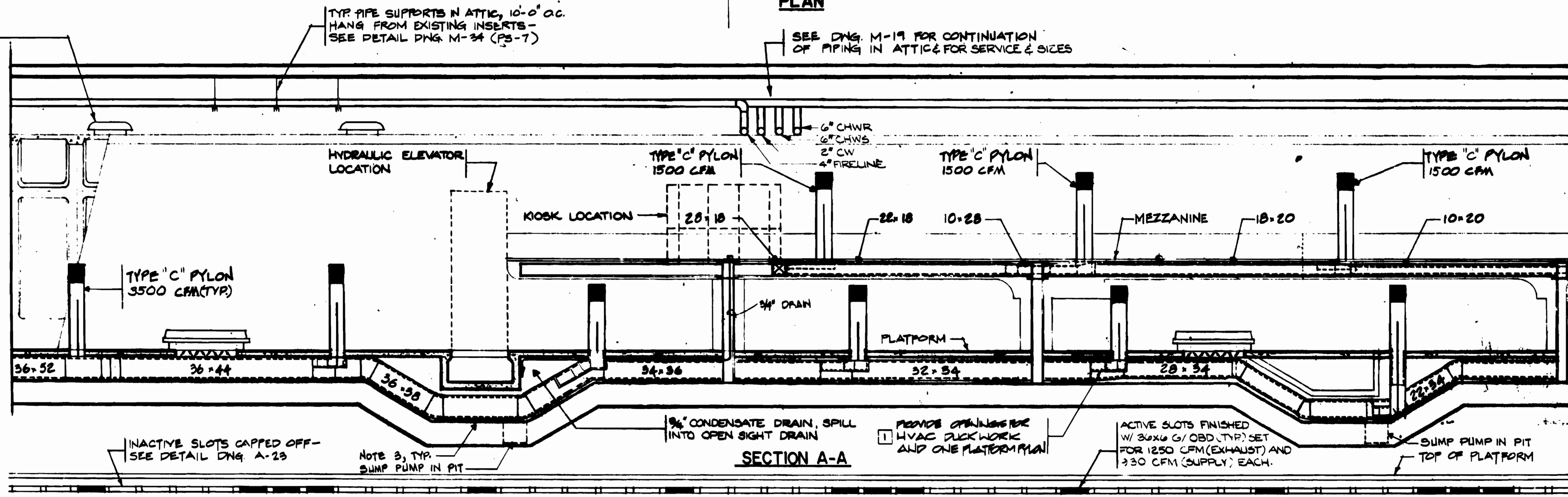
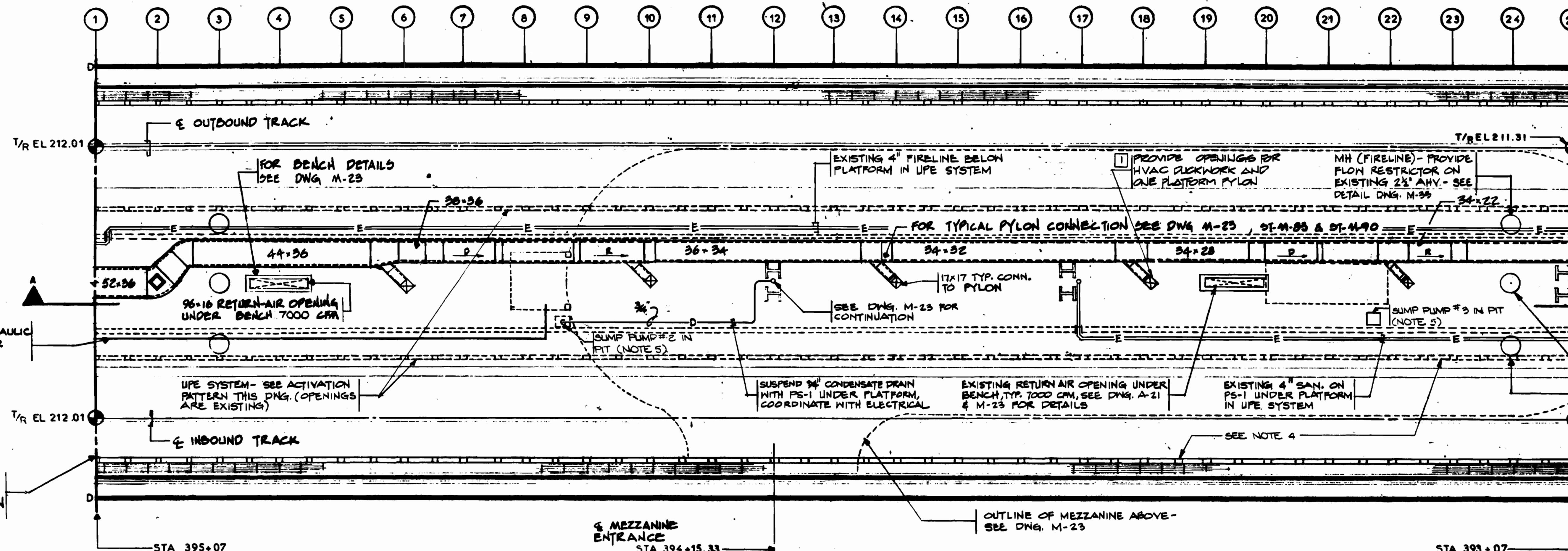
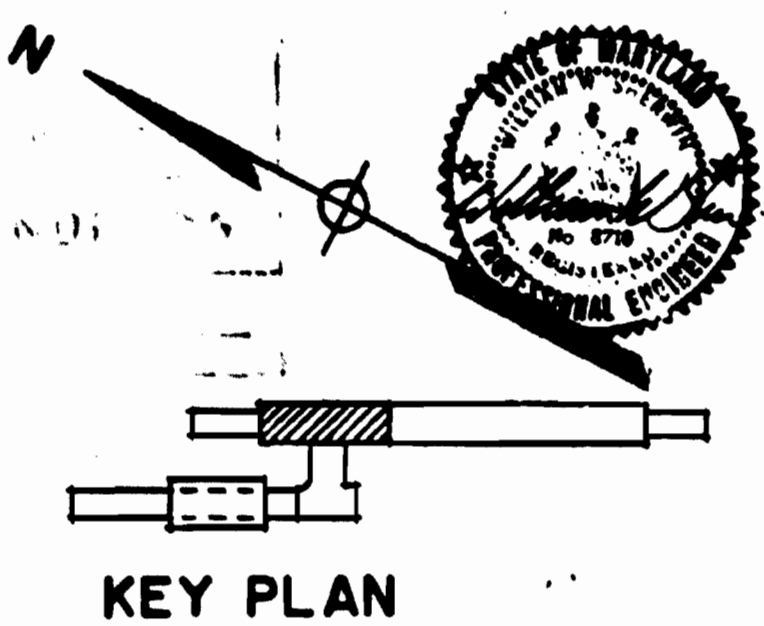


NOTES FOR THIS DRAWING

- SEE GENERAL NOTES DWG. M-1
- ALL PYLONS ARE TYPE "C". PYLONS UNDER MEZZANINE ARE 8'-0" IN HEIGHT. ALL OTHER PYLONS ARE 9'-0" - SEE ST-M-05. THE ARCH. & ELECTR. DWGS. INDICATE THE TYPE & MOUNTAGE OF LAMPS ON THE PYLONS THAT HAVE BOTH LIGHTING AND A/C FUNCTIONS.
- SUPPORT DUCTWORK OFF THE FLOOR BY 1" x 1/2" x 1/16" CHANNEL, 4'-0" O.C.
- FUTURE EXHAUST SLOTS 42" x 11" @ 4'-2" O.C. SEE ARCH. DWG. A-23 FOR CAPPING OFF DETAIL TYP. 1.B & O.B.
- SUMP PUMPS 2, AND 3 1/2" DISCHARGE TO SPILL OVER OPEN HUB OF 3" SVCI PIPE. SEE SUMP PUMP DETAIL DWG. M-29.
- AHU #830 DISCHARGE DUCTWORK SHALL BE MEDIUM PRESSURE CONSTRUCTION.



