

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

METRO RAIL PROJECT

LOS ANGELES CENTRAL BUSINESS DISTRICT TO NORTH HOLLYWOOD



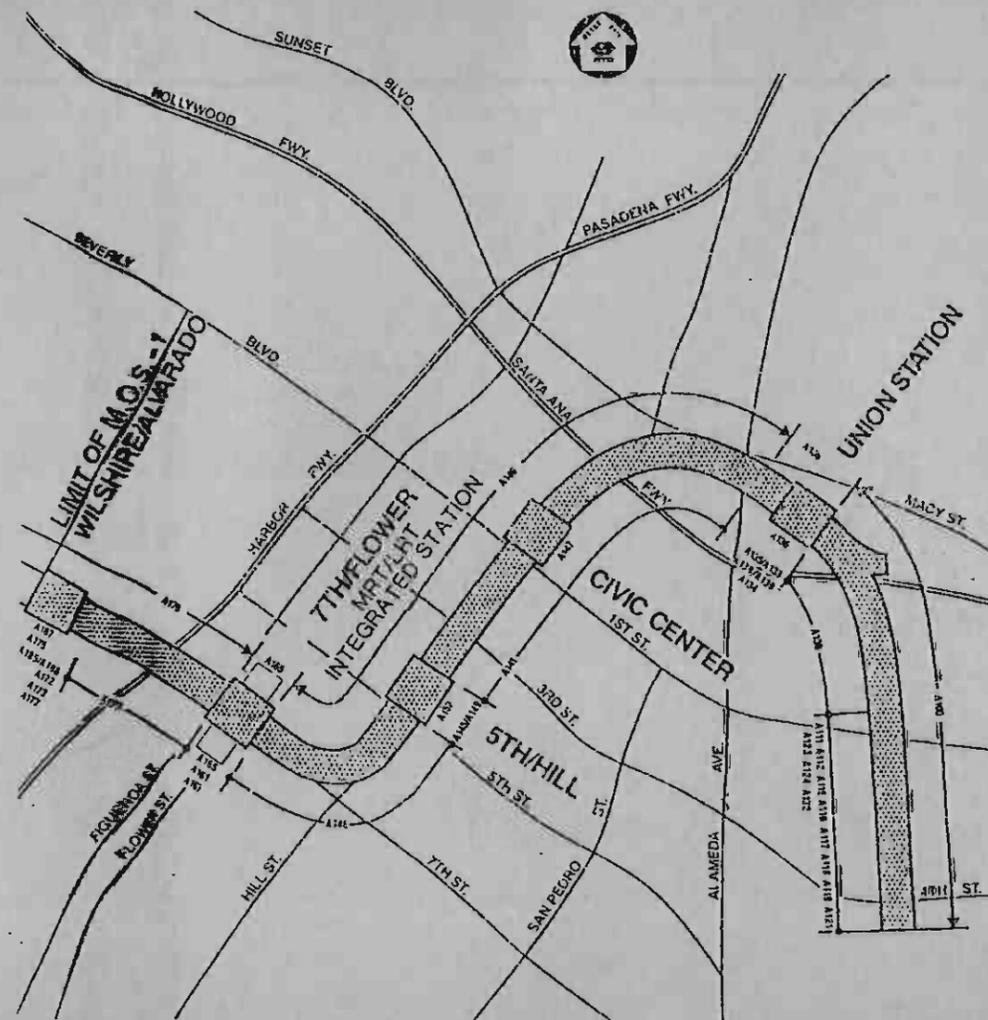
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VII. COMMUNICATIONS SYSTEMS

CONTRACT DRAWINGS

CONTRACT A640

APRIL 1987

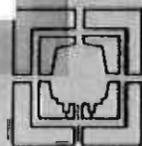


The preparation of this document has been financed in part through a grant from the U.S. Department of Transportation, Urban Mass Transportation Administration, under the Urban Mass Transportation Act of 1964, as amended, the State of California, and the Los Angeles County Transportation Commission.

SPEC. COLL.

OVERSIZE

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GENERAL CONSULTANT:
METRO RAIL TRANSIT CONSULTANTS
DMJM/PBQD/KE/HWA

243 6 4517

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT

LOS ANGELES CENTRAL BUSINESS DISTRICT TO NORTH HOLLYWOOD



VII. COMMUNICATIONS SYSTEMS CONTRACT DRAWINGS CONTRACT A640

APRIL 1987

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GENERAL CONSULTANT:
METRO RAIL TRANSIT CONSULTANTS
DMIM/PBQD/KE/HWA

APPROVED: Edward Cheliff DATE: 4/10/87
PROJECT DIRECTOR



RTD
SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

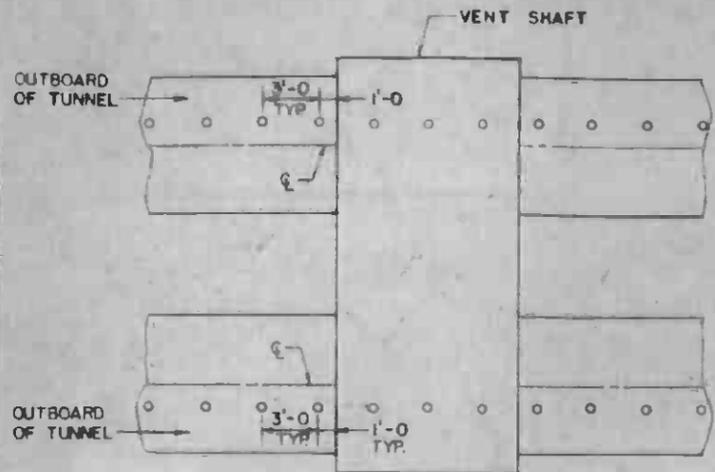
APPROVED: William J. Rubin DATE: 4-10-87
ASSISTANT GENERAL MANAGER
TRANSIT SYSTEMS DEVELOPMENT

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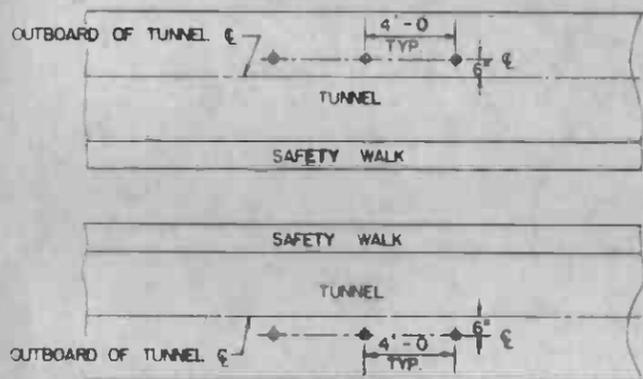
INDEX OF DRAWINGS

SHEET NO	DRAWING NO.	DRAWING TITLE / DESCRIPTION	SHEET NO	DRAWING NO.	DRAWING TITLE / DESCRIPTION	SHEET NO.	DRAWING NO.	DRAWING TITLE / DESCRIPTION
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2	N-002	INDEX SHEET 2	36	N-083	FACILITIES ELECTRICAL INTERFACES, PASSENGER VEHICLE	49	N-096	TRACTION POWER INTERFACE, YARD SUBSTATION
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			46	N-284	TRACTION POWER INTERFACE, DISCONNECT SWITCHES			
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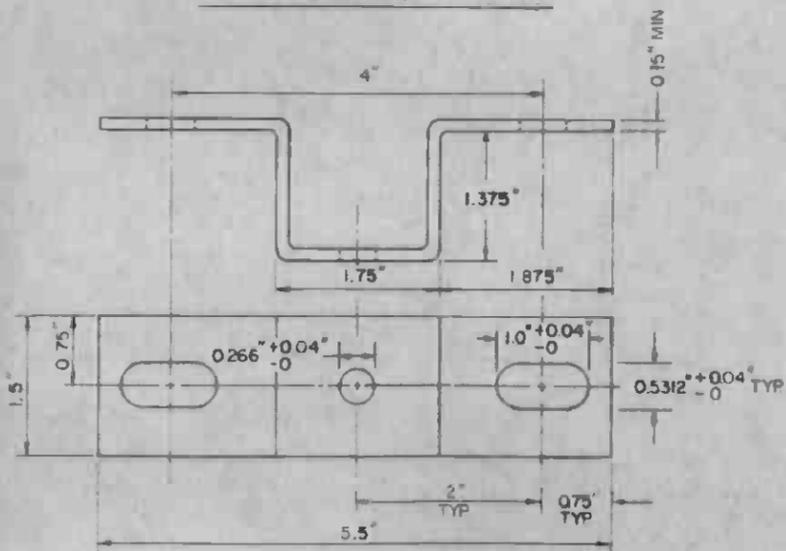
<p>THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.</p>	<p>DESIGNED BY L.A. Hanson</p> <p>CHECKED BY C. Barak</p> <p>IN CHARGE AMBurgers</p> <p>DATE</p>		<p>SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT</p> <p>METRO RAIL PROJECT</p> <p>DMJM/PBQD KE/HWA GENERAL CONSULTANTS</p> <p>APPROVED <i>[Signature]</i></p>	<p>LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS CONTRACT DRAWING INDEX SHEET</p>	<p>CONTRACT NO A640</p> <p>DRAWING NO N-001</p> <p>SCALE NO SCALE</p> <p>SHEET NO 1</p>
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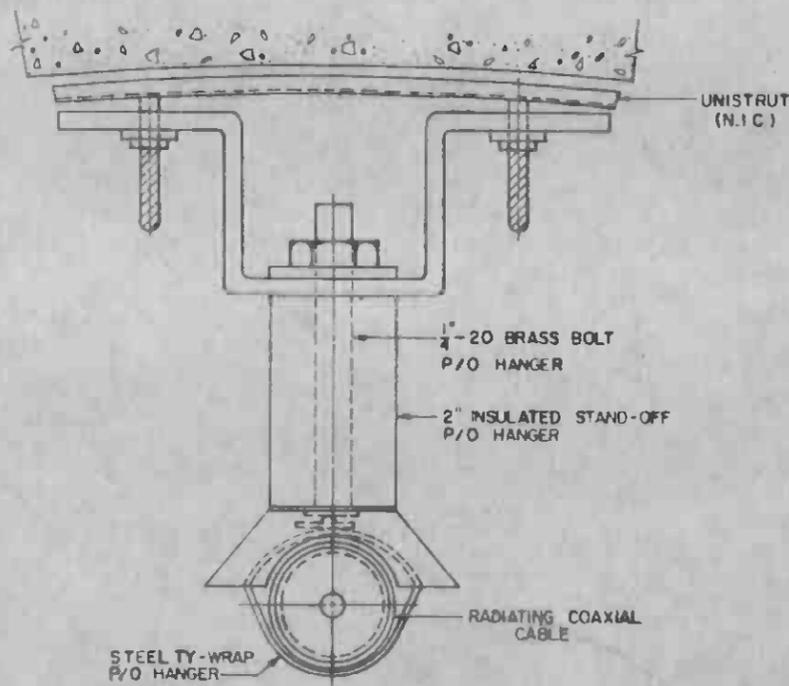
VENT SHAFT EMBEDDED LOCATIONS



TUNNEL EMBEDDED LOCATION



COAXIAL ANTENNA MOUNT BRACKET DETAIL



DISTRIBUTED ANTENNA MOUNTING DETAIL

- NOTES**
- BRACKETS, HANGERS AND COAXIAL CABLE SUPPLIED AND INSTALLED BY COMMUNICATIONS CONTRACT.
 - HANGER ANDREW TYPE 43042 OR EQUIV.



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DESIGNED BY
 DRAWN BY
 CHECKED BY
 IN CHARGE
 DATE 10 FEB 1984



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
 METRO RAIL PROJECT



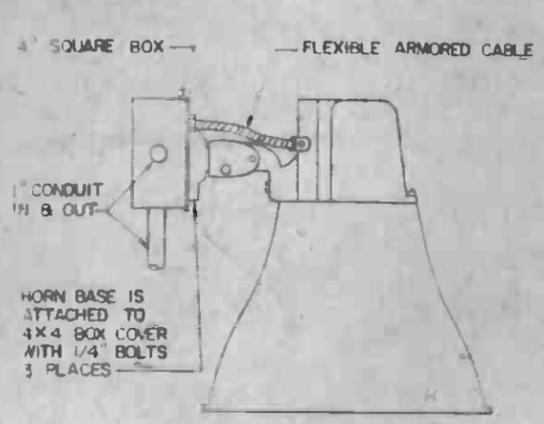
DMJM/PBOD/KE/HWA
 GENERAL CONSULTANTS
 APPROVED

LA CBD TO NORTH HOLLYWOOD
 COMMUNICATIONS
 STANDARD
 RADIO DISTRIBUTED ANTENNA MOUNTING DETAILS

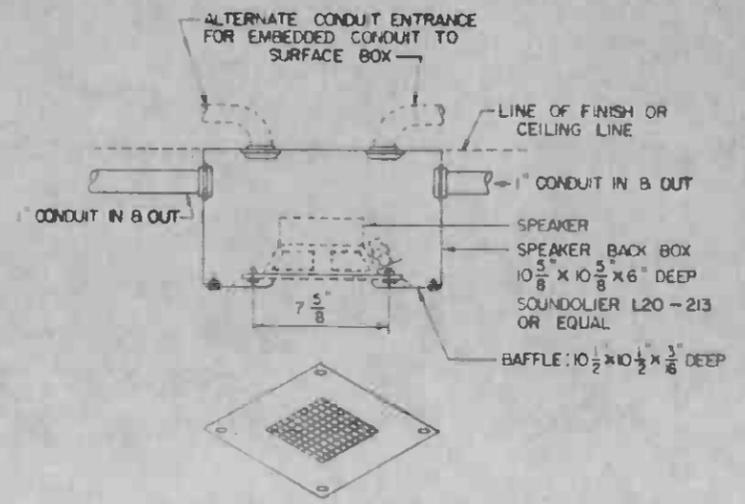
CONTRACT NO
A640
 DRAWING NO
NS-001
 SCALE
 NO SCALE
 SHEET NO
3

REV	DATE	BY	CHK	APP	DESCRIPTION

REV	DATE	BY	CHK	APP	DESCRIPTION

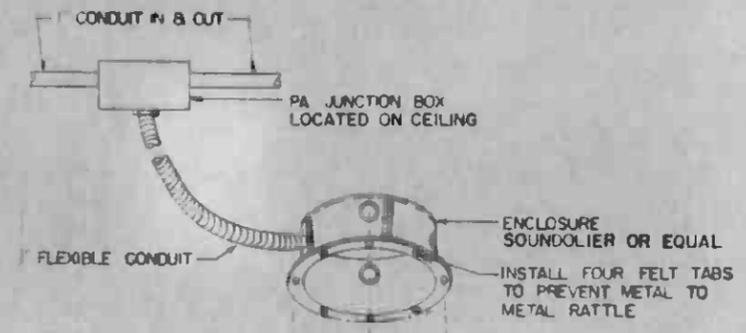


HORN MOUNT



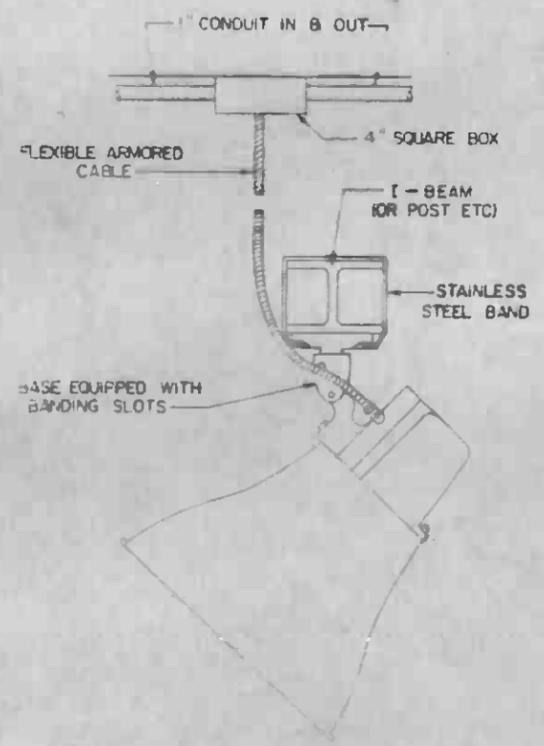
SURFACE MOUNT SQUARE BAFFLE

(SEE NOTES)

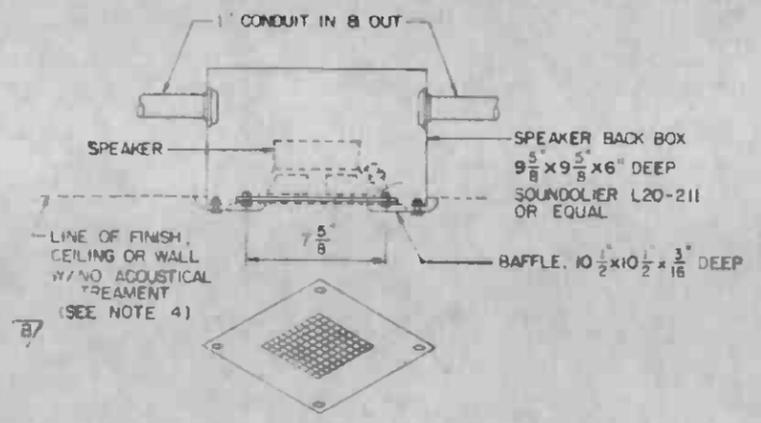


SUSPENDED CEILING MOUNT

INSTALL MOUNTING SCREWS THROUGH GRILLE MOUNTING HOLES INTO MOUNTING HOLES ON THE ENCLOSURE



ALTERNATE HORN MOUNT



RECESSED MOUNT SQUARE BAFFLE

(SEE NOTES)

NOTES:

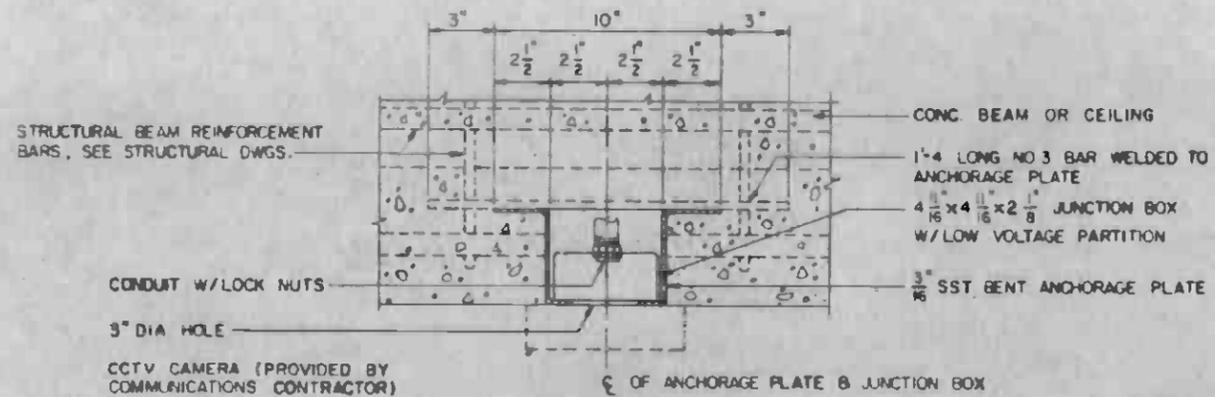
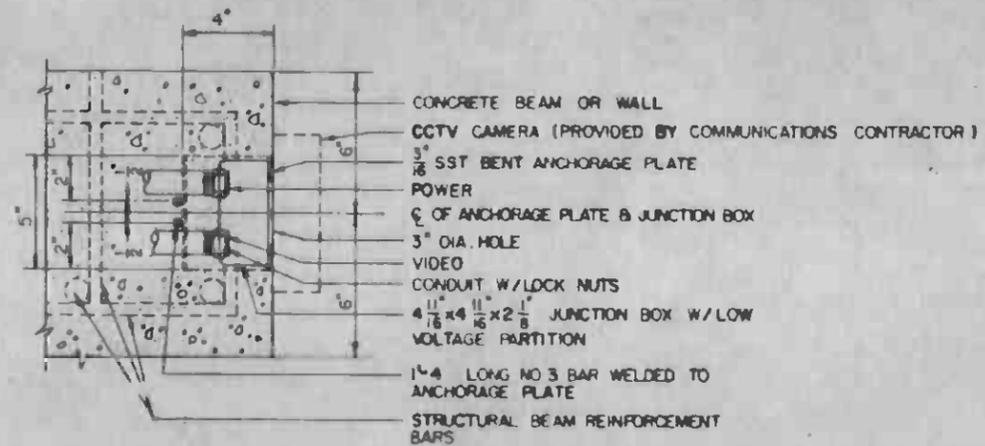
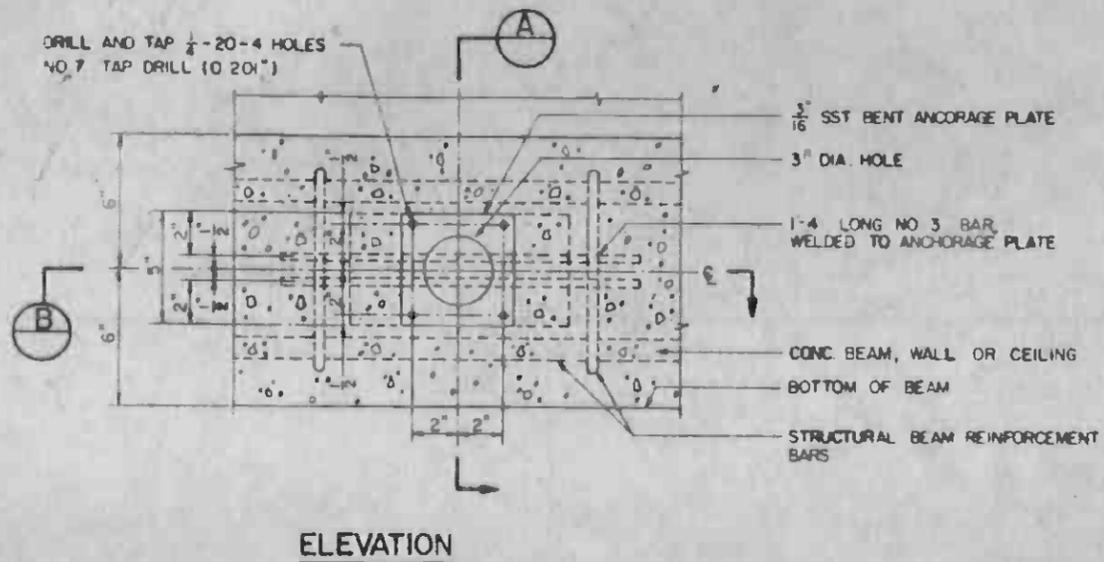
1. SPEAKERS, BAFFLES AND WIRING FURNISHED AND INSTALLED BY COMMUNICATIONS CONTRACTOR.
2. BACKBOXES, JUNCTION BOXES AND CONDUIT FURNISHED AND INSTALLED BY THE DISTRICT.

EMBEDMENT DEPTH WILL DEPEND ON TYPE OF ACOUSTICAL TREATMENT TO BE APPLIED TO CEILING. STATION CONTRACTOR TO CONTACT THE DISTRICT FOR GUIDANCE.

(BY COMMUNICATIONS CONTRACTOR)



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REV	DATE	BY	APP	DESCRIPTION	REV	DATE	BY	APP	DESCRIPTION	SUBMITTED BY <i>[Signature]</i> APPROVED BY <i>[Signature]</i>	
				PROPOSAL ISSUE						DMJM/PBOD/KE HWA GENERAL CONSULTANTS	



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4-81 RMA PROPOSAL ISSUE				SUBMITTED <i>[Signature]</i> APPROVED <i>[Signature]</i>		DMJM/PBOD/KE/HWA GENERAL CONSULTANTS		REV. 0		REV. 0	
REV	DATE	BY	SUB	APP	DESCRIPTION	REV	DATE	BY	SUB	APP	DESCRIPTION

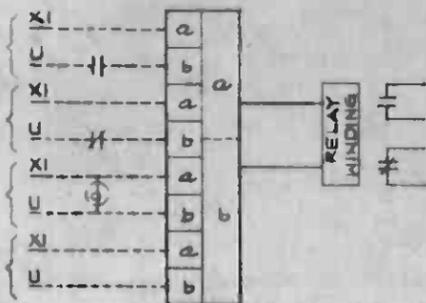


FIG. 1 (A THRU F)

FIG.	X1 VOLTS
A	12 Vdc
B	24 Vdc
C	48 Vdc
D	120 Vac
E	240 Vac
F	FUTURE

NOTE:
RELAY FURNISHED BY CONTRACT
A 640

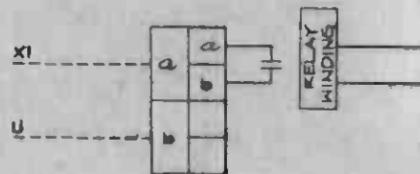


FIG. 2 (A THRU F)

FIG.	X1 VOLTS	a/b AMP RATING
A	12 Vac	
B	24 Vac	
C	48 Vac	
D	120 Vac	
E	120 Vac	
F	125 Vdc	

1.5 a (INDUCTIVE)

NOTE:
RELAY FURNISHED BY CONTRACT
A 640

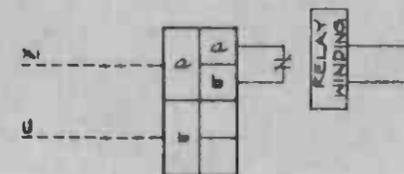


FIG. 3 (A THRU F)

FIG.	X1 VOLTS	a/b AMP RATING
A	12 Vdc	
B	24 Vdc	
C	48 Vdc	
D	120 Vac	
E	120 Vac	
F	FUTURE	

NOTE:
RELAY FURNISHED BY CONTRACT
A 640

TYPICAL INTERPOSING RELAY MONITORING CONNECTION

TYPICAL INTERPOSING RELAY SIGNALLING CONNECTION
NORMALLY OPEN CONTACT

TYPICAL INTERPOSING RELAY SIGNALLING CONNECTION
NORMALLY CLOSED CONTACT



FIG. 4 (A AND B)

FIG.	EXTERNAL CONTACTS
A	NORMALLY CLOSED
B	NORMALLY OPEN

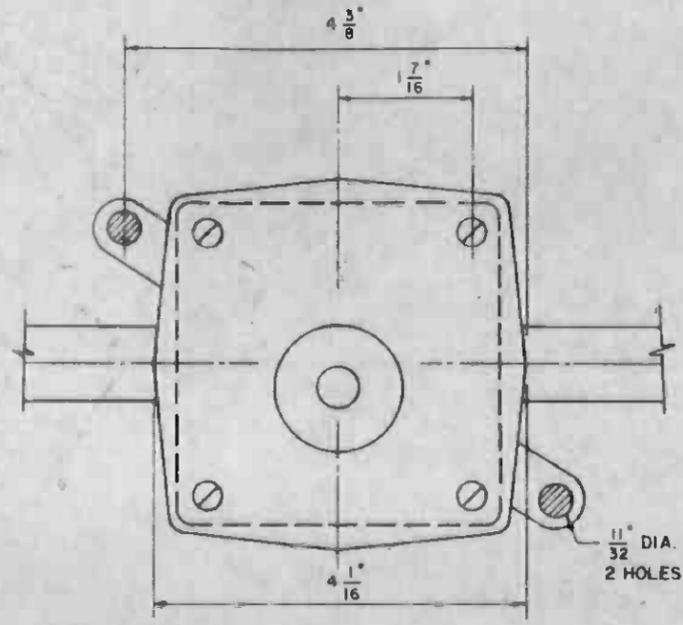
TYPICAL DRY CONTACT SIGNALLING
TOWARD COMMUNICATIONS (SCADA)



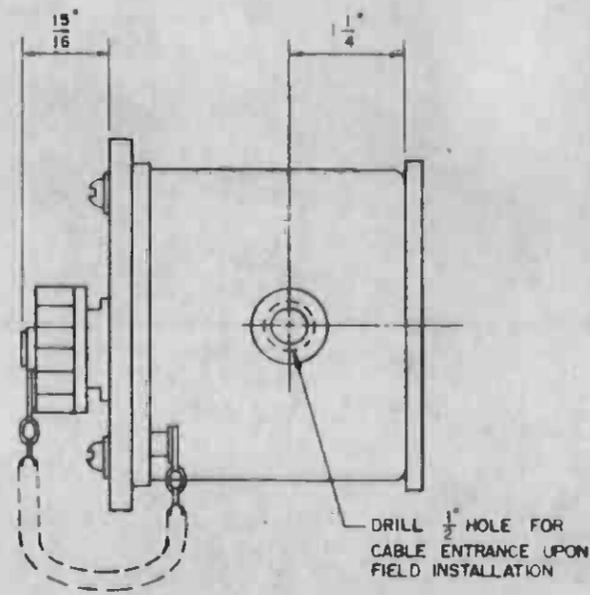
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>D. Blahut</i> DRAWN BY K. ILASZ CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 10 NOV 85	REGISTERED PROFESSIONAL ENGINEER No. 181188 ELECTRICAL STATE OF CALIFORNIA	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT SUBMITTED <i>[Signature]</i>	DMJM/PBOD/KE/HWA GENERAL CONSULTANTS APPROVED <i>[Signature]</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS STANDARD INTERPOSING RELAY INTERFACES	CONTRACT NO. A640 DRAWING NO. NS-007 SCALE NO SCALE SHEET NO. 6
REV. DATE BY SUB. APP. DESCRIPTION	REV. DATE BY SUB. APP. DESCRIPTION	PROPOSAL ISSUE					

NOTE:

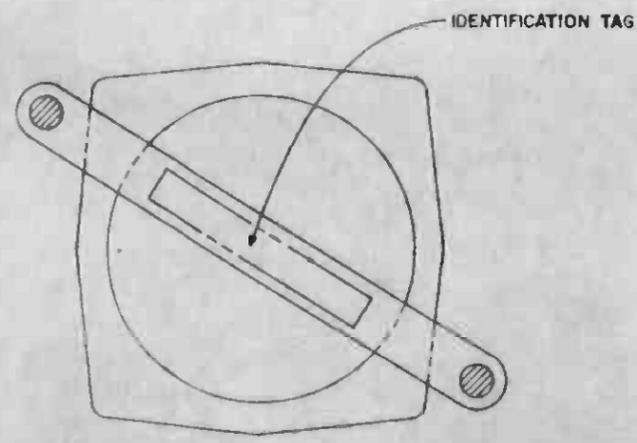
ACTUAL LOCATION OF HOLE IN SIDE OF JACK BOX TO BE DETERMINED IN THE FIELD BY EXISTING CONDITIONS.



JACK BOX W/COVER PLATE



SIDE VIEW



REAR VIEW



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1954, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY
MRTC
DRAWN BY
[Signature]
CHECKED BY
[Signature]
IN CHARGE
[Signature]
DATE
24 OCT 86



**SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT**



DMJM/PBOD/KE/HWA
GENERAL CONSULTANTS

APPROVED *[Signature]*

**LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
SOUND-POWERED FTTEL JACK BOX**

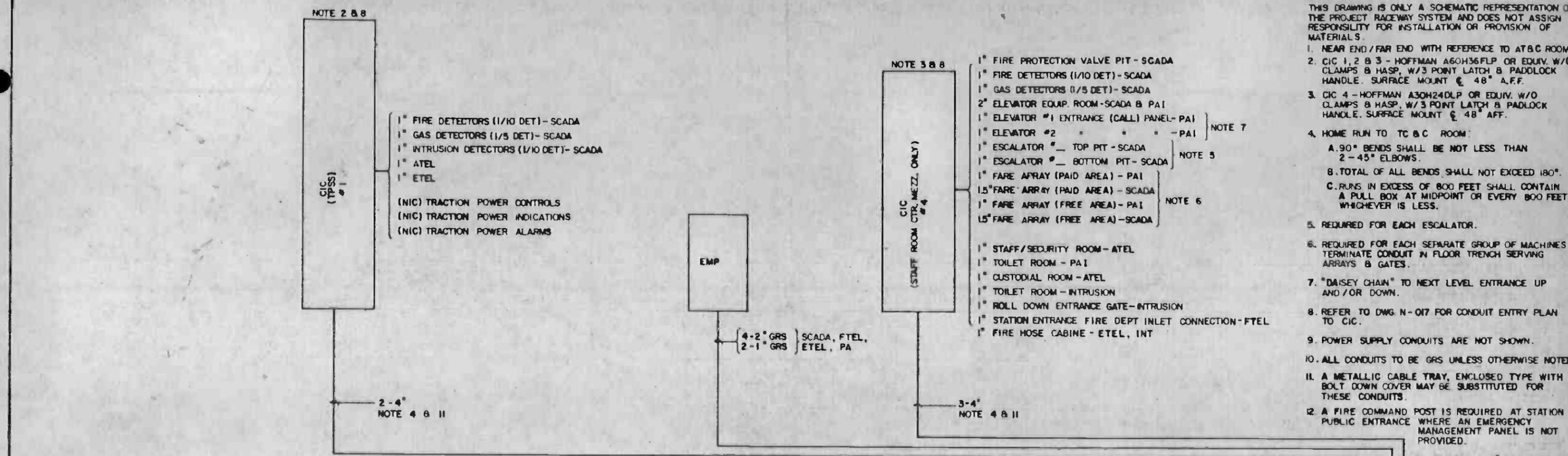
CONTRACT NO.	A64D	
DRAWING NO.	N-004	REV 0
SCALE	FULL SIZE	
SHEET NO.	7	

REV	DATE	BY	SUB	APP	DESCRIPTION
4681					PROPOSAL ISSUE

GENERAL:

THIS DRAWING IS ONLY A SCHEMATIC REPRESENTATION OF THE PROJECT RACEWAY SYSTEM AND DOES NOT ASSIGN RESPONSIBILITY FOR INSTALLATION OR PROVISION OF MATERIALS.

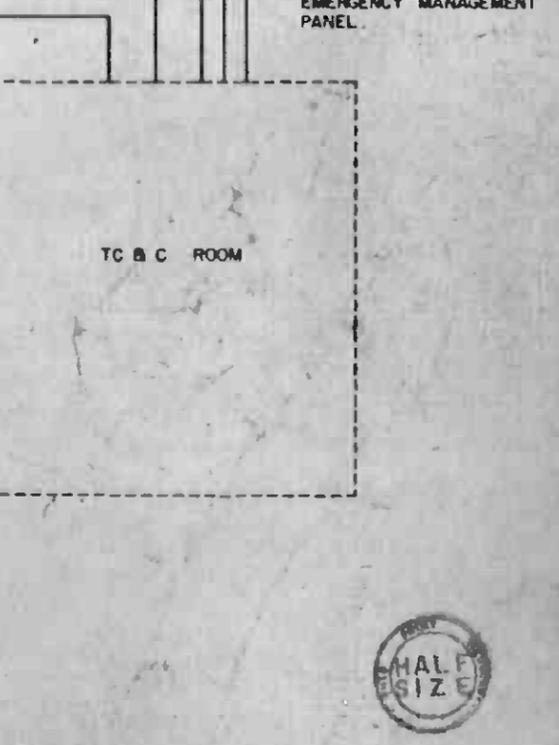
- NEAR END/FAR END WITH REFERENCE TO A/B/C ROOM.
- CIC 1, 2 & 3 - HOFFMAN A60H36FLP OR EQUIV. W/O CLAMPS & HASP, W/3 POINT LATCH & PADLOCK HANDLE. SURFACE MOUNT @ 48" A.F.F.
- CIC 4 - HOFFMAN A30H24DLP OR EQUIV. W/O CLAMPS & HASP, W/3 POINT LATCH & PADLOCK HANDLE. SURFACE MOUNT @ 48" AFF.
- HOME RUN TO TC & C ROOM:
 - 90° BENDS SHALL BE NOT LESS THAN 2-45° ELBOWS.
 - TOTAL OF ALL BENDS SHALL NOT EXCEED 180°.
 - RUNS IN EXCESS OF 800 FEET SHALL CONTAIN A PULL BOX AT MIDPOINT OR EVERY 800 FEET, WHICHEVER IS LESS.
- REQUIRED FOR EACH ESCALATOR.
- REQUIRED FOR EACH SEPARATE GROUP OF MACHINES. TERMINATE CONDUIT IN FLOOR TRENCH SERVING ARRAYS & GATES.
- "DAISEY CHAIN" TO NEXT LEVEL ENTRANCE UP AND/OR DOWN.
- REFER TO DWG N-017 FOR CONDUIT ENTRY PLAN TO CIC.
- POWER SUPPLY CONDUITS ARE NOT SHOWN.
- ALL CONDUITS TO BE GRS UNLESS OTHERWISE NOTED.
- A METALLIC CABLE TRAY, ENCLOSED TYPE WITH BOLT DOWN COVER MAY BE SUBSTITUTED FOR THESE CONDUITS.
- A FIRE COMMAND POST IS REQUIRED AT STATION PUBLIC ENTRANCE WHERE AN EMERGENCY MANAGEMENT PANEL IS NOT PROVIDED.



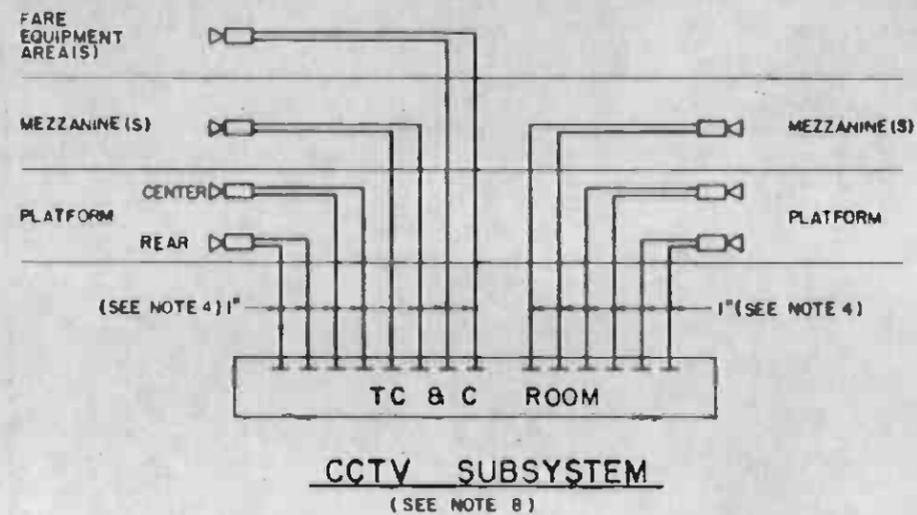
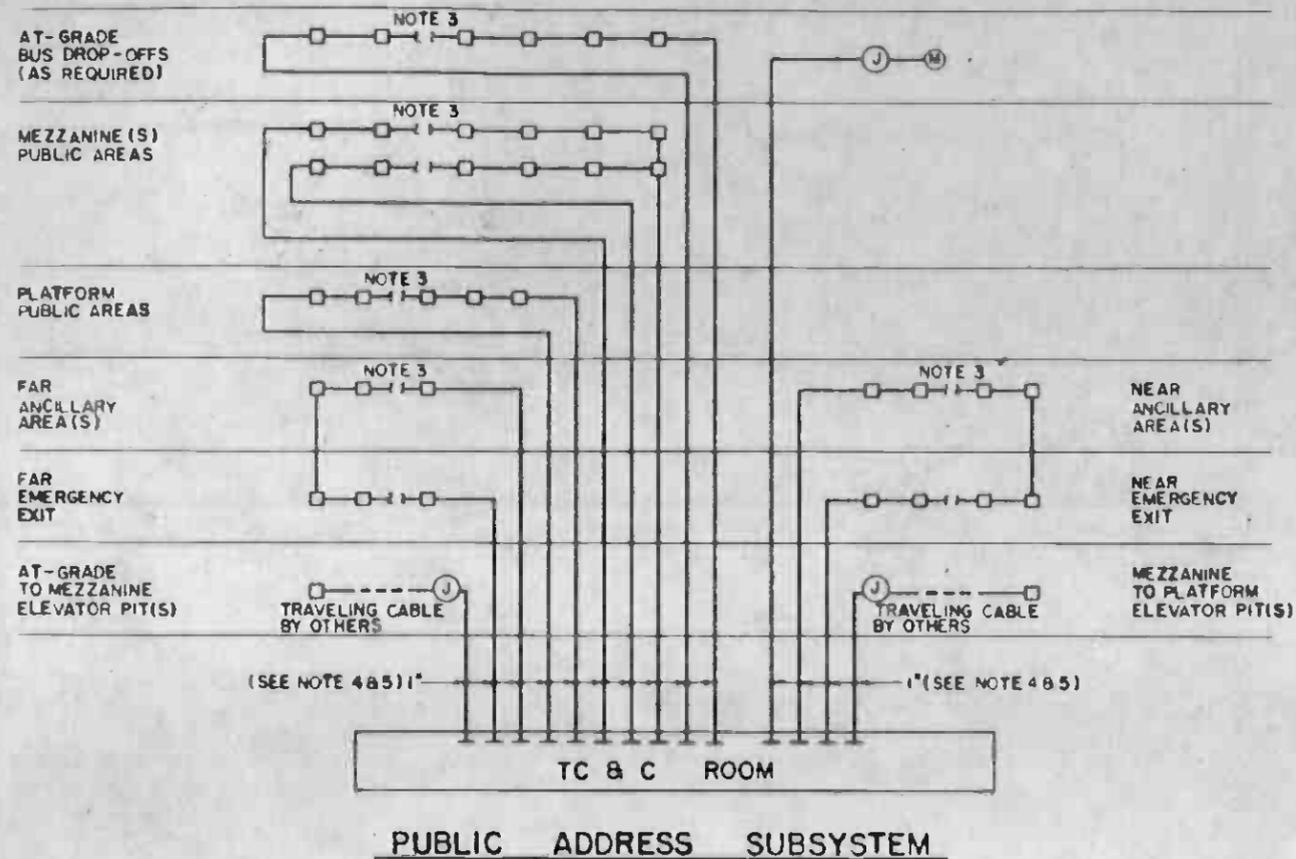
- ALL STATIONS**
- 1" FIRE PROTECTION VALVE PIT - SCADA
 - 1" MECH. EQUIP. ROOM - ATEL
 - 2" MECH. EQUIP. ROOM - SCADA
 - 1" ELEC. EQUIP. ROOM - ATEL
 - 1" ELEC. EQUIP. ROOM - SCADA
 - 1" AUX POWER ROOM - ATEL
 - 2" AUX POWER ROOM - SCADA
 - 1" FIRE DETECTORS (1/10 DET) - SCADA
 - 1" GAS DETECTORS (1/5 DET) - SCADA
 - 1" INTRUSION DETECTORS (1/10 DET) - SCADA
 - 1" SPRINKLER VALVE ROOM - SCADA
 - 1" SPRINKLER VALVE ROOM - FTTEL
 - 1" CHILLER ROOM - ATEL
 - 1" CHILLER ROOM - SCADA
 - 1" EMERGENCY EQUIP. ROOM - ETEL
 - 1" BATTERY ROOM - SCADA
 - 1" CUSTODIAL ROOM - ATEL
 - 1" FIRE HOSE CAB. (MEZZ.) - ETEL & INT
 - 1" FIRE HOSE CAB. (CTR. PLAT.) - ETEL & INT
 - 1" FIRE HOSE CAB. (END PLAT.) - ETEL & INT
 - 1" EMERGENCY FAN ROOM - SCADA
 - 1.5" EMERGENCY TRIP STATION (PLAT. END INBOUND) - ETEL, FTTEL, ETS
 - 1.5" EMERGENCY TRIP STATION (PLAT. END OUTBOUND) - ETEL, FTTEL, ETS
 - 1" SUMP PUMP ROOM - SCADA

- END MEZZ. STATIONS**
- 1" ELEVATOR PIT - PAI, MTEL
 - 2" ELEVATOR EQUIP. ROOM - SCADA
 - 1" ELEVATOR #1 CALL PANEL - PAI
 - 1" ELEVATOR #2 CALL PANEL - PAI
 - 1" ESCALATOR # TOP PIT - SCADA
 - 1" ESCALATOR # BOTTOM PIT - SCADA
 - 1" FARE ARRAY (PAID AREA) - PAI
 - 1.5" FARE ARRAY (PAID AREA) - SCADA
 - 1" FARE ARRAY (FREE AREA) - PAI
 - 1.5" FARE ARRAY (FREE AREA) - SCADA
 - 3-2" EMERGENCY MANAGEMENT PANEL - SCADA, FTTEL & ETEL
 - 1" STAFF / SECURITY ROOM - ATEL
 - 1" TOILET ROOM - PAI
 - 1" TOILET ROOM - INTRUSION
 - 1" ROLL DOWN ENTRANCE GATE - INTRUSION
 - 1" STATION ENTRANCE FIRE DEPT INLET CONNECTION - FTTEL
 - 2-1" FIRE COMMAND POST - NOTE 12

- END MEZZ. STATIONS**
- 1" ELEVATOR PIT - MTEL
 - 2" ELEVATOR EQUIP. ROOM - SCADA (AS REQ'D - INCLUDING FUTURE)
 - 1" ELEVATOR # CALL PANEL - CATTEL (AS REQ'D - INCLUDING FUTURE) - NOTE 7
 - 1" ESCALATOR # TOP PIT - SCADA
 - 1" ESCALATOR # BOTTOM PIT - SCADA
 - 1" FARE ARRAY (PAID AREA) - PAI
 - 1.5" FARE ARRAY (PAID AREA) - SCADA
 - 1" FARE ARRAY (FREE AREA) - PAI
 - 1.5" FARE ARRAY (FREE AREA) - SCADA
 - 1" ROLL DOWN ENTRANCE GATE - INTRUSION
 - 1" STATION ENTRANCE FIRE DEPT INLET CONNECTION
 - 3-2" EMERGENCY MANAGEMENT PANEL - SCADA, FTTEL & ETEL
 - 2-1" FIRE COMMAND POST - NOTE 12



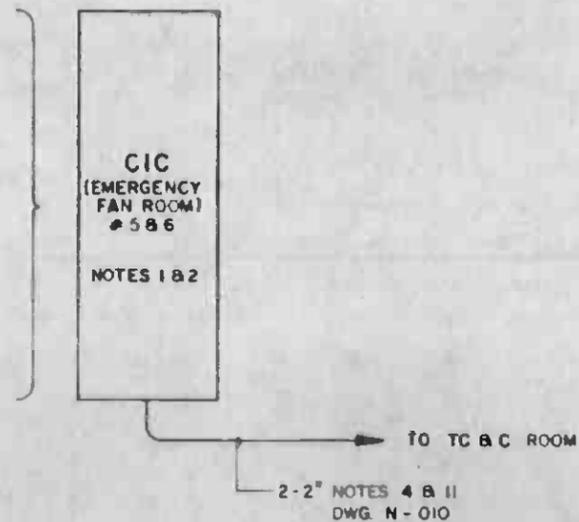
<p>THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA</p>				<p>DESIGNED BY <i>[Signature]</i> DRAWN BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 17 FEB 1984</p>		<p>REGISTERED PROFESSIONAL ENGINEER ELECTRICAL STATE OF CALIFORNIA No. 68118 Exp. 3-31-84</p>		<p>SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT</p> <p>DMJM/PSGD/KE/MWA GENERAL CONSULTANTS</p>		<p>LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS STATION CONDUIT REQUIREMENTS SHEET 1 OF 3</p>		<p>CONTRACT NO. A 640 DRAWING NO. N-010 SCALE NO SCALE SHEET NO. 8</p>	
REV	DATE	BY	APP.	DESCRIPTION	REV	DATE	BY	APP.	DESCRIPTION				
				PROPOSAL ISSUE									



NOTES:

- CIC#5 - HOFFMAN A30H24DLP OR EQUIVALENT W/O CLAMPS & HASP, W/ 3 POINT LATCH & PADLOCK HANDLE. SURFACE MOUNT & 48" AFF. LOCATED IN EMERGENCY FAN ROOM AT FAR END OF CROSSOVER FROM PLATFORM END.
- CIC#6 - SAME AS CIC#5. LOCATE IN EMERGENCY FAN ROOM AT FAR END OF CROSSOVER FROM PLATFORM END WHEN STATION HAS CROSSOVER AT BOTH ENDS OF PLATFORM.
- THE MAXIMUM NUMBER OF SPEAKERS TO BE "DAISEY-CHAINED" PER SET OF CONDUITS IS 16.
- THESE CONDUITS ARE "HOME RUNS" TO THE TC & C ROOM, NOT TO THE CIC.
- THESE CONDUITS SHOULD STUB UP 18" ABOVE THE FLOOR OR STUB DOWN 6" FROM THE CEILING IN A SEPARATE AREA AWAY FROM THE CONDUITS FROM THE CIC'S.
- ALL CONDUITS TO BE GRS UNLESS OTHERWISE NOTED.
- REFER TO STATION MAKE-UPS FOR DETAILED LOCATION OF CAMERAS.

- 1" EMERGENCY FAN ROOM-ATEL
- 1" EMERGENCY FAN ROOM-SCADA
- 1" FIRE DETECTORS(V₁₀)-SCADA
- 1" GAS DETECTORS(V₅)-SCADA
- 1" ELEC. EQUIP. ROOM-ATEL
- 1" ELEC. EQUIP. ROOM-SCADA



LEGENDS:

- CCTV CAMERA
- PA SPEAKER
- ATC & C AUTOMATIC TRAIN CONTROL AND COMMUNICATIONS
- CIC COMMUNICATIONS INTERFACE CABINET
- JUNCTION BOX
- MICROPHONE



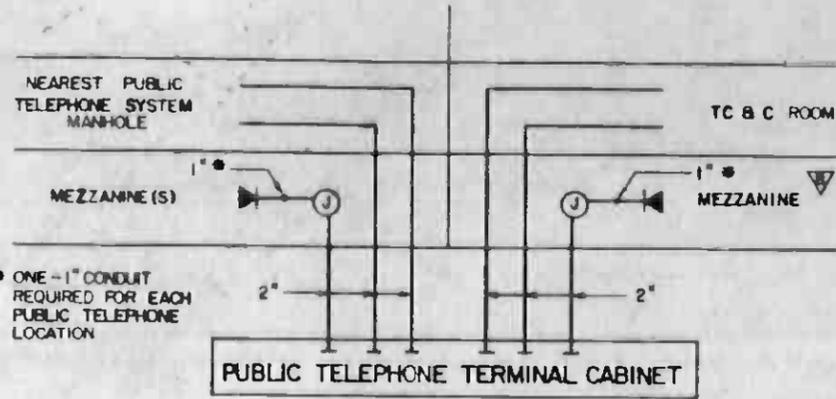
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IS PART OF THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY <i>[Signature]</i> DRAWN BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i> DATE 17 FEB 1984		REGISTERED PROFESSIONAL ENGINEER No. ESE1000 STATE OF CALIFORNIA		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT				LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS STATION CONDUIT REQUIREMENTS		CONTRACT NO. A640	
PROPOSAL ISSUE				SUBMITTED <i>[Signature]</i>		APPROVED <i>[Signature]</i>		DMJM/PBOD/KE/HWA GENERAL CONSULTANTS		DRAWING NO. N - 011		REV. 0			
SCALE NO SCALE				SHEET 2 OF 3				SHEET NO. 9							

NOTES:

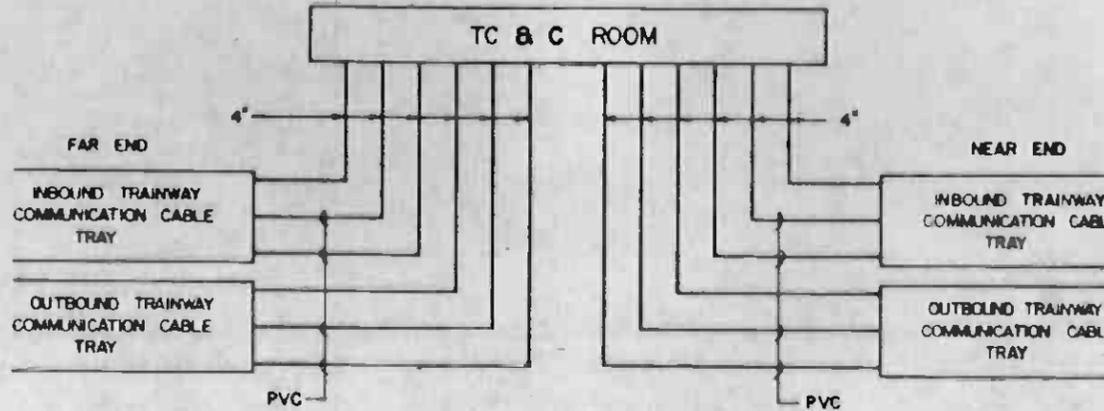
1. ALL CONDUITS TO BE GALVANIZED RIGID STEEL UNLESS OTHERWISE NOTED.
2. ROUTE TO NEAREST POINT OF ACCESS TO TRAINWAY AND CAP.
3. USE 2" CONDUIT OR 2" SLEEVES AS APPLICABLE.
4. ROUTING TO PLAT AND MEZZ TO BE COORDINATED WITH THE DISTRICT.

LEGENDS:

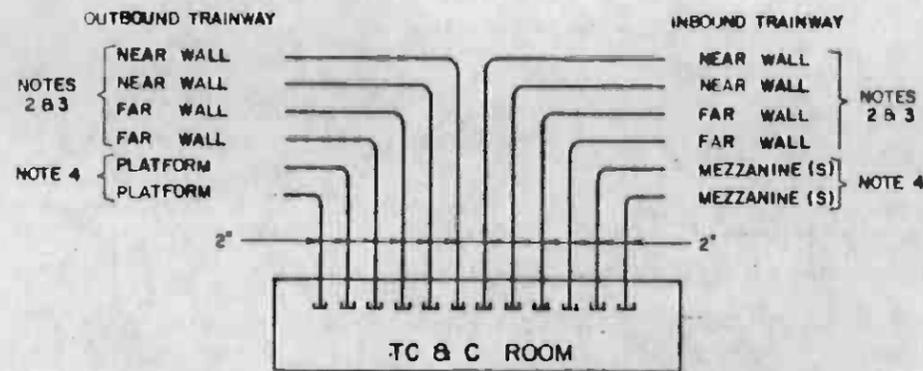
- ☐ PUBLIC TELEPHONE
- ⊙ JUNCTION BOX
- TC & C TRAIN CONTROL AND COMMUNICATIONS



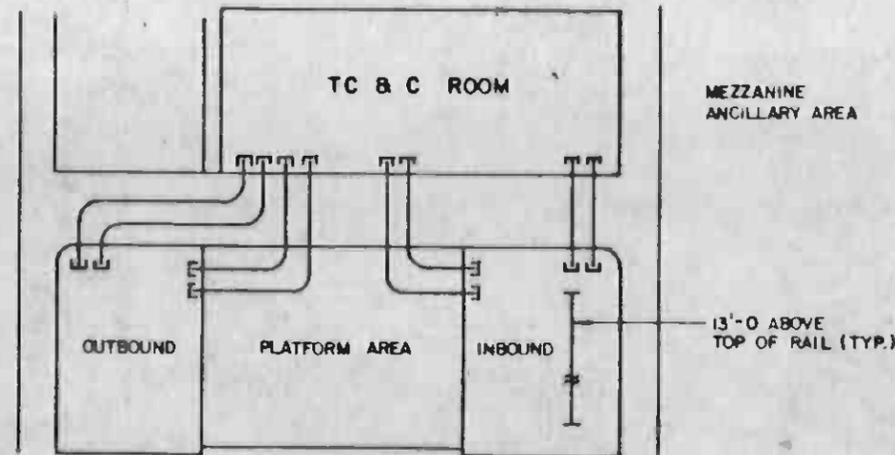
PAY (PUBLIC) TELEPHONE



CABLE TRANSMISSION SUBSYSTEM



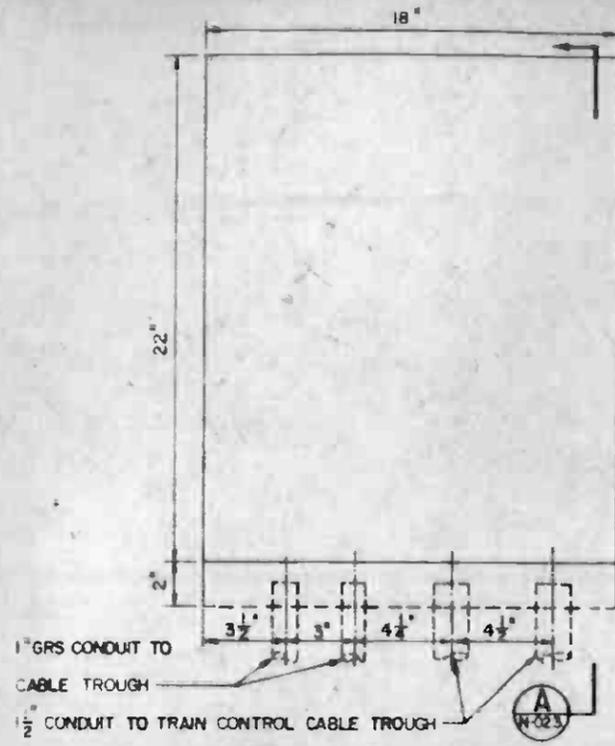
RADIO SUBSYSTEM



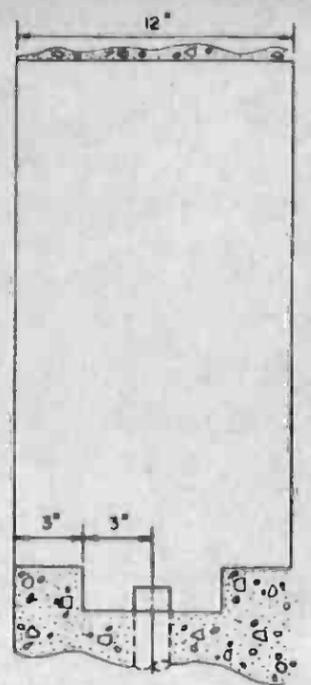
TYPICAL RADIO CONDUIT LOCATIONS
NOTES 2 & 3



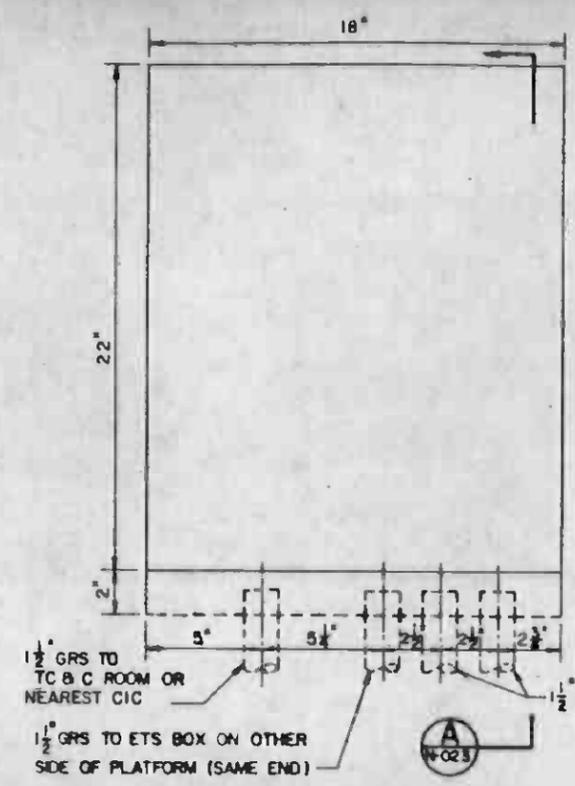
				THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY <i>C. J. Miller</i> DRAWN BY <i>Robert J. Miller</i> CHECKED BY <i>Robert J. Miller</i> IN CHARGE <i>Robert J. Miller</i> DATE 17 FEB 1984		REGISTERED PROFESSIONAL ELECTRICAL ENGINEER No. 891188 No. 1-30-84 STATE OF CALIFORNIA		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 		DLJM/PBGD/KE/MWA GENERAL CONTRACTORS APPROVED <i>DLJ</i>		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS STATION CONDUIT REQUIREMENTS SHEET 3 OF 3		CONTRACT NO. A640 DRAWING NO. N-012 SCALE NO SCALE SHEET NO. 10	
REV.	DATE	BY	SUB.	APP.	DESCRIPTION	REV.	DATE	BY	SUB.	APP.	DESCRIPTION								
					PROPOSAL ISSUE														



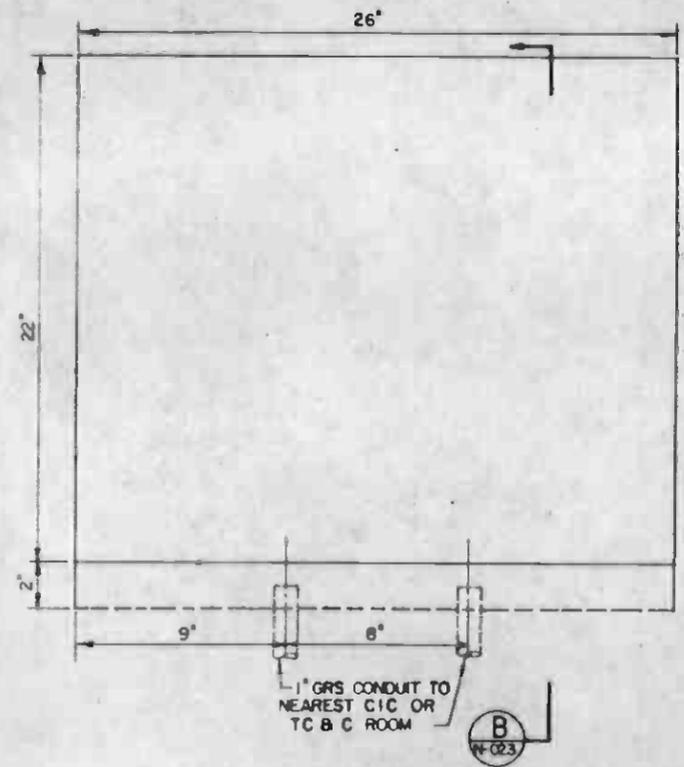
BLOCK OUT FOR BLS TUNNEL ENTRANCE AT PORTAL



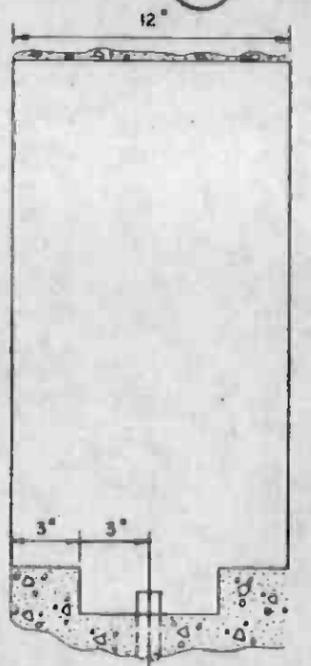
SECTION A (SIMILAR)



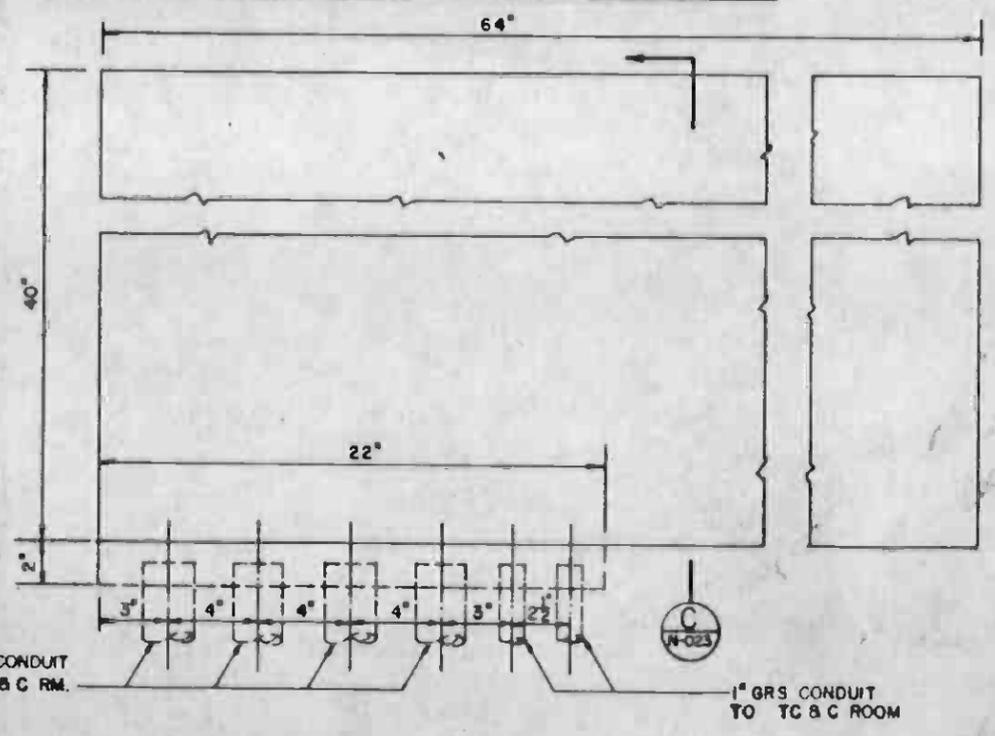
BLOCK OUT FOR BLS AT END OF STATION PLATFORM



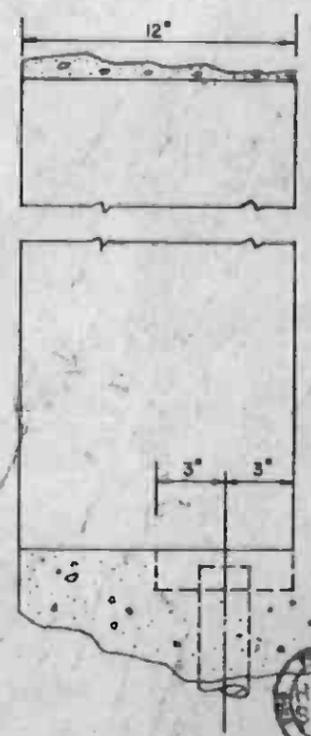
COMMAND POST AT STATION



SECTION B



EMERGENCY MANAGEMENT PANEL

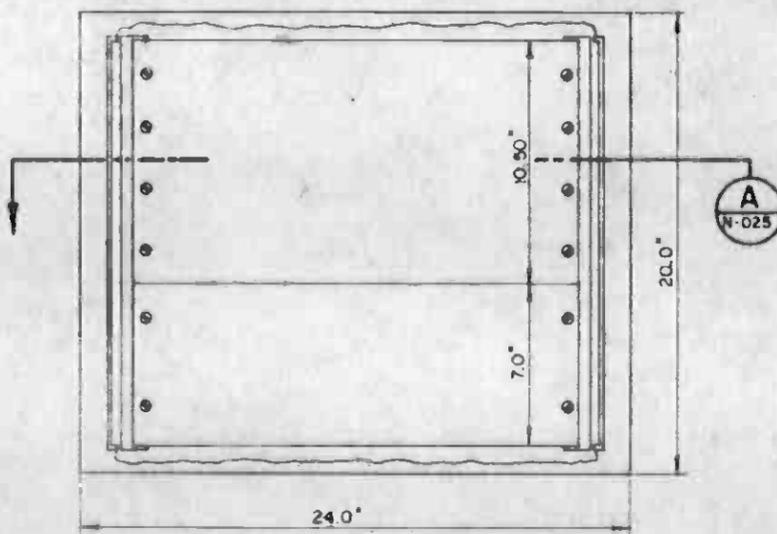


SECTION C

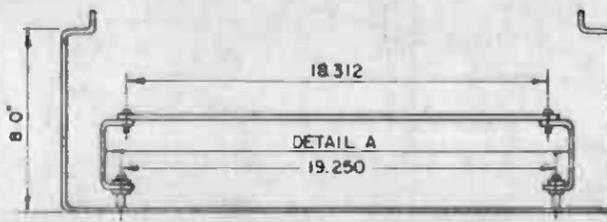
- NOTES:**
1. BLOCK-OUT SIZES APPLICABLE WHEN SURFACE MOUNTING IS NOT POSSIBLE DUE TO PERSONNEL CIRCULATION CLEARANCE BOXES MUST BE ENCASED TO PRESERVE THE WALL FIRE RATING.
 2. WHERE SURFACE MOUNTING CLEARANCE EXISTS, PROVIDE CONDUITS SPACED AS SHOWN. STUB UP 6" FROM WALL AND 18" ABOVE FINISH FLOOR OR 6" FROM WALL AND 18" DOWN FROM CEILING.
 3. CONDUITS TO BE THREADED, CAPPED, TAGGED & PULL-WIRE INSTALLED.
 4. BLOCK OUTS SHALL BE CENTERED 54" ABOVE FINISHED FLOOR.

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY: <i>B. Staboly</i> DRAWN BY: <i>Acosta/Novak/rov</i> CHECKED BY: <i>Paul Seely</i> IN CHARGE: <i>M. Burgess</i> DATE: 14 JUL 86		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		CONTRACT NO. A640 DRAWING NO. N-023 SCALE: 1/4" = 1' - 0" SHEET NO. 13	
PROPOSAL ISSUE		SUBMITTED: <i>C. S. [Signature]</i>		APPROVED: <i>[Signature]</i>		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS BLS & COMMAND POST BLOCK OUT	

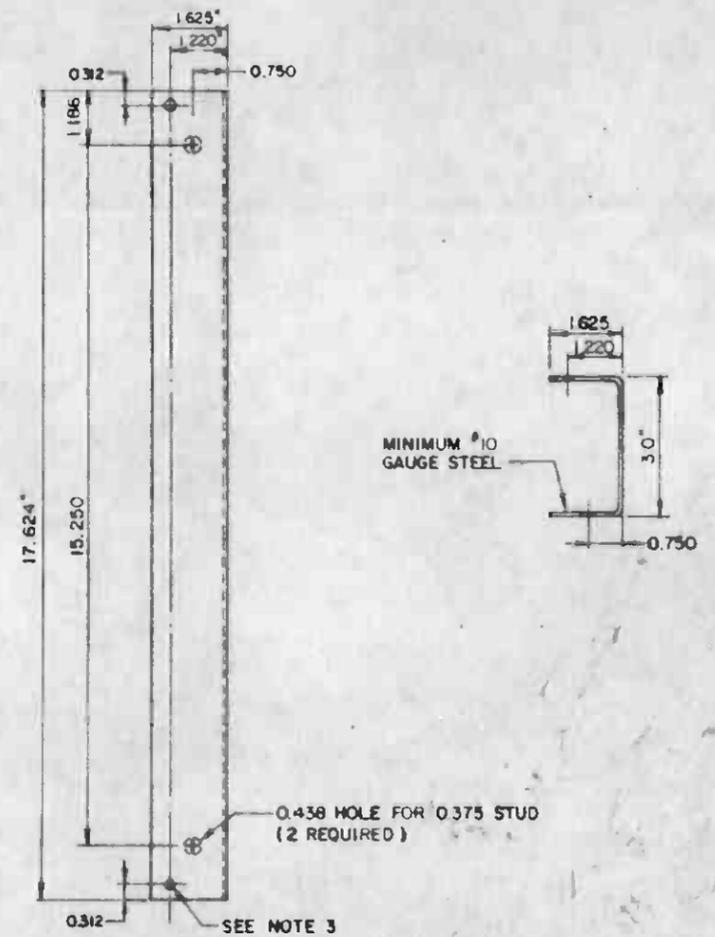
- NOTES:**
1. COMMAND POST BOX SHALL BE HOFFMAN A-20H 24 BLP OR EQUIVALENT.
 2. DRILL AND TAP FOR NO. 6-20 SCREWS USING EIA RS-310-B UNIVERSAL SPACING STANDARD 30 HOLES REQUIRED.



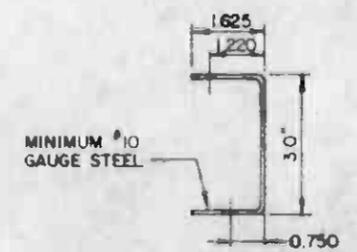
COMMAND POST BOX
SEE NOTE 1 1/2" = 1'-0"



VIEW A
1/4" = 1'-0"



DETAIL A
1/2" = 1'-0"



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY DRAWN BY CHECKED BY IN CHARGE DATE		REGISTERED PROFESSIONAL ENGINEER No. 281180 10-30-84 ELECTRICAL STATE OF CALIFORNIA		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT				LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS COMMAND POST DETAILS AND ASSEMBLY		CONTRACT NO. A640	
REV DATE BY DUB APP DESCRIPTION				10 SEP 84		SUBMITTED <i>C. M. Miller</i>		DMJM/PBOD/KE/MWA GENERAL CONSULTANTS APPROVED <i>Edward Schaff</i>		SHEET NO. 14		DRAWING NO. N-025 REV 0			
PROPOSAL ISSUE				10 SEP 84		APPROVED <i>Edward Schaff</i>		SCALE AS NOTED		SHEET NO. 14		CONTRACT NO. A640			

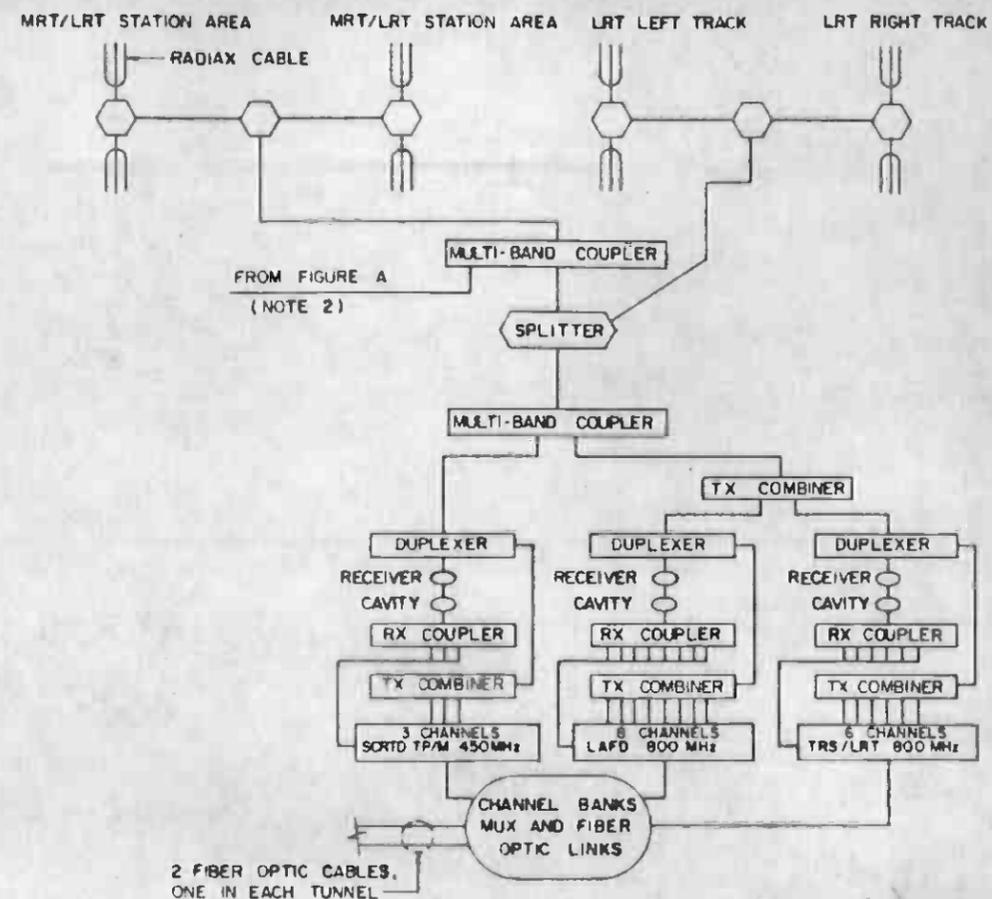
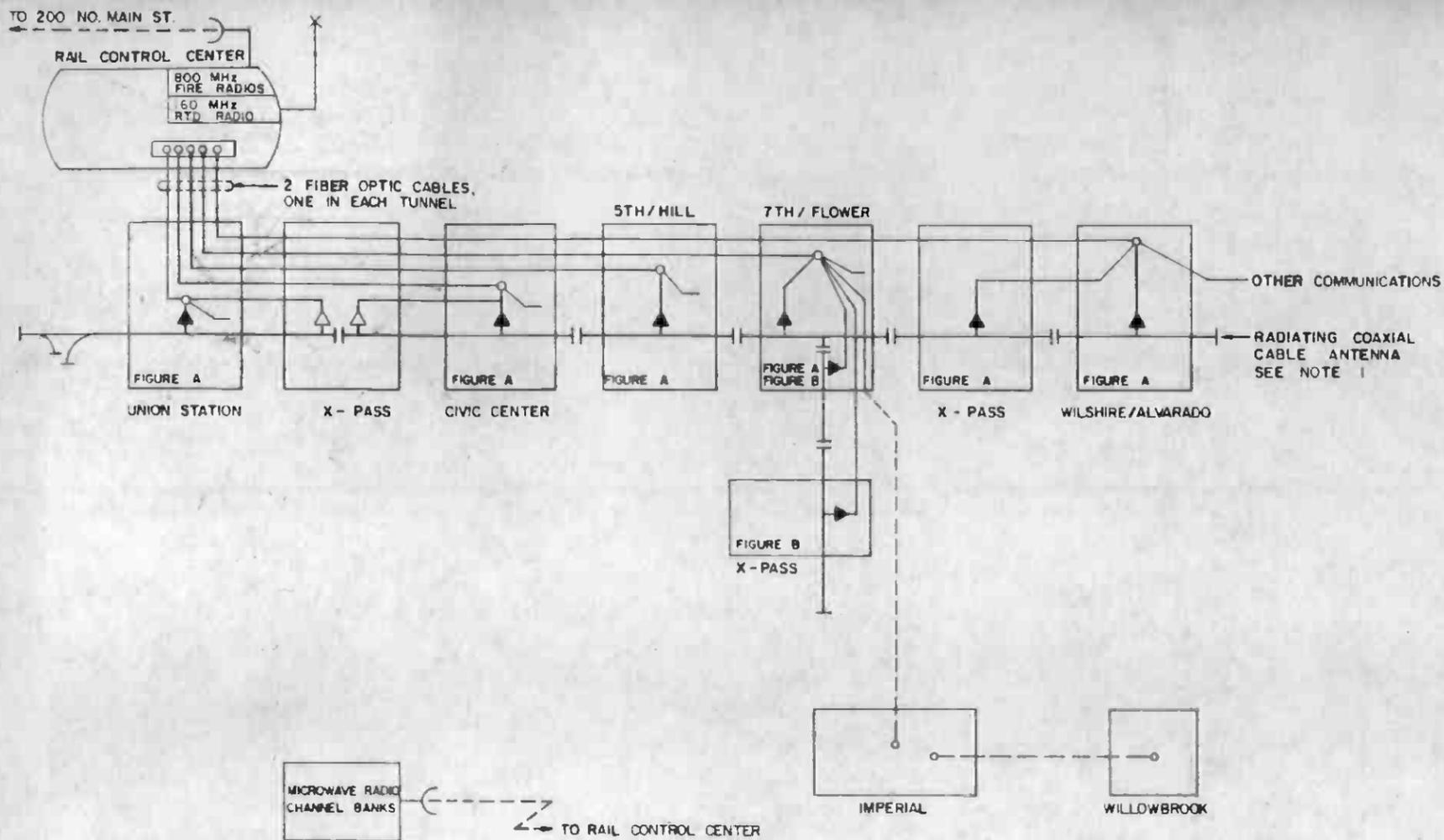


FIGURE B
TYPICAL LIGHT RAIL CONFIGURATION

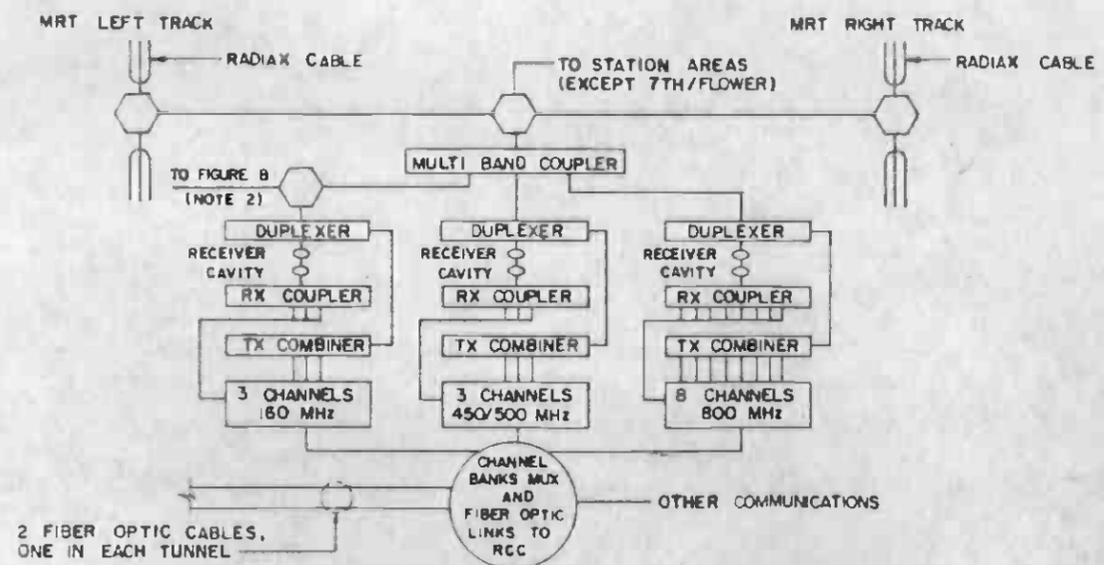


FIGURE A
TYPICAL MRT CONFIGURATION

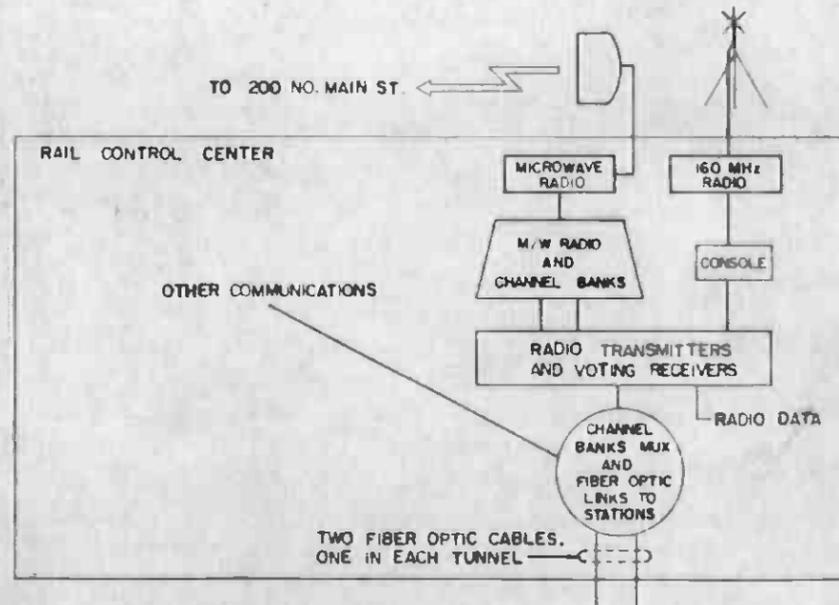


FIGURE C

- NOTES:**
- ONE RADIATING COAXIAL CABLE ANTENNA IN EACH TUNNEL.
 - SPLITTER TO LRT BASE STATION AT 7TH / FLOWER ONLY.
 - TRS / LRT 800 MHz BASE STATION RADIOS DFE.

- SYMBOLS:**
- POWER SPLITTER
 - COAXIAL CABLE MANUFACTURED TO FUNCTION AS AN ANTENNA THROUGH-OUT ITS LENGTH - (RADIAX RADIATING TRANSMISSION LINE)
 - BASE STATION
 - RECEIVER
 - NOT IN CONTRACT
 - OPTIONAL SEGMENTATION OF DISTRIBUTED ANTENNA

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY
B. Blahut
CHECKED BY
A. S. Sorensen
RECORDED BY
B. Blahut
DATE
5 FEB 87



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

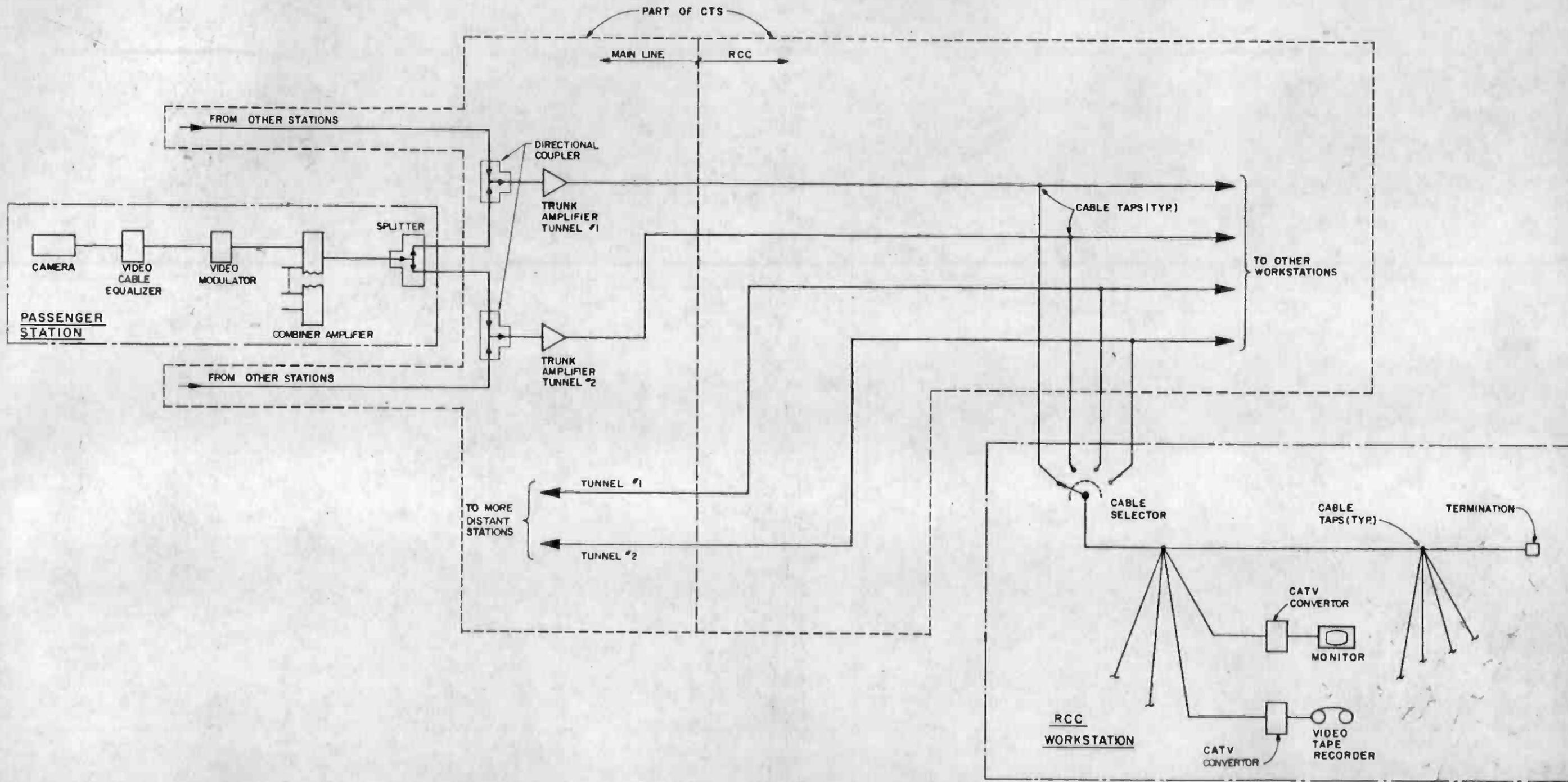


DMJM/PBOD/KE/HWA
GENERAL CONSULTANTS
APPROVED *Kenneth H. H. H.*

LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
RADIO SYSTEM BLOCK DIAGRAM

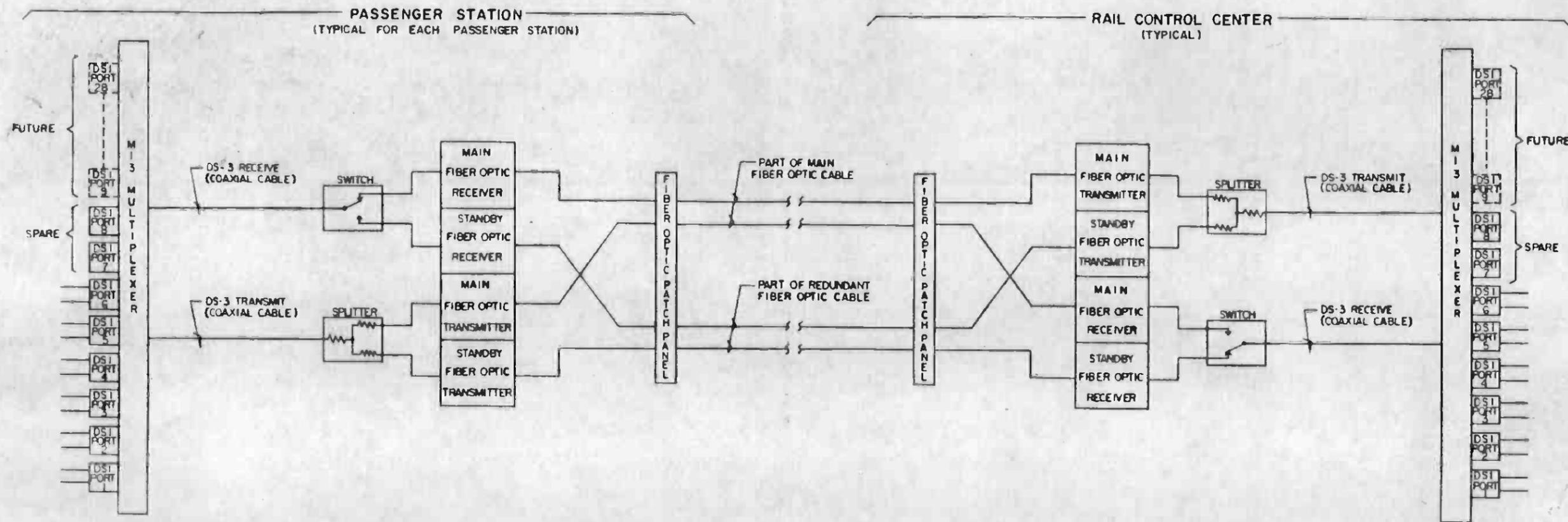
CONTRACT NO.	A640
DRAWING NO.	N-006
REV.	0
SCALE	NONE
SHEET NO.	15

REV	DATE	BY	SUB	APP	DESCRIPTION
1	4-6-87				PROPOSAL ISSUE



HALF SIZE

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY M.R.T.C. <i>Edward Azota</i> CHECKED BY <i>B. Blahutsky</i> IN CHARGE <i>M. Ruggen</i> DATE 24 OCT 86	REGISTERED PROFESSIONAL ENGINEER No. ED11800 Exp. 12-89 STATE OF CALIFORNIA	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT <i>CM</i>	DMJM/PB00/KE/HWA GENERAL CONSULTANTS APPROVED <i>Howard Khaliff</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS CCTV BLOCK DIAGRAM	CONTRACT NO. A640 DRAWING NO. N-008 SCALE NO SCALE SHEET NO. 17				
REV	DATE	BY	SUB	APP	DESCRIPTION	REV	DATE	BY	SUB	APP	DESCRIPTION
					PROPOSAL ISSUE						



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY
M.R.T.C.
DRAWN BY
Charles A. Cook
CHECKED BY
P. B. Robinson
IN CHARGE
P. M. Bergman
DATE
20 AUG 86



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT



DMJM/PBOD/KE/HWA
GENERAL CONSULTANTS

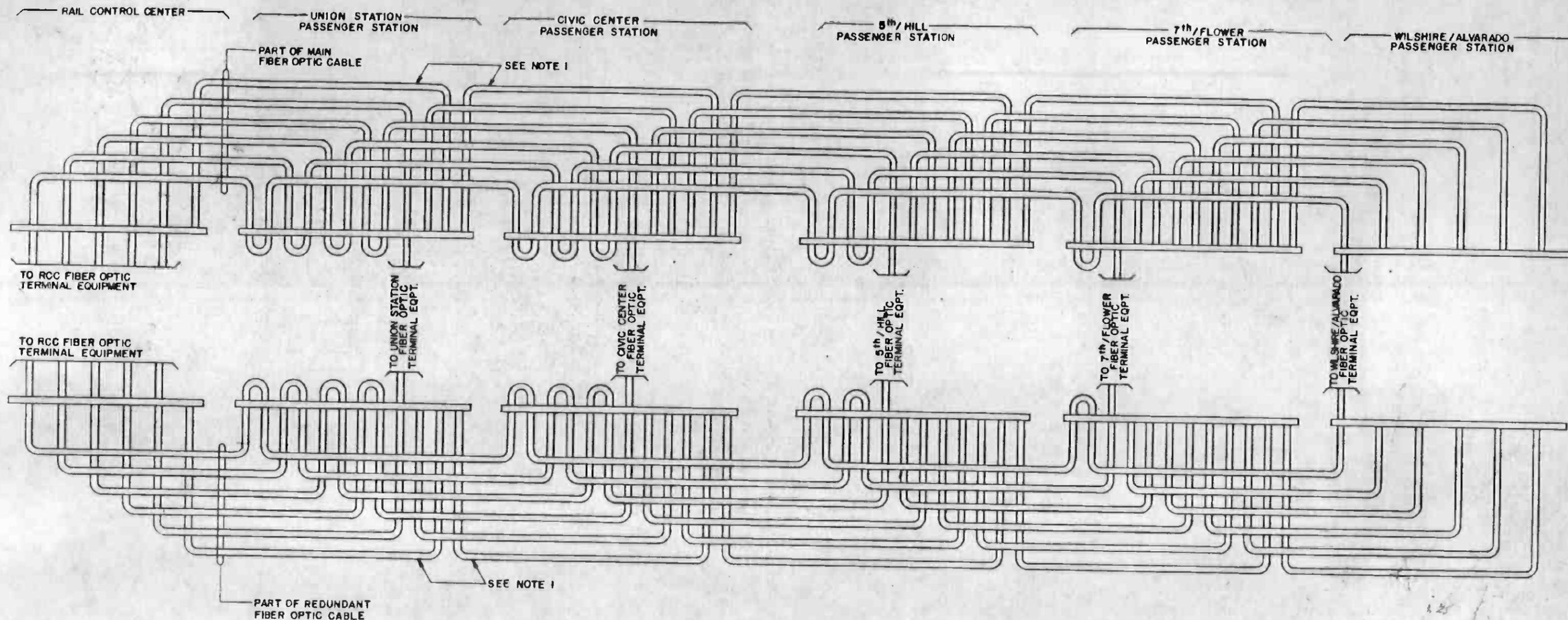
LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
CTS
BLOCK DIAGRAM
FIBER OPTIC AND MULTIPLEX EQPT.

CONTRACT NO. A640
DRAWING NO. N-III
SCALE NO SCALE
SHEET NO. 18

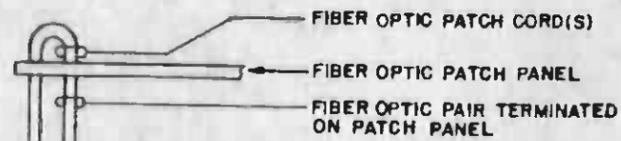
REV	DATE	BY	SUB	APP	DESCRIPTION
1	11-13	B			PROPOSAL ISSUE

SUBMITTED *ery*

APPROVED *Shirley Matiff*



LEGEND:



NOTES:

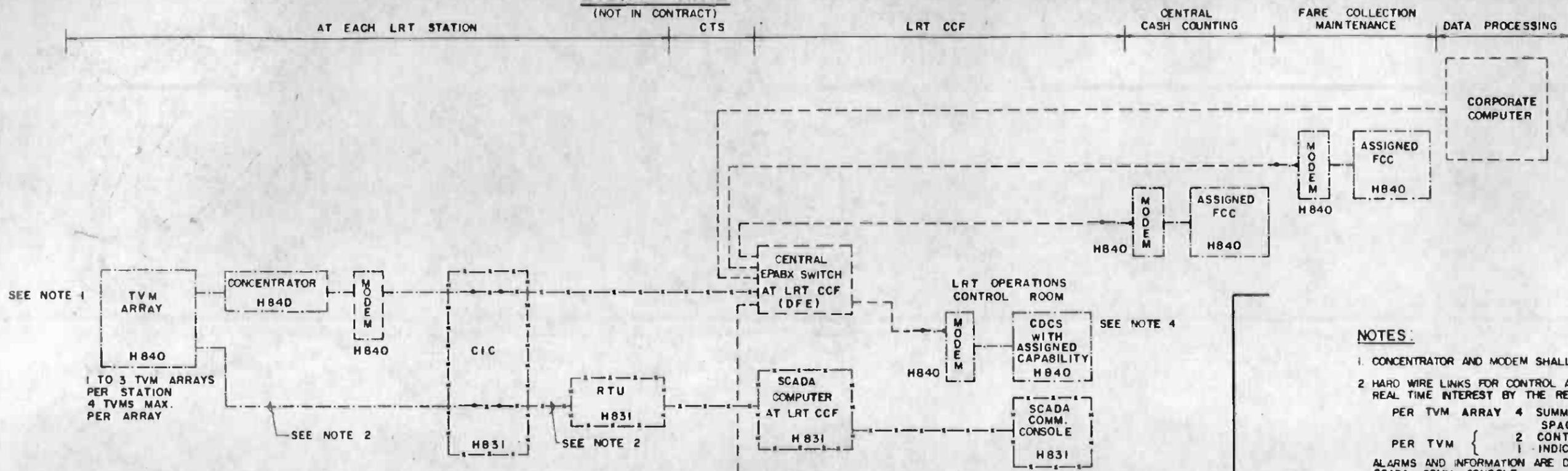
1. TYPICAL CONNECTIONS FOR FIBER PAIRS PROVIDED FOR FUTURE EXTENSIONS AND SPARE. FIBER PAIRS FOR FUTURE EXTENSIONS AND SPARES ARE NOT SHOWN FOR CLARITY.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY M.R.T.C. DRAWN BY <i>Edward A. Smith</i> CHECKED BY <i>B. Blahutsky</i> IN CHARGE <i>P.M. Burgess</i> DATE 19 AUG 86		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS INTERCONNECTION OF CTS FIBER OPTIC CABLE	CONTRACT NO. A640 DRAWING NO. N-211 REV 0 SCALE NO SCALE SHEET NO. 19
REV DATE BY PWB APP DESCRIPTION	REV DATE BY PWB APP DESCRIPTION	PROPOSAL ISSUE		SUBMITTED <i>e y</i>	GENERAL CONSULTANTS DMJM/PBOD/KE/HWA APPROVED <i>[Signature]</i>		

LIGHT RAIL

(NOT IN CONTRACT)



SEE NOTE 1

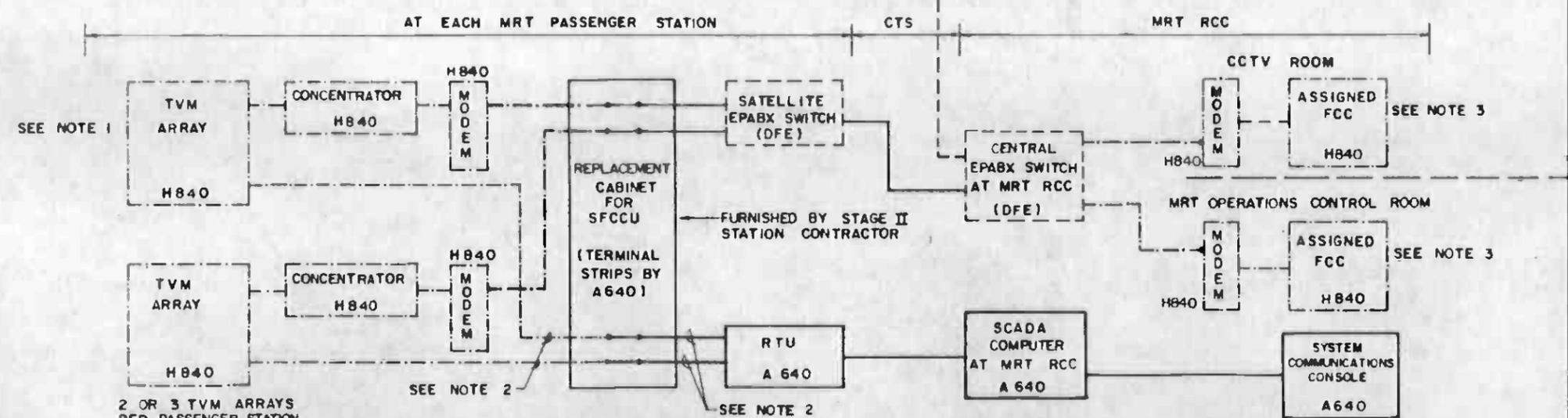
1 TO 3 TVM ARRAYS PER STATION
4 TVMS MAX. PER ARRAY

SEE NOTE 2

SEE NOTE 2

SEE NOTE 4

METRO RAIL



SEE NOTE 1

2 OR 3 TVM ARRAYS PER PASSENGER STATION
3 TO 15 TVMS PER ARRAY

SEE NOTE 2

SEE NOTE 2

SEE NOTE 3

SEE NOTE 3

NOTES:

- CONCENTRATOR AND MODEM SHALL BE MOUNTED WITHIN TVM ARRAY
- HARD WIRE LINKS FOR CONTROL AND MONITORING OF ACTIVITIES OF REAL TIME INTEREST BY THE RESPECTIVE SCADA SUBSYSTEM PER TVM ARRAY 4 SUMMARY MONITORING POINTS SPACE PER TVM { 2 CONTROL POINTS 1 INDICATION POINT } ALARMS AND INFORMATION ARE DISPLAYED AT THE RESPECTIVE SCADA COMM. CONSOLE. A640 OR H831 CONTRACTOR, AS APPROPRIATE, TO PROVIDE INTERPOSING DRY RELAY CONTACTS FOR CONTROL FUNCTIONS. H840 CONTRACTOR TO PROVIDE INTERPOSING DRY RELAY CONTACTS FOR MONITORING FUNCTIONS.
- ASSIGNED FCC COMPRISES - MICROCOMPUTER WITH KEYBOARD, DISPLAY, AND PRINTER WITH SPECIFIC MONITORING REPORT FUNCTIONS ASSIGNED TO THEM. FCC COMMUNICATES WITH TVM ARRAYS WHEN STATUS INFORMATION IS REQUESTED.
- CDCS COMPRISES MICROCOMPUTER - WITH KEYBOARD, DISPLAY, PRINTER AND ADDITIONAL STORAGE TO STORE DATA COLLECTED DURING ROUTINE POLLING OF TVMS. CDCS CAN ALSO DOWNLOAD DATA VIA A MODEM TO TVMS AND THE CORPORATE COMPUTER. INTERFACE DETAILS TO THE CORPORATE COMPUTER TO BE PROVIDED BY H840 CONTRACTOR.

ABBREVIATIONS:

- TVM TICKET VENDING MACHINE
- CIC COMMUNICATIONS INTERFACE CABINET
- RTU REMOTE TERMINAL UNIT
- LRT LIGHT RAIL TRANSIT
- MRT METRO RAIL TRANSIT
- CCF CENTRAL CONTROL FACILITY AT WILLOWBROOK JUNCTION
- RCC RAIL CONTROL CENTER AT MRT YARD
- FCC FARE COLLECTION COMPUTER
- CDCS CENTRAL DATA COLLECTION SYSTEM
- SFCCU STATION FARE COLLECTION CONTROL UNIT (NOT USED IN PRESENT DESIGN)
- SCADA SUPERVISORY CONTROL AND DATA ACQUISITION
- DFE DISTRICT FURNISHED EQUIPMENT

KEY:

- FURNISHED & INSTALLED BY CONTRACT H840
- - - - FURNISHED & INSTALLED BY CONTRACT H831
- FURNISHED & INSTALLED BY CONTRACT A640
- - - - RTD FURNISHED VOICE GRADE DATA LINKS & TELEPHONE SWITCHES



<p>THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA</p>		<p>DESIGNED BY <i>[Signature]</i></p> <p>DRAWN BY <i>[Signature]</i></p> <p>CHECKED BY <i>[Signature]</i></p> <p>IN CHARGE <i>[Signature]</i></p> <p>DATE 11 FEB 87</p>		<p>INDUSTRIAL PROFESSIONAL GROUP No. 22744 71 Blvd MECHANICAL STATE OF CALIFORNIA</p>		<p>SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT</p> <p>DMJM/PBQD/KE/HWA GENERAL CONSULTANTS</p> <p>APPROVED <i>[Signature]</i></p>		<p>LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS FARE COLLECTION SYSTEM INTERFACE BLOCK DIAGRAM</p>		<p>CONTRACT NO. A640 DRAWING NO. N-081 SCALE: NO SCALE SHEET NO. 20</p>	
REV	DATE	BY	SUB	APP.	DESCRIPTION	REV	DATE	BY	SUB	APP.	DESCRIPTION
					PROPOSAL ISSUE						

(REFERENCE A660 TP-8)

LEAD DESIGNATION

INTRUSION

REVENUE SERVICE REQUIRED

TVM DOOR OPEN

MAINTENANCE SERVICE REQUIRED

CIC TERMINAL STRIP

(SEE INTERFACE DWG. NS-007)

MONITORING CONNECTIONS | **CONTROL CONNECTIONS**

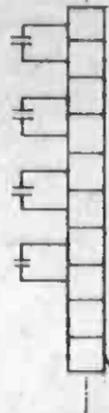


FIGURE | **TERMINAL**

1 0	a
	b
1 0	a
	b
1 0	a
	b
1 0	a
	b

SEE NOTE 1

LEAD DESIGNATION

CIC TERMINAL STRIP

(SEE INTERFACE DWG. NS-007)

MONITORING CONNECTIONS | **CONTROL CONNECTIONS**

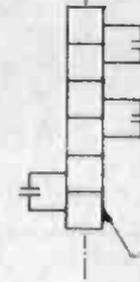


FIGURE | **TERMINAL**

2 0	a
	b
2 0	a
	b
1 0	a
	b

SEE NOTE 1

TICKET VENDING MACHINE (TVM) SUMMARY MONITOR
ONE SET (1) OF INDICATIONS PER TVM ARRAY

COMMUNICATIONS / TVM MONITORING AND CONTROL
ONE SET OF CONTROLS AND INDICATIONS PER TVM

COMMUNICATIONS / FARE COLLECTION

NOTE

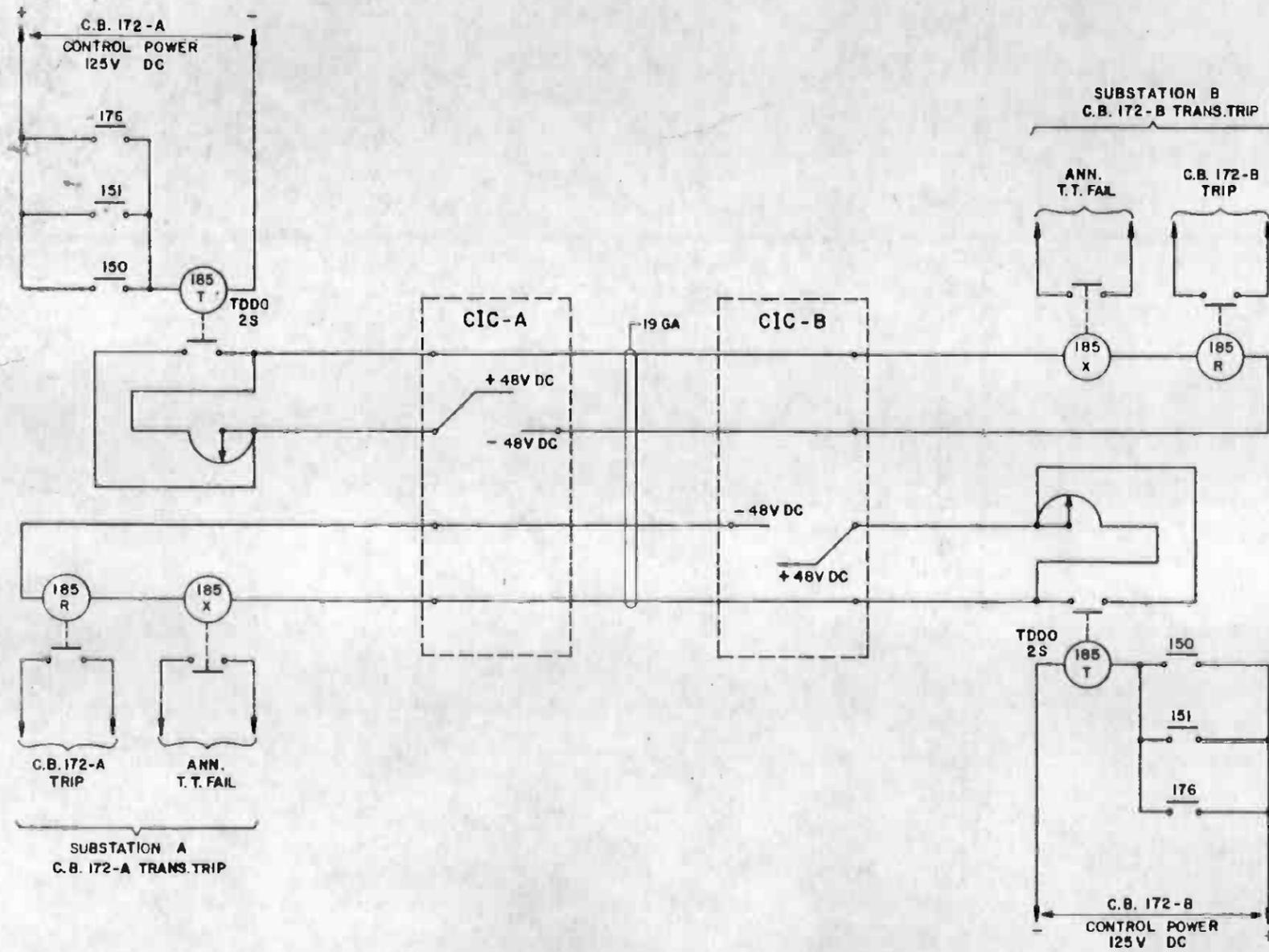
1. SEE DWG N-036 FOR NOTES.



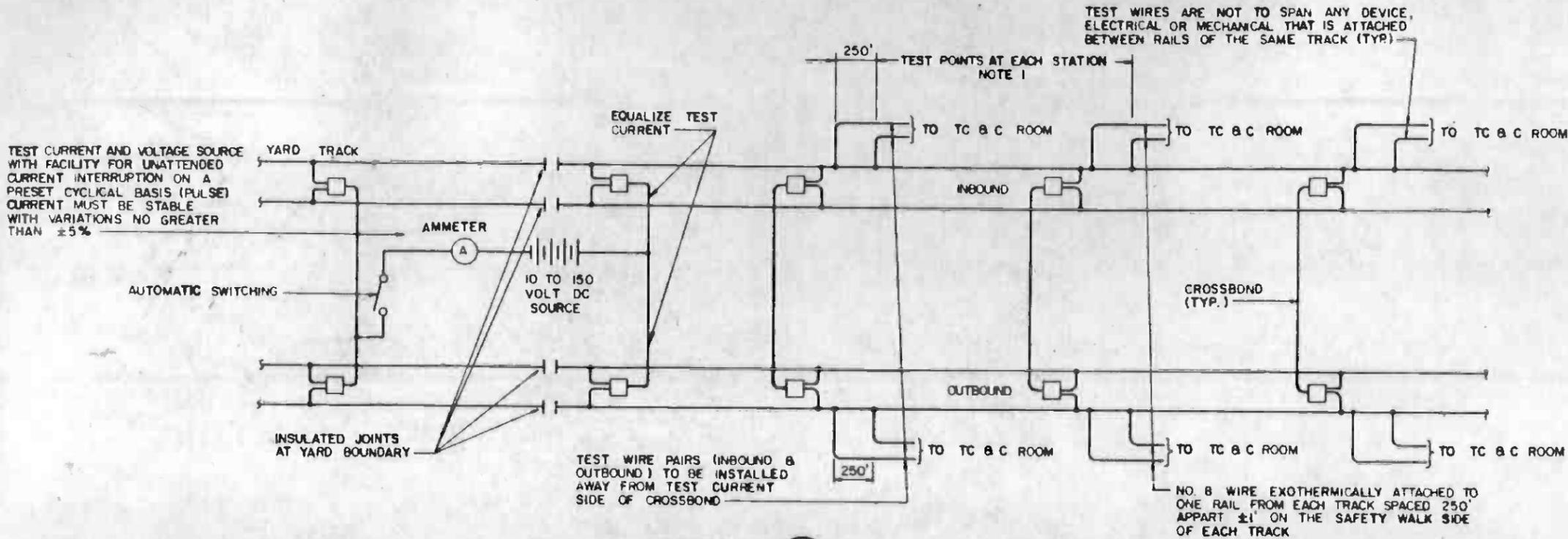
<p>THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.</p>		<p>DESIGNED BY <i>R. Blakely</i></p> <p>DRAWN BY <i>E. Acosta</i></p> <p>CHECKED BY <i>Ed. [unclear]</i></p> <p>DATE 10 NOV 85</p>		<p>SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT</p> <p>DRUM/PBOD/KE/HWA GENERAL CONSULTANTS</p> <p>APPROVED <i>[Signature]</i></p>	<p>LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS FARE COLLECTION INTERFACES</p>	<p>CONTRACT NO. A640</p> <p>DRAWING NO. N-047</p> <p>SCALE NO SCALE</p> <p>SHEET NO. 21</p>					
REV.	DATE	BY	SUB.	APP.	DESCRIPTION	REV.	DATE	BY	SUB.	APP.	DESCRIPTION
					PROPOSAL ISSUE						

NOTE:

1. PROVIDE FOUR CABLE PAIRS BETWEEN CIC IN ADJACENT TRACTION POWER SUBSTATIONS. ALL OTHER CABLES AND DEVICES SHOWN HEREIN ARE N.I.C.

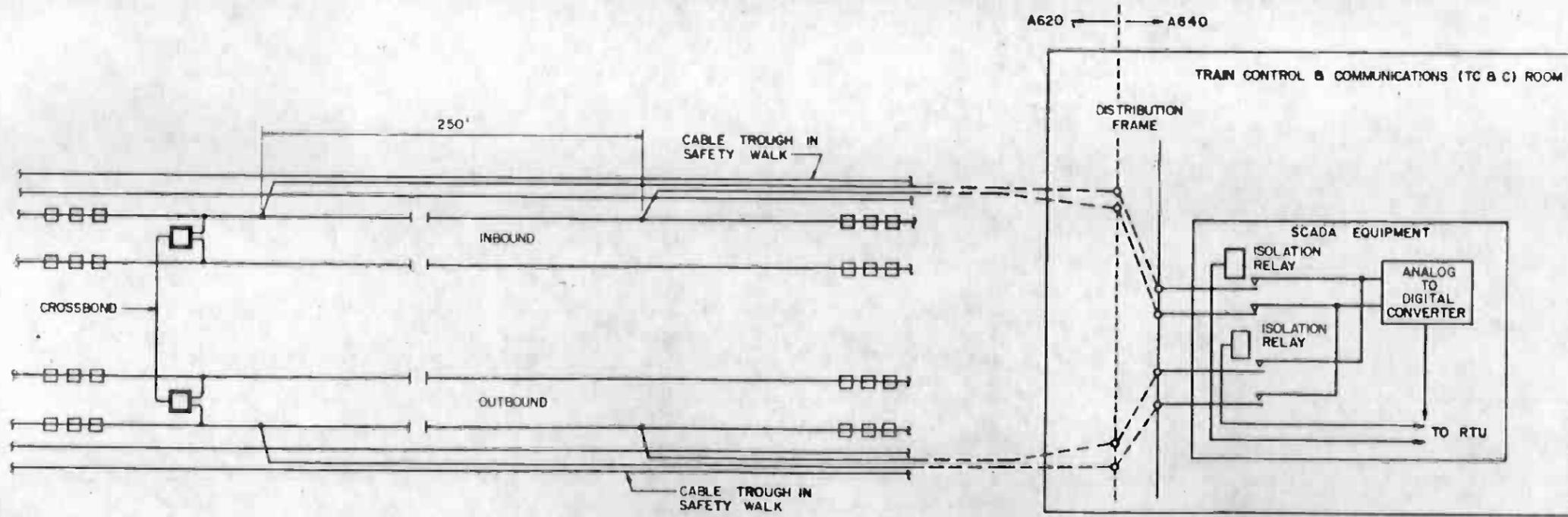


THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY G.W. PENNEY DRAWN BY E.S. ACOSTA CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 24 SEP 86	REGISTERED PROFESSIONAL ENGINEER LICENSE NO. 41100 ELECTRICAL STATE OF CALIFORNIA	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT DMJM/PBOD/KE/HWA GENERAL CONSULTANTS	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS TRANSFER TRIP SCHEMATIC APPROVED <i>[Signature]</i>	CONTRACT NO A640 DRAWING NO N-264 SCALE NO SCALE SHEET NO 22
REV DATE BY SUB APP DESCRIPTION	1 24 SEP 86 E.S. ACOSTA PROPOSAL ISSUE					



DETAIL 26

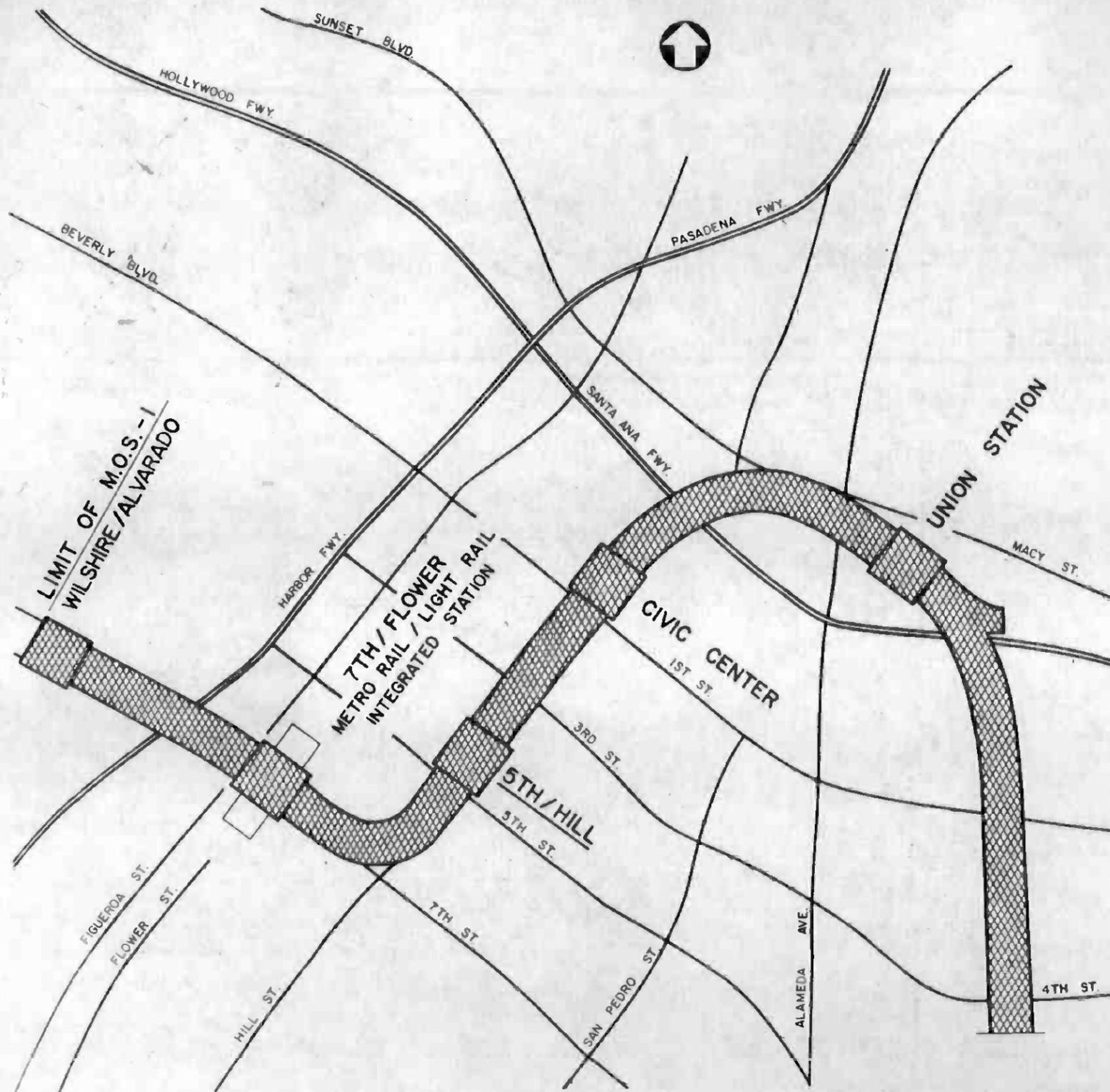
NOTE:
 1. AT STATIONS WITH ASSOCIATED INTERLOCKINGS INSTALL TWO ADDITIONAL SETS OF TEST POINTS. ONE SET TO BE INSTALLED BEYOND END OF INTERLOCKING AWAY FROM STATION AND THE OTHER SET TO BE INSTALLED BEYOND END OF PLATFORM AT THE OPPOSITE END OF STATION (STUB TERMINALS DO NOT NEED TEST POINTS AT THE STUB END OF THE PLATFORM).



DETAIL 27



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY R.A. HADLOW DRAWN BY A. Woodson CHECKED BY B.B. Bishop IN CHARGE M. Rogers DATE 7 NOV 88	REGISTERED PROFESSIONAL ENGINEER No. 601900 Exp. 3-20-91 STATE OF CALIFORNIA	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT DTLM/PBQD/KE/HWA GENERAL CONSULTANTS APPROVED <i>Edward Schaff</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS CORROSION CONTROL SCHEMATIC	CONTRACT NO. A640 DRAWING NO. N-049 SCALE NO SCALE SHEET NO. 23
REV. DATE BY SUB. APP. DESCRIPTION	REV. DATE BY SUB. APP. DESCRIPTION	PROPOSAL ISSUE		SUBMITTED <i>C. Lind</i>		



STATION	SEISMIC RECORDER	SEISMIC SWITCHES	LOCATION
UNION	NO	YES	TC & C ROOM
CIVIC CENTER	YES	YES	EMERGENCY EQUIPMENT ROOM
5TH / HILL	NO	NO	---
7TH / FLOWER	NO	NO	---
WILSHIRE / ALVARADO	NO	YES	EMERGENCY EQUIPMENT ROOM



REV	DATE	BY	SUB	APP	DESCRIPTION

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA

DESIGNED BY
TK MCCRANIE

CHECKED BY
[Signature]

IN CHARGE
[Signature]

DATE
26 SEP 86

PROPOSAL ISSUE



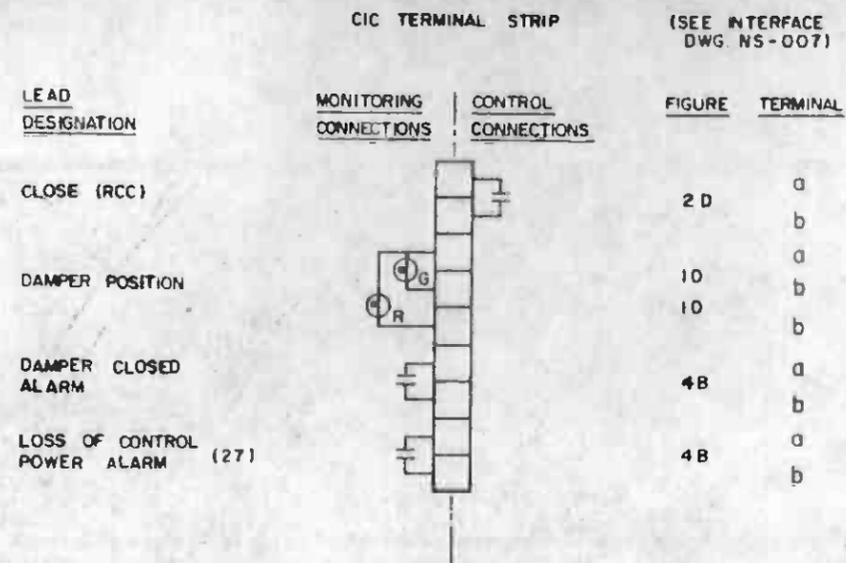
SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

DMJM/PBQD/KE/HWA
GENERAL CONSULTANTS

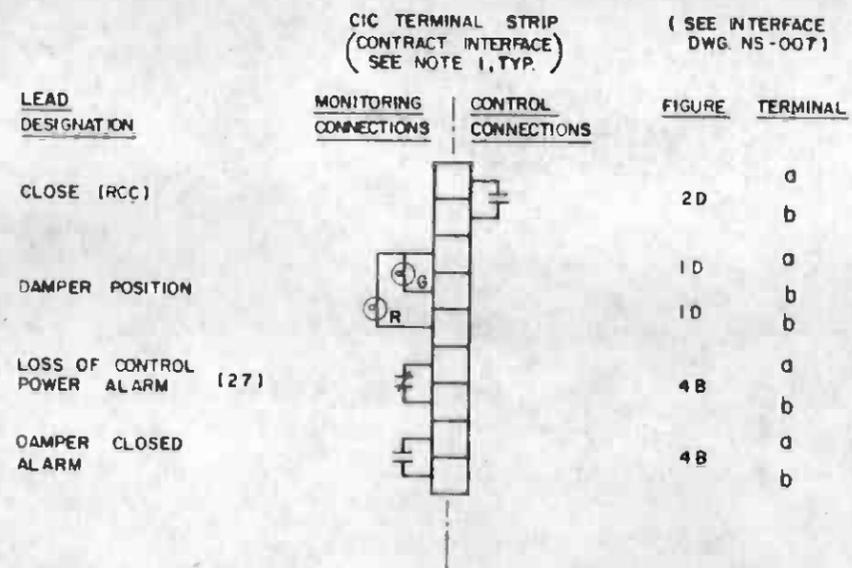
APPROVED *[Signature]*

LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS
SEISMIC DETECTION
SEISMIC RECORDER AND
SWITCH LOCATION SCHEMATIC

CONTRACT NO.	A640
DRAWING NO.	N-112
SCALE	NO SCALE
SHEET NO.	24



EMERGENCY FAN FAN DAMPERS



EMERGENCY FAN TRACK DAMPERS

NOTES:

THE UNNUMBERED TERMINAL STRIPS ARE SYMBOLIC REPRESENTATIONS OF CIC, CIR OR MDF TERMINALS THAT ARE THE INTERFACES BETWEEN CONTRACT A640 AND OTHER PROJECT CONTRACTS

RELAY CONTACTS AND LIGHT SYMBOLS ON THE LEFT SIDE OF THE STRIP REPRESENT EQUIPMENT AND CONTROL SYSTEM MONITORING INPUTS FROM THE INTERFACING CONTRACT TO SCADA.

RELAY CONTACT SYMBOLS ON THE RIGHT SIDE OF THE STRIP REPRESENT CONTROL OUTPUTS FROM SCADA TO THE INTERFACING CONTRACT EQUIPMENT.

ACTUAL TERMINAL STRIPS AND TERMINAL NUMBERS ARE DESIGNATED IN THE ELECTRICAL CONNECTION DIAGRAMS OR WIRE CONNECTION SCHEDULES OF EACH INTERFACING CONTRACT.

