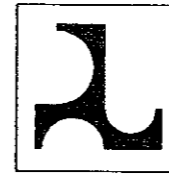




JAPAN INTERNATIONAL  
COOPERATION AGENCY

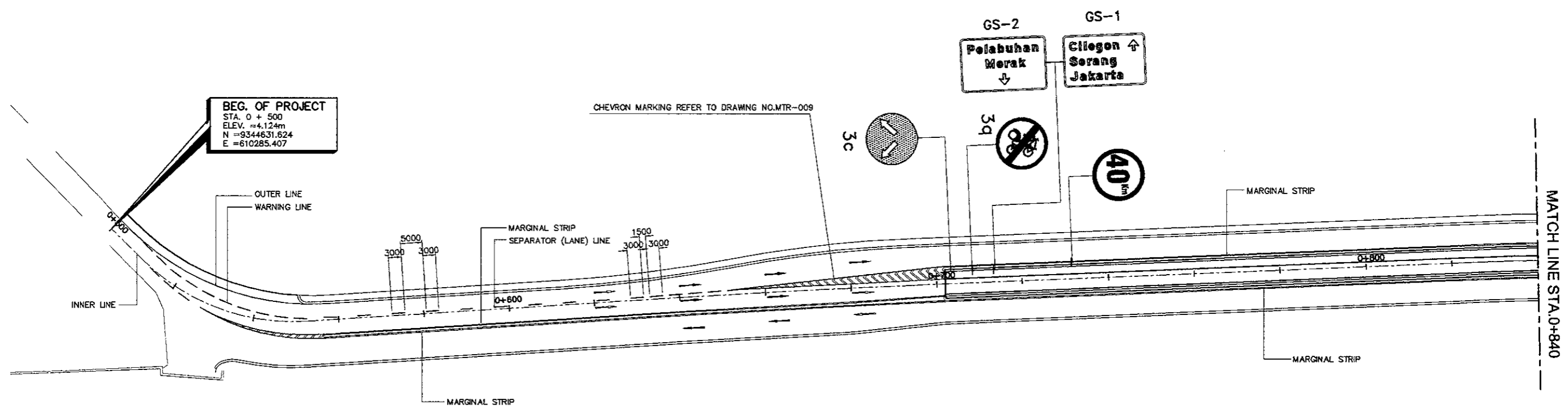
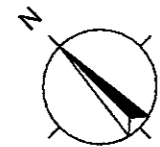


DIRECTORATE GENERAL OF HIGHWAY  
MINISTRY OF PUBLIC WORKS  
REPUBLIC OF INDONESIA

# TRAFFIC CONTROL

 **Kei** KATAHIRA & ENGINEERS INTERNATIONAL

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETERS.
  2. FOR PAVEMENT MARKING DETAILS REFER TO DWG. MTR-007 & MTR-008.
  3. FOR STANDARD TRAFFIC SIGN DETAILS, REFER TO DWGS. MTR-010 TO MTR-014.
  4. LOCATION OF SIGNS SHALL BE VERIFIED DURING CONSTRUCTION.
  5. OVERHEAD GUIDE SIGN SHALL BE ATTACHED TO A CANTILEVER TYPE SIGNS SUPPORT, REFER TO DWG.MTR-016 AND MTR-017.
  6. DELINEATORS SHALL BE INSTALLED AT FACE OF NEW JERSEY BARRIER AND PARAPET.

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Date		Date		Date	

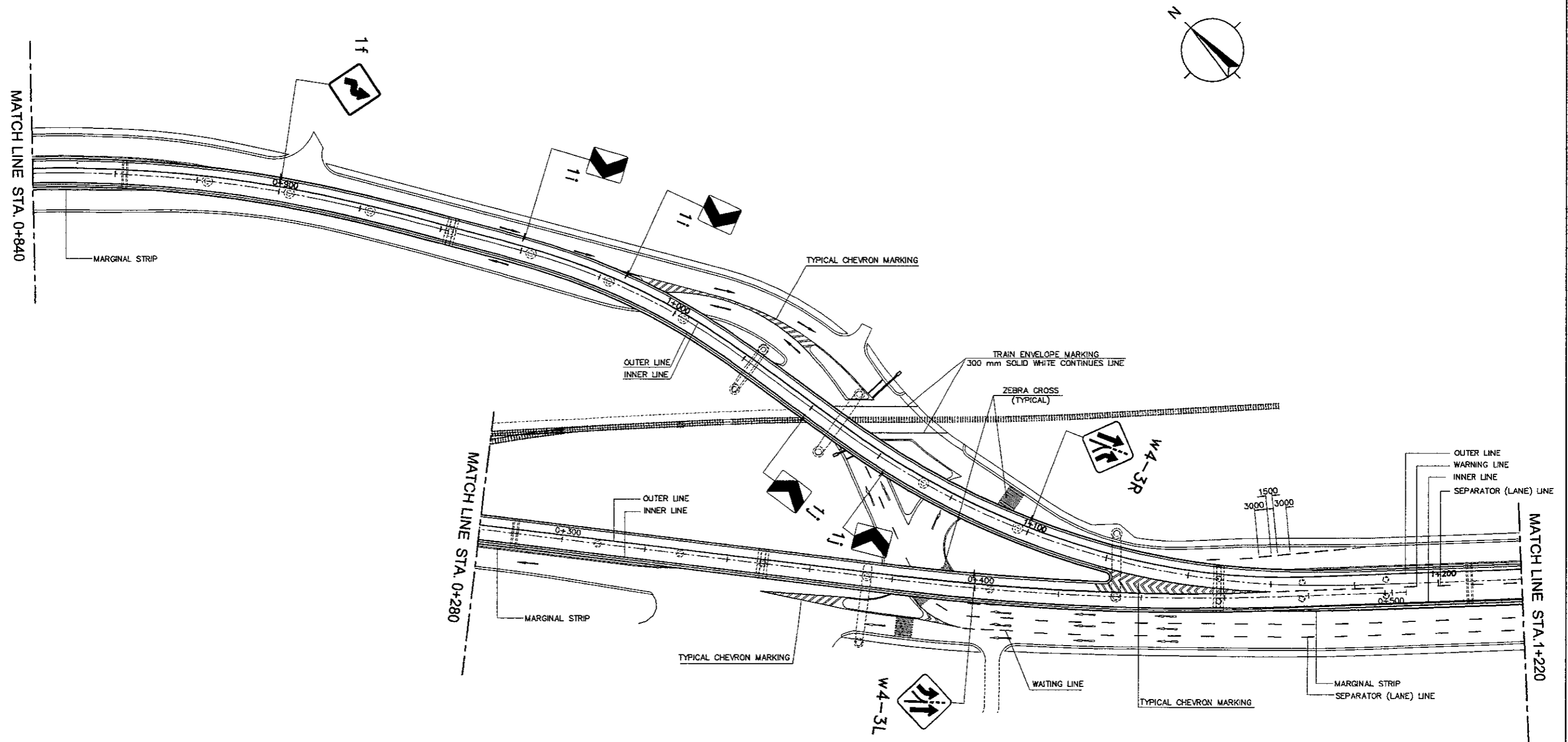
APPROVED BY	Ir. HERRY VAZA M,Eng.Sc	Sign	
	NIP. : 110038400	Date	

PROJECT AND LOCATION :  
 DETAILED DESIGN STUDY OF  
 NORTH JAVA CORRIDOR FLYOVER PROJECT  
 MERAK FLYOVER - CONTRACT PACKAGE 1  
 ( MERAK - BALARAJA )  
 BANTEN PROVINCE

SCALE :  
 1 : 1000  
 FULL SIZE A3

DRAWING TITLE :  
 TRAFFIC SIGNS AND ROAD MARKINGS  
 LAYOUT ( FLYOVER )  
 2 OF 3

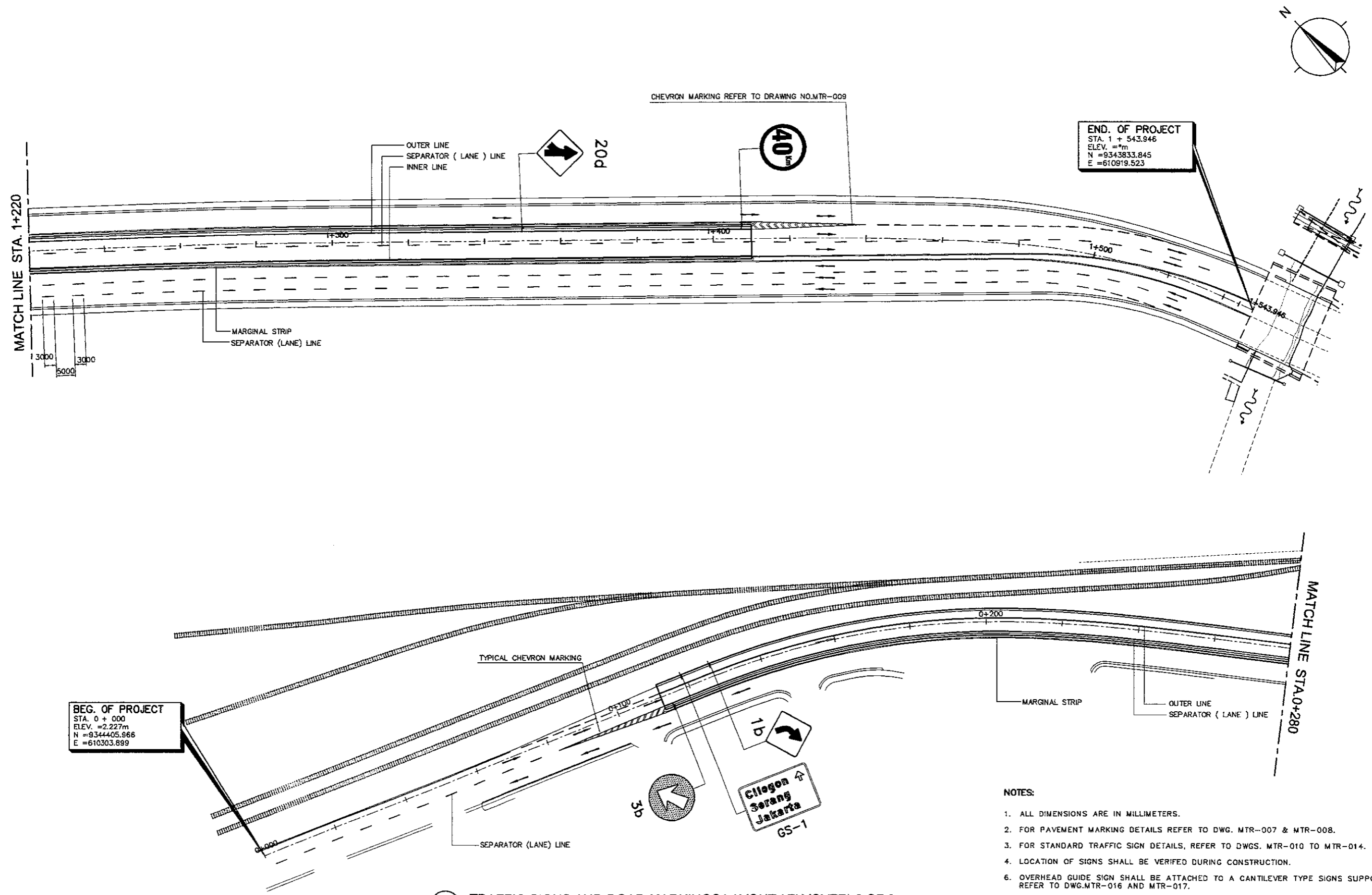
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 MTR-002  
 SHEET NO :  
 02 / 26



**NOTES:**

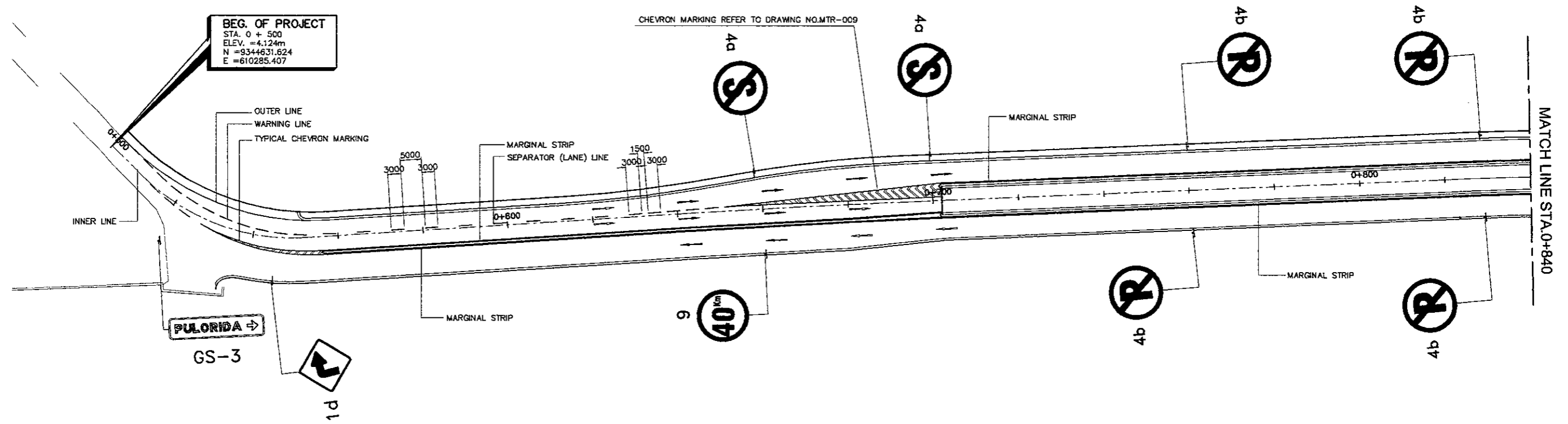
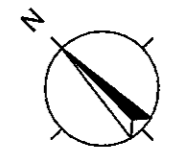
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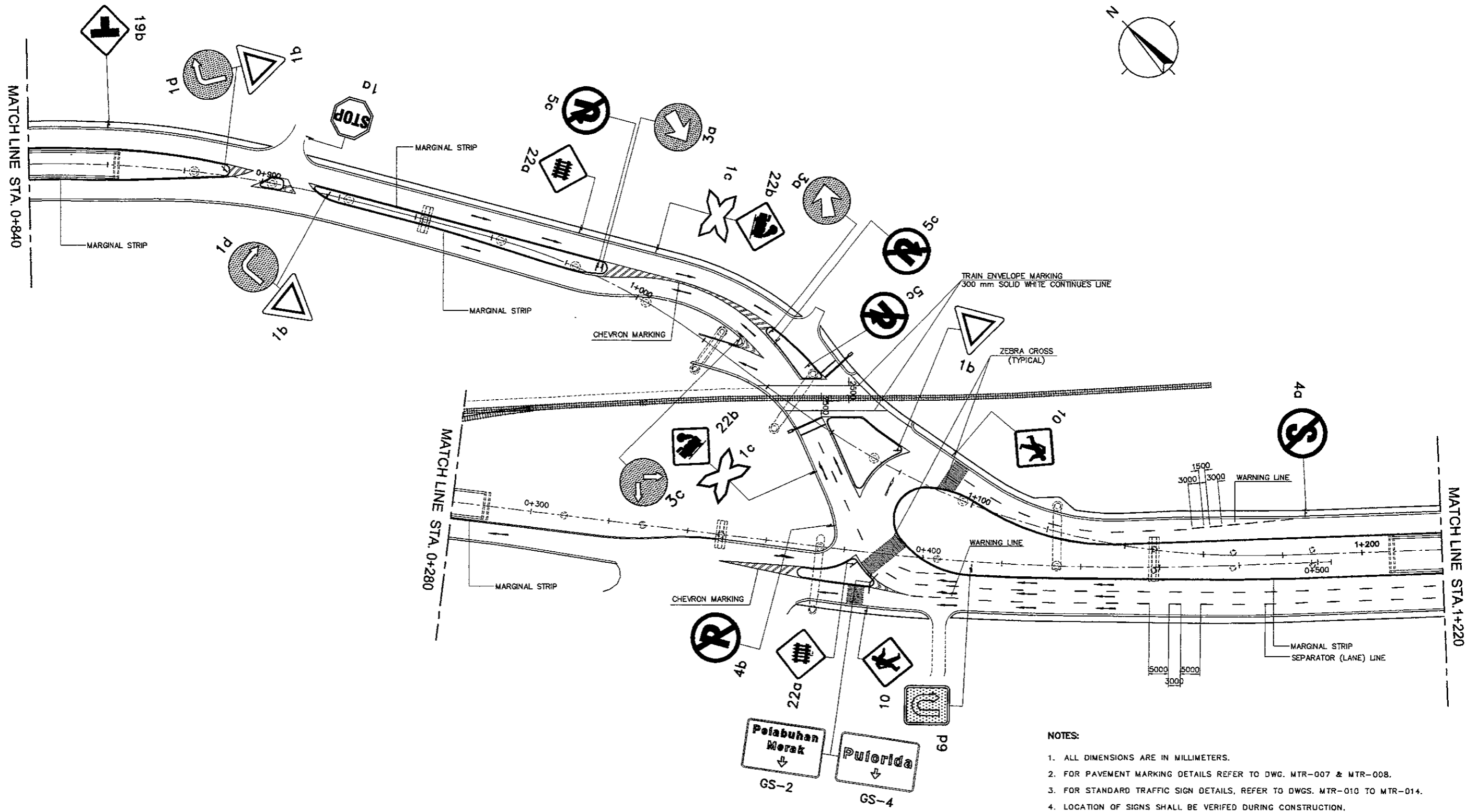
- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
  2. FOR PAYMENT MARKING DETAILS REFER TO DWG. MTR-007 & MTR-008.
  3. FOR STANDARD TRAFFIC SIGN DETAILS, REFER TO DWGS. MTR-010 TO MTR-014.
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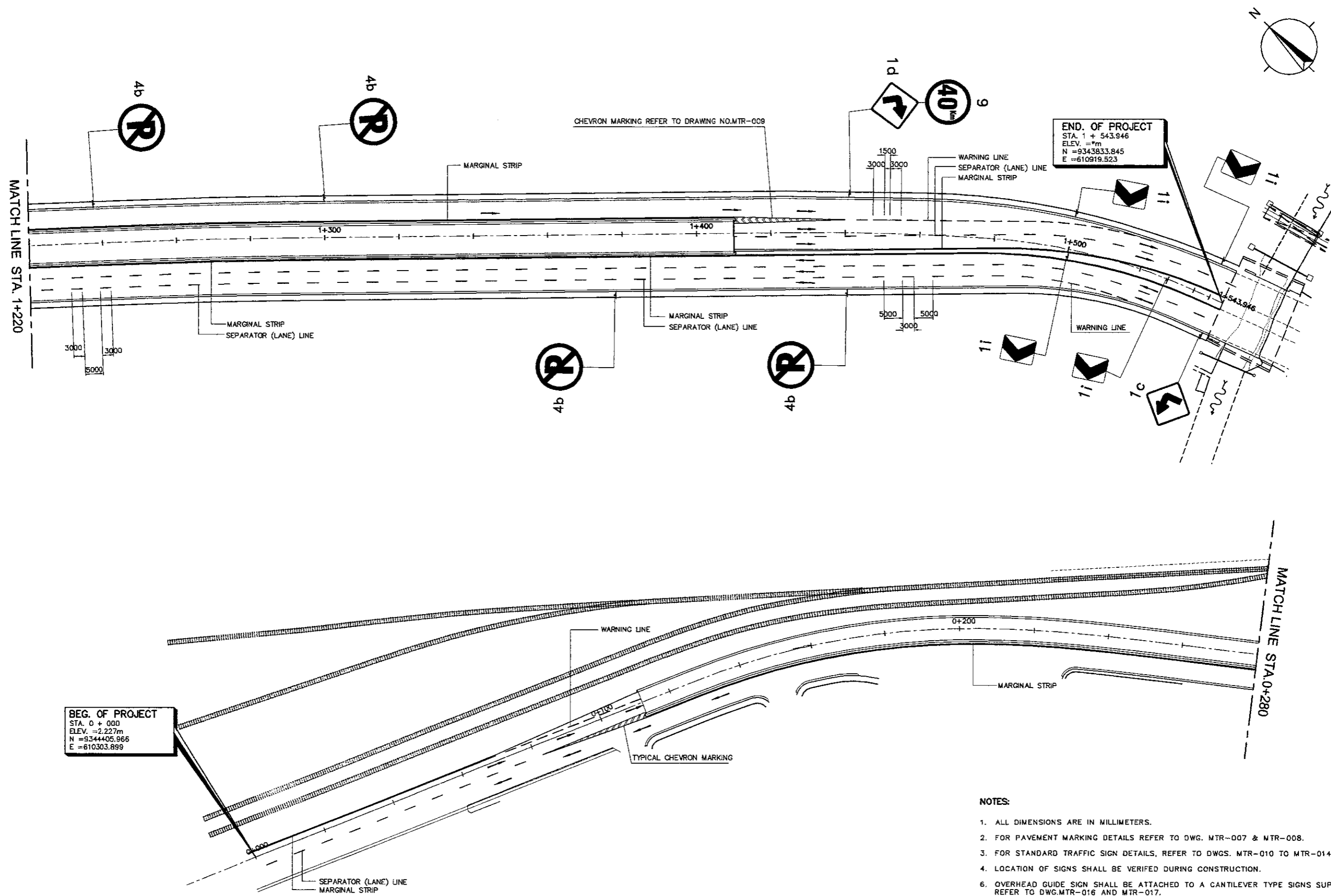
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  6. DELINEATORS SHALL BE INSTALLED AT FACE OF NEW JERSEY BARRIER AND PARAPET.

**1** TRAFFIC SIGNS AND ROAD MARKINGS LAYOUT ( AT GRADE ) 2 OF 3  
 SCALE 1:1000

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	

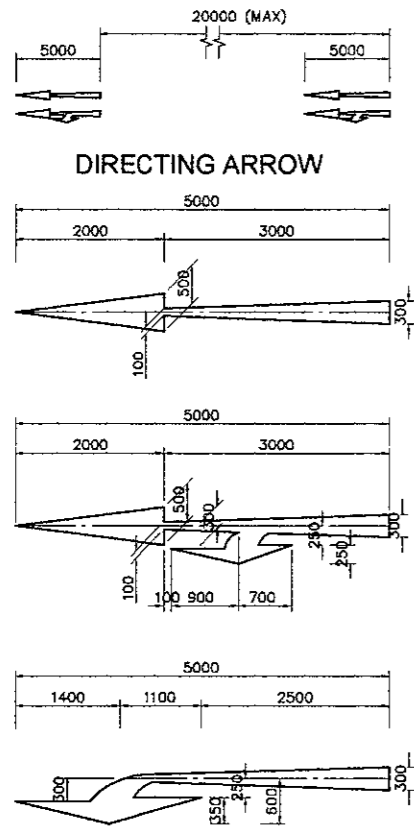


**BEG. OF PROJECT**  
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 ELEV. = 2.227m  
 N = 9344405.966  
 E = 610303.899

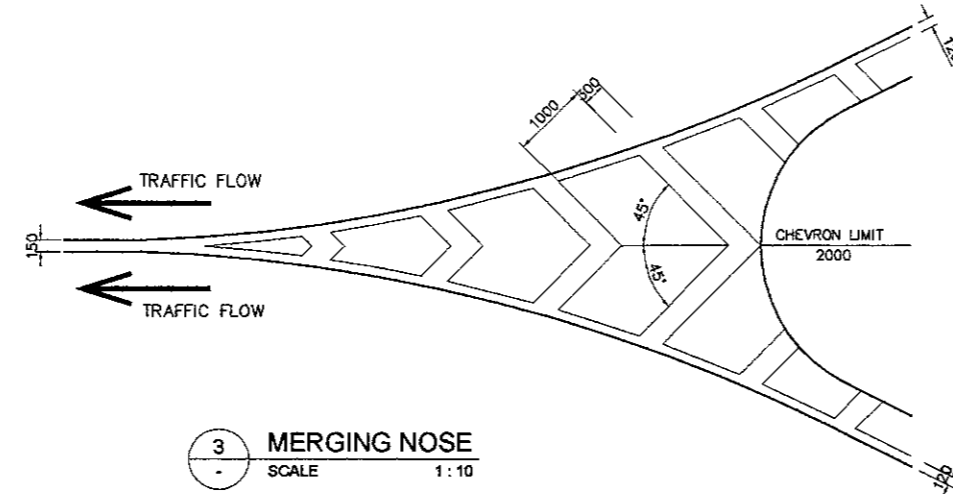
**END. OF PROJECT**  
 STA. 1 + 543.946  
 ELEV. = \*m  
 N = 9343833.845  
 E = 610919.523

- NOTES:**
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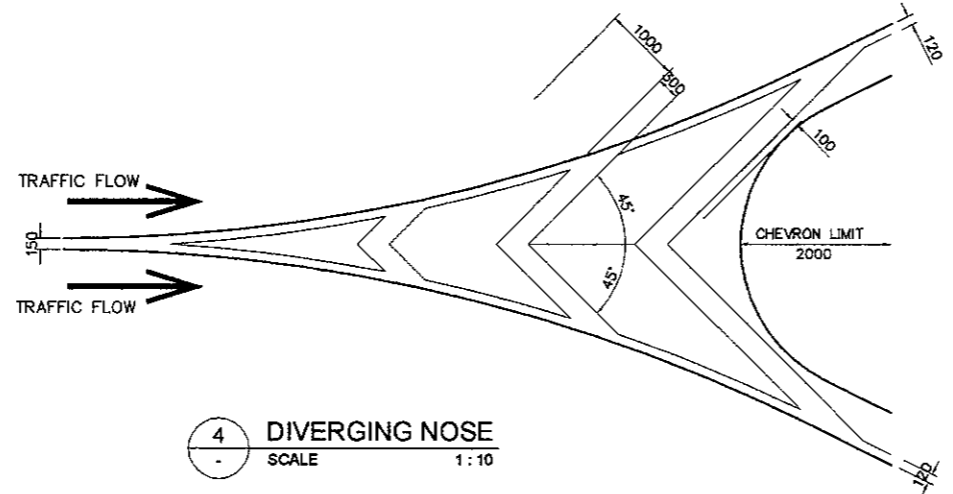
1 TRAFFIC SIGNS AND ROAD MARKINGS LAYOUT ( AT GRADE ) 3 OF 3  
 SCALE 1:1000



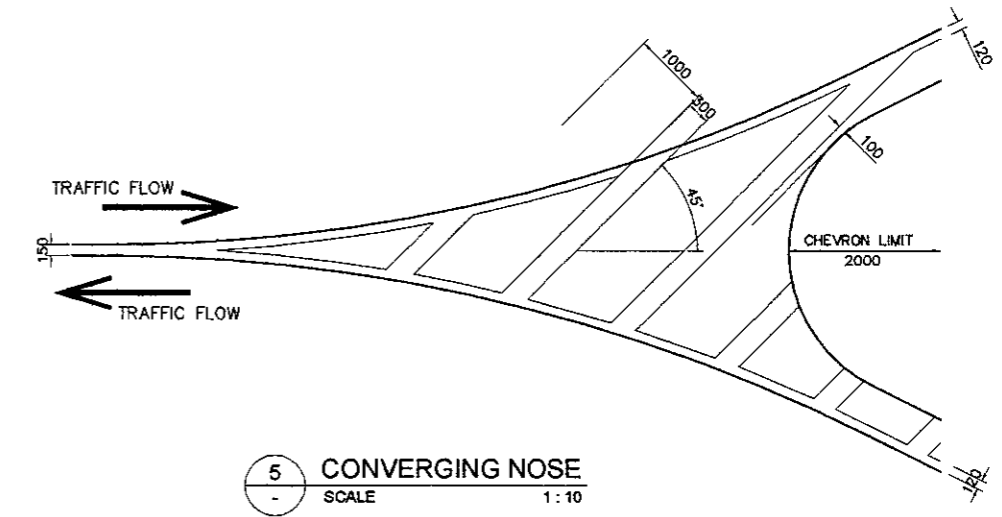
**2** ARROW MARKING DETAIL  
 SCALE 1 : 10



**3** MERGING NOSE  
 SCALE 1 : 10



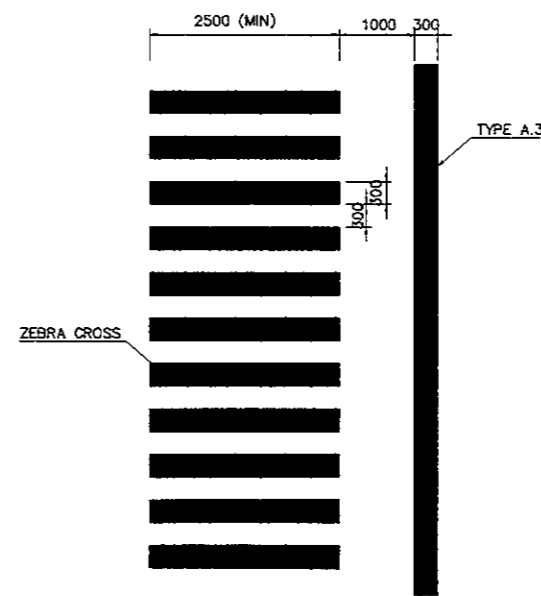
**4** DIVERGING NOSE  
 SCALE 1 : 10



**5** CONVERGING NOSE  
 SCALE 1 : 10

TYPE		LANE MARKINGS
A	CONTINUOUS/SOLID LINE	—————
	1. MARGINAL STRIP/ DIRECTION LINE	————— 120
	2. APPROACH LINE	————— ±20000 120
	3. STOP LINE	————— 300 120
B	BROKEN GUIDING LINE (SEPARATOR/DIVIDING LINES) (V < 60 KM/H)	— 3000 — 5000 — 3000 — 5000 — 3000 — 5000 — 3000 — 5000 — 3000 — 5000 — 3000 — 120
C	WARNING LINE (MIN 50M)	— 3000 — 1500 — 3000 — 1500 — 3000 — 1500 — 3000 — 1500 — 3000 — 1500 — 3000 — 1500 — 3000 — 1500 — 3000 — 1500 — 150