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY  
AS-BUILT CONDITION  
Resident Engineer



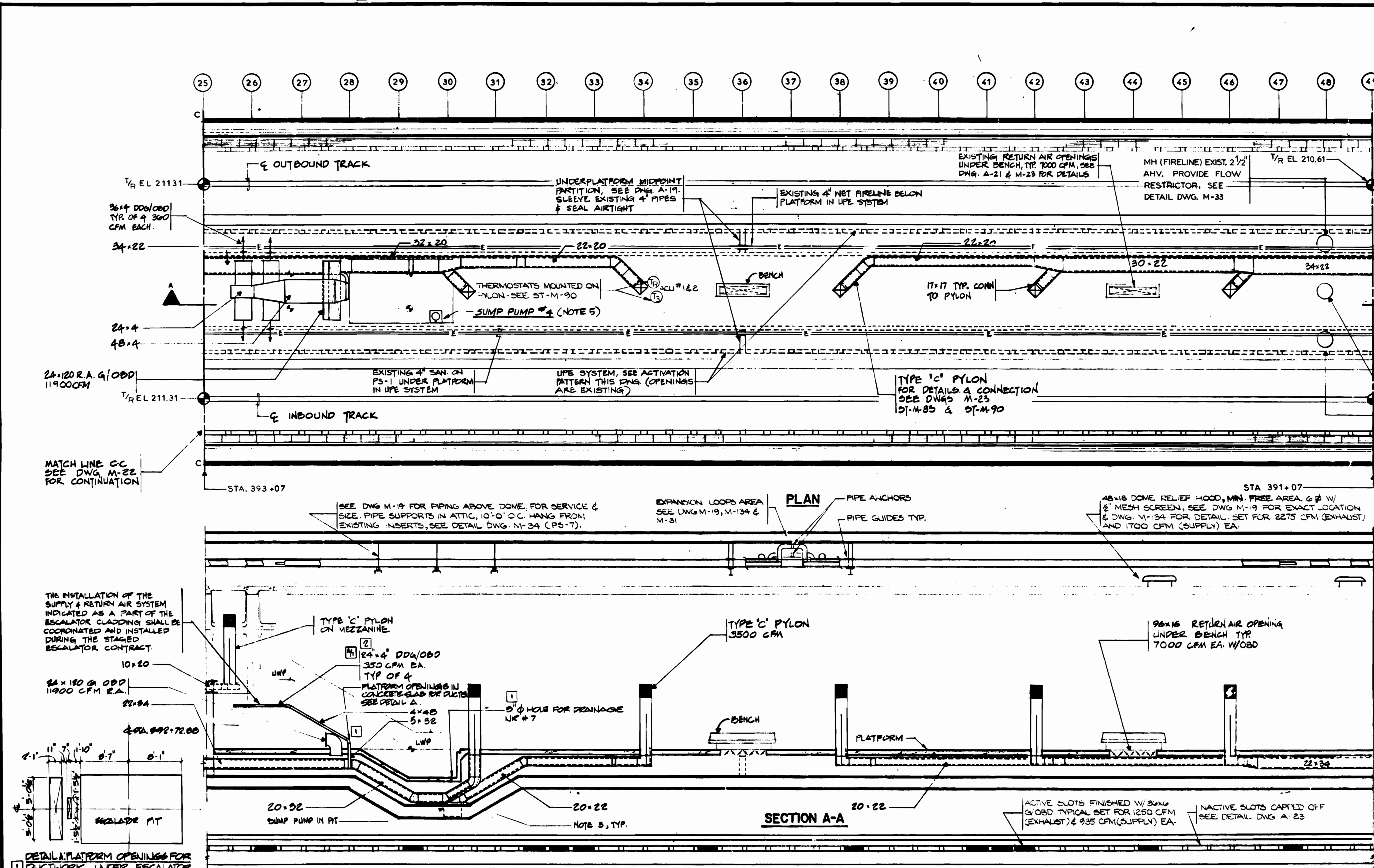
ACTIVATION PATTERN FOR UNDER PLATFORM EXHAUST SYSTEM, TYPICAL, BOTH SIDES OF PLATFORM

DESIGNED D.B. FOLLAIN DATE 08/07/80	REFERENCE DRAWINGS	REVISIONS	WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY		ROCKVILLE ROUTE BETHESDA STATION, NORTH PLATFORM PLAN AND SECTION	
DRAWN D.B. FOLLAIN DATE 08/07/80	A-18 PLATFORM PLAN & SECTION	DATE 7-1-80	MATHEWS • CHATELAIN • BEALL ENGINEERS AND ARCHITECTS SECTION DESIGNER		DE LEUW, CATHIER & COMPANY GENERAL ENGINEERING CONSULTANT	
CHECKED S.B. MICHAELS DATE 08/07/80	E-18 PLATFORM PLAN - LIGHTING & POWER	BY HTJ	HARRY WEISSE & ASSOCIATES GENERAL ARCHITECTURAL CONSULTANT		HARRY WEISSE & ASSOCIATES GENERAL ARCHITECTURAL CONSULTANT	
APPROVED S.B. MICHAELS DATE 8/15/80		DESCRIPTION PLATFORM OPENINGS FOR HVAC PER PCD & REV. 1, AS-BUILT	SUBMITTED G. P. Fress DATE 8-15-80		APPROVED G. P. Fress	



**NOTES FOR THIS DRAWING**

- 1 SEE GENERAL NOTES DWG M-1
- 2 ALL PYLONS ARE TYPE 'C'. PYLONS UNDER MEZZANINE ARE 8'-6" IN HEIGHT, ALL OTHER PYLONS ARE 9'-0" SEE ST-M-83. THE ARCH. & ELEC. DWGS. INDICATE THE TYPE & WATTAGE OF LAMPS ON THE PYLONS THAT HAVE BOTH LIGHTING AND A/C FUNCTIONS.
- 3 SUPPORT DUCTWORK OFF THE FLOOR W/ 1 1/2" x 1/8" CHANNEL 4'-0" OC
- 4 FUTURE EXHAUST SLOTS 42" x 11" @ 4'-2" OC. SEE ARCH. DWG. A-23 FOR CAPPING OFF DETAIL TYP. I.B. & Q.E.
- 5 SUMP PUMP #4 WITH 1/4" DISCHARGE TO SPILL OVER OPEN HUB OF 3" SVCI PIPE. SEE SUMP PUMP DETAIL DWG. M-29
- 6 ALL 1, 2 & 3 DISCHARGE DUCTWORK SHALL BE MEDIUM PRESSURE CONSTRUCTION.



ACCESS MANHOLES  
MATCH LINE B-B SEE DWG M-20 FOR CONTINUATION

AS-BUILT CONDITION

KEY PLAN

**ACTIVATION PATTERN FOR UNDER PLATFORM EXHAUST SYSTEM TYPICAL BOTH SIDES OF PLATFORM.**

DESIGNED		DATE		REFERENCE DRAWINGS		REVISIONS	
D.B. FOLLAIN	08/18/80	A-19	08/18/80	PLATFORM PLAN & SECTION	PKH	NOTES	
D.B. FOLLAIN	08/19/80	E-10	07/17/80	PLATFORM PLAN - LIGHTING & POWER	WIK	(1) PLATFORM OPENING FOR HVAC	
S.R. MICHAELIS	10/18/80					PER REV. 0 REV. 1, AS-BUILT	
S.R. MICHAELIS	11/18/80					(2) AC DRIVE AT ESCALATOR PER REV. 05, AS-BUILT	

**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

MATHEWS • CHATELAIN • BEALL  
ENGINEERS AND ARCHITECTS  
SECTION DESIGNER

DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT

HARRY WEESSE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *James P. Gross* DATE 8-18-80 APPROVED *[Signature]*