ABBREVIATIONS:

- G - GREEN
- R - RED
- W - WHITE
- B - BLUE
- C - CLEAR
- TS - TERMINAL STRIP
- LCS - LOCAL CONTROL STATION
- MCC - MOTOR CONTROL CENTER
- EMP - EMERGENCY MANAGEMENT PANEL
- CIC - COMMUNICATIONS INTERFACE CABINET
- CIR - COMMUNICATIONS INTERFACE RACK
- MDF - MAIN DISTRIBUTION FRAME



	THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TREASURY OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.	DESIGNED BY <i>B. Blakely</i> DRAWN BY <i>A. Vukobratovic</i> CHECKED BY <i>R. H. ...</i> IN CHARGE <i>B. Blakely</i> DATE 29 OCT 85		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	DMJM/PBQD/KE/HWA GENERAL CONSULTANTS APPROVED <i>Sawada</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS SCADA / FACILITIES ELECTRICAL INTERFACES	CONTRACT NO. A640 DRAWING NO. N-036 SCALE NO SCALE SHEET NO. 25
REV. DATE BY SUB APP DESCRIPTION	REV. DATE BY SUB APP DESCRIPTION	PROPOSAL ISSUE					

S.C.R.T.D. LIBRARY

CIC TERMINAL STRIP (SEE INTERFACE DWG NS-007)

LEAD DESIGNATION	MONITORING CONNECTIONS	CONTROL CONNECTIONS	FIGURE	TERMINAL
ON (GROUP FAN START)			2 D	a b
STATION HI TEMP ALARM			4 B	a b
TROUBLE ALARM (HI BEARING TEMP, HI FAN VIBRATION, CONTROL PWR LOSS)			4 B	a b
FAN #1 MOTOR OVERLOAD ALARM (49)			4 B	a b
FAN #2 MOTOR OVERLOAD ALARM (49)			4 B	a b
#1 LOSS OF EXHAUST AIR FLOW ALARM (FS)			4 B	a b
#1 LOSS OF SUPPLY AIR FLOW ALARM (FS)			4 B	a b
#2 LOSS OF EXHAUST AIR FLOW ALARM (FS)			4 B	a b
#2 LOSS OF SUPPLY AIR FLOW ALARM (FS)			4 B	a b

**EMERGENCY FAN AUXILIARY CIRCUITS
FANS #1 & #2**

CIC TERMINAL STRIP (CONTRACT INTERFACE) (SEE NOTE 1, TYP.) (SEE INTERFACE DWG NS-007)

LEAD DESIGNATION	MONITORING CONNECTIONS	CONTROL CONNECTIONS	FIGURE	TERMINAL
ON (RCC)			2 D	a b
CS / EXHAUST DIRECTION			2 D	a b
CS / SUPPLY DIRECTION			2 D	a b
IN LOCAL CONTROL (69)			4 B	a b
EXHAUST SUPPLY			1 D	b
STAND-BY TROUBLE (HI BEARING TEMP, HI FAN VIBRATION, CONTROL PWR LOSS)			1 D	b
CONTROL POWER AVAILABLE			1 D	b
MRT HI TEMP.			1 D	b

EMERGENCY FANS #1, #2 & #3

NOTE:
1. SEE DWG N-036 FOR NOTES.



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DESIGNED BY
B. Blahodsky
CHECKED BY
R. Hanks
IN CHARGE
B. Blahodsky
DATE
17 OCT 85



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT



SUBMITTED *AMB*

DMJM/PROD/KE/HWA
GENERAL CONSULTANTS
APPROVED *Howard Kitchell*

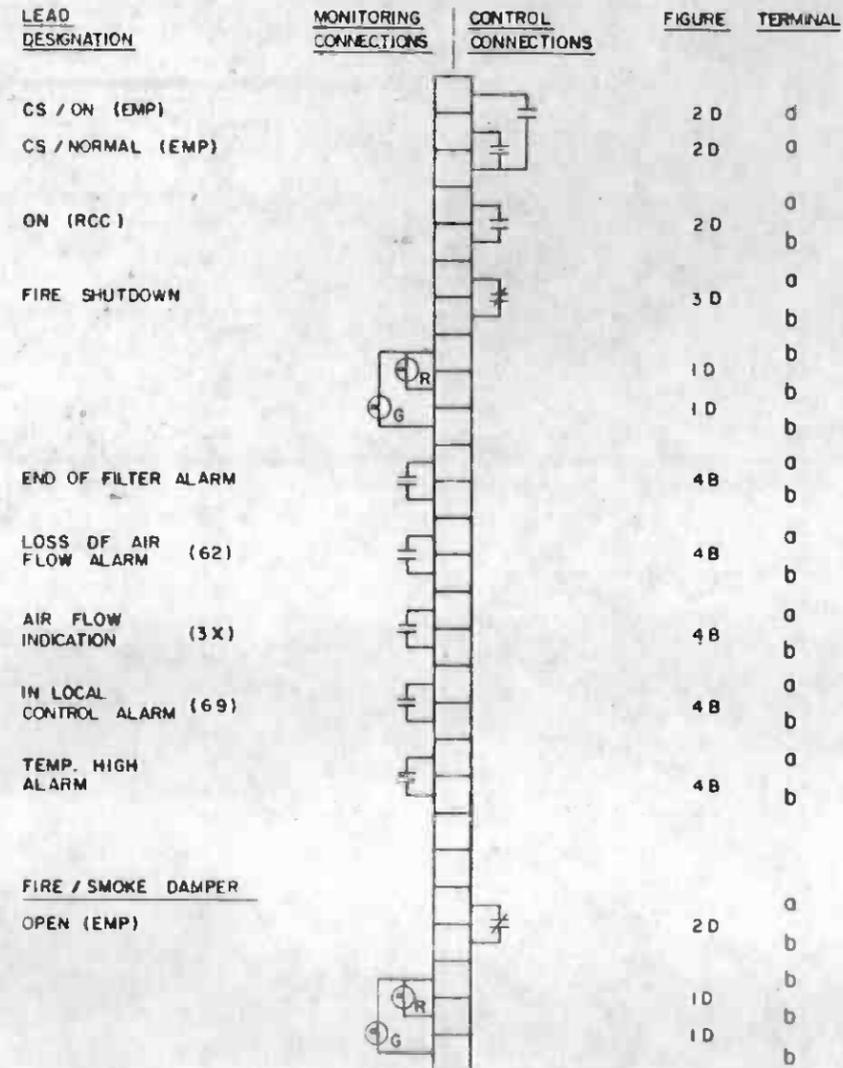
LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS SCADA / FACILITIES ELECTRICAL INTERFACES

CONTRACT NO.	A640
DRAWING NO.	N-037
SCALE	NO SCALE
SHEET NO.	26

DATE BY SUB APP DESCRIPTION

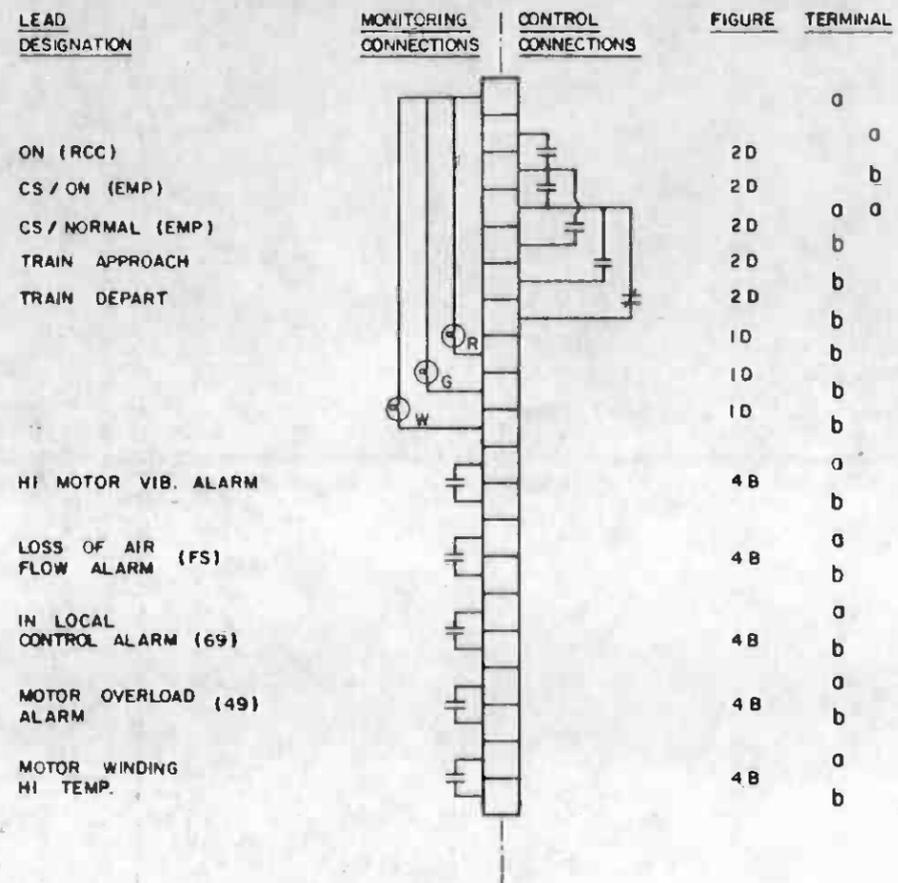
REV 4-8-87 RAN PROPOSAL ISSUE

CIC TERMINAL STRIP (SEE INTERFACE DWG NS-007)



STATION VENTILATION SYSTEM

CIC TERMINAL STRIP (CONTRACT INTERFACE SEE NOTE 1, TYP.) (SEE INTERFACE DWG NS-007)



UNDERPLATFORM EXHAUST FANS

NOTE:
1. SEE DWG. N-036 FOR NOTES.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>B. Blahutsky</i> DRAWN BY <i>A. Haddock</i> CHECKED BY <i>R. Haddock</i> IN CHARGE <i>B. Blahutsky</i> DATE 6 APR 87		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	DMJM/PBOD/KE/HWA GENERAL CONSULTANTS APPROVED <i>Howard K. White</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES	CONTRACT NO. A640 DRAWING NO. N-039 SCALE NO SCALE SHEET NO. 28
REV. DATE BY SUB APP DESCRIPTION	REV. DATE BY SUB APP DESCRIPTION	PROPOSAL ISSUE					

CIC TERMINAL STRIP (SEE INTERFACE DWG NS-007)

LEAD DESIGNATION	MONITORING CONNECTIONS	CONTROL CONNECTIONS	FIGURE	TERMINAL
OPEN			2D	a
CLOSE			2D	b
			1D	b
			1D	b
LOCAL ALARM SILENCE			3D	a
				b
DOOR MTR. OVERLOAD ALARM			4B	a
				b
BOLT RETRACTED ALARM			4B	a
				b
24 V POWER LOSS ALARM			4B	a
				b

ROLL-UP DOORS AT STATION ENTRANCE

CIC TERMINAL STRIP (CONTRACT INTERFACE SEE NOTE 1, TYP.) (SEE INTERFACE DWG NS-007)

LEAD DESIGNATION	MONITORING CONNECTIONS	CONTROL CONNECTIONS	FIGURE	TERMINAL
PUMP #1, MOTOR OVERLOAD ALARM (49)			4B	a
				b
PUMP #1, START ALARM (42)			4B	a
				b
PUMP #1, FLOW INDICATION (FS)			4B	a
				b
ON (PUMP #1)			2D	a
				b
PUMP #2, MOTOR OVERLOAD ALARM (49)			4B	a
				b
PUMP #2, START ALARM			4B	a
				b
PUMP #2, FLOW INDICATION (FS)			4B	a
				b
ON (PUMP #2)			2D	a
				b
TROUBLE ALARM (62)			4B	a
				b
HIGH, HIGH LEVEL ALARM (3 x 3)			4B	a
				b
LOSS OF CONTROL POWER ALARM (74)			4B	a
				b

DUPLEX SUMP PUMP WITH CONTROL SWITCHES

NOTE:

1. SEE DWG N-036 FOR NOTES.



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REV. DATE BY SUB APP DESCRIPTION	1 11-87 EJA 2 1-88 EJA 3 1-88 EJA 4 1-88 EJA 5 1-88 EJA 6 1-88 EJA 7 1-88 EJA 8 1-88 EJA 9 1-88 EJA 10 1-88 EJA 11 1-88 EJA 12 1-88 EJA 13 1-88 EJA 14 1-88 EJA 15 1-88 EJA 16 1-88 EJA 17 1-88 EJA 18 1-88 EJA 19 1-88 EJA 20 1-88 EJA 21 1-88 EJA 22 1-88 EJA 23 1-88 EJA 24 1-88 EJA 25 1-88 EJA 26 1-88 EJA 27 1-88 EJA 28 1-88 EJA 29 1-88 EJA 30 1-88 EJA 31 1-88 EJA 32 1-88 EJA 33 1-88 EJA 34 1-88 EJA 35 1-88 EJA 36 1-88 EJA 37 1-88 EJA 38 1-88 EJA 39 1-88 EJA 40 1-88 EJA 41 1-88 EJA 42 1-88 EJA 43 1-88 EJA 44 1-88 EJA 45 1-88 EJA 46 1-88 EJA 47 1-88 EJA 48 1-88 EJA 49 1-88 EJA 50 1-88 EJA 51 1-88 EJA 52 1-88 EJA 53 1-88 EJA 54 1-88 EJA 55 1-88 EJA 56 1-88 EJA 57 1-88 EJA 58 1-88 EJA 59 1-88 EJA 60 1-88 EJA 61 1-88 EJA 62 1-88 EJA 63 1-88 EJA 64 1-88 EJA 65 1-88 EJA 66 1-88 EJA 67 1-88 EJA 68 1-88 EJA 69 1-88 EJA 70 1-88 EJA 71 1-88 EJA 72 1-88 EJA 73 1-88 EJA 74 1-88 EJA 75 1-88 EJA 76 1-88 EJA 77 1-88 EJA 78 1-88 EJA 79 1-88 EJA 80 1-88 EJA 81 1-88 EJA 82 1-88 EJA 83 1-88 EJA 84 1-88 EJA 85 1-88 EJA 86 1-88 EJA 87 1-88 EJA 88 1-88 EJA 89 1-88 EJA 90 1-88 EJA 91 1-88 EJA 92 1-88 EJA 93 1-88 EJA 94 1-88 EJA 95 1-88 EJA 96 1-88 EJA 97 1-88 EJA 98 1-88 EJA 99 1-88 EJA 100 1-88 EJA	PROPOSAL ISSUE	SUBMITTED <i>PMBurgess</i>	APPROVED <i>Harold Chaff</i>	CONTRACT NO. A640 DRAWING NO. N-040 SCALE NO SCALE SHEET NO. 29	

CIC TERMINAL STRIP (SEE INTERFACE DWG NS-007)

CIC TERMINAL STRIP (CONTRACT INTERFACE) (SEE NOTE 1, TYP) (SEE INTERFACE DWG NS-007)

NOTE:
1. SEE DWG. N-036 FOR NOTES.

LEAD DESIGNATION	MONITORING CONNECTIONS	CONTROL CONNECTIONS	FIGURE	TERMINAL
FIRE SHUTDOWN			3D	a b
IN LOCAL CONTROL			4B	a b
DN (RCC)			2D	a b
SUPPLY FAN			1D 10 1D	a b b b
CS/ON (EMP)			2D	a b
C/S NORMAL (EMP)			2D	a b
AUXILIARY CIRCUITS				
AIR FLOW ALARM			4B	a b
HIGH TEMP. ALARM			4B	a b
END OF FILTER ALARM			4B	a b
TROUBLE ALARM			4B	a b

LEAD DESIGNATION	MONITORING CONNECTIONS	CONTROL CONNECTIONS	FIGURE	TERMINAL
CLOSE			2D	a b
TRIP			2D	a b
(TRIP) (NORMAL AFTER CLOSE)			10 10 10	a b b b
CLOSE IN LOCAL CONTROL (69)			4B	a b
BREAKER TRIP ALARM (74)			4B	a b
LOCKOUT ALARM (86)			4B	a b
TRIP IN LOCAL CONTROL (69)			4B	a b

480V MAIN BREAKERS AT MAIN SWBD IN AUX. PWR. ROOM

TRACTION POWER ROOM SUPPLY FANS



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DESIGNED BY
B. Blahut
DRAWN BY
A. Vanden...
CHECKED BY
R. H...
IN CHARGE
B. Blahut
DATE
6 APR 87



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT



DMJM/PBGD/KE/HWA
GENERAL CONSULTANTS

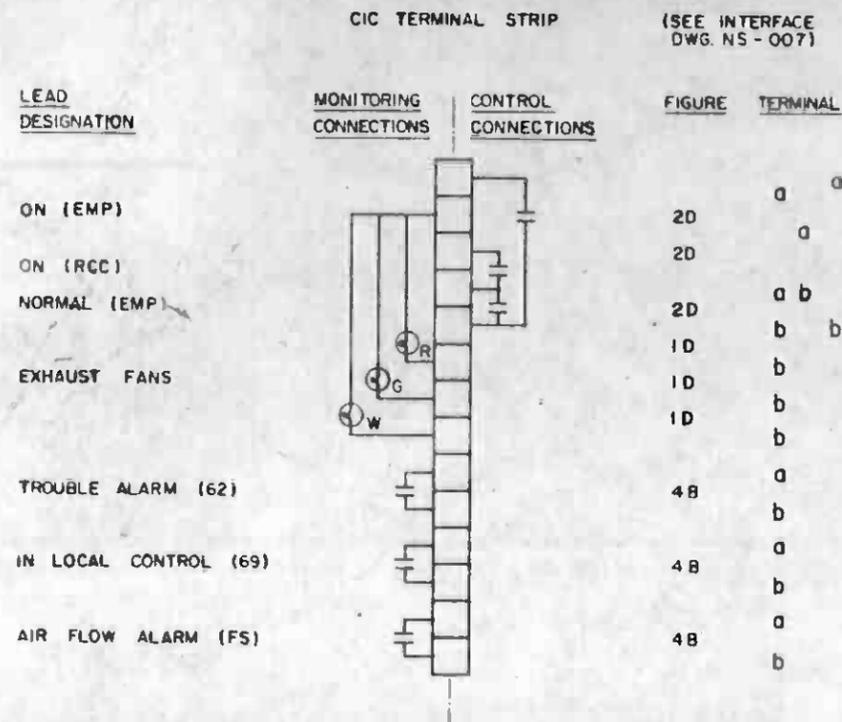
SUBMITTED *PM Berger*

APPROVED *Edward J. Kelly*

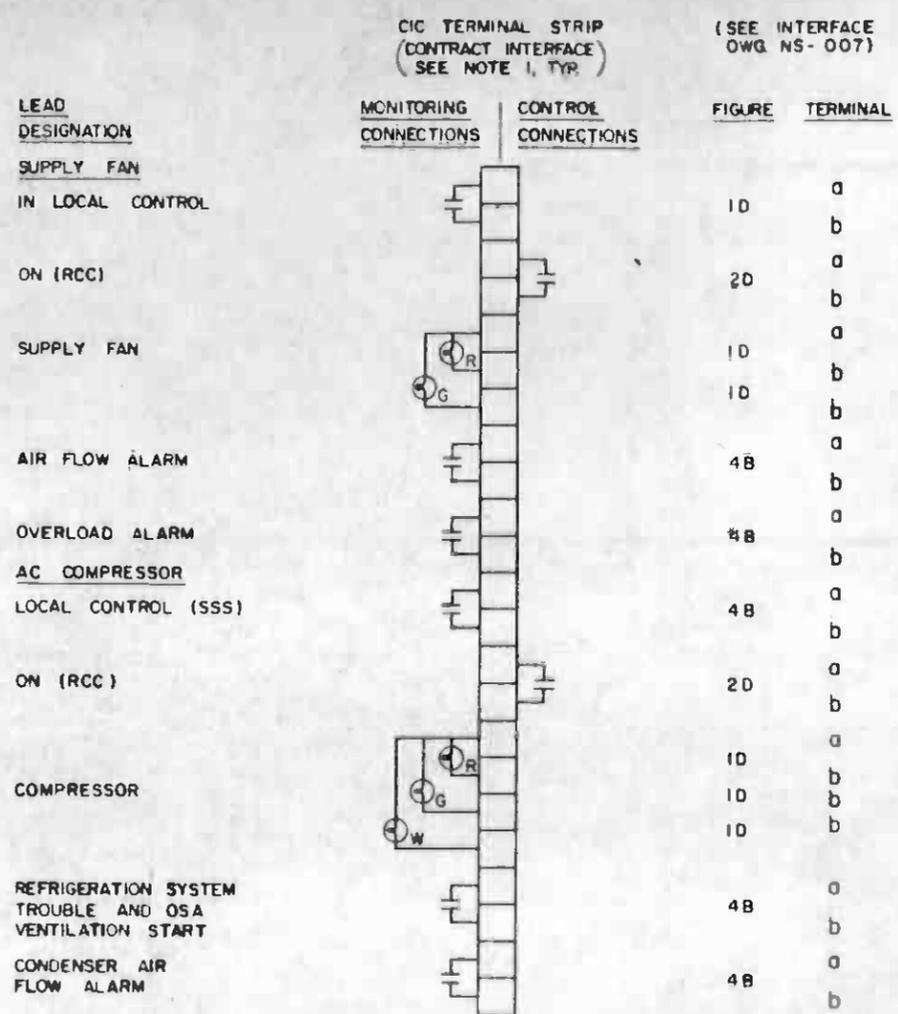
LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS
SCADA / FACILITIES ELECTRICAL INTERFACES

CONTRACT NO.	A640
DRAWING NO.	N-041
REV.	0
SCALE	NO SCALE
SHEET NO.	30

REV.	DATE	BY	SUB	APP	DESCRIPTION
10	4-27-87	RAP			PROPOSAL ISSUE



SMOKE AND HEAT EXHAUST FANS



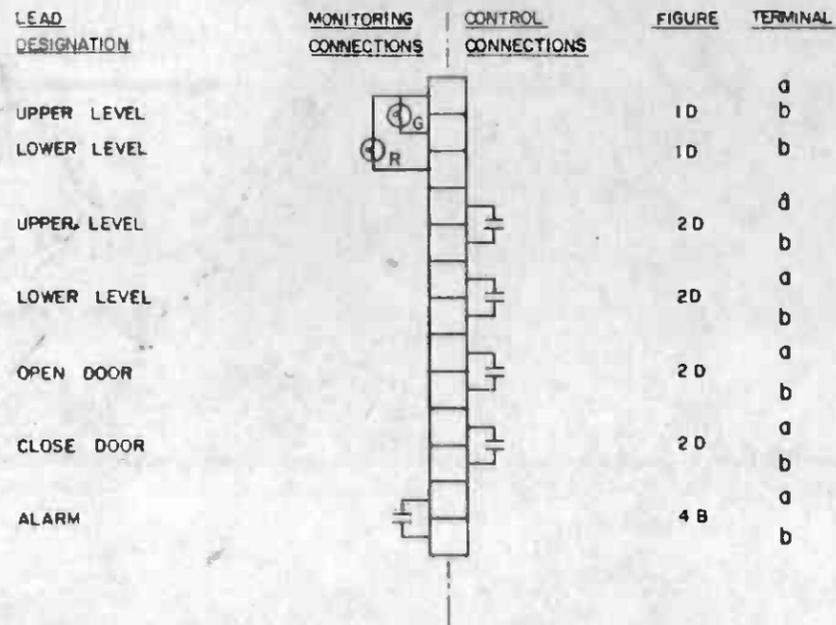
NOTE:
1. SEE DWG N-036 FOR NOTES.

TRAIN CONTROL & COMMUNICATIONS ROOM AIR CONDITIONING



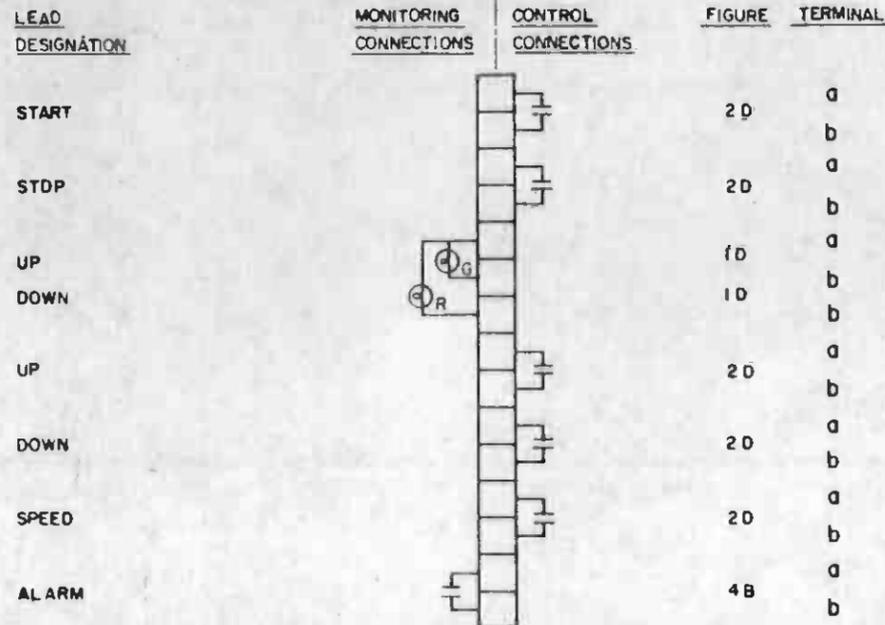
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>B. Blahut</i> DRAWN BY <i>A. Vukobrat</i> CHECKED BY <i>R. Hovlan</i> IN CHARGE <i>B. Blahut</i> DATE 6 APR 87		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	DMJM/PBOD/KE/HWA GENERAL CONSULTANTS APPROVED <i>Harold K. Schell</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS SCADA / FACILITIES ELECTRICAL INTERFACES	CONTRACT NO. A640 DRAWING NO. N-042 REV. 0 SCALE NO SCALE SHEET NO. 31
REV. DATE BY SUB APP DESCRIPTION	REV. DATE BY SUB APP DESCRIPTION	PROPOSAL ISSUE					

CIC TERMINAL STRIP (SEE INTERFACE DWG. NS-007)



ELEVATOR CONTROLS AND INDICATIONS (ELEVATORS)

CIC TERMINAL STRIP (CONTRACT INTERFACE) (SEE NOTE 1, TYP) (SEE INTERFACE DWG. NS-007)



ESCALATOR CONTROLS AND INDICATIONS (ESCALATORS)

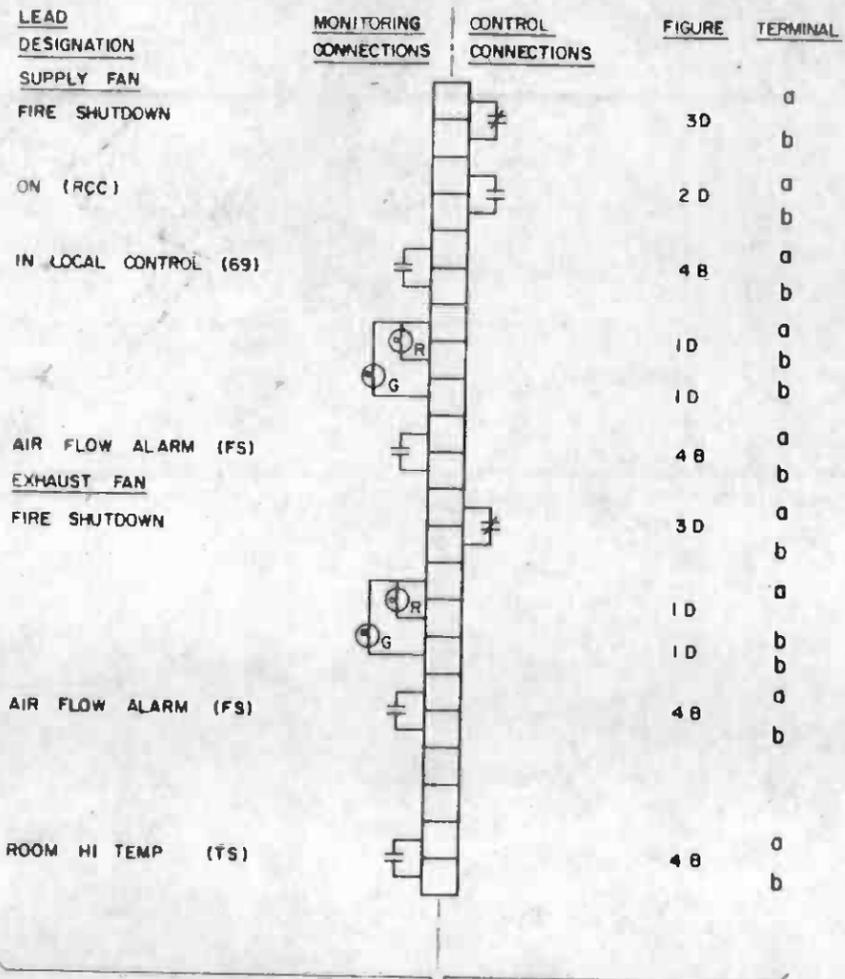
NOTE:

1. SEE DWG. N-036 FOR NOTES.



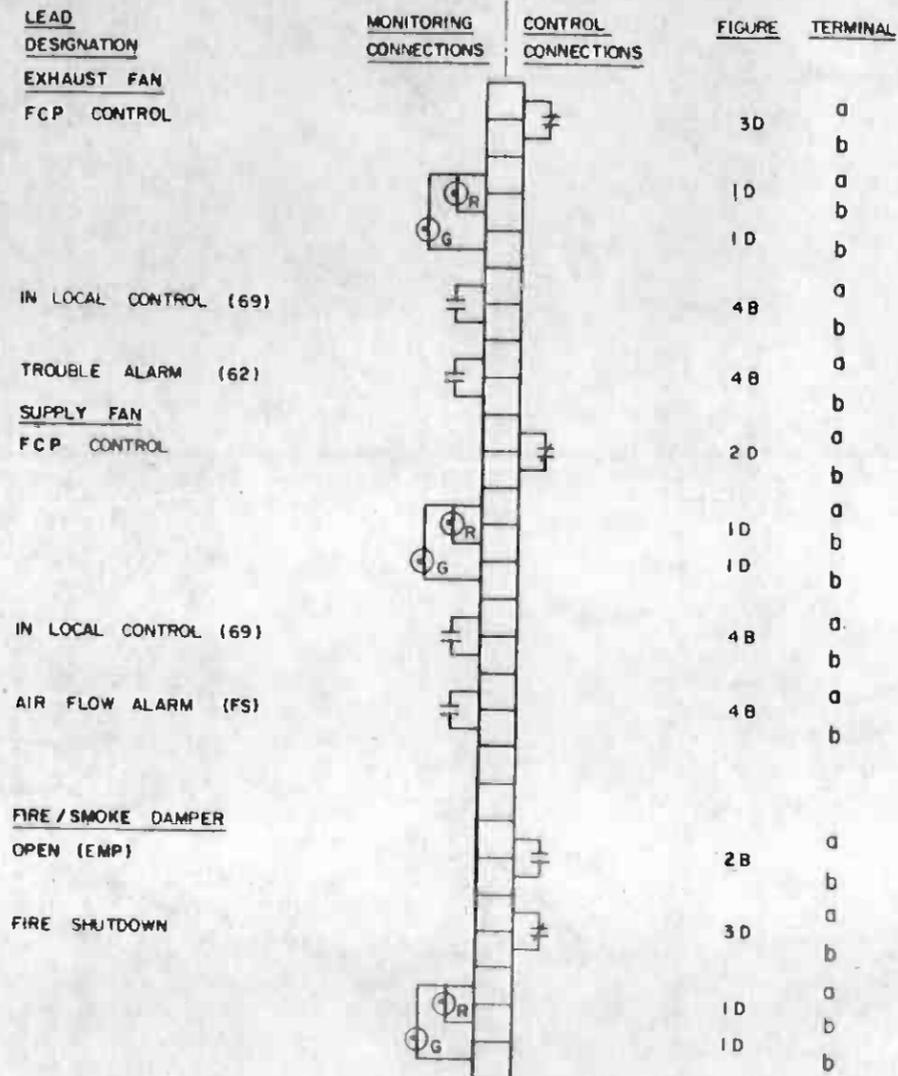
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>B. Blahodny</i> CHECKED BY <i>R. Anderson</i> IN CHARGE <i>B. Blahodny</i> DATE 6 APR 87	REGISTERED PROFESSIONAL ENGINEER MORRIS BURGESS 2110063 CALIFORNIA	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS SCADA / FACILITIES ELECTRICAL INTERFACES	CONTRACT NO. A640 DRAWING NO. N-043 SCALE NO SCALE SHEET NO. 32
REV. DATE BY SUB. APP. DESCRIPTION	1 11-87 BAA PROPOSAL ISSUE	SUBMITTED <i>PMBurgess</i>		APPROVED <i>David J. Kelly</i>		GENERAL CONSULTANTS	

CIC TERMINAL STRIP (SEE INTERFACE DWG. NS-007)



AUXILIARY POWER ROOM

CIC TERMINAL STRIP (CONTRACT INTERFACE) (SEE NOTE 1, TYP.) (SEE INTERFACE DWG. NS-007)



AUXILIARY POWER BATTERY ROOM

NOTE:
1. SEE DWG. N-036 FOR NOTES.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>B. Blahut</i> DRAWN BY <i>A. Vindurov</i> CHECKED BY <i>R. Hester</i> IN CHARGE <i>B. Blahut</i> DATE 6 APR 87		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS SCADA / FACILITIES ELECTRICAL INTERFACES	CONTRACT NO. A640 DRAWING NO. N-044 SCALE NO SCALE SHEET NO. 33
REV. DATE BY SUB APP DESCRIPTION	REV. DATE BY SUB APP DESCRIPTION	PROPOSAL ISSUE		SUBMITTED <i>P. M. [Signature]</i>	APPROVED <i>[Signature]</i>		

CIC TERMINAL STRIP (SEE INTERFACE DWG. NS-007)

LEAD DESIGNATION	MONITORING CONNECTIONS	CONTROL CONNECTIONS	FIGURE	TERMINAL
OUTSIDE AIR VENTILATION EXHAUST FAN			4B	a
IN LOCAL CONTROL				b
FULL OSA MODE ON (RCC)			2D	a
				b
EXHAUST FAN			1D	a
				b
MOTOR OVERLOAD			4B	a
				b
AIR FLOW ALARM			4B	a
				b
ROOM HI TEMP			4B	a
				b
HALON EXHAUST FAN ON (RCC)			2D	a
				b
			1D	a
				b
			1D	a
				b
IN LOCAL CONTROL			4B	a
				b
AIR FLOW ALARM			4B	a
				b

TRAIN CONTROL & COMMUNICATIONS ROOM EXHAUST FANS

CIC TERMINAL STRIP (CONTRACT INTERFACE SEE NOTE 1, TYP) (SEE INTERFACE DWG NS-007)

LEAD DESIGNATION	MONITORING CONNECTIONS	CONTROL CONNECTIONS	FIGURE	TERMINAL
ON (RCC & FCP SHUTDOWN & RESET)			2D	a
				b
EXHAUST FAN			1D	a
				b
EXHAUST FAN (62) TROUBLE			4B	a
				b

TRAIN CONTROL & COMMUNICATIONS BATTERY ROOM EXHAUST FAN

NOTE:
1. SEE DWG. N-036 FOR NOTES



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>B. Blahutsky</i> CHECKED BY <i>R. Anderson</i> IN CHARGE <i>B. Blahutsky</i> DATE 6 APR 87	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT	DMJM/PBQD/KE/HWA GENERAL CONSULTANTS APPROVED <i>Howard J. Klaff</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS SCADA / FACILITIES ELECTRICAL INTERFACES	CONTRACT NO. A640 DRAWING NO. N-045 SCALE NO SCALE SHEET NO. 34
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LEAD DESIGNATION

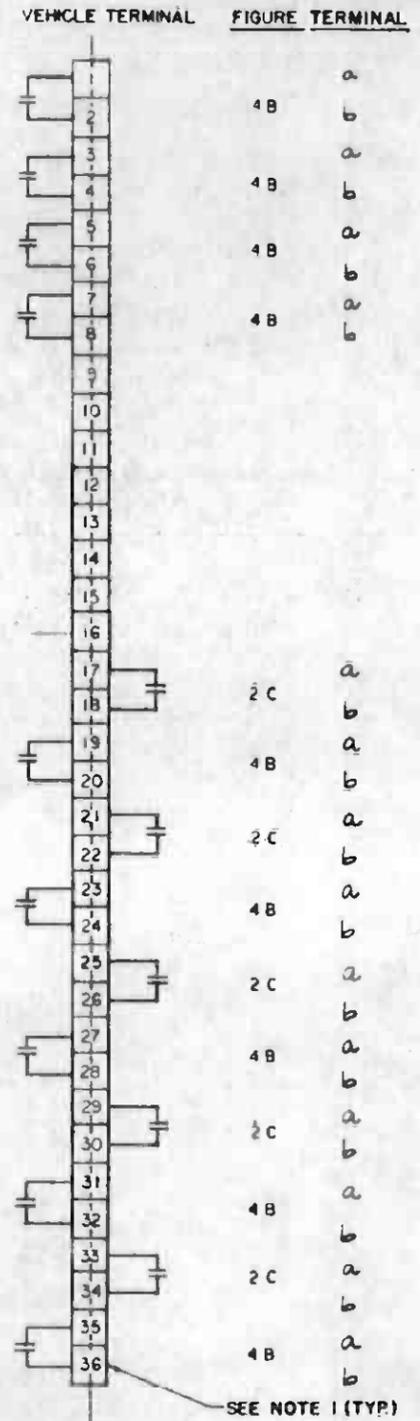
OPERATING MODE

ATO
 MTO
 MTO SUBMODE
 EMO
 RESTRICTED MANUAL

PERFORMANCE LEVEL

PL-1 COMMAND
 PL-1 INDICATION
 PL-2 COMMAND
 PL-2 INDICATION
 PL-3 COMMAND
 PL-3 INDICATION
 PL-4 COMMAND
 PL-4 INDICATION
 PL-5 COMMAND
 PL-5 INDICATION

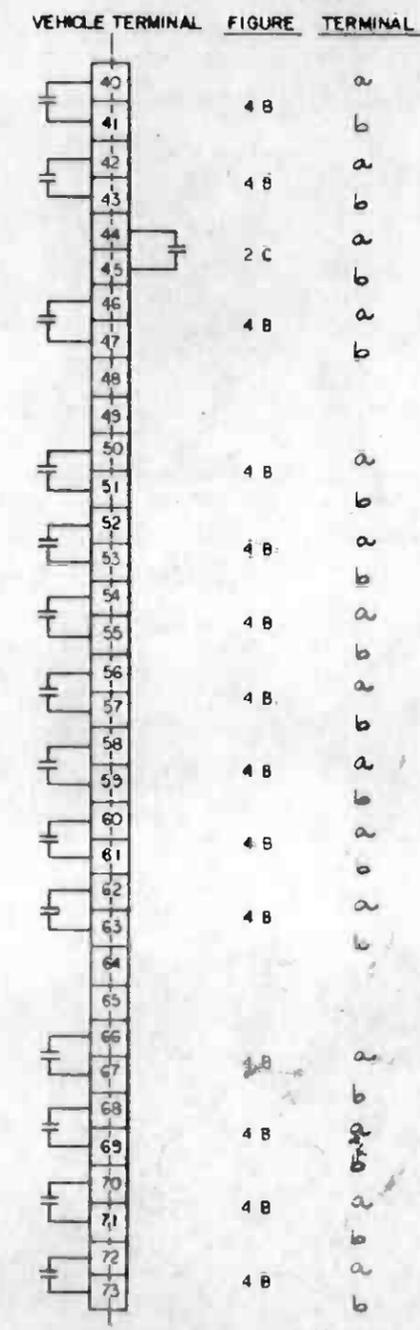
(SEE INTERFACE DWG. NS-007)



LEAD DESIGNATION

SIDE DOOR OPEN
 SIDE DOOR CLOSED
 DWELL EXPIRED
 DOORS CLOSED BYPASS
 PROPULSION FAILURE
 PROPULSION CUTOUT
 SERVICE BRAKE FAILURE
 PARKING BRAKE ON
 FRICTION BRAKE CUTOUT
 ELECTRIC BRAKE CUTOUT
 EMERGENCY BRAKE ON
 AUXILIARY POWER FAILURE
 AIR COMPRESSOR CUTOUT
 UNINTENTIONAL MOVEMENT DETECTION BYPASS
 ZERO SPEED BYPASS

(SEE INTERFACE DWG. NS-007)



NOTE:
 1. SEE DWG. N-036 FOR NOTES.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY <i>R. Taylor</i> DRAWN BY <i>Eduardo Arach</i> CHECKED BY <i>B. Blahnik</i> IN CHARGE <i>DMB</i> DATE 6 APR 87		REGISTERED PROFESSIONAL ENGINEER No. 8911000 9-10-77 ELECTRICAL STATE OF CALIFORNIA		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT DMJM/PBOD/KE/HWA GENERAL CONSULTANTS APPROVED <i>Howard J. Cheliff</i>		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS TICU / PASSENGER VEHICLE INTERFACES		CONTRACT NO. A 640 DRAWING NO. N-083 SCALE NO SCALE SHEET NO. 36	
REV	DATE	BY	SUB	APP	DESCRIPTION	REV	DATE	BY	SUB	APP	DESCRIPTION		
					PROPOSAL ISSUE								

CIC TERMINAL STRIP

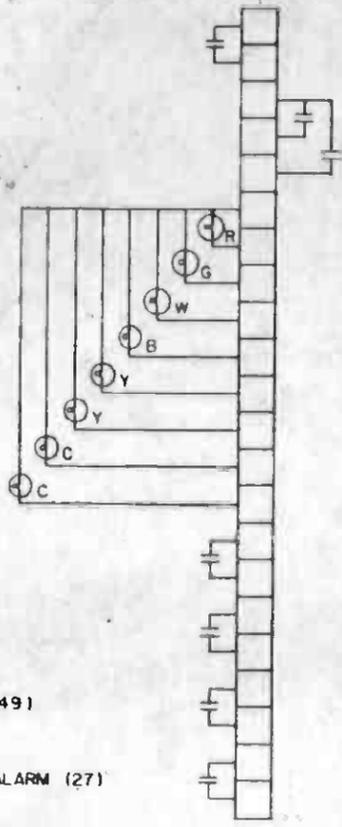
(SEE INTERFACE DWG. NS-007)

LEAD DESIGNATION

MONITORING CONNECTIONS CONTROL CONNECTIONS

FIGURE TERMINAL

- IN LOCAL CONTROL (69)
- DELUGE SYSTEM START REMOTE /ON (EMP)
- (TROUBLE)
- (LOW PRESS)
- (VALVE CLOSED)
- (VALVE CLOSED)
- (OVERLOAD)
- (LOSS OF CONTROL POWER)
- TROUBLE ALARM (62)
- WATER FLOWING (FL)
- MOTOR OVERLOAD ALARM (49)
- LOSS OF CONTROL POWER ALARM (27)



FIRE PUMPS

FIGURE	TERMINAL
4B	a
	b
2D	a
2D	b
1D	a
1D	b
4B	a
	b
4B	a
	b
4B	a
	b
4B	a
	b

CIC TERMINAL STRIP (CONTRACT INTERFACE) (SEE NOTE 1, TYP.)

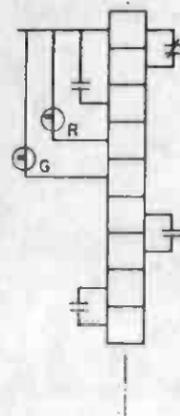
(SEE INTERFACE DWG. NS-007)

LEAD DESIGNATION

MONITORING CONNECTIONS CONTROL CONNECTIONS

FIGURE TERMINAL

- FIRE SHUTDOWN CS / LOCAL CONTROL
- DN (RCC)
- TROUBLE ALARM



CROSS PASSAGE VENTILATION

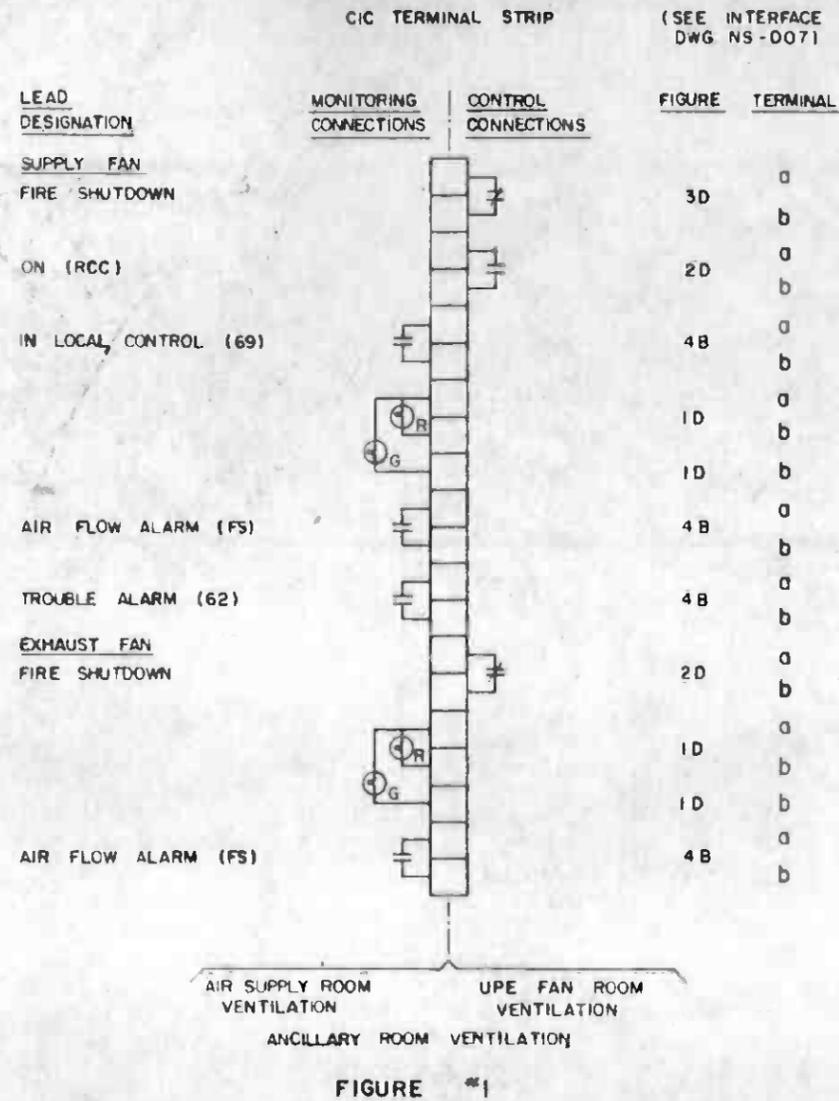
FIGURE	TERMINAL
3D	a a
2D	b
1D	b
1D	b
2D	a
	b
4B	a
	b

NOTE:

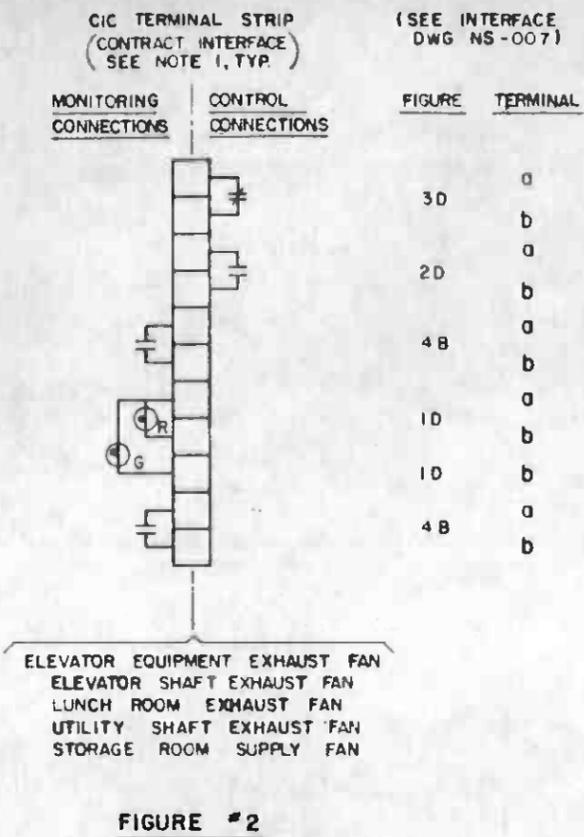
1. SEE DWG. N-036 FOR NOTES.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>B. Blahut</i> DRAWN BY <i>A. Vlachov</i> CHECKED BY <i>R. Hanks</i> DATE <i>6 APR 87</i>		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS SCADA / FACILITIES ELECTRICAL INTERFACES	CONTRACT NO. A640 DRAWING NO. N-084 SCALE NO SCALE SHEET NO. 37
REV. DATE BY SUB APP DESCRIPTION	REV. DATE BY SUB APP DESCRIPTION	PROPOSAL ISSUE		SUBMITTED <i>P. M. Berger</i>	APPROVED <i>Harold J. Chaff</i> DMJM/PBQD/KE/HWA GENERAL CONSULTANTS		



MISCELLANEOUS ANCILLARY ROOM VENTILATION



NOTE:
1. SEE DWG N-036 FOR NOTES.

EXCEPTIONS TO SCADA POINT ASSIGNMENTS

CONTRACT	FIGURE #1 FANS	EXCEPTION
A136	AIR SUPPLY ROOM, UPE FAN ROOM	NO AIR FLOW ALARM
CONTRACT	FIGURE #2 FAN	EXCEPTION
A136	ELEVATOR EQUIPMENT ROOM	NO AIR FLOW ALARM



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, UNDER THE TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>B. Blahuly</i> DRAWN BY <i>A. Brokurov</i> CHECKED BY <i>R. Kahan</i> IN CHARGE <i>B. Blahuly</i> DATE 6 APR 87	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS SCADA / FACILITIES ELECTRICAL INTERFACES	CONTRACT NO A640 DRAWING NO N-085 SCALE NO SCALE SHEET NO 38
DESIGNED BY <i>B. Blahuly</i> DRAWN BY <i>A. Brokurov</i> CHECKED BY <i>R. Kahan</i> IN CHARGE <i>B. Blahuly</i> DATE 6 APR 87		DMJM/PBQD/KE/HWA GENERAL CONSULTANTS APPROVED <i>David Schaff</i>	CONTRACT NO A640 DRAWING NO N-085 SCALE NO SCALE SHEET NO 38		

CIC TERMINAL STRIP (SEE INTERFACE DWG NS-007)

LEAD DESIGNATION	MONITORING CONNECTIONS	CONTROL CONNECTIONS	FIGURE	TERMINAL
EXHAUST FAN ON (RCC)			2D	a
FCP CONTROL			2D	b
IN LOCAL CONTROL (69)			4B	a
				b
			10	a
			1D	b
MOTOR OVERLOAD ALARM (49)			4B	a
				b
AIR FLOW ALARM (FS)			4B	a
SUPPLY FAN				b
FIRE SHUTDOWN			3D	a
				b
			1D	a
			1D	b
MOTOR OVERLOAD ALARM (49)			4B	a
				b
AIR FLOW ALARM (FS)			4B	a
				b
FIRE / SMOKE DAMPERS				
FIRE SHUTDOWN			3B	a
				b
OPEN (EMP)			2D	a
				b
			1D	a
			1D	b
FIRE SHUTDOWN			3B	a
				b
OPEN (EMP)			2D	a
				b
			1D	a
			1D	b

CHILLER ROOM VENTILATION

CIC TERMINAL STRIP (CONTRACT INTERFACE) (SEE NOTE 1, TYP) (SEE INTERFACE DWG NS-007)

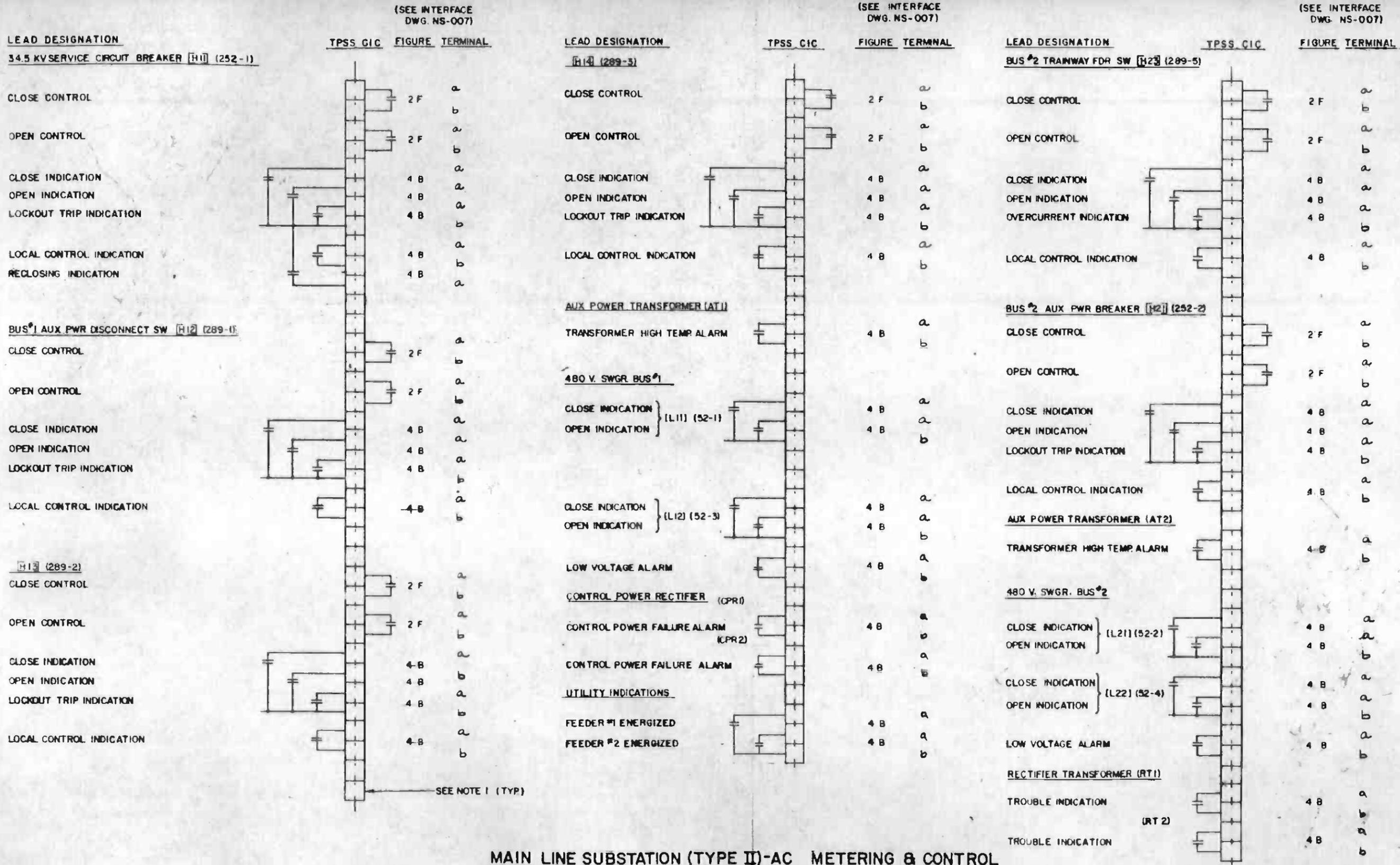
LEAD DESIGNATION	MONITORING CONNECTIONS	CONTROL CONNECTIONS	FIGURE	TERMINAL
FIRE SHUTDOWN			3D	a
				b
EXHAUST FAN			1D	a
			1D	b
				b
AIR FLOW ALARM (FS)			4B	a
				b

EMERGENCY FAN ROOM VENTILATION

NOTE:
1. SEE DWG. N-036 FOR NOTES.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>B. B. B...</i> DRAWN BY <i>A. V. V...</i> CHECKED BY <i>K. K. K...</i> IN CHARGE <i>B. B. B...</i> DATE 6 APR 87		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS SCADA / FACILITIES ELECTRICAL INTERFACES CONTRACT NO. A 640 DRAWING NO. N-086 SCALE NO SCALE SHEET NO 39	
REV DATE BY SUB APP DESCRIPTION		PROPOSAL ISSUE		DMJM/PBOD/KE/HWA GENERAL CONSULTANTS APPROVED <i>[Signature]</i>		SUBMITTED <i>[Signature]</i>	



MAIN LINE SUBSTATION (TYPE II)-AC METERING & CONTROL

I. SEE DWG. N-036 FOR NOTES.

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IS PART OF THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY <i>R. Hahn</i> DRAWN BY <i>Edward Proctor</i> CHECKED BY <i>G. D. ...</i> IN CHARGE <i>...</i> DATE 10 JAN 86				SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS SCADA / TRACTION POWER INTERFACES		CONTRACT NO. A640 DRAWING NO. N-076 REV. NO. 0 SCALE NO SCALE SHEET NO. 40	
REV. DATE BY SUB APP DESCRIPTION	PROPOSAL ISSUE												



(SEE INTERFACE DWG NS-007)

LEAD DESIGNATION

34.5 KV. SERVICE CIRCUIT BREAKER [H11] (292-1)

TPSS CIC
(SEE NOTE 1 TYR)

FIGURE TERMINAL

CLOSE CONTROL

2F a

OPEN CONTROL

2F a

CLOSE INDICATION

4B a

OPEN INDICATION

4B a

LOCKOUT TRIP INDICATION

4B b

LOCAL CONTROL INDICATION

4B a

RECLOSING INDICATION

4B a

BUS #1 AUX. PWR. DISCONNECT SWITCH [H12] (289-1)

CLOSE CONTROL

2F a

OPEN CONTROL

2F b

CLOSE INDICATION

4B a

OPEN INDICATION

4B a

LOCKOUT TRIP INDICATION

4B b

LOCAL CONTROL INDICATION

4B a

[H13] (289-2)

CLOSE CONTROL

2F a

OPEN CONTROL

2F a

CLOSE INDICATION

4B a

OPEN INDICATION

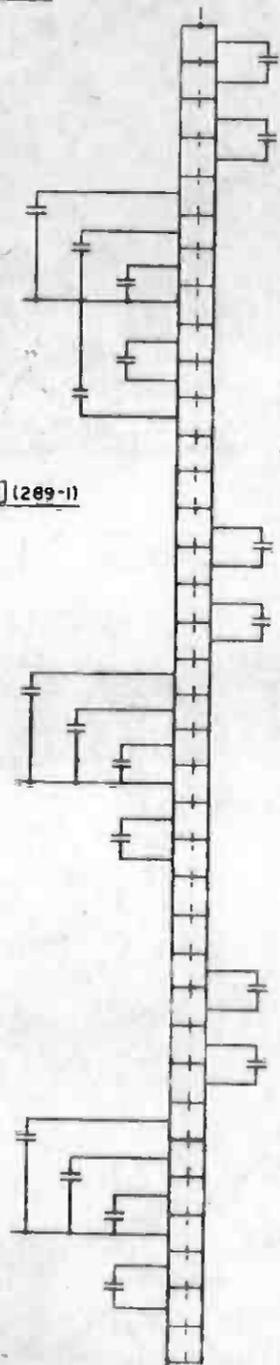
4B a

LOCKOUT TRIP INDICATION

4B a

LOCAL CONTROL INDICATION

4B a



(SEE INTERFACE DWG NS-007)

LEAD DESIGNATION

AUX POWER TRANSFORMER (AT1)

TRANSFORMER HIGH TEMP. ALARM

480V. SWITCHGEAR BUS #1

CLOSE INDICATION } [L11] (52-1)
OPEN INDICATION }

CLOSE INDICATION } [L12] (52-3)
OPEN INDICATION }

CLOSE INDICATION } [L13] (52-5)
OPEN INDICATION }

LOW VOLTAGE ALARM

125 VDC RECTIFIER (CPR 1)

CONTROL POWER
FAILURE ALARM

RECTIFIER TRANSFORMER (RTJ)

TROUBLE INDICATION

TPSS CIC

FIGURE TERMINAL

4B a

4B b

4B a

4B a

4B a

4B a

4B a

4B b

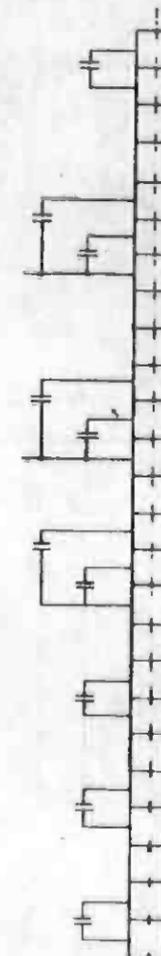
4B a

4B a

4B a

4B b

4B a



NOTE:
1. SEE DWG. N-036 FOR NOTES.

MAIN LINE SUBSTATION (TYPE I) - AC METERING & CONTROL



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DESIGNED BY
R. Holden
DRAWN BY
Edmund Proctor
CHECKED BY
B. Blakely
IN CHARGE
AM Burgess
DATE
16 JAN 86



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT



DMJM/PBOD/KE/HWA
GENERAL CONSULTANTS

SUBMITTED *Ellis*

APPROVED *Howard J. Sheliff*

LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
SCADA / TRACTION POWER
INTERFACES

CONTRACT NO.
A 640
DRAWING NO.
N-079
SCALE
NO SCALE
SHEET NO.
43

REV	DATE	BY	SUB	APP	DESCRIPTION

REV	DATE	BY	SUB	APP	DESCRIPTION

PROPOSAL ISSUE

LEAD DESIGNATION

CIC #4 UNION STATION
TERMINAL STRIP

LEAD DESIGNATION

CIC #4 UNION STATION
TERMINAL STRIP

DIS 1

MONITORING CONNECTIONS

CONTROL CONNECTIONS

MDS-03

MONITORING CONNECTIONS

CONTROL CONNECTIONS

CLOSE CONTROL

2F a

CLOSE CONTROL

20 a

OPEN CONTROL

2F b

OPEN CONTROL

20 a

CLOSE INDICATION

4B a

CLOSE INDICATION

4B a

OPEN INDICATION

4B b

OPEN INDICATION

4B b

MDS-01

CONTACT RAIL
DE-ENERGIZE CONTROL

20 b

CLOSE CONTROL

20 a

MDS-04

20 a

OPEN CONTROL

20 b

CLOSE CONTROL

20 b

CLOSE INDICATION

4B a

OPEN CONTROL

20 b

OPEN INDICATION

4B b

CLOSE INDICATION

4B a

CONTACT RAIL
DE-ENERGIZE CONTROL

20 b

OPEN INDICATION

4B b

MDS-02

MDS-05

CLOSE CONTROL

20 a

CLOSE CONTROL

20 a

OPEN CONTROL

20 b

OPEN CONTROL

20 b

CLOSE INDICATION

4B a

CLOSE INDICATION

4B a

OPEN INDICATION

4B b

OPEN INDICATION

4B b

SEE NOTE 1 (TYP)

NOTE:

1. SEE DWG. N-Q36 FOR NOTES.

UNION STATION DISCONNECT SWITCHES METERING AND CONTROL



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA

DESIGNED BY
R. Harkin
DRAWN BY
Acosta/Vinson
CHECKED BY
B. J. [unclear]
DATE
10 JUL 86



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT



DMJM/PBOD/KE/HWA
GENERAL CONSULTANTS

LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
SCADA/TRACTION POWER
INTERFACES

CONTRACT NO. A640
DRAWING NO. N-082
SCALE: NO SCALE
SHEET NO. 45

REV 4-87 EAA PROPOSAL ISSUE

APPROVED *[Signature]*

APPROVED *[Signature]*

(SEE INTERFACE
DWG. NS-007)

(SEE INTERFACE
DWG. NS-007)

(SEE INTERFACE
DWG. NS-007)

LEAD DESIGNATION

CJB-1 FIGURE TERMINAL

LEAD DESIGNATION

CJB-2 FIGURE TERMINAL

LEAD DESIGNATION

CJB-3 FIGURE TERMINAL

YDS 33
OPEN CONTROL
CLOSE CONTROL
OPEN INDICATION
CLOSE INDICATION
YDS 33,34,42
SOLENOID CONTROL
YDS 36
OPEN CONTROL
CLOSE CONTROL
OPEN INDICATION
CLOSE INDICATION
YDS 36,39,41
SOLENOID CONTROL

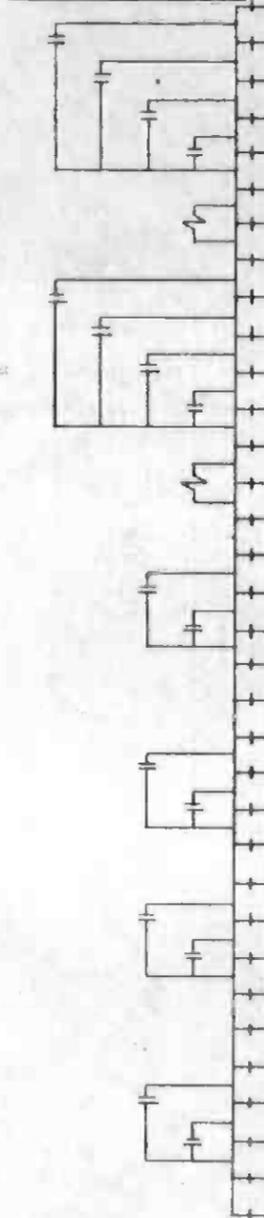
YDS 34
OPEN INDICATION
CLOSE INDICATION

YDS 42
OPEN INDICATION
CLOSE INDICATION

YDS 39
OPEN INDICATION
CLOSE INDICATION

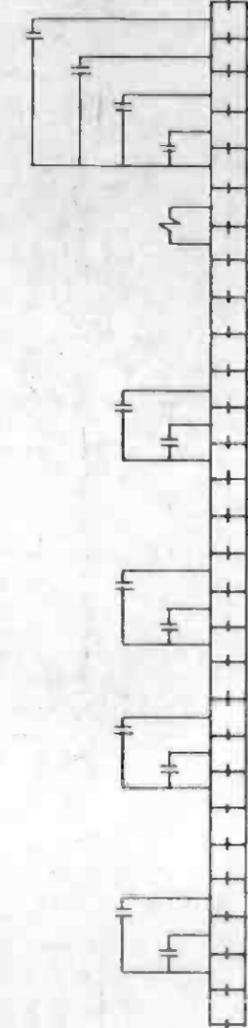
YDS 41
OPEN INDICATION
CLOSE INDICATION

MONITORING CONNECTIONS



4B a
4B a
4B a
4B a
b
(TBD)
4B a
4B a
4B a
4B a
b
(TBD)
4B a
4B a
b
4B a
4B a
b
4B a
4B a
b
4B a
4B a
b

MONITORING CONNECTIONS



YDS 01
OPEN CONTROL
CLOSE CONTROL
OPEN INDICATION
CLOSE INDICATION
YDS 01,02,03,06,07
SOLENOID CONTROL

YDS 02
OPEN INDICATION
CLOSE INDICATION

YDS 03
OPEN INDICATION
CLOSE INDICATION

YDS 06
OPEN INDICATION
CLOSE INDICATION

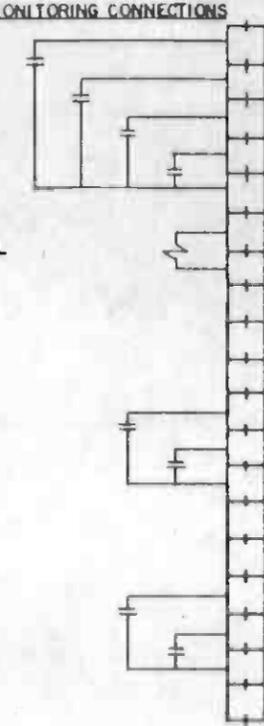
YDS 07
OPEN INDICATION
CLOSE INDICATION

4B a
4B a
4B a
4B a
b
(TBD)
4B a
4B a
b
4B a
4B a
b
4B a
4B a
b
4B a
4B a
b

YDS 23
OPEN CONTROL
CLOSE CONTROL
OPEN INDICATION
CLOSE INDICATION
YDS 23,25,26
SOLENOID CONTROL

YDS 25
OPEN INDICATION
CLOSE INDICATION

YDS 26
OPEN INDICATION
CLOSE INDICATION



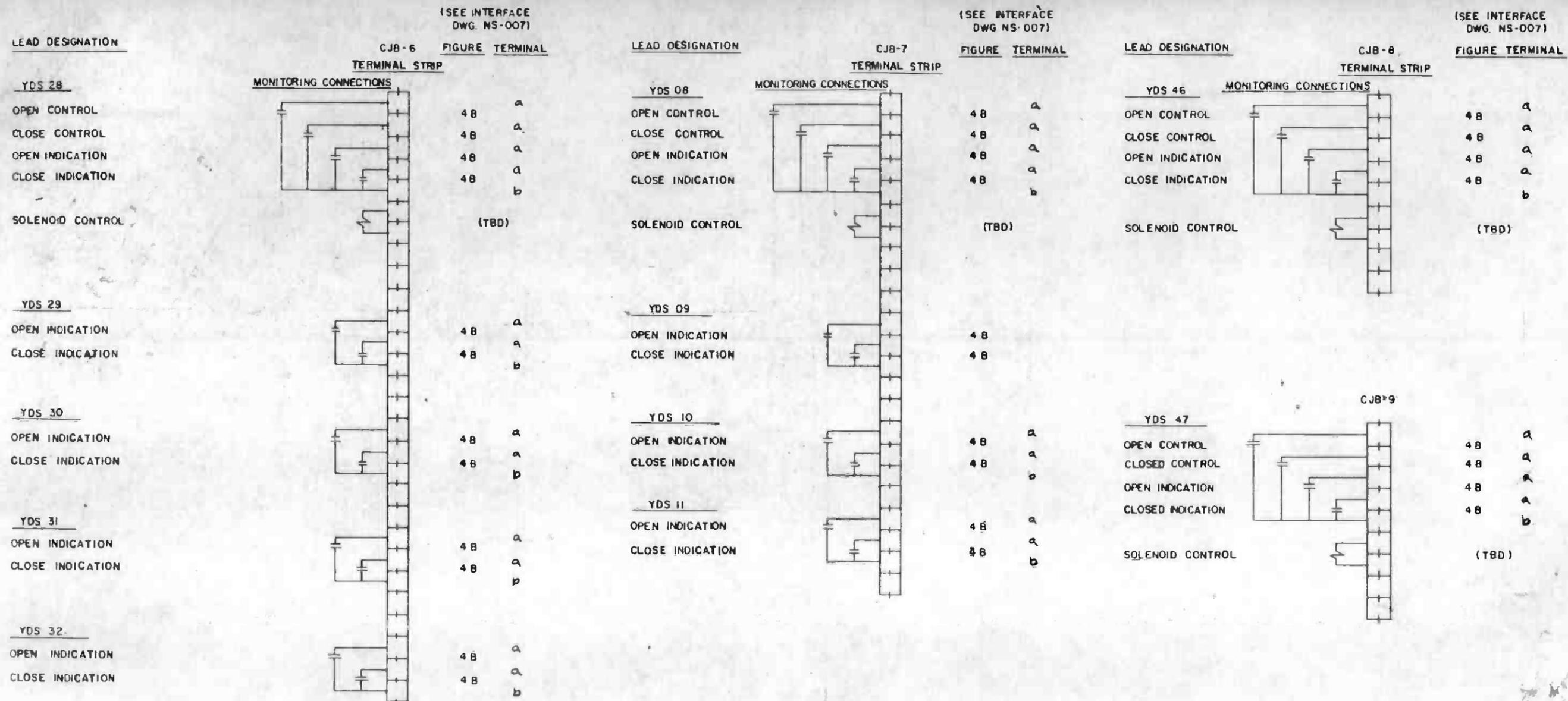
4B a
4B a
4B a
4B a
b
(TBD)
4B a
4B a
b
4B a
4B a
b

YARD DISCONNECT SWITCHES METERING AND CONTROL



NOTE:
SEE DWG. N-036 FOR NOTES

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, UNDER MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY P.A. Maxwell DRAWN BY T. Conroy CHECKED BY R. H. ... DATE 6 APR 87	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	DMJM/PBOD/KE/HWA GENERAL CONSULTANTS 	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS SCADA / TRACTION POWER INTERFACES CONTRACT NO. A 640 DRAWING NO. N-282 SCALE NO SCALE SHEET NO 47
4-4-87 RAN PROPOSAL ISSUE					



YARD DISCONNECT SWITCHES METERING AND CONTROL



NOTE:
SEE DWG. N-036 FOR NOTES

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.										DESIGNED BY C.A. HAMMOND DRAWN BY T. GARDNER CHECKED BY R. HARRIS IN CHARGE R. B. HARRIS DATE 6 APR 87				SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 			DMJM/PBOD/KE/HWA GENERAL CONSULTANTS APPROVED Howard K. Claff		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS SC ADA / TRACTION POWER INTERFACES		CONTRACT NO A 640 DRAWING NO N-283 SCALE NO SCALE SHEET NO 48	
DATE	BY	SUB	APP	DESCRIPTION	REV	DATE	BY	SUB	APP	DESCRIPTION												

LEAD DESIGNATION

(SEE INTERFACE DWG. NS-007)

YARD TPSS CIC
(SEE NOTE 1 TYP)

FIGURE TERMINAL

YARD TPSS CIC

FIGURE TERMINAL

YARD TPSS CIC

FIGURE TERMINAL

34.5 KV DISCONNECT SWITCHES
[H02] (289-2)

CLOSE CONTROL

OPEN CONTROL

CLOSE INDICATION

OPEN INDICATION

LOCKOUT TRIP INDICATION

LOCAL CONTROL INDICATION

[H03] (289-3)

CLOSE CONTROL

OPEN CONTROL

CLOSE INDICATION

OPEN INDICATION

LOCKOUT TRIP INDICATION

LOCAL CONTROL INDICATION

[H04] (289-4)

CLOSE CONTROL

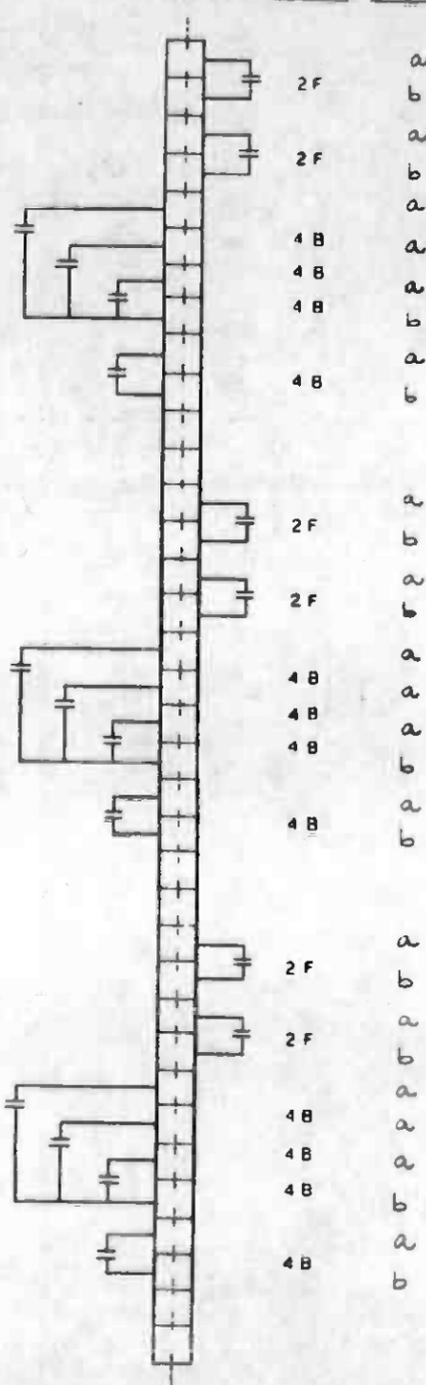
OPEN CONTROL

CLOSE INDICATION

OPEN INDICATION

LOCKOUT TRIP INDICATION

LOCAL CONTROL INDICATION



[H05] (289-5)

CLOSE CONTROL

OPEN CONTROL

CLOSE INDICATION

OPEN INDICATION

LOCKOUT TRIP INDICATION

LOCAL CONTROL INDICATION

[H06] (289-6)

CLOSE CONTROL

OPEN CONTROL

CLOSE INDICATION

OPEN INDICATION

LOCKOUT TRIP INDICATION

LOCAL CONTROL INDICATION

34.5 KV SERVICE CIRCUIT BREAKERS

[H07] (252-2)
CLOSE CONTROL

OPEN CONTROL

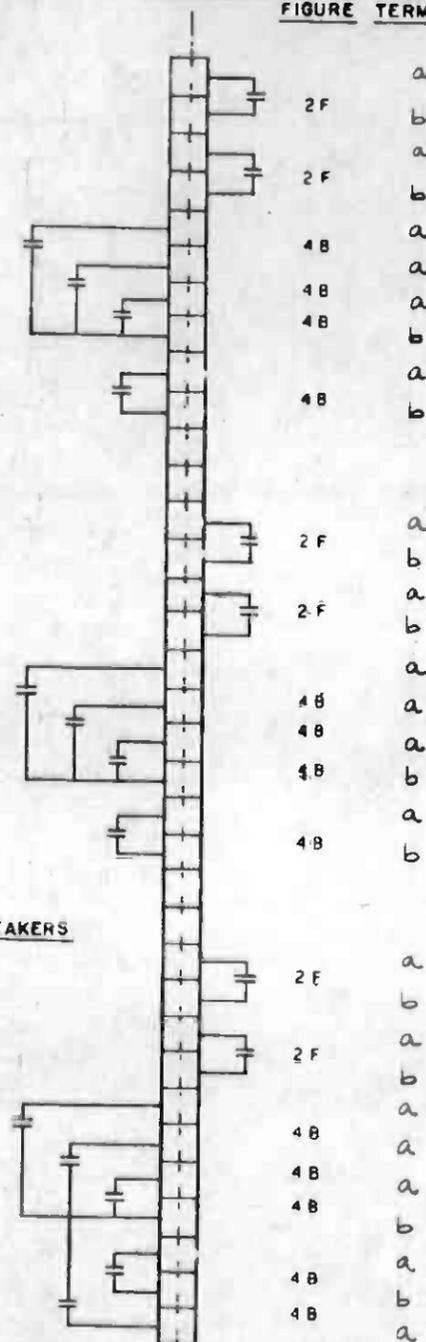
CLOSE INDICATION

OPEN INDICATION

LOCKOUT TRIP INDICATION

LOCAL CONTROL

RECLOSE INDICATION



[H09] (252-3)

CLOSE CONTROL

OPEN CONTROL

CLOSE INDICATION

OPEN INDICATION

LOCAL CONTROL INDICATION

D.C. CIRCUIT BREAKERS

[D02] (172-1)

CLOSE CONTROL

OPEN CONTROL

CLOSE INDICATION

OPEN INDICATION

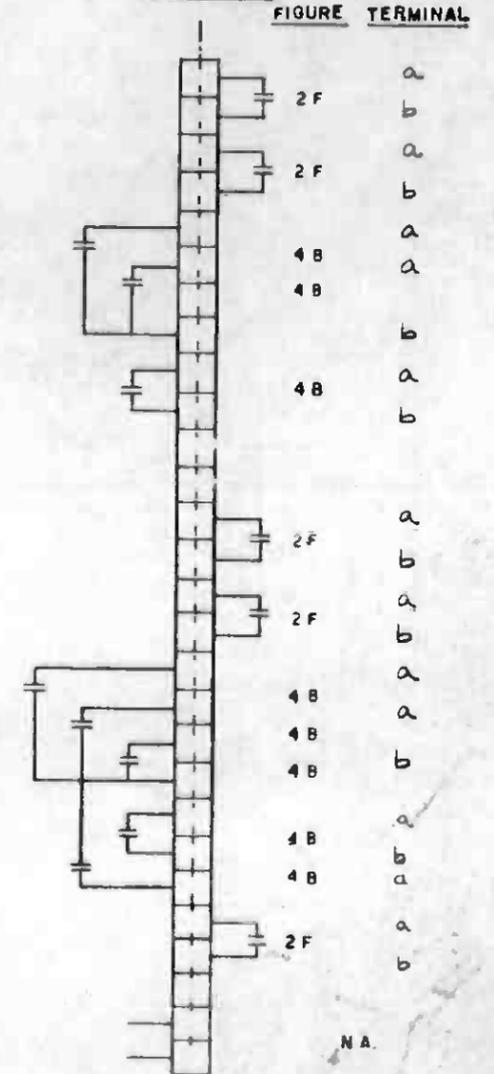
SWGR LOCKOUT TRIP

LOCAL CONTROL INDICATION

SWITCHGEAR GROUNDED

EMERGENCY TRIP CONTROL

DC BUS VOLTAGE (ANALOG)



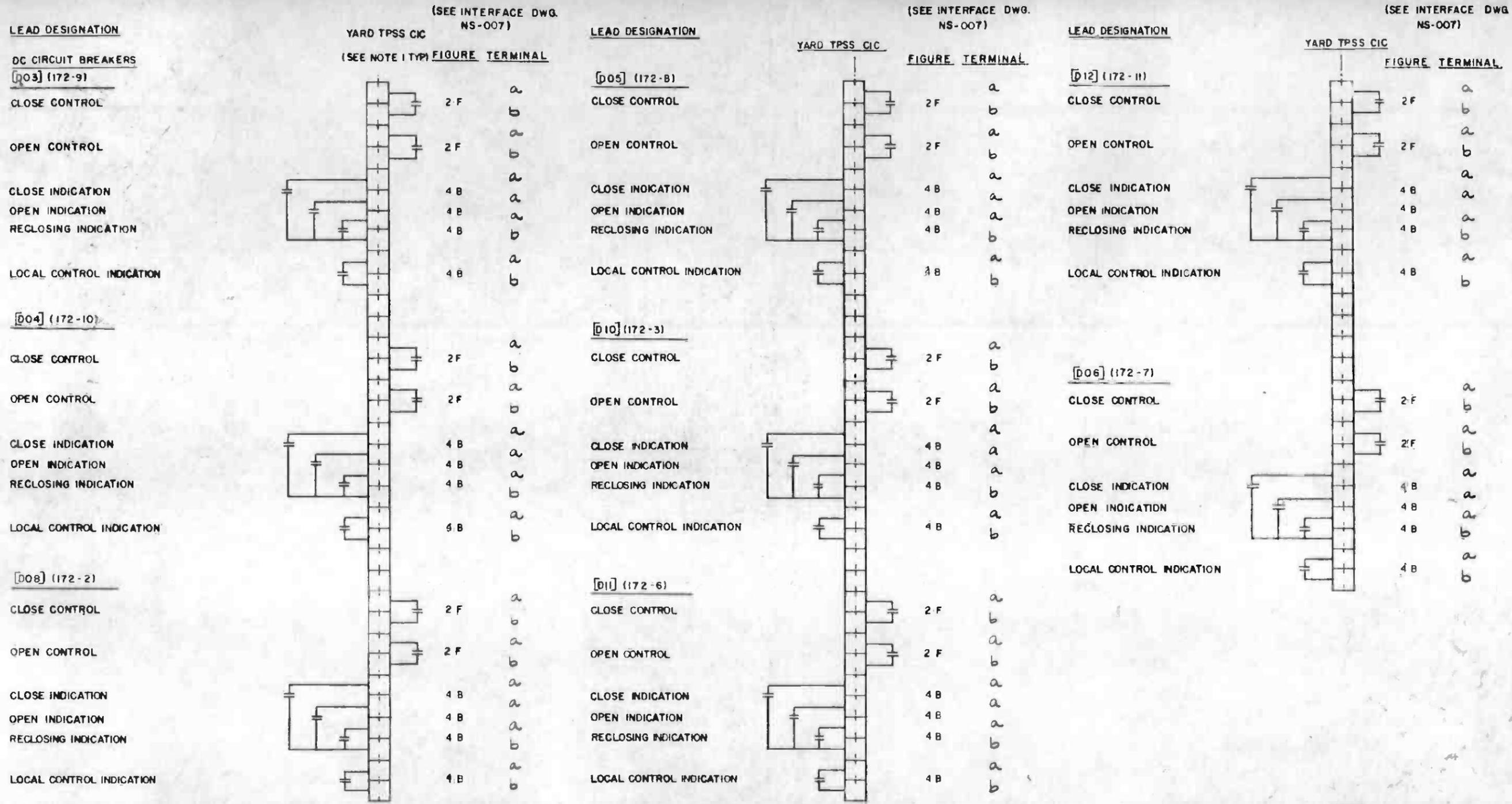
NOTE:

1. SEE DWG. N-036 FOR NOTES.

YARD SUBSTATION - METERING AND CONTROL



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY R. H. HANSEN DRAWN BY E. J. BROWN CHECKED BY D. J. BROWN IN CHARGE P. M. DUNN DATE 20 FEB 86	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT DTJM/PBQD/KE/MWA GENERAL CONSULTANTS APPROVED: [Signature]	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS SCADA / TRACTION POWER INTERFACES	CONTRACT NO. A640 DRAWING NO. N-096 SCALE NO SCALE SHEET NO. 49
REV.	DATE	BY	SUB.	APP.	DESCRIPTION
					PROPOSAL ISSUE



NOTE:
1. SEE DWG. N-036 FOR NOTES.

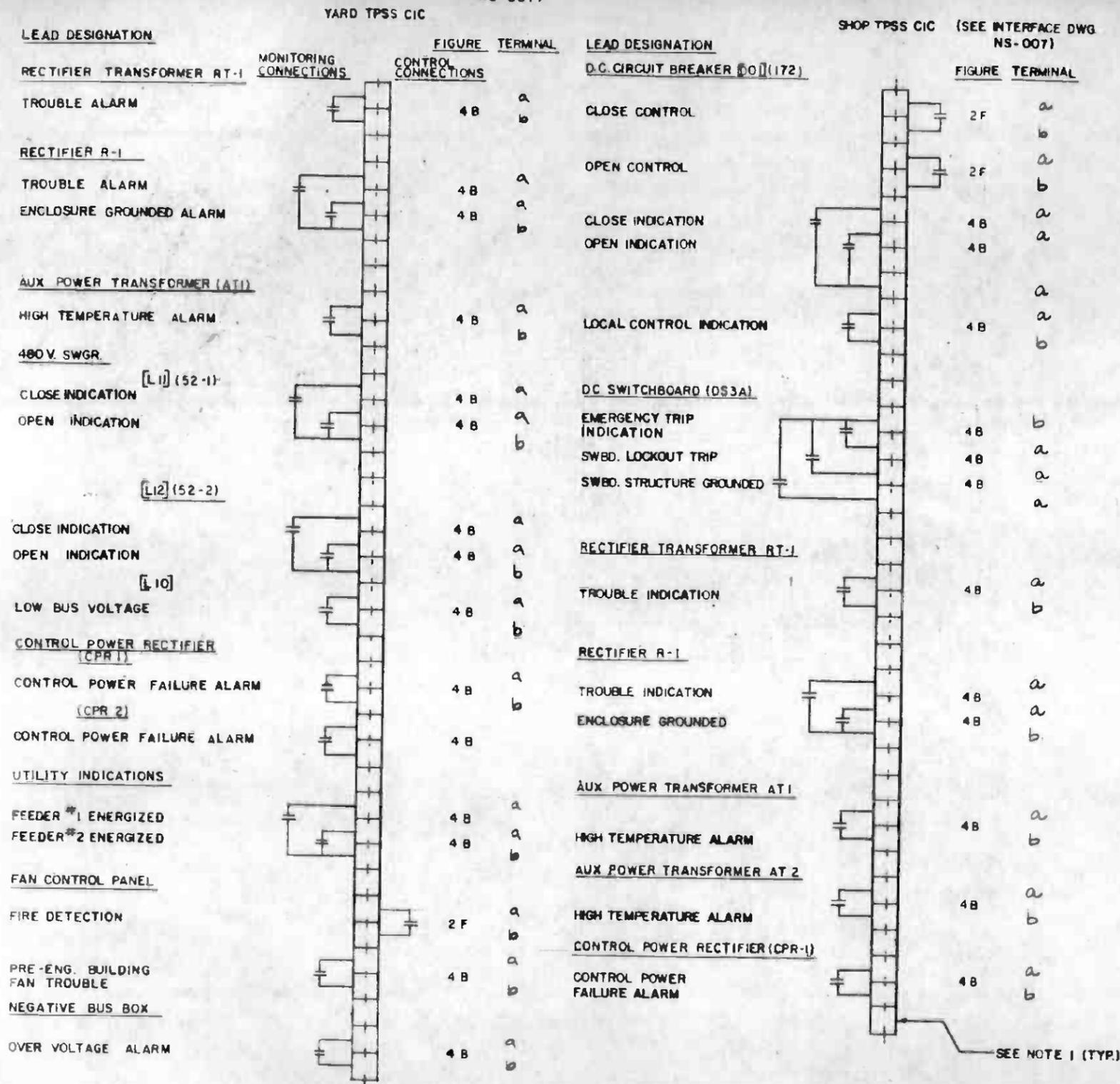


YARD SUBSTATION - METERING AND CONTROL

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>R. Hovden</i> DRAWN BY <i>Edward D. Smith</i> CHECKED BY <i>D. B. Daily</i> IN CHARGE <i>P. J. Bergman</i> DATE 24 FEB 86	REGISTERED PROFESSIONAL ENGINEER No. 6811980 9-10-85	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT DMJM/PBOD/KE/HWA GENERAL CONSULTANTS APPROVED: <i>Howard K. Kelly</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS SCADA / TRACTION POWER INTERFACES	CONTRACT NO. A640 DRAWING NO. N-097 SCALE NO SCALE SHEET NO. 50
REV. DATE BY SUB APP DESCRIPTION	REV. DATE BY SUB APP DESCRIPTION	PROPOSAL ISSUE		SUBMITTED <i>Ellis</i>	RTD	0

(SEE INTERFACE DWG. NS-007)

(SEE INTERFACE DWG. NS-007)



YARD SUBSTATION
METERING & CONTROL

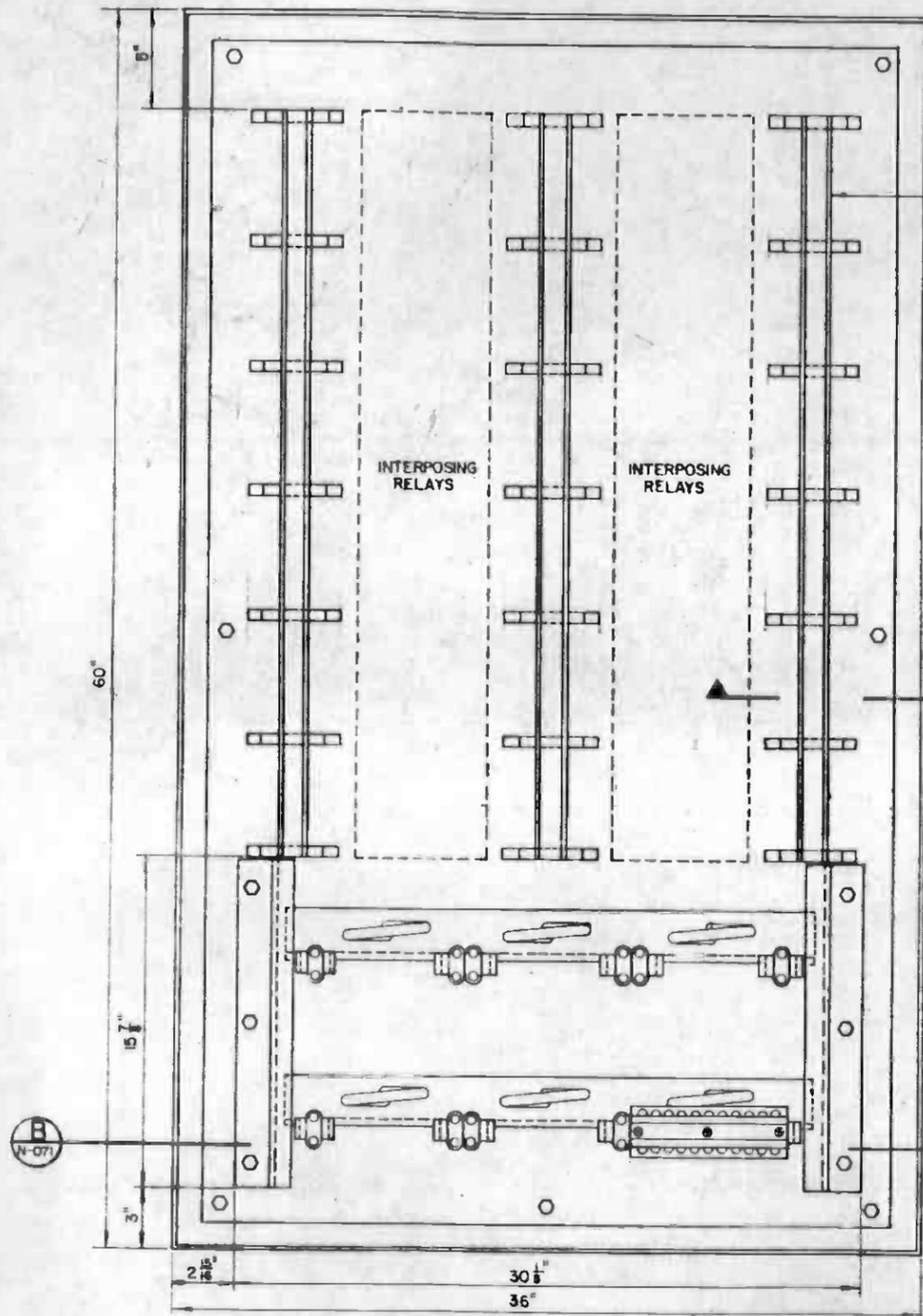
MAIN SHOP
METERING & CONTROL

NOTE:
1. SEE DWG. N-036 FOR NOTES.

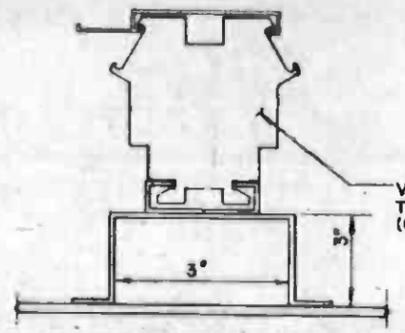


<p>THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, UNDER MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.</p>				<p>DESIGNED BY <i>R. H. ...</i></p> <p>DRAWN BY <i>Edmund ...</i></p> <p>CHECKED BY <i>B. ...</i></p> <p>IN CHARGE <i>M. ...</i></p> <p>DATE 26 FEB 86</p>		<p>REGISTERED PROFESSIONAL ENGINEER No. 181180 ELECTRICAL STATE OF CALIFORNIA</p>		<p>SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT</p> <p>DMJM/PBOD/KE/HWA GENERAL CONSULTANTS</p> <p>APPROVED <i>Howard ...</i></p>		<p>CONTRACT NO. A 640</p> <p>DRAWING NO. N-098</p> <p>SCALE NO SCALE</p> <p>SHEET NO. 51</p>	
REV	DATE	BY	SUN	APP.	DESCRIPTION	REV	DATE	BY	SUN	APP.	DESCRIPTION
					PROPOSAL ISSUE						

NOTES:
 1. TERMINAL BLOCK TRACK TERMINAL BLOCKS ARE NOT SHOWN FOR DRAWING CLARITY. FURNISH TERMINAL BLOCKS AS REQUIRED.



SEE NOTE 1

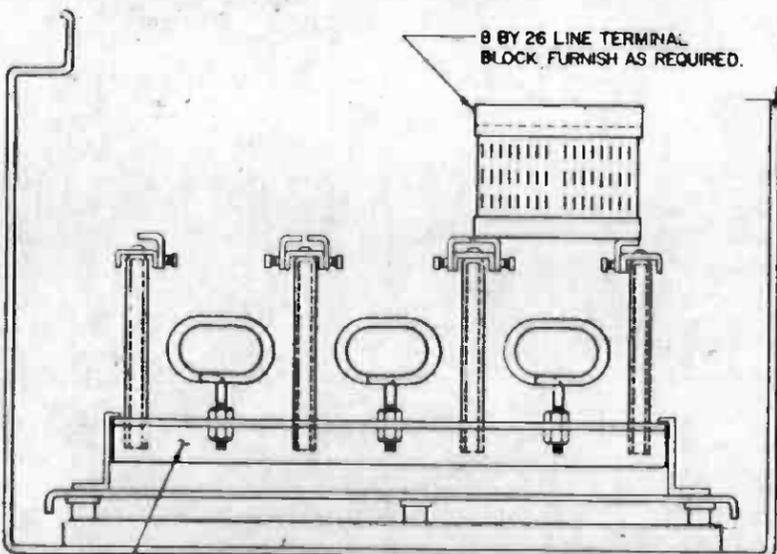


SEE NOTE 1

SECTION A

A
N-071

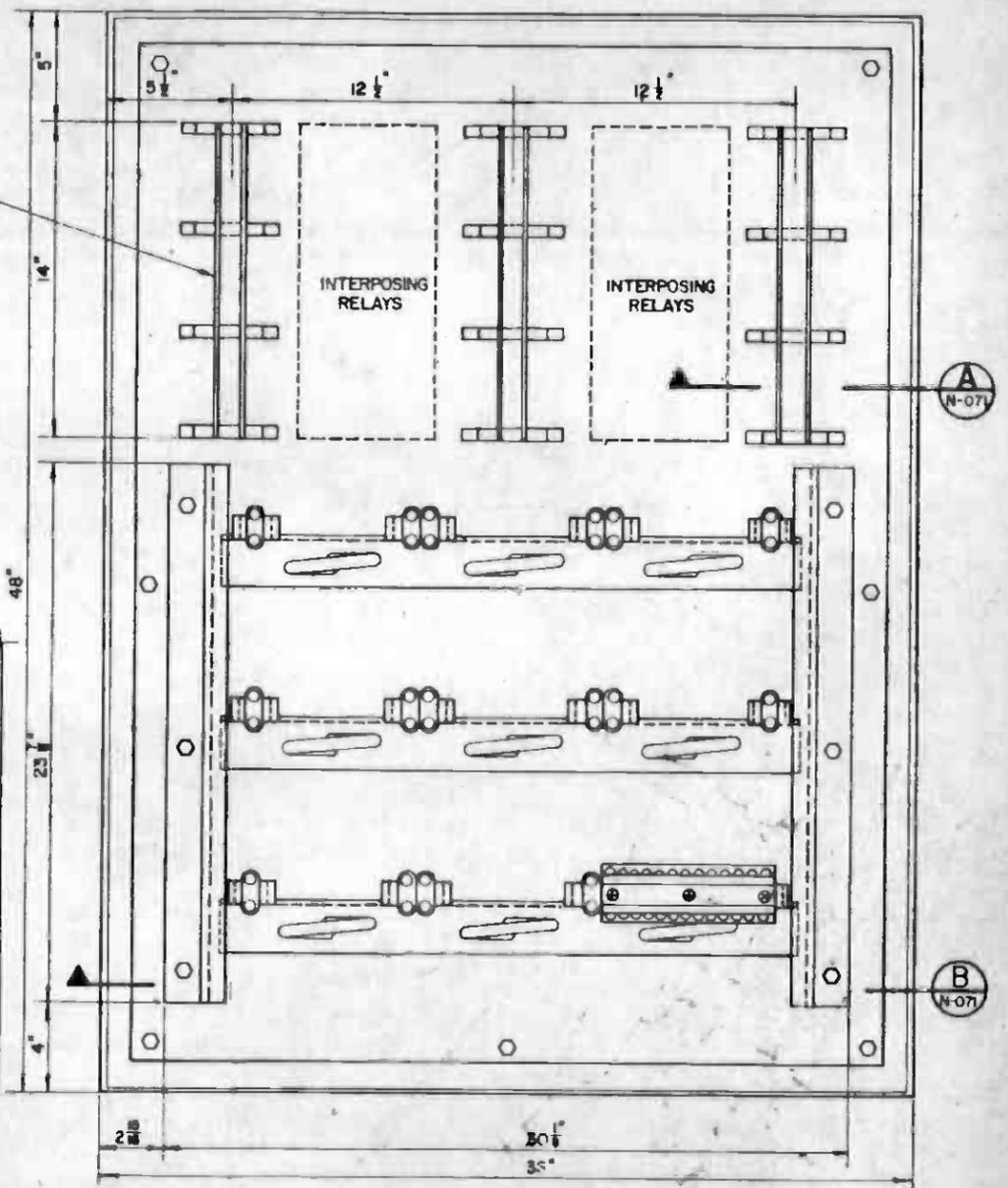
8 BY 26 LINE TERMINAL BLOCK, FURNISH AS REQUIRED.



SECTION B

B
N-071

NEWTON INSTRUMENT CO. FIG. 5055, (OR EQUIV)



HALF SIZE

REV. DATE BY SUB. APP.		DESCRIPTION	

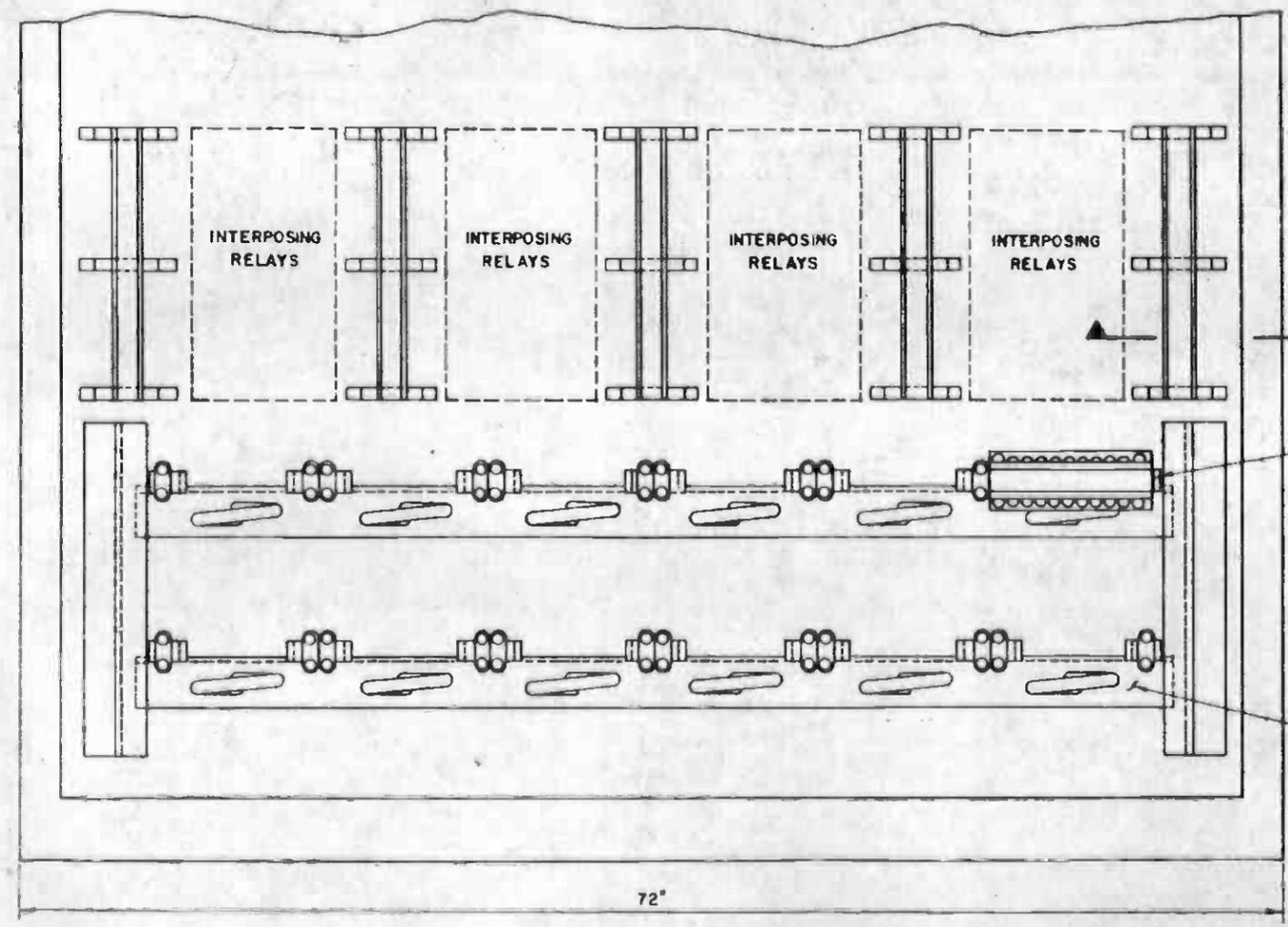
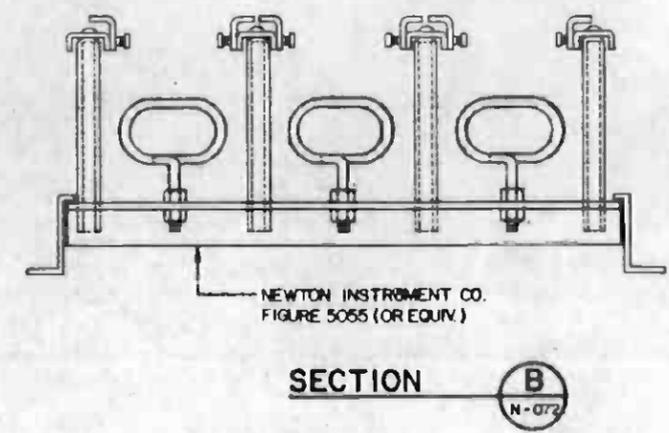
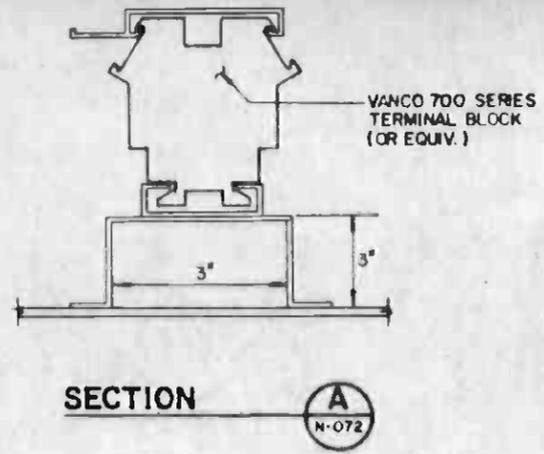
DESIGNED BY
M.R.T.C.
 DRAWN BY
B.B. [Signature]
 CHECKED BY
B.B. [Signature]
 IN CHARGE
B.B. [Signature]
 DATE
6 NOV 85



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
 METRO RAIL PROJECT
 DTJM/PBQD/KE/HWA
 GENERAL CONTRACTOR
 APPROVED: [Signature]

LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS INTERFACE CABINET SHEET 1 OF 2

CONTRACT NO.	A640
DRAWING NO.	N-071
REV.	0
SCALE	1/4" = 1"
SHEET NO.	53



8" X 26" LINE TERMINAL
BLOCK FURNISHED AS
REQUIRED.

NEWTON INSTRUMENT CO.
FIG. 5055 (OR EQUIV.)



REV.	DATE	BY	SUB.	APP.	DESCRIPTION

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DESIGNED BY
M.R.T.C.

DRAWN BY
A. V. ...

CHECKED BY
B. ...

IN CHARGE
C. ...

DATE
5 NOV 85

PROPOSAL ISSUE



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

DTD

DMJM/PBQD/KE/HWA
GENERAL CONSULTANTS

SUBMITTED *[Signature]*

APPROVED *[Signature]*

LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
INTERFACE CABINET
SHEET 2 OF 2

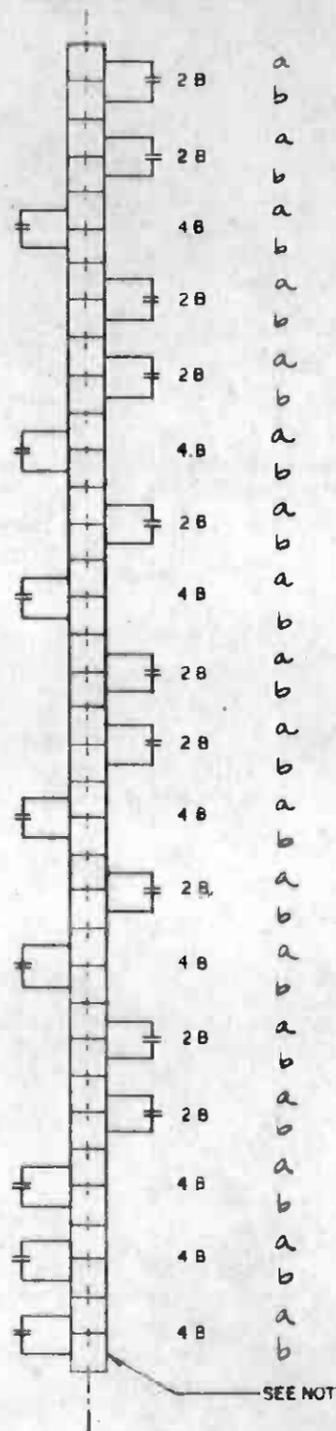
CONTRACT NO.	A640
DRAWING NO.	N-072
REV.	0
SCALE	1/4" = 1"
SHEET NO.	54

(SEE INTERFACE
DWG. NS-007)

LEAD DESIGNATION

SIGNAL # 2 CLEAR REQUEST
SIGNAL # 2 CANCEL REQUEST
SIGNAL # 2 CLEAR INDICATION
SIGNAL # 4 CLEAR REQUEST
SIGNAL # 4 CANCEL REQUEST
SIGNAL # 4 CLEAR INDICATION
SIGNAL # 4 CALL-ON REQUEST
SIGNAL # 4 CALL-ON INDICATION
SIGNAL # 6 CLEAR REQUEST
SIGNAL # 6 CANCEL REQUEST
SIGNAL # 6 CLEAR INDICATION
SIGNAL # 6 CALL-ON REQUEST
SIGNAL # 6 CALL-ON INDICATION
SIGNAL # 8 CLEAR REQUEST
SIGNAL # 8 CANCEL REQUEST
SIGNAL # 8 CLEAR INDICATION
A5 SIGNAL OVERRUN AR TRACK INDICATION
A5 SIGNAL OVERRUN AL TRACK INDICATION

TC/C CIR FIGURE TERMINAL
TERMINAL STRIP

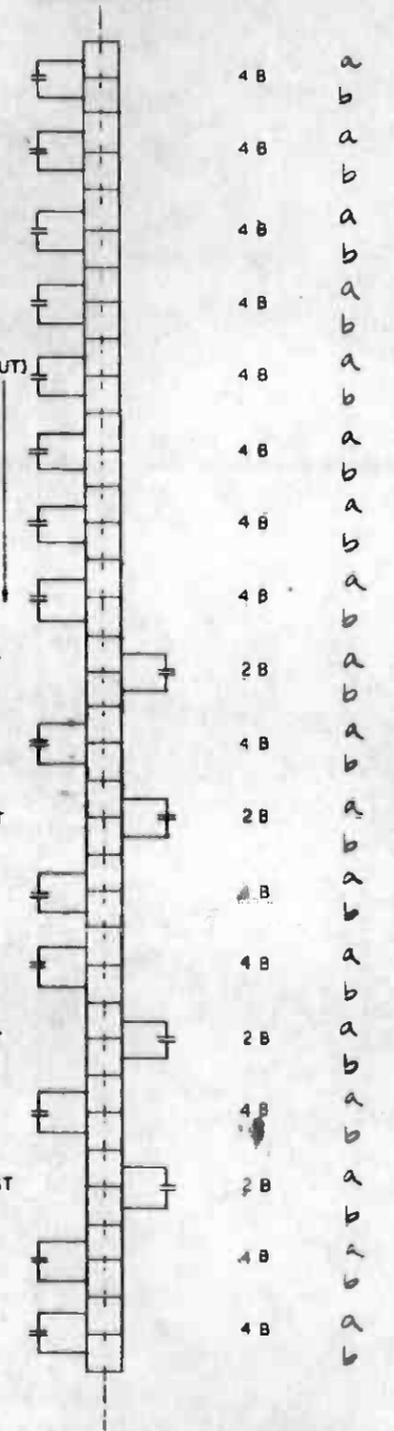


SEE NOTE 1 (TYP)

LEAD DESIGNATION

A1 - A5 TRAFFIC NORMAL AR TRACK INDICATION
A1 - A5 TRAFFIC REVERSE AR TRACK INDICATION
A1 - A5 TRAFFIC NORMAL AL TRACK INDICATION
A1 - A5 TRAFFIC REVERSE AL TRACK INDICATION
A5 - TRAFFIC NORMAL AR TRACK (FUT) INDICATION
A5 - TRAFFIC REVERSE AR TRACK INDICATION
A5 - TRAFFIC NORMAL AL TRACK INDICATION
A5 - TRAFFIC REVERSE AL TRACK INDICATION
SWITCHES # 1A & B NORMAL REQUEST
SWITCHES # 1A & B NORMAL CORRESPONDENCE INDICATION
SWITCHES # 1A & B REVERSE REQUEST
SWITCHES # 1A & B REVERSE CORRESPONDENCE INDICATION
SWITCHES # 1A & B LOCK INDICATION
SWITCHES # 3A & B NORMAL REQUEST
SWITCHES # 3A & B NORMAL CORRESPONDENCE INDICATION
SWITCHES # 3A & B REVERSE REQUEST
SWITCHES # 3A & B REVERSE CORRESPONDENCE INDICATION
SWITCHES # 3A & B LOCK INDICATION

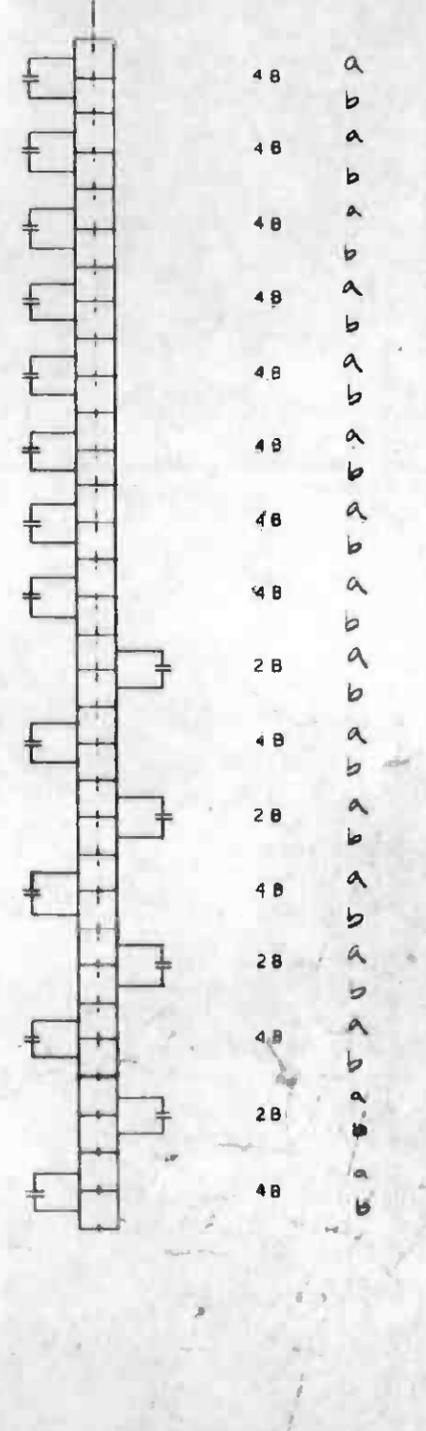
TC/C CIR FIGURE TERMINAL
TERMINAL STRIP



LEAD DESIGNATION

A5 ROUTE LOCKING AR EAST INDICATION
A5 ROUTE LOCKING AR WEST INDICATION
A5 ROUTE LOCKING AL EAST INDICATION
A5 ROUTE LOCKING AL WEST INDICATION
A5 PLATFORM ROUTE LOCKING AR EAST INDICATION
A5 PLATFORM ROUTE LOCKING AR WEST INDICATION
A5 PLATFORM ROUTE LOCKING AL EAST INDICATION
A5 PLATFORM ROUTE LOCKING AL WEST INDICATION
AUTOMATIC TERMINAL MODE # 1 REQUEST
AUTOMATIC TERMINAL MODE # 1 INDICATION
AUTOMATIC TERMINAL MODE # 2 REQUEST
AUTOMATIC TERMINAL MODE # 2 INDICATION
AUTOMATIC TERMINAL MODE # 3
AUTOMATIC TERMINAL MODE # 3 INDICATION
MANUAL TERMINAL MODE REQUEST
MANUAL TERMINAL MODE INDICATION

TC/C CIR FIGURE TERMINAL
TERMINAL STRIP



WILSHIRE / ALVARADO STATION

NOTE:
1. SEE DWG. N-036 FOR NOTES.



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DESIGNED BY
R. H. H. H.
CHECKED BY
B. B. B. B.
IN CHARGE
B. B. B. B.
DATE
15 MAY 86



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT



DMJM/PBOD/KE/HWA
GENERAL CONSULTANTS

LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
AUTOMATIC TRAN CONTROL
INTERFACES

CONTRACT NO. A640
DRAWING NO. N-136
SCALE: NO SCALE
SHEET NO. 56

REV.	DATE	BY	APP.	DESCRIPTION

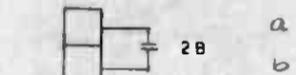
REV. DATE BY APP. DESCRIPTION
1 4/21/86 PROPOSAL ISSUE

(SEE INTERFACE
DWG. NS-007)

LEAD DESIGNATION

TC/C CIR
TERMINAL STRIP

LOCAL PANEL CONTROL ENABLE



2B a

LOCAL CONTROL REQUEST
INDICATION



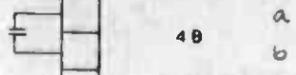
4B a

LOCAL CONTROL INDICATION



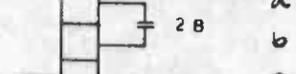
4B a

EMERGENCY LOCAL CONTROL
INDICATION



4B a

RCC CONTROL



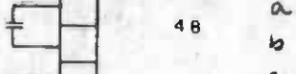
2B a

RCC CONTROL REQUEST
INDICATION



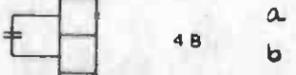
4B a

RCC CONTROL INDICATION



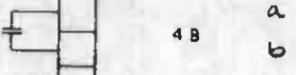
4B a

TRAIN STOP NORMAL - AR
INDICATION



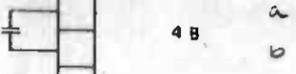
4B a

TRAIN STOP REVERSE - AR
INDICATION



4B a

TRAIN STOP NORMAL - AL
INDICATION



4B a

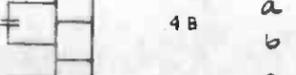
TRAIN STOP REVERSE - AL
INDICATION



4B a

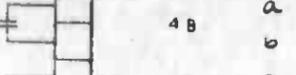
(42 INDICATIONS)

AC POWER FAILURE INDICATION



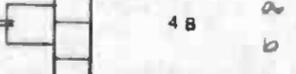
4B a

DC POWER FAILURE INDICATION



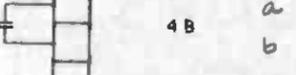
4B a

BLOWN FUSE INDICATION



4B a

GROUND FAULT INDICATION



4B a

SEE NOTE 1 (TYP)

LEAD DESIGNATION

TC/C CIR
TERMINAL STRIP

CONTACT RAIL DE-ENERGIZED
AR TRACK EASTBOUND INDICATION



4B a

CONTACT RAIL DE-ENERGIZED
AR TRACK WESTBOUND INDICATION



4B a

CONTACT RAIL DE-ENERGIZED
AL TRACK EASTBOUND INDICATION



4B a

CONTACT RAIL DE-ENERGIZED
AL TRACK WESTBOUND INDICATION



4B a

ALARM ACKNOWLEDGE



2B a

ALARM ACKNOWLEDGE
INDICATION



4B a

TRACK OCCUPIED
INDICATION



4B a

4B a

4B a

4B a

NOTE:

1. SEE DWG. N-036 FOR NOTES.

WILSHIRE / ALVARADO STATION



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DESIGNED BY
DRAWN BY
CHECKED BY
IN CHARGE
DATE
14 MAY 86



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT



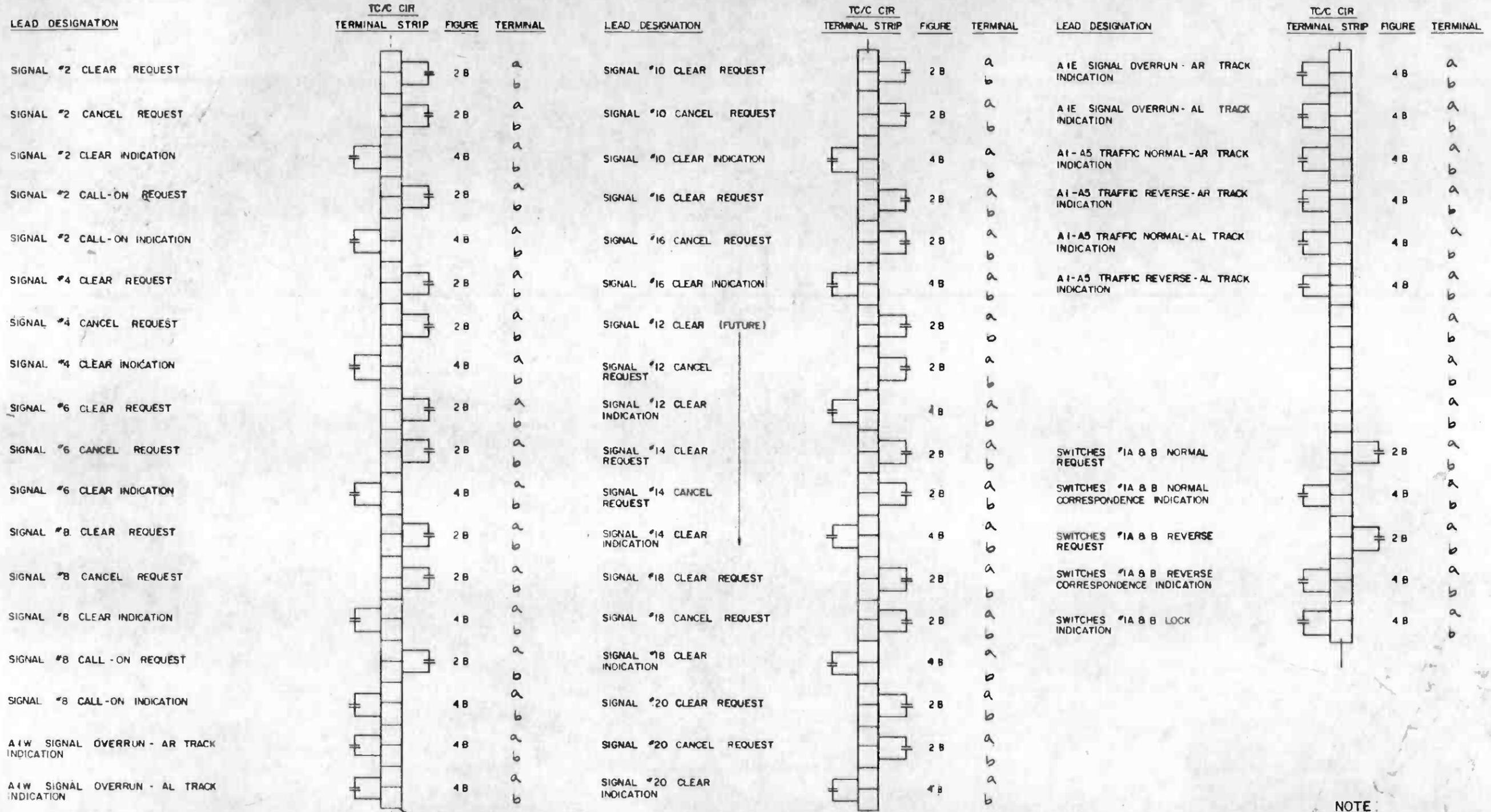
DMJM/PBOD/KE/HWA
GENERAL CONSULTANTS

LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
AUTOMATIC TRAIN CONTROL
INTERFACES

CONTRACT NO	A640
DRAWING NO	N-137
REV	0
SCALE	NO SCALE
SHEET NO	57

REV	DATE	BY	SUB	APP	DESCRIPTION
1					PROPOSAL ISSUE

(SEE INTERFACE
DWG. NS-007)



SEE NOTE 1 (TYP)

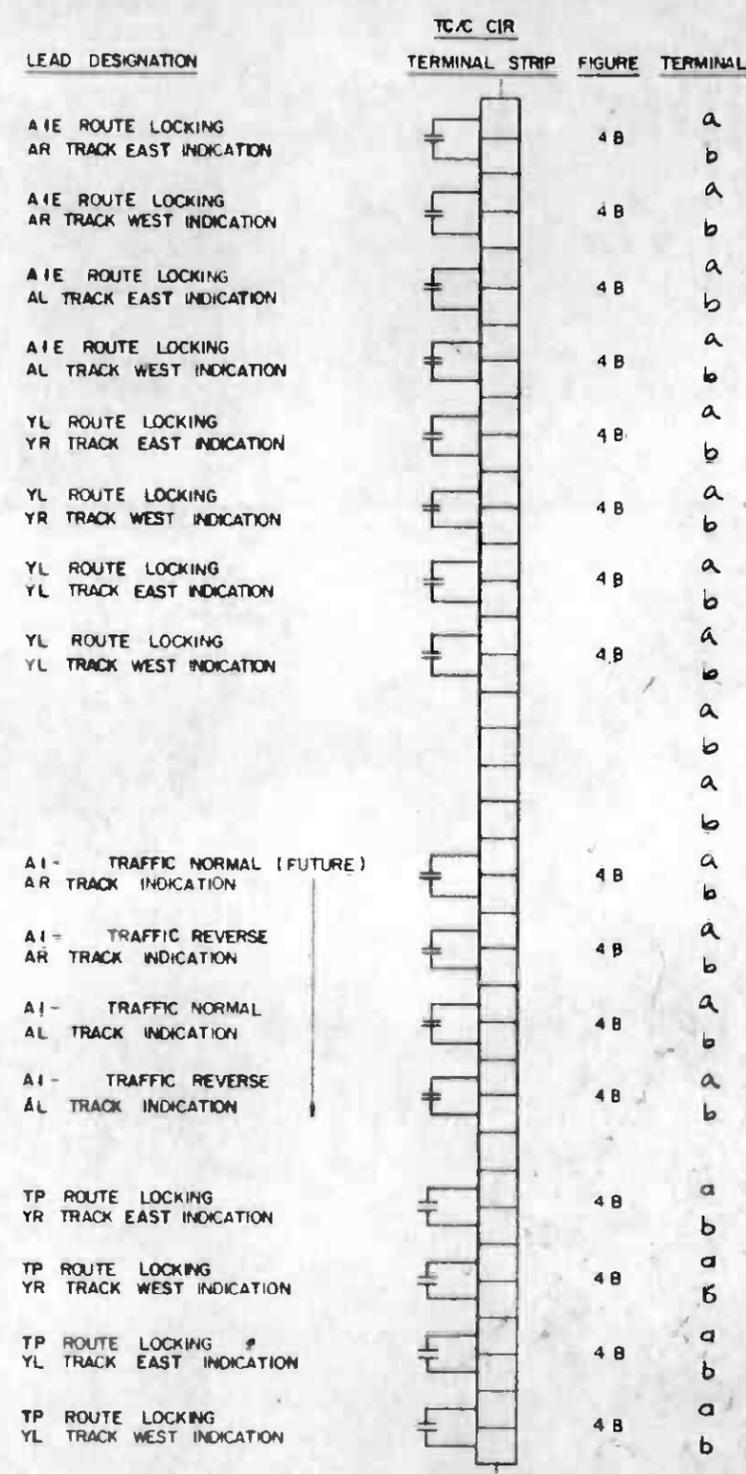
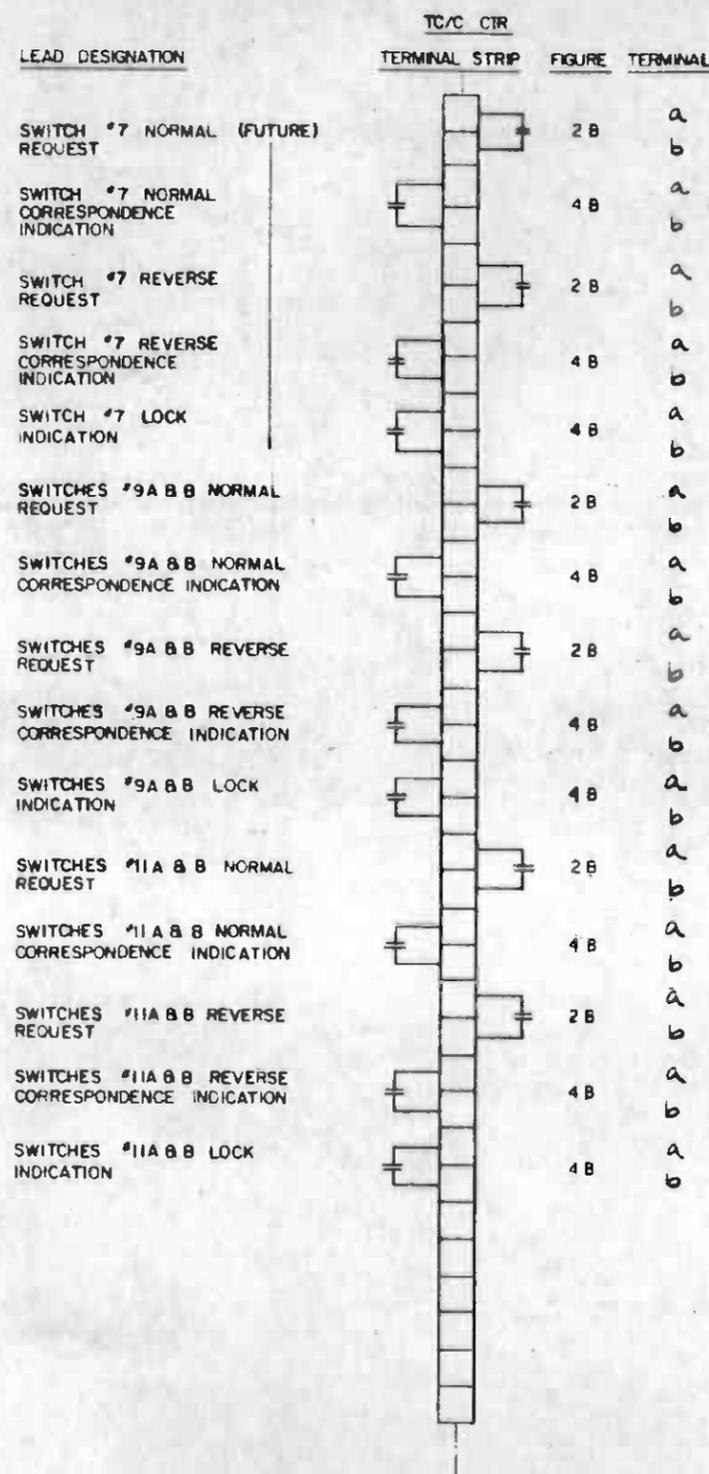
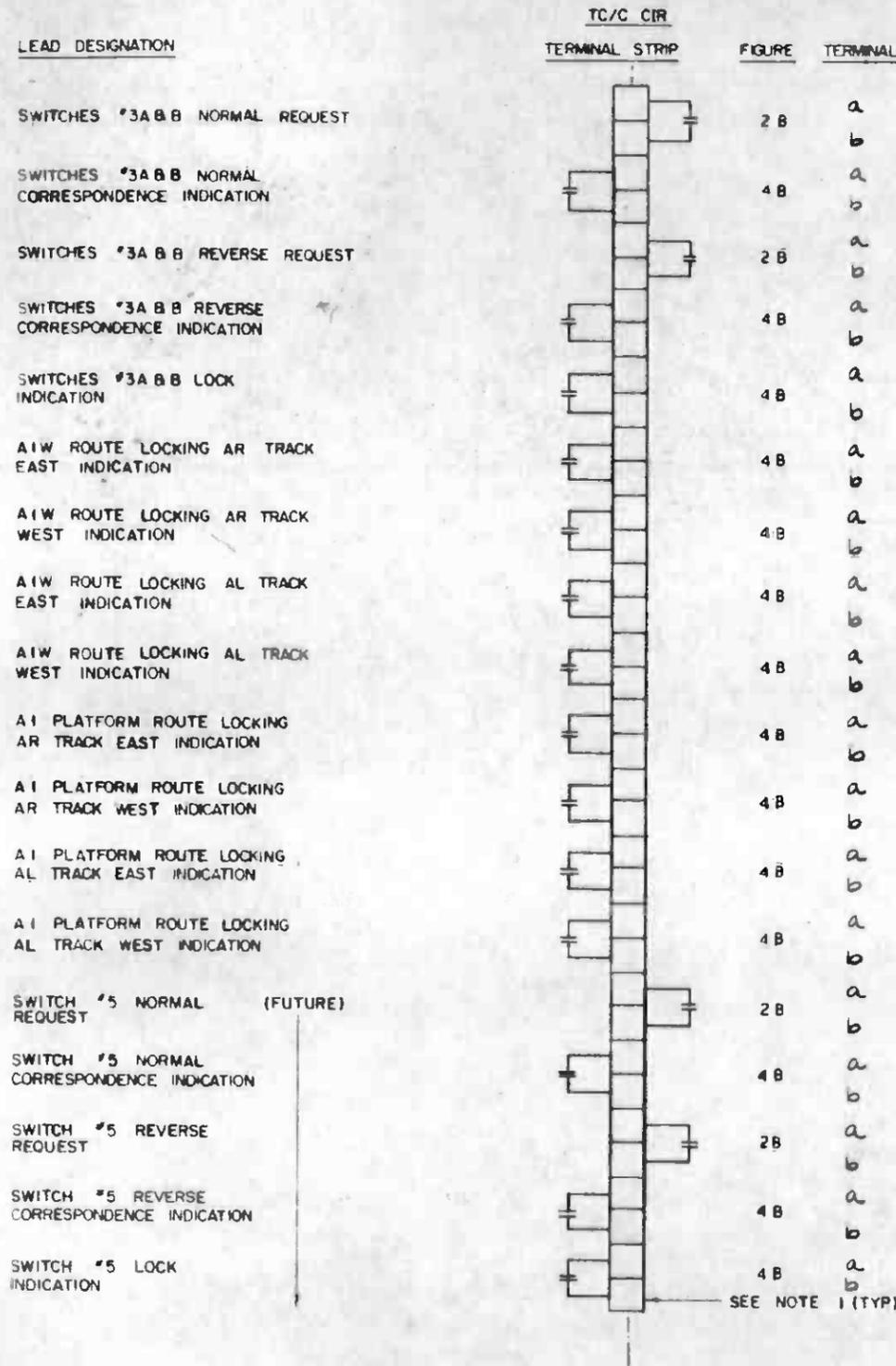
NOTE:
1. SEE DWG N-036 FOR NOTES.



