

GOVERNMENT OF MALAYSIA

**THE FEASIBILITY STUDY ON
TRANSPORTATION FACILITIES PROJECTS
IN KLANG VALLEY**

FINAL REPORT

**TRAFFIC CONTROL AND SURVEILLANCE
SYSTEM PROJECT**

DRAWINGS

JUNE 1989

JAPAN INTERNATIONAL COOPERATION AGENCY

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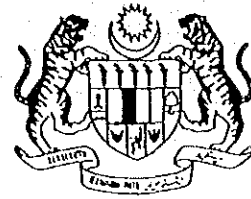
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**THE FEASIBILITY STUDY ON
TRANSPORTATION FACILITIES PROJECTS
IN KLANG VALLEY**

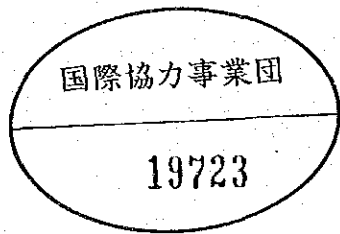
FINAL REPORT

**TRAFFIC CONTROL AND SURVEILLANCE
SYSTEM PROJECT**

DRAWINGS

JUNE 1989

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C O N T E N T S

1. Area Traffic Control System in Kuala Lumpur

2. Area Traffic Control System in Petaling Jaya

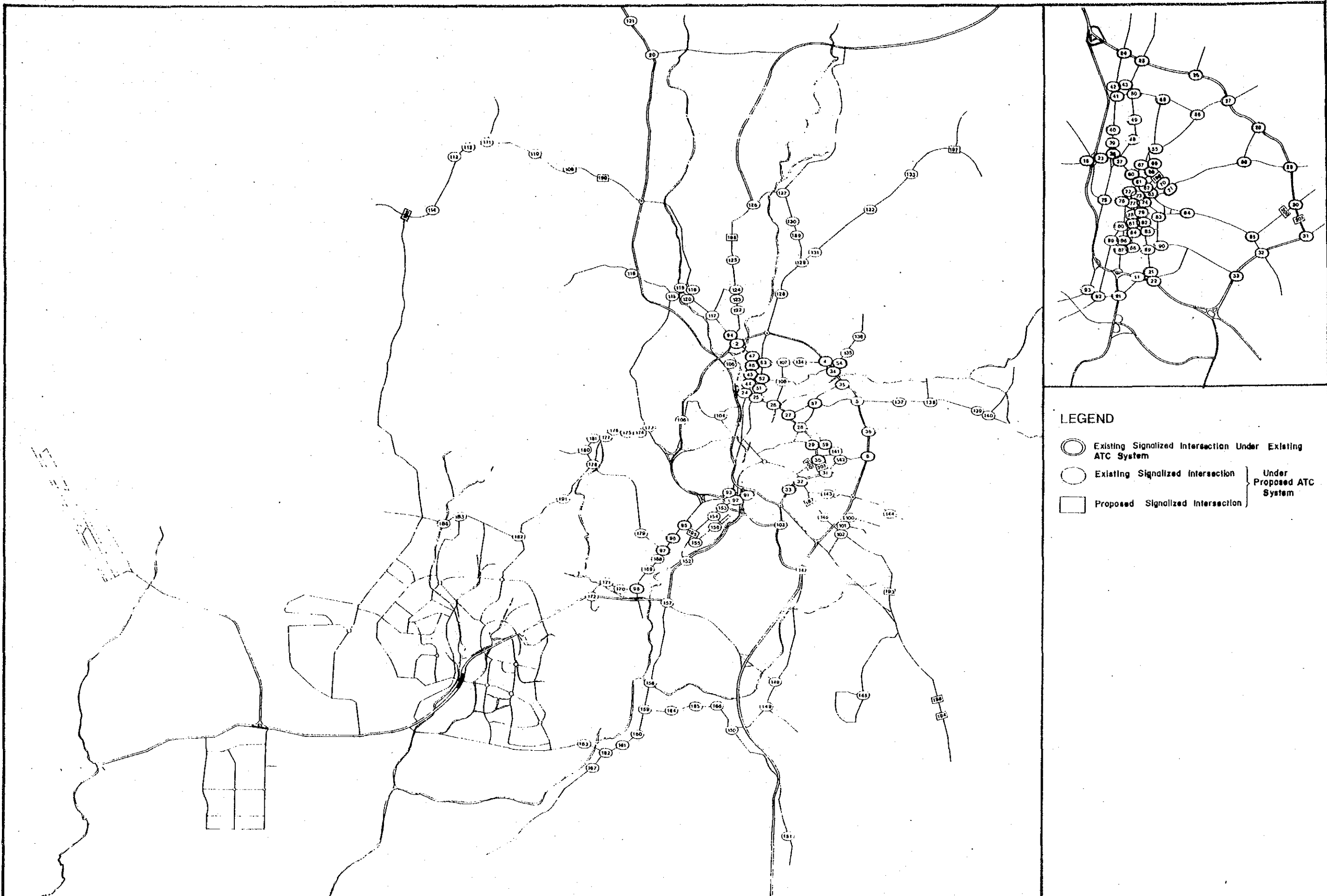
3. Highway Traffic Surveillance System

4. Standard Way of Installation

1. AREA TRAFFIC CONTROL SYSTEM IN KUALA LUMPUR

LIST OF DRAWINGS

DRAWING CONTENTS	DRAWING NO.	SCALE
(1) Intersection Location in Kuala Lumpur ATC Coverage Area	T-1001	1:100,000
(2) Control Center	T-1002	1:400
(3) An Illustration of A Wall Display Map (Kuala Lumpur ATC System)	T-1003	-
(4) Sub-area Plan for the Kuala Lumpur ATC System	T-1004	1:84,000
(5) Detector Location for the Kuala Lumpur ATC System	T-1005	1:100,000
(6) CCTV, Changeable Message Sign Location and Optical Fiber Cable Network	T-1006	1:40,000



**TRAFFIC CONTROL AND SURVEILLANCE
SYSTEM PROJECT**

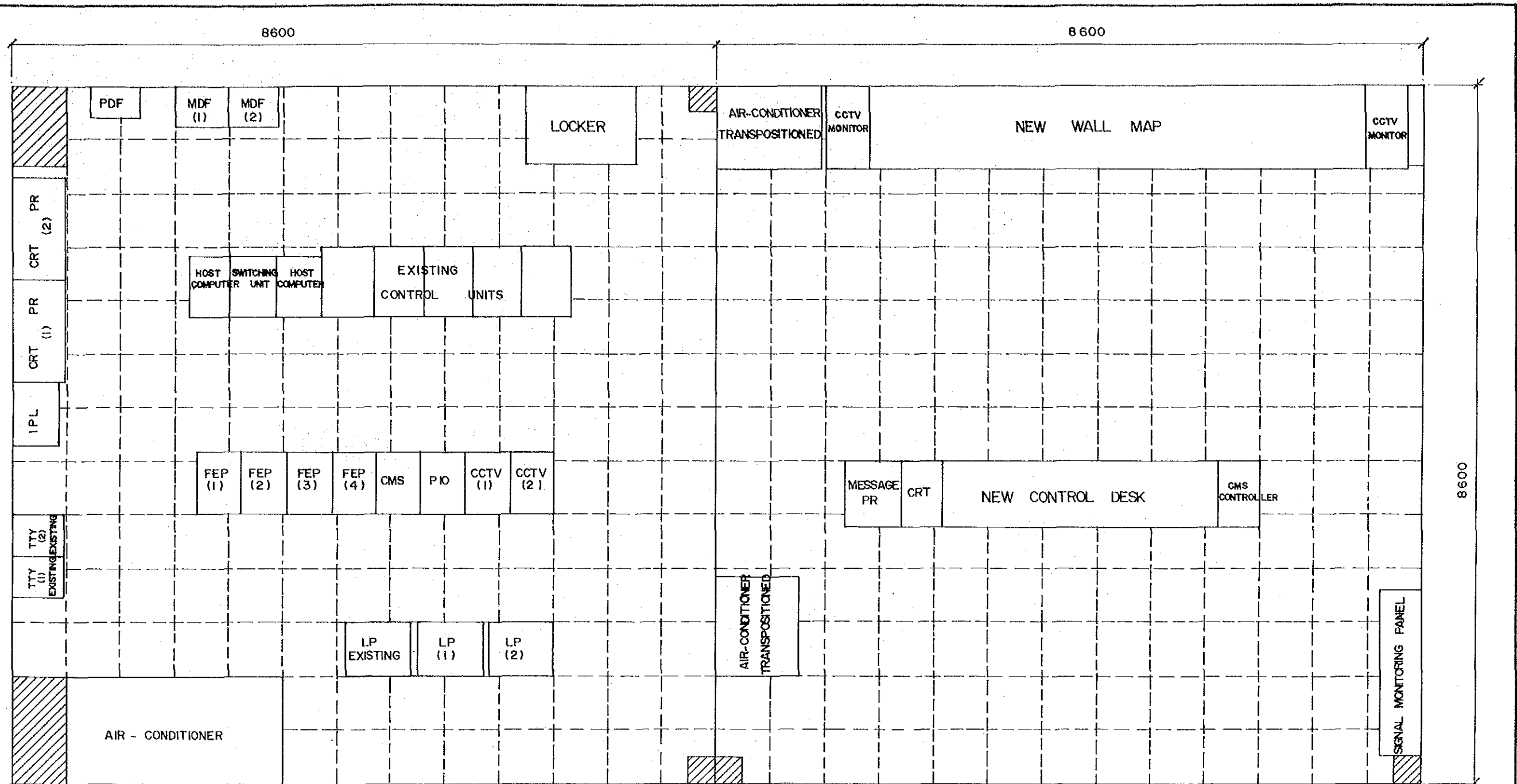
Intersection Location in KL ATC Area

SCALE: 1 : 100 000

DRAWING NO : T- 1001 DATE : September 1988

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FACILITIES PROJECTS IN KLANG VALLEY**

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SPACE REQUIREMENTS :

CONTROL ROOM	=	74.0 m ²
MACHINE ROOM	=	74.0 m ²
BROADCASTING ROOM	=	5.0 m ²
CVCF ROOM	=	25.0 m ²
GENERATOR ROOM	=	25.0 m ²

ATC CONTROL CENTRE LAYOUT IN, KL

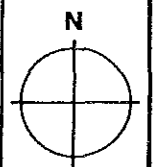
LEGEND :

SCALE :

1 : 400

THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY

DRAWING NO: T-1002





**TRAFFIC CONTROL AND SURVEILLANCE
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Illustration of The Wall Display Map (Kuala Lumpur ATC Control Centre)

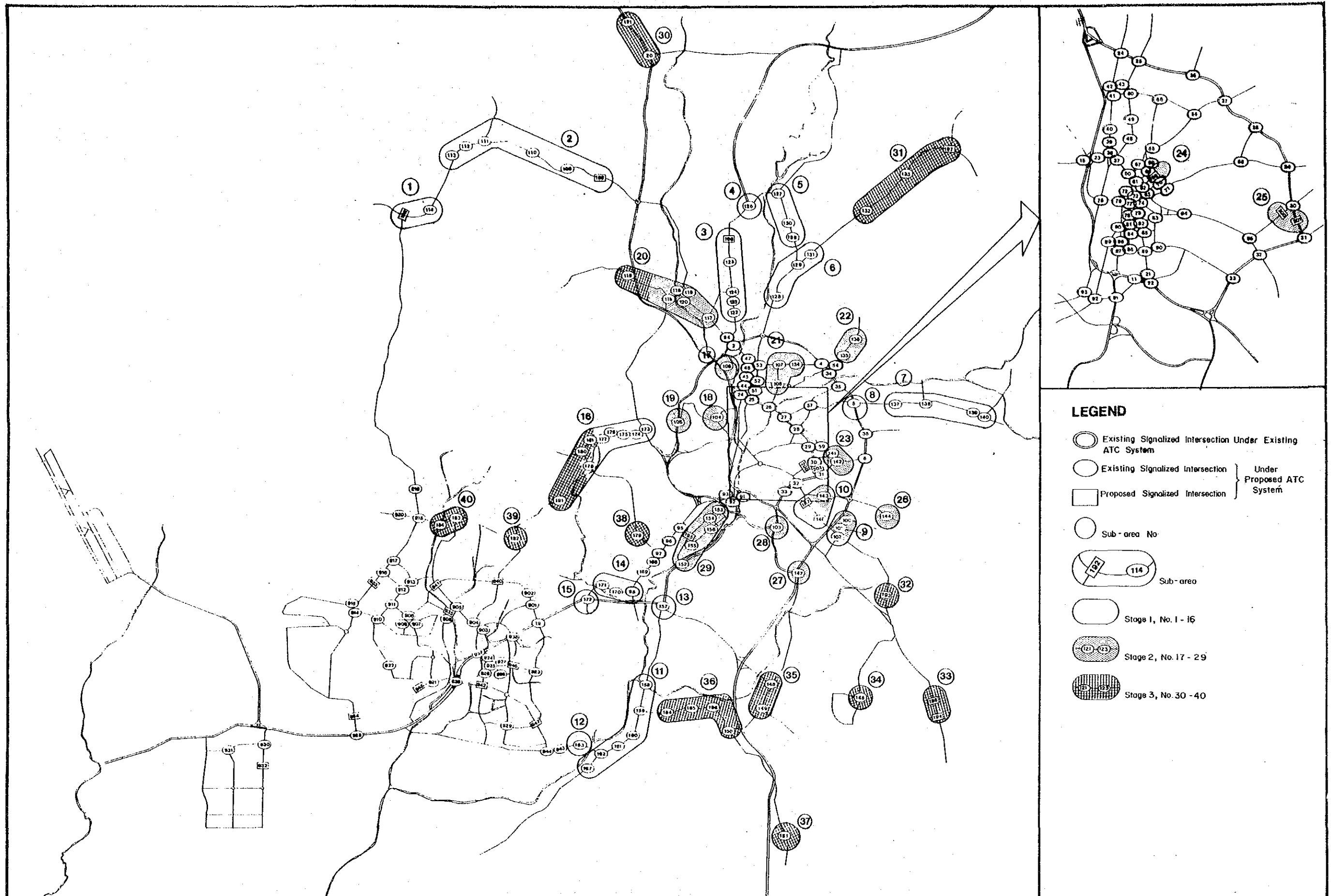
SCALE : Not to Scale

DRAWING NO : T-1003

DATE : September 1988

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FACILITIES PROJECTS IN KLANG VALLEY**

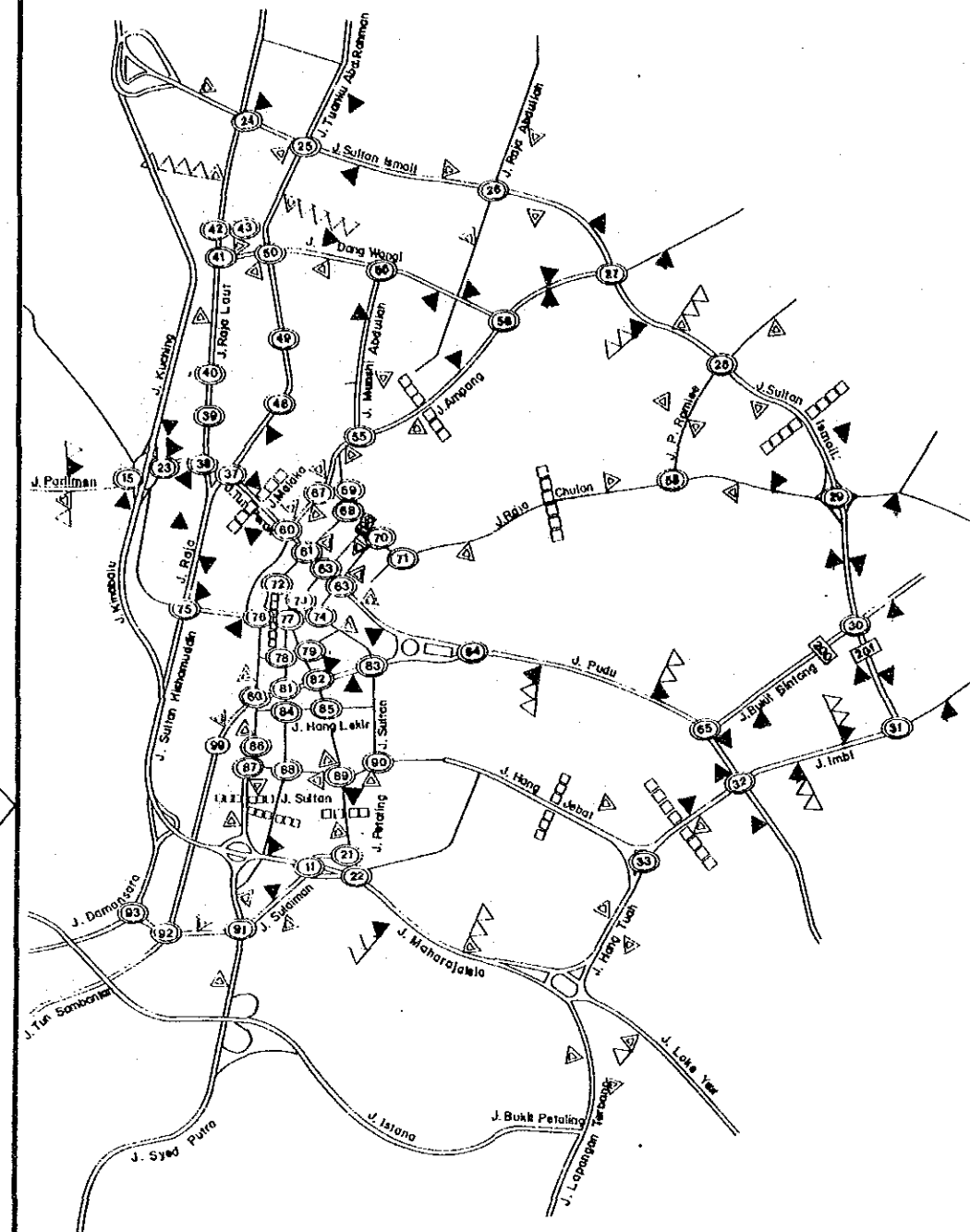
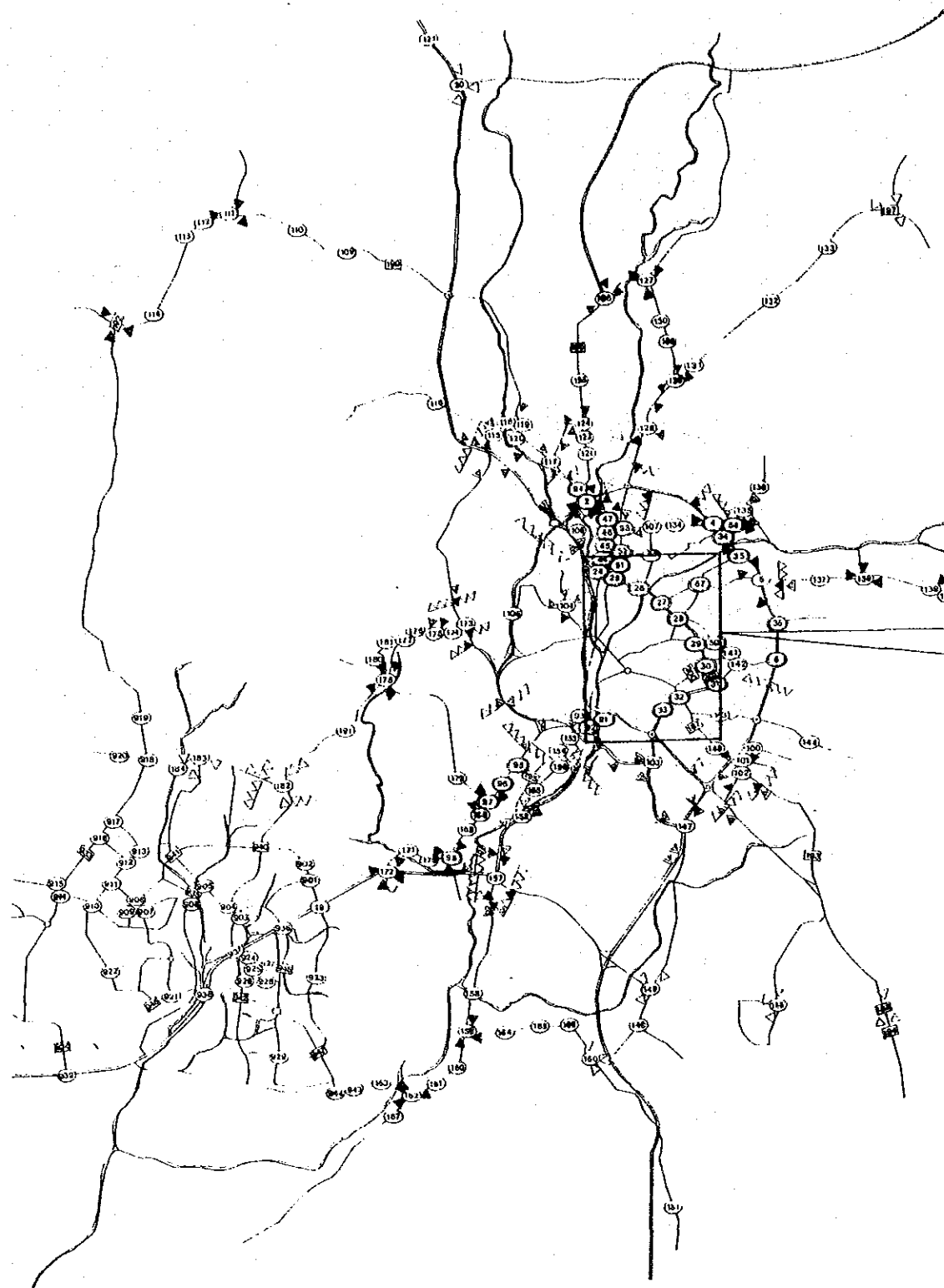
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LEGEND