**1** TYPES OF LINE MARKING  
 SCALE 1 : 400

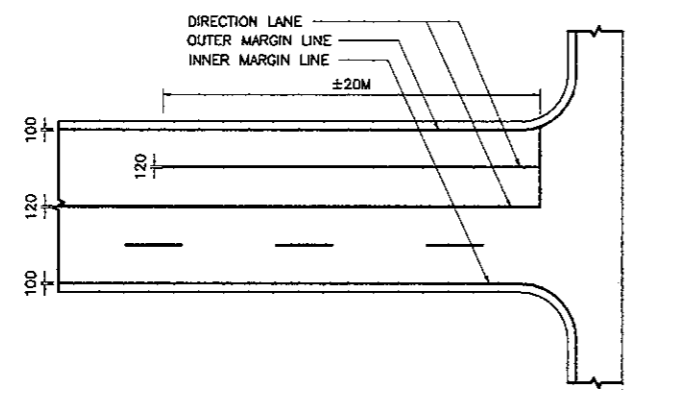
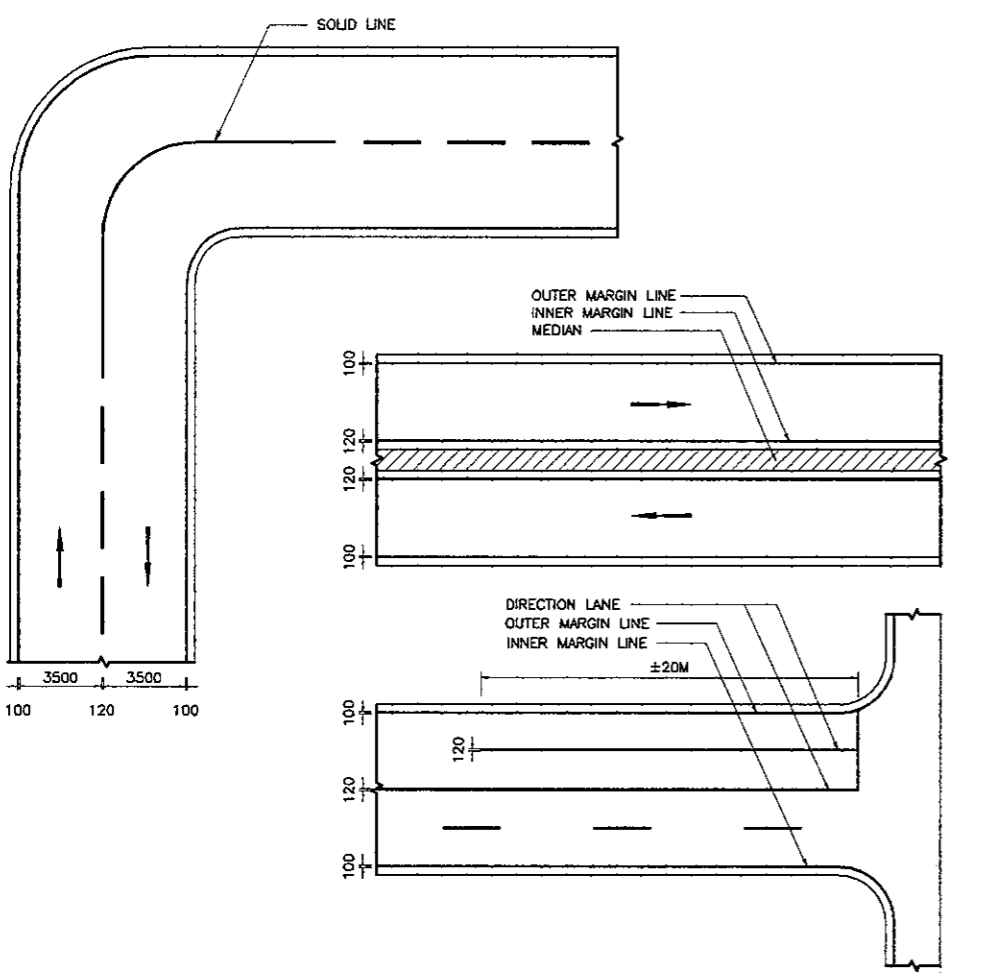
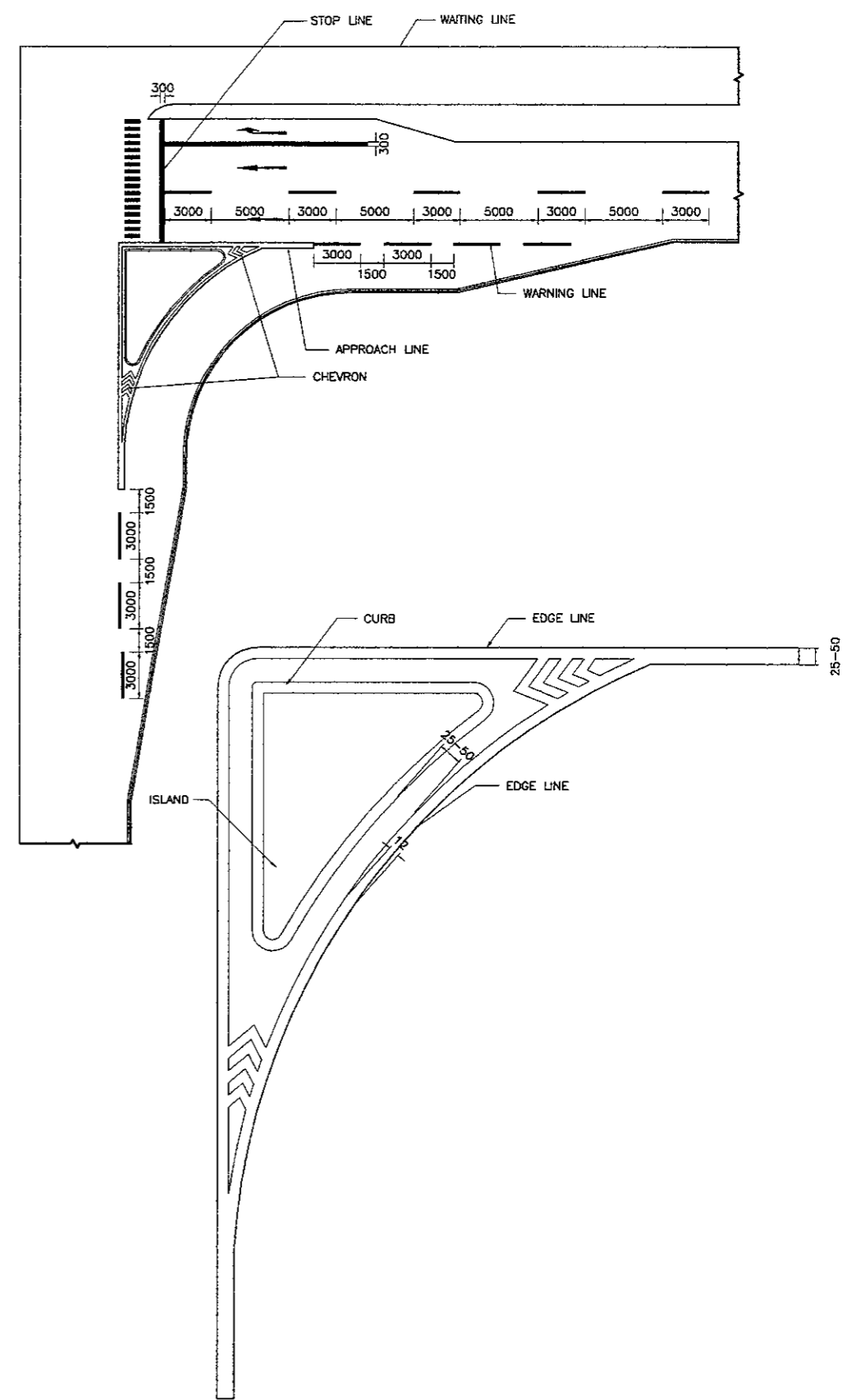
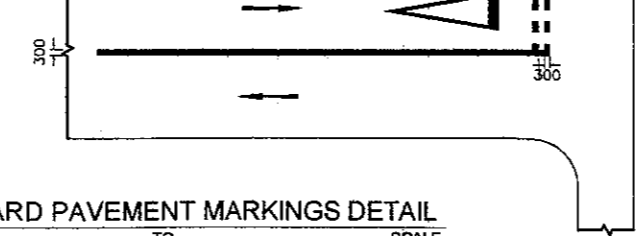
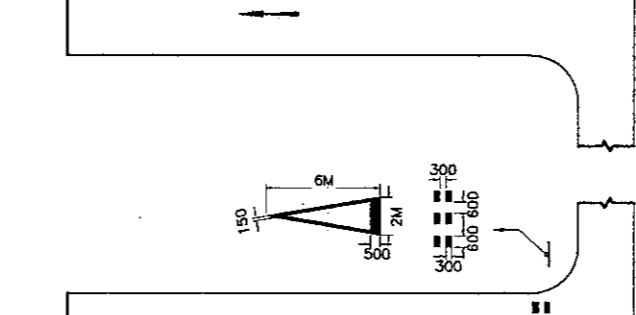
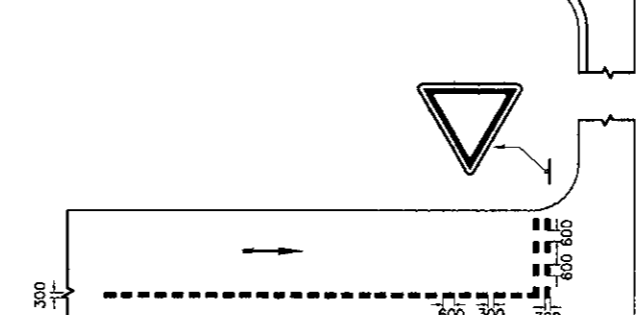
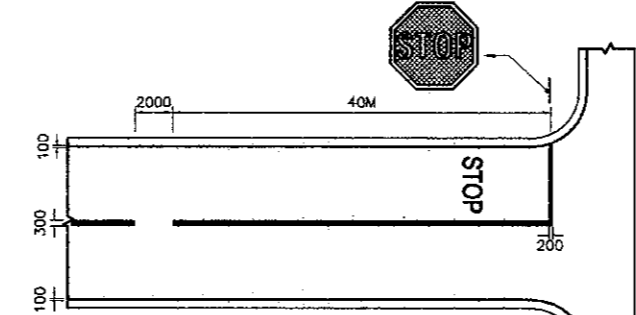
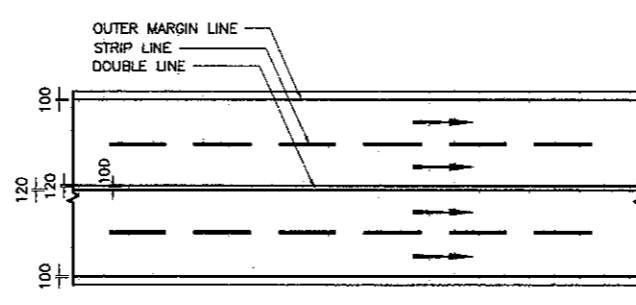
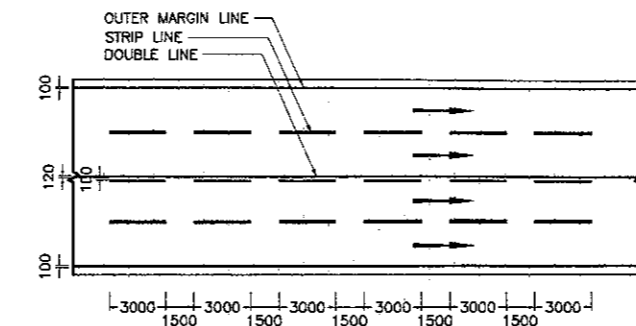
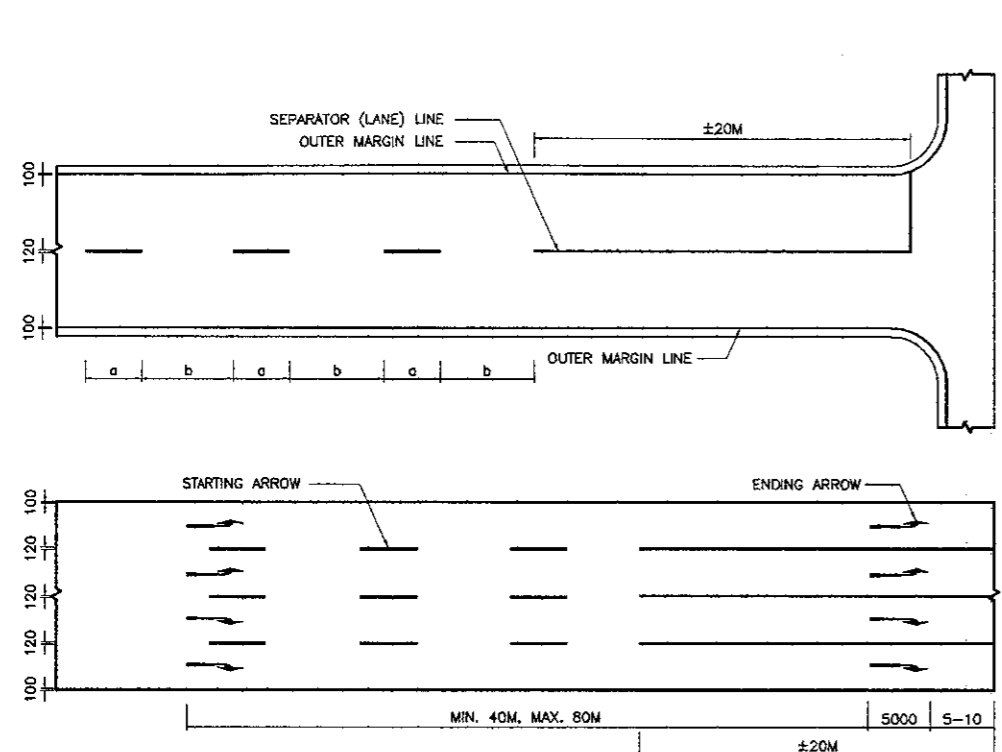


**6** STOP LINE LOCATION AT PEDESTRIAN CROSSING  
 SCALE 1 : 10

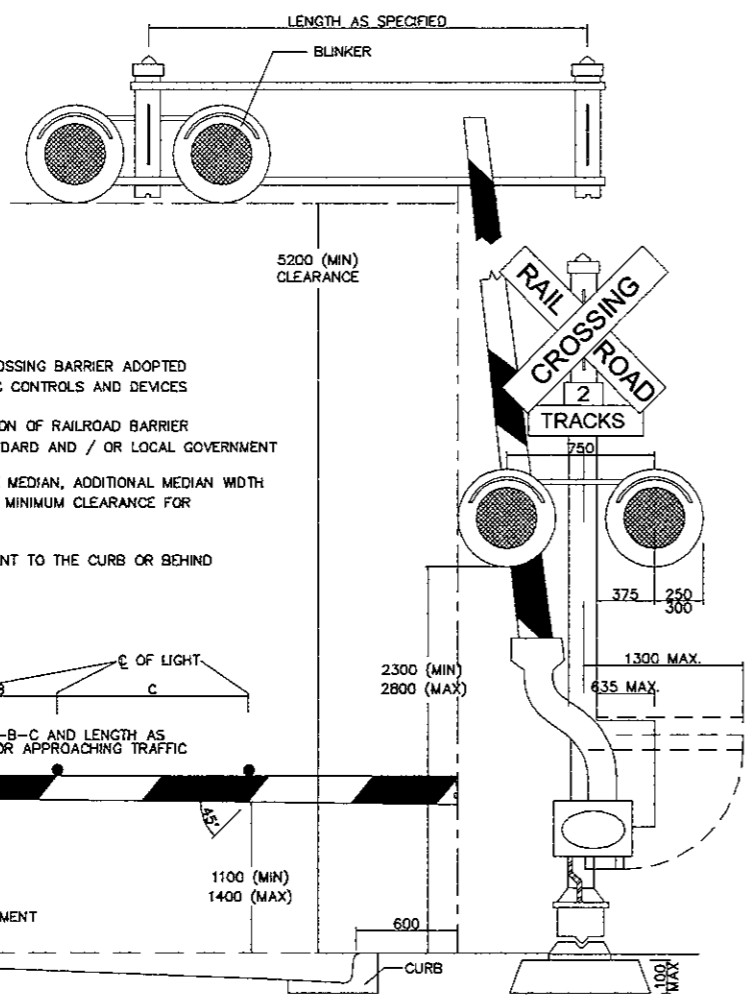
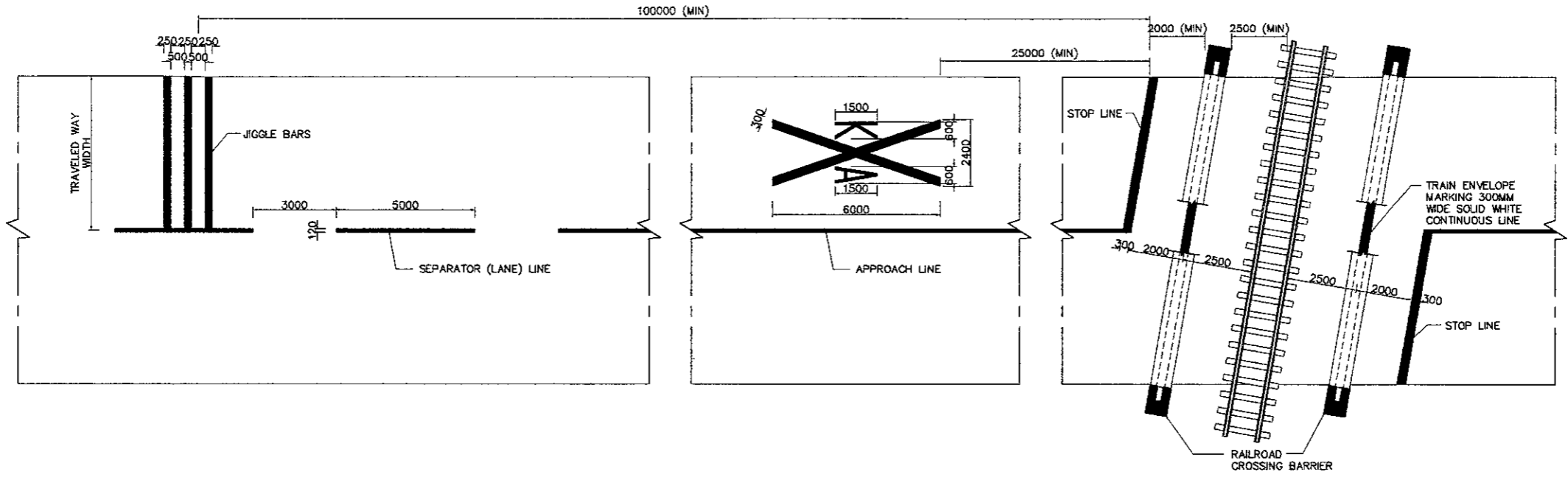
- NOTES**
- ROAD MARKINGS TO BE WHITE PAINT AND THE MATERIAL SHALL BE APPROVED BY THE ENGINEER
  - ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SHOWN
  - MARKING AT ALL LOCATIONS OF THE ROAD SHALL BE PROVIDED AS SHOWN IN THE DRAWINGS AND AS INSTRUCTED/ APPROVED BY THE ENGINEER
  - PAVEMENT/ROAD MARKINGS SHOULD CONFORM WITH THE " DINAS PERHUBUNGAN LALU LINTAS DAN ANGKUTAN JALAN SETEPAT "



DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	

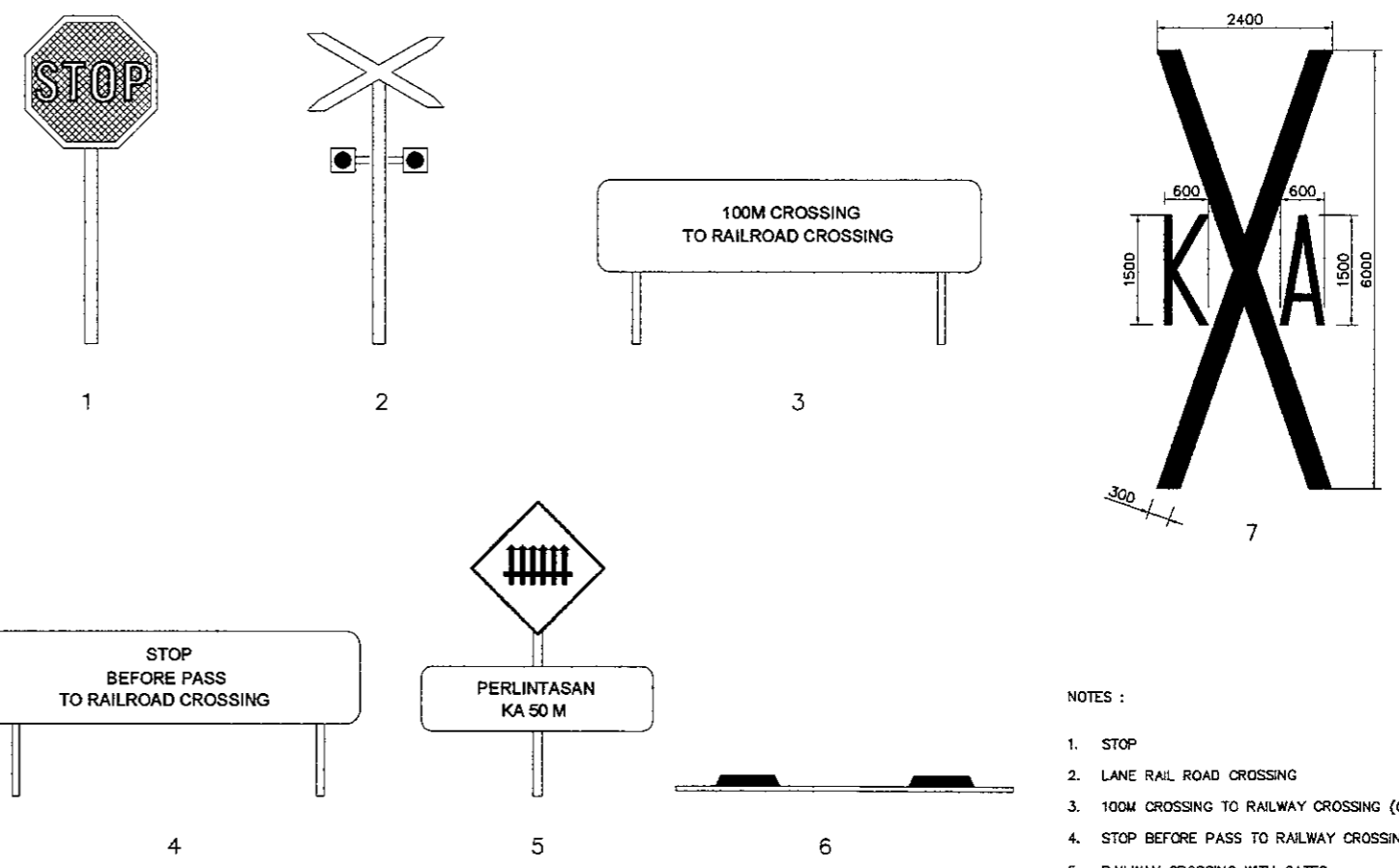


1 STANDARD PAVEMENT MARKINGS DETAIL  
 NOT TO SCALE



**NOTES :**

1. TYPICAL EXAMPLE OF RAILROAD CROSSING BARRIER ADOPTED FROM MANUAL ON UNIFORM TRAFFIC CONTROLS AND DEVICES
2. DETAILED FABRICATION & INSTALLATION OF RAILROAD BARRIER SHOULD CONFORM TO PT. KAI STANDARD AND / OR LOCAL GOVERNMENT
3. WHERE GATES ARE LOCATED IN THE MEDIAN, ADDITIONAL MEDIAN WIDTH MAY BE REQUIRED TO PROVIDE THE MINIMUM CLEARANCE FOR THE COUNTERWEIGHT SUPPORT
4. SIDEWALK CAN BE LOCATED ADJACENT TO THE CURB OR BEHIND THE RAILWAY BARRIER



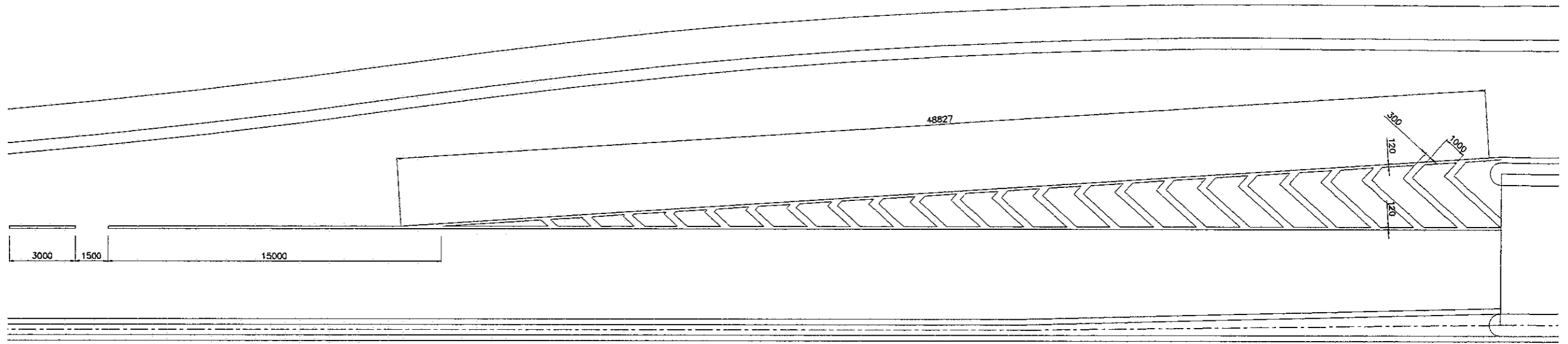
**NOTES :**

1. STOP
2. LANE RAIL ROAD CROSSING
3. 100M CROSSING TO RAILWAY CROSSING (OPTIONAL)
4. STOP BEFORE PASS TO RAILWAY CROSSING (OPTIONAL)
5. RAILWAY CROSSING WITH GATES
6. JIGGLE BARS
7. RAILROAD CROSSING