U N I O N S T A T I O N

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, UNDER MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>R. H. ...</i> DRAWN BY <i>ACOSTA/VINARUOV</i> CHECKED BY <i>B. Blakely</i> IN CHARGE <i>PTB/Burgess</i> DATE 16 MAY 86	REGISTERED PROFESSIONAL ENGINEER No. ED11980 Exp. 9-30-87 ELECTRICAL STATE OF CALIFORNIA	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT DMJM/PBOD/KE/HWA GENERAL CONSULTANTS SUBMITTED <i>Cellin</i> APPROVED <i>David Schuff</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS AUTOMATIC TRAIN CONTROL INTERFACES CONTRACT NO. A640 DRAWING NO. N-138 SCALE: NO SCALE SHEET NO. 58
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(SEE INTERFACE
DWG NS-007)



NOTE:
1. SEE DWG. N-036 FOR NOTES.

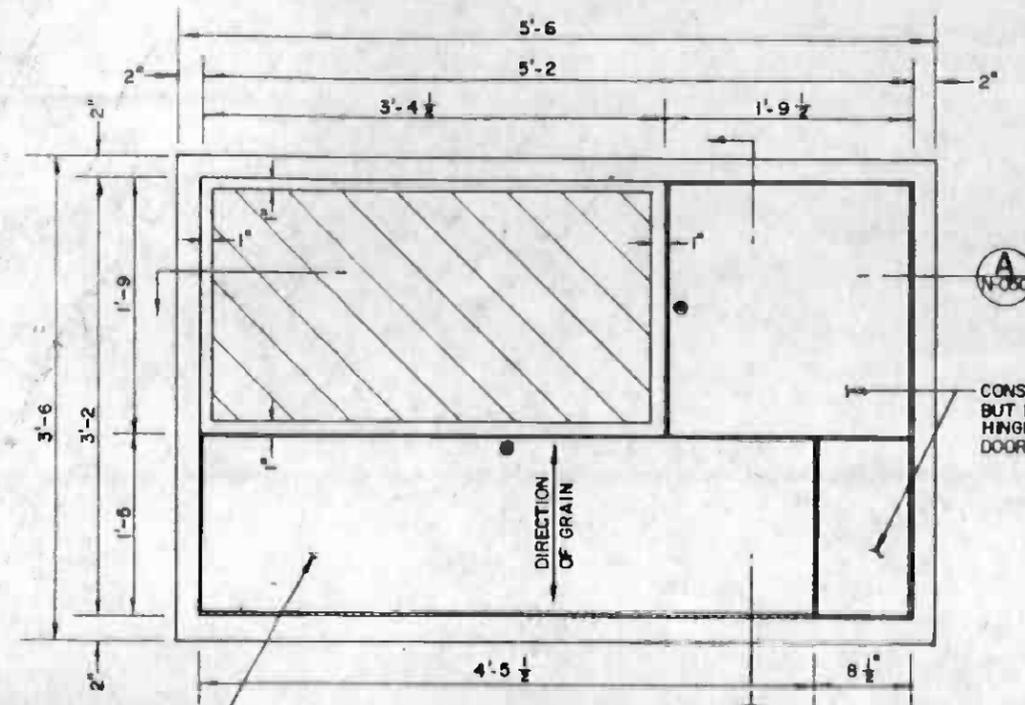
U N I O N S T A T I O N



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY <i>R. [Signature]</i> DRAWN BY <i>Acosta / [Signature]</i> CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 15 MAY 86		REGISTERED PROFESSIONAL ENGINEER CHARLES R. FISHER No. 011190 Exp. 12-31-87 ELECTRICAL STATE OF CALIFORNIA		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT DMJM PBOD/KE/HWA GENERAL CONSULTANTS APPROVED <i>[Signature]</i>		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS AUTOMATIC TRAIN CONTROL INTERFACES CONTRACT NO. A640 DRAWING NO. N-139 SCALE: NO SCALE SHEET NO. 59	
REV	DATE	BY	APP	DESCRIPTION	REV	DATE	BY	APP	DESCRIPTION		
4-6-86		RAS		PROPOSAL ISSUE							

NOTES:

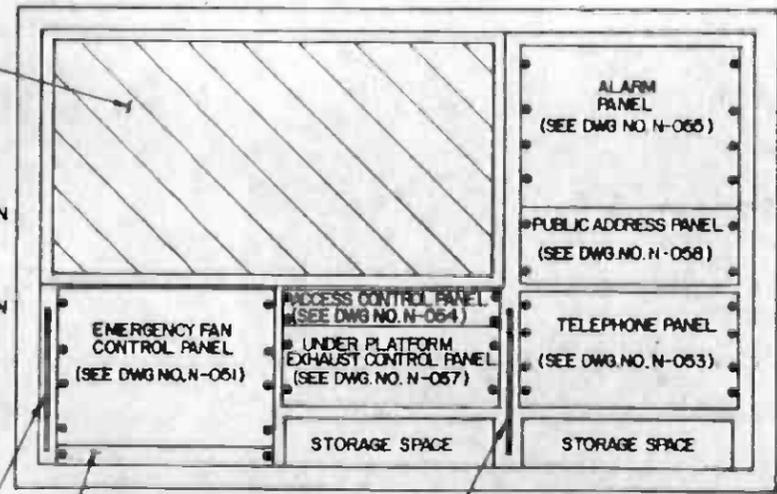
1. ALL SURFACES OF EMP EXPOSED TO PUBLIC VIEW SHALL BE TYPE 304 STAINLESS STEEL - NO. 4 FINISH.
2. BODY OF CABINET INSTALLED IN WALL, NOT EXPOSED TO PUBLIC VIEW, MAY BE INTEGRAL WITH FRONT OUTER FRAME, OR MAY BE A SEPARATE CABINET OF HIGH CORROSION RESISTANT STAINLESS STEEL WITH A NO. 2B OR 2D FINISH, ASSEMBLED TO THE OUTER FRAME.
3. LOCKS ON DOORS SHALL BE KEYED DIFFERENTLY
4. PIANO HINGES SHALL BE USED ON DOORS
5. BODY ON CABINET SHALL BE SET INTO WALL ROUGH OPENING, SHIMMED TO BE PLUMB AND SQUARE, TO BE CORRECT HEIGHT AND TO RELATE CORRECTLY WITH CONDUITS LOCATED IN STRUCTURAL WALL BELOW EMP LOCATION. CABINET SHALL BE ATTACHED TO STRUCTURAL WALL WITH EXPANSION BOLTS.



FRONT VIEW

WHEN HINGED DOWN TO HORIZONTAL POSITION, DOOR SHALL ACT AS A WRITING SURFACE. INSIDE FACE OF DOOR SHALL BE SUITABLE FOR THIS PURPOSE. DOOR SUPPORTS SHALL INCORPORATE A SHOCK ABSORBING MECHANISM TO PREVENT DAMAGE IF DOOR IS ABRUPTLY HINGED DOWN.

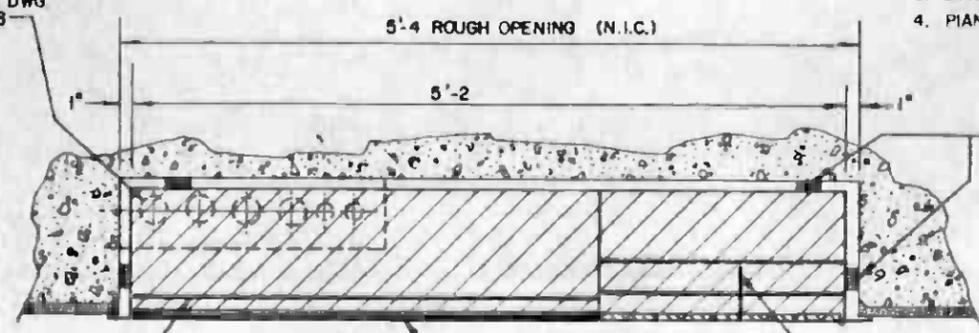
STATION DIAGRAM PANEL - SHALL BE MOUNTED BEHIND GLASS, EXPOSED TO PUBLIC VIEW. DIAGRAM SHALL DISPLAY ALL LEVELS OF STATION. TECHNIQUE SHALL BE TWO OR THREE COLOR SILKSCREEN ON 12 GA. COLD ROLLED STEEL PANEL MATCHING OR COMPATIBLE WITH STATION MAP GRAPHICS IN COLORS, TYPOGRAPHY AND FINISH. LIGHT EMITTING DIODES (LED'S) SHALL BE INSTALLED IN THE PANEL IN KEY LOCATIONS TO INDICATE WHEN WHEN LIGHTED, A ZONE FAULT. DETAILS OF FAULT LOCATION WITHIN THE ZONE SHALL BE DISPLAYED ON ALARM PANEL (SEE DWG. NO. N-055) BEHIND LOCKED DOOR.



FRONT VIEW WITH DOORS REMOVED

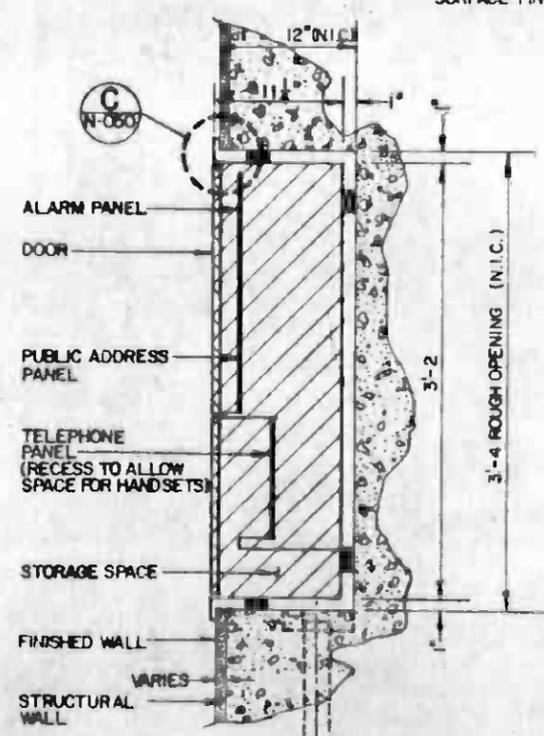
REQUIRED CONDUITS - SEE DWG NO. ND-0230 FOR DETAILS

CONSTRUCT AS TWO DOORS BUT FASTEN TOGETHER AND HINGE TO OPERATE AS ONE DOOR.

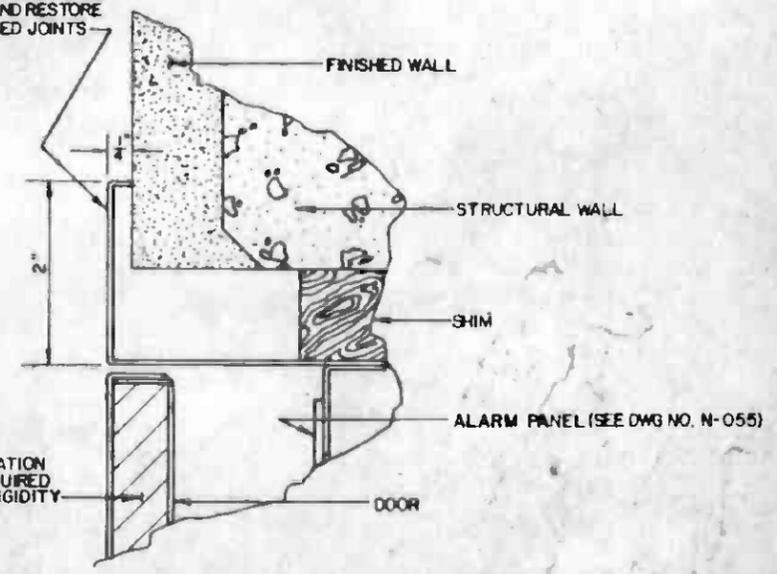


SECTION A-A

16 GA FRONT OUTER FRAME - FORMED EDGES TO BE SQUARE WITH MINIMUM PRACTICAL RADIUS. MITER, WELD, GRIND AND RESTORE SURFACE FINISH AT ALL EXPOSED JOINTS



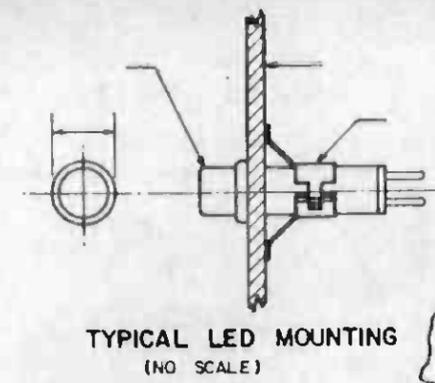
SECTION B-B



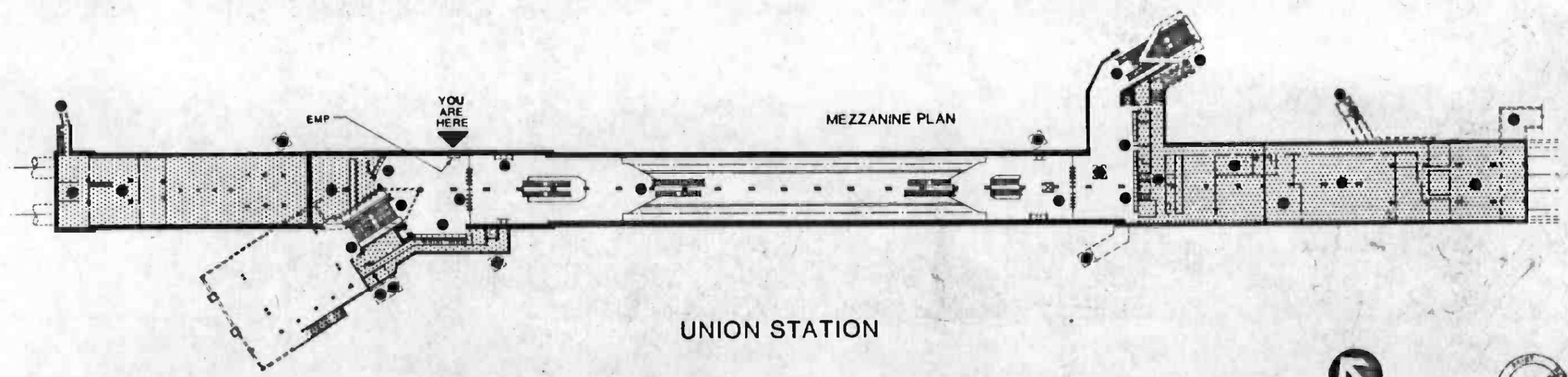
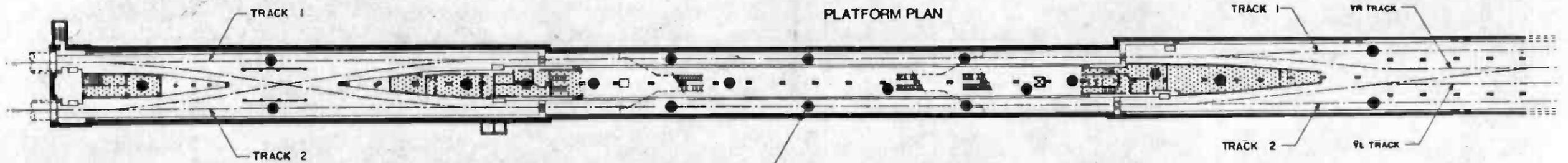
DETAIL C-C



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>[Signature]</i> DRAWN BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 11 NOV 85		REGISTERED PROFESSIONAL ENGINEER NO. 6811880 1-30-85 ELECTRICAL STATE OF CALIFORNIA		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT DMJM/PBOD/KE/HWA GENERAL CONSULTANTS APPROVED <i>[Signature]</i>		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS EMERGENCY MANAGEMENT PANEL CONTRACT NO. A640 DRAWING NO. N-050 SCALE 1/4" = 1'-0" AND FULL SIZE SHEET NO. 61			
REV	DATE	BY	SUB	APP	DESCRIPTION	REV	DATE	BY	SUB	APP	DESCRIPTION
					PROPOSAL ISSUE						



METAL FRAME FOR GLASS DOOR



UNION STATION



REV	DATE	BY	CHK	APP	DESCRIPTION

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY *[Signature]*
 DRAWN BY *[Signature]*
 CHECKED BY *[Signature]*
 IN CHARGE *[Signature]*
 DATE 24 OCT 86

4-2-87 *[Signature]* PROPOSAL ISSUE



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

DMJM/PB00/KE/HWA
 GENERAL CONSULTANTS

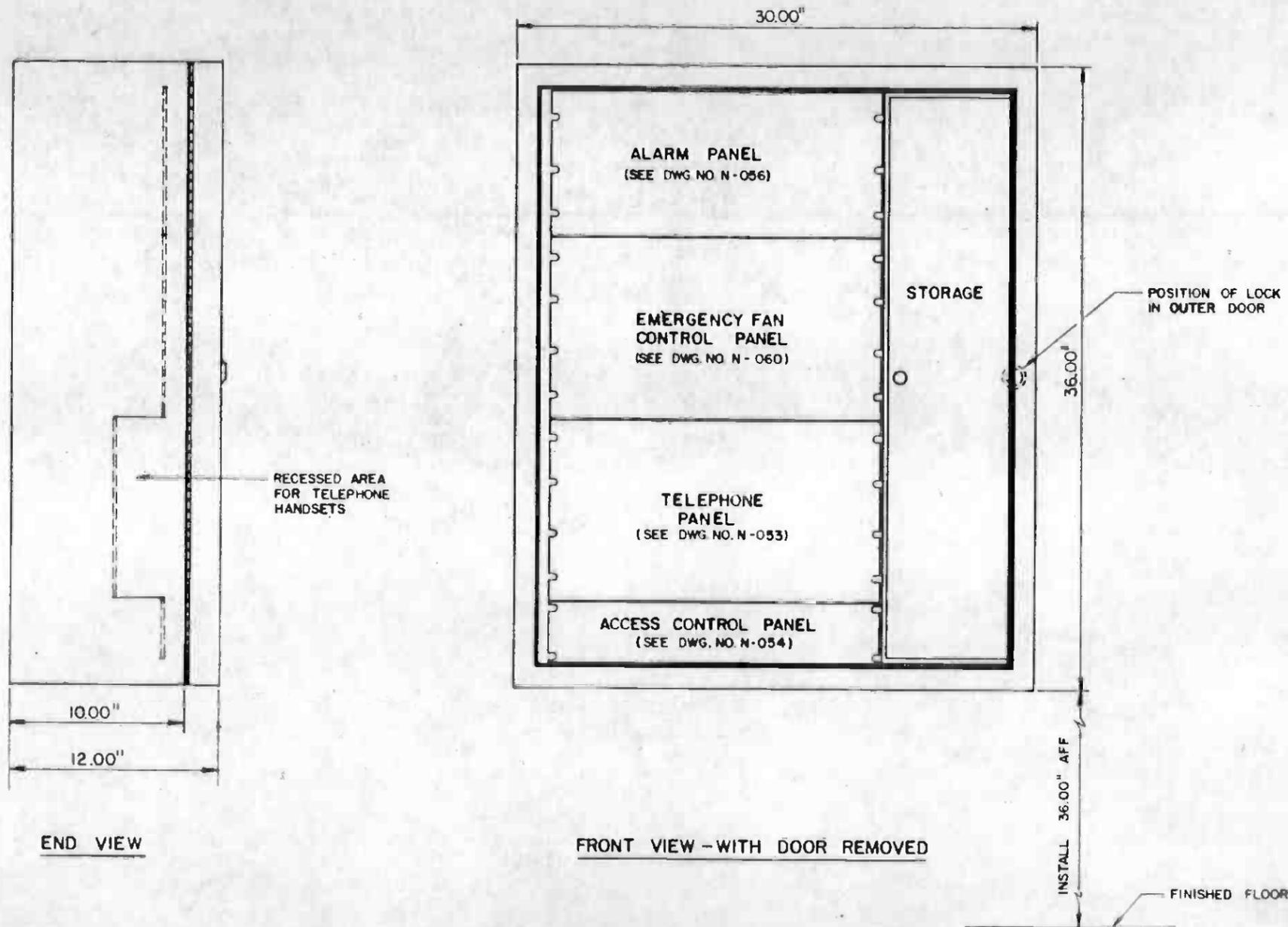
APPROVED *[Signature]*

LA CBD TO NORTH HOLLYWOOD
 COMMUNICATIONS
 EMP ALARM SUMMARY MAP
 (TYPICAL)

CONTRACT NO.	A640
DRAWING NO.	N-099
SCALE	3/4" = 1"
SHEET NO.	62

NOTES

1. AUXILIARY EMERGENCY MANAGEMENT PANELS ARE LOCATED AT ALL NON-STATION VENT SHAFTS.
2. MATERIAL MAY BE STAINLESS STEEL OR EPOXY COATED STEEL.
3. HOFFMAN, OR EQUIVALENT NEMA TYPE 4X ENCLOSURES WHICH ARE IN CONFORMANCE WITH THE TECHNICAL PROVISIONS MAY BE PROPOSED, FOR APPROVAL BY THE DISTRICT.
4. PANEL SHALL BE INSTALLED ON STRUCTURAL WALLS WITH EXPANSION BOLTS.



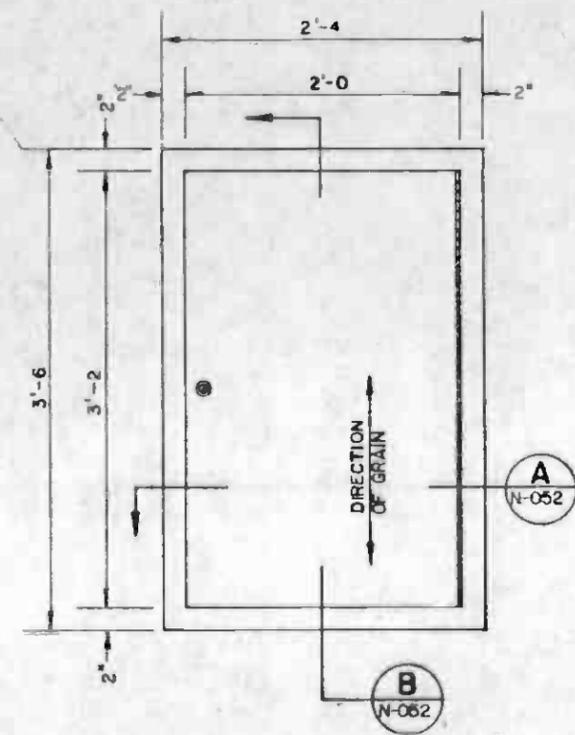
END VIEW

FRONT VIEW - WITH DOOR REMOVED

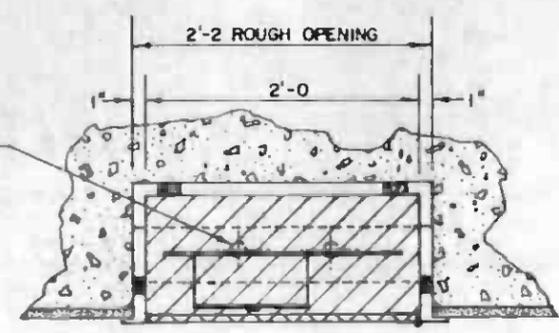


THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IS PART OF THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>[Signature]</i> DRAWN BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i> DATE 7 NOV 85		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	DMJM/PBOD/KE/HWA GENERAL CONTRACTOR APPROVED <i>[Signature]</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS AUXILIARY EMERGENCY MANAGEMENT PANEL	CONTRACT NO. A640 DRAWING NO. N-051 SCALE 1/4" = 1'-0" SHEET NO. 63
REV. DATE BY DES. APP. DESCRIPTION	REV. DATE BY DES. APP. DESCRIPTION	PROPOSAL ISSUE					

NOTES:
 1. NOTES 1, 2, 3, 4 AND 5 ON DRAWING NO. N-050 RELATE TO THIS DRAWING AS WELL.

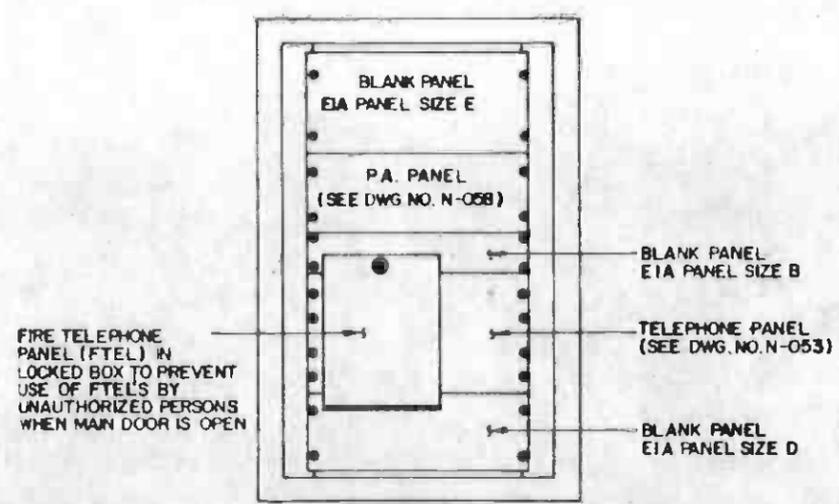


FRONT VIEW

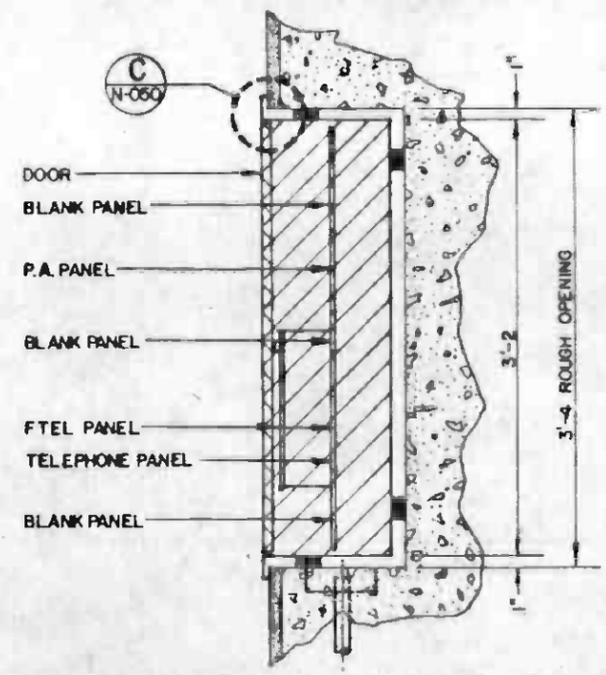


REQUIRED CONDUITS SEE DWG. NO. ND-0230 FOR DETAILS.

SECTION A
N-052



FRONT VIEW WITH DOOR OFF



SECTION B
N-052

HALF SIZE

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY <i>PK & MH</i> DRAWN BY <i>PK & MH</i> CHECKED BY <i>PK & MH</i> IN CHARGE <i>PK & MH</i> DATE 8 NOV 85		REGISTERED PROFESSIONAL ENGINEER No. ED11980 9-30-81 STATE OF CALIF.		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS COMMAND POST		CONTRACT NO. A640 DRAWING NO. N-052 REV. 0 SCALE 1/8" = 1'-0" SHEET NO. 64	
REV.	DATE	BY	APP.	DESCRIPTION	REV.	DATE	BY	APP.	DESCRIPTION	APPROVED	DATE	APPROVED	DATE
				PROPOSAL ISSUE						<i>PK & MH</i>	8 NOV 85	<i>PK & MH</i>	

S.C.R.T.D. LIBRARY

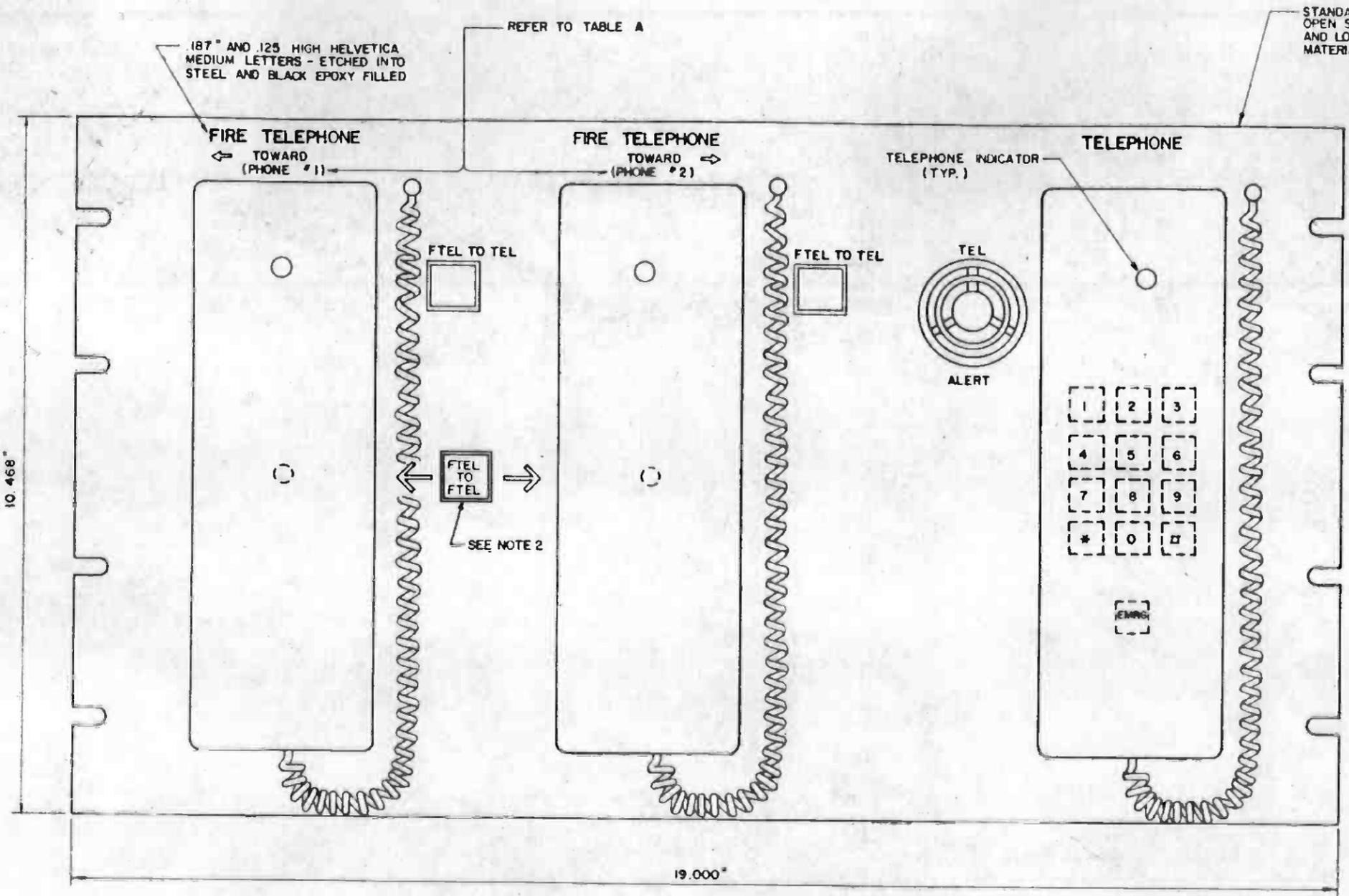


TABLE A
FIRE TELEPHONE DESTINATION ENGRAVING
DESIGNATION FOR FTEL

CABINET	LOCATION	PHONE 1	PHONE 2	NOTE
EMP	UNION STATION	CIVIC CENTER	PORTAL	
EMP	CIVIC CENTER	5TH & HILL	UNION STATION	
EMP	5TH & HILL	7TH & FLOWER	CIVIC CENTER	
EMP	7TH & FLOWER	WILSHIRE/ALVARADO	5TH & HILL	2
EMP	WILSHIRE/ALVARADO	WILSHIRE/VERMONT	7TH & FLOWER	3
CP	PORTAL	UNION STATION		
CP	RAMIREZ ST. VENT SHAFT	PORTAL TO UNION STATION		
CP	UNION STATION	CIVIC CENTER	PORTAL	
CP	CIVIC CENTER	5TH & HILL	UNION STATION	
CP	5TH & HILL	7TH & FLOWER	CIVIC CENTER	
CP	7TH & FLOWER	WILSHIRE/ALVARADO	5TH & HILL	2
CP	WILSHIRE/ALVARADO TAIL TRACK	WILSHIRE/ALVARADO		4

- NOTES:**
- FOR USE IN EMERGENCY MANAGEMENT PANELS (EMP'S).
 - AT 7TH FLOWER EMP AND CP THIS SWITCH CONNECTS MRT AND LRT TUNNEL FTEL CIRCUITS TOGETHER.
 - PHONE 1 TO BE EQUIPPED WITH DURABLE TEMPORARY LABEL READING "TAIL TRACK". PERMANENT ENGRAVING TO BE AS INDICATED.
 - VALID FOR MOS-1 ONLY. TO BE REMOVED WHEN METRO RAIL SYSTEM IS EXTENDED BEYOND WILSHIRE/ALVARADO.

REV.	DATE	BY	CHK.	APP.	DESCRIPTION

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY
M.R.T.C.

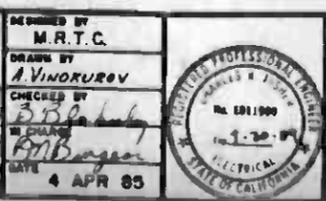
DRAWN BY
A. VINDOROV

CHECKED BY
B. B. [Signature]

IN CHARGE
R. B. [Signature]

DATE
4 APR 83

PROPOSAL ISSUE



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

DMJM/PBOD/KE/HWA
GENERAL CONTRACTOR

APPROVED *[Signature]*

LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS TELEPHONE PANEL

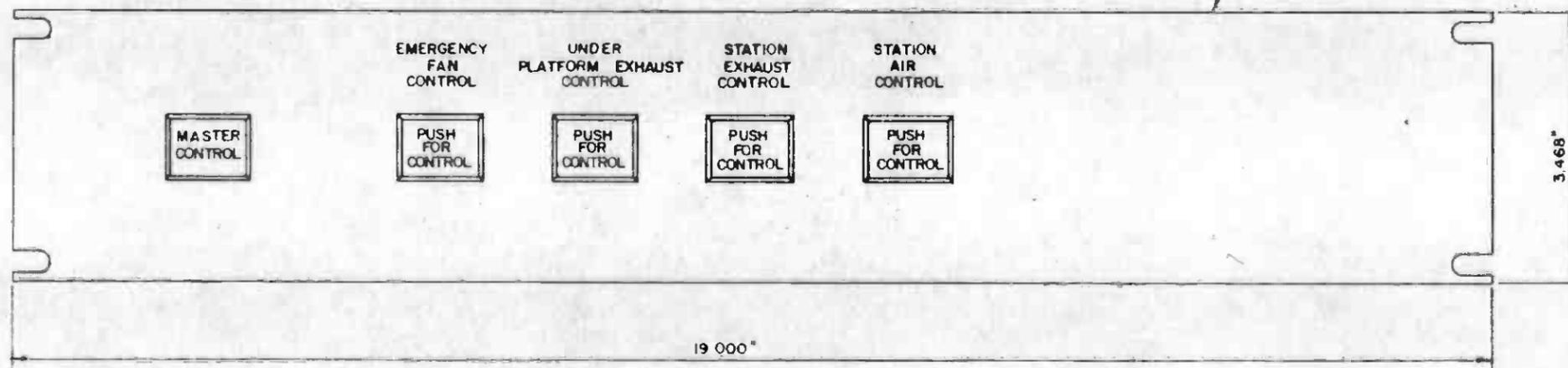
CONTRACT NO. **A640**

DRAWING NO. **N-053** REV. **0**

SCALE **FULL SIZE**

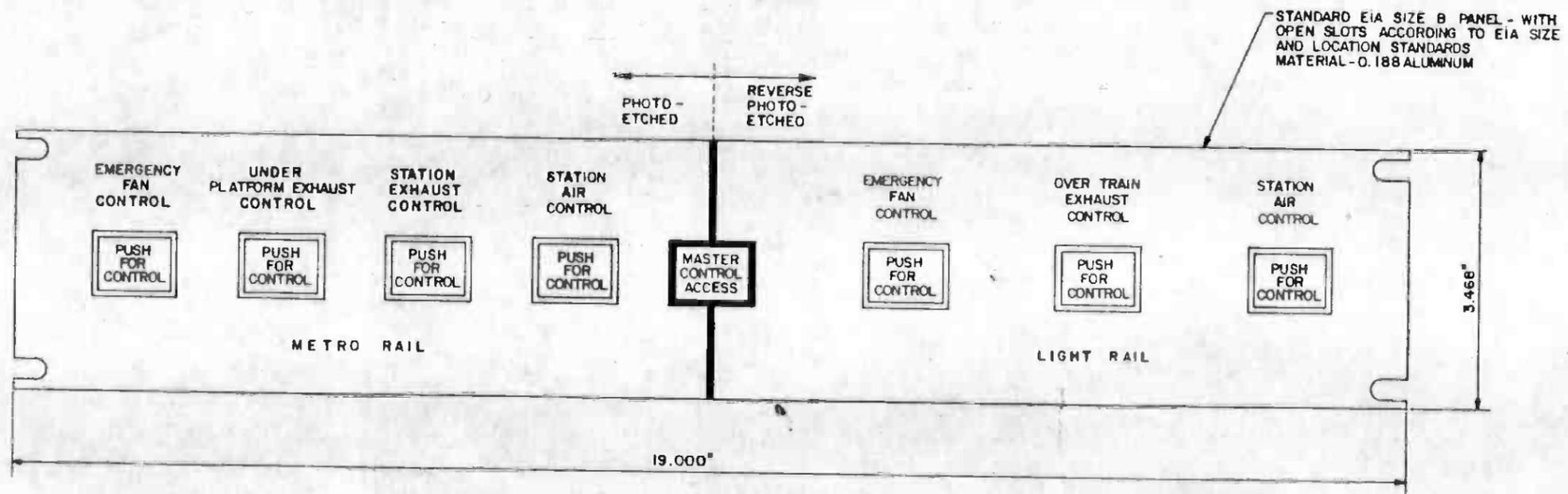
SHEET NO. **65**

STANDARD EIA SIZE B PANEL - WITH
OPEN SLOTS ACCORDING TO EIA SIZE
AND LOCATION STANDARDS
MATERIAL- 0.188 ALUMINUM
FINISH - PHOTO-ETCHED



FOR USE IN EMERGENCY MANAGEMENT PANELS (EMP'S)

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY M.R.T.C. <i>John W. Nelson</i>			SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT			CONTRACT NO. A640	
CHECKED BY <i>Bob [unclear]</i> IN CHARGE <i>Pat [unclear]</i> DATE 3 APR 85				DRAWN/PLOD/KE/HWA GENERAL CONSULTANTS <i>[Signature]</i>			LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS ACCESS CONTROL PANEL			DRAWING NO. N-054 REV. 0	
PROPOSAL ISSUE				SUBMITTED <i>[Signature]</i>		SCALE FULL SIZE		SHEET NO. 66			
REV.	DATE	BY	DWG. APP.	DESCRIPTION	REV.	DATE	BY	DWG. APP.	DESCRIPTION		



NOTE :
FOR USE IN EMERGENCY MANAGEMENT PANELS (EMP'S) AT
7th / FLOWER STATION.

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY M.R.T.C. DRAWN BY <i>Edmund Acosta</i> CHECKED BY <i>W. Blakely</i> IN CHARGE <i>W. Burgum</i> DATE 2 OCT 86	REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA No. ED11980 EXPIRES 12/31/87	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	DMJM/PBQO/KE/HWA GENERAL CONSULTANTS SUBMITTED: <i>Edmund Acosta</i> APPROVED: <i>Edward J. Kelly</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS ACCESS CONTROL PANEL	CONTRACT NO. A640 DRAWING NO. N-254 SCALE FULL SIZE SHEET NO. 67
REV. DATE BY SUB APP. DESCRIPTION	PROPOSAL ISSUE						

PHOTO-ETCHED

REVERSE PHOTO-ETCHED

STANDARD EIA SIZE H PANEL - WITH OPEN SLOTS
ACCORDING TO EIA SIZE AND LOCATION STANDARDS
MATERIAL - 0.188 ALUMINUM

NOTE :

1. KEYED ALARM INDICATION RESET SHALL BE PROVIDED (REFERENCE SECTION 10 OF TECHNICAL PROVISIONS).

METRO RAIL ZONE ALARMS

FIRE DETECTION

TC & C ROOM		PLATFORM ARC EAST	MEZZ ARC EAST	VENT SHAFT EAST						ALARM ACE
TRAC POWER	MCOR POWER	PLATFORM ARC WEST	MEZZ ARC WEST	VENT SHAFT WEST						ALARM ACE

FIRE SUPPRESSION

TC & C ROOM	VALVE ROOM EAST	PLATFORM ARC EAST	MEZZ ARC EAST	TRACK 1 DELUGE 1	TRACK 1 DELUGE 2	TRACK 1 DELUGE 3				ALARM ACE
TRAC POWER	VALVE ROOM WEST	PLATFORM ARC WEST	MEZZ ARC WEST	TRACK 2 DELUGE 1	TRACK 2 DELUGE 2	TRACK 2 DELUGE 3				ALARM ACE

INTRUSION DETECTION

MAIN ENTRANCE EAST	FIRE MACHINE EAST	PLATFORM ARC EAST	MEZZ ARC EAST	VALVE ROOM EAST	VALVE PIT SURFACE					ALARM ACE
MAIN ENTRANCE WEST	FIRE MACHINE WEST	PLATFORM ARC WEST	MEZZ ARC WEST	VALVE ROOM WEST	CP					ALARM ACE

GAS MONITORING

TRACK 1 TUNNEL EAST	TRACK 2 TUNNEL EAST	ARC EAST	TRAIN ROOM EAST	MEZZ ARC EAST	TPSS					ALARM ACE
TRACK 1 TUNNEL WEST	TRACK 2 TUNNEL WEST	PLATFORM ARC WEST	MEZZ ARC WEST	CHLOR WEST	MEZZ ARC/WEST WEST	MEZZ ELEC ROOM WEST				ALARM ACE

FACILITIES

EMO FAN 1 EAST	EMO FAN 2 EAST	STA AIR 1 EAST	STA AIR 2 EAST	WPE TRACK 1	AIR POWER EAST	SUMP PUMP				ALARM ACE
EMO FAN 1 WEST	EMO FAN 2 WEST	STA AIR 1 WEST	STA AIR 2 WEST	WPE TRACK 2	AIR POWER WEST	ELECTOR PUMP				ALARM ACE

LIGHT RAIL

PLATFORM ARC NORTH	VENT SHAFT NORTH	OTE VENT SHAFT	SIGNAL & COMM DOOR	TAIL TRACK EXHAUST	TAIL TRACK MECH RM			ALARM ACE
PLATFORM ARC SOUTH	VENT SHAFT SOUTH			TAIL TRACK HEAT	TAIL TRACK SDOOR			ALARM ACE

PLATFORM ARC SOUTH	VALVE ROOM NORTH	TRACK 1 DELUGE 1	TRACK 1 DELUGE 2	TAIL TR 1 DELUGE 1	TAIL TR 1 DELUGE 2	TAIL TR MECH ROOM		ALARM ACE
PLATFORM ARC SOUTH	VALVE ROOM SOUTH	TRACK 2 DELUGE 1	TRACK 2 DELUGE 2	TAIL TR 2 DELUGE 1	TAIL TR 2 DELUGE 2	SIGNAL & COMM HALL DR		ALARM ACE

MAIN ENTRANCE	CP TAIL TRACK	PLATFORM ARC NORTH	VALVE ROOM SOUTH	VALVE ROOM TAIL TR				ALARM ACE
PLATFORM ORACLE	CP PORTAL	PLATFORM ARC SOUTH	VALVE ROOM SOUTH	VALVE PIT SURFACE				ALARM ACE

TAIL TRACK SOUTH	MEZZ ELEC/MECH SOUTH	PLATFORM ARC NORTH	SIGNAL & COMM NORTH					ALARM ACE
TRAIN PLATFORM	PLATFORM ELEC/MECH SOUTH	PLATFORM ARC SOUTH	LRT TUNNEL					ALARM ACE

EMO FAN 1 NORTH	EMO FAN 2 NORTH	SUBWAY VENT NORTH	OVER THE ESR TRACK 1	AIR PWS NORTH				ALARM ACE
EMO FAN 1 SOUTH	EMO FAN 2 SOUTH	SUBWAY VENT SOUTH	OVER THE ESR TRACK 2	FIRE PUMPS				ALARM ACE

RED

AMBER

BLUE

YELLOW

GREEN

19.00'

NOTE :

FOR USE IN EMERGENCY MANAGEMENT PANELS (EMP'S) AT 71^{1/2} FLOWER STATION.



REV	DATE	BY	APP	DESCRIPTION

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REV	DATE	BY	APP	DESCRIPTION

DESIGNED BY
E. ACOSTA

DRAWN BY
Edmund Acosta

CHECKED BY
B. Blahutsky

IN CHARGE
M. C. ...

DATE
30 SEP 86



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

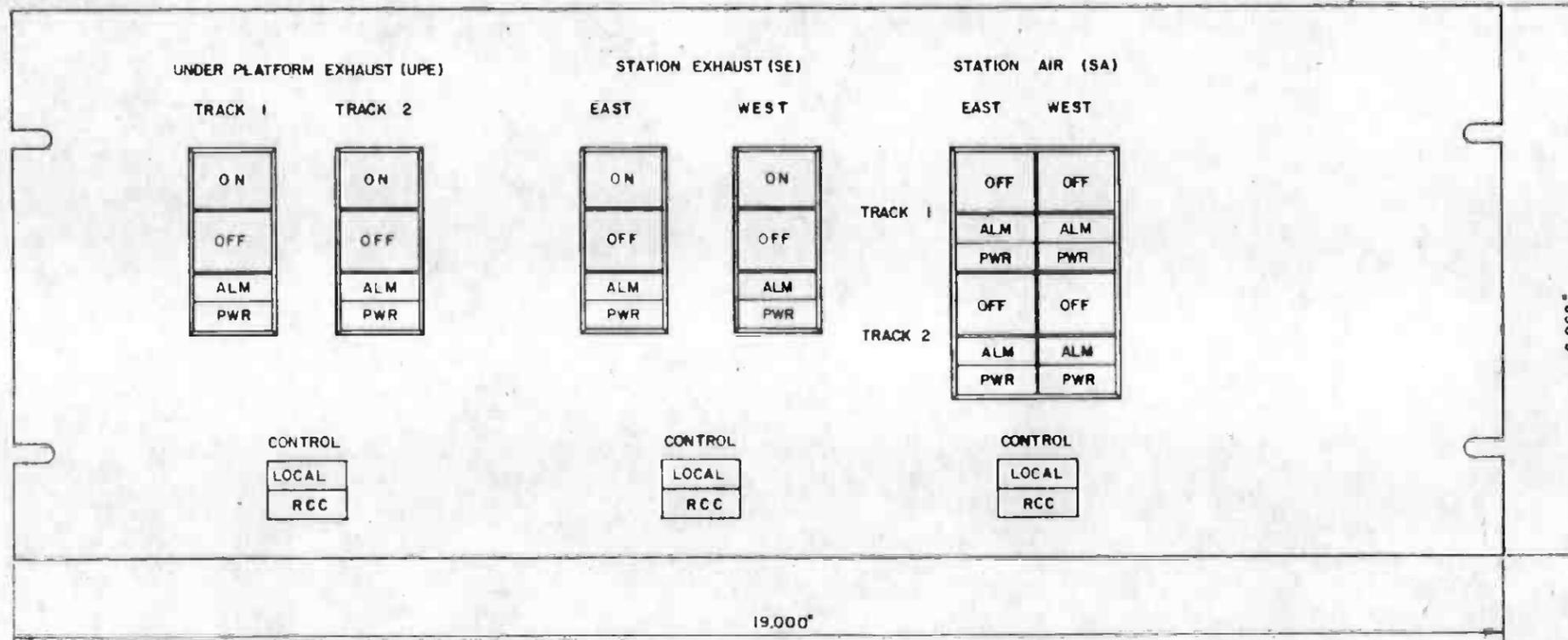
DMJM/PBOD/KE/HWA
GENERAL CONSULTANTS

APPROVED *Edward J. ...*

LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS
EMERGENCY MANAGEMENT PANEL
SPECIAL ALARM PANEL

CONTRACT NO.	A-640
DRAWING NO.	N-255
SCALE	FULL SIZE
SHEET NO.	69

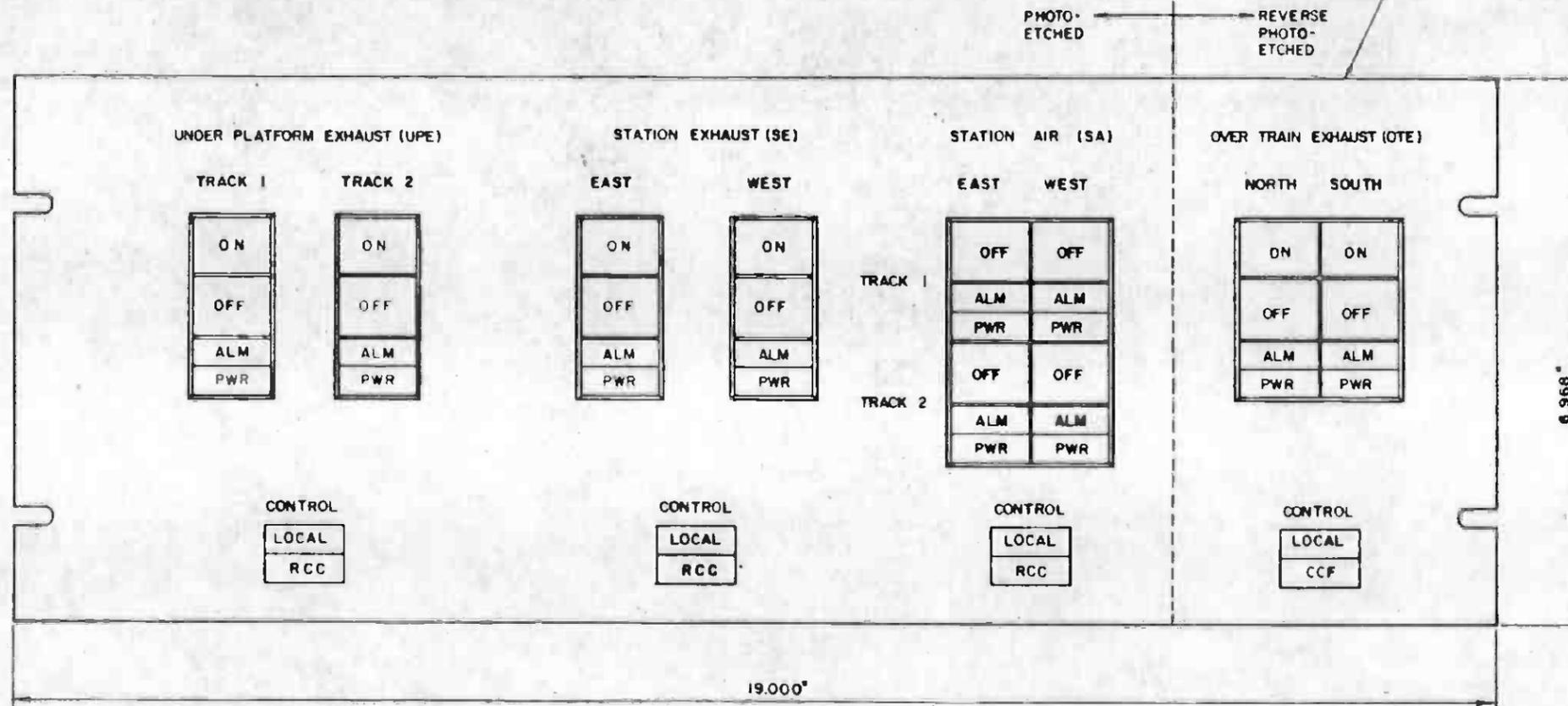
STANDARD EIA SIZE D PANEL - WITH
OPEN SLOTS ACCORDING TO EIA SIZE
AND LOCATION STANDARDS
MATERIAL - 0.188 ALUMINUM
FINISH - PHOTO ETCHED



FOR USE IN EMERGENCY MANAGEMENT PANELS (EMP'S)

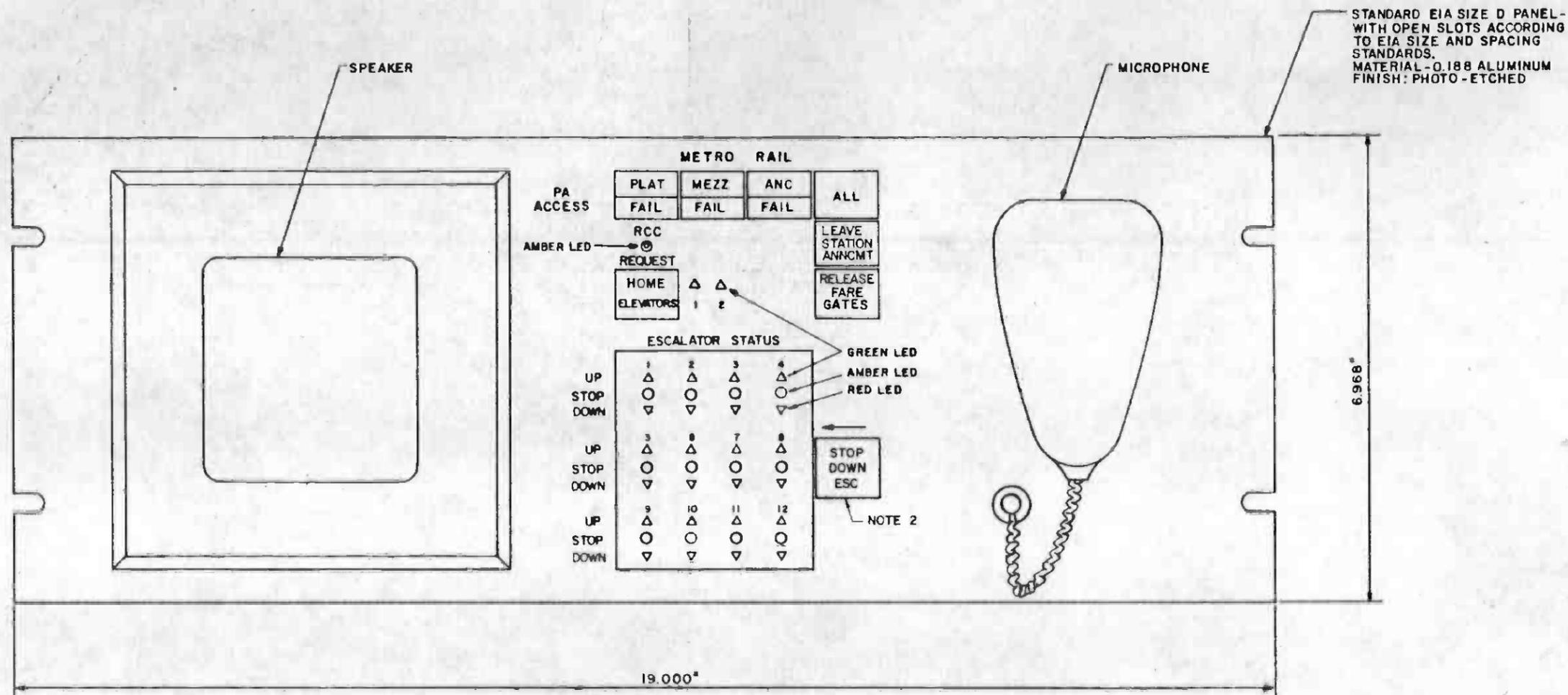
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY M.R.C. DRAWN BY Y.G. 04 CHECKED BY 302 hdy IN CHARGE PMB DATE 1 NOV 85		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	DAJM/PBDD/KE/HWA GENERAL CONTRACTOR APPROVED: <i>[Signature]</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS UNDER PLATFORM EXHAUST, STATION EXHAUST AND STATION AIR CONTROL PANEL	CONTRACT NO. A640 DRAWING NO. N-057 SCALE FULL SIZE SHEET NO. 70				
REV.	DATE	BY	DES.	APP.	DESCRIPTION	REV.	DATE	BY	DES.	APP.	DESCRIPTION
					PROPOSAL ISSUE						

STANDARD EIA SIZE D PANEL - WITH
OPEN SLOTS ACCORDING TO EIA SIZE
AND LOCATION STANDARDS
MATERIAL - 0.188 ALUMINUM



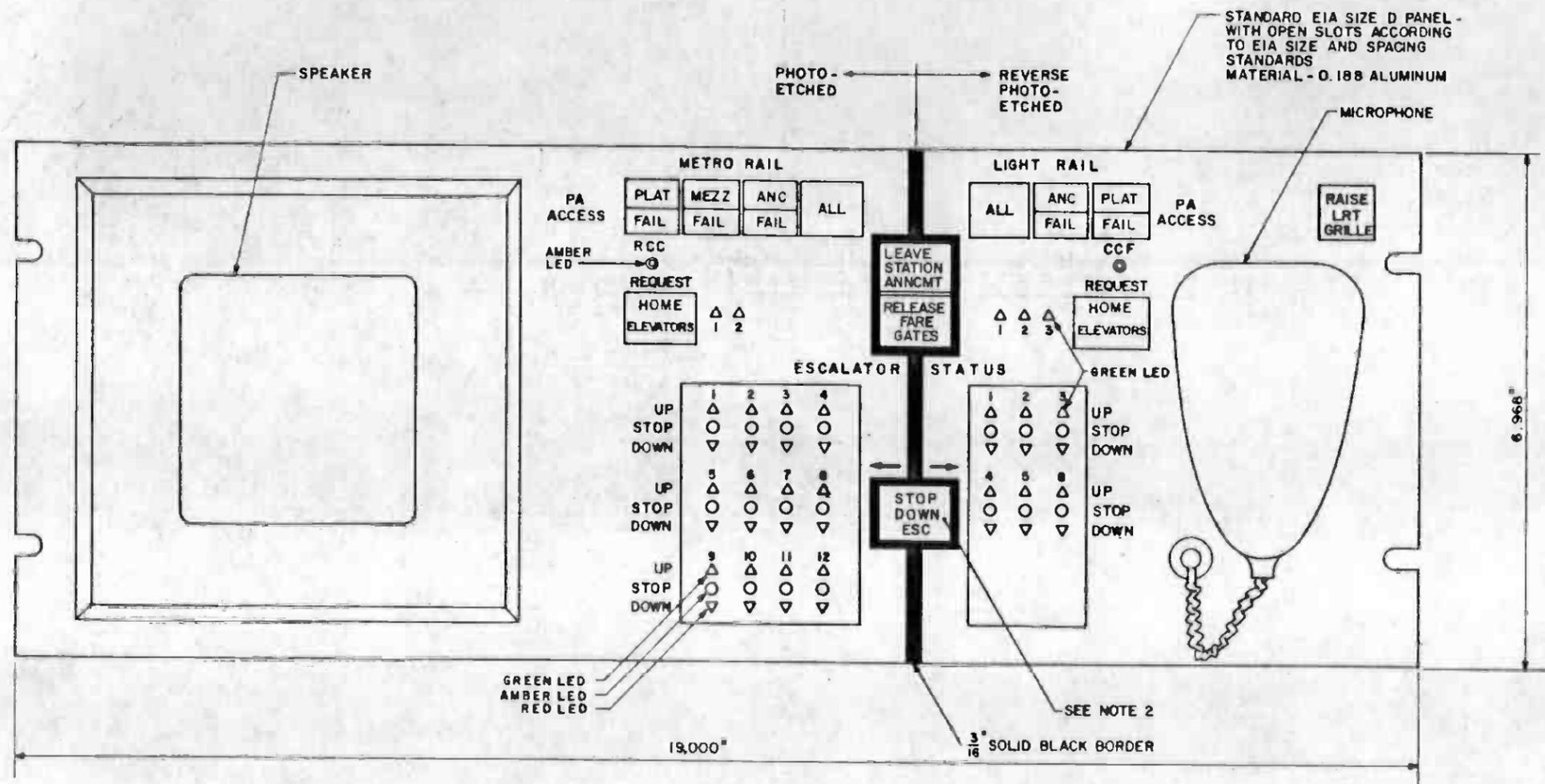
FOR USE IN EMERGENCY MANAGEMENT PANELS (EMP'S)
AT 7TH / FLOWER STATION.

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY M.E.T.C. DRAWN BY Y. G. OI CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 1 NOV 85		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	DAJUN/PBOD/KE/HWA GENERAL CONSULTANTS 	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS UNDER PLATFORM EXHAUST, STATION EXHAUST AND STATION AIR CONTROL PANEL	CONTRACT NO. A640 DRAWING NO. N-257 SCALE FULL SIZE SHEET NO. 71				
REV.	DATE	BY	SUB.	APP.	DESCRIPTION	REV.	DATE	BY	SUB.	APP.	DESCRIPTION
					PROPOSAL ISSUE						



NOTES:
 1. FOR USE IN EMERGENCY MANAGEMENT PANELS (EMP'S) AND COMMAND POSTS (CP'S)
 2. "STOP DOWN ESC" ALSO ACTIVATES P.A. ANNOUNCEMENT.

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY M.R.T.C. DRAWN BY <i>Edward A. ...</i> CHECKED BY <i>B. Blakely</i> IN CHARGE <i>Am ...</i> DATE 29 SEP 86	REGISTERED PROFESSIONAL ENGINEER No. 831190 1-1-87 ELECTRICAL STATE OF CALIFORNIA	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS PA CONTROL PANEL	CONTRACT NO. A640 DRAWING NO. N-058 REV 0 SCALE FULL SIZE SHEET NO. 72
4081 B PROPOSAL ISSUE	DATE BY SUB APP DESCRIPTION	SUBMITTED <i>Cliff ...</i>	APPROVED <i>Howard ...</i>				



NOTES:

1. FOR USE IN EMERGENCY MANAGEMENT PANELS (EMP'S) AND COMMAND POSTS (CP'S) AT 7th/FLOWER STATION
2. "STOP DOWN ESC" ALSO ACTIVATES PA ANNOUNCEMENT,

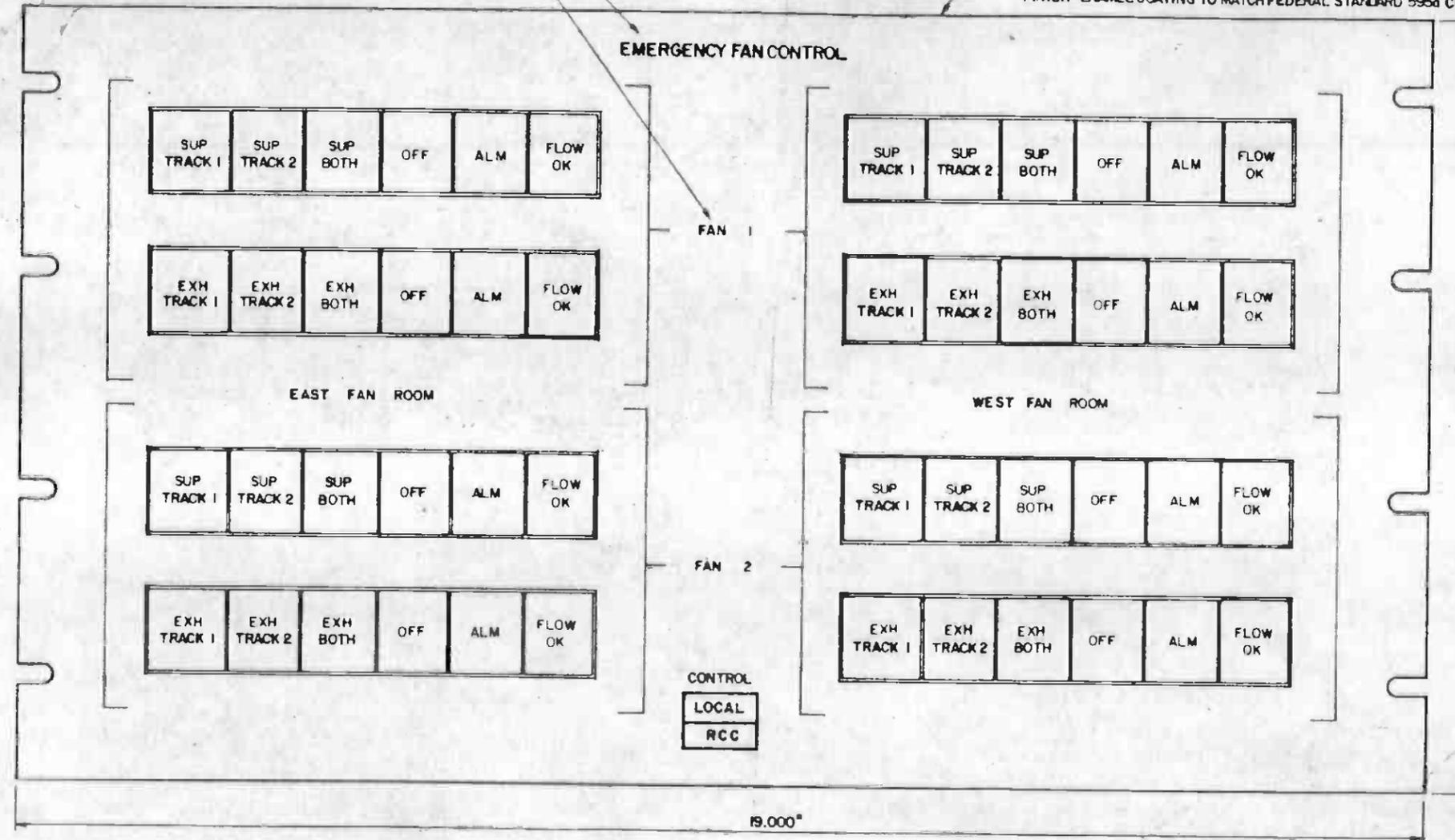
	THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.	DESIGNED BY M.R.T.C. DRAWN BY <i>Edwards Scott</i> CHECKED BY <i>E. Blakely</i> IN CHARGE <i>Tom Engano</i> DATE 14 OCT 86		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	DMJM/PBOD/KE/HWA GENERAL CONSULTANTS APPROVED <i>Howard Chaff</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS PA CONTROL PANEL	CONTRACT NO. A640 DRAWING NO. N-258 SCALE FULL SIZE SHEET NO. 73	
REV DATE BY SUB APP DESCRIPTION	REV DATE BY SUB APP DESCRIPTION	PROPOSAL ISSUE						

NOTES:

1. THIS LAYOUT APPLIES TO THE FOLLOWING EMP'S:
 CIVIC CENTER
 5TH & HILL
 7TH & FLOWER

.187" AND .125" HIGH HELVETICA
 MEDIUM LETTERS - ETCHED INTO
 STEEL AND BLACK EPOXY FILLED.

STANDARD EIA SIZE F PANEL - WITH OPEN SLOTS
 ACCORDING TO EIA SIZE AND LOCATION STANDARDS.
 MATERIAL - 12 GA (.104") COLD ROLLED STEEL
 FINISH - ENAMEL COATING TO MATCH FEDERAL STANDARD 595a COLOR NO. 27722

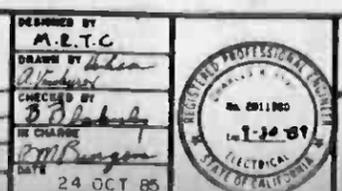


REV.	DATE	BY	SUB.	APP.	DESCRIPTION

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY
M.E.T.C.
 DRAWN BY
[Signature]
 CHECKED BY
[Signature]
 IN CHARGE
[Signature]
 DATE
 24 OCT 85

PROPOSAL ISSUE



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

DTM/JM/POD/KE/HWA
 GENERAL CONSULTANTS

APPROVED *[Signature]*

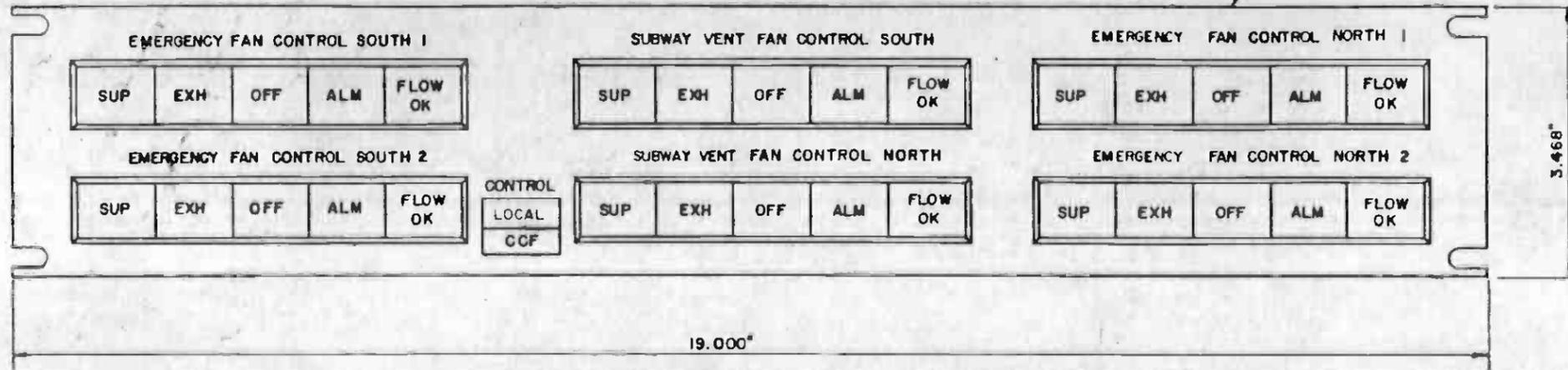
LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS
 EMERGENCY FAN CONTROL PANEL
 CONFIGURATION 1

CONTRACT NO.	A640
DRAWING NO.	N-059
SCALE	FULL SIZE
SHEET NO.	74

NOTE :

1. THIS LAYOUT APPLIES TO THE FOLLOWING LOCATIONS:
7TH AND FLOWER.

STANDARD SIZE B PANEL WITH OPEN SLOTS
ACCORDING TO EIA SIZE AND LOCATION STANDARD
MATERIAL: 0.188 ALUMINUM
FINISH - PHOTO - ETCHED



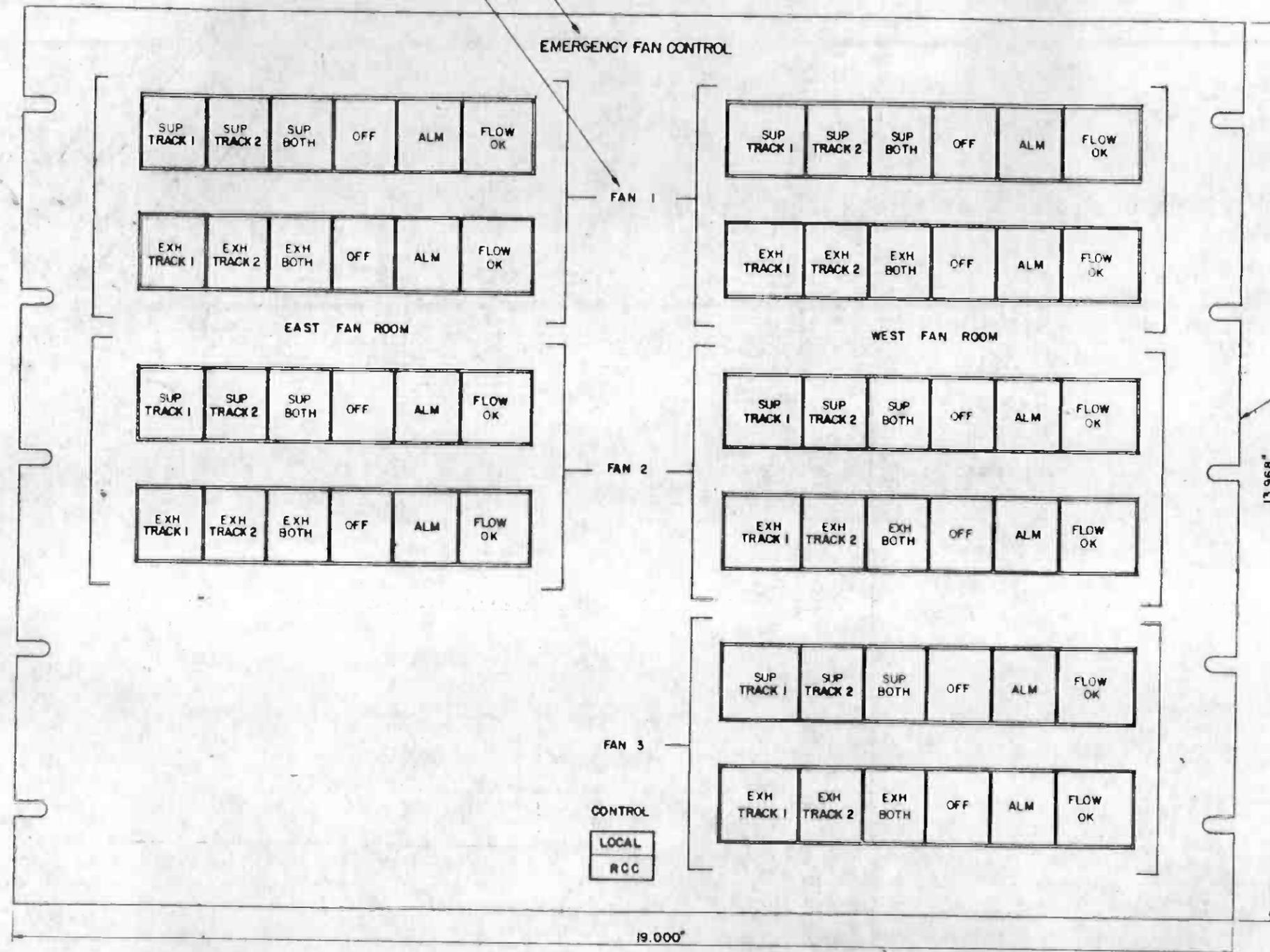
<p>THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.</p>				<p>DESIGNED BY M.R.T.C.</p> <p>DRAWN BY <i>Edwin Acosta</i></p> <p>CHECKED BY <i>R. Blakely</i></p> <p>IN CHARGE <i>Bob Burgess</i></p> <p>DATE 5 AUG 86</p>		<p>SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT</p> <p>METRO RAIL PROJECT</p> <p>DMJM/PBOD/KE/HWA GENERAL CONSULTANTS</p> <p>APPROVED: <i>Barbara K. Kelly</i></p>		<p>LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS</p> <p>EMERGENCY FAN CONTROL PANEL</p> <p>LIGHT RAIL CONFIGURATION</p>		<p>CONTRACT NO A640</p> <p>DRAWING NO N-259</p> <p>SCALE FULL SIZE</p> <p>SHEET NO 75</p>	
REV	DATE	BY	SUB	APP	DESCRIPTION	REV	DATE	BY	SUB	APP	DESCRIPTION
					PROPOSAL ISSUE						

S.C.R.T.D. LIBRARY

.187" AND .125" HIGH HELVETICA MEDIUM LETTERS - ETCHED INTO STEEL AND BLACK EPOXY FILL

NOTES:

1. THIS LAYOUT APPLIES TO THE FOLLOWING EMP'S:
WILSHIRE / ALVARADO



STANDARD EIA SIZE H PANEL - WITH SLOTS ACCORDING TO EIA SIZE AND LOCATION STANDARDS.
MATERIAL - 0.188 ALUMINUM
FINISH - PHOTO ETCHED



REV.	DATE	BY	CHK.	APP.	DESCRIPTION

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA

DESIGNED BY
M.E.T.C.
DRAWN BY
[Signature]
CHECKED BY
[Signature]
DATE
2 OCT 85



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

METRO RAIL PROJECT

RTD

DATE: 10/2/85
BY: *[Signature]*
APPROVED: *[Signature]*

LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS EMERGENCY FAN CONTROL PANEL

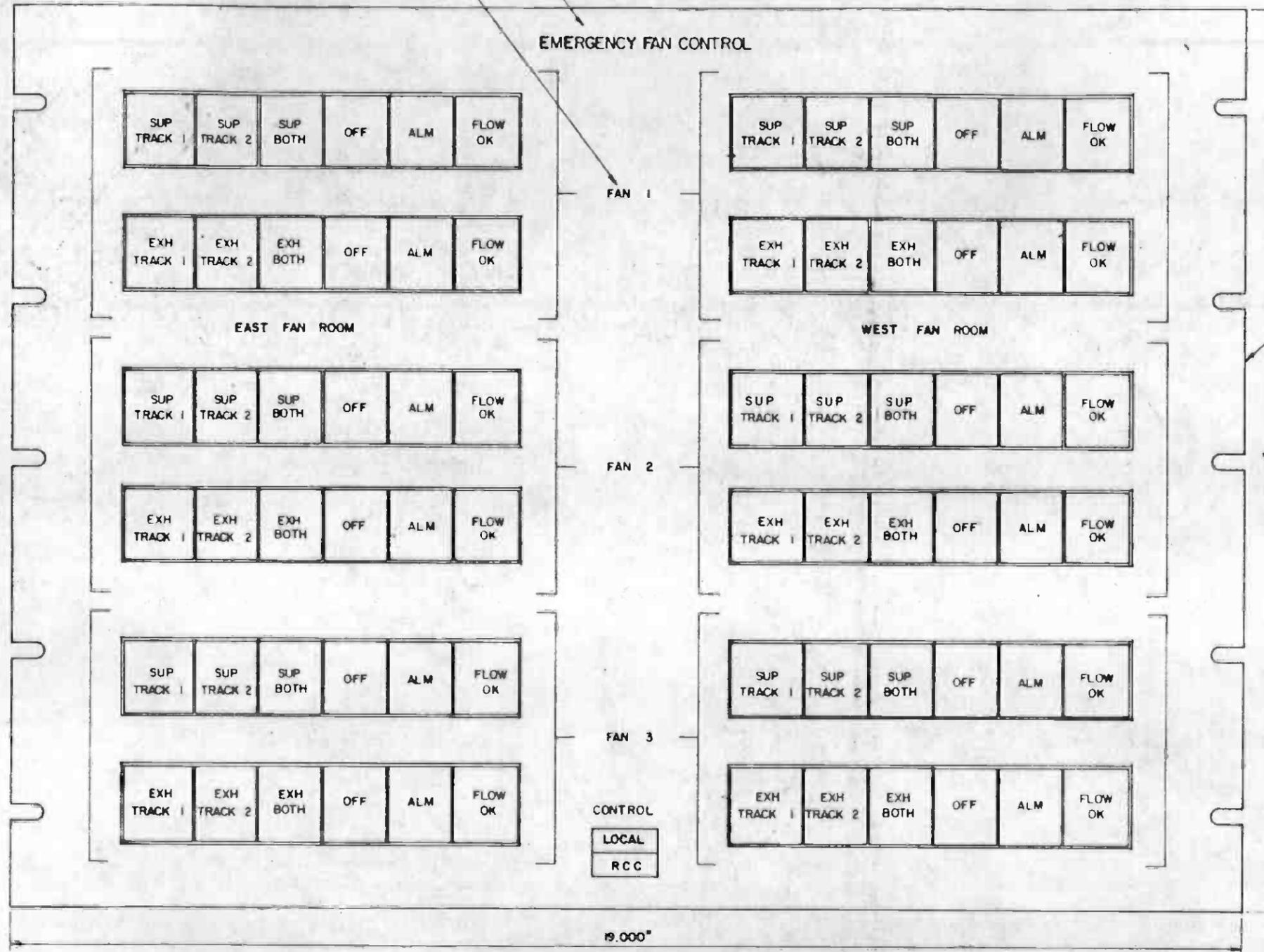
CONFIGURATION 4

CONTRACT NO.	A640
DRAWING NO.	N-062
SCALE	FULL SIZE
SHEET NO.	76

.187" AND .125" HIGH HELVETICA
MEDIUM LETTERS - ETCHED
INTO STEEL AND BLACK
EPOXY FILLED

NOTES:

1. THIS LAYOUT APPLIES TO THE FOLLOWING EMP'S:
UNION STATION



STANDARD EIA SIZE H PANEL - WITH SLOTS
ACCORDING TO EIA SIZE AND LOCATION
STANDARDS. MATERIAL - 12 GA (104")
COLD ROLLED STEEL, FINISH - ENAMEL
COATING TO MATCH FEDERAL STANDARD
595a COLOR NO. 27722.

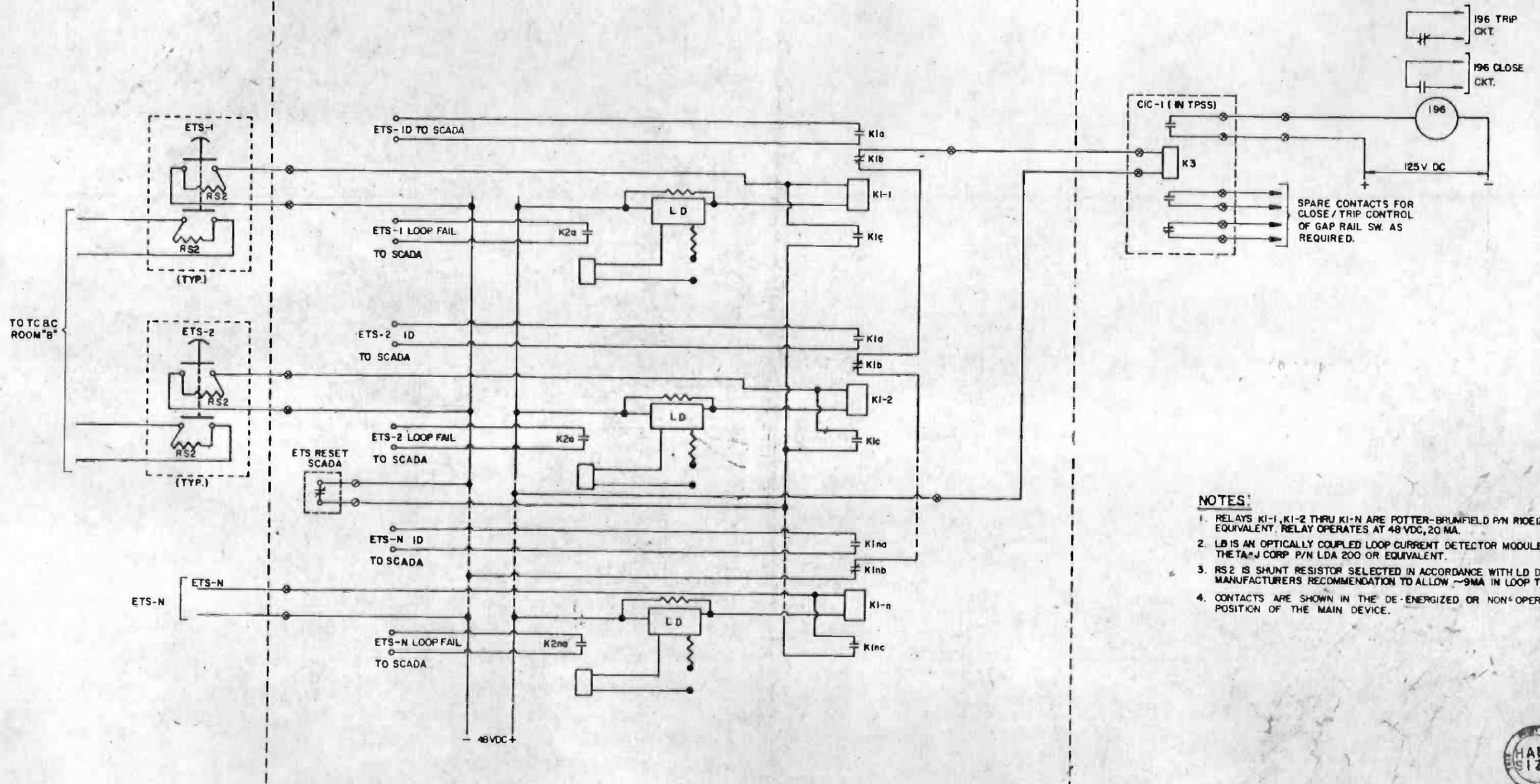


<p>THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.</p>										<p>DESIGNED BY M.R.T.C.</p>				<p>SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT</p>				<p>CONTRACT NO. A640</p>													
<p>REVISIONS:</p> <table border="1"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>BY</th> <th>SUB.</th> <th>APP.</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>10-23-85</td> <td></td> <td></td> <td></td> <td>PROPOSAL ISSUE</td> </tr> </tbody> </table>										REV.	DATE	BY	SUB.	APP.	DESCRIPTION	1	10-23-85				PROPOSAL ISSUE	<p>CHECKED BY <i>[Signature]</i></p>		<p>DATE 23 OCT 85</p>		<p>APPROVED BY <i>[Signature]</i></p>		<p>GENERAL CONSULTANTS</p>		<p>LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS EMERGENCY FAN CONTROL PANEL CONFIGURATION 5</p>	
REV.	DATE	BY	SUB.	APP.	DESCRIPTION																										
1	10-23-85				PROPOSAL ISSUE																										
										<p>DRAWING NO. N-063</p>																					
										<p>SCALE FULL SIZE</p>																					
										<p>SHEET NO. 77</p>																					

WAYSIDE

TC & C ROOM "A"

TRACTION POWER SUBSTATION "A"



NOTES:

1. RELAYS KI-1, KI-2 THRU KI-N ARE POTTER-BRUNFIELD P/N RIDE12V25K OR EQUIVALENT. RELAY OPERATES AT 48 VDC, 20 MA.
2. LD IS AN OPTICALLY COUPLED LOOP CURRENT DETECTOR MODULE 1/2 OF THE TA-J CORP P/N LDA 200 OR EQUIVALENT.
3. RS2 IS SHUNT RESISTOR SELECTED IN ACCORDANCE WITH LD DEVICE MANUFACTURERS RECOMMENDATION TO ALLOW ~9MA IN LOOP TO OPERATE
4. CONTACTS ARE SHOWN IN THE DE-ENERGIZED OR NON-OPERATED POSITION OF THE MAIN DEVICE.



REV.	DATE	BY	CHK.	APP.	DESCRIPTION

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION. URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IS PART OF THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY
R.A. Hawley

CHECKED BY
Bob Williams

IN CHARGE
Bob Williams

DATE
5 NOV 85

4-1-87 EAM PROPOSAL ISSUE



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

DMJM/PSGD/KE/HWA
GENERAL CONSULTANTS

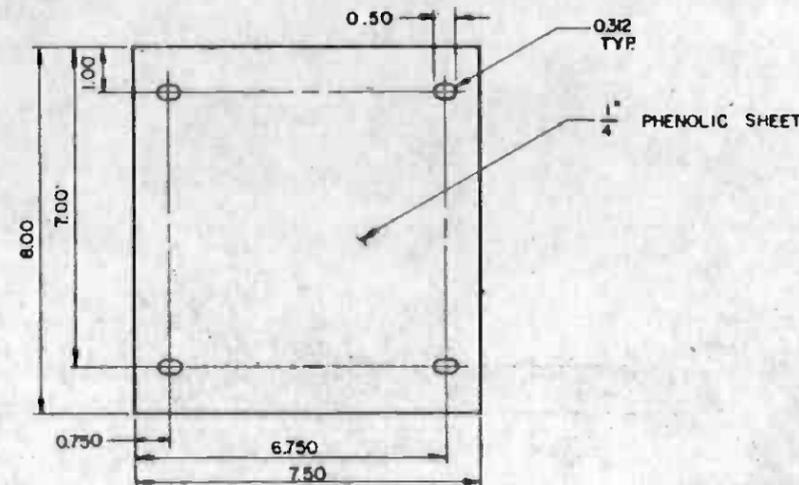
APPROVED *Howard J. Claff*

LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
EMERGENCY TRIP SWITCH
SCHEMATIC DIAGRAM

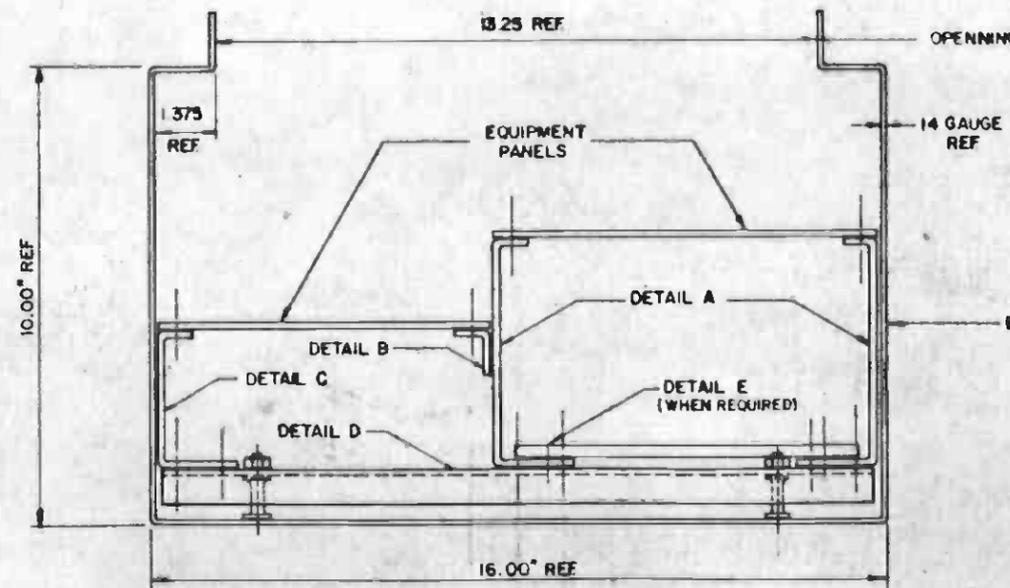
CONTRACT NO.	A64D
DRAWING NO.	N-064
SCALE	NO SCALE
SHEET NO.	78

NOTES:

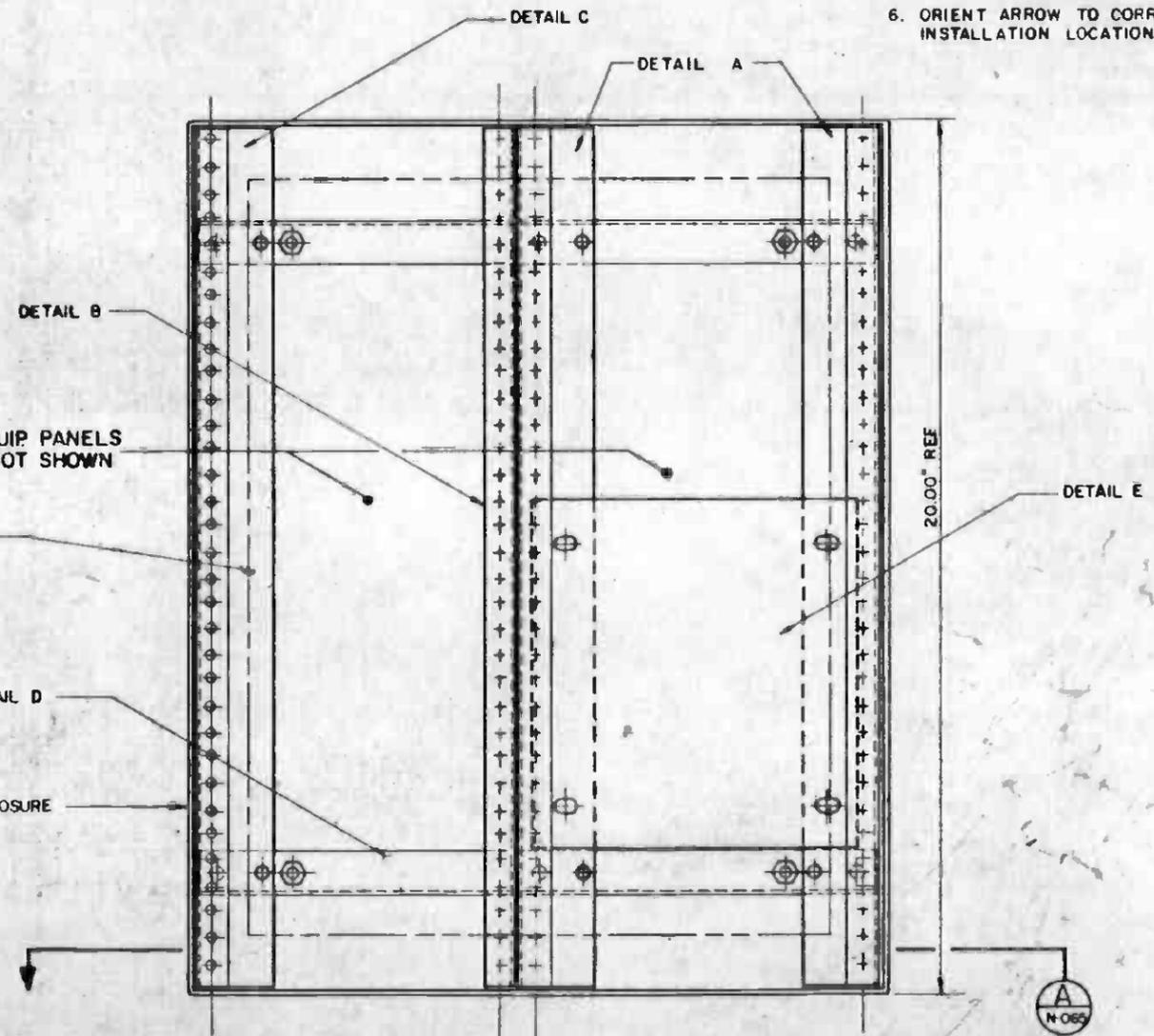
1. DRILL AND TAP FOR NO 6-20 SCREWS USING EIA RS-310-B UNIVERSAL SPACING STANDARD.
2. PANEL MOUNTING HOLES AND/OR SLOTS SHALL BE SPACED PER EIA RS-310-B UNIVERSAL SPACING STANDARD.
3. PANEL DESIGNATIONS SHALL BE AS FOLLOWS:
 FIGURE G. PLATFORM EAST
 PLATFORM WEST
 FIGURE H. TAIL TRACK EAST
 TAIL TRACK WEST
 PANELS SHALL BE GEOGRAPHICALLY ORIENTED TO CORRESPOND WITH SPECIFIC INSTALLATION LOCATION.
4. DETAIL E IS DESIGNED TO PROVIDE A MOUNTING FIXTURE FOR CONTRACTOR PROVIDED GAS TUBE PROTECTOR MODULES AND PROTECTORS, AND SHALL BE PROVIDED AT ALL BLUE LIGHT STATIONS (BLS) EXCEPT THOSE LOCATED IN A CROSSPASSAGE OR AT THE END OF A STATION PLATFORM.
5. SHEET SHALL BE GLASS EPOXY GRADE G-10.
6. ORIENT ARROW TO CORRESPOND WITH SPECIFIC INSTALLATION LOCATION



DETAIL E
(SEE NOTE 4) N-065 N-068



SECTION A
N-065



BLS CABINET



REV	DATE	BY	CHK	APP	DESCRIPTION

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DESIGNED BY	M.E.T.C.	CHECKED BY	<i>S. Blahutsky</i>	DATE	20 NOV 85
DRAWN BY	<i>C.E. D... ..</i>	IN CHARGE	<i>M.</i>		

REGISTERED PROFESSIONAL ELECTRICAL ENGINEER
 No. 601180
 No. 7-30
 STATE OF CALIFORNIA

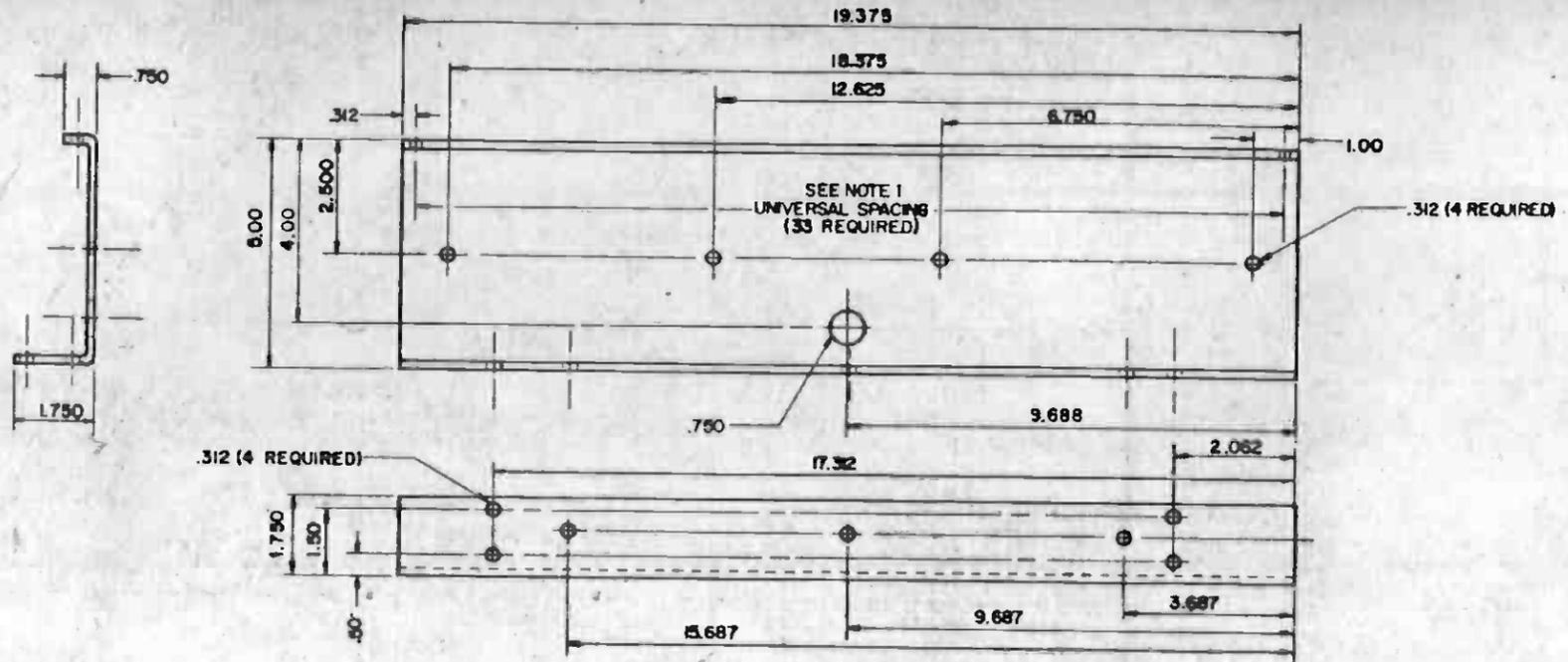
SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

DLJM/PBQD/KE/MWA
 GENERAL CONSULTANTS

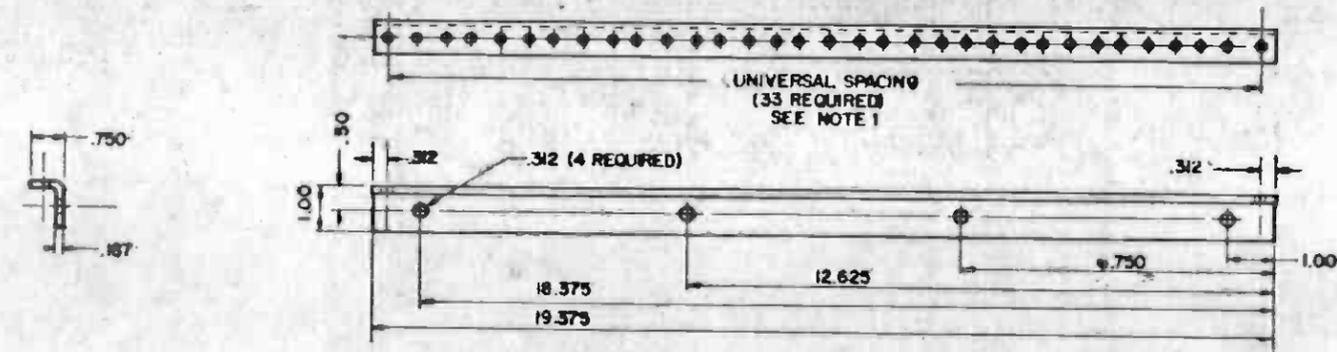
APPROVED: *Toward Schaff*

LA CBD TO NORTH HOLLYWOOD
 COMMUNICATIONS
 BLUE LIGHT STATIONS
 SHEET 1 OF 6

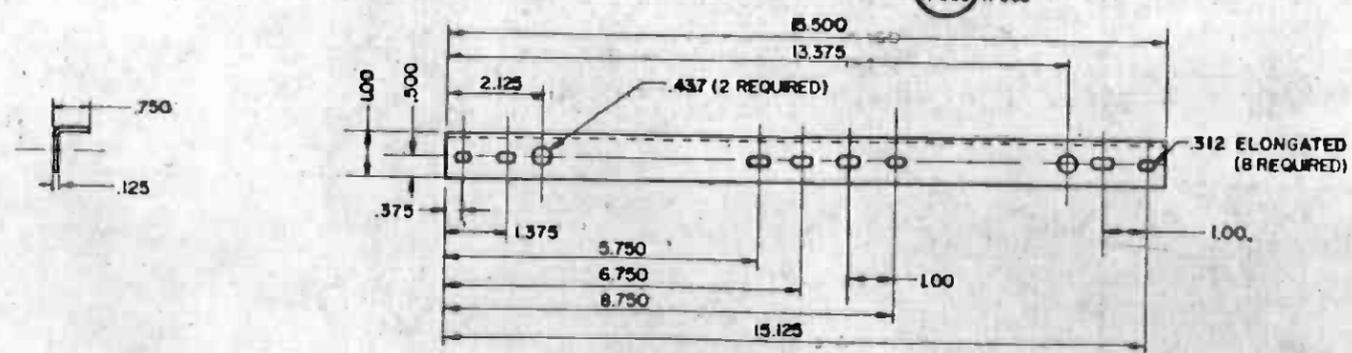
CONTRACT NO.	A640
DRAWING NO.	N-065
REV.	0
SCALE	NO SCALE
SHEET NO.	79



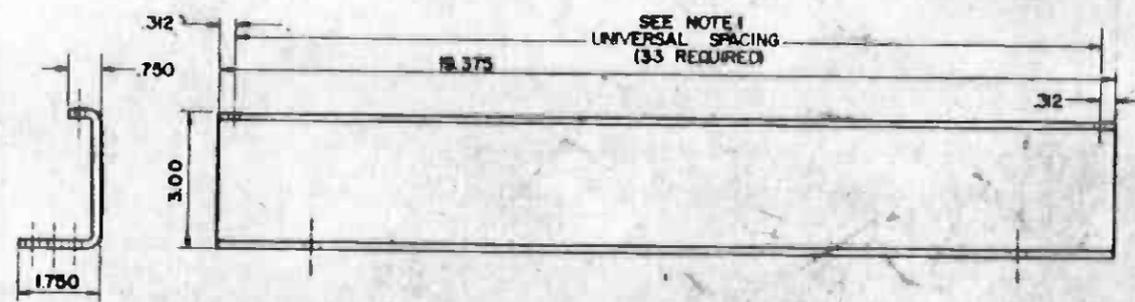
DETAIL A
N-066 N-065



DETAIL B
N-066 N-065



DETAIL C
N-066 N-065



DETAIL D
N-066 N-065



REV	DATE	BY	CHK	APP	DESCRIPTION

REV	DATE	BY	CHK	APP	DESCRIPTION

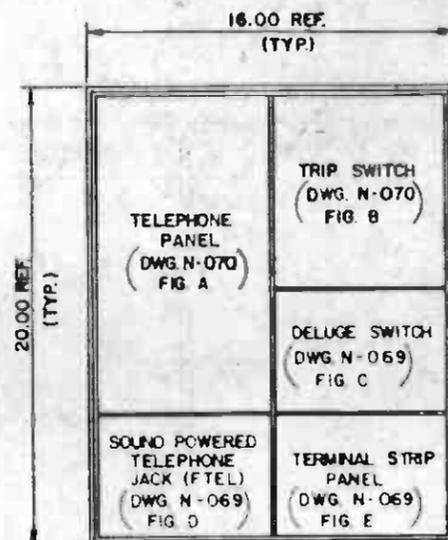
DESIGNED BY
M.Z.T.C.
DRAWN BY
M.H.M.
CHECKED BY
M.H.M.
DATE
20 NOV 85



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT
DMLM/PBOD/KE/HWA
GENERAL CONSULTANTS
APPROVED: *[Signature]*

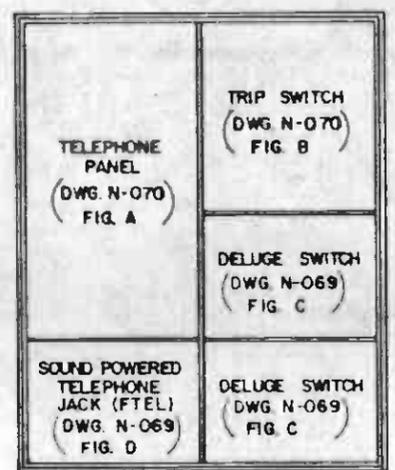
LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
BLUE LIGHT STATIONS
SHEET 2 OF 6

CONTRACT NO.	A640
DRAWING NO.	N-066
SCALE	1/2" = 1"
SHEET NO.	80

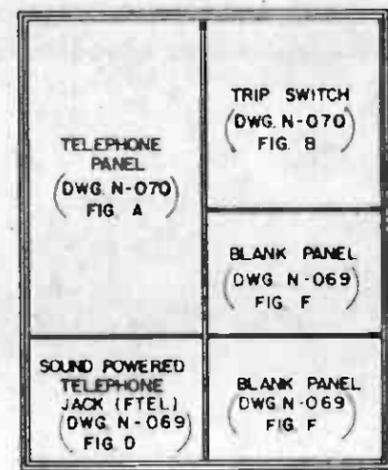


SEE NOTE 3

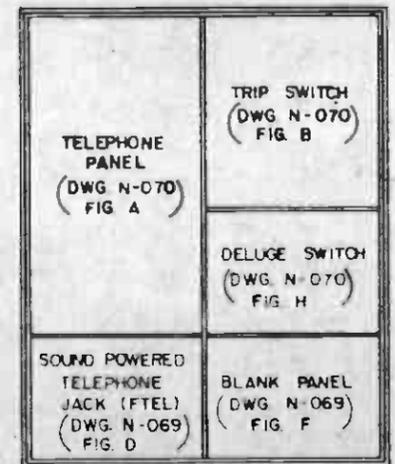
CONFIGURATION 1
BLS LOCATED AT STATION
END OF PLATFORM



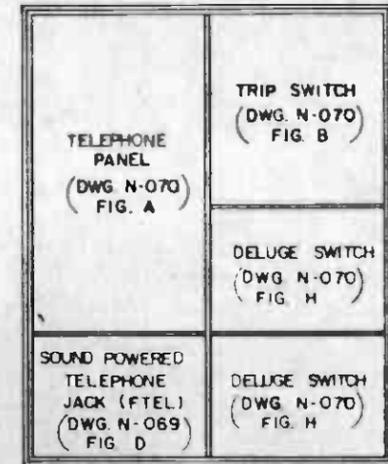
CONFIGURATION 2
BLS LOCATED AT TAIL TRACK END OF
LRT PLATFORM IN 7TH/FLOWER STATION



CONFIGURATION 3
BLS LOCATED IN CROSS-PASSAGES



CONFIGURATION 4
BLS LOCATED AT SOUTH END OF
LRT PLATFORM



CONFIGURATION 5
BLS LOCATED AT EMERGENCY EXIT IN
LRT TAILTRACK AT 7TH/FLOWER STATION

REFER TO DWG. N-065 FOR NOTES.
REFER TO DWGS. N-065 AND N-066
FOR FIGURE DETAILS.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY
M.R.T.C.
DRAWN BY
[Signature]
CHECKED BY
[Signature]
DATE
20 NOV 85



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

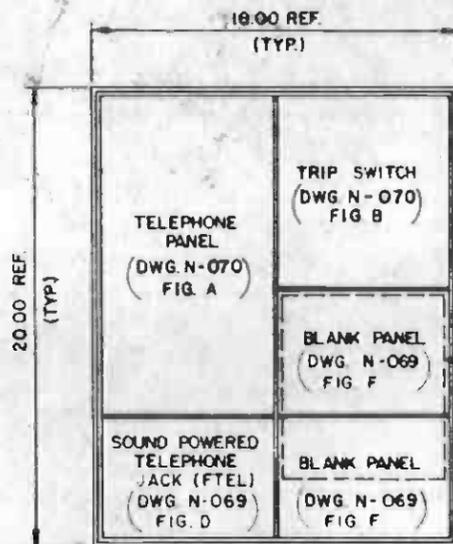


DMJM/PROD/KE/HWA
GENERAL CONSULTANTS

LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS
BLUE LIGHT STATIONS
SHEET 3 OF 6

CONTRACT NO.	A640
DRAWING NO.	N-067
REV.	0
SCALE	1/4" = 1'-0"
SHEET NO.	81

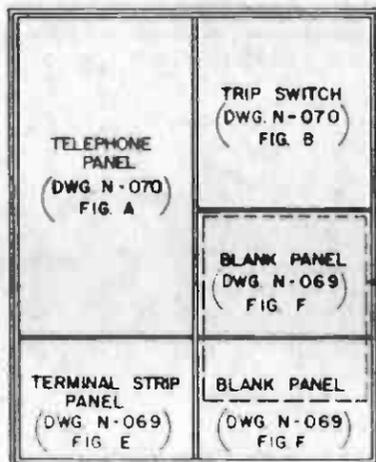
REV.	DATE	BY	CHK.	APP.	DESCRIPTION



DETAIL E
DWG. N-065

CONFIGURATION 4

BLS LOCATED IN TUNNEL THAT IS NOT INSIDE A CROSS-PASSAGE



DETAIL E
DWG. N-065

CONFIGURATION 5

BLS LOCATED IN YARD AREA

REFER TO DWG. N-065 FOR NOTES.
REFER TO DWGS. N-065 AND N-066 FOR FIGURE DETAILS.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA

DESIGNED BY
M.R.T.C.
DRAWN BY
C.E. Daniel
CHECKED BY
R. [Signature]
IN CHARGE
P.M. [Signature]
DATE
20 NOV 85



**SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT**



DALUM/PBOD/KE/MWA
GENERAL CONSULTANTS

SUBMITTED *[Signature]*

APPROVED *[Signature]*

**LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
BLUE LIGHT STATIONS**
SHEET 4 OF 6

CONTRACT NO.	A640
DRAWING NO.	N-068
REV.	0
SCALE	1/4" = 1"
SHEET NO.	82

REV.	DATE	BY	SUB.	APP.	DESCRIPTION
1	11/20/85	[Signature]			PROPOSAL ISSUE

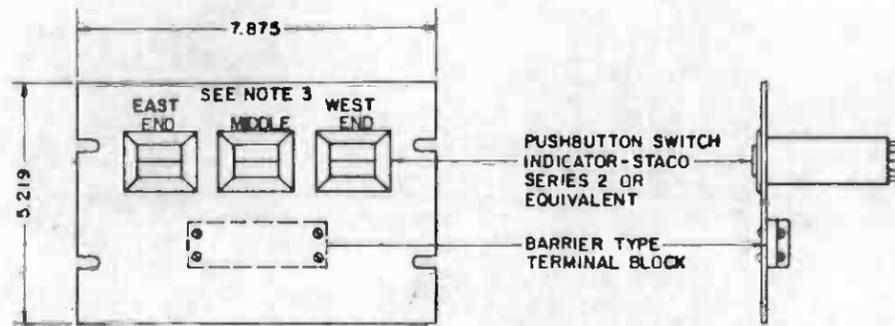


FIGURE C
(SEE NOTE 2)

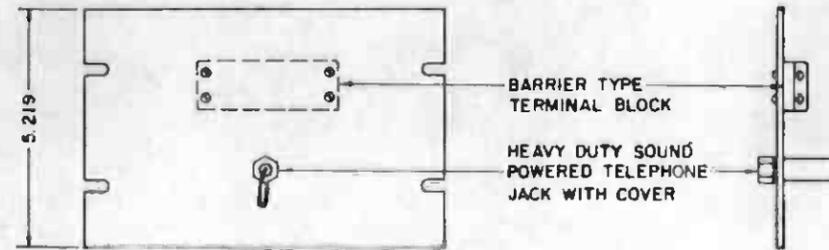


FIGURE D
(SEE NOTE 2)

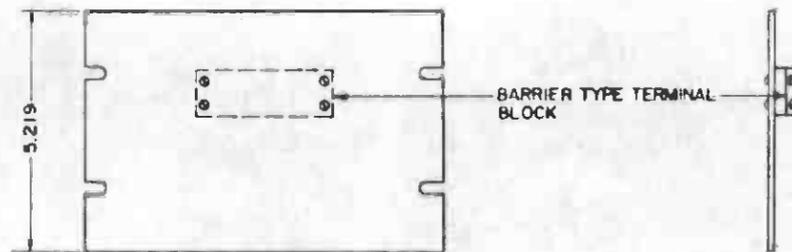


FIGURE E
(SEE NOTE 2)

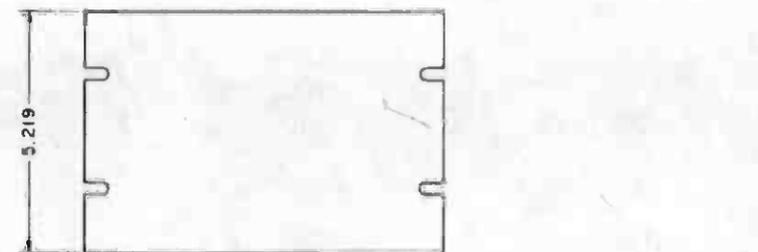


FIGURE F
(SEE NOTE 2)

REFER TO DWG. N-065 FOR NOTES.
REFER TO DWGS N-065 AND N-066
FOR FIGURE DETAILS.



REV	DATE	BY	CHK	APP	DESCRIPTION

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
M. R. P. C.
DRAWN BY
C. B. Dool
CHECKED BY
[Signature]
DATE
20 NOV 85



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT



DMJM/PBQD/KE/HWA
GENERAL CONSULTANTS

APPROVED [Signature]

LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
BLUE LIGHT STATIONS
SHEET 5 OF 6

CONTRACT NO.	A640
DRAWING NO.	N-069
SCALE	HALF SIZE
SHEET NO.	83

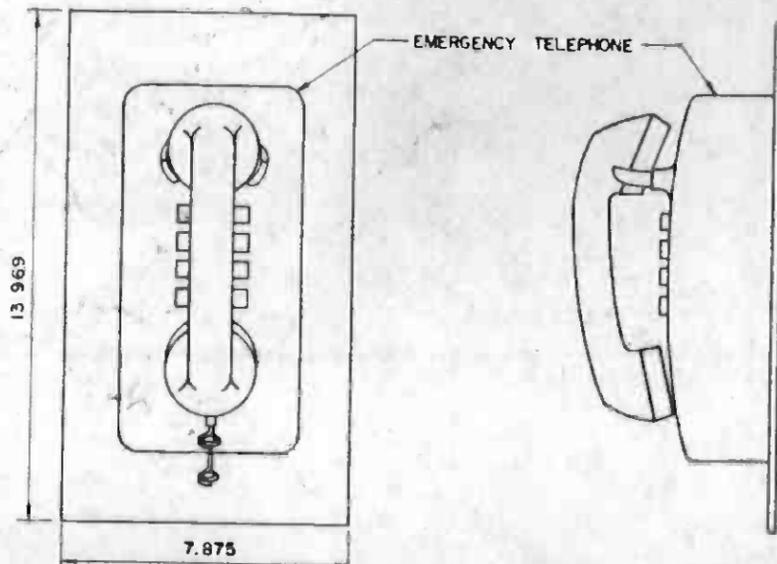


FIGURE A
(SEE NOTE 2)

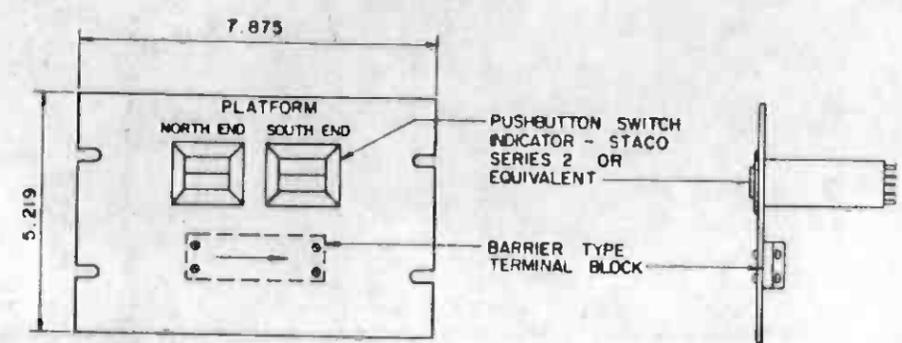


FIGURE G
(SEE NOTES 2,3,6)

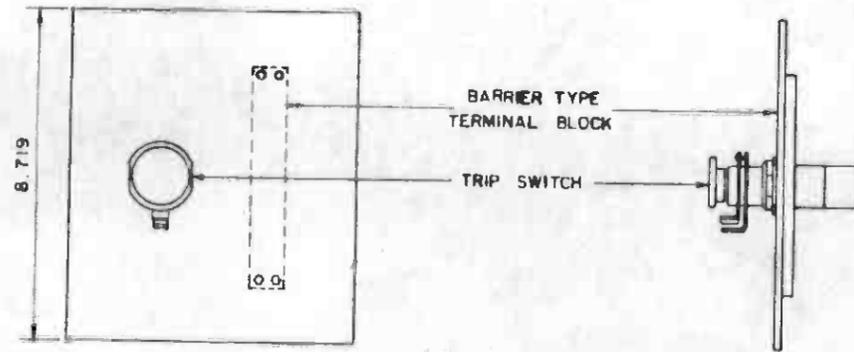


FIGURE B
(SEE NOTE 2)

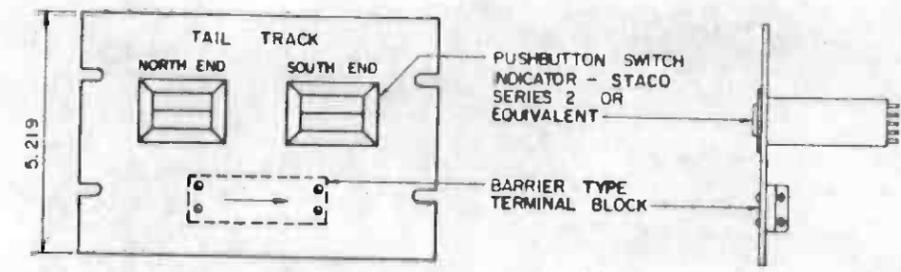


FIGURE H
(SEE NOTES 2,3,6)

REFER TO DWG. N-065 FOR NOTES.
REFER TO DWGS. N-065 AND N-066
FOR FIGURE DETAILS.



REV.	DATE	BY	CHK	APP	DESCRIPTION

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY
M.R.T.C.

DRAWN BY
[Signature]

CHECKED BY
[Signature]

IN CHARGE
[Signature]

DATE
20 NOV 85

4-4-85
PROPOSAL ISSUE



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

DMJM/PBQD/KE/MWA
GENERAL CONSULTANTS

APPROVED *[Signature]*

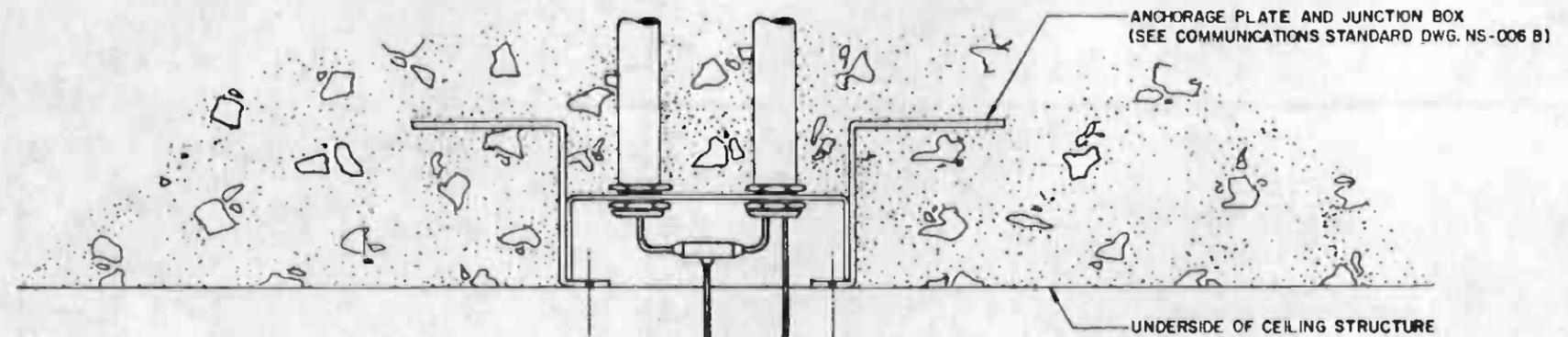
LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
BLUE LIGHT STATIONS
SHEET 6 OF 6

CONTRACT NO. A640	
DRAWING NO. N-070	REV. 0
SCALE AS NOTED	
SHEET NO. 84	

FACILITIES
CONTRACT
A 000

CONTRACT
A 640

INCLUDES COAXIAL
CABLE, OTHER WIRES
IN CONDUIT AND
CONNECTIONS



ANCHORAGE PLATE AND JUNCTION BOX
(SEE COMMUNICATIONS STANDARD DWG. NS-006 B)

UNDERSIDE OF CEILING STRUCTURE

CONTRACT
DEMARICATION
LINE

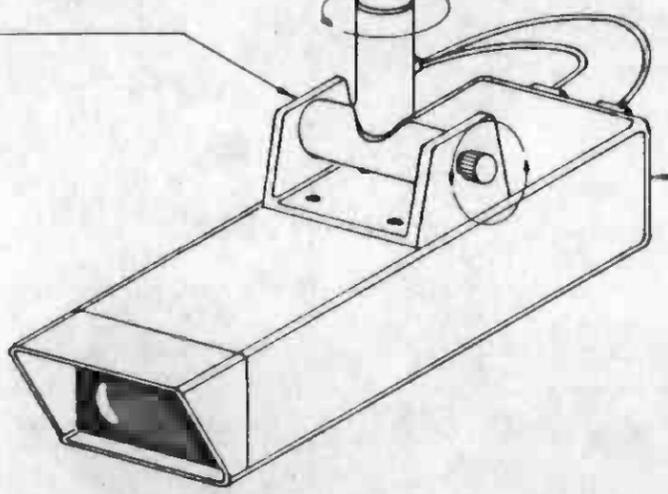
SHEET METAL FINISHED CEILING (WHERE USED)-
A 640 CONTRACTOR SHALL REMOVE CEILING
PAN & CUT APPROPRIATE SIZE HOLE IN PAN,
DIRECTLY BELOW JUNCTION BOX, FOR ACCESS.