**ROCKVILLE ROUTE**

BETHESDA STATION CENTER PLATFORM  
PLAN AND SECTION

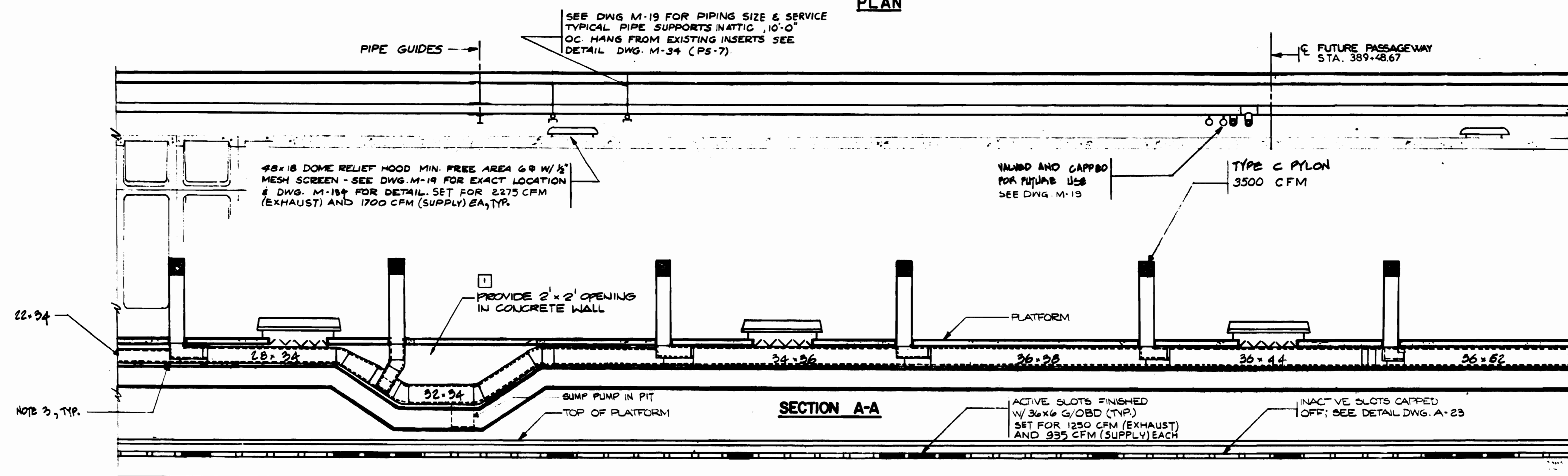
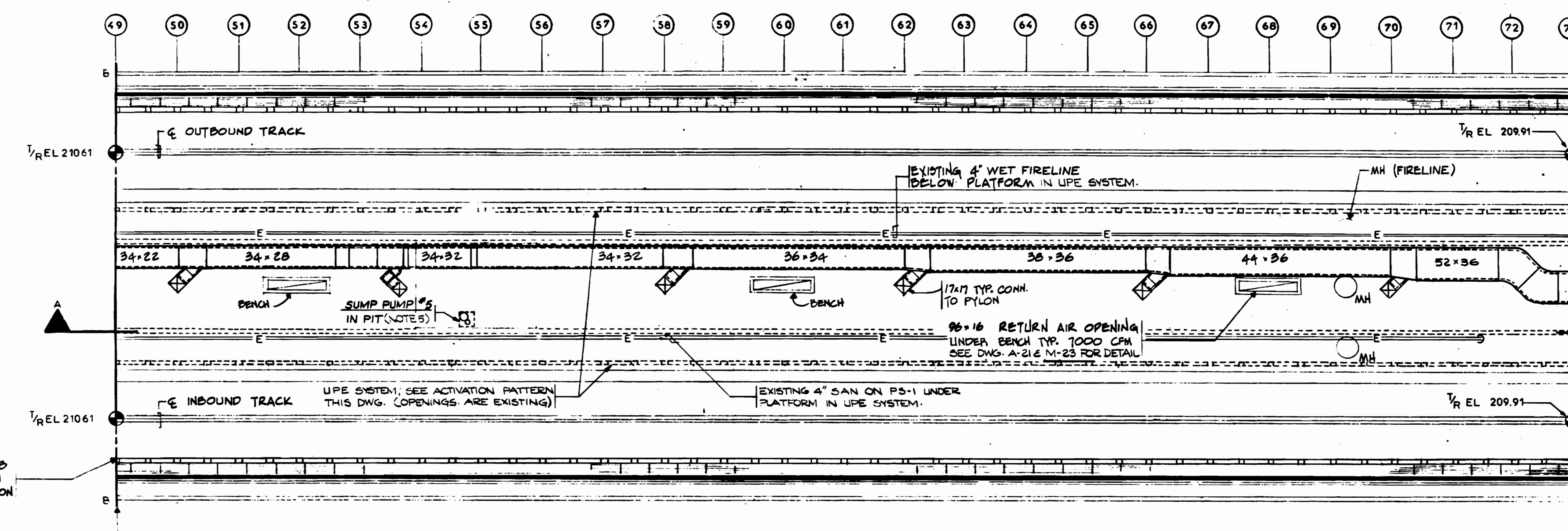
SCALE: 1/8" = 1'-0" 10 2 4 6 8 10

DRAWING NO. FA 11-M-21 M334-116



**NOTES FOR THIS DRAWING**

1. SEE GENERAL NOTES DWG. M-1.
2. ALL PYLONS ARE TYPE 'C'. PYLONS UNDER MEZZANINE ARE 8'-6" IN HEIGHT. ALL OTHER PYLONS ARE 9'-0" - SEE ST-M-83. THE ARCH. & ELECT. DWGS. INDICATE THE TYPE & WATTAGE OF LAMPS ON THE PYLONS THAT HAVE BOTH LIGHTING AND A/C FUNCTIONS.
3. SUPPORT DUCTWORK OFF THE FLOOR W/ 1" x 2" x 1/2" CHANNEL, 4'-0" O.C.
4. FUTURE EXHAUST SLOTS 42"x11" @ 4'-2" O.C. SEE ARCH. DWG. A-23 FOR CAPPING OFF DETAIL TYP. I.B. & O.B.
5. SUMP PUMPS # 5 WITH 1/4" DISCHARGE TO SPILL OVER OPEN HUB OF 3" SVCI PIPE. SEE SUMP PUMP DETAIL; DWG. M-29.
6. ANY #2 DISCHARGE DUCTWORK SHALL BE MEDIUM PRESSURE CONSTRUCTION.



ACTIVATION PATTERN FOR UNDER PLATFORM EXHAUST SYSTEM TYPICAL BOTH SIDES OF PLATFORM

DESIGNED D.P. FOLLAIN 08/27/76 DATE  
 DRAWN D.P. FOLLAIN 08/19/76 DATE  
 CHECKED S.R. MICHAELS 10/19/76 DATE  
 APPROVED S.R. MICHAELS 5/25/80 DATE

NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
A-20	PLATFORM PLAN & SECTION	7-5-83	HTJ	PROVIDED ACCESS TO FUTURE
E-20	PLATFORM PLAN - LIGHTING & POWER			REGULAR PAPER FOR AS-BUILT

NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
A-20	PLATFORM PLAN & SECTION	7-5-83	HTJ	PROVIDED ACCESS TO FUTURE
E-20	PLATFORM PLAN - LIGHTING & POWER			REGULAR PAPER FOR AS-BUILT



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

MATHEWS • CHATELAIN • BEALL  
ENGINEERS AND ARCHITECTS  
SECTION DESIGNER

DE LEUW, CATHAR & COMPANY  
GENERAL ENGINEERING CONSULTANT

HARRY WEESSE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *Jerily R. Press* DATE 8-19-80 APPROVED *Paul J. ...*

