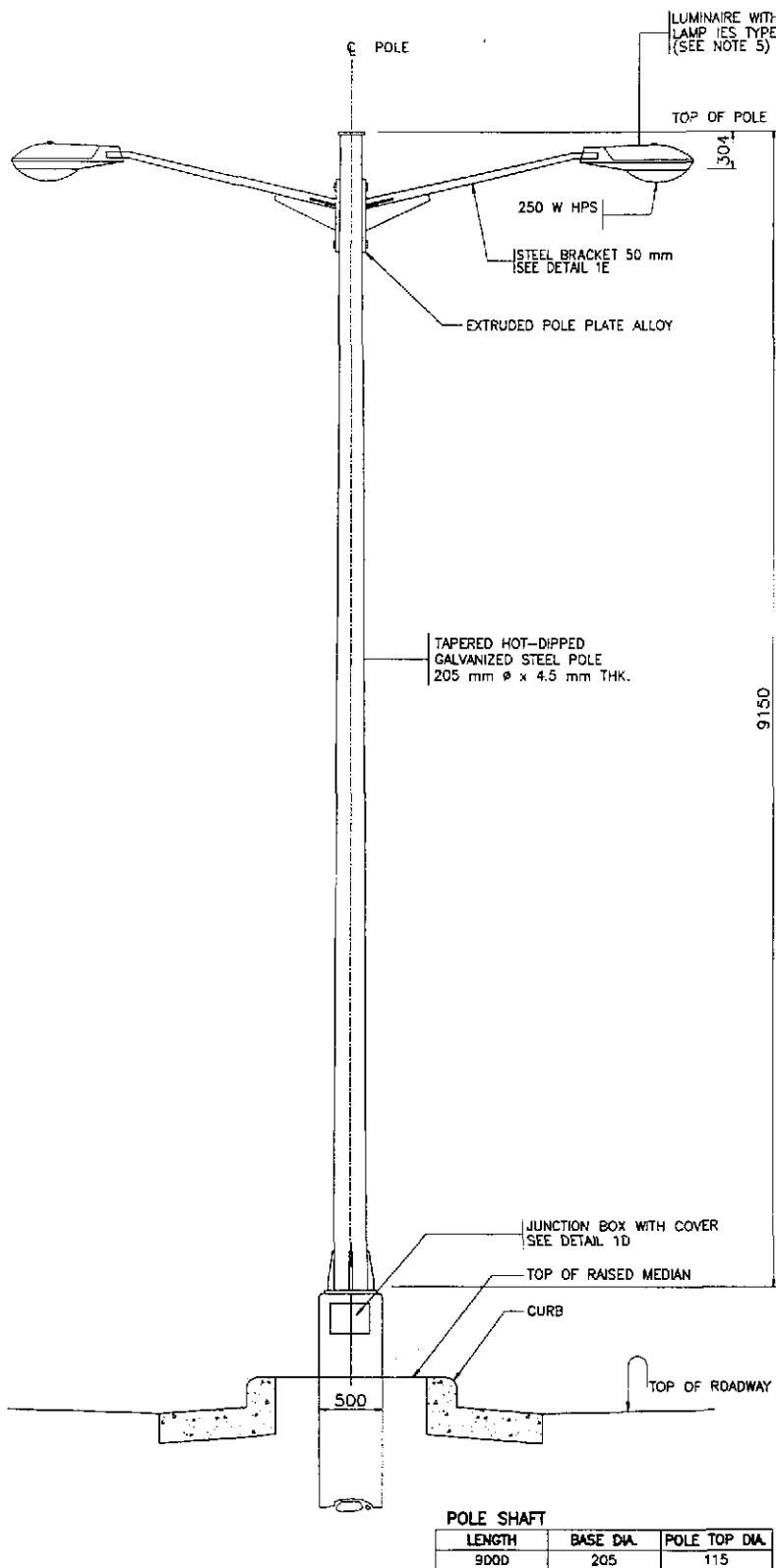
ERNESTO M. ANTIOQUIA
ENGINEER

PIR. NO. 7403864 P.E.E. NO. 5915

ISSUED ON 01/02/2002 ISSUED AT CAGAYAN DE ORO

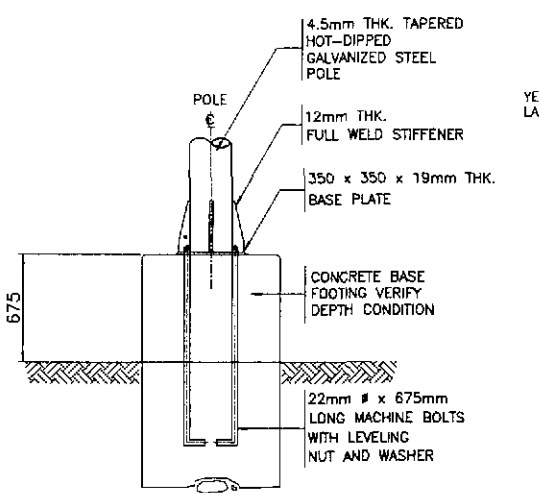
T.M. 100-382-372

<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p> <p>KATAHIRA & ENGINEERS INTERNATIONAL</p> <p>YEO YACHIYO ENGINEERING CO., LTD.</p>	<p>DATE: 9/18/02</p> <p>CHECKED: 9/20/02</p> <p>SUBMITTED: 9/23/02</p>	<p>SIGNATURE: [Signature]</p> <p>SIGNATURE: [Signature]</p> <p>SIGNATURE: [Signature]</p>	<p>REPUBLIC OF THE PHILIPPINES</p> <p>DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p> <p>BUREAU OF DESIGN</p> <p>OFFICE OF THE SECRETARY</p>	<p>PROJECT AND LOCATION :</p> <p>THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)</p> <p>PLARIDEL BYPASS - CONTRACT PACKAGE II</p>	<p>SCALE :</p> <p>AS SHOWN</p> <p>FULL SIZE A1</p>	<p>SHEET CONTENTS :</p> <p>SERVICE POLE DETAILS</p> <p>ALL INTERSECTIONS (INITIAL STAGE)</p>	<p>SHEET NO. :</p> <p>ES-02</p>
	<p>Submitted By: DANILDO C. TRAJANO Project Director</p> <p>Reviewed By: FE M. BARRIENTOS Chief, Mechanical-Elect. Div.</p> <p>Recommended By: GILBERTO S. REYES OIC, Director IV</p> <p>Recommended By: MANUEL M. BONGAN Undersecretary</p> <p>Approved By: SIMEON A. DATUMANONG Secretary</p>						

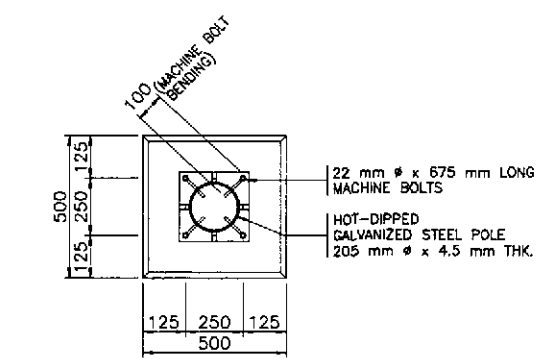


1A ELEVATION
ES-03

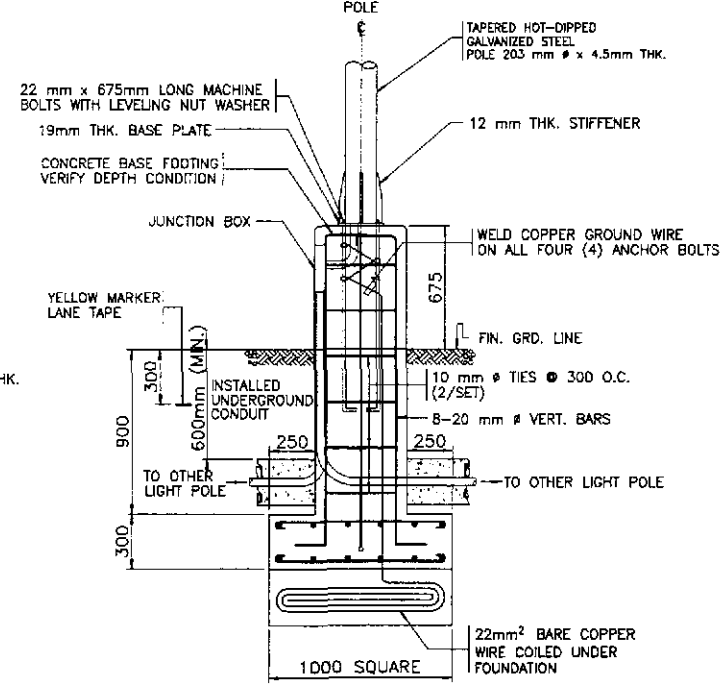
- NOTES:
1. CONCRETE MIXTURE SHOULD BE 211 kg/cm (3000 PSI)
 2. PAINT ALL JOINTS IN BOX AND CONDUIT WITH RED LEAD PRIMER BEFORE POURING CONCRETE.
 3. FOR CONDUIT LARGER THAN 40mm Ø, KNOCKOUTS AND HOLES SHALL HAVE TO BE WIDENED BY THE USER TO THE DESIRED DIAMETER.
 4. FOR LOAM AND MUDDY SOIL, REFER TO 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.



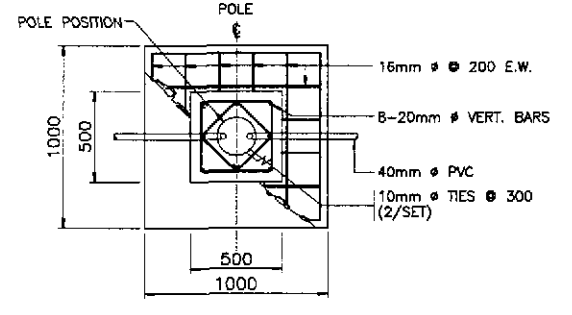
ELEVATION



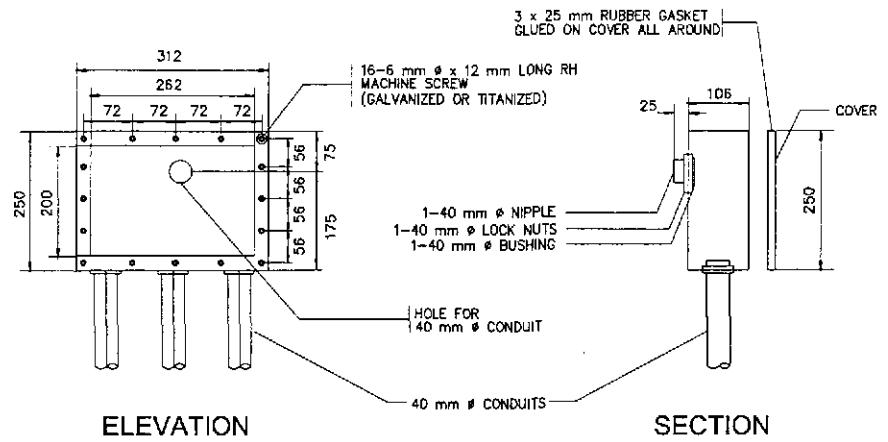
1B BASE PLATE DETAILS
ES-03



ELEVATION

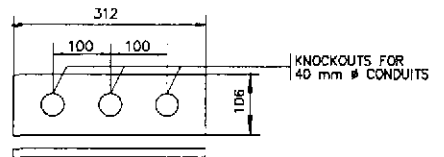


1C STANDARD FOOTING DETAILS
ES-03



ELEVATION

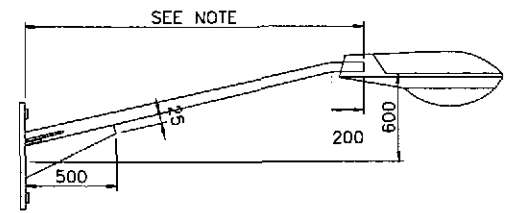
SECTION



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



- NOTE:
- ARM LENGTH SHALL BE 3000mm UNLESS OTHERWISE INDICATED IN THE PLAN.
- MATERIAL:
- MAST ARM - B.I. PIPE AS PER PNS 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

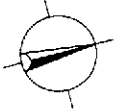
1E MAST ARM ELEVATION
ES-03

1 STREET LIGHT POLE DETAILS
ES-03 NOT TO SCALE

ERNESTO M. ANTIOQUIA
ENGINEER

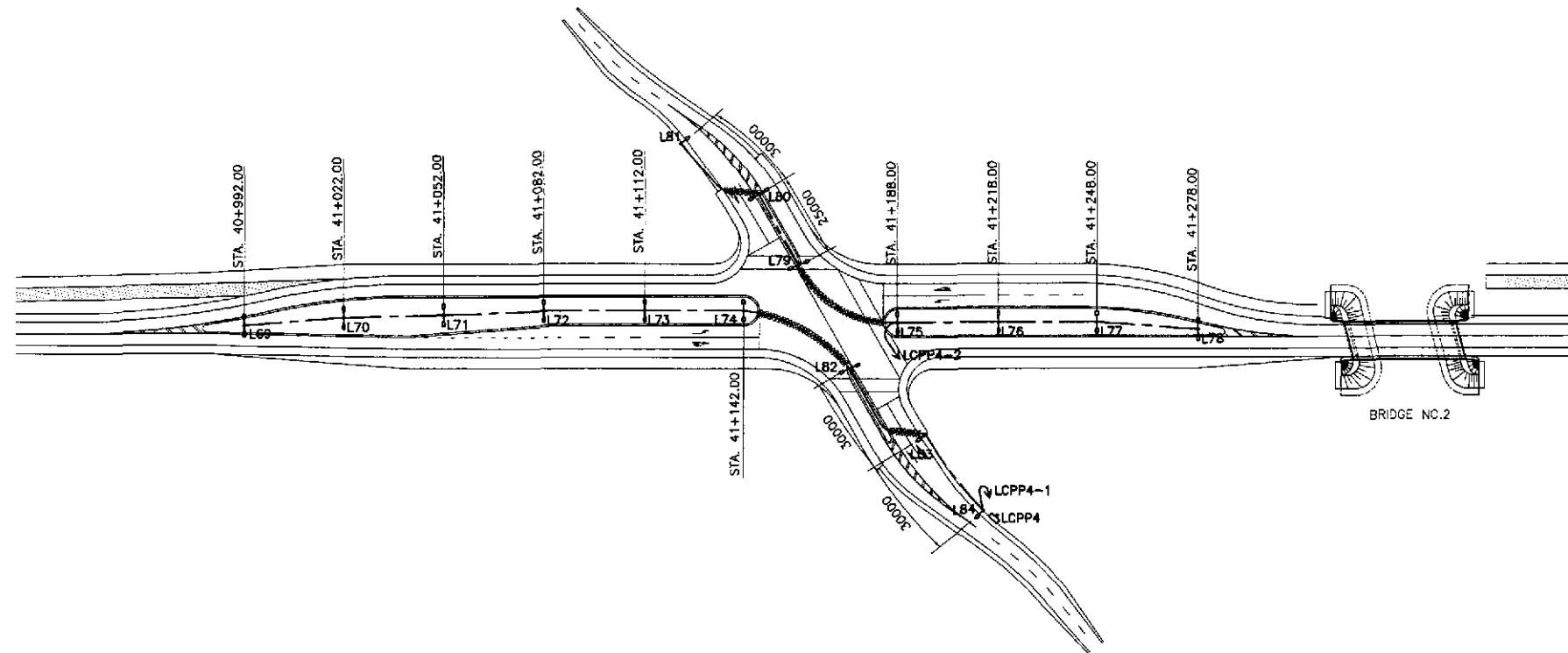
P.R. NO. 7403864 P.E.E. NO. 2915
ISSUED ON 01/02/2002 ISSUED AT CEBU, CEBU, CEBU
T.L.N. 100-382-379

	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)	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : STREET LIGHT POLE DETAILS ALL INTERSECTIONS (INITIAL STAGE)	SHEET NO. : ES-03
	CHECKED	9/20/02	E. M. ANTIOQUIA		Submitted By:	Reviewed By:	Recommended By:				
	SUBMITTED	9/23/02	MANUEL M. BONDAN	DANILO C. TRAJANO	FE M. BARRIENTOS	GILBERTO S. REYES	MANUEL M. BONDAN	SIMEON A. DATUMANONG			
			TEAM LEADER	Project Director	Chief, Mechanical-Elect' Div.	Dir., Director IV	Undersecretary	Secretary			



NOTE:

- 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.



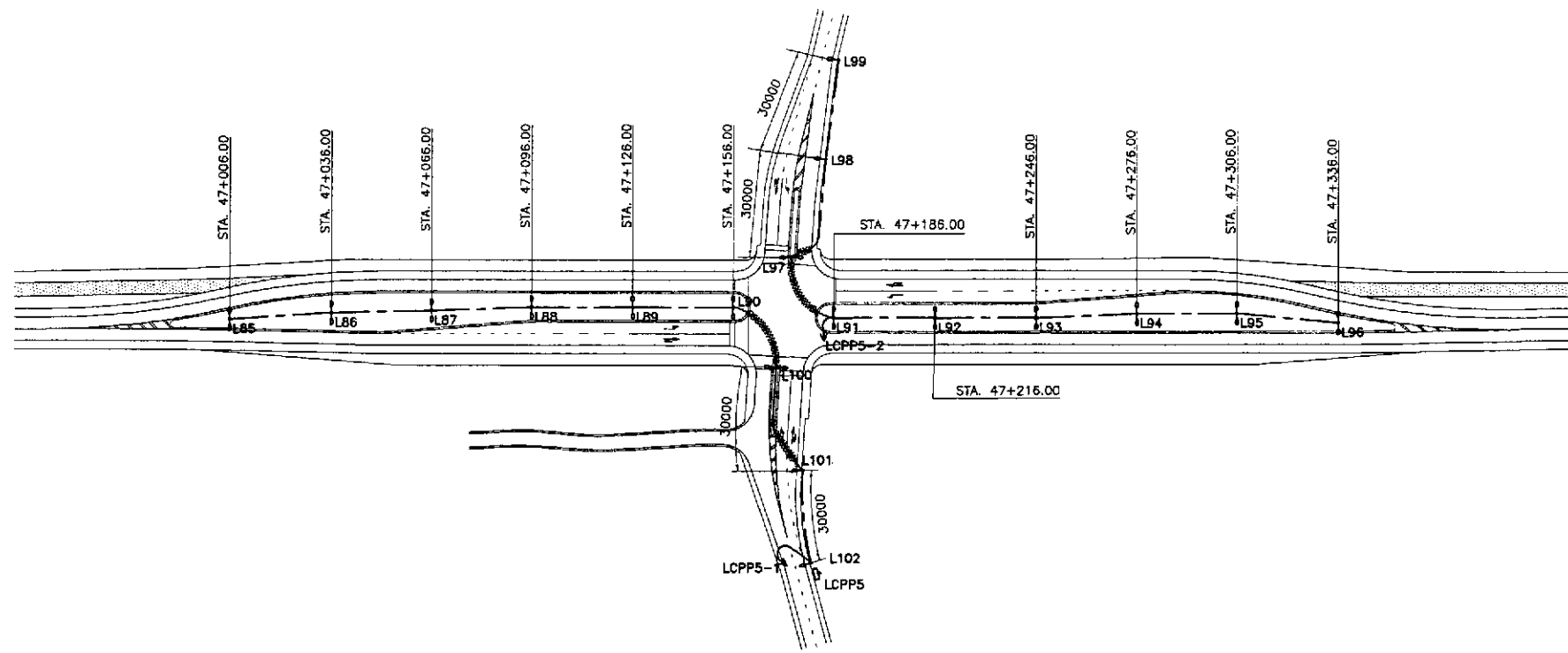
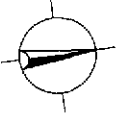
LOAD SCHEDULE

CKT. NO.	LOAD DESCRIPTION	VOLTS	CONNECTED LOAD		NO. & SIZE OF WIRES & CONDUIT	PROTECTION		
			(VA)	AMPERE		AT	AF	P
1	L84 (1 x 250 W HPS)	220	310	1.41	SEE NOTE 1			
	L83 (1 x 250 W HPS)	220	310	1.41	SEE NOTE 1			
	L82 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L74 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L73 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L72 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L71 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L70 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L69 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	SUB-TOTAL		4960	22.56	2-30 mm² THW & 1-8.0 mm² TW(G) IN 40 mm^ø CONDUIT	30	100	2
2	L75 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L79 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L80 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L81 (1 x 250 W HPS)	220	310	1.41	SEE NOTE 1			
	L76 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L77 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L78 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
		SUB-TOTAL		4030	18.33	2-30 mm² THW & 1-8.0 mm² TW(G) IN 40 mm^ø CONDUIT	30	100
3	TRAFFIC LIGHTS	220	3450	15	WIRES AND CONDUIT (BY OTHERS)	30	100	2
	TOTAL		12440	55.89	2-38 mm² THW IN 40 mm^ø CONDUIT	70	100	2

1 ROADWAY LIGHTING PLAN
 EI-01 SCALE 1:1000

EM
ERNESTO M. ANTOQUILA
 ENGINEER
 PTR. NO. 7403884 P.C.E. NO. 2813
 ISSUED ON: 09/02/2007 ISSUED AT: CARMAG, LAZUNA
 T.L.N. 139-382-376

	DESIGNED	9/18/07	<i>EM</i>		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS					PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/20/07	<i>EM</i>		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 AND LOAD SCHEDULE INTERSECTION A-9 (INITIAL STAGE)	EI-01
	SUBMITTED	9/23/07	<i>EM</i>		Submitted By: DANILO C. TRAJAND Project Director	Reviewed By: FE M. BARRIENTOS Chief, Mechanical-Elect. Div.	Recommended By: GILBERTO S. REYES OIC, Director IV	Recommended By: MANUEL M. BONDAN Undersecretary	Approved By: SIMEON A. DATUMANONG Secretary				



1 ROADWAY LIGHTING PLAN
 SCALE 1:1000

LOAD SCHEDULE

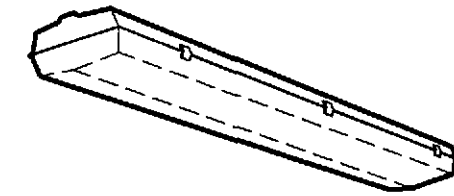
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			(VA)	AMPERE		AT	AF	P
1	L102 (1 x 250 W HPS)	220	310	1.41	SEE NOTE 1			
	L101 (1 x 250 W HPS)	220	310	1.41	SEE NOTE 1			
	L100 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L90 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L89 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L88 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L87 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L86 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L85 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	SUB-TOTAL			4960	22.56	2-30 mm ² THW & 1-8.0 mm ² TW(G) IN 40 mm ^ø CONDUIT	30	100
2	L91 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L97 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L98 (1 x 250 W HPS)	220	310	1.41	SEE NOTE 1			
	L99 (1 x 250 W HPS)	220	310	1.41	SEE NOTE 1			
	L92 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L93 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L94 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
	L95 (2 x 250 W HPS)	220	620	2.82	SEE NOTE 1			
SUB-TOTAL			4960	22.56	2-30 mm ² THW & 1-8.0 mm ² TW(G) IN 40 mm ^ø CONDUIT	30	100	2
3	TRAFFIC LIGHTS	220	3450	15	WIRES AND CONDUIT (BY OTHERS)	30	100	2
TOTAL			13370	60.12	2-38 mm ² THW IN 40 mm ^ø CONDUIT	80	100	2

NOTE:

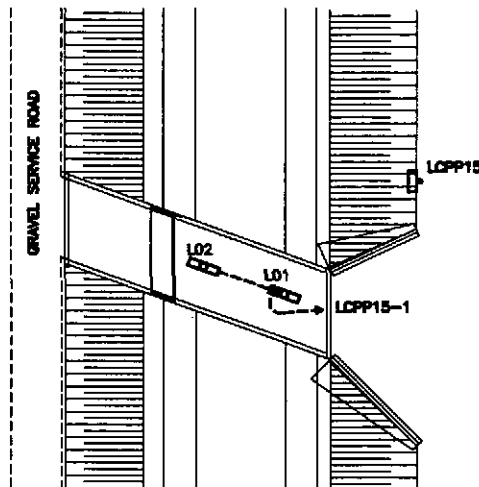
1. UNLESS OTHERWISE INDICATED, THE MINIMUM SIZE OF CIRCUIT CONDUCTORS FROM STEEL POLE JUNCTION BOX/HANDHOLE TO EACH LUMINAIRE SHALL BE 2-3.5mm² THW & 1-3.5mm² TW(G) INSIDE STEEL POLE.

ERNESTO M. ANTOQUIA
 DESIGNER
 PTR. NO. 7403664 P.E.C. NO. 2813
 ISSUED ON 9/20/02 ISSUED AT CARLOS LABANA
 T.L.N. 100-382-378

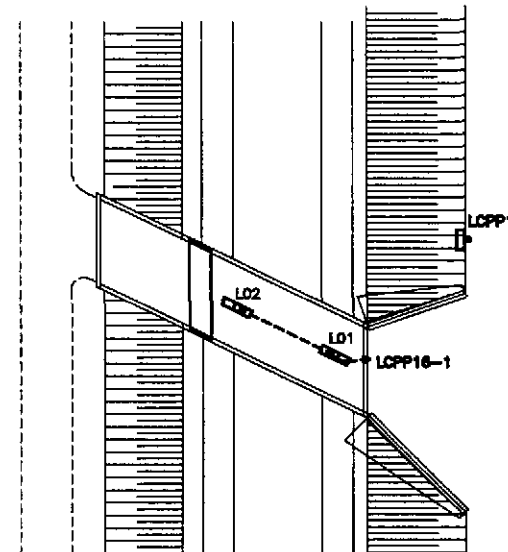
	DESIGNED	9/18/02			REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS					PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/20/02			BUREAU OF DESIGN		OFFICE OF THE SECRETARY			THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	1:1000	ROADWAY LIGHTING PLAN AND LOAD SCHEDULE INTERSECTION A-16 (INITIAL STAGE)	EI-02
	SUBMITTED	9/23/02			Submitted By:	Reviewed By:	Recommended By:	Approved By:	PLARIDEL BYPASS - CONTRACT PACKAGE II				



CEILING LUMINAIRE, SURFACE MOUNTED, IP56 (MINIMUM). HOUSING SHALL BE MADE FROM GLASS FIBRE REINFORCED POLYESTER RESIN. PATTERNED COVER SHALL BE MADE FROM POLYCARBONATE DIFFUSER. BALLAST SHALL BE UL LISTED, RAPID START HIGH POWER FACTOR TYPE.