**2** TYPICAL RAILROAD CROSSING GATE  
 NOT TO SCALE

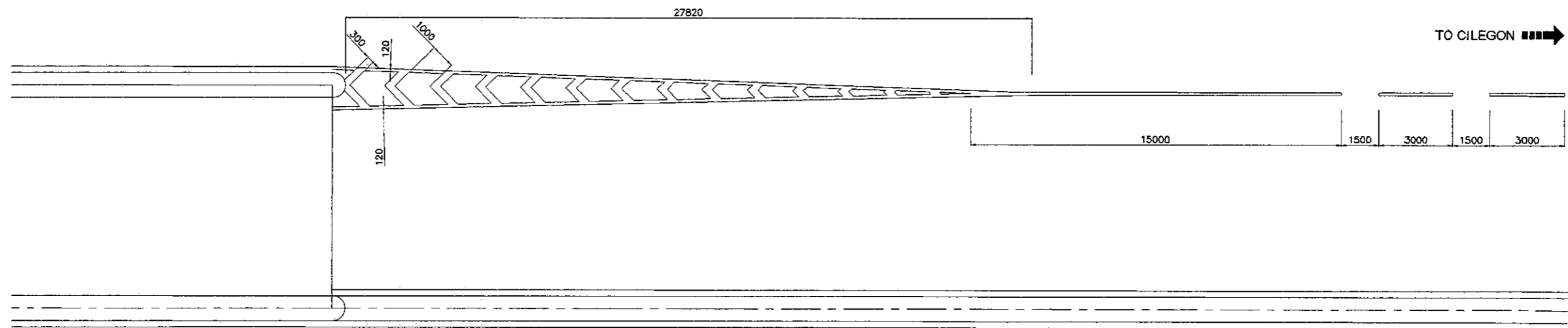
**1** STANDARD SIGNS AND PAVEMENT MARKINGS AT RAILROAD CROSSING  
 NOT TO SCALE

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



← TO PULORIDA

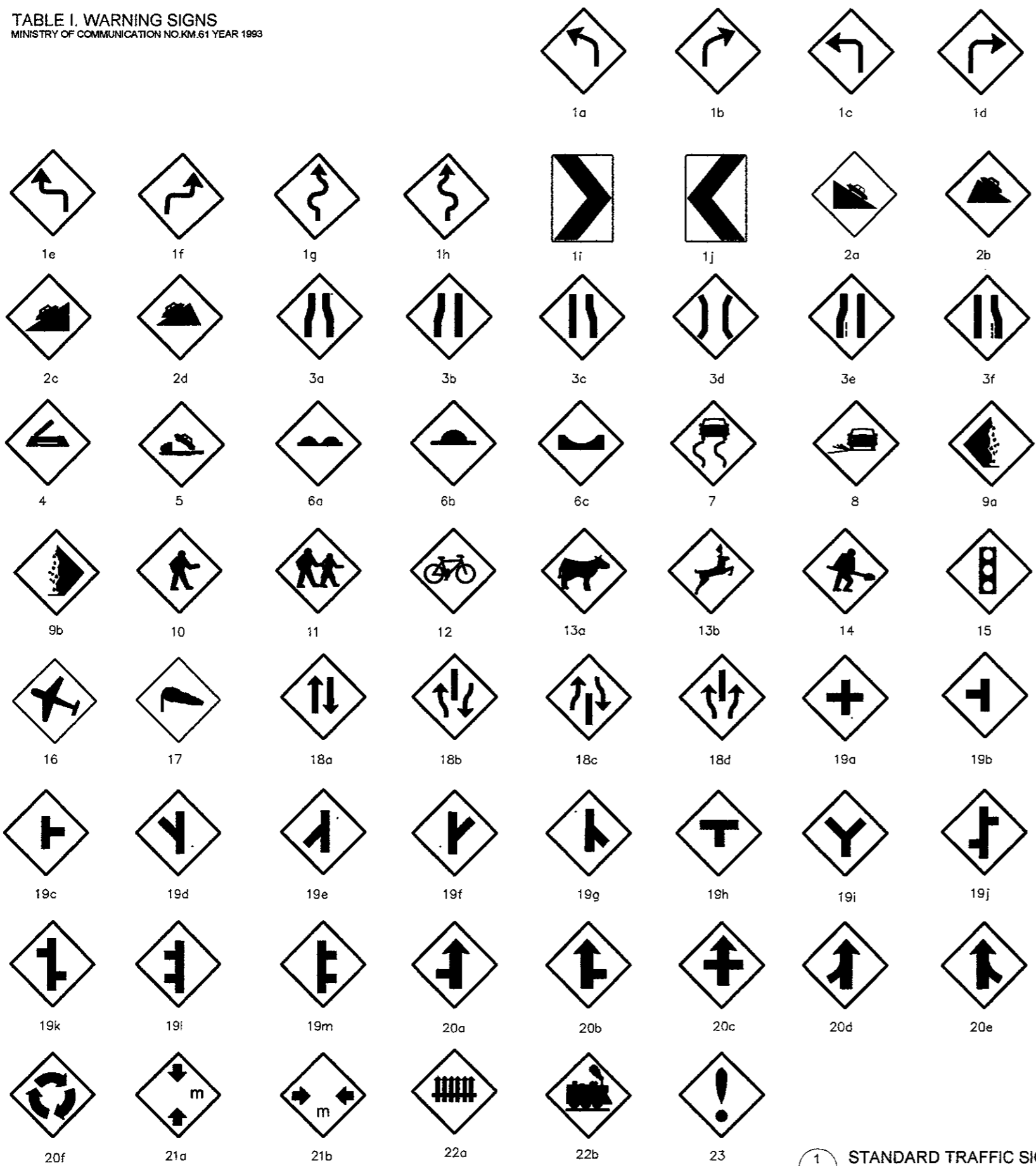
APPROACH 1



TO CILEGON →

APPROACH 2

**TABLE I. WARNING SIGNS**  
 MINISTRY OF COMMUNICATION NO.KM.61 YEAR 1993



- 1a. LEFT CURVE
- 1b. RIGHT CURVE
- 1c. SHARP LEFT CURVE
- 1d. SHARP RIGHT CURVE
- 1e. DOUBLE CURVE, BEGIN WITH LEFT CURVE
- 1f. DOUBLE CURVE, BEGIN WITH RIGHT CURVE
- 1g. MANY CURVES, BEGIN WITH LEFT CURVE
- 1h. MANY CURVES, BEGIN WITH RIGHT CURVE
- 1i. RIGHT CURVE
- 1j. LEFT CURVE
- 2a. DOWN GRADE
- 2b. DOWN GRADE SHARP
- 2c. UP GRADE
- 2d. UP GRADE SHARP
- 3a. CHANGING OF ROAD WIDTH
- 3b. CHANGING OF ROAD WIDTH LEFT
- 3c. CHANGING OF ROAD WIDTH RIGHT
- 3d. CHANGING OF ROAD WIDTH AT BRIDGE
- 3e. MERGER OF LEFT LANE TO RIGHT LANE
- 3f. MERGER OF RIGHT LANE TO LEFT LANE
- 4. LIFT BRIDGE
- 5. WHARF
- 6a. CONDITIONAL OF ROAD PROFILE IS NOT EVEN
- 6b. CONDITIONAL OF ROAD PROFILE IS CONVEX
- 6c. CONDITIONAL OF ROAD PROFILE IS CONCAVE
- 7. SLIPPERY
- 8. MANY GRAVEL'S
- 9a. FALLING ROCKS FROM LEFT
- 9b. FALLING ROCKS FROM RIGHT
- 10. WATCH FOR PEDESTRIAN
- 11. WATCH FOR CHILDREN
- 12. WATCH FOR BICYCLE
- 13a. WATCH FOR CATTLE
- 13b. WATCH FOR WILD LIFE
- 14. ROAD WORK
- 15. TRAFFIC CONTROL LIGHTS
- 16. PLANE TRAJECTORY
- 17. WIND FROM SIDE COURSE
- 18a. TWO WAY TRAFFIC
- 18b. BEGINNING OF SEPARATOR ON TWO WAY TRAFFIC
- 18c. END OF SEPARATOR ON TWO WAY TRAFFIC
- 18d. BEGINNING OF SEPARATOR ON ONE WAY TRAFFIC
- 19a. CROSS ROAD
- 19b. INTERSECTION FROM LEFT DIRECTION TRAFFIC
- 19c. INTERSECTION FROM RIGHT DIRECTION TRAFFIC
- 19d. INTERSECTION FROM FRONT LEFT DIRECTION TRAFFIC
- 19e. INTERSECTION FROM BACK LEFT DIRECTION TRAFFIC
- 19f. INTERSECTION FROM FRONT RIGHT DIRECTION TRAFFIC
- 19g. INTERSECTION FROM BACK RIGHT DIRECTION TRAFFIC
- 19h. T-TYPE INTERSECTION
- 19i. Y-TYPE INTERSECTION
- 19j. TWO INTERSECTION, BEGIN FROM LEFT DIRECTION TRAFFIC AND THEN RIGHT DIRECTION TRAFFIC
- 19k. TWO INTERSECTION, BEGIN FROM RIGHT DIRECTION TRAFFIC AND THEN LEFT DIRECTION TRAFFIC
- 19l. TWO INTERSECTION, BOTH OF THEM FROM LEFT DIRECTION TRAFFIC
- 19m. TWO INTERSECTION, BOTH OF THEM FROM RIGHT DIRECTION TRAFFIC
- 20a. CROSSROAD WITH PRIORITY
- 20b. INTERSECTION FROM LEFT DIRECTION TRAFFIC WITH PRIORITY
- 20c. INTERSECTION FROM RIGHT DIRECTION TRAFFIC WITH PRIORITY
- 20d. INTERSECTION FROM BACK LEFT DIRECTION TRAFFIC WITH PRIORITY
- 20e. INTERSECTION FROM BACK RIGHT DIRECTION TRAFFIC WITH PRIORITY
- 21a. HEIGHT OF FREE SPACE
- 21b. WIDTH OF FREE SPACE
- 22a. RAIL ROAD CROSSING WITH GATES
- 22b. RAIL ROAD CROSSING WITHOUT GATES
- 23. LOOK OUT

COLOR LEGEND :

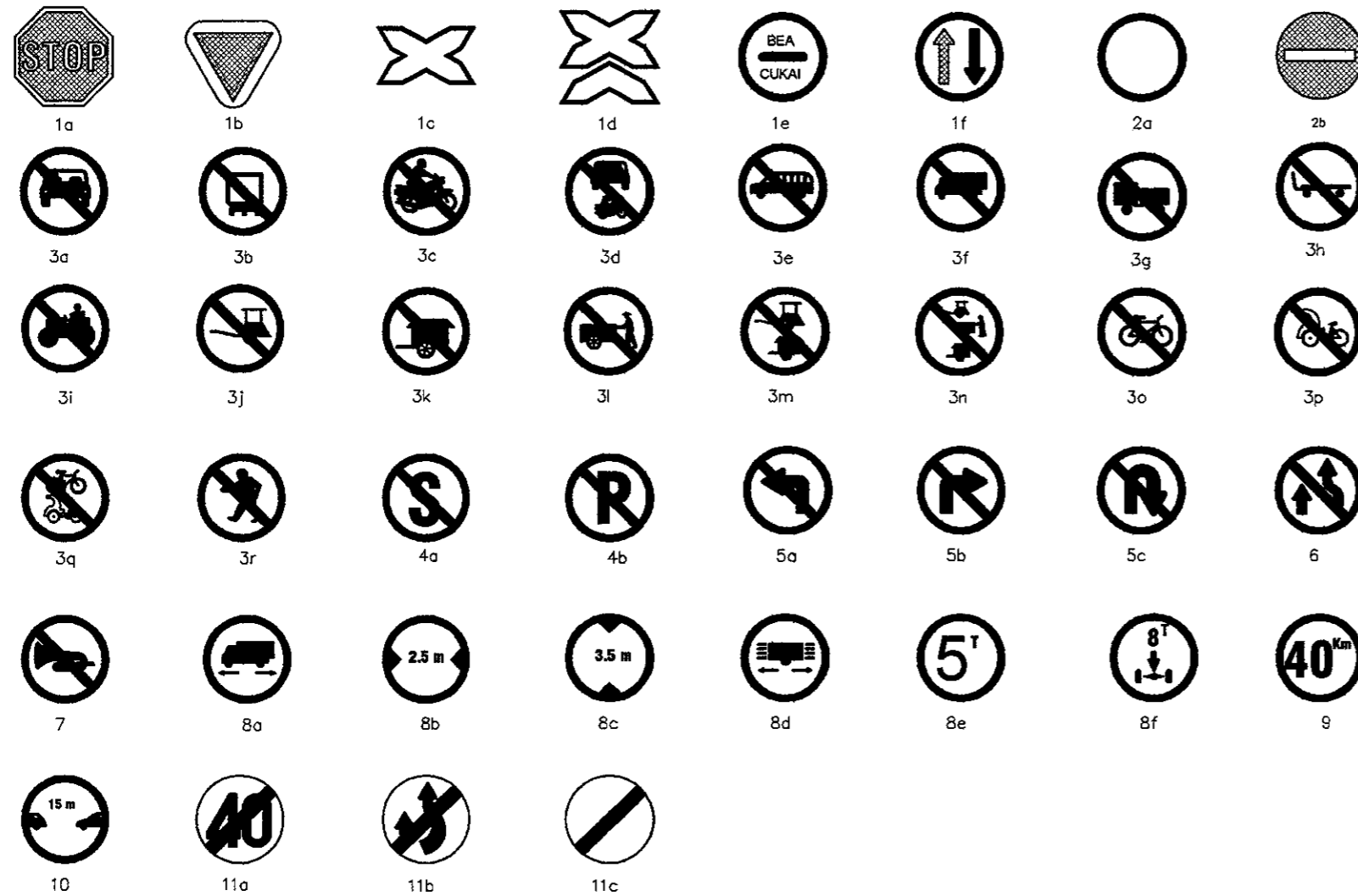
YELLOW

BLACK

NOTE :

STANDARD TRAFFIC ROAD SIGNS SHOULD CONFORM WITH THE "DINAS PERHUBUNGAN LALU LINTAS DAN ANGKUTAN JALAN SETEMPAT"

TABLE II A. PROHIBITION SIGN  
 MINISTRY OF COMMUNICATION NO.KM.61 YEAR 1993

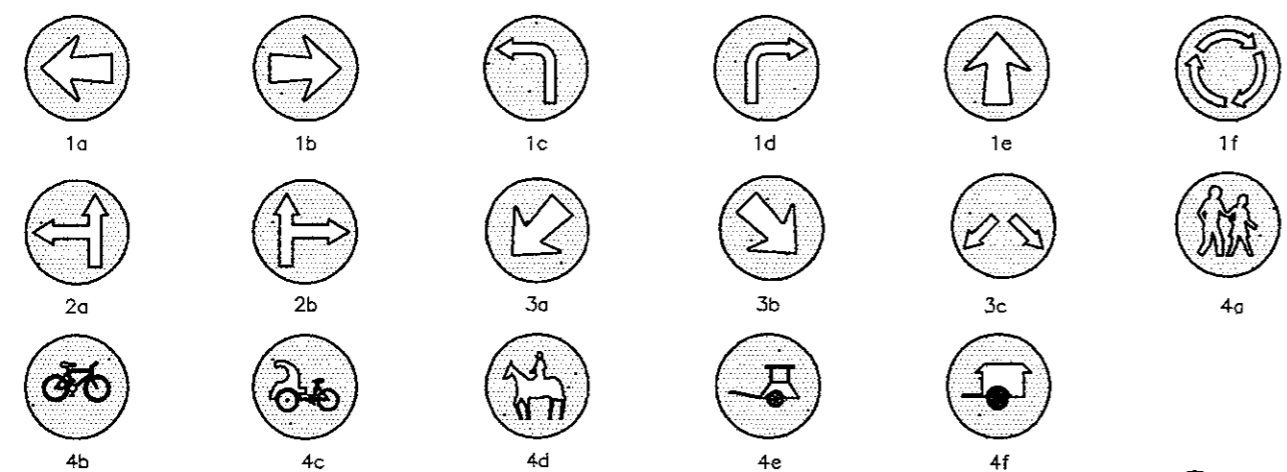


- 1a. STOP
- 1b. GIVE WAY, YIELD
- 1c. ONE LANERAIL ROAD CROSSING
- 1d. TWO LANERAIL ROAD CROSSING
- 1e. STOP FOR INVESTIGATION CONCERN WITH 'BEA CUKAI'
- 1f. PRIORITY FOR VEHICLES FROM BOTH DIRECTION
- 2a. NO ENTRY FOR ALL VEHICLES FROM BOTH DIRECTIONS
- 2b. NO ENTRY FOR ALL VEHICLES
- 3a. NO ENTRY FOR FOUR WHEEL MOTORIZED VEHICLES
- 3b. NO ENTRY FOR THREE WHEEL MOTORIZED VEHICLES
- 3c. NO ENTRY FOR TWO WHEEL MOTORIZED VEHICLES
- 3d. NO ENTRY FOR ALL MOTORIZED VEHICLES
- 3e. NO ENTRY FOR BUS
- 3f. NO ENTRY FOR TRUCK
- 3g. NO ENTRY FOR MOTORIZED VEHICLE WITH PULL A CART
- 3h. NO ENTRY FOR TRAILER
- 3i. NO ENTRY FOR ROLLER
- 3j. NO ENTRY FOR CARRIAGE
- 3k. NO ENTRY FOR OXCART
- 3l. NO ENTRY FOR PUSHCART
- 3m. NO ENTRY FOR CARRIAGE AND OXCART
- 3n. NO ENTRY FOR CARRIAGE, PUSHCART AND OXCART
- 3o. NO ENTRY FOR BICYCLE
- 3p. NO ENTRY FOR TRICYCLE
- 3q. NO ENTRY FOR BICYCLE AND TRICYCLE
- 3r. NO ENTRY FOR PEDESTRIAN
- 4a. NO STOPPING
- 4b. NO PARKING
- 5a. TURN TO LEFT PROHIBITION ( NO LEFT TURN )
- 5b. TURN TO RIGHT PROHIBITION ( NO RIGHT TURN )
- 5c. CHANGE OF COURSE PROHIBITION ( NO U-TURN )
- 6. NO OVERTAKE
- 7. NO HORN
- 8a. LENGTH LIMIT FOR MOTORIZED VEHICLE
- 8b. WIDTH LIMIT
- 8c. HEIGHT LIMIT
- 8d. LENGHT LIMIT FOR CART
- 8e. WEIGHT LIMIT FOR CART
- 8f. WEIGHT LIMIT
- 9. SPEED LIMIT
- 10. DISTANCE LIMIT
- 11a. END OF SPEED LIMIT AREA
- 11b. END OF NO OVERTAKE AREA
- 11c. END OF PROHIBITION AREA

COLOR LEGEND :

	YELLOW
	RED
	BLACK
	BLUE

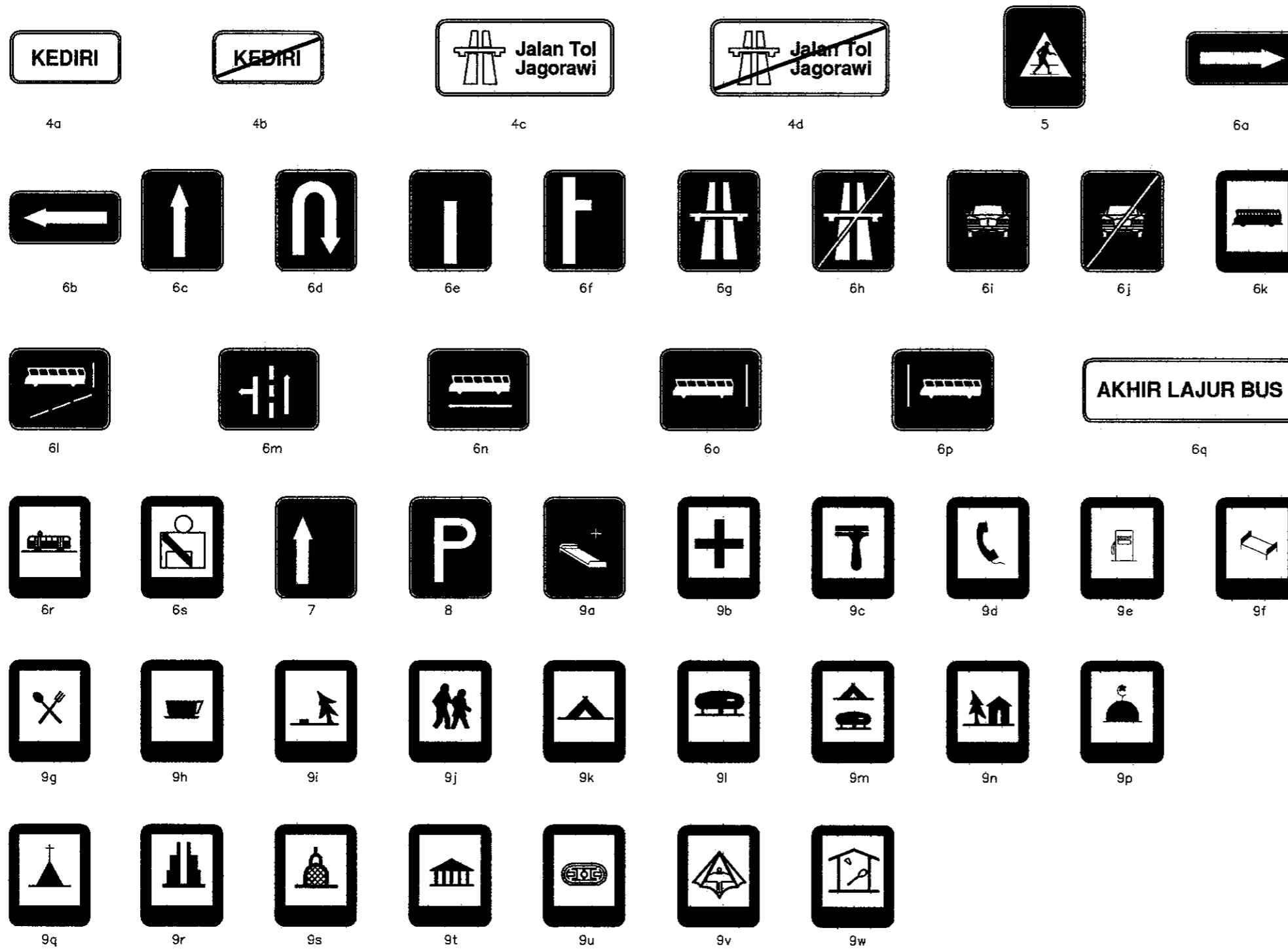
TABLE II B. INSTRUCTION SIGN



- 1a. INDICATION OF DIRECTION TO LEFT
- 1b. INDICATION OF DIRECTION TO RIGHT
- 1c. TURNING INDICATION TO LEFT
- 1d. TURNING INDICATION TO RIGHT
- 1e. MUST BE RUN IN A STRAIGHT LINE
- 1f. MUST BE FOLLOW THE ARROW POINTS WHILE ON TRAFFIC ROTARY
- 2a. MUST BE FOLLOW ONE OF THE ARROW POINTS
- 2b. MUST BE FOLLOW ONE OF THE ARROW POINTS
- 3a. MUST PASS THIS LANE
- 3b. MUST PASS THIS LANE
- 3c. MUST PASS IN ONE OF THESE LANES
- 4a. FOR PEDESTRIANS
- 4b. FOR BICYCLES
- 4c. FOR TRICYCLES
- 4d. FOR HORSE
- 4e. FOR CARRIAGE
- 4f. FOR OXCART

NOTE :  
 STANDARD TRAFFIC ROAD SIGNS SHOULD CONFORM WITH THE " DINAS PERHUBUNGAN LALU LINTAS DAN ANGKUTAN JALAN SETEMPAT "

TABLE III. GUIDE SIGNS



- 4a. INCOMING BORDER OF KEDIRI CITY
- 4b. OUT GOING BORDER OF KEDIRI CITY
- 4c. BEGINNING OF TOLL ROAD
- 4d. END OF TOLL ROAD
- 5. PEDESTRIAN CROSSING PLACE
- 6a. ONE WAY RIGHT
- 6b. ONE WAY LEFT
- 6c. STRAIGHT ONE WAY
- 6d. U TURN
- 6e. DEAD END
- 6f. DEAD END DIRECTION RIGHT WAY
- 6g. TOLL ROAD
- 6h. END OF TOLL ROAD
- 6i. VEHICLE ONLY
- 6j. END OF VEHICLE
- 6k. BUS STOP
- 6l. START OF BUS LINE
- 6m. OTHER TRAFFIC
- 6n. SPECIAL BUS LINE
- 6o. ONE DIRECTION BUS LINE
- 6p. TWO DIRECTION BUS LINE
- 6q. END OF BUS LINE
- 6r. FIXED LANE HALT
- 6s. USED SAFETY BELT
- 7. PRIORITY GIVEN TO THE COMING TRAFFIC
- 8. PARKING AREA
- 9a. HOSPITAL
- 9b. FIRST AID OFFICE
- 9c. VEHICLE WORK SHOP
- 9d. PUBLIC TELEPHONE
- 9e. GAS / FUEL STATION
- 9f. HOTEL AND MOTEL
- 9g. RESTAURANT
- 9h. CAFE
- 9i. RECREATIONAL AREA
- 9j. PASSING ZONE
- 9k. CAMPING AREA
- 9l. REST AREA
- 9m. CARAVAN AREA
- 9n. BUNGALOW / VILLE
- 9o. MOSQUE
- 9p. CHURCH
- 9q. HINDUS TEMPLE
- 9s. BUDDHIST TEMPLE
- 9t. MUSEUM
- 9u. OPEN SPORT STADIUM
- 9v. GLIDING AREA
- 9w. SPORT HALL

COLOR LEGEND :



NOTE :  
 STANDARD TRAFFIC ROAD SIGNS  
 SHOULD CONFORM WITH THE "DINAS PERHUBUNGAN LALU LINTAS DAN ANGKUTAN JALAN SETEMPAT"

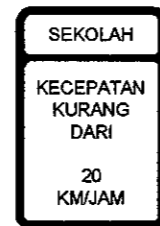
ADDITIONAL TRAFFIC SIGNS  
 ( FOR TRAFFIC IMPLEMENTATION )



S1-1



W16-7PL



S4-4



S4-5



S4-5a



R3-5L



R3-5R



R3-6L



R3-6R



W20-7a



W2-16



W4-3L



W4-3R

- S1-1 SCHOOL
- S4-5 REDUCED SPEED (SCHOOL) ZONE AHEAD
- S4-5a REDUCED SPEED (SCHOOL) ZONE AHEAD
- R3-5L MANDATORY MOVEMENT LANE CONTROL (LEFT)
- R3-5R MANDATORY MOVEMENT LANE CONTROL (RIGHT)
- R3-6L OPTIONAL MOVEMENT LANE CONTROL (LEFT)
- R3-6R OPTIONAL MOVEMENT LANE CONTROL (RIGHT)
- W20-7a FLAGGER
- W2-16 DISTANCE
- W4-3L ADDED LINE (LEFT)
- W4-3R ADDED LINE (RIGHT)
- W16-7PL LEFT DIAGONAL ARROW PLAQUE

COLOR LEGEND :

- YELLOW
- RED
- BLACK
- BLUE

NOTE :

STANDARD TRAFFIC WITH ROAD SIGNS  
 SHOULD CONFORM WITH THE "DINAS PERHUBUNGAN LALU LINTAS DAN ANGKUTAN JALAN SETEMPAT"

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	

APPROVED BY

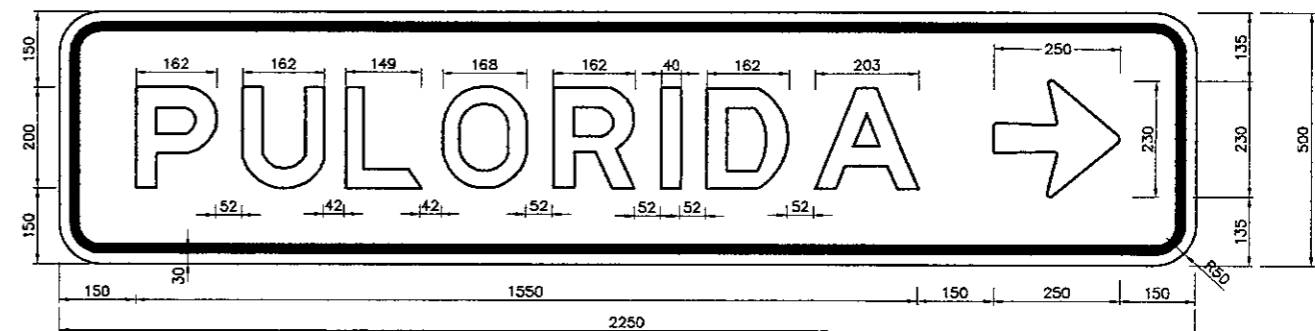
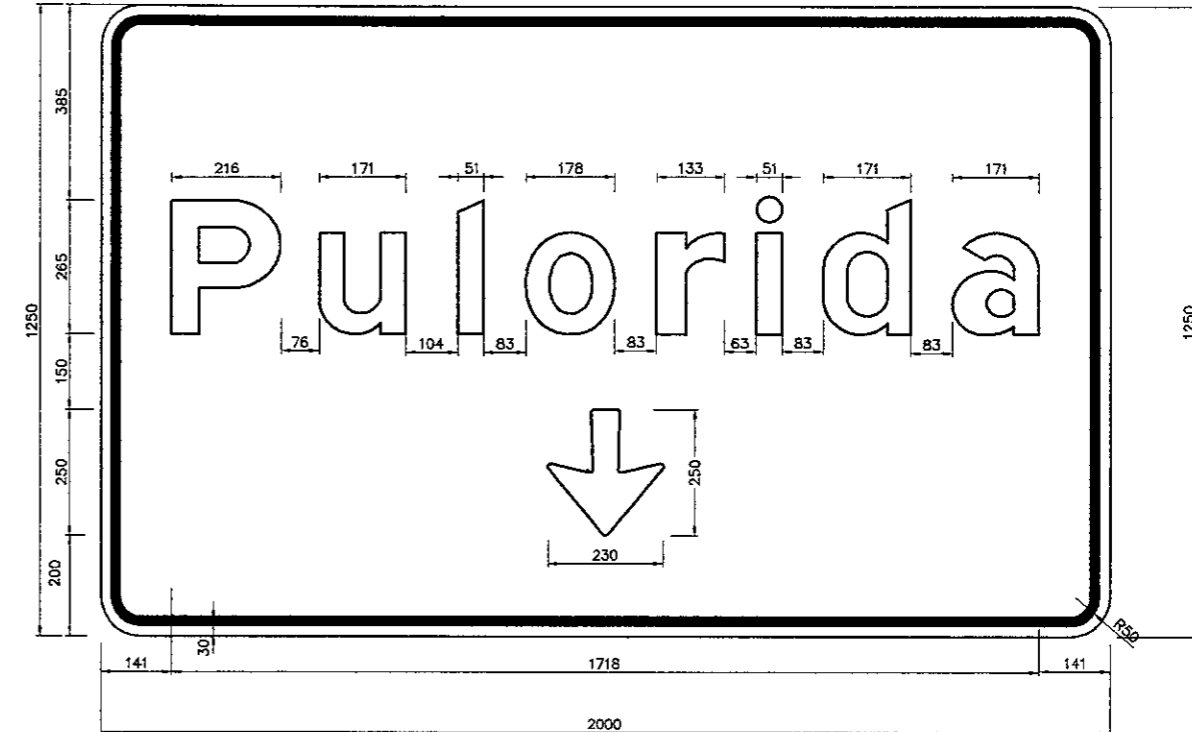
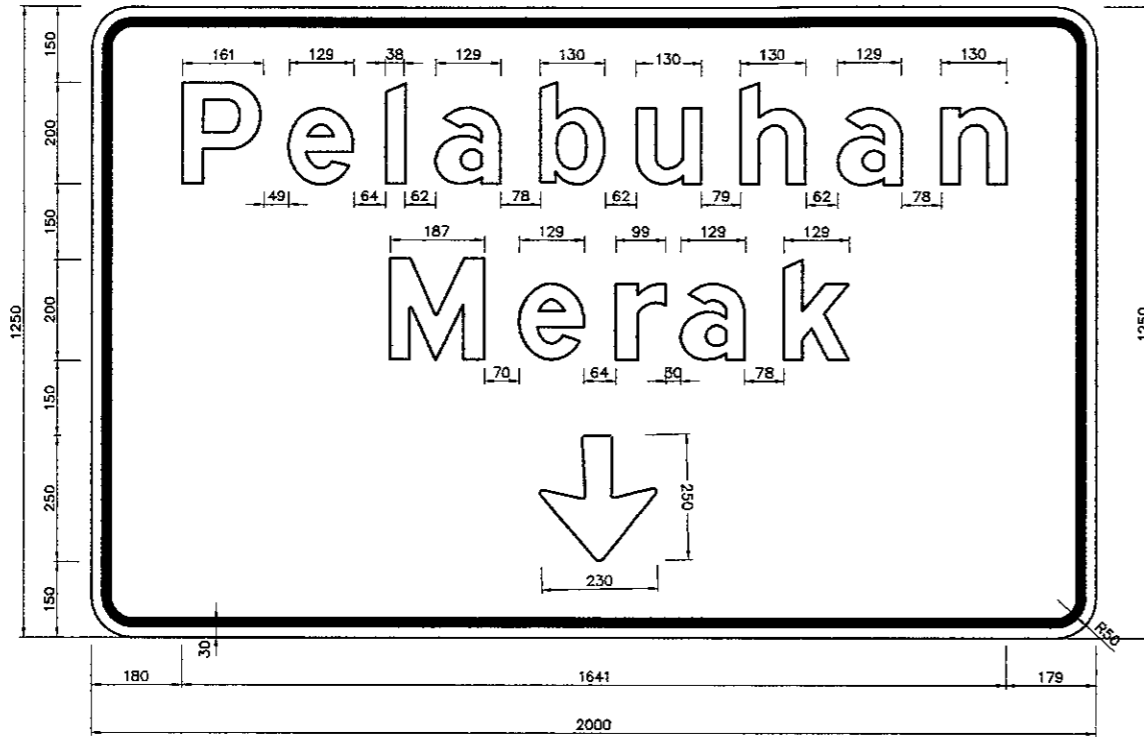
ir. HERRY VAZA M,Eng.Sc	Sign
NIP. : 110038400	Date

PROJECT AND LOCATION :
   
 DETAILED DESIGN STUDY OF
   
 NORTH JAVA CORRIDOR FLYOVER PROJECT
   
 MERAK FLYOVER - CONTRACT PACKAGE 1
   
 ( MERAK - BALARAJA )
   
 BANTEN PROVINCE

SCALE :
   
 1 : 75
   
 FULL SIZE A3

DRAWING TITLE :
   
 OVERHEAD GUIDE SIGNS

DRAWING NO :
   
 MTR-015
   
 SHEET NO :
   