**ROCKVILLE ROUTE**  
BETHESDA STATION SOUTH PLATFORM  
PLAN AND SECTION

SCALE: 1/8" = 1'-0" 1 0 2 4 6 8 10

DRAWING NO. FA 11-M-20 M334-117

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

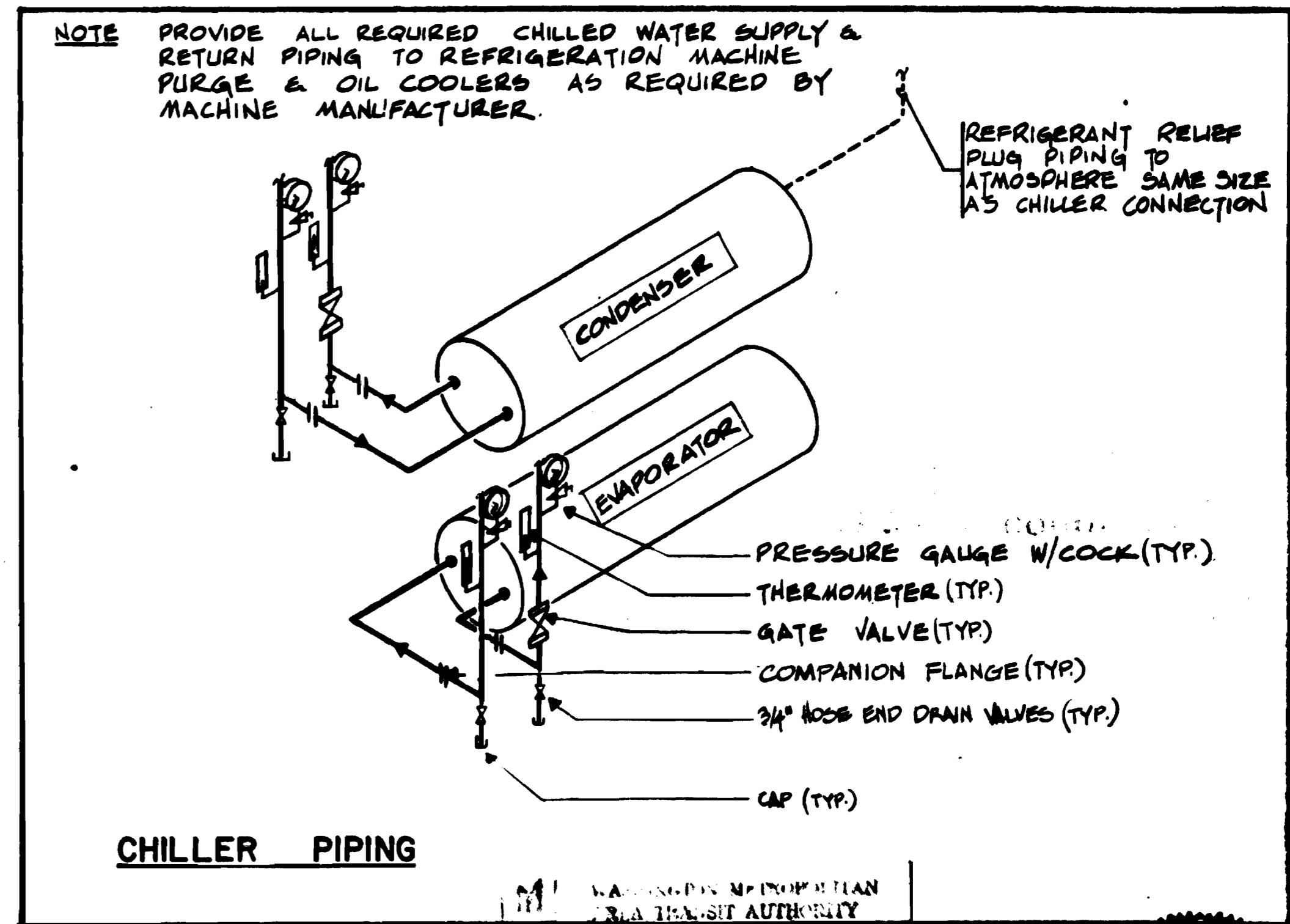
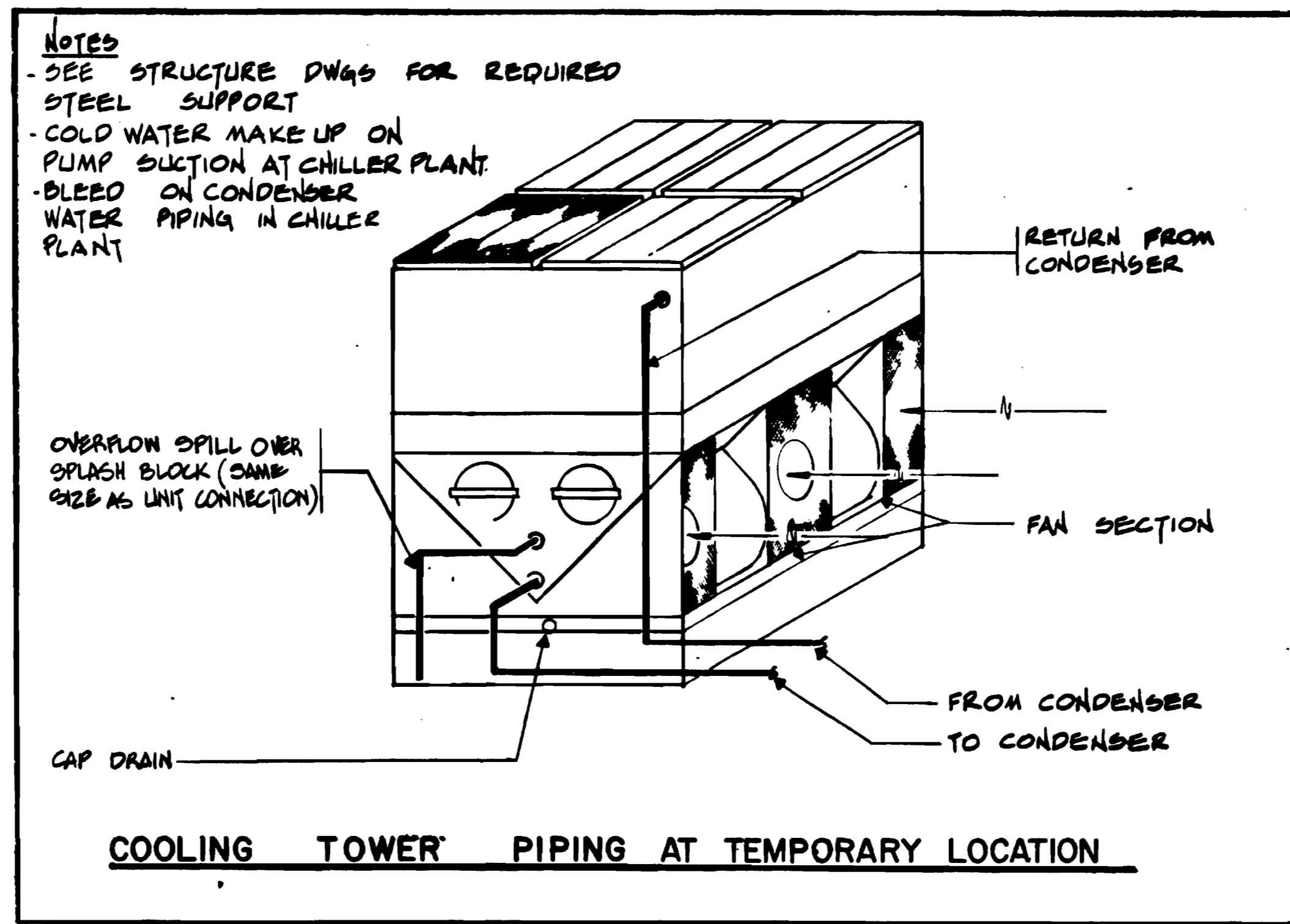
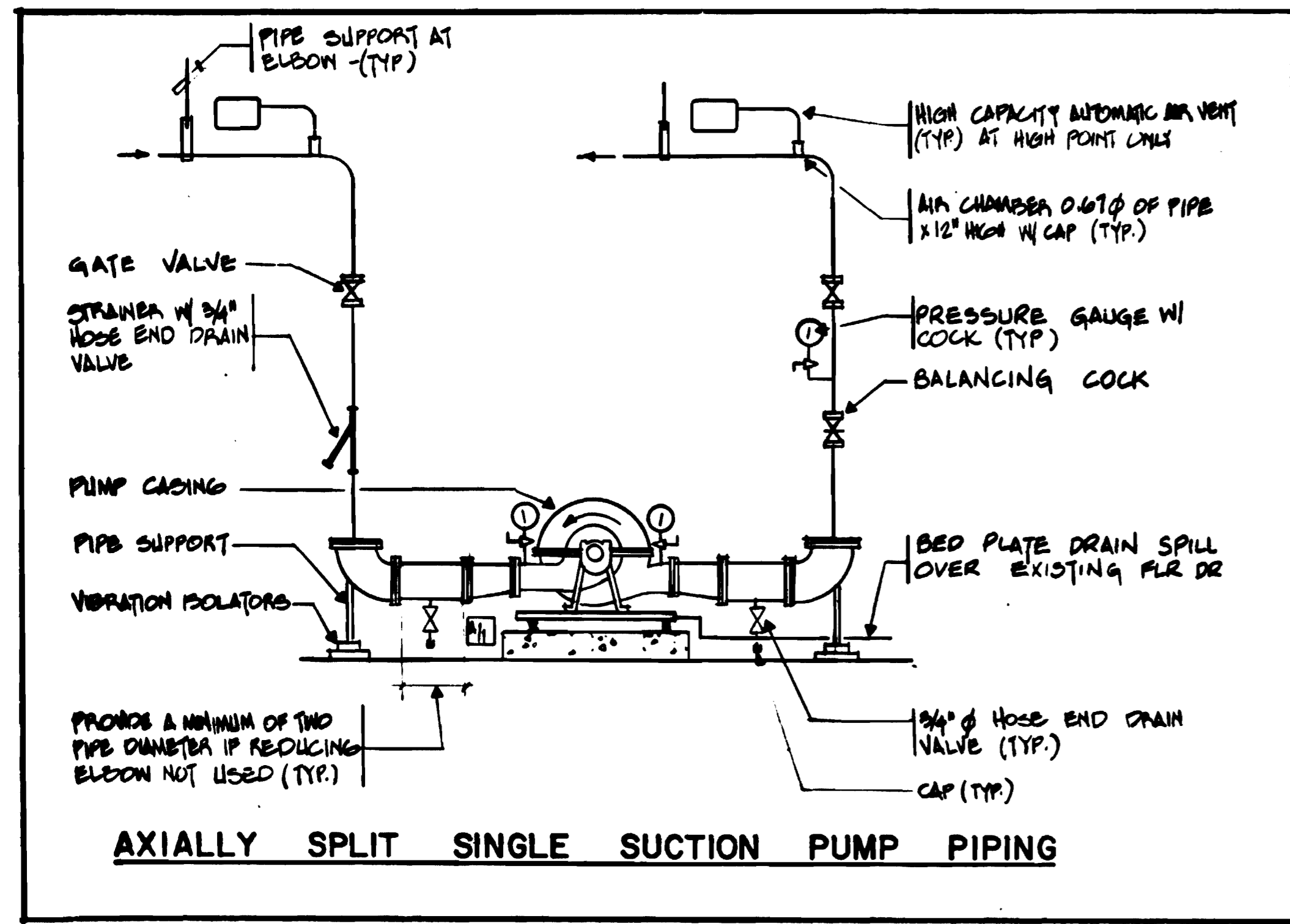