1 LIGHTING LAYOUT
B-4 (STA. 41+625.000)
EI-03 NOT TO SCALE



2 LIGHTING LAYOUT
B-8 (STA. 45+274.068)
EI-03 NOT TO SCALE

□	220	1 x 40W FLUORESCENT	SURFACE
SYMBOL	VOLT	LAMP	MOUNTING

3 LIGHTING FIXTURE SCHEDULE
EI-03 NOT TO SCALE

LOAD SCHEDULE

CKT. NO.	LOAD DESCRIPTION	VOLTS	CONNECTED LOAD		NO. & SIZE OF WIRES & CONDUIT	PROTECTION		
			(VA)	AMPERE		AT	AF	P
1	L01 (1 x 40 W FLUORESCENT LAMP)	220	50	0.23				
	L02 (1 x 40 W FLUORESCENT LAMP)	220	50	0.23				
	L03 (1 x 40 W FLUORESCENT LAMP) - FUTURE	220	50	0.23				
	L04 (1 x 40 W FLUORESCENT LAMP) - FUTURE	220	50	0.23				
	SUB-TOTAL		200	0.92	2-5.5 mm ² THW & 1-3.5 mm ² TW(G) IN 20 mm ^ø CONDUIT			
	TOTAL		200	0.92	2-5.5 mm ² THW IN 20 mm ^ø CONDUIT	20	100	2

LOAD SCHEDULE

CKT. NO.	LOAD DESCRIPTION	VOLTS	CONNECTED LOAD		NO. & SIZE OF WIRES & CONDUIT	PROTECTION		
			(VA)	AMPERE		AT	AF	P
1	L01 (1 x 40 W FLUORESCENT LAMP)	220	50	0.23				
	L02 (1 x 40 W FLUORESCENT LAMP)	220	50	0.23				
	L03 (1 x 40 W FLUORESCENT LAMP) - FUTURE	220	50	0.23				
	L04 (1 x 40 W FLUORESCENT LAMP) - FUTURE	220	50	0.23				
	SUB-TOTAL		200	0.92	2-5.5 mm ² THW & 1-3.5 mm ² TW(G) IN 20 mm ^ø CONDUIT			
	TOTAL		200	0.92	2-5.5 mm ² THW IN 20 mm ^ø CONDUIT	20	100	2

Ernesto M. Antioquia
 ERNESTO M. ANTIOQUIA
 DRAWER
 PIR. NO. 7493891 FILE NO. 2813
 ISSUED ON 02/02/2002 ISSUED AT CEBU, CEBU
 TEL. 100-389-579

	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/20/02	<i>Ernesto M. Antioquia</i>		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)			NOT TO SCALE	LIGHTING LAYOUT, LOAD SCHEDULE & LIGHTING FIXTURE SCHEDULE BOX CULVERT B-4 & BOX CULVERT B-8 (INITIAL STAGE)	EI-03
	SUBMITTED	9/23/02	<i>Ernesto M. Antioquia</i>		PLARIDEL BYPASS - CONTRACT PACKAGE II			FULL SIZE A1		

ENGR'S FIELD OFFICE & LIVING QUARTERS

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CITY / DISTRICT / MUNICIPALITY

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FRONT & REAR ELEV.
LEFT & RIGHT SIDE ELEV.
LONGITUDINAL & CROSS SECT.
REFLECTED CEILING PLAN
- 03 ENGINEER'S LIVING QUARTERS
FLOOR PLAN
FRONT & REAR ELEV.
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- 04 ENGINEER'S FIELD OFFICE/LABORATORY
ROOF PLAN
DET. CROSS SECTION
SCHEDULE OF DOORS & WINDOWS
- 05 ENGINEER'S LIVING QUARTERS
ROOF PLAN
DET. CROSS SECTION
SCHEDULE OF DOORS & WINDOWS

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LINE and GRADE

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- 07 ENGINEER'S FIELD OFFICE/LABORATORY
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ELEV. OF STEEL STUD FRAMES
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- 09 ENGINEER'S FIELD OFFICE/LABORATORY
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- 10 ENGINEER'S LIVING QUARTERS
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ELECTRICAL :

- FE-01 ENGINEER'S FIELD OFFICE/LABORATORY
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ELECTRICAL

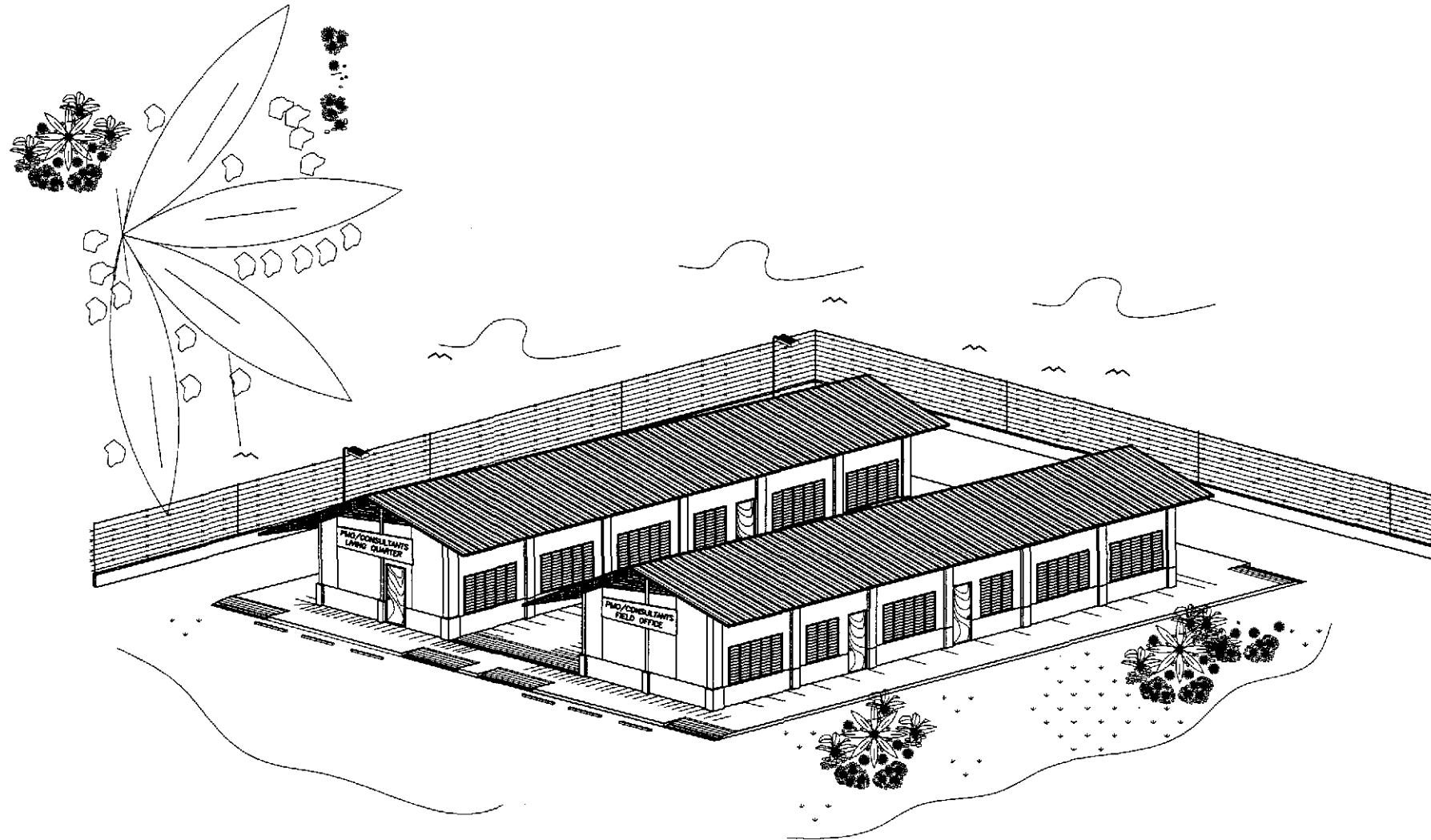
PLUMBING :

- FP-01 SEWER AND WATER LINE LAYOUT
ISOMETRIC DIAGRAM
- 02 SEPTIC TANK DETAILS

MECHANICAL

EXTERNAL :

- FX-01 PLOT PLAN
ELEV - FENCE & GATE
FOUNDATION DETAIL



P E R S P E C T I V E

GENERAL NOTES :

IT IS THE INTENTION OF THE DPMH THAT AFTER COMPLETION OF THE PROJECTS ALL PRE-FABRICATED METAL FIELD OFFICES WITH LABORATORY 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.

Arnel M. Gonzales
ARNEL M. GONZALES
ENGINEER

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

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

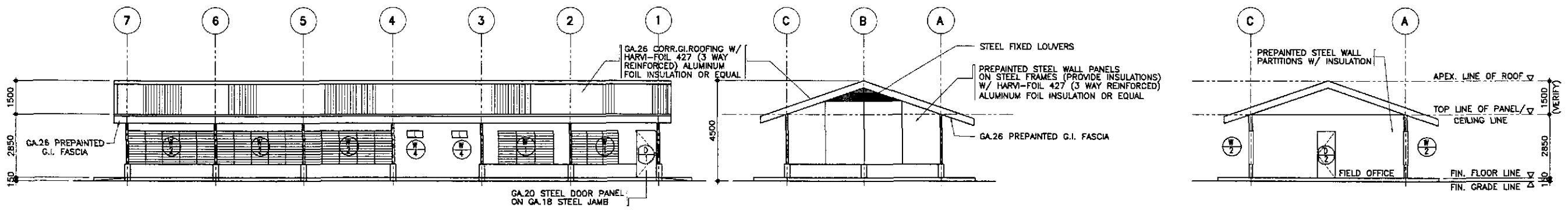
DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			
DESIGNED 9/10/01	<i>A. P. Gonzales</i>	OFFICE OF THE SECRETARY			
CHECKED 9/20/01	<i>A. P. Gonzales</i>	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
SUBMITTED 9/26/01	<i>A. P. Gonzales</i>	Submitted By:	Reviewed By:	Recommended By:	Approved By:
	TEAM LEADER	DANILO C. TRAJANO Project Director	EMMANUEL P. CUNTAPAY Chief, Architectural Division	GILBERTO S. REYES DIC, Director IV	MANUEL M. BONGUAN 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)
PLARIDEL BYPASS - CONTRACT PACKAGE II

SCALE :
NOT TO SCALE
FULL SIZE A1

SHEET CONTENTS :
ENGINEER'S FIELD OFFICE
AND LIVING QUARTERS
PERSPECTIVE AND
TABLE OF CONTENTS

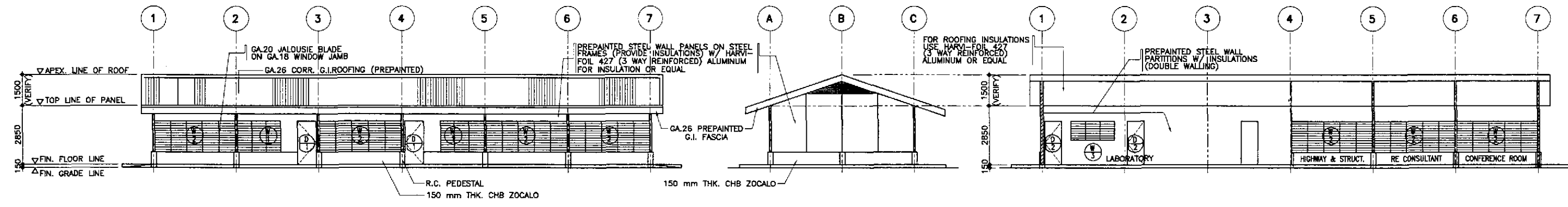
SHEET NO. :
FA-01



3 REAR ELEVATION
FA-02 SCALE 1:100

5 LEFT SIDE ELEVATION
FA-02 SCALE 1:100

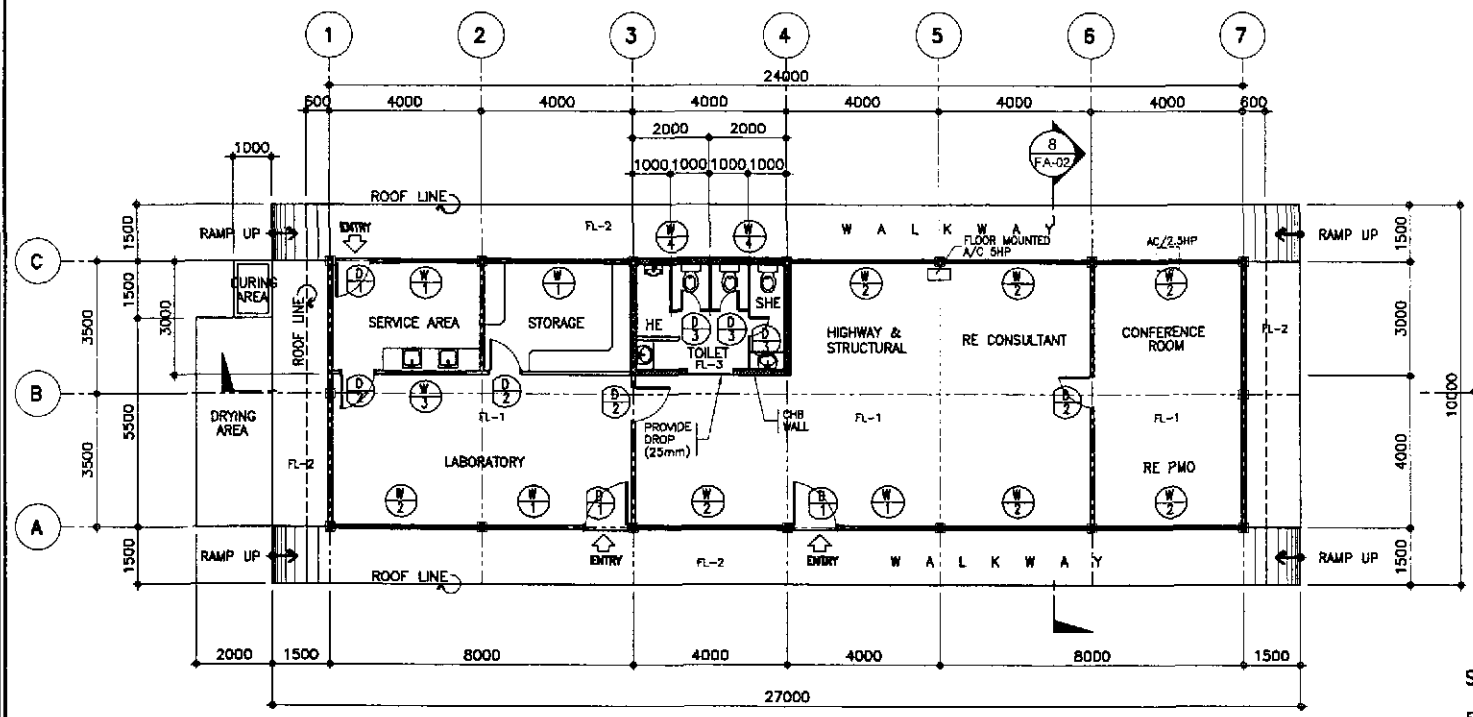
8 CROSS SECTION
FA-02 SCALE 1:100



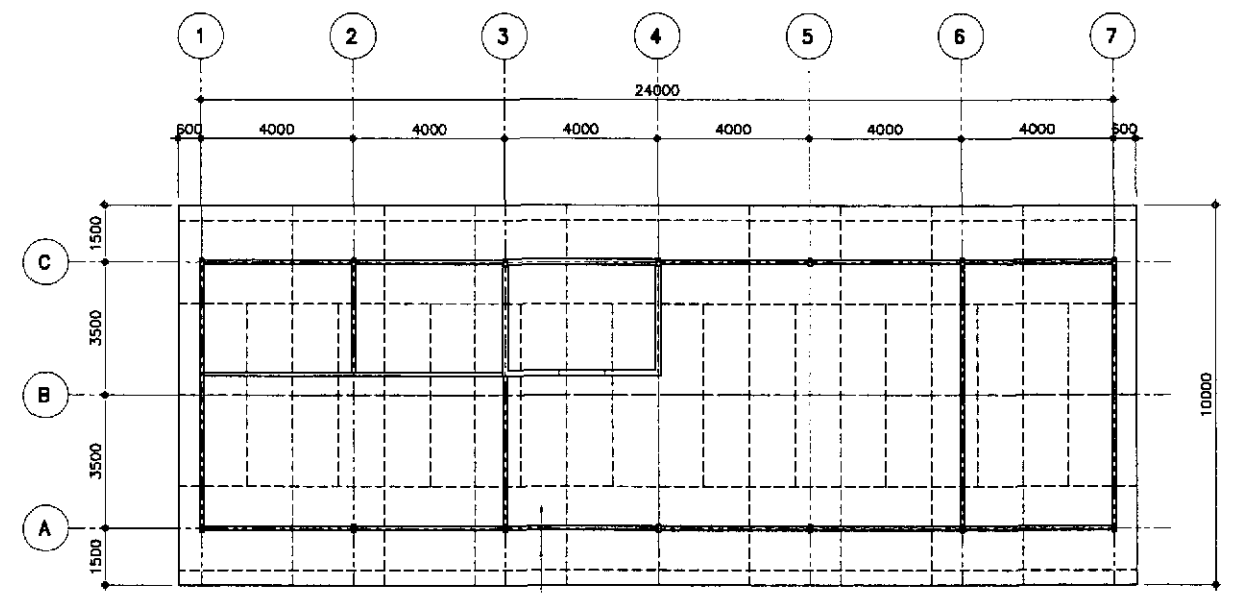
2 FRONT ELEVATION
FA-02 SCALE 1:100

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

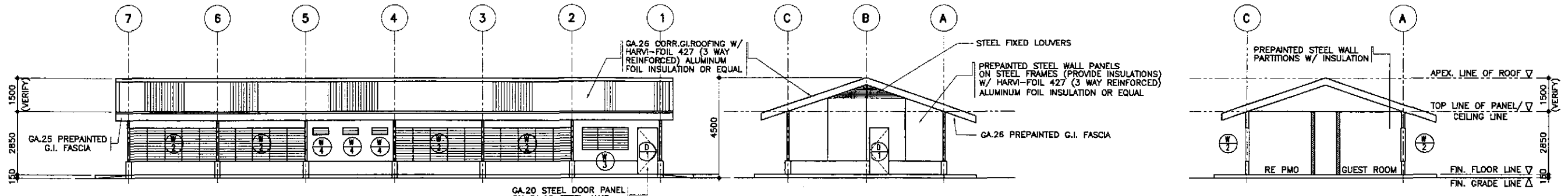
SCHEDULE OF FLOOR FINISHES

- 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

ARNEL P. GONZALES
ENGINEER

PTR. NO. 5046340 P.R.C. NO. 53457
ISSUED ON 04/28/2002 T.I.N. 138-062-682
ISSUED AT SAN JUAN, M.M.

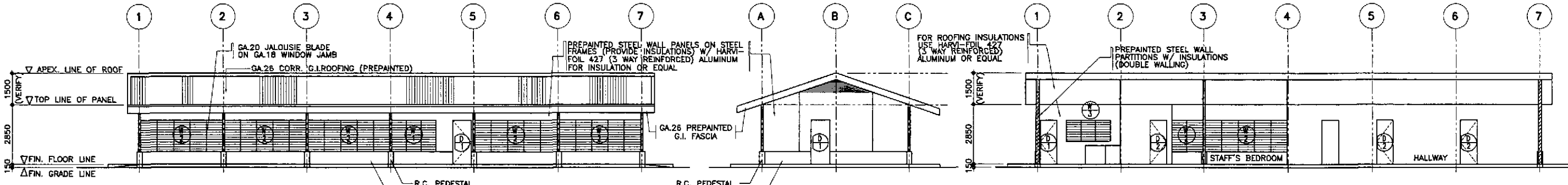
	DATE: 9/18/02 SIGNATURE: ARNEL P. GONZALES DESIGNED: ARNEL P. GONZALES		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE II	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : ENGR'S FIELD OFFICE / LABORATORY FLOOR PLAN, ELEVATIONS, CROSS-SECTIONS AND REFLECTED CEILING PLAN	SHEET NO. : FA-02	
	CHECKED: ARNEL P. GONZALES SUBMITTED: ARNEL P. GONZALES		P.J.H. - PMO Submitted By: DANILLO C. TRAJANO Project Director	BUREAU OF DESIGN Reviewed By: EMMANUEL P. CUNTAPAY Chief, Architecture Division	OFFICE OF THE SECRETARY Recommended By: GILBERTO S. REYES Director IV	Recommended By: MANUEL M. BONDAN Undersecretary					Approved By: SIMÉON A. DATUMANONG Secretary
	PROJECT DIRECTOR: DANILLO C. TRAJANO CHIEF, ARCHITECTURE DIVISION: EMMANUEL P. CUNTAPAY DIRECTOR IV: GILBERTO S. REYES UNDERSECRETARY: MANUEL M. BONDAN SECRETARY: SIMÉON A. DATUMANONG		PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE II			SCALE : AS SHOWN FULL SIZE A1					SHEET CONTENTS : ENGR'S FIELD OFFICE / LABORATORY FLOOR PLAN, ELEVATIONS, CROSS-SECTIONS AND REFLECTED CEILING PLAN



3 REAR ELEVATION
FA-03 SCALE 1:100

5 LEFT SIDE ELEVATION
FA-03 SCALE 1:100

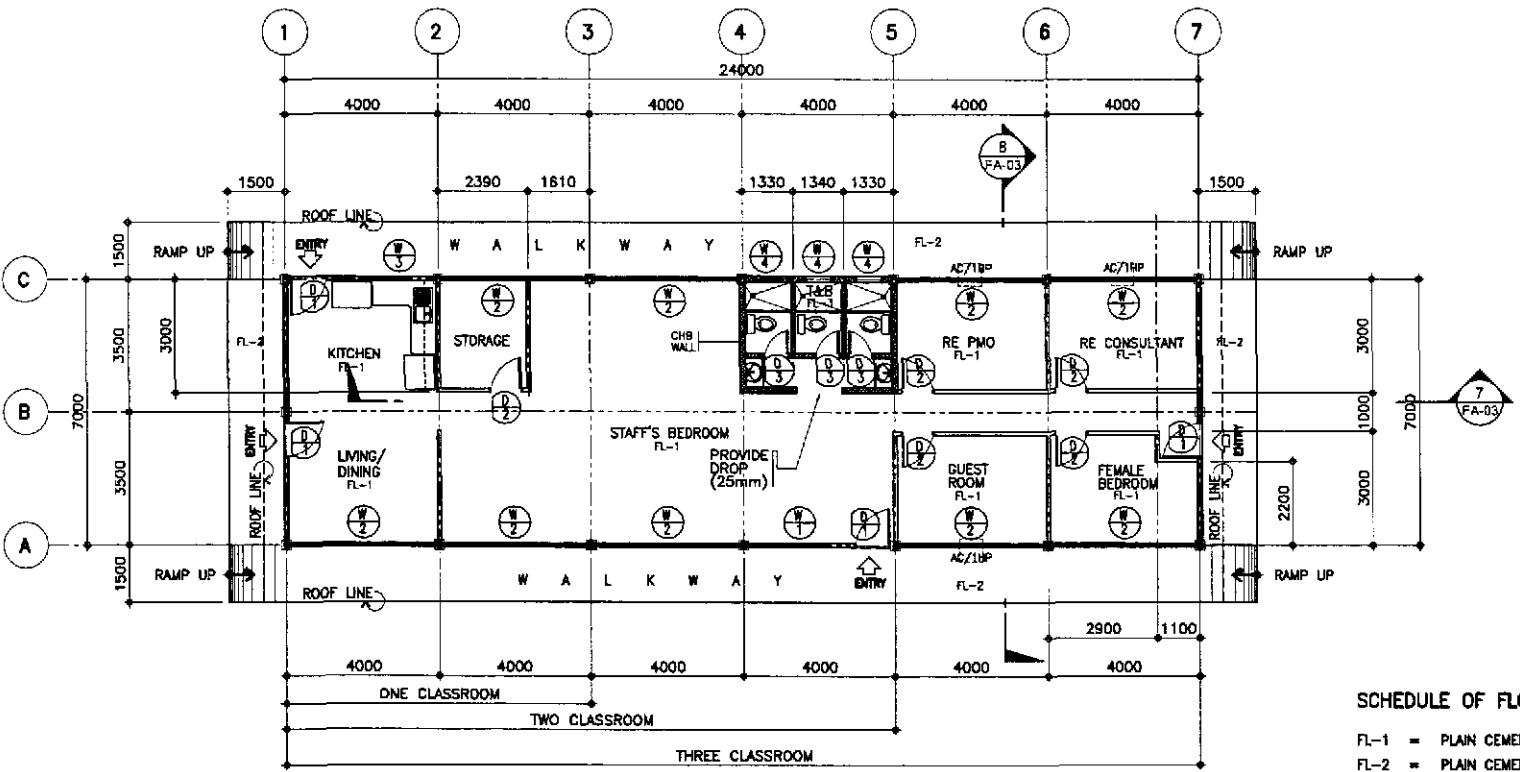
8 CROSS SECTION
FA-03 SCALE 1:100



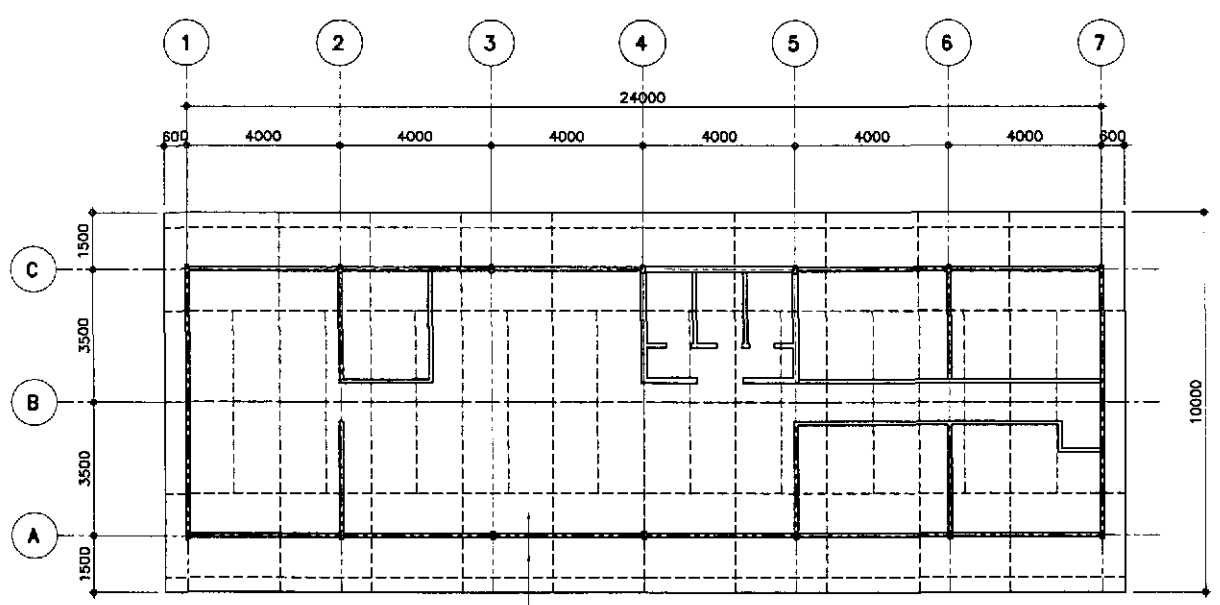
2 FRONT ELEVATION
FA-03 SCALE 1:100

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

ARNEL P. GONZALES
ENGINEER
PTR. NO. 5848340 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
YEC YACHIYO ENGINEERING CO., LTD.

DESIGNED	DATE	SIGNATURE
CHECKED		
SUBMITTED		

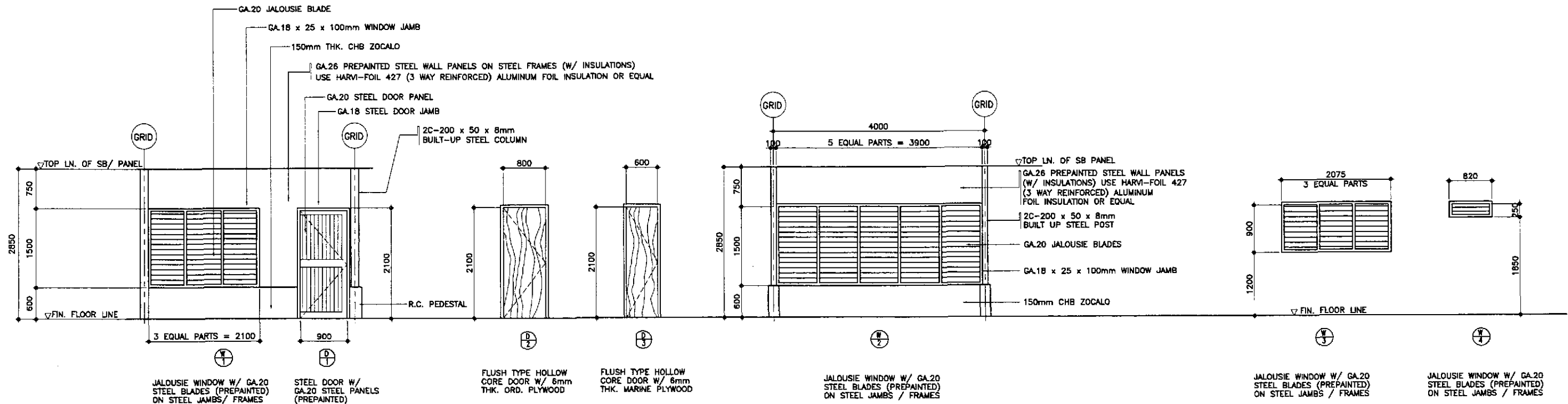
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
OFFICE OF THE SECRETARY
Submitted By: DANIL C. TRAJANO, Project Director
Reviewed By: EMMANUEL P. CUNTAFA, Chief, Architectural Division
Recommended By: GILBERTO S. REYES, OIC, Director IV
Approved By: MANUEL M. BONGAN, Undersecretary
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)
PLARIDEL BYPASS - CONTRACT PACKAGE II