 15 / 26



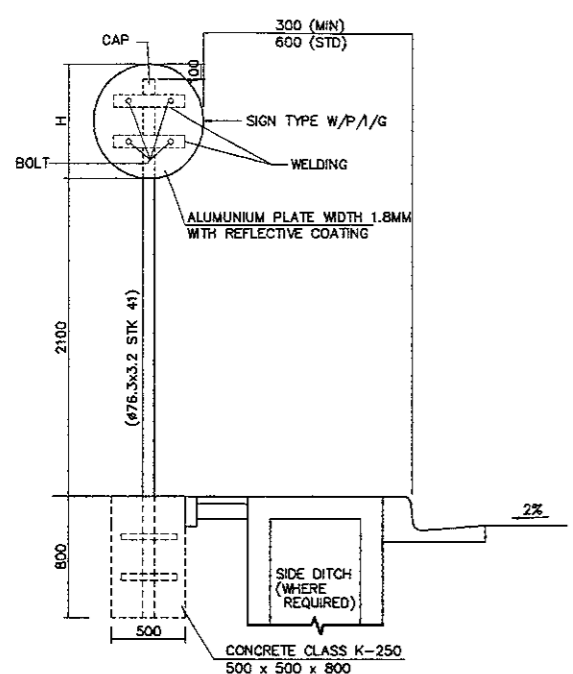
NOTES :

USED LETTER : REFER TO THE STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS, FHWA 1977
   
 : USED TYPE UPPERCASE E(M) 200, LOWERCASE LC 150

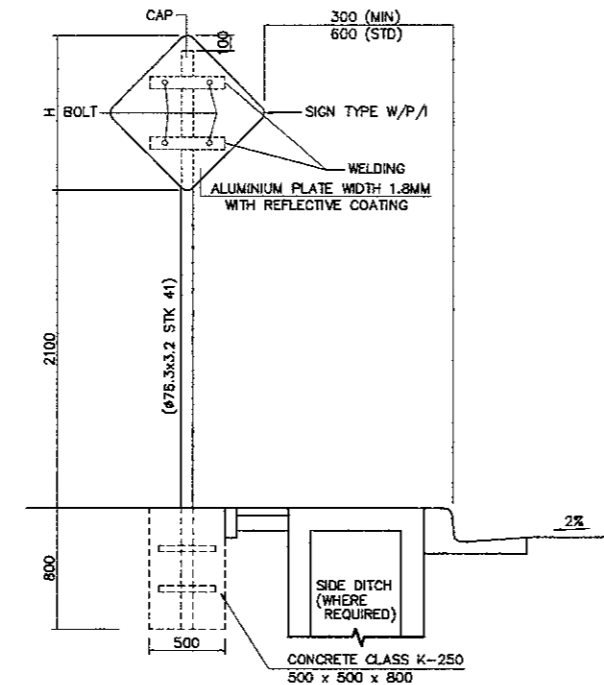
USED COLOUR : BACKGROUND : GREEN (REFLECTORIZED) ENGINEERING GRADE (EG)
   
 LETTER : WHITE (REFLECTORIZED) HIGH INTENSITY
   
 ARROW : WHITE (REFLECTORIZED) HIGH INTENSITY
   
 BORDER LINE : WHITE BOLD 30 MM (REFLECTORIZED) HIGH INTENSITY
   
 CORNER RADIUS : 50 MM



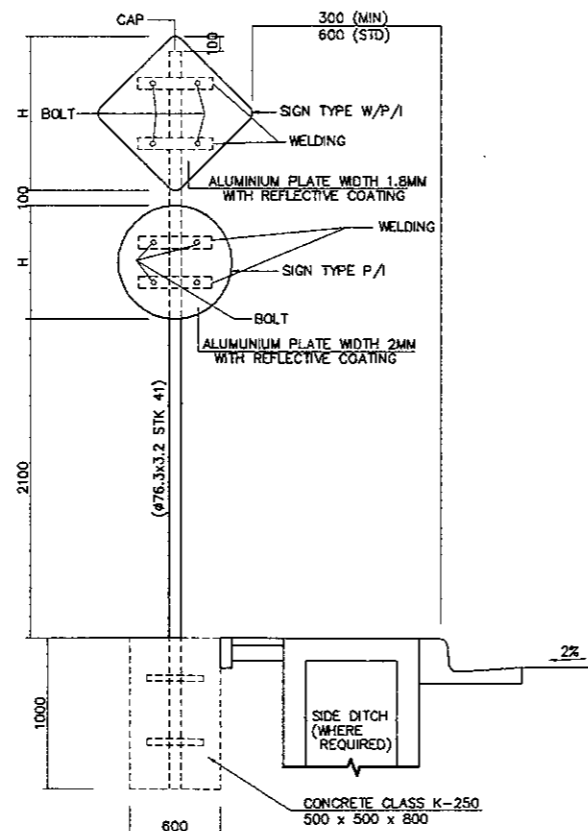
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name R. UENO	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date



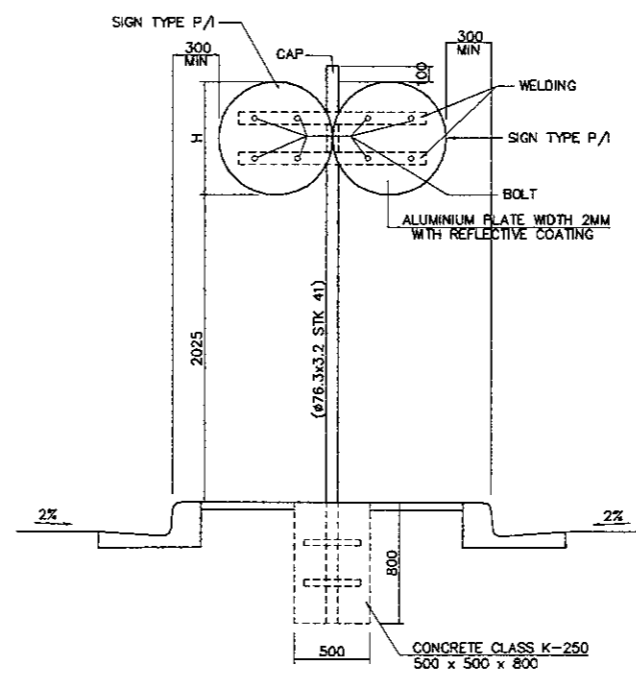
**1 TYPE - A**  
 SCALE 1:50



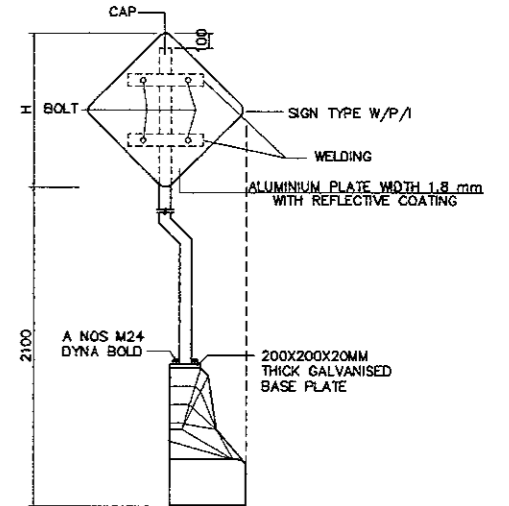
**2 TYPE - B**  
 SCALE 1:50



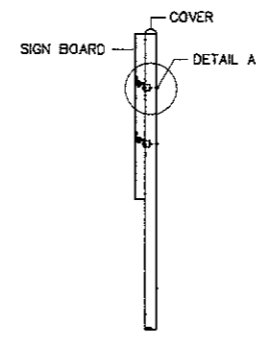
**3 TYPE - C**  
 SCALE 1:50



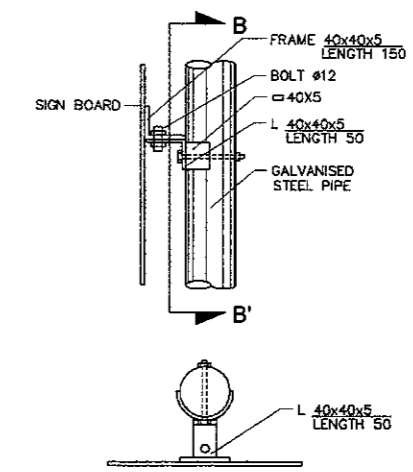
**4 TYPE - D**  
 SCALE 1:50



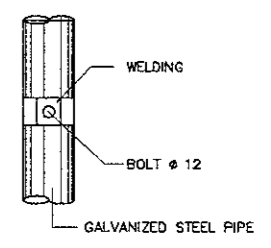
**5 TYPE - E**  
 SCALE 1:50



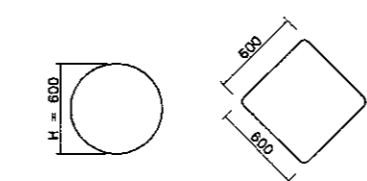
**7 TYPICAL INSTALLATION OF SIGN AT STEEL POLE**  
 NOT TO SCALE



**8 DETAIL A**  
 NTS



**9 SEC. B-B'**  
 NTS



**6 DIMENSIONS OF SIGN**  
 SCALE 1:50

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN
- DETAILS SHALL BE IN ACCORDANCE WITH SK MEN-HUB NO. 61 TAHUN 1993
- ALUMINIUM PLATE WITH REFLECTIVE SHEETING (AASHTO M 268) SHALL BE USED.
- UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER, THE THICKNESS OF ALUMINIUM PLATE SHALL BE 2MM.
- DETAILS OF CLAMPS SHALL BE APPROVED BY THE ENGINEER.
- LOCATION OF SIGNS AND EACH TYPE OF SIGNS SHALL BE AS DIRECTED AND APPROVED BY THE ENGINEER

DESIGNED BY	CHECKED BY	SUBMITTED BY
Name R. UENO	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date

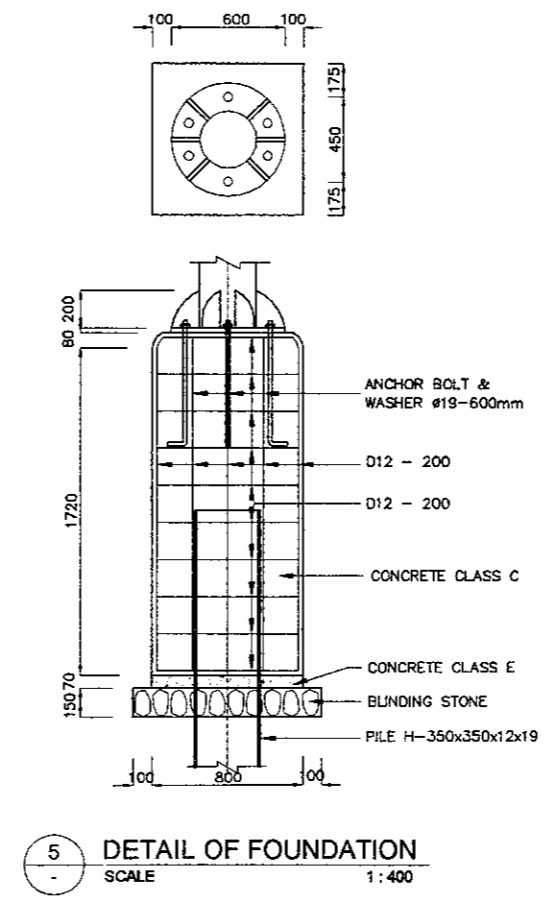
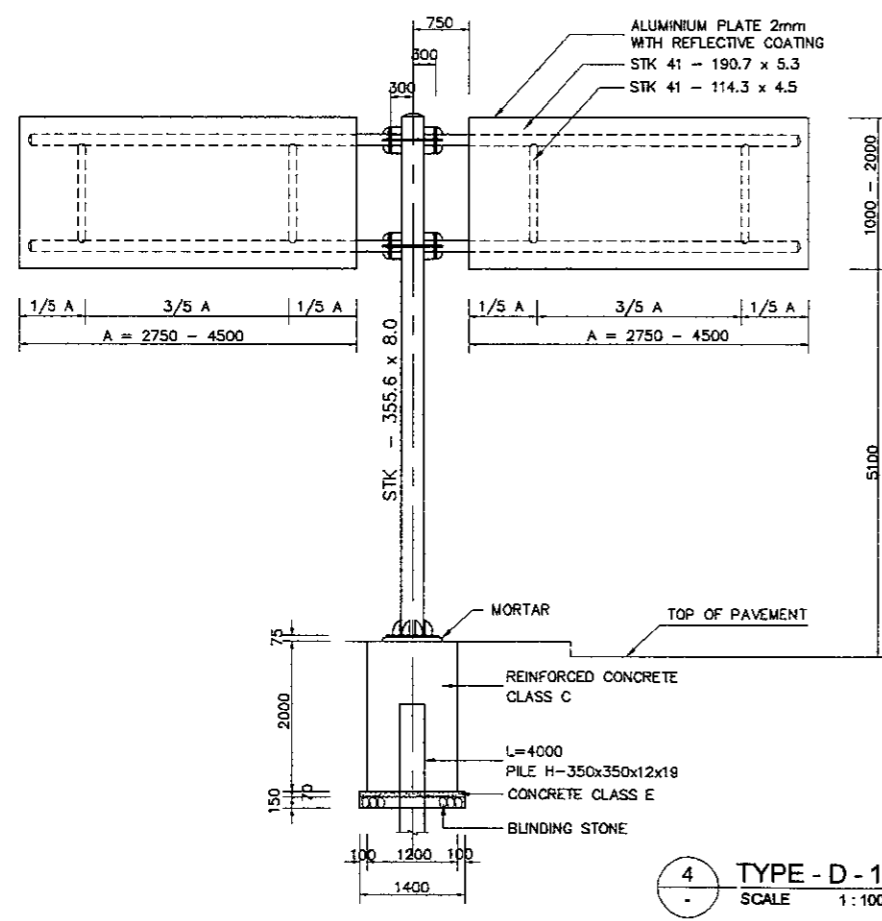
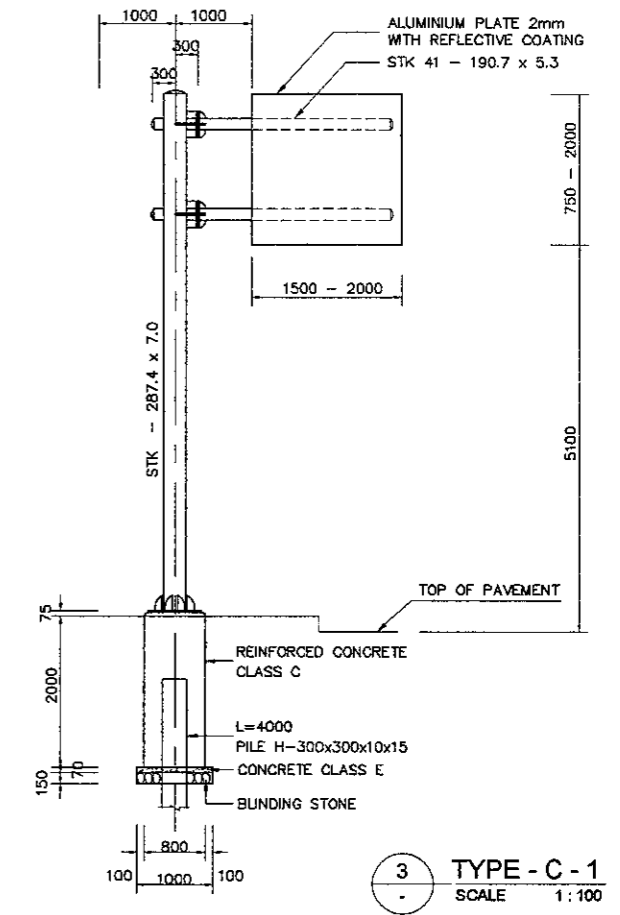
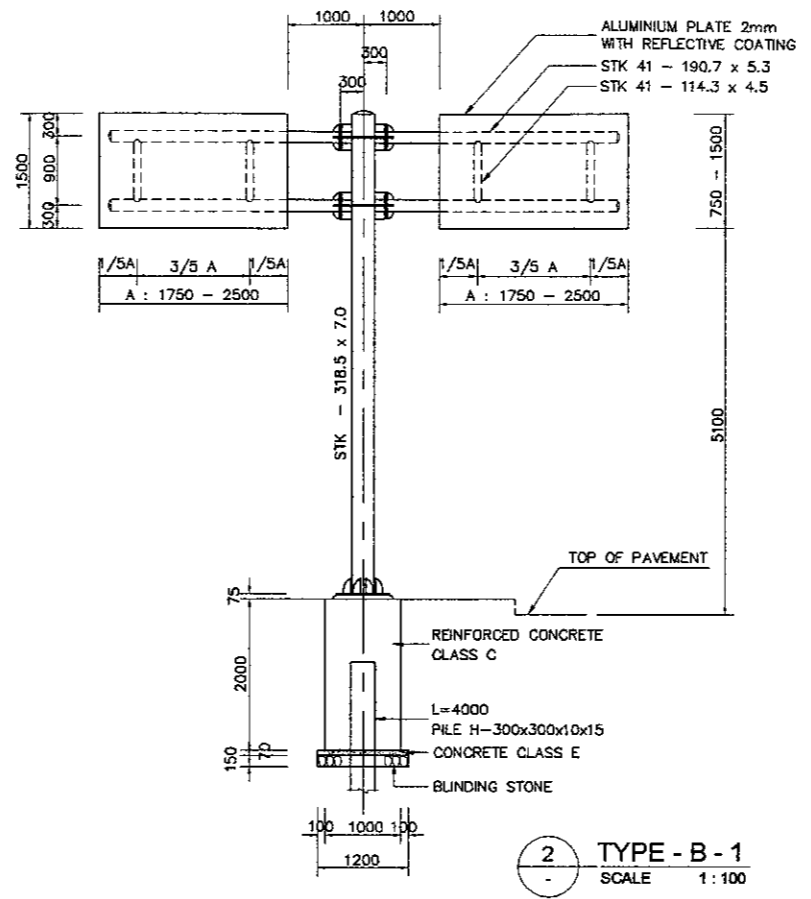
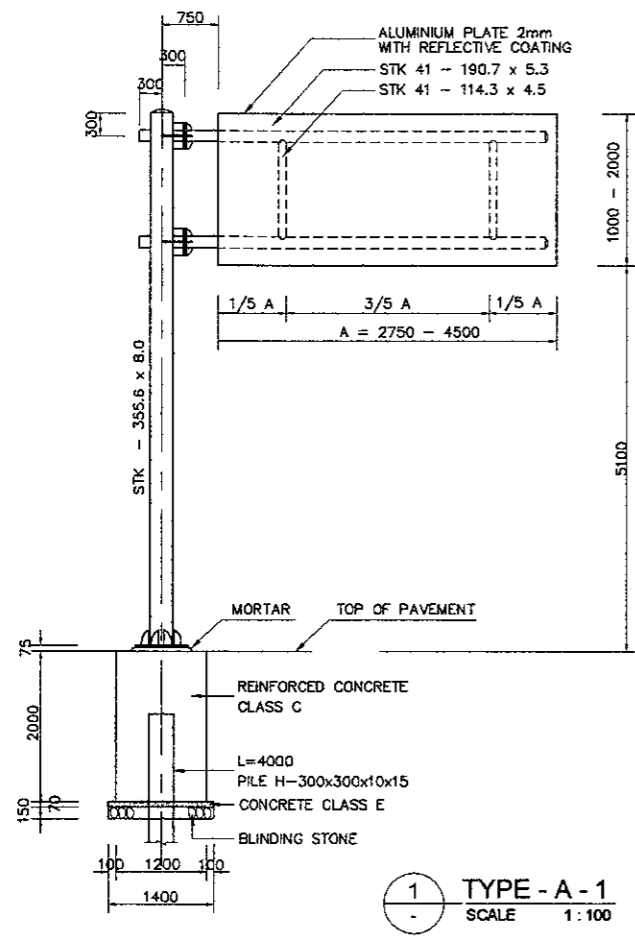
REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	
APPROVED BY	Ir. HERRY VAZA M.Eng.Sc
NIP. : 110038400	Sign
Date	Date

PROJECT AND LOCATION :
DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT MERAK FLYOVER - CONTRACT PACKAGE 1 ( MERAK - BALARAJA ) BANTEN PROVINCE

SCALE :
1 : 400 1 : 1000 FULL SIZE A3


DRAWING TITLE :
OVERHEAD SIGN TRUSS STRUCTURAL FRAME DETAIL 1 OF 2

DRAWING NO. :
MTR-017
SHEET NO. :
17 / 26



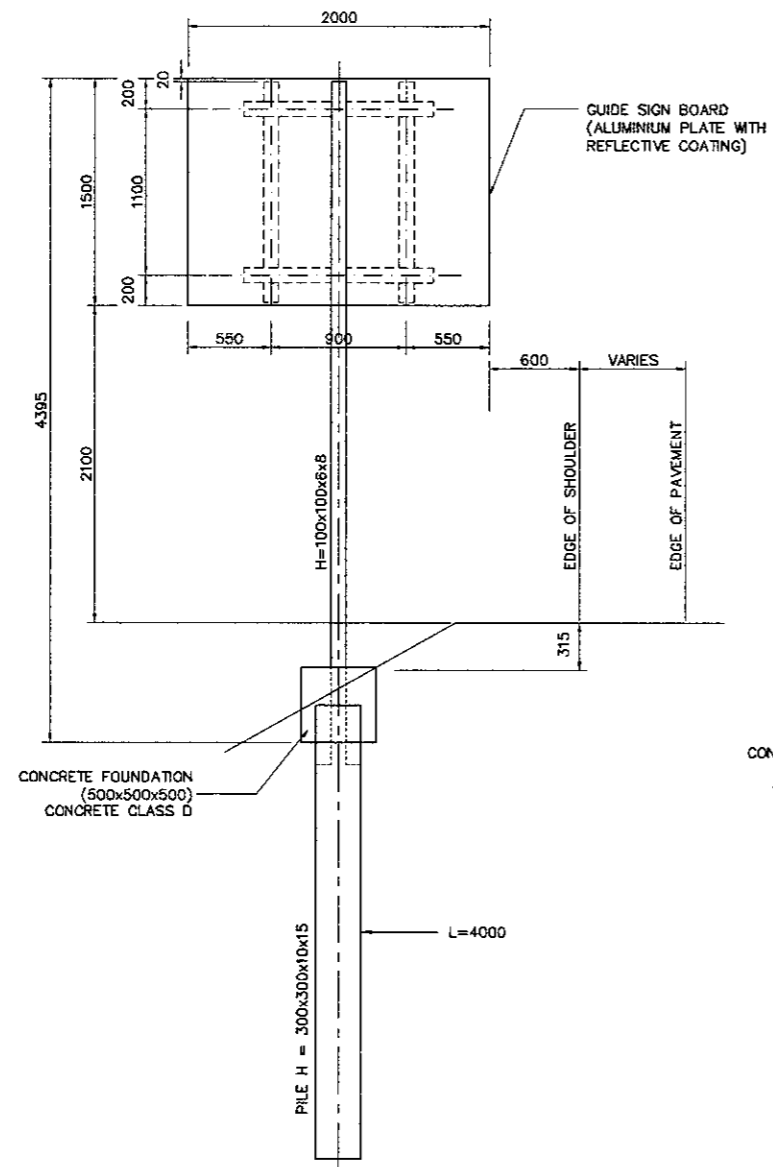
- NOTES :
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
  - ALL STEEL MATERIALS EXCEPT STAINLESS STEEL SHALL BE GALVANIZED
  - "STK" INDICATES STEEL PIPE OR PILE.
  - EACH TYPE OF GUIDE SIGN SHALL BE PROVIDED AS SHOWN IN THE PLAN OR AS INSTRUCTED BY THE ENGINEER.
  - PILE FOUNDATION SHALL BE ADOPTED WHEN THE GUIDE SIGN IS INSTALLED ON THE EARTH WORK SECTION. PILE LENGTH ARE STANDARD AND MAY BE VARIED TO SITE CONDITIONS AS INSTRUCTED BY THE ENGINEER.
  - GUIDE SIGN WITH FRAMES LOCATED ON BRIDGES SHALL BE INSTALLED ON PEDESTALS.

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	

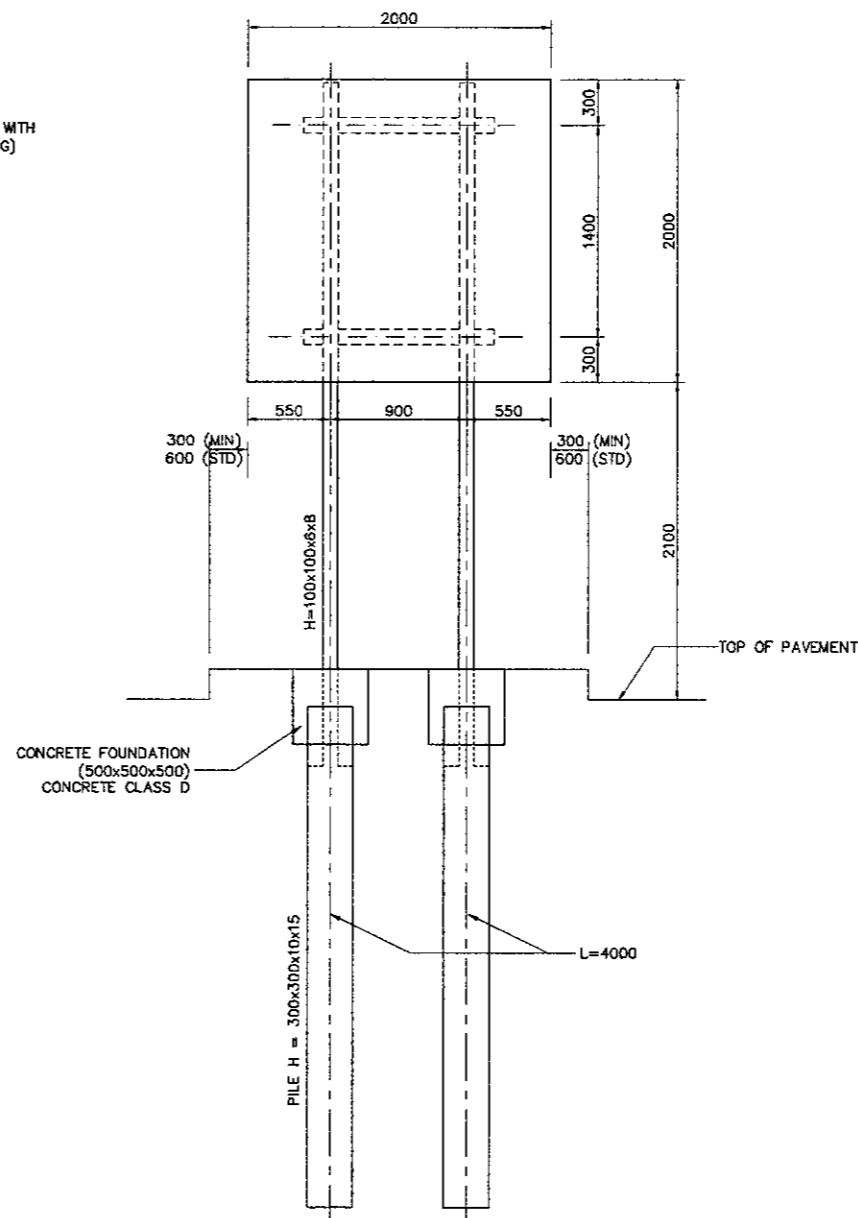
 REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS			
APPROVED BY	Ir. HERRY VAZA M,Eng.Sc	Sign	
	NIP. : 110038400	Date	

PROJECT AND LOCATION :	SCALE :
DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT MERAK FLYOVER - CONTRACT PACKAGE 1 ( MERAK - BALARAJA ) BANTEN PROVINCE	1 : 500  FULL SIZE A3

DRAWING TITLE :	DRAWING NO. :
OVERHEAD SIGN TRUSS STRUCTURAL FRAME DETAIL 2 OF 2	MTR-018
	SHEET NO. :
	18 / 26



1 TYPE - E - 1  
 SCALE 1:500

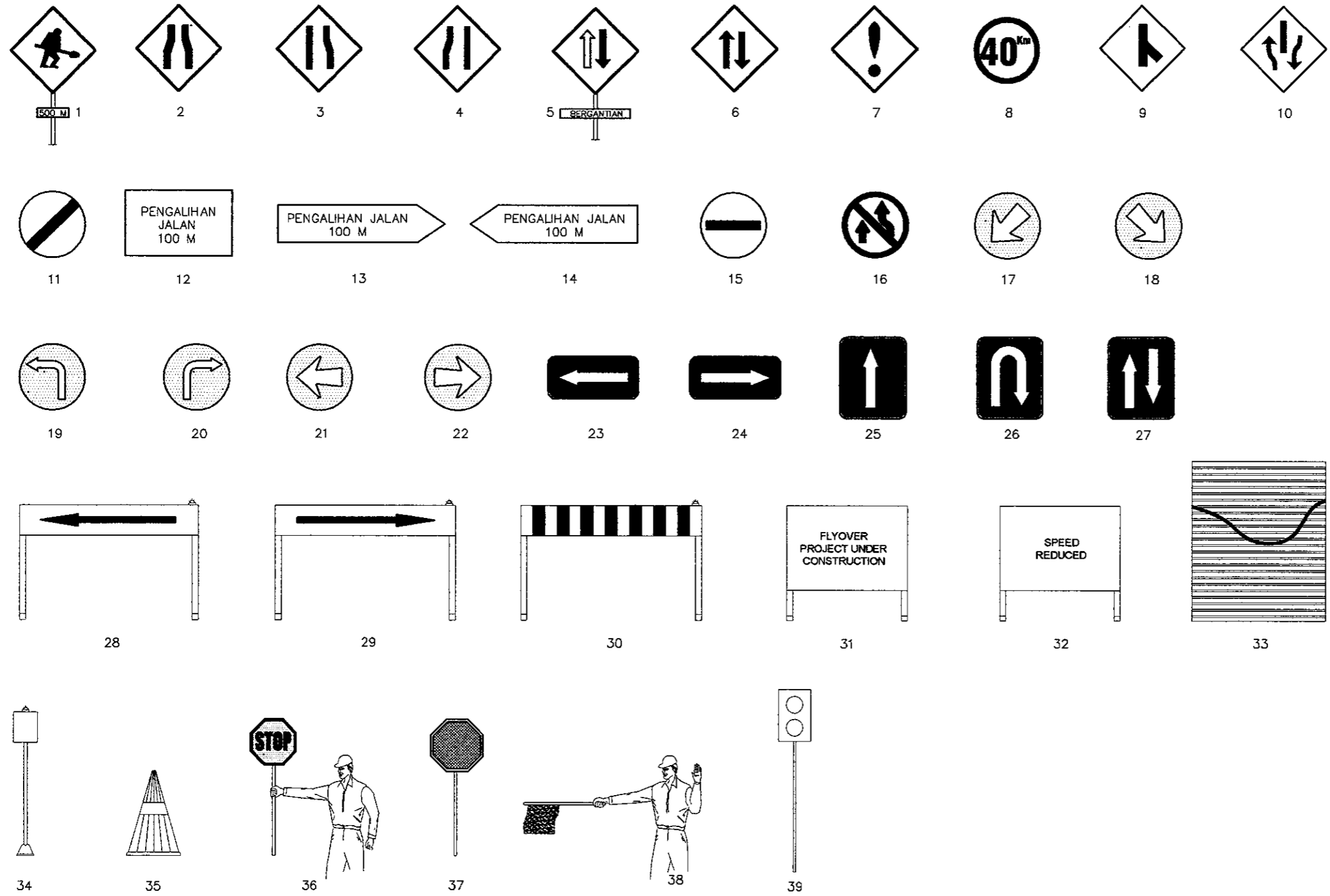


2 TYPE - F - 1  
 SCALE 1:500

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
2. ALL STEEL MATERIALS EXCEPT STAINLESS STEEL SHALL BE GALVANIZED.
3. 'H' INDICATES STEEL H-BEAM.
4. "STK" INDICATES STEEL PIPE OR PILE.
5. EACH TYPE OF GUIDE SIGN SHALL BE INSTALLED AS SHOWN ON THE PLANS OR AS INSTRUCTED BY THE ENGINEER.
6. PILE FOUNDATION SHALL BE ADOPTED WHEN THE GUIDE SIGN IS INSTALLED ON THE EARTH WORK SECTION. PILE LENGTH ARE STANDARD AND MAY BE VARIED TO SITE CONDITIONS AS INSTRUCTED BY THE ENGINEER.
7. GUIDE SIGN WITH FRAMES LOCATED ON BRIDGES SHALL BE INSTALLED ON PEDESTALS.