- Existing Signalized Intersection Under Existing ATC System
- Existing Signalized Intersection } Under Proposed ATC System
- Proposed Signalized Intersection
- Sub-area No.
- Sub-area
- Stage 1, No. 1 - 16
- Stage 2, No. 17 - 29
- Stage 3, No. 30 - 40

<p>TRAFFIC CONTROL AND SURVEILLANCE SYSTEM PROJECT</p> <p>Sub Area Plan for The Kuala Lumpur ATC System</p>	<p>SCALE : 1 : 84 000</p>	<p>THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>
<p>DRAWING NO : T-1004</p>	<p>DATE : September 1988</p>	



LEGEND

- Existing Signalized Intersection Under Existing ATC System
- Existing Signalized Intersection } Under Proposed ATC System
- Proposed Signalized Intersection
- ▲ Detector For Stage 1
- ◄ Detector For Stage 2
- ◁ Detector For Stage 3
- Existing Detector for Statistical Traffic Volume

TRAFFIC CONTROL AND SURVEILLANCE SYSTEM PROJECT

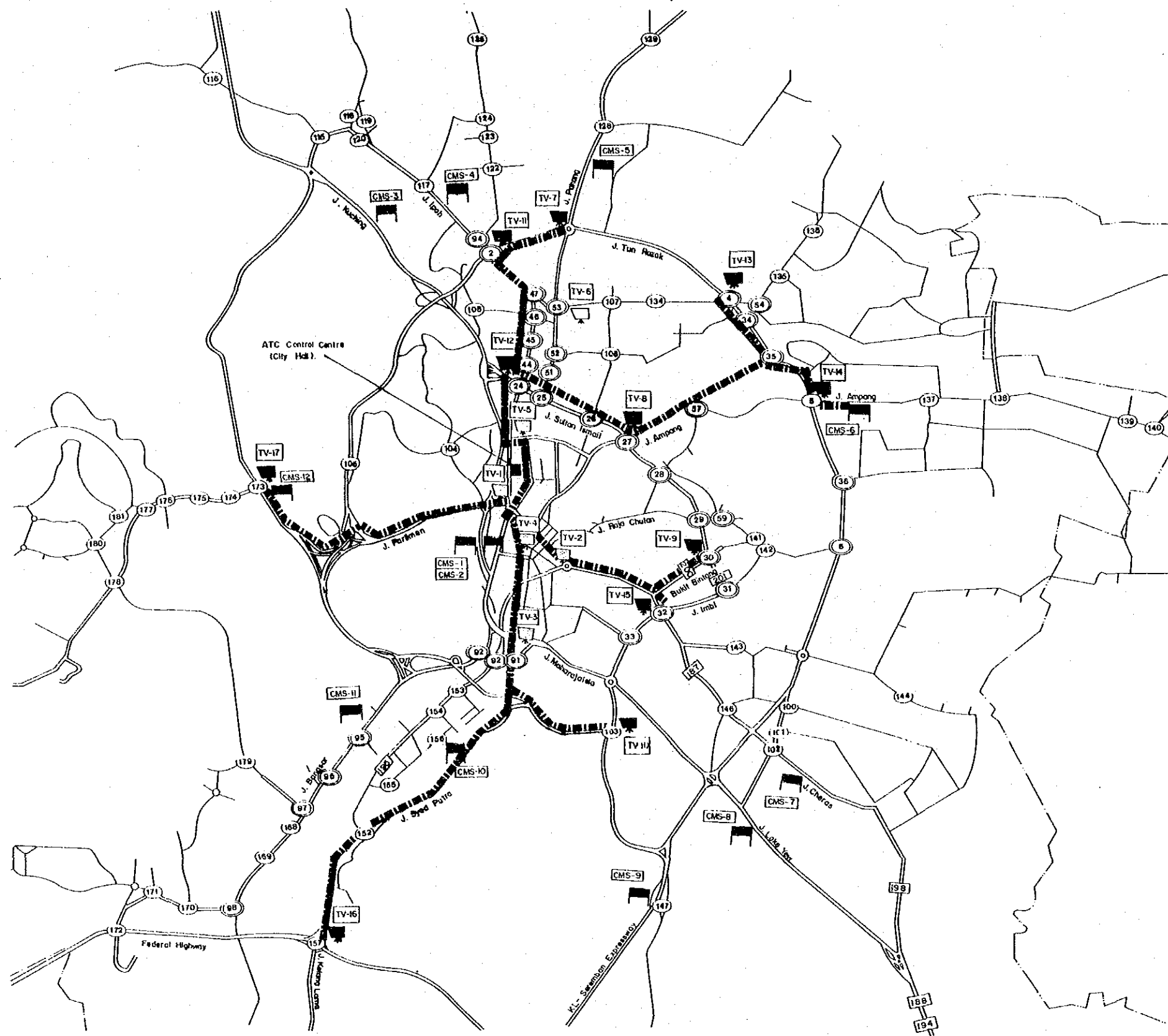
Detector Location for The Kuala Lumpur ATC System

SCALE : 1:100,000

DRAWING NO : T-1005 DATE : September 1988

THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY

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LEGEND

- Existing Signalized Intersection Under Existing ATC System
- Existing Signalized Intersection } Under Proposed ATC System
- Proposed Signalized Intersection
- ◻ Existing CCTV Camera (TV-1 - TV-6)
- ◼ Proposed CCTV Camera (TV-7 - TV-17)
- ◼ Changeable Message Sign (CMS-1 - CMS-12)
Stage 2 (CMS-1 - CMS-2)
Stage 3 (CMS-3 - CMS-12)
- ▬ Optical Fiber Cable For CCTV

TRAFFIC CONTROL AND SURVEILLANCE SYSTEM PROJECT

SCALE : 1 : 40 000

THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY
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CCTV and Changeable Message Sign Location and Optical Fiber Cable Network for The Kuala Lumpur ATC System

DRAWING NO : T- 1006
DATE : September 1988

2. AREA TRAFFIC CONTROL SYSTEM IN PETALING JAYA

LIST OF DRAWINGS

DRAWING CONTENTS	DRAWING NO.	SCALE
(1) Intersection Location in Petaling Jaya ATC Coverage Area	T-2001	1:40,000
(2) Control Center (Sub-center)	T-2002	1:400
(3) An Illustration of A Wall Display Map (Petaling Jaya Sub-center)	T-2003	-
(4) Sub-area Plan for Petaling Jaya ATC System	T-2004	1:40,000
(5) Detector Location for Petaling Jaya ATC System	T-2005	1:40,000
(6) CCTV Location and Optical Fiber Cable Network for Petaling Jaya ATC System	T-2006	1:40,000

LEGEND

- Existing Signalised Intersection
- Proposed Signalised Intersection



**TRAFFIC CONTROL AND SURVEILLANCE
SYSTEM PROJECT**

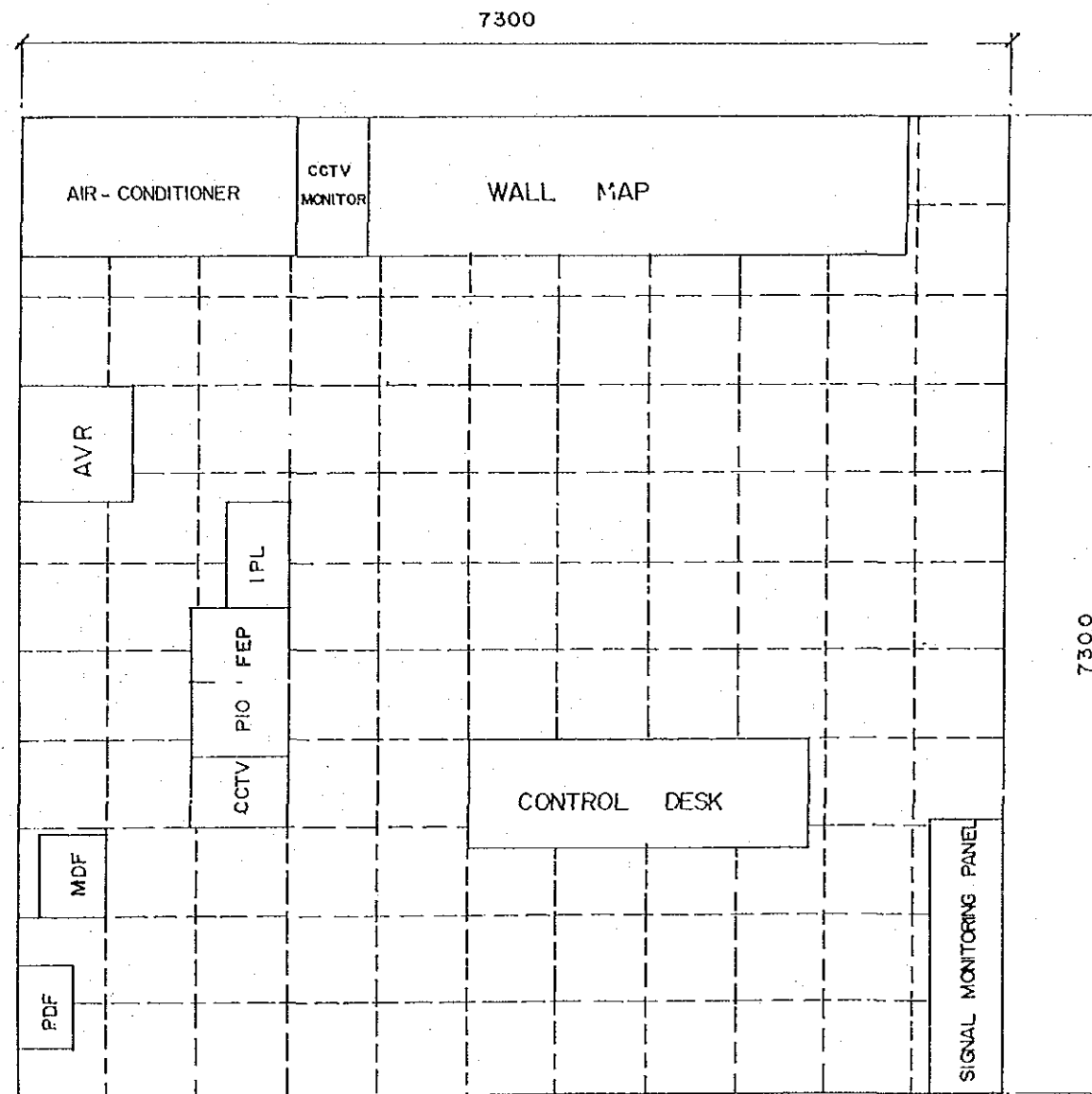
Intersection Location in PJ ATC Area

SCALE : 1 : 40 000

DRAWING NO : T - 2001 DATE : September 1988

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ATC CONTROL CENTRE LAYOUT IN PJ

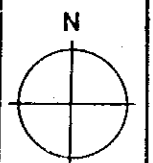
THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY

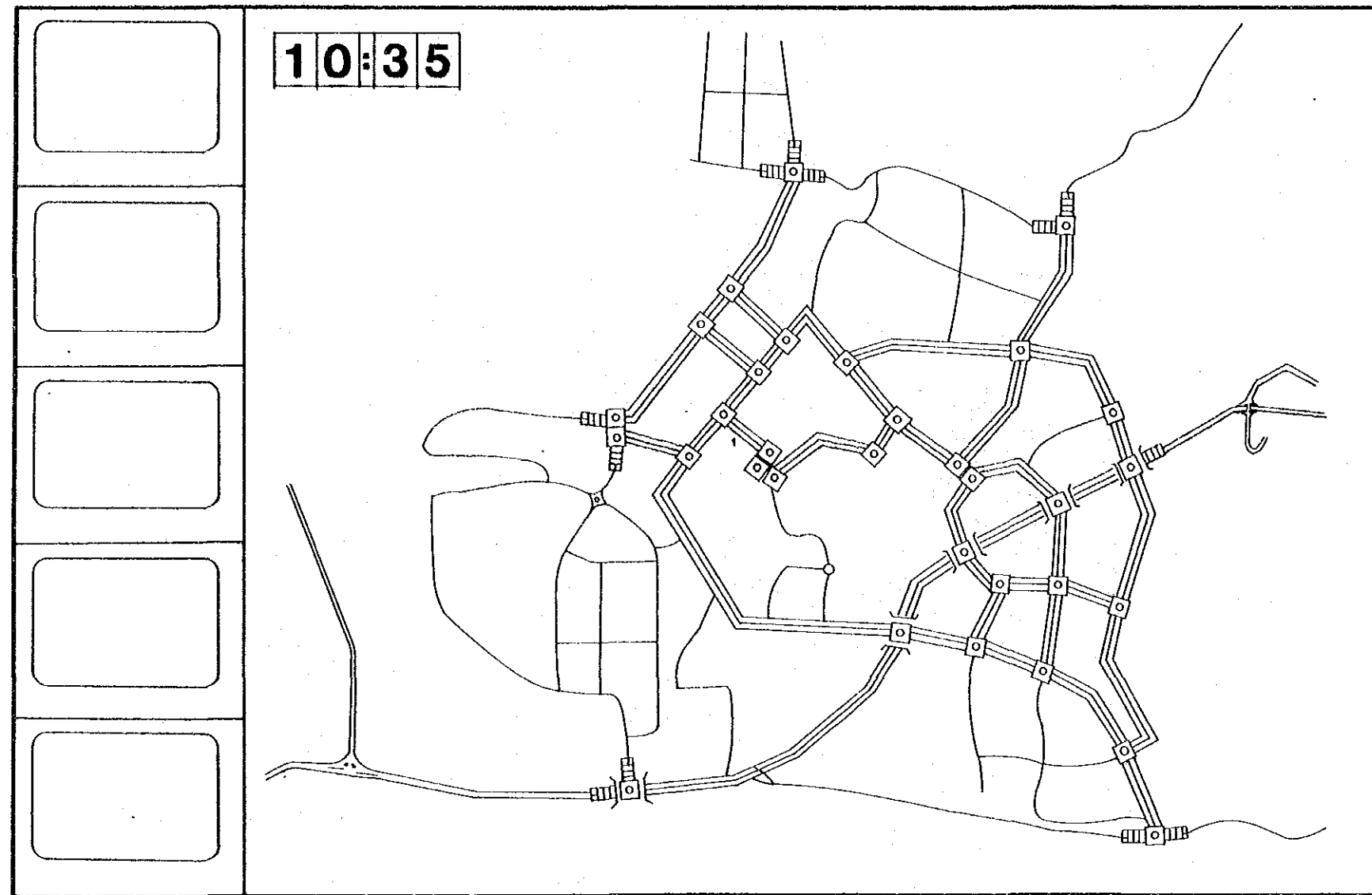
LEGEND :