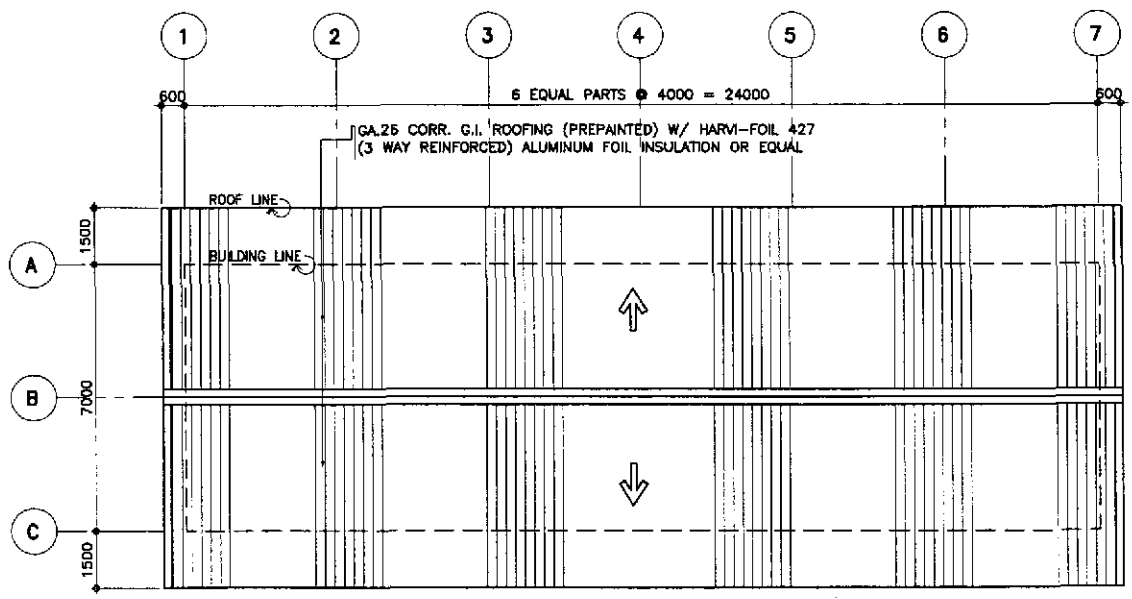
SCALE :
AS SHOWN
FULL SIZE A1

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

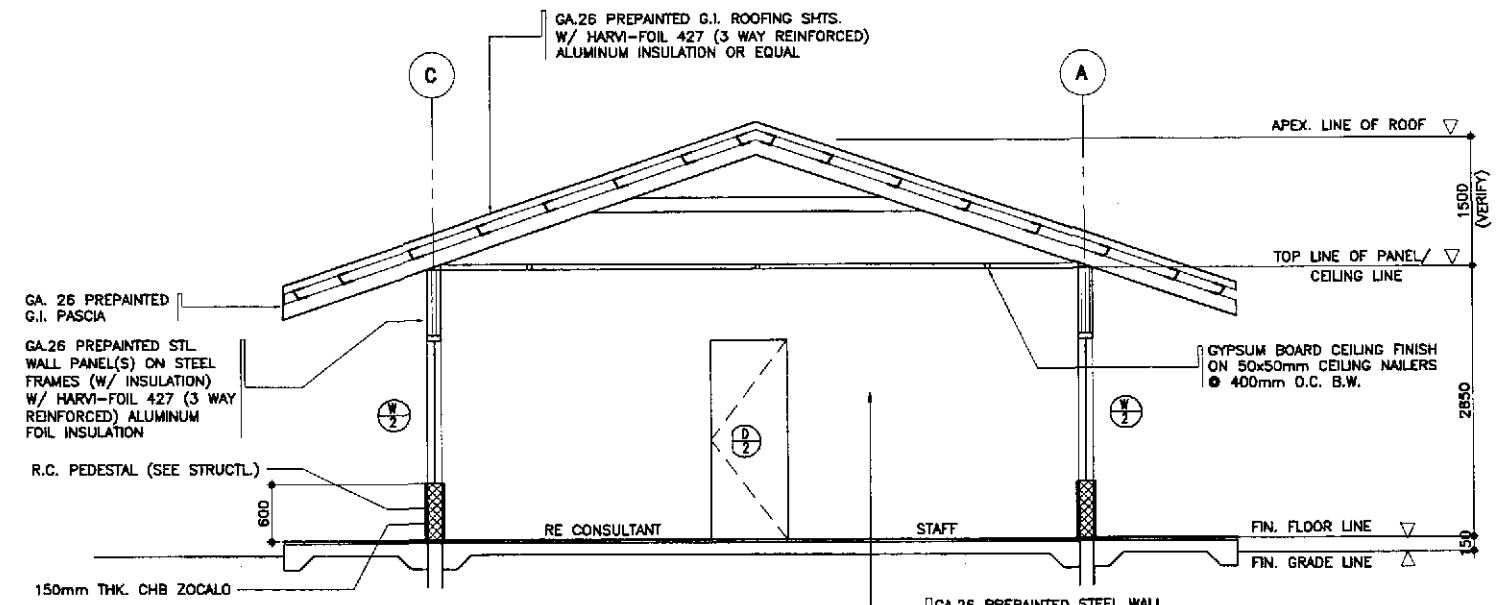
SHEET NO. :
FA-03



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



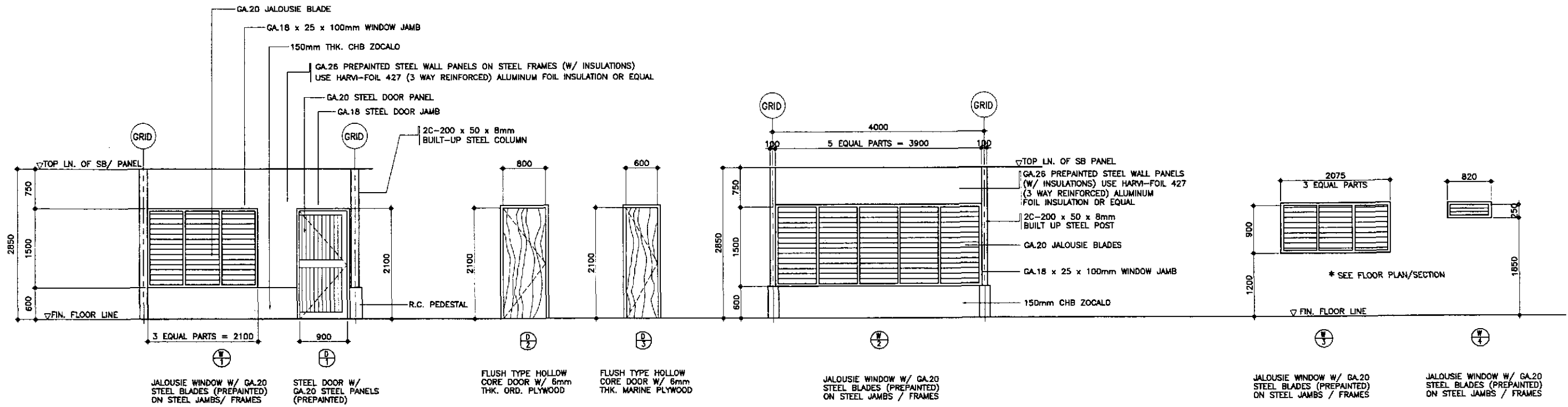
1 **ROOF PLAN**
 FA-04 SCALE 1:100



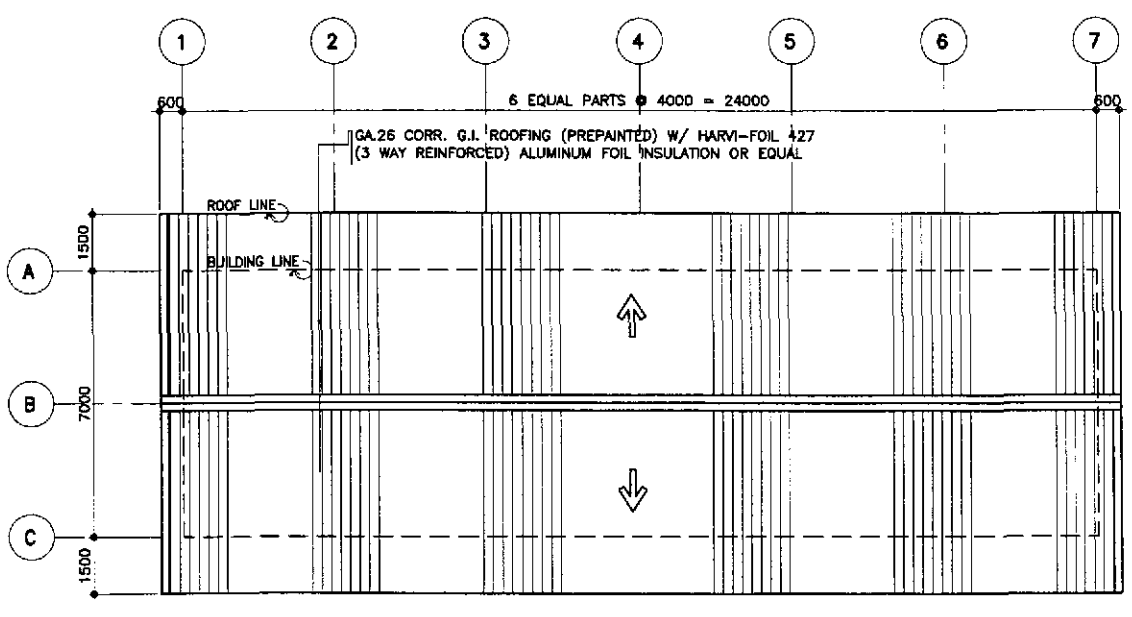
2 **DETAIL CROSS SECTION**
 FA-04 SCALE 1:40

ARVEL P. GONZALES
 ENGINEER
 PTR. NO. 5845340 P.R.C. NO. 53457
 ISSUED ON 04/26/2002 T.L.N. 138-062-682
 ISSUED AT SAN JUAN, M.M.

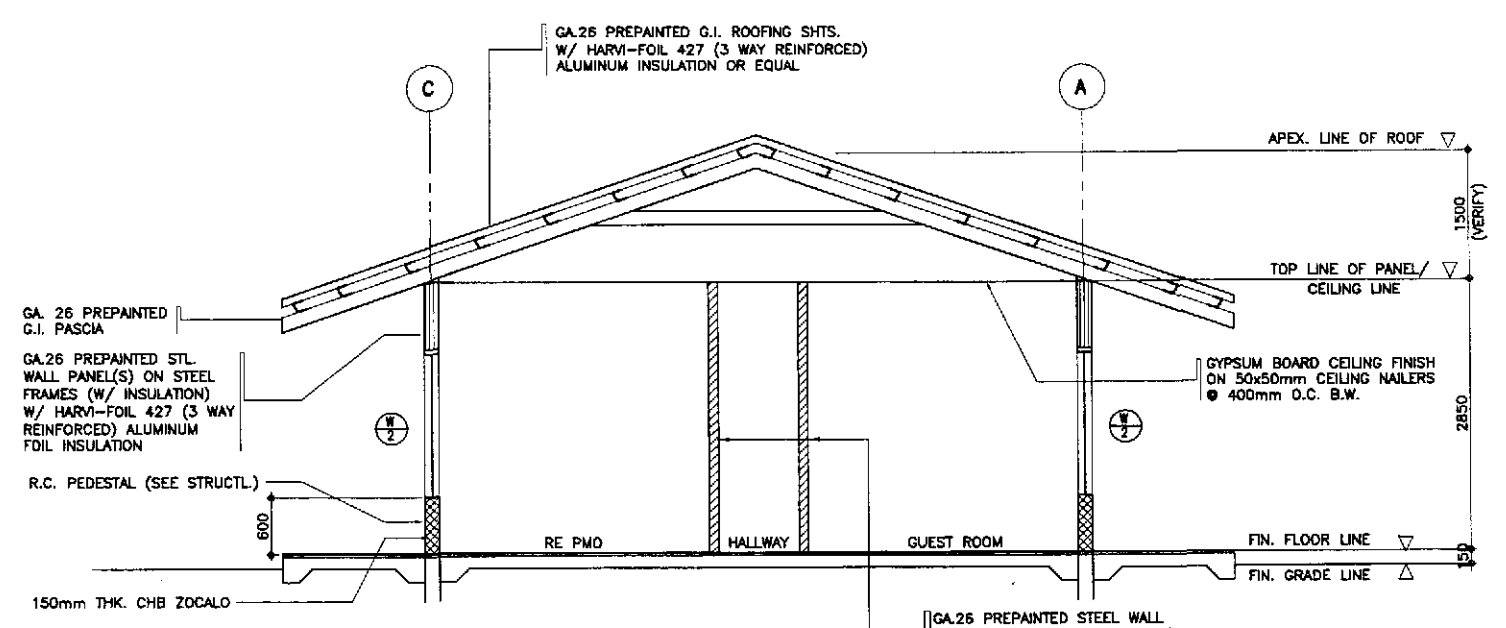
	DESIGNED: <i>[Signature]</i> A. P. GONZALES CHECKED: <i>[Signature]</i> A. P. GONZALES SUBMITTED: <i>[Signature]</i> A. P. GONZALES TEAM LEADER	DATE: <i>[Date]</i> DATE: <i>[Date]</i> DATE: <i>[Date]</i>	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN OFFICE OF THE 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) PLARIDEL BYPASS - CONTRACT PACKAGE II	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
	Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: EMMANUEL P. CUNTAPAY Chief, Architectural Division	Recommended By: GILBERTO S. REYES OIC, Director IV	Recommended By: MANUEL M. BONGAN Undersecretary	Approved By: SIMEDON A. DATUMANONG Secretary		
	JICA JAPAN INTERNATIONAL COOPERATION AGENCY						



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



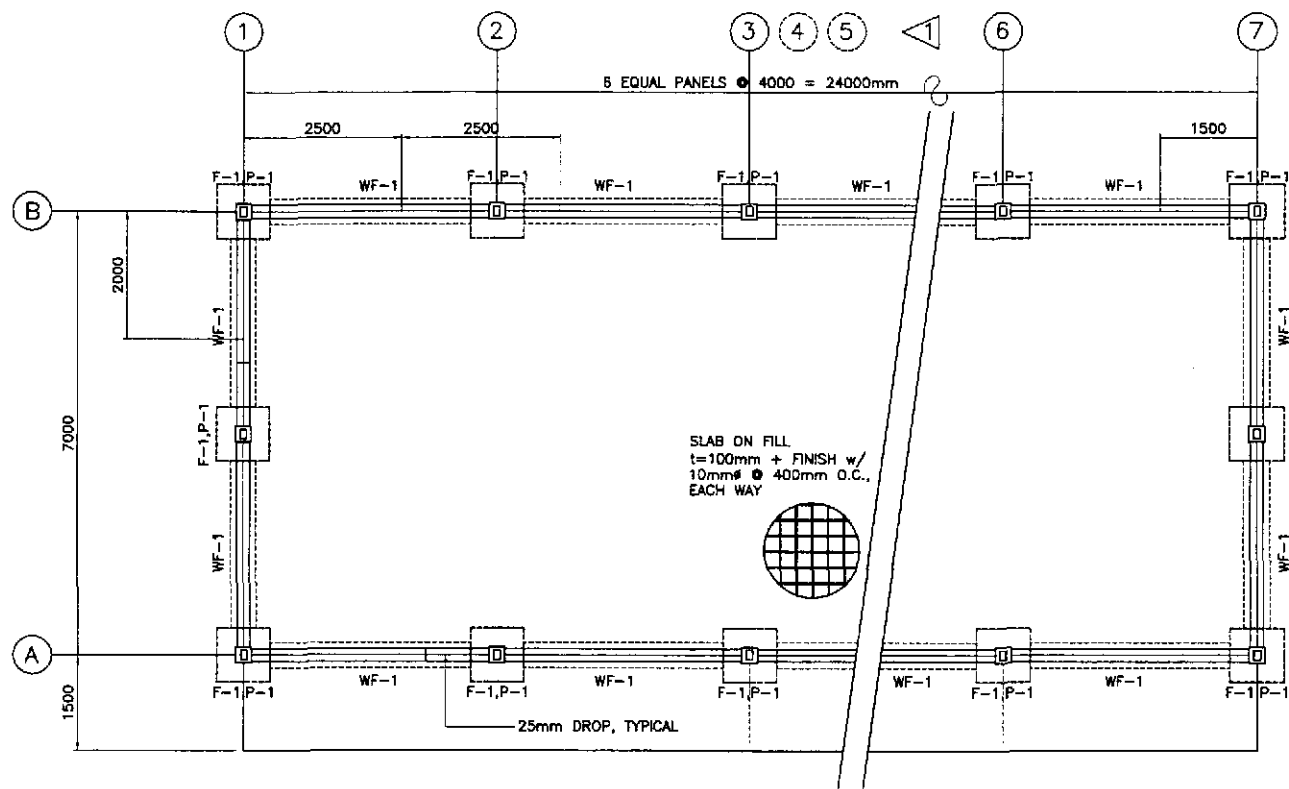
1 **ROOF PLAN**
 FA-05 SCALE 1:100



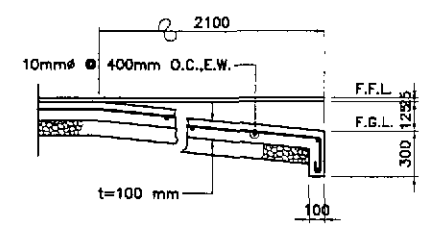
2 **DETAIL CROSS SECTION**
 FA-05 SCALE 1:40

ARNEL P. GONZALES
 ENGINEER
 PTR. NO. 6846340 P.R.C. NO. 53457
 ISSUED ON 04/26/2002 T.I.N. 138-062-682
 ISSUED AT SAN JUAN, M.M.

	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE II	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					
	CHECKED	9/20/02	ARNEL P. GONZALES						Submitted By:	Reviewed By:	Recommended By:	Approved By:	
	SUBMITTED	9/27/02	ARNEL P. GONZALES						DANILO C. TRAJANO Project Director	EMMANUEL P. CUNTAPAY Chief, Architectural Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary



1 FOUNDATION PLAN
FA-06 SCALE 1:25



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

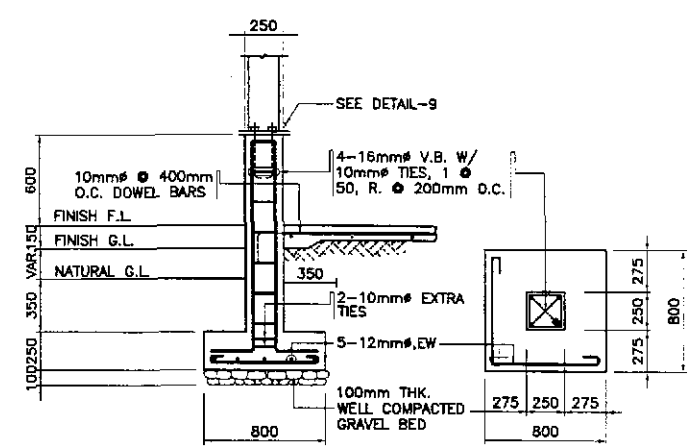
DESIGN CRITERIA :

- 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_{at} = 124.02 mpa
 3. STRUCTURAL LIGHT GAGE COLD FORMED STEEL
 - STIFFENED LIGHT GAGE CHANNEL FOR RAFTERS, STUD & WALLS
 - f_a = 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 = 69 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 psi)

- 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.

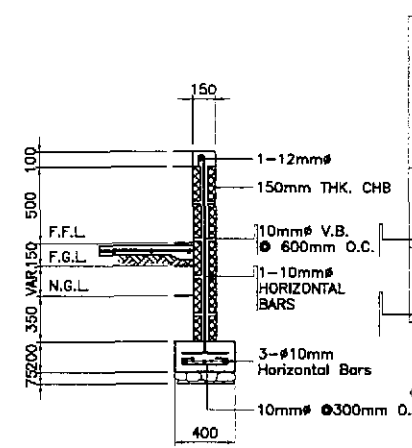
- MATERIAL SPECIFICATIONS :
1. FOR ROOFING SHEETS : 0.6mm THICK (GA.26) PREPAINATED CORRUGATED G.I. ROOFING SHEET, LONG SPAN.
 2. FOR WALLING SHEETS : USE ALUMINUM FOIL INSULATION HARVI-FOIL 427 (3-WAY REINFORCED OR EQUAL). DOUBLE WALL 0.6mm THICK (GA.26) HIGH TENSILE STEEL SHEET WALLING/CLADDING W/ ALUMINUM FOIL FOR INSULATION. HARVI-FOIL 427 (3-WAY REINFORCED OR EQUAL). BASE STEEL WITH 550 MPa YIELD STRESS.
 3. 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-CORROSIVE 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 PREPAINATED 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.



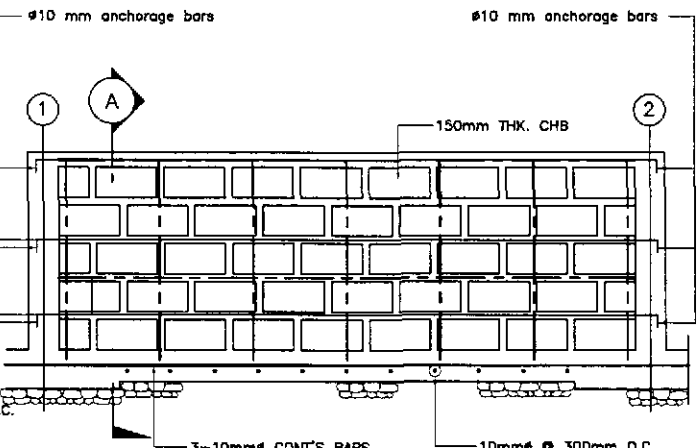
ELEVATION PLAN

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



SECTION A

3 WF-1
FA-06 SCALE 1:25



TYP. ELEVATION

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JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

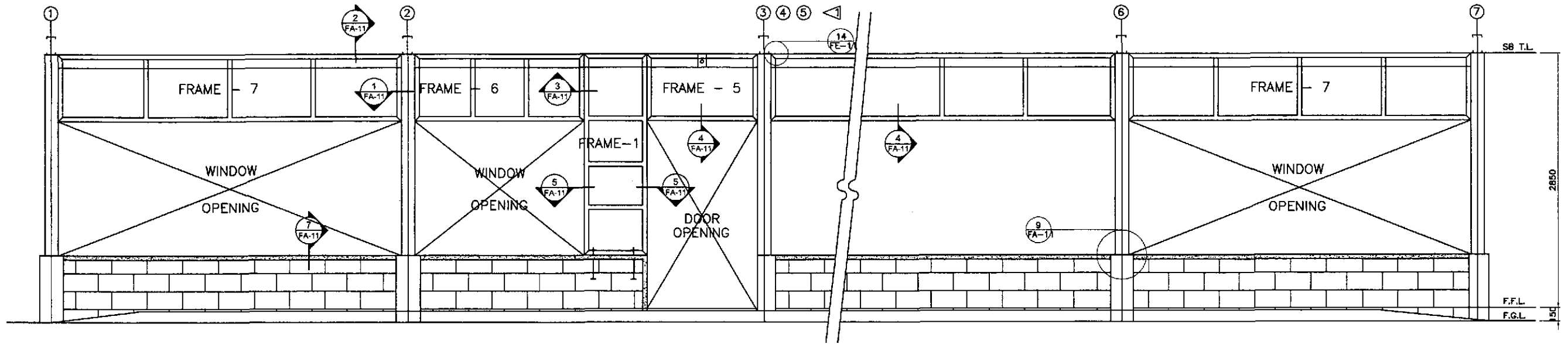
DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				
DESIGNED 9/18/07	A. P. GONZALES	BUREAU OF DESIGN		OFFICE OF THE SECRETARY		
CHECKED 9/20/07	A. P. GONZALES	Submitted By:	Reviewed By:	Recommended By:	Recommended By:	Approved By:
SUBMITTED 9/23/07	A. P. GONZALES	DANIL D. TRAJANO Project Director	WILFREDO S. LOPEZ Chief, Structural Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONGAON Undersecretary	SIMEON A. DATUMANGONG Secretary

PROJECT AND LOCATION :	SCALE :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN
PLARIDEL BYPASS - CONTRACT PACKAGE II	FULL SIZE A1

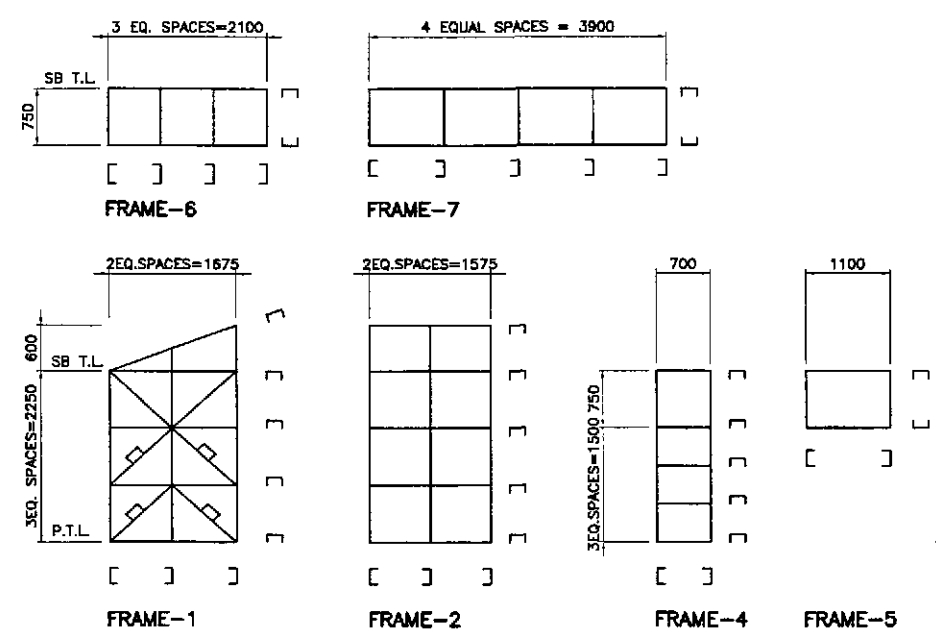
SHEET CONTENTS :	SHEET NO. :
ENGINEER'S FIELD OFFICE AND LIVING QUARTERS FOUNDATION PLAN, R.C. RAMP, DETAILS OF F1, P-1 & WF-1 AND DESIGN CRITERIA	FA-06

ARIEL P. GONZALES
ENGINEER

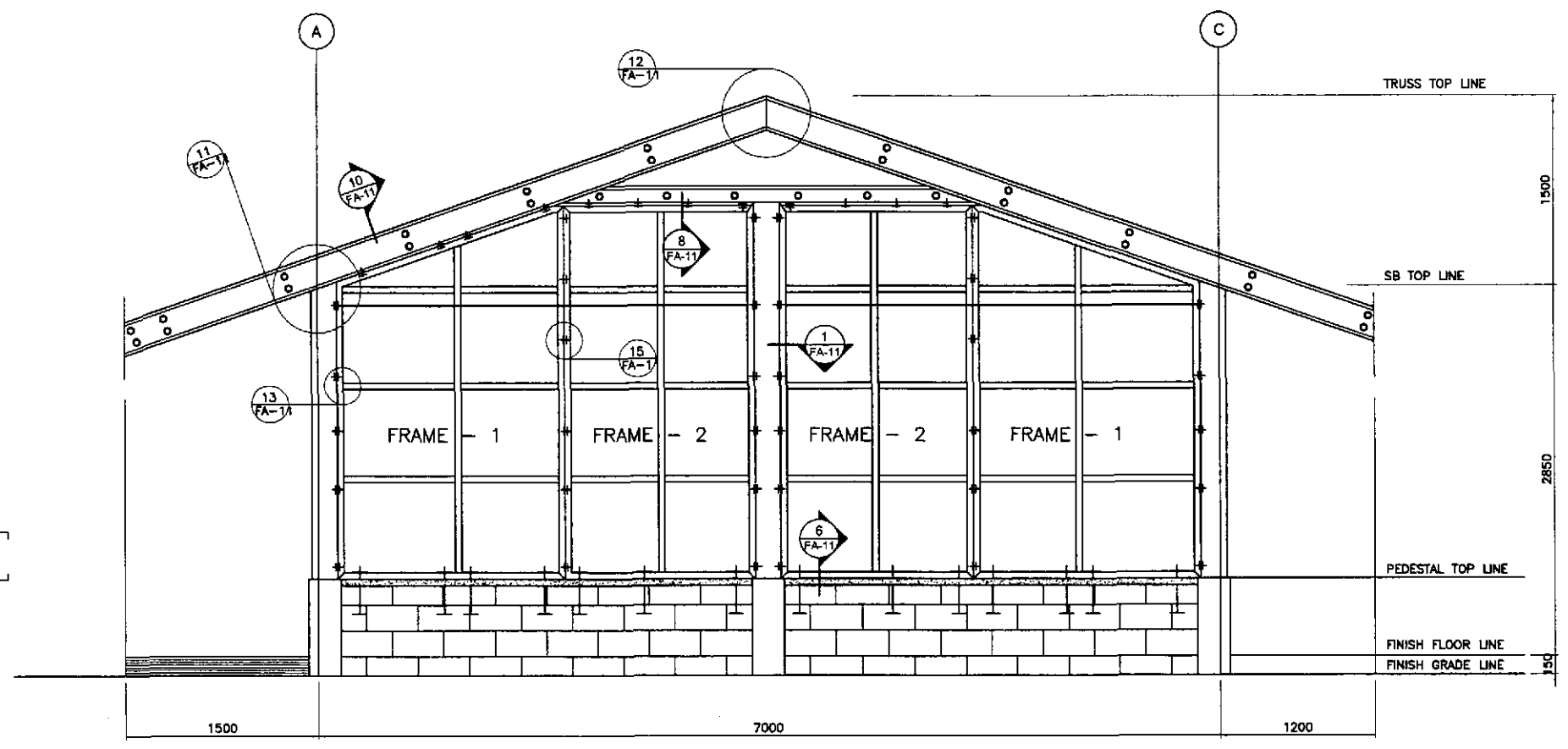
PTR. NO. 5846340 P.R.C. NO. 53457
ISSUED ON 04/26/2002 T.I.N. 138-062-662
ISSUED AT SAN JUAN, M.M.