**ROAD WORK  
 ( TEMPORARY SIGNS )**

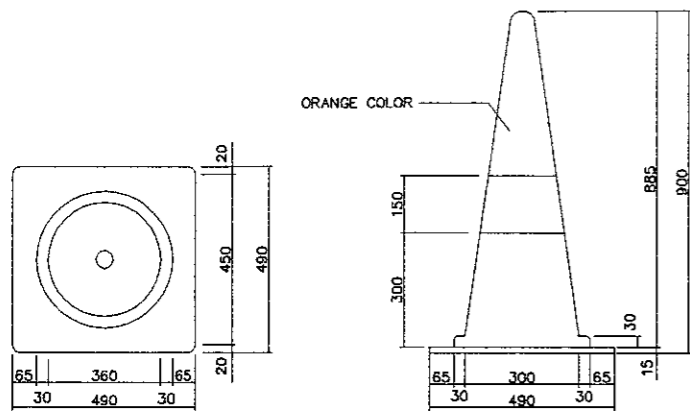


1. 500M ROADWORK
2. CHANGING OF ROAD WIDTH
3. LANE ENDS RIGHT
4. LANE ENDS LEFT
5. PRIORITY FOR VEHICLES
6. TWO WAY TRAFFIC
7. LOOK OUT
8. SPEED LIMIT MAX 40KM
9. INTERSECTION FROM BACK RIGHT DIRECTION TRAFFIC
10. BEGINNING OF SEPERATOR ONE TWO WAY TRAFFIC
11. END OF PROHIBITION AREA
12. 100M CHANGE TRAFFIC
13. 100M CHANGE TRAFFIC TO RIGHT
14. 100M CHANGE TRAFFIC TO LEFT
15. NO ENTRY FOR ALL VEHICLES
16. TWO TRAFFIC
17. MUST PASS THIS LANE
18. MUST PASS THIS LANE
19. TURNING INDICATION TO LEFT
20. TURNING INDICATION TO RIGHT
21. INDICATION OF DIRECTION TO LEFT
22. INDICATION OF DIRECTION TO RIGHT
23. ONE WAY LEFT
24. ONE WAY RIGHT
25. STRAIGHT ONE WAY
26. U TURN
27. PRIORITY GIVEN TO THE COMING TRAFFIC
28. CLOSED ROAD FOR CHANGE TRAFFIC TO LEFT
29. CLOSED ROAD FOR CHANGE TRAFFIC TO RIGHT
30. CLOSED TRAFFIC UNDER CONSTRUCTION
31. INFORMATION BOARD DURING CONSTRUCTION AHEAD
32. REDUCED SPEED WARNING BOARD
33. PROTECTION DURING CONSTRUCTION
34. PLAN LIGHT
35. CONE
36. CONTROL TRAFFIC GO / AHEAD
37. GO AHEAD
38. FLAGGER CONTROL
39. FLASHING WARNING LIGHT

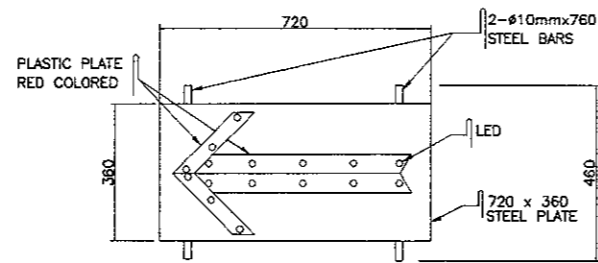
COLOR LEGEND :

	YELLOW
	RED
	BLACK
	BLUE

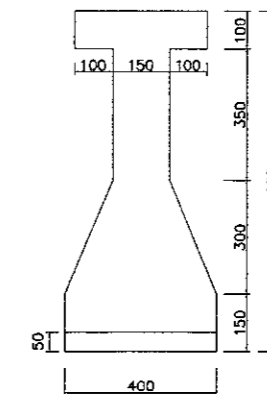
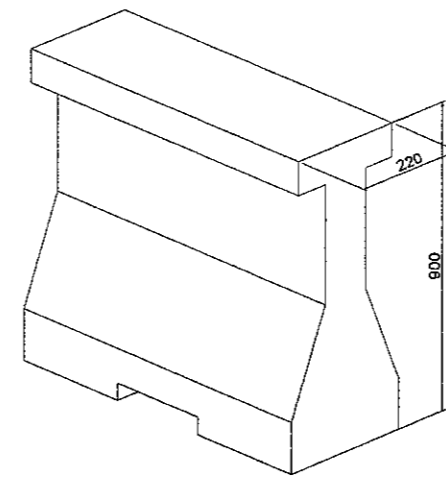
NOTE :  
 STANDARD TRAFFIC WITH ROAD SIGNS  
 SHOULD CONFORM WITH THE " "   
 DINAS PERHUBUNGAN LALU LINTAS  
 DAN ANGKUTAN JALAN SETEMPAT



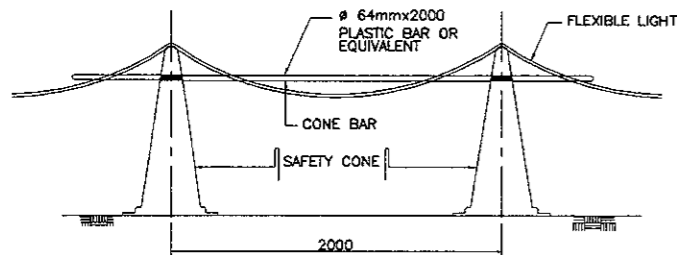
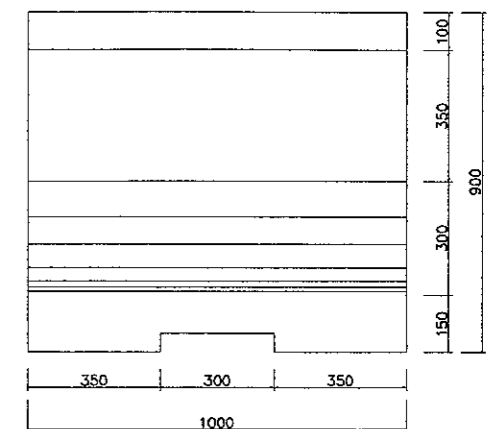
3 SAFETY CONE  
 SCALE 1:20



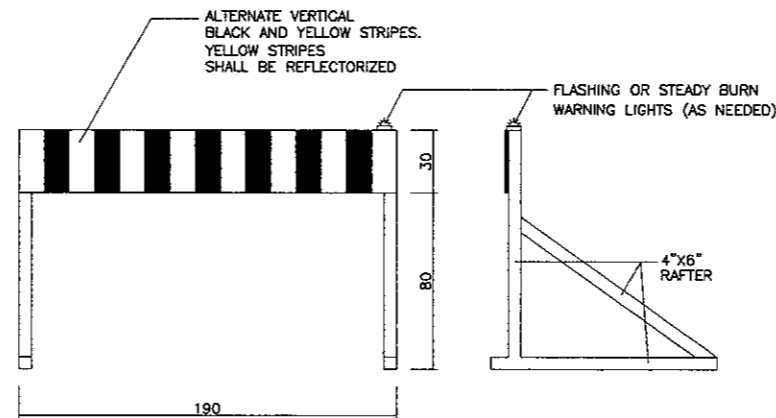
6 ARROW PLATE OF LED  
 SCALE 1:20



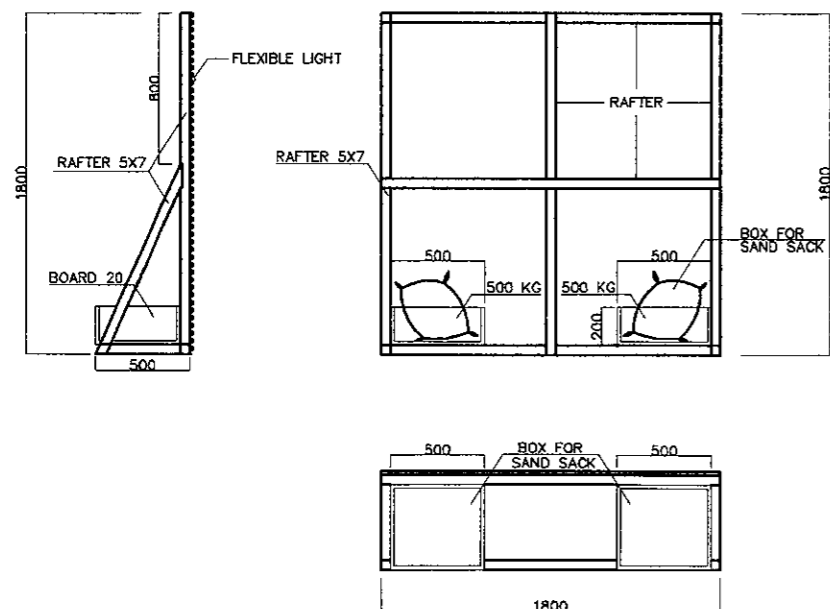
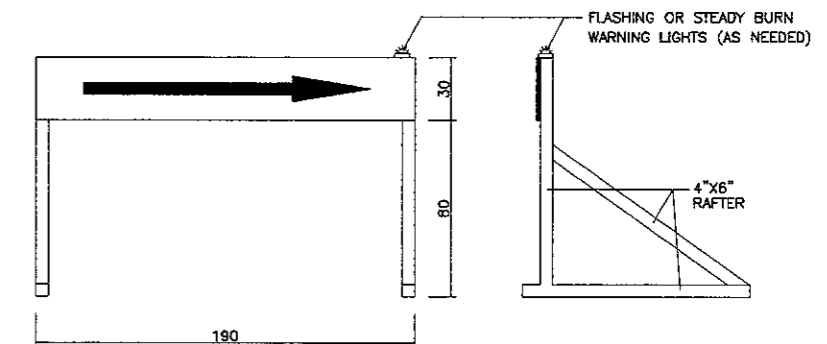
7 MOVABLE BARRIER  
 SCALE 1:20



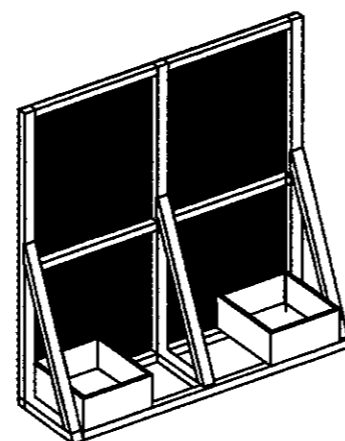
2 CONE BAR  
 NOT TO SCALE



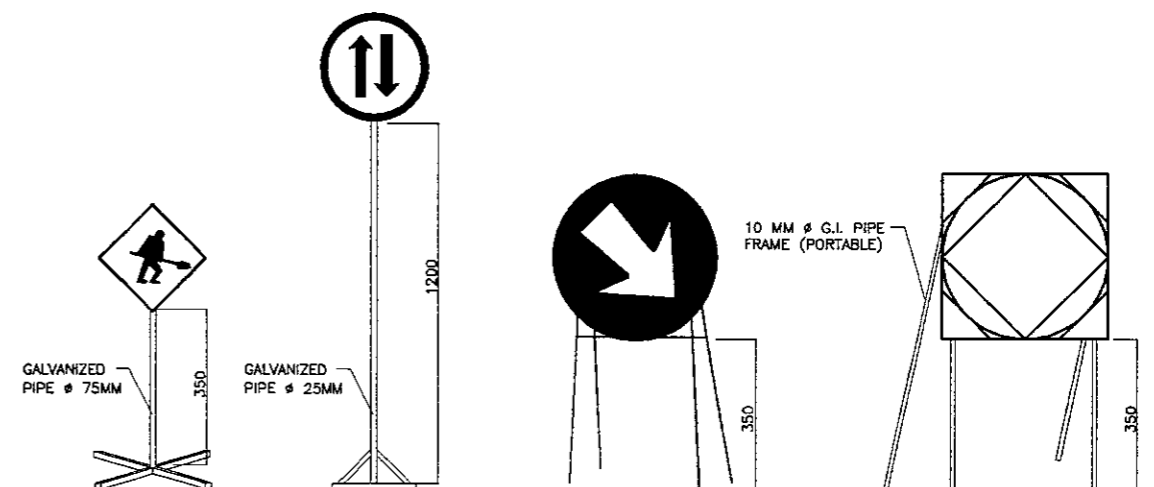
5 TEMPORARY SIGN BOARD SUPPORT  
 SCALE 1:30



1 TEMPORARY FENCE DURING CONSTRUCTION  
 SCALE 1:40

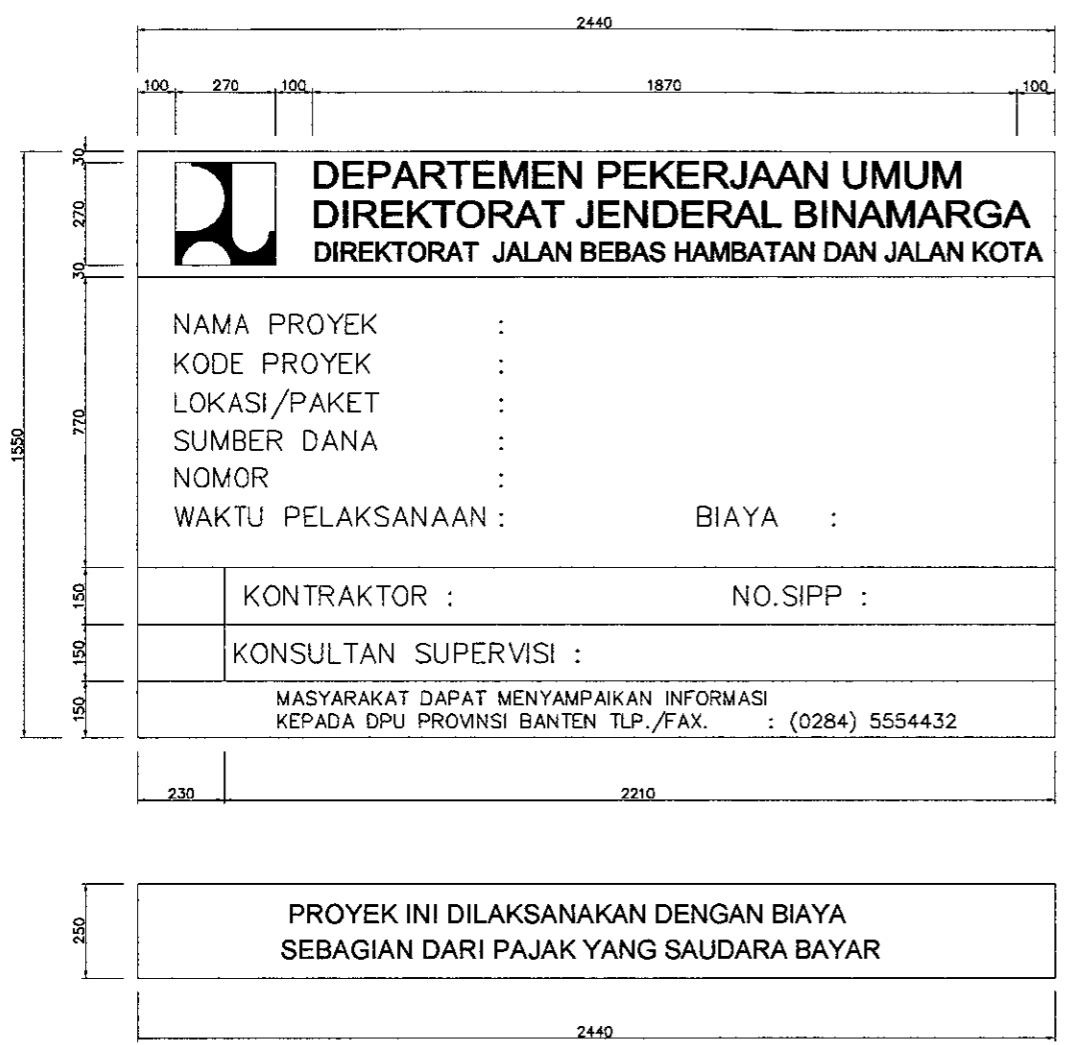


ISOMETRIC



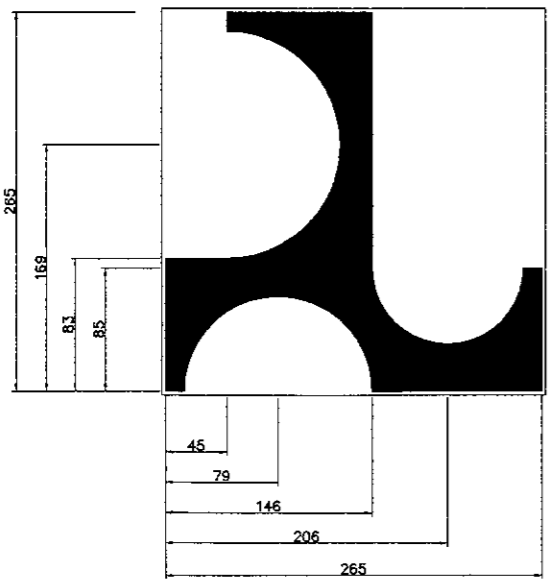
4 TEMPORARY SIGN SUPPORT DETAILS  
 NOT TO SCALE

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



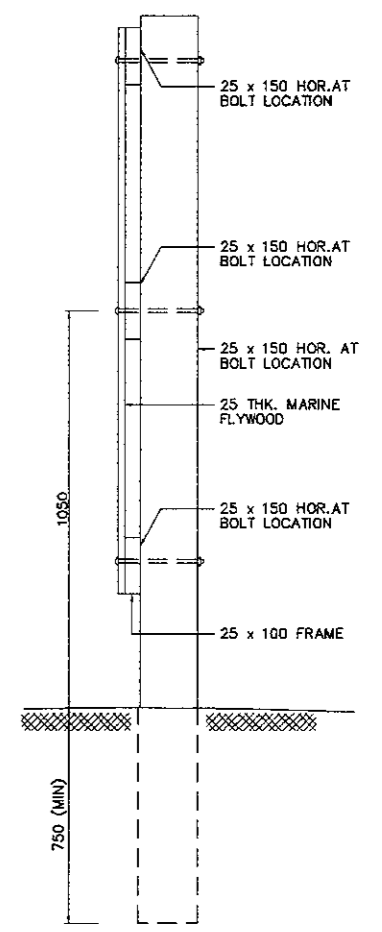
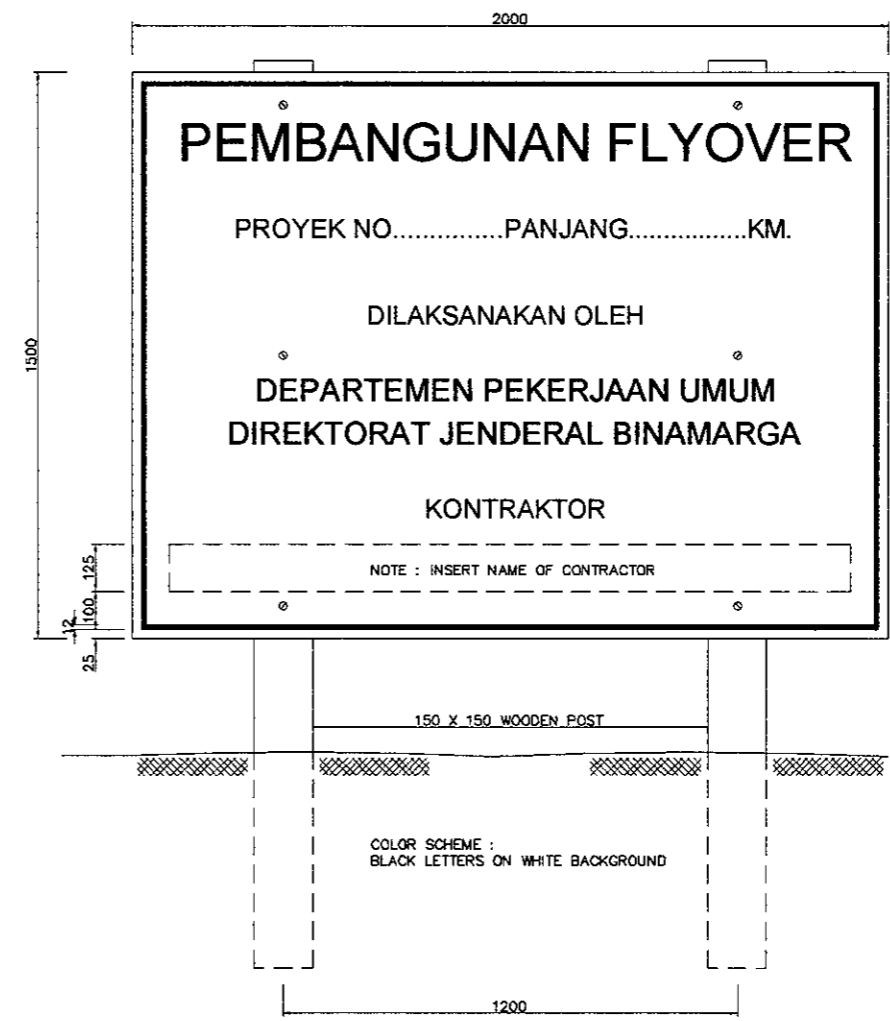
BASE COLOUR : OCEAN BLUE  
 TEXT COLOUR : BLACK AND  
 TEXT HEIGHT : 7,00 CM  
 SYMBOL SEE DETAIL

BASE COLOUR : DARK YELLOW  
 TEXT COLOUR : BLACK AND  
 TEXT HEIGHT : 5,00 CM  
 LINE COLOUR : BLACK AND  
 LINE WIDTH : 0,50 CM



**SYMBOL OF MINISTRY OF PUBLIC WORKS**

SYMBOL OF THE MINISTRY OF SETTLEMENT AND  
 REGIONAL INFRASTRUCTURE IS A PROPELLER WITH  
 DIMENSION SHOWN ON THE DRAWING  
 BASE COLOUR : DARK YELLOW  
 OBJECT COLOUR : DARK BLUE

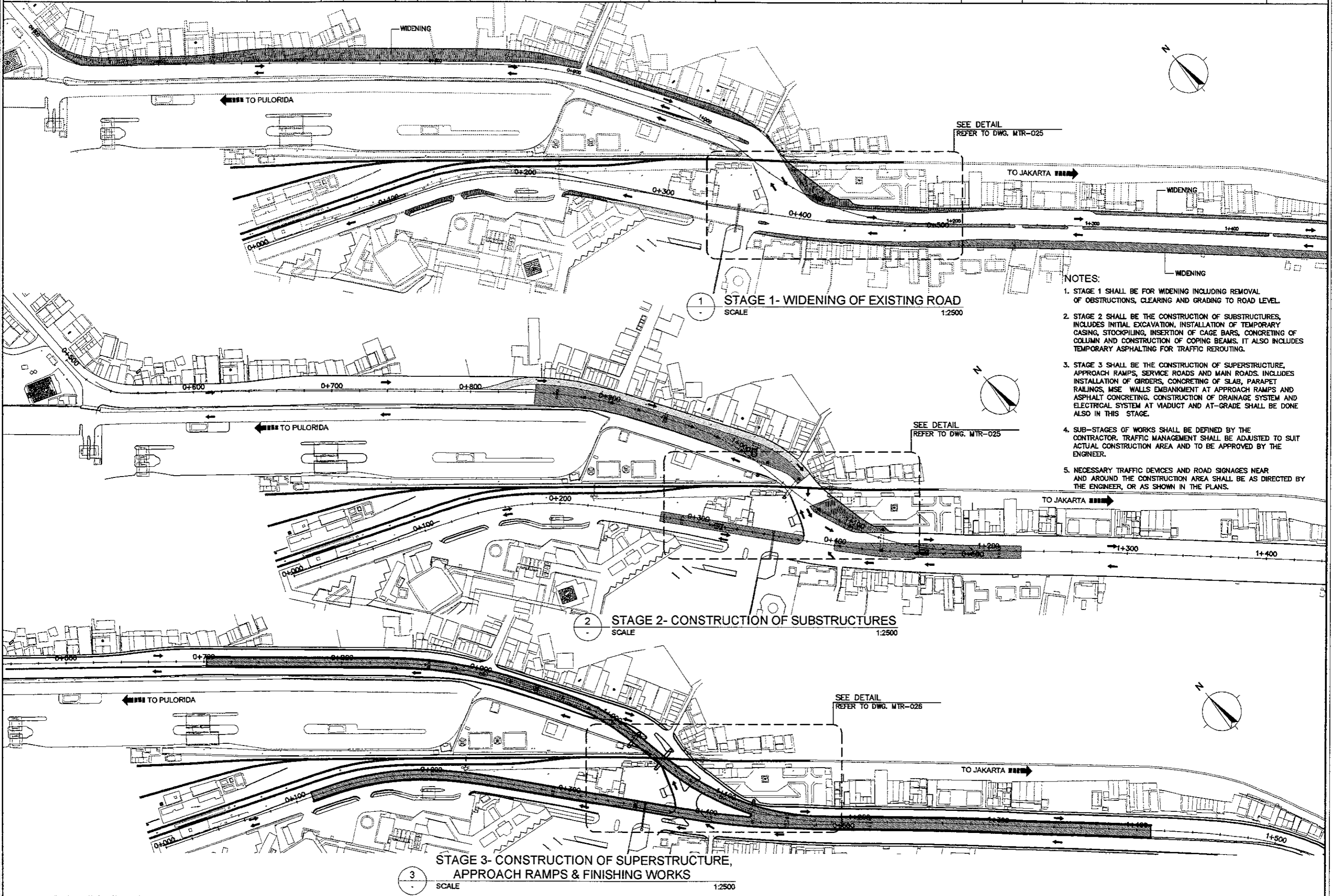


**A FRONT ELEVATION**  
 SCALE 1:20

**B SIDE ELEVATION**  
 SCALE 1:20

**1 PROJECT DESCRIPTION SIGN BOARD DURING CONSTRUCTION**  
 1:20

DESIGNED BY	CHECKED BY	SUBMITTED BY
Name R. UENO	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date



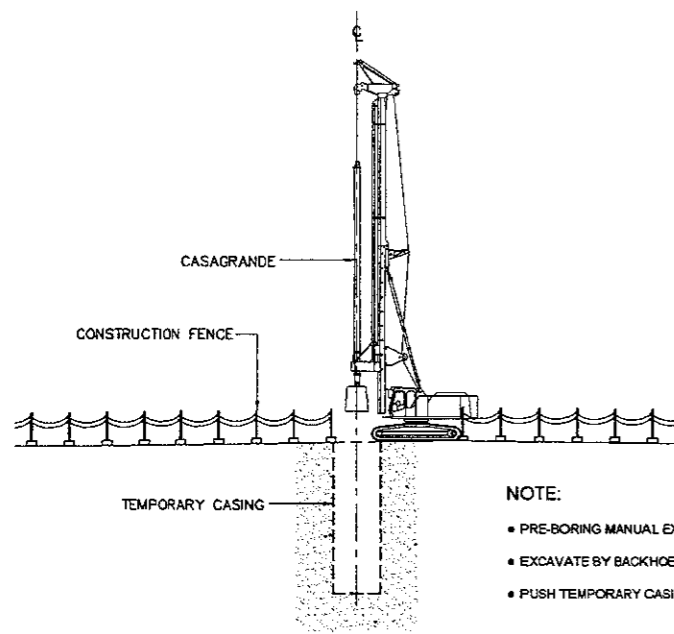
**1** STAGE 1- WIDENING OF EXISTING ROAD  
 SCALE 1:2500

**2** STAGE 2- CONSTRUCTION OF SUBSTRUCTURES  
 SCALE 1:2500

**3** STAGE 3- CONSTRUCTION OF SUPERSTRUCTURE,  
 APPROACH RAMP & FINISHING WORKS  
 SCALE 1:2500

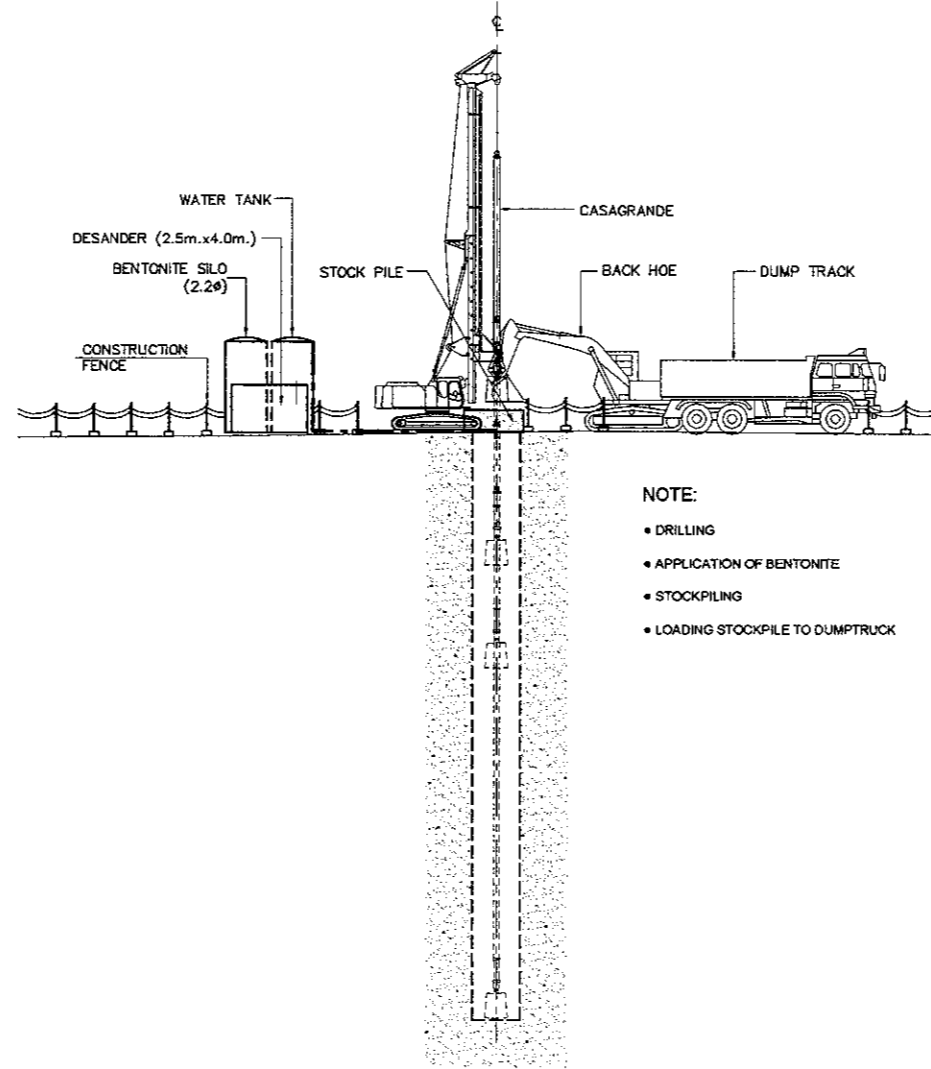
- NOTES:**
- STAGE 1 SHALL BE FOR WIDENING INCLUDING REMOVAL OF OBSTRUCTIONS, CLEARING AND GRADING TO ROAD LEVEL.
  - STAGE 2 SHALL BE THE CONSTRUCTION OF SUBSTRUCTURES, INCLUDES INITIAL EXCAVATION, INSTALLATION OF TEMPORARY CASING, STOCKPILING, INSERTION OF CAGE BARS, CONCRETING OF COLUMN AND CONSTRUCTION OF COPING BEAMS. IT ALSO INCLUDES TEMPORARY ASPHALTING FOR TRAFFIC REROUTING.
  - STAGE 3 SHALL BE THE CONSTRUCTION OF SUPERSTRUCTURE, APPROACH RAMP, SERVICE ROADS AND MAIN ROADS. INCLUDES INSTALLATION OF GIRDERS, CONCRETING OF SLAB, PARAPET RAILINGS, MSE WALLS EMBANKMENT AT APPROACH RAMP AND ASPHALT CONCRETING. CONSTRUCTION OF DRAINAGE SYSTEM AND ELECTRICAL SYSTEM AT VIADUCT AND AT-GRADE SHALL BE DONE ALSO IN THIS STAGE.
  - SUB-STAGES OF WORKS SHALL BE DEFINED BY THE CONTRACTOR. TRAFFIC MANAGEMENT SHALL BE ADJUSTED TO SUIT ACTUAL CONSTRUCTION AREA AND TO BE APPROVED BY THE ENGINEER.
  - NECESSARY TRAFFIC DEVICES AND ROAD SIGNAGES NEAR AND AROUND THE CONSTRUCTION AREA SHALL BE AS DIRECTED BY THE ENGINEER, OR AS SHOWN IN THE PLANS.