DRAWING NO : T-2002

SCALE :

1:400





**TRAFFIC CONTROL AND SURVEILLANCE
SYSTEM PROJECT**

Illustration of The Wall Display Map (Petaling Jaya ATC Sub Centre)






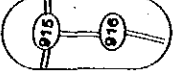



SCALE : Not to Scale

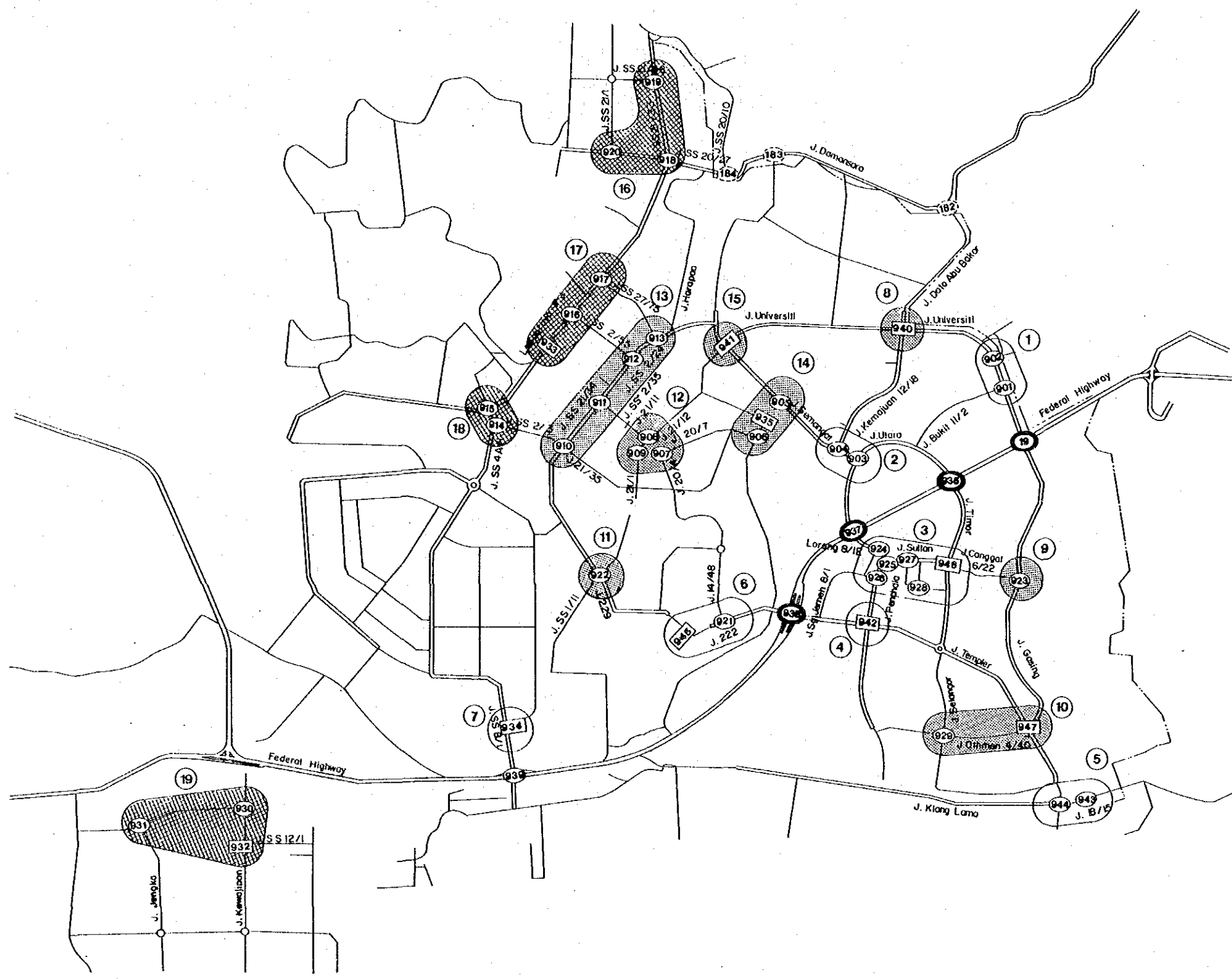
DRAWING NO : T-2003 DATE : September 1988

**THE FEASIBILITY STUDY ON TRANSPORTATION
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LEGEND

-  Intersection Under Kuala Lumpur ATC System
-  Intersection Under Highway Traffic Surveillance System
-  Existing Signalised Intersection
-  Proposed Signalised Intersection
-  Sub Area No
-  Sub Area
-  Stage 1 No 1 - 7
-  Stage 2 No 8 - 15
-  Stage 3 No 16 - 19



TRAFFIC CONTROL AND SURVEILLANCE SYSTEM PROJECT

Sub Area Plan for The Petaling Jaya ATC System (Sub Centre)

SCALE : 1 : 40000

DRAWING NO : T-2004 DATE : September 1988

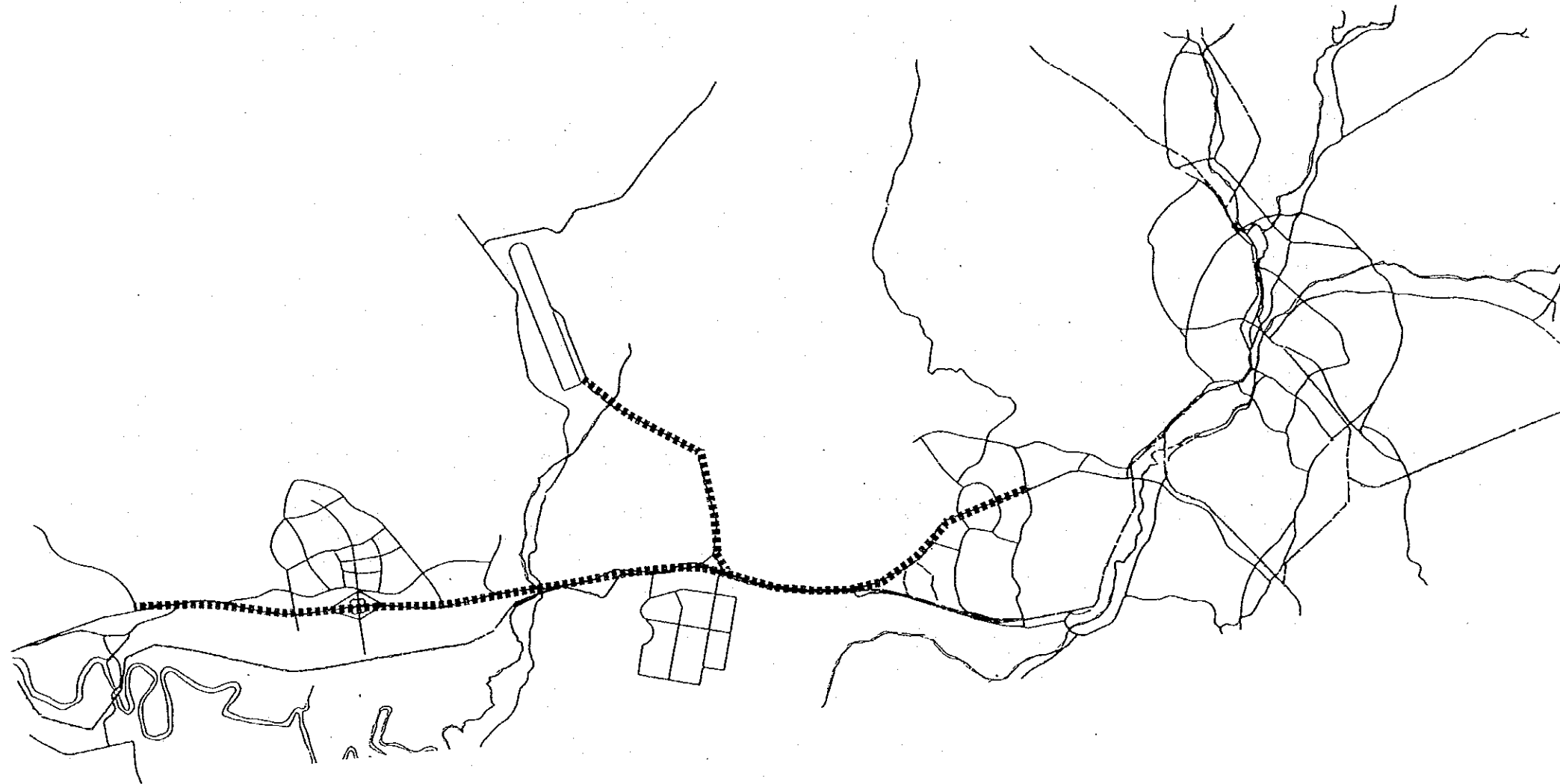
THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY

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3. HIGHWAY TRAFFIC SURVEILLANCE SYSTEM

LIST OF DRAWINGS

DRAWING CONTENTS	DRAWING NO.	SCALE	
		A1	A3
(1) Area Map for the HTS System	T-3001	1:120,000	1:240,000
(2) Control Center	T-2002	1:200	1:400
(3) An Illustration of A Wall Display Map (HTS System)	T-2003	-	-
(4) Detector, CCTV & Changeable Message Sign Location for the HTS System	T-2004	-	-
(5) An Illustration of The Cabling for the HTS System	T-2005	1:40,000	1:80,000



AREA MAP FOR HTS SYSTEM

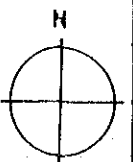
**THE FEASIBILITY STUDY ON TRANSPORTATION
FACILITIES PROJECTS IN KLANG VALLEY**

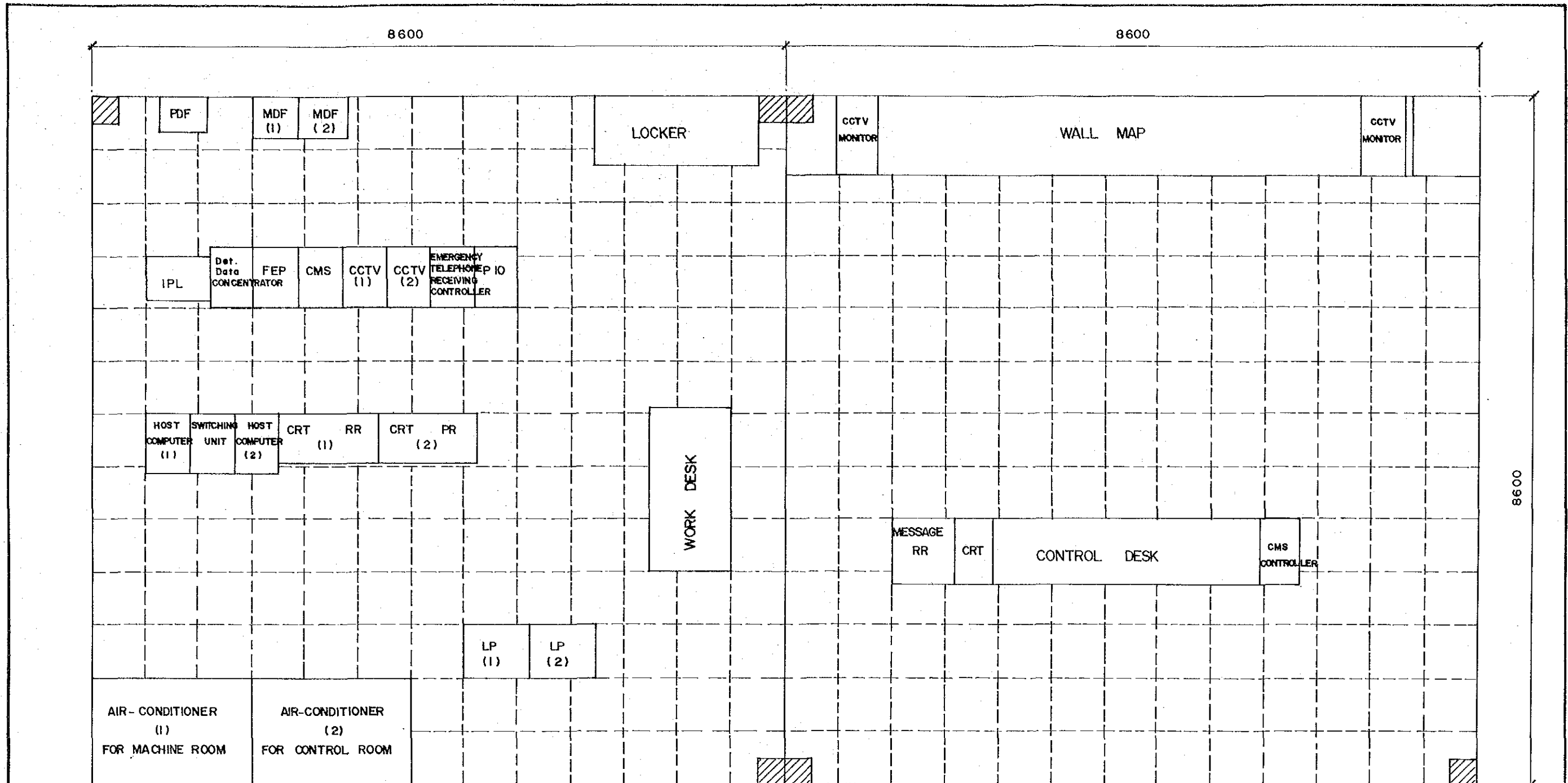
LEGEND :

DRAWING NO : T - 3001

SCALE :

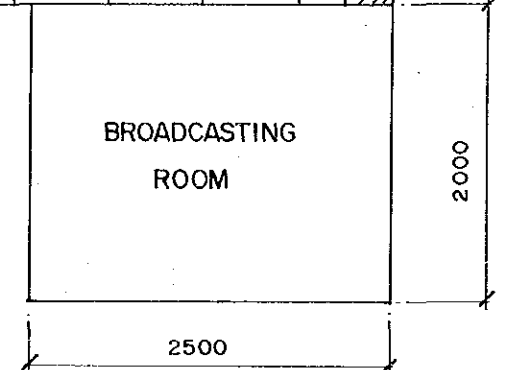
1 : 240 000



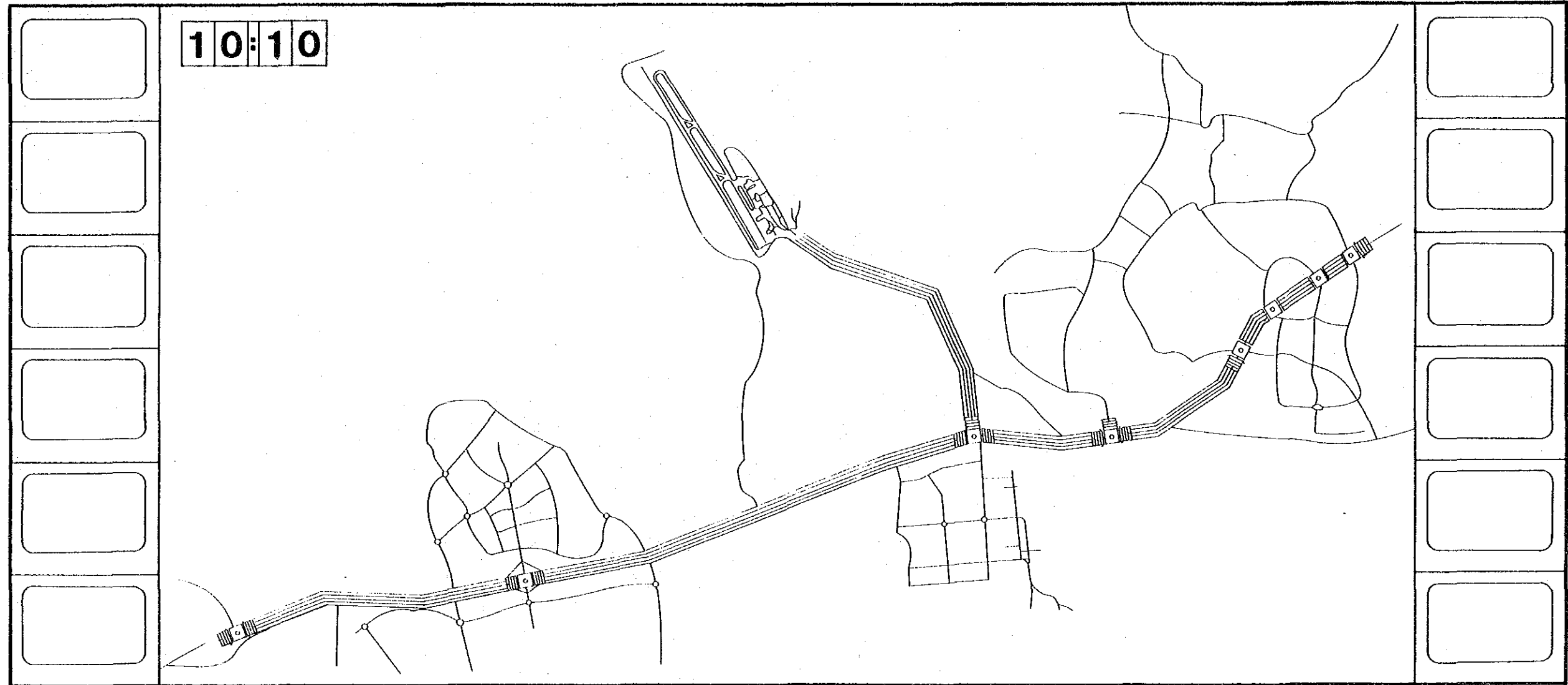


SPACE REQUIREMENTS :

CONTROL ROOM	=	74.0m ²
MACHINE ROOM	=	74.0m ²
BROADCASTING ROOM	=	5.0m ²
CVCF ROOM	=	25.0m ²
GENERATOR ROOM	=	25.0m ²



<p>HTS CONTROL CENTRE LAYOUT</p> <p>THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY</p>	<p>LEGEND :</p> <p>DRAWING NO : T- 3002</p>	<p>SCALE :</p> <p>1 : 400</p>	<p>N</p>
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**TRAFFIC CONTROL AND SURVEILLANCE
SYSTEM PROJECT**