2 FRONT ELEVATION
FA-07 SCALE 1:25



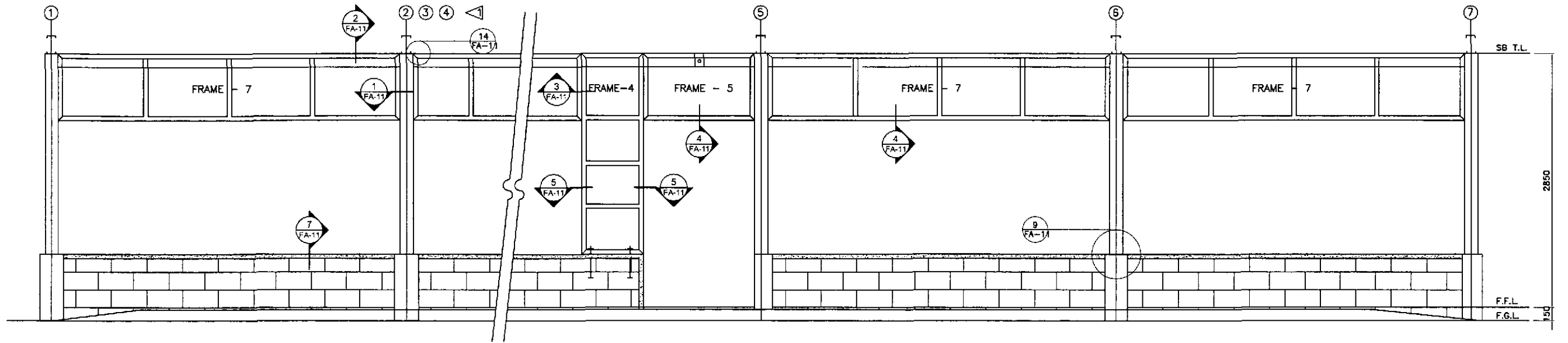
1 FRAMES SCHEMATIC DIAGRAMS
FA-07 SCALE 1:50



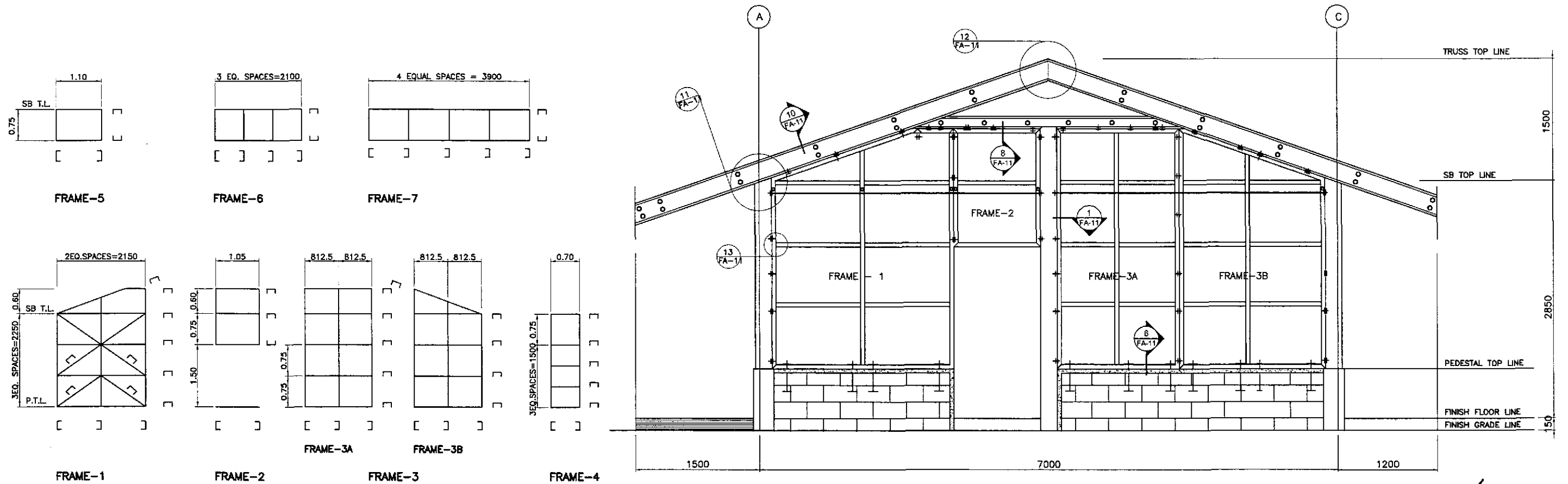
3 RIGHT SIDE ELEVATION
FA-07 SCALE 1:25

ARNEL P. GONZALES
ENGINEER
PTR. NO. 5848540 P.R.C. NO. 53457
ISSUED ON 04/25/2002 T.I.N. 138-062-682
ISSUED AT SAN JUAN, M.M.

	DESIGNED	DATE	SIGNATURE		PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE II	SCALE :	SHEET CONTENTS : ENGR'S FIELD OFFICE / LABORATORY FRONT AND RIGHT SIDE ELEVATION OF STEEL STUD FRAMES & SCHEMATIC DIAGRAM	SHEET NO. :	
	CHECKED	9/20/02	A. P. GONZALES			Submitted By:		AS SHOWN	FA-07
	SUBMITTED	9/23/02	P. GONZALES			DANILO C. TRAJANO (Project Director) WILFREDO S. LOPEZ (Chief, Structural Division) GILBERTO S. REYES (OIC, Director IV) MANUEL M. BONOAN (Undersecretary) SIMEON A. DATUMANONG (Secretary)		FULL SIZE A1	



2 FRONT ELEVATION
FA-08 SCALE 1:25

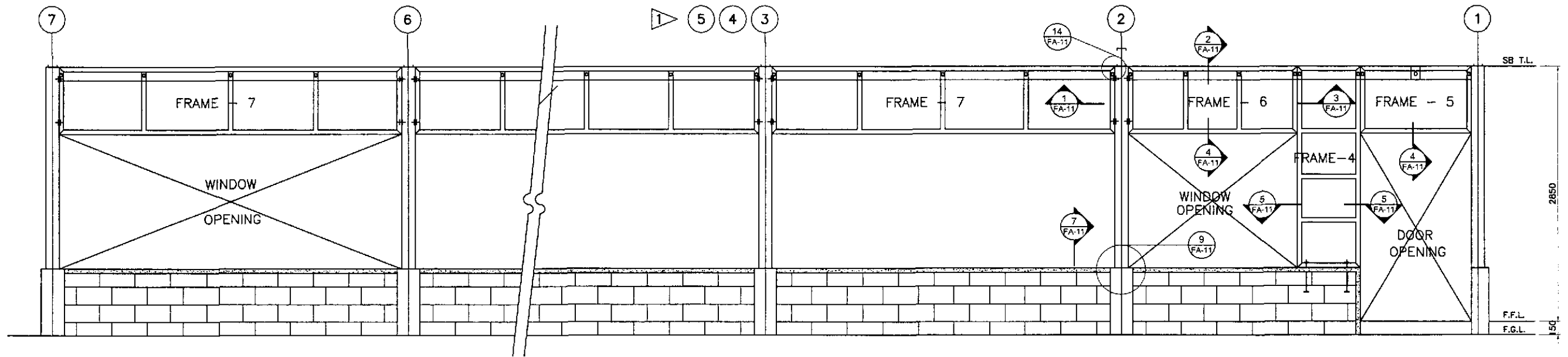


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FA-08 SCALE 1:50

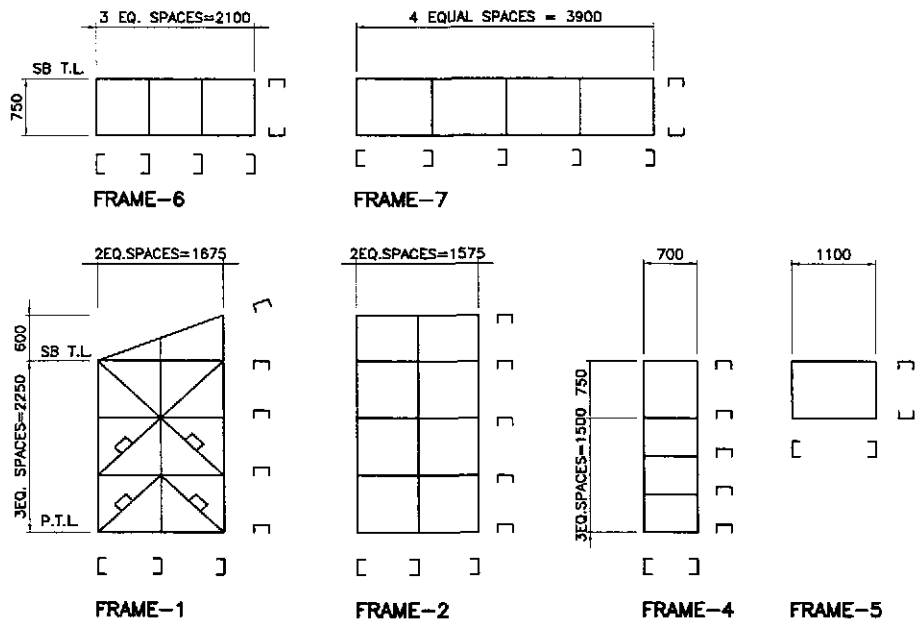
3 RIGHT SIDE ELEVATION
FA-08 SCALE 1:25

ARNEL P. GONZALES
ENGINEER
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ISSUED ON 04/28/2002 T.I.N. 136-062-682
ISSUED AT SAN JUAN, M.M.

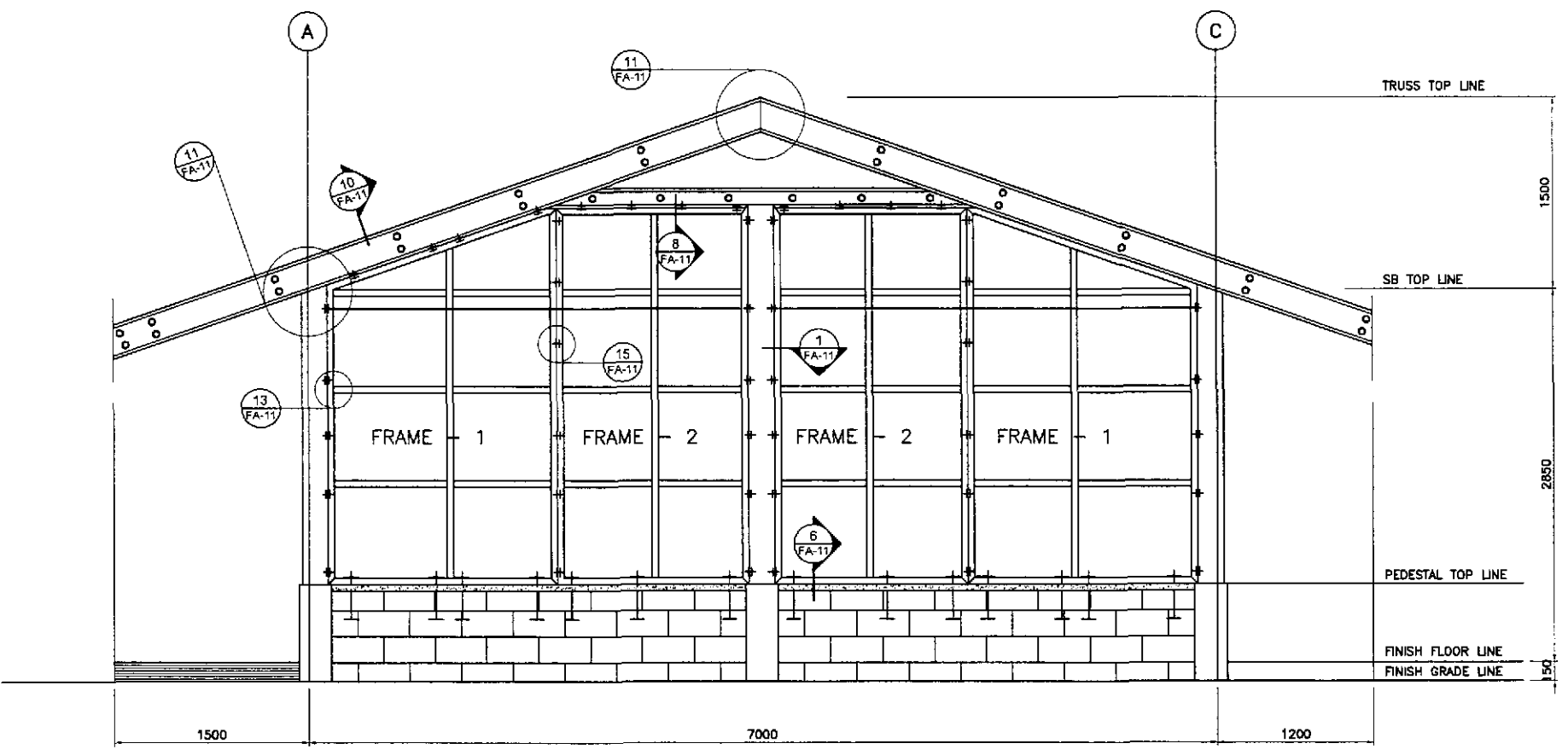
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	CHECKED				P.H.L. - PMD Submitted By: DANILO C. TRAJANO Project Director	BUREAU OF DESIGN Reviewed By: WILFREDO S. LOPEZ Chief, Structural Division	OFFICE OF THE SECRETARY Recommended By: GILBERTO S. REYES D.C., Director IV	Recommended By: MANUEL M. BONGAAN Undersecretary				



2 REAR ELEVATION
FA-09 SCALE 1:25



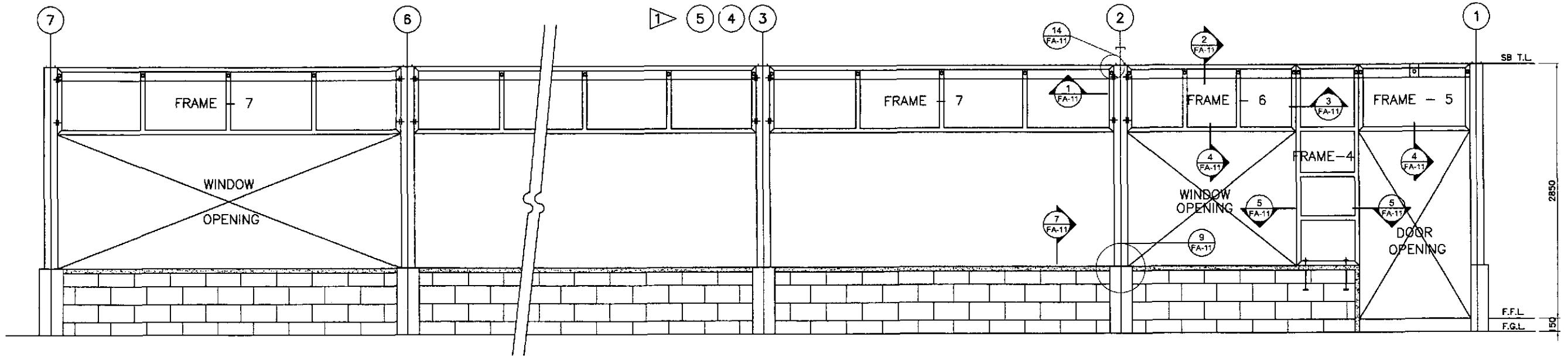
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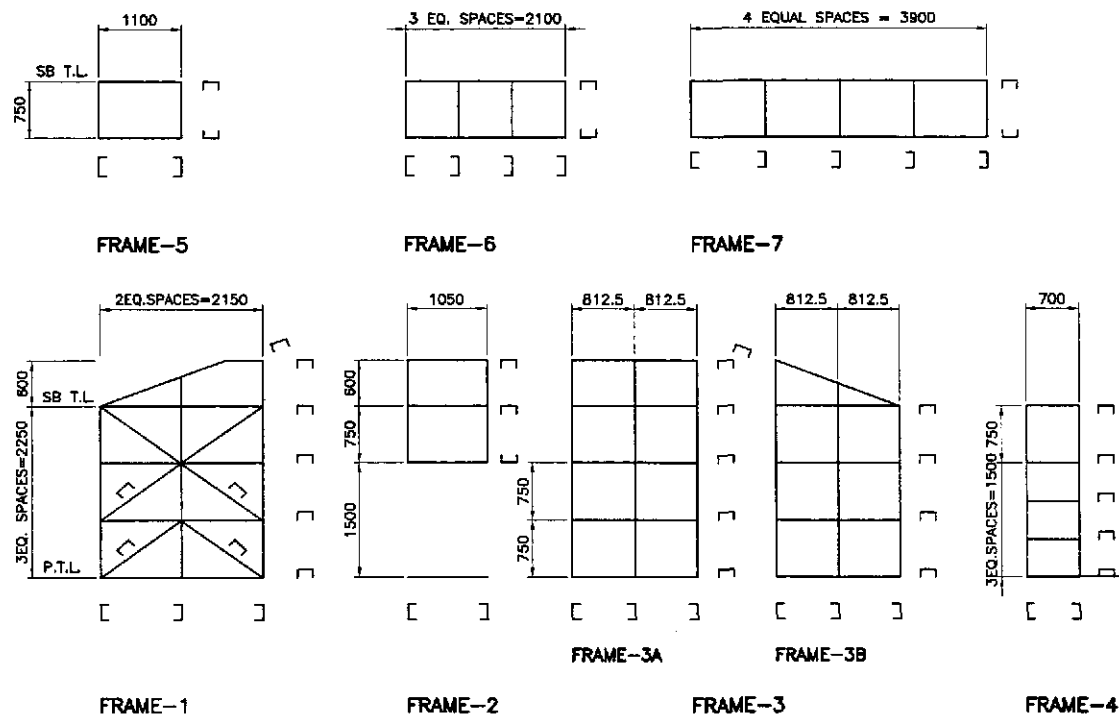
3 LEFT SIDE ELEVATION
FA-09 SCALE 1:25

ARDEL P. GONZALES
ENGINEER
PTR. NO. 5848340 P.R.C. NO. 53457
ISSUED ON 04/25/2002 T.L.N. 138-062-682
ISSUED AT SAN JUAN, M.M.

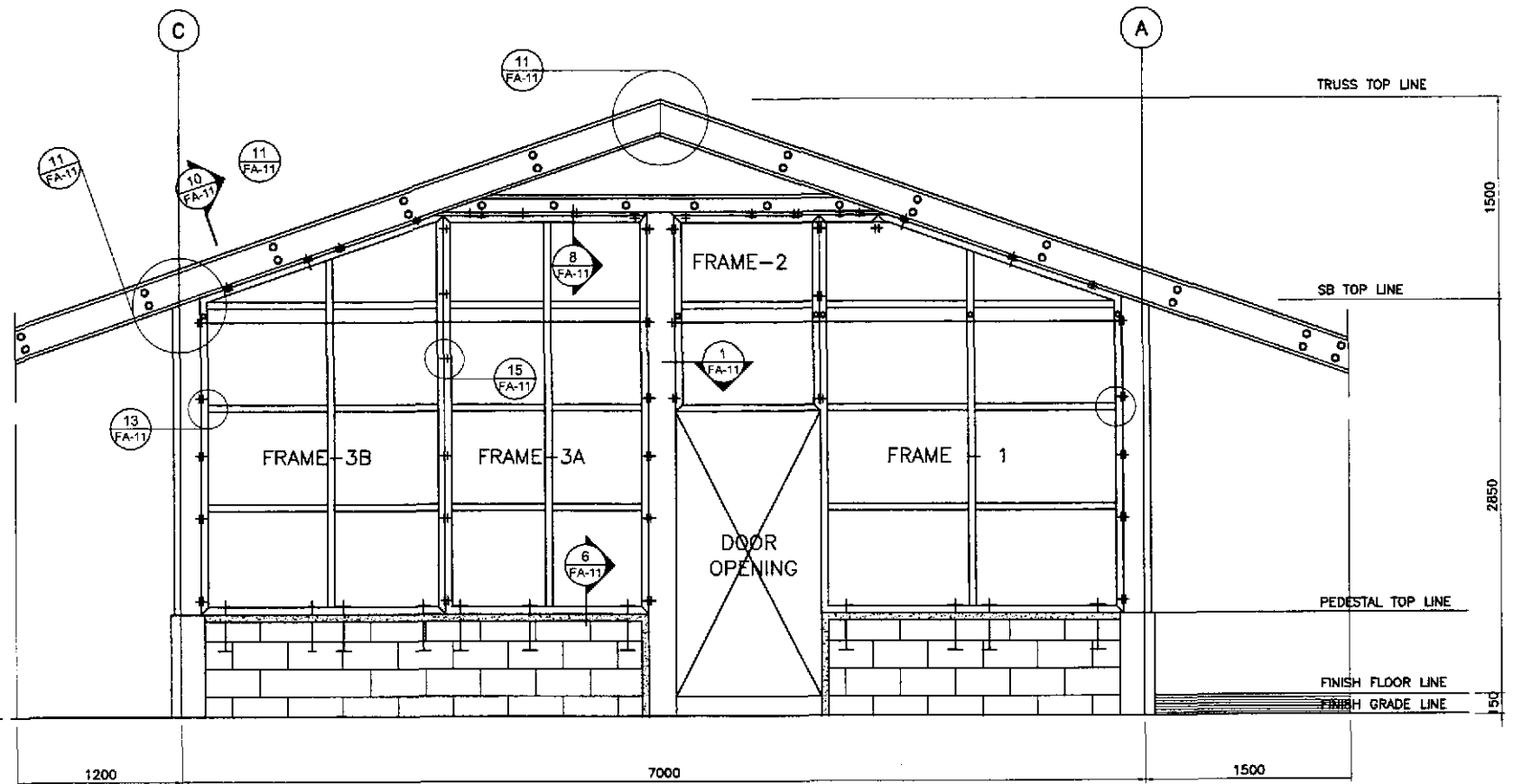
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	CHECKED	DATE	SIGNATURE		Submitted By:	Reviewed By:	Recommended By:				
					PUHL - PMD DANILLO C. TRAJANO Project Director	WILFREDO S. LOPEZ Chief, Structural Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONGAN Undersecretary	SMEON A. DATUMANONG Secretary		



2 REAR ELEVATION
FA-10 SCALE 1:25



1 FRAMES SCHEMATIC DIAGRAMS
FA-10 SCALE 1:50



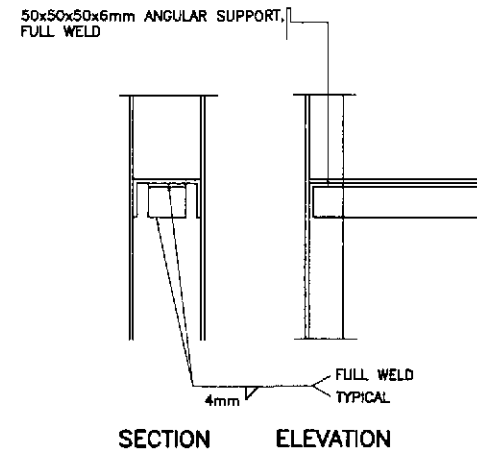
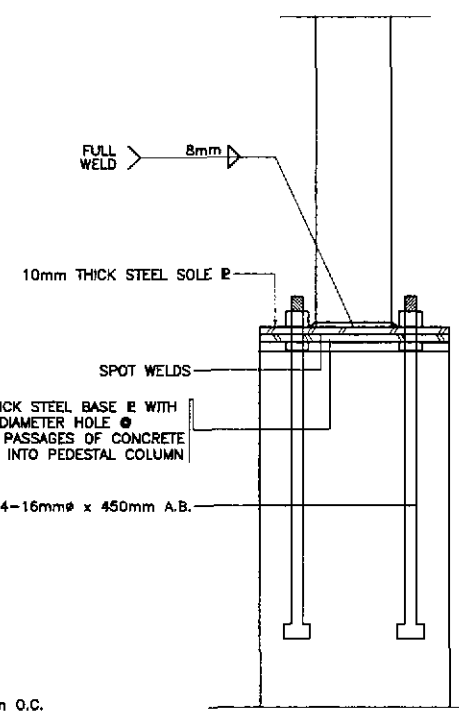
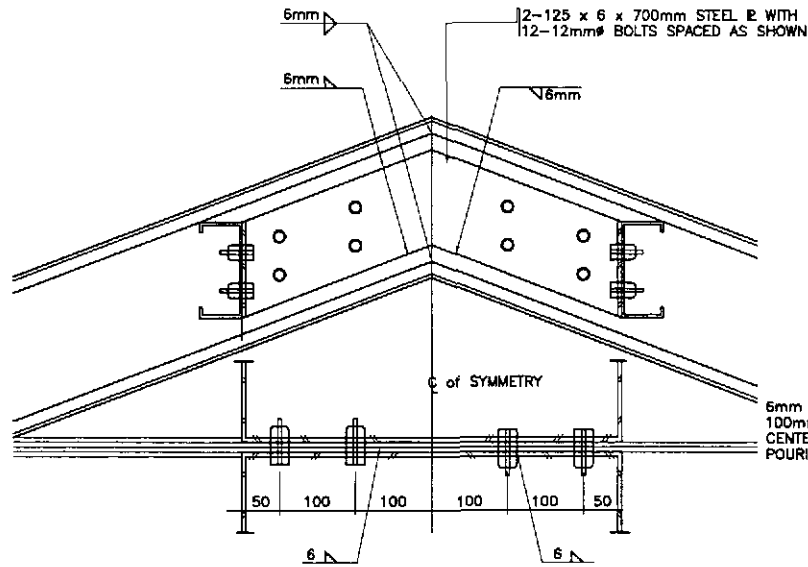
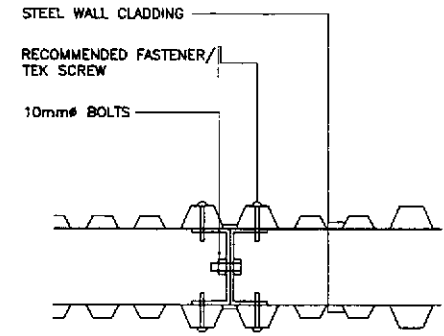
3 LEFT SIDE ELEVATION
FA-10 SCALE 1:25

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

	DESIGNED	DATE	SIGNATURE		PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :	
	CHECKED	07/20/02	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 (OC, Director IV) Recommended By: MANUEL M. BONOAN (Undersecretary) Approved By: SIMEON A. DATUMANONG (Secretary)	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE II	AS SHOWN	ENGINEER'S LIVING QUARTERS REAR AND LEFT SIDE ELEVATION OF STEEL STUD FRAMES & SCHEMATIC DIAGRAMS	FA-10
	SUBMITTED	07/23/02	A. P. GONZALES			PLARIDEL BYPASS - CONTRACT PACKAGE II FULL SIZE A1			

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.