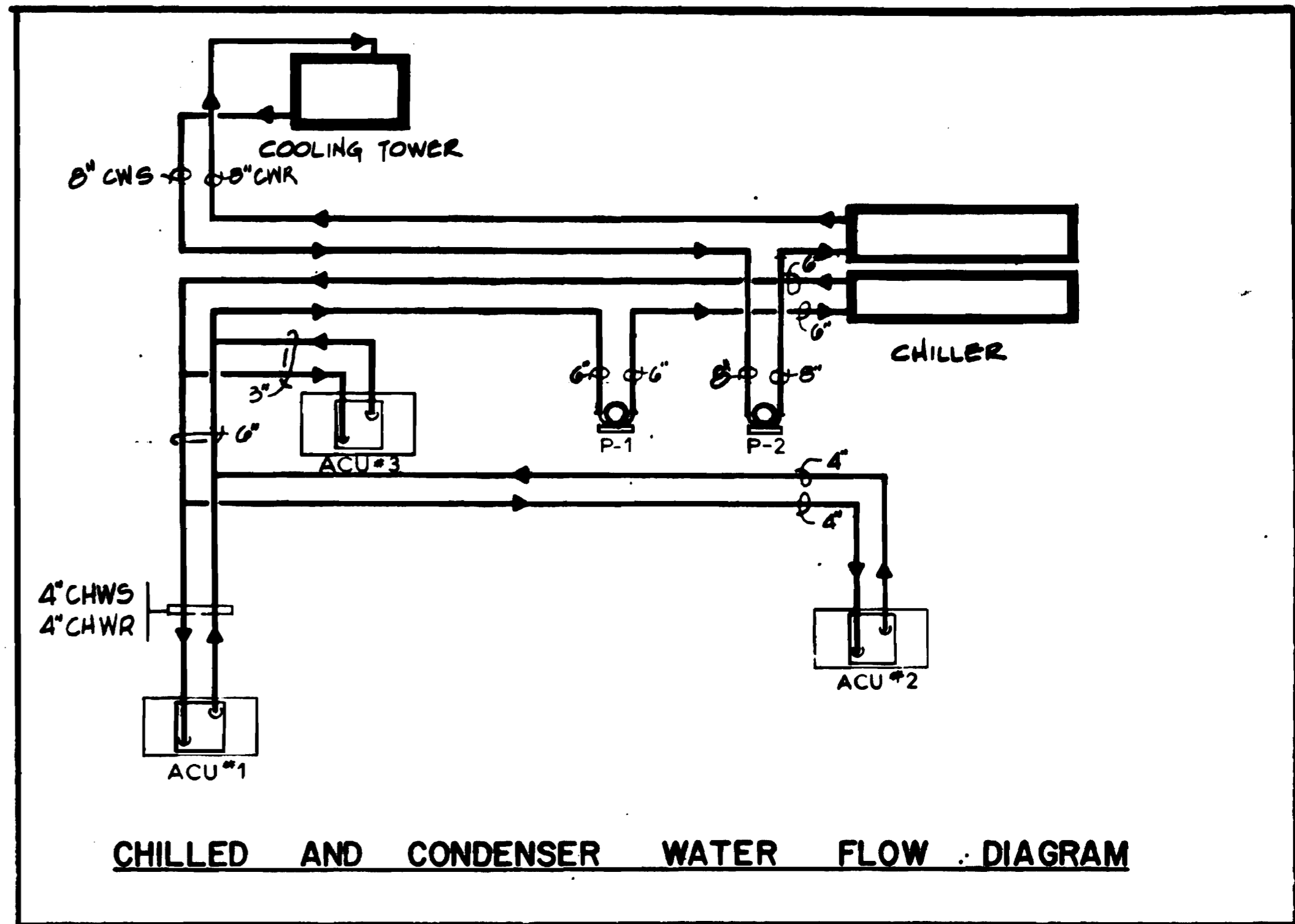
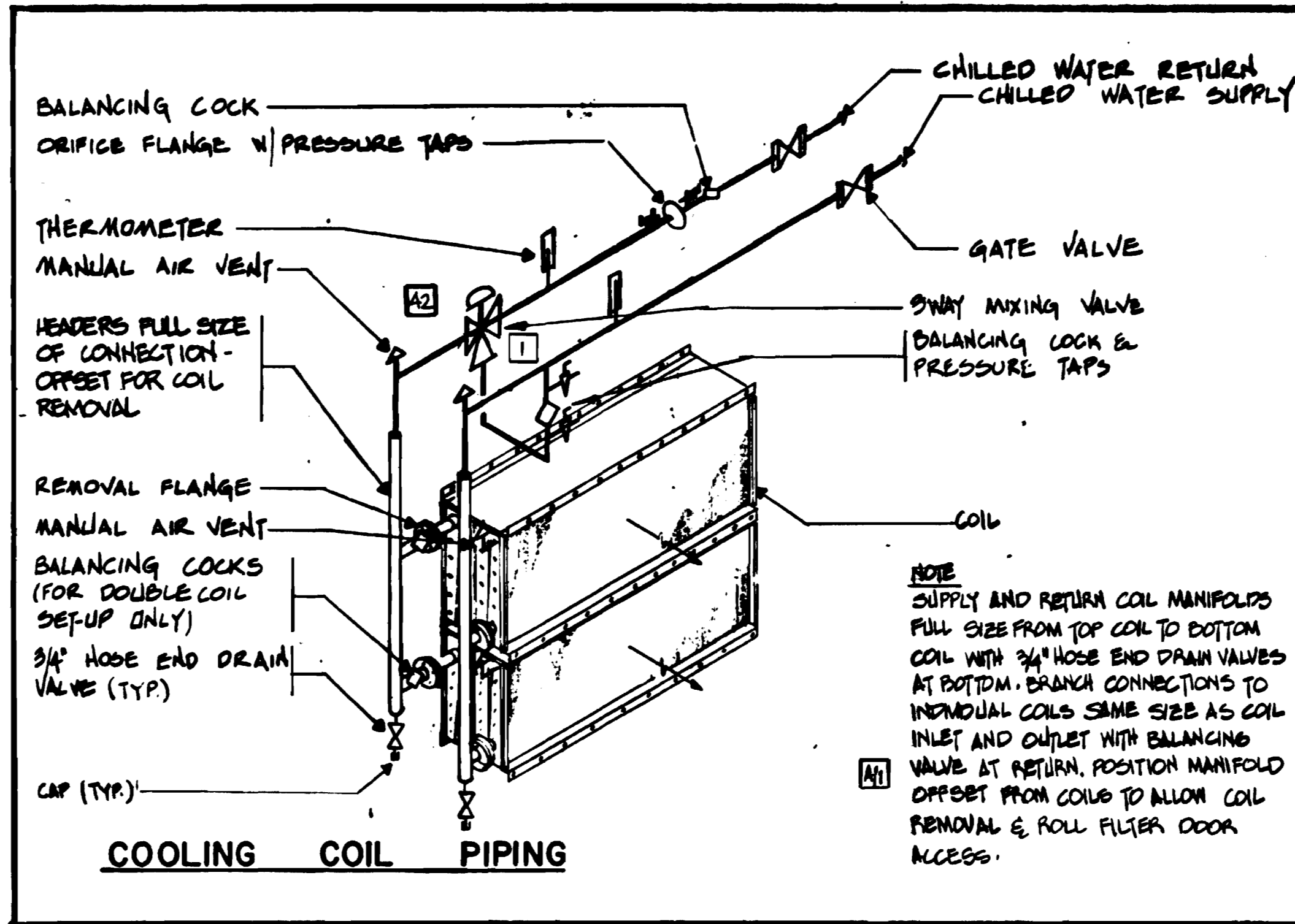
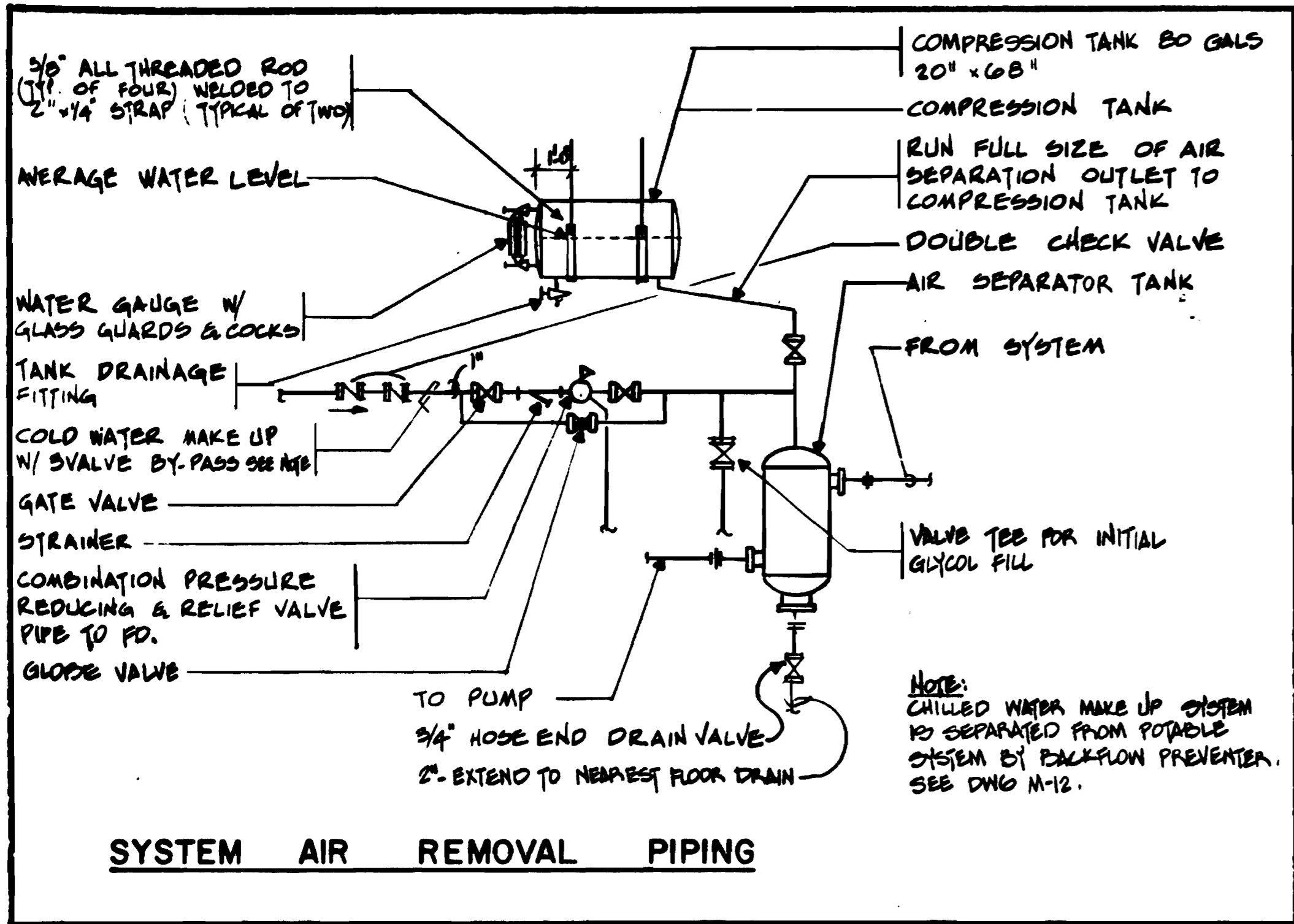
**AS-BUILT CONDITION**