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



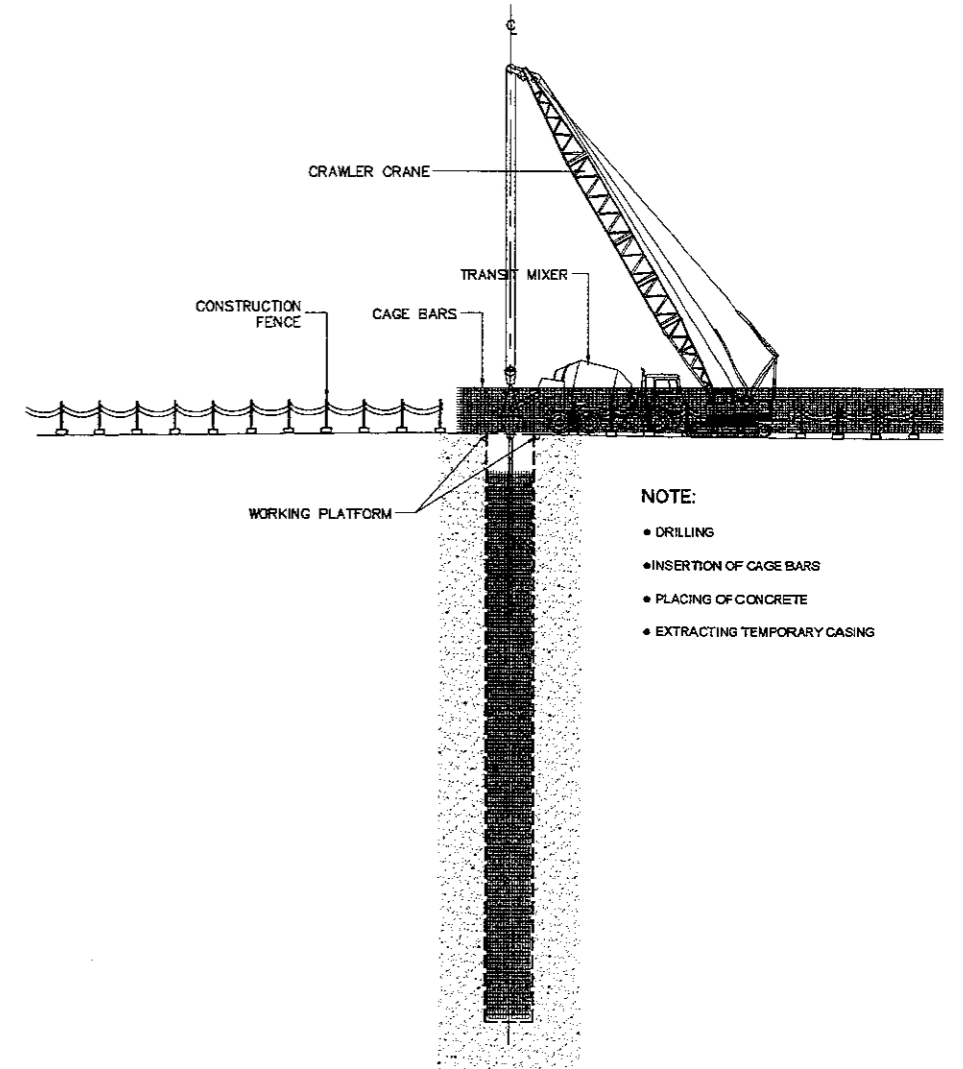
- NOTE:**
- PRE-BORING MANUAL EXCAVATION (MIN. 2.0m)
  - EXCAVATE BY BACKHOE GREATER THAN 4.0m
  - PUSH TEMPORARY CASING

**AB1** SEQUENCE - 1  
 SCALE 1:400



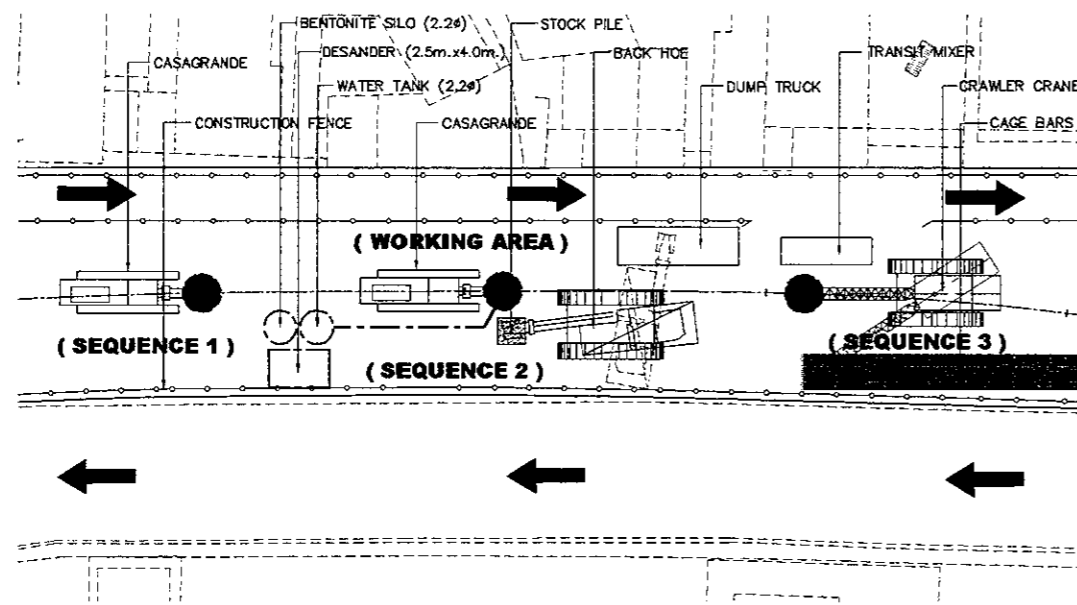
- NOTE:**
- DRILLING
  - APPLICATION OF BENTONITE
  - STOCKPILING
  - LOADING STOCKPILE TO DUMPTRUCK

**AB2** SEQUENCE - 2  
 SCALE 1:400

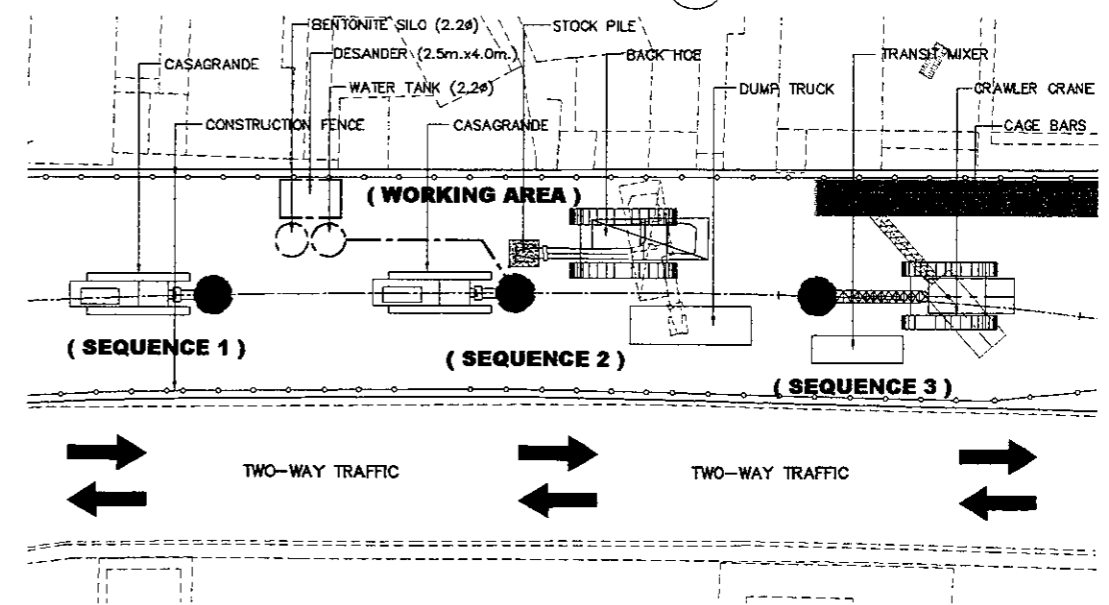


- NOTE:**
- DRILLING
  - INSERTION OF CAGE BARS
  - PLACING OF CONCRETE
  - EXTRACTING TEMPORARY CASING

**AB3** SEQUENCE - 3  
 SCALE 1:400



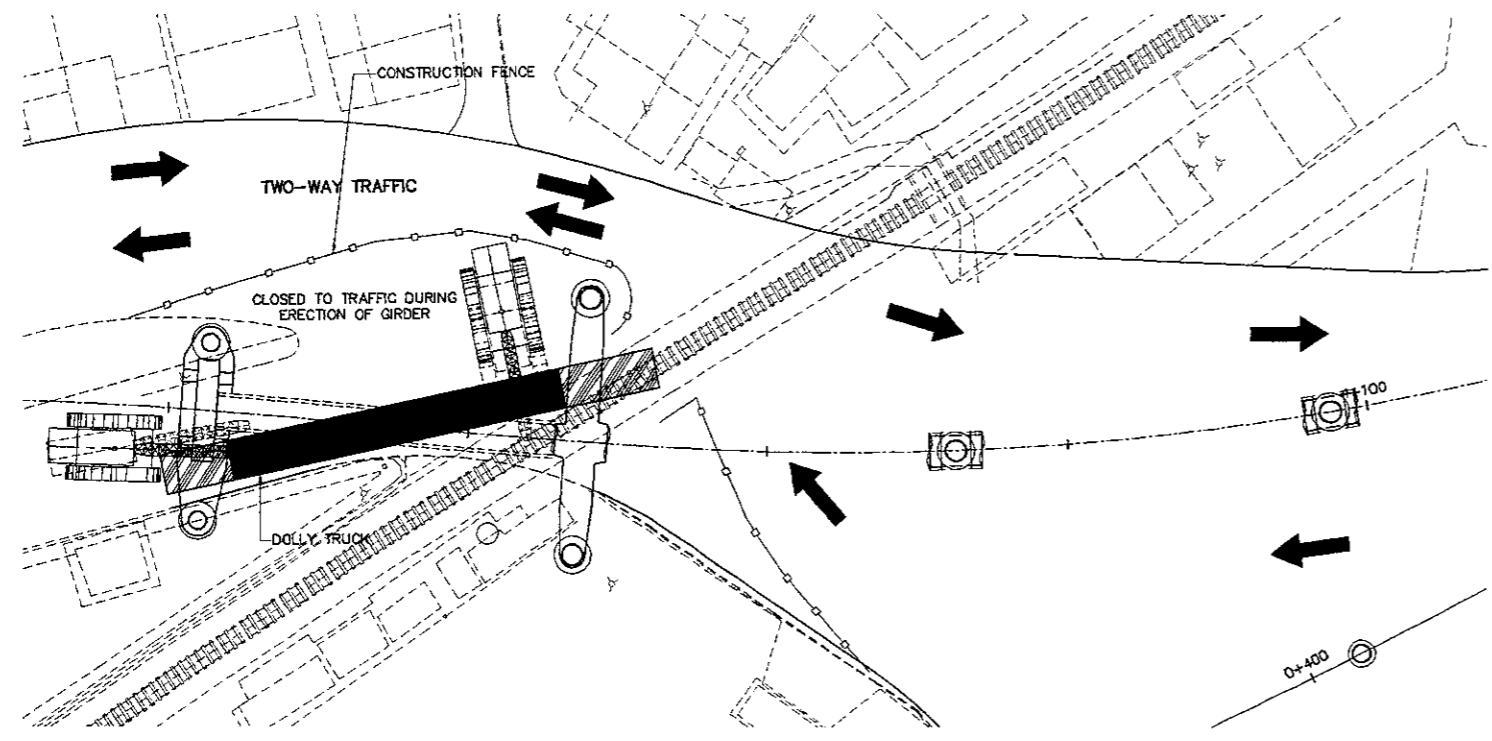
**A** SEQUENCE LAYOUT PLAN (ALTERNATIVE 1)  
 SCALE 1:500



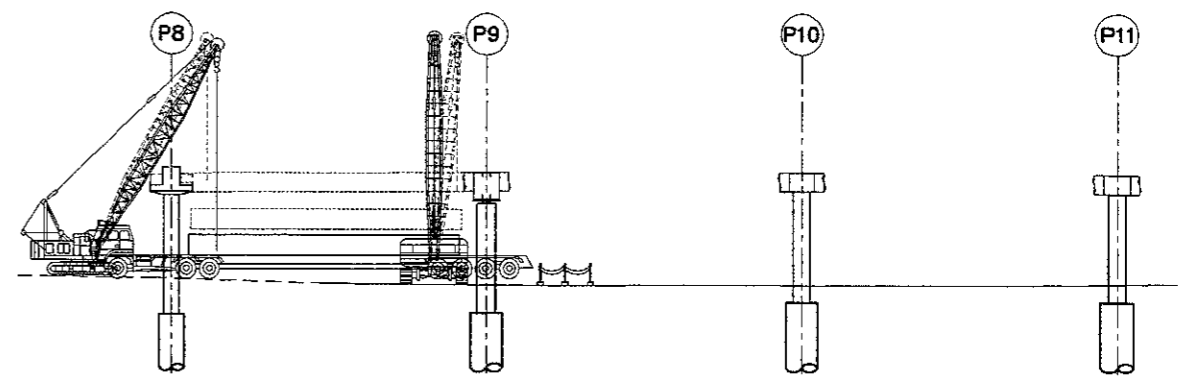
**B** SEQUENCE LAYOUT PLAN (ALTERNATIVE 2)  
 SCALE 1:500



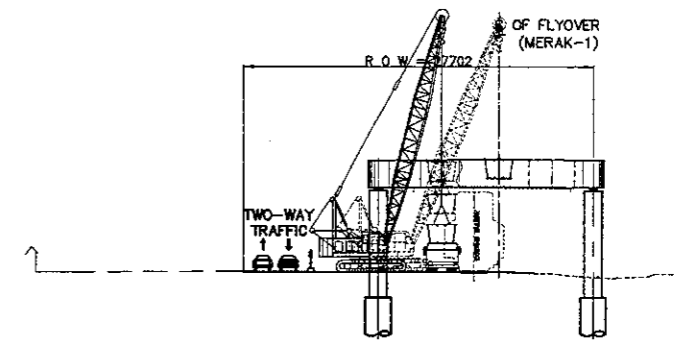
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name R. UENO	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date



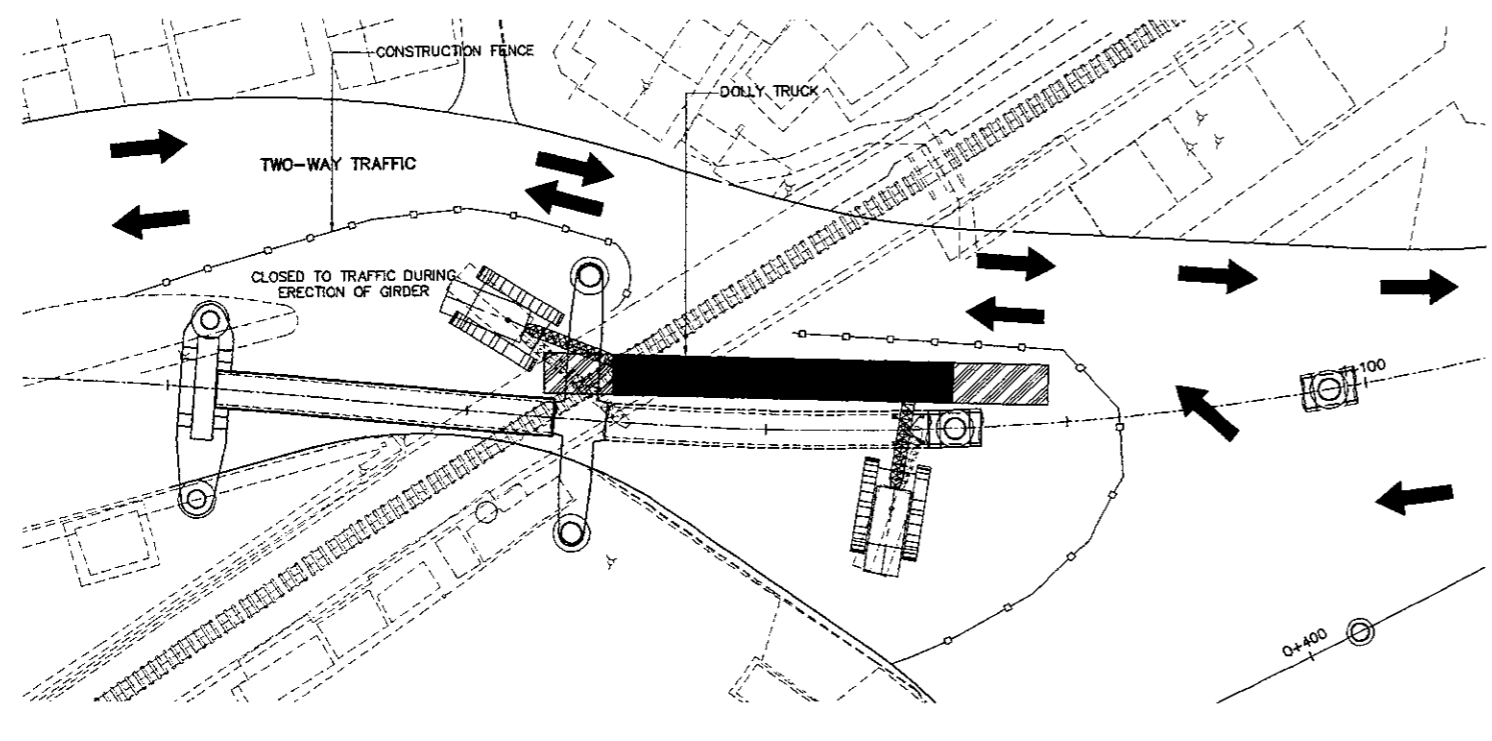
**A** INSTALLATION OF GIRDER (PHASE - 1)  
 SCALE 1:500



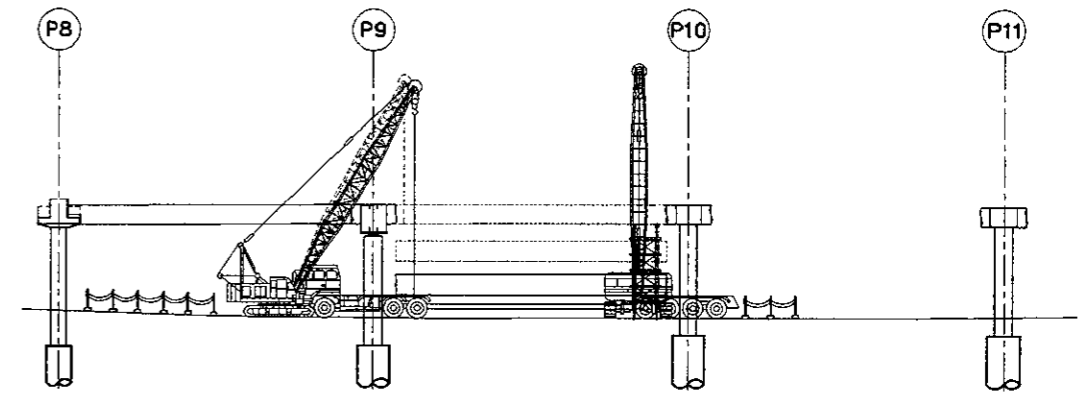
**A1** TYPICAL ELEVATION (PORTAL COLUMN PIER)  
 SCALE 1:600



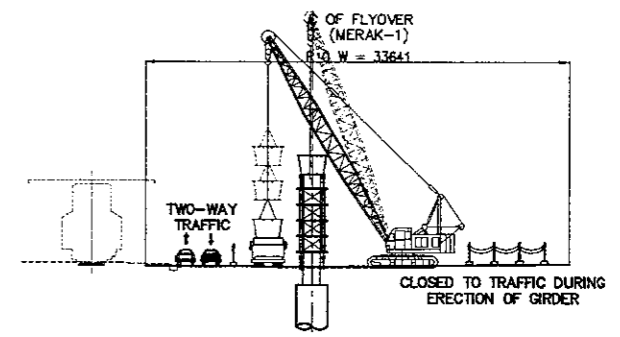
**A2** TYPICAL SECTION (PORTAL COLUMN PIER)  
 SCALE 1:600



**B** INSTALLATION OF GIRDER (PHASE - 2)  
 SCALE 1:500



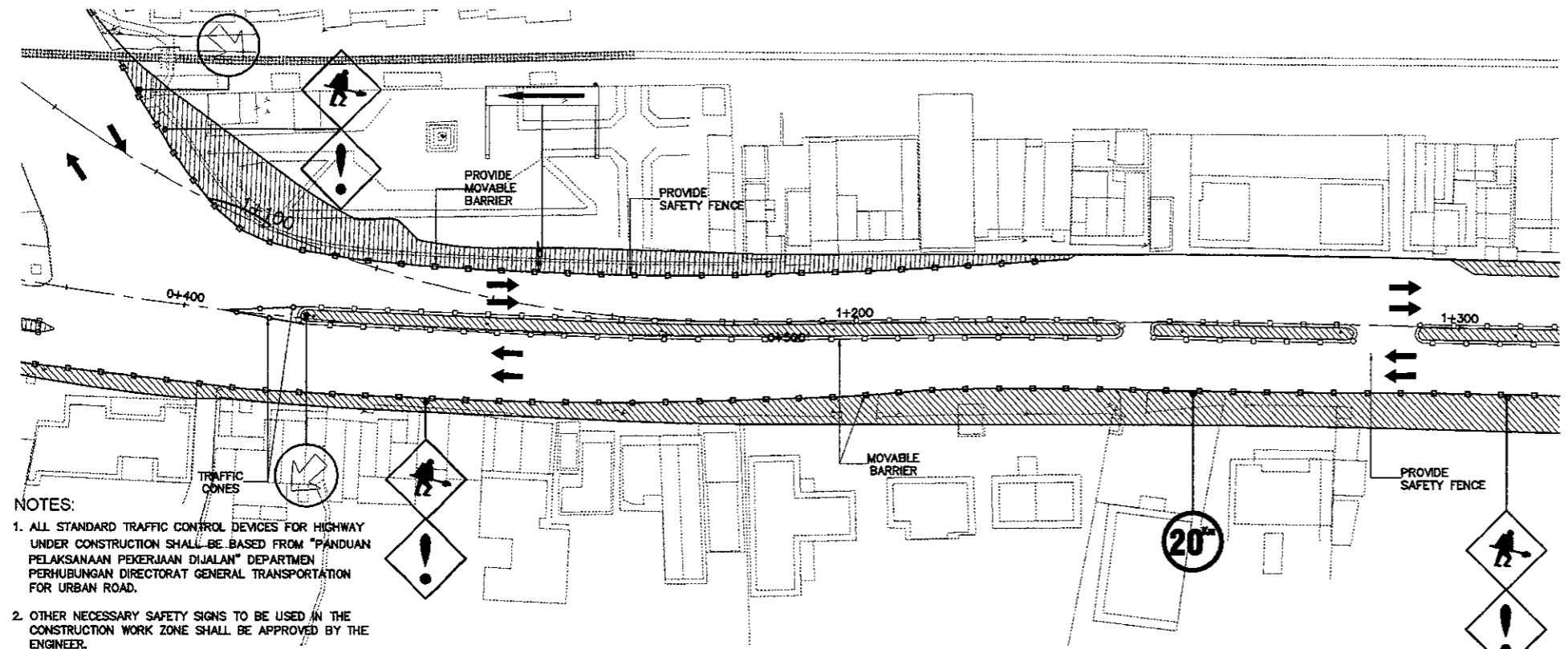
**B1** TYPICAL ELEVATION (PORTAL COLUMN PIER)  
 SCALE 1:600



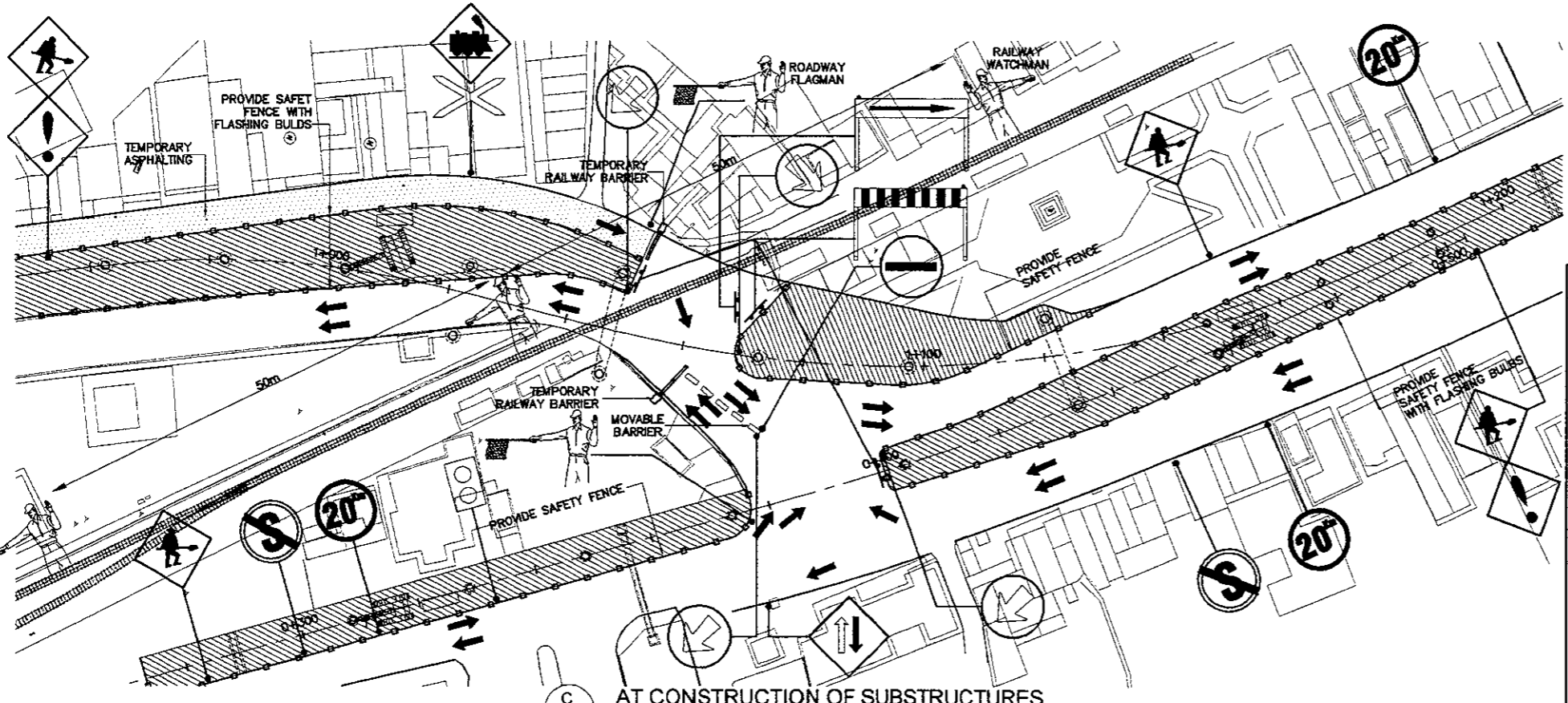
**B2** TYPICAL SECTION (PORTAL COLUMN PIER)  
 SCALE 1:600