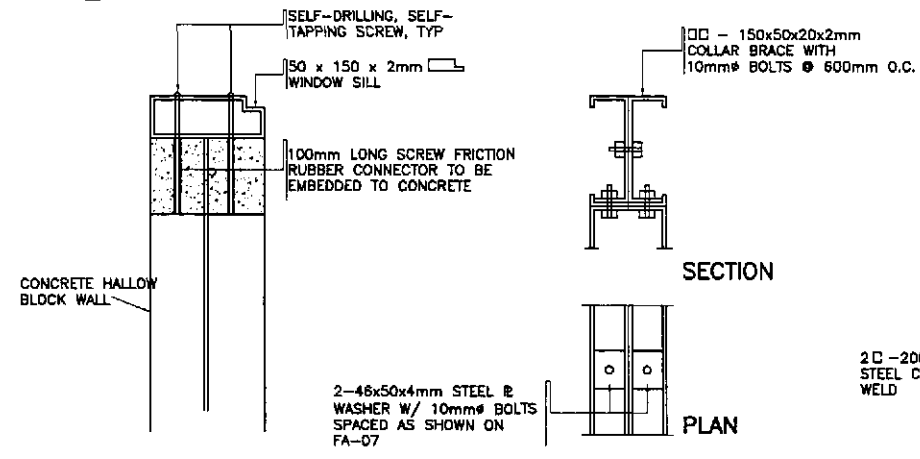


3 DETAIL - 12
FA-11 SCALE 1:5

10 DETAIL - 13
FA-11 SCALE 1:5

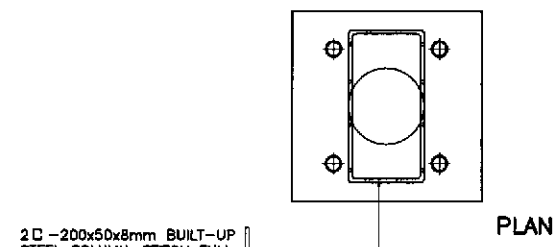
13 DETAIL - 14
FA-11 SCALE 1:5

15 DETAIL - 15
FA-11 SCALE 1:5

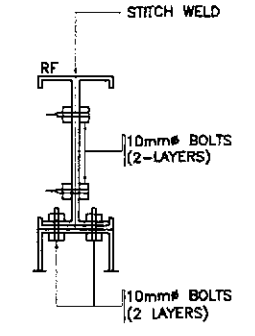


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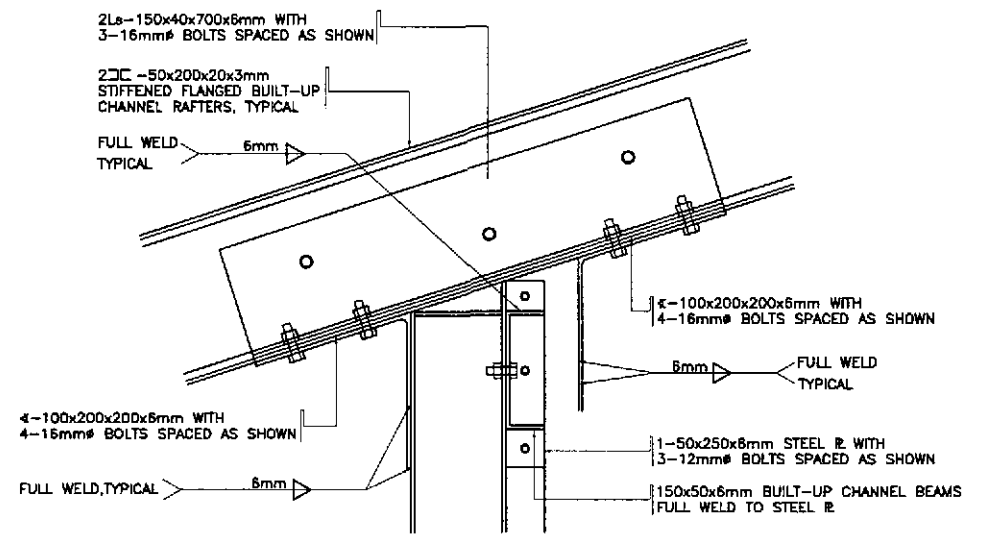
5 DETAIL - 8
FA-11 SCALE 1:5



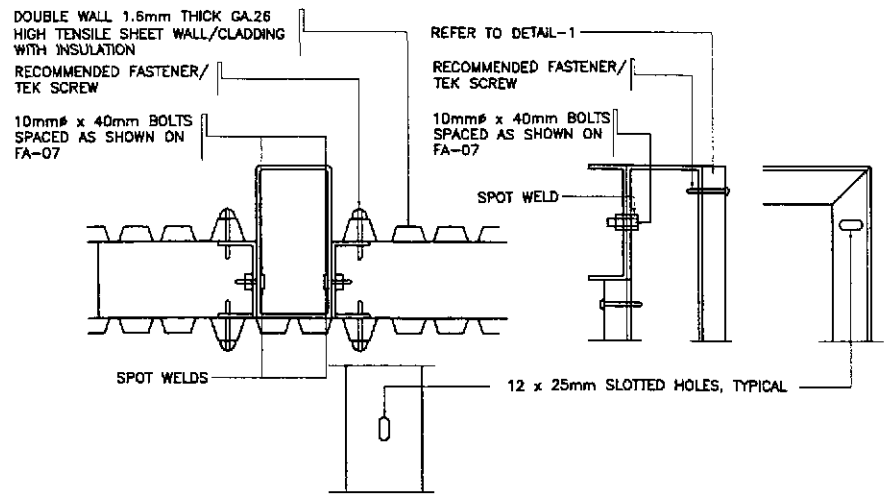
7 DETAIL - 9
FA-11 SCALE 1:5



9 DETAIL - 10
FA-11 SCALE 1:5

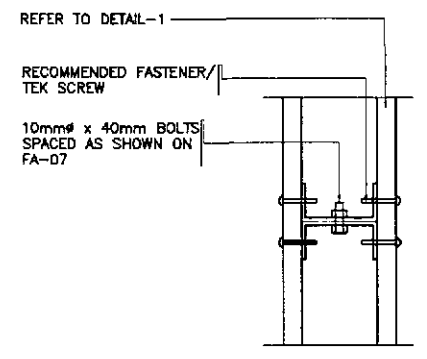


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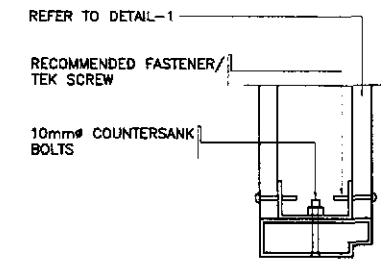


1 DETAIL - 1
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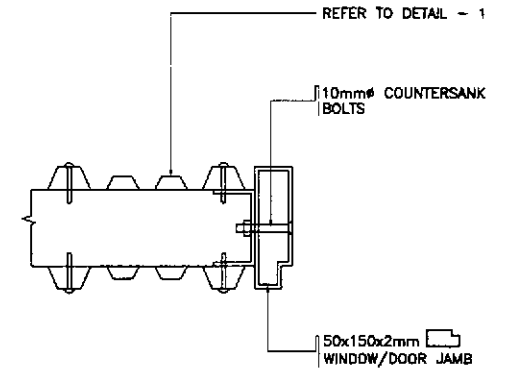
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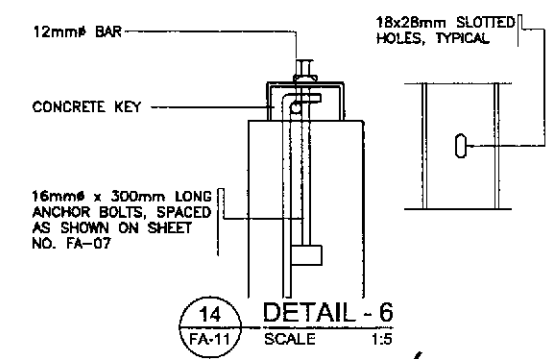
6 DETAIL - 3
FA-11 SCALE 1:5



8 DETAIL - 4
FA-11 SCALE 1:5



11 DETAIL - 5
FA-11 SCALE 1:5

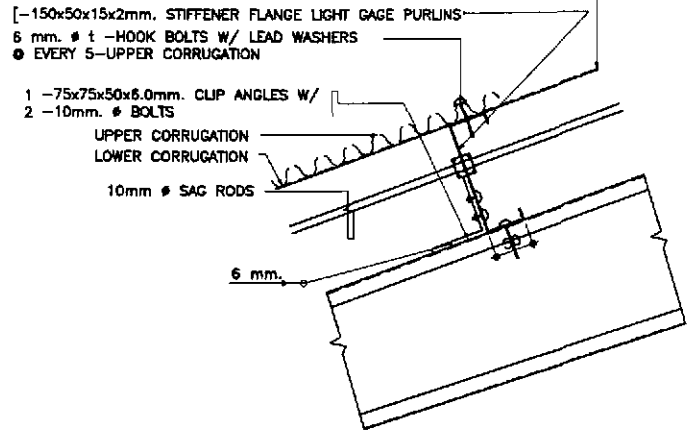


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FA-11 SCALE 1:5

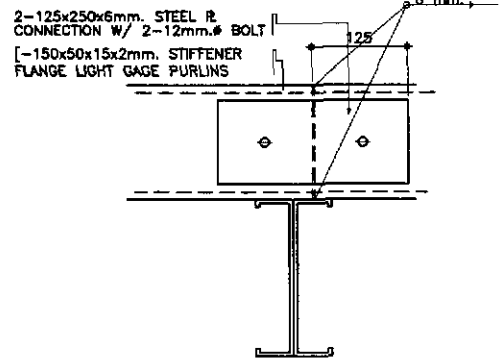
ARNEL P. GONZALES
ENGINEER
PTR. NO. 5846340 P.R.C. NO. 53457
ISSUED ON 04/26/2002 T.I.N. 138-082-682
ISSUED AT SAN JUAN, M.M.

	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :	
	CHECKED				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	FA-11
	SUBMITTED				OFFICE OF THE SECRETARY	PLARIDEL BYPASS - CONTRACT PACKAGE II			FULL SIZE A1	DETAILS OF CONNECTIONS DETAIL 1 TO 15	
Submitted By: DANILLO C. TRAJANO, Project Director Reviewed By: WILFREDO S. LOPEZ, Chief, Structural Division Recommended By: GILBERTO S. REYES, DCC, Director IV Recommended By: MANUEL M. BONGAN, Undersecretary Approved By: SIMEON A. DATUMANONG, Secretary											

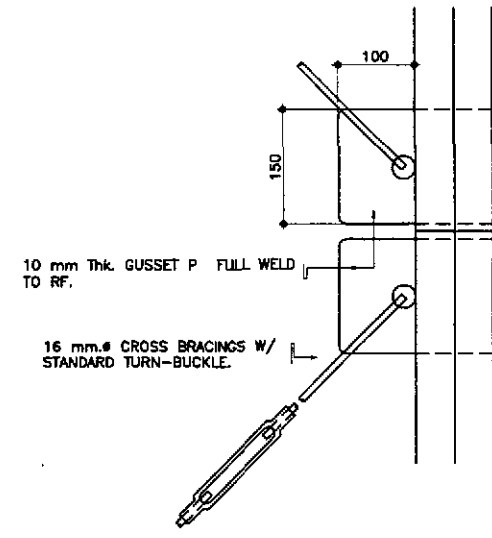
ALUMINUM FOIL INSULATION, TYP.
USE HAVIFOIL 427 (3-WAY REINFORCE-
MENT) OR EQUAL



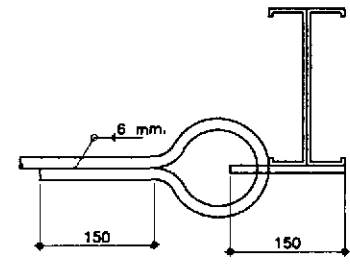
ELEVATION



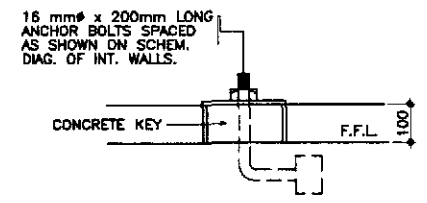
SECTION, SPLICE CONNECTION



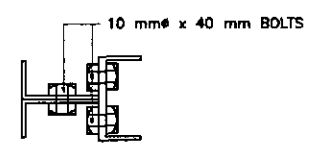
PLAN



SECTION



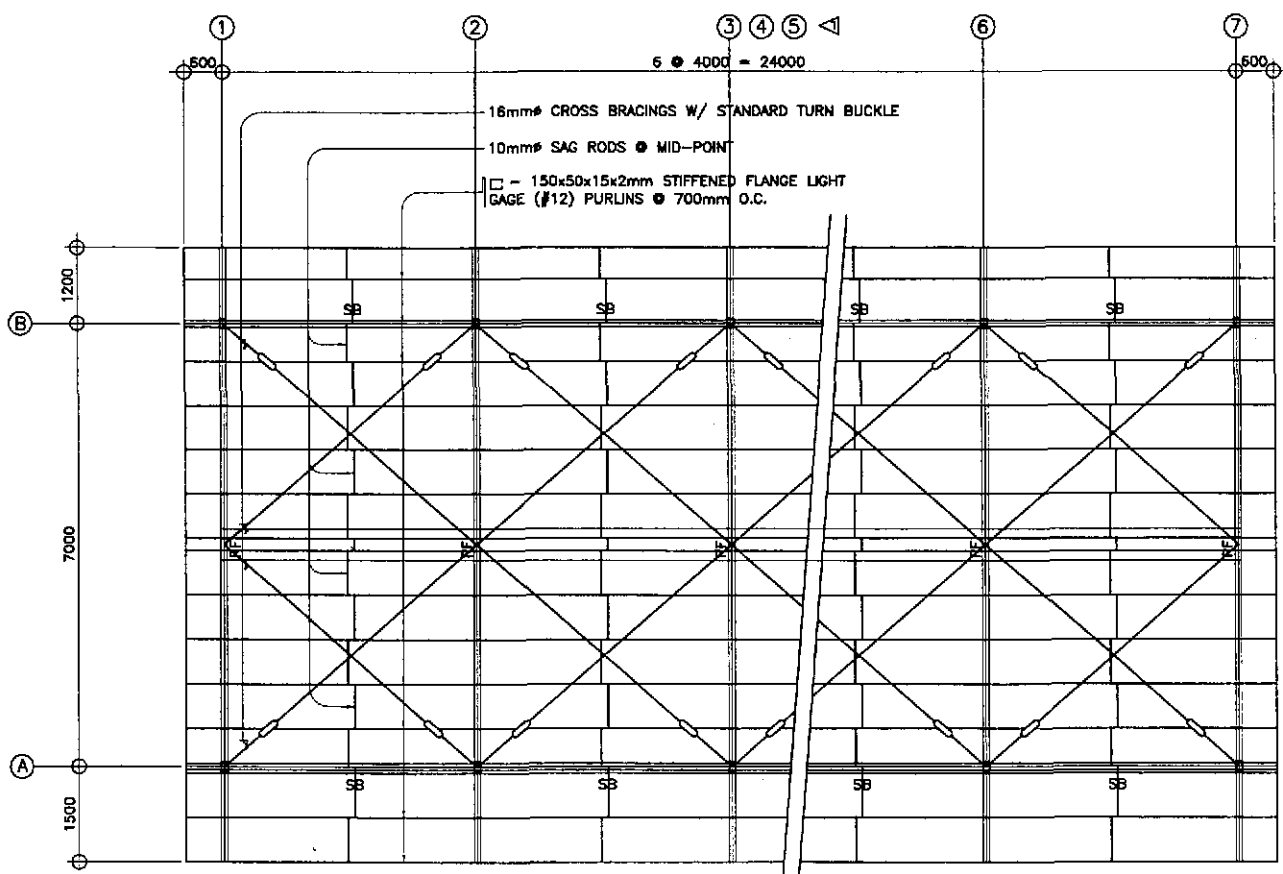
5 DETAIL - a
FA-12 SCALE 1:5



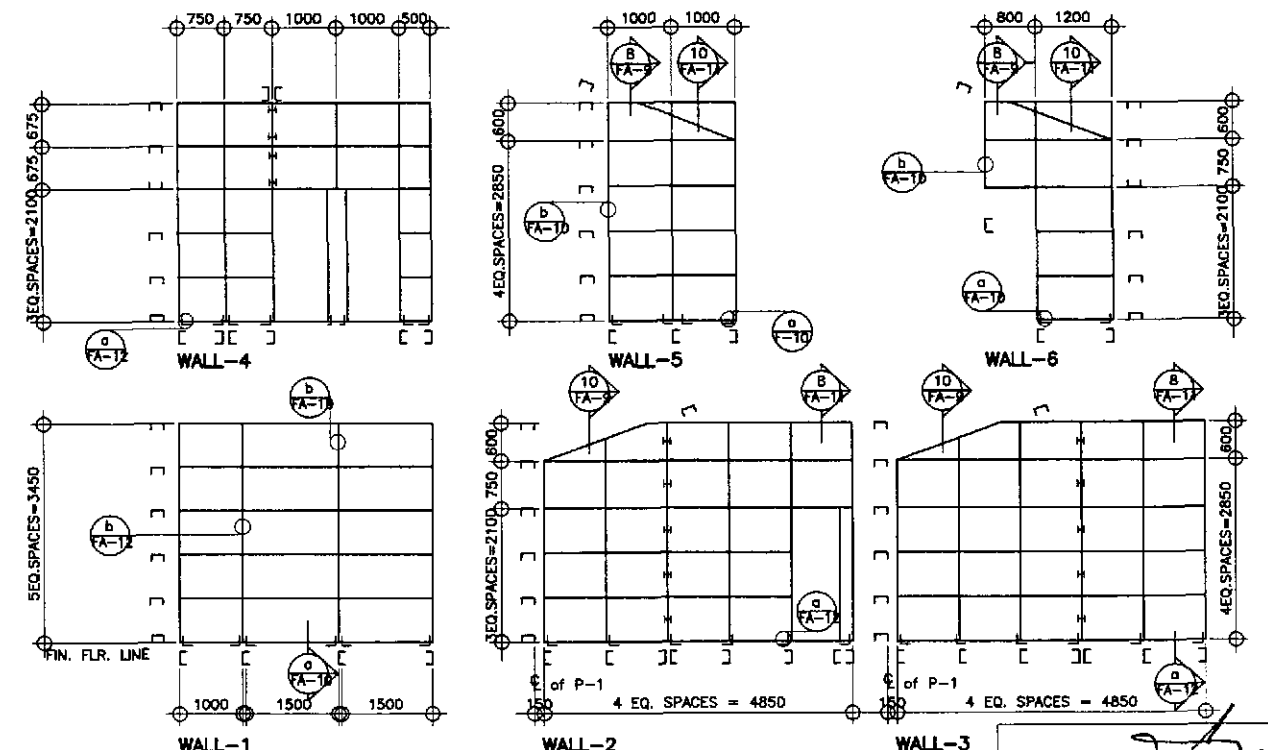
6 DETAIL - b
FA-12 SCALE 1:5

2 PURLIN CONNECTION
FA-12 SCALE 1:5

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



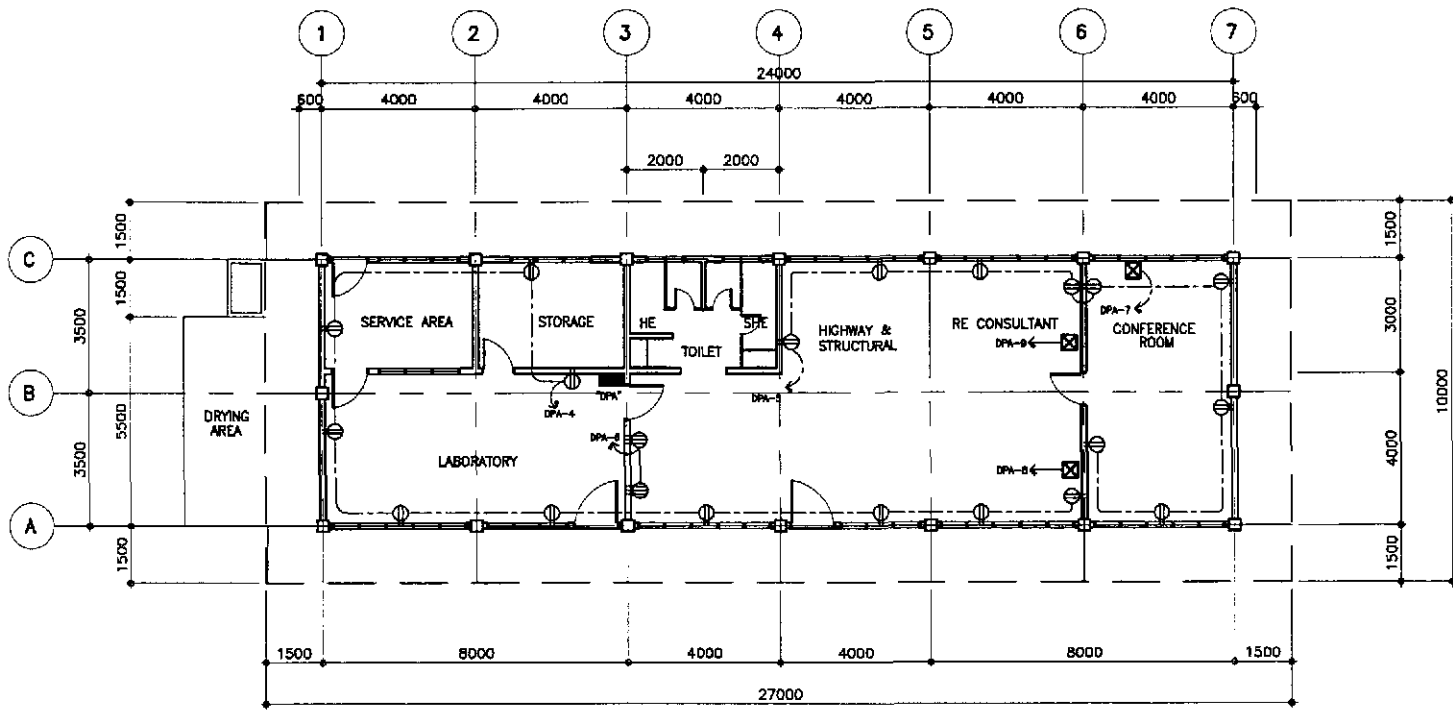
1 ROOF FRAMING PLAN
FA-12 SCALE 1:80



3 SCHEMATIC DIAGRAMS OF INTERIOR WALLS
FA-12 SCALE 1:80

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.

	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) PLARIDEL BYPASS - CONTRACT PACKAGE II	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
	CHECKED	1/30/02	A.P. GONZALES		Submitted By:	Reviewed By:	Recommended By:	Approved By:				
SUBMITTED	1/23/02	DANILO C. TRAJANO	Project Director	WILFREDO S. LOPEZ	Chief, Structural Division	GILBERTO S. REYES	Dir. Director IV	MANUEL M. BONJAN	Undersecretary	SIMEON A. DATUMANONG	Secretary	



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

GENERAL NOTES:

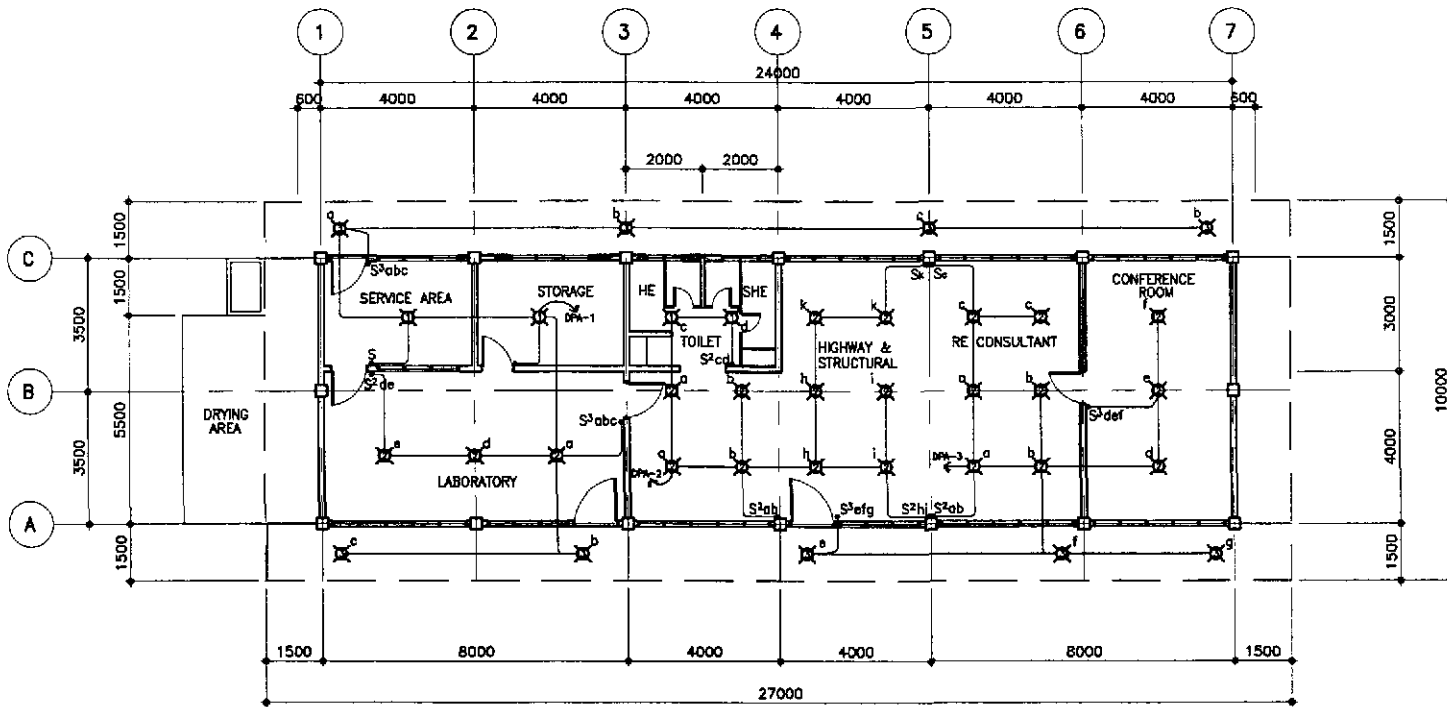
- ALL ELECTRICAL WORKS SHALL BE DONE IN STRICT COMPLIANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHIL. ELECT. CODE, EXISTING APPLICABLE ORDINANCES, RULES AND REGULATIONS OF THE LOCAL GOVERNMENT AND THE REQUIREMENTS OF THE POWER COMPANY.
- THE TYPE OF POWER SERVICE TO USED SHALL BE SINGLE-PHASE 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

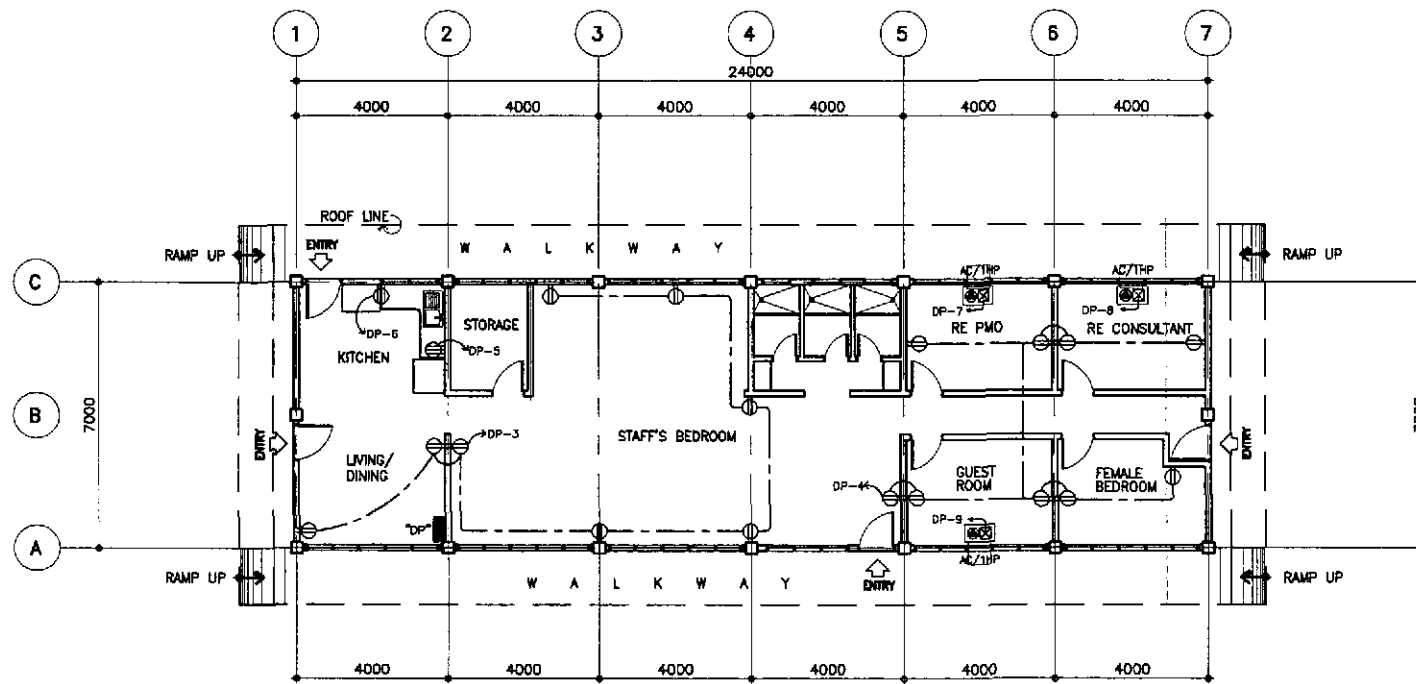


2 LIGHTING LAYOUT OF THE ENGINEER'S FIELD OFFICE / LABORATORY
FE-01 SCALE 1:100

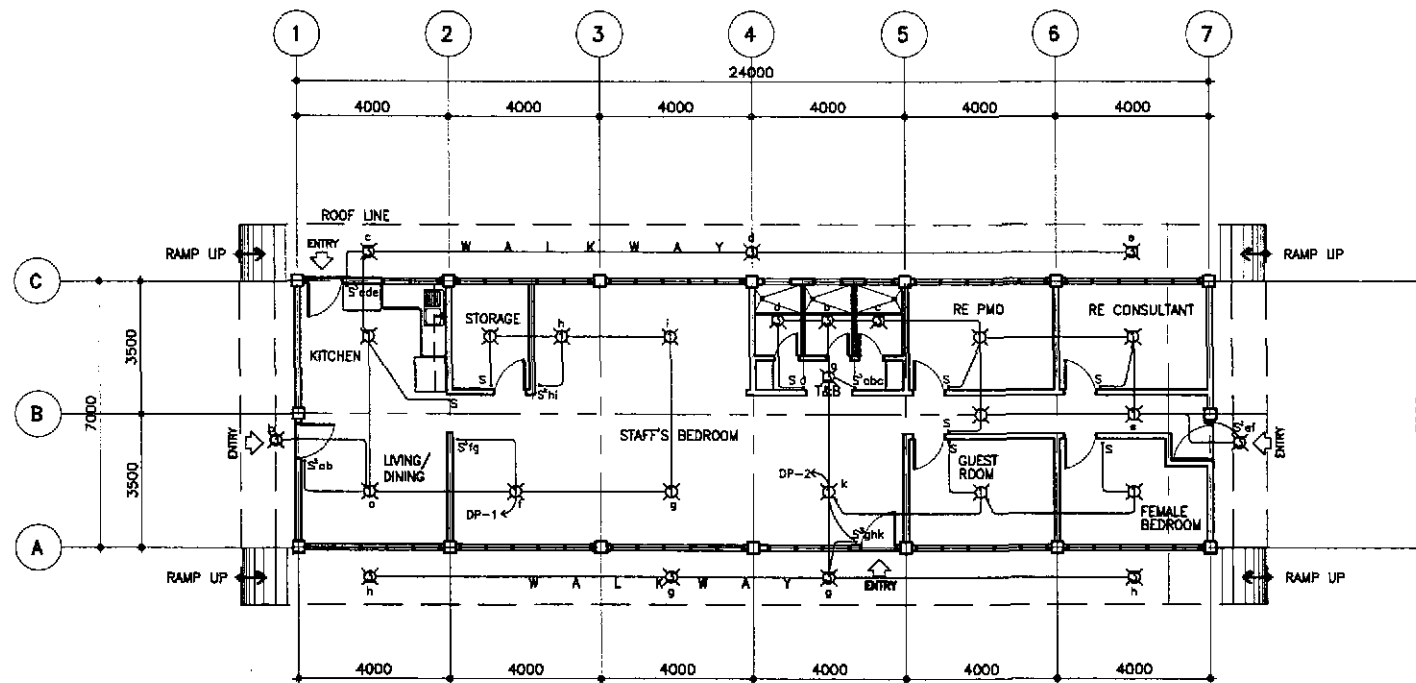
ERNESTO M. ANTIOQUIA
ENGINEER

PTR. NO. 7403664 P.E.E. NO. 2913
ISSUED ON 01/02/2002 ISSUED AT CABUYAO, LAGUNA
T.I.N. 108-382-379

		DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	9/17/02		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 LIGHTING LAYOUT, POWER LAYOUT ELECTRICAL SYMBOLS & GENERAL NOTES	FE-01
	CHECKED	7/20/02		Submitted By: DANILO C. TRAJANO Project Director	Reviewed By: FE M. BARRIENTOS Chief, Mechanical-Elect. Div.	Recommended By: GILBERTO S. REYES OIC, Director IV	FULL SIZE A1		
SUBMITTED	7/23/02		Team Leader	Approved By: (See cover sheet for Signature/Approval)	Recommended By: MANUEL M. BONDAN Undersecretary				



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



1 LIGHTING LAYOUT FOR ENGINEER'S LIVING QUARTER
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 WOODDED 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 NOT 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

Ernesto M. Antioquia
ERNESTO M. ANTIOQUIA
ENGINEER

PTR. NO. 7403864 P.E.E. NO. 2913
ISSUED ON 01/02/2002 ISSUED AT CAGAYAN, LAGUNA
T.I.N. 109-382-379

 JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS YACHIO ENGINEERING CO., LTD.	DATE	SIGNATURE	 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN	PROJECT AND LOCATION :				SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	7/18/02		<i>Ernesto M. Antioquia</i>	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
	CHECKED	7/20/02		<i>Ernesto M. Antioquia</i>	PLARIDEL BYPASS - CONTRACT PACKAGE II				FULL SIZE A1		
SUBMITTED	7/23/02	<i>Ernesto M. Antioquia</i>	Submitted By:	Reviewed By:	Recommended By:	Approved By:					
			DANILO C. TRAJANO Project Director	FE M. BARRIENTOS Chief, Mechanical-Elect' Div.	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary				

SCHEDULE OF LOADS AND COMPUTATIONS

PANELBOARD "DP"		MAIN A.C.B. : 100AF,2P, 250V 100 AT, 18 KAIC W/SOLID NEUTRAL				
CRT. NO.	LOAD DESCRIPTION	VA	RATING OF BRANCH BREAKER			SIZE OF HOMERUN WIRES IN CONDUIT
			VOLTS	AF	P AT	
1	LIGHT OUTLETS	455	220	50	2 15	2-3.5mm TW ² in 15mm#C
2	LIGHT OUTLETS	640	220	50	2 15	2-3.5mm TW ² in 15mm#C
3	CONVENIENCE OUTLET	1440	220	50	2 20	2-3.5mm TW ² in 15mm#C
4	CONVENIENCE OUTLET	1620	220	50	2 20	2-3.5mm TW ² in 15mm#C
5	REFRIGERATOR	500	220	50	2 20	2-3.5mm TW ² + 1-2.0mm ² TW(G) IN 15mm#C
6	ELECTRIC STOVE	3000	220	50	2 30	2-5.5mm ² THW+1-3.5mm ² TW(G) IN 20mm#C
7	1hp,1φ WDO,TYPE ACU	1980	220	50	2 30	2-5.5mm ² THW+1-3.5mm ² TW(G) IN 20mm#C
8	1hp,1φ WDO,TYPE ACU	1980	220	50	2 30	2-5.5mm ² THW+1-3.5mm ² TW(G) IN 20mm#C
9	1hp,1φ WDO,TYPE ACU	1980	220	50	2 30	2-5.5mm ² THW+1-3.5mm ² TW(G) IN 20mm#C
10	SPARE	1500	220	50	2 20	-
11	SPARE	1500	220	50	2 20	-
12	SPARE	1500	220	50	2 20	-
TOTAL		18,095				

$I_{90\%} = \frac{18095}{220} (0.90) + 0.25(8) = 76.03 \text{ Amps}$
 $I_{95\%} = \frac{18095}{220} (0.90) + 1.5(8) = 86.03 \text{ Amps}$
 MAIN ACB: 100AF,2P,250 V,100AT,15KAIC
 USE : 2-38mm² THW + 1-14mm² TW(G) IN 40mm# RSC

SCHEDULE OF LIGHTING FIXTURES & LAMPS

SYMBOLS	DESCRIPTION	MOUNTING & INSTALLATION
①	ONE (1) 40 WATTS, 220V, FLUORESCENT LIGHTING FIXTURES, BOX TYPE	SURFACE CEILING MOUNTED
②	ONE (2) 40 WATTS, 220V, FLUORESCENT LIGHTING FIXTURES, BOX TYPE	SURFACE CEILING MOUNTED
③	ONE (1)-SL-18 LAMP WITH HEXLESS TYPE, MEDIUM BASE PORCELAIN RECEPTACLE	SURFACE CEILING MOUNTED

NOTE:
ALL FLUORESCENT LIGHTING FIXTURES SHALL BE EQUIPPED WITH A HIGH POWER FACTOR PRE-HEAT WITH STARTER TYPE BALLAS, COMPLETE WITH ALL NECESSARY ACCESSORIES, WIRED AND READY FOR USE.