ATTACHMENT PLATE

TUBING - LENGTH AS REQUIRED

STANDARD UNIVERSAL FITTING
PROVIDING 360° HORIZONTAL
MOVEMENT & FULLY ADJUSTABLE
TILT FROM HORIZONTAL TO
VERTICAL.

CAMERA - IN ENVIRONMENTAL HOUSING



REV	DATE	BY	DWG.	APP.	DESCRIPTION

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.					

DESIGNED BY
P. Carter
DRAWN BY
P. Carter
CHECKED BY
D. J. Buckley
IN CHARGE
PMB
DATE
30 DEC 85



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

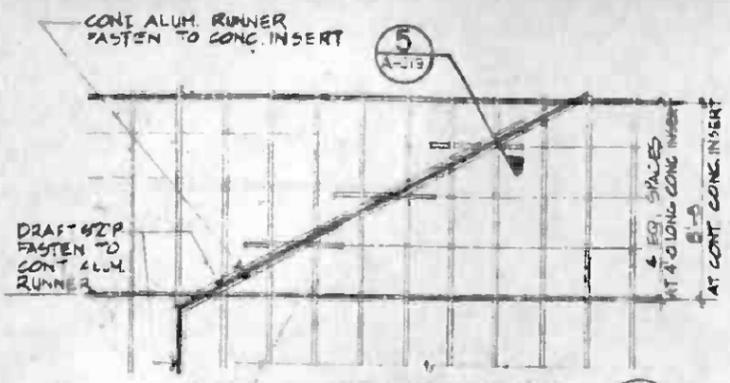
DMJM/PBQD/KE/HWA
GENERAL CONTRACTORS

APPROVED *[Signature]*

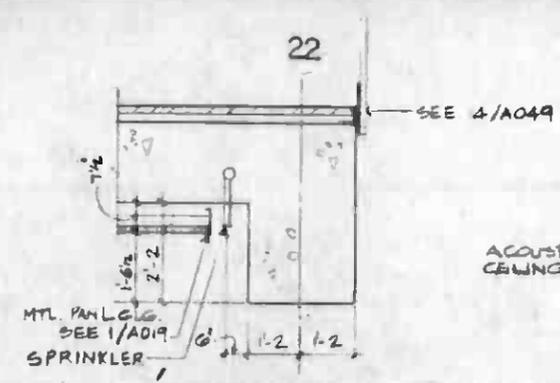


LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
CLOSED CIRCUIT TELEVISION (CCTV)
CAMERA INTERFACE

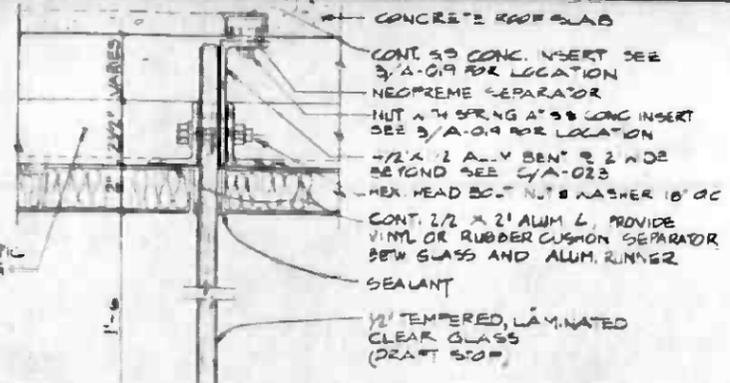
CONTRACT NO.	A640
DRAWING NO.	N-100
REV.	0
SCALE	NO SCALE
SHEET NO.	85



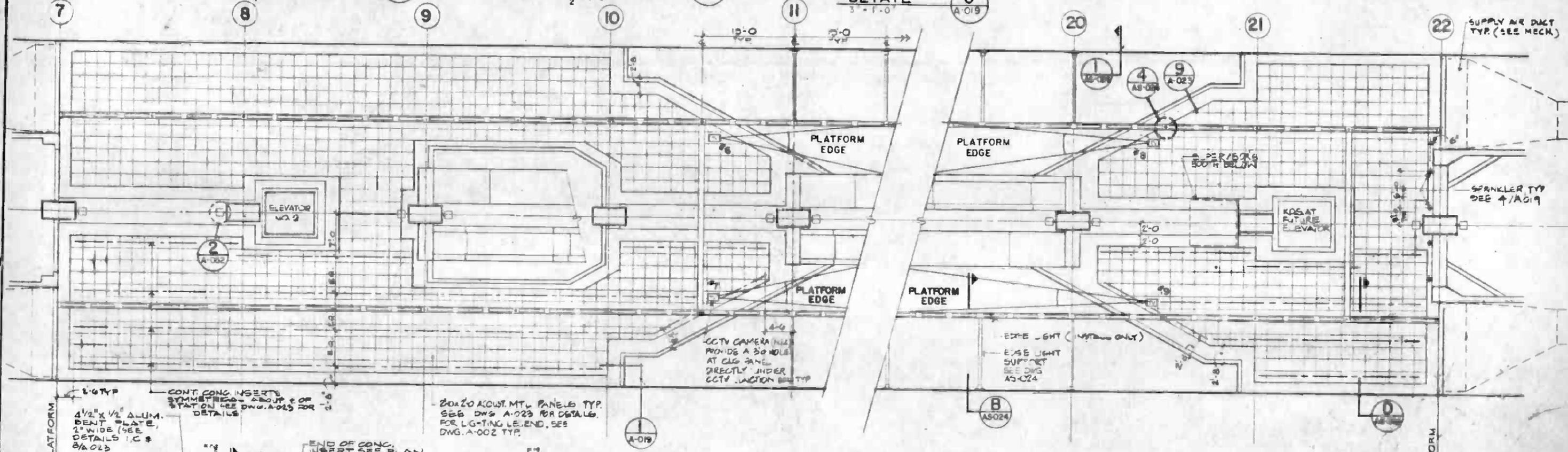
CEILING PLAN
1/4" = 1'-0"



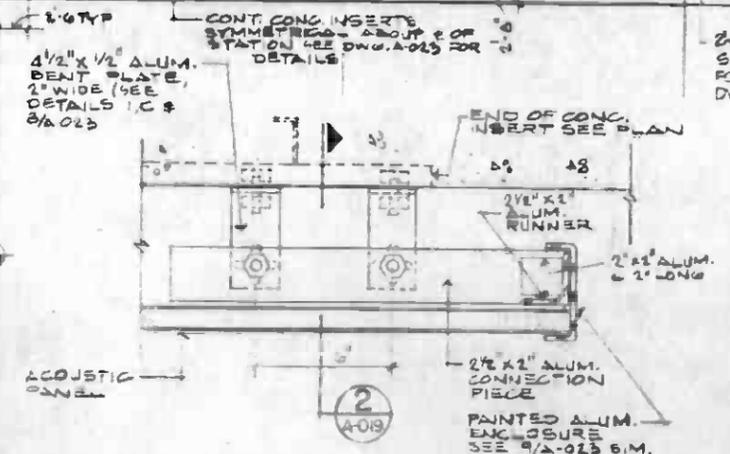
SECTION
1/2" = 1'-0"



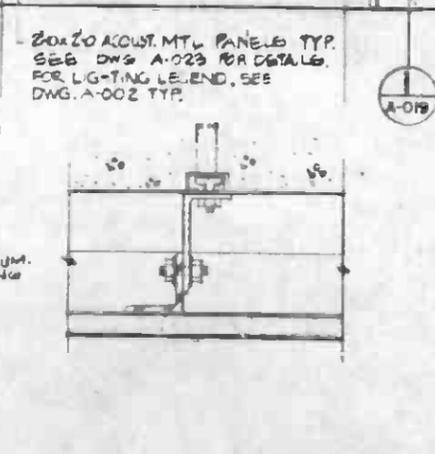
DETAIL
3" = 1'-0"



REFLECTED CEILING PLANS, EAST & WEST ENDS
1/8" = 1'-0"

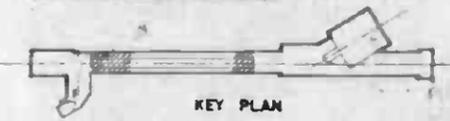


DETAIL
3" = 1'-0"



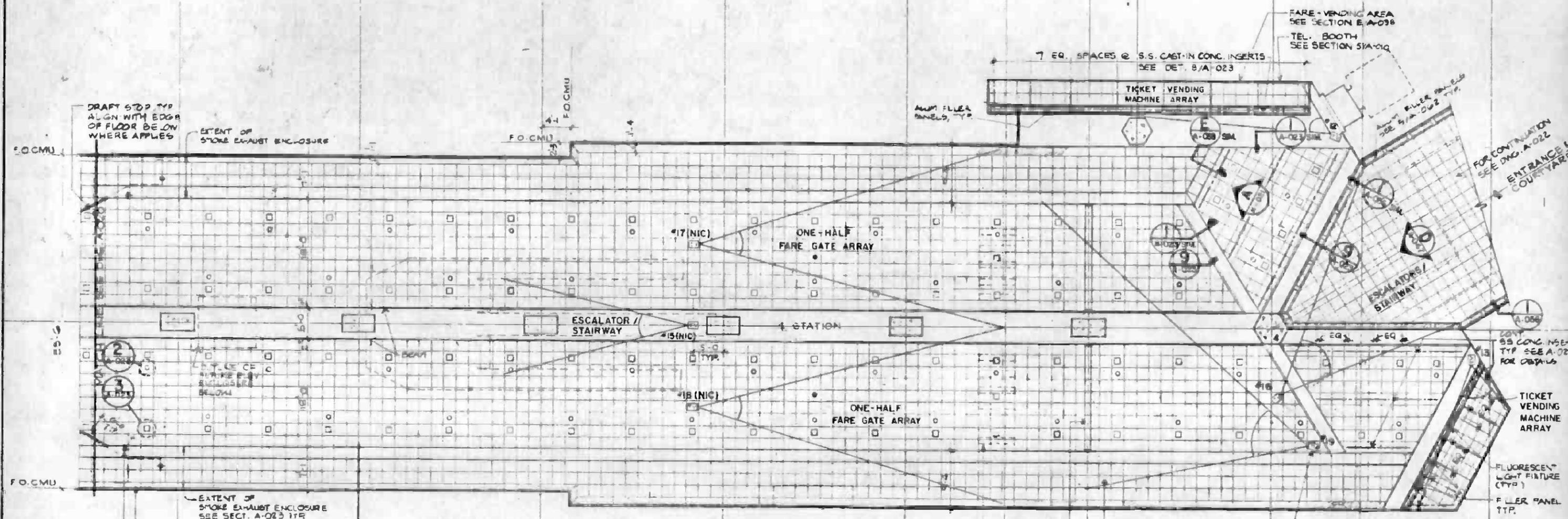
DETAIL
3" = 1'-0"

UNION STATION



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY <i>[Signature]</i> DRAWN BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 6 APR 87		REGISTERED PROFESSIONAL ENGINEER MORRIS BURGESS LICENSE NO. 15416 ELECTRICAL STATE OF CALIFORNIA		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT				CONTRACT NO. A640 DRAWING NO. N-200 SCALE AS NOTED SHEET NO. 86	
REV. DATE BY SUB APP DESCRIPTION				REV. DATE BY SUB APP DESCRIPTION				APPROVED <i>[Signature]</i>		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS CCTV SURVEILLANCE AREAS SHEET 1 OF 3		CONTRACT NO. A640 DRAWING NO. N-200 SCALE AS NOTED SHEET NO. 86	

21 22 23 24 25 255 26 27 28 29 30



DRAFT STOP TYP
ALGN WITH EDGE
OF FLOOR BELOW
WHERE APPLIES

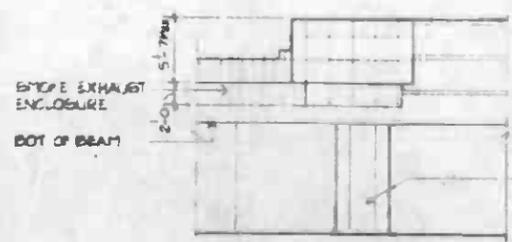
EXTENT OF
STORE EXHAUST ENCLOSURE

EXTENT OF
SMOKE EXHAUST ENCLOSURE
SEE SECT. A-023 TYP

LINEAR GRILLE TYP

SPRINKLER HEADS TYP
SEE MECH DWGS

END PLATFORM



ELEVATION A
A-021

CONC. COLUMN

ELEVATION B
A-021

2'-0\"/>

CCTV CAMERA (NIC)
PROVIDE A 3/4\"/>

NOTE
SEE SECS. A-020 AND A-023
FOR TYP 53 CONC. INSERT
LOCATION AND DETAILS

UNION STATION

PARTIAL MEZZANINE REFLECTED
CEILING PLAN, WEST END



KEY PLAN



REV		DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY <i>Oran</i>	THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.
DRAWN BY <i>J. Johnson</i>	
CHECKED BY <i>R. H. H.</i>	
DATE <i>6 APR 87</i>	

DESIGNED BY
Oran

DRAWN BY
J. Johnson

CHECKED BY
R. H. H.

DATE
6 APR 87

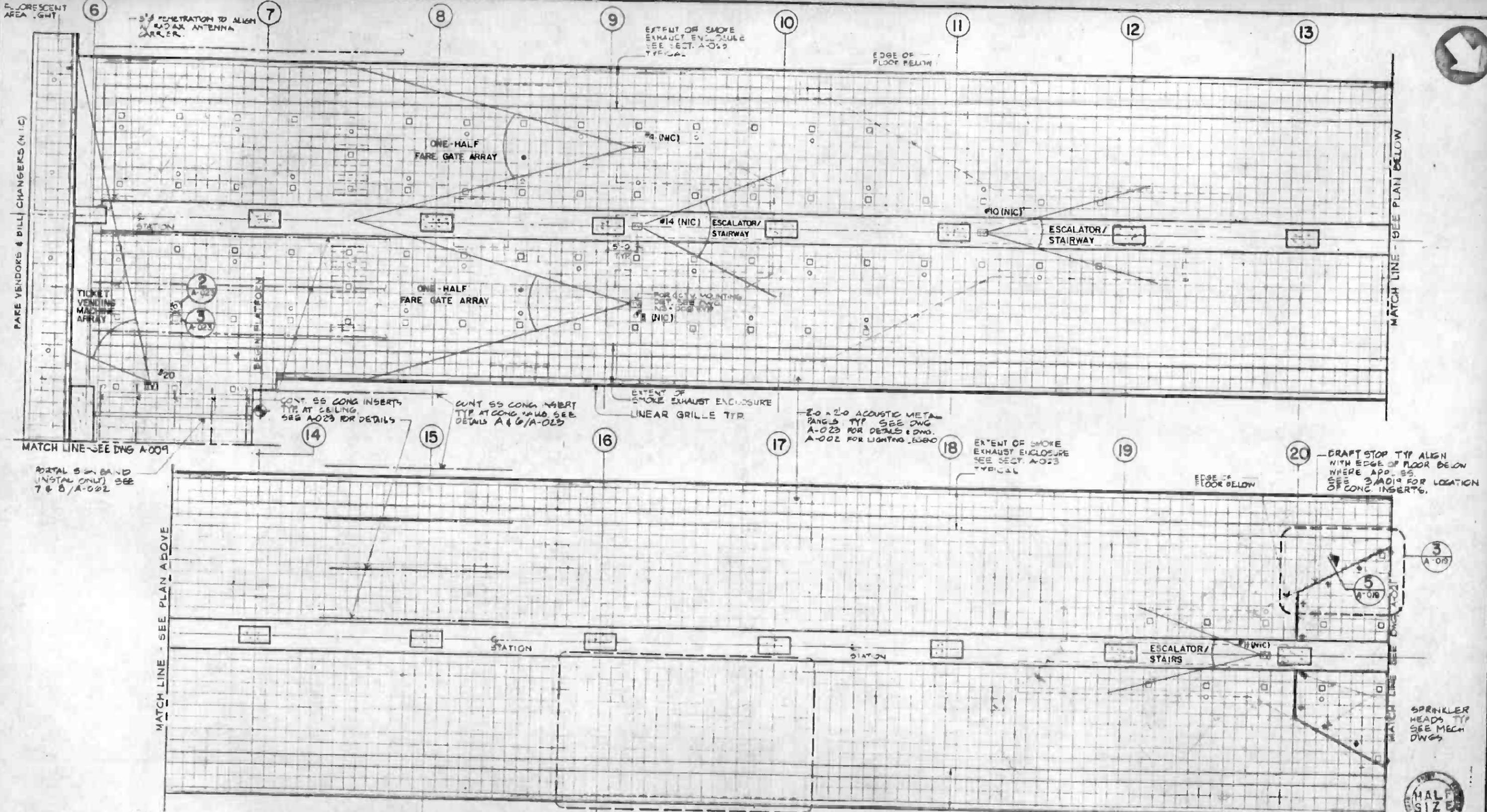
SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

DMJM/PBDD/KE/HWA
GENERAL CONSULTANTS

APPROVED *L. J. H.*

LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
CCTV SURVEILLANCE AREAS
SHEET 2 OF 3

CONTRACT NO.	A640
DRAWING NO.	N-201
SCALE	1/8" = 1'-0"
REVISION	0
PROJECT NO.	87



UNION STATION TRAINROOM REFLECTED CEILING PLANS, MEZZANINE LEVEL

EXTENT OF SMOKE EXHAUST ENCLOSURE LINEAR GRILLE TYP.



REV.	DATE	BY	CHK.	APP.	DESCRIPTION

REV.	DATE	BY	CHK.	APP.	DESCRIPTION

DESIGNED BY
[Signature]

DRAWN BY
[Signature]

CHECKED BY
[Signature]

IN CHARGE
[Signature]

DATE
6 APR 87

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

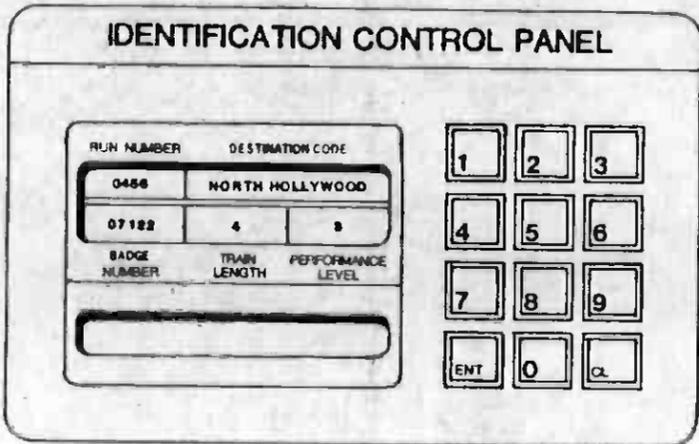


DMJM/PB00/KE/HWA
GENERAL CONSULTANTS

APPROVED *[Signature]*

LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS
CCTV SURVEILLANCE AREAS
SHEET 3 OF 3

CONTRACT NO.	A640
DRAWING NO.	N-202
SCALE	1/8" = 1'-0"
SHEET NO.	88



REV.	DATE	BY	SUB.	APP.	DESCRIPTION

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY	<i>[Signature]</i>
DRAWN BY	<i>[Signature]</i>
CHECKED BY	<i>[Signature]</i>
IN CHARGE	<i>[Signature]</i>
DATE	13 FEB 85



**SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT**


 DLJM/PBOD/KE/HWA
 GENERAL CONSULTANTS
 APPROVED: *[Signature]*

**LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
TRAIN IDENTIFICATION
CONTROL PANEL**

CONTRACT NO.	A640
DRAWING NO.	N-074
REV.	0
SCALE	FULL SIZE
SHEET NO.	90

CONTRACT A640
INCLUDES WIRING TO
RADIO AND WIRING
CONNECTIONS.

CONTRACT
DEMARCATI
ON LINE

CONTRACT A650

RADIO ANTENNA
RADOME

RADIO
ANTENNA

FUTURE RADOME

FUTURE ANTENNA

TOP OF VEHICLE ROOF

NOTE:

1. ALL VEHICLE BORNE EQUIPMENT SHALL BE
INSTALLED BY CONTRACT A650.

CONTRACT A650

CONTRACT
DEMARCATI
ON LINE

CONTRACT A640
INCLUDES WIRING TO
ANTENNA, TO CCU AND
WIRING CON-
NECTIONS.

STANDARD EIA
HOLE DIAMETER
AND HOLE SPACING

19" WIDE

10" HIGH (MIN.)-
SPACE FOR TWO
RADIOS

13" DEEP
(MAX)

RADIO ANTENNA MOUNT

RADIO

FUTURE
RADIO

RADIO MOUNT

INSIDE FACE OF
OUTSIDE WALL
OF VEHICLE

CONTRACT A650

CONTRACT
DEMARCATI
ON LINE

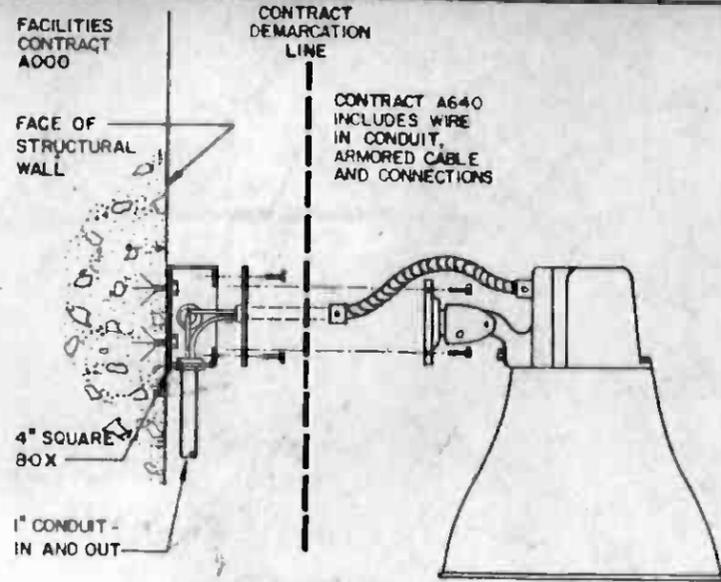
CONTRACT A640
INCLUDES WIRING TO CCU
AND ELSEWHERE AND
CONNECTIONS.

TICU MOUNTED IN VEHICLE
SIDE WALL, ABOVE AND TO
THE LEFT OF CONSOLE, BUT
WITHIN EASY REACH OF
SEATED OPERATOR.

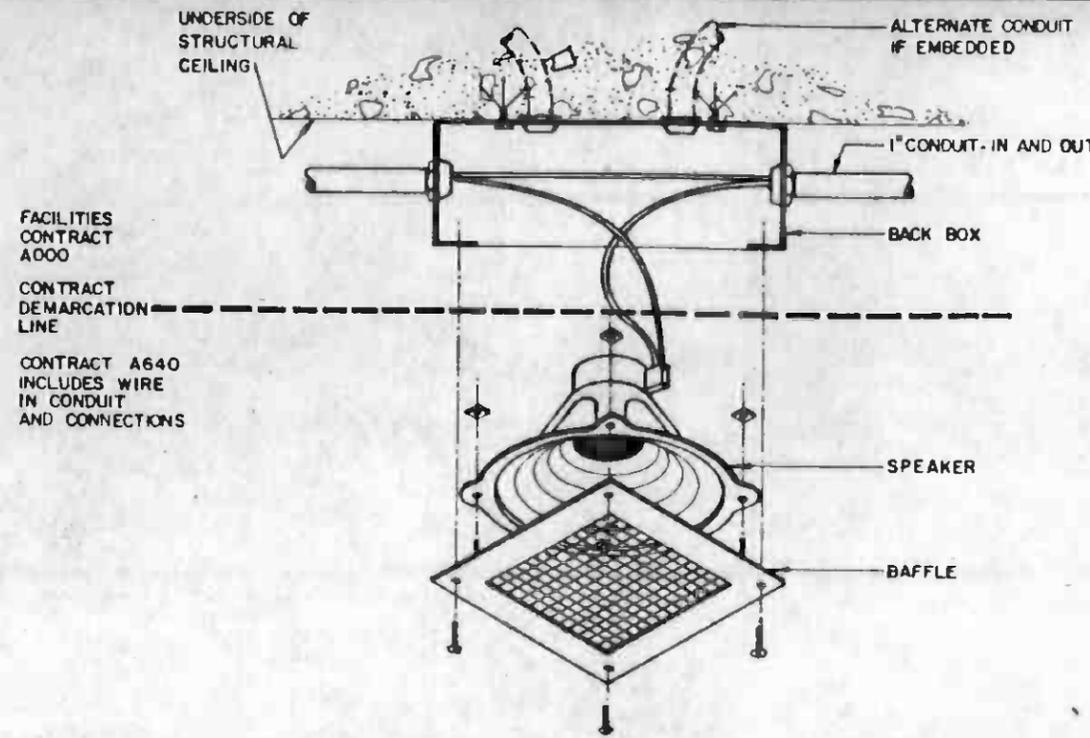
TRAIN IDENTIFICATION CONTROL UNIT MOUNT



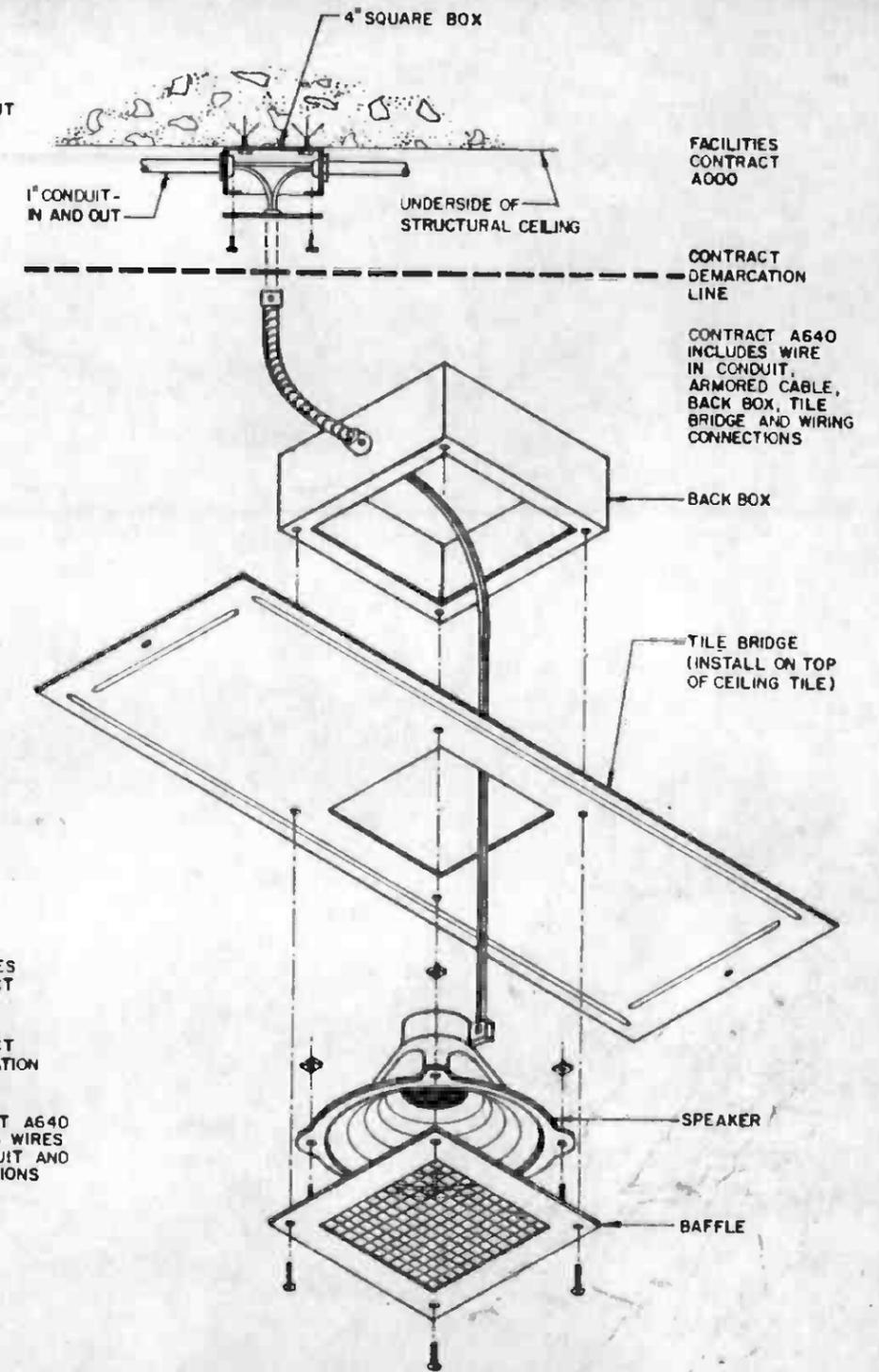
<p>THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.</p>										<p>DESIGNED BY <i>[Signature]</i></p> <p>DRAWN BY <i>[Signature]</i></p> <p>CHECKED BY <i>[Signature]</i></p> <p>IN CHARGE <i>[Signature]</i></p> <p>DATE 21 JAN 85</p>				<p>SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT</p>		<p>DMJM/PBDD/KE/HWA GENERAL CONSULTANTS</p> <p>APPROVED <i>[Signature]</i></p>		<p>CONTRACT NO. A640</p> <p>DRAWING NO. N-095</p> <p>SCALE NO SCALE</p> <p>SHEET NO. 91</p>			
REV	DATE	BY	SUB	APP	DESCRIPTION	REV	DATE	BY	SUB	APP	DESCRIPTION										
						1	1-3-85				PROPOSAL ISSUE										



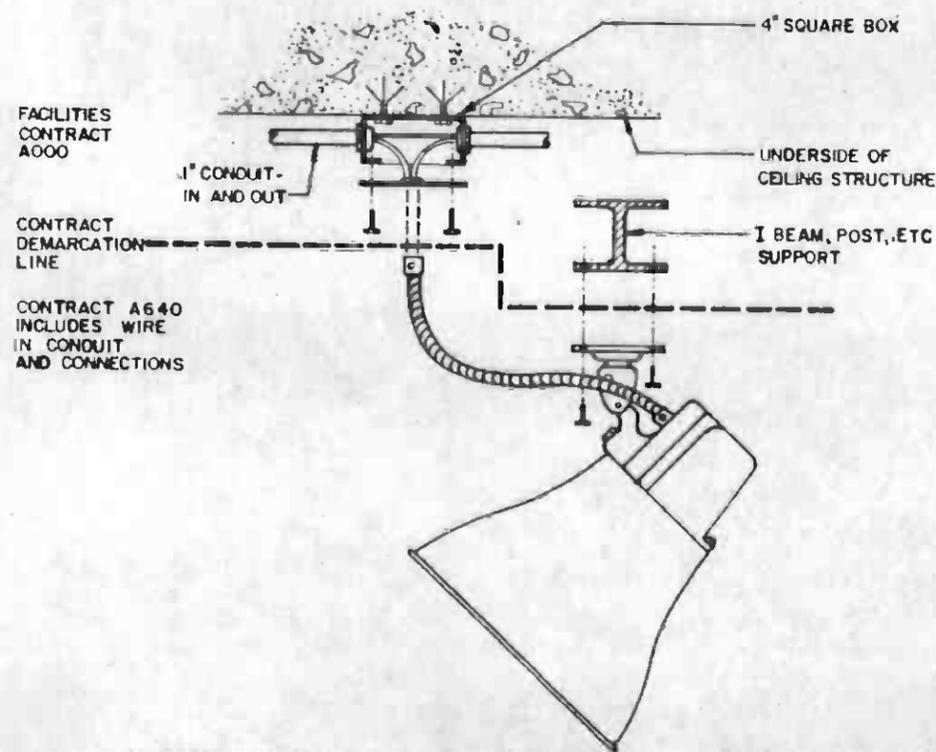
**HORN MOUNT
FIGURE 1**



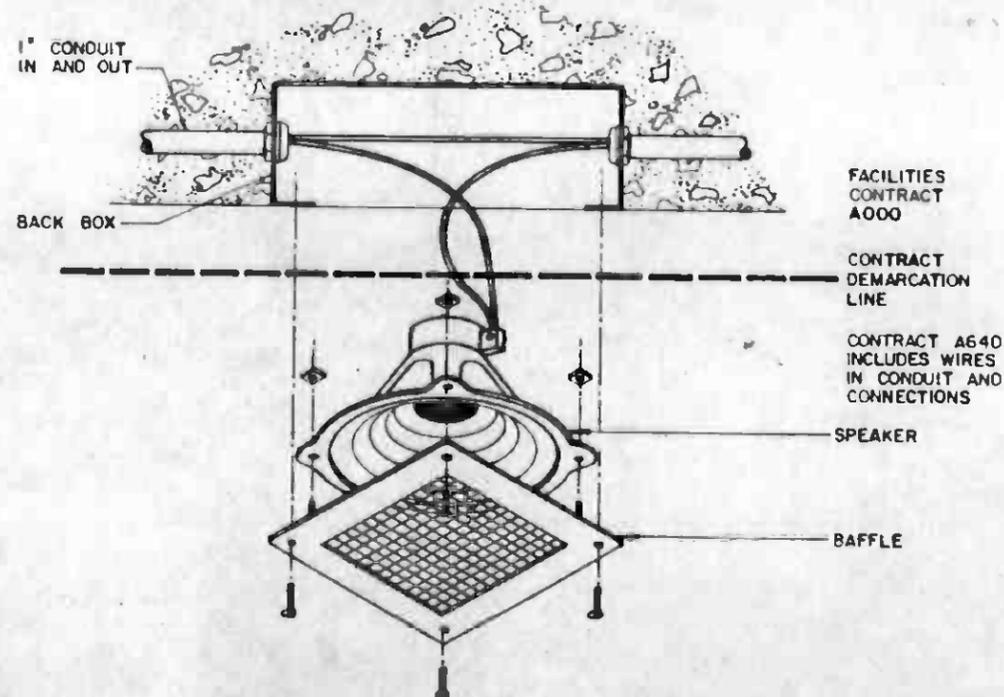
**SURFACE MOUNT - SQUARE BAFFLE
FIGURE 3**



**SUSPENDED CEILING MOUNT
FIGURE 5**



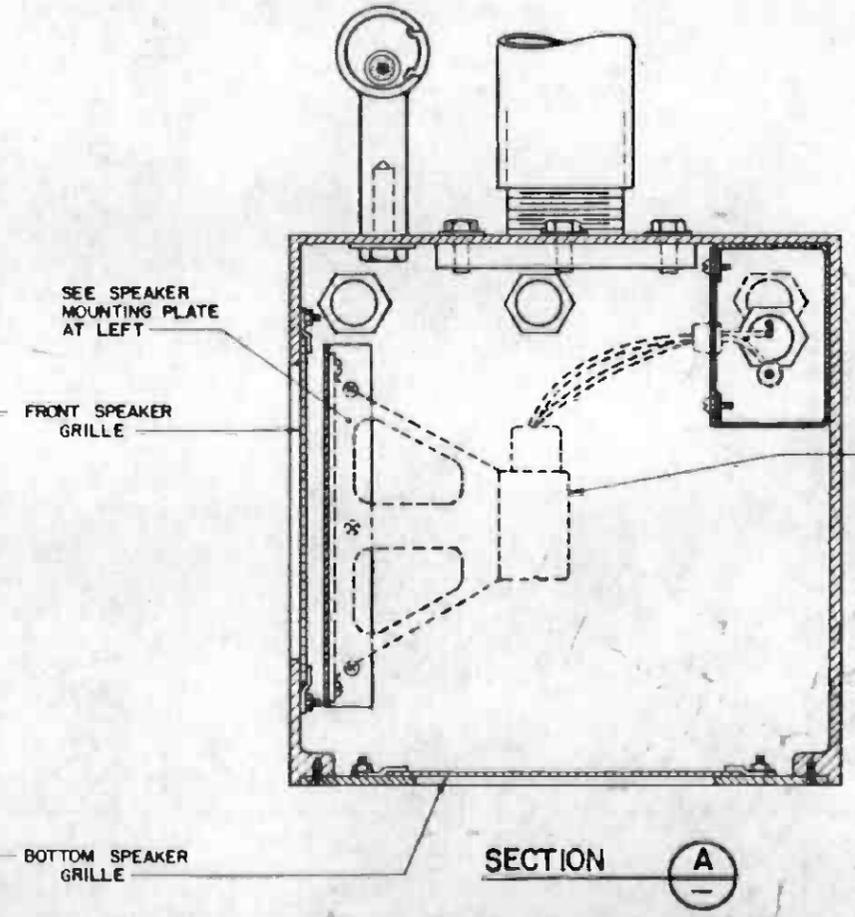
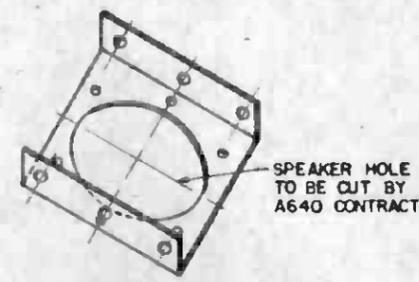
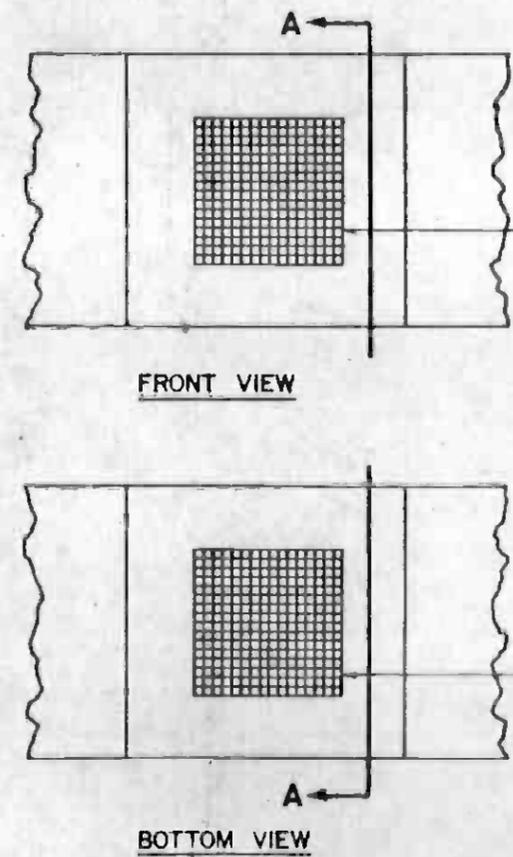
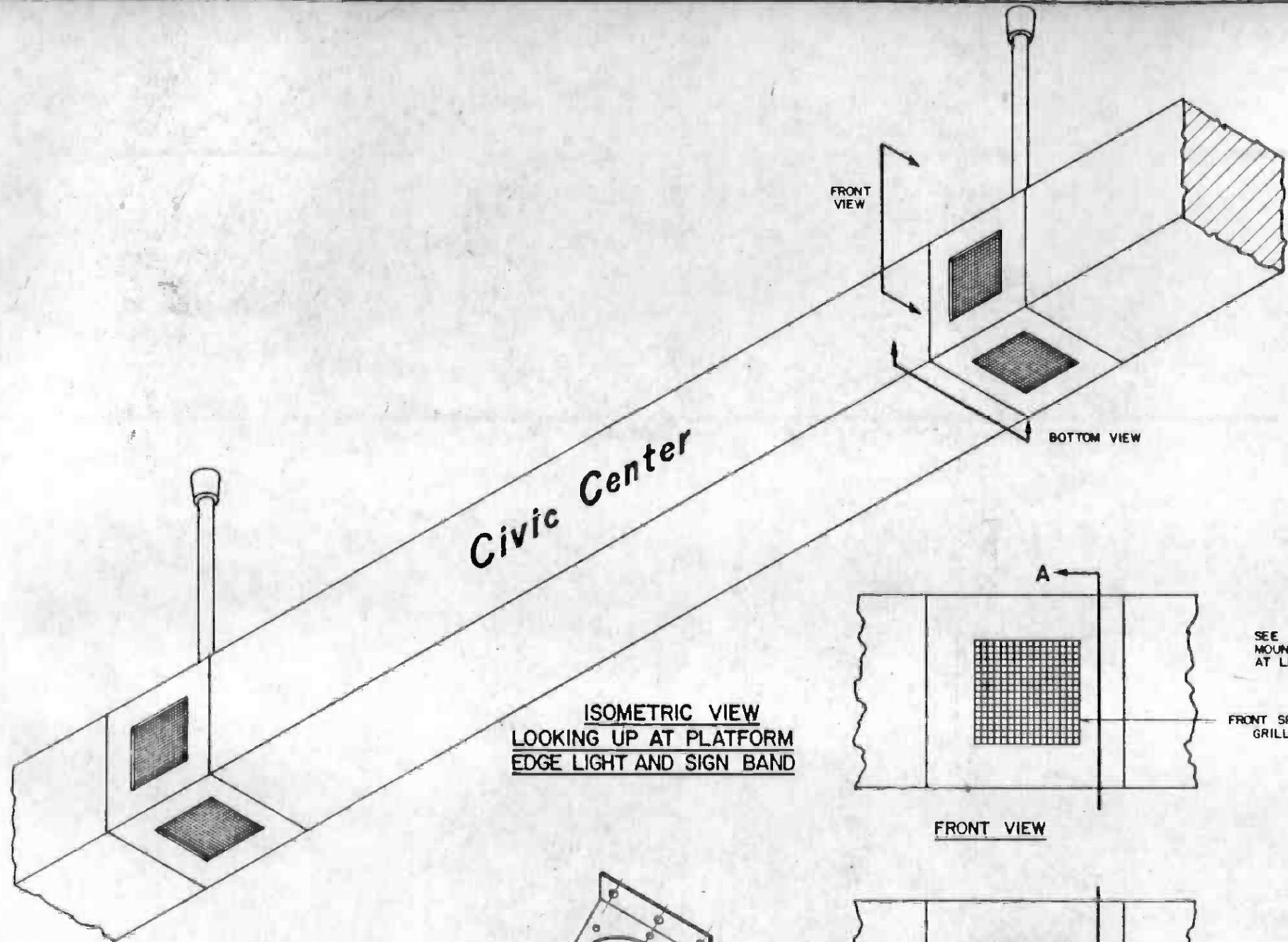
**ALTERNATE HORN MOUNT
FIGURE 2**



**RECESSED MOUNT - SQUARE BAFFLE
FIGURE 4**

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>[Signature]</i> DRAWN BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 6 JAN 86	REGISTERED PROFESSIONAL ENGINEER No. ED11900 ELECTRICAL STATE OF CALIFORNIA	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT DMJM/PBQD/KE/HWA GENERAL CONSULTANTS APPROVED <i>[Signature]</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS PUBLIC ADDRESS SPEAKER INTERFACE SHEET 1 OF 2	CONTRACT NO. A640 DRAWING NO. N-101 SCALE NO SCALE SHEET NO. 92
REV. DATE BY SUB APP DESCRIPTION	REV. DATE BY SUB APP DESCRIPTION	PROPOSAL ISSUE		SUBMITTED <i>[Signature]</i>		



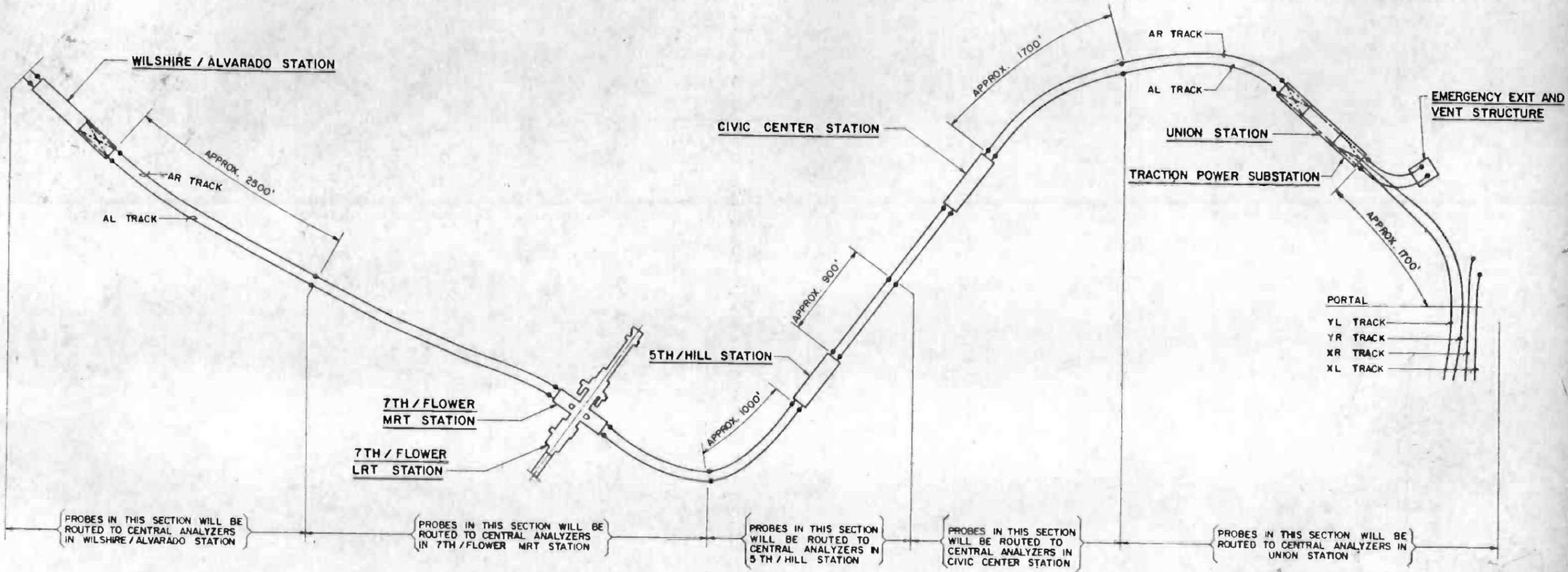


EQUIPMENT IN DOTTED LINES PROVIDED BY A640 CONTRACT, INCLUDING WIRES AND CONNECTIONS.

ALL OTHER COMPONENTS OF PLATFORM EDGE LIGHT AND SIGN BAND, INCLUDING SPEAKER GRILLES, PROVIDED BY SIGNING AND EDGE LIGHT CONTRACT A760

HALF SIZE

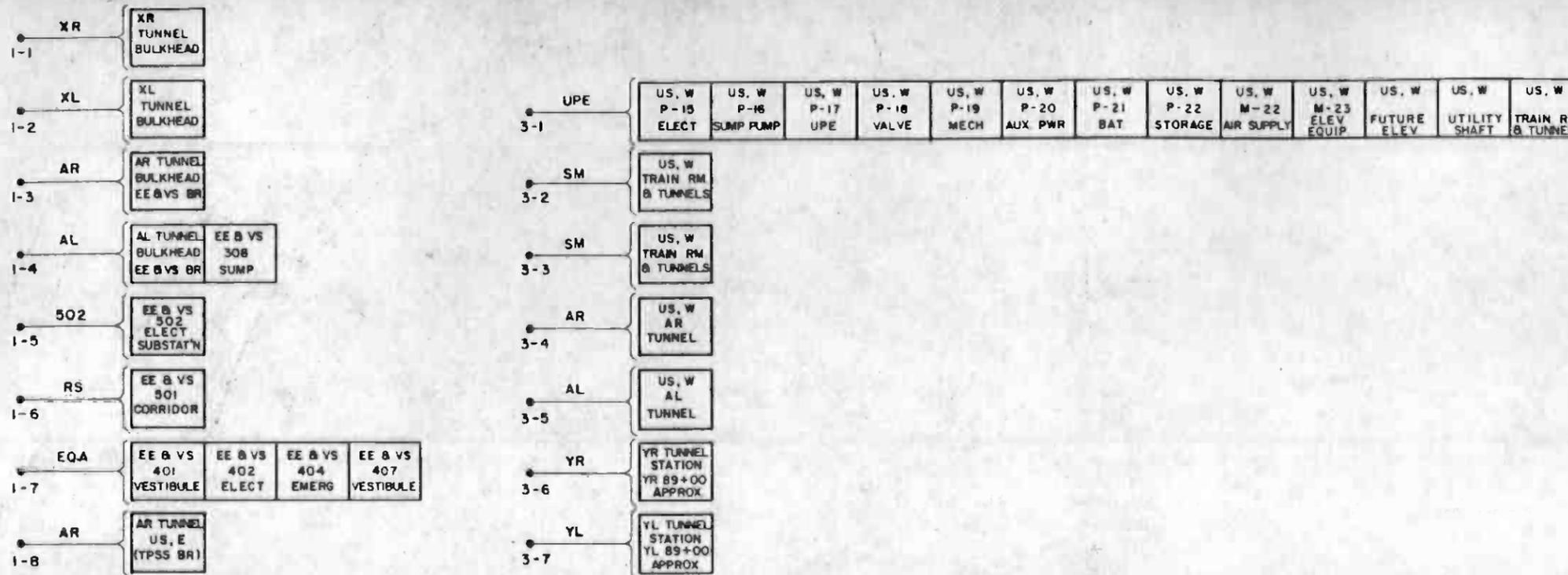
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>[Signature]</i> DRAWN BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 7 JAN 86	REGISTERED PROFESSIONAL ENGINEER CHARLES R. FINEBERG No. 5911980 ELECTRICAL STATE OF CALIFORNIA	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS PUBLIC ADDRESS SPEAKER INTERFACE SHEET 2 OF 2	CONTRACT NO. A640 DRAWING NO. N-102 SCALE NO SCALE SHEET NO. 93
REV. DATE BY SUB APP DESCRIPTION	REV. DATE BY SUB APP DESCRIPTION	PROPOSAL ISSUE	SUBMITTED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DMJM/PBOD/KE/HWA GENERAL CONSULTANTS	SHEET 2 OF 2	SHEET NO. 93



- LEGEND:**
- PROBE
 - ☒ CROSSOVER
 - STATION



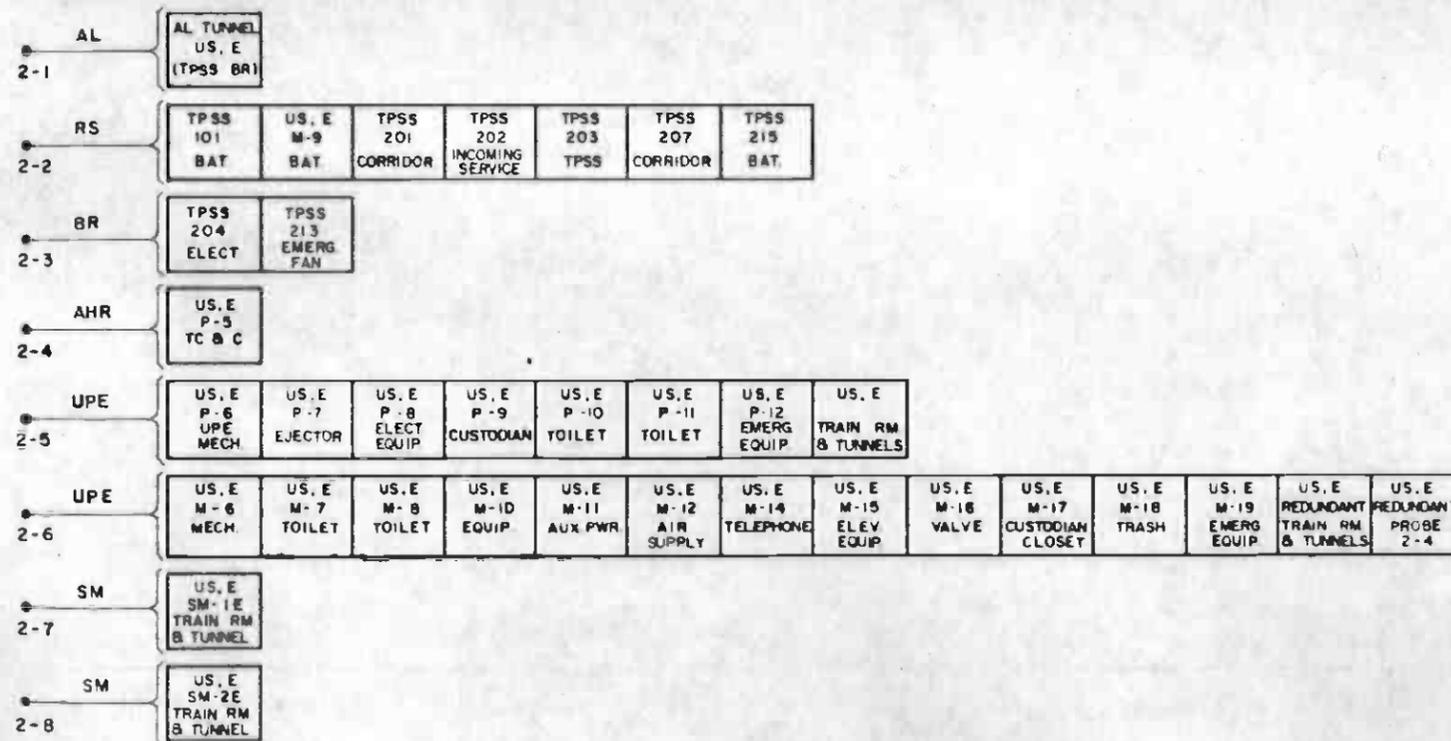
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY T MCCRANE		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS GAS MONITORING MOS - 1 TUNNEL PROBE LOCATION DIAGRAM	CONTRACT NO. A640
DRAWN BY <i>[Signature]</i>		CHECKED BY <i>[Signature]</i>					DATE 18 AUG 86
PROPOSAL ISSUE		SUBMITTED <i>[Signature]</i>		APPROVED <i>[Signature]</i>		SCALE NO SCALE	SHEET NO. 94



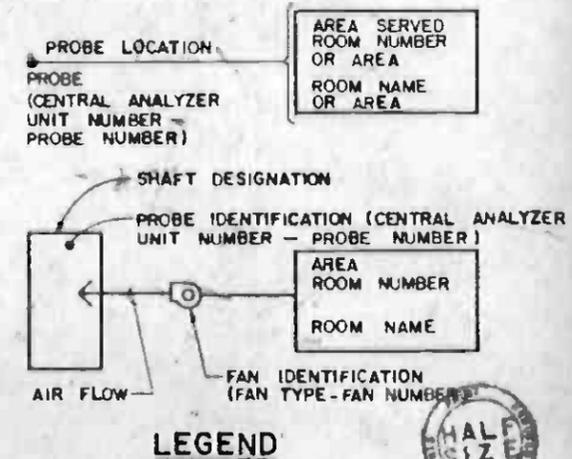
SYMBOL	DESCRIPTION
AHR	AIR HANDLING UNIT RETURN AIR DUCT
AHU	AIR HANDLING UNIT
AL	MAIN LINE, LEFT TRACK
AR	MAIN LINE, RIGHT TRACK
AUX	AUXILIARY
BAT	BATTERY
BR	BLAST RELIEF
E	EAST
EE & VS	EMERGENCY EXIT & VENT STRUCTURE
EF	EXHAUST FAN
ELECT	ELECTRICAL
ELEV	ELEVATOR
EMERG	EMERGENCY
EQA	EQUIPMENT ACCESS SHAFT
EQUIP	EQUIPMENT
M	IN ROOM NUMBER DESIGNATION, MEZZANINE
MECH	MECHANICAL
P	IN ROOM NUMBER DESIGNATION, PLATFORM
PWR	POWER
RS	RELIEF SHAFT
SF	SUPPLY FAN
SM	SMOKE EXHAUST FAN
SSF	TPSS ROOM SUPPLY FAN
TC & C	TRAIN CONTROL & COMMUNICATIONS ROOM
TPSS	TRACTION POWER SUBSTATION
UPE	UNDERPLATFORM EXHAUST FAN
US	UNION STATION
US, E	EASTERN PART OF UNION STATION
US, W	WESTERN PART OF UNION STATION
W	WEST
XL	YARD LEAD, LEFT TRACK
XR	YARD LEAD, RIGHT TRACK
YL	YARD LEAD, LEFT TRACK
YR	YARD LEAD, RIGHT TRACK
•	PROBE
○	FAN
---	ALTERNATE AIR FLOW

CENTRAL ANALYZER UNIT NO. 1

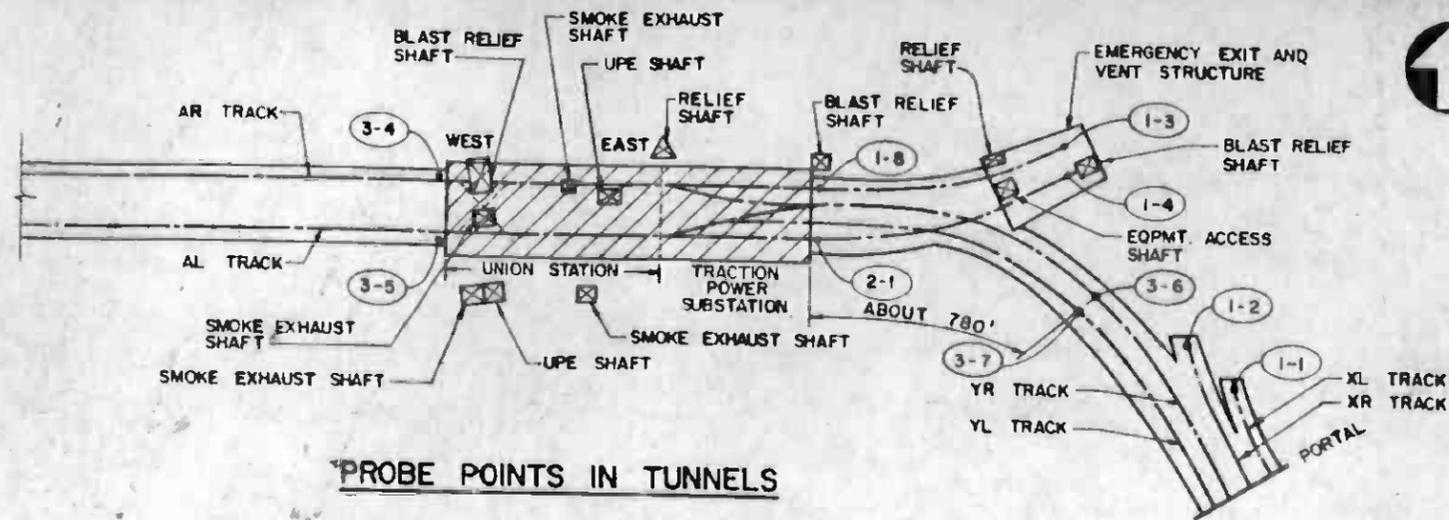
CENTRAL ANALYZER UNIT NO. 3



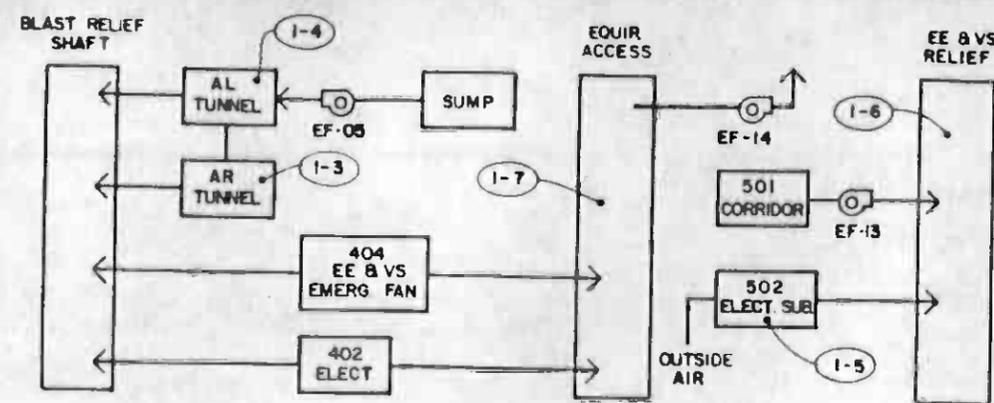
CENTRAL ANALYZER UNIT NO. 2



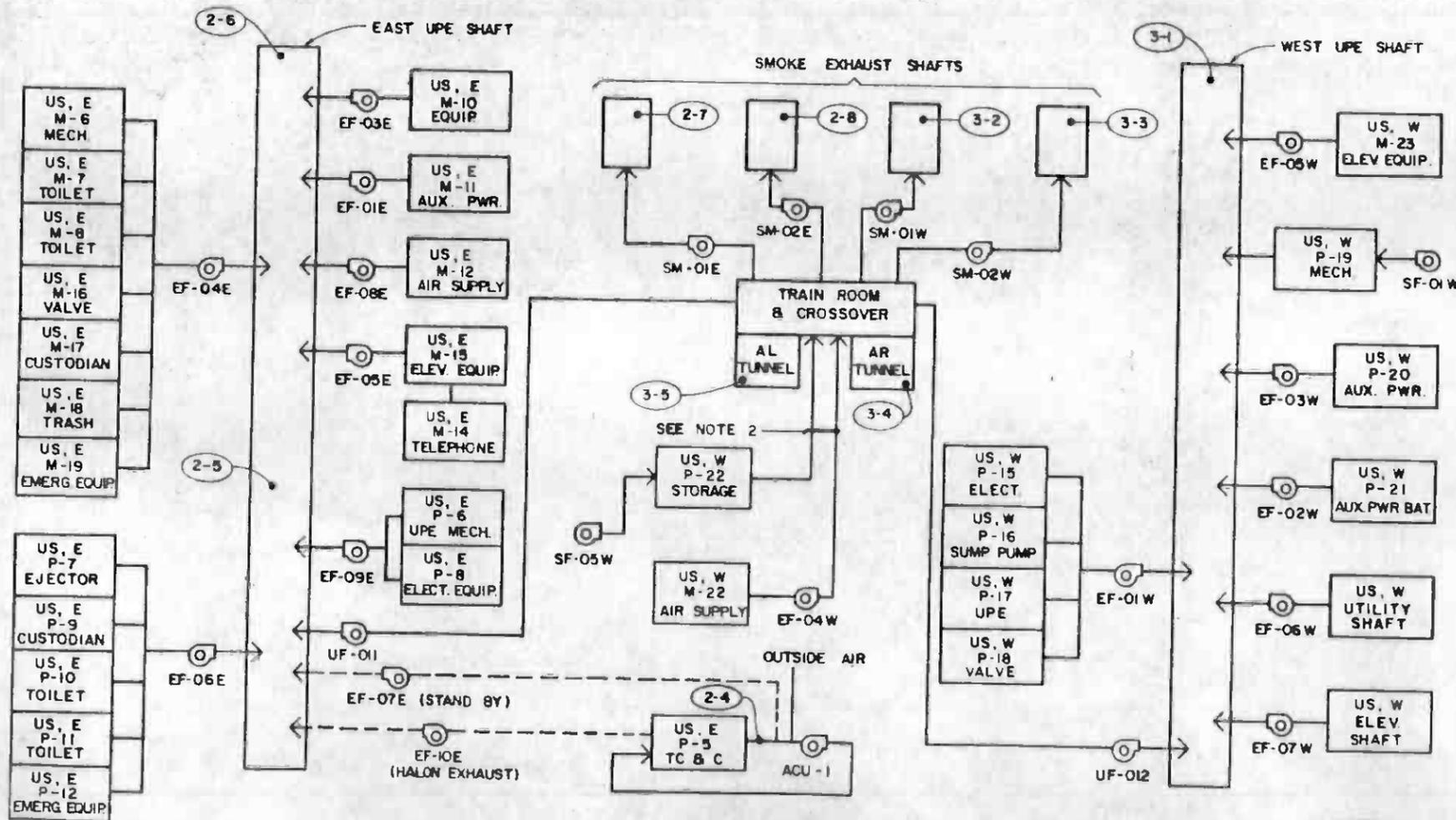
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY T.K. MCCRANIE DRAWN BY <i>J. Vanhook</i> CHECKED BY <i>Robert...</i> IN CHARGE <i>...</i> DATE 8 AUG 86	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	DMJM/PBOD/KE/HWA GENERAL CONSULTANTS APPROVED <i>Howard Chaffin</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS GAS MONITORING UNION STATION PROBE LOCATION SCHEMATIC SHEET 1 OF 2	CONTRACT NO. A640 DRAWING NO. N-151 SCALE NO SCALE SHEET NO. 95
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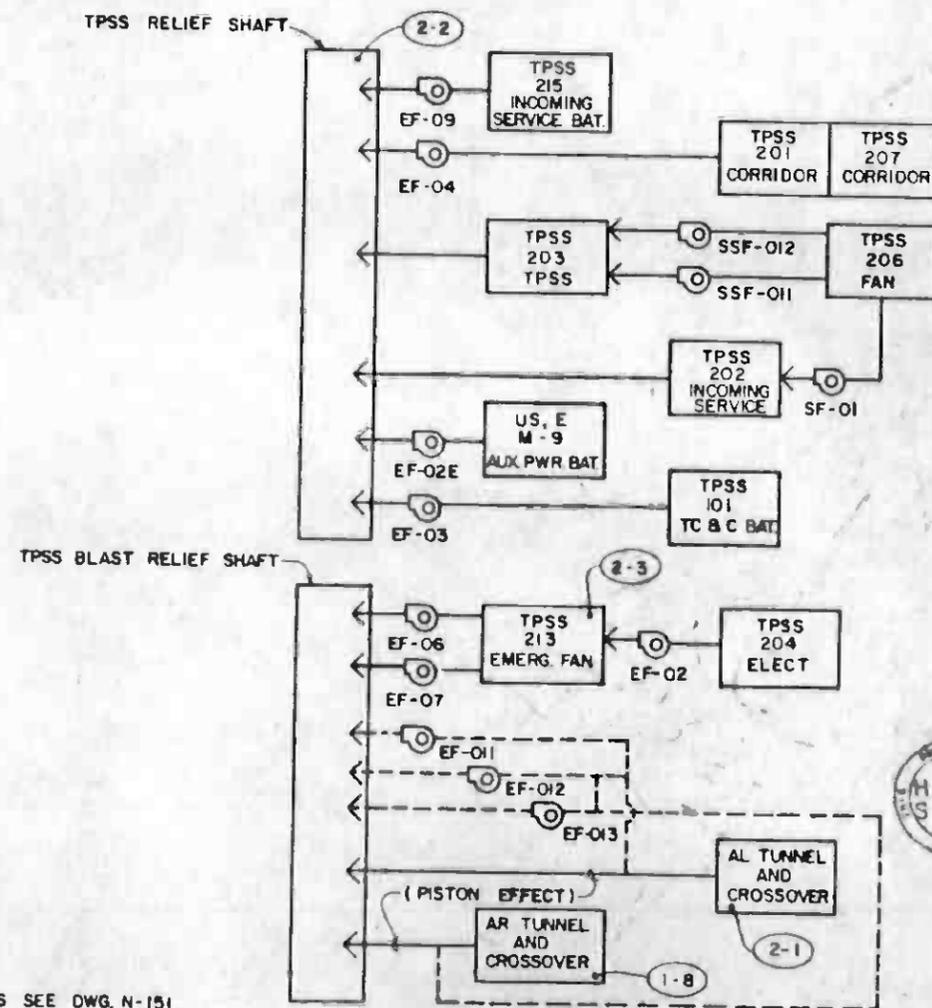
PROBE POINTS IN TUNNELS



PROBE POINTS IN EMERGENCY EXIT & VENT STRUCTURE



PROBE POINTS IN UNION STATION



PROBE POINTS IN TRACTION POWER SUBSTATION

NOTES:

1. FOR LEGEND AND SYMBOLS SEE DWG. N-151.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY T. K. MCCRANIE DRAWN BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 7 AUG 88		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS GAS MONITORING UNION STATION PROBE LOCATION SCHEMATIC SHEET 2 OF 2		CONTRACT NO A640 DRAWING NO N-152 SCALE NO SCALE SHEET NO 96			
REV	DATE	BY	SUB	APP	DESCRIPTION	REV	DATE	BY	SUB	APP	DESCRIPTION
					PROPOSAL ISSUE						

CENTRAL ANALYZER UNIT NO. 1

(SEE NOTES 1 & 2)

CENTRAL ANALYZER UNIT NO. 2

(SEE NOTES 1 & 2)

CENTRAL ANALYZER UNIT NO. 3

(SEE NOTES 1 & 2)

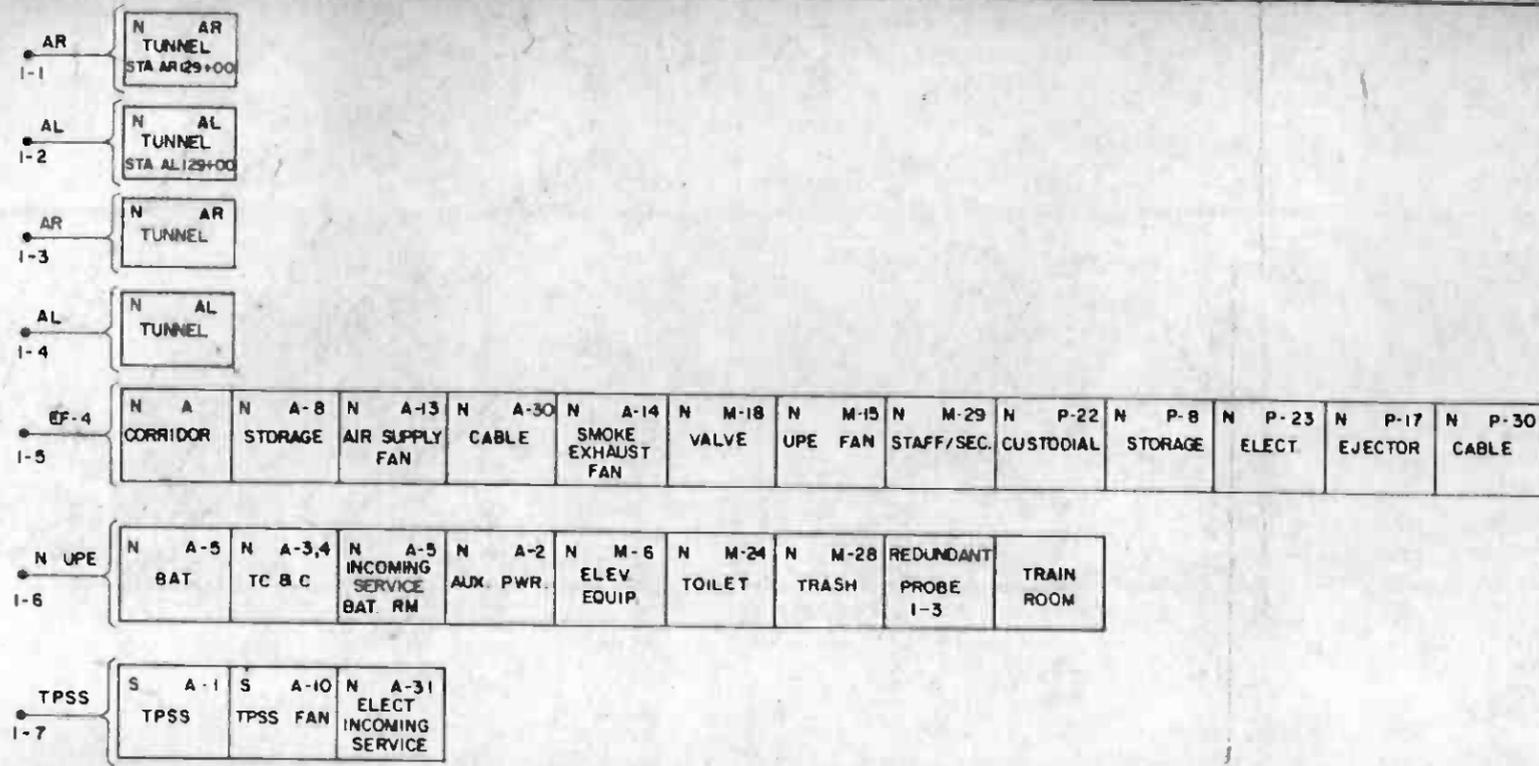
PROBE NO.	LOCATION SEE DWG. N-152	TYPE OF CONN. (NOTE 3)	CONDUIT USED FROM TC & C RM (NOTE 4)	TUBING LENGTH (NOTE 5)	REMARKS	PROBE NO.	LOCATION SEE DWG. N-152	TYPE OF CONN. (NOTE 3)	CONDUIT USED FROM TC & C RM (NOTE 4)	TUBING LENGTH (NOTE 5)	REMARKS	PROBE NO.	LOCATION SEE DWG. N-152	TYPE OF CONN. (NOTE 3)	CONDUIT USED FROM TC & C RM (NOTE 4)	TUBING LENGTH (NOTE 5)	REMARKS
1-1	TOP OF CEILING, AT ϵ OF TRACK	3	1-4" \emptyset CONDUIT, CABLE TRENCH	2000'	A640 CONTRACTOR TO PROVIDE APPROX. 30' OF 1" \emptyset CONDUIT IN TUNNEL	2-1	TOP OF TUNNEL AT ϵ OF AL TRACK	3	1-4" \emptyset CONDUIT TO CIC 2, 1" \emptyset CONDUIT TO PROBE	500'	A640 CONTRACTOR TO PROVIDE APPROX. 20' OF 1" \emptyset COND. IN TUNNEL	3-1	2'-0" BELOW TOP OF GRATING	AS APPROVED	CT 18 TO CIC 2, FG 18 TO PROBE	1100'	
1-2	SAME AS 1-1	3	SAME AS 1-1	2000'	SAME AS 1-1	2-2	2'-0" BELOW TOP OF GRATING	AS APPROVED	1-4" \emptyset CONDUIT TO CIC 1, 1" \emptyset CONDUIT TO PROBE	300'		3-2	SAME AS 3-1	AS APPROVED	A457 TO A471	1000'	
1-3	TOP OF CEILING	3	1-4" \emptyset CONDUIT, CABLE TRENCH, 1-2" \emptyset CONDUIT TO CIC 3, 1" \emptyset COND TO PROBE	1100'		2-3	1'-0" BELOW TOP OF CEILING	AS APPROVED	SAME AS 2-1	300'		3-3	SAME AS 3-1	AS APPROVED	A459 TO A470	1000'	
1-4	SAME AS 1-3	3	SAME AS 1-3	1100'	EXCEPT USE SEPARATE 1" \emptyset CONDUIT FROM CIC 3	2-4	AT DUCT ϵ 2'-0" ABOVE FIN. FLR.	1	FG 10 TO CIC 3, FG 1 TO PROBE	100'		3-4	TOP OF TUNNEL, 4'-0" FROM EDGE AT ϵ OF TRACK	AS APPROVED	CT 20 TO CIC 4, 1" \emptyset CONDUIT TO PROBE	1400'	A640 CONTRACTOR TO PROVIDE APPROX. 30' OF 1" \emptyset CONDUIT IN TUNNEL
1-5	TOP OF CEILING	AS APPROVED	1-4" \emptyset CONDUIT CABLE TRENCH, 1-2" \emptyset CONDUIT TO CIC 1, 1" \emptyset CONDUIT TO PROBE	1300'		2-5	7'-0" ABOVE FIN. FLOOR	2	FG 10 TO CIC 3, FG 2 TO PROBE	200'		3-5	SAME AS 3-4	AS APPROVED	CT 20 TO CIC 4, 1" \emptyset CONDUIT TO PROBE	1400'	SAME AS 3-4
1-6	2'-0" BELOW TOP OF GRATING	AS APPROVED	SAME AS 1-5	1300'	EXCEPT USE SEPARATE 1" \emptyset CONDUIT FROM CIC 1	2-6	2'-0" BELOW TOP OF GRATING	AS APPROVED	SAME AS 2-5	200'		3-6	TOP OF TUNNEL, AT STA YR. 92+20 (APPROX.), AT ϵ OF TRACK	AS APPROVED	1-4" \emptyset CONDUIT TO CABLE TRENCH TO STUB-UP AT STA YR. 92+20, APPROX.	1900'	A640 CONTRACTOR TO PROVIDE APPROX. 30' OF 1" \emptyset CONDUIT IN TUNNEL
1-7	EL. 252.50'	AS APPROVED	SAME AS 1-5	1100'	EXCEPT USE SEPARATE 1" \emptyset CONDUIT FROM CIC 1	2-7	AT END OF DUCTWORK	1	FG 10 TO CIC 3, A455 TO PROBE	300'		3-7	SAME AS 3-6	AS APPROVED	SAME AS 3-6	1900'	SAME AS 3-6
1-8	TOP OF TUNNEL, AT ϵ OF AR TRACK	3	1-4" \emptyset CONDUIT, CABLE TRENCH	400'	A640 CONTRACTOR TO PROVIDE APPROX. 30' OF 1" \emptyset CONDUIT IN TUNNEL	2-8	SAME AS 2-7	1	FG 10 TO CIC 3, A451 TO PROBE	300'							

NOTES:

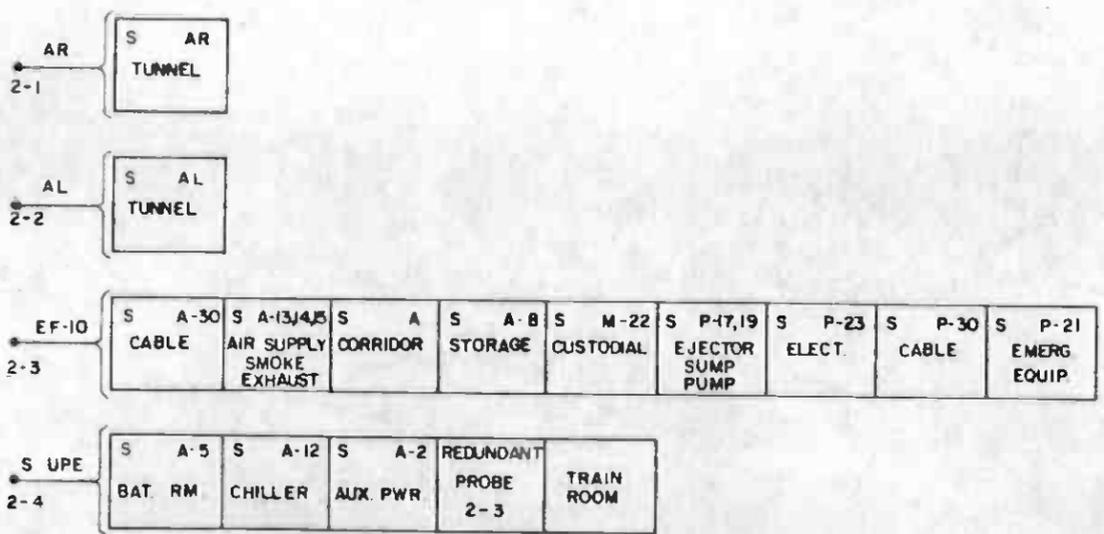
- CENTRAL ANALYZER VENT SHALL BE ROUTED TO EXHAUST DUCT OF UNDERPLATFORM EXHAUST FAN UF-011 (TYPICAL).
- CENTRAL ANALYZER CONDENSATE DRAIN SHALL BE ROUTED TO NEAREST FLOOR DRAIN (TYPICAL).
- FOR PROBE CONNECTION DETAILS, SEE DWG. N-167.
- FOR LEGEND AND SYMBOLS SEE DWG. N-151.
- TUBING LENGTHS SHOWN ARE APPROXIMATE.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY BILL HOWING CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 4 AUG 88	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT	DMJM/PSOD/KE/HWA GENERAL CONSULTANTS APPROVED <i>[Signature]</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS GAS MONITORING UNION STATION PROBE SCHEDULE	CONTRACT NO. A640 DRAWING NO. N-153 SCALE NO SCALE SHEET NO. 97
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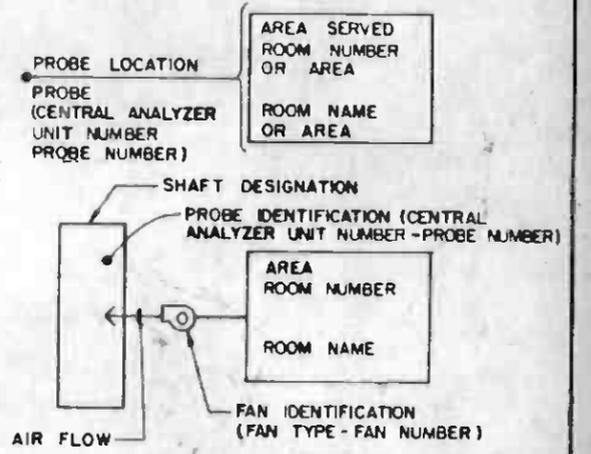


CENTRAL ANALYZER UNIT NO. 1



CENTRAL ANALYZER UNIT NO. 2

SYMBOL	DESCRIPTION
A	IN ROOM NUMBER DESIGNATION, ANCILLARY LEVEL
ACU	AIR CONDITIONING UNIT
AL	MAIN LINE, LEFT TRACK
AR	MAIN LINE, RIGHT TRACK
AUX	AUXILIARY
BAT	BATTERY
EF	EXHAUST FAN
ELECT	ELECTRICAL
ELEV	ELEVATOR
EMERG	EMERGENCY
EQUIP	EQUIPMENT
M	IN ROOM NUMBER DESIGNATION, MEZZANINE LEVEL
N	NORTHERN PART OF CIVIC CENTER STATION
P	IN ROOM NUMBER DESIGNATION, PLATFORM LEVEL
PWR	POWER
S	SOUTHERN PART OF CIVIC CENTER STATION
SF	SUPPLY FAN
TC&C	TRAIN CONTROL AND COMMUNICATIONS
TPSS	TRACTION POWER SUBSTATION
UPE	UNDER PLATFORM EXHAUST
•	PROBE
○	FAN
---	ALTERNATE AIR FLOW

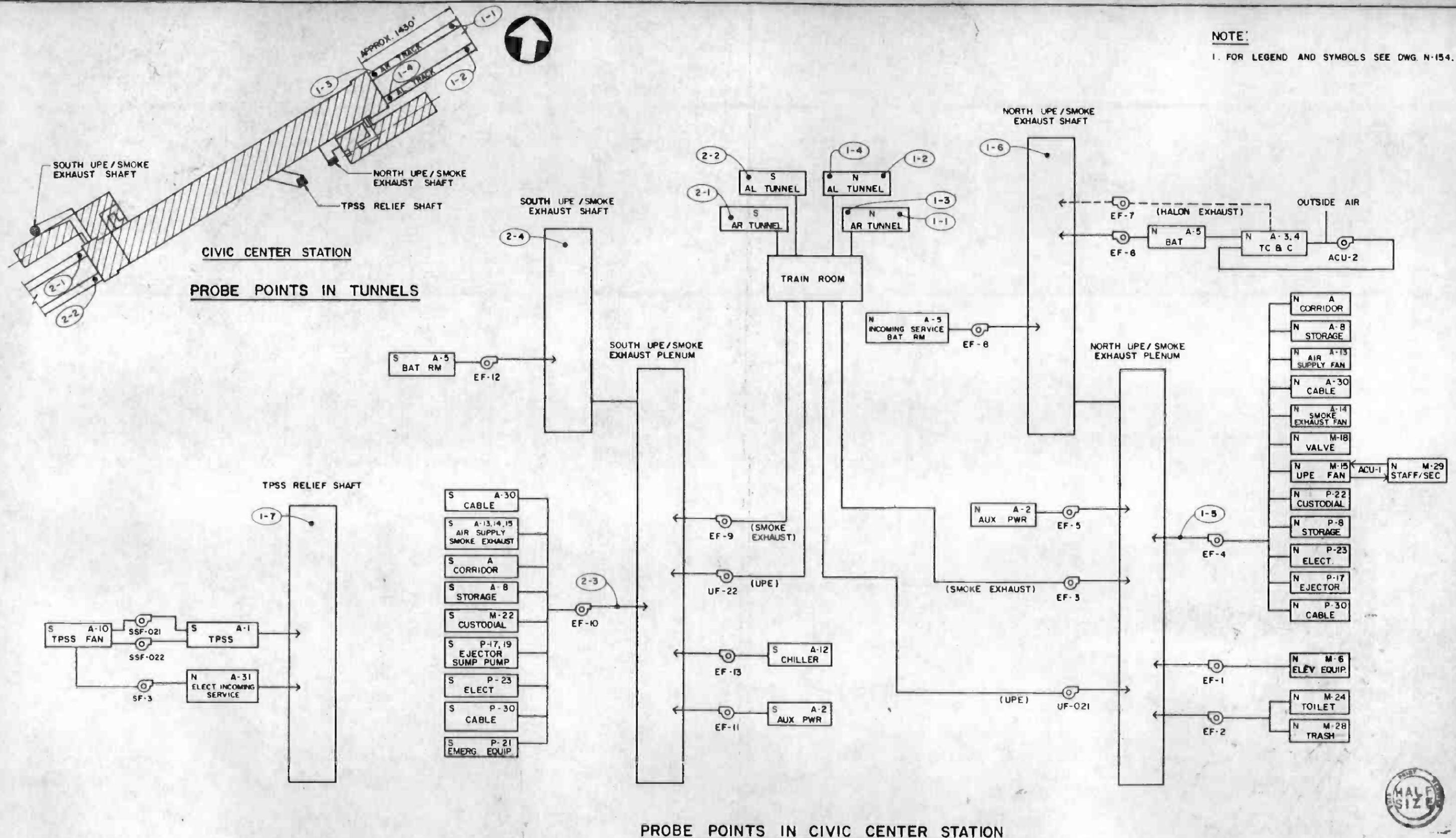


LEGEND



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY S. GOLDSMITH DRAWN BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 19 AUG 88	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS GAS MONITORING CIVIC CENTER STATION PROBE LOCATION SCHEMATIC SHEET 1 OF 2	CONTRACT NO. A640 DRAWING NO. N-154 SCALE NO SCALE SHEET NO. 98
REV. DATE BY SUB APP DESCRIPTION	4687 PROPOSAL ISSUE	19 AUG 88	SUBMITTED BY <i>[Signature]</i>	APPROVED <i>[Signature]</i>	

NOTE:
1. FOR LEGEND AND SYMBOLS SEE DWG. N-154.



PROBE POINTS IN CIVIC CENTER STATION



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY S. GOLDSMITH DRAWN BY CHECKED BY IN CHARGE DATE 20 AUG 86	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT DMJM PBOD/KE/HWA GENERAL CONSULTANTS APPROVED:	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS GAS MONITORING CIVIC CENTER STATION PROBE LOCATION SCHEMATIC SHEET 2 OF 2	CONTRACT NO. A640 DRAWING NO. N-155 SCALE NO SCALE SHEET NO. 99
REV. DATE BY SUB APP DESCRIPTION	REV. DATE BY SUB APP DESCRIPTION	PROPOSAL ISSUE	SUBMITTED: <i>ellid</i>	APPROVED: <i>Edward J. Kelly</i>	

CENTRAL ANALYZER UNIT NO. 1

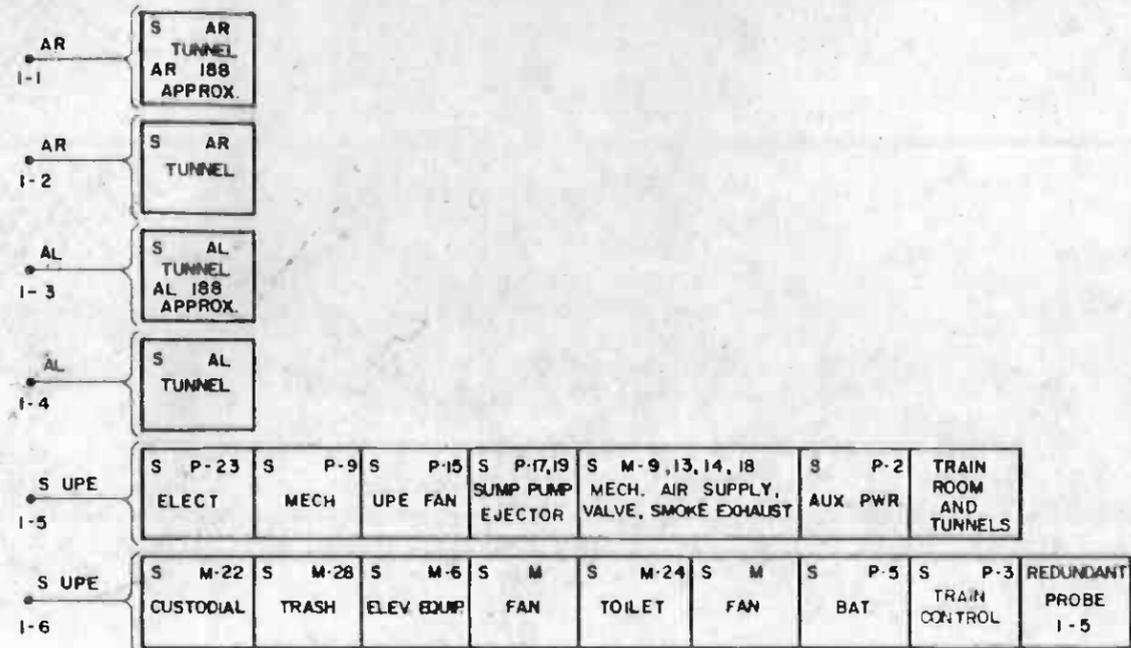
CENTRAL ANALYZER UNIT NO. 2

PROBE NO.	LOCATION SEE DWG. N-155	TYPE OF CONN (NOTE 1)	CONDUIT USED FROM TC&C ROOM (NOTE 2)	TUBING LENGTH (NOTE 3)	REMARKS	PROBE NO.	LOCATION SEE DWG. N-155	TYPE OF CONN (NOTE 1)	CONDUIT USED FROM TC&C ROOM (NOTE 2)	TUBING LENGTH (NOTE 3)	REMARKS
1-1	TOP OF TUNNEL, STA AR 129+00 (APPROX) AT ϕ OF TRACK	3	CTOO1 TO CABLE TRENCH TO C/C IN CROSS-PASSAGE AT STA AR 132+13	2300'	A640 CONTRACTOR TO FURNISH APPROX. 400' OF 1" ϕ CONDUIT FROM C/C IN CROSS-PASSAGE TO PROBE LOCATION	2-1	TOP OF TUNNEL, AT ϕ OF TRACK, 4'-0" FROM EDGE	3	HC-003 FX-028	600'	A640 CONTRACTOR TO PROVIDE APPROX. 30' OF 1" ϕ CONDUIT IN TUNNEL
1-2	SAME AS 1-1	3	SAME AS 1-1	2300'	SAME AS 1-1	2-2	SAME AS 2-1	3	HC-003 FX-028	600'	SAME AS 2-1
1-3	TOP OF TUNNEL, AT ϕ OF TRACK, 4'-0" FROM EDGE	3	HC-008 FX-030	300'	A640 CONTRACTOR TO PROVIDE APPROX. 30' OF 1" ϕ CONDUIT IN TUNNEL	2-3	AT EF-10 DUCT ϕ , 6'-0" FROM ϕ OF DISCH ELBOW	1	HC-003 FX-015	500'	
1-4	SAME AS 1-3	3	HC-008 FX-029	300'	SAME AS 1-3	2-4	2'-0" BELOW TOP OF GRATING, AT ϕ OF VERT. SHAFT	AS APPROVED	HC-003 FX-015	700'	
1-5	AT EF-4 DUCT ϕ , 8'-0" FROM COL. C	1	HC-008 FX-009	400'							
1-6	2'-0" BELOW TOP OF GRATING	AS APPROVED	EXPOSED CONDUIT IN TC & C TO CONDUIT AT WALL, RUN NEW CONDUIT IN SHAFT TO PROBE	200'	A640 CONTRACTOR TO PROVIDE EXPOSED CONDUIT IN TC & C AND NEW CONDUIT IN SHAFT						
1-7	4'-6" ABOVE FINISHED FLOOR, 10'-0" FROM ϕ OF VERTICAL SHAFT	AS APPROVED	HC-008 FX-010	300'							

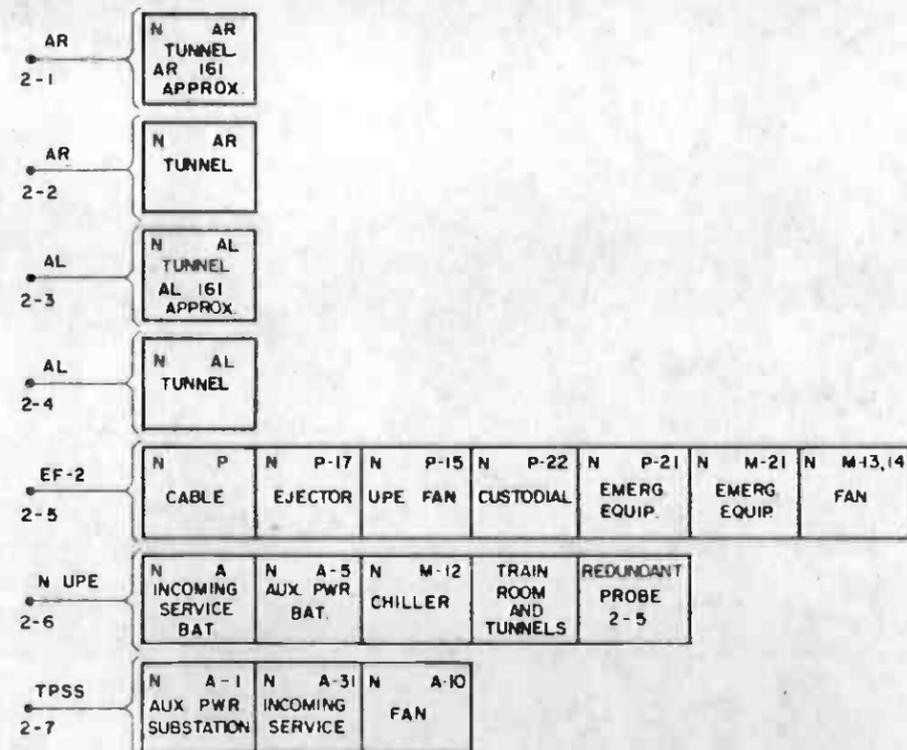
- NOTES:
- FOR PROBE CONNECTION DETAILS, SEE DWG. N-167.
 - FOR LEGEND AND SYMBOLS SEE DWG. N-154.
 - TUBING LENGTHS SHOWN ARE APPROXIMATE.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY BILL HOWING DRAWN BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 21 AUG 88		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	DMJM/PSDD/KE-HWA GENERAL CONTRACTOR APPROVED: <i>[Signature]</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS GAS MONITORING CIVIC CENTER STATION PROBE SCHEDULE	CONTRACT NO. A640 DRAWING NO. N-156 SCALE NO SCALE SHEET NO. 100
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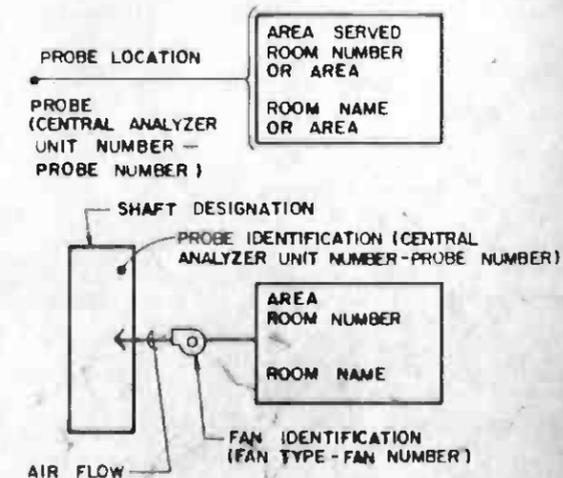


CENTRAL ANALYZER UNIT NO. 1



CENTRAL ANALYZER UNIT NO. 2

SYMBOL	DESCRIPTION
A	IN ROOM NUMBER DESIGNATION ANCILLARY LEVEL
ACU	AIR CONDITIONING UNIT
AL	MAIN LINE, LEFT TRACK
AR	MAIN LINE, RIGHT TRACK
AUX	AUXILIARY
BAT	BATTERY
EF	EXHAUST FAN
ELECT	ELECTRICAL
ELEV	ELEVATOR
EMERG	EMERGENCY
EQUIP	EQUIPMENT
M	IN ROOM NUMBER DESIGNATION, MEZZANINE LEVEL
MECH	MECHANICAL
N	NORTHERN PART OF 5TH/HILL STATION
P	IN ROOM NUMBER DESIGNATION, PLATFORM LEVEL
PWR	POWER
S	SOUTHERN PART OF 5TH/HILL STATION
SF	SUPPLY FAN
SSF	SUPPLY FAN
TC	TRAIN CONTROL ROOM
TPSS	TRACTION POWER SUBSTATION
UPE	UNDER PLATFORM EXHAUST
•	PROBE
⊙	FAN
---	ALTERNATE AIR FLOW



LEGEND



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY S. GOLDSMITH
 DRAWN BY [Signature]
 CHECKED BY [Signature]
 IN CHARGE [Signature]
 DATE 22 AUG 86

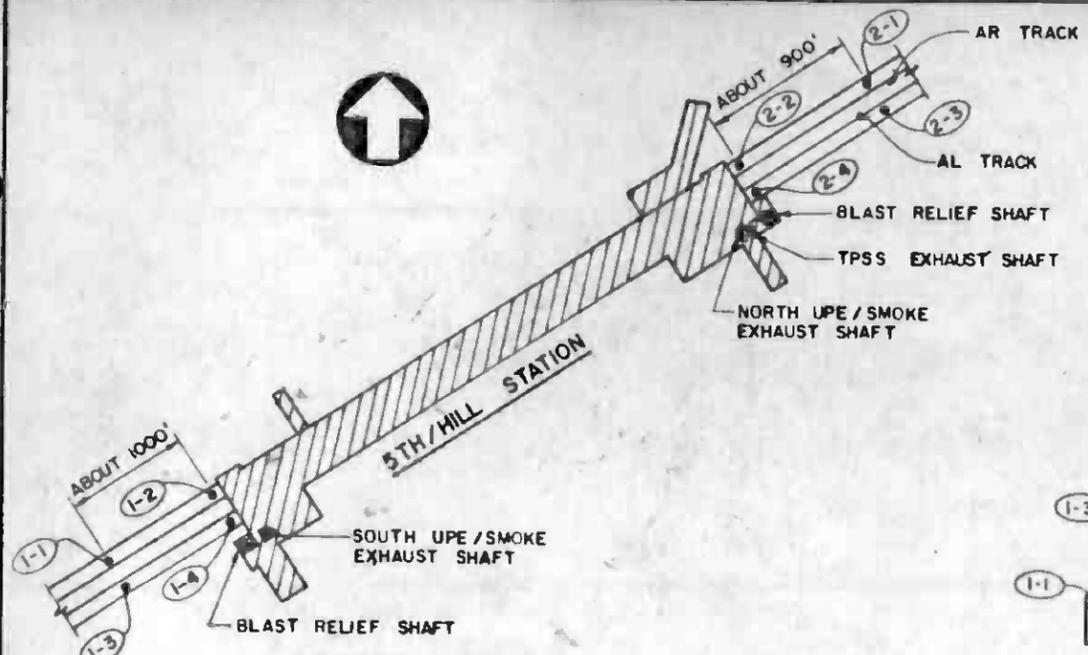


SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
 METRO RAIL PROJECT
 DMJM P800/KE/HWA
 GENERAL CONSULTANTS
 APPROVED [Signature]

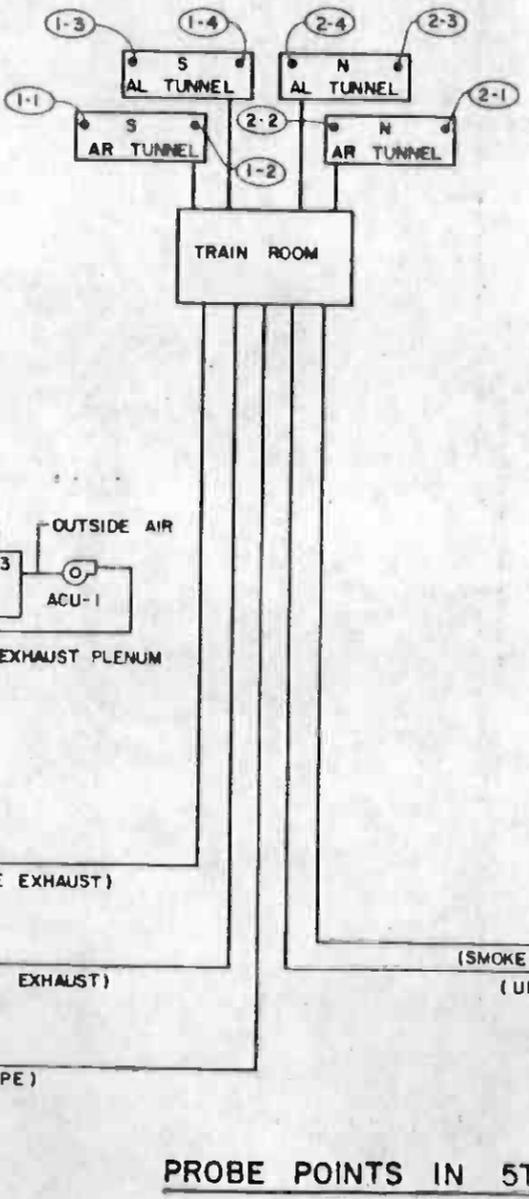
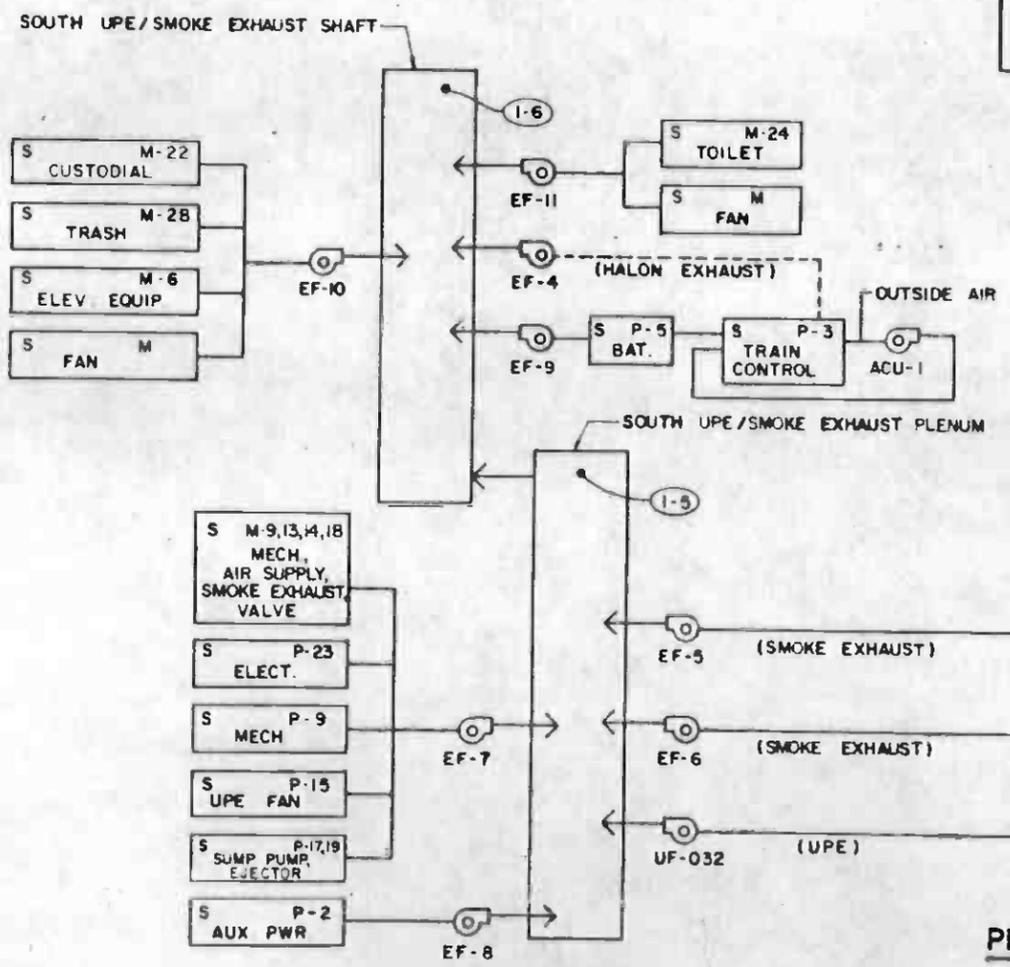
LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS GAS MONITORING 5TH/HILL STATION PROBE LOCATION SCHEMATIC SHEET 1 OF 2

CONTRACT NO	A640
DRAWING NO	N-157
SCALE	NO SCALE
SHEET NO	101

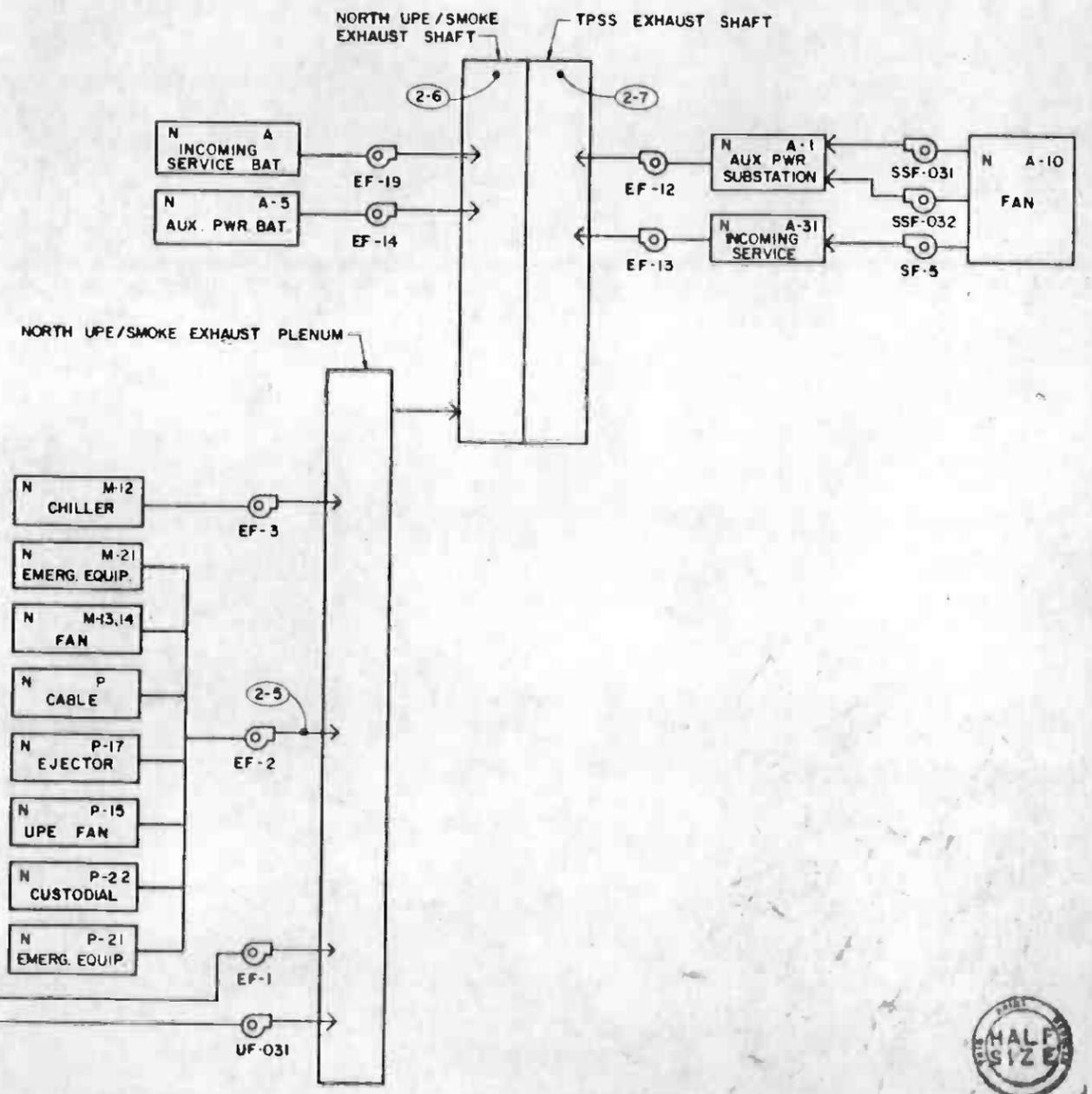
DATE	BY	CHK	APP	DESCRIPTION
4-28-86	[Signature]	[Signature]	[Signature]	PROPOSAL ISSUE



PROBE POINTS IN TUNNELS



PROBE POINTS IN 5TH/HILL STATION



NOTE:
1. FOR LEGEND AND SYMBOLS, SEE DWG N-157.



REV	DATE	BY	SUB	APP	DESCRIPTION

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY
S. GOLDSMITH

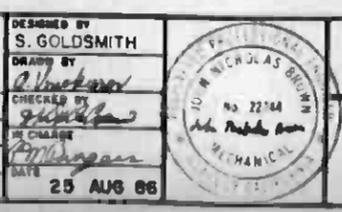
DRAWN BY
[Signature]

CHECKED BY
[Signature]

IN CHARGE
[Signature]

DATE
25 AUG 88

PROPOSAL ISSUE



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

DMJM/PBOD/KE/HWA
GENERAL CONSULTANTS

APPROVED
[Signature]

LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS GAS MONITORING
5TH/HILL STATION
PROBE LOCATION SCHEMATIC
SHEET 2 OF 2

CONTRACT NO.	A640
DRAWING NO.	N-158
SCALE	NO SCALE
SHEET NO.	102

CENTRAL ANALYZER UNIT NO. 1
(NOTES 1 & 2)

CENTRAL ANALYZER UNIT NO. 2
(NOTES 1 & 2)

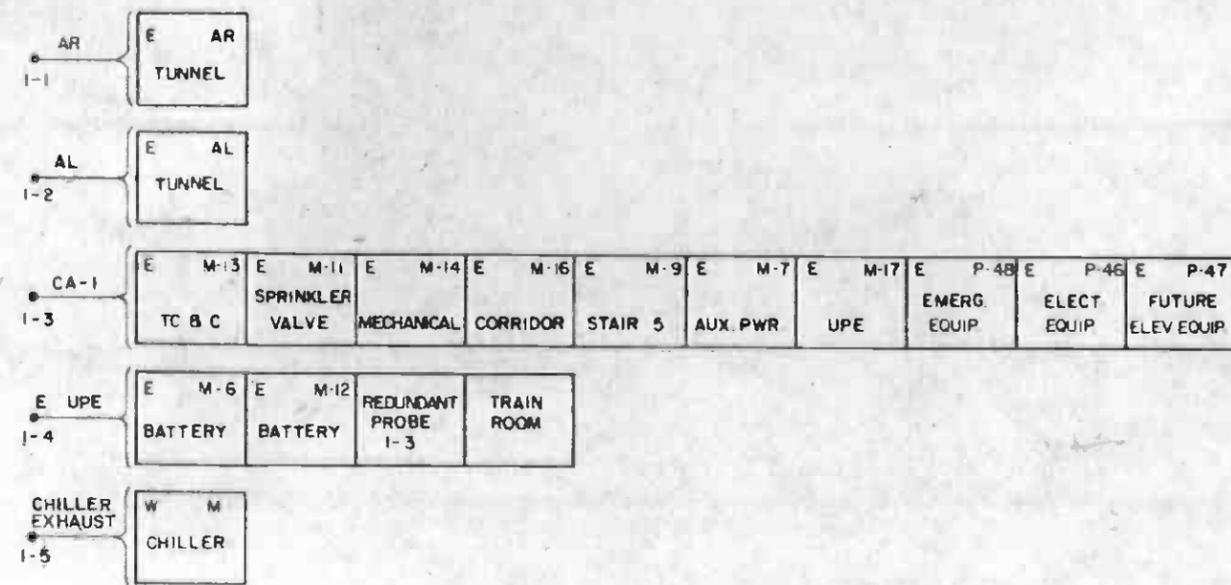
PROBE NO.	LOCATION SEE DWG N-158	TYPE OF CONN. (NOTE 3)	CONDUIT USED FROM TC & C RM (NOTE 4)	TUBING LENGTH (NOTE 5)	REMARKS	PROBE NO.	LOCATION SEE DWG N-158	TYPE OF CONN. (NOTE 3)	CONDUIT USED FROM TC & C RM (NOTE 4)	TUBING LENGTH (NOTE 5)	REMARKS
1-1	TOP OF TUNNEL, STA AR 185 + 88.83 (APPROX) AT \bar{C} OF TRACK	3	CT-011 TO CABLE TRENCH, GA-71	1500'	A640 CONTRACTOR TO PROVIDE APPROX 310' OF 1" \bar{O} CONDUIT IN TUNNEL FROM GA-71 TO PROBE	2-1	TOP OF TUNNEL, STA AR 162 + 38.83 (APPROX) AT \bar{C} OF TRACK	3	CT-002 TO CABLE TRENCH, GA-62	2000'	A640 CONTRACTOR TO PROVIDE APPROX 450' OF 1" \bar{O} CONDUIT IN TUNNEL FROM GA-62 TO PROBE
1-2	TOP OF TUNNEL, AT \bar{C} OF TRACK, 4'-0" FROM EDGE	3	HC-006 FX-010	300'	A640 CONTRACTOR TO PROVIDE APPROX 30' OF 1" \bar{O} CONDUIT IN TUNNEL	2-2	TOP OF TUNNEL, AT \bar{C} OF TRACK, 4'-0" FROM EDGE	3	HC-003 FX-001	1000'	A640 CONTRACTOR TO PROVIDE APPROX 30' OF 1" \bar{O} CONDUIT IN TUNNEL
1-3	SAME AS 1-1	3	CT-008 TO CABLE TRENCH, GA 72	1500'	SAME AS 1-1	2-3	SAME AS 2-1	3	CT-005 TO CABLE TRENCH, GA 61	2000'	SAME AS 2-1
1-4	SAME AS 1-2	3	HC-006 FX-010	300'	SAME AS 1-2	2-4	SAME AS 2-2	3	HC-003 FX-	1000'	SAME AS 2-2
1-5	1'-0" BELOW TOP OF OPENING	AS APPROVED	HC-006 FX-013	300'		2-5	AT DUCT \bar{C} , 2'-0" FROM MO-12	1	HC-003 FX-012	1000'	
1-6	2'-0" BELOW TOP OF GRATING	AS APPROVED	HC-006 FX-013	300'		2-6	14'-0" ABOVE FINISHED FLOOR	2	HC-003 FX-015	1100'	
						2-7	SAME AS 2-6	AS APPROVED	HC-003 FX-015	1100'	

NOTES:

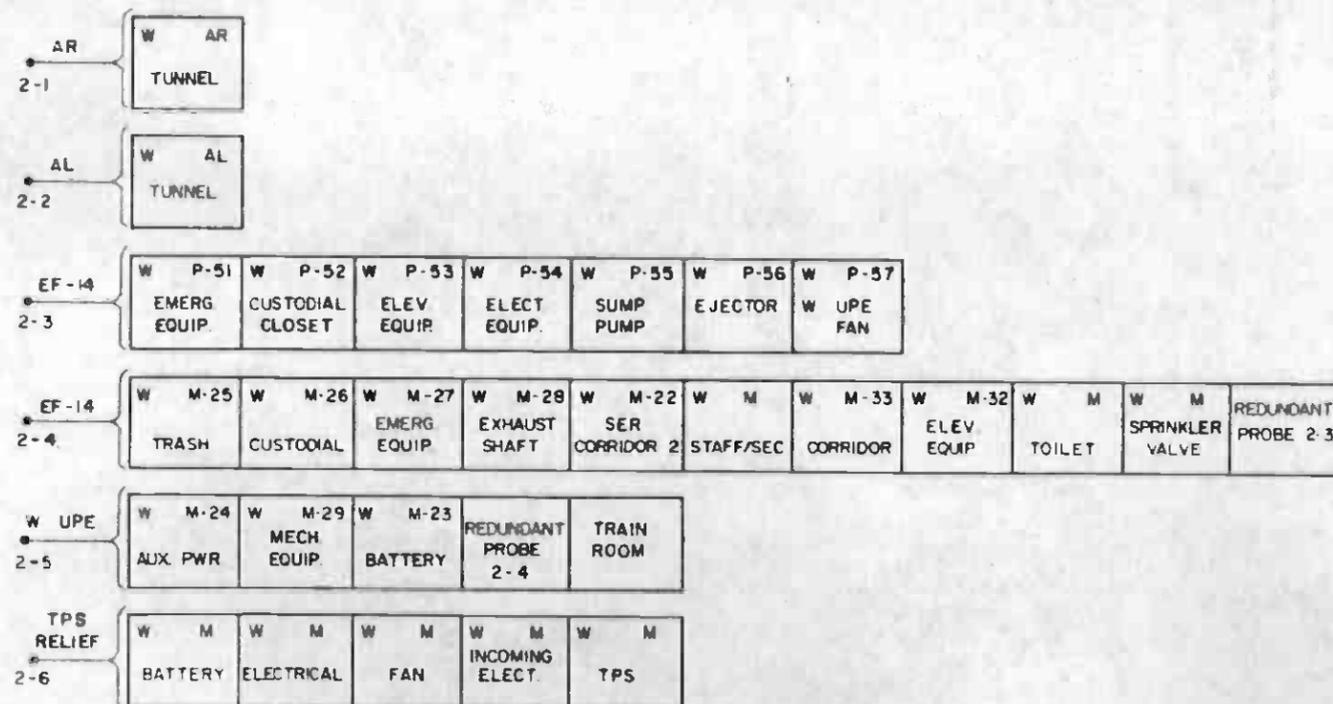
- CENTRAL ANALYZER VENT SHALL BE ROUTED TO BATTERY ROOM (TYPICAL).
- CENTRAL ANALYZER CONDENSATE DRAIN SHALL BE ROUTED TO NEAREST FLOOR DRAIN (TYPICAL)
- FOR PROBE CONNECTION DETAILS, SEE DWG N-167.
- FOR LEGEND AND SYMBOLS SEE DWG N-157.
- TUBING LENGTHS SHOWN ARE APPROXIMATE.