**1** TYPICAL INSTALLATION OF GIRDER  
 SCALE AS SHOWN

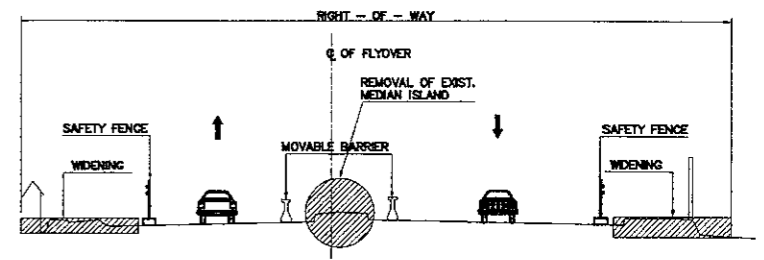
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name R. UENO	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date



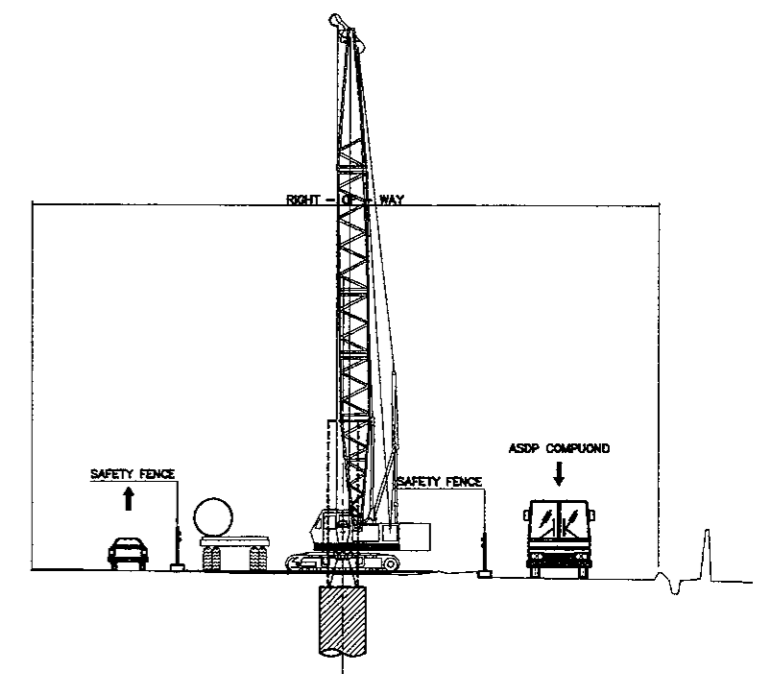
**(A) AT WIDENING AREA**  
 SCALE 1:1000



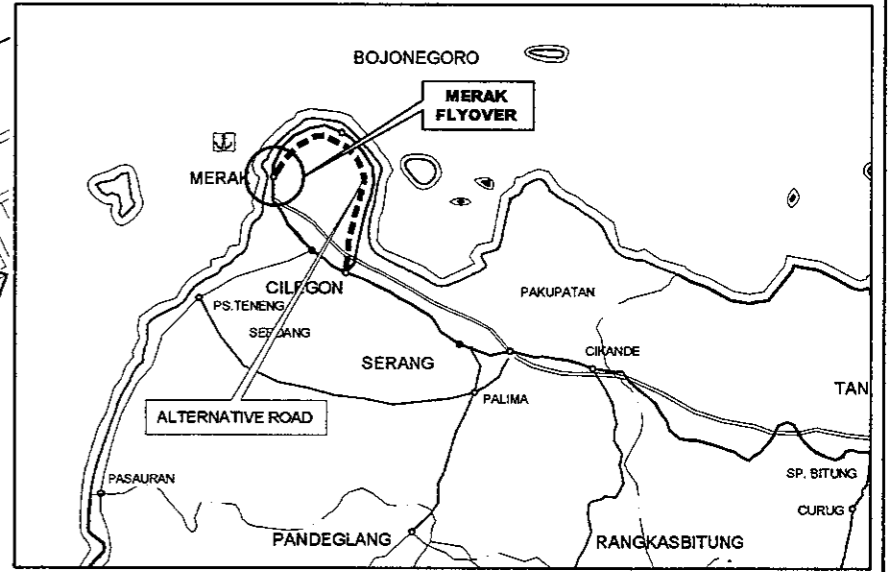
**(C) AT CONSTRUCTION OF SUBSTRUCTURES**  
 SCALE 1:1000



**(B) TYPICAL SECTION**  
 SCALE 1:300



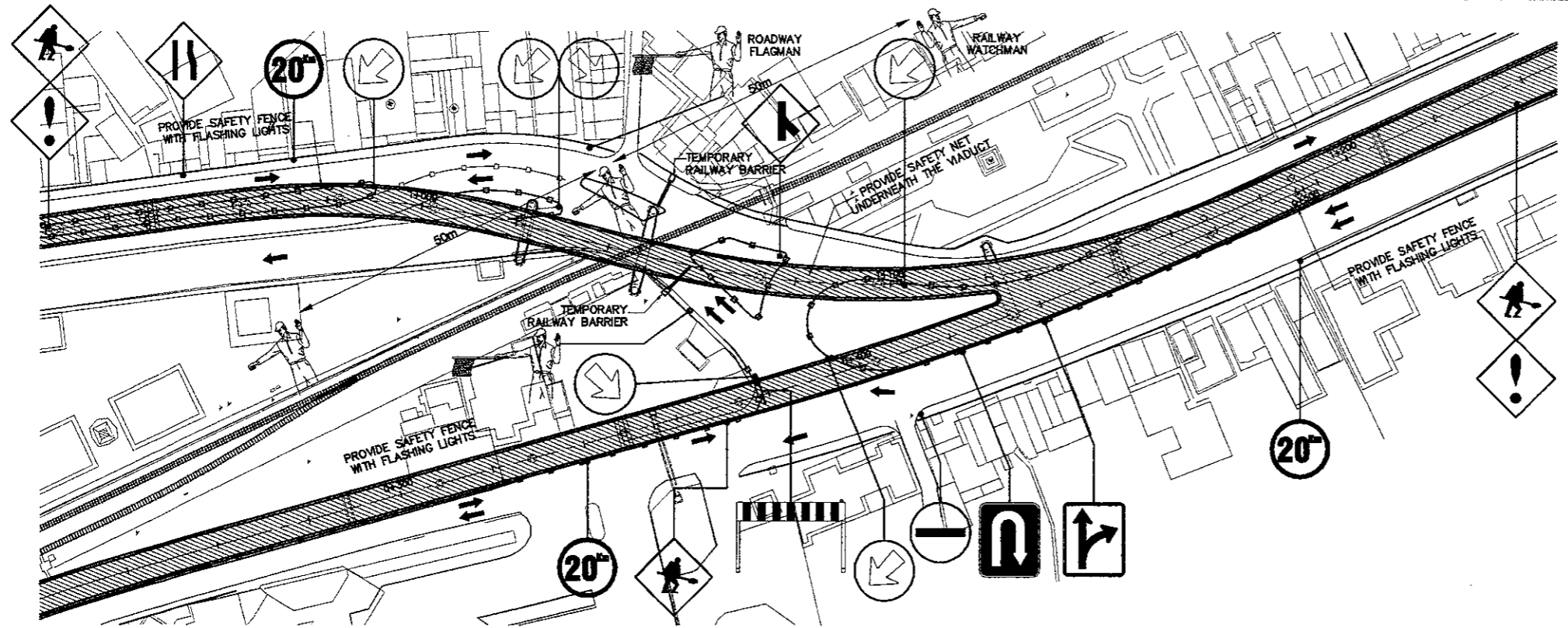
**(D) TYPICAL SECTION**  
 SCALE 1:300



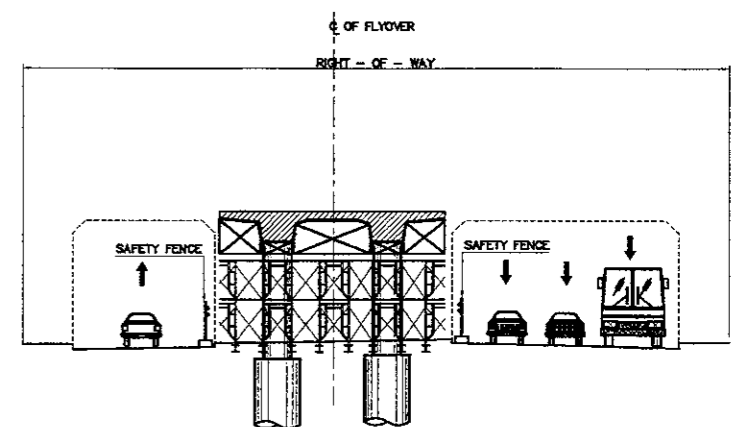
**ALTERNATIVE ROAD DURING CONSTRUCTION**  
 NOT TO SCALE

- NOTES:**
1. ALL STANDARD TRAFFIC CONTROL DEVICES FOR HIGHWAY UNDER CONSTRUCTION SHALL BE BASED FROM "PANDUAN PELAKSANAAN PEKERJAAN DIJALAN" DEPARTEMEN PERHUBUNGAN DIRECTORAT GENERAL TRANSPORTATION FOR URBAN ROAD.
  2. OTHER NECESSARY SAFETY SIGNS TO BE USED IN THE CONSTRUCTION WORK ZONE SHALL BE APPROVED BY THE ENGINEER.
  3. FOR STANDARD WORK SIGNS, REFER TO DWG. MTR-019
  4. INSTALL TWO (2) PROJECT SIGN BOARDS AS SHOWN IN THE STANDARD DRAWING AT EACH END OF PROJECT CONSTRUCTION AREA.

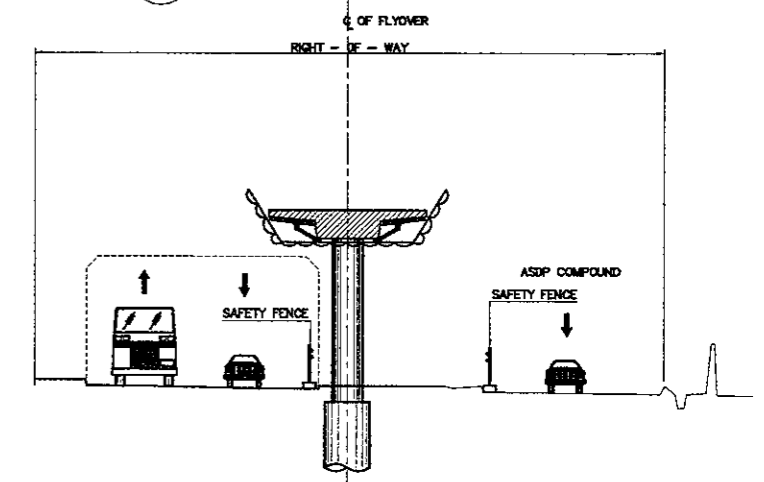
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name R. UENO	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date



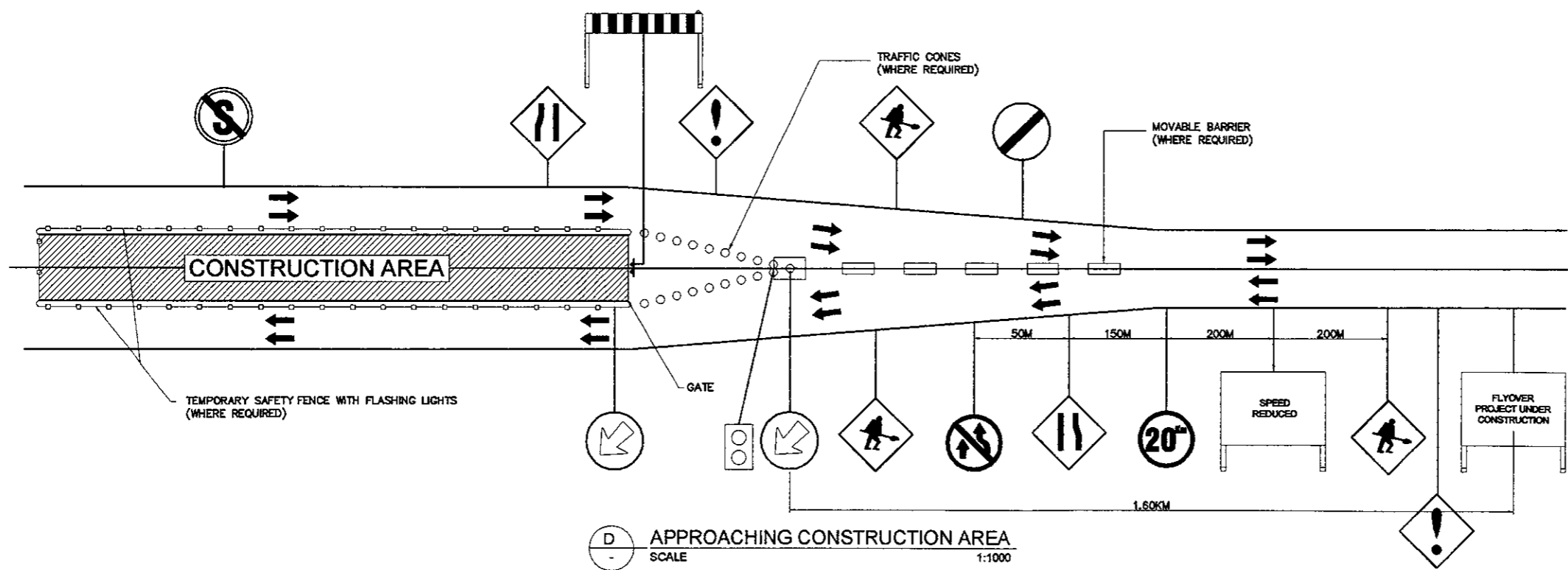
**A** AT CONSTRUCTION OF SUPERSTRUCTURES  
 SCALE 1:1000



**B** TYPICAL SECTION (TWO-COLUMN PIER)  
 SCALE 1:300



**C** TYPICAL SECTION (SINGLE COLUMN PIER)  
 SCALE 1:300



**D** APPROACHING CONSTRUCTION AREA  
 SCALE 1:1000

**1** TRAFFIC MANAGEMENT LAYOUT  
 SCALE AS SHOWN

- NOTES:
1. ALL STANDARD TRAFFIC CONTROL DEVICES FOR HIGHWAY UNDER CONSTRUCTION SHALL BE BASED FROM "PANDUAN PELAKSANAAN PEKERJAAN DIJALAN" DEPARTMEN PERHUBUNGAN DIRECTORAT GENERAL TRANSPORTATION FOR URBAN ROAD.
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JAPAN INTERNATIONAL  
COOPERATION AGENCY

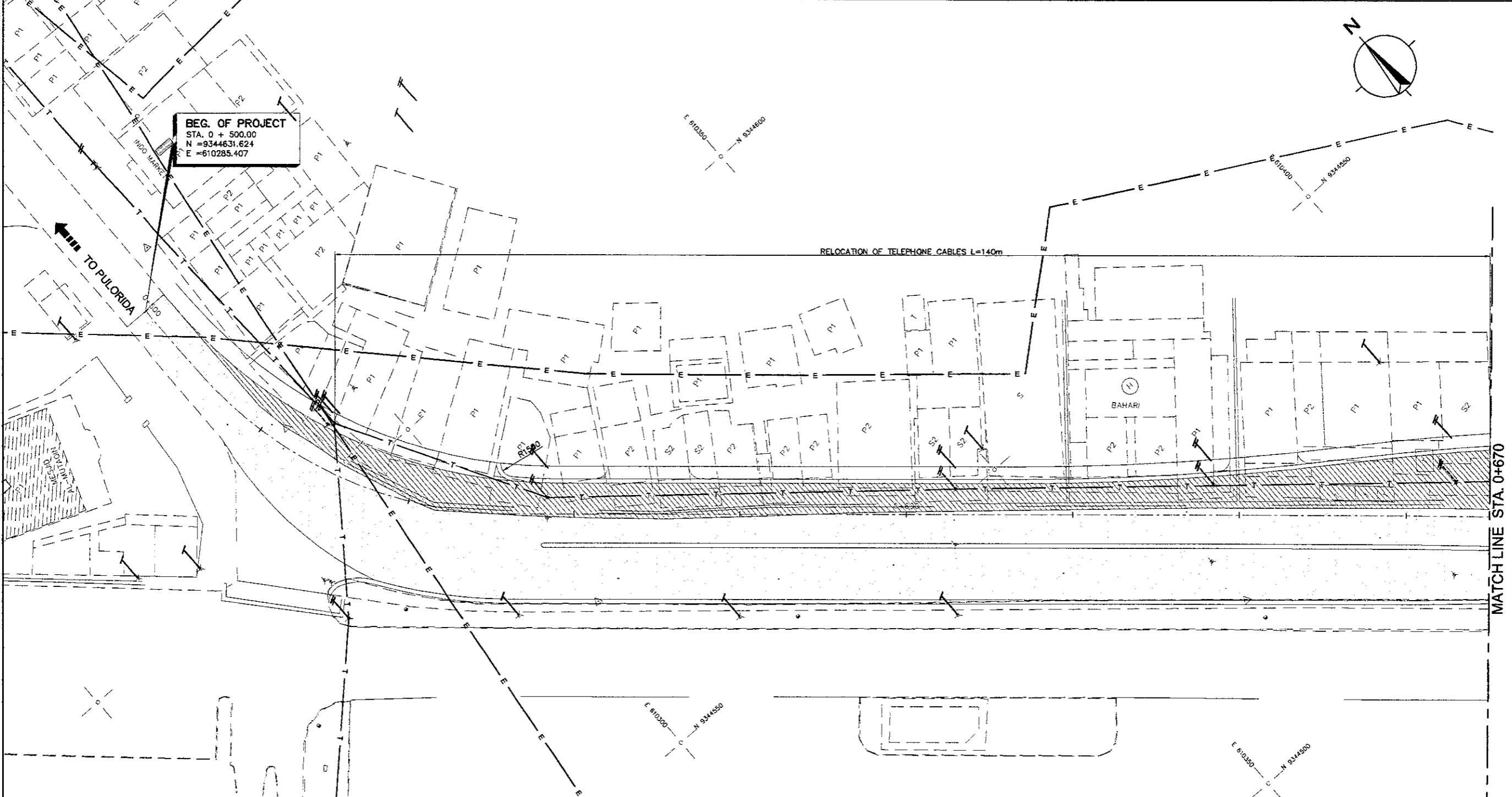


DIRECTORATE GENERAL OF HIGHWAY  
MINISTRY OF PUBLIC WORKS  
REPUBLIC OF INDONESIA

# UTILITIES

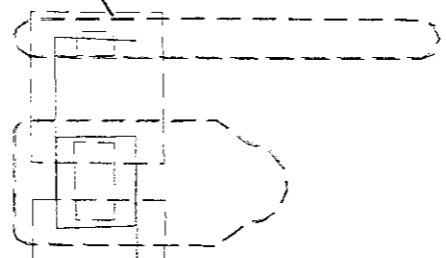
 KATAHIRA & ENGINEERS INTERNATIONAL

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



**BEG. OF PROJECT**  
 STA. 0 + 500.00  
 N = 9344631.624  
 E = 610285.407

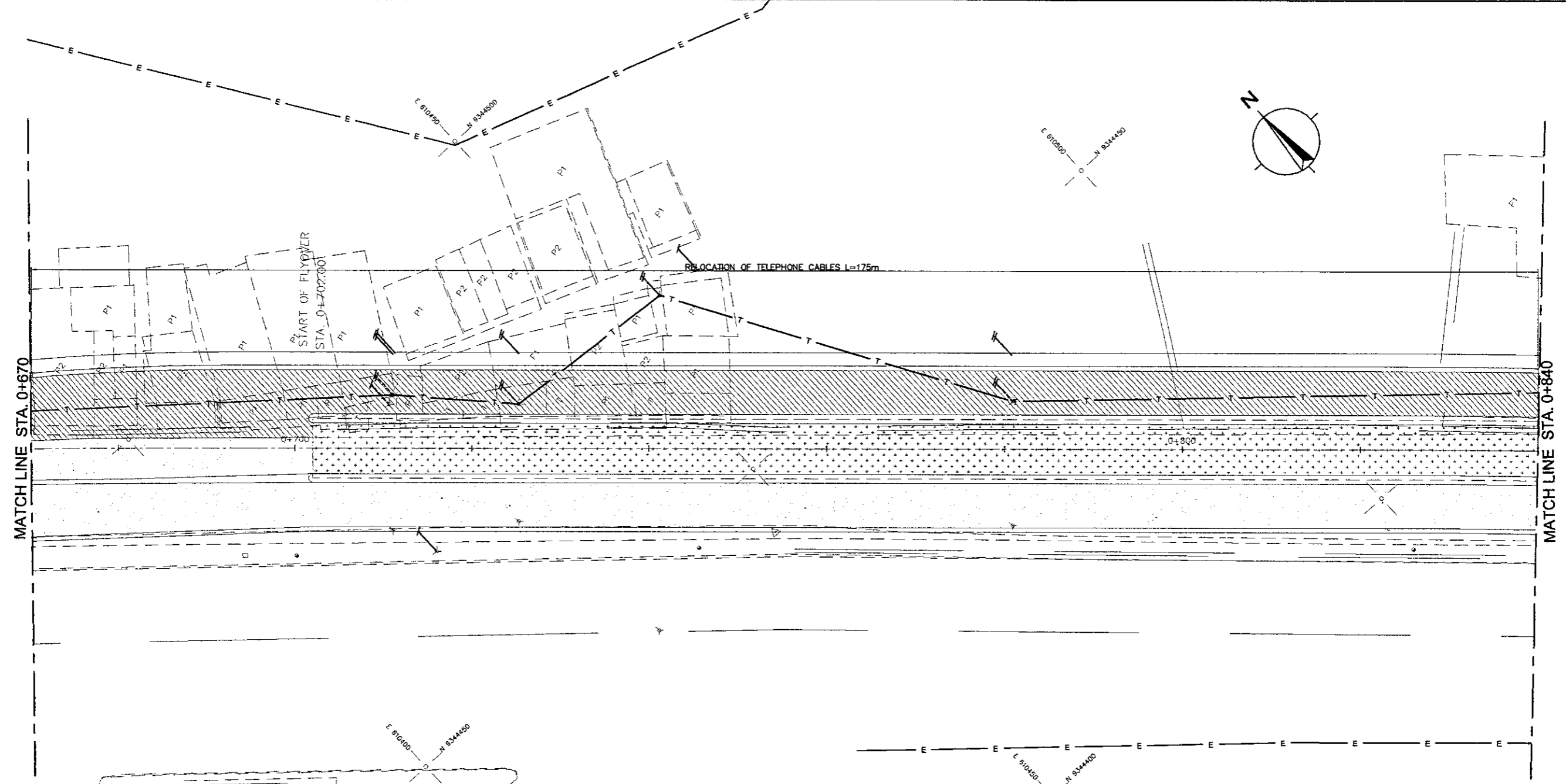
- NOTATION :**
- W — W — W — : WATER SUPPLY
  - T — T — T — : TELEPHONE LINE
  - CO — CO — CO — : CABLE OPTIC LINE
  - E — E — E — : ELECTRICAL LINE
  - G — G — G — : GAS LINE
  - O — O — O — : OIL LINE



**1 PUBLIC UTILITIES ABOVE GROUND**  
 SCALE 1:500

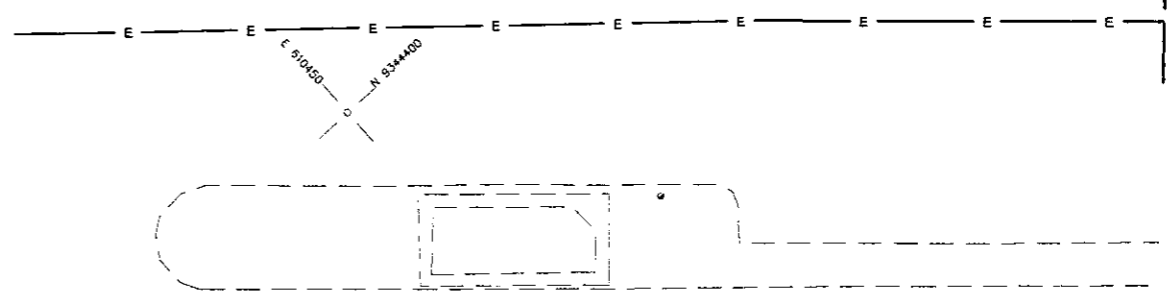
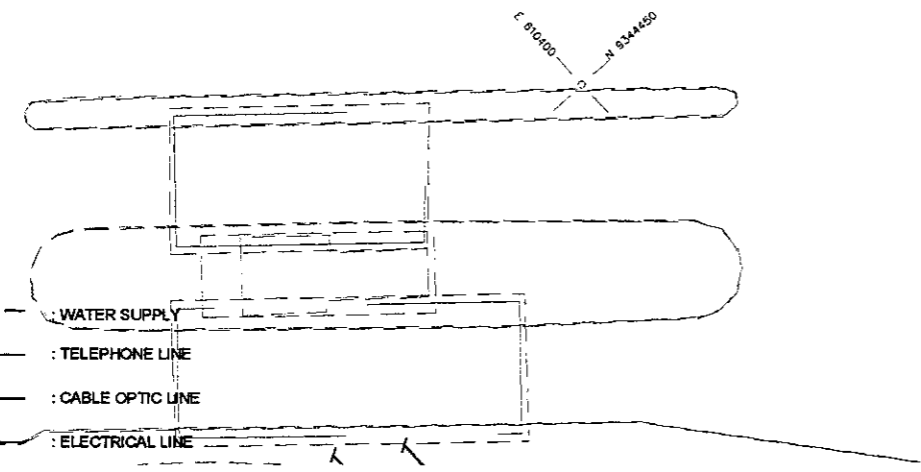
- NOTES :**
- EXTENT, POSITION, SIZE AND TYPE OF PUBLIC UTILITIES SHOWN ON THIS DRAWING WERE BASED ON INFORMATION EXTRACTED FROM THE RECORDS OF THE VARIOUS PUBLIC UTILITY AUTHORITIES AND MUST BE REGARDED AS APPROXIMATE ONLY, NEITHER THE EMPLOYER NOR THE CONSULTANT GUARANTEE THE ACCURACY OF THE INFORMATION AND THE LOCATION OF UTILITIES AS SHOWN IN THE DRAWING.
  - THE CONTRACTOR SHALL VERIFY THE POSITION, DEPTH, SIZE AND GRADIENT OF ALL AFFECTED EXISTING UTILITIES


DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



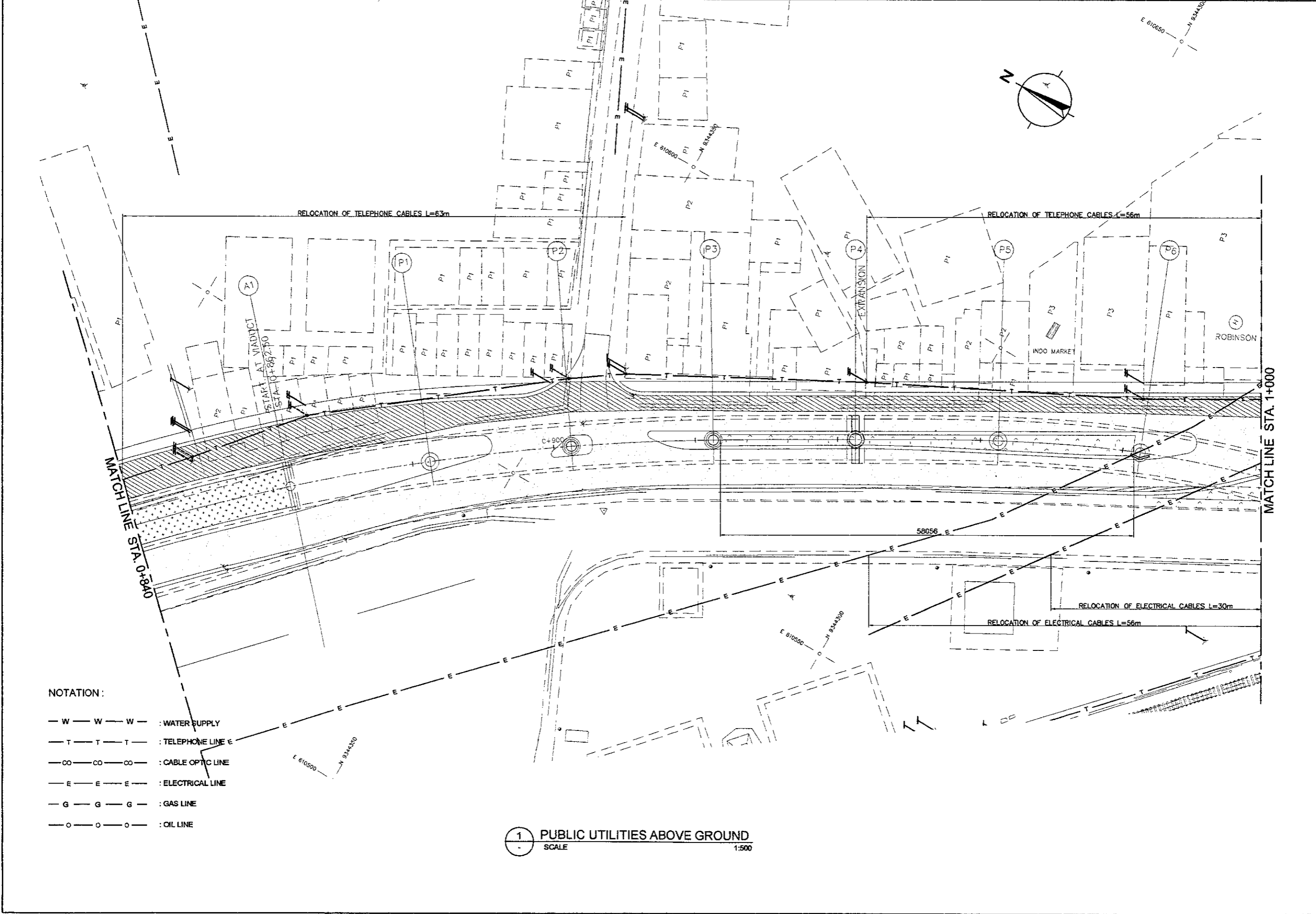
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 PUBLIC UTILITIES ABOVE GROUND
   