ENGINEER'S LIVING QUARTERS

SCHEDULE OF LOADS AND COMPUTATIONS

PANELBOARD "DPA"		MAIN A.C.B. : 225AF,2P, 250V 200 AT, 18 KAIC W/SOLID NEUTRAL				
CRT. NO.	LOAD DESCRIPTION	VA	RATING OF BRANCH BREAKER			SIZE OF HOMERUN WIRES IN CONDUIT
			VOLTS	AF	P AT	
1	LIGHT OUTLETS	590	220	50	2 15	2-3.5mm TW ² in 15mm#C
2	LIGHT OUTLETS	1210	220	50	2 15	2-3.5mm TW ² in 15mm#C
3	LIGHT OUTLETS	1065	220	50	2 15	2-3.5mm TW ² in 15mm#C
4	CONVENIENCE OUTLETS	1800	220	50	2 20	2-3.5mm TW ² + 1-2.0mm ² TW(G) IN 15mm#C
5	CONVENIENCE OUTLETS	1620	220	50	2 20	2-3.5mm TW ² + 1-2.0mm ² TW(G) IN 15mm#C
6	PHOTOCOPY MACHINE /HEAVY DUTY CO.	2500	220	50	2 20	2-3.5mm TW ² + 1-2.0mm ² TW(G) IN 15mm#C
7	JTR,1φ,SPLIT TYPE ACU	6930	220	100	2 70	2-8mm ² THW + 1-5.5mm ² TW(G) IN 25mm#C
8	JTR,1φ,SPLIT TYPE ACU	6930	220	100	2 70	2-8mm ² THW + 1-5.5mm ² TW(G) IN 25mm#C
9	JTR,1φ,SPLIT TYPE ACU	6930	220	100	2 70	2-8mm ² THW + 1-5.5mm ² TW(G) IN 25mm#C
10	SPARE	5000	220	100	2 70	-
11	SPARE FOR PERIMETER LIGHTS	1500	220	50	2 30	2-5.5mm ² THW + 1-3.5mm ² TW(G) IN 25mm#C
12	SPARE	1500	220	50	2 20	-
TOTAL		37,575				

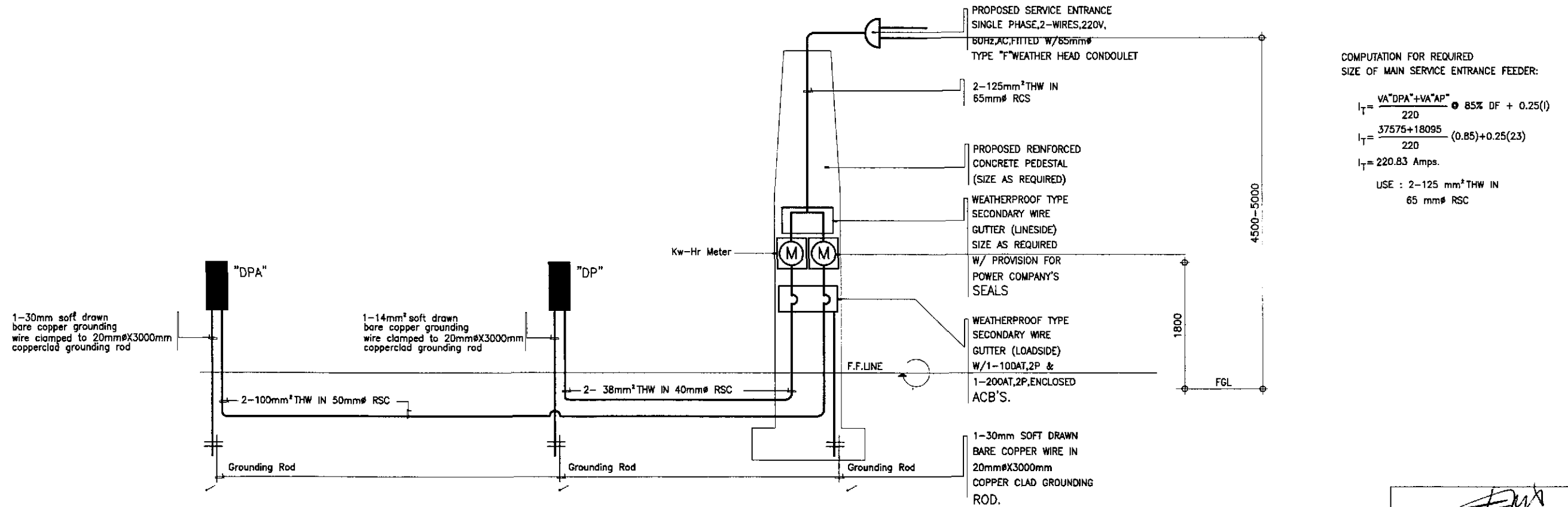
$I_{95\%} = \frac{37575(0.95)}{220} + 0.25(23) = 168 \text{ Amps}$
 USE : 2-100mm² THW + 1-30mm² TW IN 50mm# RSC
 $I_{90\%} = \frac{37575(0.90)}{220} + 1.5(23) = 196.75 \text{ Amps}$
 MAIN ACB: 225AF,2P,250 V,200AT,18 KAIC

SCHEDULE OF LIGHTING FIXTURES & LAMPS

SYMBOLS	DESCRIPTION	MOUNTING & INSTALLATION
①	ONE (1) 40 WATTS, 220V, FLUORESCENT LIGHTING FIXTURES, BOX TYPE	SURFACE CEILING MOUNTED
②	ONE (2) 40 WATTS, 220V, FLUORESCENT LIGHTING FIXTURES, BOX TYPE	SURFACE CEILING MOUNTED
③	ONE (1)-SL-18 LAMP WITH HEXLESS TYPE, MEDIUM BASE PORCELAIN RECEPTACLE	SURFACE CEILING MOUNTED

NOTE:
ALL FLUORESCENT LIGHTING FIXTURES SHALL BE EQUIPPED WITH A HIGH POWER FACTOR PRE-HEAT WITH STARTER TYPE BALLAS, COMPLETE WITH ALL NECESSARY ACCESSORIES, WIRED AND READY FOR USE.

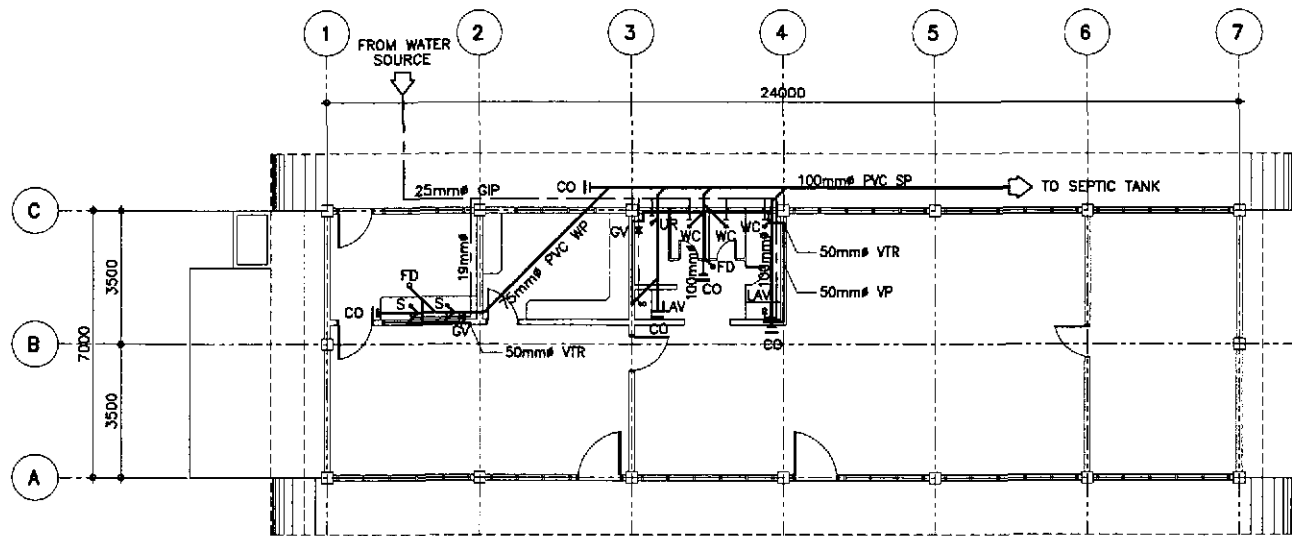
ENGINEER'S FIELD OFFICE/LABORATORY



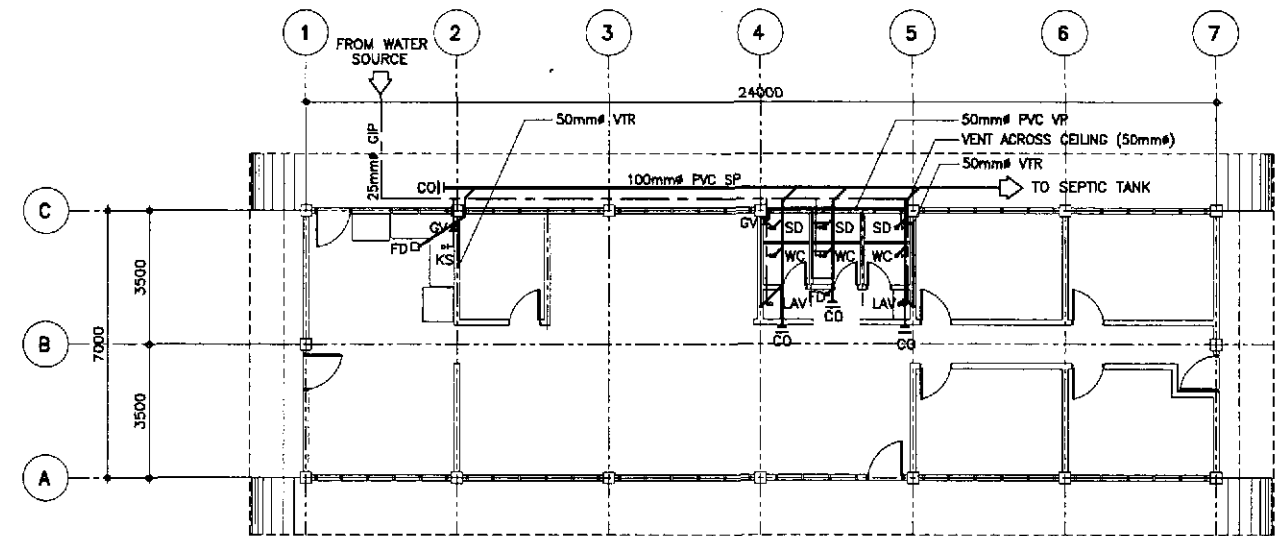
COMPUTATION FOR REQUIRED SIZE OF MAIN SERVICE ENTRANCE FEEDER:
 $I_T = \frac{VA^{DPA} + VA^{AP}}{220} \bullet 85\% DF + 0.25(I)$
 $I_T = \frac{37575 + 18095}{220} (0.85) + 0.25(23)$
 $I_T = 220.83 \text{ Amps}$
 USE : 2-125 mm² THW IN 65 mm# RSC

1 ELECTRICAL RISER DIAGRAMS
FE-03 NOT TO SCALE

ERNESTO M. ANTIOQUIA
 ENGINEER
 PTR. NO. 7403884 P.E.E. NO. 2913
 ISSUED ON 01/02/2002 ISSUED AT CABUYAO, LAGUNA
 T.J.N. 108-382-379

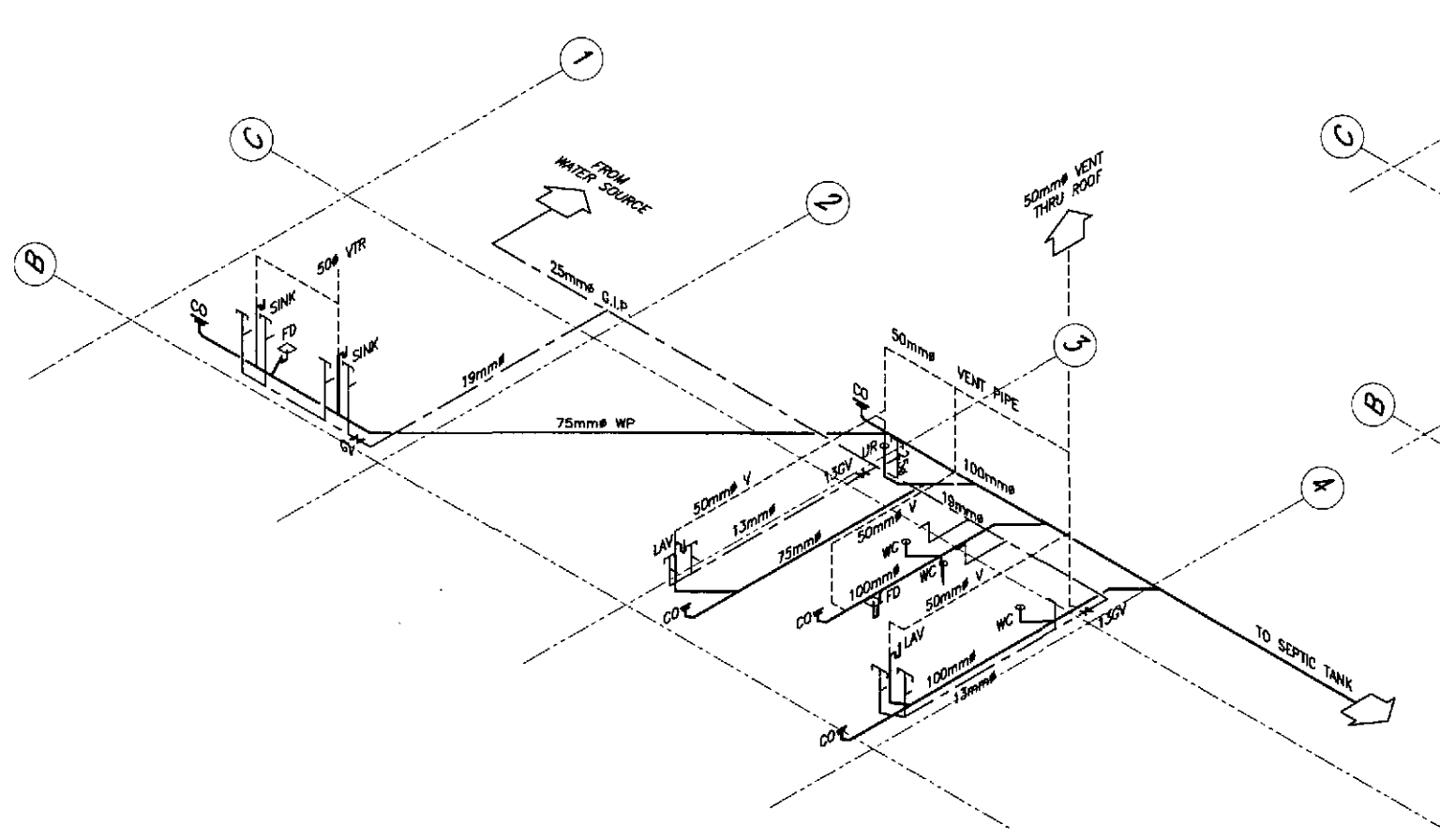


1
FP-01
ENGINEER'S FIELD OFFICE
SEWER AND WATER LINE LAYOUT
SCALE 1:100

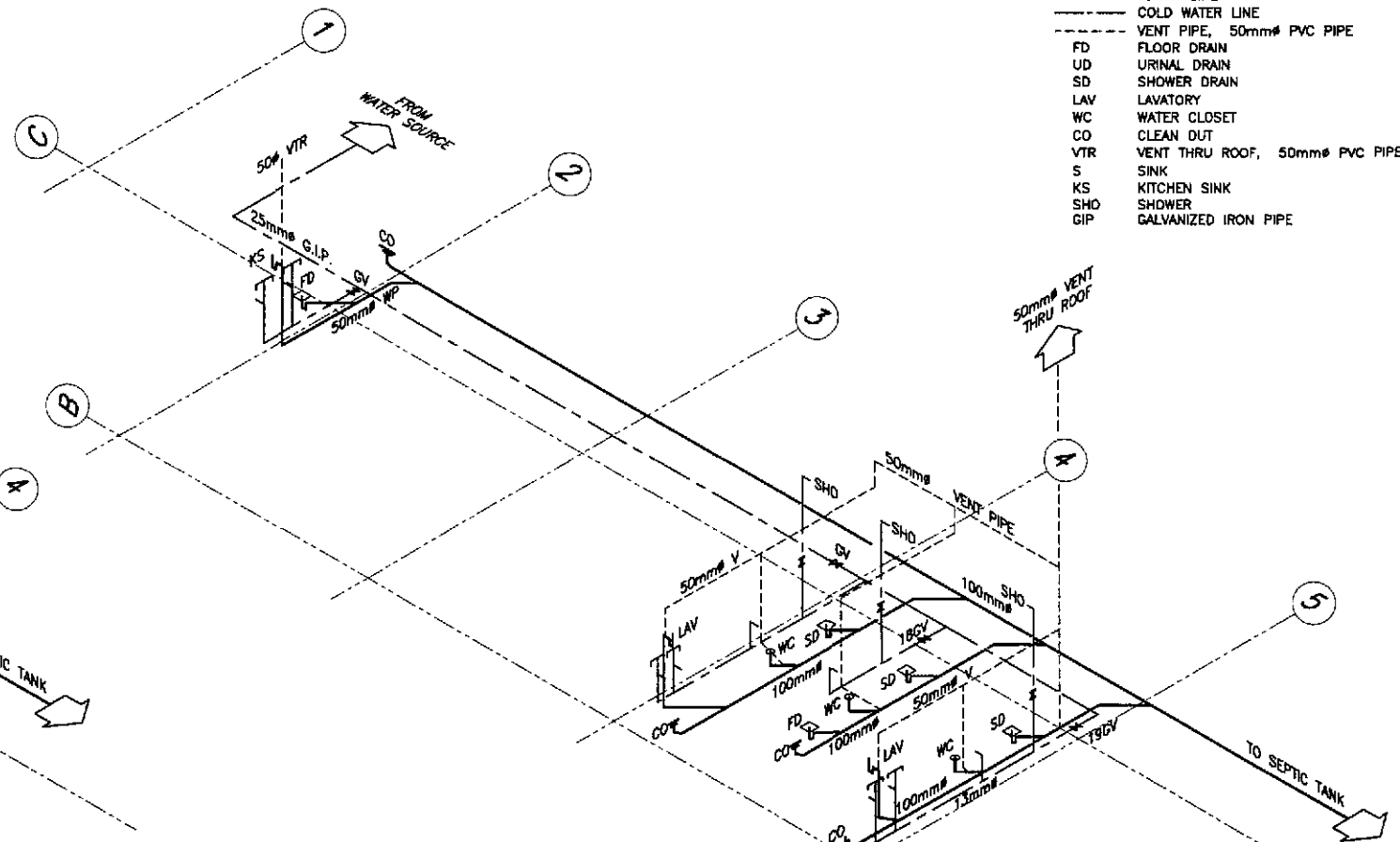


2
FP-01
ENGINEER'S LIVING QUARTER
SEWER AND WATER LINE LAYOUT
SCALE 1:100

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

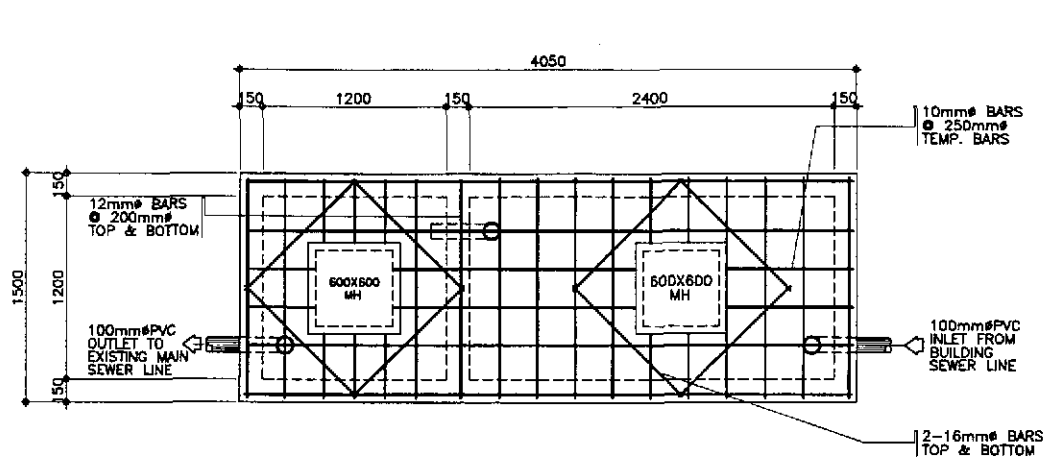


4
FP-01
(SHOWING SEWER AND WATER LINE)
ISOMETRIC DIAGRAM
SCALE 1:50

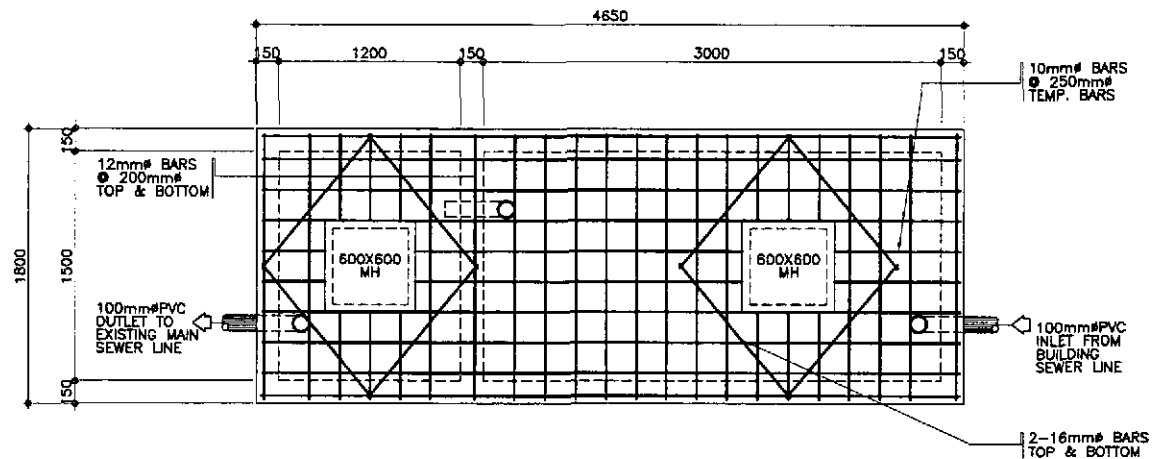
RAFAELITA S. MARIA
SANITARY ENGINEER

PTR. NO. 0083138 P.R.C. NO. 0000695
ISSUED ON 03/28/2002 T.I.M. 119-878-225
ISSUED AT SAN MATEO, RIZAL

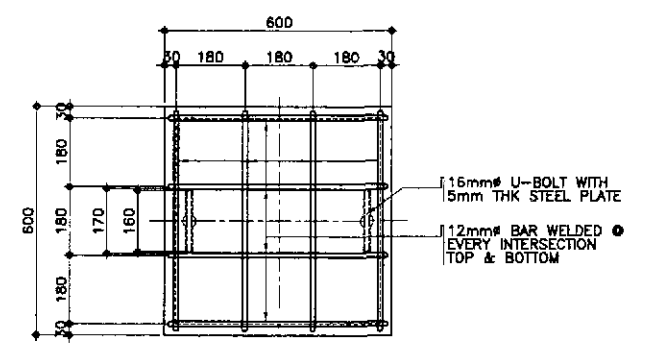
	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	DESIGNED	<i>[Signature]</i>	BUREAU OF DESIGN			THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	ENGINEER'S FIELD OFFICE AND LIVING QUARTERS SEWER AND WATER LINE LAYOUT AND ISOMETRIC DIAGRAM	FP-01
	CHECKED	<i>[Signature]</i>	OFFICE OF THE SECRETARY			FULL SIZE A1			
SUBMITTED	<i>[Signature]</i>	Submitted By: DANILO C. TRAJANO Project Director	Reviewed By: EMANUEL P. CUNTAPAY Chief, Architectural Division	Recommended By: GILBERTO S. REYES OIC, Director IV	Manuel M. Boncan Undersecretary	Simeon A. Datumanong Secretary			