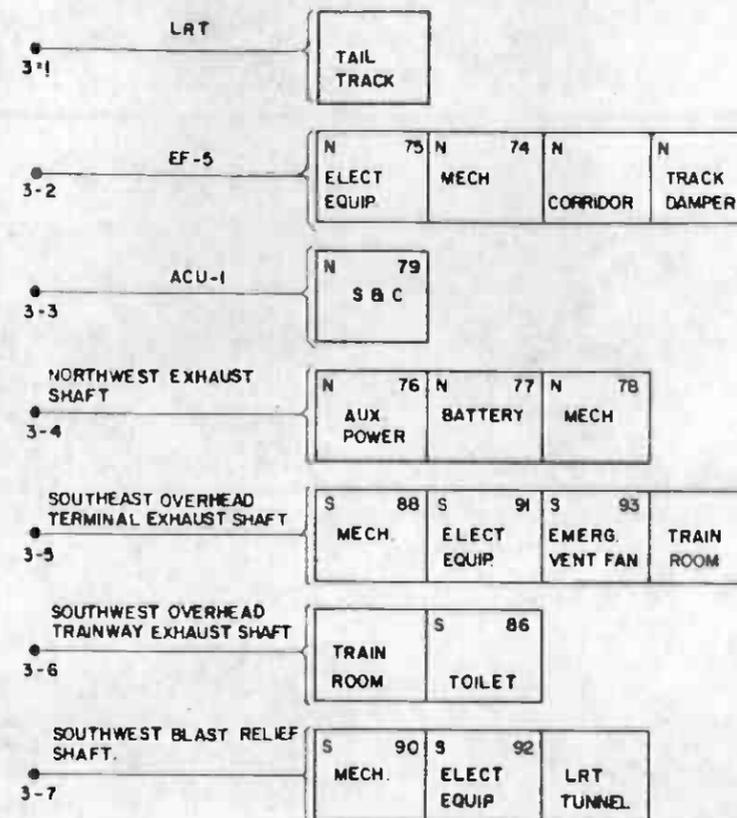
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY S. GOLDSMITH DRAWN BY <i>J. H. ...</i> CHECKED BY <i>...</i> IN CHARGE <i>...</i>	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS GAS MONITORING 5TH/HILL STATION PROBE SCHEDULE	CONTRACT NO. A640 DRAWING NO. N-159 SCALE NO SCALE SHEET NO. 103
DATE BY 25 AUG 88	DESCRIPTION PROPOSAL ISSUE	APPROVED BY <i>...</i>	SUBMITTED BY <i>...</i>	APPROVED BY <i>...</i>		



CENTRAL ANALYZER UNIT NO. 1

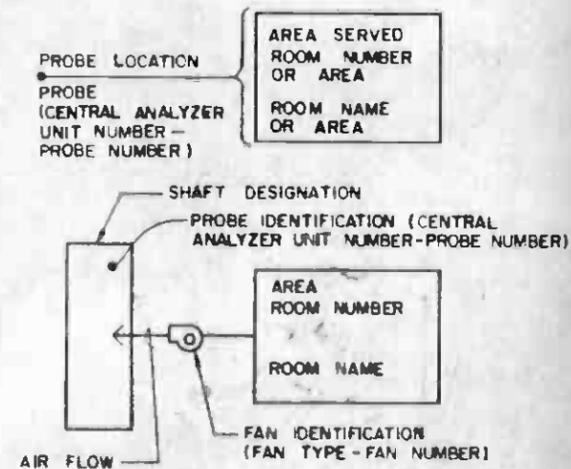


CENTRAL ANALYZER UNIT NO. 2



CENTRAL ANALYZER UNIT NO. 3

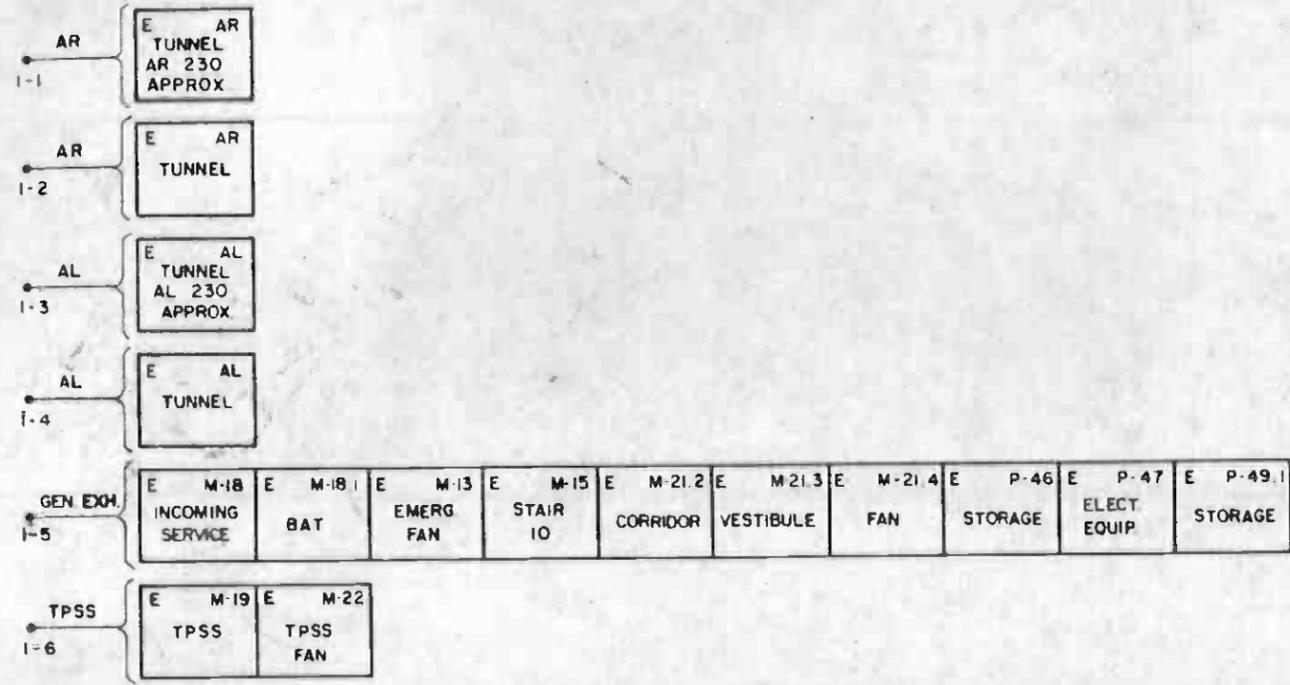
SYMBOL	DESCRIPTION
ACU	AIR CONDITIONING UNIT
AL	MAIN LINE, LEFT TRACK
AR	MAIN LINE, RIGHT TRACK
AUX	AUXILIARY
CA	AIR COOLED CONDENSER
E	EAST PART OF 7TH / FLOWER STATION
EF	EXHAUST FAN
ELECT	ELECTRICAL
EMERG	EMERGENCY
ELEV	ELEVATOR
EQUIP	EQUIPMENT
M	IN ROOM NUMBER DESIGNATION, MEZZANINE LEVEL
MECH	MECHANICAL
P	IN ROOM NUMBER DESIGNATION, PLATFORM LEVEL
PWR	POWER
SEC	SECURITY
SER	SERVICE
SF	SUPPLY FAN
SSF	SUPPLY FAN
TC & C	TRAIN CONTROL AND COMMUNICATIONS
TPS	TRACTION POWER SUBSTATION
UPE	UNDER PLATFORM EXHAUST
W	WEST PART OF 7TH / FLOWER STATION
•	PROBE
⊙	FAN
---	ALTERNATE AIR FLOW



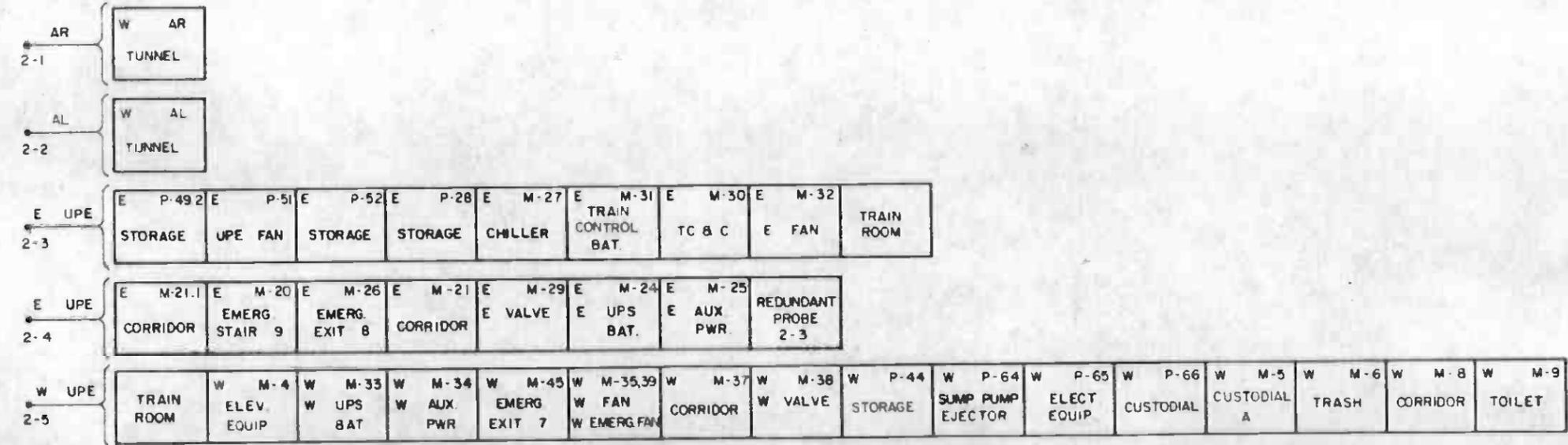
LEGEND



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY S. GOLDSMITH DRAWN BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 28 SEP 88	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS GAS MONITORING 7TH / FLOWER STATION PROBE LOCATION SCHEMATIC 	CONTRACT NO. A640 DRAWING NO. N-160 SCALE NO SCALE SHEET NO. 104
REV. DATE BY SLS APP DESCRIPTION 1 6 87 JHC PROPOSAL ISSUE	REV. DATE BY SUB. APP DESCRIPTION	APPROVED <i>[Signature]</i>	SUBMITTED <i>[Signature]</i>	GENERAL CONSULTANTS	APPROVED <i>[Signature]</i>

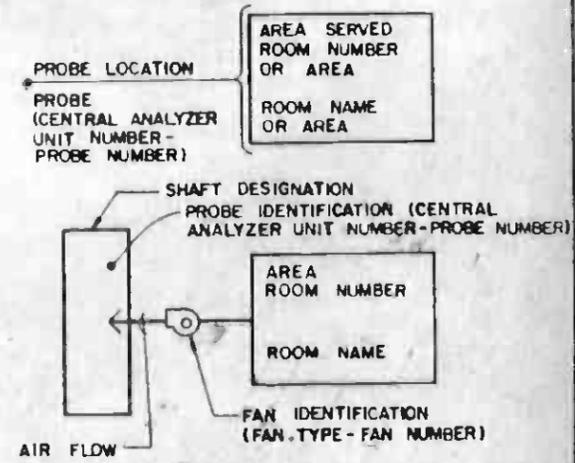


CENTRAL ANALYZER UNIT NO. 1



CENTRAL ANALYZER UNIT NO. 2

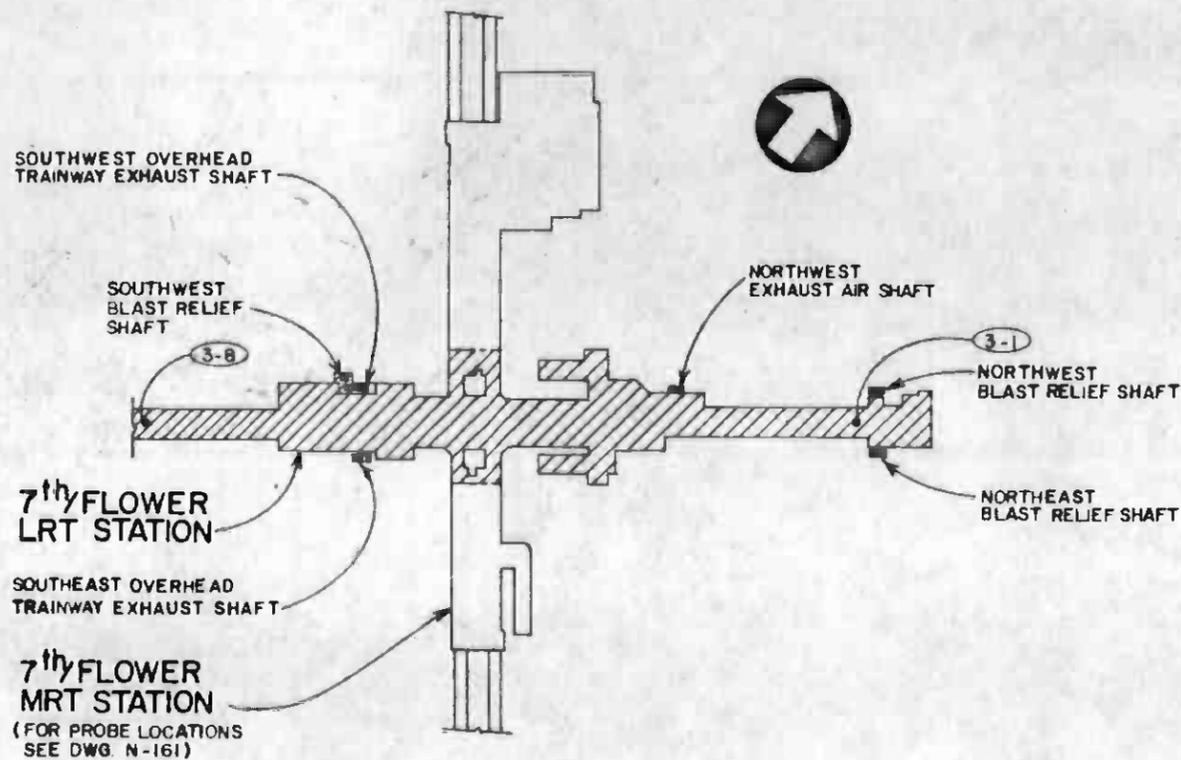
SYMBOL	DESCRIPTION
AHU	AIR HANDLING UNIT
AL	MAIN LINE, LEFT TRACK
AR	MAIN LINE, RIGHT TRACK
AUX	AUXILIARY
BAT	BATTERY
E	EASTERN PART OF WILSHIRE/ALVARADO STATION
EF	EXHAUST FAN
ELECT	ELECTRICAL
ELEV	ELEVATOR
EMERG	EMERGENCY
EQUIP	EQUIPMENT
GEN EXH	GENERAL EXHAUST SHAFT
M	IN ROOM NUMBER DESIGNATION, MEZZANINE LEVEL
P	IN ROOM NUMBER DESIGNATION, PLATFORM LEVEL
PWR	POWER
SSF	SUPPLY FAN
TC & C	TRAIN CONTROL & COMMUNICATIONS
EIS	ELECTRIC INCOMING SERVICE
TPSS	TRACTION POWER SUBSTATION
UPE	UNDER PLATFORM EXHAUST
UPS	UNINTERRUPTIBLE POWER SUPPLY
W	WESTERN PART OF WILSHIRE/ALVARADO STATION
•	PROBE
⊙	FAN
---	ALTERNATE AIR FLOW



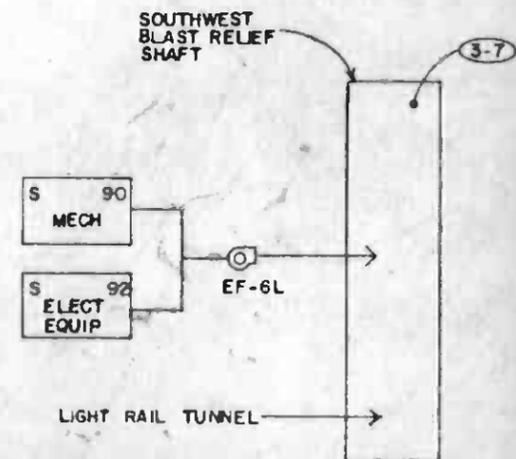
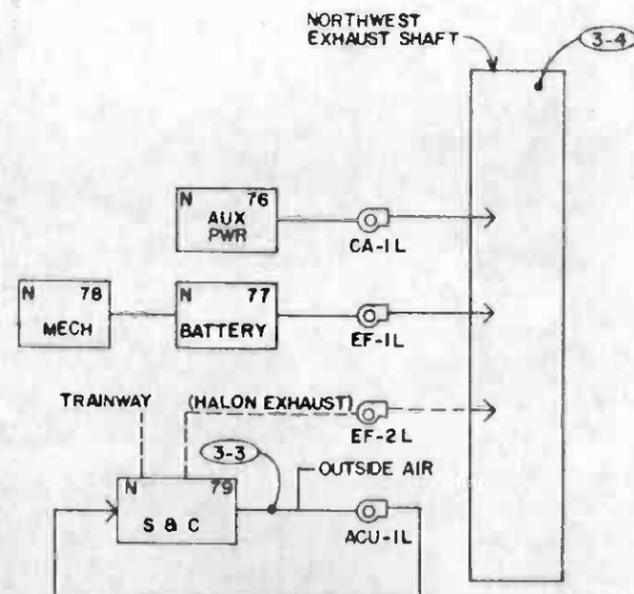
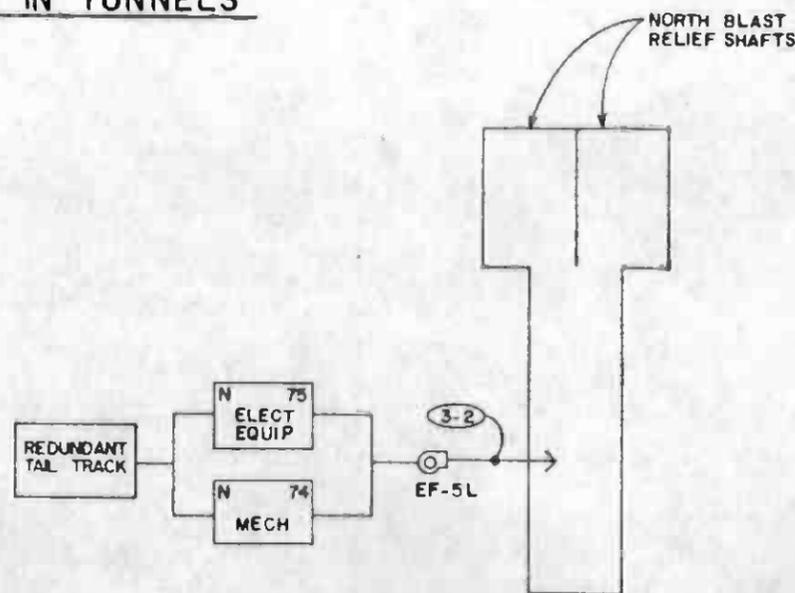
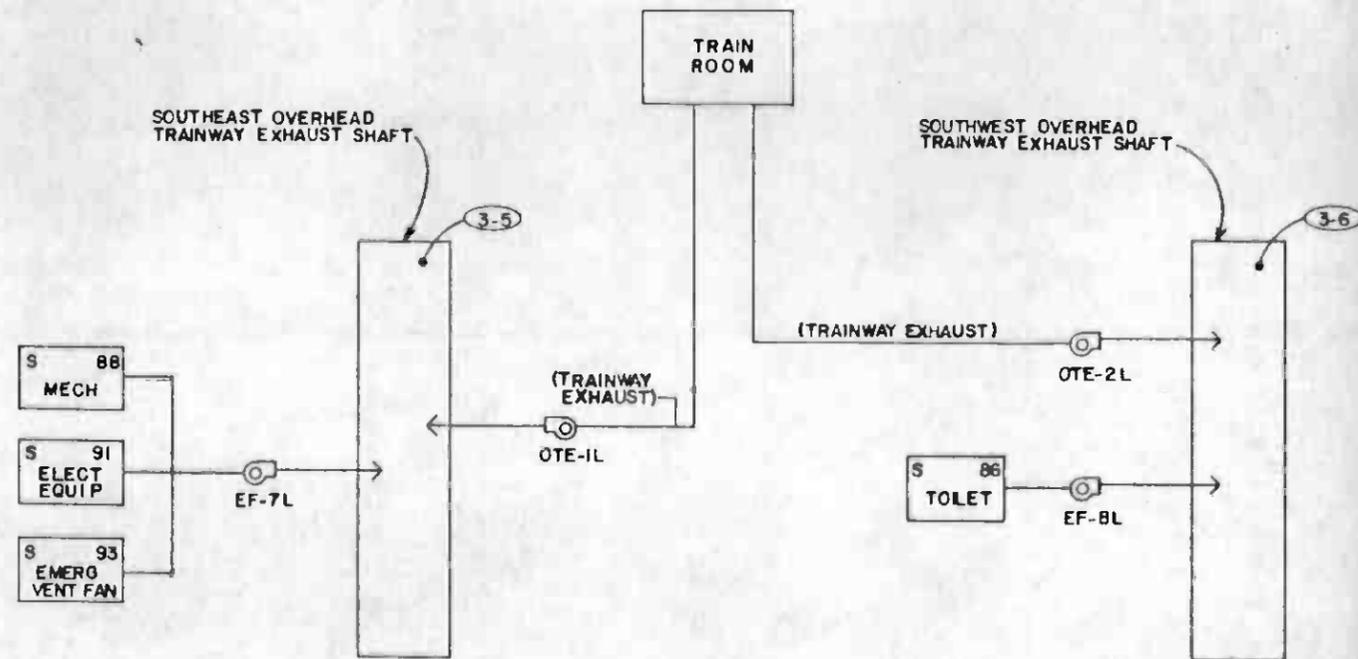
LEGEND



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY S. GOLDSMITH DRAWN BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 28 AUG 86	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	DMJM PBOD KE HWA GENERAL CONSULTANTS APPROVED <i>[Signature]</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS GAS MONITORING WILSHIRE/ALVARADO STATION PROBE LOCATION SCHEMATIC	CONTRACT NO. A640 DRAWING NO. N-164 SCALE NO SCALE SHEET NO. 108
REV. DATE BY	DESCRIPTION	REV. DATE BY	SUB. APP.	DESCRIPTION	REV. DATE BY	SUB. APP.
				PROPOSAL ISSUE		



PROBE POINTS IN TUNNELS



NOTE:
FOR LEGEND AND SYMBOLS, SEE DWG. N-160.



PROBE POINTS IN 7th/FLOWER LRT STATION

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY S. GOLDSMITH DRAWN BY E. AGOSTA CHECKED BY <i>[Signature]</i> DATE 25 AUG 86		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS GAS MONITORING 7TH/FLOWER LIGHT RAIL STATION PROBE LOCATION SCHEMATIC		CONTRACT NO. A 640 DRAWING NO. N-162 SCALE NO SCALE SHEET NO. 106			
REV.	DATE	BY	S.B.	APP.	DESCRIPTION	REV.	DATE	BY	SUB	APP.	DESCRIPTION
					PROPOSAL ISSUE						

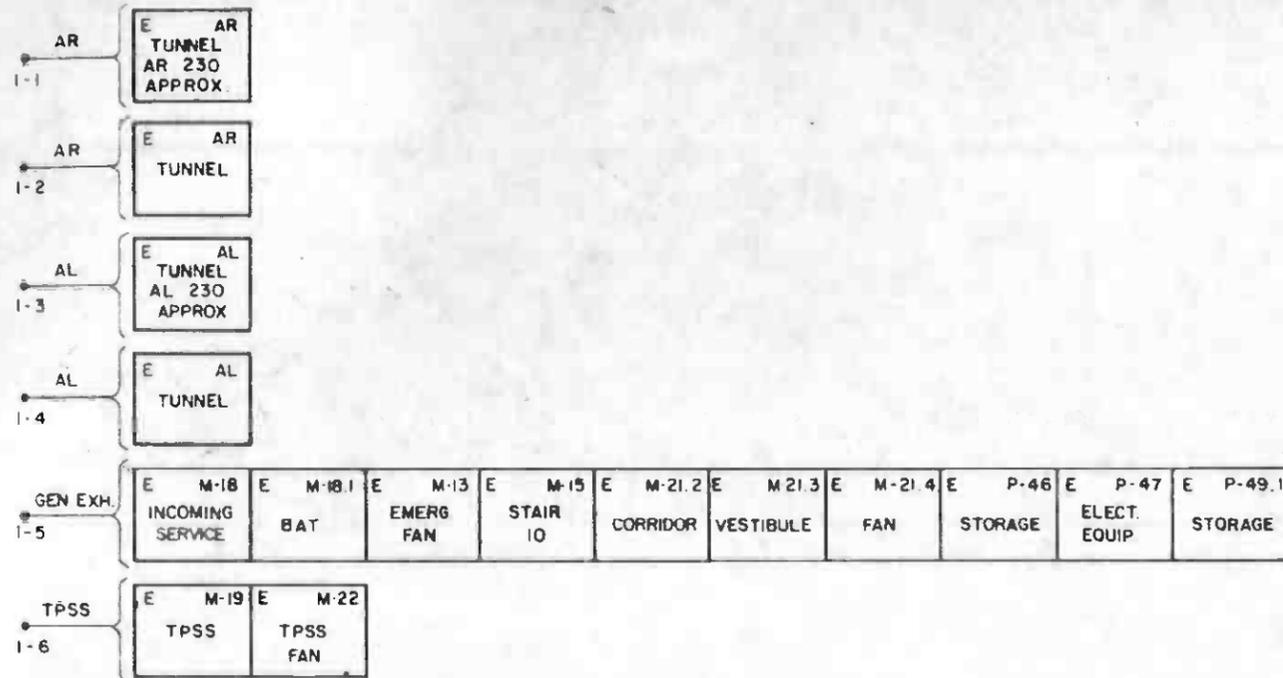
CENTRAL ANALYZER UNIT NO. 1 (SEE NOTES 1 & 2)						CENTRAL ANALYZER UNIT NO. 2 (SEE NOTES 1 & 2)						CENTRAL ANALYZER UNIT NO. 3 (SEE NOTES 1 & 2)					
PROBE NO.	LOCATION	TYPE OF CONN. ³	CONDUIT USED	TUBING LENGTH ⁵	REMARKS	PROBE NO.	LOCATION	TYPE OF CONN. ³	CONDUIT USED	TUBING LENGTH ⁵	REMARKS	PROBE NO.	LOCATION	TYPE OF CONN. ³	CONDUIT USED	TUBING LENGTH ⁵	REMARKS
1-1	TOP OF TUNNEL, AT ϕ OF TRACK, 4'-0" FROM EDGE	3	RUN EXPOSED TO MDF, CT-003 TO CIG 3, FG 401 TO PROBE	300'	A640 CONTRACTOR TO PROVIDE APPROX. 30' OF 1" ϕ CONDUIT IN TUNNEL	2-1	TOP OF TUNNEL, AT ϕ OF TRACK, 4'-0" FROM EDGE	3	RUN EXPOSED TO MDF, CT-002 TO CIG 2, FG 606 TO PROBE	800'	A640 CONTRACTOR TO PROVIDE APPROX. 30' OF 1" ϕ CONDUIT IN TUNNEL	3-1	TOP OF TAIL-TRACK CEILING, AT ϕ OF STATION, STA 4 + 70 APPROX.	AS APPROVED		1000'	
1-2	SAME AS 1-1	3	SAME AS 1-1	400'	SAME AS 1-1	2-2	SAME AS 2-1	3	SAME AS 2-1	800'	SAME AS 2-1	3-2	AT DUCT ϕ , 2'-0" FROM BRS WALL	1		1000'	
1-3	AT DUCT ϕ , 8'-0" FROM DISCH. FLANGE	1	RUN EXPOSED TO MDF, CT-003 TO CIG 3, FG 101 TO PROBE	200'		2-3	AT DUCT ϕ , 4'-0" ABOVE FINISH FLR.	1	RUN EXPOSED TO MDF, CT-002 TO CIG 2, FG 301 TO PROBE	700'		3-3	AT DUCT ϕ , 3'-0" ABOVE FINISH FLR.	1		700'	
1-4	2'-0" BELOW TOP OF ACCESS GRATING	AS APPROVED	RUN EXPOSED TO MDF, CT-003 TO CIG 3, FG 101 TO PROBE	300'		2-4	AT DUCT ϕ , BETWEEN TWO DISCH. ELBOWS	1	RUN EXPOSED TO MDF, CT-002 TO CIG 2, TBD TO PROBE	700'		3-4	2'-0" BELOW TOP OF GRATING	AS APPROVED		700'	
1-5	AT DUCT ϕ	1	RUN EXPOSED TO MDF, CT-001 TO CIG 1, TBD TO PROBE	900'		2-5	2'-0" BELOW TOP OF GRATING	AS APPROVED	SAME AS 2-3	700'		3-5	2'-0" BELOW TOP OF GRATING	AS APPROVED		600'	
						2-6	2'-0" BELOW TOP OF GRATING	AS APPROVED	RUN EXPOSED TO MDF, CT-001 TO CIG 1, TBD TO PROBE	900'		3-6	2'-0" BELOW TOP OF GRATING	AS APPROVED		600'	
												3-7	2'-0" BELOW TOP OF GRATING	AS APPROVED		600'	
												3-8	TOP OF TUNNEL AT ϕ OF STATION, STA 14 + 20 APPROX.	3		1000'	

NOTES:

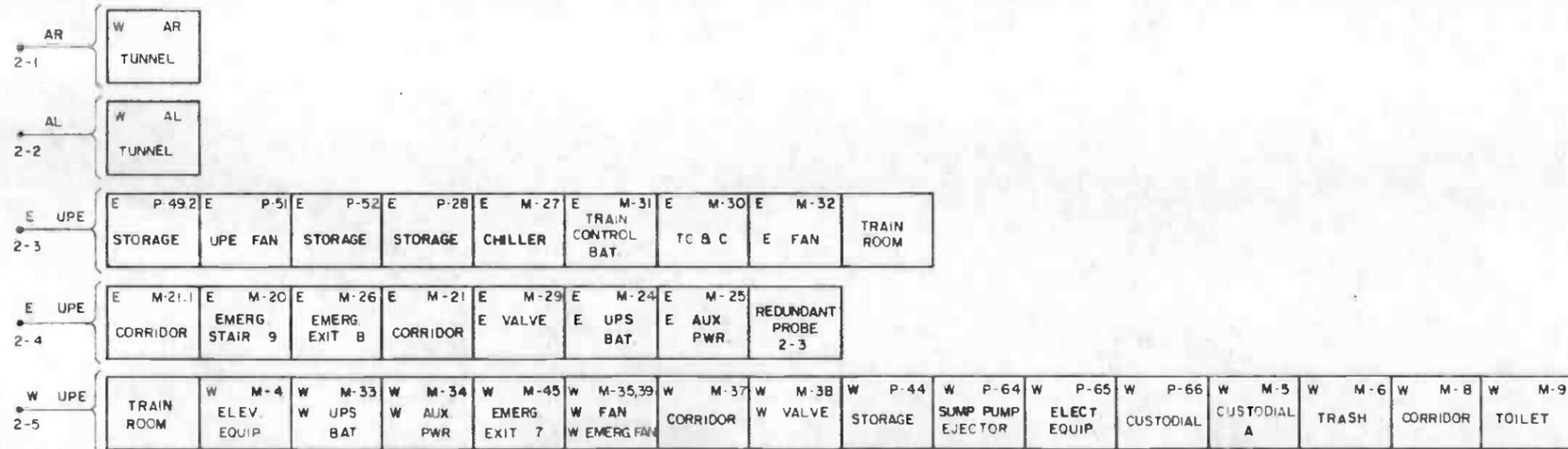
- CENTRAL ANALYZER VENT SHALL BE ROUTED TO TRANSFER GRILLE OF SPRINKLER VALVE ROOM (TYPICAL)
- CENTRAL ANALYZER CONDENSATE DRAIN SHALL BE ROUTED TO NEAREST FUNNEL DRAIN (TYPICAL)
- FOR PROBE CONNECTION DETAILS, SEE DRAWING N-167
- FOR LEGEND AND SYMBOLS SEE DWG. N-160.
- TUBING LENGTH SHOWN IS APPROXIMATE.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY BILL HOWING DRAWN BY ED ACOSTA CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 22 AUG 88		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	DMJM/PB00/KE HWA GENERAL CONSULTANTS APPROVED <i>[Signature]</i>	CONTRACT NO. A640 DRAWING NO. N-163 SCALE NO SCALE SHEET NO. 107
REV. DATE BY I.D. APP. DESCRIPTION	REV. DATE BY SUB. APP. DESCRIPTION	PROPOSAL ISSUE		APPROVED <i>[Signature]</i>		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS GAS MONITORING 7TH/FLOWER STATION PROBE SCHEDULE

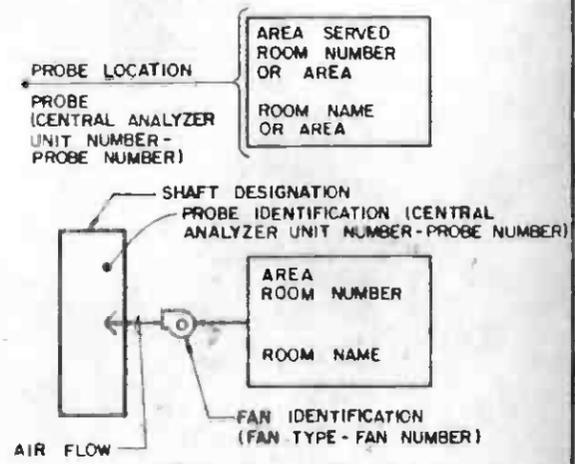


CENTRAL ANALYZER UNIT NO. 1



CENTRAL ANALYZER UNIT NO. 2

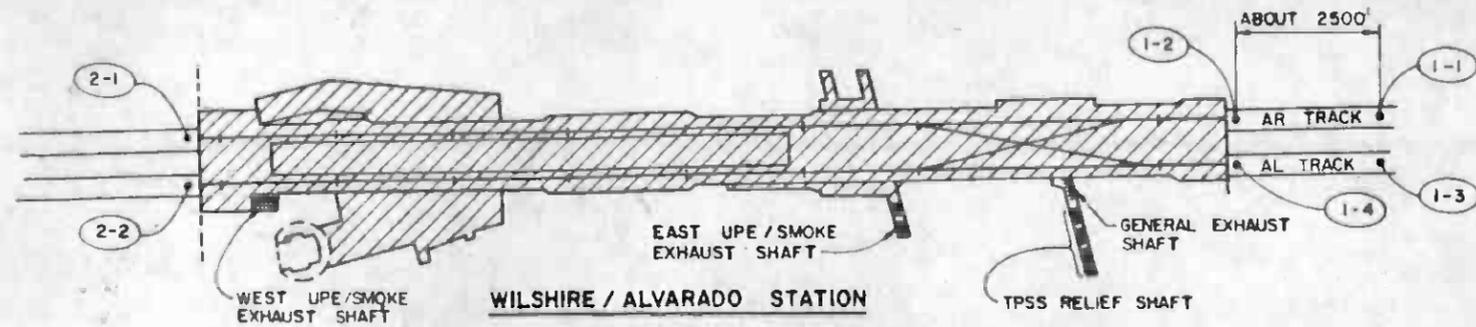
SYMBOL	DESCRIPTION
AHU	AIR HANDLING UNIT
AL	MAIN LINE, LEFT TRACK
AR	MAIN LINE, RIGHT TRACK
AUX	AUXILIARY
BAT	BATTERY
E	EASTERN PART OF WILSHIRE/ALVARADO STATION
EF	EXHAUST FAN
ELECT	ELECTRICAL
ELEV	ELEVATOR
EMERG	EMERGENCY
EQUIP	EQUIPMENT
GEN EXH	GENERAL EXHAUST SHAFT
M	IN ROOM NUMBER DESIGNATION, MEZZANINE LEVEL
P	IN ROOM NUMBER DESIGNATION, PLATFORM LEVEL
PWR	POWER
SSF	SUPPLY FAN
TC & C	TRAIN CONTROL & COMMUNICATIONS
EIS	ELECTRIC INCOMING SERVICE
TPSS	TRACTION POWER SUBSTATION
UPE	UNDER PLATFORM EXHAUST
UPS	UNINTERRUPTIBLE POWER SUPPLY
W	WESTERN PART OF WILSHIRE/ALVARADO STATION
•	PROBE
○	FAN
---	ALTERNATE AIR FLOW



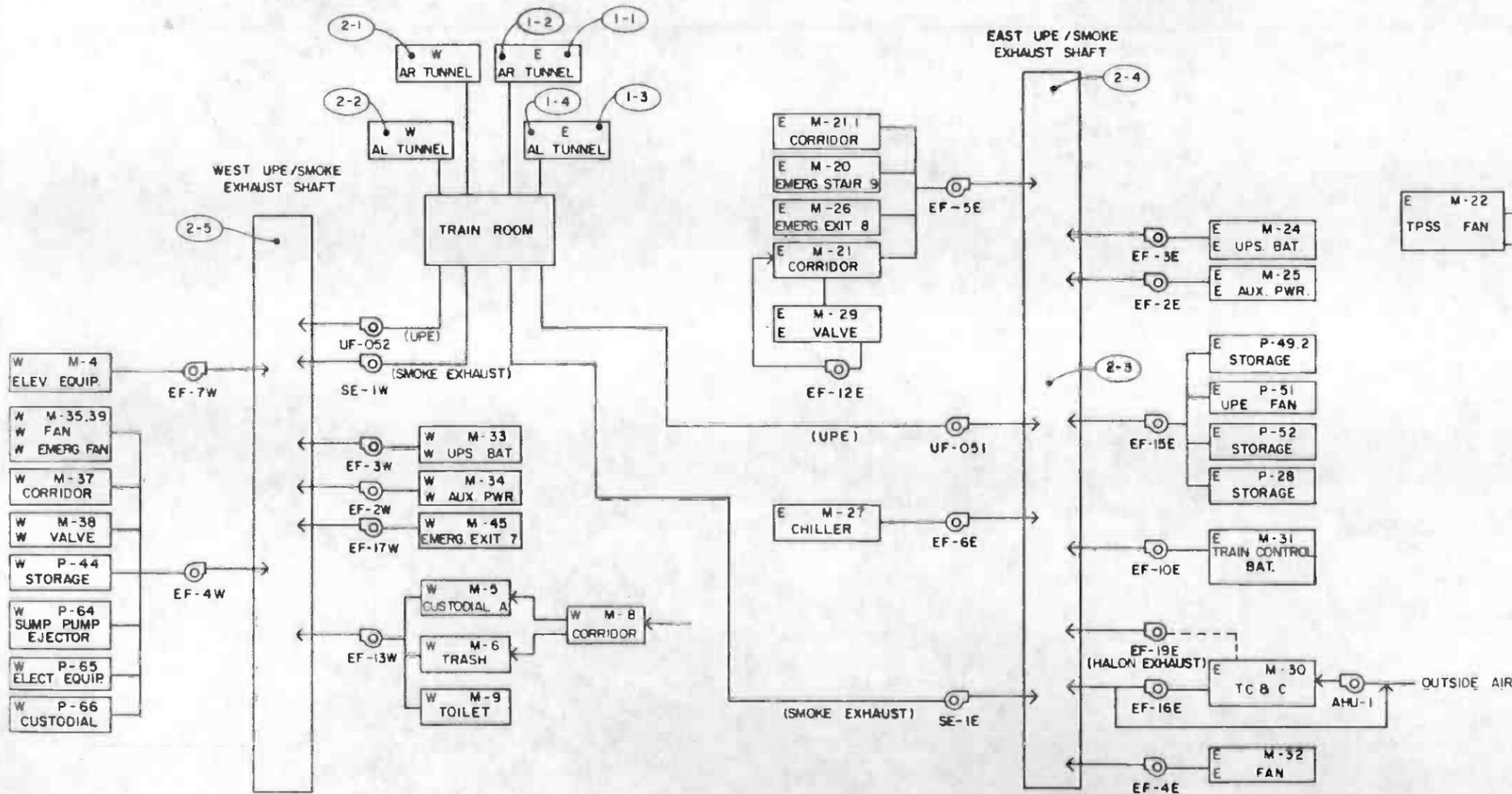
LEGEND



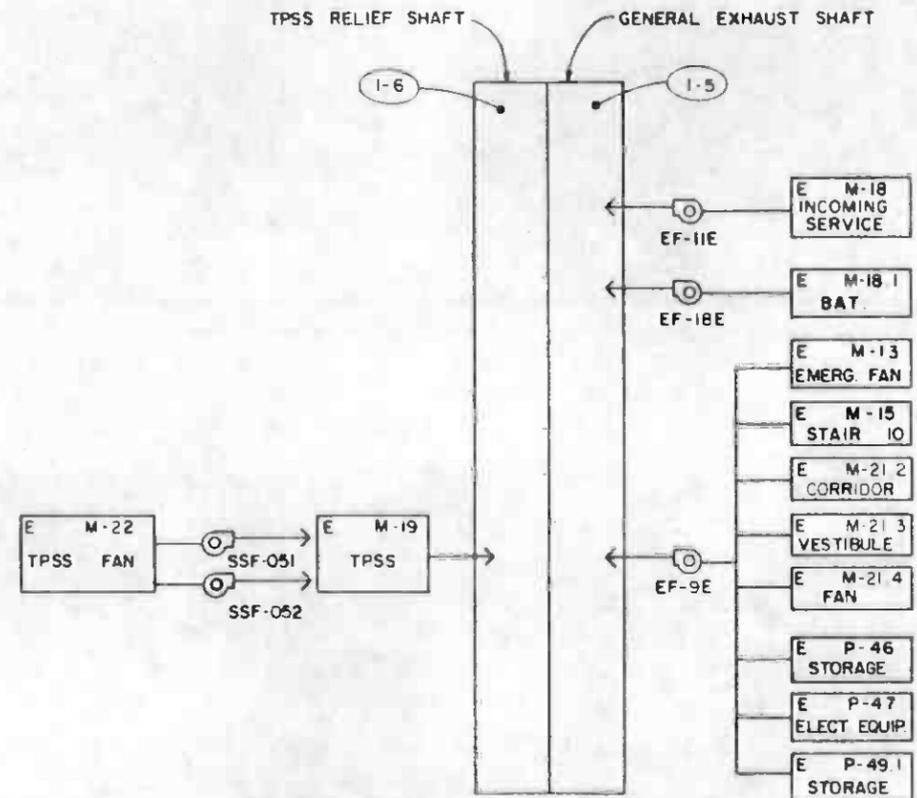
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY S. GOLDSMITH DRAWN BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 29 AUG 86	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS GAS MONITORING WILSHIRE / ALVARADO STATION PROBE LOCATION SCHEMATIC	CONTRACT NO A640 DRAWING NO N-164 SCALE NO SCALE SHEET NO 108
REV. DATE BY APP. DESCRIPTION	REV. DATE BY SUB. APP. DESCRIPTION	PROPOSAL ISSUE	SUBMITTED <i>[Signature]</i>	APPROVED <i>[Signature]</i>		



PROBE POINTS IN TUNNELS



PROBE POINTS IN WILSHIRE / ALVARADO STATION



NOTE:
1. FOR LEGEND AND SYMBOLS SEE DWG. N-164.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY S. GOLDSMITH CHECKED BY <i>[Signature]</i> DATE 22 SEP 86	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT	DMJM/PBOD/KE HWA GENERAL CONSULTANTS APPROVED <i>[Signature]</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS GAS MONITORING WILSHIRE / ALVARADO STATION PROBE LOCATION SCHEMATIC	CONTRACT NO. A640 DRAWING NO. N-165 SCALE NO SCALE SHEET NO. 109
DATE 4-87	DESCRIPTION PROPOSAL ISSUE	APPROVED 22 SEP 86	SUBMITTED TO 	APPROVED <i>[Signature]</i>	CONTRACT NO. A640 DRAWING NO. N-165 SCALE NO SCALE SHEET NO. 109	CONTRACT NO. A640 DRAWING NO. N-165 SCALE NO SCALE SHEET NO. 109

CENTRAL ANALYZER UNIT NO 1 (SEE NOTES 1 & 2)						CENTRAL ANALYZER UNIT NO 2 (SEE NOTES 1 & 2)					
PROBE NO.	LOCATION SEE DWG. N-165	TYPE OF CONN.	CONDUIT USED FROM TC&C RM	TUBING LENGTH	REMARKS	PROBE NO.	LOCATION SEE DWG. N-165	TYPE OF CONN.	CONDUIT USED FROM TC&C RM	TUBING LENGTH	REMARKS
1-1	1'-0" BELOW TOP OF TUNNEL AT C OF TRACK AT STA 230+00	3	C-006	3000'	A640 CONTRACTOR TO PROVIDE APPROX. 400' OF 1" Ø CONDUIT FROM CROSSPASSAGE AT STA 233+65	2-1	1'-0" BELOW TDP OF TUNNEL AT C OF TRACK 4'-0" FROM EDGE	3	CONDUIT FG 375 TO J-BOX AT TUNNEL OPENING	700'	A640 CONTRACTOR TO PROVIDE APPROX. 30' OF 1" Ø CONDUIT IN TUNNEL.
1-2	1'-0" BELOW TOP OF TUNNEL AT C OF TRACK 4'-0" FROM EDGE	3	CONDUIT FG 372 TO J-BOX AT TUNNEL OPENING	500'	A640 CONTRACTOR TO PROVIDE APPROX. 30' OF 1" Ø CONDUIT IN TUNNEL.	2-2	1'-0" BELOW TOP OF TUNNEL AT C OF TRACK 4'-0" FROM EDGE	3	CONDUIT FG 374 TO J-BOX AT TUNNEL OPENING	700'	A640 CONTRACTOR TO PROVIDE APPROX. 30' OF 1" Ø CONDUIT IN TUNNEL.
1-3	1'-0" BELOW TOP OF TUNNEL AT C OF TRACK AT STA 230+00	3	C-003	3000'	A640 CONTRACTOR TO PROVIDE APPROX. 400' OF 1" Ø CONDUIT FROM CROSSPASSAGE AT STA 233+65	2-3	9'-0" ABOVE E.UPE SHAFT FLOOR AT STA GRID LINE H 7	AS APPROVED	EMBEDDED CONDUIT THROUGH WALL FROM TC & C ROOM INTO E.UPE SHAFT	200'	A640 CONTRACTOR TO PROVIDE APPROX. 150' OF 1" Ø CONDUIT FROM J-BOX TO PROBE LOCATION
1-4	1'-0" BELOW TOP OF TUNNEL AT C OF TRACK 4'-0" FROM EDGE		CONDUIT FG 373 TO J-BOX AT TUNNEL OPENING	500'	A640 CONTRACTOR TO PROVIDE APPROX. 30' OF 1" Ø CONDUIT IN TUNNEL.	2-4	15'-0" FROM END OF E.UPE SHAFT AT 2'-0" BELOW GRATING	AS APPROVED	EMBEDDED CONDUIT THROUGH WALL FROM TC & C ROOM INTO E.UPE SHAFT	300'	A640 CONTRACTOR TO PROVIDE J-BOX AND APPROX. 100' OF 1" Ø CONDUIT BEYOND PROBE 2-3
1-5	2'-0" BELOW GRATING AT C OF EIS EXHAUST SHAFT	2	CONDUIT FG 376 TO J-BOX IN TPSS EXHAUST SHAFT	400'	A640 CONTRACTOR TO MAKE CONNECTION FROM J-BOX TO PROBE LOCATION	2-5	4'-6" ABOVE FLOOR LEVEL IN W.UPE SHAFT AT MIDPOINT OF COMMON WALL BETWEEN UPE & BLAST RELIEF SHAFT	AS APPROVED	CONDUIT FG 377 TO J-BOX IN W.UPE SHAFT	600'	
1-6	2'-0" BELOW GRATING AT C OF TPSS EXHAUST SHAFT	AS APPROVED	CONDUIT FG 376 TO PROBE LOCATION	400'							

NOTES:

- CENTRAL ANALYZER VENT SHALL BE ROUTED TO 2" Ø VENT LINE IN BATTERY ROOM NO. 31 (TYP).
- FOR PROBE CONNECTION DETAILS, SEE DWG. N-167.
- FOR LEGEND AND SYMBOLS SEE DWG. N-164.
- TUBING LENGTHS SHOWN ARE APPROXIMATE.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA

DESIGNED BY
M.R.T.C.
DRAWN BY
MARTHA UDRESOU
CHECKED BY
[Signature]
IN CHARGE
[Signature]
DATE
27 OCT 86



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

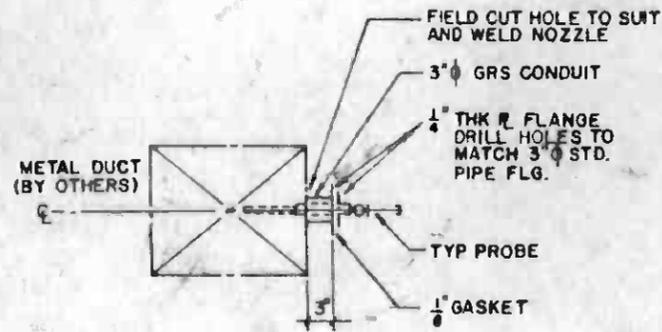


DMJM PBOD/KE/HWA
GENERAL CONSULTANTS
APPROVED: *[Signature]*

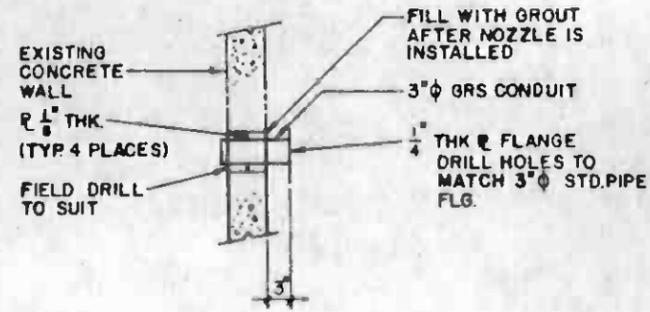
LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
GAS MONITORING
WILSHIRE / ALVARADO STATION
PROBE SCHEDULE

CONTRACT NO
A 640 B
DRAWING NO
N-166
SCALE
NO SCALE
SHEET NO
110

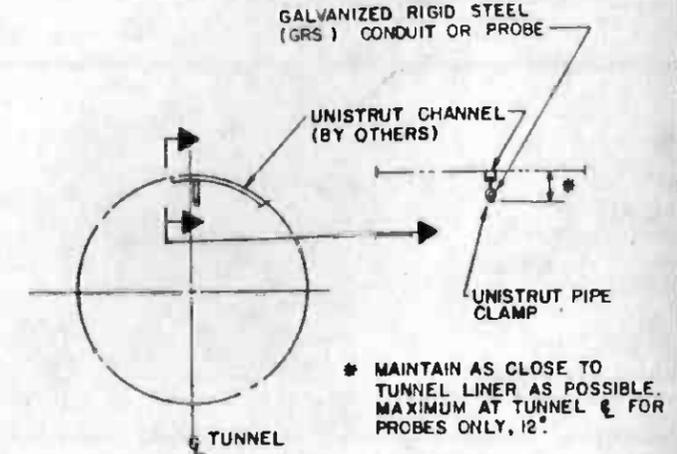
DATE	BY	SUB	APP	DESCRIPTION
4/6/87	JRB			PROPOSAL ISSUE



DETAIL 1
DUCT CONNECTION



DETAIL 2
WALL CONNECTION



DETAIL 3
TUNNEL CONNECTION

NOTES:

1. OTHER CONFIGURATIONS MAY BE SUBMITTED FOR APPROVAL OF THE DISTRICT.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY
BILL HOWING
DRAWN BY
ED ACOSTA
CHECKED BY
[Signature]
IN CHARGE
[Signature]
DATE
21 AUG 88



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT



DMJM/PBOD/KE/HWA
GENERAL CONSULTANTS

APPROVED *[Signature]*

LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
GAS MONITORING
PROBE LOCATION DETAILS

CONTRACT NO.
A640
DRAWING NO.
N-167
SCALE
NO SCALE
SHEET NO.
111

DATE BY SUB APP

DESCRIPTION

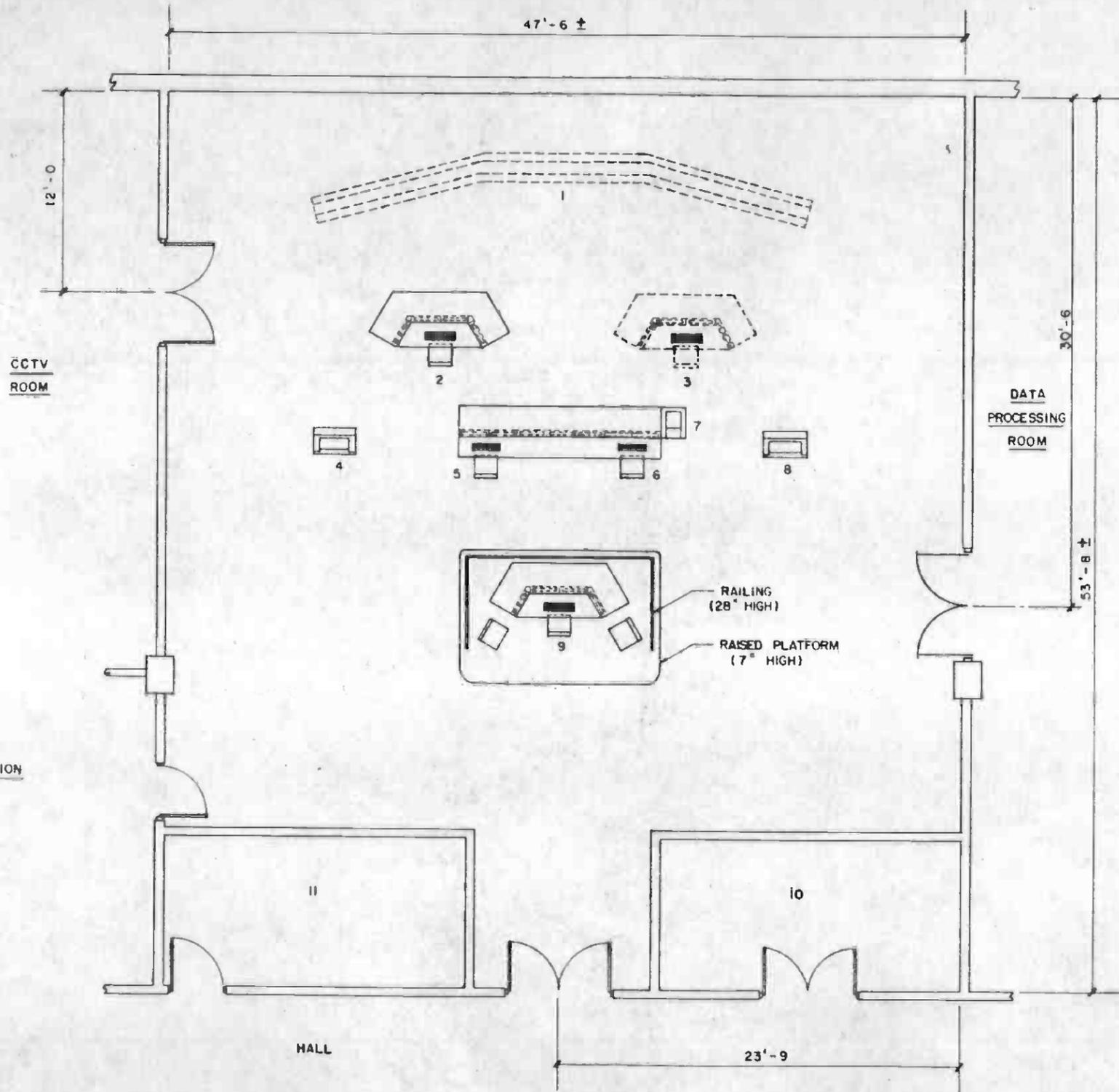
REV DATE BY SUB APP

PROPOSAL ISSUE

DESCRIPTION

SUBMITTED

[Signature]

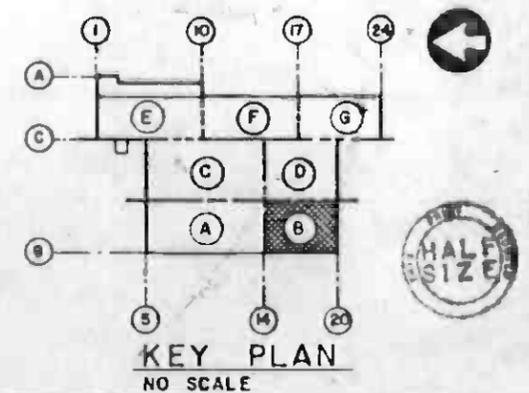
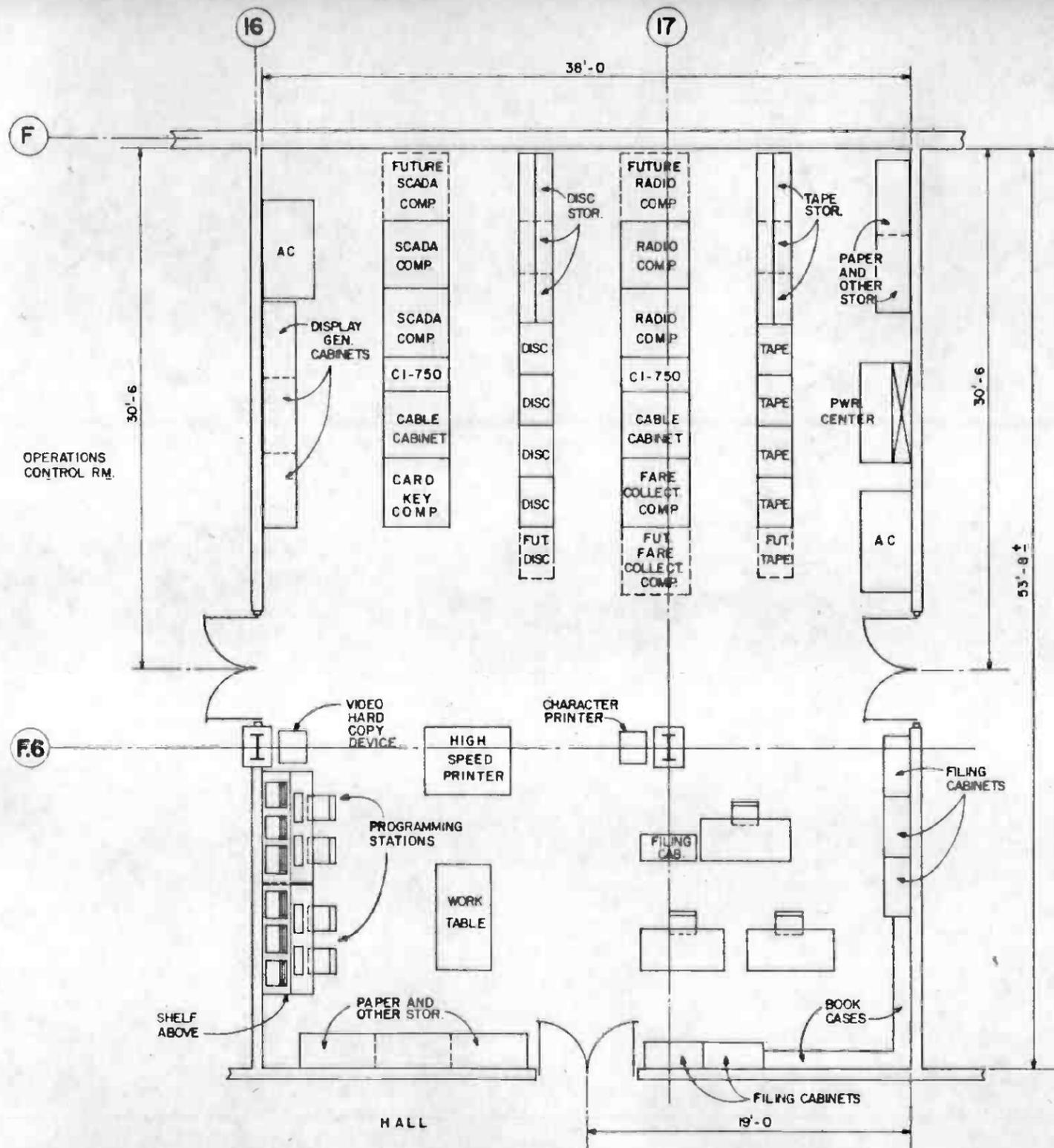


EQUIPMENT :

- 1 POSSIBLE FUTURE SYSTEM STATUS BOARD.
- 2. TRAIN DISPATCHER CONSOLE
- 3. TRAIN DISPATCHER CONSOLE
- 4. CHARACTER PRINTER (ALARMS / EVENTS)
- 5. FIRE DEPARTMENT LIASON POST
- 6. SYSTEM COMMUNICATIONS CONSOLE
- 7. CRT VIDEO HARDCOPY DEVICE (HARDCOPY OUTPUTS OF CRT DISPLAYS)
- 8. CHARACTER PRINTER (REPORTS)
- 9. RAIL OPERATIONS SUPERVISOR CONSOLE
- 10. AIR CONDITIONING
- 11. STORAGE

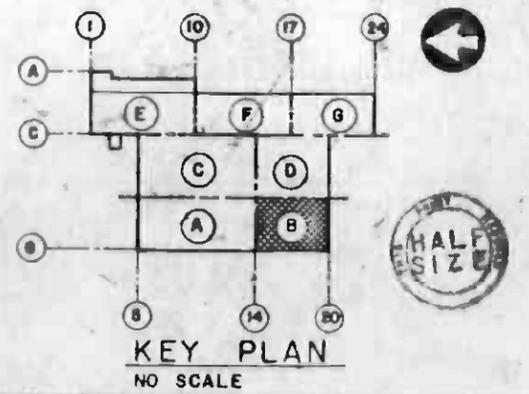
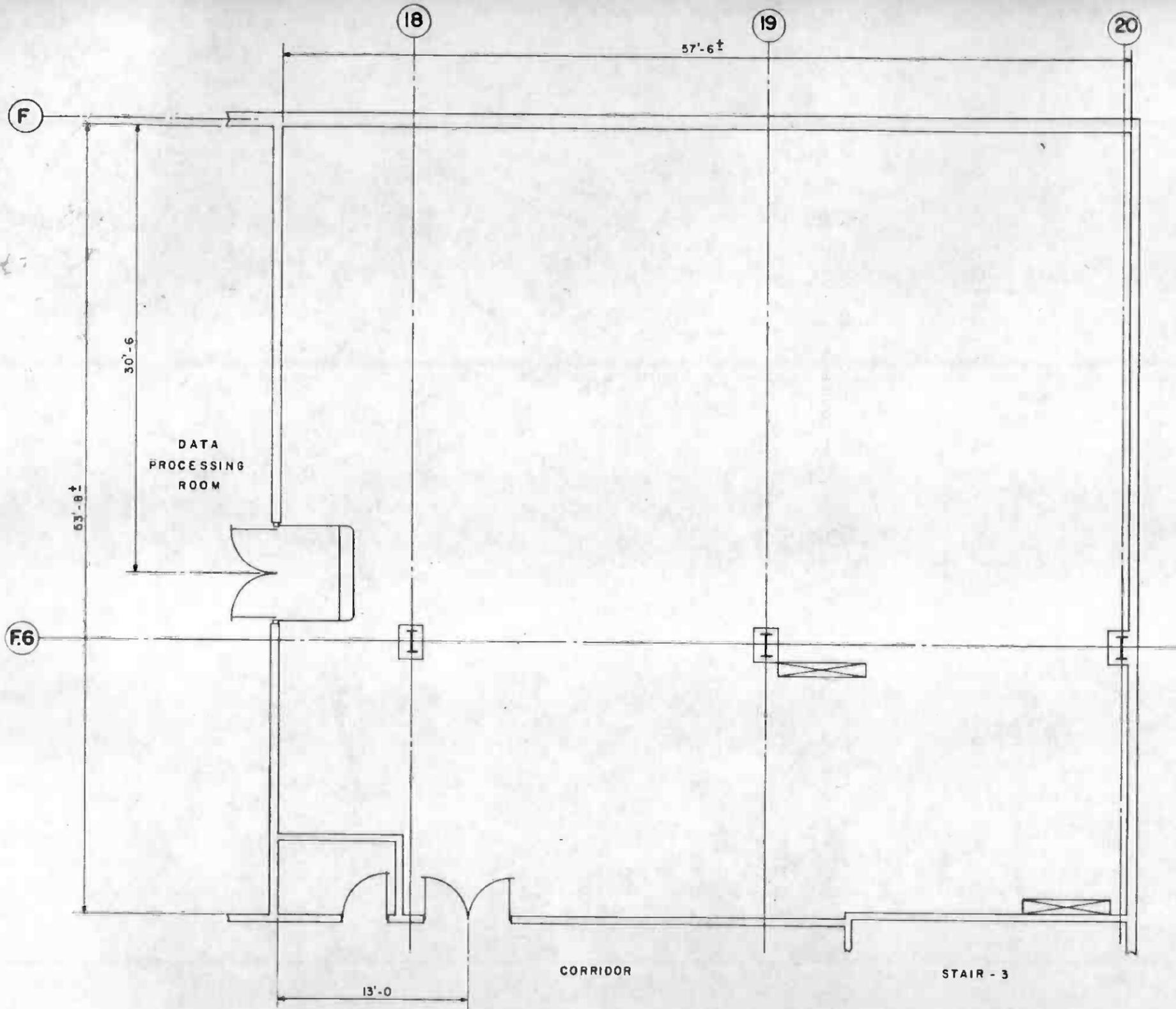


THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION UNDER THE URBAN MASS TRANSPORTATION ADMINISTRATION UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>[Signature]</i> DRAWN BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 22 SEP 86		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS RAIL CONTROL CENTER OPERATIONS CONTROL ROOM	CONTRACT NO. A640 DRAWING NO. N-107 SCALE 1/4" = 1'-0" SHEET NO. 112
REVISIONS NO. DATE BY SUB APP DESCRIPTION	PROPOSAL ISSUE 1 11/85 [Signature] [Signature]	SUBMITTED <i>[Signature]</i>	APPROVED <i>[Signature]</i>				



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>B. Blakesley</i> DRAWN BY <i>Edw. Acorn</i> CHECKED BY <i>R. Hansen</i> IN CHARGE <i>JMB</i> DATE 21 OCT 86	REGISTERED PROFESSIONAL ENGINEER No. 101200 1-20-87 ELECTRICAL STATE OF CALIF.	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT RTO	DMJM PBQD/KE/HWA GENERAL CONSULTANTS APPROVED <i>Howard K. Claff</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS DATA PROCESSING ROOM	CONTRACT NO. A 640 DRAWING NO. N-207 SCALE 1/4" = 1'-0" SHEET NO. 113
4-287 PROPOSAL ISSUE							

S.C.R.T.D. LIBRARY



REV	DATE	BY	CHK	APP	DESCRIPTION

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

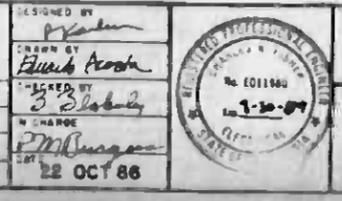
DESIGNED BY
[Signature]

DRAWN BY
[Signature]

CHECKED BY
[Signature]

IN CHARGE
[Signature]

DATE
22 OCT 86



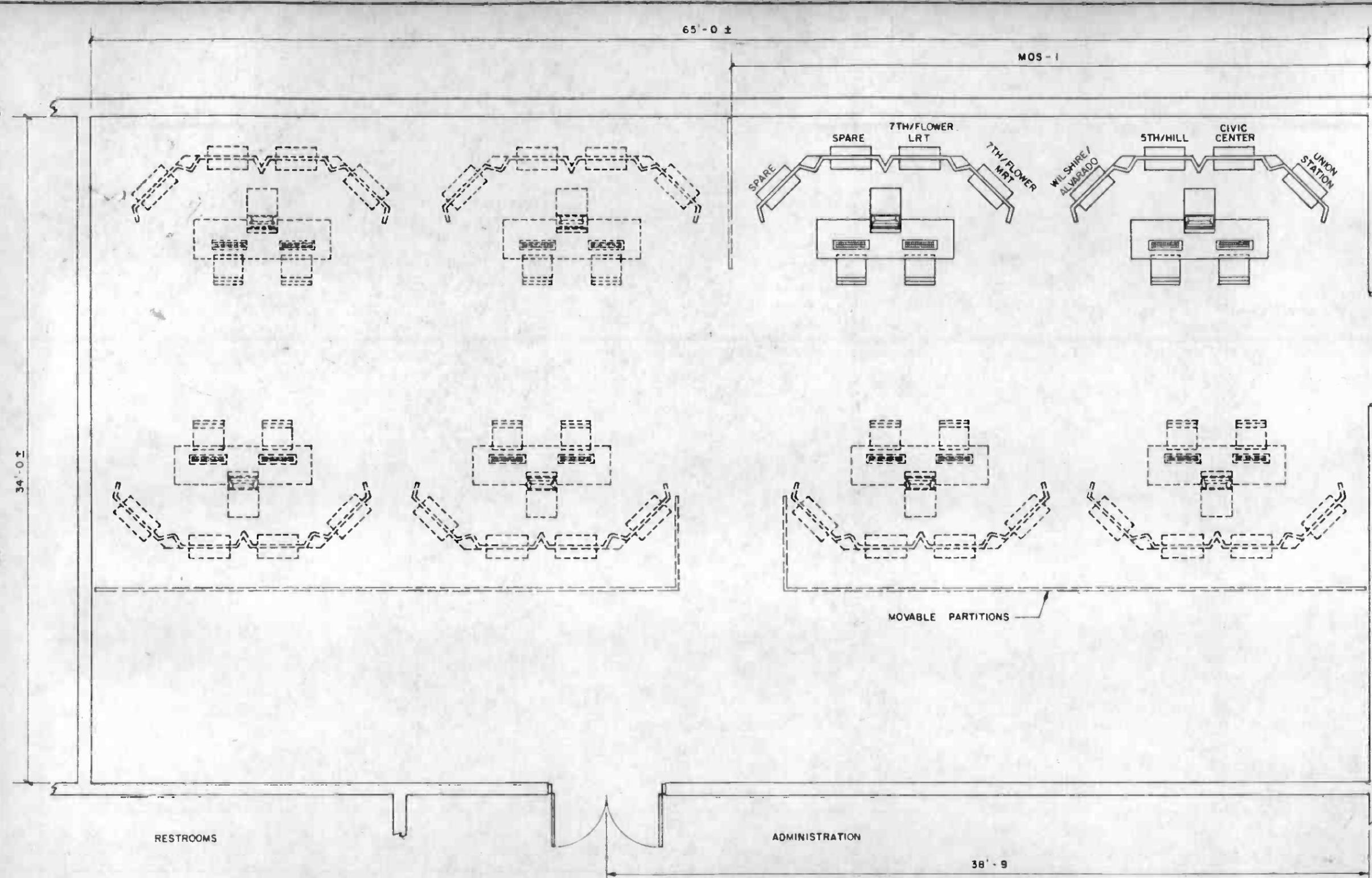
SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

DMJM/PBDD KE/HWA
GENERAL CONSULTANTS

APPROVED
[Signature]

LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
EQUIPMENT ROOM

CONTRACT NO. A640
DRAWING NO. N-209
SCALE 1/4" = 1'-0"
SHEET NO. 114



OPERATIONS
CONTROL
ROOM

NOTES:

1. WORKSTATIONS SHOWN IN SOLID LINE ARE THOSE REQUIRED FOR MOS-1; WORKSTATIONS SHOWN IN DOTTED LINES ARE FOR FUTURE STATIONS.
2. CAPACITIES FOR 34' X 65' CCTV MONITORING ROOM ARE:
 - A. DESIGN CAPACITY: WORKSTATIONS FOR 32 STATIONS (AS SHOWN).
 - B. MAXIMUM CAPACITY: WORKSTATIONS FOR 44 STATIONS.
3. WORKSTATION DESIGN IS BASED ON EACH OBSERVER MONITORING 2 STATIONS IN PEAK HOURS AND 4 STATIONS IN OFF-PEAK HOURS, RESULTING IN:
 - A. FOR MOS-1, 3 OBSERVERS REQUIRED IN PEAK HOURS; 2 OBSERVERS REQUIRED IN OFF-PEAK HOURS.
 - B. FOR 18 STATIONS, 9 OBSERVERS REQUIRED IN PEAK HOURS; 5 OBSERVERS REQUIRED IN OFF-PEAK HOURS.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY
P. Parker
DRAWN BY
P. Parker
CHECKED BY
D. S. Roberts
IN CHARGE
P. M. Bergerson
DATE
24 SEP 86



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT



DMJM/PBQD/KE/HWA
GENERAL CONSULTANTS

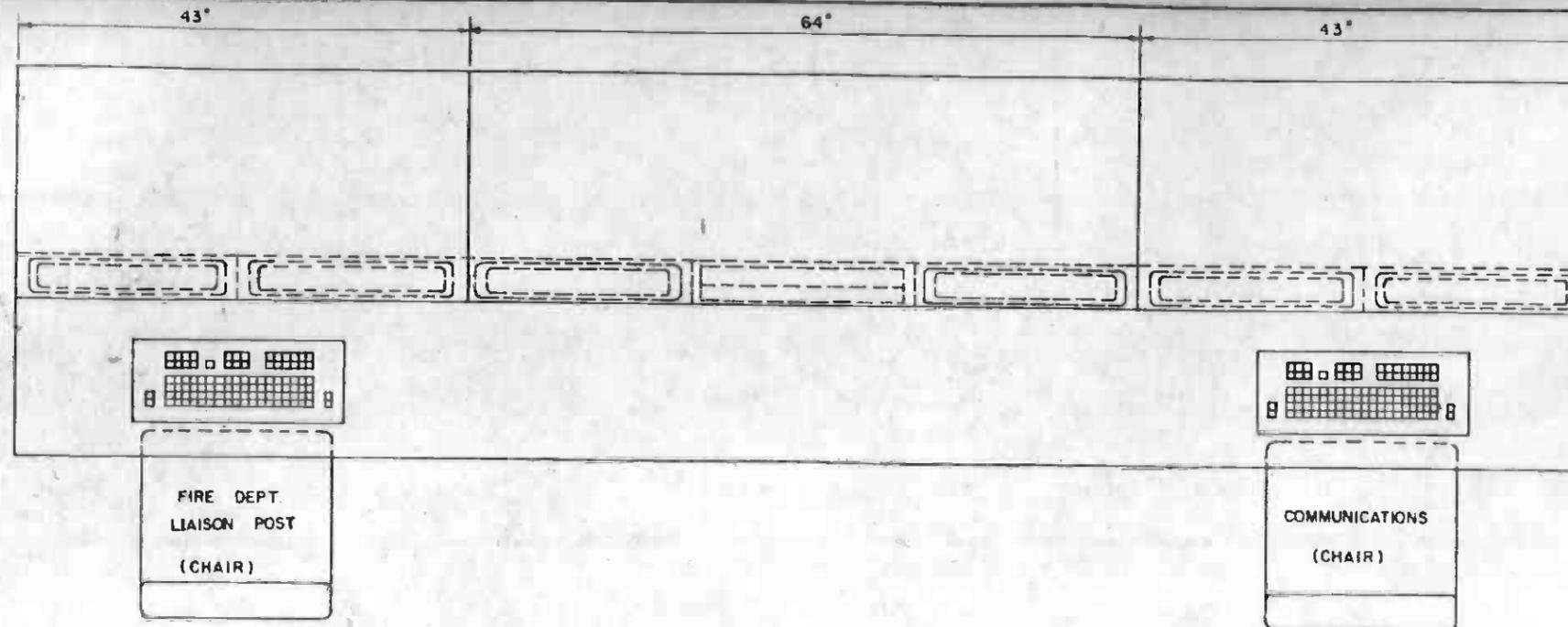
LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
RAIL CONTROL CENTER
CCTV ROOM

CONTRACT NO.
A640
DRAWING NO.
N-034
SCALE
3/8" = 1'-0"
SHEET NO.
115

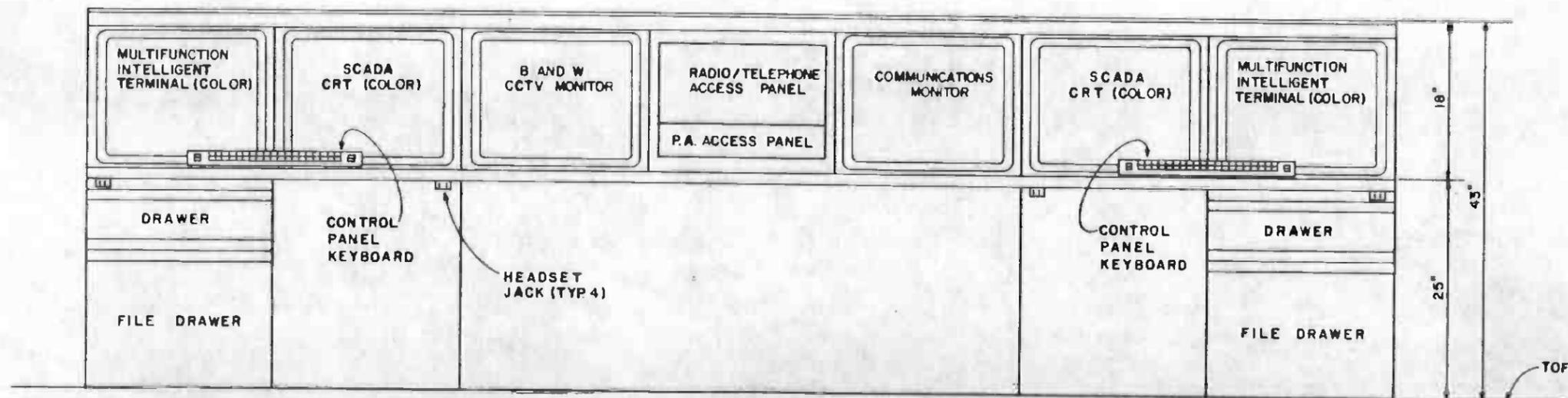
REV	DATE	BY	SUB	APP	DESCRIPTION
1607					PROPOSAL ISSUE

SUBMITTED *Lee*

APPROVED



PLAN (UNFOLDED)

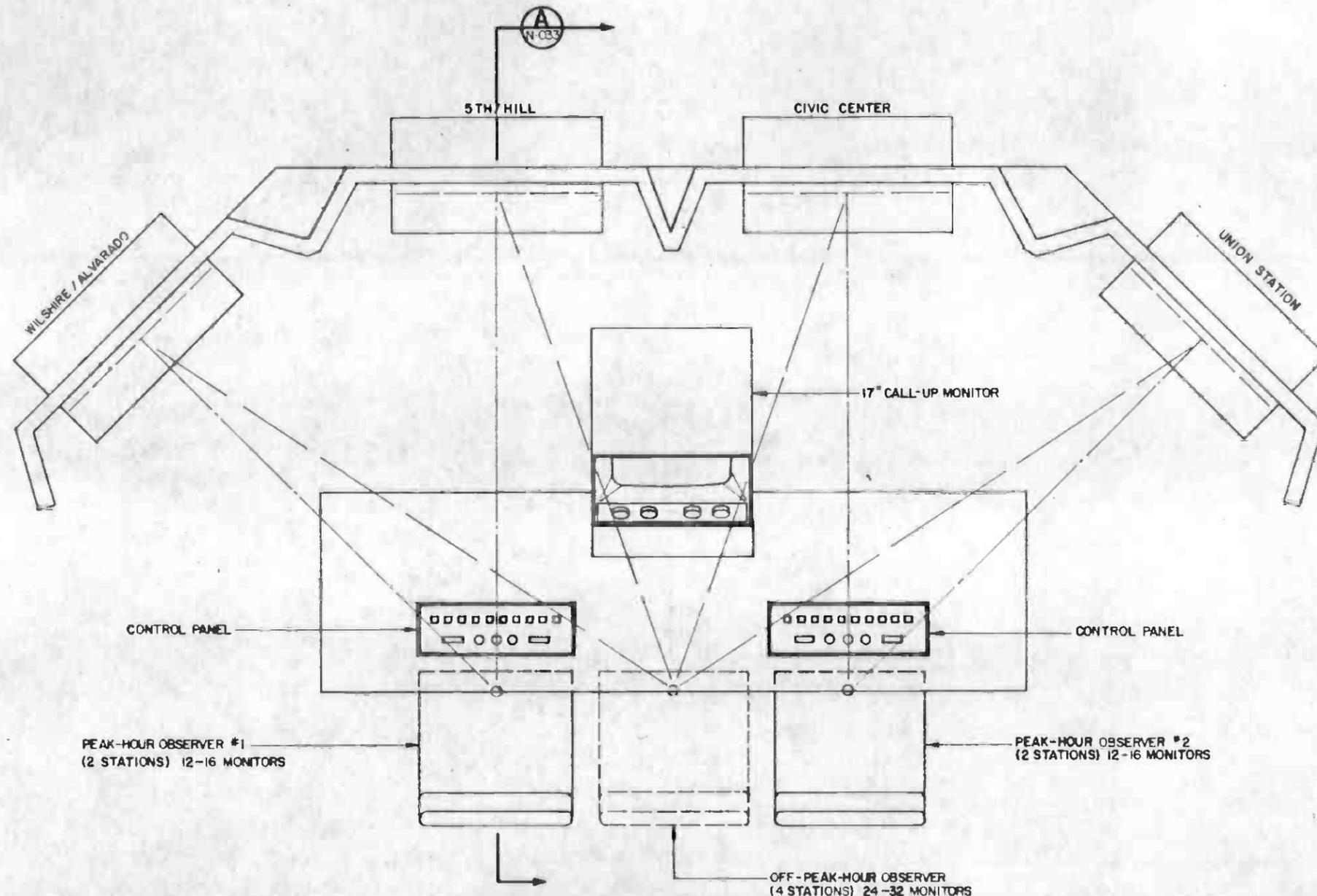


ELEVATION (UNFOLDED)

NOTE:
ALL EQUIPMENT BACK MOUNTED 19" EIA STANDARDS.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>[Signature]</i> DRAWN BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 24 OCT 86	REGISTERED PROFESSIONAL ENGINEER No. 6811000 Exp. 1-30-97 ELECTRICAL STATE OF CALIFORNIA	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT DMJM/PBOD/KE HWA GENERAL CONSULTANTS APPROVED <i>[Signature]</i>	CONTRACT NO. A 640 DRAWING NO. N-103 SCALE 1" = 1' SHEET NO. 116
REV. DATE BY SUB APP DESCRIPTION	REV. DATE BY SUB APP DESCRIPTION	PROPOSAL ISSUE		SUSU-PTES <i>[Signature]</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS SYSTEM COMMUNICATIONS CONSOLE



PLAN VIEW
4 STATION GROUPING



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY
[Signature]
DRAWN BY
[Signature]
CHECKED BY
[Signature]
DATE
8 AUG 86



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT



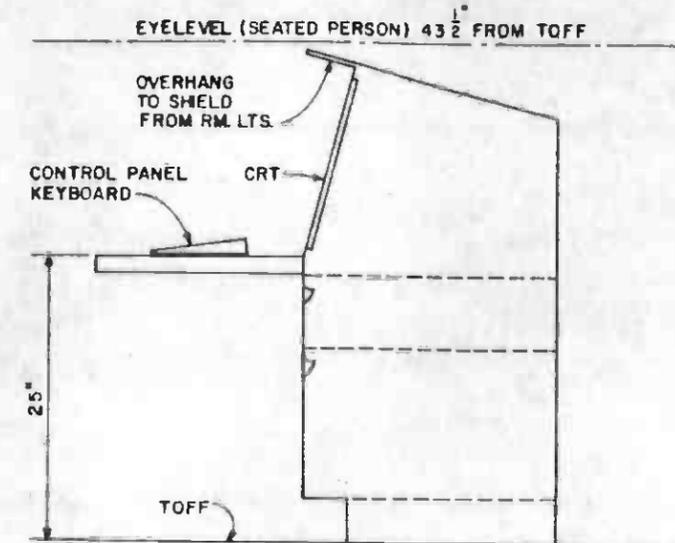
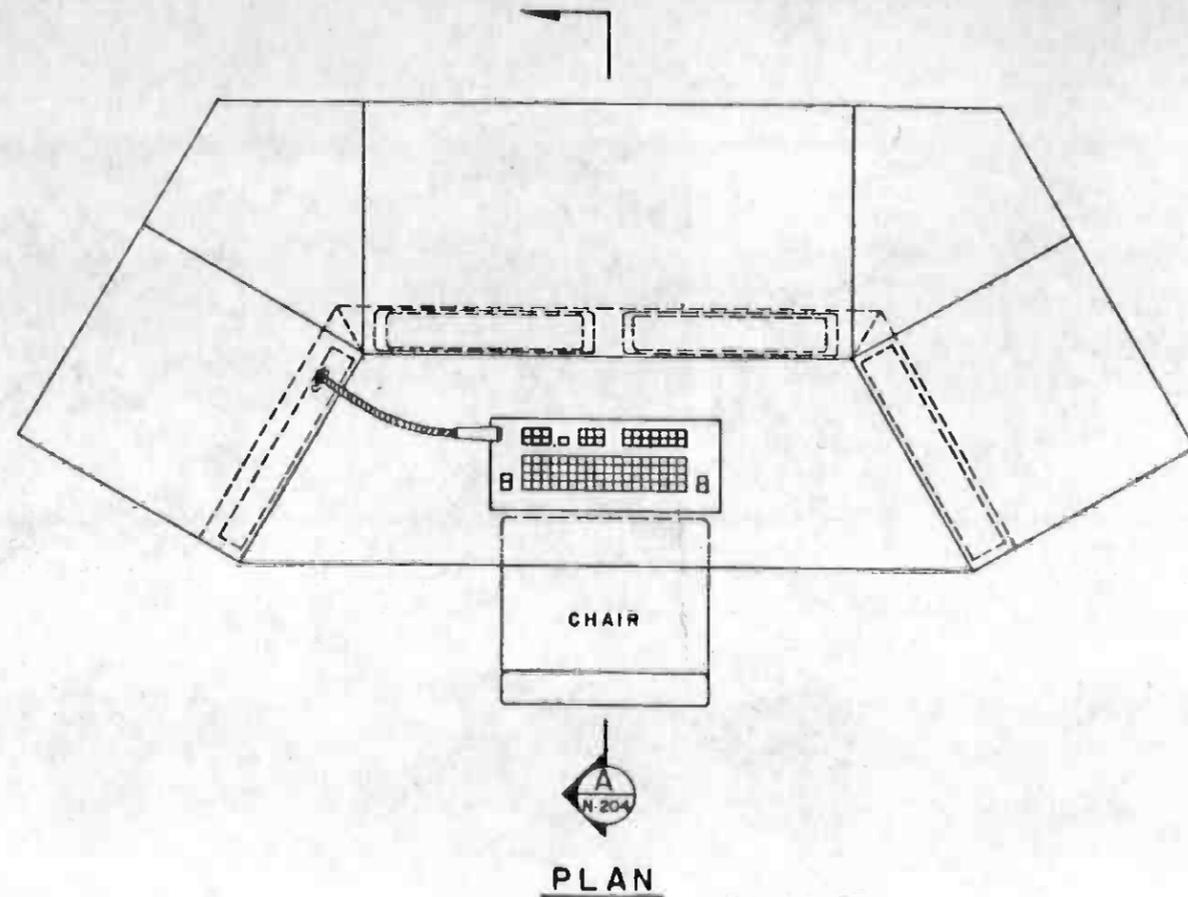
DMJM/PBQD/KE/HWA
GENERAL CONTRACTORS
APPROVED
[Signature]

LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
RAIL CONTROL CENTER
PLAN - CCTV OBSERVER WORK STATION

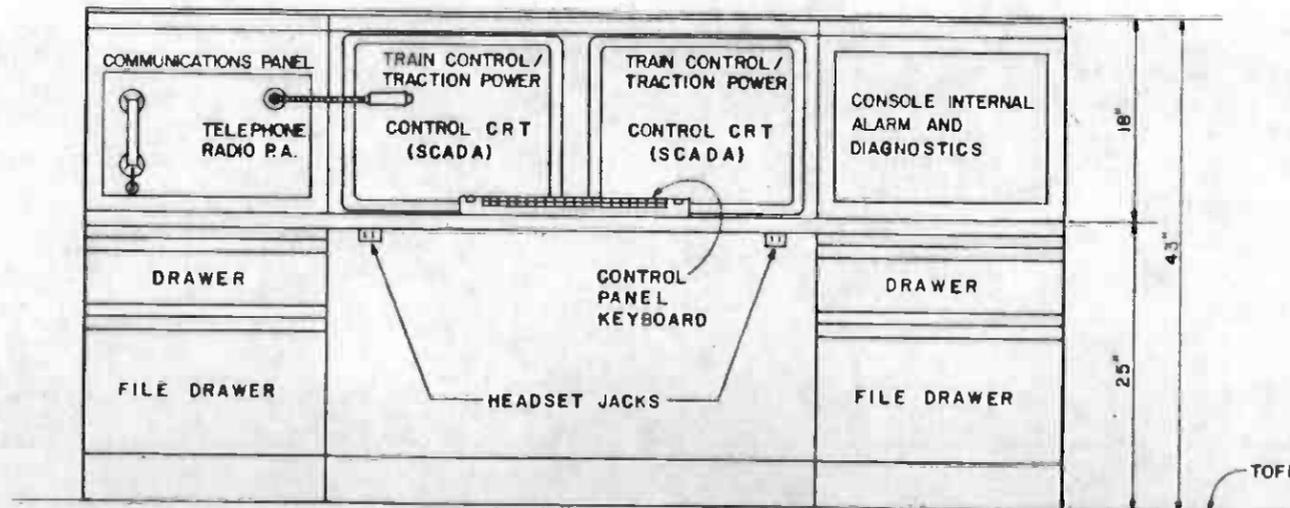
CONTRACT NO. A640
DRAWING NO. N-032
SCALE 1/2" = 1'-0"
SHEET NO. 117

REV.	DATE	BY	CHK.	APP.	DESCRIPTION

REV.	DATE	BY	CHK.	APP.	DESCRIPTION



SECTION **A**
N-204

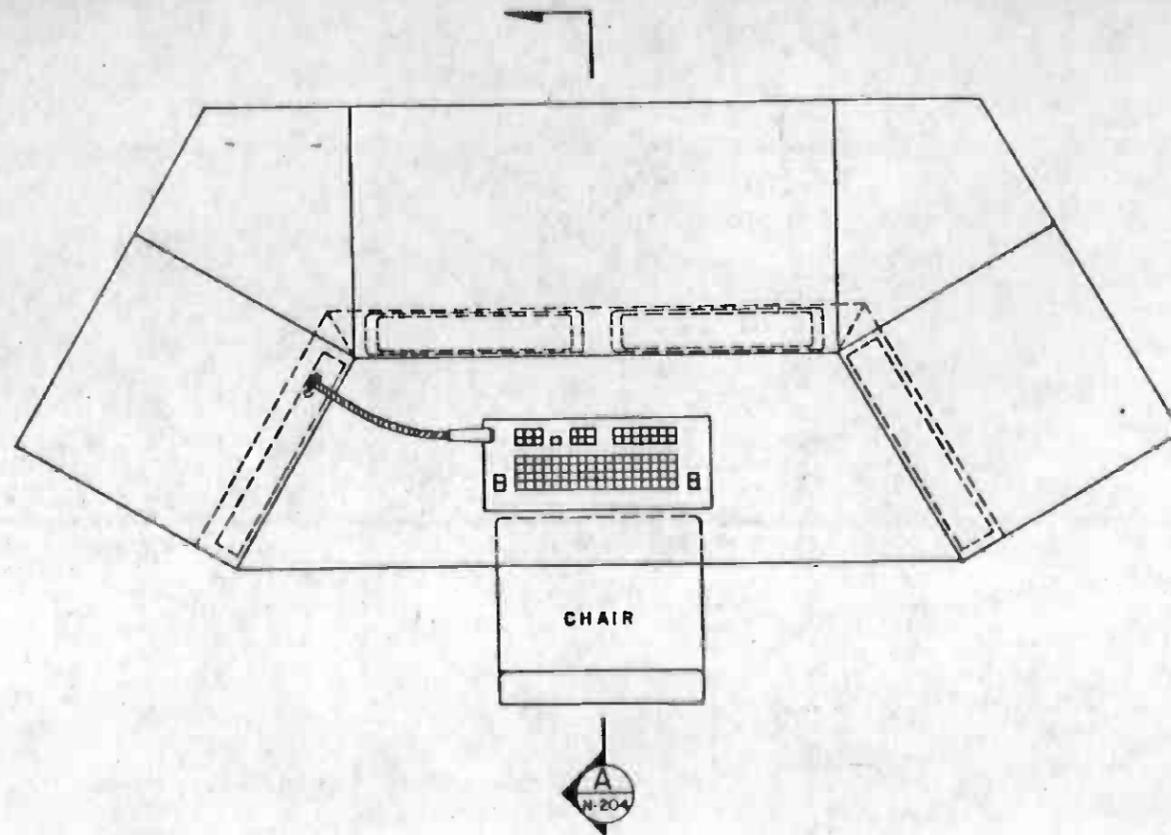


ELEVATION (UNFOLDED)

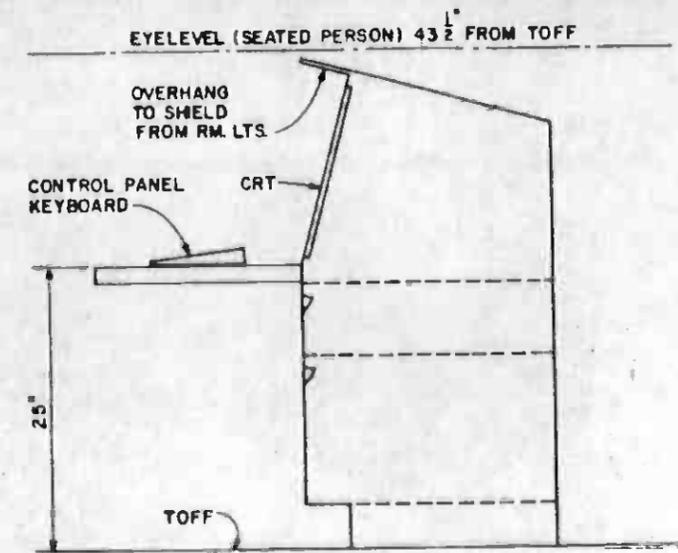
NOTE:
ALL EQUIPMENT RACK MOUNTED 19" EIA STANDARDS.



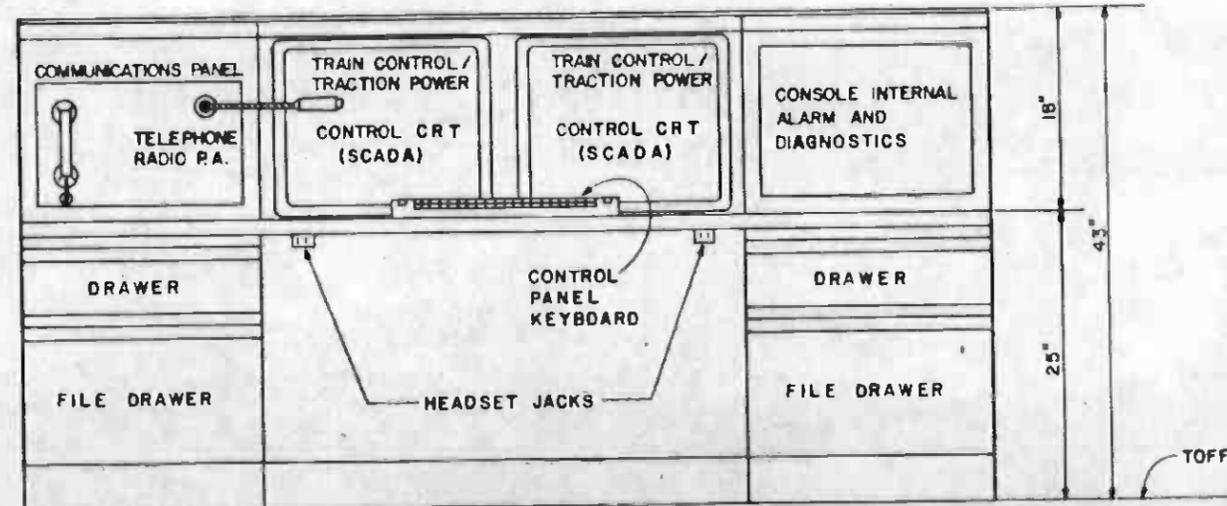
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>P. Korte</i> DRAWN BY <i>Edward Asch</i> CHECKED BY <i>S. Diakou</i> IN CHARGE <i>P. Mungers</i> DATE 23 OCT 86	REGISTERED PROFESSIONAL ENGINEER CHARLES S. FISHER No. 4011880 Exp. 1-28-87 STATE OF CALIFORNIA	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 	DMJM/PBOD KE/HWA GENERAL CONSULTANTS APPROVED <i>Howard K. Kelleys</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS TRAIN DISPATCHER CONSOLE	CONTRACT NO. A 640 DRAWING NO. N-204 SCALE 1/8" = 1" SHEET NO. 118
REV. DATE BY SUB. APP. DESCRIPTION	REV. DATE BY SUB. APP. DESCRIPTION	PROPOSAL ISSUE 23 OCT 86		SUBMITTED <i>ell m</i>	APPROVED <i>Howard K. Kelleys</i>	CONTRACT NO. A 640 DRAWING NO. N-204 SCALE 1/8" = 1" SHEET NO. 118	



PLAN



SECTION A
N-204

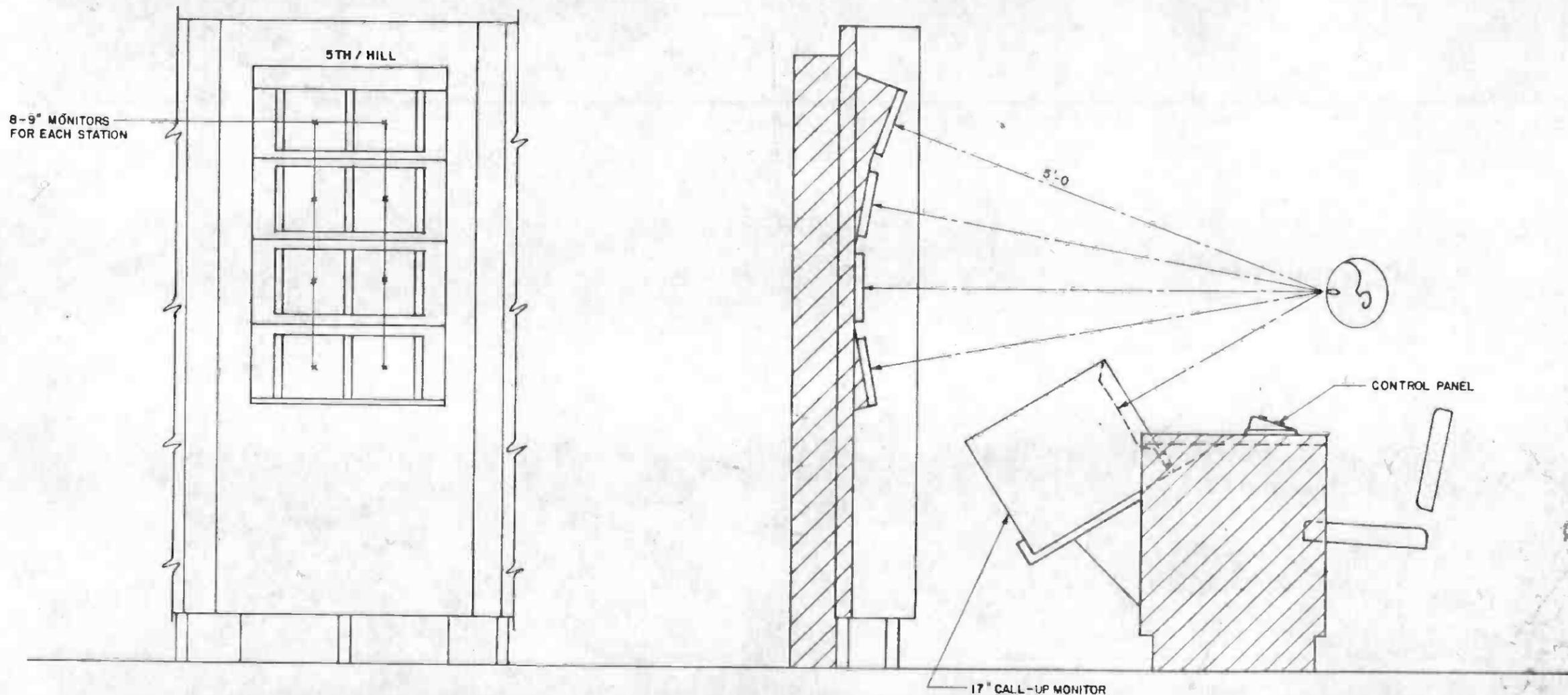


ELEVATION (UNFOLDED)

NOTE:
ALL EQUIPMENT RACK MOUNTED 19" EIA STANDARDS.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>Pruden</i> DRAWN BY <i>Edwards</i> CHECKED BY <i>Blakely</i> IN CHARGE <i>W. S. Jones</i> DATE 23 OCT 86	REGISTERED PROFESSIONAL ENGINEER No. 6011900 12-30-87 ELECTRICAL STATE OF CALIFORNIA	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT RTD	DMJM/PBOD/KE/NWA GENERAL CONSULTANTS APPROVED <i>David Khalil</i>	LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS RAIL OPERATIONS SUPERVISOR CONSOLE	CONTRACT NO. A 640 DRAWING NO. N-203 SCALE 1/8" = 1" SHEET NO. 119
REV. DATE BY SUB APP DESCRIPTION	REV. DATE BY SUB APP DESCRIPTION	PROPOSAL ISSUE	SUBMITTED <i>Edwards</i>	APPROVED <i>David Khalil</i>	CONTRACT NO. A 640	DRAWING NO. N-203	SHEET NO. 119

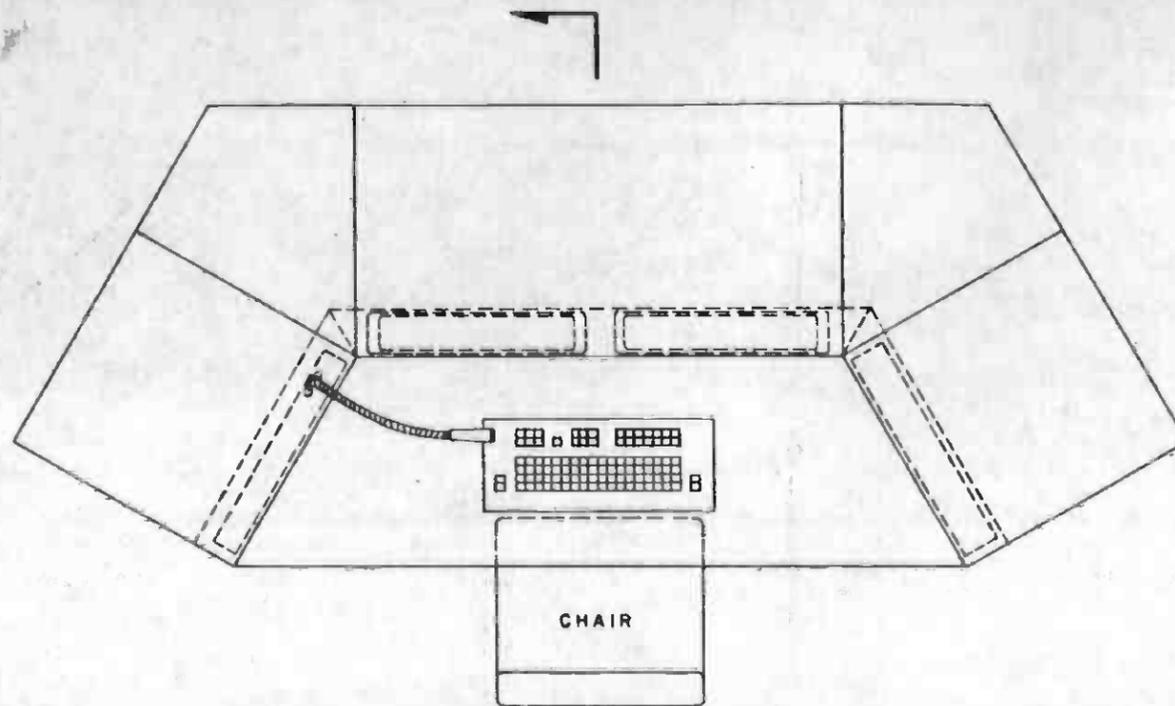


FRONT VIEW

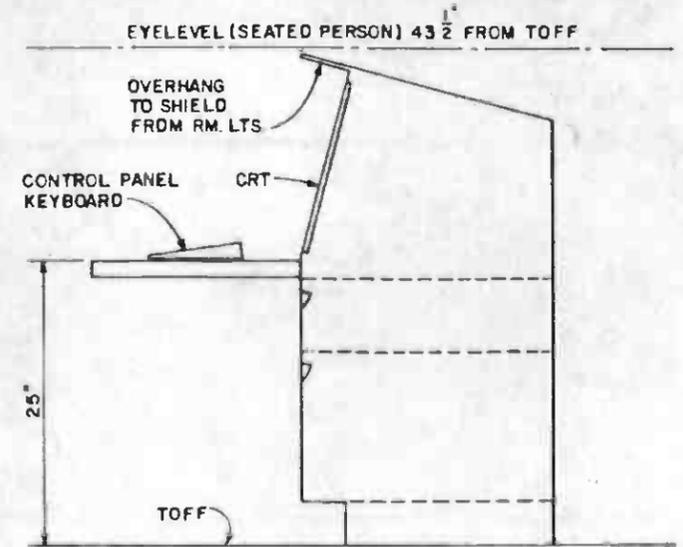
SECTION A
N-032



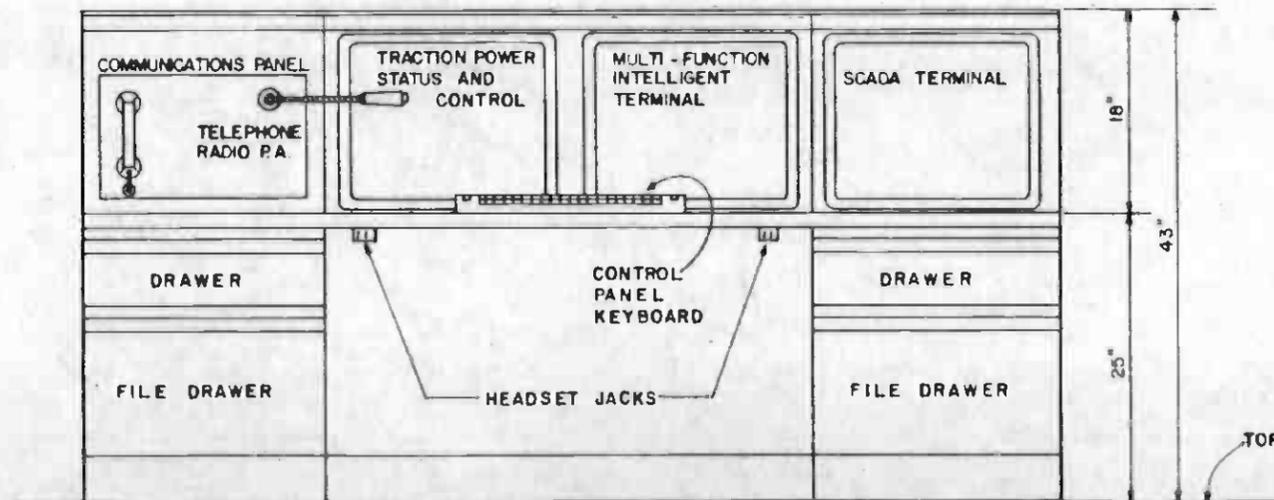
				THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY <i>[Signature]</i> DRAWN BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i> IN CHARGE <i>[Signature]</i> DATE 8 AUG 86				SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT DMLM/PBOD/KE/HWA GENERAL CONSULTANTS SUBMITTED <i>[Signature]</i> APPROVED <i>[Signature]</i>		LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS RAIL CONTROL CENTER CCTV OBSERVER WORK STATION CONTRACT NO. A640 DRAWING NO. N-033 SCALE 1/2" = 1'-0" SHEET NO. 120	
REV.	DATE	BY	SUB.	APP.	DESCRIPTION	REV.	DATE	BY	SUB.	APP.	DESCRIPTION				
					PROPOSAL ISSUE										



PLAN



SECTION



ELEVATION (UNFOLDED)

NOTE:

ALL EQUIPMENT RACK MOUNTED 19" EIA STANDARDS.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY
Plaker
DRAWN BY
Edwards
CHECKED BY
B. Blalock
IN CHARGE
M. B. ...
DATE
23 OCT 88



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT



DMJM PBQD KE/HWA
GENERAL CONSULTANTS

LA CBD TO NORTH HOLLYWOOD
COMMUNICATIONS
YARD DISPATCHER CONSOLE

CONTRACT NO. A 640
DRAWING NO. N-108 REV. 0
SCALE 1/8" = 1'
SHEET NO. 121

DATE	BY	APP.	DESCRIPTION
1-9-87	<i>W</i>		PROPOSAL ISSUE

APPROVED *Ellis*

APPROVED *Howard*

SCRTD METRO RAIL PROJECT

**CHECKLIST OF DESIGN PROVISIONS VERSUS CPUC REQUIREMENTS
CONTRACT A640 VERSUS GENERAL ORDER NO.127**

G.O. NO.127 REQUIREMENT		A640 CONTRACT DOCUMENTS				* CONTRACTOR DESIGN DOCUMENTS
NO.	DESCRIPTION	TECHNICAL PROVISIONS		CONTRACT DRAWINGS		
		SECTION NO./TITLE	ARTICLE	NO.	TITLE	
SECTION 2	GENERAL REQUIREMENTS					
2.2	PLANS TO BE FILED					
2.2(a)	FUNCTIONAL DESCRIPTION & BLOCK DIAGRAM OF ATP	REFER TO A620 CONTRACT (ATC) DOCUMENTS REFER TO A650 CONTRACT (PV) DOCUMENTS				
2.2(b)	SCHEDULE OF WORK	MANAGEMENT PROGRAM	17.2	N/A	N/A	
		SEE ALSO A620 CONTRACT (ATC) AND A650 CONTRACT (PV) DOCUMENTS				
2.2(c)	SCHEMATIC DIAGRAMS OF ATP EQUIPMENT & CIRCUITS	REFER TO A620 CONTRACT (ATC) DOCUMENTS REFER TO A650 CONTRACT (PV) DOCUMENTS				
2.2(d)	EQUIPMENT ARRANGEMENT DRAWINGS	REFER TO A620 CONTRACT (ATC) DOCUMENTS REFER TO A650 CONTRACT (PV) DOCUMENTS				
2.2(e)	TRACK PLAN	REFER TO A620 CONTRACT (ATC) DOCUMENTS				
2.3	PREPARATION OF EXHIBITS - SYMBOLS	MANAGEMENT PROGRAM	17.6.5	N-019D	SYMBOLS & ABBREVIATIONS	
		SEE ALSO A620 CONTRACT (ATC) DOCUMENTS				
		SEE ALSO A650 CONTRACT (PV) DOCUMENTS				
2.5	REQUEST FOR INSPECTION					
2.5(b)	AS-BUILT PLANS REQUIRED FOR INSPECTION	INTERFACE REQUIREMENTS	14.2	N/A	N/A	
		MANAGEMENT PROGRAM CONFIGURATION	17.6.9	N/A	N/A	
		SEE ALSO A620 CONTRACT (ATC) AND A650 CONTRACT (PV) DOCUMENTS				
2.7	TEST AND INSPECTION RECORDS	TEST PROGRAM	16.2,16.4,16.10,16.12	N/A	N/A	
		SEE ALSO A620 CONTRACT (ATC) DOCUMENTS				
		SEE ALSO A650 CONTRACT (PV) DOCUMENTS				

Ⓟ PV = PASSENGER VEHICLE

CONTINUES AT RIGHT

G.O. NO.127 REQUIREMENT		A640 CONTRACT DOCUMENTS				* CONTRACTOR DESIGN DOCUMENTS
NO.	DESCRIPTION	TECHNICAL PROVISIONS		CONTRACT DRAWINGS		
		SECTION NO./TITLE	ARTICLE	NO.	TITLE	
SECTION 3	GENERAL SPECIFICATIONS					
3.1	AUTOMATIC PROTECTION AGAINST:					
3.1(a)	REAR END COLLISIONS	REFER TO A620 CONTRACT (ATC) AND A650 CONTRACT (PV) DOCUMENTS				
3.1(b)	HEAD-ON OR SIDESWIPE COLLISIONS	REFER TO A620 CONTRACT (ATC) DOCUMENTS REFER TO A650 CONTRACT (PV) DOCUMENTS				
3.1(c)	DERAILMENT OR COLLISION RESULTING FROM MOVING TRACK SWITCH	REFER TO A620 CONTRACT (ATC) DOCUMENTS REFER TO A650 CONTRACT (PV) DOCUMENTS				
3.1(e)	DETECTABLE RIGHT-OF-WAY HAZARDS	SUPERVISORY CONTROL AND DATA ACQUISITION	9	N/A	N/A	
		GAS MONITORING	9.2.6			
		SEISMIC EVENT	9.2.7			
		EGS DEVICES	9.2.8			
		SUMP PUMPS (WATER HAZARD)	9.2.13			
		GAS MONITORING & SEISMIC EVENT DETECTION	11			
		METHANE & HYDROGEN SULFIDE GAS	11.1.1A			
		SEISMIC EVENT	11.1.1C			
		SEE ALSO A620 CONTRACT (ATC) AND A650 CONTRACT (PV) DOCUMENTS				
3.2	SUBORDINATION OF OTHER ATC FUNCTIONS TO ATP	REFER TO A620 CONTRACT (ATC) DOCUMENTS REFER TO A650 CONTRACT (PV) DOCUMENTS				
3.3	TRAIN DETECTION REQUIREMENTS	REFER TO A620 CONTRACT (ATC) DOCUMENTS REFER TO A650 CONTRACT (PV) DOCUMENTS				
3.4	VEHICLE ATP BYPASS	REFER TO A620 CONTRACT (ATC) DOCUMENTS REFER TO A650 CONTRACT (PV) DOCUMENTS				
3.5	SAFE BRAKING DISTANCES	REFER TO A620 CONTRACT (ATC) DOCUMENTS REFER TO A650 CONTRACT (PV) DOCUMENTS				
3.6	ROUTE INTERLOCKING REQUIREMENTS	REFER TO A620 CONTRACT (ATC) DOCUMENTS REFER TO A650 CONTRACT (PV) DOCUMENTS				
3.6(a)	INTERLOCKING CIRCUIT SEQUENCE	REFER TO A620 CONTRACT (ATC) DOCUMENTS				

* CONTRACTOR SHALL COMPLETE CHECKLIST, IDENTIFYING THE DOCUMENTS WHICH VERIFY CONFORMANCE TO EACH REQUIREMENT.

FOR CONTINUATION SEE DWG. N-213 A



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY <i>R.A. Hanson</i> DRAWN BY <i>Edw. Proctor</i> CHECKED BY <i>D. J. Kelly</i> IN CHARGE <i>P.M. Burgess</i> DATE 30 OCT 86		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		DMJM-PBQD/KE/HWA GENERAL CONSULTANTS APPROVED <i>Edward K. Kelly</i>	CONTRACT NO. A640 DRAWING NO. N-113 SCALE NONE SHEET NO. 122
DATE: 30 OCT 86 BY: R.A.H. SUB: R.A.H. APP: R.A.H.	DESCRIPTION: PROPOSAL ISSUE			LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS CHECKLIST OF REQUIREMENTS CPUC G.O. No.127 SHEET 1 OF 2			

G.O. NO. 127 REQUIREMENT		A 640 CONTRACT DOCUMENTS				CONTRACTOR DESIGN DOCUMENTS
NO.	DESCRIPTION	TECHNICAL PROVISIONS		CONTRACT DRAWINGS		
		SECTION NO. / TITLE	ARTICLE	NO.	TITLE	
SECTION 3.6 (b)	SWITCH POINT DETECTION	REFER TO A 620 CONTRACT (ATC) DOCUMENTS				
3.6 (c)	TRAIN DETECTION IN INTERLOCKINGS	REFER TO A 620 CONTRACT (ATC) DOCUMENTS				
3.6 (d)	CONTROLLED INTERLOCKING APPROACH AND ENTRY	REFER TO A 620 CONTRACT (ATC) DOCUMENTS REFER TO A 650 CONTRACT (PV) DOCUMENTS				
3.6 (e)	TIME LOCKING	REFER TO A 620 CONTRACT (ATC) DOCUMENTS				
3.6 (f)	ROUTE LOCKING	REFER TO A 620 CONTRACT (ATC) DOCUMENTS				
3.7	CIVIL SPEED LIMITS	REFER TO A 620 CONTRACT (ATC) DOCUMENTS REFER TO A 650 CONTRACT (PV) DOCUMENTS				
3.8	SAFE SPEED - DISTANCE PROFILE	REFER TO A 620 CONTRACT (ATC) DOCUMENTS REFER TO A 650 CONTRACT (PV) DOCUMENTS				
3.8 (a)	REACTION TO OVERSPEED	REFER TO A 620 CONTRACT (ATC) DOCUMENTS REFER TO A 650 CONTRACT (PV) DOCUMENTS				
3.8 (b)	SAFE SPEED - DISTANCE PROFILE	REFER TO A 620 CONTRACT (ATC) DOCUMENTS REFER TO A 650 CONTRACT (PV) DOCUMENTS				
3.8 (c)	BRAKING WITH ZERO SPEED COMMANDED	REFER TO A 650 CONTRACT (PASSENGER VEHICLE) DOCUMENTS				
3.8 (d)	TRAIN SPEED DETECTION	REFER TO A 620 CONTRACT (ATC) DOCUMENTS REFER TO A 650 CONTRACT (PV) DOCUMENTS				
3.8 (e)	ZERO SPEED DETECTION	REFER TO A 620 CONTRACT (ATC) DOCUMENTS REFER TO A 650 CONTRACT (PASSENGER VEHICLE) DOCUMENTS				
3.8 (f)	ROLL-BACK DETECTION AND REACTION	REFER TO A 620 CONTRACT (ATC) DOCUMENTS REFER TO A 650 CONTRACT (PASSENGER VEHICLE) DOCUMENTS				
3.9	REACTION TO ABSENCE OF SPEED LIMIT SIGNALS	REFER TO A 620 CONTRACT (ATC) DOCUMENTS REFER TO A 650 CONTRACT (PV) DOCUMENTS				

G.O. NO. 127 REQUIREMENT		A 640 CONTRACT DOCUMENTS				CONTRACTOR DESIGN DOCUMENTS
NO.	DESCRIPTION	TECHNICAL PROVISIONS		CONTRACT DRAWINGS		
		SECTION NO. / TITLE	ARTICLE	NO.	TITLE	
3.10	RIGHT-OF-WAY HAZARD	GAS MONITORING ECS DEVICES SUMP PUMPS METHANE & HYDROGEN SULFIDE GAS SEISMIC EVENT	9.2.6 9.2.8 2.9.13 11.1.1A 11.1.1C	N/A	N/A	
SEE ALSO A 620 CONTRACT (ATC) AND A 650 CONTRACT (PV) DOCUMENTS						
3.12	SECURITY FOR EQUIPMENT	SUPERVISORY CONTROL AND DATA ACQUISITION GENERAL CONSTRUCTION REQUIREMENTS FIRE AND EMERGENCY MANAGEMENT INTRUSION DETECTION AND CONTROLLED ACCESS COMPONENT DESIGN AND FABRICATION CABINETS & RACKS CABINET DETAILS	9 9.6.11B 10 10.8 20 20.5 20.5.2D	N/A	N/A	
SEE ALSO A 620 CONTRACT (ATC) AND A 650 CONTRACT (PV) DOCUMENTS						
SEE ALSO A 112 CONTRACT (YARD MAIN SHOP BUILDING CONSTRUCTION) DOCUMENTS						
SEE ALSO A 136 CONTRACT (UNION STATION CONSTRUCTION, STAGE II) DOCUMENTS						
SEE ALSO A 147 CONTRACT (CIVIC CENTER STATION CONSTRUCTION, STAGE II) DOCUMENTS						
SEE ALSO A 157 CONTRACT (5TH/HILL STATION CONSTRUCTION, STAGE II) DOCUMENTS						
SEE ALSO A 167 CONTRACT (7TH/FLOWER STATION CONSTRUCTION, STAGE II) DOCUMENTS						
SEE ALSO A 187 CONTRACT (WILSHIRE/ALVARADO STATION CONSTRUCTION, STAGE II) DOCUMENTS						
3.13	CROSS & GROUND PROTECTION	SUPERVISORY CONTROL AND DATA ACQUISITION CONSTRUCTION REQUIREMENTS COMPONENT DESIGN AND FABRICATION POWER EQUIPMENT CABINET AND RACK GROUNDING DISTRIBUTION FRAME	9 9.6.11D 20 20.4 20.5.3 20.6	N/A	N/A	
SEE ALSO A 620 CONTRACT (ATC) AND A 650 CONTRACT (PV) DOCUMENTS						
3.15	MAINTENANCE & OPERATION	SYSTEMS ASSURANCE PROGRAM MAINTENABILITY PROGRAM	18 18.4	N/A	N/A	
SEE ALSO A 620 CONTRACT (ATC) AND A 650 CONTRACT (PV) DOCUMENTS						

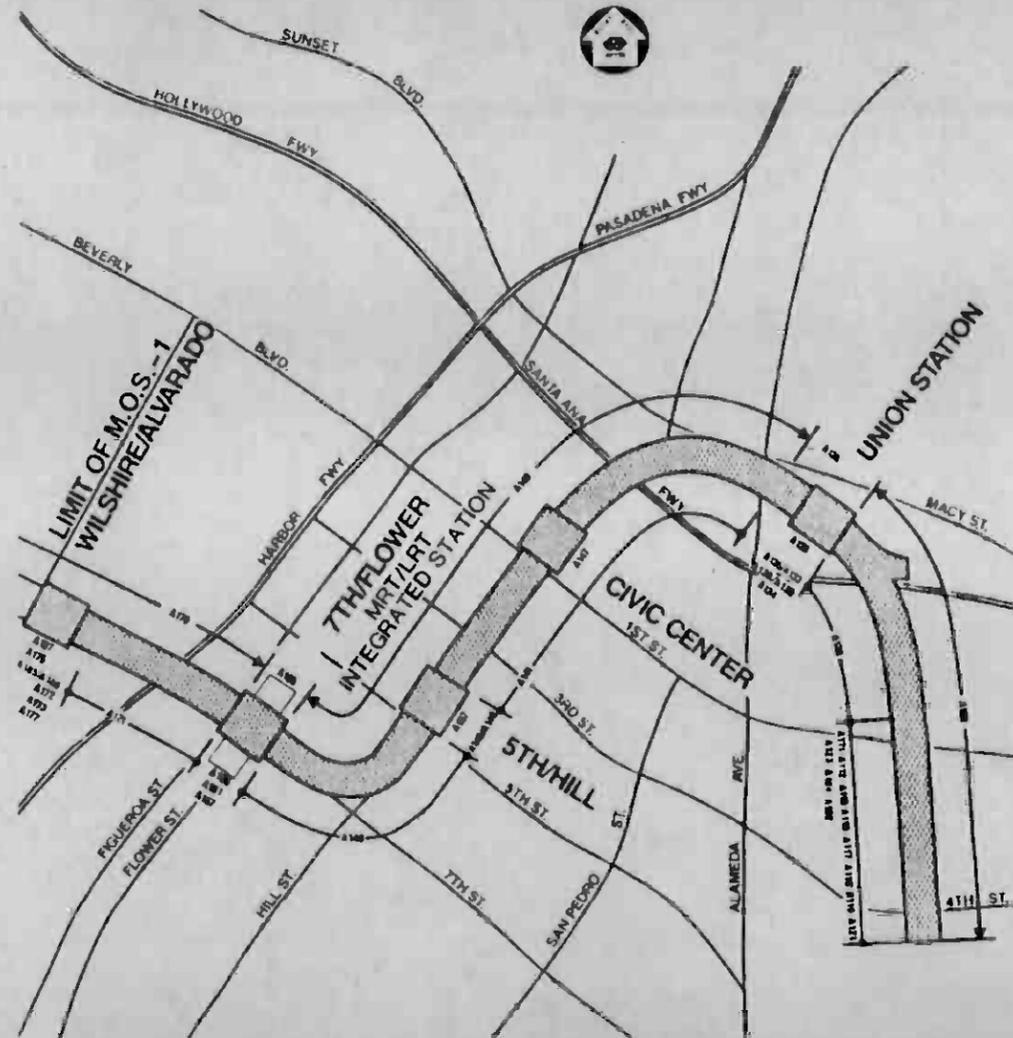
* CONTRACTOR SHALL COMPLETE CHECKLIST, IDENTIFYING THE DOCUMENTS WHICH VERIFY CONFORMANCE TO EACH REQUIREMENT.



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REV	DATE	BY	SUB	APP	DESCRIPTION	REV	DATE	BY	SUB	APP	DESCRIPTION
					PROPOSAL ISSUE						

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT

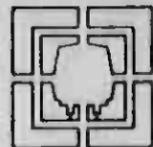
LOS ANGELES CENTRAL BUSINESS DISTRICT TO NORTH HOLLYWOOD



VIII. COMMUNICATIONS SYSTEMS REFERENCE DRAWINGS CONTRACT A640

APRIL 1987

The preparation of this document has been financed in part through a grant from the U.S. Department of Transportation, Urban Mass Transportation Administration, under the Urban Mass Transportation Act of 1964, as amended, the State of California, and the Los Angeles County Transportation Commission.



GENERAL CONSULTANT:

METRO RAIL TRANSIT CONSULTANTS
DMJM/PBQD/KE/HWA



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SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT

LOS ANGELES CENTRAL BUSINESS DISTRICT TO NORTH HOLLYWOOD



VIII. COMMUNICATIONS SYSTEMS REFERENCE DRAWINGS CONTRACT A640

APRIL 1987



GENERAL CONSULTANT:
METRO RAIL TRANSIT CONSULTANTS
DMJM/PBQD/KE/HWA

APPROVED: Howard J. Chaloff DATE: 4/8/87
PROJECT DIRECTOR



RTD
SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

APPROVED: William J. Rhine DATE: 4-10-87
ASSISTANT GENERAL MANAGER
TRANSIT SYSTEMS DEVELOPMENT

INDEX OF DRAWINGS

SHEET NO.	DRAWING NO.	DRAWING TITLE / DESCRIPTION	SHEET NO.	DRAWING NO.	DRAWING TITLE / DESCRIPTION	SHEET NO.	DRAWING NO.	DRAWING TITLE / DESCRIPTION
1	N-300	INDEX SHEET 1						LINE SECTION CONTRACT A141
		UNION STATION CONTRACT A136						
2	M-002	HVAC EQUIPMENT SCHEDULE	35	E-095	COMMUNICATIONS RACEWAY SCHEDULE, SHEET 1	58	E-213	CROSS-PASSAGE RACEWAY ARRANGEMENT
3	M-003	HVAC EQUIPMENT SCHEDULE	36	E-096	COMMUNICATIONS RACEWAY SCHEDULE, SHEET 2			
4	M-026	HVAC AIR FLOW DIAGRAM	37	E-097	COMMUNICATIONS RACEWAY SCHEDULE, SHEET 3			
5	M-027	HVAC CONTROL DIAGRAMS	38	E-098	COMMUNICATIONS RACEWAY SCHEDULE, SHEET 4			
6	M-028	HVAC CONTROL DIAGRAMS	39	E-099	COMMUNICATIONS RACEWAY SCHEDULE, SHEET 5			
			40	E-100	COMMUNICATIONS RACEWAY SCHEDULE, SHEET 6			
			41	E-101	COMMUNICATIONS RACEWAY SCHEDULE, SHEET 7			
			42	E-102	COMMUNICATIONS RACEWAY SCHEDULE, SHEET 8			
7	M-043	DELUGE VALVE DETAILS						
8	M-046	FIRE PROTECTION SYSTEM RISER DIAGRAM						
9	M-047	FIRE PUMP DETAILS AND SCHEMATIC						
10	E-012	CONTROL WIRING BLOCK DIAGRAM SHEET 1						
11	E-013	CONTROL WIRING BLOCK DIAGRAM SHEET 2	43	E-112	ELEMENTARY WIRING DIAGRAM, SHEET 1			
12	E-014	CONTROL WIRING BLOCK DIAGRAM SHEET 3	44	E-114	ELEMENTARY WIRING DIAGRAM, SHEET 3			
13	E-015	CONTROL WIRING BLOCK DIAGRAM SHEET 4	45	E-116	ELEMENTARY WIRING DIAGRAM, SHEET 5			
14	E-070	RISER DIAGRAMS, TRAIN CONTROL, CTS, SCADA	46	E-117	ELEMENTARY WIRING DIAGRAM, SHEET 6			
15	E-071	RISER DIAGRAMS, TELEPHONE SYSTEMS	47	E-118	ELEMENTARY WIRING DIAGRAM, SHEET 7			
16	E-072	RISER DIAGRAMS, PUBLIC ADDRESS SYSTEM	48	E-119	ELEMENTARY WIRING DIAGRAM, SHEET 8			
17	E-073	RISER DIAGRAMS, FIRE ALARM SYSTEM	49	E-120	ELEMENTARY WIRING DIAGRAM, SHEET 9			
18	E-074	RISER DIAGRAMS, CCTV, INTRUSION ALARM	50	E-121	ELEMENTARY WIRING DIAGRAM, SHEET 10			
19	E-075	RISER DIAGRAMS, FARE COLLECTION, RADIO	51	E-122	ELEMENTARY WIRING DIAGRAM, SHEET 11			
			52	E-110	ELEMENTARY WIRING DIAGRAM, SHEET 12			
			53	E-111	ELEMENTARY WIRING DIAGRAM, SHEET 13			
20	E-076	COMMUNICATIONS RACEWAY PLAN, EAST MEZZANINE						
21	E-077	COMMUNICATIONS RACEWAY PLAN, EAST MEZZANINE						
22	E-078	COMMUNICATIONS RACEWAY PLAN, EAST TRACK LEVEL						
23	E-079	COMMUNICATIONS RACEWAY PLAN, EAST PLATFORM						
24	E-080	COMMUNICATIONS RACEWAY PLAN, WEST MEZZANINE						
25	E-081	COMMUNICATIONS RACEWAY PLAN, WEST MEZZANINE	54	E-137	CONNECTION DIAGRAM, CIC 3			
26	E-082	COMMUNICATIONS RACEWAY PLAN, WEST MEZZANINE	55	E-138	CONNECTION DIAGRAM, CIC 2			
27	E-083	COMMUNICATIONS RACEWAY PLAN, WEST PLATFORM	56	E-139	CONNECTION DIAGRAM, CIC 4			
28	E-084	COMMUNICATIONS RACEWAY PLAN, WEST TRACK LEVEL						
29	E-085	COMMUNICATIONS RACEWAY PLAN, WEST TRACK LEVEL						
30	E-086	COMMUNICATIONS RACEWAY PLAN, WEST ENTRANCE	57	E-140	COMMUNICATIONS INTERFACE CABINET			
31	E-087	COMMUNICATIONS RACEWAY PLAN, TRACK LEVEL						
32	E-088	COMMUNICATIONS RACEWAY PLAN, EAST ENTRANCE						
33	E-092	COMMUNICATIONS RACEWAY PLAN, DETAILS						
34	E-094	COMMUNICATIONS RACEWAY PLAN, DETAILS						



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DESIGNED BY
R.A. Hawley
CHECKED BY
O. Huchard
IN CHARGE
B. Blachly
DATE
7 APR 87



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

DMJM, PBQD, KE, HWA
GENERAL CONSULTANTS

APPROVED
P.M. Burgess

LA CBD TO NORTH HOLLYWOOD COMMUNICATIONS
REFERENCE DRAWINGS
INDEX SHEET

CONTRACT NO. A640
DRAWING NO. N-300
SCALE: NO SCALE
SHEET NO. 1

AIR HANDLING UNIT SCHEDULE

REF NO	TYPE AND LOCATION	TOTAL AIR CFM	OUTSIDE AIR CFM	TOTAL SP IN. WATER	WHEEL DIA IN.	MAX OUTLET VEL FPM	MOTOR DATA				COOLING COIL						OPERATING WEIGHT LBS	REMARKS		
							HP	VOLT	PH	HZ	MAX COIL FACE VEL FPM	COOLING CAPACITY BTUH	ENT AIR °F	LVG AIR °F	ENT WATER TEMP °F	LVG WATER TEMP °F			GPM	AIR PD IN WATER
AHU-011	HORIZONTAL DRAWTHRU, EAST AIR SUPPLY RM	37,500	37,500	3.5	40	2,200	40	460	3	60										
AHU-012	HORIZONTAL DRAWTHRU, EAST AIR SUPPLY RM	37,500	37,500																	
AHU-013	HORIZONTAL DRAWTHRU, WEST AIR SUPPLY RM	37,500	37,500																	
AHU-014	HORIZONTAL DRAWTHRU, WEST AIR SUPPLY RM	37,500	37,500																	

REF NO.	LOCATION	AREA SERVED	TOTAL AIR CFM	EXT. SP IN. WG	TYPE / DRIVE	WHEEL DIA IN.	RPM	MOTOR DATA				OPERATING WEIGHT LBS	REMARKS
								HP	VOLT	PH	HZ		
UF-011	EAST UPE FAN RM	UNDER PLATFORM EXHAUST	64,000	2.5	VANE AXIAL / DIRECT	56	900	50	460	3	60	3600	FURNISHED BY OTHERS
UF-012	WEST UPE FAN RM	UNDER PLATFORM EXHAUST	64,000			56	900	50				3600	
SM-1E	EAST END ROOF	EAST MEZZ. SMOKE EXH.	42,000			54	1770	30				2000	
SM-2E	EAST	EAST											
SM-1W	WEST	WEST											
SM-2W	WEST	WEST											
EF-021	EMER EXH FAN RM	EMER. TUNNEL EXHAUST	185,000	3.5	VANE AXIAL / DIRECT	84	1170	250				6400	FURNISHED BY OTHERS
EF-022													
EF-023													
EF-1E	EAST AIR SUPPLY RM	EAST AUXILIARY POWER RM.	1800	0.75	CENTRIFUGAL		750	1/2	460	3			
EF-2E	EAST BATTERY RM.	EAST BATTERY RM.	900		CABINET FAN / BELT		1000	1/3	120	1			
EF-3E	EAST AIR SUPPLY RM.	EAST EQUIPMENT RM.	5200				550	1.5	460	3			
EF-4E	EAST VALVE RM.	EAST ANCILLARY RMS.	2070				760	3/4	460	3			
EF-5E	EAST ELEV. EQUIP. RM.	EAST ELEV. EQUIP. RM.	500				1150	1/3	120	1			
EF-6E	EAST U.P.E. RM.	EJECTOR, CUSTOD. & TOILETS	1220				900	1/3	120	1			
EF-7E	EAST AIR SUPPLY RM.	TRAIN CONTROL & COMM. RM.	5400				600	2	460	3			
EF-8E	EAST AIR SUPPLY RM.	EAST AIR SUPPLY RM.	4100				740	1.5	460	3			
EF-9E	EAST U.P.E. RM.	UPE & ELECT.	2340				780	3/4	460	3			
EF-1W	WEST MECHANICAL RM.	WEST ANCILLARY RMS.	2340				780	3/4	460	3			
EF-2W		WEST BATTERY RM.	700				1000	1/3	120	1			
EF-3W		WEST ANCILLARY RMS.	2800				700	3/4	460	3			
EF-4W	WEST AIR SUPPLY RM.	WEST AIR SUPPLY RM.	6000				600	2	460	3			
EF-5W	W. MEZZ. ELEVATOR RM.	WEST ELEV. EQUIP. RM.	300	0.5	CENT. CAB. / DIRECT		1510	1/10	120	1			
EF-6W	W. MEZZ. ELEVATOR RM.	WEST UTILITY TUNNEL	700	0.375	CENT. CAB. FAN / BELT		1140	1/3	120	1			
EF-10E	EAST U.P.E. RM.	TRAIN CONTROL & COMM. RM.	4320	0.75	CENT. CAB. FAN / BELT		510	2	460	3			
SF-1E	EAST AIR SUPPLY RM.	EAST AUX. POWER RM.	1950	1.5	CENTRIFUGAL		1060	1.5	460	3			W/ FILTERS
SF-2E		EAST EQUIPMENT RM.	5200		CABINET FAN BELT		720	3.0					
SF-3E	EAST ELEV. EQUIP. RM.	EAST ANCILLARY RMS.	5400				720	3.0					
SF-4E	EAST U.P.E. RM.	EJECTOR, CUSTOD. & TOILETS	1220				1270	1/2					
SF-5E	EAST AIR SUPPLY RM.	EAST AIR SUPPLY RM.	4100				730	2					
SF-6E	EAST U.P.E. RM.	U.P.E. & ELECT. RMS.	2400				1060	1.5					
SF-1W	WEST MECH. RM.	ANCILLARY RMS. & SHAFT	3040				930	2					
SF-2W		WEST BATTERY RM.	650	1.0			1300	1/2					
SF-3W		WEST ANCILLARY RMS.	1880	1.5			1060	1.5					
SF-4W	WEST AIR SUPPLY RM.	WEST AIR SUPPLY RM.	6000	1.5			725	3					
EF-11E	LUNCH ROOM	LUNCH ROOM	540	0.25	CENT. CABINET / BELT		910	1/20	120	1			SEE DWG. M-027F
EF-7W	EMERG. STAIRS #16	WEST ELEV. SHAFT	400	0.25	CENT. CAB. / DIRECT		1300	1/25					
EF-9W	EMERG. FAN ROOM	EMERG. FAN RM.	3525	0.5	CENT. CABINET / BELT		1570	1	460	3			
EF-10W			3525	0.5									
EF-12E	EAST ELEV. SHAFT	EAST ELEV. SHAFT	350	0.25	UTILITY / DIRECT		1150	1/6	120	1			
							1000	1/3	120	1			
SF-5W	EAST STORAGE RM.	EAST STORAGE RM.	1500	1.5	CENT. CABINET / BELT		1250	3/4	460	3			W/ FILTER
SF-7E	EAST AIR SUPPLY RM.	EAST BATTERY RM.	950	1.5			1420	1	460	3			
SF-8E	EAST AIR SUPPLY RM.	BATTERY ROOM #101, IN A-130	1600	0.5	CENTRIFUGAL, IN-LINE		1427	1/2	460	3			

ROLL FILTER SCHEDULE (FURNISHED WITH AHU BY OTHERS)									
REF NO.	LOCATION	CFM	MINIMUM EFFICIENCY	MAX PD (IN. WG) INITIAL / FINAL	FACE AREA SQ. FT.	FILTER MOUNTING ARRANGEMENT	TYPE	REMARKS	
RF 1	EAST AIR SUPPLY RM	37,500	80%	0.18/0.5	98.1	HORIZONTAL	AUTOMATIC ROLL	1/6 HP-120V-10	
RF 2	EAST								
RF 3	WEST								
RF 4	WEST								

HEAT PUMP SCHEDULE											
REF NO.	TYPE	CFM	CAPACITY BTUH		FAN MOTOR HP	MAX AMPS	POWER			LOCATION	REMARKS
			COOLING	HEAT 'G			VOLT	PH	HZ		
HP-1	AIR CLD	350	9000	8000	1/10	10	208	1	60	STAFF RM	150 LBS OPR WT
HP-2		490	13,500	12,200	1/6					STAFF LUNCH	180 LBS OPR WT



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REVISED PER CR 5-215 REVISED PER CR 5-108				DMJM/PBOD/KE/HWA GENERAL CONSULTANTS		LA CBD TO NORTH HOLLYWOOD UNION STATION HVAC EQUIPMENT SCHEDULE		APPROVED			

AIR COOLED CONDENSER SCHEDULE									
DESIG.	ENT. AIR TEMP °F	MIN. TOTAL CAPAC MBH	APPROX. FAN MOTOR HP	CONDENSING TEMP °F	POWER			FILTER	REMARKS
					VOLT	PH	HZ		
ACC-1	92	196	7 1/2	120	460	3	60	REPLACEABLE IN RACK	R-22

FIRE/SMOKE DAMPER SCHEDULE				
REF. NO.	TYPE	(VERIFY IN FIELD) SIZE IN. X IN.	LOCATION	NOTES
FSD-1	MOTOR OPERATE LOW LEAKAGE SIMILAR TO RUSKIN	36 x 18	TCC RM. P-5	③
FSD-2		36 x 18	TCC RM. P-5	③
FSD-3		48 x 30	TCC RM. P-5	③
FSD-4		36 x 18	TCC RM. P-5	③
FSD-5		30 x 18	EAST ANCILLARY CORRIDOR	③
FSD-6		30 x 18		③
FSD-7		30 x 18		③
FSD-8			DELETED	
FSD-9		12 x 12	BATTERY RM. M-9	③
FSD-10		12 x 10	BATTERY RM. P-21	③
FSD-11				
FSD-12		36 x 8	EMERGENCY EXIT STAIR #21	②
FSD-13		36 x 8	EMERGENCY EXIT STAIR #21	②
FSD-14		159 x 100	AHU-011	②
FSD-15		159 x 100	AHU-012	②
FSD-16		159 x 100	AHU-013	②
FSD-17		159 x 100	AHU-014	②

PACKAGED AIR CONDITIONER UNIT SCHEDULE																					
DESIG.	TYPE	LOCATION	FAN							COMPRESSORS					COOLING COIL (R-22)						
			CFM	APPROX. EXT. S.P. IN WATER	APPROX. FAN MOTOR HP	POWER			QTY.	HP	LRA	RLA	POWER			COOL. CAP. MBH		ENT. AIR °F		LVG. AIR °F	
						VOLT	PH	HZ					VOLT	PH	HZ	TOTAL	SENS.	DBT	WBT	DBT	WBT
ACU-1	REMOTE AIR COOLED	EQUIPMENT ROOM	6000	1	5	460	3	60	2	7.5	79	12.4	460	3	60	184	132	81	64	59	56

SOUND ATTENUATOR												
REF. NO.	LOCATION	AIR FLOW CFM	MAX. ALLOWED IN WATER	MAX. FACE VEL FPM	DIMENSIONS (IN.) W x H x L	MIN. D.I.L. IN DECIBELS						
						125	250	500	1000	2000	4000	8000
UA-011A	UF-011 UPE	64000	0.25	2000	60x90x84	13	18	28	41	46	35	26
UA-011B	UF-011 *				78x84x84							
UA-012A	UF-012 *											
UA-012B	UF-012 *											
EA-021A	EF-021 EMERG.	185,000			96x144x84							
EA-021B	EF-021 *											
EA-022A	EF-022 *											
EA-022B	EF-022 *											
EA-023A	EF-023 *											
EA-023B	EF-023 *											
SA-011	SM-1E SMOKE EXH	42000		1500	60x75x60	10		30	42	34	23	14
SA-012	SM-1E *											
SA-013	SM-2E *											
SA-014	SM-2E *											
SA-015	SM-1W *											
SA-016	SM-2W *											

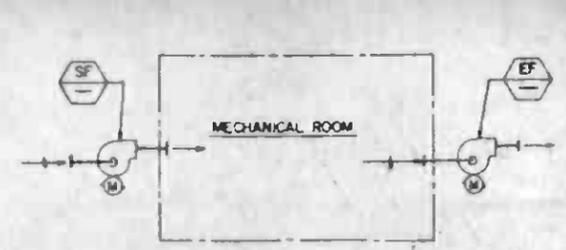
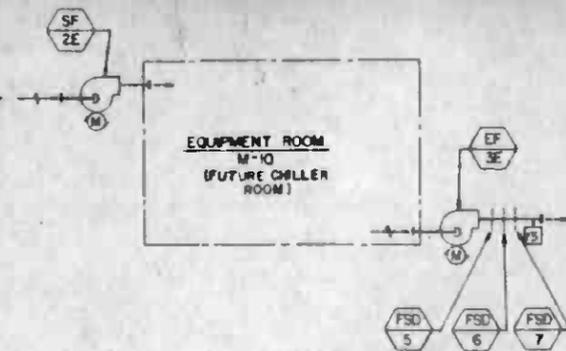
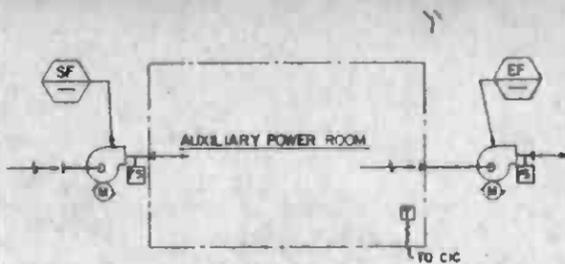
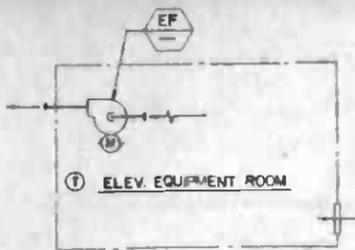
MOTORIZED DAMPER SCHEDULE		
REF. NO.	(VERIFY IN FIELD) SIZE IN. X IN.	LOCATION
AHD-021	DELETED	
AHD-022	DELETED	
AHD-023	DELETED	
AHD-024	DELETED	
UD-011	78 x 84	UF-011 *
UD-012		UF-012 *
ED-021	96 x 144	EF-021 *
ED-022		EF-022 *
ED-023		EF-023 *
TO-021	192 x 138	EMERGENCY FAN ROOM *
TD-022		
BD-021	180 x 162	
BD-022		
MD-1	36 x 2	EQUIPMENT ROOM *
MD-2	36 x 16	
MD-3	36 x 18	
MD-4		
MD-5,6,7		EMERGENCY FAN ROOM *
MD-8,9	24 x 24	

- NOTES:
- * SYSTEMWIDE PROCURED AND INSTALLED UNDER THIS CONTRACT.
 - △ FURNISHED WITH ROOM TYPE SMOKE DETECTOR.
 - ③ REMOTELY OPERABLE.
 - ④ FOR RATINGS OF FIRE & SMOKE DAMPERS COORDINATE WITH ARCHITECTURAL DRAWINGS.