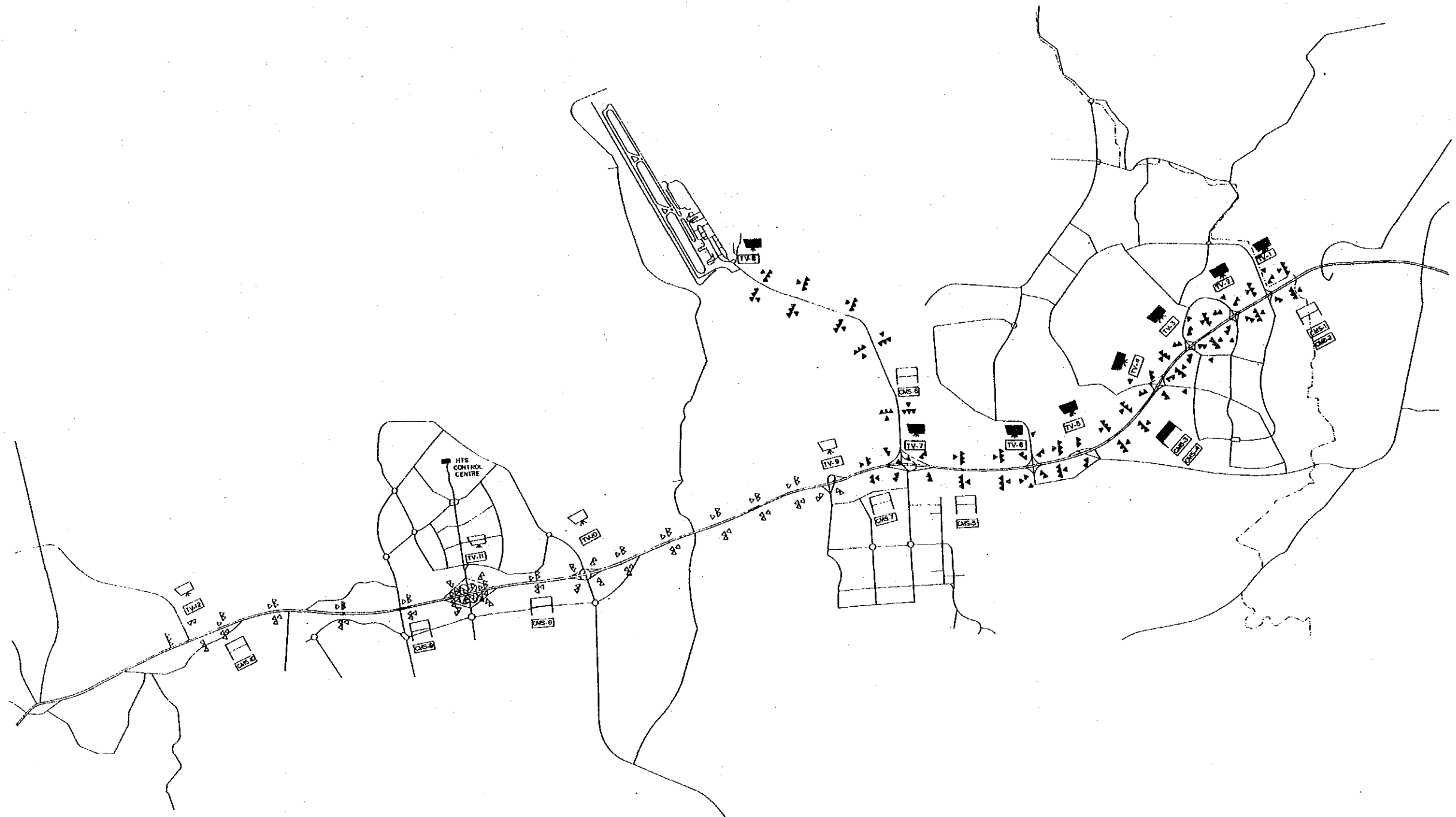
Illustration of The Wall Display Map (HTS System)

SCALE : Not to Scale

DRAWING NO : T-3003 DATE : September 1988

**THE FEASIBILITY STUDY ON TRANSPORTATION
FACILITIES PROJECTS IN KLANG VALLEY**

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**TRAFFIC CONTROL AND SURVEILLANCE
SYSTEM PROJECT**

Detector, CCTV & Changeable Message Sign Location for The HTS System

SCALE : 1 : 8000

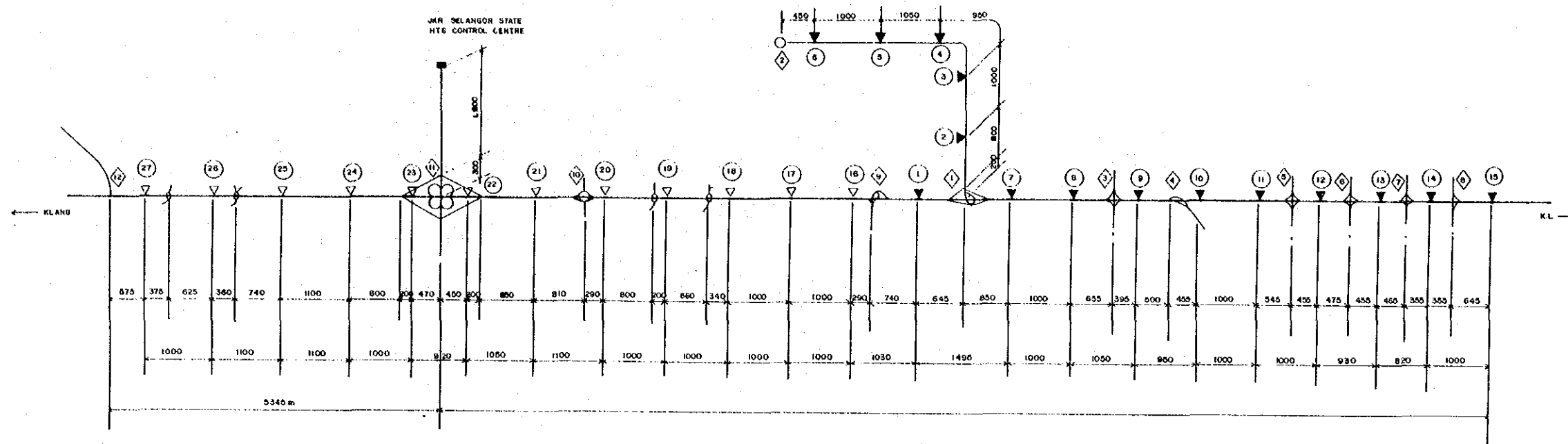
DRAWING NO : T-3004

DATE : September 1988

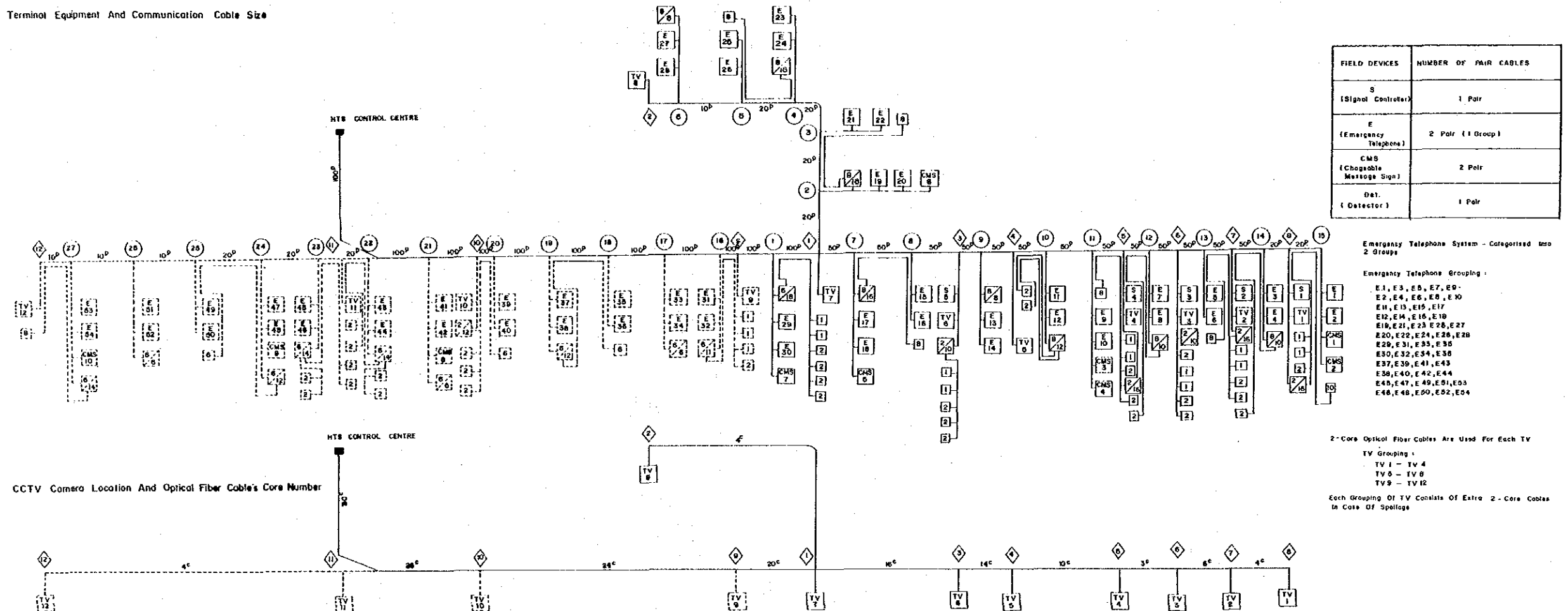
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Illustration of Terminal Equipment And Its Locality



Terminal Equipment And Communication Cable Size



TRAFFIC CONTROL AND SURVEILLANCE SYSTEM PROJECT

An Illustration of The Cabling for The HTS System

SCALE : 1:40 000

DRAWING NO : T-3005 DATE : September 1988

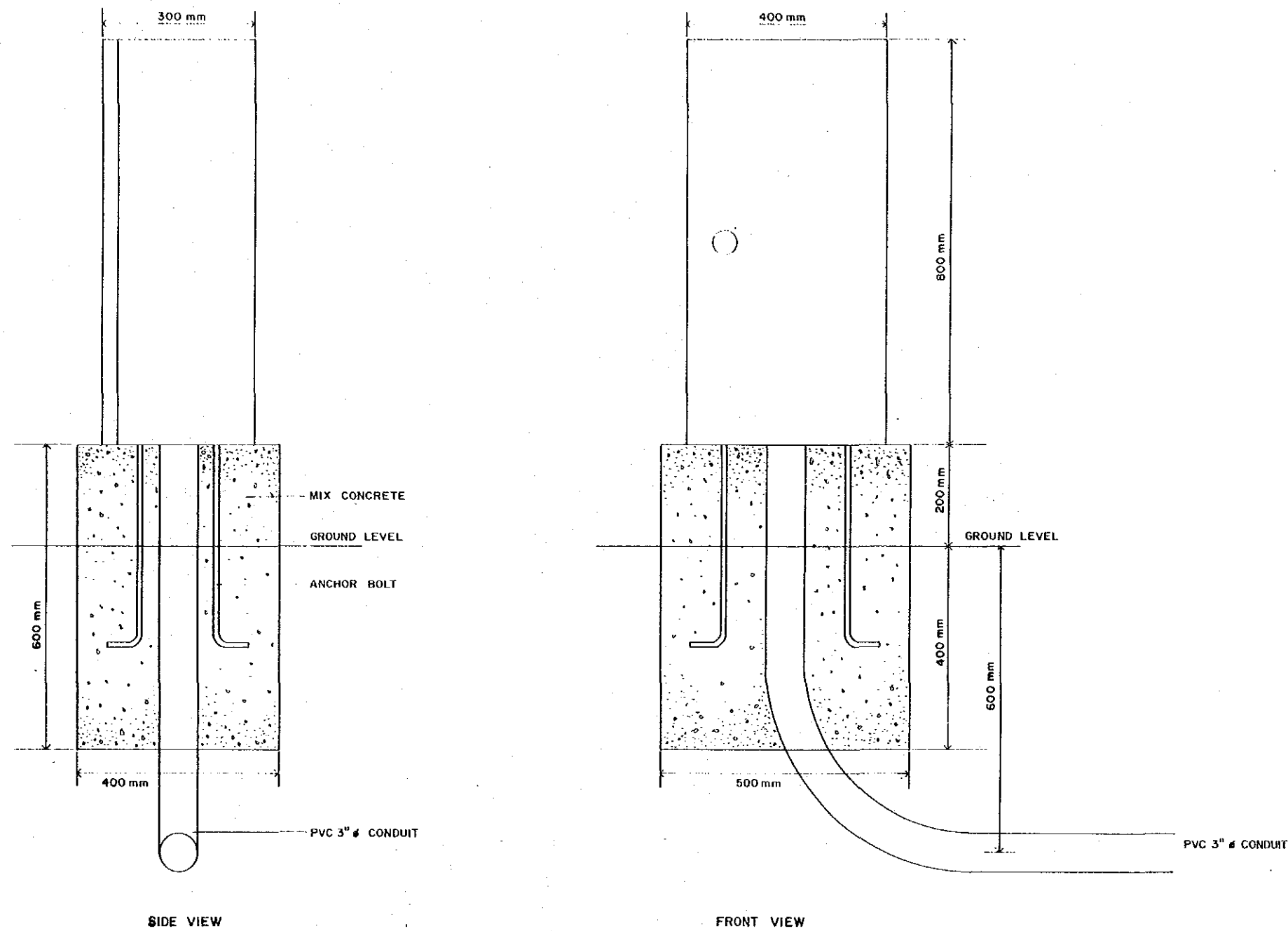
THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY

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4. STANDARD WAY OF INSTALLATION

LIST OF DRAWINGS

DRAWING CONTENTS	DRAWING NO.	SCALE
(1) Mounting Facilities of Local Controller	T-4001	1:10
(2) Traffic Signal Post and Footing Plan (Type A)	T-4002	1:40
(3) Traffic Signal Post and Footing Plan (Type B)	T-4003	1:30
(4) Mounting Facilities of Detector Cabinet	T-4004	1:10
(5) Loop Type Detector Installation Plan	T-4005	1:20
(6) Grounding System for Local Controller and Detector Cabinet	T-4006	1:40
(7) Underground Conduit Installation Plan	T-4007	1:20
(8) Handhole Plan	T-4008	1:16
(9) Changeable Message Sign Installation Plan (Type A)	T-4009	1:100
(10) Changeable Message Sign Installation Plan (Type B)	T-4010	1:100
(11) CCTV Camera Installation Plan	T-4011	1:80
(12) Emergency Telephone Unit Installation Plan	T-4012	1:10
(13) Existing Mounting Facilities of Local Controller	T-4013	-



**AREA TRAFFIC CONTROL AND SURVEILLANCE
SYSTEM PROJECT**

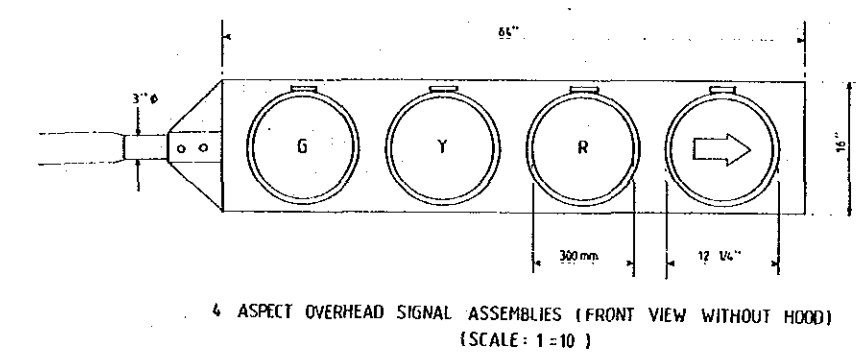
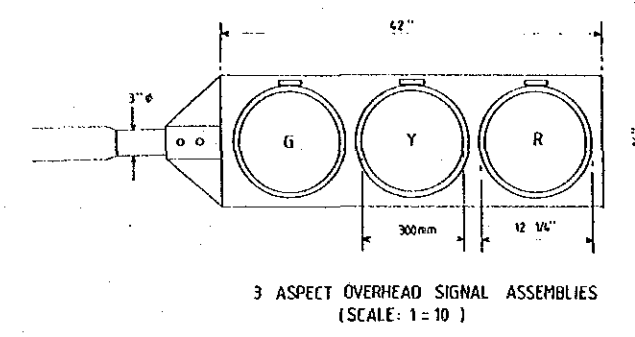
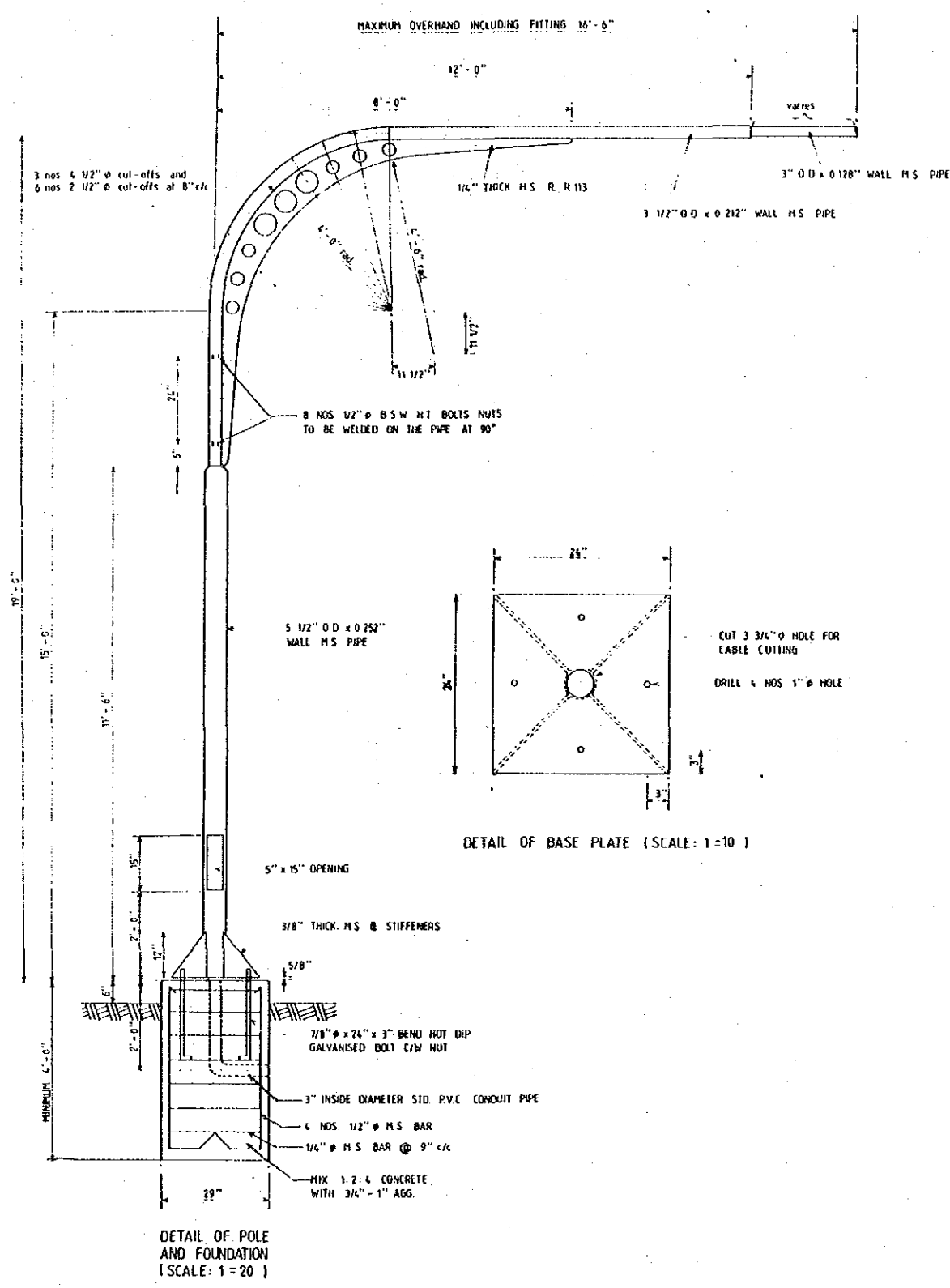
Mounting Facility of Local Controller