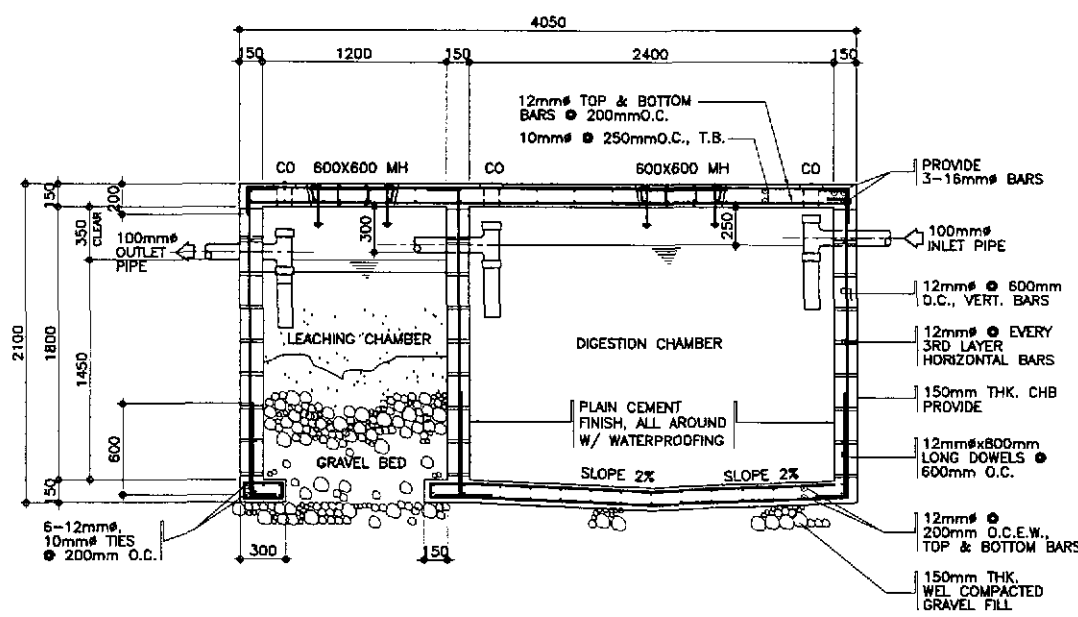
1A PLAN
FP-02 SCALE 1:20



1C PLAN
FP-02 SCALE 1:20

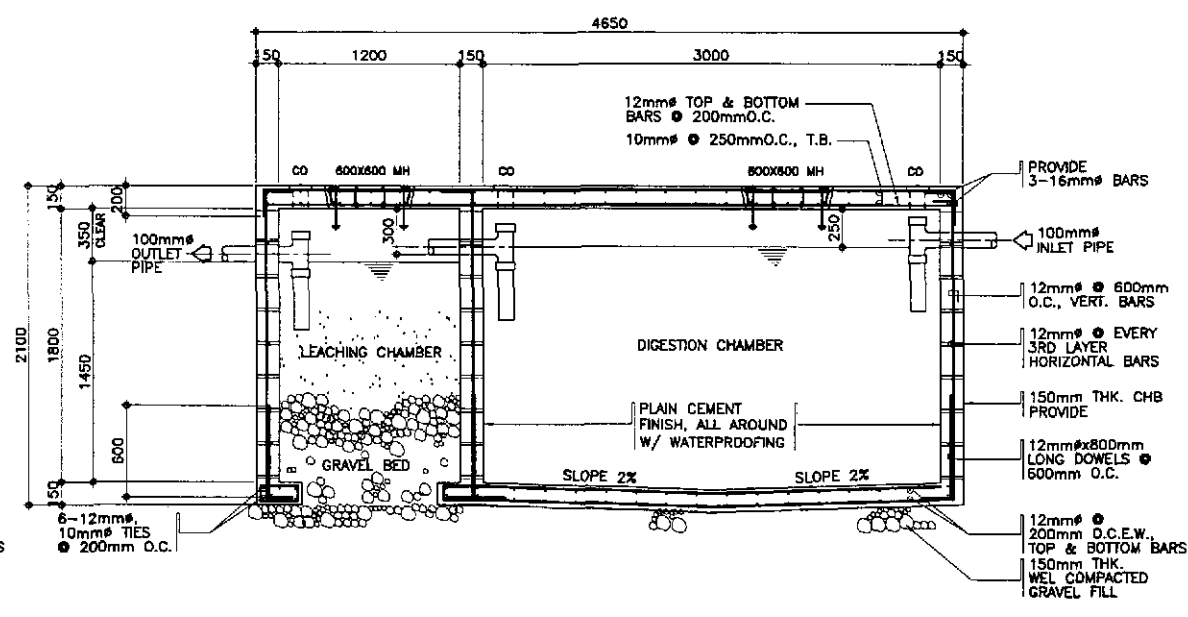


2A PLAN
FP-02 SCALE 1:20



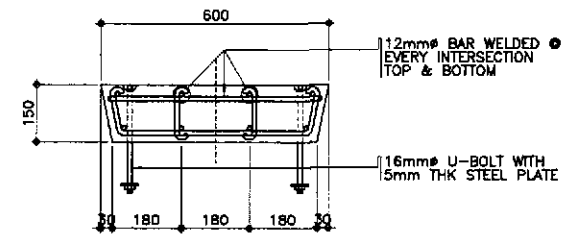
1B SECTION
FP-02 SCALE 1:20

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

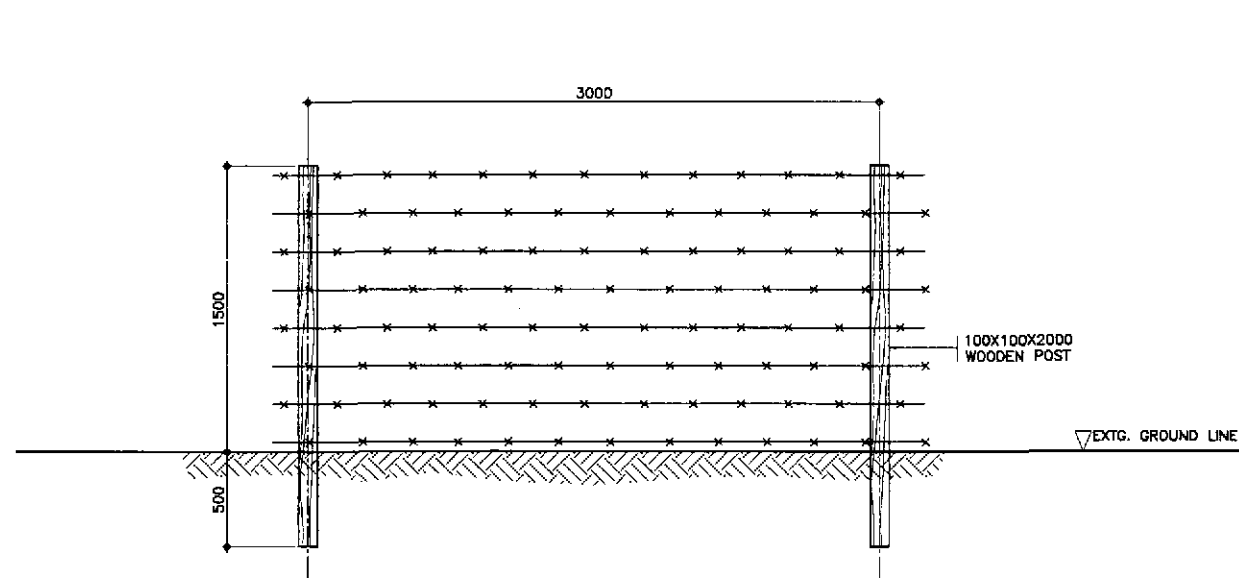
- GENERAL NOTES:
1. ALL PLUMBING WORKS INCLUDED HEREIN EXECUTED ACCORDING TO THE PROVISIONS AND REQUIREMENTS OF THE PHILIPPINE NATIONAL PLUMBING CODE.
 2. SOIL AND WASTE PIPE LINE SHALL BE PVC, SIZE AS IN DRAWING.
 3. ALL WATER LINES SHALL BE G.I. PIPE SCHEDULE 40 AND SIZE OF PIPES TO THE FIXTURES SHALL 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

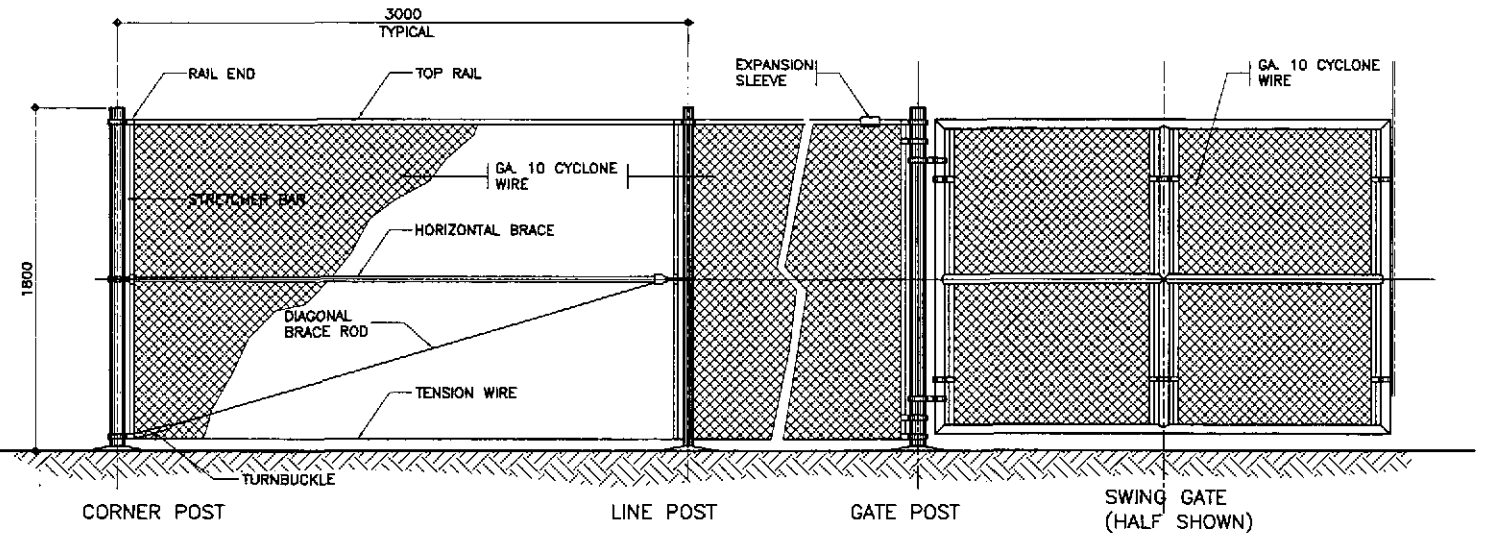
Manuel M. Bonan
SANITARY ENGINEER

PTR. NO. 0083138 P.R.C. NO. 0000685
ISSUED ON 03/26/2002 T.L.N. 118-878-225
ISSUED AT SAN MATEO, RIZAL

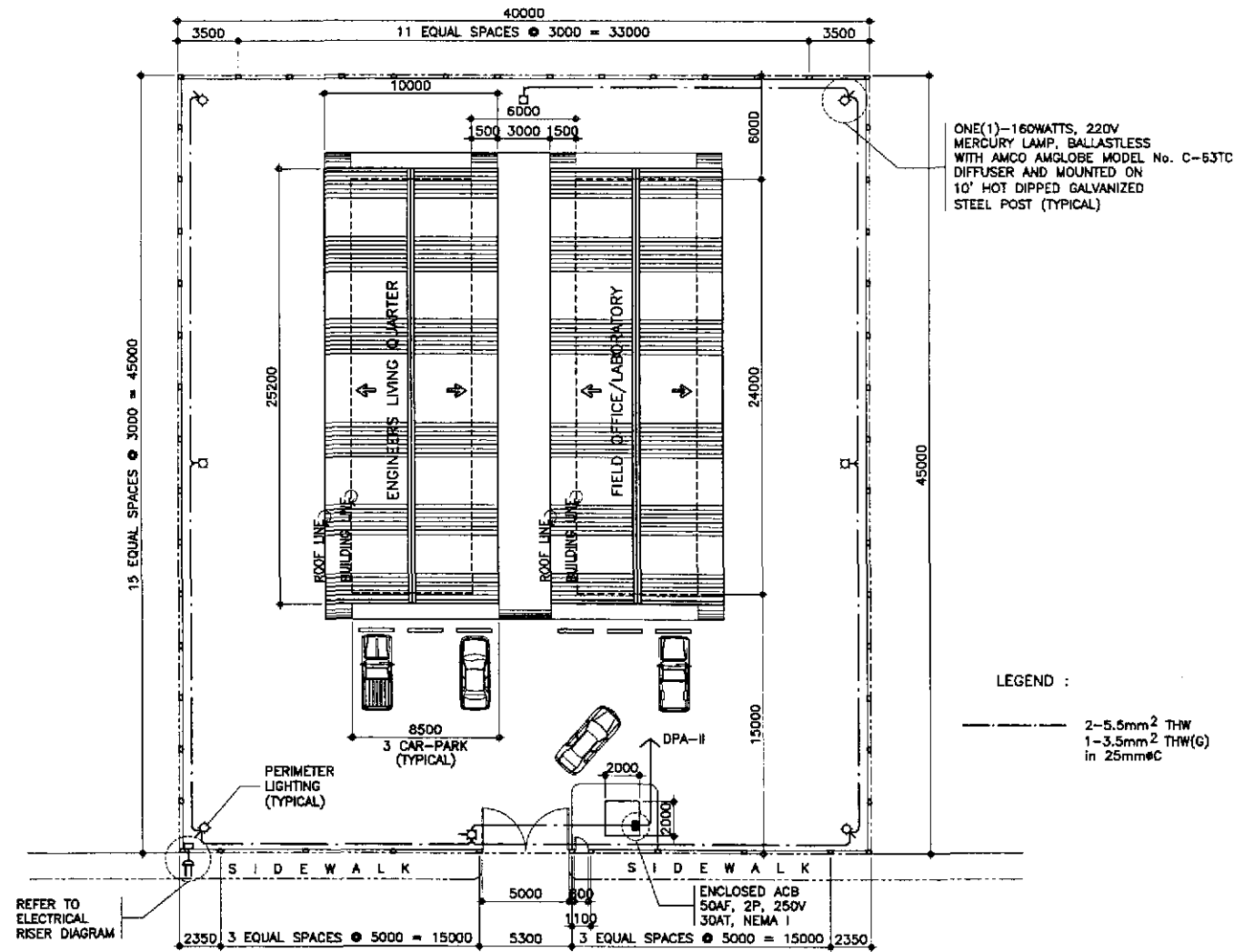
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	CHECKED	9/18/02	<i>[Signature]</i>		BUREAU OF DESIGN	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	ENGINEER'S FIELD OFFICE AND LIVING QUARTERS SEPTIC TANK DETAILS	FP-02			
SUBMITTED	9/20/02	<i>[Signature]</i>	OFFICE OF THE SECRETARY	BUREAU OF DESIGN			PLARIDEL BYPASS - CONTRACT PACKAGE II	FULL SIZE A1				
					Submitted By: DANILO C. TRAJANO Project Director	Reviewed By: EMMANUEL P. CLINTAPAY Chief, Architectural Division	Recommended By: GILBERTO S. REYES D.C. Director IV	Recommended By: MANUEL M. BONAN Undersecretary	Approved By: SIMEON A. DATUMANONG Secretary			



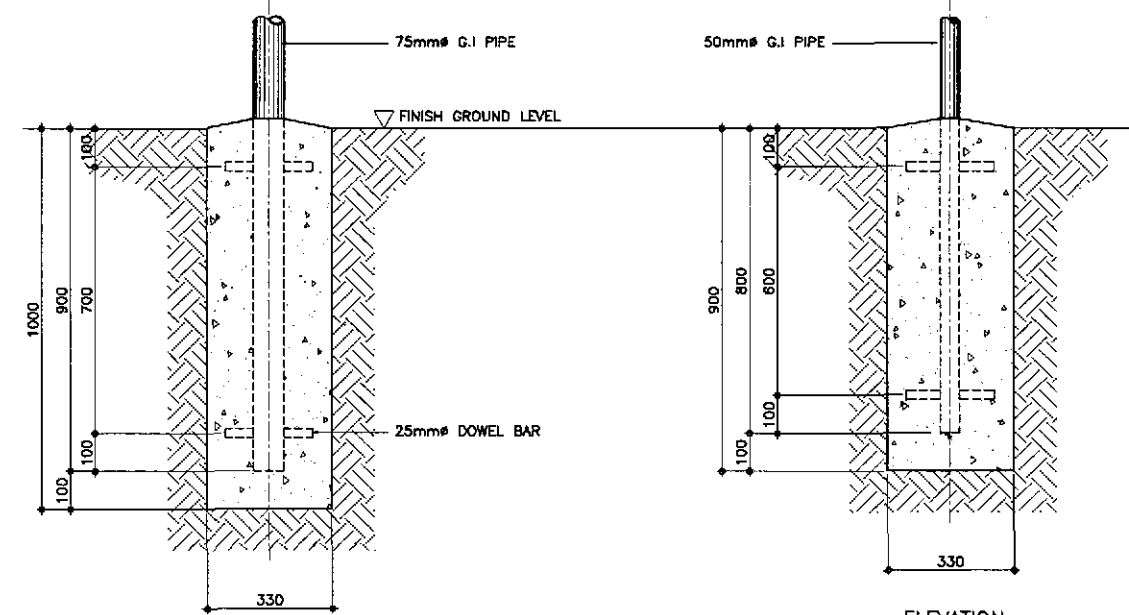
3 TYPICAL ELEVATION FENCE (REAR & SIDE)
SCALE 1:20



2 TYPICAL ELEVATION - FENCE AND GATE
SCALE 1:20



1 PLOT PLAN
SCALE 1:200



ELEVATION
CORNER AND GATE POST
PLAN

ELEVATION
LINE POST
PLAN

4 TYPICAL FOUNDATION DETAIL
SCALE 1:10

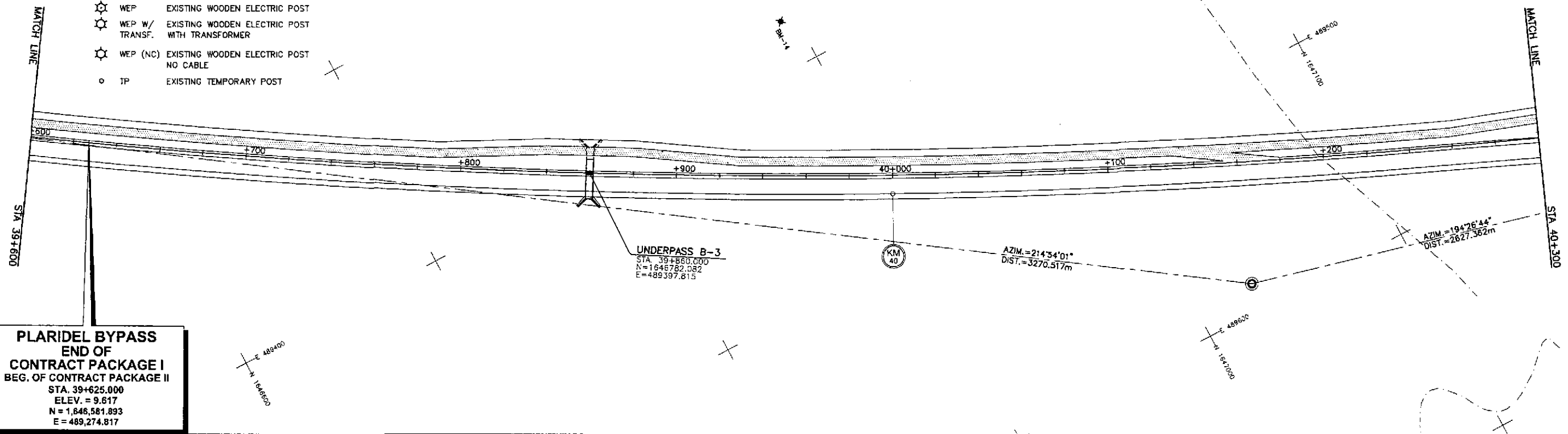
ARNOLD P. GONZALES
ENGINEER
PTR. NO. 5846340 P.R.C. NO. 53457
ISSUED ON 04/28/2002 T.I.N. 138-082-682
ISSUED AT SAN JUAN, M.M.

	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) PLARIDEL BYPASS - CONTRACT PACKAGE II	SCALE :	SHEET CONTENTS : ENGINEER'S FIELD OFFICE AND LIVING QUARTERS PLOT PLAN, ELEVATION OF FENCE & GATE TYPICAL FOUNDATION DETAILS	SHEET NO. :	
	CHECKED				BUREAU OF DESIGN					AS SHOWN		FULL SIZE A1	FX-01
	SUBMITTED				Submitted By:	Reviewed By:	Recommended By:	Approved By:					
			DANILO C. TRAJANO Project Director	EMMANUEL P. CUNTAPAY Chief, Architectural Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONGAAN Undersecretary	SIMEON A. DATUMANONG Secretary						

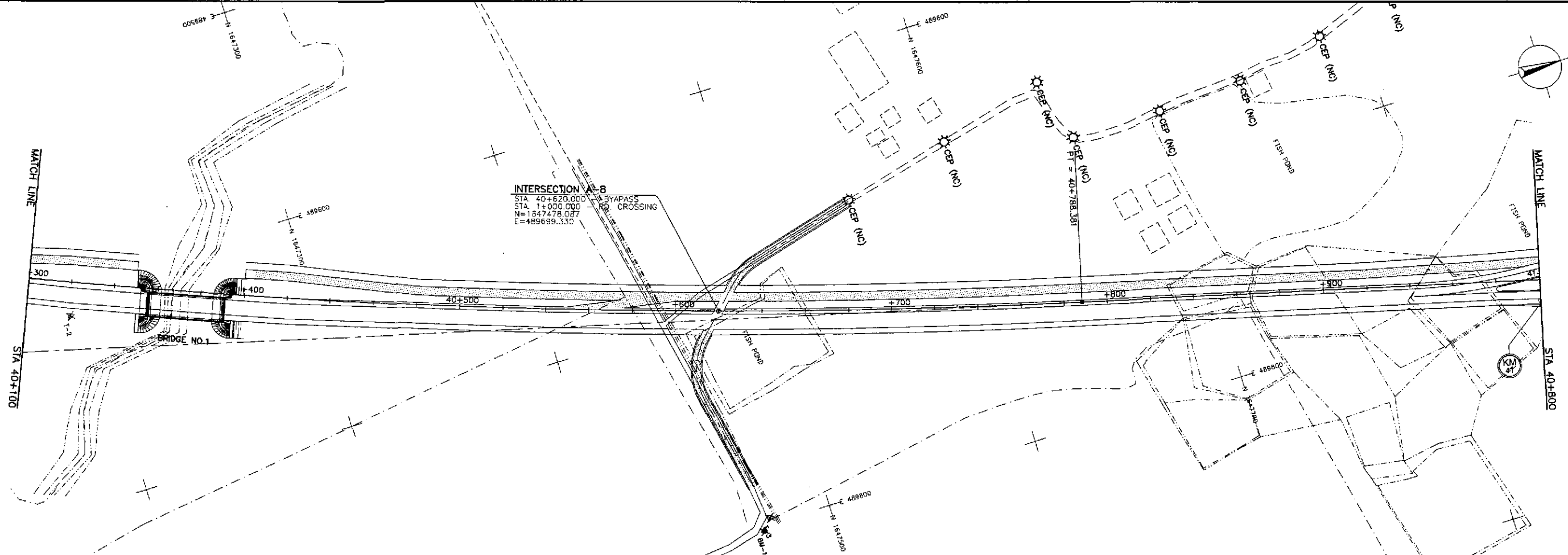
OTHERS

LEGEND:

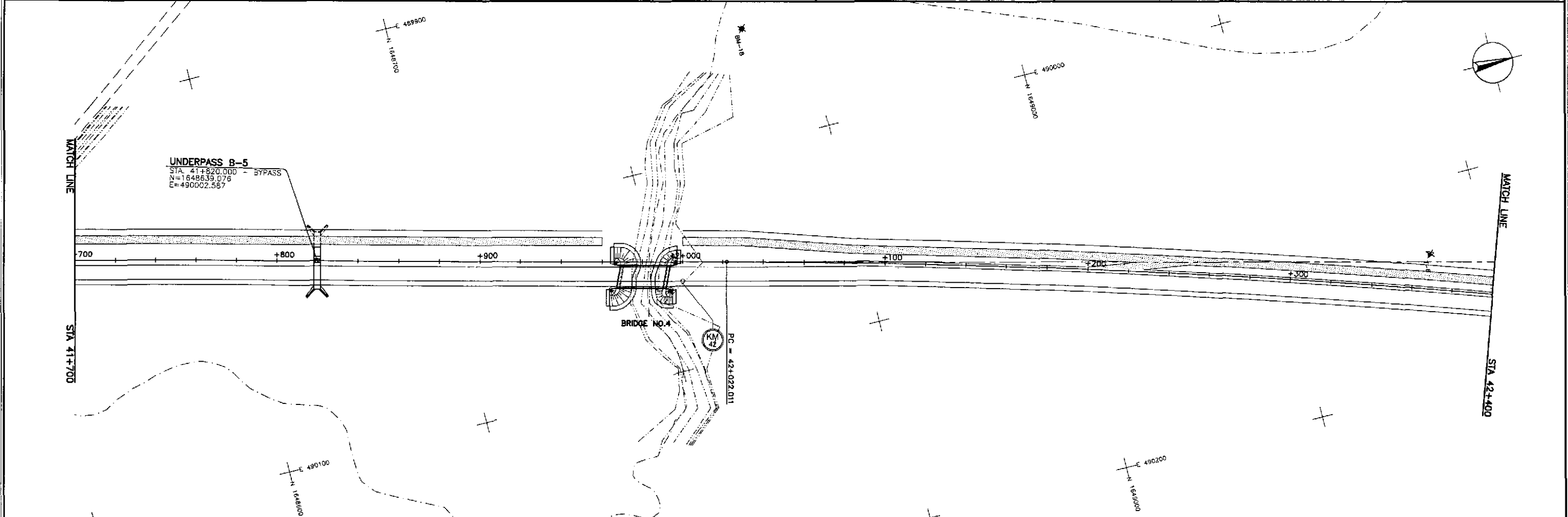
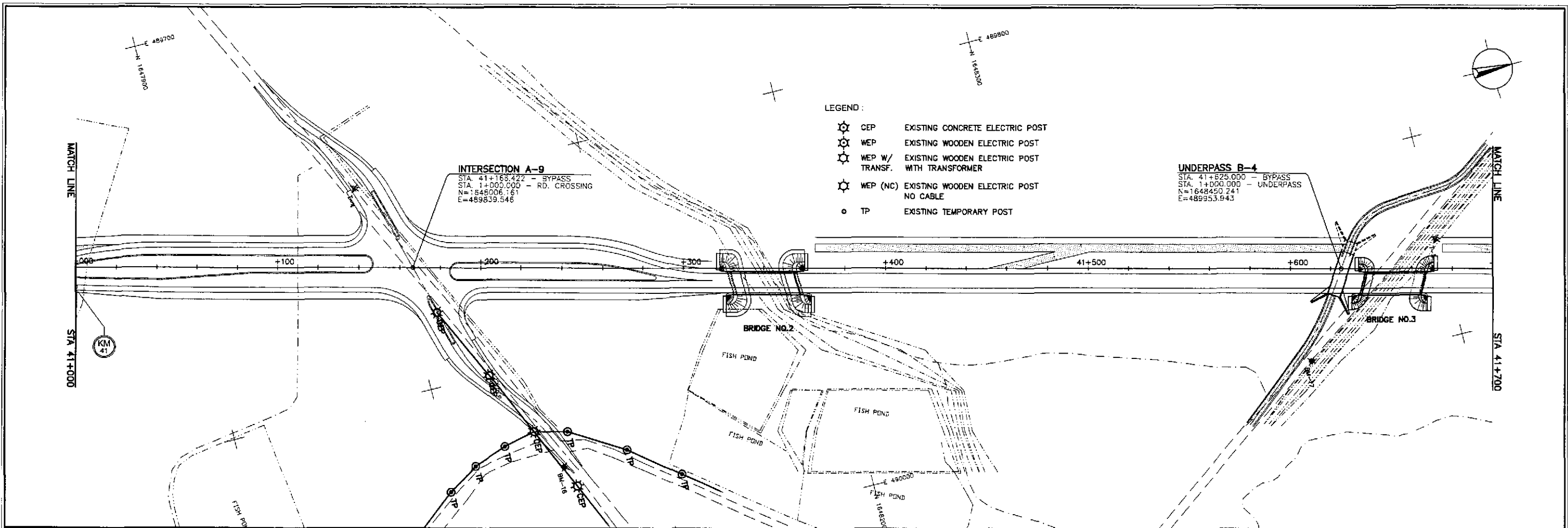
- ⊗ CEP EXISTING CONCRETE ELECTRIC POST
- ⊗ WEP EXISTING WOODEN ELECTRIC POST
- ⊗ WEP W/ TRANSF. EXISTING WOODEN ELECTRIC POST WITH TRANSFORMER
- ⊗ WEP (NC) EXISTING WOODEN ELECTRIC POST NO CABLE
- TP EXISTING TEMPORARY POST