DUPLICATE ORIGINAL

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REV. DATE BY SUB APP DESCRIPTION		REV. DATE BY SUB APP DESCRIPTION		APPROVED 		APPROVED 		LA CBD TO NORTH HOLLYWOOD UNION STATION HVAC EQUIPMENT SCHEDULE			



SUPPLY (MAKE-UP)		EXHAUST		SERVICE	
BY	FROM	BY	TO		
—	—	EF-2E	ELEV. EQUIP. RM M-4	TELEPHONE CLOSET	M-14
—	—	EF-5W	ELEVATOR EQUIP. RM M-23		

SUPPLY		EXHAUST		SERVICE	
BY	FROM	BY	TO		
SF-1E	EAST END FA SHAFT	EF-1E	EAST END UPE SHAFT	EAST END AUXILIARY POWER ROOM	M-11
SF-3W	WEST END FA SHAFT	EF-3W	WEST END UPE SHAFT	WEST END AUXILIARY POWER ROOM	P-20

SUPPLY (MAKE-UP)		EXHAUST		FIRE-SMOKE DAMPER		SERVICE	
BY	FROM	BY	TO				
—	—	EF-7W	WEST END UPE SHAFT	FSD-11	EMERGENCY STAIR NO. 15	WEST END ELEVATOR SHAFT	
—	—	EF-8W	WEST END UPE SHAFT	FSD-12, 13	EMERGENCY STAIR NO. 21		

SUPPLY		EXHAUST		SERVICE	
BY	FROM	BY	TO		
SF-9E	FA SHAFT (EAST)	EF-9E	UPE SHAFT (EAST)	AIR SUPPLY ROOM	M-12
SF-6E	FA SHAFT (EAST)	EF-6E	UPE SHAFT (EAST)	UPE FROM RM	P-6
SF-4W	FA SHAFT (WEST)	EF-4W	UPE SHAFT (WEST)	AIR SUPPLY ROOM	M-22
—	—	EF-1E	PUBLIC AREA	LUNCH ROOM	M-5

CONTROL SEQUENCE:
MANUAL CONTROL:
 FAN CAN BE STARTED AND STOPPED MANUALLY FROM CCF AND MCC, AND WILL BE OPERATING CONTINUOUSLY. PROVISIONS SHALL BE MADE FOR POSSIBLE FUTURE AUTOMATIC CONTROL AS DESCRIBED BELOW.
AUTOMATIC CONTROL:
 UPON RISE IN TEMPERATURE ABOVE SETTING OF T (NORMALLY 94°F) FAN SHALL START ON A DROP IN TEMPERATURE (APPROX. 6° BELOW THERMOSTAT SETTING) FAN SHALL STOP. IN THE EVENT OF SPRINKLER ACTIVATION IN THE APPROPRIATE SPRINKLER ZONE THE FAN SHALL SHUT DOWN THROUGH THE CIC.

CONTROL SEQUENCE:
MANUAL CONTROL:
 FANS CAN BE STARTED AND STOPPED MANUALLY FROM CCF OR MCC, AND WILL BE OPERATING CONTINUOUSLY. FANS SHALL BE INTERLOCKED WITH THE PREACTION SPRINKLER DETECTION SYSTEM.
AUTOMATIC CONTROL:
 UPON ACTIVATION OF THE PREACTION SPRINKLER DETECTION SYSTEM THE FANS SHALL SHUT DOWN THROUGH THE CIC. MONITOR AT THE RAIL CONTROL CENTER.
 ROOM HIGH TEMPERATURE (T) (NORMALLY 104°F) SHALL BE MONITORED AND ANNUNCIATED AT THE RCC.
 FOR WIRING DIAGRAM SEE ELECTRICAL DWGS NO. E-12F THRU E-122F.

CONTROL SEQUENCE:
MANUAL CONTROL:
 FANS CAN BE STARTED AND STOPPED MANUALLY FROM CCF, MCP AND MCC, AND WILL BE OPERATING CONTINUOUSLY. FIRE/SMOKE DAMPERS CAN BE CLOSED OR REOPENED FROM FSCP.
AUTOMATIC CONTROL:
 FSD-5, 6 & 7 SHALL BE INTERLOCKED WITH EF-3E AND WILL BE OPEN WHEN FAN OPERATES. UPON CLOSURE OF EITHER FIRE/SMOKE DAMPER, EF-3E SHALL BE STOPPED. IN THE EVENT OF SPRINKLER ACTIVATION IN THE APPROPRIATE SPRINKLER ZONE THE FANS SHALL SHUT DOWN AND THE FIRE/SMOKE DAMPERS SHALL BE SHUT DOWN THROUGH THE CIC. AFTER CHILLERS ARE INSTALLED FANS SHALL OPERATE CONTINUOUSLY ONLY DURING CHILLER OPERATION. A MANUAL SWITCH SHALL BE PROVIDED OUTSIDE OF CHILLER ROOM BY THE DOOR TO STOP CHILLERS WITHOUT STOPPING THE VENTILATION SYSTEM.

CONTROL SEQUENCE:
 BE OPERATING CONTINUOUSLY. WITHIN AN ANCILLARY AREA, THE FAN CAN STOP AND FIRE/SMOKE DAMPER CAN CLOSE THROUGH CIC. THE FIRE/SMOKE DAMPER SHALL BE FURNISHED WITH FIRE/STAY AND SMOKE DETECTOR WHICH SHALL CLOSE THE DAMPER AUTOMATICALLY IN CASE OF FIRE AND SMOKE DETECTION. THE POSITION OF FIRE/SMOKE DAMPER AND LOSS OF AIR FLOW SHALL BE ANNUNCIATED AT THE RCC.
 FOR WIRING DIAGRAM SEE ELECTRICAL DWGS. NO. E-12F THRU E-122F.

CONTROL SEQUENCE:
MANUAL CONTROL:
 FANS CAN BE STARTED AND STOPPED MANUALLY FROM CCF OR MCC AND WILL BE OPERATING CONTINUOUSLY.
AUTOMATIC CONTROL:
 IN EVENT OF SPRINKLER ACTIVATION OF THE APPROPRIATE SPRINKLER ZONE THE FANS SHALL SHUT DOWN THROUGH THE CIC.

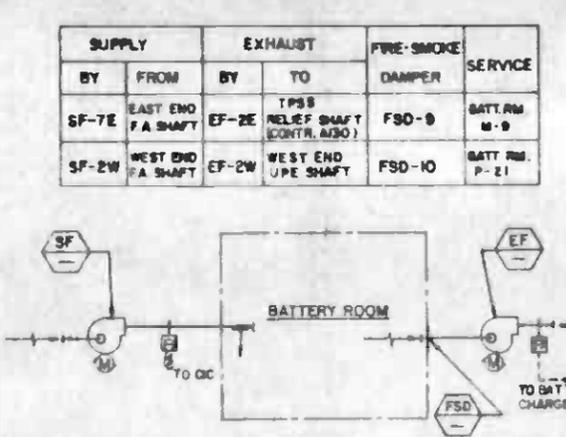
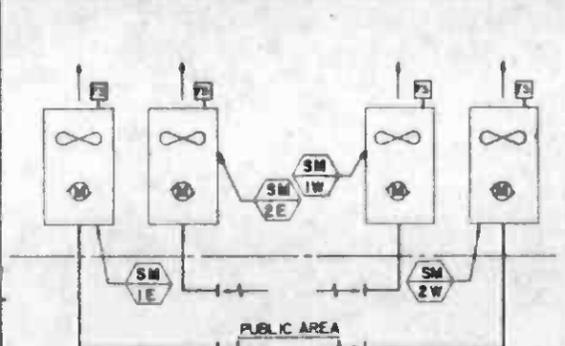
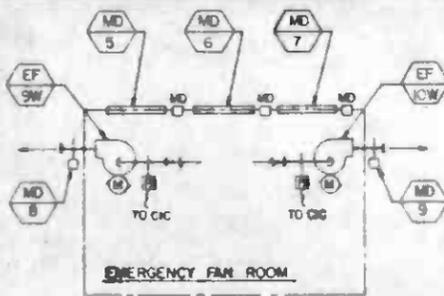
ELEVATOR EQUIPMENT ROOMS

AUXILIARY POWER ROOMS

EQUIPMENT ROOM (FUTURE CHILLER ROOM)

EMERGENCY STAIRS

MECHANICAL ROOMS



SUPPLY (MAKE-UP)		EXHAUST		SERVING					
BY	FROM	BY	TO						
SF-3E	FA SHAFT (EAST)	EF-4E	UPE SHAFT (EAST)	VALVE RM	CLST. ROOM	TRASH/EMERG. ROOM	TOILETS	STORAGE ROOM	
		EF-5E		ELEV. MECH ROOM					
		EF-11E		LUNCH ROOM					
SF-4E	FA SHAFT (EAST)	EF-6E	UPE SHAFT (EAST)	EJECT. ROOM	CLST. ROOM	TOILET	EMERG. ROOM	EQUIP. ROOM	
SF-1W	FA SHAFT (WEST)	EF-1W	UPE SHAFT (WEST)	ELECT. ROOM	PUMP ROOM	VALVE ROOM	FAN RM.	MECH. ROOM	
		EF-8W	UPE SHAFT (WEST)						
SF-5W	FA SHAFT (WEST)	—	—						
		EF-12E	OUTSIDE						

CONTROL SEQUENCE:
MANUAL CONTROL:
 FAN WILL BE STARTED AND STOPPED MANUALLY FROM MCC AND WILL BE OPERATING CONTINUOUSLY.
AUTOMATIC CONTROL:
 MOTORIZED DAMPERS SHALL BE OPEN WHEN FANS ARE ON AND CLOSED WHEN FANS ARE OFF. FANS SHALL BE SHUTDOWN AND MOTORIZED DAMPERS CLOSED THROUGH SIGNAL FROM CIC, WHEN EMERGENCY FANS (EF-021, EF-023) ARE ACTUATED. IN CASE OF SPRINKLER ACTIVATION IN THE APPROPRIATE SPRINKLER ZONE THE FANS SHALL SHUTDOWN THROUGH THE CIC. LOSS OF AIR FLOW SHALL BE MONITORED AND ANNUNCIATED AT THE CCF. FOR WIRING DIAGRAM, SEE ELECTRICAL DWGS. NO. E-112F THRU E-122F.

CONTROL SEQUENCE:
 FANS, NORMALLY OFF, WILL BE STARTED AND STOPPED FROM MCC, EMP OR CCF. OPERATION OF FANS DURING THE NORMAL OR EMERGENCY SITUATION WILL BE DIRECTED BY FIREMEN AT EMP OR PERSONNEL.
 FOR WIRING DIAGRAM SEE ELECTRICAL DWGS NO. E-112F THRU E-122F.

CONTROL SEQUENCE:
MANUAL CONTROL:
 FANS WILL BE STARTED AND STOPPED MANUALLY FROM THE MCC, CCF AND EMP AND WILL BE OPERATING CONTINUOUSLY.
AUTOMATIC CONTROL:
 A FLOW SWITCH IN THE DISCHARGE OF THE EXHAUST FAN IS INTERLOCKED WITH THE BATTERY CHARGER. THE BATTERY CHARGER CAN ONLY BE ENERGIZED IF AIR FLOW IS PROVEN. LOSS OF AIR ON EXHAUST FAN SHALL RESULT IN STOPPING BATTERY CHARGER WHICH SHALL BE ANNUNCIATED AT THE CCF. LOSS OF AIR ON SUPPLY FAN SHALL BE MONITORED AND ANNUNCIATED AT THE CCF. THE FANS SHALL BE SHUTDOWN AND FIRE/SMOKE DAMPER CLOSED AUTOMATICALLY THROUGH CIC IN THE EVENT OF SPRINKLER ACTIVATION IN THE APPROPRIATE SPRINKLER ZONE. FANS CAN BE REACTIVATED AND THE FIRE/SMOKE DAMPER REOPENED FROM THE FSCP. FOR WIRING DIAGRAM SEE ELECTRICAL DWGS NO. E-112F THRU E-122F.

CONTROL SEQUENCE:
MANUAL CONTROL:
 FANS WILL BE STARTED AND STOPPED MANUALLY FROM MCC OR CCF AND WILL BE OPERATING CONTINUOUSLY.
AUTOMATIC CONTROL:
 IN CASE OF SPRINKLER ACTIVATION IN THE APPROPRIATE SPRINKLER ZONE, THE FANS SHALL SHUTDOWN THROUGH THE CIC. LOSS OF AIR FLOW SHALL BE MONITORED AND ANNUNCIATED AT THE CCF. FOR WIRING DIAGRAM SEE ELECTRICAL DWGS NO. E-112F THRU E-122F.

- LEGEND:**
- FSD ... FIRE/SMOKE DAMPER
 - M ... MOTOR
 - △ ... ROOM TYPE SMOKE DETECTOR FURNISHED WITH FIRE/SMOKE DAMPER
 - CIC ... COMMUNICATION INTERFACE CABINET
 - MCC ... MOTOR CONTROL CENTER
 - RCC ... RAIL CONTROL CENTER



NOTE:
 SEE M-001F FOR THE REST OF HVAC SYMBOLS AND ABBREVIATIONS

DUPLICATE ORIGINAL

EMERGENCY FAN ROOM

SMOKE EXHAUST

BATTERY ROOMS

ANCILLARY ROOMS

REV.	DATE	BY	SUB.	APP.	DESCRIPTION

REV.	DATE	BY	SUB.	APP.	DESCRIPTION
1	1985	K.I.			REVISED PER CR5-215
2	1985	K.I.			REVISED PER CR5-208

DESIGNED BY
M.R.T.C.
 DRAWN BY
E. AGUIRRE / G.A.
 CHECKED BY
IN CHARGE
 DATE
26 JULY '85

**SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
 METRO RAIL PROJECT**



DMJM/PBOD-KE/HWA
 GENERAL CONSULTANTS

**LA CBD TO NORTH HOLLYWOOD
 UNION STATION
 HVAC CONTROL DIAGRAMS**

CONTRACT NO.	A136
DRAWING NO.	M-027F
SCALE	NO SCALE
SHEET NO.	A640/5

OPERATING SEQUENCE GENERAL :

THE AIR CONDITIONING SYSTEM SHALL BE THERMOSTAT CONTROLLED. ACU-1 SUPPLY FAN SHALL RUN CONTINUOUSLY.

A HALON FIRE EXTINGUISHING SYSTEM WILL BE PROVIDED BY OTHERS. A HALON EXHAUST SYSTEM SHALL BE PROVIDED IN THIS CONTRACT, TO PURGE HALON AFTER USE.

ACTIVATION OF SPACE SMOKE DETECTOR SHALL STOP ALL FANS, CLOSE ALL DAMPERS AND SHALL ACTIVATE HALON SYSTEM THROUGH THE LOCAL HALON SUB-SYSTEM CONTROL.

ACTIVATION OF SPACE GAS DETECTOR SHALL RESULT IN ACTIVATION OF THE 100% OSA VENTILATION MODE, DESCRIBED BELOW.

MANUAL CONTROL

ACU-1 SUPPLY FAN CAN BE STARTED AND STOPPED MANUALLY BY "ON-OFF" FAN CONTROL SWITCH (CS), LOCATED IN THE AIR CONDITIONING CONTROL PANEL (ACCP), OR REMOTELY FROM THE CENTRAL CONTROL FACILITY (CCF) THROUGH THE COMMUNICATIONS INTERFACE CABINET (CIC).

REFRIGERATION SYSTEM CAN BE MANUALLY ACTIVATED BY THE "AUTO-OFF" SYSTEM SELECTOR SWITCH (SSS), LOCATED ON THE SUBBASE OF THERMOSTAT T₂.

HALON EXHAUST FAN EF-10 CAN BE STARTED AND STOPPED MANUALLY BY A FAN CONTROL SWITCH IN THE AUXILIARY CONTROL PANEL (ACP), LOCATED NEAR THE ENTRANCE OF THE TC & C RM, AND BY (CCF) THROUGH (CIC).

EXHAUST FAN EF-7E CAN BE STARTED AND STOPPED MANUALLY FROM THE (CCF) THROUGH THE (CIC).

AUTOMATIC CONTROL

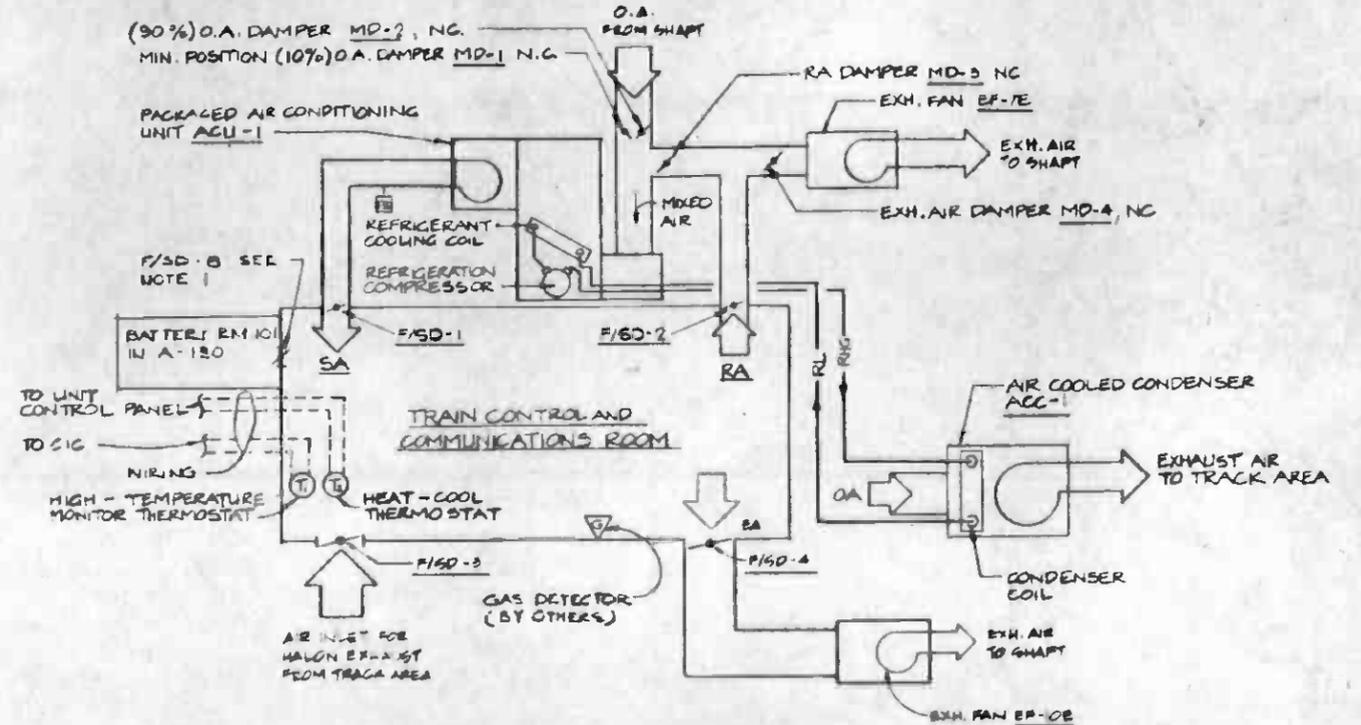
SSS ON "AUTO" COMPRESSORS IN ACU-1 SHALL BE CYCLED AND CONDENSER ACC-1 CIRCUITS SHALL BE ENERGIZED BY THERMOSTAT T₂ TO MAINTAIN SETTING APPROXIMATELY 75°.

SSS ON OFF: REFRIGERATION SYSTEM SHALL BE INOPERATIVE

100% OSA VENTILATION MODE
UPON GAS DETECTION IN TC & C RM OR IN CASE OF REFRIGERATION SYSTEM MALFUNCTION ACU-1 SUPPLY FAN SHALL SUPPLY 100% OSA BY POSITIONING OSA DAMPERS MD-1 & MD-2 OPEN AND RA DAMPER MD-3 CLOSED. EXHAUST FAN EF-7E SHALL BE RUNNING W/ DAMPERS FSD-2 & MD-4 OPEN.

HALON EXHAUST SYSTEM
UPON ACTIVATION OF HALON EXHAUST FAN EF-10E, DAMPERS FSD-3 AND FSD-4 SHALL OPEN ALL OTHER DAMPERS SHALL REMAIN CLOSED. ALL OTHER EQUIPMENT SHALL REMAIN INOPERATIVE.

MONITOR AT CCF AND ACCP
ONE COMBINED MALFUNCTION ALARM: AIR CONDITIONING SYSTEM OVERLOAD, LOSS OF AIR FLOW, OF AIR FLOW, CONTROL POWER FAILURE, AND ROOM HIGH TEMPERATURE (THERMOSTAT T₁).



AUTOMATIC DAMPER SCHEDULE			
DAMPER NO.	CONTROL AIR	NORMAL POSITION	OPERATION
MD-1	OA	NC	OPENS WHEN ACU-1 RUNS (10% O.A.)
MD-2	OA	NC	OPENS WHEN EF/7E RUNS (90% O.A.)
MD-3	RA	NO	CLOSES WHEN EF/7E RUNS
MD-4	EA	NC	OPENS WHEN EF/7E RUNS

FIRE/SMOKE DAMPER (F/SD) SCHEDULE		
DAMPER NO.	NORMAL POSITION	OPERATION
F/SD-1	NO	CLOSES WHEN HALON DISCHARGE IS ACTIVATED OR FIRE (SMOKE) IS DETECTED.
F/SD-2	NO	CLOSES WHEN HALON DISCHARGE IS ACTIVATED OR FIRE (SMOKE) IS DETECTED.
F/SD-3	NC	OPENS WHEN EF-10E RUNS.
F/SD-4	NC	OPENS WHEN EF-10E RUNS.
F/SD-8	NC	OPENS WHEN ACU-1 RUNS.

TCC ROOM CONTROL SCHEMATIC DIAGRAM

NO SCALE

NOTES:

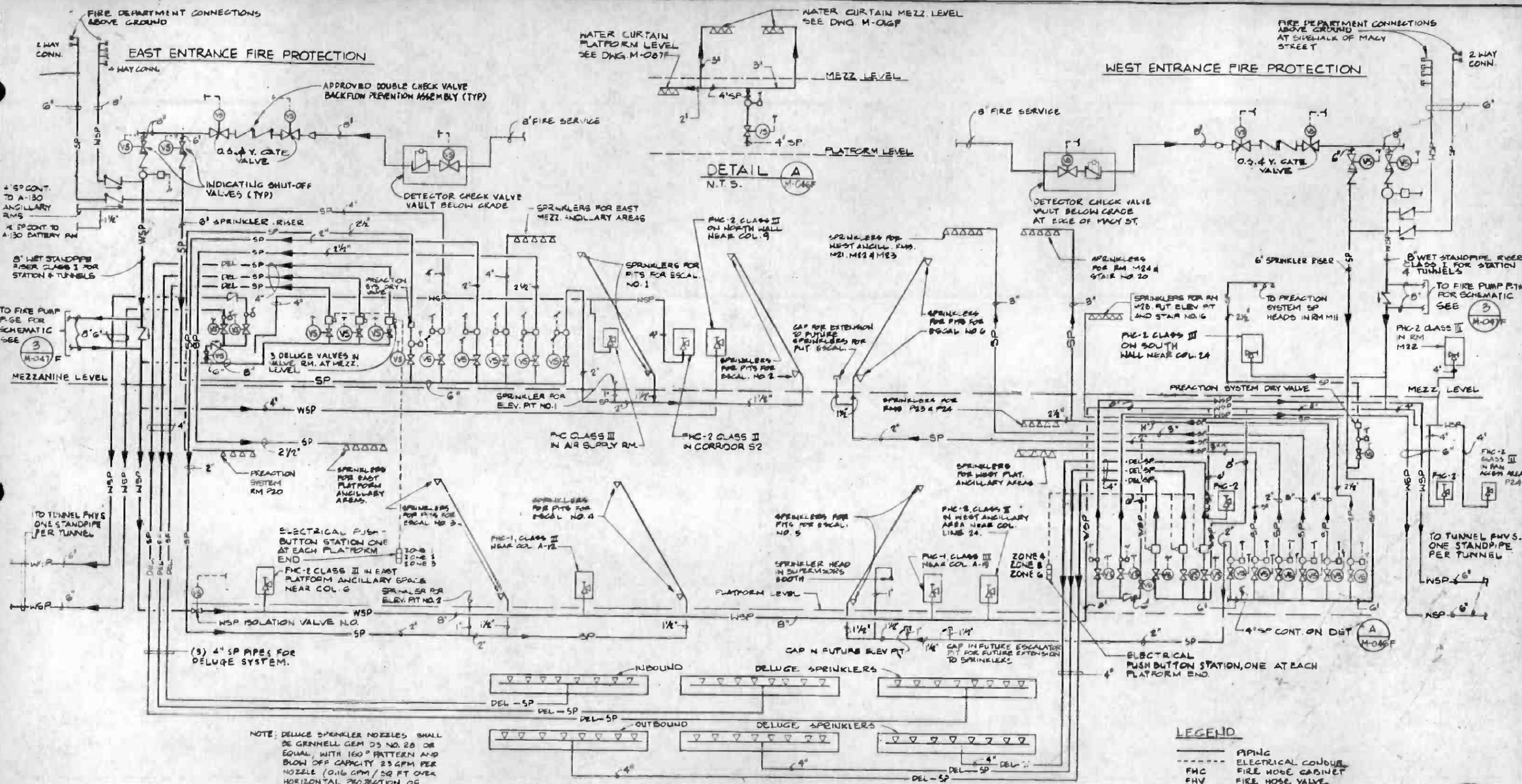
- FSD-8 IS PROVIDED IN CONTRACT A-130 B SIZED FOR 10% OF THE TC & C ROOM SUPPLY AIR TO PROVIDE COOL AIR FOR THE ADJACENT BATTERY ROOM #101, ALSO IN A-130 WIRING BETWEEN FSD-8 AND A-130 CIC BY COMMUNICATION CONTRACTOR.
- ALL FIRE/SMOKE DAMPERS SHOWN WILL FAILSAFE CLOSE. MOTORIZED DAMPERS MD-1, MD-2 AND MD-4 WILL FAILSAFE OPEN, AND MD-3 WILL FAILSAFE CLOSE.
- ALL SMOKE, FIRE & GAS DETECTORS WILL BE PROVIDED IN A SYSTEMWIDE CONTRACT, INCLUDING THOSE WIRED TO FIRE/SMOKE DAMPERS.

1
M-028 F



DUPLICATE ORIGINAL

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY R. STELLART		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		LA CBD TO NORTH HOLLYWOOD UNION STATION HVAC CONTROL DIAGRAMS	CONTRACT NO. A136
DRAWN BY D. W. HENRY	CHECKED BY R. STELLART	IN CHARGE R. STELLART					DATE 23 FEB 1968
REV. DATE BY SUB APP DESCRIPTION	REV. DATE BY SUB APP DESCRIPTION	REV. DATE BY SUB APP DESCRIPTION	REV. DATE BY SUB APP DESCRIPTION	APPROVED 	APPROVED 	DRAWING NO. M-028F	SHEET NO. A640/6



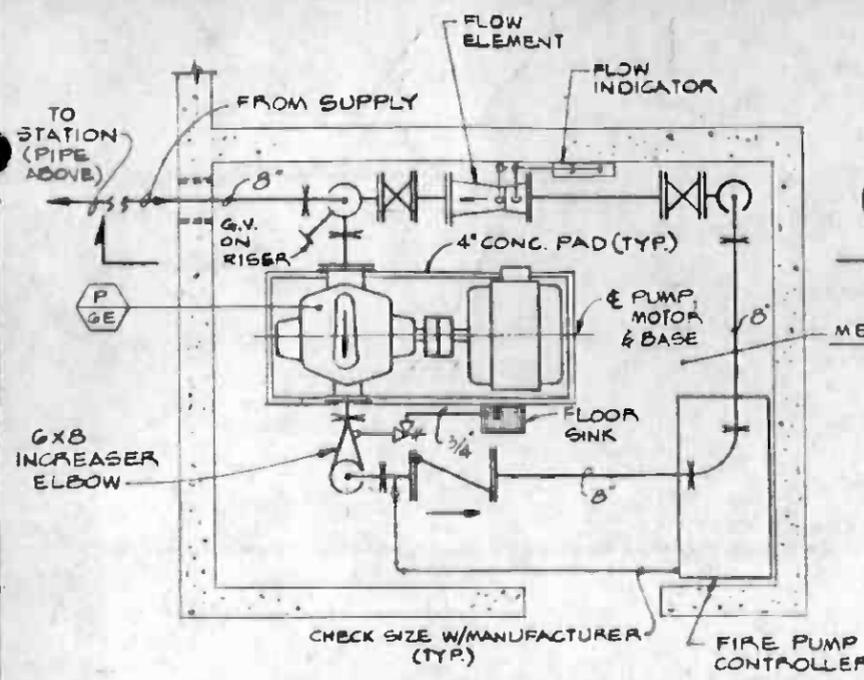
FIRE PROTECTION PIPING SCHEMATIC RISER DIAGRAM

NOTE: DELUGE SPRINKLER NOZZLES SHALL BE GRINNELL GEM D3 NO. 28 OR EQUAL, WITH 160° PATTERN AND BLOW OFF CAPACITY 23 GPM PER NOZZLE (0.16 GPM/SQ FT OVER HORIZONTAL PROJECTION OF TRAIN FLOOR AREA)

NOTE: FIRE HOSE CABINETS & WET STANDPIPE SYSTEM TO PROVIDE CLASS III SERVICE COVERAGE PER NFPA 14.

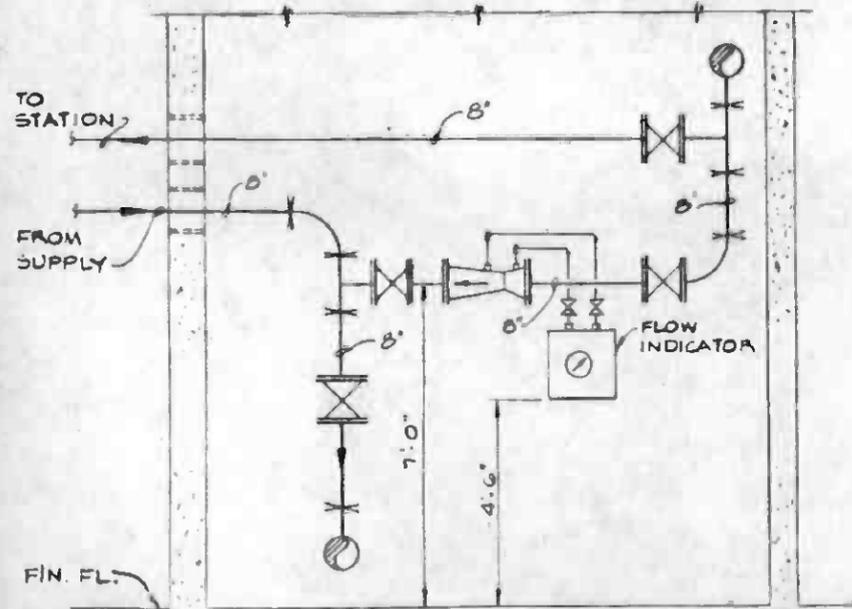
- LEGEND**
- PIPING
 - ELECTRICAL CONDUIT
 - FHC FIRE HOSE CABINET
 - FHV FIRE HOSE VALVE
 - VS VALVE POSITION SUPERVISORY SWITCH
 - WF WATER FLOW INDICATOR (FLOW SWITCH)

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY C. MALDEN DRAWN BY C. MALDEN CHECKED BY R. STEWART IN CHARGE Ralph Stewart DATE 2 FEB 85		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 		LA CBD TO NORTH HOLLYWOOD UNION STATION FIRE PROTECTION SYSTEM RISER DIAGRAM		CONTRACT NO. A136 DRAWING NO. M-046F SCALE NONE SHEET NO. A640/B							
REV	DATE	BY	SUB	APP	DESCRIPTION	REV	DATE	BY	SUB	APP	DESCRIPTION	APPROVED	HARRY WEESE & ASSOCIATES 1100115 - ARBETT - MCCARTHY - STRATTON ENVIRONMENTAL COLLABORATIVE, INC. GIN WORK ASSOCIATES			DMJM/PBQD/KE/MWA GENERAL CONSULTANTS	
					REVISED PER CR 5-215								SUBMITTED <i>Ralph Stewart</i>			APPROVED	

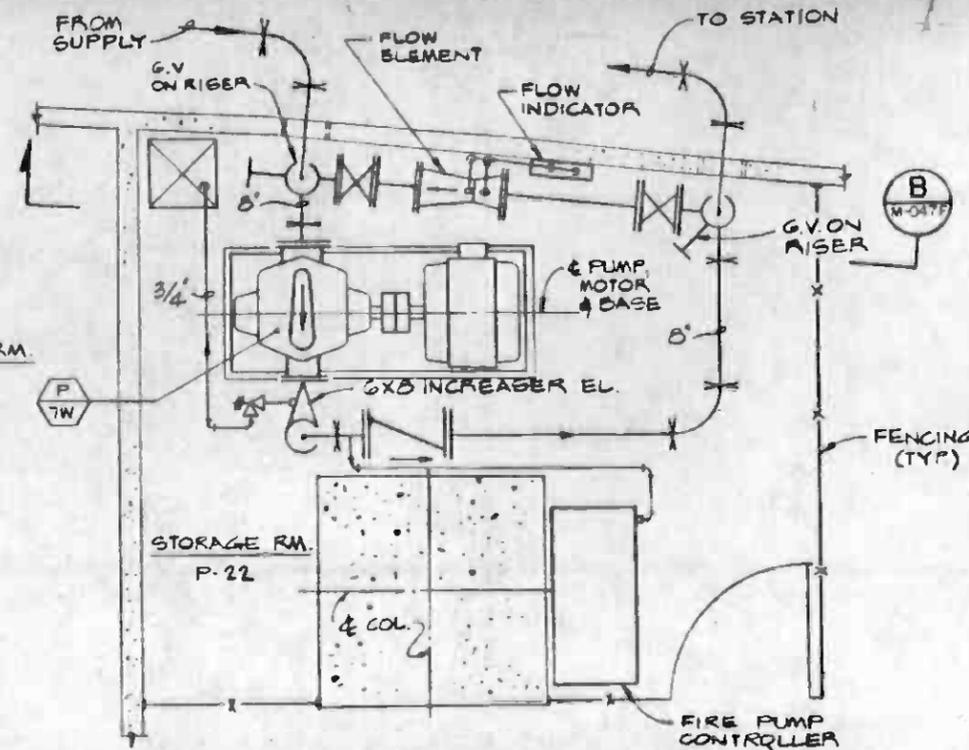


EAST END FIRE PUMP PLAN

DETAIL 1
SCALE: 1/2" = 1'-0"
M-047F M-033F

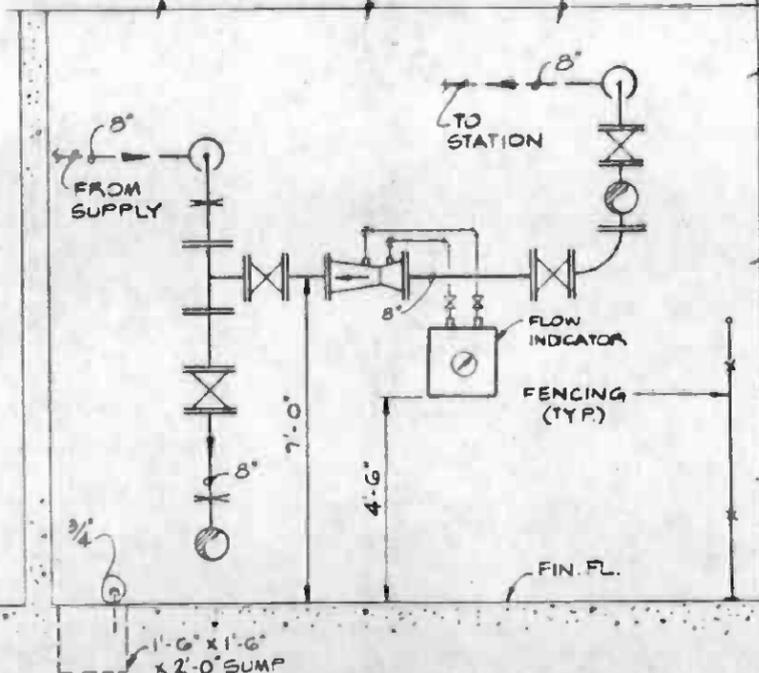


SECTION A
SCALE: 1/2" = 1'-0"
M-047F

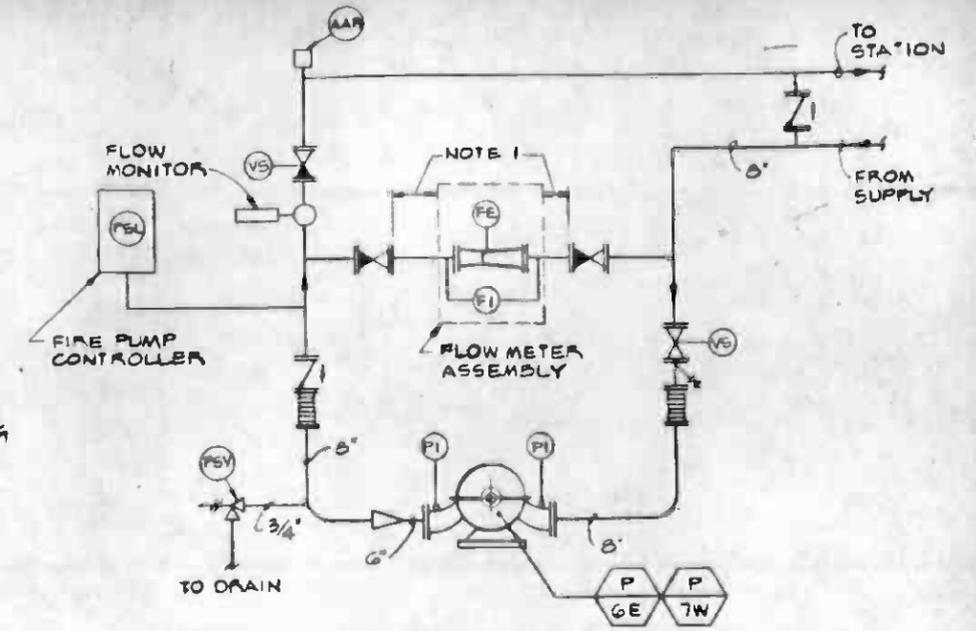


WEST END FIRE PUMP PLAN

DETAIL 2
SCALE: 1/2" = 1'-0"
M-047F M-039F

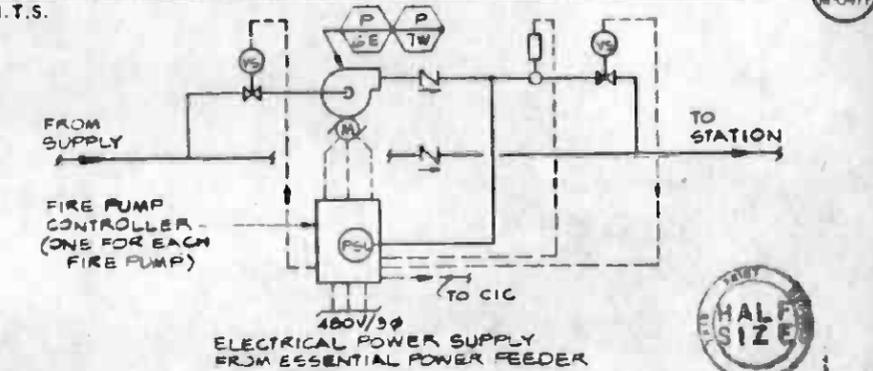


SECTION B
SCALE: 1/2" = 1'-0"
M-047F



FIRE PUMP SCHEMATIC (TYP. FOR EAST & WEST END)

N.T.S.



FIRE PUMP CONTROL DIAGRAM

N.T.S.

SEQUENCE OF OPERATION

GENERAL:

THE FIRE PUMPS ARE NORMALLY OFF AND ON AUTOMATIC MODE OF CONTROL. ISOLATION VALVES ARE OPEN. IN CASE OF FIRE EMERGENCY, THE PUMPS CAN BE STARTED EITHER THRU AUTOMATIC OR MANUAL MODE OF CONTROL.

MANUAL CONTROL:

EACH PUMP SHALL BE INDIVIDUALLY CONTROLLED. MANUAL CONTROL MAY BE LOCAL FROM THE FIRE PUMP CONTROLLER OR REMOTE FROM THE EMP. CONTROL FROM EMP SHALL OVERRIDE AUTOMATIC CONTROL. PROVISION SHALL BE MADE TO START THE PUMP THRU THE SIGNAL FROM THE RELATED UNDERCAR DE-LUXE SYSTEM PUSH BUTTON.

AUTOMATIC CONTROL:

THE WATER PRESSURE IS CONTINUOUSLY MONITORED BY THE LOW PRESSURE SWITCH (PS). IN CASE WATER PRESSURE DROPS BELOW THE SETTING POINT (NORMALLY 0 P.S.I. BELOW THE WATER STATIC PRESSURE) THE LEAD FIRE PUMP SHALL BE AUTOMATICALLY TURNED ON BY THE SIGNAL FROM (PS). THE OPERATION OF LEAD FIRE PUMP SHOULD PROVIDE SUFFICIENT WATER PRESSURE IN THE SYSTEM FOR THE MAXIMUM WATER DEMAND. HOWEVER, IN CASE WATER PRESSURE IS STILL NOT SUFFICIENT, THE LAG FIRE PUMP CAN BE STARTED MANUALLY FROM EMP OR FIRE PUMP CONTROLLER. THE LEAD AND LAG FIRE PUMP WILL BE ALTERNATELY STARTED BY THE LEAD-LAG SELECTOR SWITCH.

ANNOUNCEMENT:

PUMP RUNNING AND PUMP NOT RUNNING SHALL BE ANNUNCIATED AT RCC AND EMP. LOSS OF WATER FLOW, ISOLATION VALVE CLOSED POSITION, UNDER VOLTAGE, FIRE PUMP MOTOR OVERLOAD AND LOW WATER PRESSURE SHALL BE ANNUNCIATED BY ONE SUMMARY FAIL SIGNAL IN RCC.

NOTE: FOR WIRING DIAGRAM SEE ELECTRICAL DWG. NO E-121F.

DUPLICATE ORIGINAL

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY MRTC
REV. DATE BY SUB APP DESCRIPTION	11-88 RJA EB REVISED PER CR 5-215	CHECKED BY DATE
	7-26-85 B.S. T.R. INITIAL ISSUE PER CR 5-200	DATE 7-26-85

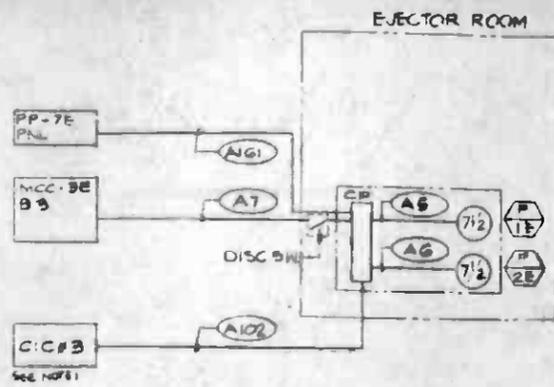
DESIGNED BY MRTC
CHECKED BY DATE
DATE 7-26-85

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		RTD
SUBMITTED		APPROVED

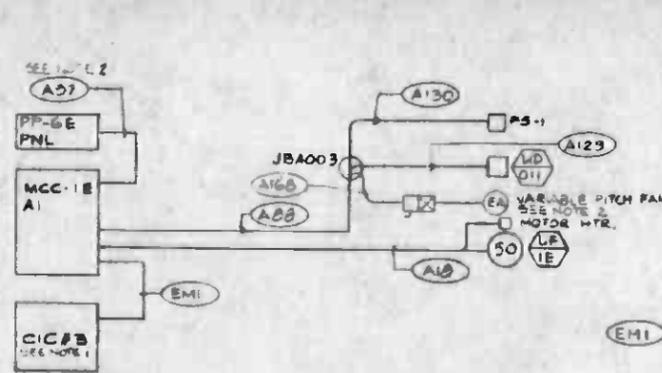
LA CBD TO NORTH HOLLYWOOD UNION STATION	
FIRE PUMP DETAILS AND SCHEMATIC	

CONTRACT NO. A 136
DRAWING NO. M-047F
SCALE AS NOTED
SHEET NO. A640/9

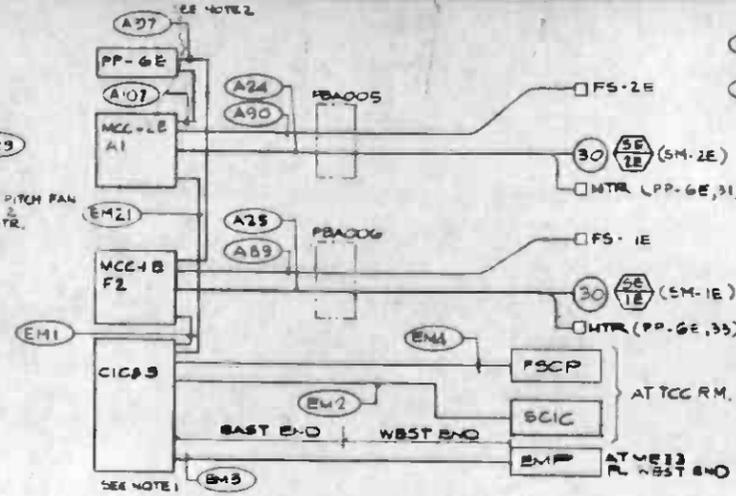
S.C.R.T.D. LIBRARY



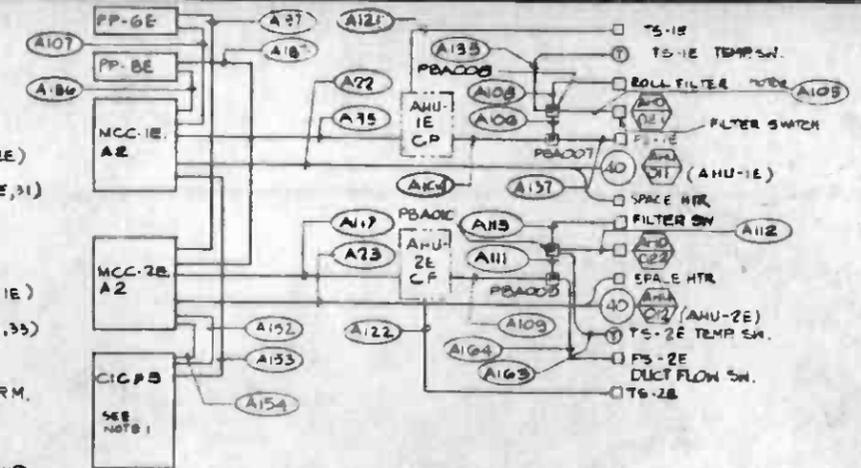
EJECTOR PUMP



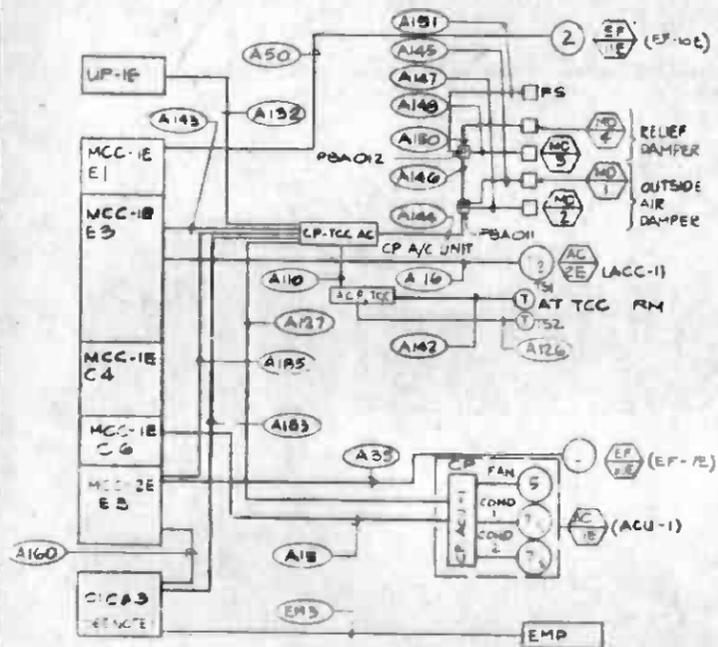
UNDERPLATFORM EXHAUST



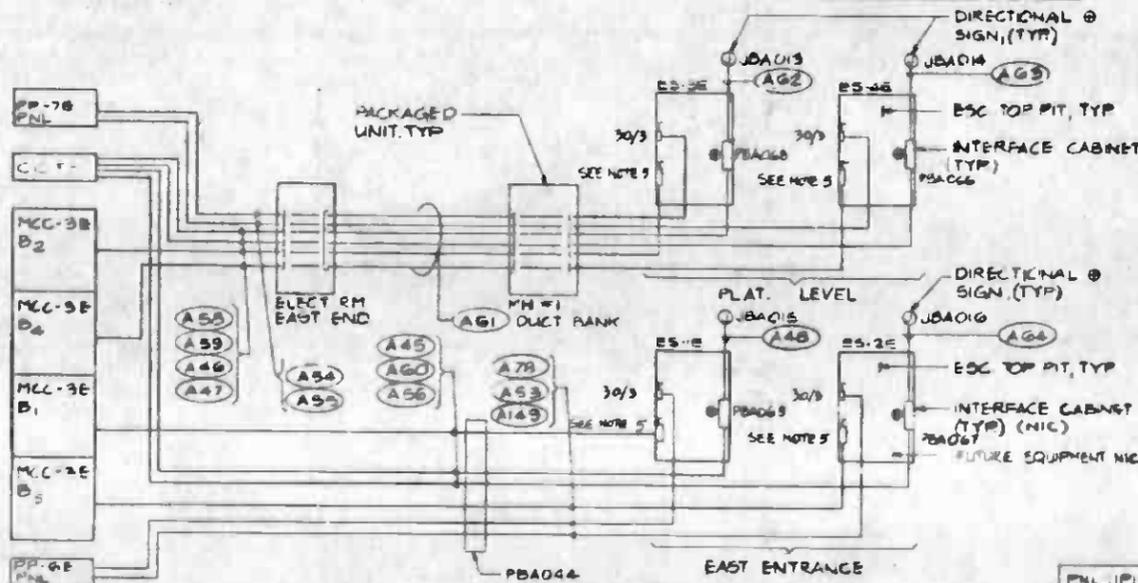
SMOKE EXHAUST



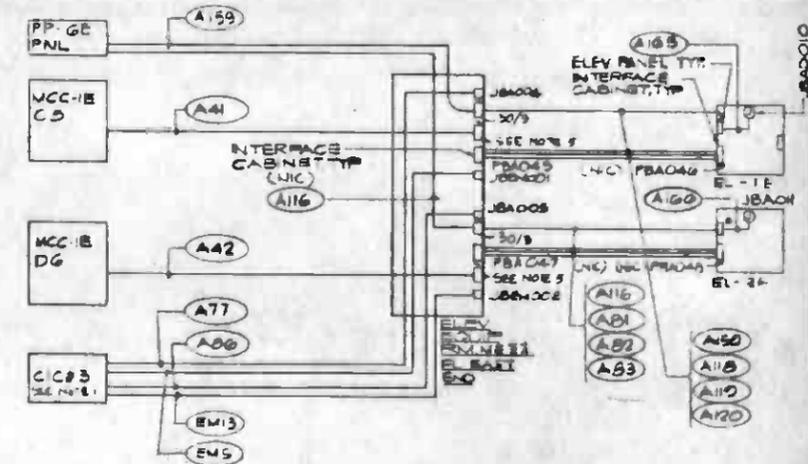
VENTILATION SYSTEM - EAST END



VENTILATION SYSTEM - TRAIN CONTROL ROOM



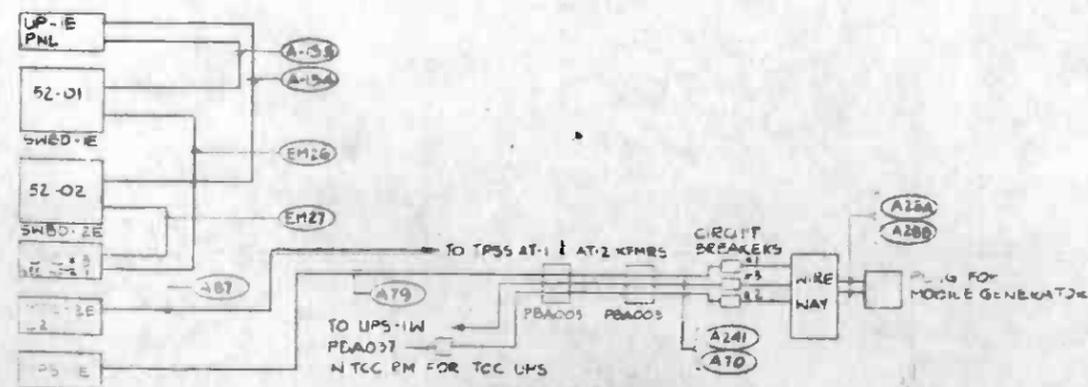
ESCALATOR - EAST END



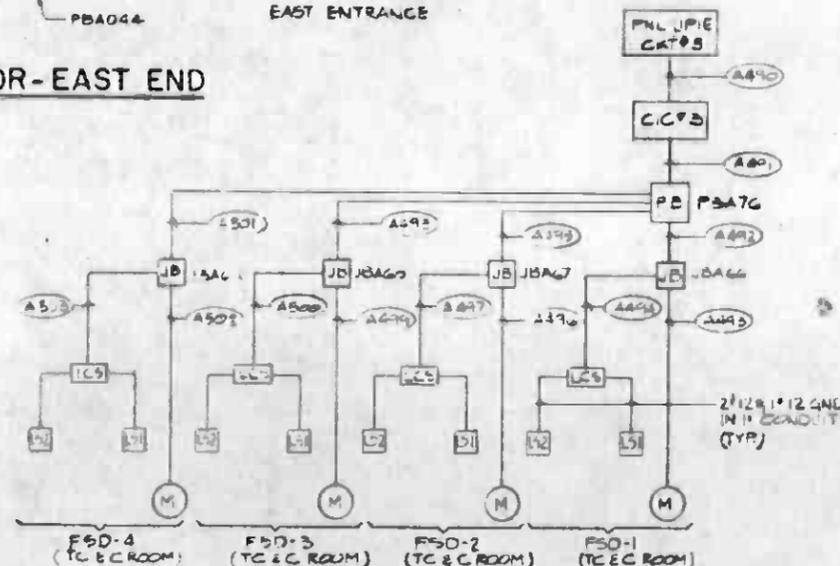
ELEVATOR - EAST END

NOTES:

- FOR CONDITIONS FROM C/C#3 TO EMP, SCIC, ESCP SEE SMOKE EXHAUST SYSTEM DWG E-0125 (C/C#3) OR DWG E-013F (C/C#2)
- THESE CONDITTS ALSO CONTAIN CABLES RUNNING TO OTHER STARTERS IN THE SAME MCC.
- THIS CABLE RUNS THRU ELECTRICAL ROOM, DUCT BANK CONDUIT A61 SPAN-15E MHI.
- EQUIPMENT FURNISHED BY ESCALATOR CONTRACTOR.
- DISCONNECT SWITCHES, FUSES SHALL BE SIZED AS REQUIRED BY EQUIPMENT MANUFACTURER.
- THIS CABLE RUNS WITH OTHER CABLES IN DUCT BANK CONDUIT A61 FROM ELECTRICAL ROOM TO MANHOLE 1.



SWITCHBOARD - EAST END



FIRE & SMOKE DAMPERS

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

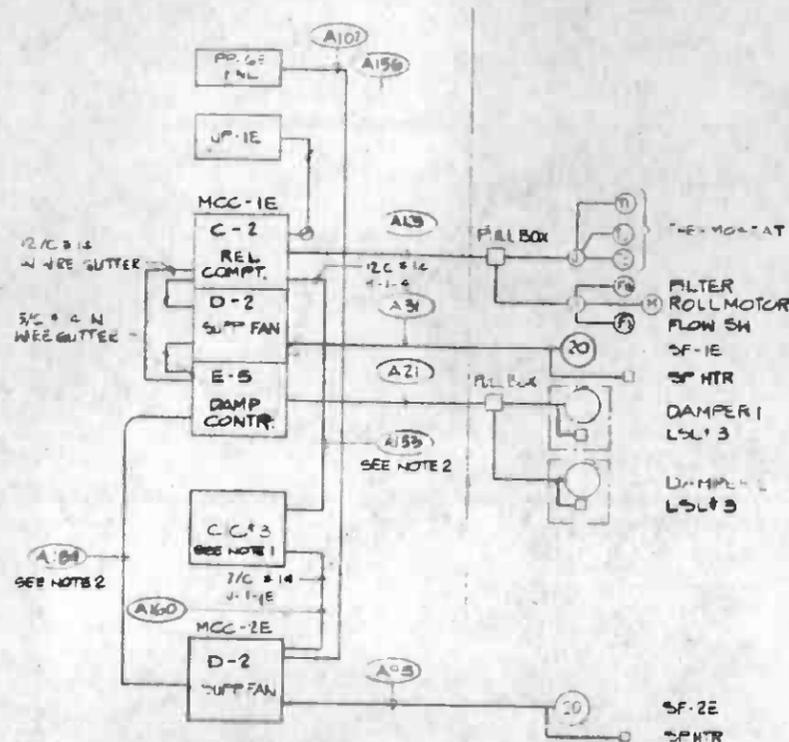
DESIGNED BY
H. SOLERO
CHECKED BY
M. SOLERO
K. T. DJIE
IN CHARGE
J. C. CHANG
DATE
7 APR 68



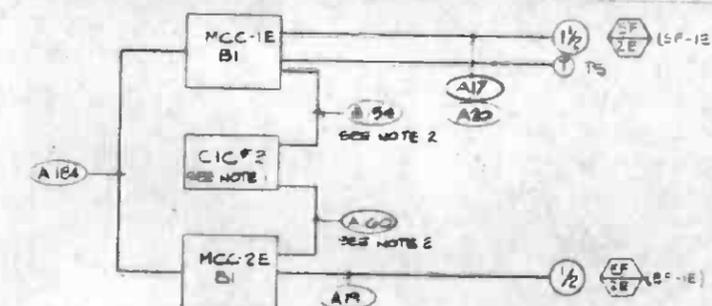
SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT
HARRY WEESE & ASSOCIATES
TIMOTHY S. ABBETT, MCCARTHY - STRATTON
ENVIRONMENTAL CONSULTANTS, INC.
CHU WONG ASSOCIATES
DMJM/PBOD/KE/HWA
GENERAL CONSULTANTS

CONTRACT NO. A136
DRAWING NO. E-012F
SCALE: NO SCALE
SHEET NO. A640/10
LA CBD TO NORTH HOLLYWOOD
UNION STATION
CONTROL WIRING BLOCK DIAGRAM
SHEET 1

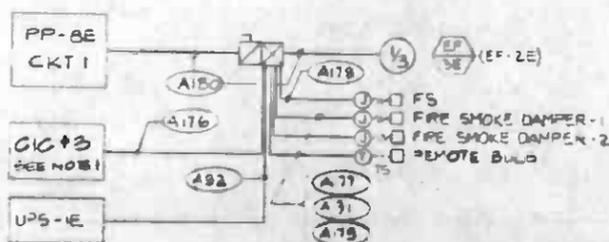
REV.	DATE	BY	SUB.	APP.	DESCRIPTION



TRACTION POWER ROOM

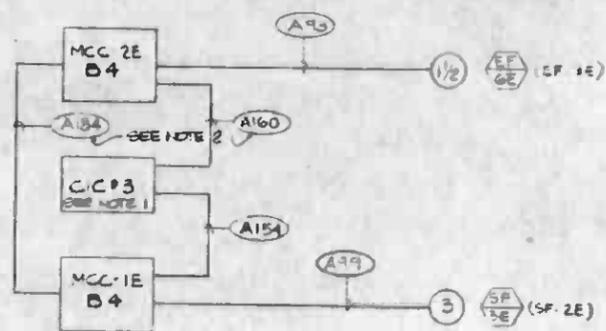


AUXILIARY POWER ROOM - EAST END

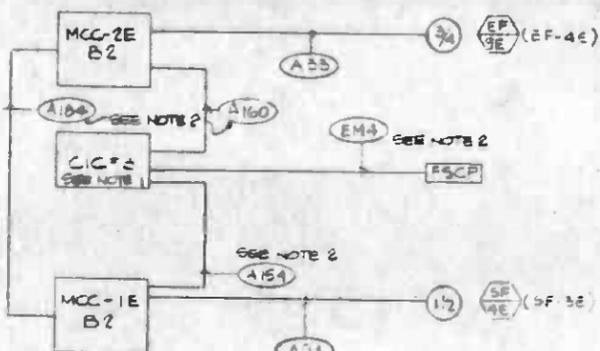


BATTERY ROOM-EAST END

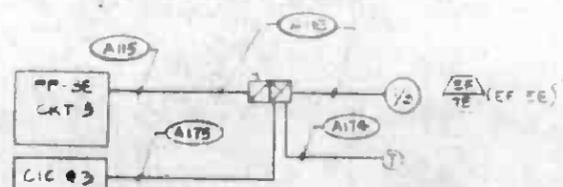
NOTES
1. SEE DRG E-012 FOR NOTES.



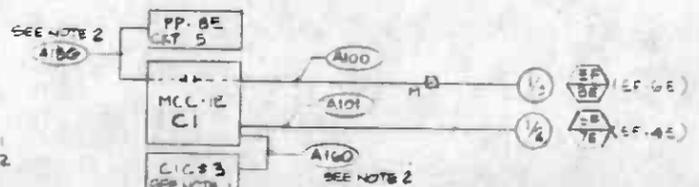
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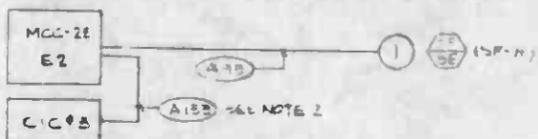
ANCILLARY ROOM - EAST END



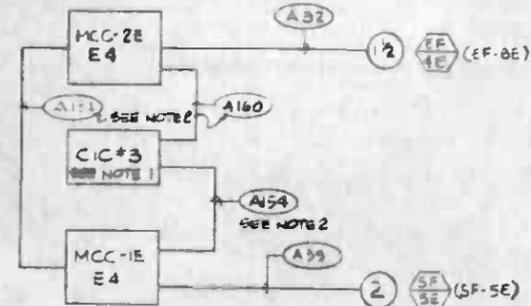
ELEVATOR EQUIP. ROOM



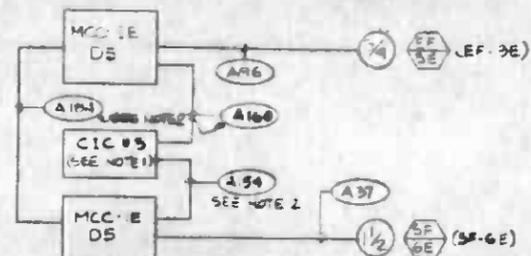
EJECTOR CUSTODIAL CLOSET-EAST END



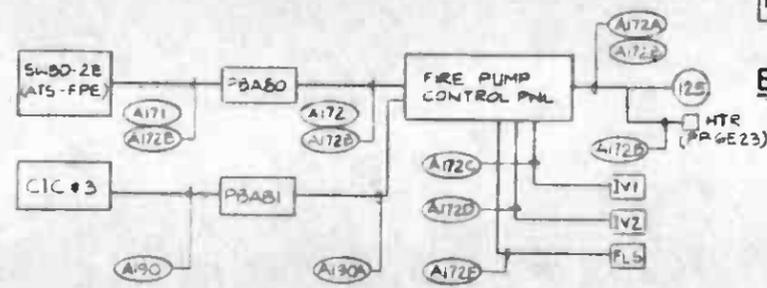
EAST AIR SUPPLY ROOM



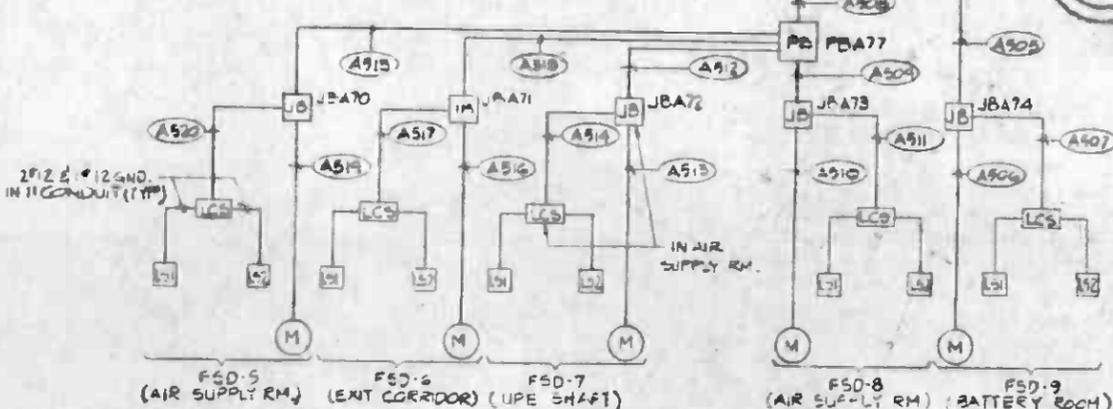
AIR SUPPLY ROOM - EAST END



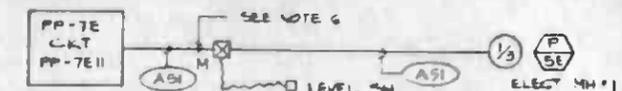
MECH/U.P.E. & ELECT. ROOM-EAST END



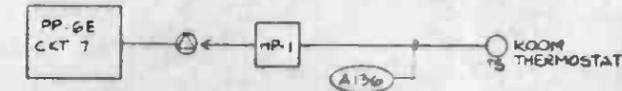
FIRE PUMP - EAST END



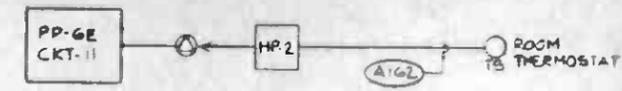
FIRE & SMOKE DAMPERS



ELECTRICAL MH #1 - EAST END



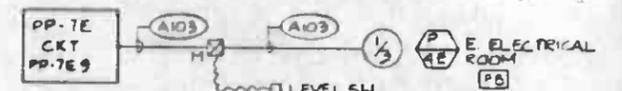
STAFF/SECURITY ROOM HEAT PUMP



STAFF LUNCH ROOM HEAT PUMP



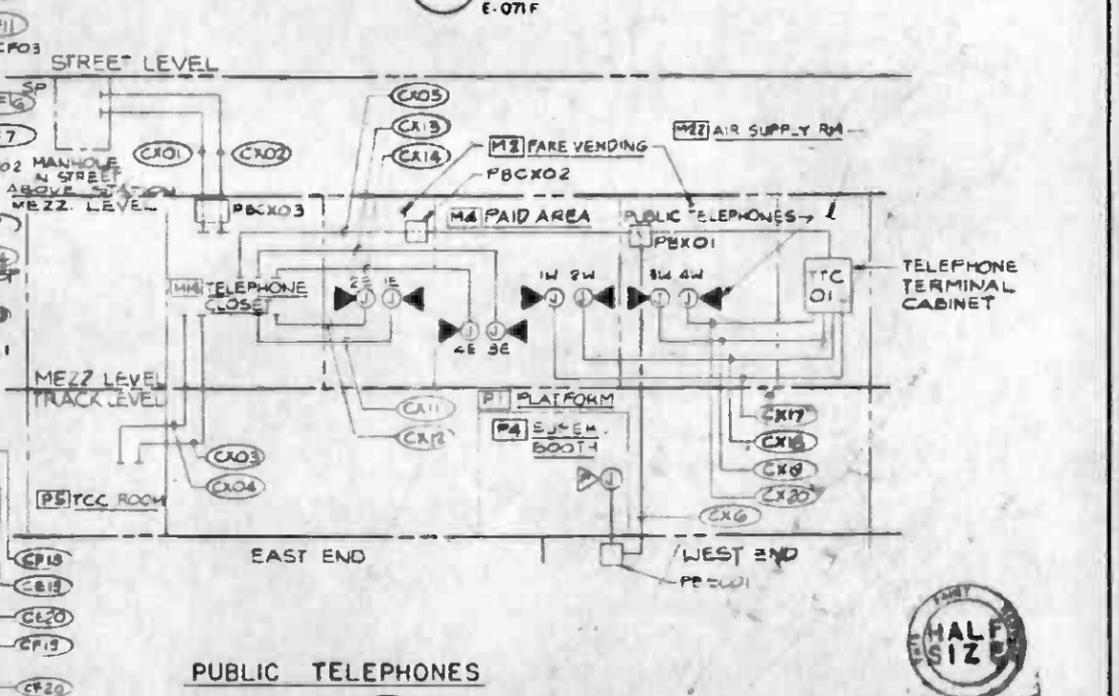
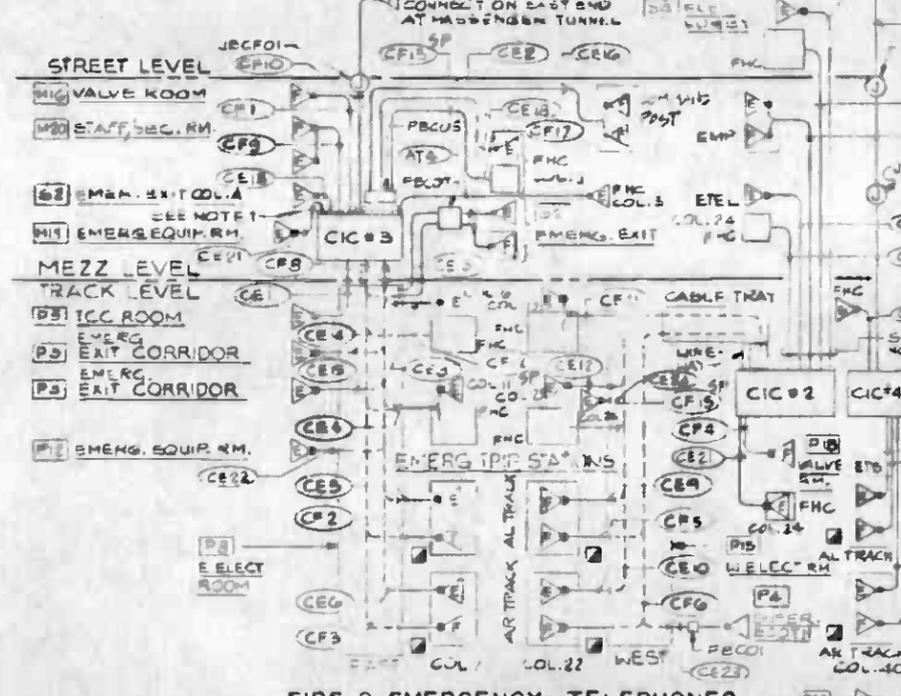
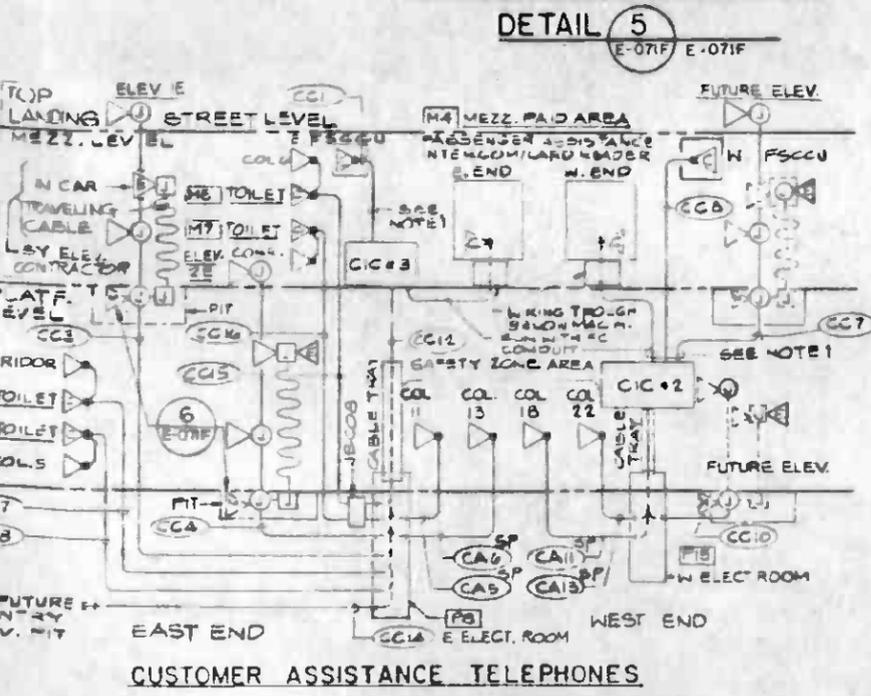
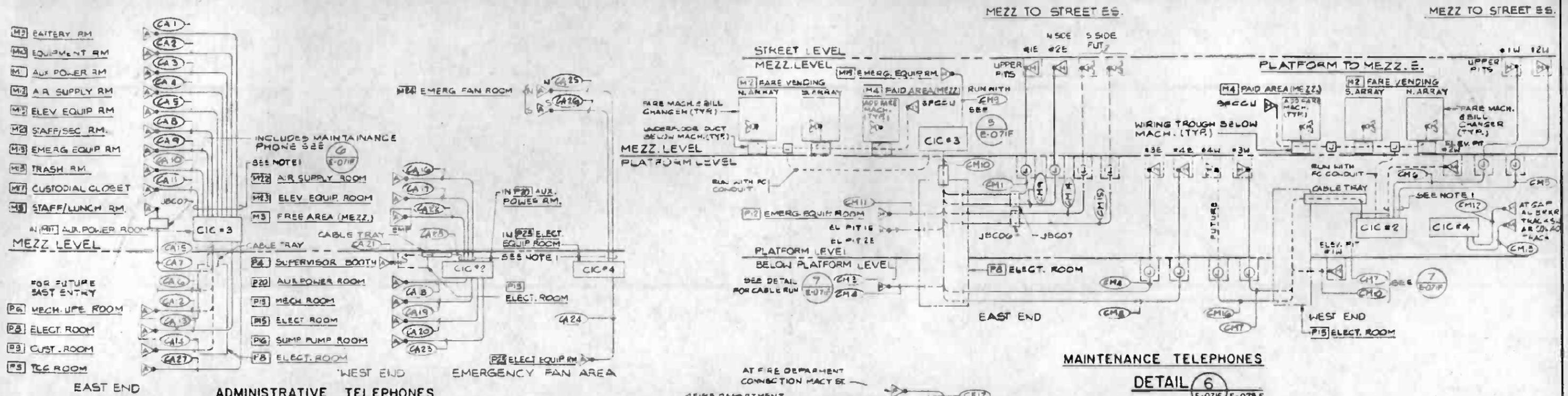
EJECTOR ROOM - EAST END



ELECTRICAL ROOM - EAST END

HALF SIZE

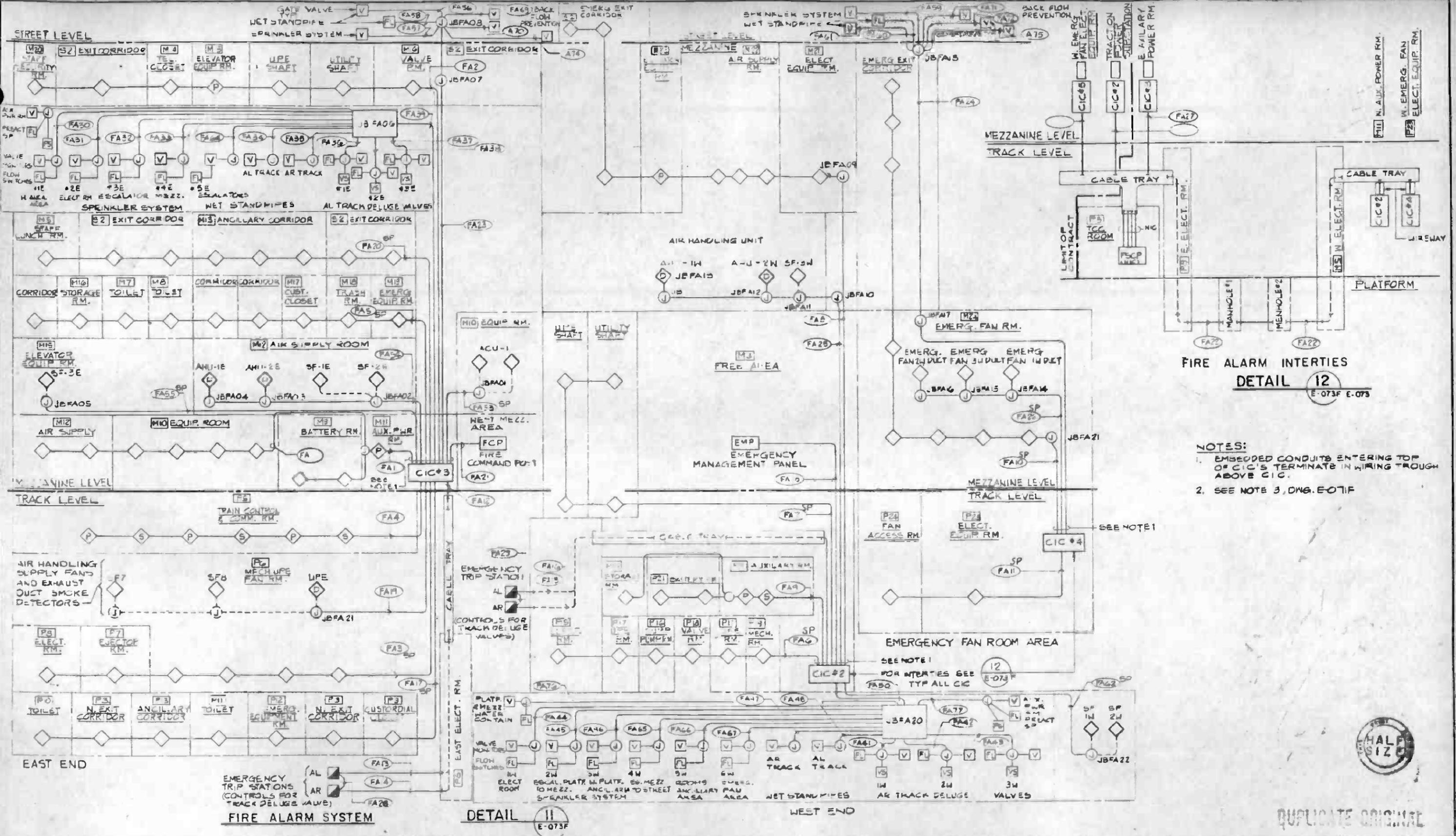
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY G. M. AMOR CHECKED BY K. T. DJIE IN CHARGE J. C. CHANG DATE 7 APR 80		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT HARRY WEESE & ASSOCIATES TIPPEYS - ABBETT - MCCARTHY - STRATTON ENVIRONMENTAL COLLABORATIVE INC. GIN WONG ASSOCIATES SUBMITTED		LA CBD TO NORTH HOLLYWOOD UNION STATION CONTROL WIRING BLOCK DIAGRAM SHEET 3	CONTRACT NO A136 DRAWING NO E-014F SCALE NO SCALE SHEET NO A640/12
REV. DATE BY SUB APP DESCRIPTION	REV. DATE BY SUB APP DESCRIPTION	REVISIONS: 1. REVISED PER CRB-208 2. INIT					



NOTES:

- EMBEDDED CONDUITS ENTERING TOP OF CIC'S TERMINATE IN WIRING TROUGH ABOVE CIC.
- FOR INTERCONNECTION OF CIC, SEE DETAIL "1", DRAWING E-070F.
- THESE DRAWINGS ARE SUBMITTED ONLY FOR INFORMATION ON THE GENERAL DESIGN CONCEPT OF THE COMMUNICATION SYSTEMS, THE CIC LOCATIONS AND THE ELECTRICAL FACILITIES/COMMUNICATION SYSTEMS INTERFACES, THEY PROVIDE A GOOD ESTIMATE OF INPUT/OUTPUT POINTS AND THE PROSPECTIVE BIDDERS WILL HAVE ENOUGH INFORMATION TO MAKE FIRM INITIAL PROPOSALS ON CONTRACT A 640. BIDDERS ARE CAUTIONED THAT THESE DWGS ARE BEING REVISED & WILL FURTHER BE REVISED TO INCLUDE THE REALIGNMENT OF UNION STA. STRUCTURE & TO EXCLUDE PRESENTLY SHOWN ENTRANCES & EXITS, INCLUDING STAIRS, HATCHES, AIR INTAKES & EXHAUSTS. THE DWGS WILL ALSO BE REVISED TO INCLUDE CHANGES TO AGREE WITH THE LATEST ISSUE OF A135. BIDDERS OF A640 MUST TAKE INTO ACCOUNT THE ABOVE MENTIONED FUTURE REVISIONS & PROVIDE CONTINGENCIES FOR ADDITIONAL WORK RELATIONS.

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY J.W. SHANNON DRAWN BY J.K. CZECH CHECKED BY J.C. CHANG IN CHARGE J.C. CHANG DATE 17 APR 85		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT HARRY WEASE & ASSOCIATES TIMOTHY A. ARBETT - MC CARTHY - STRATTON ENVIRONMENTAL COLLABORATIVE, INC. GIN WONG ASSOCIATES SUBMITTED: <i>[Signature]</i>		LA CBD TO NORTH HOLLYWOOD UNION STATION TELEPHONE SYSTEMS RISER DIAGRAM CONTRACT NO. A136 DRAWING NO. E-071F SCALE NO SCALE SHEET NO. A640/15					
REV	DATE	BY	SUB	APP	DESCRIPTION	REV	DATE	BY	SUB	APP	DESCRIPTION
1	3/17/85	WEM			REVISED PER CR 7-009						



**FIRE ALARM INTERTIES
DETAIL 12**
E-073F E-073

- NOTES:**
- EMBEDDED CONDUITS ENTERING TOP OF CIC'S TERMINATE IN WIRING TROUGH ABOVE CIC.
 - SEE NOTE 3, DWG. E-071F



DUPLICATE ORIGINAL

REV	DATE	BY	SUB	APP	DESCRIPTION

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED BY J. W. SHANNON	
DRAWN BY K. ILASZ	
CHECKED BY J. C. CHANG	
IN CHARGE J. C. CHANG	
DATE 7 APR	

**SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT**

HARRY WEESE & ASSOCIATES
TIPPLETT-ABBETT-McCARTHY-STRATTON
ENVIRONMENTAL COLLABORATIVE, INC.
GIN WONG ASSOCIATES

DMJM PBQO/KE/HWA
GENERAL CONSULTANTS

APPROVED _____

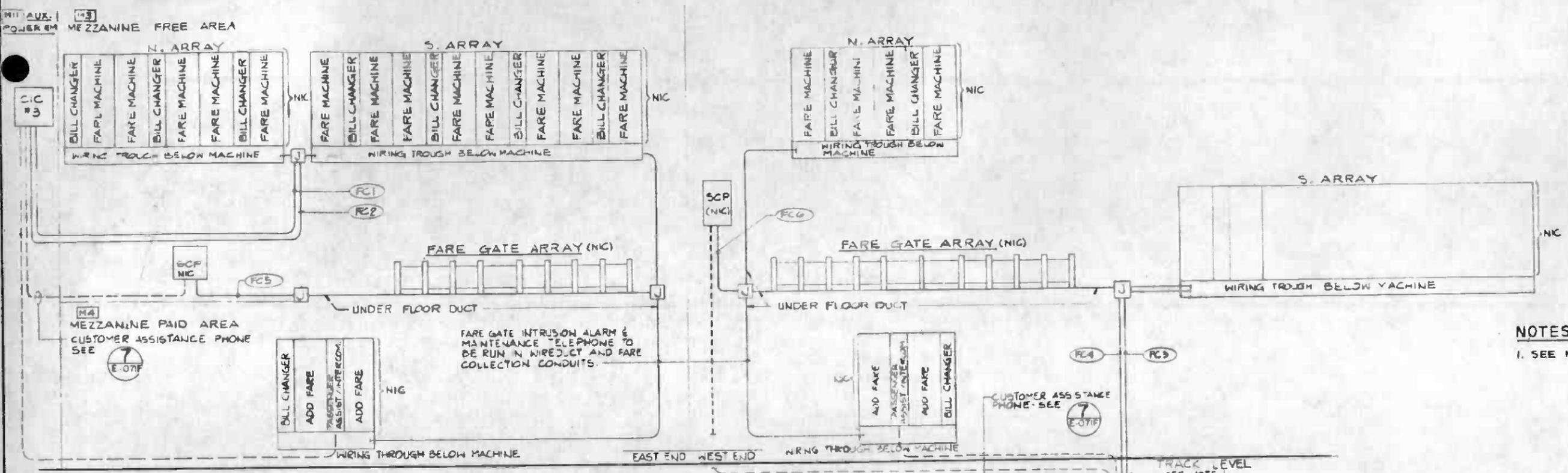
**LA CBD TO NORTH HOLLYWOOD
UNION STATION
FIRE ALARM SYSTEM
RISER DIAGRAM**

CONTRACT NO. **A136**

DRAWING NO. **E-073F** REV **1**

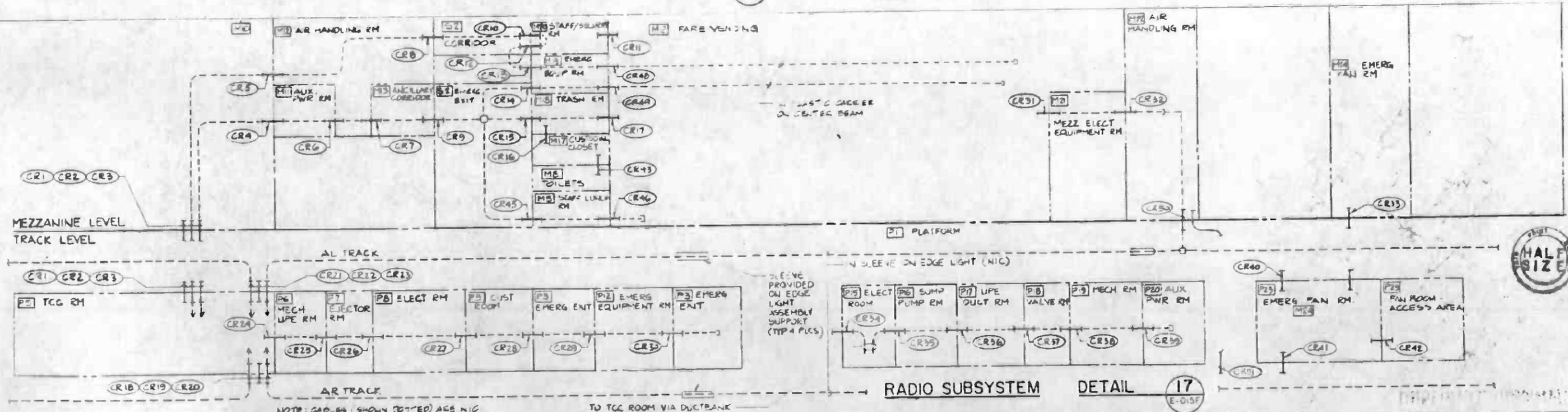
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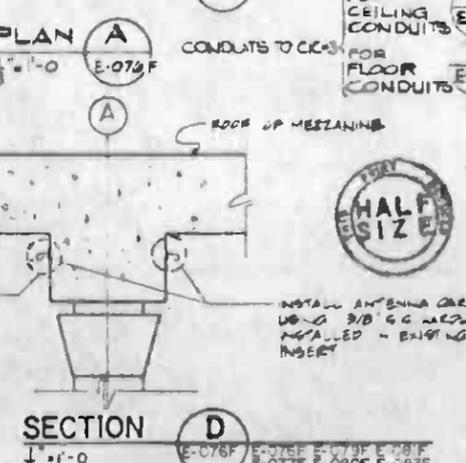
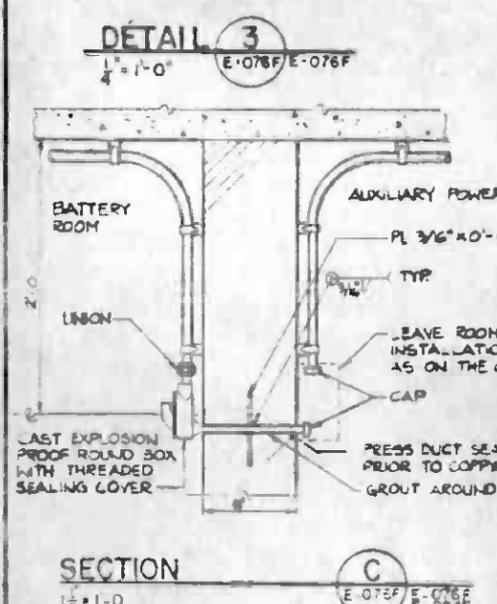
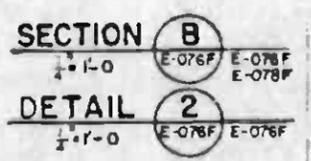
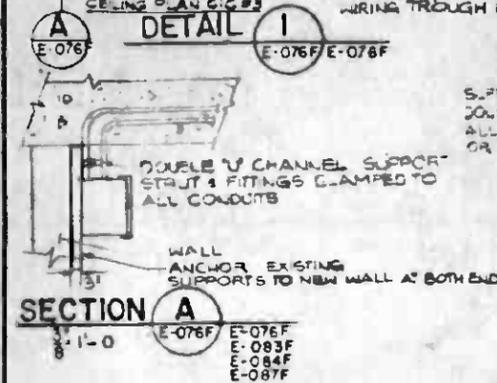
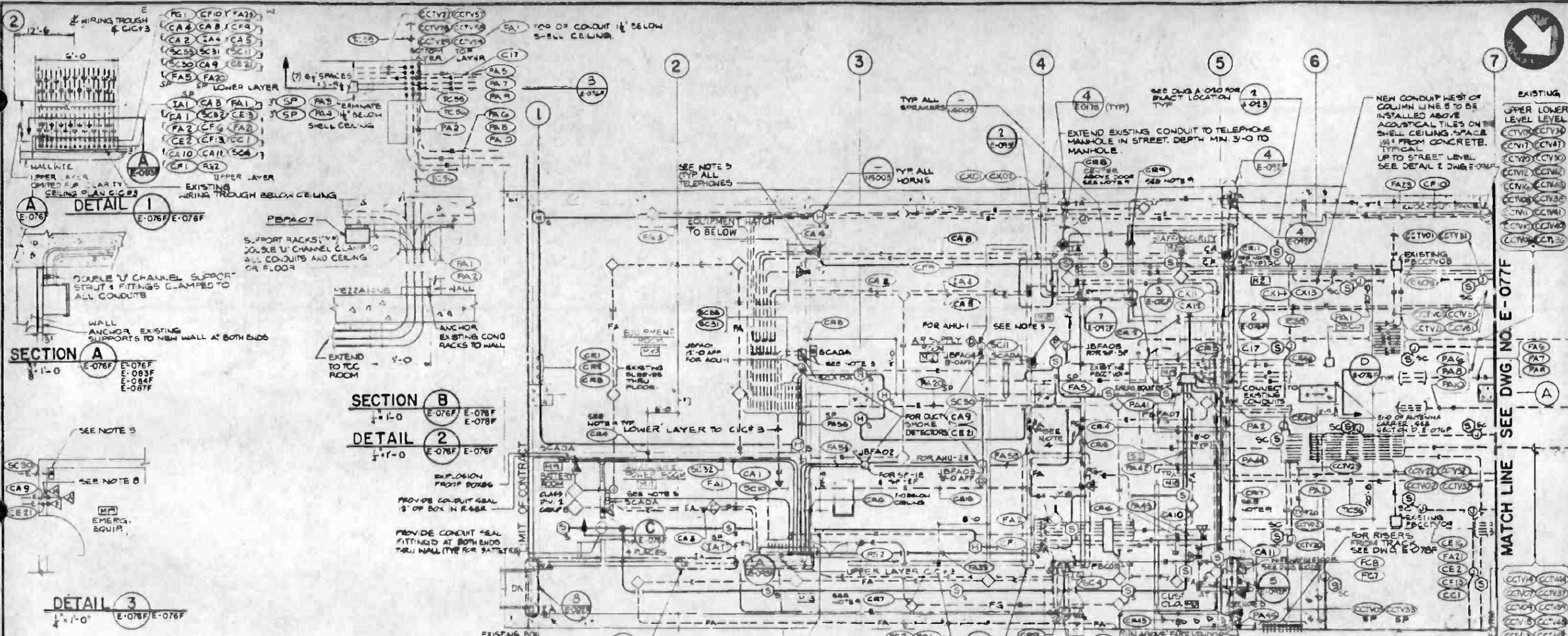
SHEET NO. **A640/17**



NOTES:
 1. SEE NOTE 3, DWG E-071F.

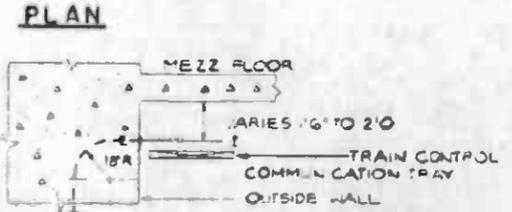
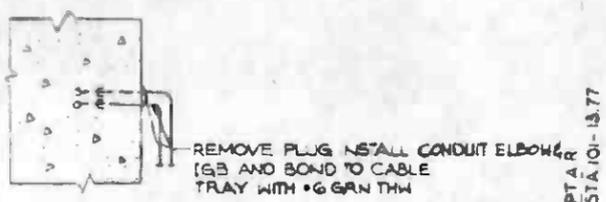
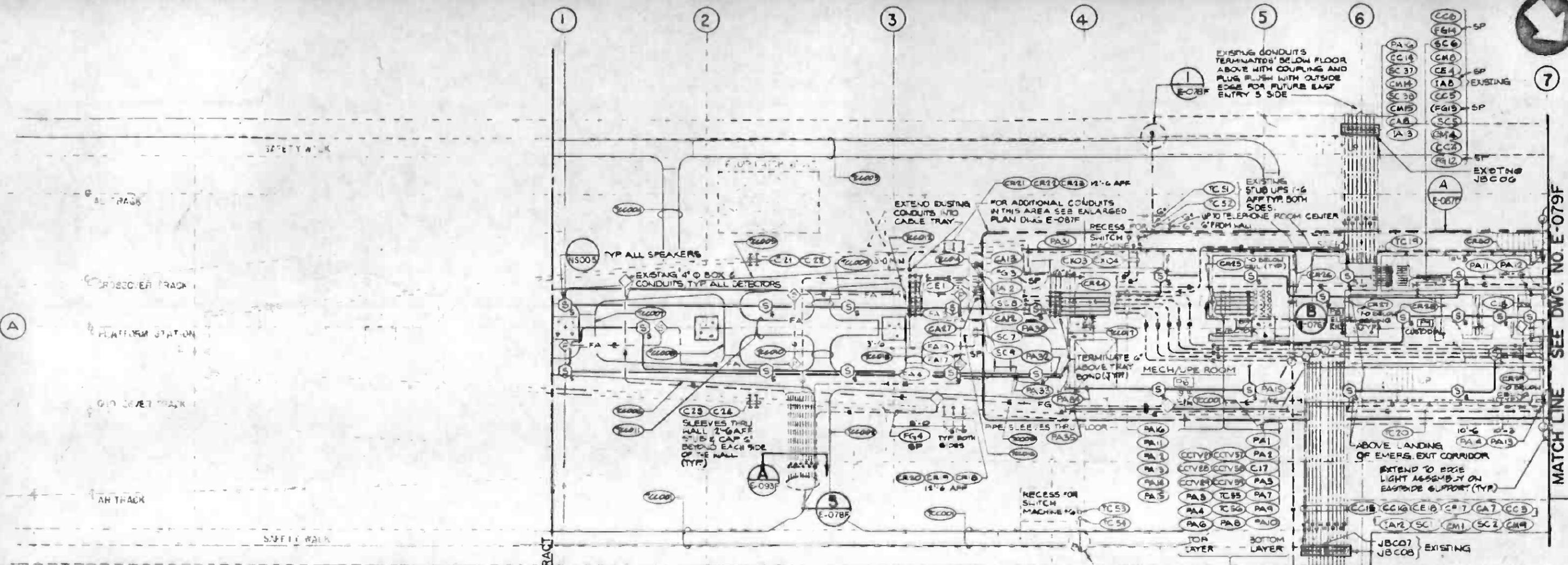
FARE COLLECTION SYSTEM DETAIL 16
 E-075F





- NOTES:**
- 1 ALL CONDUITS 1" GRS UON INSTALL PULL WIRES IN ALL EXISTING AND NEW CONDUITS.
 - 2 RUN ALL EXPOSED CONDUITS PARALLEL TO BUILDING LINES
 - 3 INSTALL 4" x 3" x 2" DEEP BOXES WITH SINGLE-GANG TILE RING IN WALLS WITH TILE FINISH AND SINGLE-GANG MASONRY BOXES ELSEWHERE. CENTER BOXES 3'-9" AFF. AND 2" FROM LATCH SIDE OF DOOR FRAME OPENING U.O.N. IF MULTIPLE OUTLETS OCCUR AT A DOOR INSTALL OUTLETS ON 6" CENTERS 3'-9" AFF. WITH FIRST OUTLET 2" FROM DOOR OPENING. PROVIDE GASKETED COVER PLATES FOR ALL NEW AND EXISTING OUTLETS. EXTEND EXISTING CONDUITS TO OUTLETS. ALL BOXES TO BE GALVANIZED SHEET STEEL WITH 1" KNOCKOUTS, AND GROUNDING SCREW.
 - 4 INSTALL CAST FLUSH 3" DEEP 4" Ø JUNCTION BOX 8'-0" AFF IN DUCT FOR FUTURE DETECTOR. BOXES TO BE GALVANIZED WITH THREADED HUBS. EXTEND EXISTING CONDUITS TO BOXES.
 - 5 INSTALL NEMA 12 2'6" x 3'6" x 1'-0" DEEP BOX FOR SCADA. CENTERED 4'-0" AFF U.O.N. LOCATE TO CLEAR EQUIPMENT. BOX TO HAVE REMOVABLE EQUIPMENT MOUNTING BACK PANEL AND HINGED FRONT DOOR.
 - 6 EXTEND CONDUIT TO PELIN FHC (AND ETEL ON FREE STANDING F-C)
- REFERENCES:**
1. LEGEND: E-001F
 2. RISER DIAGRAMS: E-070F TO E-075F
 3. LIGHTING: E-066F
 4. POWER I: E-028F
 5. PULLBOX SCHEDULE: E-0180F
 6. CONDUIT SCHEDULE: E-095F TO E-101F
 7. C.I.C. INSTALLATION: E-095E

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY J.W. SHANNON DRAWN BY J.K. CZECH CHECKED BY K.D. JIE IN CHARGE J.C. CHANG DATE 1/1/80		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 		LA CBD TO NORTH HOLLYWOOD UNION STATION EAST ANCILLARY ROOMS-MEZZANINE LEVEL TRAIN CONTROL & COMM. RACEWAY PLAN		CONTRACT NO. A136 DRAWING NO. E-076F SCALE AS NOTED SHEET NO. A640/20	
REVISIONS: 1. REVISED PER CR 7-009 2. REVISED PER CR 5-208 3. INITIAL ISSUE				SUBMITTED 		APPROVED 		N.I.C. (SEE NOTE 10)		DDUPLICATE ORIGINAL	

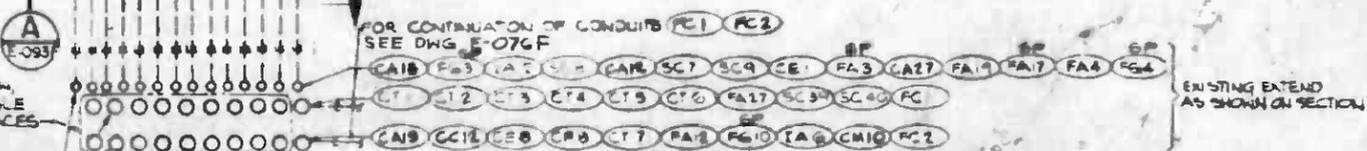


PLAN A
1/8"=1'-0" E-078F

2
1/2"=1'-0" E-078F

EXISTING 6/8 CONDUIT SLEEVES THRU FLOOR BOND TO CABLE TRAY BELOW. SEE DWG. E-069F FOR CABLE TRAY LOCATION, TYP (8) PLACES.

EXTEND ALL SLEEVES AND CONDUITS TO C/C #3 AS SHOWN ON SECTION.



DETAIL 5
1/2"=1'-0" E-078F E-078F E-078F

- REFERENCES:
- 1- LEGEND: E-001F
 - 2- RISER DIAGRAMS: E-070F TO E-075F. FOR NOTES SEE DWG. E-076F.
 - 3- LIGHTING: E-018F
 - 4- POWER: E-030F
 - 5- PULL BOX SCHEDULE: E-30F
 - 6- CONDUIT SCHEDULE: E-095F TO E-101F

- NOTES:
- 1. FOR NOTES SEE DWG. E-076F.
 - 2. SEE NOTE 3, DWG. E-071F.

DETAIL 1 (SHOWN)
1/8"=1'-0" E-078F E-078F

DETAIL 2 (SIMILAR, OPPOSITE HAND)
1/8"=1'-0" E-078F E-078F

REV	DATE	BY	APP	DESCRIPTION

DESIGNED BY J.W. SHANNON	
DRAWN BY J.K. CZECH	
CHECKED BY K. DJIF	
IN CHARGE J.C. CHANG	
DATE 17 APR 85	

**SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT**

HARRY WEESE & ASSOCIATES
TIMPETS - ARBET - McCARTNEY - STRATTON
ENVIRONMENTAL COLLABORATIVE INC.
GUY WONG ASSOCIATES

DMJM/PBOD/KE MWA
GENERAL CONSULTANTS

APPROVED

**LA CBD TO NORTH HOLLYWOOD
UNION STATION**

EAST ANCILLARY ROOMS TRACK LEVEL
TRAIN CONTROL & COMM. RACEWAY PLAN

CONTRACT NO.	A136
DRAWING NO.	E-078F
REV.	2
SCALE	AS NOTED
SHEET NO.	A640/22

KEY PLAN **DUPLICATE ORIGINAL**

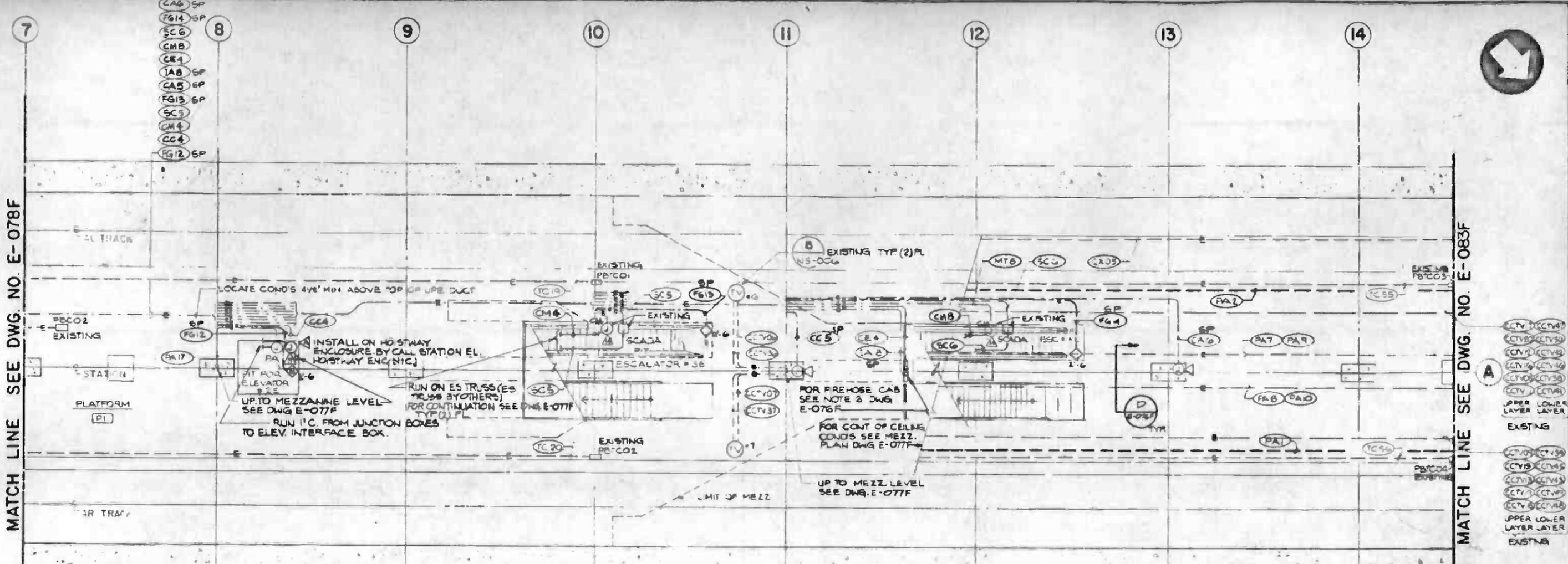


SEE PLAN E-079F
STA 03+70.95
7/8" E.L. 2/5" D.

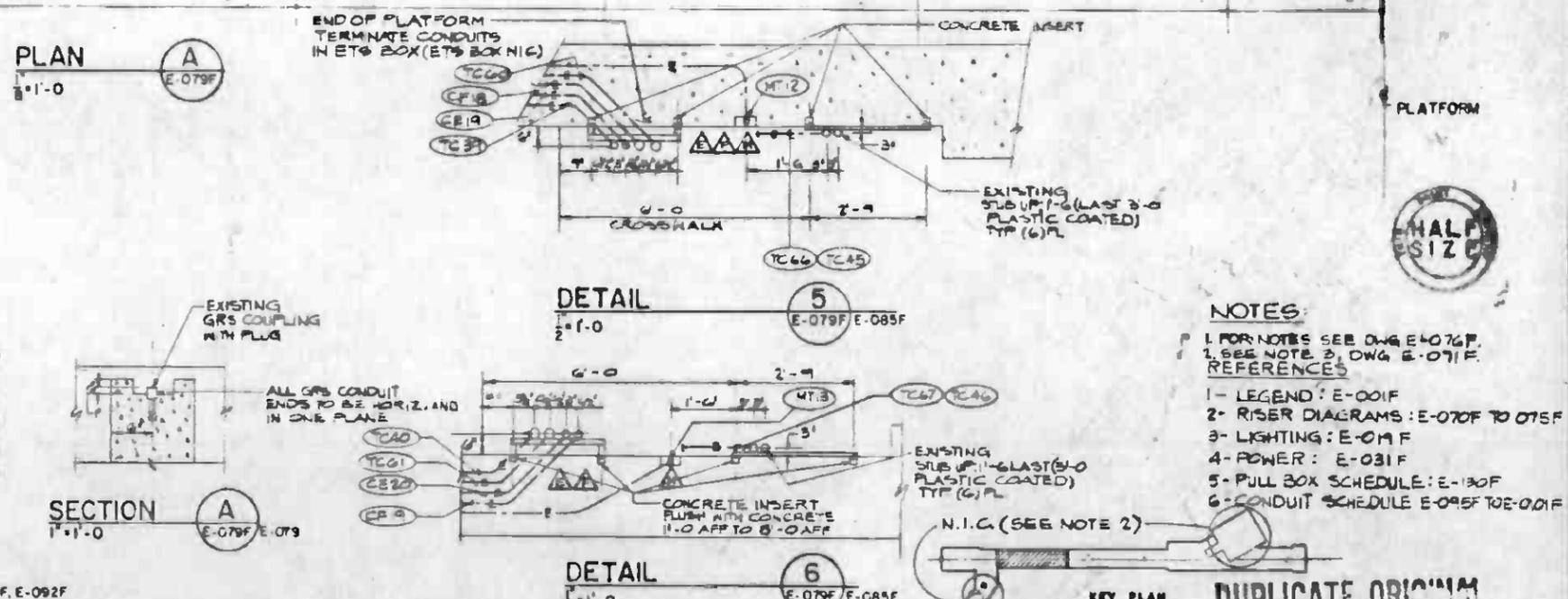
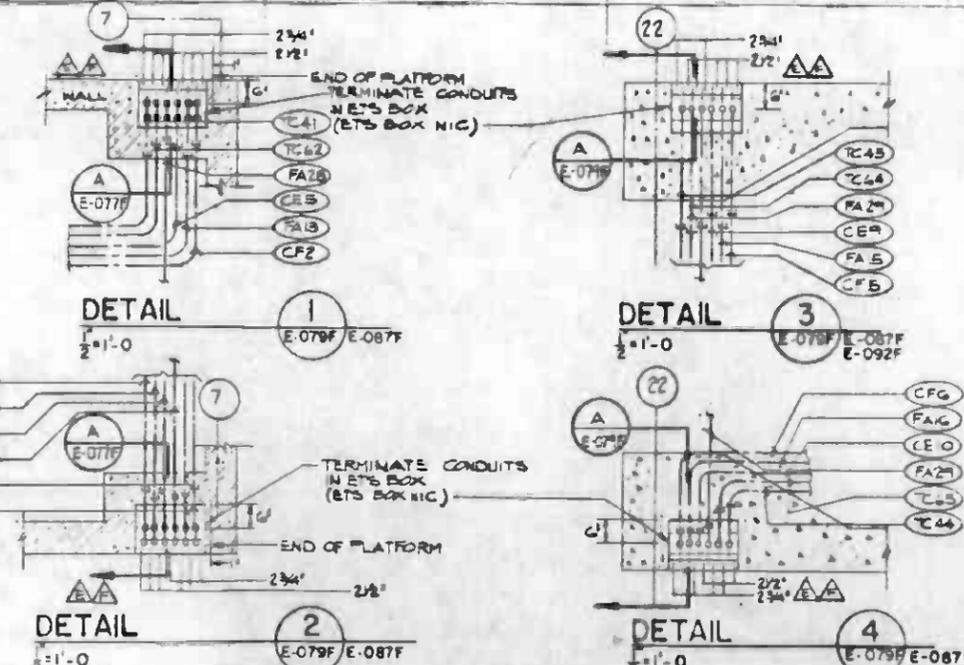
MATCH LINE SEE DWG. NO. E-078F

MATCH LINE SEE DWG. NO. E-083F

- CA6 SP
- FG14 SP
- SC6
- CMB
- CE4
- LAB SP
- CA5 SP
- FG13 SP
- SC3
- CH4
- CG4
- FG12 SP



- CTV1
- CTV2
- CTV3
- CTV4
- CTV5
- CTV6
- CTV7
- CTV8
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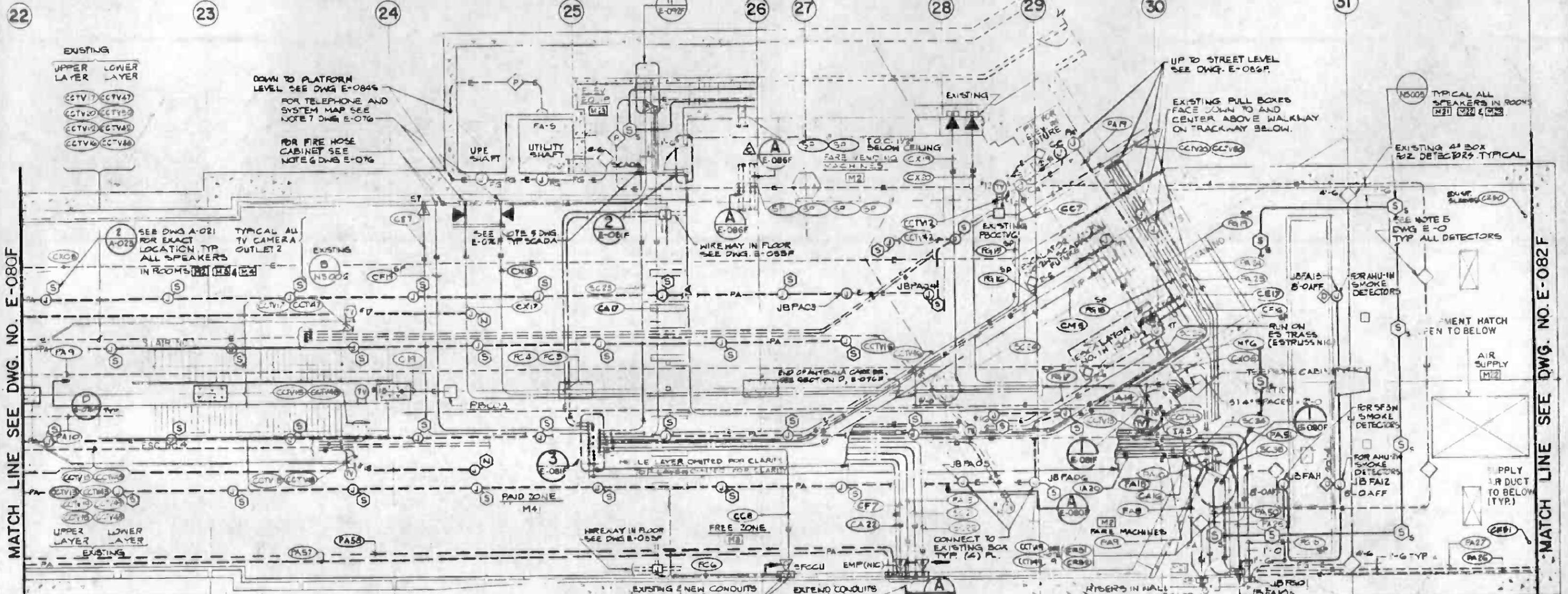
- NOTES:**
- 1- FOR NOTES SEE DWG. E-076F.
 - 2- SEE NOTE 3, DWG. E-071F.
- REFERENCES:**
- 1- LEGEND: E-001F
 - 2- RISER DIAGRAMS: E-070F TO 075F
 - 3- LIGHTING: E-014F
 - 4- POWER: E-031F
 - 5- PULL BOX SCHEDULE: E-130F
 - 6- CONDUIT SCHEDULE: E-095F TO E-001F

BEGIN PLATFORM
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T/R EL. 239.01

HALF SIZE

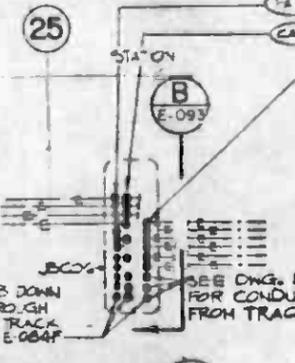
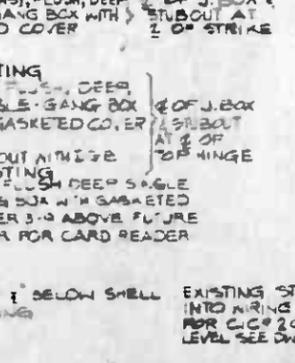
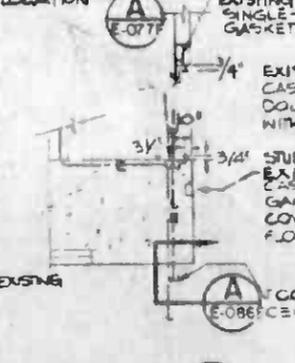
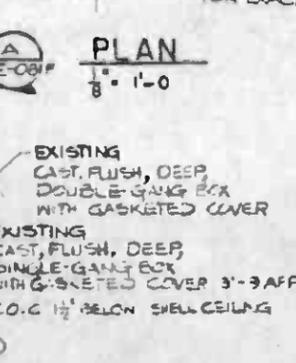
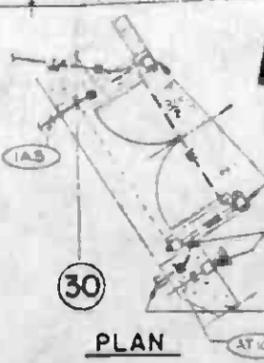
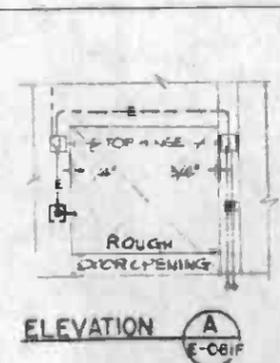
KEY PLAN **DUPLICATE ORIGINAL**

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY J.W. SHANNON DRAWN BY J.K. CRECH CHECKED BY K. DJIE IN CHARGE J.C. CHANG DATE 17 APR 88		REGISTERED PROFESSIONAL ENGINEER 		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 		LA CBD TO NORTH HOLLYWOOD UNION STATION EAST PORTION PLATFORM LEVEL TRAIN CONTROL & COMM. RACEWAY PLAN		CONTRACT NO. A136 DRAWING NO. E-079F SCALE AS NOTED SHEET NO. A640/23	
REV.	DATE	BY	APP.	DESCRIPTION	REV.	DATE	BY	APP.	DESCRIPTION	APPROVED	
1	5/17/88	WEM	AS	REVISED PER CR 7-009							
2	7/26/88	WEM	AS	REVISED PER CR 5-208							
3	4/13/88	CM		INITIAL ISSUE							



MATCH LINE SEE DWG. NO. E-080F

MATCH LINE SEE DWG. NO. E-082F



- NOTES:**
- FOR NOTES SEE DWG. E-076F
 - SEE NOTE 3, DWG. E-071P.
- REFERENCES:**
- LEGEND: E-001F
 - RISER DIAGRAMS E-070F TO E-075F
 - LIGHTING: E-021P
 - POWER: E-033F
 - PULLBOX SCHEDULE: E-100F
 - CONDUIT SCHEDULE: E-095F TO E-010F



DETAIL 1
E-081F E-081F
1/4\"/>

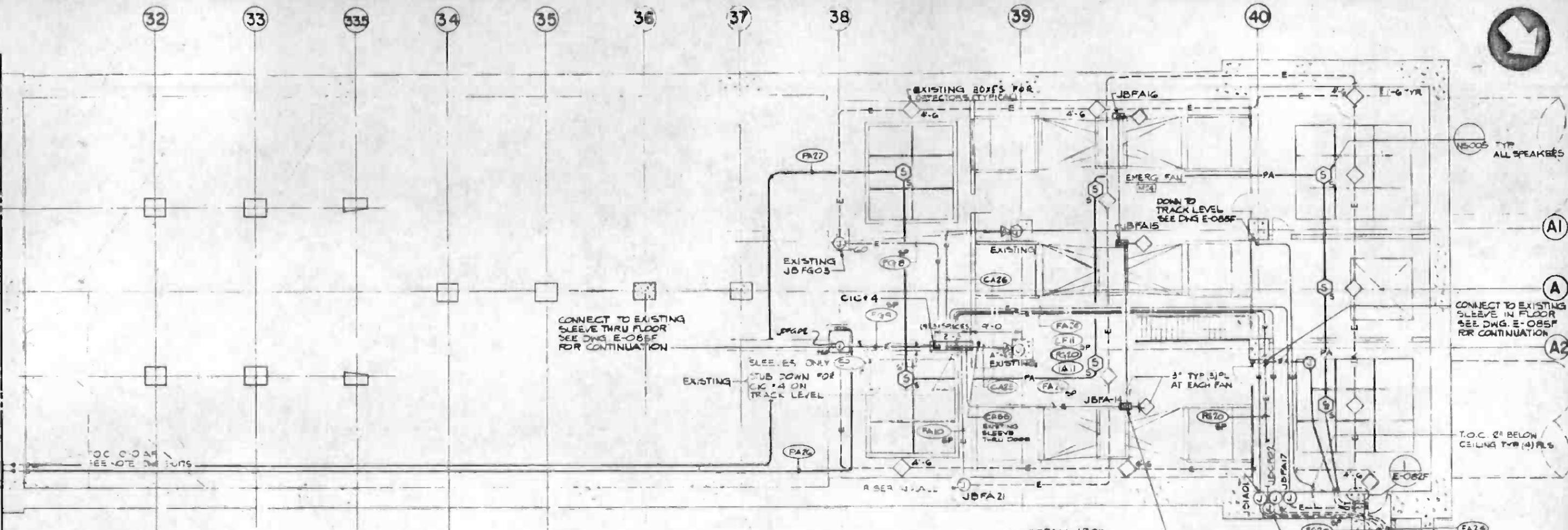
DETAIL 2
E-081F E-081F
1/4\"/>

DETAIL 3
E-081F E-081F
1/4\"/>

DUPLICATE ORIGINAL

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY J.W. SHALLOON DRAWN BY K. ILASZ CHECKED BY K. D. JEFF IN CHARGE J.C. CHAN DATE 7 APR 85		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT 		LA CBD TO NORTH HOLLYWOOD UNION STATION WEST ANCILLARY ROOM MEZZANINE LEVEL TRAIN CONTROL & COMM. RACEWAY PLAN		CONTRACT NO. A136 DRAWING NO. E-081F REVISION 2 SCALE AS NOTED SHEET NO. A640/25	
REV.	DATE	BY	APP.	DESCRIPTION	REV.	DATE	BY	APP.	DESCRIPTION
1	11-7-84	WEM	AS	REVISED PER CR 7-009					
2	1-19-85	WEM	AS	REVISED PER CR 5-208					
				INITIAL ISSUE					

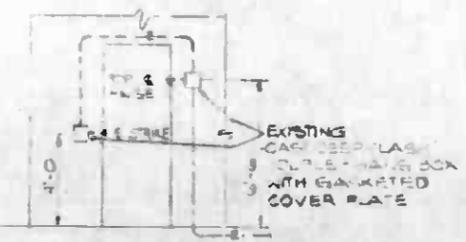
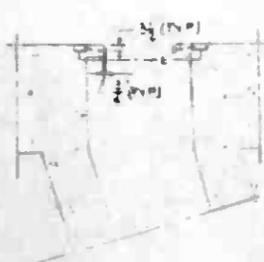
MATCH LINE SEE DWG. NO. E-081F



PLAN A
1/4" = 1'-0" E-082F

- NOTES:**
- FOR NOTES SEE DWG E-076F
 - PROVIDE JUNCTION BOX AT INTERFACE POINT WITH ADEQUATE TERMINATION CAPABILITY FOR FUTURE CONTINUITY OF WIRING. A BIDDING CONTRACTOR SHALL INSTALL WIRING IN RACEWAY. CROSSING END OF CONTRACT LIMITS, AFTER PROPER COORDINATION WITH AHT CONTRACTOR.
 - SEE NOTE 3, DWG. E-071F.