SCALE : 1 : 10

DRAWING NO : T-4001
DATE : September 1988

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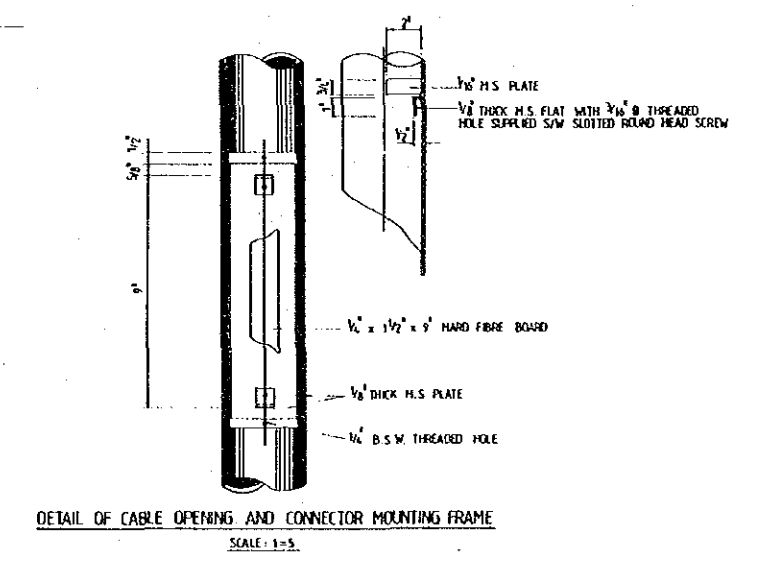
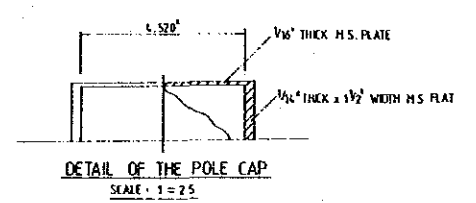
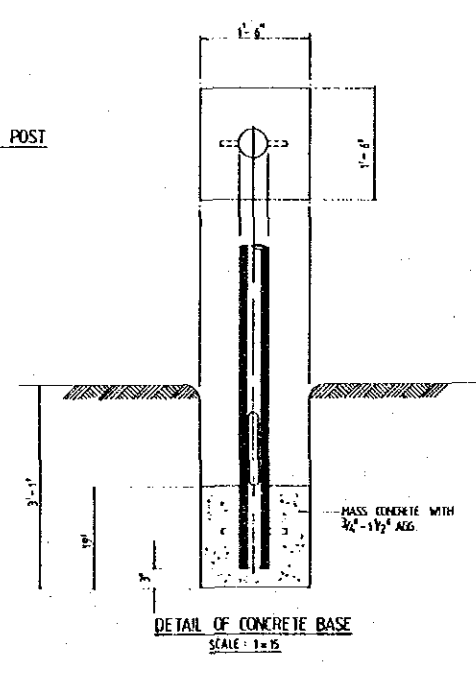
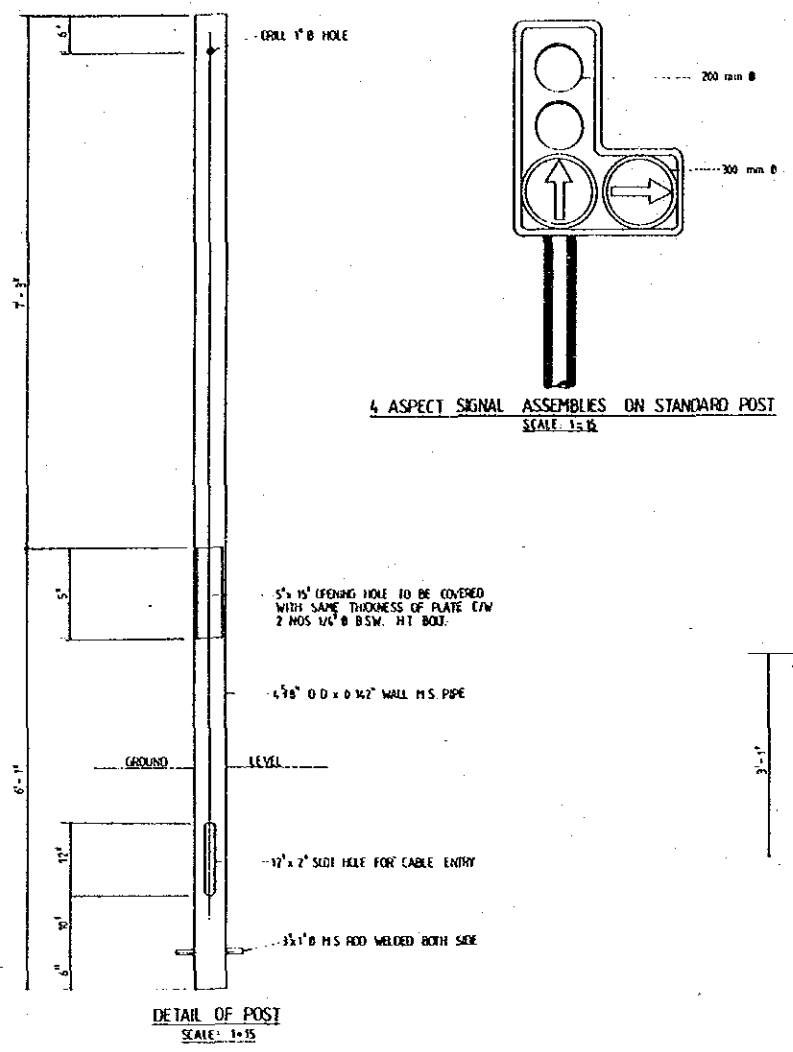


TRAFFIC CONTROL AND SURVEILLANCE SYSTEM PROJECT

Traffic Signal Post And Footing Plan (Type A)

SCALE: 1:40
 DRAWING NO: T-4002
 DATE: September 1988

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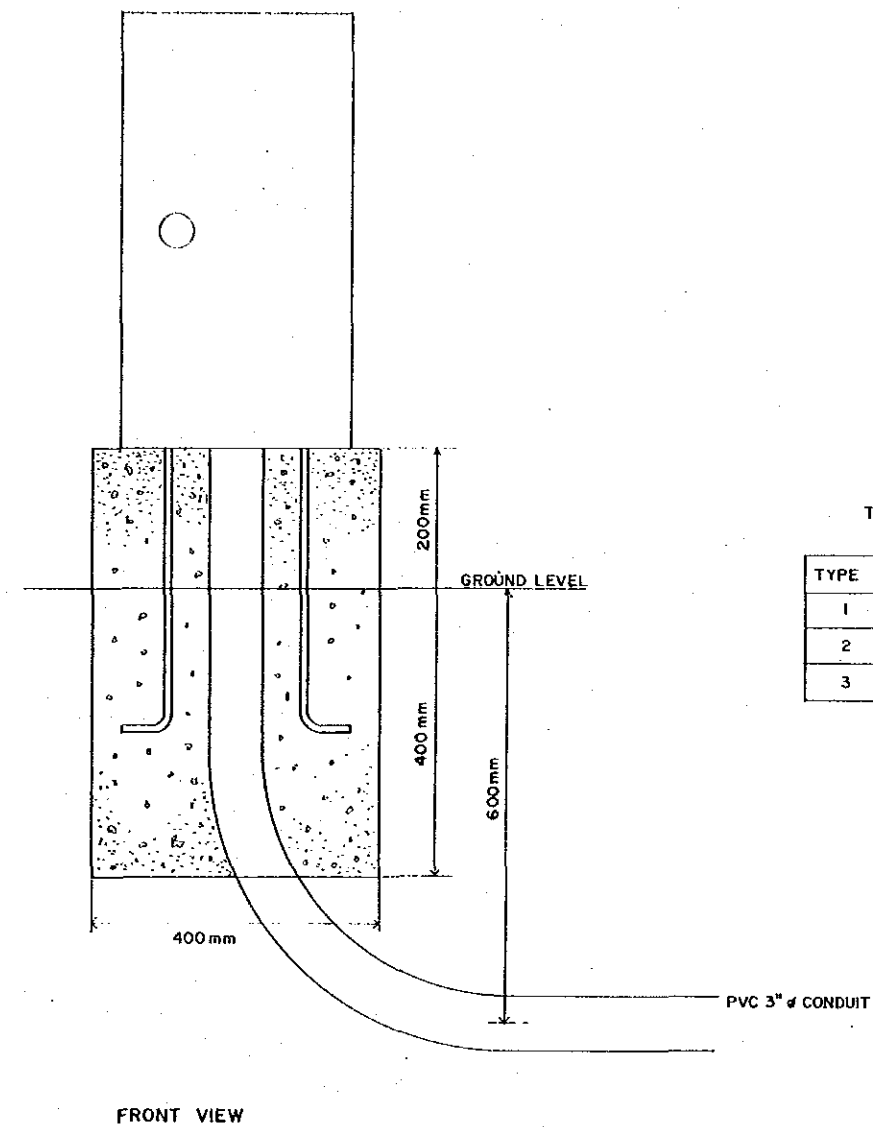
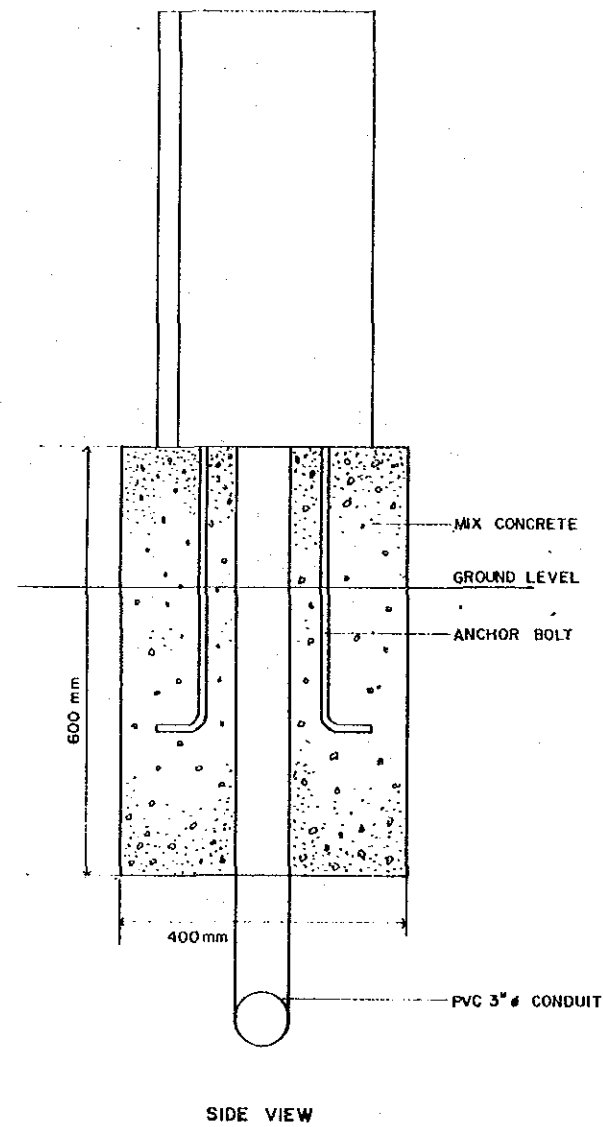


TRAFFIC CONTROL AND SURVEILLANCE SYSTEM PROJECT

Traffic Signal Post And Footing Plan (Type B)

SCALE: 1:30
DRAWING NO: T-4003
DATE: September 1988

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TYPE OF DETECTOR CABINET (mm)