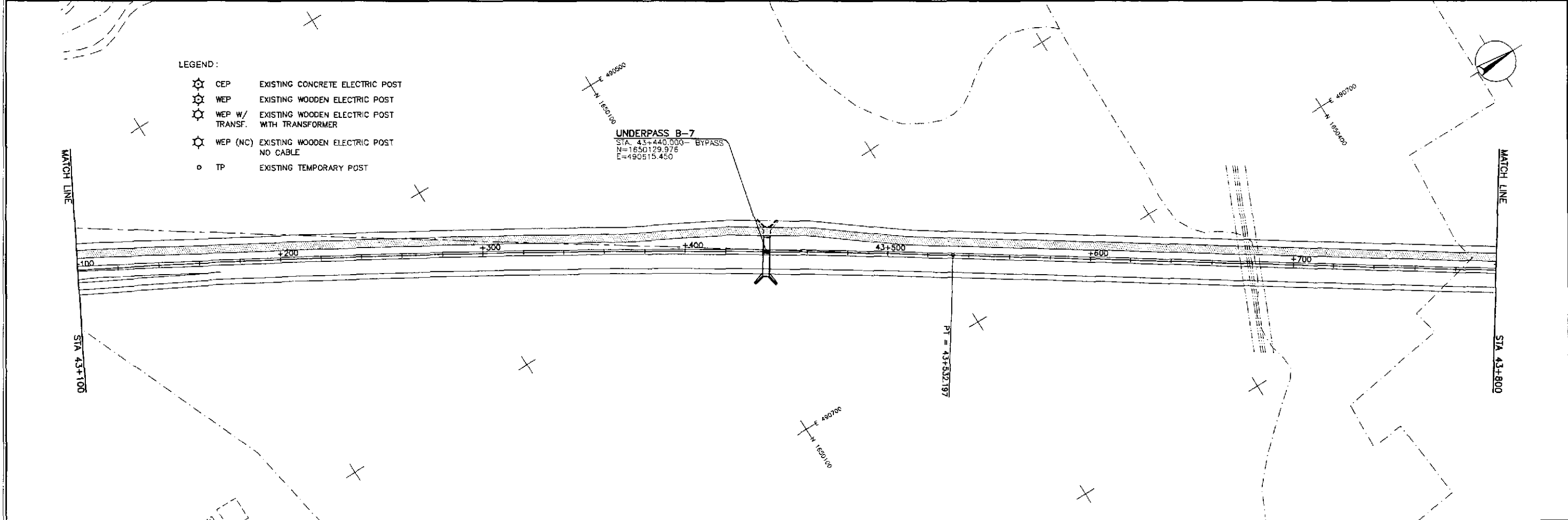
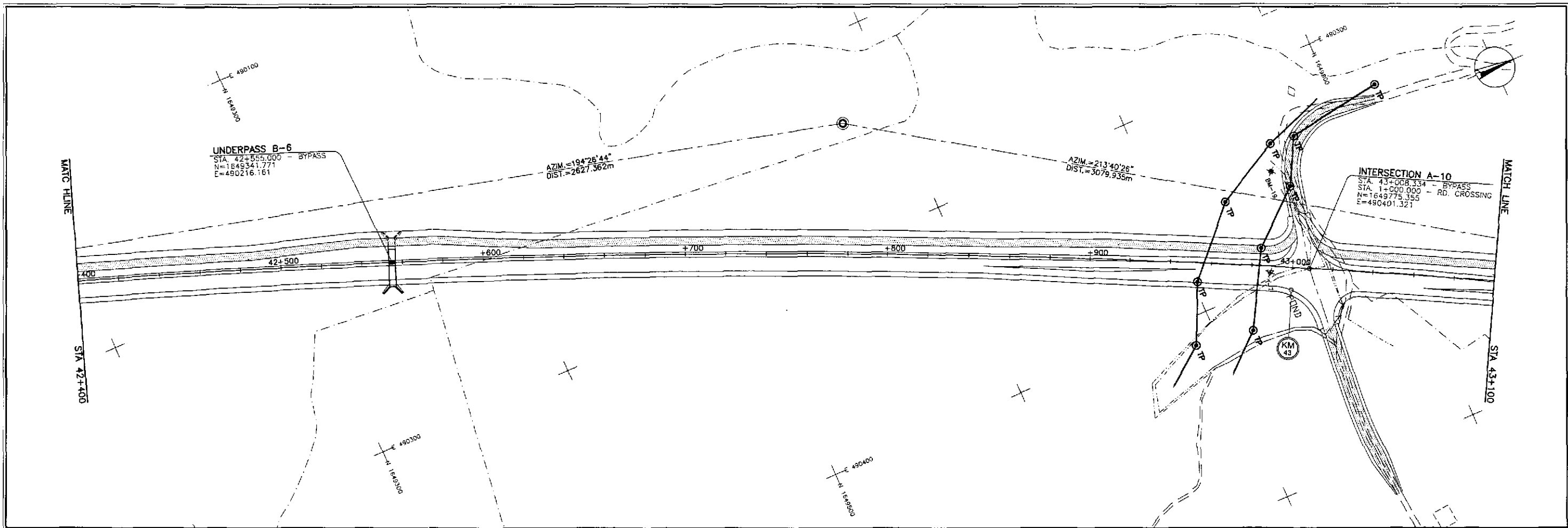
PLARIDEL BYPASS
END OF CONTRACT PACKAGE I
BEG. OF CONTRACT PACKAGE II
 STA. 39+625.000
 ELEV. = 9.617
 N = 1,846,581.893
 E = 489,274.817



	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	7/18/02	<i>[Signature]</i>	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	UTILITY RELOCATION REFERENCE LAYOUT PLAN ALONG BYPASS STA. 39+625 - STA. 41+000	OE-01
	SUBMITTED	7/20/02	<i>[Signature]</i>	Submitted By:	Reviewed By:	Recommended By:	Approved By:	PLARIDEL BYPASS - CONTRACT PACKAGE II	FULL SIZE A1		
				DANILO C. TRAJANO Project Director	JOSEFINA M. ALADAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary			

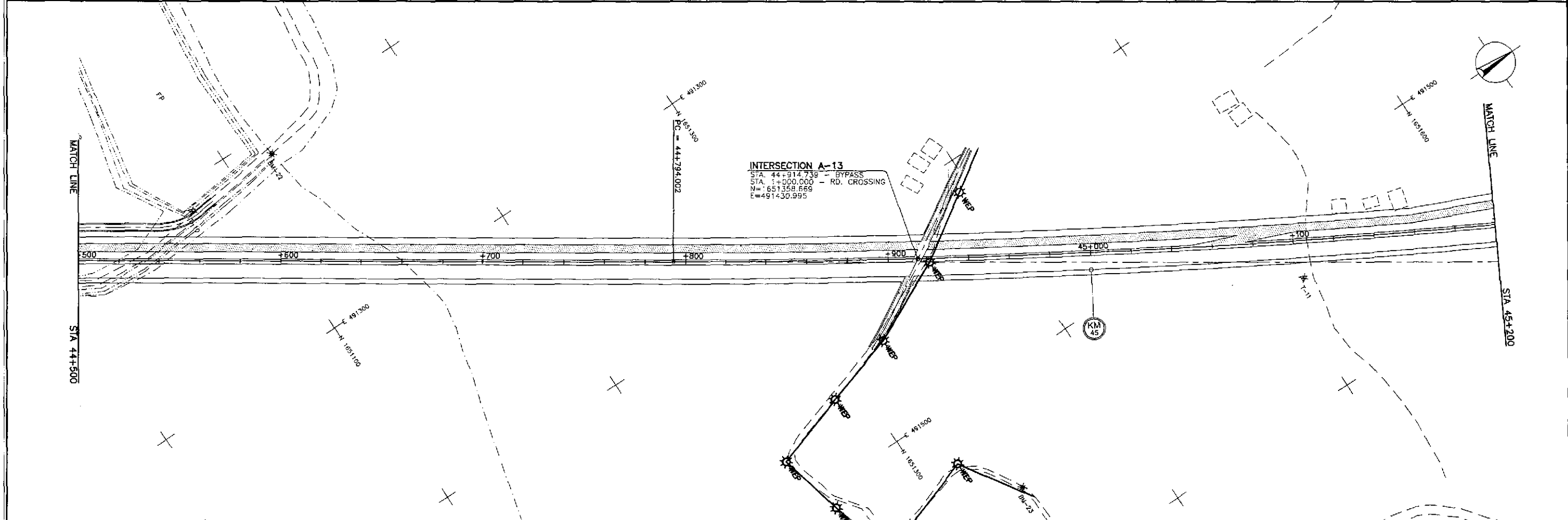
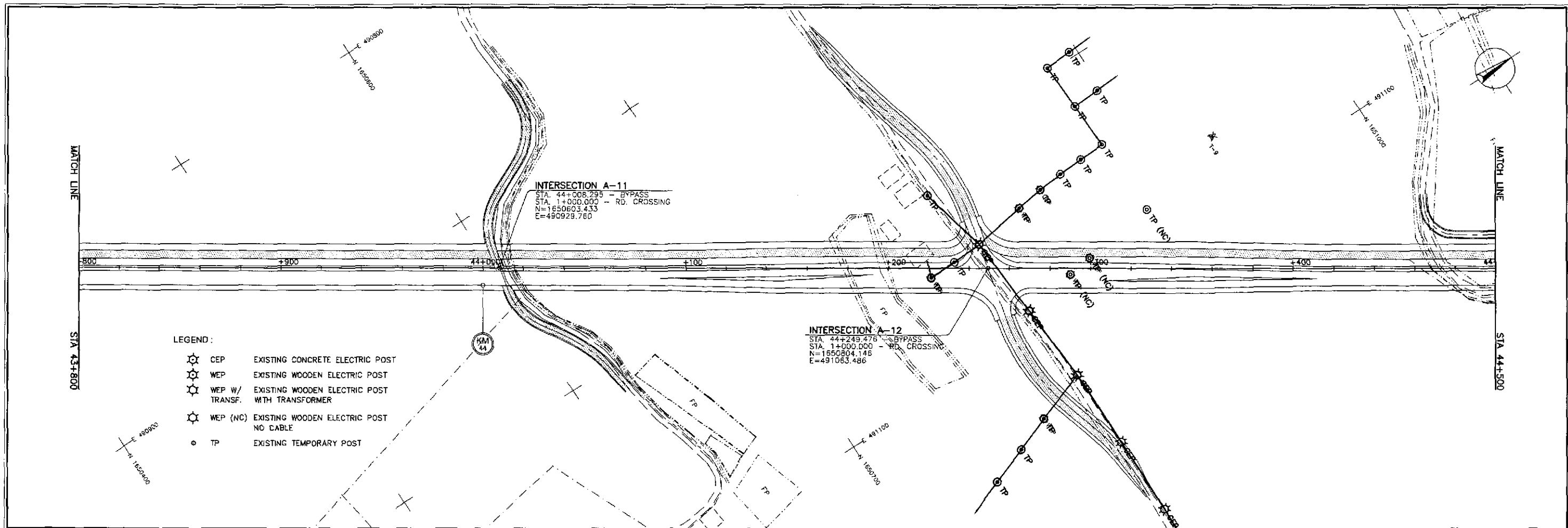


	DESIGNED	9/18/02	<i>[Signature]</i>		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE II	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : UTILITY RELOCATION REFERENCE LAYOUT PLAN ALONG BYPASS STA. 41+000 - STA. 42+400	SHEET NO. : OE-02
	CHECKED	9/20/02	<i>[Signature]</i>		BUREAU OF DESIGN							
	SUBMITTED	9/20/02	<i>[Signature]</i>		Submitted By: DANILO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES OIC, Director N	Recommended By: MANUEL M. BONDAN Undersecretary				

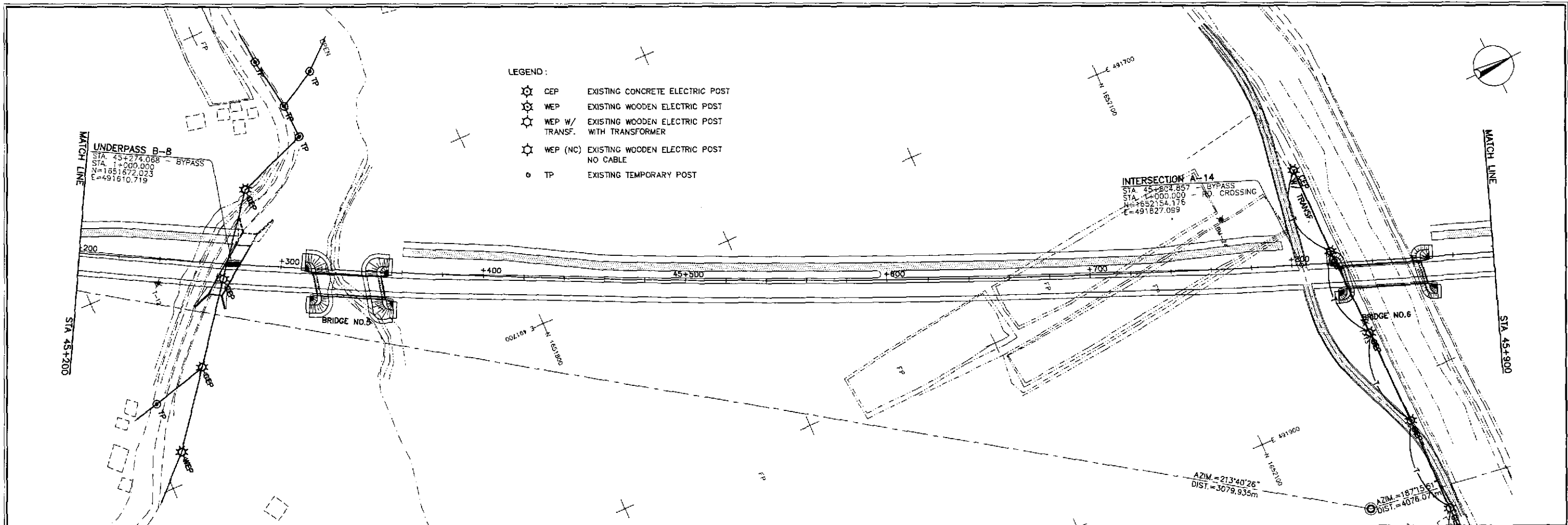


- LEGEND:
- ⊗ CEP EXISTING CONCRETE ELECTRIC POST
 - ⊗ WEP EXISTING WOODEN ELECTRIC POST
 - ⊗ WEP W/ TRANSF. EXISTING WOODEN ELECTRIC POST WITH TRANSFORMER
 - ⊗ WEP (NC) EXISTING WOODEN ELECTRIC POST NO CABLE
 - TP EXISTING TEMPORARY POST

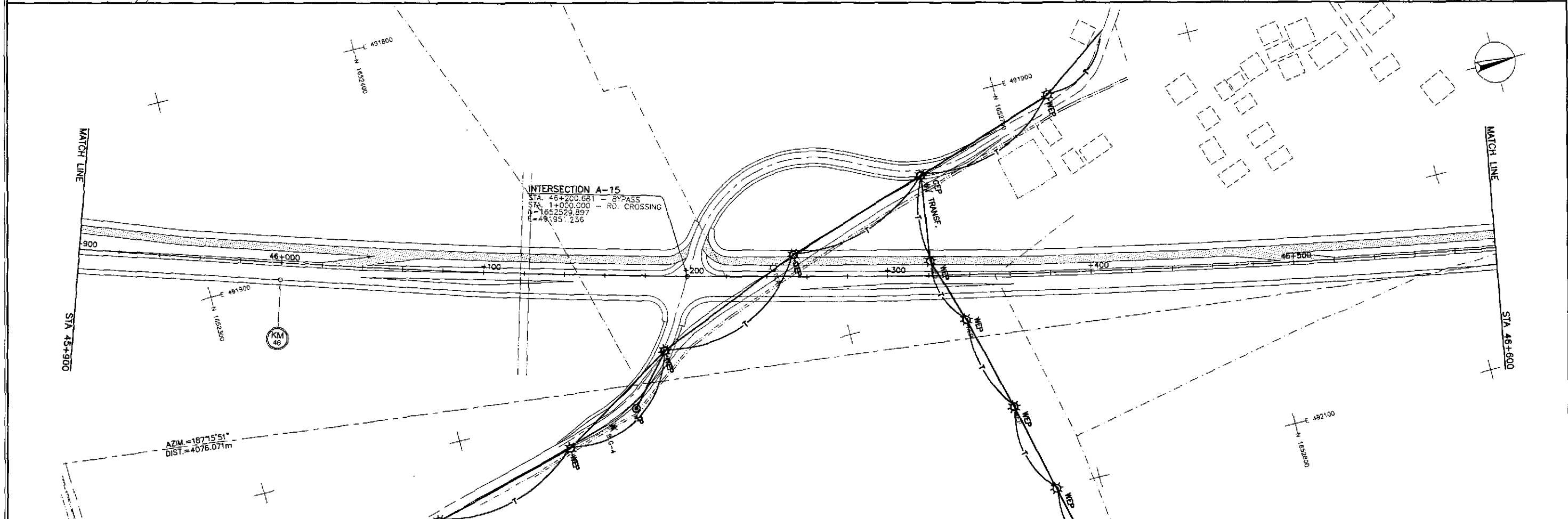
<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p> <p> KATAHIRA & ENGINEERS INTERNATIONAL</p> <p> YACHIYO ENGINEERING CO., LTD.</p>	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :		SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/10/12	<i>[Signature]</i> ACACIO		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)		1:1000	UTILITY RELOCATION REFERENCE LAYOUT PLAN ALONG BYPASS STA. 42+400 - STA. 43+800	OE-03
	SUBMITTED	9/10/12	<i>[Signature]</i> S. CASSE		PLARIDEL BYPASS - CONTRACT PACKAGE II		FULL SIZE A1		
Submitted By:		BUREAU OF DESIGN		OFFICE OF THE SECRETARY					
DANILO C. TRAJAND Project Director		JOSEFINA M. ALAGAR Chief, Highways Division		GILBERTO S. REYES OIC, Director IV		MANUEL M. BONOAN Undersecretary		SIMEON A. DATUMANONG Secretary	



 JAPAN INTERNATIONAL COOPERATION AGENCY		 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) PLARIDEL BYPASS - CONTRACT PACKAGE II		SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : UTILITY RELOCATION REFERENCE LAYOUT PLAN ALONG BYPASS STA. 43+800 - STA. 45+200	SHEET NO. : OE-04
DESIGNED	DATE	SIGNATURE	Submitted By:	Reviewed By:	Recommended By:	Approved By:		
CHECKED	9/18/02	<i>[Signature]</i>	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES Chf. Director II	MANUEL M. BONOAN Undersecretary	Approved By: (See cover sheet for Signature/Approval) SIMEON A. DATUMANONG Secretary	
SUBMITTED	9/13/02	<i>[Signature]</i>						



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



JICA
 JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS
 INTERNATIONAL

YEO YACHIYO ENGINEERING CO., LTD.

DATE	SIGNATURE
DESIGNED 9/2/02	<i>[Signature]</i>
CHECKED 9/10/02	<i>[Signature]</i>
SUBMITTED 9/10/02	<i>[Signature]</i>

REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	
BUREAU OF DESIGN	OFFICE OF THE SECRETARY
Submitted By: PJHL - PMO	Recommended By: (See cover sheet for Signature/Approval)
Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Approved By: SIMEON A. DATUMANONG Secretary
Recommended By: GILBERTO S. REYES OIC, Director IV	
Submitted By: DANILLO C. TRAJANO Project Director	

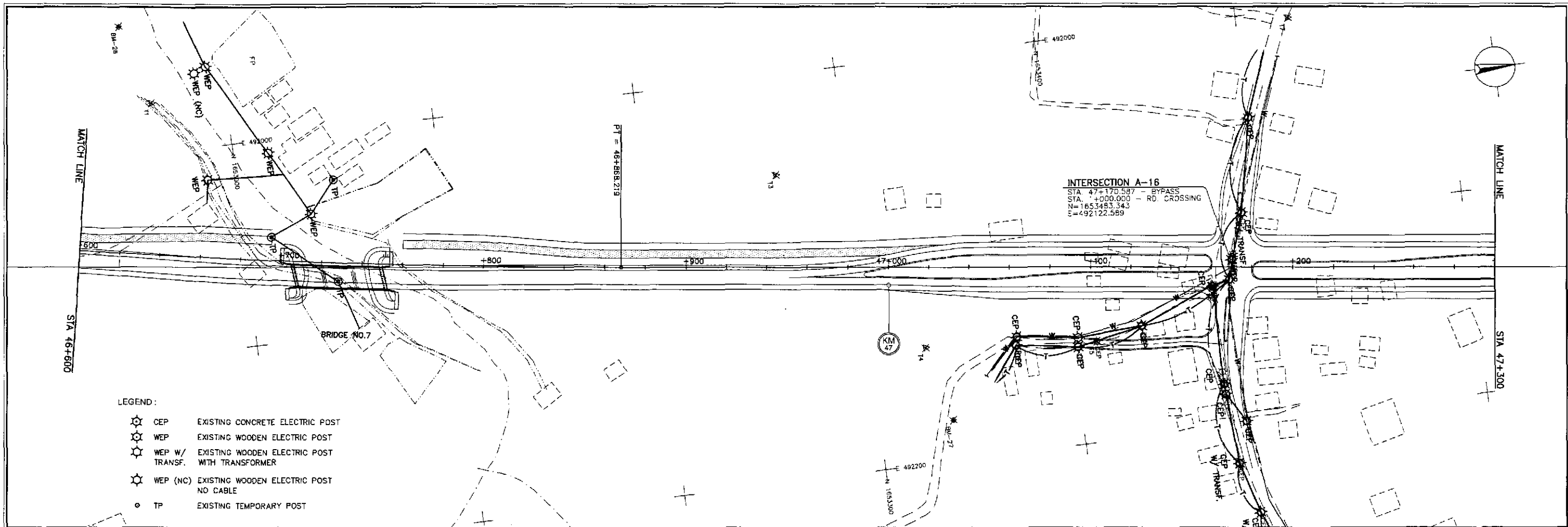
PROJECT AND LOCATION :
 THE DETAILED DESIGN STUDY ON
 UPGRADING INTER-URBAN HIGHWAY SYSTEM
 ALONG THE PAN-PHILIPPINE HIGHWAY
 (Plaridel, Cabanatuan and San Jose Bypasses)

PLARIDEL BYPASS - CONTRACT PACKAGE II

SCALE :
 1:1000
 FULL SIZE A1

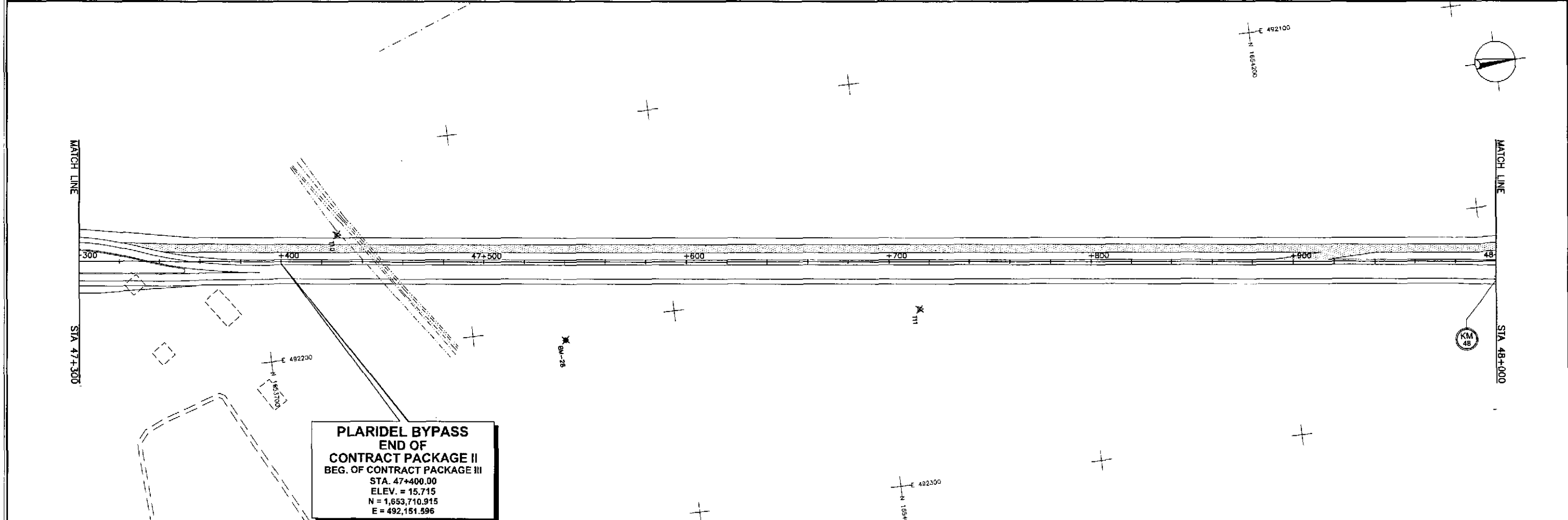
SHEET CONTENTS :
 UTILITY RELOCATION REFERENCE
 LAYOUT PLAN
 ALONG BYPASS
 STA. 45+200 - STA. 46+600

SHEET NO. :
OE-05



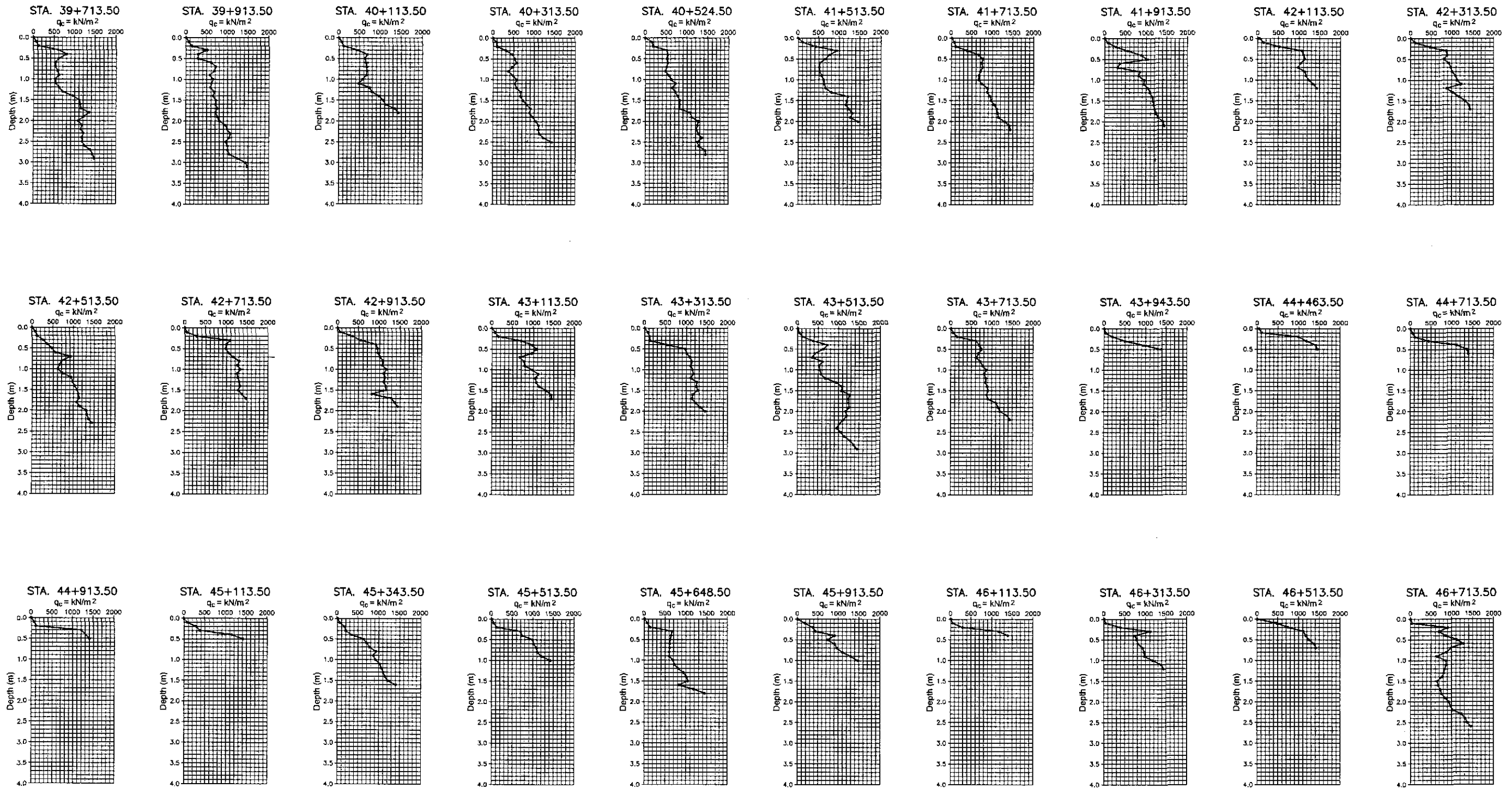
LEGEND:

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



PLARIDEL BYPASS
END OF
CONTRACT PACKAGE II
BEG. OF CONTRACT PACKAGE III
 STA. 47+400.00
 ELEV. = 15.715
 N = 1,653,710.915
 E = 492,151.596

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, Cabatuan and San Jose Bypasses)		SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : UTILITY RELOCATION REFERENCE LAYOUT PLAN ALONG BYPASS STA. 46+600 - STA. 47+400	SHEET NO. : OE-06
DESIGNED 9/12/02 ACACIO	CHECKED 9/20/02 S. GARCIA COSA	SUBMITTED 9/23/02 DANILLO C. TRAJANO Project Director	REVIEWED BY: JOSEFINA M. ALAGAR Chief, Highways Division	RECOMMENDED BY: GILBERTO S. REYES OIC, Director IV	RECOMMENDED BY: MANUEL M. BONDAN Undersecretary	APPROVED BY: SIMEON A. DATUMANONG Secretary		



2 GEOTECHNICAL SURVEY - PORTABLE CONE PENETRATION TEST (CPT)
 OC-01 NOT TO SCALE

	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	7/20/12	S. O. Ochoa	Submitted By:		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. 39+713.50 - STA. 46+513.50	OC-01
	CHECKED	7/20/12	S. O. Ochoa	Reviewed By:	Recommended By:	Recommended By:	OFFICE OF THE SECRETARY	PLARIDEL BYPASS - CONTRACT PACKAGE II	FULL SIZE A1		
SUBMITTED	7/23/12	W. K. Kitchell	DANILO C. TRAJAND Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONGAN Undersecretary	SIMEON A. DATUMANONG Secretary				