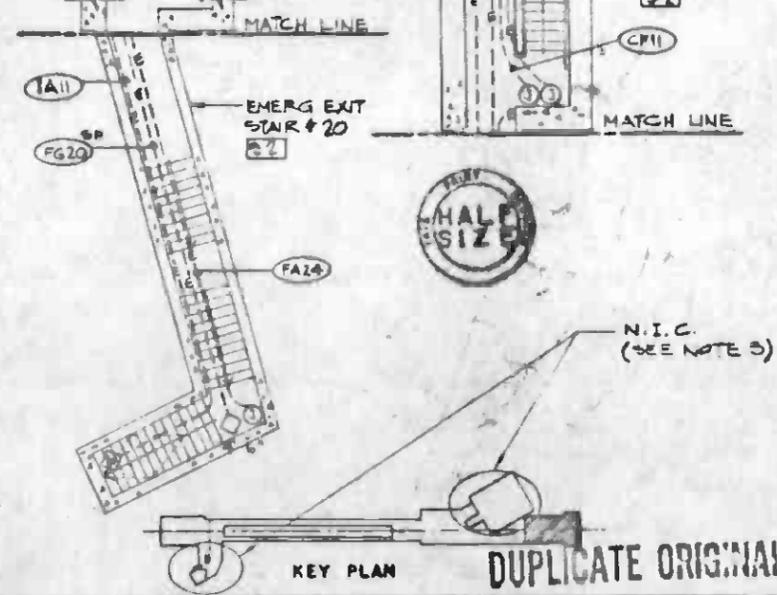
INSTALL JBOX ON FAN HOUSING NEAR SMOKE DETECTORS. CONNECT TO EXISTING CONDUITS IN FLOOR AND SMOKE DETECTOR TYP (3) PL



PARTIAL ELEVATION

PLAN
DETAIL 1
1/4" = 1'-0" E-082F E-082F

- REFERENCES:**
- LEGEND: E-004F
 - RISER DIAGRAMS: E-070F TO E-075F
 - LIGHTING: E-022F
 - POWER: E-034F
 - PULL BOX SCHEDULE: E-100F
 - CONDUIT SCHEDULE: E-095F TO E-101F



KEY PLAN
DUPLICATE ORIGINAL

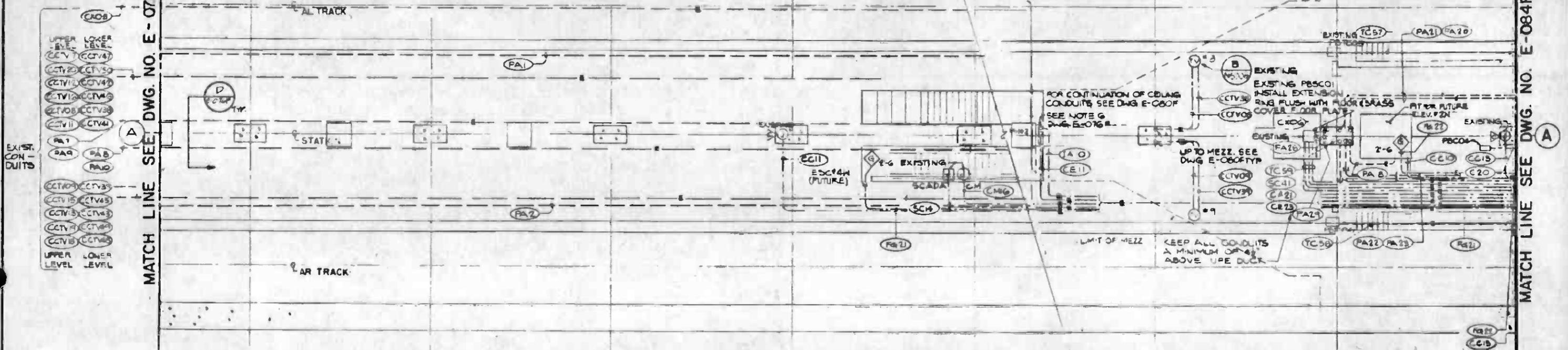
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY J.W. SHANNON DRAWN BY K. ILASE CHECKED BY K. DJIE IN CHARGE J.C. CHANG DATE 17 APR 85	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		CONTRACT NO. A136 DRAWING NO. E-082F SCALE AS NOTED SHEET NO. A640/26
REV. DATE BY SUB. APP. DESCRIPTION	REV. DATE BY SUB. APP. DESCRIPTION	2 8/78 WEM AD REVISED PER CR 7-009 1 12/81 WEM AD REVISED PER CR 5-208 3 1/85 CM INITIAL ISSUE	HARRY WEESE & ASSOCIATES TIPPETTS - ABBETT - MCCARTHY - STRAYTON ENVIRONMENTAL COLLABORATIVE, INC. ONE WONG ASSOCIATES	DMJM/PROD/KE/HWA GENERAL CONSULTANTS	WEST EMERGENCY FAN ROOM-MEZZ LEVEL TRAIN CONTROL & COMM RACEWAY PLAN

15 16 17 18 19 20 21 22



MATCH LINE SEE DWG. NO. E-079F

MATCH LINE SEE DWG. NO. E-084F



- EXIST. CONDUITS
- UPPER LEVEL
 - LOWER LEVEL
 - CCV1
 - CCV2
 - CCV3
 - CCV4
 - CCV5
 - CCV6
 - CCV7
 - CCV8
 - CCV9
 - CCV10
 - CCV11
 - CCV12
 - CCV13
 - CCV14
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 - CCV97
 - CCV98
 - CCV99
 - CCV100

- EXISTING CONDUITS
- PA1
 - PA2
 - PA3
 - PA4
 - PA5
 - PA6
 - PA7
 - PA8
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 - PA10
 - PA11
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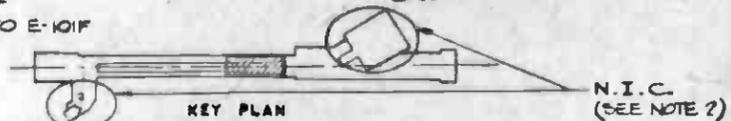
PLAN A
1/8" = 1'-0" E-083F



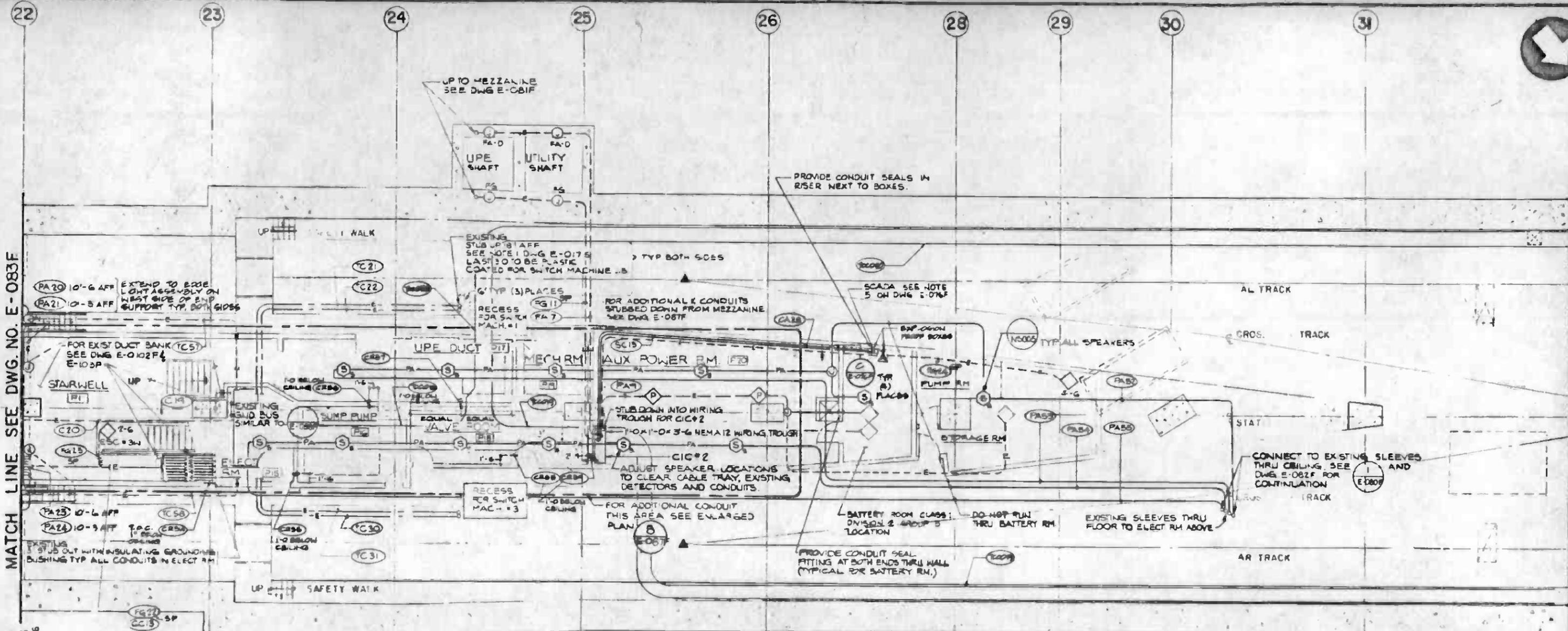
- REFERENCES:
- 1- LEGEND: E-001F
 - 2- RISER DIAGRAMS: E-070F TO E-075F
 - 3- LIGHTING: E-022F
 - 4- POWER: E-034F
 - 5- PULL BOX SCHEDULES: E-120F
 - 6- CONDUIT SCHEDULE: E-095F TO E-101F

- NOTES:
- 1- FOR NOTES SEE DWG. E-076F.
 - 2- SEE NOTE 3, DWG. E-071F.

DUPLICATE ORIGINAL



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REV.	DATE	BY	SUB.	APP.	DESCRIPTION	REV.	DATE	BY	SUB.	APP.	DESCRIPTION						
						2	5/17/85	WEM			REVISED PER CR 7-004						
						3	5/20/85	WEM	AS		REVISED PER CR 5-208						
						0	4/19/85	JM			INITIAL ISSUE						



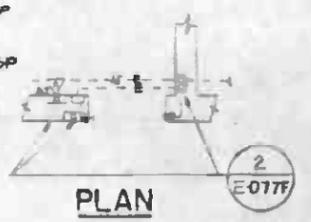
MATCH LINE SEE DWG. NO. E-083F

MATCH LINE SEE DWG. NO. E-085F

ENCL. E-084F
STA. 10+30.56
T.O.M. EL. 237.66

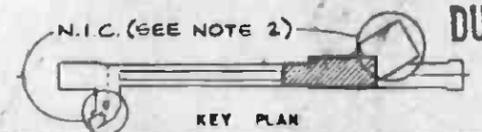
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- CG100 SP

PLAN **A**
E-084F E-084F



DETAIL **1**
E-084F E-087F
1/4" = 1'-0"

- NOTES:**
- SEE DWG. E-076 F FOR NOTES.
 - SEE NOTE 3, DWG. E-071 F
- REFERENCES:**
- LEGEND - E-001 F
 - RISER DIAGRAMS - E-070 F TO E-075 F
 - LIGHTING - E-024 F
 - POWER - E-036 F
 - PULLBOX SCHEDULE - E-180 F
 - CONDUIT SCHEDULE - E-076 F TO E-101 F



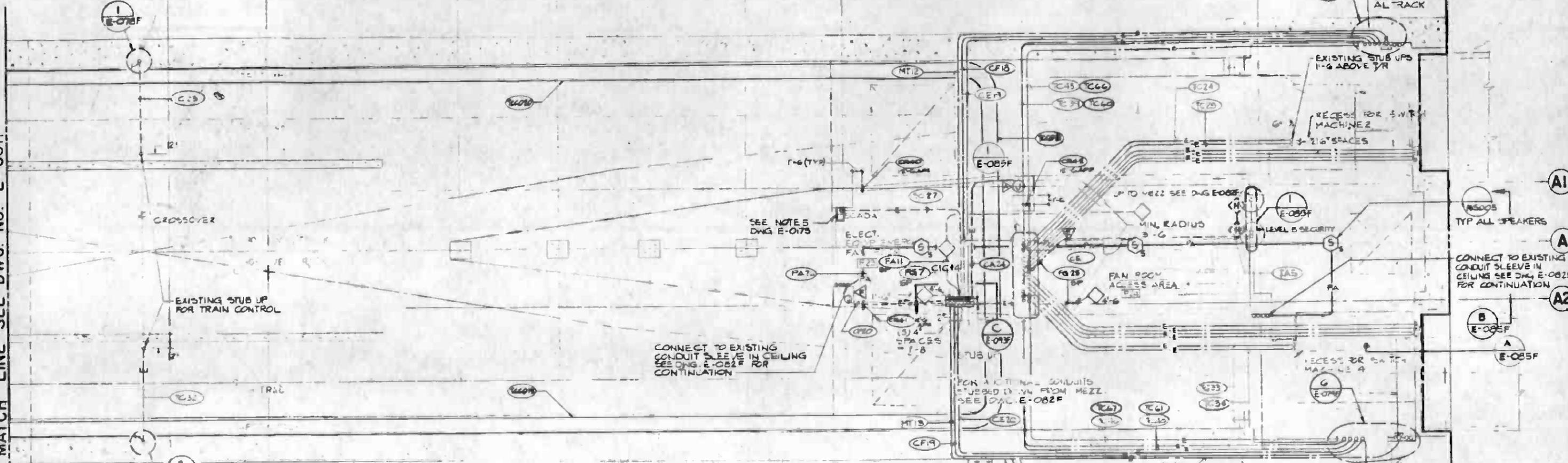
DUPLICATE ORIGINAL

<p>THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.</p>				<p>DESIGNED BY J.W. SHANNON</p> <p>DRAWN BY J.K. CZECH</p> <p>CHECKED BY M. DAVIS</p> <p>IN CHARGE J.C. CHANG</p> <p>DATE 17 APR 85</p>		<p>SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT</p> <p>METRO RAIL PROJECT</p> <p>HARRY WEEBE & ASSOCIATES TIPPETT - ARBETT - MCCARTHY - STRATTON ENVIRONMENTAL COLLABORATIVE, INC. GIR WONG ASSOCIATES</p> <p>DMJM/PBDO/KE/HWA GENERAL CONTRACTORS</p>		<p>CONTRACT NO. A136</p> <p>DRAWING NO. E-084F</p> <p>SCALE 1/8" = 1'-0"</p> <p>SHEET NO. A640/28</p>	
<p>REVISED PER CA 7-009</p>				<p>NO. 11288</p>		<p>LA CBD TO NORTH HOLLYWOOD UNION STATION</p>			
<p>INITIAL ISSUE</p>				<p>APPROVED</p>		<p>WEST ANCILLARY ROOM, TRACK LEVEL TRAIN CONTROL & COMM. RACEWAY PLAN</p>			
REV.	DATE	BY	APP.	DESCRIPTION	REV.	DATE	BY	APP.	DESCRIPTION

MATCH LINE SEE DWG. NO. E-087F

END OF CONTRACT A136 CONTRACT A141

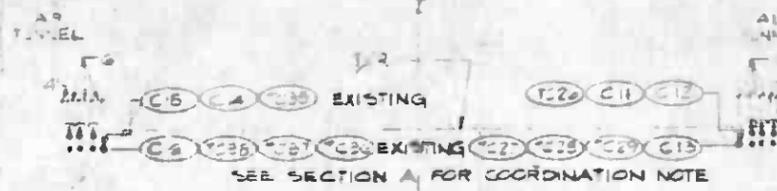
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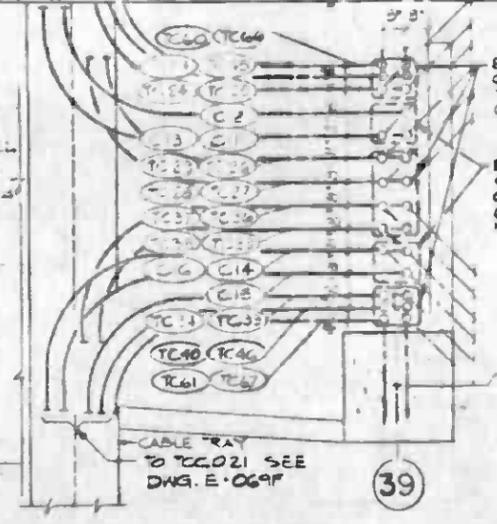
AI
A
A2
B
E-085F
A
E-085F

COMM/TRAIN CONTROL CABLES IN TRENCH (NIC)

STATION



PARTIAL END ELEVATION

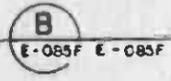
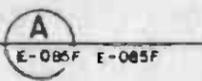


DETAIL

EXTEND EXISTING TRAIN CONTROL CONDUITS TO TRAIN CONTROL SIDE OF CABLE TRAY (SEE NOTE 2 BELOW)
EXTEND EXISTING CT6 SYSTEM CONDUITS TO COMMUNICATION SIDE OF CABLE TRAY (SEE NOTE 2 BELOW)

- NOTES:
 1- FOR NOTES SEE DWG E-075F
 2- USE GRS CONDUITS WITH IGB ON ENDS. BOND TO TRAY WITH 80 GREEN THW. MINIMUM BENDING RADIUS OF ALL CONDUITS IS 3'-0"
 3- SEE NOTE 3, DWG. E-071F
 REFERENCES:
 1- LEGEND: E-001F
 2- RIGER DIAGRAMS: E-070F TO E-075F
 3- LIGHTING: E-022F
 4- POWER: E-024F
 5- PULL BOX SCHEDULE: E-100F
 6- CONDUIT SCHEDULE: E-095F TO E-101F

SECTION



KEY PLAN

DUPLICATE ORIGINAL

REV	DATE	BY	CHK	APP	DESCRIPTION

REV	DATE	BY	CHK	APP	DESCRIPTION
1	11/27/87	WEM	AS		REVISED PER CR 7-209
2	12/20/87	WEM	AS		REVISED PER CR 5-206
3	4/20/88				INITIAL ISSUE

DESIGNED BY J.W. SHANNON	
DRAWN BY K.ILASZ	
CHECKED BY K. DJIE	
DATE J.C. CHANG	
SIGNATURE 17 APR 85	

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
 METRO RAIL PROJECT

HARRY WEESE & ASSOCIATES
 TIPPETTS - ABBETT - MCCARTHY - STRATTON
 ENVIRONMENTAL COLLABORATIVE, INC.
 GIN WONG ASSOCIATES

DMJM/PBQD/KE/HWA
 GENERAL CONSULTANTS

LA CBD TO NORTH HOLLYWOOD
 UNION STATION
 WEST EMERGENCY FAN ROOM TRACK LEVEL
 TRAIN CONTROL & COMM. RACEWAY PLAN

CONTRACT NO.	A136
DRAWING NO.	E-085F
REV.	2
SCALE	AS NOTED
SHEET NO.	A640/29

MATCH LINE
SEE DWG. NO. E-081F

SMOKE EXHAUST
DUCT BELOW UPE
AND EMERG STAIRS

28

NOOS TYR (2) PLACES - 4 Ø 2" CAST IR WITH GASKETED
COVER 6" G AFF

USE EXISTING SLEEVES, TYP (2) PLACES
SP SP SP SP

SMOKE
EXHAUST
SHAFT

FOR FIN. SEE NOTE 6
DWG E-076F

SEE DWG A-022
FOR EXACT LOCATION
TYP (S) F.

ELEV. TO MEZZ.
ELEV. SEE DWG
E-087F

STUBOUT FROM WALL TO CH' BELOW
SHELL CEILING

CONCEAL ABOVE
CEILING TILES

CONDUCTING
SLEEVES

STAR 119
DN

STAR 120
DN

STAR 121
DN

STAR 122
DN

STAR 123
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STAR 124
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STAR 125
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STAR 126
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STAR 127
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STAR 148
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STAR 149
DN

STAR 150
DN

SEE NOTE 5
EXCEPT 2" Ø X 2'-0" 1" Ø, AND Ø-Ø AFF

LOCATE TO CLEAR ES
MACHINERY
SLOPE UP/D
AS LES
E-081

THREADED COUPLING
AND PLUG
REMOVE PLUG AND EXTEND
WHEN SHOWN ON PLAN
TO P.O.C.

LIGHTING FIXTURE SEE E-022 F (OMITTED SOME
LOCATIONS) & ACOUSTICAL TREATMENT TUB

NOTE:
LIGHT OMITTED SOME
LOCATIONS

RUN ON ES TRUSS (ES TRUSS
NIC) SEE DWG. E-085F RR
CONTINUATION

SECTION
A
1/4" = 1'-0"

E-086F E-081F
E-086F E-088F

EMERGENCY
EXIT

EXISTING

CAST FLUSH DEEP
SINGLE GANG BOX
WITH GASKETED COVER

CAST FLUSH DEEP
DOUBLE GANG BOX
WITH GASKETED COVER

SHELL CEILING
ACOUSTIC TREATMENT
(NIC)

LOBBY SIDE

PLAN

PARTIAL ELEVATION

DETAIL
I
3/4" = 1'-0"

E-086F E-085F

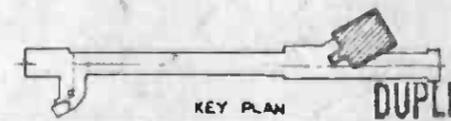
NOTES:
FOR NOTES SEE DWG E-076F

REFERENCES:
1-LEGEND: E-001F
2-RISER DIAGRAMS: E-070F TO E-075F
3-LIGHTING: E-021F
4-POWER: E-039F
5-PULL BOX SCHEDULE: E-130F

PLAN A
1/8" = 1'-0"

E-086F

6-CONDUIT SCHEDULE: E-098F 10E-101F



HALF
SIZE

DUPLICATE ORIGINAL

REV.	DATE	BY	CHK.	APP.	DESCRIPTION

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY
J.W. SHANNON

DRAWN BY
J.K. CTECH

CHECKED BY
K. DJIS

IN CHARGE
J.C. CHANG

DATE
7 APR 85

REVISOR
WEN AS

REVISION
REVISED PER CR 5-2CB

ISSUE
INITIAL ISSUE

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

HARRY WEESE & ASSOCIATES
TIPPLETT - ARBETT - MCCARTHY - STRATTON
ENVIRONMENTAL COLLABORATIVE, INC.
GIR WONG ASSOCIATES

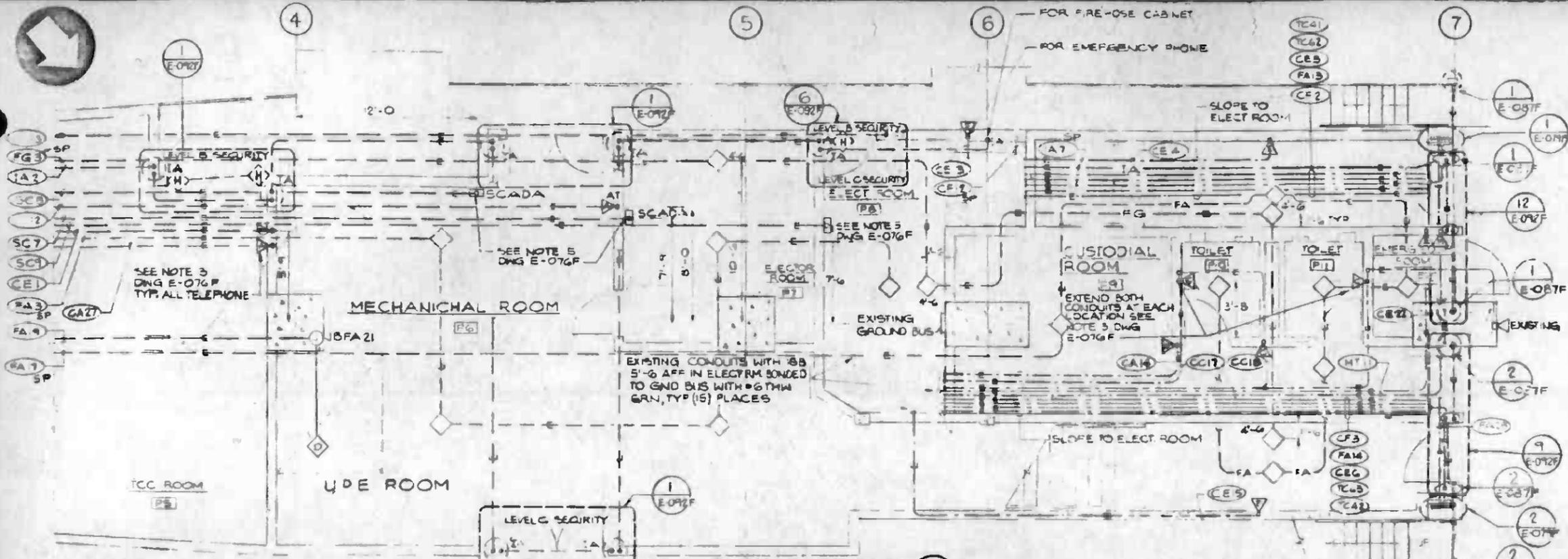
DMJM/PBOD/KE/HWA
GENERAL CONSULTANTS

APPROVED

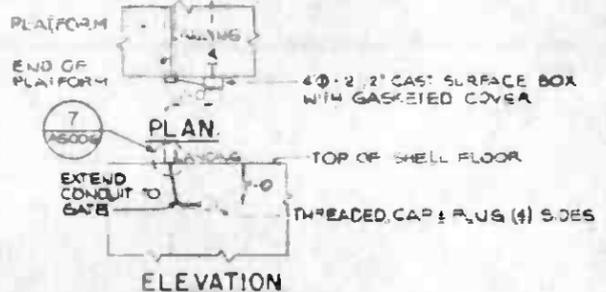
LA CBD TO NORTH HOLLYWOOD
UNION STATION

WEST ENTRANCE ROOF - STREET LEVEL
TRAIN CONTROL & COMM RACEWAY PLAN

CONTRACT NO.	A136
DRAWING NO.	E-086F
SCALE	AS NOTED
SHEET NO.	A640/30



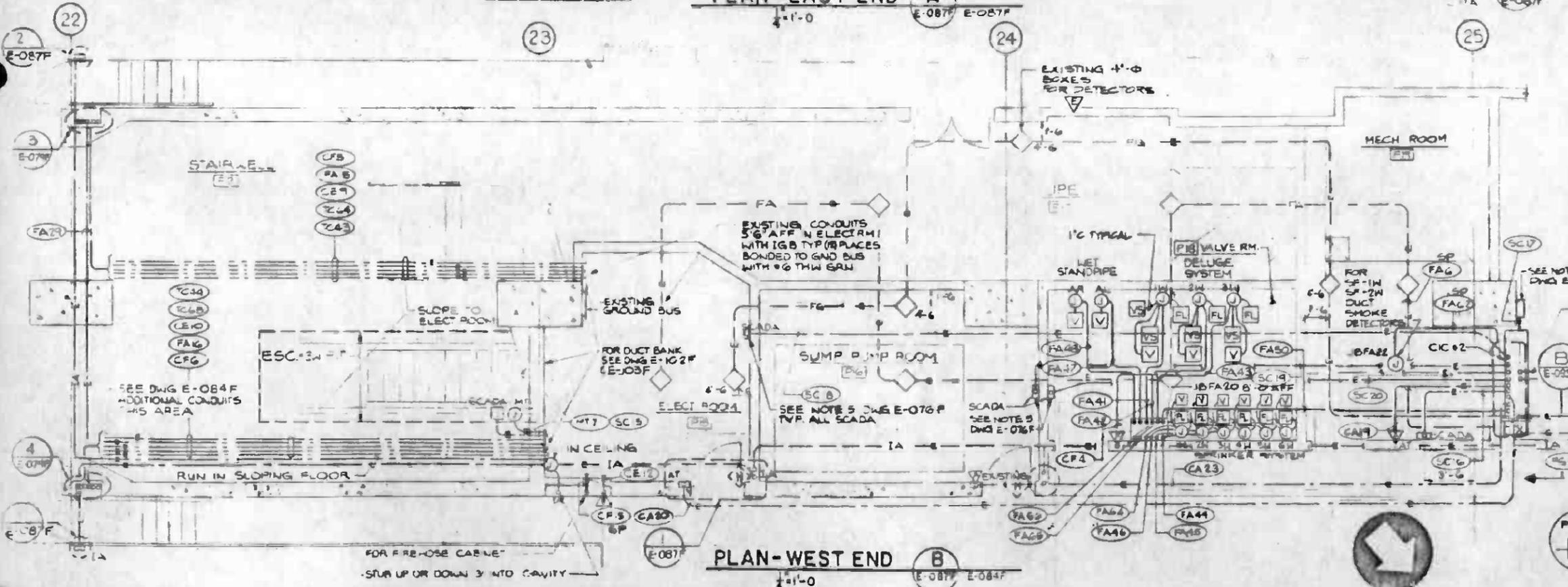
PLAN - EAST END A
1'-0"



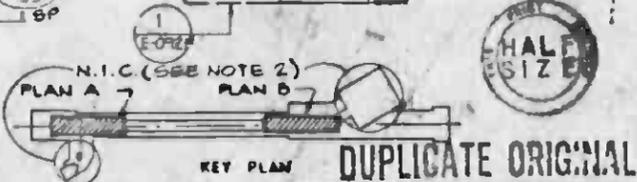
DETAIL 1 (SHOWN)
3/8" - 1'-0" E-087F E-087F

DETAIL 2 (SIMILAR, OPPOSITE HAND)
3/8" - 1'-0" E-087F E-087F

- NOTES:**
- FOR NOTES SEE DWG E-076F.
 - SEE NOTE 3, DWG. E-071F.
- REFERENCES:**
- LEGEND: E-001F
 - RISERS DIAGRAMS: E-070F TO E-075F
 - LIGHTING: E-066F & E-021F
 - POWER: E-028F & E-053F
 - PULLBOX SCHEDULE: E-130F
 - CONDUIT SCHEDULE: E-095F TO E-101F.



PLAN - WEST END B
1'-0"



KEY PLAN
DUPLICATE ORIGINAL

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY	J.W. SHANNON
DRAWN BY	J.V. CEBICH
CHECKED BY	K. DUB
IN CHARGE	J.C. CHANG
DATE	17 APR 65

REV. DATE	BY	APP.	DESCRIPTION
0178	NEM	04	REVISED PER CR7-009
1768	NEM	AS	REVISED PER CR5-208
418	JA		INITIAL ISSUE



**SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT**

HARRY WESE & ASSOCIATES
TIMPETS - ARATTY - MCCARTHY - STRATTON
ENVIRONMENTAL COLLABORATIVE, INC.
ONE WOODS ASSOCIATES

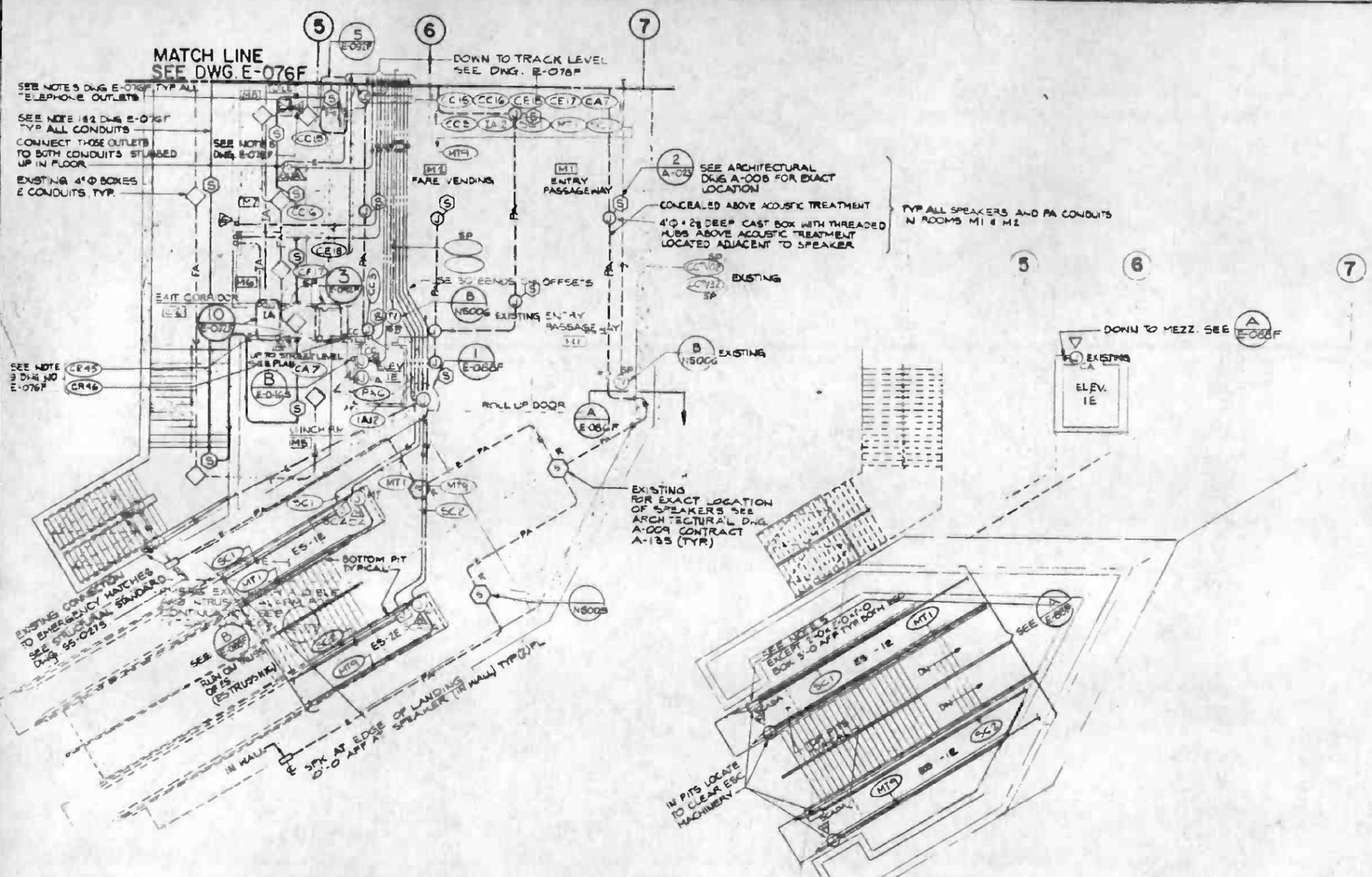
DMJM/PSGO/KE/MWA
GENERAL CONSULTANTS

APPROVED

**LA CBD TO NORTH HOLLYWOOD
UNION STATION**

ANCILLARY RMS. TRACK LEVEL - ENLARGED
TRAIN CONTROL & COMM. RACEWAY PLAN

CONTRACT NO.	A136
DRAWING NO.	E-087F
SCALE	AS NOTED
SHEET NO.	A640/31



MATCH LINE
SEE DWG. E-076F

DOWN TO TRACK LEVEL
SEE DWG. E-076F

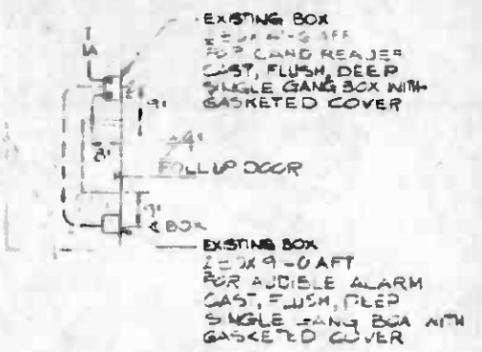
SEE NOTE 3 DWG. E-076F TYP ALL TELEPHONE OUTLETS
SEE NOTE 1 & 2 DWG. E-076F TYP ALL CONDUITS
CONNECT THOSE OUTLETS TO BOTH CONDUITS STUBBED UP IN FLOOR
EXISTING 4" Ø BOXES & CONDUITS, TYP.

2 SEE ARCHITECTURAL DWG. A-008 FOR EXACT LOCATION
CONCEALED ABOVE ACOUSTIC TREATMENT
4" Ø x 28" DEEP CAST BOX WITH THREADED HUBS ABOVE ACOUSTIC TREATMENT LOCATED ADJACENT TO SPEAKER

TYP ALL SPEAKERS AND PA CONDUITS IN ROOMS M1 & M2

DOWN TO MEZZ. SEE E-088F

EXISTING FOR EXACT LOCATION OF SPEAKERS SEE ARCHITECTURAL DWG. A-009 CONTRACT A-135 (TYP.)



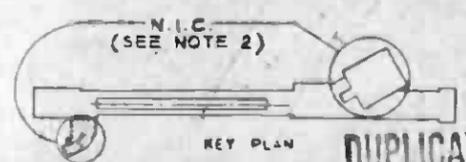
DETAIL 1
1/2" = 1'-0"
E-088F E-088F
E-088F E-088F

NOTES:
1. FOR NOTES SEE DWG. E-076 F.
2. SEE NOTE 3, DWG. E-071 F.

REFERENCES:
1- LEGEND: E-0
2- RISER DIAGRAMS: E-070F TO E-075F
3- LIGHTING: E-022F
4- POWER: E-034F
5- PULL BOX SCHEDULE: E-061F
6- CONDUIT SCHEDULE: E-095F TO E-101F
7- EXISTING WORK DOWN ON PREVIOUS CONTRACT DWG. E-046S.

MEZZANINE LEVEL PLAN A
1/8" = 1'-0"
E-088F E-088F

STREET LEVEL PLAN B
1/8" = 1'-0"
E-088F E-088F



REV	DATE	BY	SUB	APP	DESCRIPTION

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DESIGNED BY: J. W. SHANNON
DRAWN BY: J. K. CZECH
CHECKED BY: K. DJIB
IN CHARGE: J. C. CHANG
DATE: 7 APR 85

REVISIONS:
REV 1: 11/87 NEM
REV 2: 1/85 CM
REVISED PER CR 7-009
INITIAL ISSUE



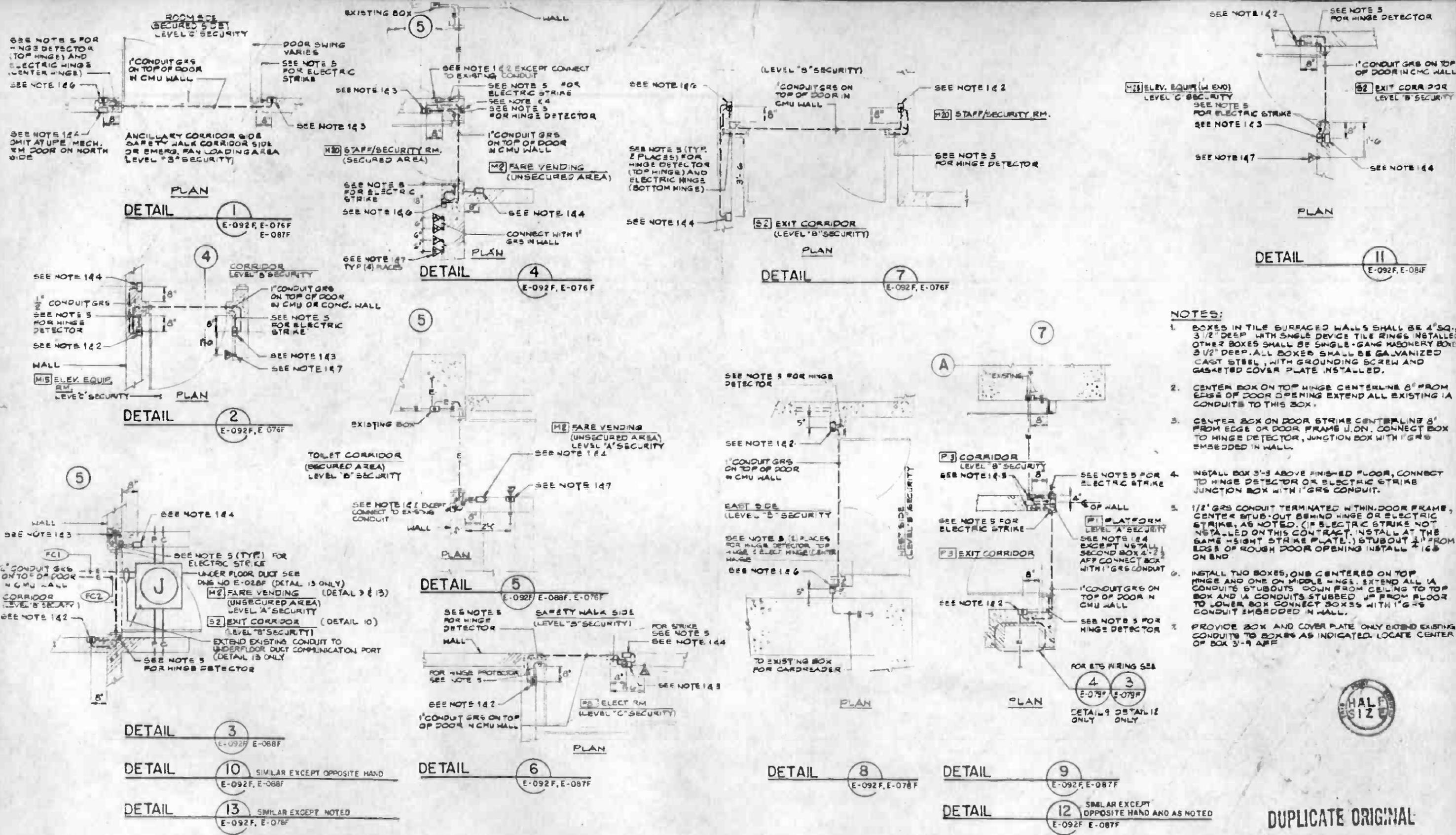
SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

HARRY WEESE & ASSOCIATES
EMMETT - ABBETT - HICKSLEY - STRATTON
ENVIRONMENTAL COLLABORATIVE, INC.
LOW BONG ASSOCIATES

DMJM/PBQO KE/MWA
GENERAL CONSULTANTS

APPROVED: _____

LA CBD TO NORTH HOLLYWOOD UNION STATION		CONTRACT NO. A136
EAST ENTRANCE MEZZ & STREET LEVEL TRAIN CONTROL & COMM. RACEWAY PLAN		DRAWING NO. E-088F
SCALE AS NOTED		REV. 1
SHEET NO. A640/32		

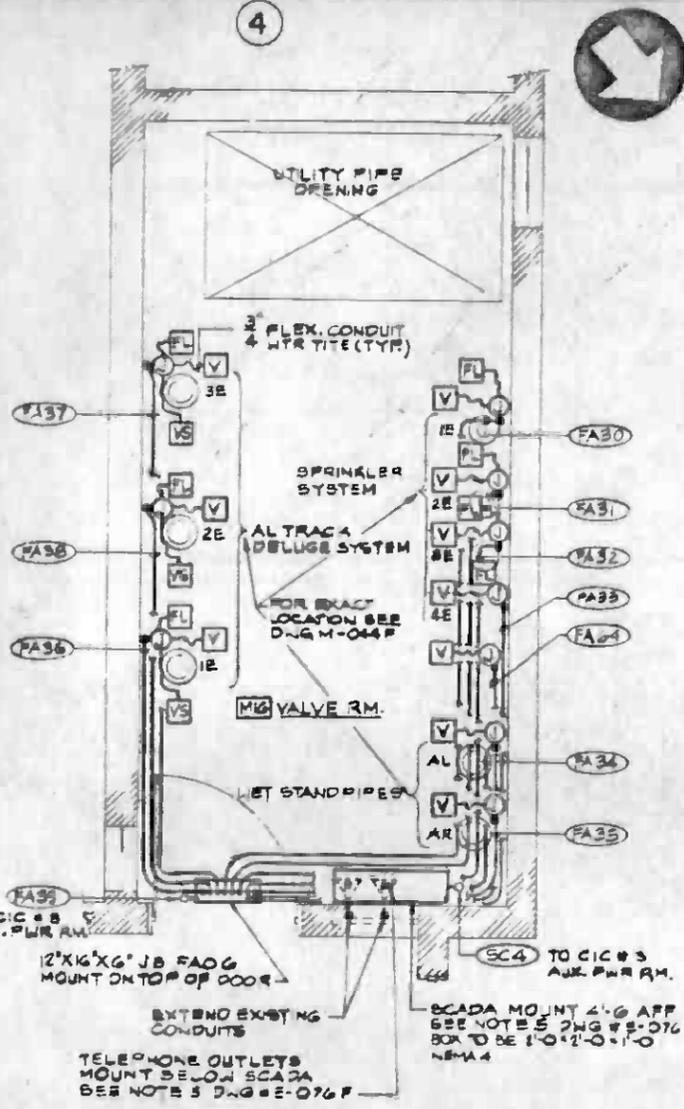


- NOTES:**
- BOXES IN TILE SURFACED WALLS SHALL BE 4" SQ., 3 1/2" DEEP WITH SINGLE DEVICE TILE RINGS INSTALLED. OTHER BOXES SHALL BE SINGLE-GANG MASONRY BOXES 3 1/2" DEEP. ALL BOXES SHALL BE GALVANIZED CAST STEEL, WITH GROUNDING SCREW AND GASKETED COVER PLATE INSTALLED.
 - CENTER BOX ON TOP HINGE CENTERLINE 8" FROM EDGE OF DOOR OPENING. EXTEND ALL EXISTING 1/2" CONDUITS TO THIS BOX.
 - CENTER BOX ON DOOR STRIKE CENTERLINE 8" FROM EDGE OF DOOR FRAME U.O.N. CONNECT BOX TO HINGE DETECTOR, JUNCTION BOX WITH 1" GRS EMBEDDED IN WALL.
 - INSTALL BOX 3-9 ABOVE FINISHED FLOOR, CONNECT TO HINGE DETECTOR OR ELECTRIC STRIKE JUNCTION BOX WITH 1" GRS CONDUIT.
 - 1/2" GRS CONDUIT TERMINATED WITHIN DOOR FRAME, CENTER STUB-OUT BEHIND HINGE OR ELECTRIC STRIKE, AS NOTED. (IF ELECTRIC STRIKE NOT INSTALLED ON THIS CONTRACT, INSTALL AT THE SAME HEIGHT STRIKE PLATE.) STUBOUT 2 1/2" FROM EDGE OF ROUGH DOOR OPENING. INSTALL 4-16 ON END.
 - INSTALL TWO BOXES, ONE CENTERED ON TOP HINGE AND ONE ON MIDDLE HINGE. EXTEND ALL 1/2" CONDUITS STUBOUTS DOWN FROM CEILING TO TOP BOX AND 1/2" CONDUITS STUBBED UP FROM FLOOR TO LOWER BOX. CONNECT BOXES WITH 1" GRS CONDUIT EMBEDDED IN WALL.
 - PROVIDE BOX AND COVER PLATE ONLY. EXTEND EXISTING CONDUITS TO BOXES AS INDICATED. LOCATE CENTER OF BOX 3-9 AFF.

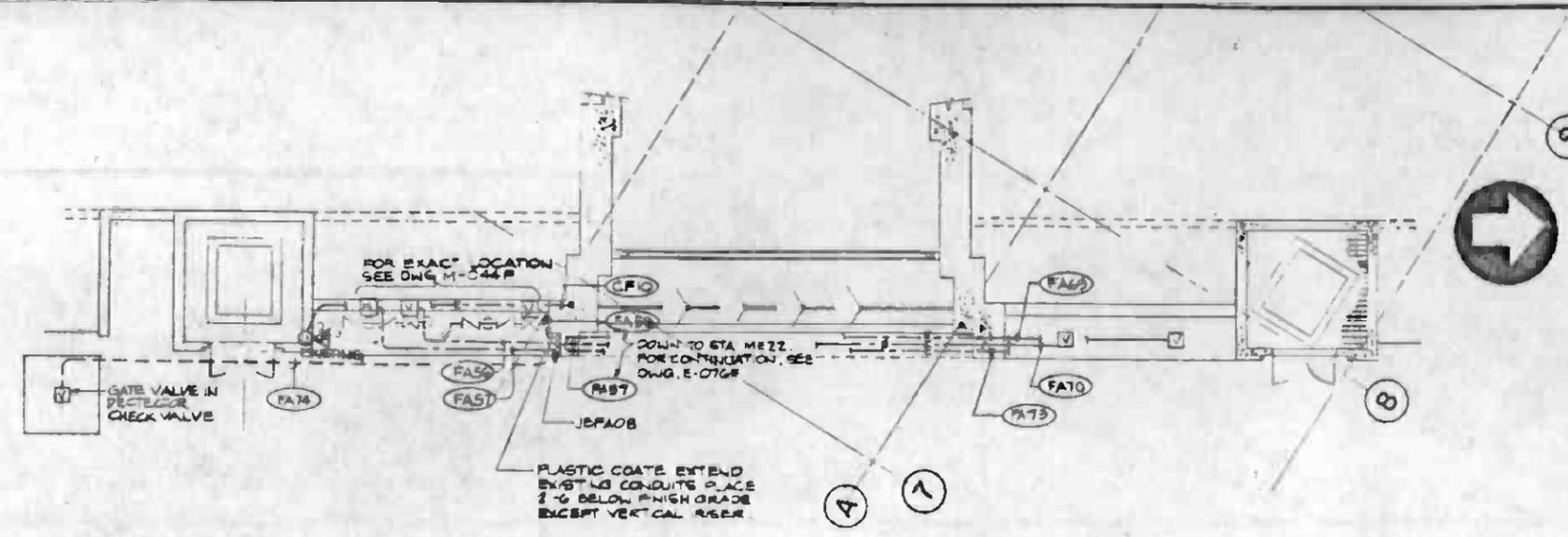


DUPLICATE ORIGINAL

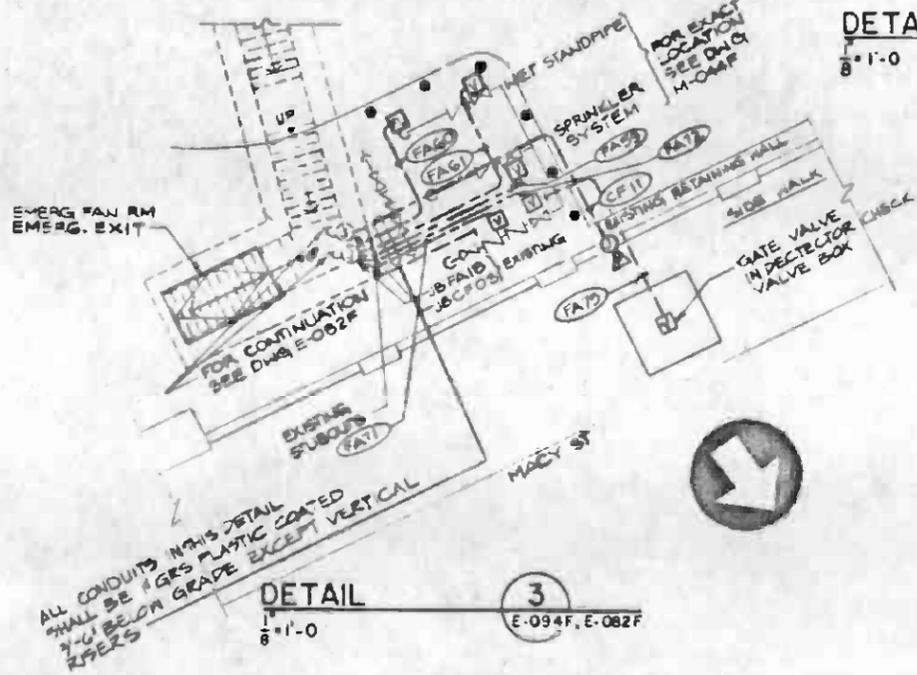
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY J.W. SHANNON DRAWN BY A.C. CANOY CHECKED BY J.C. CHANG IN CHARGE J.C. CHANG DATE 17 APR. 85		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT HARRY WEESE & ASSOCIATES TIMOTHY - ARBETT - MCCARTHY - STRATON ENVIRONMENTAL COLLABORATIVE, INC. GEM WONG ASSOCIATES		CONTRACT NO. A136 DRAWING NO. E-092F SCALE 1/2" = 1'-0" SHEET NO. A640/33	
INITIAL ISSUE				APPROVED SUBMITTED		APPROVED GENERAL CONSULTANTS		LA CBD TO NORTH HOLLYWOOD UNION STATION SECTIONS AND DETAILS SHEET 4	



PLAN
 DETAIL 1
 1/2" = 1'-0" E-094F E-076F



DETAIL 2
 3/8" = 1'-0" E-094F E-076F



DETAIL 3
 1/8" = 1'-0" E-094F, E-082F

NOTES:
 1. SEE NOTE 3, DWG. E-071F.

DUPLICATE ORIGINAL



REV.	DATE	BY	SUB.	APP.	DESCRIPTION

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.	DESIGNED BY J. W. SHANNON DRAWN BY J. K. CZECH CHECKED BY K. DJIE IN CHARGE J. C. CHANG DATE 17 APR 85
REVISED PER CR 7-009 INITIAL ISSUE	

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
 METRO RAIL PROJECT
 HARRY WEESE & ASSOCIATES
 TIPPETT-ARRETT-MCCARTHY-STRATTON
 ENVIRONMENTAL COLLABORATIVE INC
 GIM WONG ASSOCIATES
 SUBMITTED *J. Chan*
 APPROVED _____

CONTRACT NO. **A136**
 DRAWING NO. **E-094F** REV. **1**
 SCALE **AS NOTED**
 SHEET NO. **A640/34**

LA CBD TO NORTH HOLLYWOOD
 UNION STATION
 SECTIONS AND DETAILS
 SHEET 6

ELECTRICAL RACEWAY AND CABLE SCHEDULE

ELECTRICAL RACEWAY AND CABLE SCHEDULE

NO.	FROM	TO	CKTS.	RACEWAY			CONDUCTOR (N/C)			DWG. NO.	SHT. NO.	REMARKS	NO.	FROM	TO	CKTS.	RACEWAY			CONDUCTOR (N/C)			DWG. NO.	SHT. NO.	REMARKS
				METHOD	SIZE	TYPE	NO. & SIZE	TYPE	GND.								METHOD	SIZE	TYPE	NO. & SIZE	TYPE	GND.			
CA 1	BATTERY ROOM (M9)	CIC # 3 SEE NOTE 4		EMBEDDED	1"	GRS				E-076F		CC 1	STATION CONTROL PANEL	CIC # 3 SEE NOTE 4		EMBEDDED	1"	GRS				E-076F			EXTEND EXISTING CONDUIT
CA 2	EQUIPMENT ROOM (M10)	CIC # 3 SEE NOTE 4		EMBEDDED	1"	GRS				E-076F		CC 2	ELEV 1E PIT SEE NOTE 6	E ELECT RM (P8)		EMBEDDED	1"	GRS				E-076F			EXTEND EXISTING CONDUIT
CA 3	AUX POWER ROOM (M11)	CIC # 3 SEE NOTE 4		EMBEDDED	1"	GRS				E-076F		CC 3	ELEV 2E PIT SEE NOTE 6	E ELECT RM (P8)		EMBEDDED	1"	GRS				E-076F			EXISTING CONDUITS RETURN TO CIC # 3 VIA CABLE TRAY
CA 4	AIR SUPPLY ROOM (M12)	CIC # 3 SEE NOTE 4		EMBEDDED	1"	GRS				E-076F		CC 4	CA PHONE PLATF COL 1	E ELECT RM (P8)		EMBEDDED	1"	GRS				E-076F			EXISTING CONDUIT
CA 5	ELEV EQUIP ROOM (M15)	CIC # 3		EMBEDDED	1"	GRS				E-076F		CC 5	CA PHONE PLATF COL 3	E ELECT RM (P8)		EMBEDDED	1"	GRS				E-076F			EXISTING CONDUIT
CA 6	FUTURE E ENTRANCE (S SIDE)	E ELECT ROOM (P8)		EMBEDDED	1"	GRS				E-076F		CC 6	ELEV 2W (FUT) MEZZ TO STR	CIC # 2 SEE NOTE 4		EMBEDDED	1"	GRS				E-081F			EXISTING CONDUIT
CA 7	STAFF LUNCH RM (M5)	E ELECT ROOM (P8)		EMBEDDED	1"	GRS				E-076F		CC 7	STATION CONTROL PANEL	CIC # 2 SEE NOTE 4		EMBEDDED	1"	GRS				E-081F			EXISTING CONDUIT
CA 8	STAFF SECURITY RM (M20)	CIC # 3 SEE NOTE 4		EMBEDDED	1"	GRS				E-076F		CC 8	ELEV 1W (FUT) PLATF TO MEZZ	CIC # 2		EMBEDDED	1"	GRS				E-083F			EXTEND EXISTING COND RETURN TO CIC # 2 VIA CABLE TRAY
CA 9	EMERGENCY EQUIP ROOM (M19)	CIC # 3 SEE NOTE 4		EMBEDDED	1"	GRS				E-076F		CC 9	CA PHONE PLATF COL 1B	W ELECT RM (P15)		EMBEDDED	1"	GRS				E-078F			INCLUDES CABLE TRAY
CA 10	TRASH ROOM (M18)	CIC # 3 SEE NOTE 4		EMBEDDED	1"	GRS				E-076F		CC 10	CA PHONE PLATF COL 22	W ELECT RM (P15)		EMBEDDED	1"	GRS				E-083F			EXTEND EXISTING CONDUIT RETURNS TO CIC # 3 VIA CABLE TRAY
CA 11	CUSTODIAL CLOSET (M17)	CIC # 3 SEE NOTE 4		EMBEDDED	1"	GRS				E-076F		CC 11	FUTURE E ENTRY S SIDE	E ELECT RM (P8)		EMBEDDED	1"	GRS				E-078F			EXISTING
CA 12	MECHANICAL ROOM (P6)	CIC # 3		EMBEDDED	1"	GRS				E-078F		CC 12	E ELECT ROOM (P8)	TOILET (M7) SEE NOTE 2		EMBEDDED	1"	GRS				E-078F			EXTEND EXISTING CONDUITS
CA 13	ELECTRICAL ROOM (P8)	CIC # 3		EMBEDDED	1"	GRS				E-078F		CC 13	E ELECT ROOM (P8)	TOILET (M8) SEE NOTE 3		EMBEDDED	1"	GRS				E-087F			RETURN TO CIC # 3 VIA CABLE TRAY AND CABLE
CA 14	AIR SUPPLY ROOM (M24)	CIC # 2 SEE NOTE 4		EMBEDDED	1"	GRS				E-081F		CC 14	E ELECT ROOM (P8)	TOILET (P11) SEE NOTE 3		EMBEDDED	1"	GRS				E-087F			EXISTING
CA 15	ELEV EQUIP ROOM (M23)	CIC # 2		EMBEDDED	1"	GRS				E-081F		CC 15	E ELECT ROOM (P8)	TOILET (P11) SEE NOTE 3		EMBEDDED	1"	GRS				E-087F			EXISTING
CA 16	AUXILIARY ROOM (P10)	CIC # 2		EMBEDDED	1"	GRS				E-081F		CC 16	E ELECT ROOM (P8)	TOILET (P11) SEE NOTE 3		EMBEDDED	1"	GRS				E-087F			EXISTING
CA 17	MECHANICAL ROOM (P19)	CIC # 2		EMBEDDED	1"	GRS				E-081F		CC 17	E ELECT ROOM (P8)	TOILET (P11) SEE NOTE 3		EMBEDDED	1"	GRS				E-087F			EXISTING
CA 18	ELECTRICAL ROOM (P15)	CIC # 2		EMBEDDED	1"	GRS				E-081F		CC 18	E ELECT ROOM (P8)	TOILET (P11) SEE NOTE 3		EMBEDDED	1"	GRS				E-087F			EXISTING
CA 19	SUPERVISORS BOOTH (P4)	W ELECT ROOM (P8)		EMBEDDED	1"	GRS				E-081F		CC 19	E ELECT ROOM (P8)	TOILET (P11) SEE NOTE 3		EMBEDDED	1"	GRS				E-087F			EXISTING
CA 20	EMP-MEZZ FREE ZONE (M2)	CIC # 2 SEE NOTE 4		EMBEDDED	1"	GRS				E-081F		CC 20	E ELECT ROOM (P8)	TOILET (P11) SEE NOTE 3		EMBEDDED	1"	GRS				E-087F			EXISTING
CA 21	BUMP PUMP ROOM (P16)	CIC # 2		EMBEDDED	1"	GRS				E-081F		CC 21	E ELECT ROOM (P8)	TOILET (P11) SEE NOTE 3		EMBEDDED	1"	GRS				E-087F			EXISTING
CA 22	ELECT EQUIP ROOM (P23)	CIC # 4		EMBEDDED	1"	GRS				E-085F		CC 22	E ELECT ROOM (P8)	TOILET (P11) SEE NOTE 3		EMBEDDED	1"	GRS				E-087F			EXISTING
CA 23	EMERG. FAN ROOM N (M14)	CIC # 8 SEE NOTE 4		EMBEDDED	1"	GRS				E-082F		CC 23	E ELECT ROOM (P8)	TOILET (P11) SEE NOTE 3		EMBEDDED	1"	GRS				E-087F			EXISTING
CA 24	EMERG. FAN ROOM S (M24)	CIC # 4 SEE NOTE 4		EMBEDDED	1"	GRS				E-082F		CC 24	E ELECT ROOM (P8)	TOILET (P11) SEE NOTE 3		EMBEDDED	1"	GRS				E-087F			EXISTING
CA 25	TCC ROOM (P5)	CIC # 3		EMBEDDED	1"	GRS				E-081F		CC 25	E ELECT ROOM (P8)	TOILET (P11) SEE NOTE 3		EMBEDDED	1"	GRS				E-087F			EXISTING
CA 26	BATTERY ROOM (P21)	CIC # 2		EMBEDDED	1"	GRS				E-084F		CC 26	E ELECT ROOM (P8)	TOILET (P11) SEE NOTE 3		EMBEDDED	1"	GRS				E-087F			EXISTING
CO 1	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F		CO 1	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F			EXISTING CONDUITS VIA MANHOLE 112 CONTINUE BY CABLE TRAY TO TCC ROOM
CO 2	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F		CO 2	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F			EXISTING CONDUITS VIA MANHOLE 112 CONTINUE BY CABLE TRAY TO TCC ROOM
CO 3	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F		CO 3	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F			EXISTING CONDUITS VIA MANHOLE 112 CONTINUE BY CABLE TRAY TO TCC ROOM
CO 4	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F		CO 4	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F			EXISTING CONDUITS VIA MANHOLE 112 CONTINUE BY CABLE TRAY TO TCC ROOM
CO 5	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F		CO 5	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F			EXISTING CONDUITS VIA MANHOLE 112 CONTINUE BY CABLE TRAY TO TCC ROOM
CO 6	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F		CO 6	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F			EXISTING CONDUITS VIA MANHOLE 112 CONTINUE BY CABLE TRAY TO TCC ROOM
CO 7	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F		CO 7	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F			EXISTING CONDUITS VIA MANHOLE 112 CONTINUE BY CABLE TRAY TO TCC ROOM
CO 8	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F		CO 8	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F			EXISTING CONDUITS VIA MANHOLE 112 CONTINUE BY CABLE TRAY TO TCC ROOM
CO 9	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F		CO 9	TCC ROOM (P5)	ELECT ROOM (P15)		CABLE TRAY	4"	GRS				E-04F			EXISTING CONDUITS VIA MANHOLE 112 CONTINUE BY CABLE TRAY TO TCC ROOM
CO 10	MANHOLE 2	ELECT ROOM (P5)		DUCT BANK	4"	GRS				E-04F		CO 10	MANHOLE 2	ELECT ROOM (P5)		DUCT BANK	4"	GRS				E-04F			EXISTING SPARE CONDUIT
C 1	AL TUNNEL AT W END OF STRUCT	ELECT ROOM (P15)		EMBEDDED	4"	GRS				E-085F		C 1	AL TUNNEL AT W END OF STRUCT	ELECT ROOM (P15)		EMBEDDED	4"	GRS				E-085F			EXTEND EXISTING CONDUITS TO CABLE TRAY CONTINUE BY CABLE TRAY TO W ELECT ROOM AND VIA CO 1 TO CO 6 TO TCC ROOM
C 2	AL TUNNEL AT W END OF STRUCT	ELECT ROOM (P15)		EMBEDDED	4"	GRS				E-085F		C 2	AL TUNNEL AT W END OF STRUCT	ELECT ROOM (P15)		EMBEDDED	4"	GRS				E-085F			EXTEND EXISTING CONDUITS TO CABLE TRAY CONTINUE BY CABLE TRAY TO W ELECT ROOM AND VIA CO 1 TO CO 6 TO TCC ROOM
C 3	AL TUNNEL AT W END OF STRUCT	ELECT ROOM (P15)		EMBEDDED	4"	GRS				E-085F		C 3	AL TUNNEL AT W END OF STRUCT	ELECT ROOM (P15)		EMBEDDED	4"	GRS				E-085F			EXTEND EXISTING CONDUITS TO CABLE TRAY CONTINUE BY CABLE TRAY TO W ELECT ROOM AND VIA CO 1 TO CO 6 TO TCC ROOM
C 4	AL TUNNEL AT W END OF STRUCT	ELECT ROOM (P15)		EMBEDDED	4"	GRS				E-085F		C 4	AL TUNNEL AT W END OF STRUCT	ELECT ROOM (P15)		EMBEDDED	4"	GRS				E-085F			EXTEND EXISTING CONDUITS TO CABLE TRAY CONTINUE BY CABLE TRAY TO W ELECT ROOM AND VIA CO 1 TO CO 6 TO TCC ROOM
C 5	AL TUNNEL AT W END OF STRUCT	ELECT ROOM (P15)		EMBEDDED	4"	GRS				E-085F		C 5	AL TUNNEL AT W END OF STRUCT	ELECT ROOM (P15)		EMBEDDED	4"	GRS				E-085F			EXTEND EXISTING CONDUITS TO CABLE TRAY CONTINUE BY CABLE TRAY TO W ELECT ROOM AND VIA CO 1 TO CO 6 TO TCC ROOM
C 6	AL TUNNEL AT W END OF STRUCT	ELECT ROOM (P15)		EMBEDDED	4"	GRS				E-085F		C 6	AL TUNNEL AT W END OF STRUCT	ELECT ROOM (P15)		EMBEDDED	4"	GRS				E-085F			EXTEND EXISTING CONDUITS TO CABLE TRAY CONTINUE BY CABLE TRAY TO W ELECT ROOM AND VIA CO 1 TO CO 6 TO TCC ROOM
C 7	TCC ROOM (P5)	PBCO1E MEZZ M5		EMBEDDED	2"	GRS				E-085F		C 7	TCC ROOM (P5)	PBCO1E MEZZ M5		EMBEDDED	2"	GRS				E-085F			EXISTING CONDUIT
C 8	TCC ROOM (P5)	PBCO2E PLAT (P1)		EMBEDDED	2"	GRS				E-085F		C 8	TCC ROOM (P5)	PBCO2E PLAT (P1)		EMBEDDED	2"	GRS				E-085F			EXISTING CONDUIT
C 19	W ELECT ROOM (P15)	PBCO3 W PLAT (P1)		EMBEDDED	2"	GRS				E-085F		C 19	W ELECT ROOM (P15)	PBCO3 W PLAT (P1)		EMBEDDED	2"	GRS				E-085F			EXISTING CONDUITS RETURN TO TCC ROOM (P5) VIA CO 1 & CO 8
C 20	W ELECT ROOM (P15)	PBCO4 W MEZZ M5		EMBEDDED	2"	GRS				E-085F		C 20	W ELECT ROOM (P15)	PBCO4 W MEZZ M5		EMBEDDED	2"	GRS				E-085F			EXISTING CONDUITS RETURN TO TCC ROOM (P5) VIA CO 1 & CO 8
C 21	AL TRACK	TCC ROOM (P5)		EMBEDDED	2"	GRS				E-078F		C 21	AL TRACK	TCC ROOM (P5)		EMBEDDED	2"	GRS				E-078F			EXISTING CONDUIT
C 22	AL TRACK	TCC ROOM (P5)		EMBEDDED	2"	GRS				E-078F		C 22	AL TRACK	TCC ROOM (P5)		EMBEDDED	2"	GRS				E-078F			EXISTING CONDUIT
C 23	AR TRACK	TCC ROOM (P5)		EMBEDDED	2"	GRS				E-078F		C 23	AR TRACK	TCC ROOM (P5)		EMBEDDED	2"	GRS				E-078F			EXISTING CONDUIT
C 24	AR TRACK	TCC ROOM (P5)		EMBEDDED	2"	GRS				E-078F		C 24	AR TRACK	TCC ROOM (P5)		EMBEDDED	2"	GRS				E-078F			EXISTING CONDUIT

NOTES:

- VIA CABLE TRAY INCLUDES ATG AT 7 & AT 12
- CONTINUES TO TELEPHONE N TOILET ROOM CORRIDOR
- CONTINUES TO TELEPHONE BY DOOR TO EXIT ROOM CORRIDOR
- TERMINATES IN WRNG TROUGH ABOVE CIC CONTINUE TO CIC VIA W REWAY
- CONTINUES TO CC # 3 VIA AT 5
- INCLUDES CUSTOMER ASSISTANCE TELEPHONE N ELEVATOR, AND AT EACH ELEV CALL PUSHBUTTON AND ALSO MAINTENANCE PHONE IN ELEV.



REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED BY
J.W. SHANNON
DRAWN BY
J.K. CZECH
CHECKED BY
K. DJIS
IN CHARGE
J.C. CHANG
DATE
7 APRIL 85

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

HARRY WEESE & ASSOCIATES
TIPPETTS - ABBETT - MCCARTHY - STRATTON
ENVIRONMENTAL COLLABORATIVE INC
GIN WONG ASSOCIATES

DMJM PROD/KE/HWA
GENERAL CONSULTANTS

LA CBD TO NORTH HOLLYWOOD
UNION STATION
ELECTRICAL RACEWAY & CABLE SCHEDULE
TRAIN CONTROL & COMMUNICATION - SHEET 1

CONTRACT NO
A136
DRAWING NO
E-095F
SCALE
NO SCALE
SHEET NO
A640/35

ELECTRICAL RACEWAY AND CABLE SCHEDULE

ELECTRICAL RACEWAY AND CABLE SCHEDULE

NO	FROM	TO	CKTS	RACEWAY			CONDUCTOR			DWG NO	SHT NO	REMARKS	NO	FROM	TO	CKTS	RACEWAY			CONDUCTOR			DWG NO	SHT NO	REMARKS
				METHOD	SIZE	TYPE	NO.	SIZE	TYPE								GND.	METHOD	SIZE	TYPE	NO.	SIZE			
CCTV01	PBCCTVI EMERG EXT (S2)	S WALL COL 6		EMBEDDED	1"	GRS				E-076F	EXISTING SPARE E ENTRY VIA PBCCTV B	CE 1	TCC RM (P5)	CIC #3			EXPOSED & EMBEDDED	1"	GRS			E-078F		EXTEND EXISTING CONDUIT	
CCTV02	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV		EMBEDDED	1"	GRS				E-076F	EXISTING	CE 2	E TEL FHC MEZZ COL 9	CIC #3 SEE NOTE 1			EMBEDDED	1"	GRS			E-077F		EXTEND EXISTING CONDUIT	
CCTV03	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 3		EMBEDDED	1"	GRS				E-088F	EXISTING	CE 3	E TEL AT FHC COL 6, TRACK	E ELECT RM (P8)			EMBEDDED	1"	GRS			E-087F		EXTEND EXISTING CONDUIT SEE NOTE 6	
CCTV04	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 4		EMBEDDED	1"	GRS				E-076F	EXISTING	CE 4	FHC PLATF LEVEL COL 11	E ELECT ROOM (P8)			EMBEDDED	1"	GRS			E-077F		INCLUDES FTEL EXTEND EXISTING CONDUIT SEE NOTE 6	
CCTV05	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 5		EMBEDDED	1"	GRS				E-077F	EXISTING	CE 5	ETS AL TRACK, COL 7	E ELECT ROOM (P8)			EMBEDDED	1"	GRS			E-087F		EXTEND EXISTING CONDUIT SEE NOTE 6	
CCTV06	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 6		EMBEDDED	1"	GRS				SEE NOTE 2	VIA PBCCTV 2 EXISTING	CE 6	ETS AR TRACK, COL 7	E ELECT ROOM (P8)			EMBEDDED	1"	GRS			E-087F		EXTEND EXISTING CONDUIT SEE NOTE 6	
CCTV07	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 7		EMBEDDED	1"	GRS				SEE NOTE 2	VIA PBCCTV 3 EXISTING	CE 7	E TEL AT FHC WEST MEZZ (M3)	CIC #2 SEE NOTE 1			EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT	
CCTV08	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 8		EMBEDDED	1"	GRS				SEE NOTE 2	VIA PBCCTV 3, PBCCTV 4 EXISTING	CE 8	E ELECT ROOM (P8)	CIC #3			EMBEDDED CABLE TRAY EXPOSED	3"	GRS			E-076F		EXTEND EXISTING CONDUIT SEE NOTE 7	
CCTV09	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 9		EMBEDDED	1"	GRS				SEE NOTE 3	VIA PBCCTV 3, PBCCTV 5 EXISTING	CE 9	ETS AL TRACK, COL 22	E ELECT RM (P15)			EMBEDDED	1"	GRS			E-087F		EXISTING SEE NOTE 6	
CCTV10	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 10		EMBEDDED	1"	GRS				SEE NOTE 3	VIA PBCCTV 2, EXISTING	CE 10	ETS AR TRACK, COL 22	E ELECT RM (P 8)			EMBEDDED	1"	GRS			E-087F		EXISTING SEE NOTE 6	
CCTV11	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 11		EMBEDDED	1"	GRS				E-076F & E-077F	VIA PBCCTV 2, PBCCTV 4 EXISTING	CE 11	FHC PLATF LEVEL, COL 19	CIC #2			EMBEDDED	1"	GRS			E-083F & E-084F		EXISTING, INCLUDES FTEL	
CCTV12	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 12		EMBEDDED	1"	GRS				SEE NOTE 4	VIA PBCCTV 2, PBCCTV 4 EXISTING	CE 12	E TEL NEAR FHC TRACK COL 23	E ELECT RM (P15)			EMBEDDED	1"	GRS			E-087F		EXISTING	
CCTV13	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 13		EMBEDDED	1"	GRS				SEE NOTE 4	VIA PBCCTV 3, PBCCTV 5 EXISTING	CE 13	EMERG EXITS (S2) MEZZ	CIC #3 SEE NOTE 1			EMBEDDED	1"	GRS			E-076F		EXTEND EXISTING CONDUIT	
CCTV14	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 14		EMBEDDED	1"	GRS				E-077F & E-076F	EXISTING	CE 14	EMERG EXT CORRIDORS (P3)	E ELECT RM (P8)			EMBEDDED	1"	GRS			E-087F		EXTEND EXISTING CONDUIT	
CCTV15	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 15		EMBEDDED	1"	GRS				SEE NOTE 4	VIA PBCCTV 3, PBCCTV 5 EXISTING	CE 15	EMERG EXT CORRIDORS (P3)	E ELECT RM (P8)			EMBEDDED	1"	GRS			E-087F		SEE NOTE 6	
CCTV16	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 16		EMBEDDED	1"	GRS				SEE NOTE 4	VIA PBCCTV 3, PBCCTV 4 EXISTING	CE 16	FIRE COMMAND POST	CIC #3 SEE NOTE 1			EMBEDDED	1"	GRS			E-076F & E-077F		INCLUDES FTEL EXTEND EXISTING CONDUIT	
CCTV17	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 17		EMBEDDED	1"	GRS				SEE NOTE 4	VIA PBCCTV 2, PBCCTV 4 EXISTING	CE 17	E TEL ELEV LOBBY (S4)	CIC #2 SEE NOTE 1			EMBEDDED	1"	GRS			E-083F & E-084F		EXTEND EXISTING CONDUIT	
CCTV18	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 18		EMBEDDED	1"	GRS				SEE NOTE 4	VIA PBCCTV 3, PBCCTV 5 EXISTING	CE 18	E TEL BY FHC EMERG EXT (S2)	E ELECT RM (P8)			EMBEDDED	1"	GRS			E-083F & E-084F		EXTEND EXISTING CONDUIT	
CCTV19	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 19		EMBEDDED	1"	GRS				SEE NOTE 4	VIA PBCCTV 3, PBCCTV 5 EXISTING	CE 19	ETS AL TRACK COL 40	CIC #4			EMBEDDED	1"	GRS			E-085F		EXISTING	
CCTV20	PBCCTVI EMERG EXT (S2)	ELEV LOBBY (S4)		EMBEDDED	1"	GRS				SEE NOTE 5	SEE NOTE 9	CE 20	ETS AR TRACK COL 40	CIC #4			EMBEDDED	1"	GRS			E-085F		EXISTING	
CCTV21	PBCCTVI EMERG EXT (S2)	PBCCTV B		EMBEDDED	1"	GRS				E-076F	SPARE E ENTRY EXISTING	CE 21	E TEL EMERG EQUIP RM (M19)	CIC #3 SEE NOTE 1			EMBEDDED	1"	GRS			E-076F		EXTEND EXISTING CONDUIT	
CCTV22	PBCCTVI EMERG EXT (S2)	PBCCTV 9		EMBEDDED	1"	GRS				E-076F	SPARE E ENTRY EXISTING	CE 22	E TEL EMERG EQUIP RM (P12)	E ELECT RM (P8)			EMBEDDED	1"	GRS			E-087F		EXTEND EXISTING CONDUIT	
CCTV23	PBCCTVI	CAM OUTLET FOR CCTV 20		EMBEDDED	1"	GRS				E-076F	EXISTING	CE 23	SUPERVISOR'S BOOTH (P4)	E ELECT RM (P15)			EMBEDDED	1"	GRS			E-083F & E-084F		EXISTING CONDUIT TO CE 11 VIA CABLE TRAY	
CCTV27	TCC ROOM (P5)	PBCCTVI		EXPOSED & EMBEDDED	3"	GRS				E-076F	EXTEND EXISTING CONDUIT														
CCTV28	TCC ROOM (P5)	PBCCTVI		EXPOSED & EMBEDDED	3"	GRS				E-078F	EXTEND EXISTING CONDUIT														
CCTV29	TCC ROOM (P5)	PBCCTVI		EXPOSED & EMBEDDED	3"	GRS					EXTEND EXISTING CONDUIT														
CCTV31	PBCCTVI EMERG EXT (S2)	S WALL COL 6		EMBEDDED	1"	GRS				E-076F	EXISTING SPARE E ENTRY VIA PBCCTV A	CF 1	E TEL VALVE RM (M16)	CIC #3 SEE NOTE 1			EMBEDDED	2"	GRS			E-076F		EXTEND EXISTING CONDUIT	
CCTV32	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV		EMBEDDED	1"	GRS				E-076F	EXISTING	CF 2	ETS AL TRACK COL 7	E ELECT RM (P8)			EMBEDDED	2"	GRS			E-087F		EXTEND EXISTING CONDUIT	
CCTV33	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 3		EMBEDDED	1"	GRS				E-088F	EXISTING	CF 3	ETS AR TRACK COL 7	E ELECT RM (P8)			EMBEDDED	1"	GRS			E-087F		EXTEND EXISTING CONDUIT	
CCTV34	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 4		EMBEDDED	1"	GRS				E-076F	EXISTING	CF 4	E TEL VALVE RM (P18)	CIC #2			EMBEDDED	1"	GRS			E-087F		INCLUDES FTEL SEE NOTE 6	
CCTV35	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 5		EMBEDDED	1"	GRS				E-077F	EXISTING	CF 5	ETS AL TRACK COL 22	E ELECT RM (P15)			EMBEDDED	1"	GRS			E-087F		EXISTING CONDUIT CONTINUE	
CCTV36	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 6		EMBEDDED	1"	GRS				SEE NOTE 2	VIA PBCCTV 2 EXISTING	CF 6	ETS AR TRACK COL 22	E ELECT RM (P15)			EMBEDDED	1"	GRS			E-087F		TO CC #2 VIA CABLE TRAY	
CCTV37	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 7		EMBEDDED	1"	GRS				SEE NOTE 2	VIA PBCCTV 3 EXISTING	CF 7	EMP MEZZ LEVEL	CIC #2 SEE NOTE 1			EMBEDDED	1"	GRS			E-081F		INCLUDES FTEL EXTEND EXISTING CONDUIT	
CCTV38	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 8		EMBEDDED	1"	GRS				SEE NOTE 3	VIA PBCCTV 2, PBCCTV 4 EXISTING	CF 8	CIC #3	E ELECT RM (P15)			EMBEDDED CABLE TRAY EXPOSED	3"	GRS			E-078F		SEE NOTE 8	
CCTV39	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 9		EMBEDDED	1"	GRS				SEE NOTE 3	VIA PBCCTV 3, PBCCTV 5 EXISTING	CF 9	E TEL SEC STAFF RM (M10)	CIC #3 SEE NOTE 1			EMBEDDED	1"	GRS			E-076F		EXTEND EXISTING CONDUIT	
CCTV40	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 10		EMBEDDED	1"	GRS				SEE NOTE 3	VIA PBCCTV 3, PBCCTV 5 EXISTING	CF 10	E TEL STAND FIRE VALVES E-076F & E-077F	CIC #3 SEE NOTE 1			EMBEDDED	1"	GRS			E-076F & E-077F		INCLUDES FTEL	
CCTV41	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 11		EMBEDDED	1"	GRS				E-076F	VIA PBCCTV 2 EXISTING	CF 11	E TEL STAND FIRE VALVES AT FIRE STALL FIRE VALVES WAGY STREET	CIC #4 SEE NOTE 1			EMBEDDED	1"	GRS			E-085F & E-086F		EXISTING CONDUIT VIA J-BOX AND J-BOX	
CCTV42	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 12		EMBEDDED	1"	GRS				SEE NOTE 3	VIA PBCCTV 2, PBCCTV 4 EXISTING	CF 12	FHC TRACK LEVEL COL 6	E ELECT RM (P15)			EMBEDDED	1"	GRS			E-087F		SPARE CONDUIT EXTEND EXISTING CONDUIT SEE NOTE 6	
CCTV43	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 13		EMBEDDED	1"	GRS				SEE NOTE 4	VIA PBCCTV 2, PBCCTV 4 EXISTING	CF 13	FHC MEZZ LEVEL, COL 9	CIC #3 SEE NOTE 1			EMBEDDED	1"	GRS			E-076F		EXTEND EXISTING CONDUIT	
CCTV44	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 14		EMBEDDED	1"	GRS				SEE NOTE 4	VIA PBCCTV 3, PBCCTV 5 EXISTING	CF 14	FHC MEZZ LEVEL COL 24	CIC #2 SEE NOTE 1			EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT	
CCTV45	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 15		EMBEDDED	1"	GRS				SEE NOTE 4	EXISTING	CF 15	FHC TRACK LEVEL COL 23	E ELECT RM (P15)			EMBEDDED	1"	GRS			E-087F		EXISTING CONTINUES TO CC #2 VIA CABLE TRAY	
CCTV46	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 16		EMBEDDED	1"	GRS				SEE NOTE 4	VIA PBCCTV 3, PBCCTV 5 EXISTING	CF 16	FHC TRACK ELEV LOBBY (S4)	CIC #2 SEE NOTE 1			EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT	
CCTV47	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 17		EMBEDDED	1"	GRS				SEE NOTE 4	VIA PBCCTV 2, PBCCTV 4 EXISTING	CF 17	FHC EMERG EXITS (S2)	E ELECT RM (P8)			EMBEDDED	1"	GRS			E-088F		EXISTING SEE NOTE 6	
CCTV48	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 18		EMBEDDED	1"	GRS				SEE NOTE 4	VIA PBCCTV 3, PBCCTV 5 EXISTING	CF 18	ETS AR TRACK COL 40	CIC #4			EXPOSED & EMBEDDED	1"	GRS			E-085F		EXTEND EXISTING CONDUIT	
CCTV49	PBCCTVI EMERG EXT (S2)	CAM OUTLET FOR CCTV 19		EMBEDDED	1"	GRS				SEE NOTE 4	VIA PBCCTV 3, PBCCTV 5 EXISTING	CF 19	ETS AR TRACK COL 40	CIC #4			EXPOSED & EMBEDDED	1"	GRS			E-088F		EXTEND EXISTING CONDUIT	
CCTV50	PBCCTVI EMERG EXT (S2)	PBCCTV 6		EMBEDDED	1"	GRS				SEE NOTE 5	SEE NOTE 9	CF 20	E TEL EMERG EQUIP RM (P22)	CIC #4			EXPOSED & EMBEDDED	1"	GRS			E-088F		EXTEND EXISTING CONDUIT	
CCTV51	PBCCTVI EMERG EXT (S2)	PBCCTV 8		EMBEDDED	1"	GRS				E-076F	SPARE E ENTRY EXISTING														
CCTV52	PBCCTVI EMERG EXT (S2)	PBCCTV 9		EMBEDDED	1"	GRS				E-076F	SPARE E ENTRY EXISTING														

NOTES
 1 - TERMINATE IN WIRING TROUGH ABOVE CIC CONTINUE TO CC VIA WIRE WAY
 2 - E-076F, E-077F, E-079F
 3 - E-076F, E-077F, E-079F, E-080F, E-083F
 4 - E-076F, E-077F, E-079F, E-080F, E-081F
 5 - E-076F, E-077F, E-079F, E-080F, E-081F, E-086F
 6 - RETURN TO CIC #3 VIA CF8 (E TEL CABLES) OR CF8 (FTEL CABLES)
 7 - CONTINUES TO E ELECT RM IN CABLE TRAY INCLUDES CE3, CE5, CE6, CE4, CE5
 8 - EXTEND EXISTING CONDUIT CONTINUES TO E ELECT RM VIA CABLE TRAY INCLUDES CE2, CE3, CE4 & CE5
 9 - EXISTING VIA PBCCTV 2, PBCCTV 4, PBCCTV 6, SPARE FOR W ENTRY
 10 - SEE NOTE 3, DWG. E-071F

<p>THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA</p>	<p>DESIGNED BY J.W. SHANNON DRAWN BY J.K. CZECH CHECKED BY K. DJIE IN CHARGE J.C. CHANG DATE 7 APRIL 85</p>		<p>SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT</p>		<p>LA CBD TO NORTH HOLLYWOOD UNION STATION ELECTRICAL RACEWAY & CABLE SCHEDULE TRAIN CONTROL & COMMUNICATION-SHEET 2</p>	<p>CONTRACT NO A136 DRAWING NO E-096F SCALE NO SCALE SHEET NO A640/36</p>
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ELECTRICAL RACEWAY AND CABLE SCHEDULE

ELECTRICAL RACEWAY AND CABLE SCHEDULE

NO	FROM	TO	CKTS	CONDUIT			CONDUCTOR			DWG NO	SHT NO	REMARKS	NO	FROM	TO	CKTS	CONDUIT			CONDUCTOR			DWG NO	SHT NO	REMARKS
				METHOD	SIZE	TYPE	NO & SIZE	TYPE	GND								METHOD	SIZE	TYPE	NO & SIZE	TYPE	GND			
CR1	TCC ROOM (P5)	EQUIP ROOM (M0)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 1														
CR7	TCC ROOM (P5)	EQUIP ROOM (M0)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 1														
CR8	TCC ROOM (P5)	EQUIP ROOM (M0)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 1														
CR4	EQUIP ROOM (M0)	AUX POWER RM (M4)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR5	EQUIP ROOM (M0)	AIR HANDLING RM (M4)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR6	AUX POWER ROOM (M11)	AIR HANDLING RM (M4)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR7	AIR HANDLING ROOM (M4)	ANCILLARY CORR (M13)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR8	AIR HANDLING ROOM (M4)	CORR DOOR (S2)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR9	ANCILLARY CORRIDOR (M13)	EMERG EXIT CORR (S2)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR0	CORRIDOR (S2)	STAFF SECURITY ROOM (M20)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR11	STAFF SECURITY RM (M20)	FARE VENDING (M2)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR2	STAFF SECURITY RM (M20)	EMERG EXIT CORR DOOR (S2)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR3	EMERG EXIT CORR DOOR (S2)	EMERG EQUIP ROOM (M9)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR4	EMERG EQUIP ROOM (M9)	EMERG EXIT CORR DOOR (S2)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR5	EMERG EXIT CORR (S2)	TRASH ROOM (M18)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 1														
CR6	TRASH ROOM (M18)	CUSTODIAL CLOSET (M7)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 1														
CR17	TRASH ROOM (M18)	FARE VENDING (M2)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR8	TCC ROOM (P5)	AIR TRACK		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR9	TCC ROOM (P5)	AIR TRACK		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR10	TCC ROOM (P5)	AIR TRACK		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR11	TCC ROOM (P5)	AL TRACK		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR12	TCC ROOM (P5)	AL TRACK		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR13	TCC ROOM (P5)	AL TRACK		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR14	TCC ROOM (P5)	MECH LIFE ROOM (P6)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR15	MECH LIFE ROOM (P6)	ELECTOR RM (P7)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR16	ELECTOR ROOM (P7)	ELECT ROOM (P8)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR17	ELECTRICAL ROOM (P8)	CUSTODIAL RM (P9)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR18	CUSTODIAL ROOM (P9)	EMERG EXIT CORR DOOR (P3)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR19	EMERG EXIT CORR (P3)	EQUIP RM (P2)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR20	EMERG EQUIP RM (P2)	EMERG EXIT CORR DOOR (P3)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR21	MECH FARE VENDING (M2)	EMERG EQUIP ROOM (M9)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR22	ELECT EQUIP ROOM (M2)	AIR HANDLING ROOM (M4)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 1														
CR23	ELECT EQUIP ROOM (M2)	EMERG EQUIP ROOM (M9)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR24	ELECTRICAL ROOM (P15)	PLATFORM (P1)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR25	ELECTRICAL ROOM (P15)	FARE VENDING (M2)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR26	PUMP ROOM (P16)	LIFE DUCT RM (P7)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR27	LIFE DUCT ROOM (P7)	1/2" LIFE PIP (P8)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR28	VALVE ROOM (P8)	MECH ROOM (P9)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR29	MECHANICAL ROOM (P9)	AUX POWER RM (P2)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR30	ELECTRICAL EQUIPMENT EMERG FAN RM (P10)	AL TRACK		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR31	ELECTRICAL EQUIPMENT EMERG FAN RM (P10)	AIR TRACK		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR32	ELECTRICAL EQUIPMENT EMERG FAN RM (P10)	FAN ROOM (P11)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 2														
CR33	ELECTRICAL EQUIPMENT EMERG FAN RM (P10)	TOILET ROOM (M1)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 1														
CR34	EMERG EQUIP RM (M9)	FARE VENDING (M2)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 1														
CR35	EMERG EQUIP RM (M9)	FARE VENDING (M2)		EMBEDDED	2"	PVC				E-076P	SEE NOTE 1														
CR36	AIR HANDLING ROOM	AL TRACK		EMBEDDED	2"	PVC				E-076P	SEE NOTE 1														
CR37	AIR HANDLING ROOM	AL TRACK		EMBEDDED	2"	PVC				E-076P	SEE NOTE 1														

NOTES:
 1. EXISTING CONDUIT SLEEVE THROUGH FLOOR INSTALLED ON CONTRACT A136 FOR RADIO ANTENNA (RADIO ANTENNA N/C). INSTALL 3 HOUR RATED REMOVABLE FIRE SEAL IN ALL CONDUITS.
 2. CONDUIT SLEEVE THROUGH WALL FOR RADIO ANTENNA (RADIO ANTENNA N/C) MUST BE NON-METALLIC, INSTALL END BELLS ON ENDS OF CONDUIT, INSTALL REMOVABLE FIRE SEAL.
 3. SOME FIRE RATINGS AS SHOWN (SEE ARCHITECTURAL DWG) IN ALL CONDUITS.
 4. TERMINATE FLUSH WITH WALL AND GROUT ALL HOLES AROUND CONDUITS.
 5. SEE NOTE 3, DWG. E-071F.



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, UNDER MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY
 DRAWN BY
 CHECKED BY
 IN CHARGE
 DATE: APR 85

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

HARRY WEESE & ASSOCIATES
 TIPPETTS - ARBETT - MCCARTHY - STRAYTON
 ENVIRONMENTAL COLLABORATIVE INC.
 GEN WORK ASSOCIATES

DMJM/PBOD/KE/HWA
 GENERAL CONSULTANTS

APPROVED: _____

LA CBD TO NORTH HOLLYWOOD
 UNION STATION
 ELECTRICAL RACEWAY & CABLE SCHEDULE
 TRAIN CONTROL AND COMM SHEET 3

CONTRACT NO	A136
DRAWING NO	E-097F
SCALE	NO SCALE
SHEET NO	A640/37

REV	DATE	BY	CHK	APP	DESCRIPTION
1	3/78	WEH	AM		REVISED PER CR7-003
2	4/85	AM			FINAL ISSUE

ELECTRICAL RACEWAY AND CABLE SCHEDULE

NO.	FROM	TO	CKTS.	RACEWAY			CONDUCTOR			DWG. NO.	SHT. NO.	REMARKS
				METHOD	SIZE	TYPE	NO. & SIZE	TYPE	GND.			
CT 1	CIC # 3	TCC ROOM (P5)			2"	GRS			E-078F			
CT 2	CIC # 3	TCC ROOM (P5)		EXPOSED EMBEDDED AND CABLE TRAY	2"	GRS			E-078F		EXTEND EXISTING CONDUIT SLEEVES THRU FLOOR TO CIC # 3 & 2 CABLE TRAY BELW	
CT 3	CIC # 3	TCC ROOM (P5)			2"	GRS			E-078F			
CT 4	CIC # 3	TCC ROOM (P5)			2"	GRS			E-078F			
CT 5	CIC # 3	TCC ROOM (P5)			2"	GRS			E-078F			
CT 6	CIC # 3	TCC ROOM (P5)			2"	GRS			E-078F			
CT 7	CIC # 3	TCC ROOM (P5)			2"	GRS			E-078F			
CT 16	CIC # 2	TCC ROOM (P5)		DUCT BANK	4"	PVC			E-031F E-032F E-033F E-034F E-035F E-036F		EXISTING CONDUIT IN DUCT BANK BETWEEN E & W ELECT ROOM (P14) & (P10) VIA MANHOLES 112 CONTINUED IN CABLE TRAY FROM E. ELECT. ROOM TO TCC ROOM & FROM W. ELECT ROOM TO COMM OR CIC # 4.	
CT 17	CIC # 2	TCC ROOM (P5)		DUCT BANK	4"	PVC						
CT 18	CIC # 2	TCC ROOM (P5)		DUCT BANK	4"	PVC						
CT 19	CIC # 4	TCC ROOM (P5)		DUCT BANK	3"	PVC						
CT 20	CIC # 4	TCC ROOM (P5)		DUCT BANK	3"	PVC						
CA 1	TELEPHONE MANHOLE	TEL CLOSET RM M13		EMBEDDED & BURIED	2"	GRS			E-076F		EXTEND EXISTING CONDUIT VIA BCKX02	
CA 2	TELEPHONE MANHOLE	TEL CLOSET RM M14		EMBEDDED & BURIED	2"	GRS			E-076F		EXTEND EXISTING CONDUIT VIA BCKX03	
CA 3	TEL CLOSET (M14)	TCC ROOM (P5)		EMBEDDED	2"	GRS			E-078F		EXISTING	
CA 4	TEL CLOSET (M14)	TCC ROOM (P5)		EMBEDDED	2"	GRS			E-078F		EXISTING	
CA 5	TEL CLOSET (M14)	TCC TEL CABINET		EMBEDDED & BURIED	2"	GRS			E-078F		EXTEND EXISTING CONDUIT VIA BCKX01 & BCKX02	
CA 6	PBSCO1	PBCKO1		EMBEDDED	2"	GRS			E-078F		EXISTING CONDUIT	
CA 11	TEL CLOSET (M14)	PUBLIC TEL 1E		EMBEDDED	1"	GRS			E-076F		EXTEND EXISTING CONDUIT	
CA 12	TEL CLOSET (M14)	PUBLIC TEL 2E		EMBEDDED	1"	GRS			E-077F		EXTEND EXISTING CONDUIT	
CA 13	TEL CLOSET (M14)	PUBLIC TEL 3E		EMBEDDED	1"	GRS			E-076F		EXTEND EXISTING CONDUIT	
CA 14	TEL CLOSET (M14)	PUBLIC TEL 4E		EMBEDDED	1"	GRS			E-077F		EXTEND EXISTING CONDUIT	
CA 17	TTCI, W.A.R SUPPLY RM (M21)	PUBLIC TEL 1W		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT	
CA 18	TTCI, W.A.R SUPPLY RM (M21)	PUBLIC TEL 2W		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT	
CA 19	TTCI, W.A.R SUPPLY RM (M21)	PUBLIC TEL 3W		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT	
CA 20	TTCI, W.A.R SUPPLY RM (M21)	PUBLIC TEL 4W		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT	

ELECTRICAL RACEWAY AND CABLE SCHEDULE

NO.	FROM	TO	CKTS.	RACEWAY			CONDUCTOR			DWG. NO.	SHT. NO.	REMARKS
				METHOD	SIZE	TYPE	NO. & SIZE	TYPE	GND.			
FA 1	AUX POWER ROOM (M11)	CIC # 3 SEE NOTE 1		EMBEDDED	1"	GRS			E-076F			
FA 2	SPRINKLER VALVE RM (M10)	CIC # 3 SEE NOTE 1		EMBEDDED	1"	GRS			E-076F			
FA 3	MECH. BUPE ROOM (P6)	CIC # 3		EXPOSED & EMBEDDED	1"	GRS			E-078F	SPARE COND.	EXTEND EXISTING CONDUIT	
FA 4	TCC (P5)	CIC # 3		EXPOSED & EMBEDDED	1"	GRS			E-078F	SPARE COND.	EXTEND EXISTING CONDUIT	
FA 5	EMERG. EQUIP ROOM (M11)	CIC # 3 SEE NOTE 1		EMBEDDED	1"	GRS			E-076F	SPARE COND.		
FA 6	MECH. RM (P9)	CIC # 2 SEE NOTE 1		EMBEDDED	1"	GRS			E-081F			
FA 7	UPE DUCT & UTILITY S-AFF	CIC # 2 SEE NOTE 1		EMBEDDED	1"	GRS			E-084F			
FA 8	JBFA09 EQUIP RM (M21)	CIC # 2 SEE NOTE 1		EMBEDDED	1"	GRS			E-081F		EXISTING	
FA 9	AUX POWER RM (P20)	CIC # 2 SEE NOTE 1		EMBEDDED	1"	GRS			E-081F			
FA 10	EMERG. FAN ROOM (M24)	CIC # 4 SEE NOTE 1		EMBEDDED	1"	GRS			E-082F	SPARE COND.	EXTEND EXISTING CONDUIT	
FA 11	ELECT EQUIP ROOM (P23)	CIC # 4 SEE NOTE 1		EMBEDDED	1"	GRS			E-083F		EXTEND EXISTING CONDUIT	
FA 12	CIC # 3	E. ELECT ROOM (P8)		EXPOSED EMBEDDED CABLE TRAY	3"	GRS			E-078F		EXTEND EXISTING CONDUIT CONTINUES TO W. ELECT ROOM IN CABLE TRAY INCLUDES FA 13 & FA 14	
FA 13	ETS AL TRACK E. END	E. ELECT ROOM (P8)		EMBEDDED	1"	GRS			E-087F		EXTEND EXISTING CONDUIT - RETURN THRU FAN	
FA 14	ETS AR TRACK E. END	E. ELECT ROOM (P8)		EMBEDDED	1"	GRS			E-087F		EXTEND EXISTING CONDUIT - RETURN THRU FAN	
FA 15	ETS AL TRACK W. END	W. ELECT ROOM (P5)		EMBEDDED	1"	GRS			E-087F		EXISTING-RETURN THRU CABLE TRAY	
FA 16	ETS AR TRACK W. END	W. ELECT ROOM (P5)		EMBEDDED	1"	GRS			E-087F		EXISTING-RETURN THRU CABLE TRAY	
FA 17	CUSTODIAL RM (P9)	CIC # 3		EMBEDDED	1"	GRS			E-078F	SPARE COND.	EXTEND EXISTING CONDUIT	
FA 18	EMP. FREE AREA (M3)	CIC # 2 SEE NOTE 1		EMBEDDED	2"	GRS			E-081F		EXTEND EXISTING CONDUIT	
FA 19	UPE FAN (P6)	CIC # 3		EMBEDDED	1"	GRS			E-078F	SPARE COND.	EXTEND EXISTING CONDUIT	
FA 20	EMERG. EXIT CORRIDOR 31	CIC # 3 SEE NOTE 1		EMBEDDED	1"	GRS			E-076F	SPARE COND.		
FA 21	FCCP	CIC # 3 SEE NOTE 1		EMBEDDED	1"	GRS			E-077F		EXTEND EXISTING CONDUIT	
FA 22	TCC (P5)	W. ELECT ROOM (P5)		CABLE TRAY & DUCT BANK	3"	GRS			E-078F		EXISTING VIA MANHOLE (SEE CAUTIONS) TO TCC ROOM (P5) BY CABLE TRAY	
FA 23	JBFA08, JBFA07	CIC # 3 SEE NOTE 1		EMBEDDED	1"	GRS			E-078F		EXISTING	
FA 24	JBFA18, JBFA07	CIC # 4 SEE NOTE 1		EMBEDDED	1"	GRS			E-082F		EXISTING	
FA 25	JBFA10 IN A.R SUPPLY RM (M22)	CIC # 2 SEE NOTE 1		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT	
FA 26	JBFA16 IN EMERG FAN RM (M24)	CIC # 4 SEE NOTE 1		EXPOSED & EMBEDDED	1"	GRS			E-082F	SPARE COND.	EXTEND EXISTING CONDUIT TO JBFA18, JBFA18 & JBFA18	
FA 27	TCC (P5)	CIC # 3		EXPOSED EMBEDDED CABLE TRAY	1"	GRS			E-078F			
FA 28	ETS AL TRACK E. END	ETS AR TRACK		EMBEDDED	1"	GRS			E-087F		EXTEND EXISTING CONDUIT	
FA 29	ETS AR TRACK W. END	ETS AR TRACK		EMBEDDED	1"	GRS			E-087F		EXISTING	
FA 30	SPRINKLER SYS V&FM-ZONE 1E	JBFA06		EXPOSED	1"	GRS			E-087F			
FA 31	SPRINKLER SYS V&FM-ZONE 2E	JBFA06		EXPOSED	1"	GRS			E-094F			
FA 32	SPRINKLER SYS V&FM-ZONE 3E	JBFA06		EXPOSED	1"	GRS			E-094F			
FA 33	SPRINKLER SYS V&FM-ZONE 4E	JBFA06		EXPOSED	1"	GRS			E-094F			
FA 34	AL TRACK STANDPIPE E. END	JBFA06		EXPOSED	1"	GRS			E-094F			
FA 35	AR TRACK STANDPIPE E. END	JBFA06		EXPOSED	1"	GRS			E-094F			
FA 36	DELUGE VALVE AL TRACK-ZONE 1	JBFA06		EXPOSED	1"	GRS			E-094F			
FA 37	DELUGE VALVE AL TRACK-ZONE 2	JBFA06		EXPOSED	1"	GRS			E-094F			
FA 38	DELUGE VALVE AL TRACK-ZONE 3	JBFA06		EXPOSED	1"	GRS			E-094F			
FA 39	JBFA06	CIC # 3		EXPOSED	2"	GRS			E-076F E-077F E-078F			
FA 40	DELUGE VALVE AL TRACK-ZONE 4	JBFA 20		EXPOSED	1"	GRS			E-087F			
FA 41	DELUGE VALVE AL TRACK-ZONE 2A	JBFA 20		EXPOSED	1"	GRS			E-087F			
FA 42	DELUGE VALVE AL TRACK-ZONE 3A	JBFA 20		EXPOSED	1"	GRS			E-087F			
FA 43	DELUGE VALVE AL TRACK-ZONE 4A	JBFA 20		EXPOSED	1"	GRS			E-087F			
FA 44	SPRINKLER SYS V&FS-ZONE 1W	JBFA 20		EXPOSED	1"	GRS			E-087F			
FA 45	SPRINKLER SYS V&FS-ZONE 2W	JBFA 20		EXPOSED	1"	GRS			E-087F			
FA 46	SPRINKLER SYS V&FS-ZONE 3W	JBFA 20		EXPOSED	1"	GRS			E-087F			
FA 47	AL TRACK STANDPIPE W. END	JBFA 20		EXPOSED	1"	GRS			E-087F			
FA 48	AR TRACK STANDPIPE W. END	JBFA 20		EXPOSED	1"	GRS			E-087F			
FA CONDITS CONTINUED ON DWG E-099F												

NOTES

- 1. TERMINATE IN WIRING TROUGH ABOVE CIC CONTINUE TO CC VIA WIREWAY
- 2. E-076F E-077F E-078F E-080F E-081F E-083F
- 3. SEE NOTE 3, DWG. E-071F.



<p>THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.</p>				<p>DESIGNED BY J.W. SHANNON DRAWN BY J.K. CZECH CHECKED BY K. DJIE IN CHARGE J.C. CHANG DATE 7 APRIL 05</p>		<p>SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT</p>		<p>HARRY WESE & ASSOCIATES TIPPETTS - ABBETT - MCCARTHY - STRATTON ENVIRONMENTAL COLLABORATIVE, INC GIN WONG ASSOCIATES</p>		<p>DMJM/PBOD/KE/MWA GENERAL CONSULTANTS</p>		<p>CONTRACT NO. A136 DRAWING NO. E-098F SCALE NO SCALE SHEET NO. A640/38</p>	
<p>REVISED PER CR7-009 INITIAL ISSUE</p>				<p>APPROVED</p>		<p>LA CBD TO NORTH HOLLYWOOD UNION STATION</p>		<p>ELECTRICAL RACEWAY & CABLE SCHEDULE TRAIN CONTROL & COMM SHEET 4</p>		<p>APPROVED</p>			

ELECTRICAL RACEWAY AND CABLE SCHEDULE

NO.	FROM	TO	CKTS.	RACEWAY			CONDUCTOR			DWG. NO.	SHT. NO.	REMARKS
				METHOD	SIZE	TYPE	NO. & SIZE	TYPE	GND.			
PA50	ELECT. EQUIP. ROOM (M21)	PBPA05		EXPOSED	1"	GRS			E-081F			
PA51	AIR HANDLING ROOM (M22)	PBPA05		EXPOSED	1"	GRS			E-081F			
PA52	STORAGE ROOM (P21)	PBPA05		EXPOSED	1"	GRS			E-081F			
PA53	JPE RM (P17)	PBPA05		EXPOSED	1"	GRS			E-081F			
PA54	AUX POWER RM (P20)	PBPA06		EXPOSED	1"	GRS			E-081F			
PA55	ELECT. RM (P15)	PBPA06		EXPOSED	1"	GRS			E-081F			
PA56	FCP MEZZ FREE ZONE (M3)	PBPA01		SEE NOTE 5	1"	GRS			E-077F			
PA57	EMP MEZZ FREE ZONE (M3)	PBPA04		SEE NOTE 5	1"	GRS			E-081F			
PA58	EMP MEZZ FREE ZONE (M3)	JBPA02		SEE NOTE 5	1"	GRS			E-081F			
PA59	FCP MEZZ FREE ZONE (M3)	JBPA07		SEE NOTE 5	1"	GRS			E-077F			

ELECTRICAL RACEWAY AND CABLE SCHEDULE

NO.	FROM	TO	CKTS.	RACEWAY			CONDUCTOR			DWG. NO.	SHT. NO.	REMARKS
				METHOD	SIZE	TYPE	NO. & SIZE	TYPE	GND.			
SC 30	EMERG. EQUIP. RM (M4)	CIC #3 SEE NOTE 4		EXPOSED & EMBEDDED	1"	GRS			E-076F		EXTEND EXISTING CONDUIT	
SC 31	EQUIP. RM (M10)	CIC #3 SEE NOTE 4		EXPOSED & EMBEDDED	1"	GRS			E-076F		EXTEND EXISTING CONDUIT	
SC 32	BATTERY RM (M9)	CIC #3 SEE NOTE 4		EXPOSED & EMBEDDED	1"	GRS			E-076F		EXTEND EXISTING CONDUIT	
SC 33	E.A.R. SUPPLY RM (M12)	CIC #2 SEE NOTE 4		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT	
SC 34	W. MEZZ ELECT. RM (M21)	CIC #2 SEE NOTE 4		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT	
SC 35	N.A.R. SUPPLY RM (M22)	CIC #2 SEE NOTE 4		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT	
SC 37	S. SIDE E ENTRY	E ELECT. RM (P8)		EXPOSED & EMBEDDED	1"	GRS			E-078F		EXISTING CONDUITS CONTINUE TO CIC #3 VIA SC 35 & SC 40	
SC 38	S. SIDE E ENTRY	E ELECT. RM (P8)		EXPOSED & EMBEDDED	1"	GRS			E-078F		EXISTING CONDUITS CONTINUE TO CIC #3 VIA SC 35 & SC 40	
SC 39	E ELECT. RM (P8)	CIC #3		EXPOSED & EMBEDDED	3"	GRS			E-078F		EXISTING CONDUIT SEE NOTE 1	
SC 40	E ELECT. RM (P8)	CIC #3		EXPOSED & EMBEDDED	3"	GRS			E-078F		EXISTING CONDUIT SEE NOTE 2	
SC 41	SUPERVISOR'S BOOTH (P4)	E ELECT. RM (P8)		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXISTING CONDUIT CONTAINS SC 35 VIA CABLE TRAY	

SC 1	ES-1E BOTTOM & TOP PIT	E ELECT. RM (P8)		EXPOSED & EMBEDDED	1"	GRS			E-078F		EXTEND EXISTING CONDUITS
SC 2	ES-2E BOTTOM & TOP PIT	E ELECT. RM (P8)		EXPOSED & EMBEDDED	1"	GRS			E-088F		CONTINUE TO CIC #3 VIA SC 39
SC 4	VALVE RM (M6)	CIC #3		EXPOSED & EMBEDDED	1"	GRS			E-076F		EXTEND EXISTING CONDUIT
SC 5	ES-3E BOTTOM & TOP PIT	E ELECT. RM (P8)		EXPOSED & EMBEDDED	1"	GRS			E-078F		EXTEND EXISTING CONDUITS
SC 6	ES-4E BOTTOM & TOP PIT	E ELECT. RM (P8)		EXPOSED & EMBEDDED	1"	GRS			E-074F		CONTINUE TO CIC #3 VIA SC 40
SC 7	ELECTOR RM (P7)	CIC #3		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT
SC 8	E MECH. UFE RM (P19)	CIC #3		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT
SC 9	E ELECT. RM (P8)	CIC #3		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT
SC 10	AUX. POWER RM (M11)	CIC #3		EXPOSED	2"	GRS			E-076F		
SC 11	ELEV. EQUIP. RM (M18)	CIC #3 - 51		EXPOSED & EMBEDDED	1/2"	GRS			E-076F		EXTEND EXISTING CONDUIT
SC 13	BATTERY RM (P21)	CIC #2		EXPOSED	1/2"	GRS			E-081F		
SC 14	ES-4W BOTTOM PIT (PUT)	W. ELECT. RM (P15)		EMBEDDED	1"	GRS			E-081F		EXISTING CONDUITS CONTINUE TO CIC VIA CABLE TRAY
SC 15	ES-3W BOTTOM & TOP PIT	W. ELECT. RM (P15)		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXISTING CONDUITS CONTINUE TO CIC VIA CABLE TRAY
SC 16	W. MECH. RM (P19)	CIC #2		EXPOSED & EMBEDDED	2"	GRS			E-081F		EXTEND EXISTING CONDUIT
SC 17	AUX. POWER RM (P20)	CIC #2		EXPOSED	2"	GRS			E-081F		
SC 18	W. ELECT. RM (P15)	CIC #2		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT
SC 19	SUMP PUMP RM (M18)	CIC #2		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT
SC 20	W. VALVE RM (M18)	CIC #2		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT
SC 21	EMP W. MEZZ (M3)	CIC #2 SEE NOTE 4		EMBEDDED	2"	GRS			E-081F		EXTEND EXISTING CONDUIT
SC 22	EMP W. MEZZ (M3)	CIC #2 SEE NOTE 4		EMBEDDED	2"	GRS			E-081F		EXTEND EXISTING CONDUIT
SC 23	W. ELEV. EQUIP. RM (M20)	CIC #2 SEE NOTE 4		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT
SC 24	ES-2W BOTTOM PIT (PUT)	CIC #2 SEE NOTE 4		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT
SC 25	ES-1W BOTTOM PIT	CIC #2 SEE NOTE 4		EXPOSED & EMBEDDED	1"	GRS			E-081F		EXTEND EXISTING CONDUIT
SC 26	ELECT. EQUIP. (EMERG. FAN RM) (P23)	CIC #4		EXPOSED & EMBEDDED	1"	GRS			E-085F		EXTEND EXISTING CONDUIT

- NOTES
- CONTAINS SC1, SC2 & SC37
 - CONTAINS SC5, SC6 & SC38
 - RUNS TO SCADA BOX IN BOTTOM PIT THEN TO SCADA BOX
 - TOP PIT VIA CONDUITS ON ES TRUSS
 - TERMINATES IN TROUGH ABOVE CC, CONTINUES TO CIC IN WIREWAY
 - CONCEALED ABOVE ACOUSTIC TREATMENT TILES & EMBEDDED
 - SEE NOTE 3, DWG. E-071F



DUPLICATE ORIGINAL

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED BY
JW SHANNON

DRAWN BY
JK CZECH

CHECKED BY
K. DJIE

IN CHARGE
J.C. CHANG

DATE
7 APR 85

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

HARRY WEESE & ASSOCIATES
TIPPLETS - ABBETT - MCCARTHY - STRATTON
ENVIRONMENTAL COLLABORATIVE INC
GIN WONG ASSOCIATES

DMJM/PBQD/KE/HWA
GENERAL CONSULTANTS

APPROVED

LA CBD TO NORTH HOLLYWOOD
UNION STATION

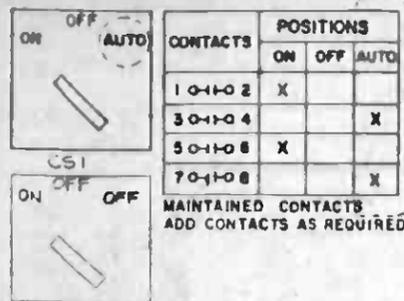
ELECTRICAL RACEWAY & CABLE SCHEDULE
TRAIN CONTROL & COMM SHEET 7

CONTRACT NO. **A136**

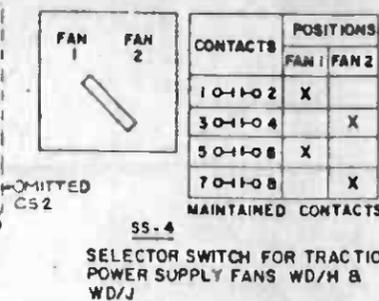
DRAWING NO. **E-101 F**

SCALE **NO SCALE**

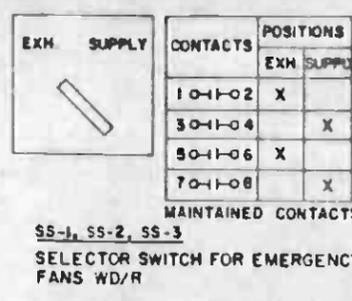
SHEET NO. **A640/41**



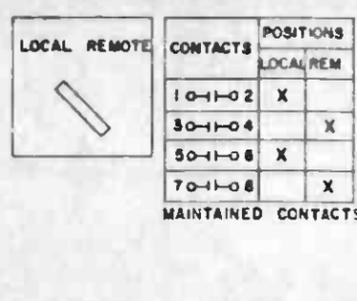
A. CONTROL SWITCH - CS1 & CS2



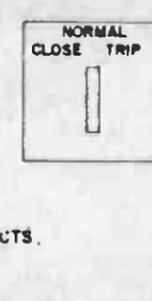
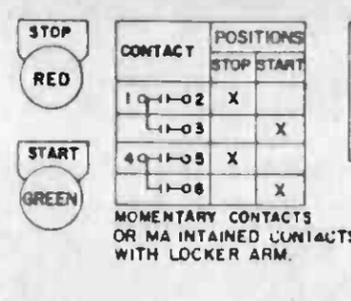
B. SELECTOR SWITCH - SS



C. PERMISSIVE SWITCH - 69



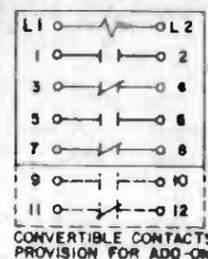
D. PUSH BUTTON STATION (NIC)



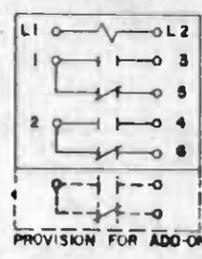
E. CIRCUIT BREAKER CONTROL SWITCH - CS3

CONTACTS	POSITIONS				
	NO.	CLOSE	NORMAL AFTER CLOSE	NORMAL AFTER TRIP	TRIP
10-1-02	1				X
	2				X
30-1-04	3		X	X	
	4	X			
50-1-06	5	X	X		
	6	X	X		

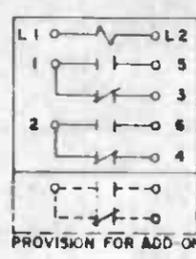
SPRING RETURN TO NORMAL
ADD CONTACTS AS REQUIRED



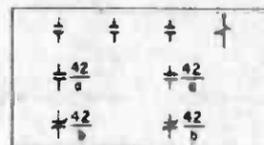
F. AUX. RELAY 3X, 74, 27 G. TIME DELAYED RELAY - 62/TDD



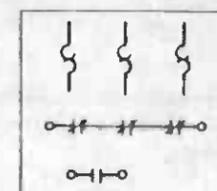
H. TIME DELAYED RELAY - 62/TDE



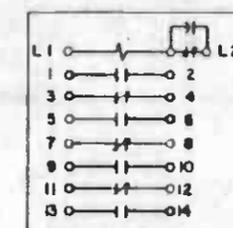
MAGNETIC MOTOR STARTER - 42
NEMA SIZE 1,2,3,4, FVNR



THERMAL OVERLOAD RELAY - 49
NEMA SIZE 1,2,3,4



J. LOCKOUT RELAY - 86



MCC TERMINAL NO DESIGNATION

TERM NO	FOR
Y	277V POWER SUPPLY
XI	120V FROM CONTROL TRANSFORMER
X	120V FROM OUTSIDE POWER SUPPLY
U	GROUNDING NEUTRAL
I	MANUAL SIGNAL
2	AUTO SIGNAL
3	INTERLOCK OR AUXILIARY SIGNAL
4	STARTER COIL
5	RED LIGHT
6	GREEN LIGHT
7	WHITE LIGHT
8	BLUE LIGHT
9	HEATER
D	ALARM RELAY COIL

CONTACTS	POSITIONS SW	POSITIONS		
		FULL CLOSE	INTERMEDIATE	FULL OPEN
1-2	aa			
3-4	aa			
5-6	ba			
7-8	ba			
9-10	OPEN TORQUE			
11-12	CLOSE TORQUE			

K. TORQUE SWITCH - TS
(NIC)

NOTES:

- FOR DEVICE NUMBERS SEE DWG. NO E-001.
- ALL DEVICES AND TERMINAL BLOCKS SHOWN ON ELEMENTARY DIAGRAMS ARE LOCATED IN MCC, UNLESS INDICATED.
- PARALLEL SWITCH CONTACTS AND INDICATING LIGHT CIRCUITS AT MOTOR CONTROL CENTER TO LOCAL CONTROL STATION, WHEN REQUIRED. TYPICAL AT ALL DIAGRAMS.

DUPLICATE ORIGINAL



THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY
MRTC
DRAWN BY
M.A. UDRESCU
CHECKED BY
J.W. SHANNON
IN CHARGE
J.C. CHANG
DATE
17 APRIL 85



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT



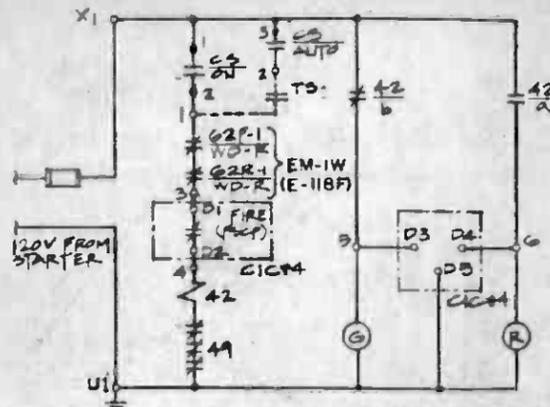
HARRY WEESE & ASSOCIATES
TIPPETTS - ARBETT - MCCARTHY - STRATTON
ENVIRONMENTAL COLLABORATIVE, INC.
GARY WONG ASSOCIATES

DMJM/PBOD/KE/MWA
GENERAL CONSULTANTS

LA CBD TO NORTH HOLLYWOOD
UNION STATION
ELEMENTARY WIRING DIAGRAM
SHEET 1

CONTRACT NO. A136
DRAWING NO. E-112F
SCALE NO SCALE
SHEET NO. A640/43

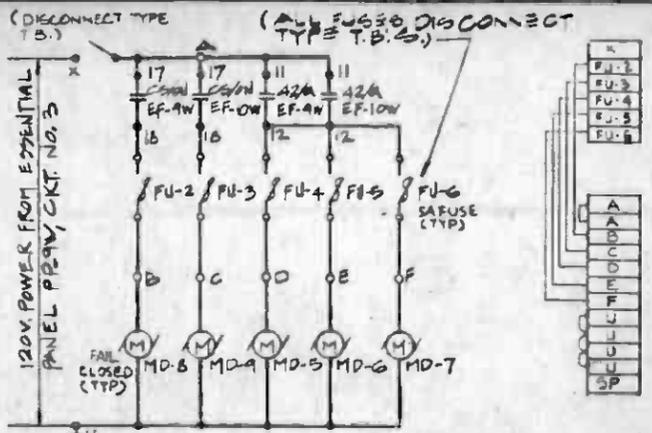
REV	DATE	BY	SUB	APP	DESCRIPTION



WD-D6 EXHAUST FAN EF-9W & DAMPERS

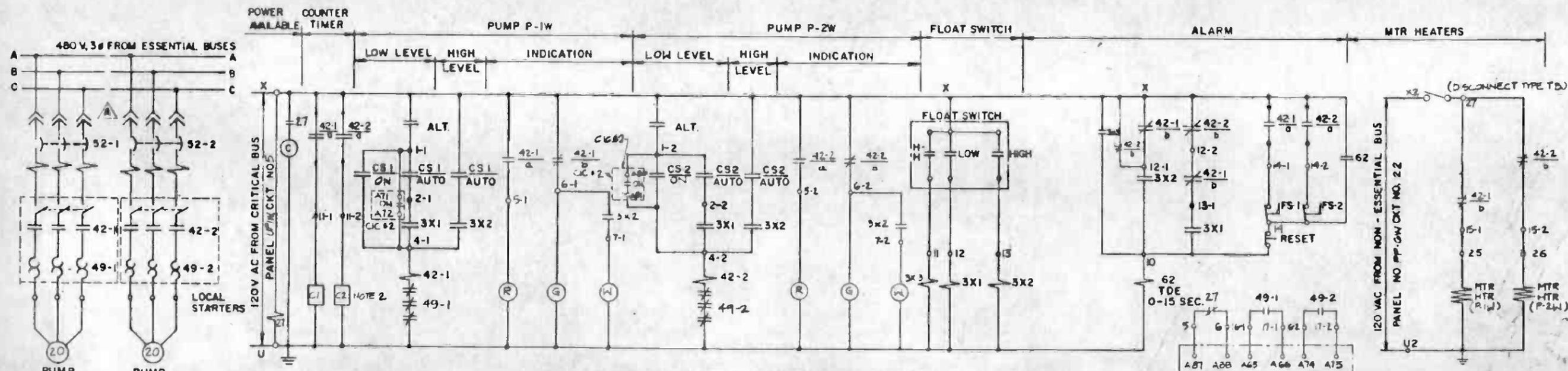
ROOM	VENT FAN		480V. PWR.		TERM AT CIC #4							120V PWR (COMMON CKT.)	
	NO.	DIAG.	HP	MCC COMP.	ROOM	CIC NO.	INTERLOCK	INDICATION	MONITOR	PNL CKT	SW	LOCATION	
WEST EMERGENCY PAN RM.	EF-9W	WD-D6	1	1W	C-5	4	D1	D2	D3	D4	D5	D6	D7
	EF-10W	WD-D6	1	1W	C-6	4	D9	D10	D11	D12	D13	D14	D15
WIRE NUMBERS					3	4	5	6	U1	19	20		

NOTE
FUSED BLOCK-BUCHANAN CAT. 350 & 330 OR EQUAL.