 SCALE 1:500

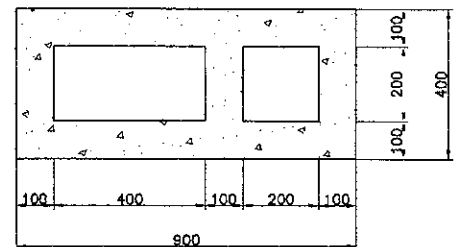
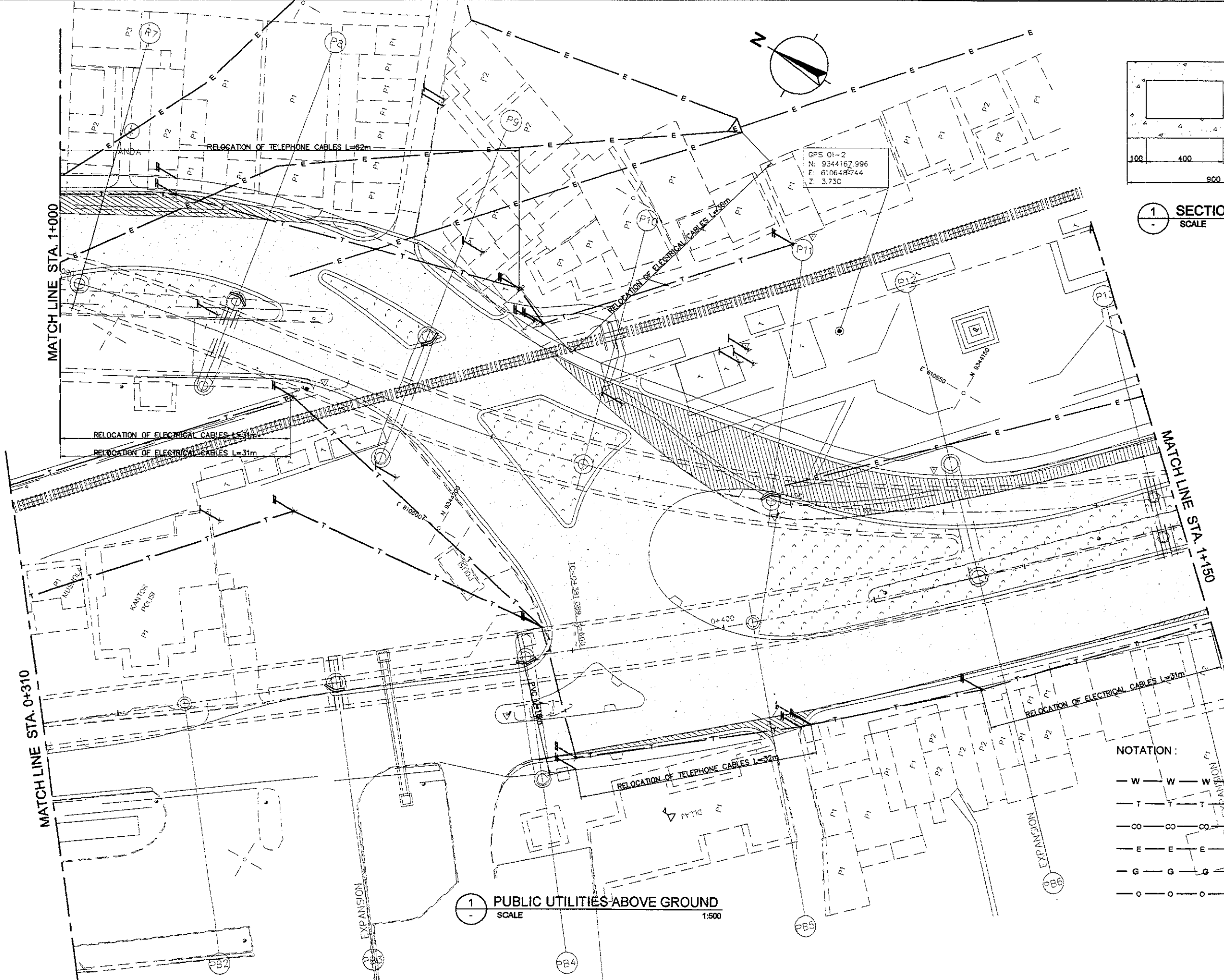
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Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



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  - E — E — E — : ELECTRICAL LINE
  - G — G — G — : GAS LINE
  - O — O — O — : OIL LINE

**1** PUBLIC UTILITIES ABOVE GROUND  
 SCALE 1:500

DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI
Sign: _____	Sign: _____	Sign: _____
Date: _____	Date: _____	Date: _____



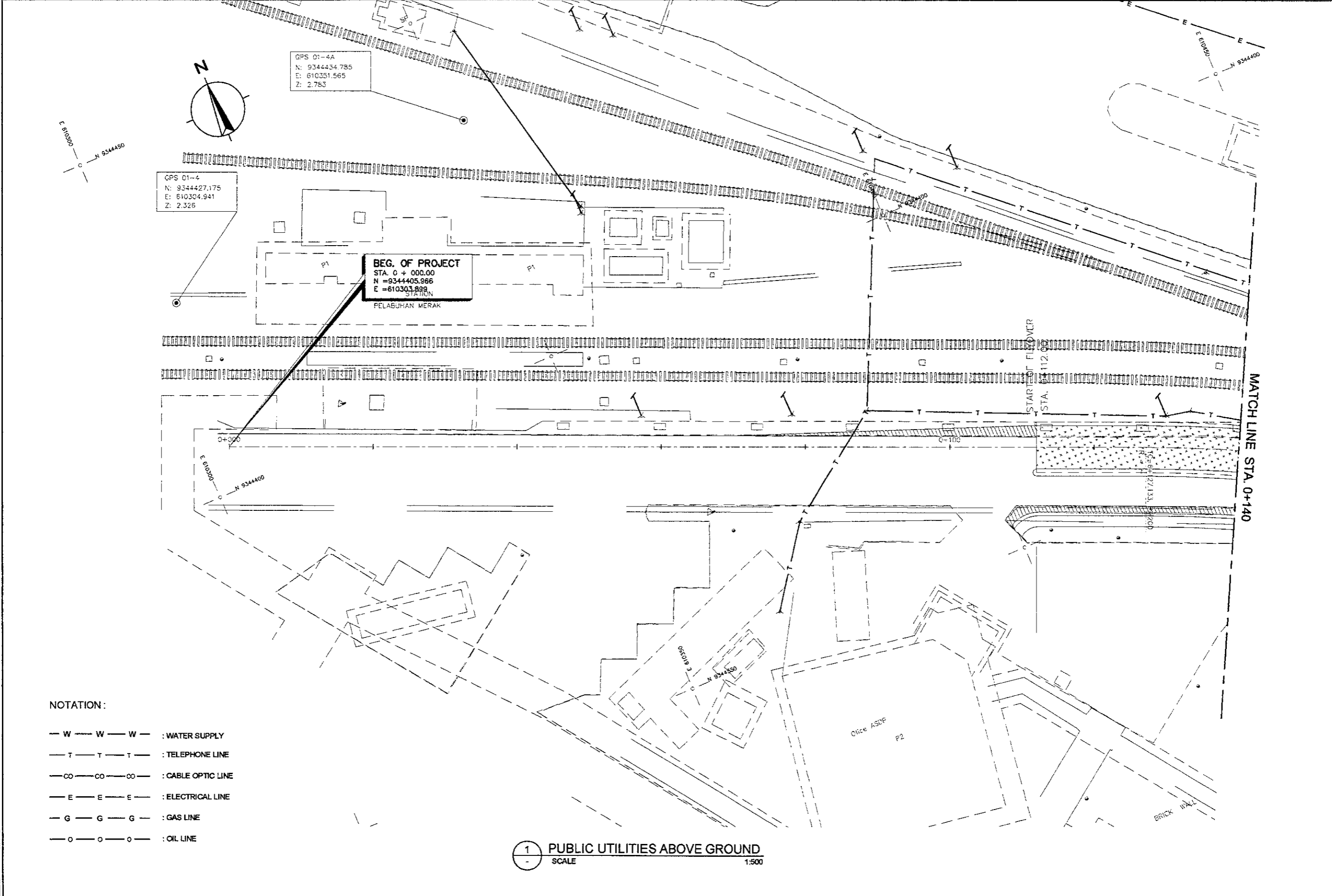
**SECTION 1-1**  
 SCALE 1:20

**1 PUBLIC UTILITIES ABOVE GROUND**  
 SCALE 1:500

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  - T — T — T : TELEPHONE LINE
  - ∞ — ∞ — ∞ : CABLE OPTIC LINE
  - E — E — E : ELECTRICAL LINE
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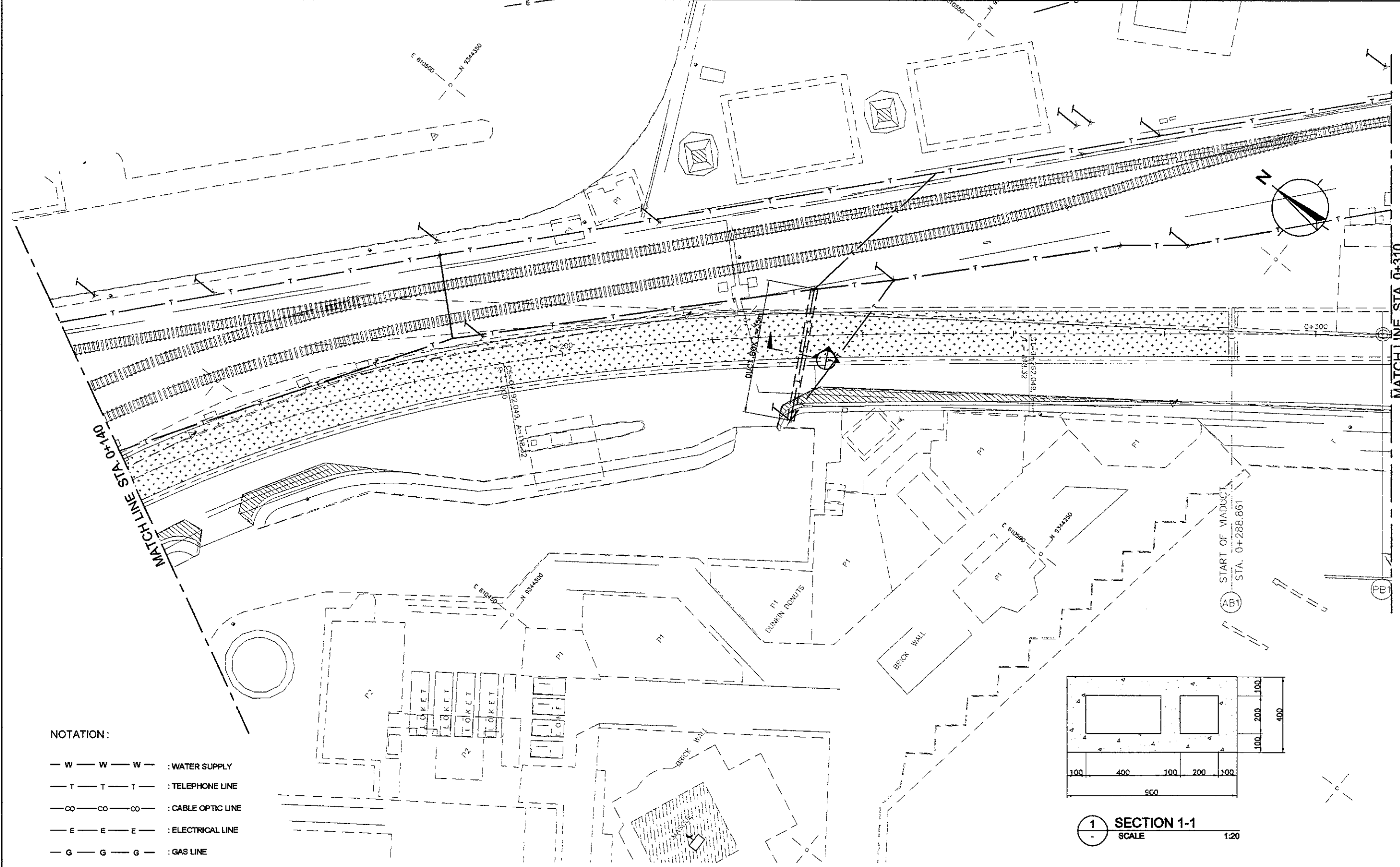
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Sign		Sign		Sign	
Date		Date		Date	



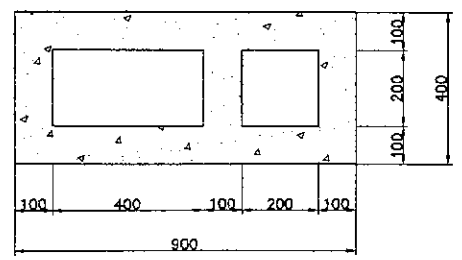
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**1** PUBLIC UTILITIES ABOVE GROUND  
 SCALE 1:500

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Sign		Sign		Sign	
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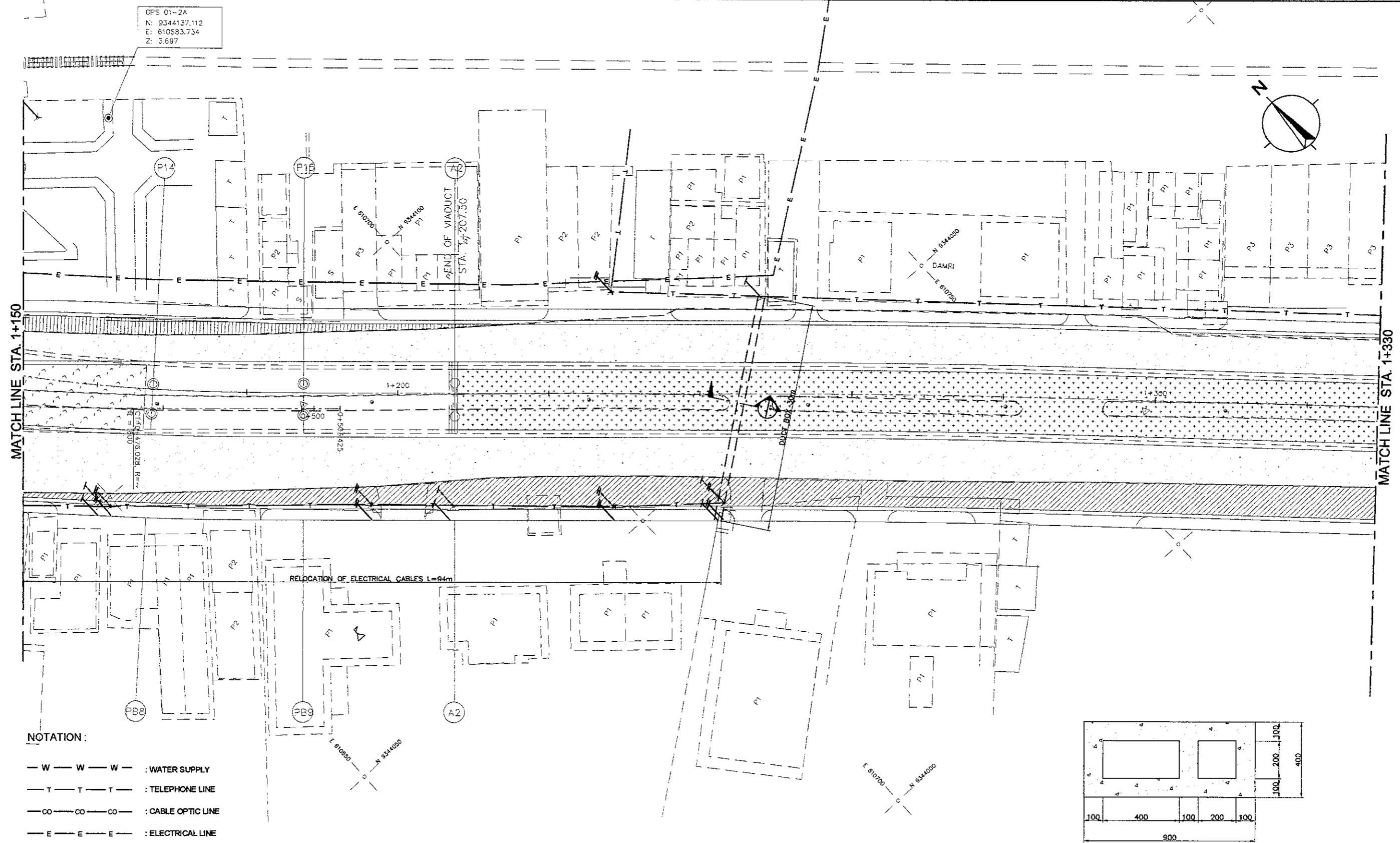


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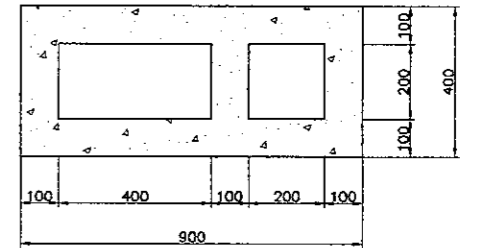


**1** PUBLIC UTILITIES ABOVE GROUND  
 SCALE 1:500

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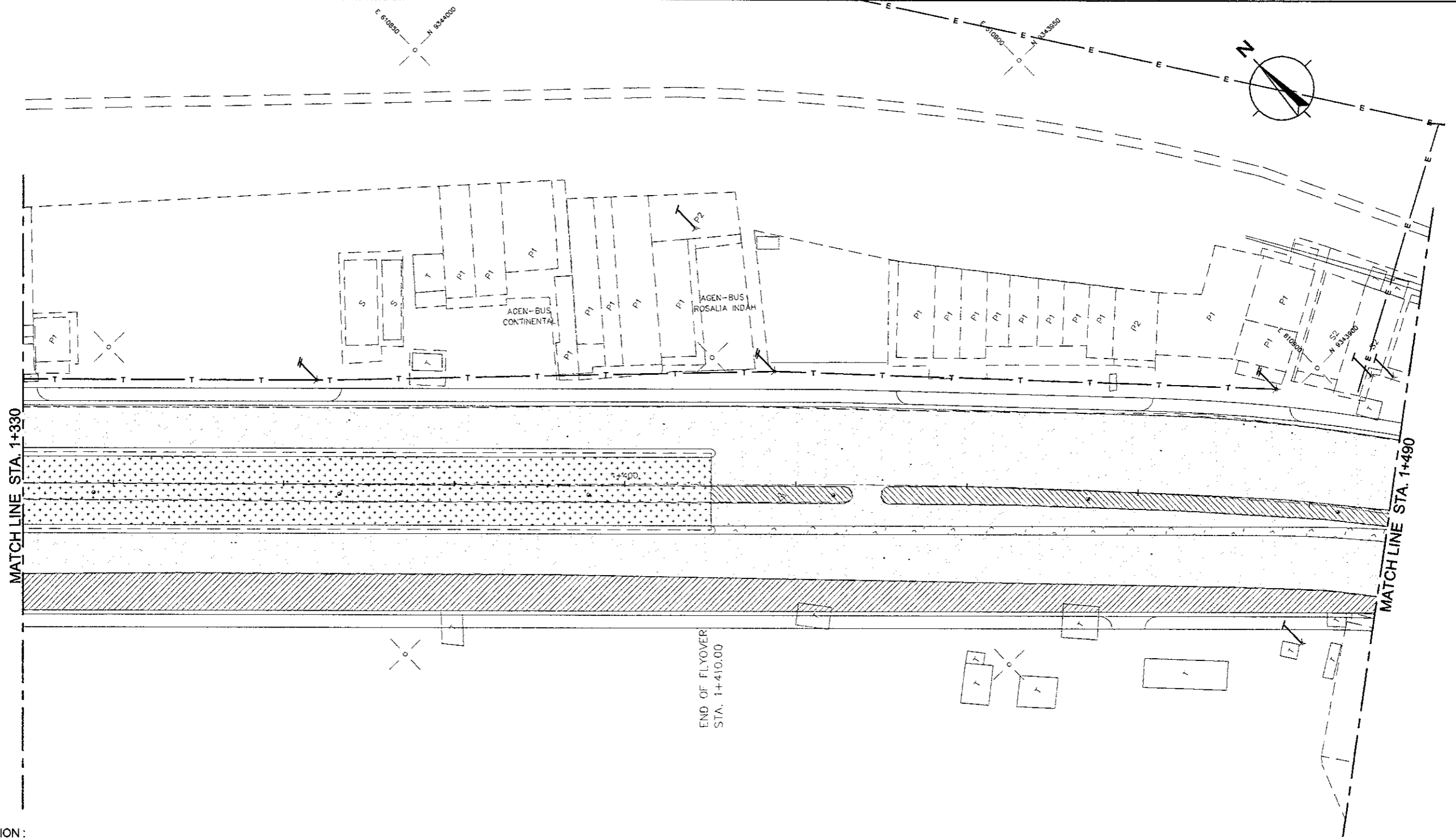
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**1 PUBLIC UTILITIES ABOVE GROUND**  
 SCALE 1:500

**1 SECTION 1-1**  
 SCALE 1:20

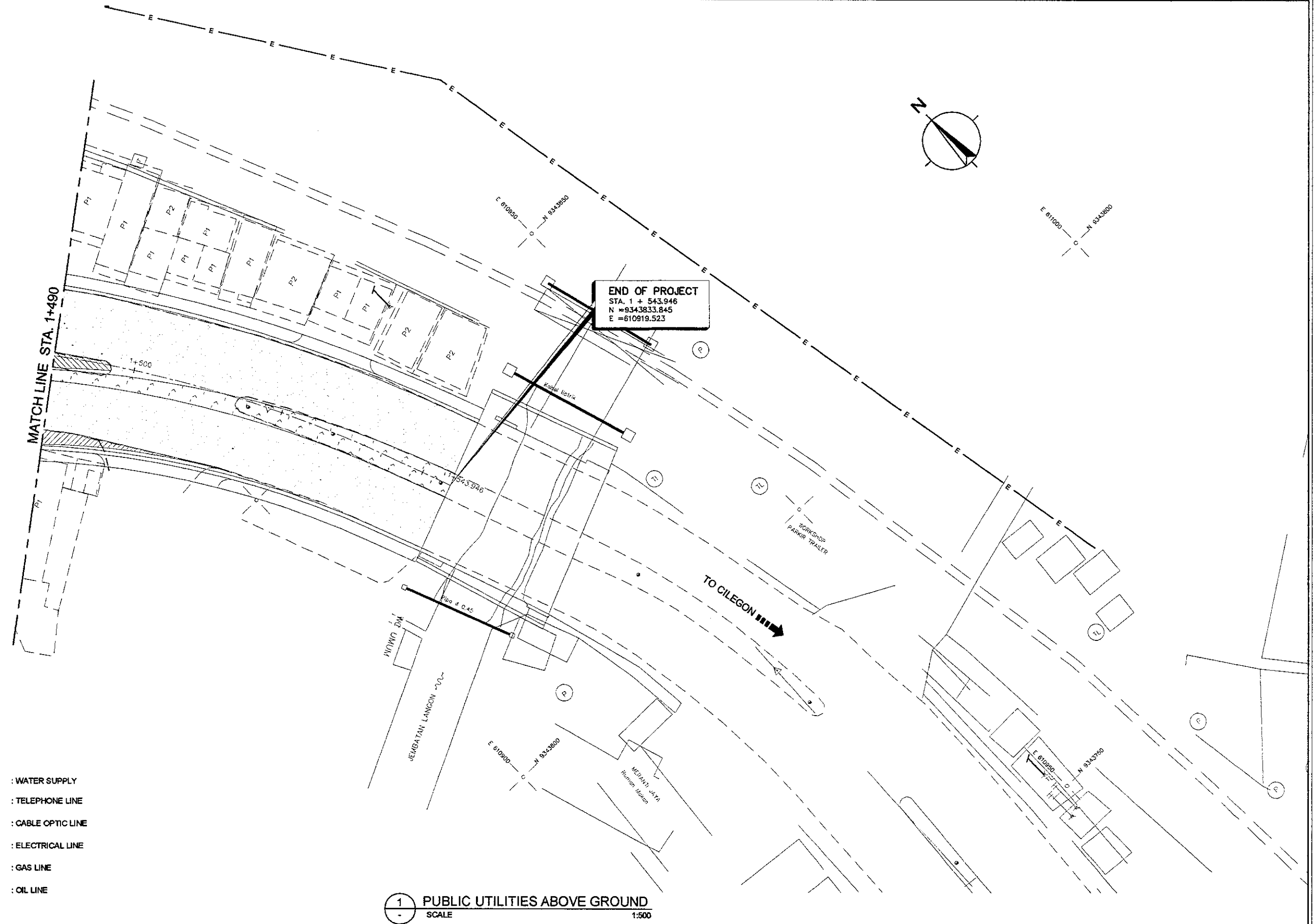
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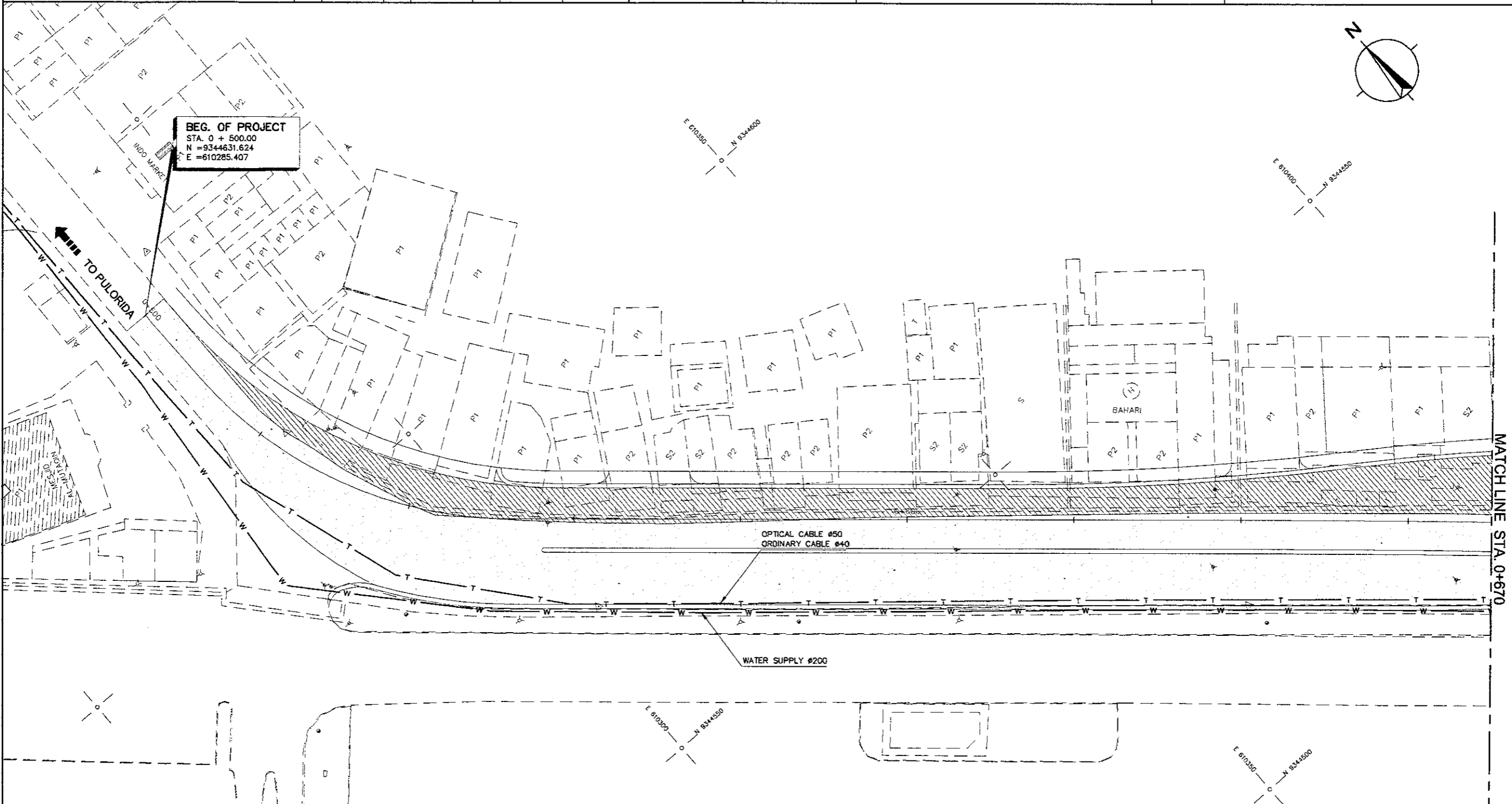
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 SCALE 1:500

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Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
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 PUBLIC UTILITIES ABOVE GROUND
   
 SCALE 1:500



**BEG. OF PROJECT**  
 STA. 0 + 500.00  
 N = 9344631.624  
 E = 610285.407

OPTICAL CABLE #50  
 ORDINARY CABLE #40

WATER SUPPLY #200

MATCH LINE STA. 0+670

**EXISTING**

— W — W — W — : WATER SUPPLY  
 — T — T — T — : TELEPHONE LINE

**PROPOSED RELOCATION**

— W — W — W — : WATER SUPPLY  
 — T — T — T — : TELEPHONE LINE

**SUMMARY OF PROPOSED UTILITIES RELOCATION**

DESCRIPTION	TOTAL QUANTITY
1. ORDINARY TELEPHONE SHIFTING	L = 31m
2. DUCT UNDERGROUND WITH 2 MANHOLE FOR OPTICAL CABLE AND ELECTRICAL	L = 30m

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