TYPE	HEIGHT	WIDTH	DEPTH
1	600	320	300
2	800	320	300
3	1100	320	300

TRAFFIC CONTROL AND SURVEILLANCE SYSTEM PROJECT

Mounting Facility of Detector Cabinet

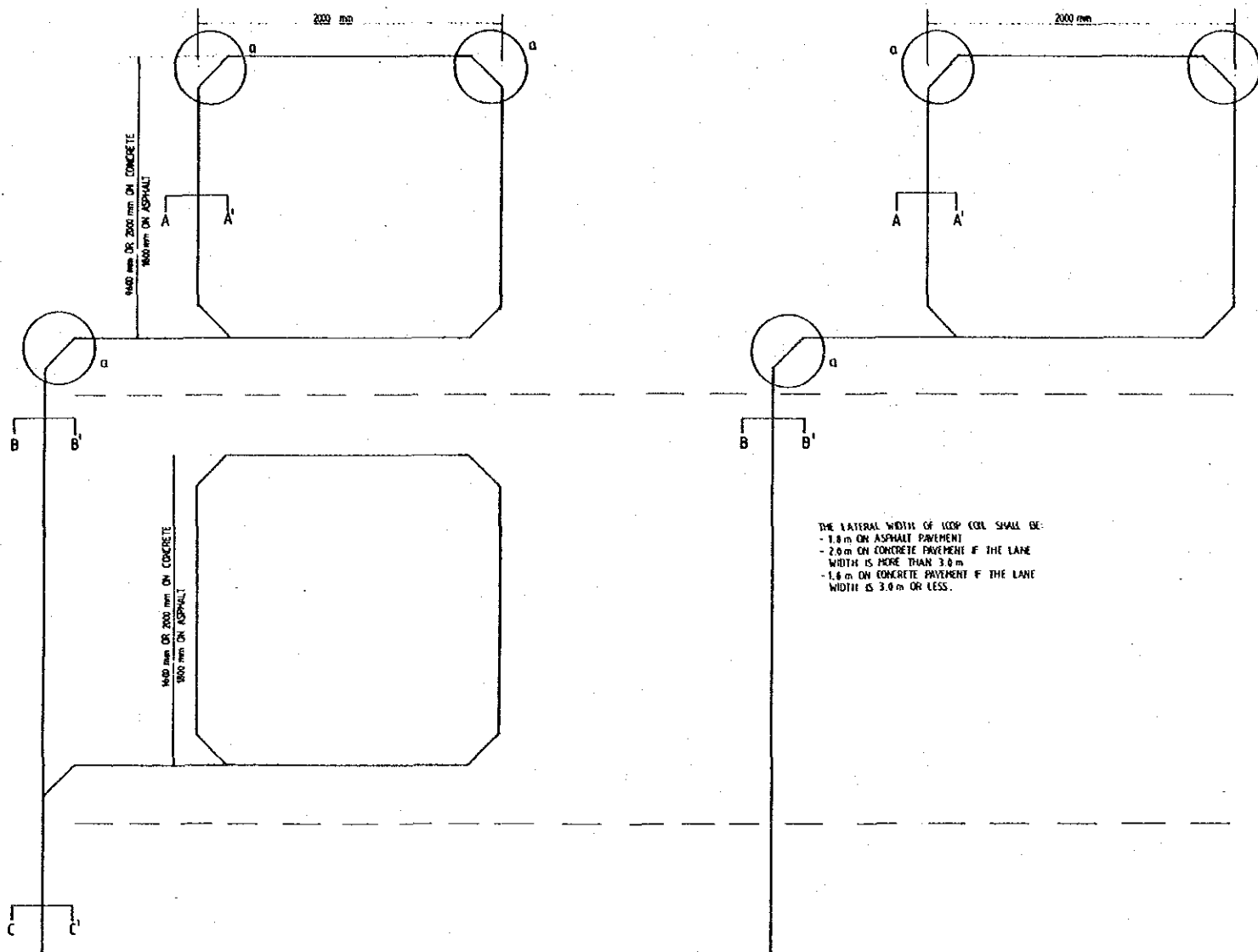
SCALE : 1:10

DRAWING NO : T- 4004

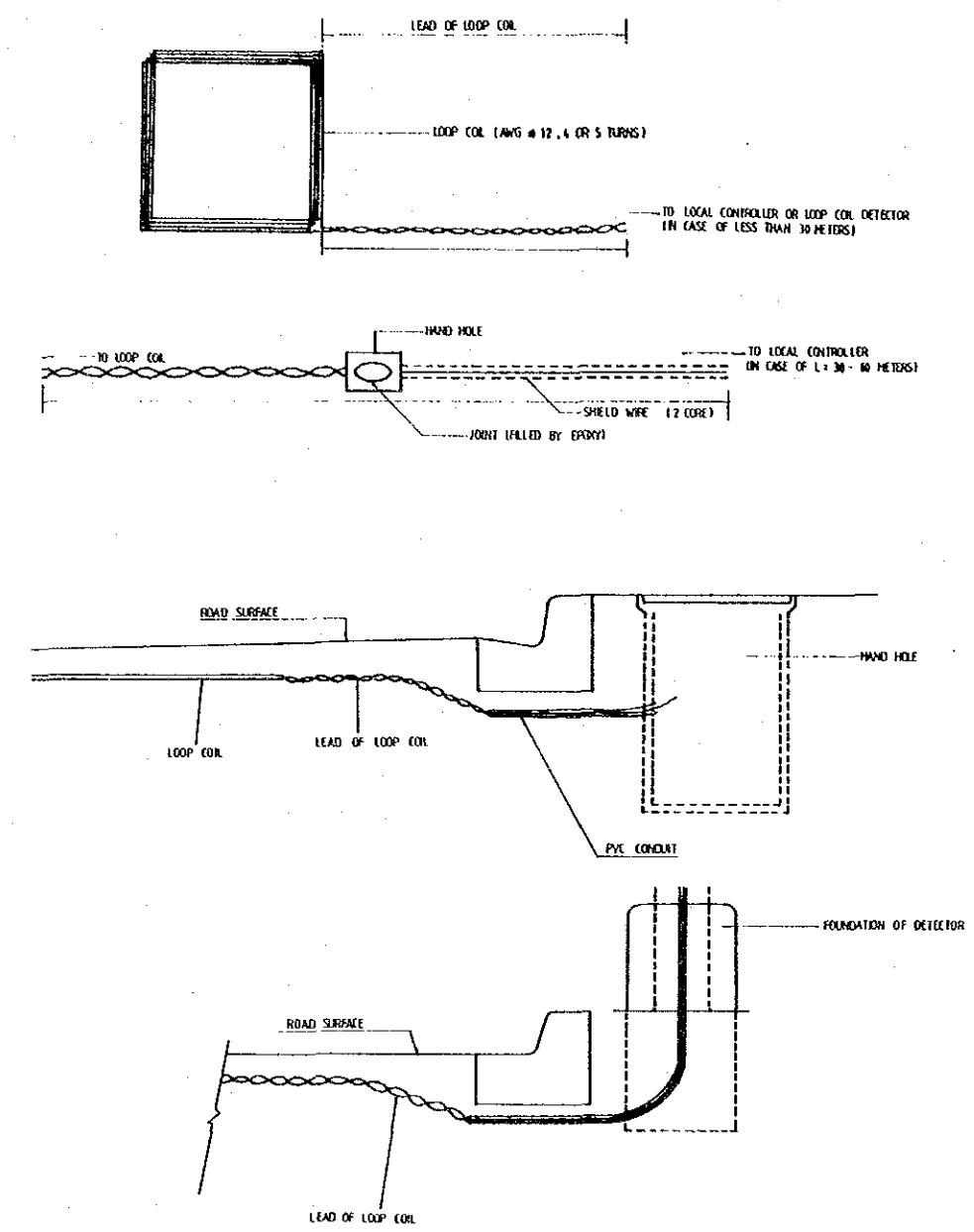
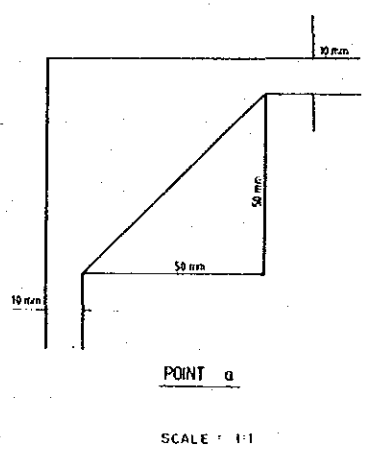
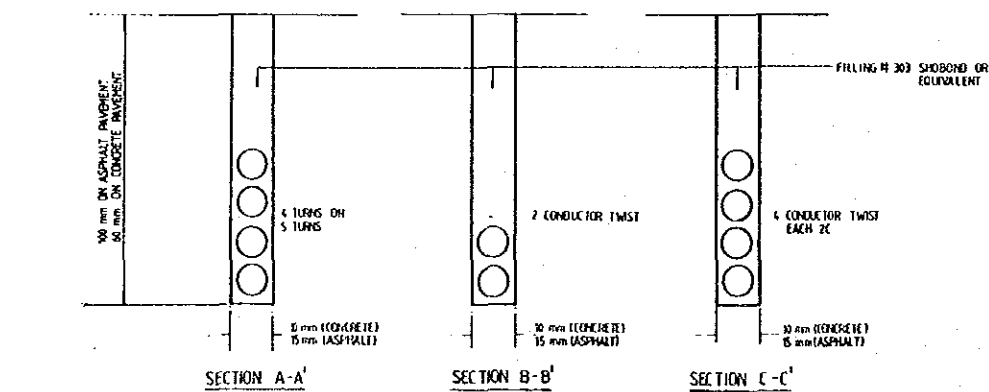
DATE : September 1988

THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY

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THE LATERAL WIDTH OF LOOP COIL SHALL BE:
 - 1.8 m ON ASPHALT PAVEMENT
 - 2.0 m ON CONCRETE PAVEMENT IF THE LANE WIDTH IS MORE THAN 3.0 m
 - 1.8 m ON CONCRETE PAVEMENT IF THE LANE WIDTH IS 3.0 m OR LESS.



TRAFFIC CONTROL AND SURVEILLANCE SYSTEM PROJECT

Loop Type Detector Installation Plan

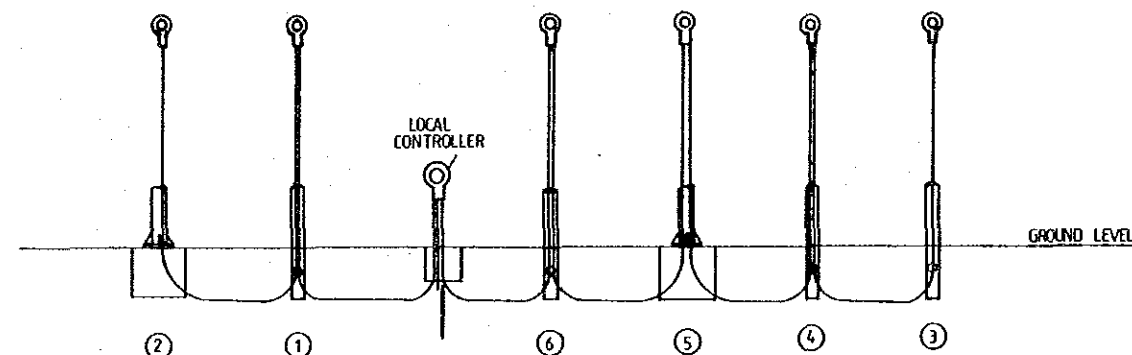
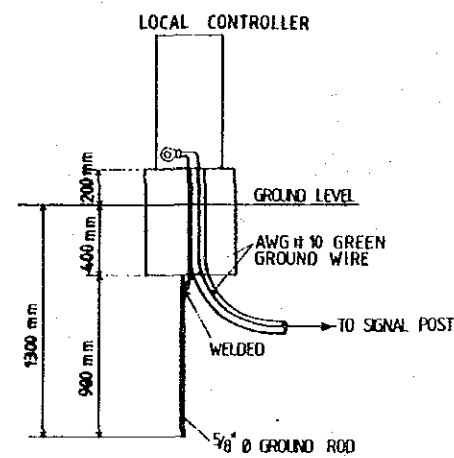
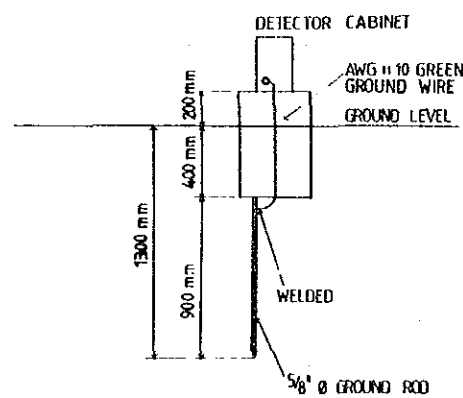
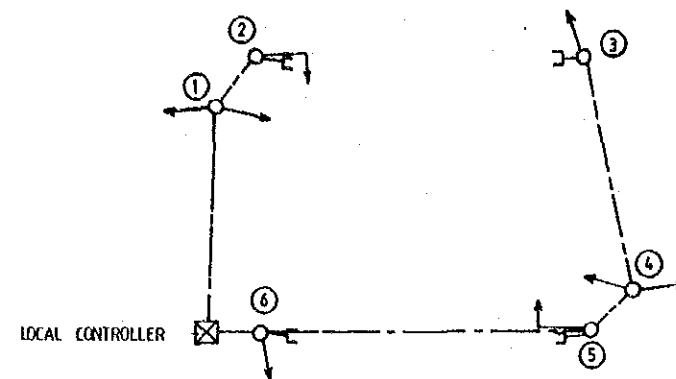
SCALE : 1 : 20

DRAWING NO : T - 4005

DATE : September 1988

THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY

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NOTE:
TO BE CONNECTED WITH STEEL POLES
OR LOCAL CONTROLLER'S CABINET

NOTE:
GROUND RESISTANCE SHOULD BE
LESS THAN 100 Ω

**TRAFFIC CONTROL AND SURVEILLANCE
SYSTEM PROJECT**

Granding System for Local Controller and Detector Cabinet

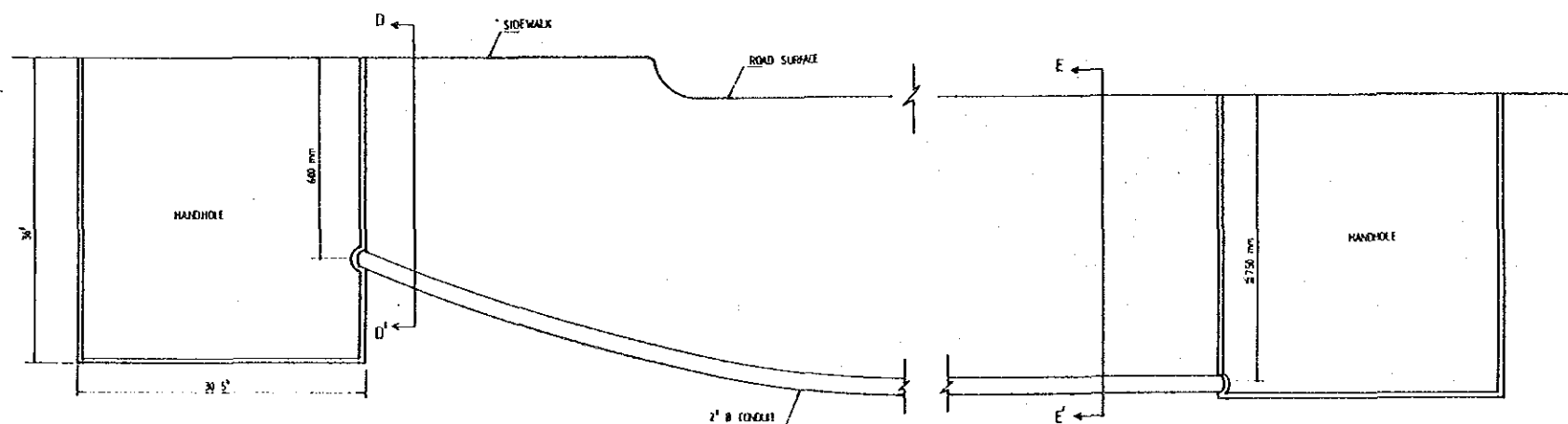
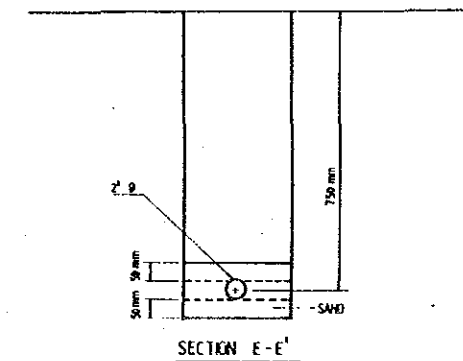
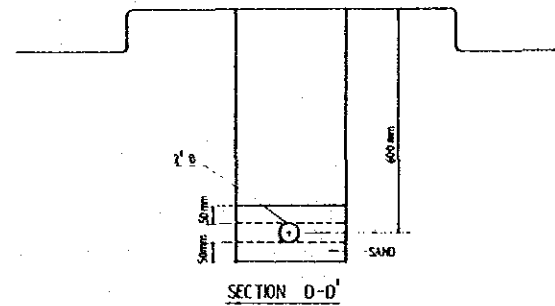
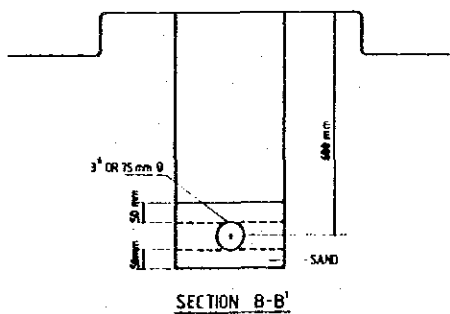
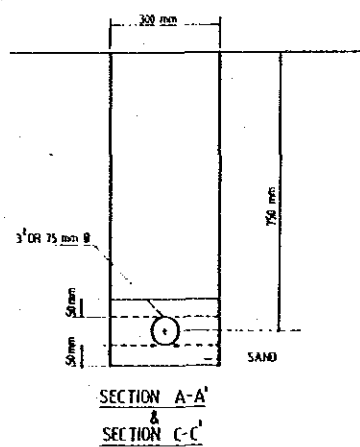
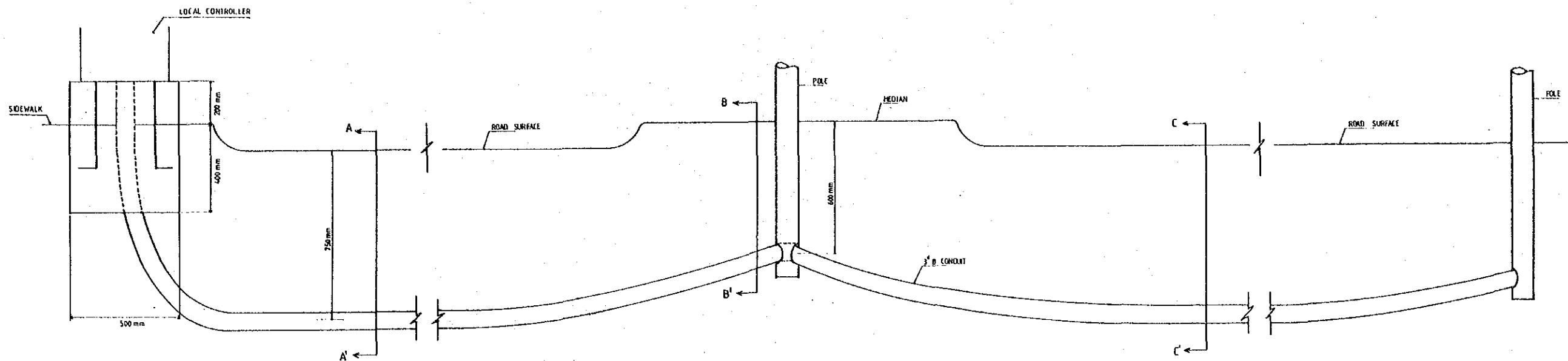
SCALE :
1:40

DRAWING NO :
T-4006

DATE :
September 1988

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**TRAFFIC CONTROL AND SURVEILLANCE
SYSTEM PROJECT**

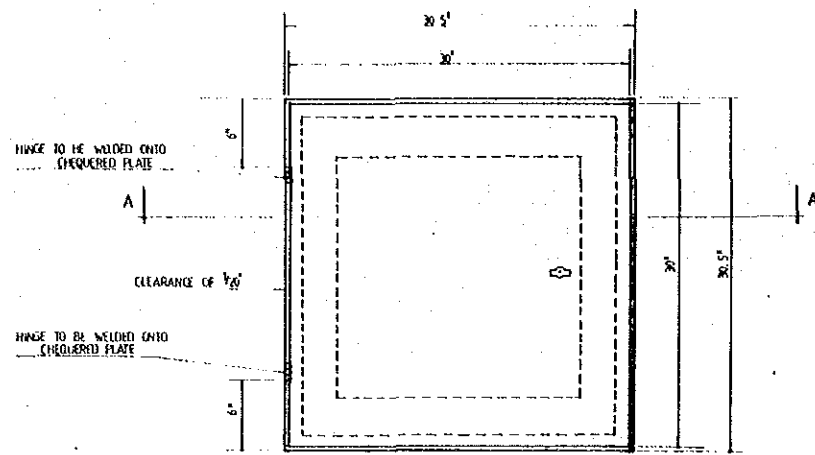
Underground Conduit Installation Plan

SCALE : 1:20

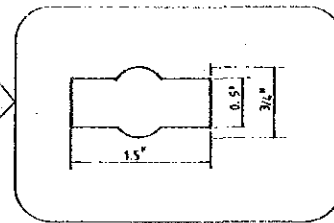
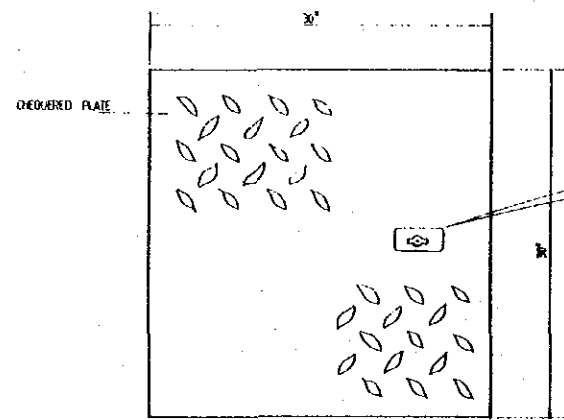
DRAWING NO : T-4007
DATE : September 1988

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FACILITIES PROJECTS IN KLANG VALLEY**