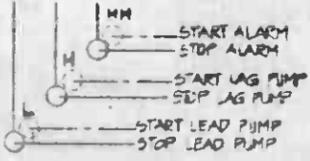
LOCATION	DAMPER NO	PNL NO	CKT NO.	DMPR FAIL POS	DMPR NORMAL OPERATING POS	DMPR POS ON CASE OF FIRE	FAN INTERLOCK	CIC						
								NO	X	1	4	5	6	U
EAST ANCIL	FSD-5	UP-1E	7	CLOSED	OPEN	CLOSED	EF-3E (WD-D2)	5	E20	E21	E22	E23	E24	E25
EAST ANCIL	FSD-6	UP-1E	7	CLOSED	OPEN	CLOSED	EF-3E (WD-D2)	3	E27	E28	E29	E30	E31	E32
EAST ANCIL	FSD-7	UP-1E	7	CLOSED	OPEN	CLOSED	EF-3E (WD-D2)	3	E34	E35	E36	E37	E38	E39
EAST BATT RM.	FSD-9	UP-1E	7	CLOSED	OPEN	CLOSED	EF-2E (WD-D4)	3	E41	E42	E43	E44	E45	E46
WEST BATT RM.	FSD-10	UP-1W	7	CLOSED	OPEN	CLOSED	EF-2W (WD-D4)	2	E5	E6	E7	E8	E9	E10

NOTE:
1. CIC TERM. SHOWN ARE FOR FSD-5. FOR FSD-6, FSD-7, FSD-9 & FSD-10 SEE ADAPTER TABLE.

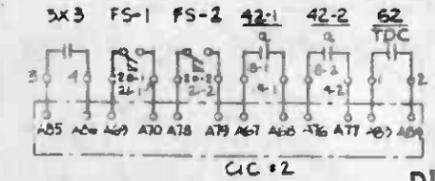


WD-G DUPLEX SUMP PUMPS P-1W, P-2W

NOTES
1. ALL DEVICES ARE LOCATED IN THE PUMP CONTROL PANEL, EXCEPT FLOW AND FLOAT SWITCHES ARE LOCAL. ALSO STARTERS AND AUX. CONTACTS ARE IN LOCAL STARTERS.
2. C1 AND C2 ARE COUNTERS.



ALT-ALTERNATOR

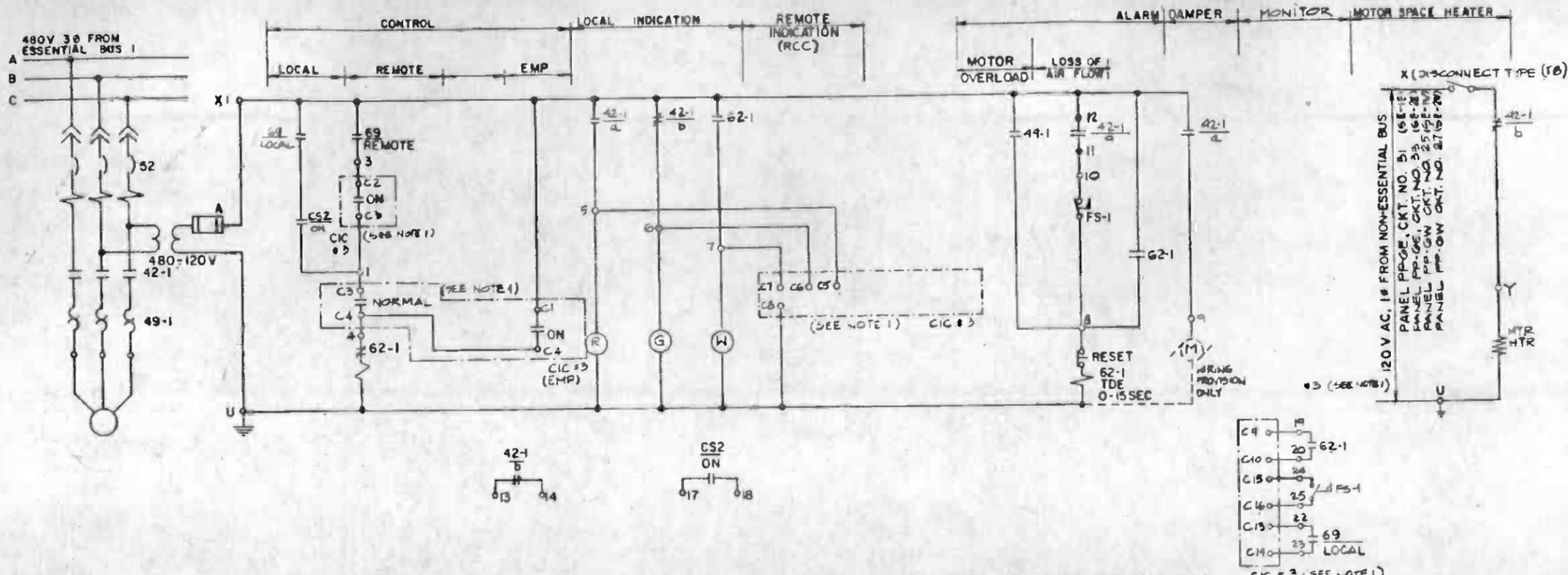


DUPLICATE ORIGINAL

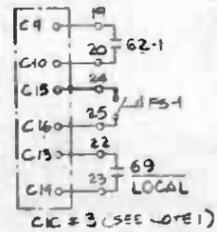


SEE DWG E-136F FOR DETAILS

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY MRTC DRAWN BY M. A. UDRESCU CHECKED BY J. W. SHANNON IN CHARGE J. C. CHANG DATE APRIL 85		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT MARRY WESE & ASSOCIATES TIPPETTS-ABBETT-McCARTHY-STRAITON ENVIRONMENTAL COLLABORATIVE INC. GRI WONG ASSOCIATES SUBMITTED <i>[Signature]</i>		DMJM PBDG/KE/MWA GENERAL CONSULTANTS APPROVED <i>[Signature]</i>		CONTRACT NO. A136 DRAWING NO. E-114F SCALE NO SCALE SHEET NO. A640/44	
REV	DATE	BY	APP	DESCRIPTION	REV	DATE	BY	APP	DESCRIPTION
1	3-17-85	MA	AS	REVISED PER CR 7-009	2	3-28-85	MA	AS	REVISED PER CR5-208
2	4-18-85	MA	AS	INITIAL ISSUE					

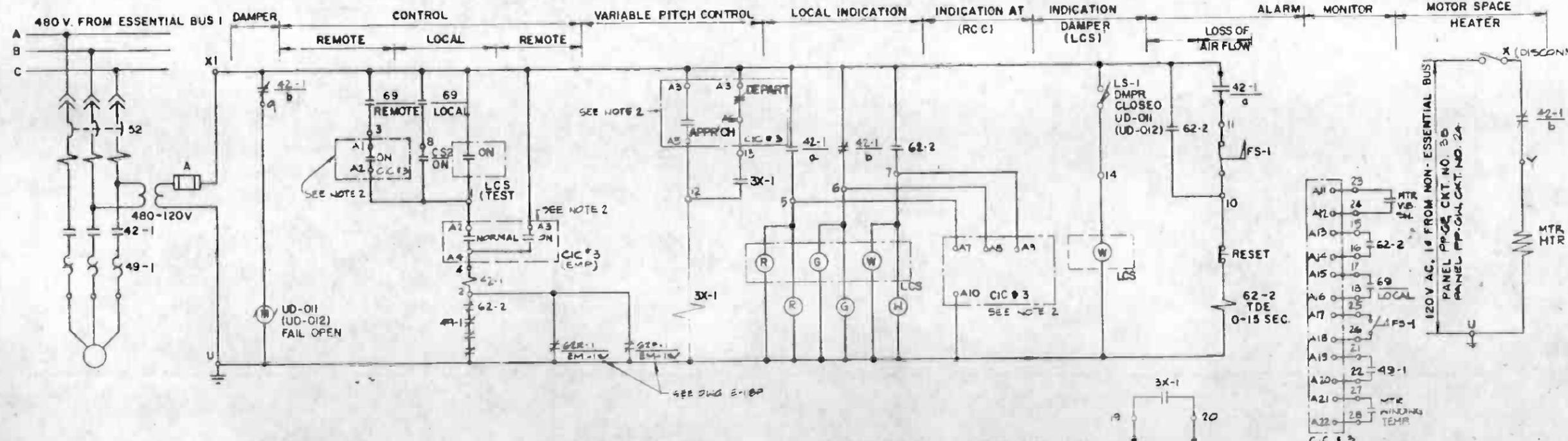


WD-L SMOKE EXHAUST FAN SE-IE (SE-2E, SE-1W, SE-2W SIMILAR)
 (MECHANICAL DESIGNATIONS ARE SM-1E, SM-2E, SM-1W, SM-2W RESPECTIVELY)

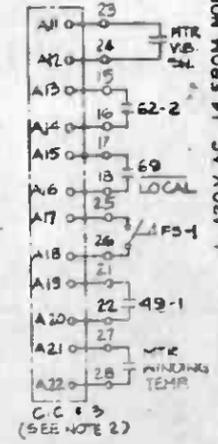


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- NOTES:
1. CIC TERMINAL NUMBERS ARE SHOWN FOR SMOKE EXHAUST FAN SE-1E ONLY. FOR FAN SE-2E CIC TERMINAL NUMBERS, SEE DWG NO E-137F. FOR FAN SE-1W & SE-2W CIC TERMINAL NUMBERS, SEE DWG NO E-138F.
 2. CIC TERMINAL NUMBERS ARE SHOWN FOR UNDERPLATFORM EXHAUST FAN UF-1E ONLY. FOR FAN UF-1W CIC TERMINAL NUMBERS, SEE DWG NO E-138F.



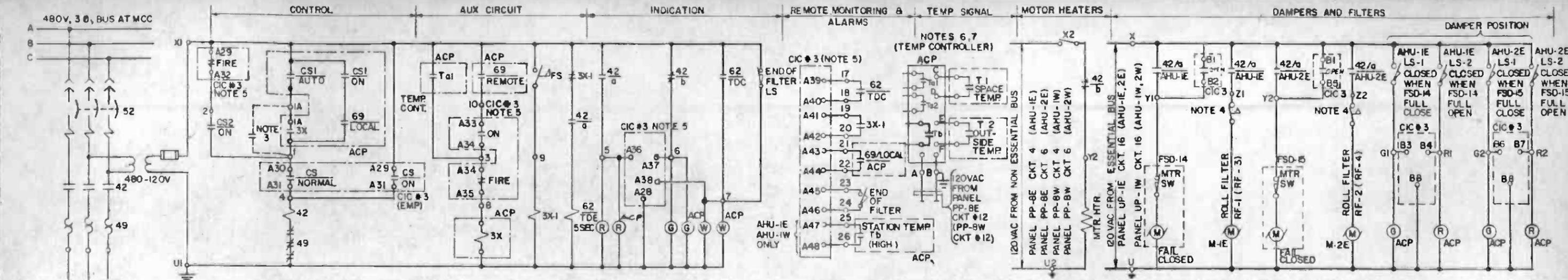
WD-M UNDERPLATFORM EXHAUST FAN UF-IE (UF-1W SIMILAR)
 (MECHANICAL DESIGNATIONS ARE UF-011, UF-012 RESPECTIVELY)



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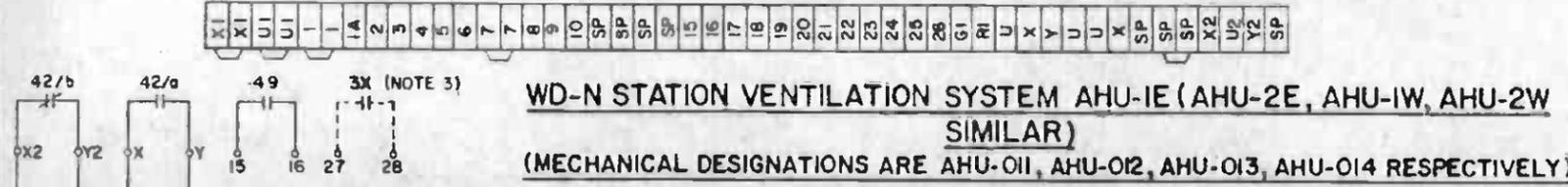
DUPLICATE ORIGINAL

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY MRTC CHECKED BY M.A. UDRESCU DRAWN BY J.W. SHANNON IN CHARGE J.C. CHANG DATE APRIL 85	SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT HARRY WESE & ASSOCIATES TIPPETT - ARBETT - MCCARTHY - STRATTON ENVIRONMENTAL COLLABORATIVE INC GIN WONG ASSOCIATES SUBMITTED	LA CBD TO NORTH HOLLYWOOD UNION STATION ELEMENTARY WIRING DIAGRAM SHEET 5	CONTRACT NO. A136 DRAWING NO. E-116F SCALE NO SCALE SHEET NO. A640/45
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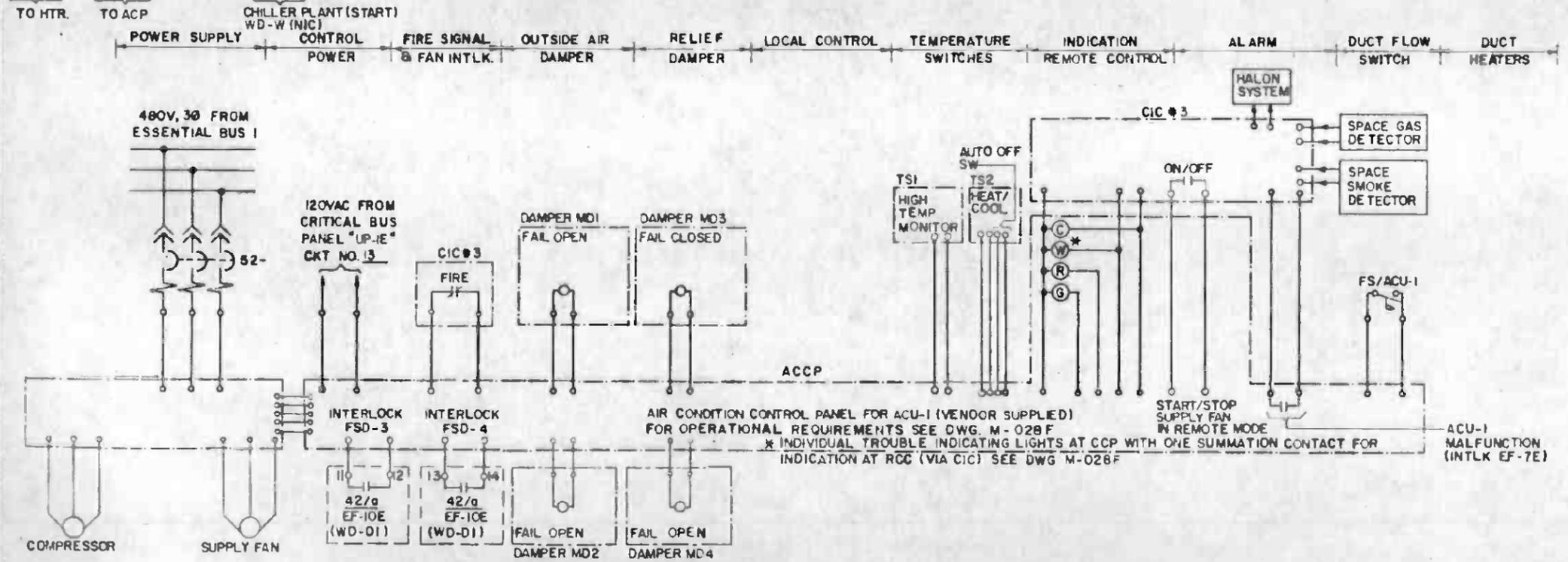


DAMPERS. ONE CIRCUIT FOR AHU-IE, AHU-2E
(AHU-IW, AHU-2W SIMILAR WITH DAMPERS FSD-16 & FSD-17 RESPECTIVELY)

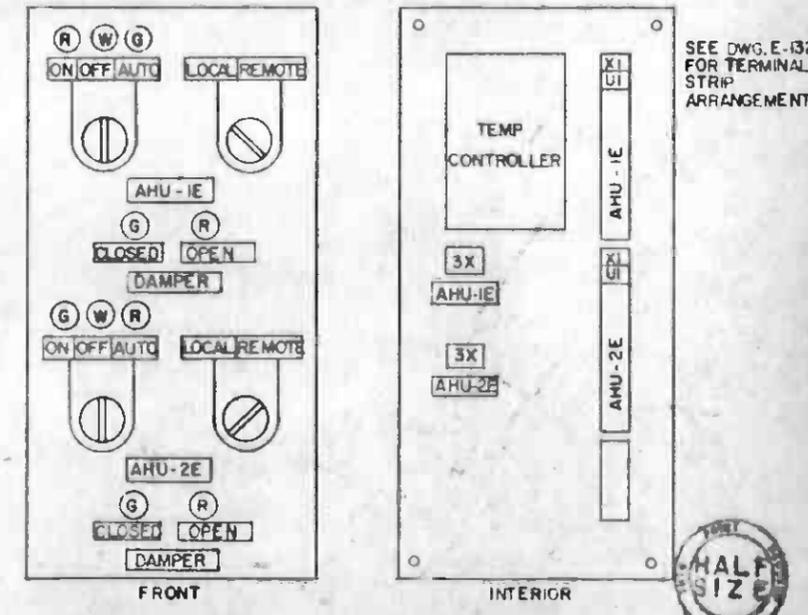
- NOTES**
- ALL DEVICES ARE LOCATED IN MCC UNLESS OTHERWISE INDICATED.
 - FILTER SWITCH, DAMPER ACTUATORS, LIMIT SWITCHES ARE SUPPLIED WITH AIR HANDLING UNIT.
 - CONTACT 3X AT ACP IS FOR FUTURE USE TO START CHILLER PLANT CONTACT 3X IN WD-N WILL BE REPLACED WITH STARTER AUX. CONTACT FROM CHILLER PLANT.
 - "RUN FILTER" CONTACT FURNISHED WITH ROLL FILTER (FILTER DIRTY) INDICATED.
 - CIC TERMINAL NUMBERS SHOWN ARE FOR STATION VENTILATION SYSTEM AHU-IE ONLY. FOR AHU-2E CIC TERMINAL NUMBERS, SEE DWG NO E-137F. FOR AHU-IW AND AHU-2W CIC TERMINAL NUMBERS, SEE DWG. E-138F.
 - Ta1 IS INTERLOCKED WITH AHU-IE & Ta2 WITH AHU-2E (AHU-IW & AHU-2W SIMILAR)
 - SEE DWG MS-015C FOR OPERATIONAL REQUIREMENTS.



WD-N STATION VENTILATION SYSTEM AHU-IE (AHU-2E, AHU-IW, AHU-2W SIMILAR)
(MECHANICAL DESIGNATIONS ARE AHU-011, AHU-012, AHU-013, AHU-014 RESPECTIVELY)

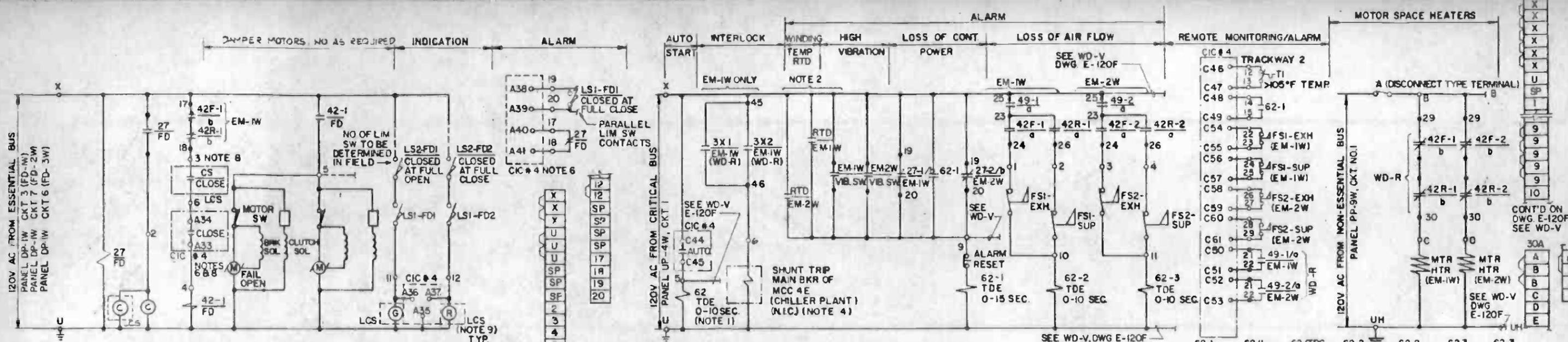


WD-O AIR CONDITION SYSTEM ACU-I FOR COMMUNICATION/TRAIN CONTROL ROOM
FOR EXH FANS EF-7E, EF-10E, SEE DWG. E-111F
FOR FIRE SMOKE DAMPERS FSD1 THROUGH FSD-4 SEE DWG. E-110F



WD-N: ACP EAST DETAIL FOR AHU-IE, AHU-2E
(ACP WEST SIMILAR)

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REV	DATE	BY	APP	DESCRIPTION	REV	DATE	BY	APP	DESCRIPTION		
1	3/7/87	YMO	da	REVISED PER CR 7-009							
2	7/26/87	HEM	A.S.	REVISED PER CR 9-208							
3	1/1/88	LM		INITIAL ISSUE							



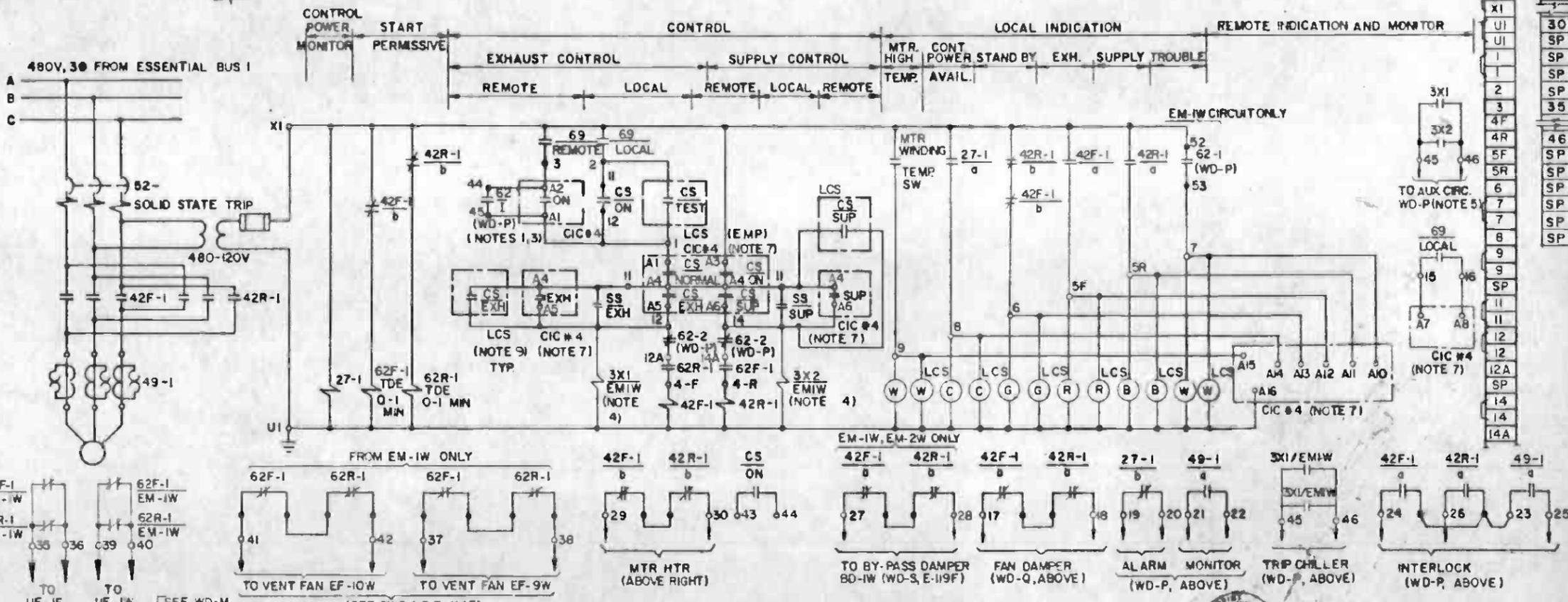
WD-Q EMERG. FAN DAMPER FD-1W FOR FAN EM-1W (FD-2W, FD-3W SIMILAR)
 (MECHANICAL DESIGNATIONS ARE ED-021, ED-022, ED-023 RESPECTIVELY)

WD-P EMERGENCY FAN AUXILIARY CIRCUIT FOR FANS EM-1W, EM-2W
 FOR FAN EM-3W, SEE WD-V, DWG E-120F

FOR ADAPTER TABLE SEE DWG E-120F

NOTES:

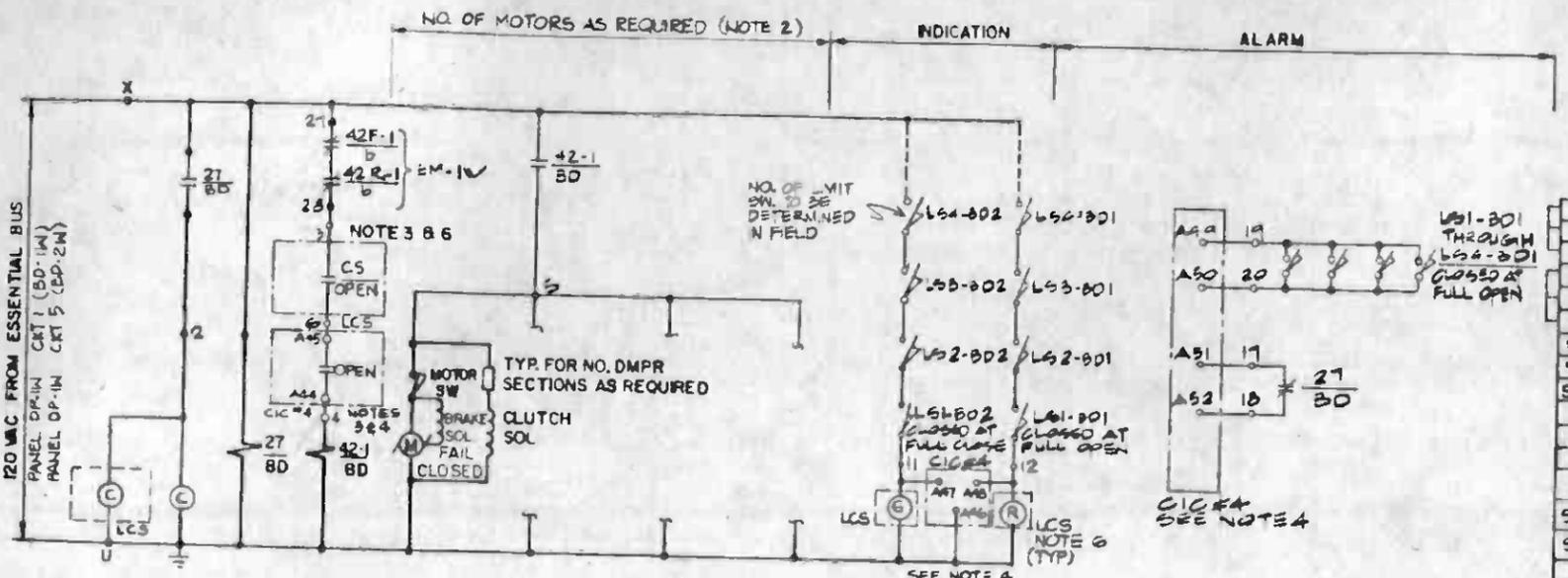
- RELAY 62 HAS 1-INSTANTANEOUS CONTACT AND 2-FORM C CONTACTS. USE INSTANTANEOUS CONTACT FOR AUTO START CKT. OF FAN EM-1W AND 62/TDC CONTACT FOR AUTO START CKT. OF FAN EM-2W. SET TIMER AT 6 SECONDS. ALSO SEE 62-5, AND NOTE 1 ON DWG E-120F FOR STARTING EM-3W.
- RTD CKT. IS FROM COMMON INSTRUMENT PANEL FOR ALL 3 FANS. FOR RTD-EM-3W SEE WD-V, DWG. E-120 F.
- FAN EM-1W WILL START IMMEDIATELY AFTER THE "ON" SIGNAL AT CENTRAL CONTROL IS ACTIVATED. FAN EM-2W WILL START 6 SECONDS AFTER EM-1W.
- CHILLER PLANT TO BE TRIPPED WHEN EMERGENCY FAN STARTS. RELAYS 3X1 & 3X2 EXIST FOR FAN EM-1W ONLY.
- MULTIPLY AUX. CONTACTS 42F, 42R & 49 AT EMERG FAN STARTERS WITH AUX. RELAYS, IF CANNOT SUPPLY ALL CONTACTS.
- CIC TERMINAL NUMBERS SHOWN ARE FOR FAN DAMPER FD-1W ONLY. FOR FD-2W & FD-3W CIC TERMINAL NUMBERS, SEE DWG NO E-139F.
- CIC TERMINAL NUMBERS SHOWN ARE FOR EMERGENCY FAN EM-1W ONLY FOR EM-2W & EM-3W CIC TERMINAL NUMBERS, SEE DWG NO E-139F.
- UNDER NORMAL OPERATING CONDITIONS CONTACT "CS/CLOSE" AT LCS & "CLOSE" AT CIC ARE IN CLOSED POSITION & THEREFORE, DAMPERS ARE NORMALLY CLOSED.



WD-R EMERGENCY FAN EM-1W (EM-2W, EM-3W SIMILAR)
 (MECHANICAL DESIGNATIONS ARE EF-021, EF-022, EF-023 RESPECTIVELY)
 SEE DWG. E-120F FOR ADAPTER TABLE

HALF SIZE
 DUPLICATE ORIGINAL

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, UNDER MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY MRTC DRAWN BY M.A. UDRESCU CHECKED BY J.H. SHANNON IN CHARGE J.C. CHANG DATE 7 APRIL 85		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT HARRY WEESE & ASSOCIATES TIPPETT - ABBETT - MCCARTHY - STRATTON ENVIRONMENTAL COLLABORATIVE INC. GUY WONG ASSOCIATES		LA CBD TO NORTH HOLLYWOOD UNION STATION ELEMENTARY WIRING DIAGRAM SHEET 7		CONTRACT NO. A136 DRAWING NO. E-118F SCALE NO SCALE SHEET NO. A640/47	
REV	DATE	BY	APP	DESCRIPTION	REV	DATE	BY	APP	DESCRIPTION		
1	11/82	DVD		REVISED PER CP7-009							
2	1/83	MEM	A	REVISED PER CR5-108							
3	1/83	MEM		INITIAL ISSUE							



MAIN BREAKER ADAPTER TABLE

480V SWBD	BREAKER NO.	SER. MCB	LOADS	CONTROL SW. NO.	PERM SW. NO.	ALARM RELAY NO.	20V AC BKR CONTROL	20V AC LOCKOUT CRT.	LOCKOUT RELAY	CONN AT CIC
1E	52-01E	NG	MCC-1E	CS-1E	69-E	74-1	JP-E 15	UP-E 11	86-11E	CIC-3 EAST F47 F48
2E	52-02E	NG	MCC-2E	CS-2E	69-2E	74-2	JP-2E 17	UP-2E 11	86-12E	CIC-3 WEST F74 F75
1W	52-01W	NG	MCC-1W	CS-1W	69-1W	74-2	JP-1W 5	UP-1W 11	86-11W	CIC-2 WEST AFR F74 F75
2W	52-02W	NG	MCC-2W	CS-2W	69-2W	74-2	JP-2W 7	UP-2W 11	86-12W	CIC-2 WEST AFR F74 F75

CONNECTION AT CIC

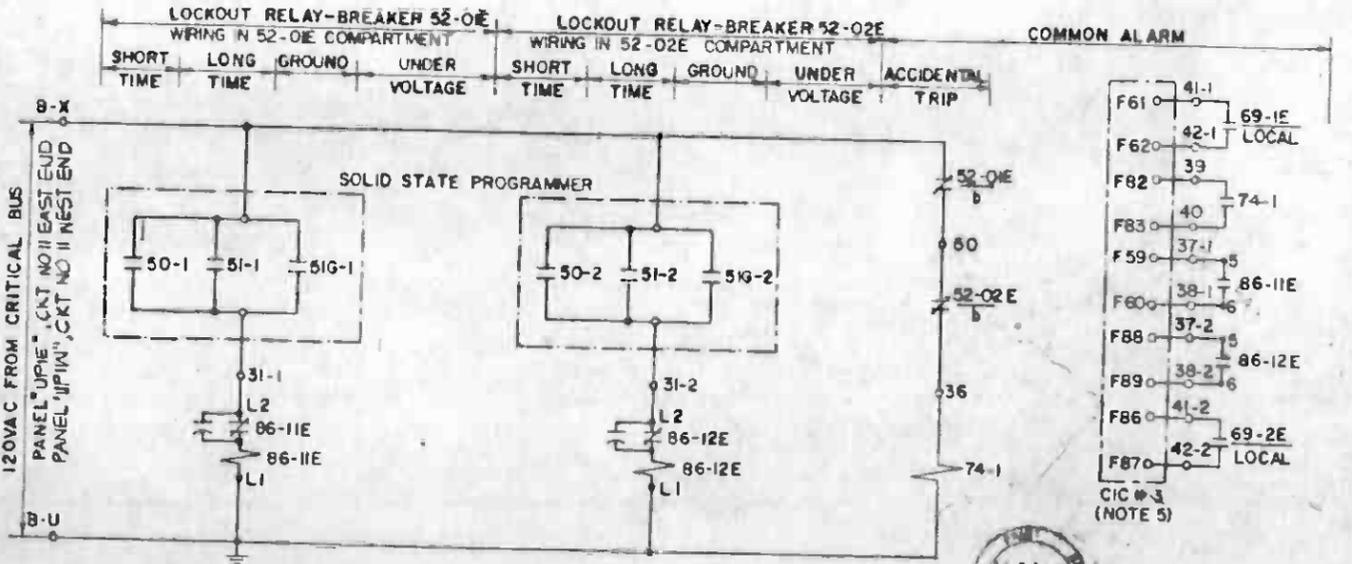
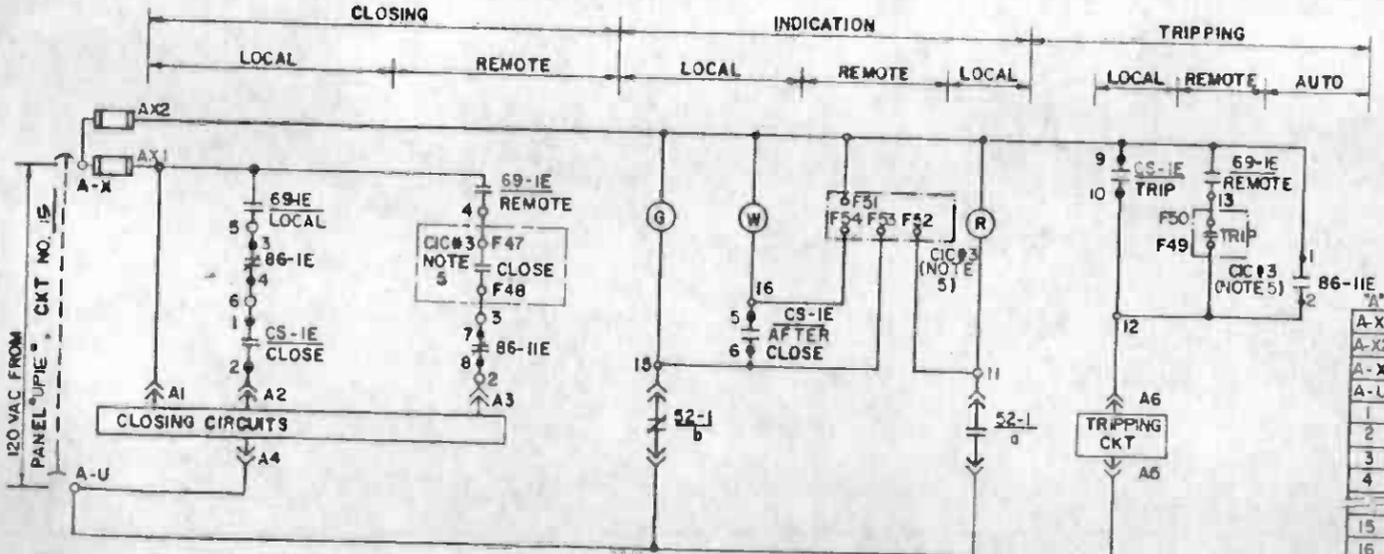
CONTROL	INDICATION	MONITOR/ALARM
F49 F50	F51 F52 F53 F54	F59 F60 F61 F62
F76 F77	F78 F79 F80 F81	F89 F90 F91 F92
F49 F50	F51 F52 F53 F54	F59 F60 F61 F62
F76 F77	F78 F79 F80 F81	F89 F90 F91 F92
12 13	A-X2 11 13 16	37 38 41 42

LOCKOUT RELAY (86-11E, -11W)

TERM. NO.	TYPE	INTERLOCK	WIRING DIAG.
1-2	a	BKR 1 TRIPPING	WD-T
3-4	b	BKR 2 CLOSING	WD-T
5-6	a	ALARM	WD-T
7-8	b	BKR 1 CLOSING	WD-T
9-10	a		
11-12	b		

WD-S BYPASS DAMPER BD-1W FOR EMERGENCY FAN EM-1W (BD-2W SIMILAR)
 (MECHANICAL DESIGNATIONS ARE BD-021, BD-022, RESPECTIVELY)

- NOTES:**
- DAMPER ACTUATOR - RAYMOND CONTROL SYSTEMS OR EQUAL
 - ESTIMATE NO OF DAMPER MOTORS AT EVEN QUANTITY BASED ON MAXIMUM OF 60 SQ. FT. DAMPER AREA PER MOTOR. (TYP FOR ALL DAMPERS)
 - UNDER THE NORMAL CONDITION BY-PASS DAMPERS ARE OPEN AND CONTACT "C/S OPEN" AT LCS & "OPEN" AT CIC ARE IN CLOSED POSITION.
 - CIC TERMINAL NUMBERS SHOWN ARE FOR EMERGENCY FAN (EM-1W) BY-PASS DAMPER BD-1W ONLY. FOR BD-2W CIC TERMINAL NUMBERS, SEE DWG. NO. E-139F.
 - CIC TERMINAL NUMBERS SHOWN ARE FOR 480V. MAIN CIRCUIT BREAKER 52-01E ONLY. FOR CIRCUIT BREAKER 52-02E, 52-01W AND 52-02W SEE ADAPTER TABLE
 - FOR LOCAL CONTROL STATION (LCS) DETAILS SEE DWG E-121F.



NOTE

- POSITION SWITCH PSS SHOWN AT RACKED-IN POSITION.
- ALL DEVICES ARE LOCATED AT BREAKER CUBICLE EXCEPT CIC CABINET IS REMOTE.

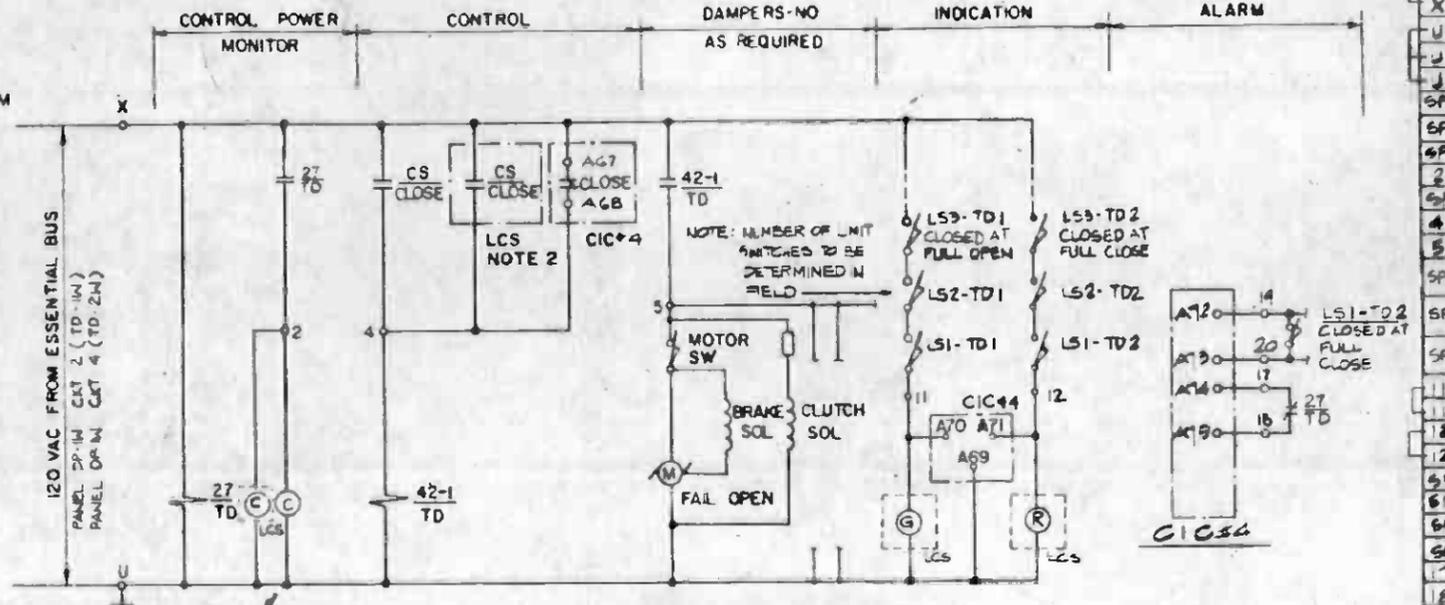
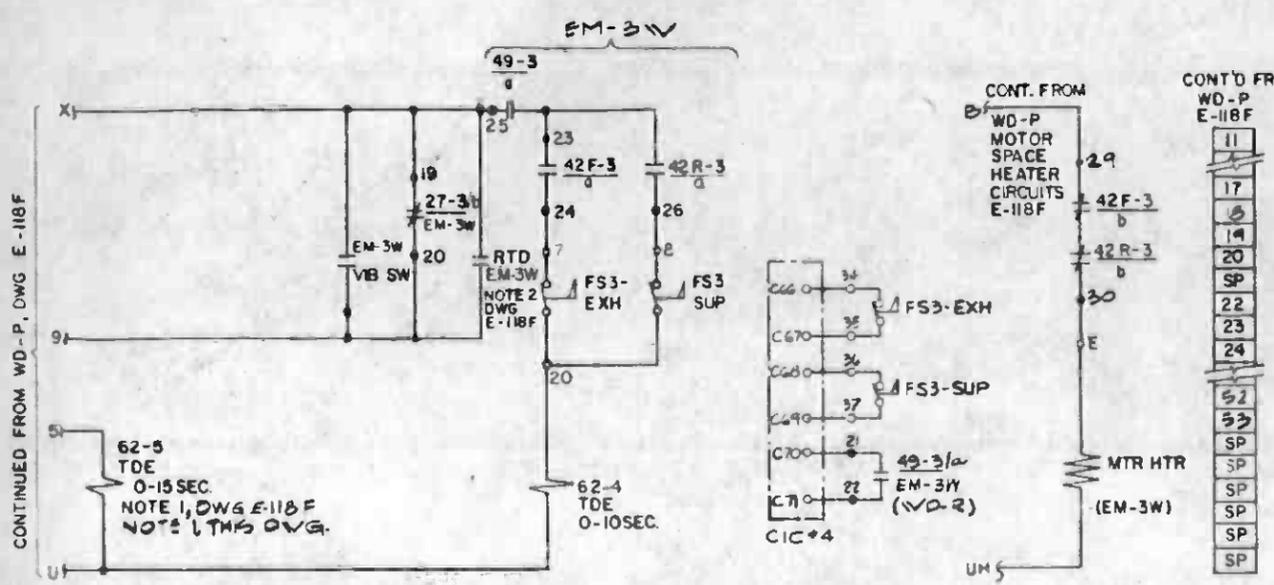
WD-T 480V MAIN BREAKER 52-01E AT MAIN SWBD IN AUX PWR RM.
 (52-02E, 52-01W, 52-02W SIMILAR) SEE ADAPTER TABLE ABOVE RIGHT



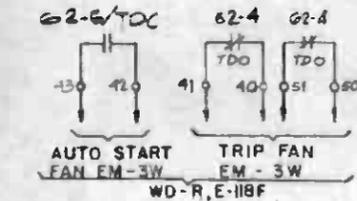
DUPLICATE ORIGINAL

<table border="1"> <tr><th>REV</th><th>DATE</th><th>BY</th><th>SUB</th><th>APP</th><th>DESCRIPTION</th></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>	REV	DATE	BY	SUB	APP	DESCRIPTION							<p>THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.</p> <p>DESIGNED BY MRTC</p> <p>DRAWN BY M.A. UDRESCU</p> <p>CHECKED BY J.W. SHANNON</p> <p>IN CHARGE J.C. CHANG</p> <p>DATE 7 APRIL 85</p>		<p>SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT</p> <p>HARRY WESE & ASSOCIATES TRIPLETT - ABBETT - MCCARTHY - STRATTON ENVIRONMENTAL COLLABORATIVE INC GUY WONG ASSOCIATES</p> <p>DMJM/PBOD/KE/HWA GENERAL CONSULTANTS</p>	<p>LA CBD TO NORTH HOLLYWOOD UNION STATION ELEMENTARY WIRING DIAGRAM SHEET 8</p>	<p>CONTRACT NO. A136</p> <p>DRAWING NO. E-119F REV. 2</p> <p>SCALE NO SCALE</p> <p>SHEET NO. A640/48</p>
REV	DATE	BY	SUB	APP	DESCRIPTION												

CONTINUED FROM WD-P, DWG E-118F



- X
- X
- U
- J
- SP
- SP
- 2
- SP
- 4
- 5
- SP
- SP
- SP
- 12
- SP
- SP
- 18
- SP
- 20



WD-V EMERGENCY FAN EM-3W AUXILIARY CIRCUITS

WD-U EMERGENCY FAN TRACK DAMPER TD-W (TD-2W SIMILAR)
(MECHANICAL DESIGNATIONS ARE TD-021, TD-022, RESPECTIVELY)

- NOTES:**
- SET TIMER 62-5 TO 12 SECONDS IN AUTO MODE, FAN EM-3W WILL START 12 SECONDS AFTER FAN EM-W B 6 SECONDS AFTER FAN EM-2W.
 - SEE E-121F FOR CONSTRUCTION OF LOCAL CONTROL STATIONS.

EMERGENCY FAN ADAPTER TABLE (E-118F)

STATION	EQUIPMENT #		HP	DIAGRAM	480V STARTER AT			120V. AUX. CKT./CONTROL AT			INTERLOCK WITH FANS	TERMINALS AT CIC																																										
	MECH	ELECT			MCC	COMPT	ROOM	PNL	CKT NO.	CONTROL AT MCC		COMPT	CONTROL AT RCC						CONTROL AT EMP						INDICATION AT RCC & EMP				MONITORING/ALARM AT RCC																									
UNION STA WEST END	EF-021	EM-1W	250	WD-R&P	4W	E-1	WEST CROSSOVER ELECT ROOM	UP-4W	1	4W	D6	UF-1E UF-1W EF-2W	A1	A2	A4	A5	A6	A1	A3	A4	A5	A6	A10	A11	A12	A13	A14	A15	A16	A7	A8	C50																						
	EF-022	EM-2W	250	WD-R&P	4W	F-1	WEST CROSSOVER ELECT ROOM	UP-4W	1	4W	D6		B59	B60	B62	B63	B64	B59	B61	B62	B63	B64	B69	B70	B71	B72	B73	B74	C44	C45	B65	B66	C46	C47	C48	C49	C54	C56	C56	C57	C58	C59	C60	C61	C66	C67	C68	C69	C52					
	EF-023	EM-3W	250	WD-R&V	4W	B-1	ROOM						C1	C2	C4	C5	C6	C1	C3	C4	C5	C6	C11	C12	C13	C14	C15	C16	C7	C8														C70										
												WIRE NOS	1	3	11	12	14	1	X1	11	12	14	7	5R	5F	6	8	9	U1	X	5	15	16	12	13	14	15	16	17	22	23	24	25	26	27	28	29	32	33	34	35	36	37	21

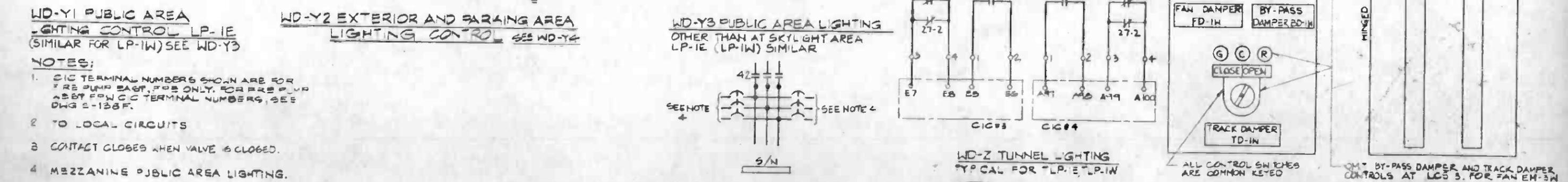
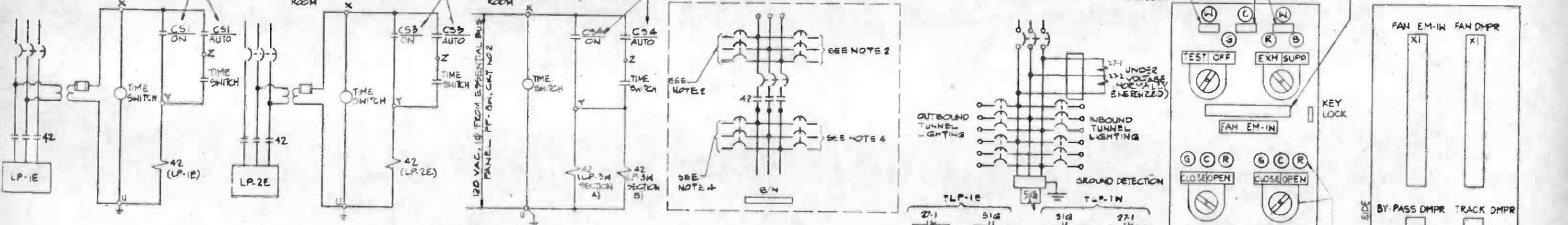
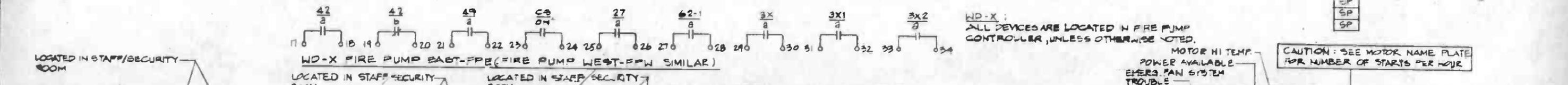
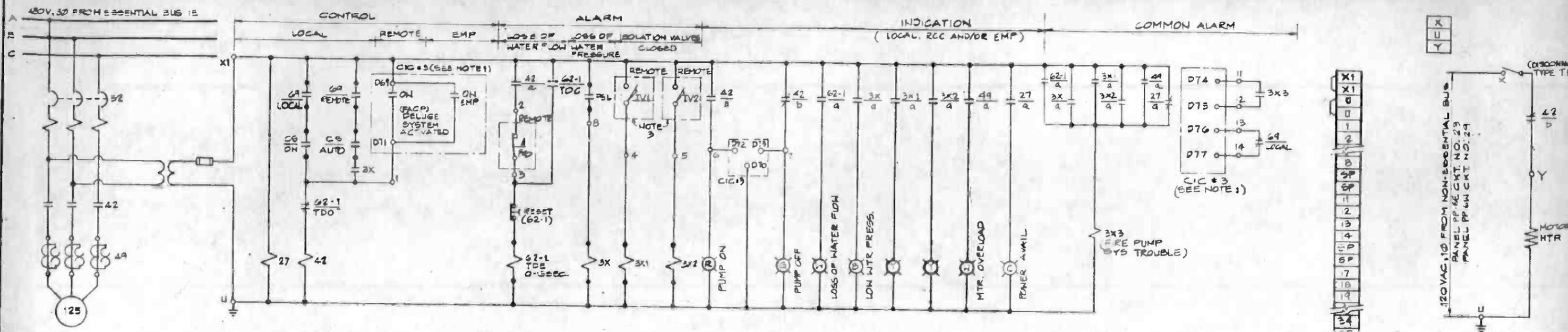
EMERGENCY FAN DAMPER ADAPTER TABLE (E-118F & THIS DWG.)

LOCATION	FOR FANS	DAMPER	DIAGRAM	120V PWR/CONTROL			INTERLOCK		CIC		TERMINALS AT CIC																				
				PNL	CKT	CONTROL AT MCC	COMPT	42R1V	42R1V	NO	ROOM	REMOTE CONTROL				INDICATION				ALARM											
WEST CROSSOVER	EM-1W (EF-021)	FAN DMPR FD 1W	WD-Q	DP-1W	3	4W	C-3	4W	E-1	CIC-4	W X-OVER ELECT RM	A33	A34	A35	A36	A37	A38	A39	A40	A41											
		BY PASS DMPR BD-1W	WD-S	DP-1W	1	4W	D-4	4W	E-1	CIC-4		A44	A45	A46	A47	A48	A49	A50	A51	A52											
		TRACK DMPR TD-1W	WD-U	DP-1W	2	4W	D-2			CIC-4		A67	A68	A69	A70	A71	A72	A73	A74	A75											
	EM-2W (EF-022)	FAN DMPR FD 2W	WD-Q	DP-1W	7	4W	D-1	4W	F-1	CIC-4		B43	B44	B45	B46	B47	B48	B49	B50	B51											
		BY PASS DMPR BD-2W	WD-S	DP-1W	5	4W	D-5	4W	F-1	CIC-4		B9	B10	B11	B12	B13	B14	B15	B16	B17											
		TRACK DMPR TD-2W	WD-U	DP-1W	4	4W	D-3			CIC-4		B32	B33	B34	B35	B36	B37	B38	B39	B40											
EM-3W (EF-023)	FAN DMPR FD 3W	WD-Q	DP-1W	6	4W	C-4	4W	B-1	CIC-4		C28	C29	C30	C31	C32	C33	C34	C35	C36												
											WIRE NUMBERS	4	6	U	11	12	19	20	17	18											
												X	4	*																	

CIC	
NO	ROOM
C51	WEST CROSSOVER ELECT ROOM
C53	WEST CROSSOVER ELECT ROOM
C71	WEST CROSSOVER ELECT ROOM
22	31
32	33
34	



<p>THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, UNDER MASS TRANSPORTATION ADMINISTRATION, UNDER THE GREAT MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA</p>				<p>DESIGNED BY MRTC</p> <p>DRAWN BY M. A. UDRESCU</p> <p>CHECKED BY J. H. SHANNON</p> <p>IN CHARGE J. C. CHANG</p> <p>DATE 17 APR 1985</p>		<p>SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT</p> <p>METRO RAIL PROJECT</p> <p>HARRY WEESE & ASSOCIATES TIPPETT - ABBETT - MCCARTHY - STRATTON ENVIRONMENTAL COLLABORATIVE INC GUY WONG ASSOCIATES</p>		<p>LA CBD TO NORTH HOLLYWOOD UNION STATION</p> <p>ELEMENTARY WIRING DIAGRAM</p> <p>SHEET 9</p>		<p>CONTRACT NO A136</p> <p>DRAWING NO E-120F</p> <p>SCALE NO SCALE</p> <p>SHEET NO A640/49</p>	
<p>REV 9787 DWG A4 REVISED PER CR 7-009</p>				<p>REV 7261 NEM A4 REVISED PER CR 5-208</p>		<p>INITIAL ISSUE</p>		<p>DATE 17 APR 1985</p>		<p>APPROVED</p>	



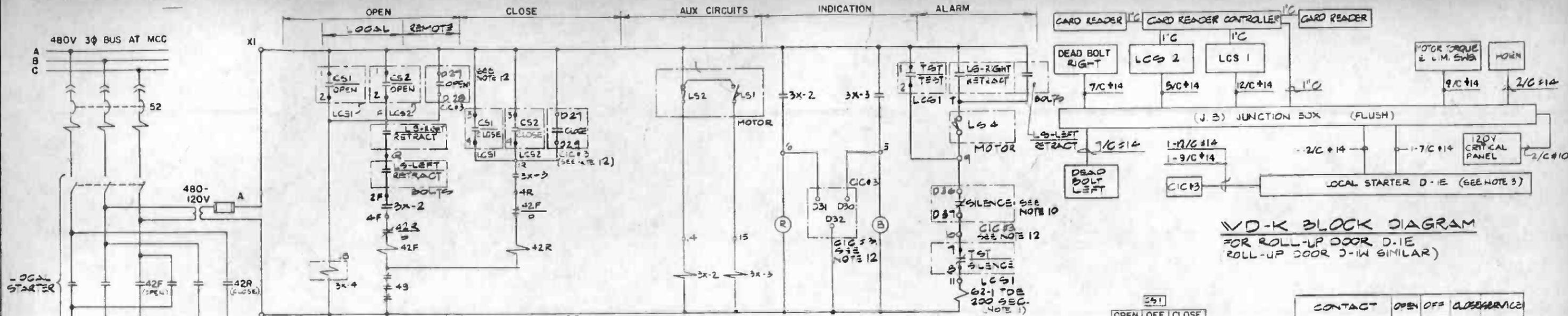
NOTES:

1. CIG TERMINAL NUMBERS SHOWN ARE FOR FIRE PUMP EAST, FOR ONLY. FOR FIRE PUMP WEST, FOR CIG TERMINAL NUMBERS, SEE DWG S-138F.
2. TO LOCAL CIRCUITS
3. CONTACT CLOSES WHEN VALVE IS CLOSED.
4. MEZZANINE PUBLIC AREA LIGHTING.

CAUTION: SEE MOTOR NAME PLATE FOR NUMBER OF STARTS PER HOUR

LOCAL CONTROL STATION FOR FAN EM-IN (7-5225 SIMILAR)
(REF. WD-P, Q, R, S, U, V DWGS. E-118F, E-119F & E-205)

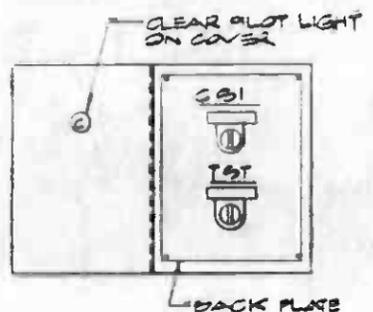
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1954 AS AMENDED AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY MRTC DRAWN BY M.A. UDRESCU CHECKED BY J.W. SHANNON J.C. CHANG DATE 1 APRIL 85				SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT RTD		LA CBD TO NORTH HOLLYWOOD UNION STATION ELEMENTARY WIRING DIAGRAM SHEET 10		CONTRACT NO. A136 DRAWING NO. E-121F SCALE NO SCALE SHEET NO. A640/50	
REV	DATE	BY	SUB	APP	DESCRIPTION	REV	DATE	BY	SUB	APP	DESCRIPTION
1	3-17-85	JYS	M		REVISED PER CR 7-009						
2	3-22-85	WEM	A	JYS	REVISED PER CR 5-208						
3	4-9-85				INITIAL ISSUE						



WD-K BLOCK DIAGRAM
FOR ROLL-UP DOOR D.I.E
(ROLL-UP DOOR D-I-W SIMILAR)

CONTACT	TEST	NORMAL	SILENCE
10-1-02	X		X
30-1-04		X	
50-1-06			X
70-1-08	X	X	

MAINTAINED CONTACTS
ALLEN-BRADLEY, CAT.
200M-JR 2 KR1 MAX OR EQUAL



LCS 1 (OUTSIDE OF GRILL) SHOWN
LCS 2 (INSIDE OF GRILL) WITH CS 2 ONLY

SW	CLOSE	INTERMEDIATE	OPEN
LS 1			
LS 2			
LS 3			
LS 4			

TO BE FIELD ADJUSTED

MOTOR OVERTRAVEL SUFFICIENT TO INSURE DOOR IS AT LIMIT OF TRAVEL.
APPROX DOOR TRAVEL TO STOP WITH MOTOR DEENERGIZED.



INSTALL INSIDE FLUSH BOX WITH SPRING LOADED COVER OPENED BY CARD READER, SEE WD-290 FOR BOX DETAILS

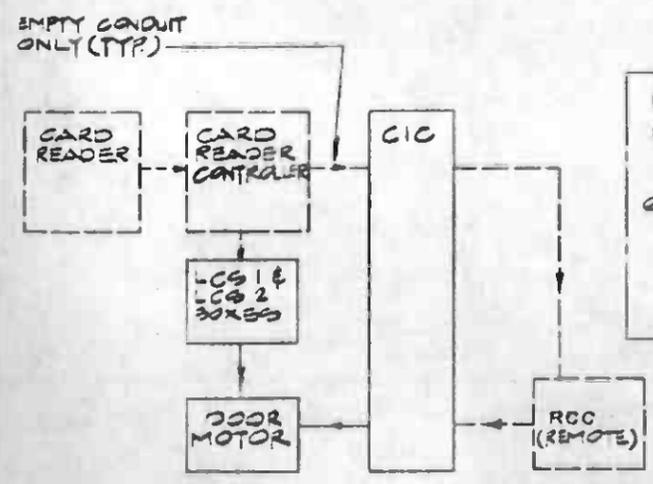
CONTACT	OPEN	OFF	CLOSE	SPARE
10-1-02	X			WD-K
30-1-04			X	WD-K
50-1-06	X			SPARE
70-1-08				X SPARE

SWITCH, MOMENTARY CONTACT, SPRING RETURN TO CENTER, ALLEN BRADLEY CAT. 200M-JR 913 OR EQUAL.

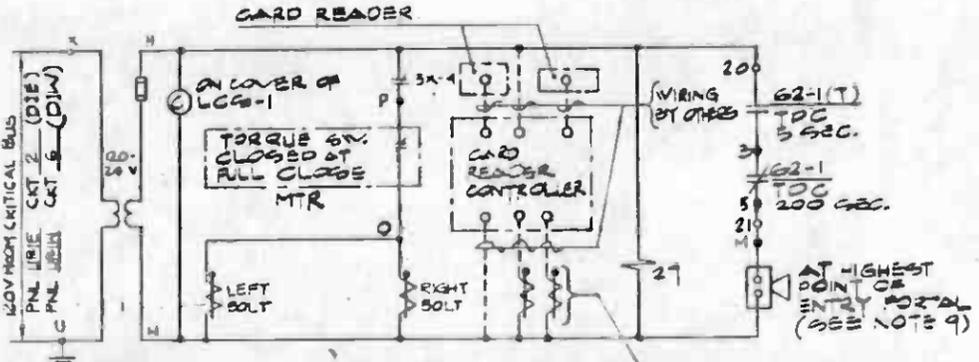
CS 1 & CS 2

NOTES:

- CS 1 & CS 2 ARE SWITCHES LOCATED IN LCS 1 & LCS 2, OUTSIDE & INSIDE OF ROLL-UP GRILL.
- DELETED.
- ALL DEVICES ARE INSTALLED IN LOCAL STARTER LOCATED IN THE DOOR CAVITY, UNLESS INDICATED OTHERWISE.
- LIMIT SWITCHES IN DEADBOLTS ARE CLOSED AT FULL RETRACT.
- DOOR MOTOR SHALL BE EQUIPPED WITH TORQUE SW. EQUIVALENT TO MOTOR OR ROTORK.
- DEAD BOLT SHALL BE A FAIL-SAFE, POSITIVE ACTION MODEL (RETRACT AT LOSS OF POWER) WITH REMOTE MONITORING, BUILT-IN LIMIT SWITCHES, LEKTRONIK MODEL 10ARA-X88-6 OR EQUAL.
- REMOTE OPERATION FROM CCF SHALL BE FOR EMERGENCY REQUIREMENTS ONLY.
- 20% RED & BLUE LIGHTS ARE ON, FOR AN INTERMEDIATE POSITION OF DOOR.
- HORN SHALL BE LISTED BY U.L. FOR BURGLARY PROTECTION, WITH CONTINUOUS VIBRATION, EXCEPTING 100 DB AT 10 FT. SURFACE MOUNTING TYPE (MOULDER SERIES 1000 OR EQUAL). FIELD TO POINT HORN DIRECTION TO SUIT STATION ENTRANCE LAYOUT.
- FIELD TO TEMPORARILY SILENCE HORN DURING TESTING IF CIC #3 HAS NOT BEEN INSTALLED.
- 62-1 IS TIME DELAYED ON ENERGIZATION, EQUIPPED WITH 1" AUX. SWITCHES, ADJUSTABLE TO 5 SECONDS AGOSTAT MODEL 1012 AE-T OR EQUAL.
- CIC TERMINAL NUMBERS ARE SHOWN FOR ROLL-UP DOOR D.I.E. ONLY. FOR D-I-W SEE DWG. E-138F.

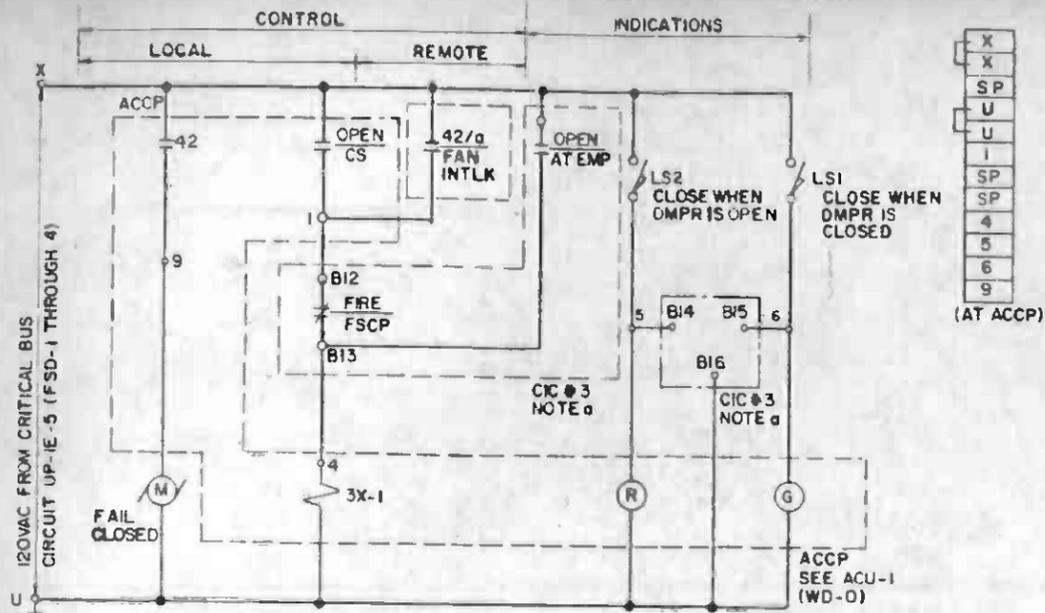


CARD READER CONTROL INTERFACE DIAGRAM



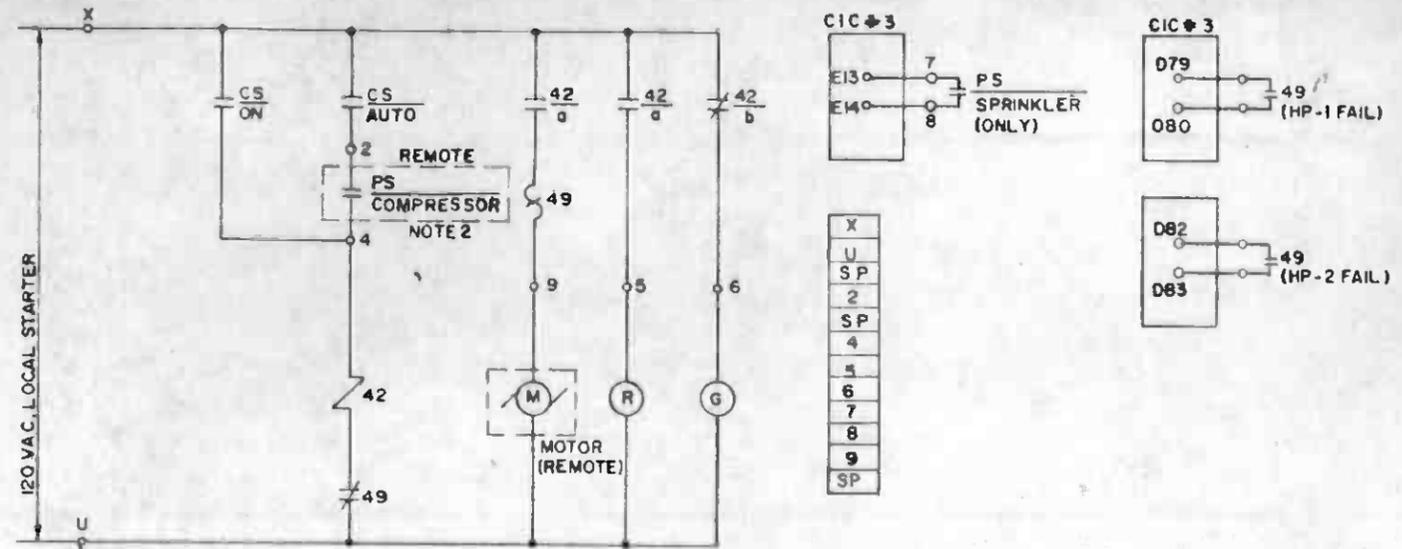
*TRANSFORMER, RELAY 3X-27 AND 24V FUSE ARE INSTALLED AND TERMINATED IN JUNCTION BOX. SEE DWG. E-36F FOR TERM BLOCKS & EXTERNAL WIRING OF JB.

WD-K ROLL-UP DOOR D.I.E AT STATION ENTRANCE (D-I-W SIMILAR)



NOTE: a. CIC TERMINALS REFER TO FSD-1. FOR FSD-2, FSD-3 & FSD-4 SEE ADAPTER TABLE & CIC # 3 DWG E-137F.

FIRE SMOKE DAMPER FSD-1 (FSD-2, FSD-3, FSD-4 SIMILAR)
 TRAIN CONTROL AND COMMUNICATION ROOM (SEE ADAPTER TABLE BELOW RIGHT)
 (CONTINUATION OF WD-0 FROM DWG E-117E)



NOTES:
 1. ALL DEVICES LOCATED AT LOCAL STARTER, UNLESS OTHERWISE NOTED
 2. FOR HP-1 & HP-2 REPLACE PS BY FUTURE TEMP SWITCHES - THERMOSTAT

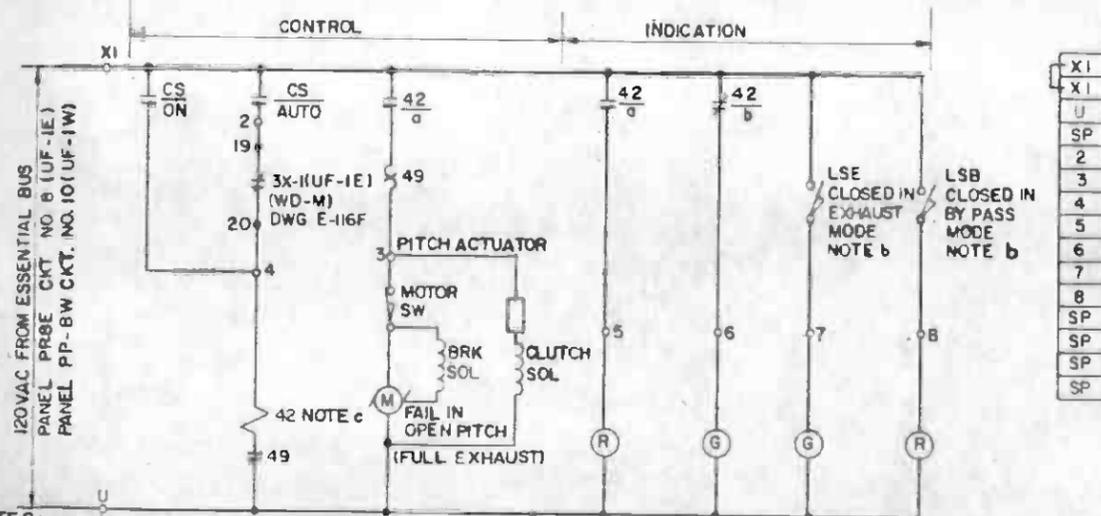
WD-C SPRINKLER SYSTEM AIR COMPRESSOR (SPRINKLER VALVE RM., EAST)
 HEAT PUMPS HP-1 & HP-2 (SIMILAR EXCEPT AS NOTED)

TCC ROOM FIRE SMOKE DAMPER FSD-1,-2,-3 & -4 ADAPTER TABLE

DAMPER NO.	120V PWR		DAMPER FAIL POSITION	DAMPER NORMAL OPERATING POSITION	FAN INTERLOCK (SEE NOTES 1 & 2)	CIC						
	PWL NO.	CKT NO.				NO.	CONTROL			INDICATION		
FSD-1	UP-IE	5	CLOSE	OPEN	ACU-1 SUPPLY FAN (WD-0)	3	B11	B12	B13	B14	B15	B16
FSD-2			CLOSE	OPEN	ACU-1 SUPPLY FAN (WD-0)	3	B18	B19	B20	B21	B22	B23
FSD-3			CLOSE	CLOSE	EF-10E (WD-D1)	3	B24	B25	B26	B27	B28	B29
FSD-4			CLOSE	CLOSE	EF-10E (WD-D1)	3	B31	B32	B33	B34	B35	B36

REFERENCE DWG M-028F

NOTES:
 1. ACU-1 SUPPLY FAN IS NORMALLY RUNNING.
 2. FSD-3 & FSD-4 OPEN ONLY WHEN HALON EXHAUST FAN EF-10E IS RUNNING



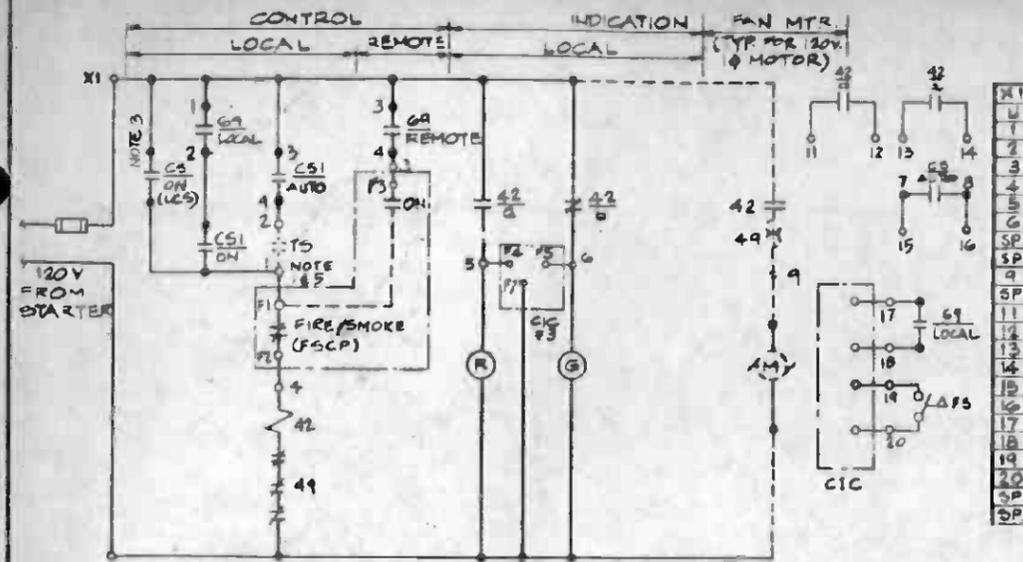
NOTES:
 a. ALL DEVICES ARE LOCATED IN 120V LOCAL STARTER.
 b. LIMIT SWITCHES ARE SUPPLIED WITH UPE FAN.
 c. FULL AIR FLOW WHEN DE-ENERGIZED (TRAIN IN STATION)

WD-1 VARIABLE PITCH CONTROL FOR UNDER PLATFORM EXHAUST FAN UF-IE
 (SIMILAR FOR UF-1W)

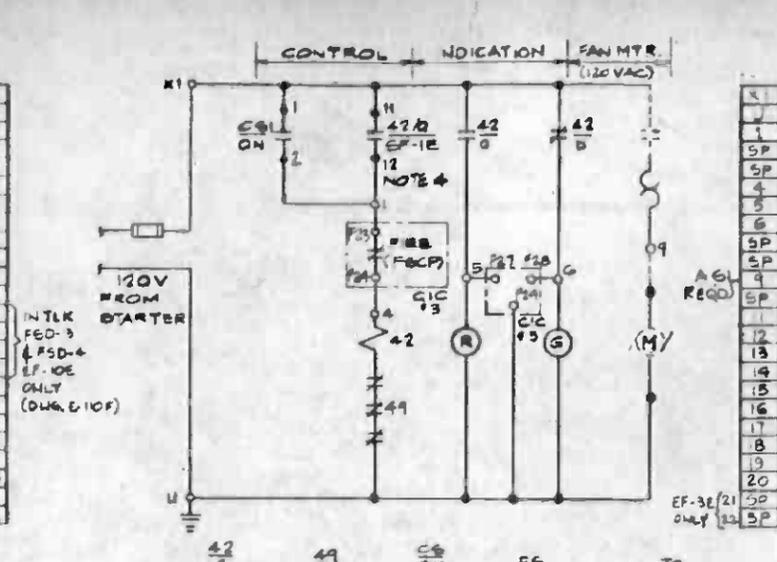


DUPLICATE ORIGINAL

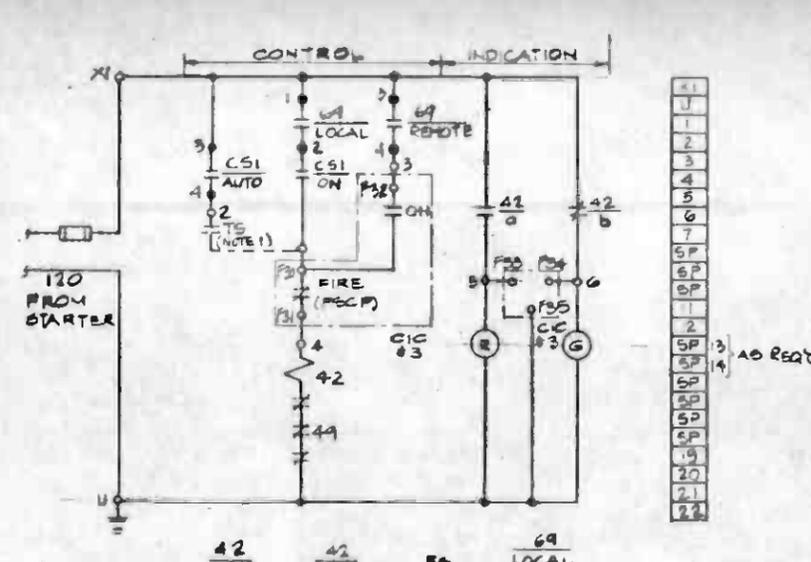
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION UNDER THE URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY DY DIWAN DRAWN BY M A UDRESCU CHECKED BY [Signature] DATE 17 MAR 87		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT DMJM PROB KE HWA GENERAL CONSULTANTS APPROVED [Signature]		LA CBD TO NORTH HOLLYWOOD UNION STATION ELEMENTARY WIRING DIAGRAM SHEET - 12		CONTRACT NO. A136 DRAWING NO. E-110F SCALE NO SCALE SHEET NO. A640/52	
REV	DATE	BY	SUB	APP	DESCRIPTION	REV	DATE	BY	SUB	APP	DESCRIPTION
1	3/7/87	DY	DI		INITIAL ISSUE CR 7-009						



WD-D1- EXHAUST FAN EF-5E

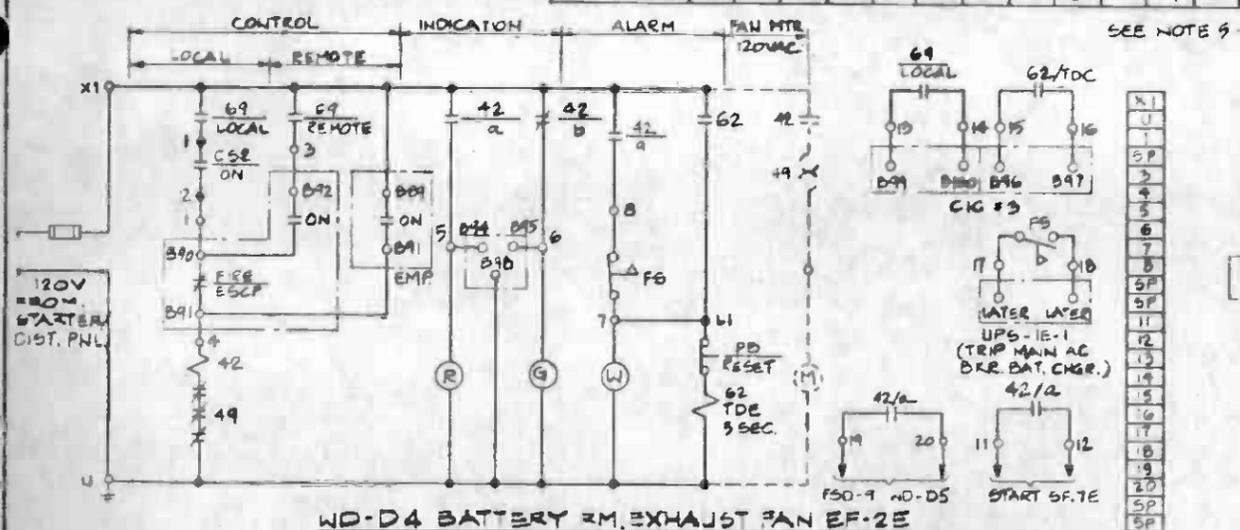


WD-D2- EXHAUST FAN EF-1E



WD-D3 SUPPLY FAN SF-1E

ROOM SERVED	FAN NO.	HP	480V/120 PWR		TERMINAL AT CIC														FLOW SW MONITORING		
			MCC/COMP/INT	ROOM	CIC NO.	CIC ON	CONTROL							INDICATION							NO.
EAST ELEVATOR RM.	EF-5E	1/2	PP-8E	3	E	APR	3	E	APR	F1	F2	F3	F4	F5	-	F7	F8	F9	NO	-	
WEST ELEVATOR RM.	EF-5W	1/2	PP-8W	5	N	APR	2	N	APR	B27	B28	B29	B30	B31	-	B33	B34	B35	NO	-	
EAST ELEV. SHAFT	EF-2E	1/2	PP-8E	13	E	APR	3	E	APR	D57	D58	D59	D60	D61	-	D63	D64	D65	YES	D66	D67
STORAGE RM.	SF-5W	3/4	1W	D3	W	APR	2	W	APR	B84	B85	B86	B87	B88	-	B90	B93	D94	YES	B91	B92
LUNCH RM.	EF-1E	1/2	PP-8E	5	E	APR	3	E	APR	B40	B41	B42	B43	B44	-	B46	B39	D45	NO	-	-
TRAIN CONT./COM. RM.	EF-7E	2	2E	D6	E	APR	3	E	APR	C35	C36	C37	C38	C39	-	C41	C42	C43	YES	C44	C45
TRAIN CONT./COM. RM.	EF-10E	2	2E	E3	E	APR	3	E	APR	C23	C24	C25	C26	C27	-	C29	C30	C31	NO	-	-
WIRE NUMBERS										1	4	3	5	6	-	U	17	18	-	19	20



WD-D4 BATTERY RM. EXHAUST FAN EF-2E

ROOM SERVED	FAN NO.	HP	480V/120 PWR		TERMINAL AT CIC														FLOW SW MONITORING												
			MCC/COMP/INT	ROOM	CIC NO.	CIC ON	CONTROL							INDICATION							NO.	NO.									
EAST APR	EF-1E	1/2	MCC-E	E-1	F23	F24	F27	F28	F29	SP-1E	1/2	E-1	B-4	F30	F31	F32	F33	F34	F35	F37	F38	3	-	F35	F36	-	F21	F22	F25	F26	
WEST APR	EF-3W	3/4	1W	C-1	D33	D34	D35	D36	D37	SP-3W	1/2	1W	B-1	A59	A56	A57	A59	A60	A63	A61	A62	2	-	D38	D37	-	B40	B41	A53	A54	
EAST AIR SUPPLY RM	EF-8E	1/2	2E	E-2	F12	F13	F16	F17	F20	SP-8E	2	1E	E-4	B77	B78	B79	B81	B82	B85	B83	B84	3	-	-	-	-	-	-	-	-	
UPPER FAN RM	EF-9E	3/4	2E	E-2	C79	C80	C83	C84	C85	SP-9E	1/2	1E	D-5	B67	B68	B69	B71	B72	B75	B73	B74	3	-	-	-	-	-	-	-	-	
WEST AIR SUPPLY RM	EF-4W	2	2W	A-2	E91	E92	E93	E96	E99	SP-4W	3	2W	B-2	D11	D12	D13	D15	D16	D19	D17	D16	2	-	-	-	-	-	-	-	-	
EAST AIR SUPPLY RM	EF-6E	1/2	2E	E-2	C89	C90	C93	C94	C97	SP-6E	1/2	1E	B-2	A67	A68	A69	A70	A71	A72	A75	A76	3	-	-	-	-	C95	C96	A73	A74	
ELEV. RM	EF-3E	3	-	-	-	-	-	-	-	SP-3E	3	1E	B-4	B47	B48	B49	B51	B52	B55	B53	B54	3	-	-	-	-	-	-	-	350	356
LUNCH RM	EF-1E	1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WEST AIR SUPPLY RM	EF-1W	3/4	2W	B-1	F1	F2	F3	F4	F5	SP-1W	2	1W	C-3	B37	B38	B39	B41	B42	B45	B43	B44	2	-	-	-	-	F6	F7	B40	B46	
WEST UTILITY SHAFT	EF-6W	1/3	PR-8W	3	F8	F9	F10	F11	F12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	F13	F14	-	-		
W. ELEVATOR SHAFT	EF-7W	1/2	PR-8W	8	D21	D22	D25	D26	D29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
FUTURE INTERLOCK ROOM	EF-3E	1/2	1E	C-3	D45	D46	D49	D50	D51	SP-2E	3	1E	B-1	A55	A56	A57	A59	A60	A61	A62	A63	3	-	-	-	D52	D53	A64	A65		
WIRE NUMBERS										1	4	3	5	6	-	U															

WD-D2 (NO ROOM HI-TEMP)

ROOM SERVED	FAN NO.	HP	480V/120 PWR		TERMINAL AT CIC														FLOW SW MONITORING												
			MCC/COMP/INT	ROOM	CIC NO.	CIC ON	CONTROL							INDICATION							NO.	NO.									
BATT RM. EAST APR	SF-7E	1	1E	C-1	B57	B58	B61	B62	B63	B63	B64	EF-2E	1/3	PP-8E	1	F50-9	B90	B91	B92	B94	B94	B95	B96	B97	B98	B99	B100	UPS-1E-1	LATER	LATER	3
BATT RM. WEST APR	SF-2W	1/2	1W	C-4	C1	C2	C5	C6	C9	C7	C8	EF-2W	1/3	PP-8W	1	F50-10	C12	C13	C14	C17	C15	C16	C19	C20	C21	C22	C23	UPS-2E-2	LATER	LATER	2
BATT RM. EAST	SF-8E	1/2	1E	D5	A79	A80	A81	A82	A83	A84	A85	EF-03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
WIRE NUMBERS																															

WD-D4

NOTES:

- ALL VENTILATION AT ANCILLARY AREA WILL BE OPERATED CONTINUOUSLY FOR GAS MITIGATION PURPOSE. AUTO MODE MAY BE ADDED VIA TIMER OR THERMOSTAT IN FUTURE.
- ALL - FOR TESTING PURPOSES, INSTALL TEMPORARY SWITCHES AT CIC PER CONTACT ARRANGEMENT AS INDICATED. REMOVE AFTER A SUCCESSFUL TESTING.
- CONTROL SWITCH (SIMILAR TO C52) FOR EF-0E ONLY, LOCATED OUTSIDE, NEAR THE ENTRANCE TO TEC ROOM. (LOCAL CONTROL STATION).
- EF-7W IS NOT INTERLOCKED WITH A SUPPLY FAN. SF-2W IS INTERLOCKED WITH EF-2W. EF-7E IS INTERLOCKED WITH EF-2E. SF-8E IS INTERLOCKED WITH EF-03 (ALSO SEE NOTE 7)
- WD-D1 FOR EXHAUST FAN EF-7E ONLY; REPLACE TS WITH
- EF-3E 42/a CONTACTS WIRED TO TB-11-2, -13, -14, -21 & -22 ARE USED TO INTERLOCK F50-5, -6 & -7. SEE WD-D5 DWG. E-114P.
- FOR EXHAUST FAN EF-03 SEE DWG E-113 CONTRACT A-30 COORDINATE SF-8E FAN INTERLOCK WITH A-130 CONTRACT.

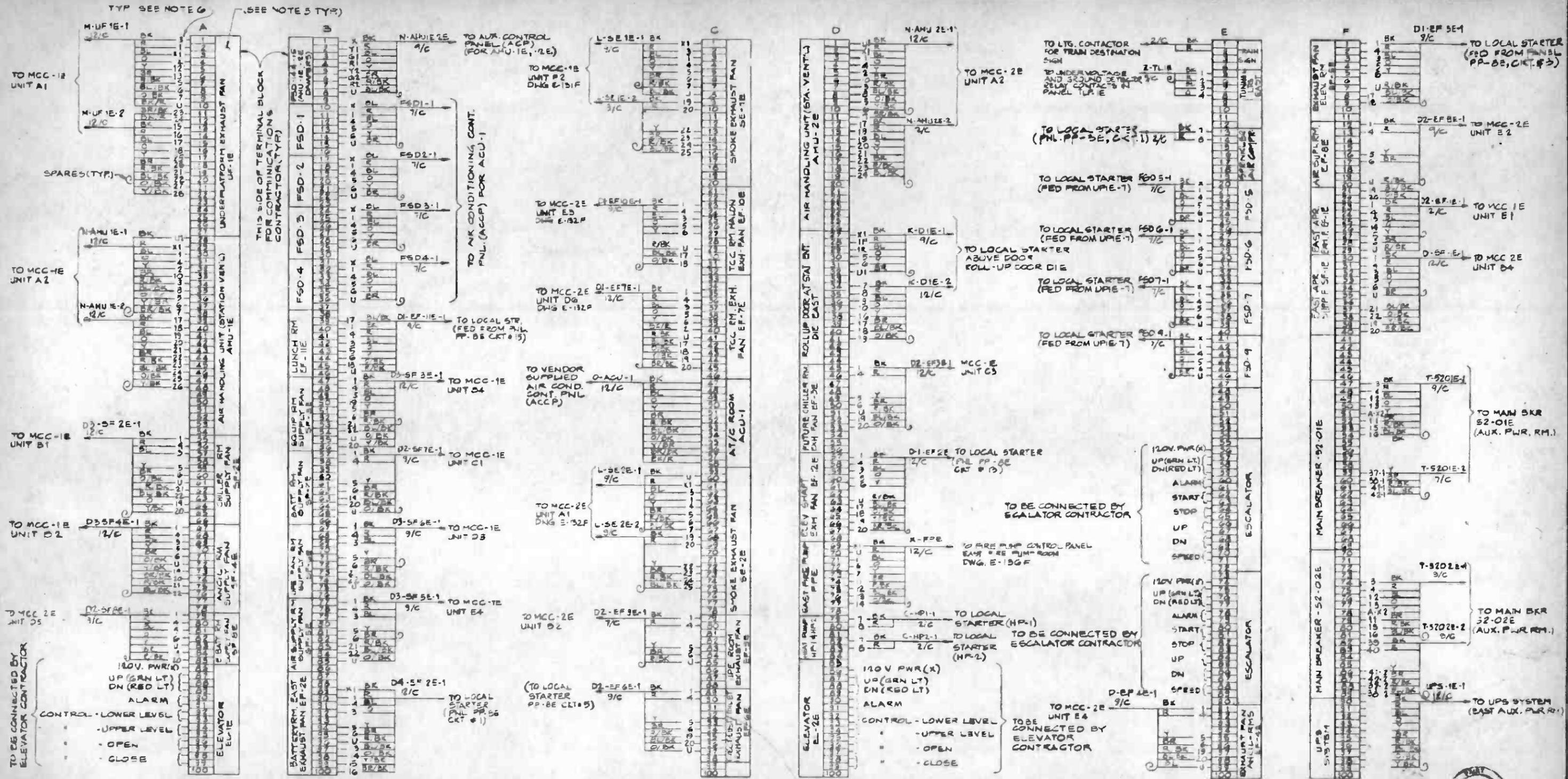
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE MASS TRANSITATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

DESIGNED BY: D. DIWAN
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DATE: 28 MAR 85

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
 METRO RAIL PROJECT

LA CBD TO NORTH HOLLYWOOD UNION STATION
 ELEMENTARY WIRING DIAGRAM
 SHEET 13

CONTRACT NO: A 136
 DRAWING NO: E-III F
 SCALE: NO SCALE
 SHEET NO: A640/53



NOTES:

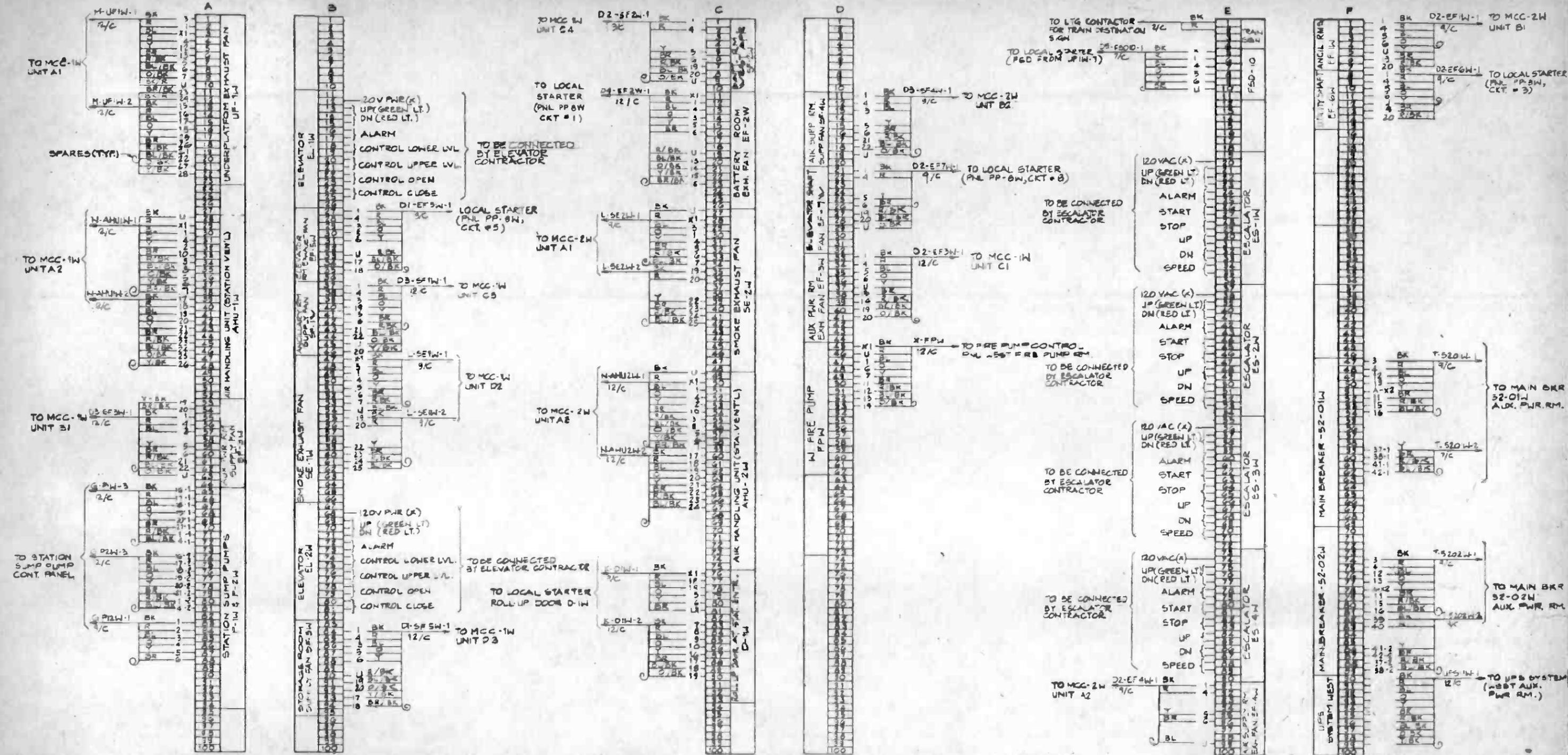
- TERMINAL BLOCKS SHALL BE EQUIPPED WITH TERMINAL COVERS, EQUIVALENT TO DUCHANAN CAT. NO P125 WITH COVER NO 13.
- DELETED
- CABINET SIZE AND CONSTRUCTION TO BE AS SHOWN ON DWG E-140F-100-3 SPACE AND BACK PLATE, SIZE 36" X 57" W. IN LOWER PORTION OF CABINET FOR USE BY COMMUNICATIONS CONTRACTOR.
- ALL CONTROL CONDUCTORS ARE AWG #14

5. GANG TERMINAL BLOCK COVERS PER ASSOCIATED EQUIPMENT ASSIGNMENT. MARK EQUIPMENT NAME AND NUMBER ON COVER.
 6. THE CONTRACTOR SHALL FIELD AND INSTALL REMARKERS FOR ALL TERMINAL NUMBERS AS LOCATED.



DUPLICATE ORIGINAL

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY MRTC		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		LA CBD TO NORTH HOLLYWOOD UNION STATION		CONTRACT NO. A-136	
DRAWN BY A CANOY				CHECKED BY R HEDENE		DMJM PROO/KE/MWA 1-20-85 ORIGINAL CONSULTANTS		DRAWING NO. E-137F		REV. 1	
REVISIONS PER CR 7-009				A SMITHSUVAN		SUBMITTED <i>Richard J. Hedene</i>		CONNECTION DIAGRAMS CIC-#3 EAST AUX. POWER ROOM		SCALE NO SCALE	
INITIAL MUE-CR5-108				7-24-85		APPROVED _____		SHEET NO A640/54			



CABLE COLOR CODE AND ABBREVIATIONS:
(PER CEA 6-GI-402 NEMA WC-5 OF JAN 79)
CONDUCTOR

COLOR	ABBREV.
BLACK	BK
RED	RD
BLUE	BL
ORANGE	OR
YELLOW	YL
BROWN	BR
RED/BLACK	RBK
BLUE/BLACK	BLK
ORANGE/BLACK	OK
YELLOW/BLACK	YBK
BROWN/BLACK	BRK
BLACK/RED	BR

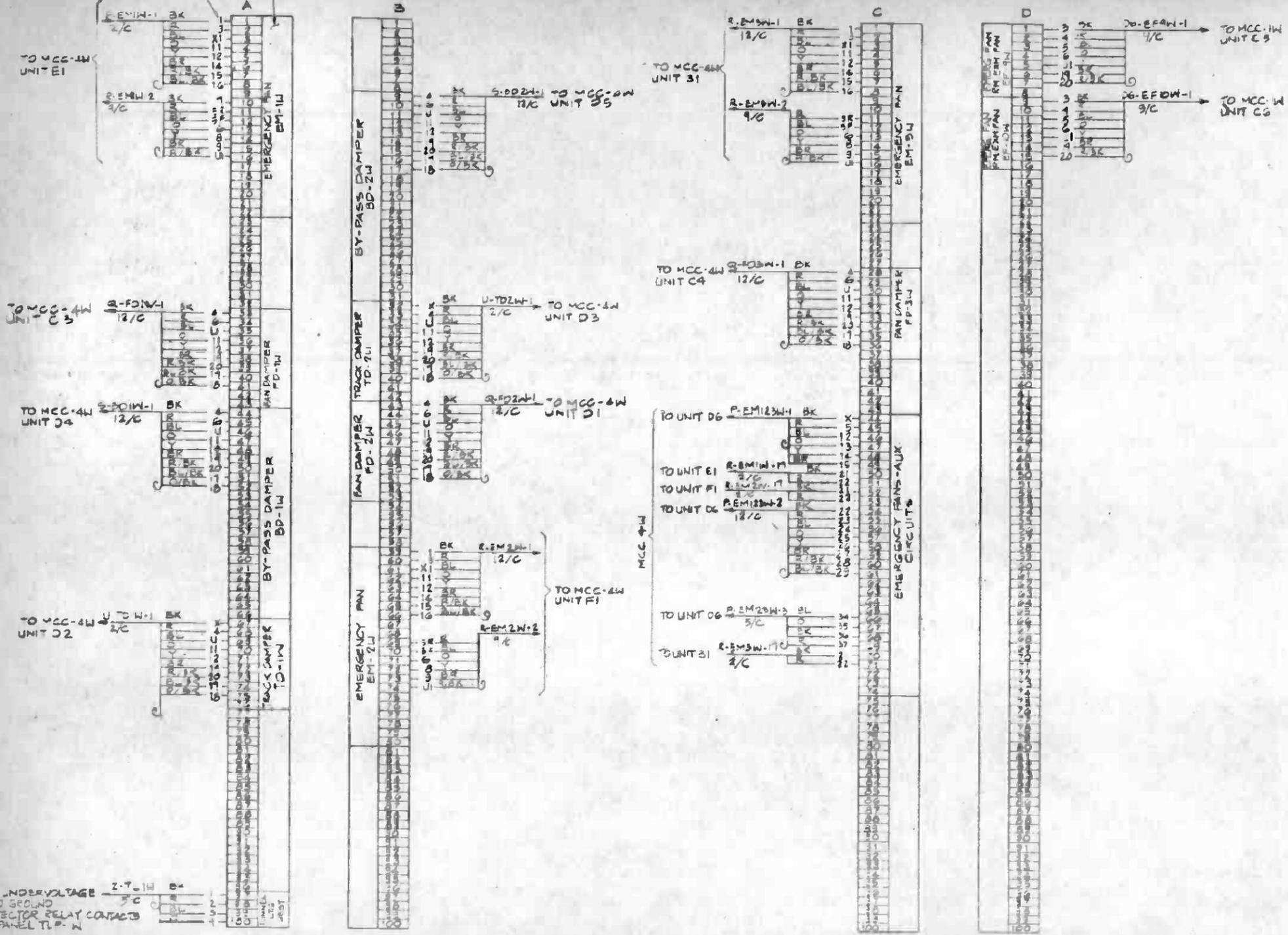
NOTE:
1. FOR NOTES AND GENERAL INFORMATION SEE DRAWING E-97



DUPLICATE ORIGINAL

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY MRTC		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		CONTRACT NO. A-136	
DRAWN BY M.A. UDRESCU				CHECKED BY P. HEDENE				DRAWING NO. E-138F	
REVISED PER CR 7-009				A. SMITHSUVAR		DATE 7-24-89		SCALE NO SCALE	
REV. DATE BY SUB APP DESCRIPTION				5/7/87 JSD		7/28/89 MEM		SHEET NO. A640/55	

(TYP) NOTE 6 NOTE 5 (TYP)



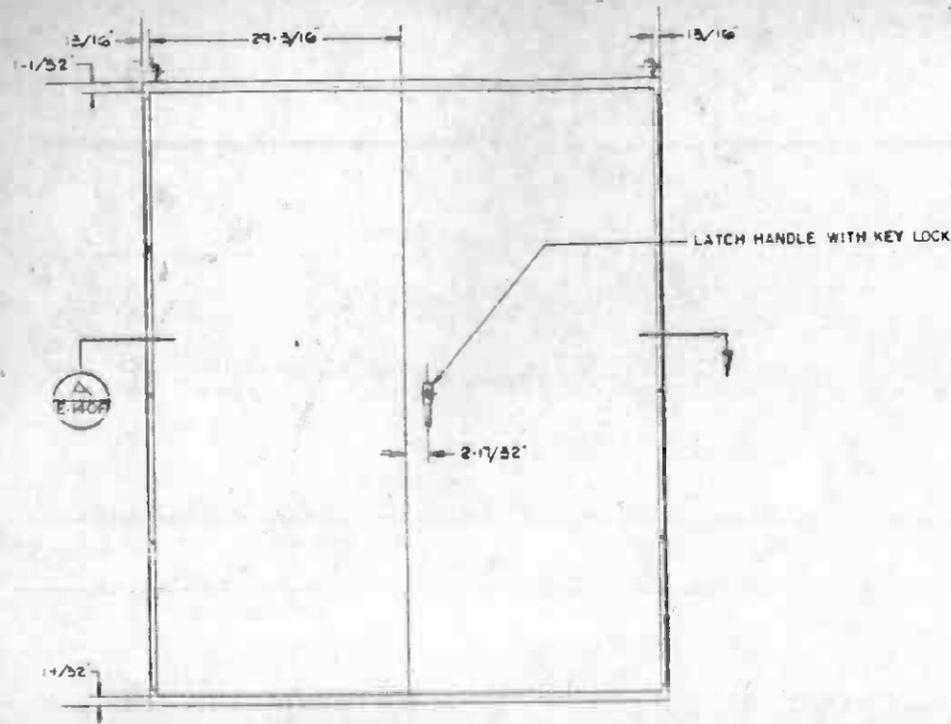
NOTES

1. TERMINAL BLOCKS SHALL BE EQUIPPED WITH TERMINAL COVERS, EQUIVALENT TO DUCHANAN CAT NO P125 WITH COVER NO 18.
2. DELETED.
3. CABINET SIZE AND CONSTRUCTION TO BE AS SHOWN ON DWG. E-140F. PROVIDE SPACE AND BACK PLATE, SIZE 3/4" X 3/4" IN LOWER PORTION OF CABINET FOR USE BY COMMUNICATIONS CONTRACTOR.
4. ALL CONTROL CONDUCTORS ARE ANG 014.
5. GANG TERMINAL BLOCK COVERS PER ASSOCIATED EQUIPMENT ASSIGNMENT. MARK EQUIPMENT NAME AND NUMBER ON COVER.
6. THE CONTRACTOR SHALL FURNISH AND INSTALL WIRE MARKERS FOR ALL TERMINAL NUMBERS AS INDICATED.



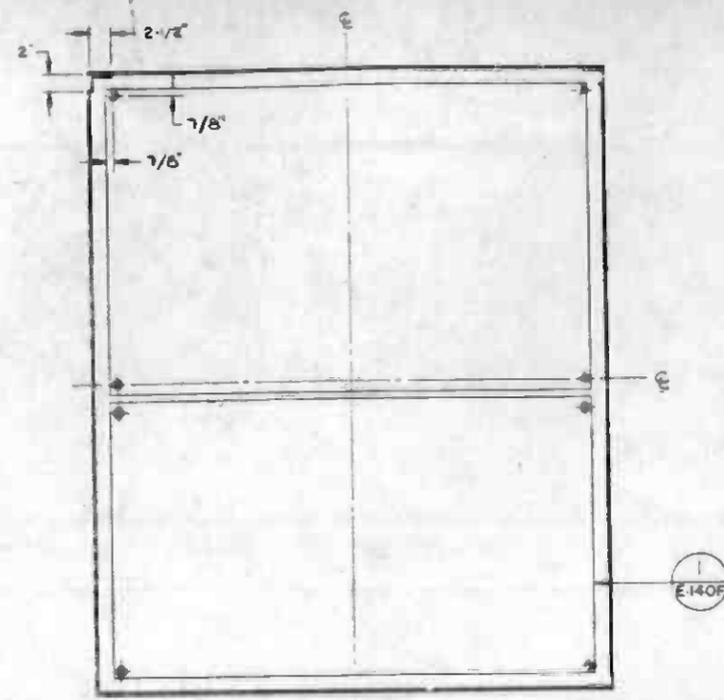
DUPLICATE ORIGINAL

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE MASS TRANSPORTATION ADMINISTRATION, UNDER THE MASS TRANSIT ACT OF 1964, AS AMENDED AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.				DESIGNED BY MRTC		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		CONTRACT NO. A-136	
DRAWN BY M.A. UOPRESCU				CHECKED BY P. MEDENE				DRAWING NO. E-135F	
APPROVED BY A. SMITHSUWAN				DATE 7-24-88		GENERAL CONSULTANTS DARIM PROOD KE HWA		SCALE NO SCALE	
DESCRIPTION WEST CROSS-OVER				SHEET NO. A640/56		LA CBD TO NORTH HOLLYWOOD UNION STATION CONNECTION DIAGRAMS CIC-#4 WEST CROSS-OVER		SHEET NO. A640/56	



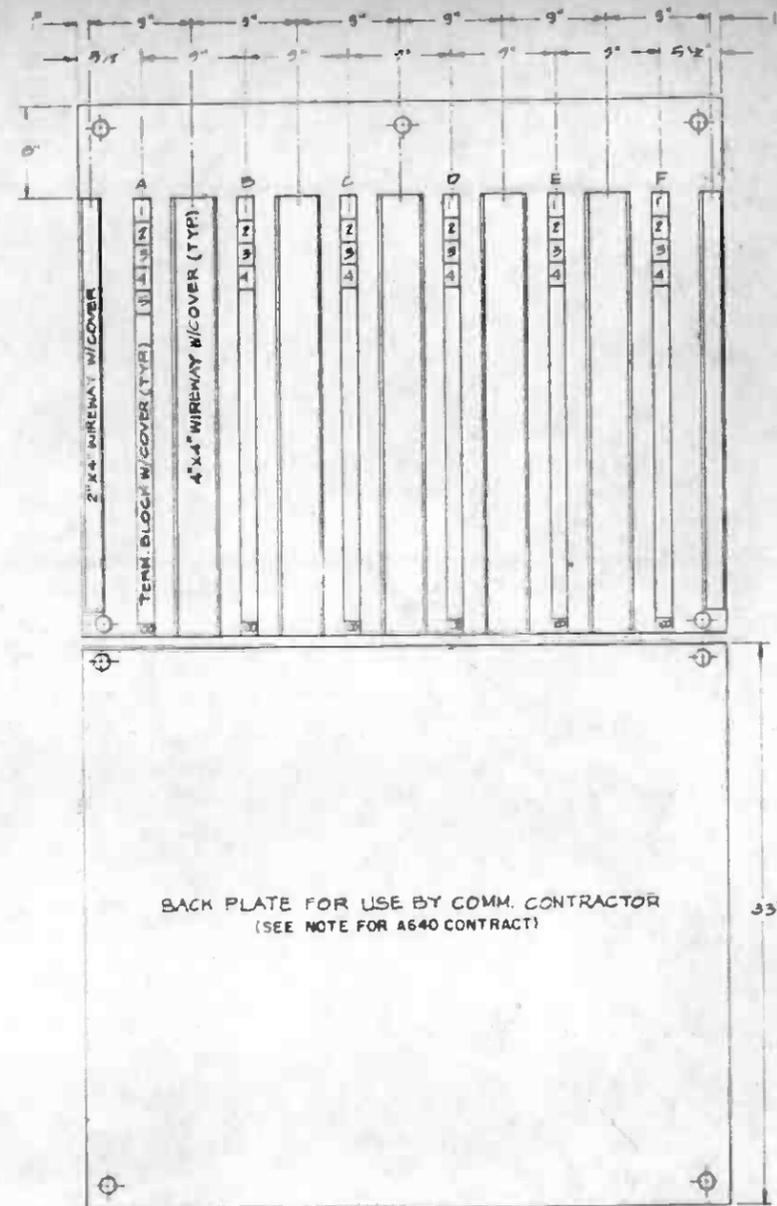
ELEVATION

SCALE 3/32" = 1'-0"



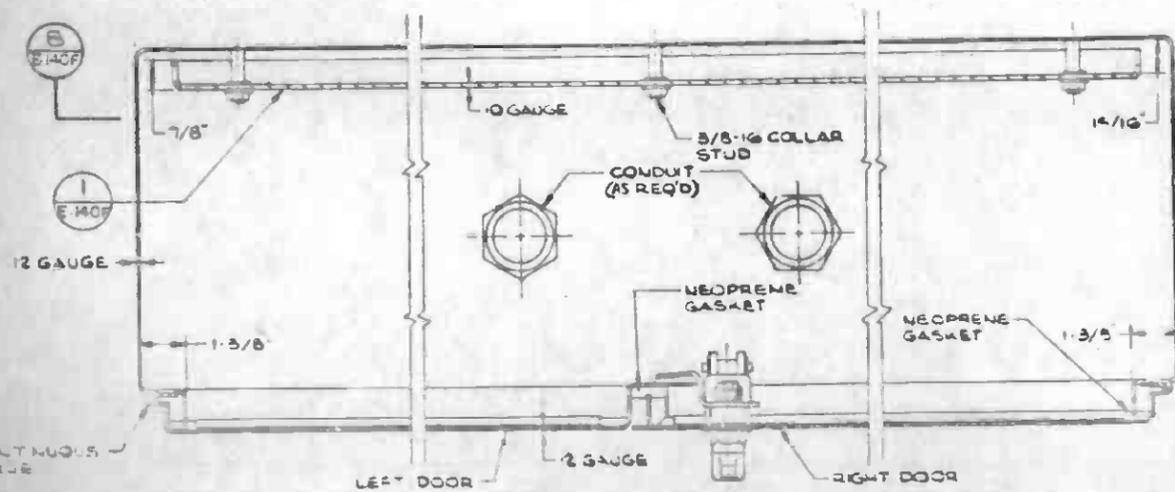
SECTION B

SCALE 3/32" = 1'-0" E-140F



TERMINAL BLOCK ARRANGEMENT 1

E-140F



SECTION A

SCALE 5/8" = 1'-0" E-140F

NOTE FOR A640 CONTRACT

A640 CONTRACT MAY ADD EXTRA CABINET TO BE INSTALLED NEXT TO THE OWNER FURNISHED CABINET IF THE SPACE PROVIDED FOR IS NOT ADEQUATE.

NOTES:

1. DELETED
2. DELETED
3. TERMINAL BLOCK SHALL BE HEAVY DUTY TYPE AND RATED 15A AT 600VAC (BUCHANAN NO. P125 OR EQUAL WITH COVER)
4. CABINET SHALL BE NEMA 4, 74" H x 60" W x 16" D MINIMUM DIMENSION, WITH 2 BACK PLATES AS SHOWN.
5. RAISE TERMINAL STRIP TO 1/2" HIGHER THAN THE WIREWAYS.



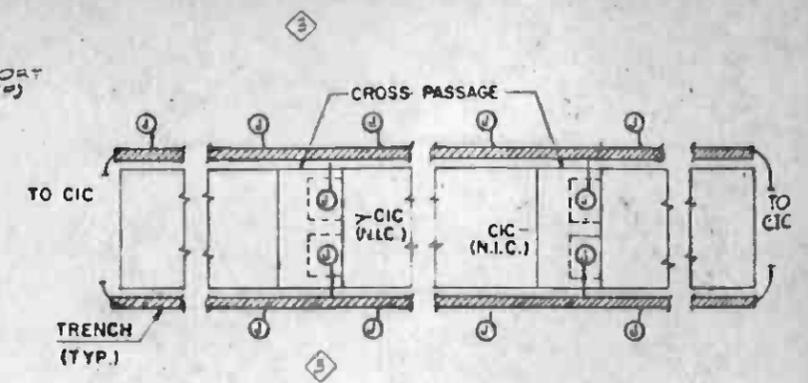
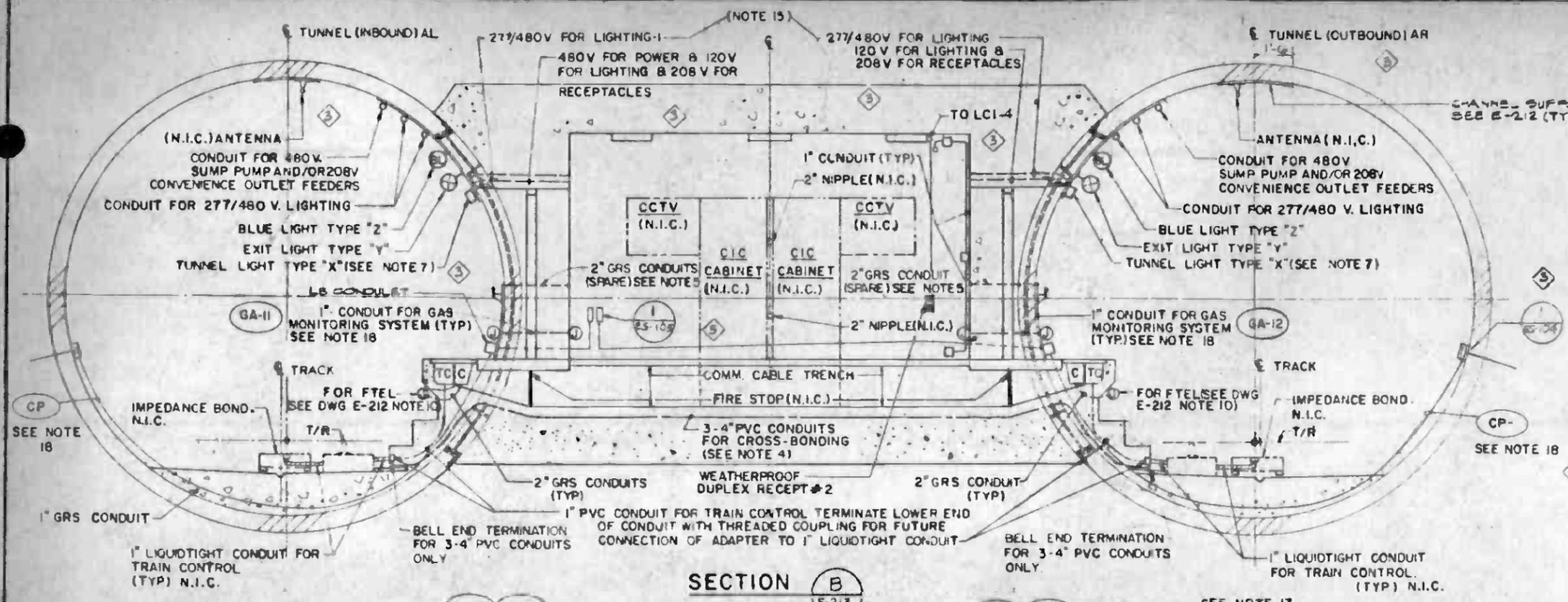
THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, UNDER GRANT "TRANSITATION ADMINISTRATION UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964 AS AMENDED AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY A CANOY		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT		LA CBD TO NORTH HOLLYWOOD UNION STATION TYPICAL COMMUNICATIONS INTERFACE CABINET (CIC)	CONTRACT NO. A-136
DATE 0 3/78 072	DESCRIPTION INITIAL ISSUE	APPROVED BY A SHIVSUVAN					DRAWING NO. E-140F
REV. DATE BY S.C. APP	DESCRIPTION	DATE 6.17.87	SCALE AS NOTED	GENERAL CONSULTANTS DMJM PROD KE HWA	REVISION NO. 0	DATE 6.17.87	PROJECT NO. A640/57



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
METRO RAIL PROJECT

LA CBD TO NORTH HOLLYWOOD
UNION STATION
TYPICAL COMMUNICATIONS
INTERFACE CABINET (CIC)

CONTRACT NO. A-136
DRAWING NO. E-140F
SCALE AS NOTED
REVISION NO. 0
DATE 6.17.87
PROJECT NO. A640/57



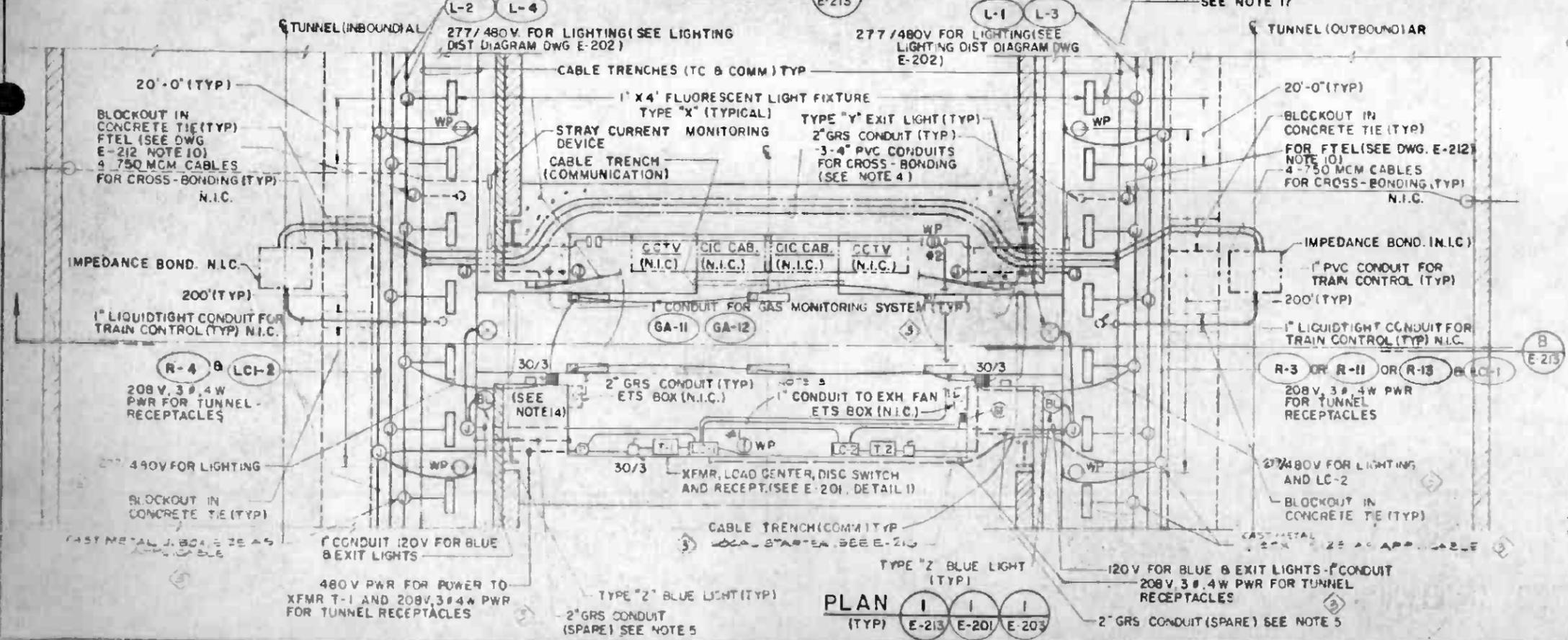
FIRE TELEPHONE JACK SCHEMATIC (FTEL)

NOTES (CONTINUED)

- 16. DELETED
- 17. USE 2#14 CABLE FOR TAP TO LIGHT FIXTURE.
- 18. FOR GA & CP CONDUIT & CABLE NUMBERS SEE DWG. E-215
- 19. USE 2#12 CABLE FOR BRANCH CIRCUIT FEEDER TO RECEPTACLES IN PUMPING STATION AND CROSS PASSAGES. USE 2#10 FOR FEEDER TO RECEPTACLES IN TUNNELS.

NOTES:

- 1. DELETED
- 2. THIS PLAN IS APPLICABLE TO ALL THE CROSS PASSAGES EXCEPT AS INDICATED ON DWG. E-201 DETAILS "1" & "2".
- 3. EQUIPMENT GROUNDING ARE TO BE PROVIDED BY THE GROUND CONDUCTOR CARRIED IN EACH CONDUIT, THEY ARE TO BE ISOLATED FROM THE STRAY CURRENT AND THE TRACTION POWER BONDINGS.
- 4. MINIMUM BENDING RADIUS OF COMM/ATC CONDUITS IS 40" POSITION CENTER OF CONDUIT RUNS HIGH AND SLOPE CONDUITS MINIMUM OF 0.5% TOWARD ENDS FOR PROPER DRAINAGE.
- 5. TERMINATE CONDUIT ENDS WITH THREADED PLUG, FLUSH WITH FINISHED WALL.
- 6. SEE SS-094, SS-102, SS-103 & SS-125 FOR APPLICABLE STRUCTURAL DIMENSIONS AND DETAILS.
- 7. FOR LIGHTING DISTRIBUTION DIAGRAM SEE DWG E-202
- 8. FOR CROSS-PASSAGES, 277/480 VOLT, THREE PHASE FEEDER SHALL ORIGINATE DIRECTLY FROM THE NEAREST PASSENGER STATION
- 9. ALL RACEWAY SYSTEMS INCLUDING JUNCTION BOXES IN THE TUNNELS SHALL BE WEATHERPROOF
- 10. DELETED.
- 11. FOR LIGHTING FIXTURE DETAILS REFER TO SPECIFICATIONS
- 12. SEE M-202 FOR EXACT LOCATION OF T-1 AND LC-182, ENSURE FREE OPENING OF THE FRONT COVERS OF THESE PANELS.
- 13. MINIMUM BENDING RADIUS OF ETS CONDUIT @ 12"
- 14. LOCATE THE 30 A/3 POLE DISCONNECT SWITCH AS NOT TO OBSTRUCT DOOR SWING.
- 15. THESE LIGHTING AND POWER CONDUITS ARE ON THE OPPOSITE SIDE OF THE CROSS PASSAGE, SEE PLAN VIEW.



PLAN E-213

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION UNDER THE MASS TRANSPORTATION ASSISTANCE ACT, UNDER THE URBAN MASS TRANSIT ACT OF 1964 AS AMENDED AND IN PART BY THE SALES OF THE DISTRICT OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.		DESIGNED BY: [Signature] DRAWN BY: [Signature] CHECKED BY: [Signature] DATE: 23 AUG 88		SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT METRO RAIL PROJECT D-H DELON HAMPTON & ASSOCIATES, Chartered DMJM PEROU RE HWA CONSULTANTS		LA CBD TO NORTH HOLLYWOOD TUNNEL LIGHTING & POWER LIGHTING AND RACEWAY ARRANGEMENT IN TUNNEL AND AT CROSS-PASSAGE		SHEET NO. A-141 DRAWING NO. E-213 SCALE NONE FILE NO. A640/58
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	-------------------------------------------------------------------------------------------------	--	---------------------------------------------------------------------------------------------------------------------------------------------------	--	----------------------------------------------------------------------------------------------------------------------------	--	------------------------------------------------------------------------