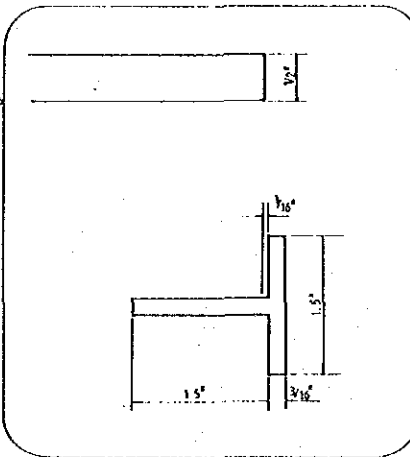
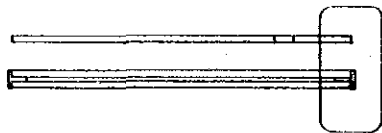
JAPAN INTERNATIONAL COOPERATION AGENCY



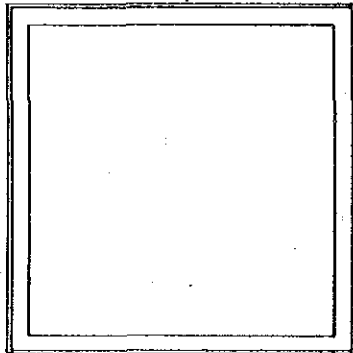
TOP VIEW



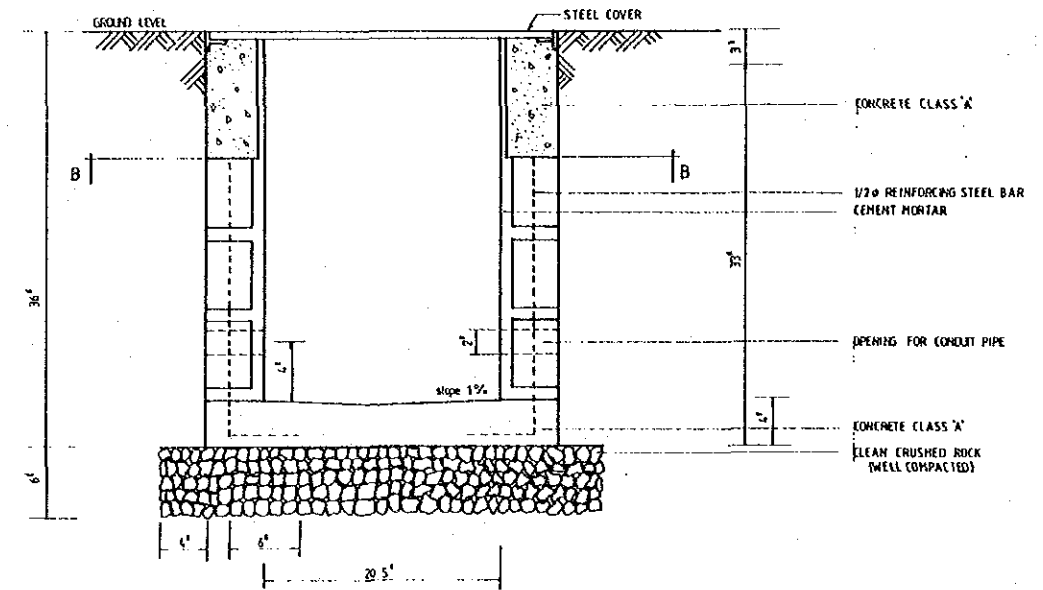
SCALE - 1/1



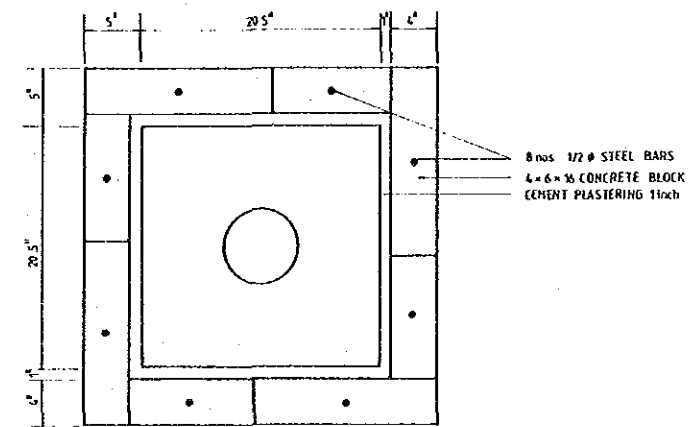
SCALE - 1/1



STEEL COVER AND FRAME



SECTION THRU A - A



SECTION THRU B - B

**TRAFFIC CONTROL AND SURVEILLANCE
SYSTEM PROJECT**

Handhole Plan

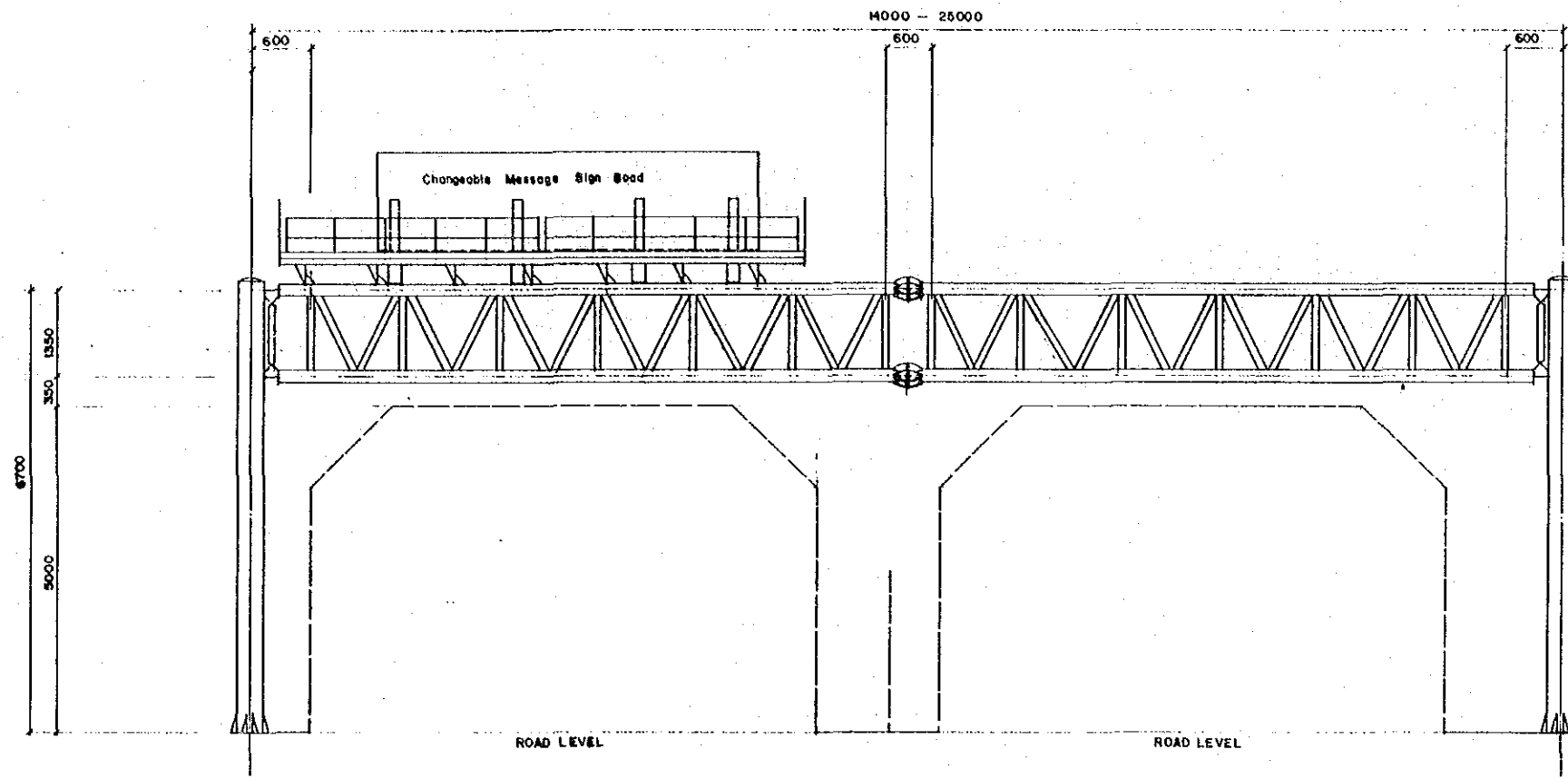
SCALE :
1:16

DRAWING NO :
T- 4008

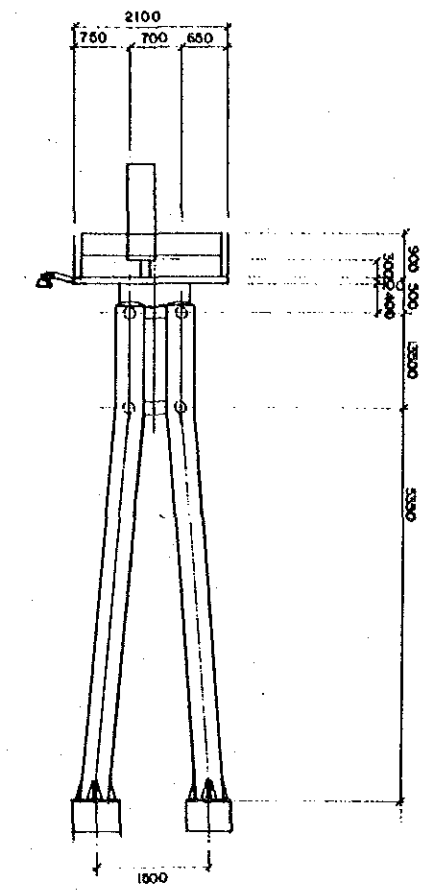
DATE :
September 1988

**THE FEASIBILITY STUDY ON TRANSPORTATION
FACILITIES PROJECTS IN KLANG VALLEY**

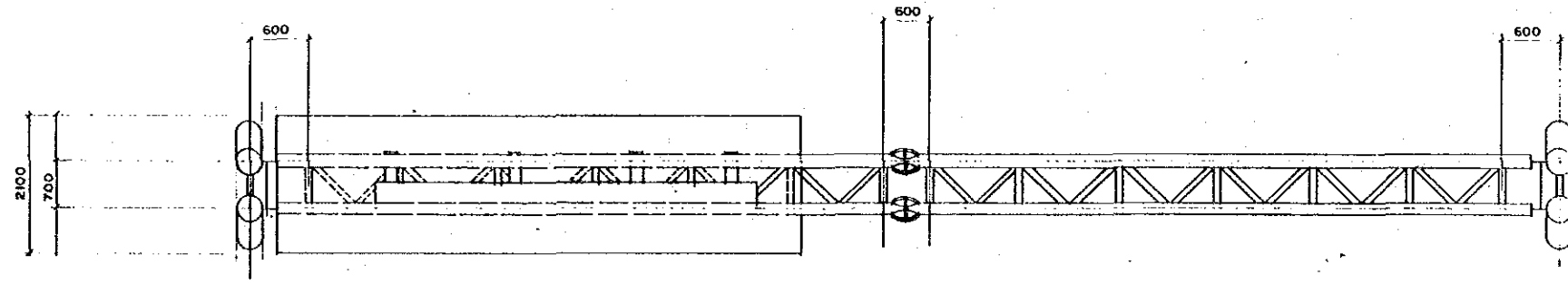
JAPAN INTERNATIONAL COOPERATION AGENCY



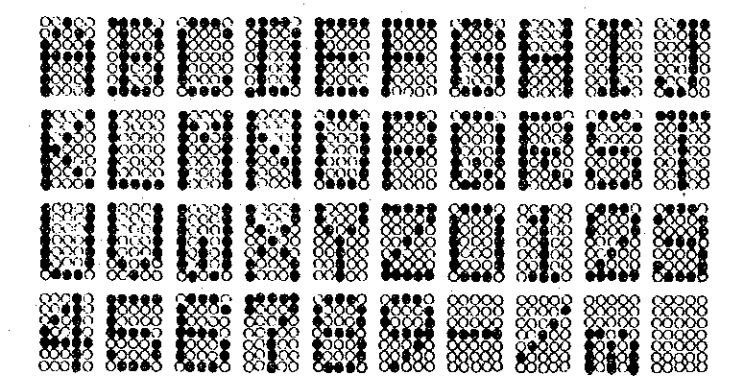
FRONT VIEW



SIDE VIEW



TOP VIEW



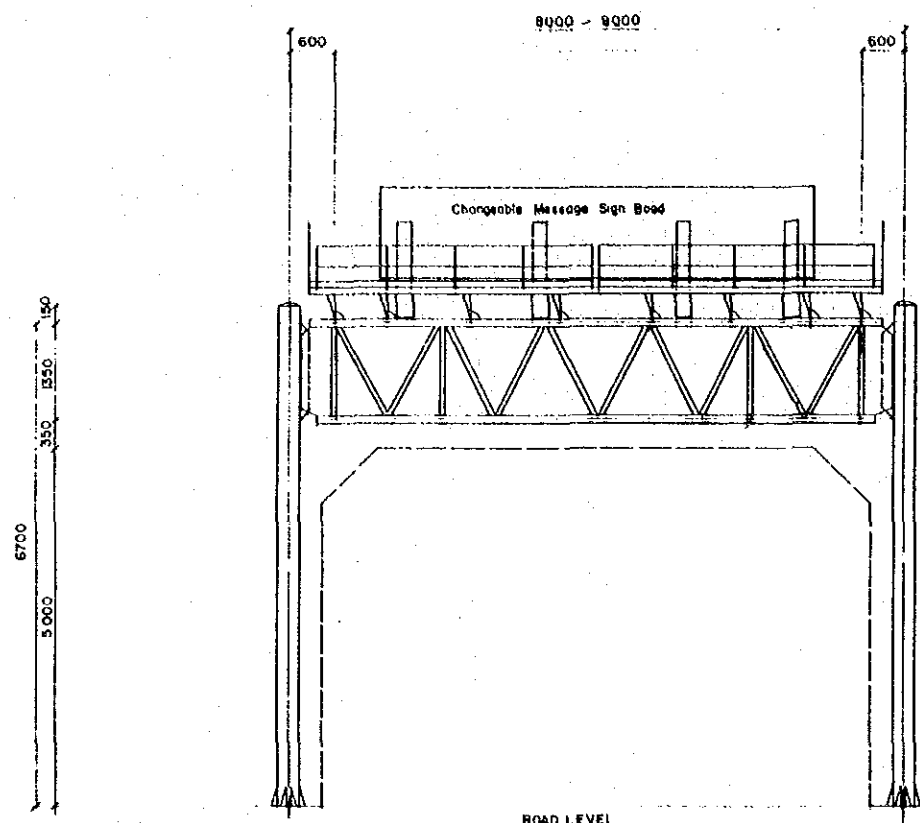
SAMPLE OF DISPLAY CHARACTERS

**TRAFFIC CONTROL AND SURVEILLANCE
SYSTEM PROJECT**

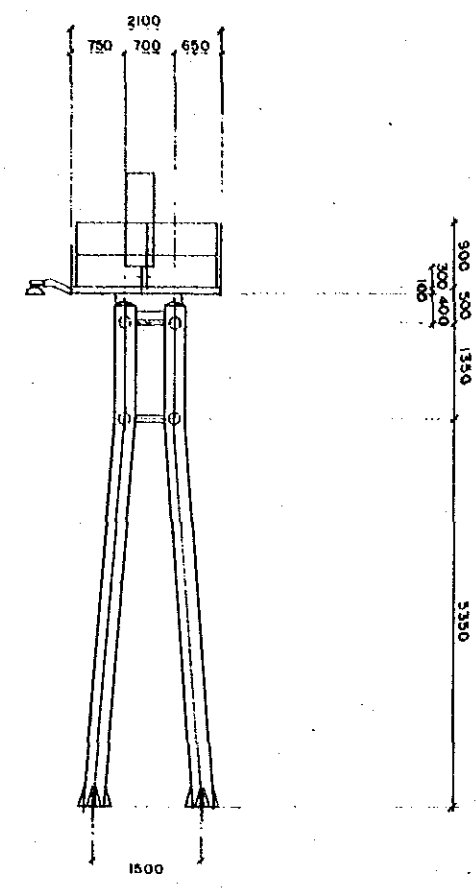
Changeable Message Sign Installation Plan (Type A)

SCALE : 1:100
DRAWING NO : T-4009
DATE : September 1988

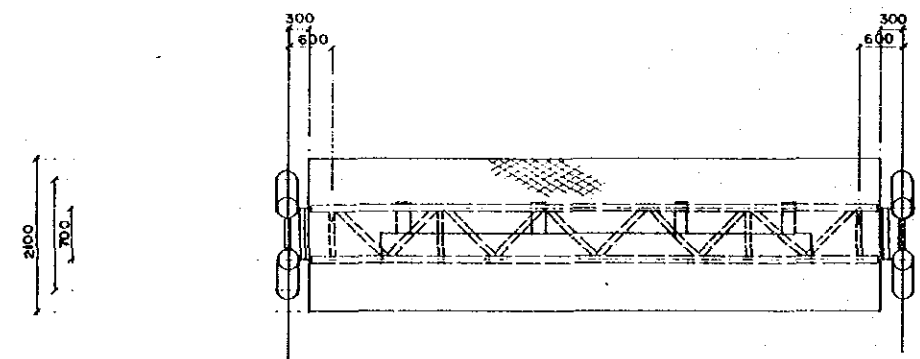
**THE FEASIBILITY STUDY ON TRANSPORTATION
FACILITIES PROJECTS IN KLANG VALLEY**
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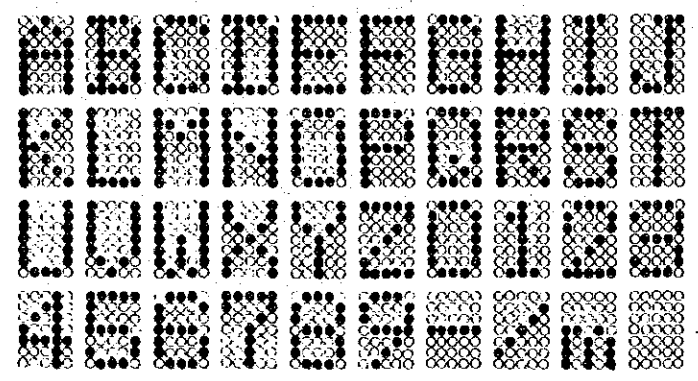
FRONT VIEW



SIDE VIEW



TOP VIEW



SAMPLE OF DISPLAY CHARACTERS

AREA TRAFFIC CONTROL AND SURVEILLANCE SYSTEM PROJECT

Changeable Message Sign Installation Plan (Type B)

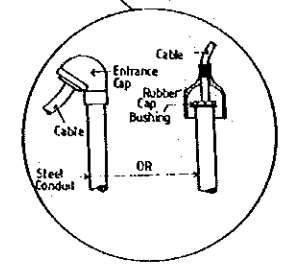
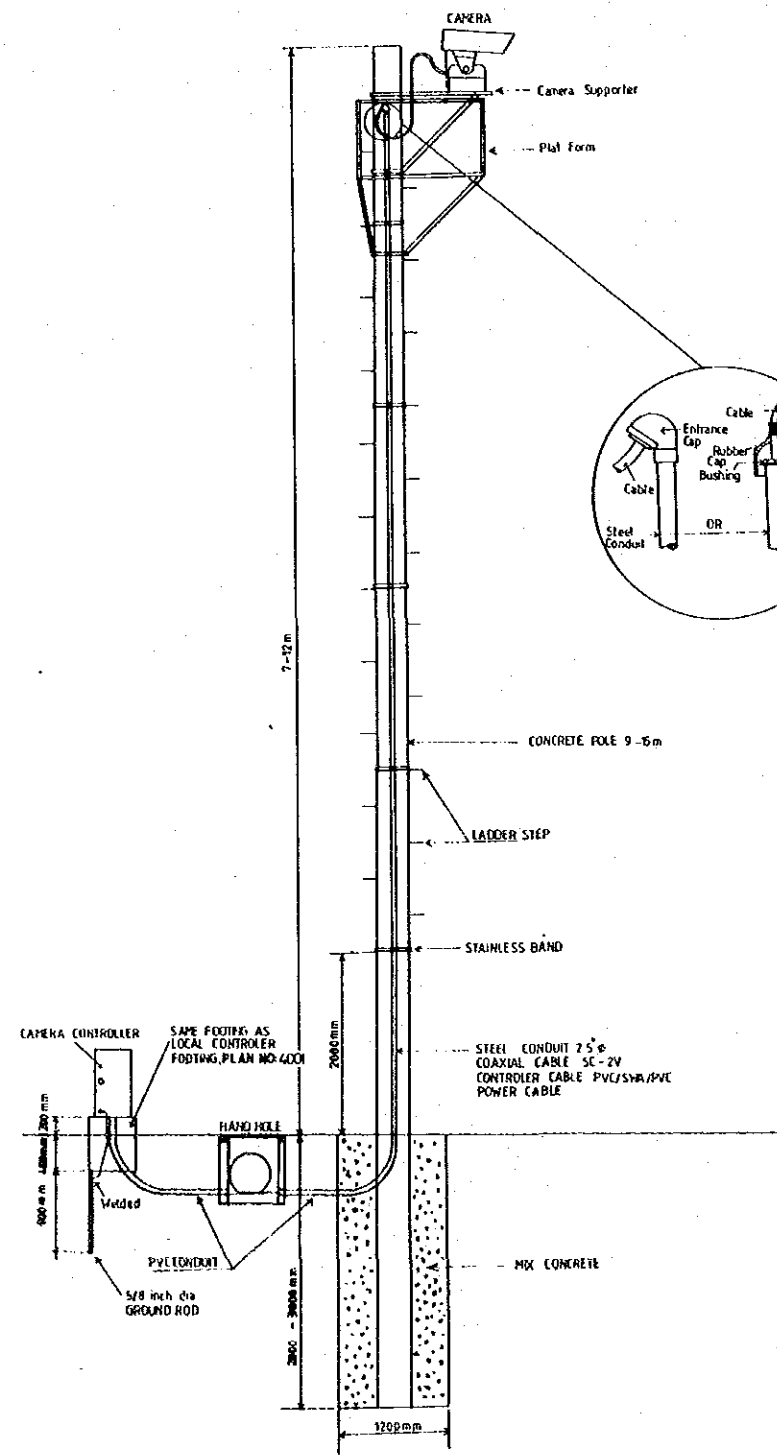
SCALE : 1:100

DRAWING NO : T-4010

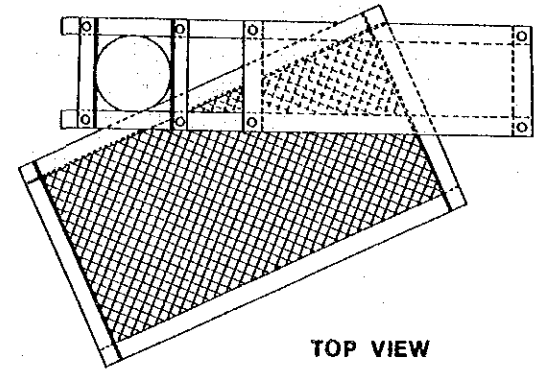
DATE : September 1988

THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY

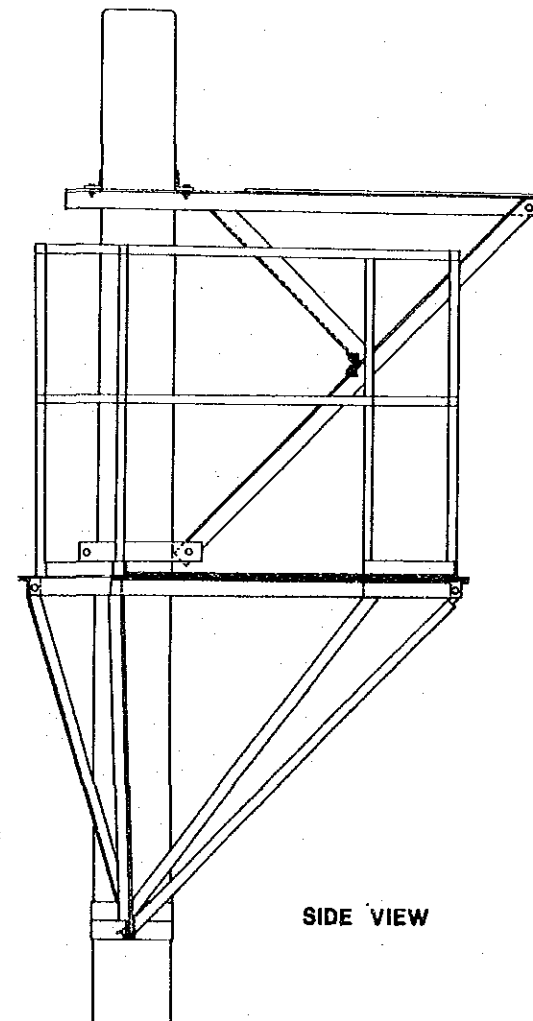
JAPAN INTERNATIONAL COOPERATION AGENCY



CCTV PLATFORM



TOP VIEW



SIDE VIEW

TRAFFIC CONTROL AND SURVEILLANCE SYSTEM PROJECT

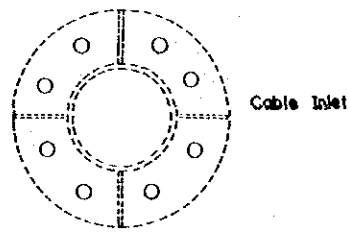
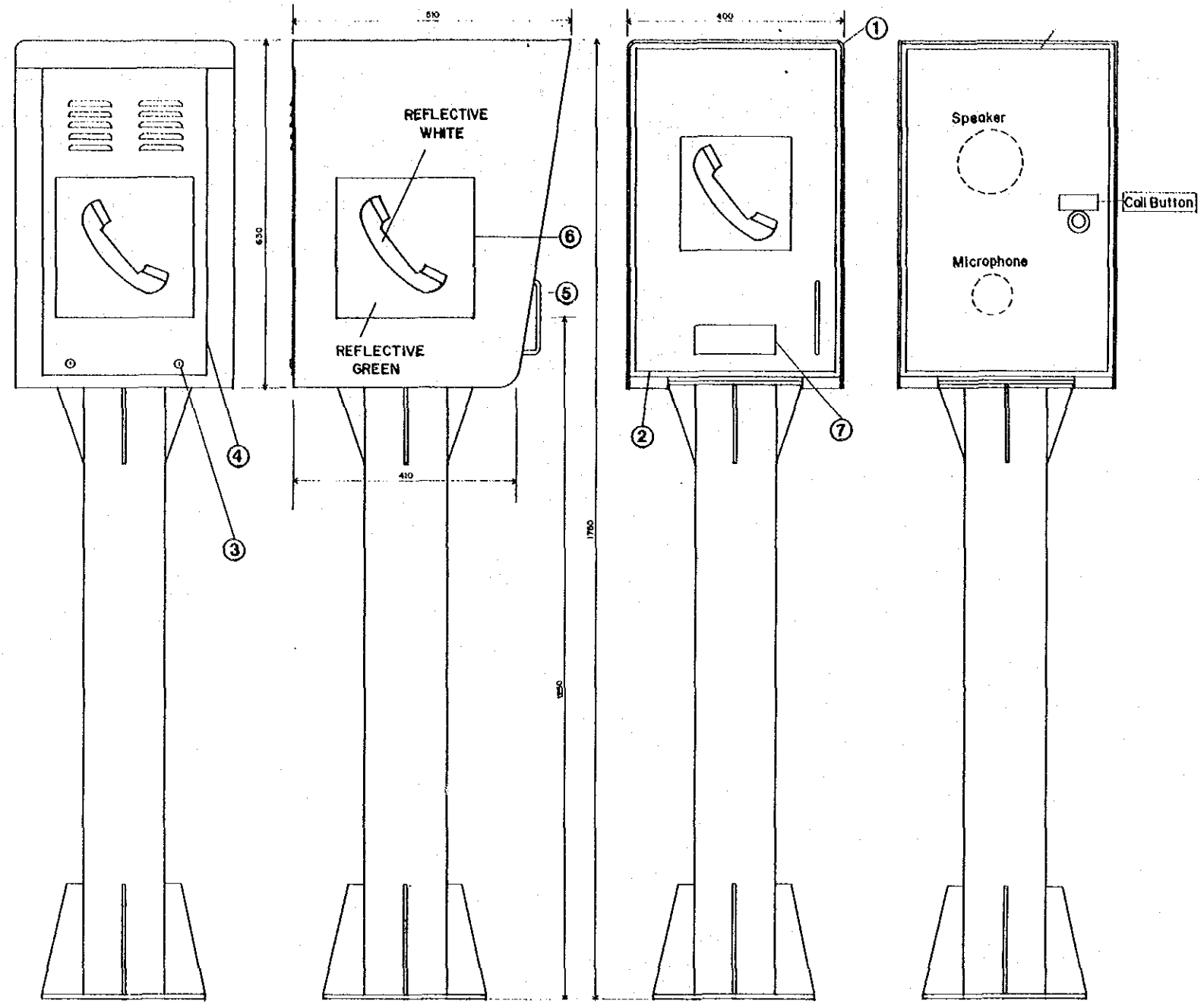
CCTV Camera Installation Plan

SCALE : 1:80

DRAWING NO : T-4011

DATE : September 1988

THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY
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PAINTING COLOR: BRIGHT ORANGE
(MUNSELL 7.5 YR 7.5/16)

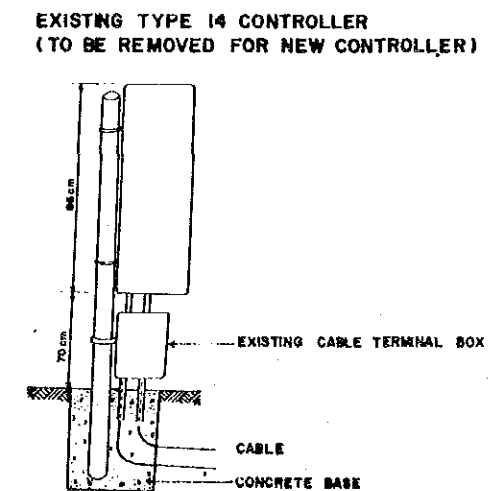
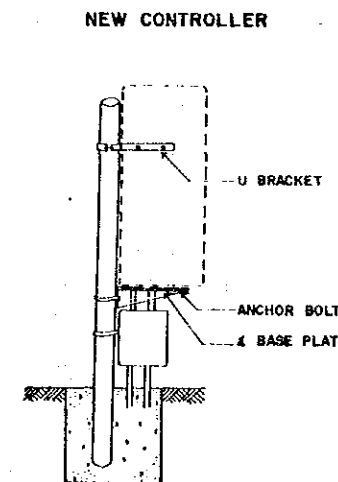
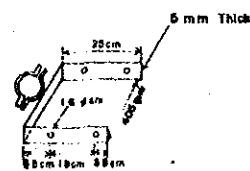
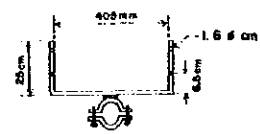
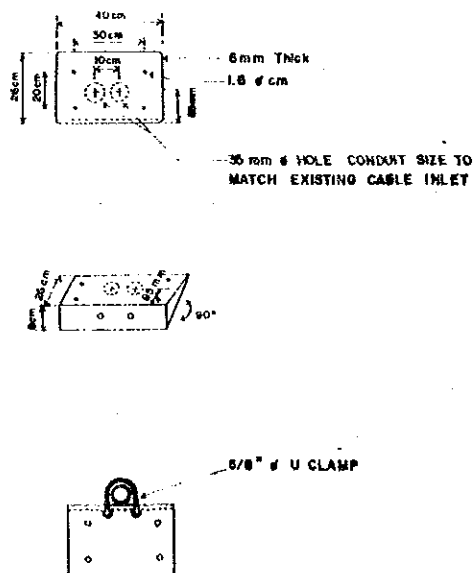
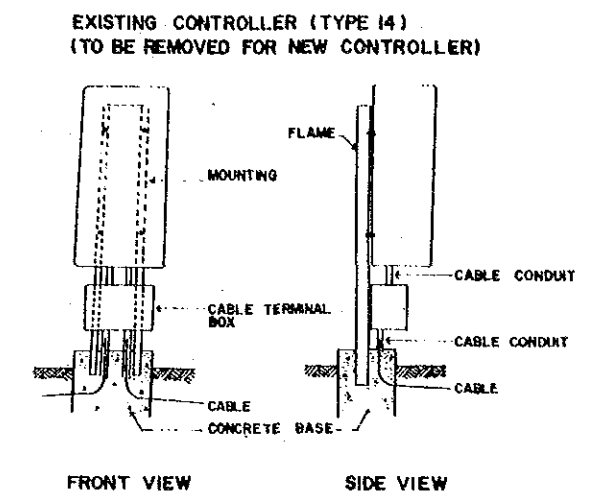
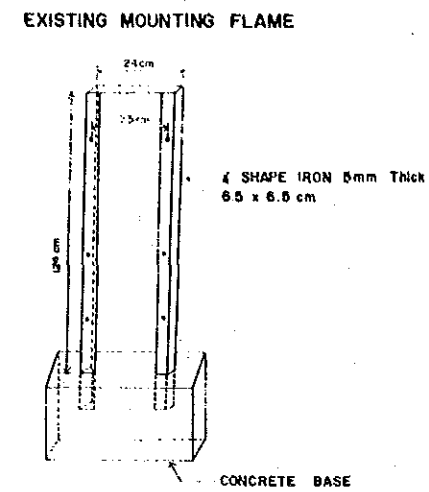
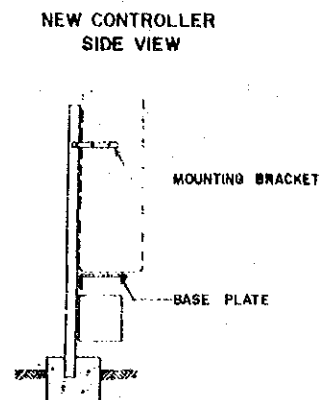
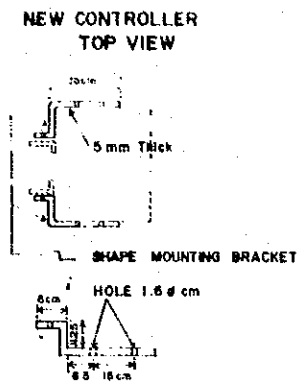
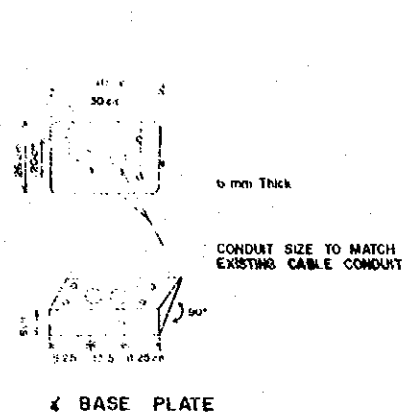
NO	ITEM	REMARKS
1	Frame	Steel Plate & Pipe - Chromate Plated And Three Layers Of Epoxy Resin Enamelling Paint
2	Front Cover	
3	Key	
4	Back Cover	Steel Plate - Chromate Plated And Three Layers Of Epoxy Resin Enamelling Paint
5	Knob	Steel Bar - Chrome Plated
6	Telephone Mark	Steel Plate - Chromate Plated And Three Layers Of Epoxy Resin Enamelling Paint
7	Name Plate	Aluminum

TRAFFIC CONTROL AND SURVEILLANCE SYSTEM PROJECT

Emergency Telephone Unit Installation Plan

SCALE : 1:10
DRAWING NO : T - 4012
DATE : September 1988

THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY
JAPAN INTERNATIONAL COOPERATION AGENCY



AREA TRAFFIC CONTROL AND SURVEILLANCE
SYSTEM PROJECT

Existing Mounting Facilities of Local Controller

SCALE : Not to Scale

DRAWING NO : T-4013

DATE : September 1988

THE FEASIBILITY STUDY ON TRANSPORTATION
FACILITIES PROJECTS IN KLANG VALLEY

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