SEP 15 1988

RESIDENT ENGINEER

SEAL OF PROFESSIONAL ENGINEER

KEY PLAN



AS-BUILT CONDITION  
 BY: *Michael DeRy* SEP 15 1980  
 REVISION ENGINEER DATE



DESIGNED	D. FOLLAIN	4/19/77
DRAWN	D. FOLLAIN	4/19/78
CHECKED	S. MICHAELIS	4/19/79
APPROVED	S. MICHAELIS	4/19/80

NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION

DATE	BY	DESCRIPTION
9/13/80	PKH	VIBRATION ISOLATORS AND NOTES
7/2/82	HTJ	1 REVISED PER PCO-55, AS BUILT



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

MATHEWS • CHATELAIN • BEALL  
 ENGINEERS AND ARCHITECTS  
 SECTION DESIGNER

DE LEUW, CATHER & COMPANY  
 GENERAL ENGINEERING CONSULTANT

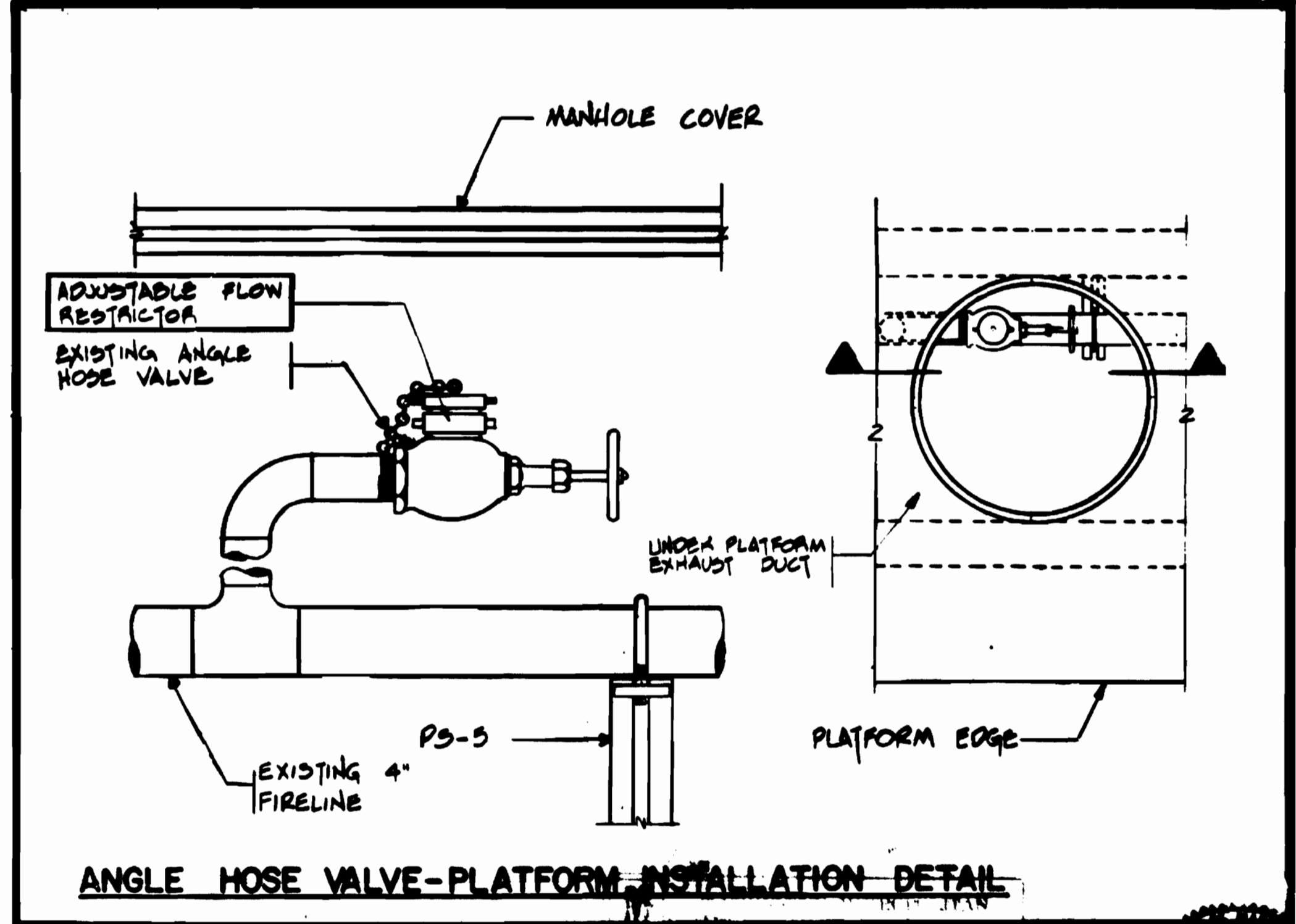
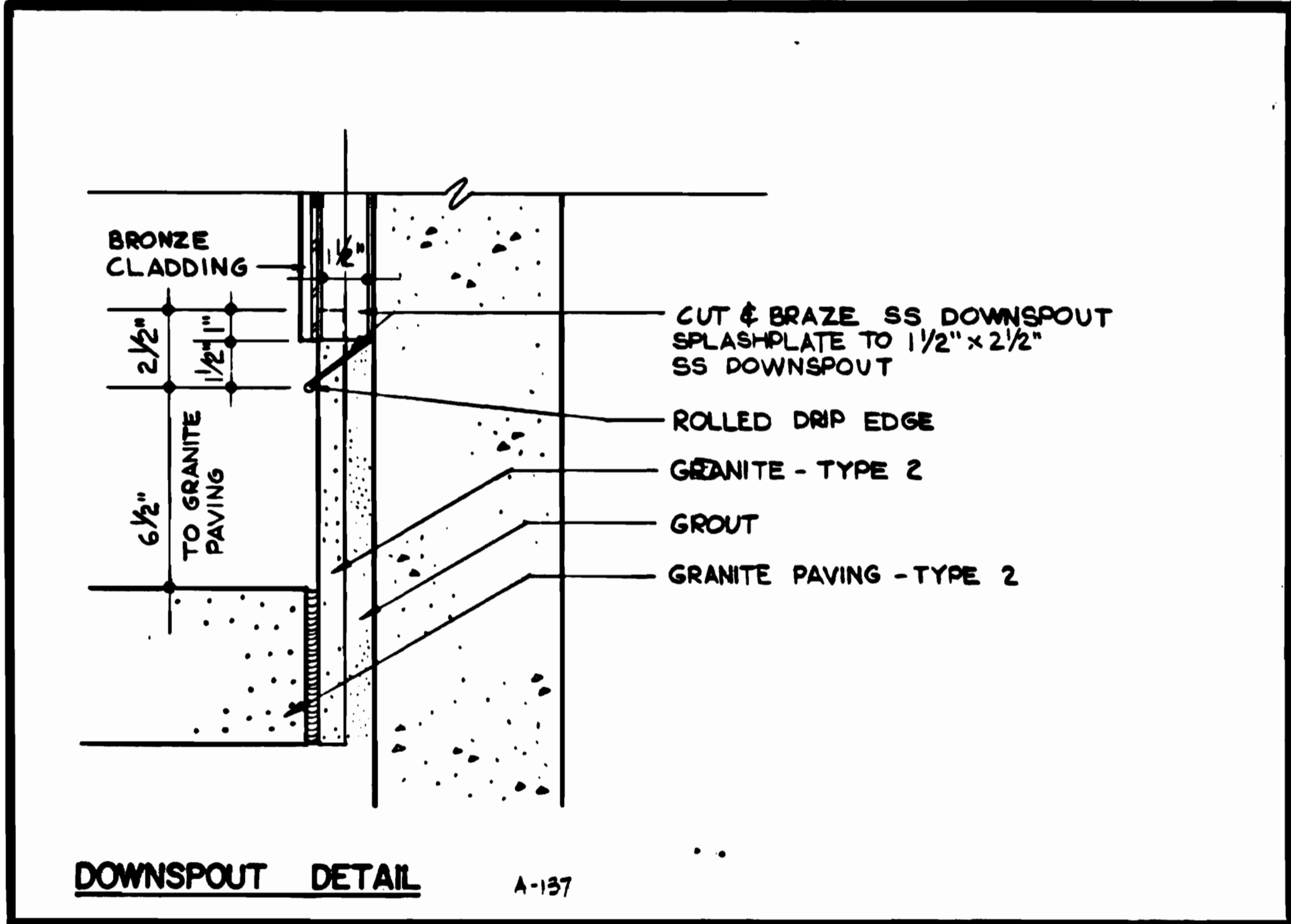
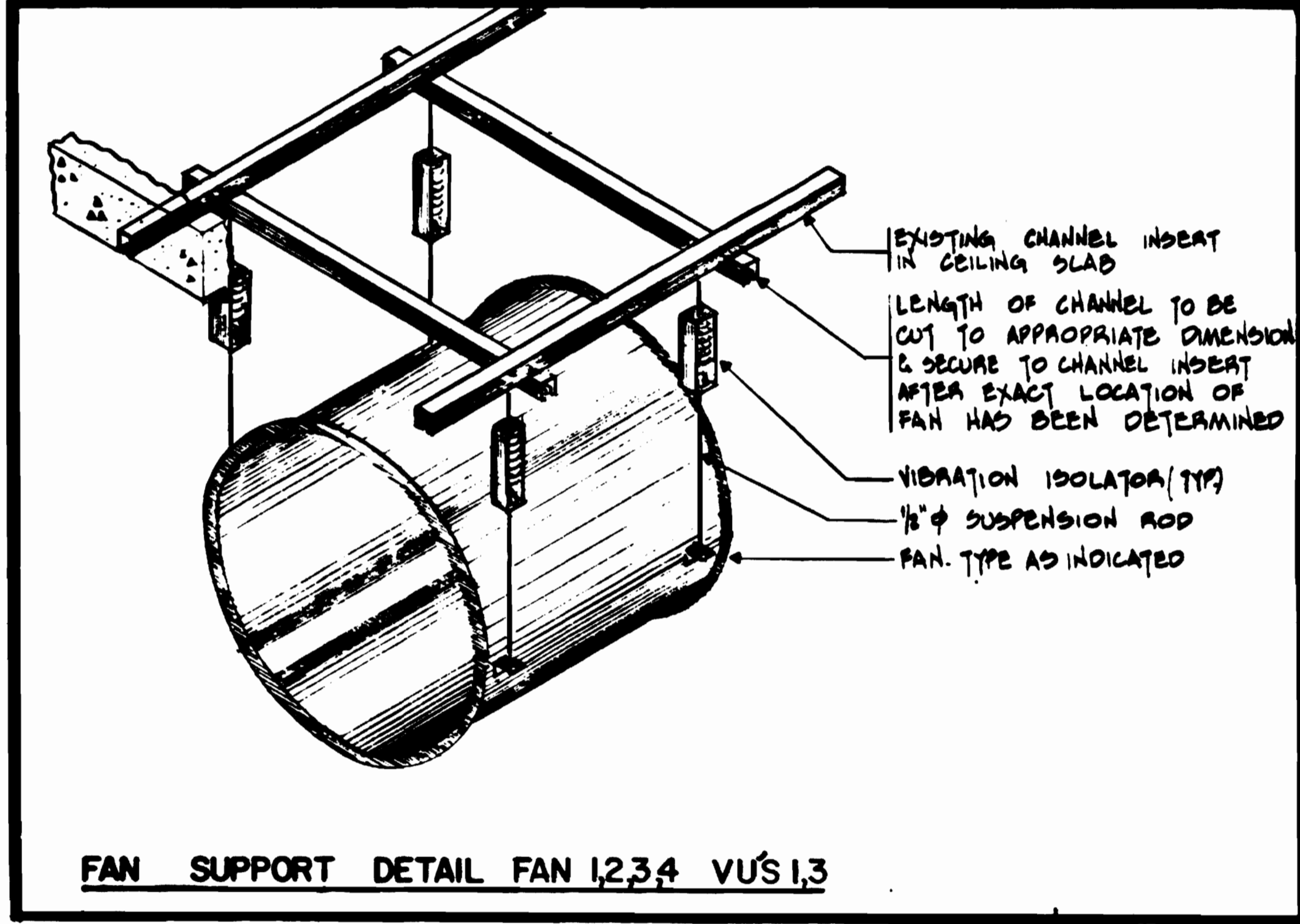
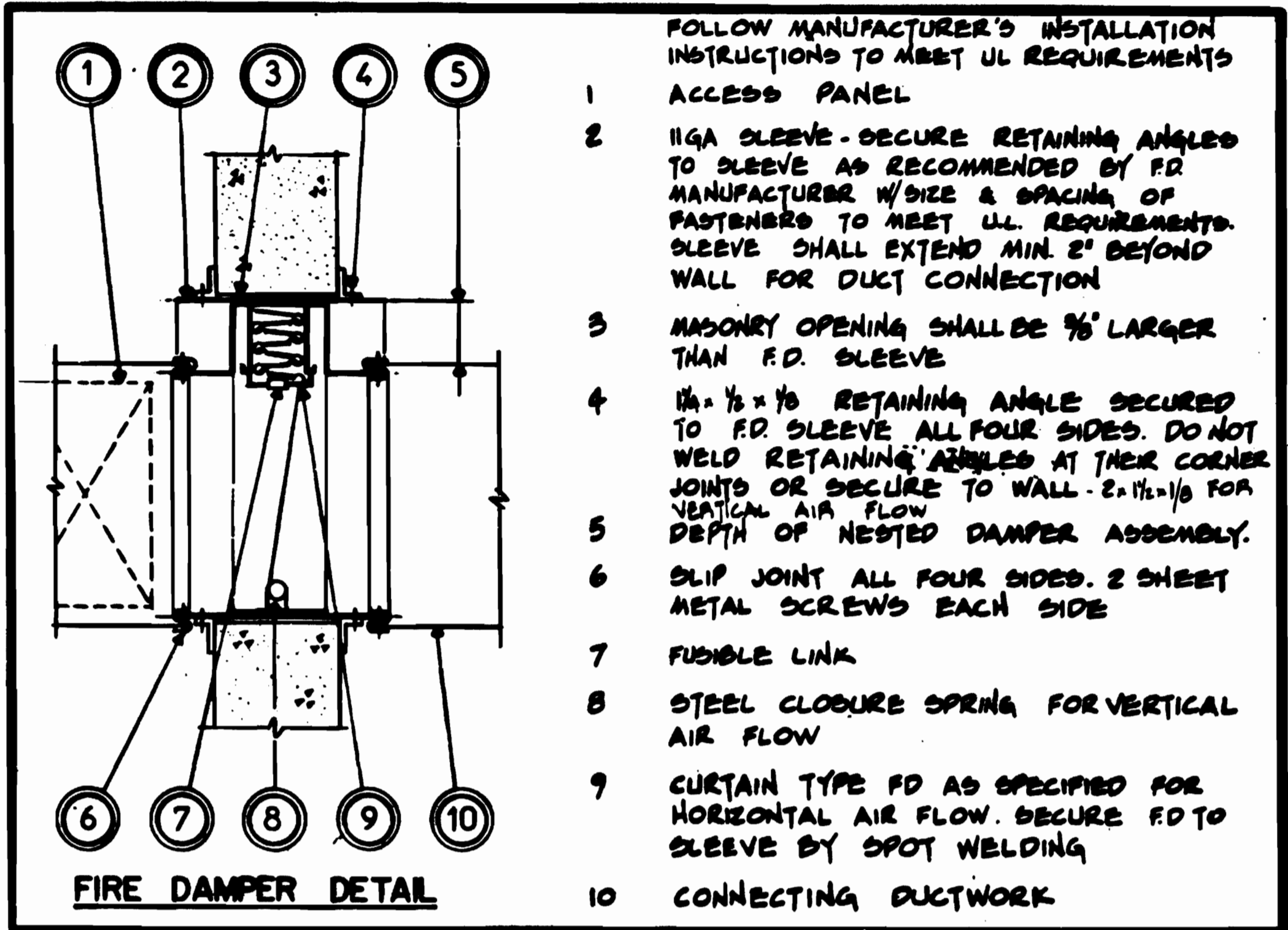
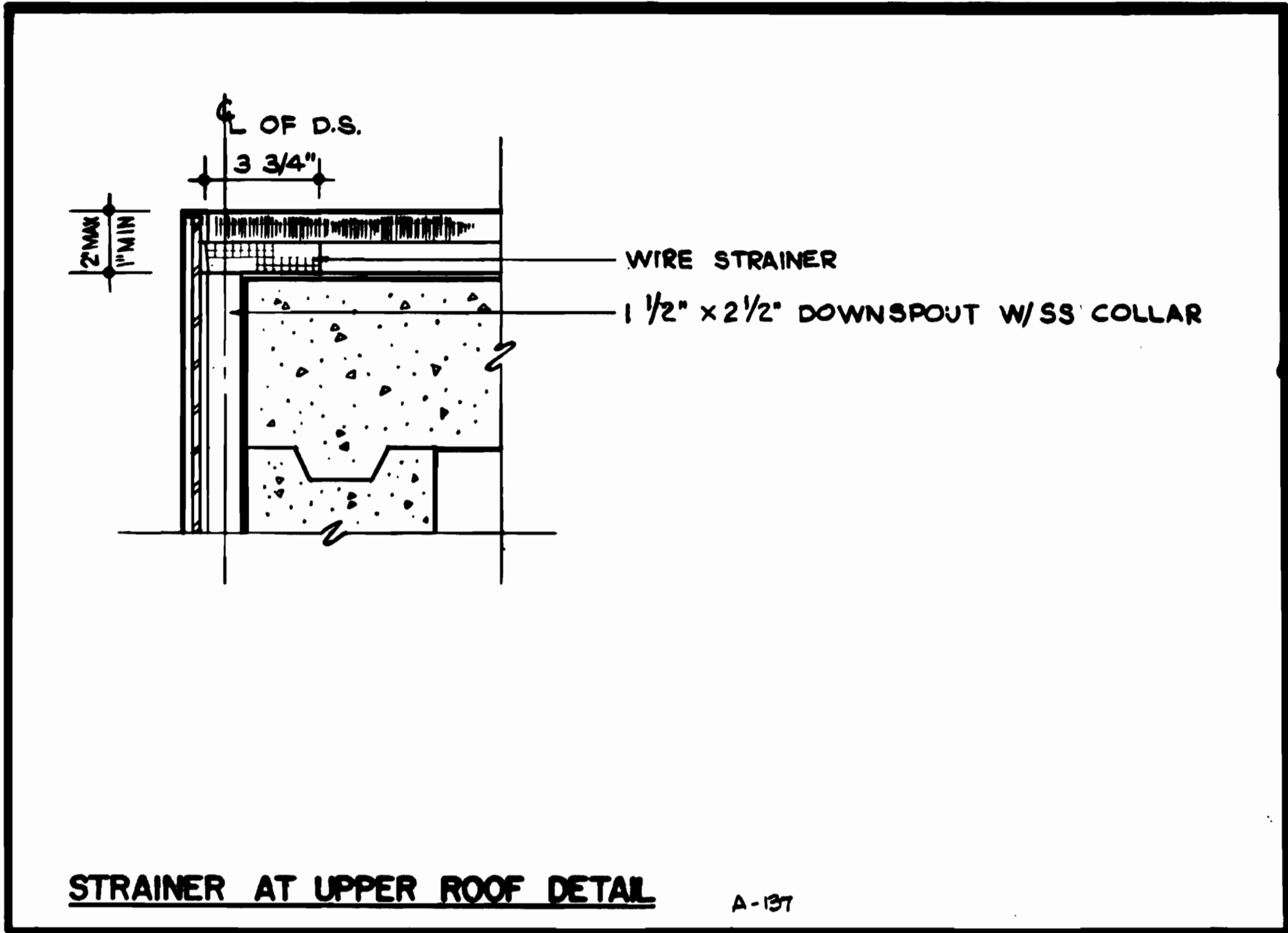
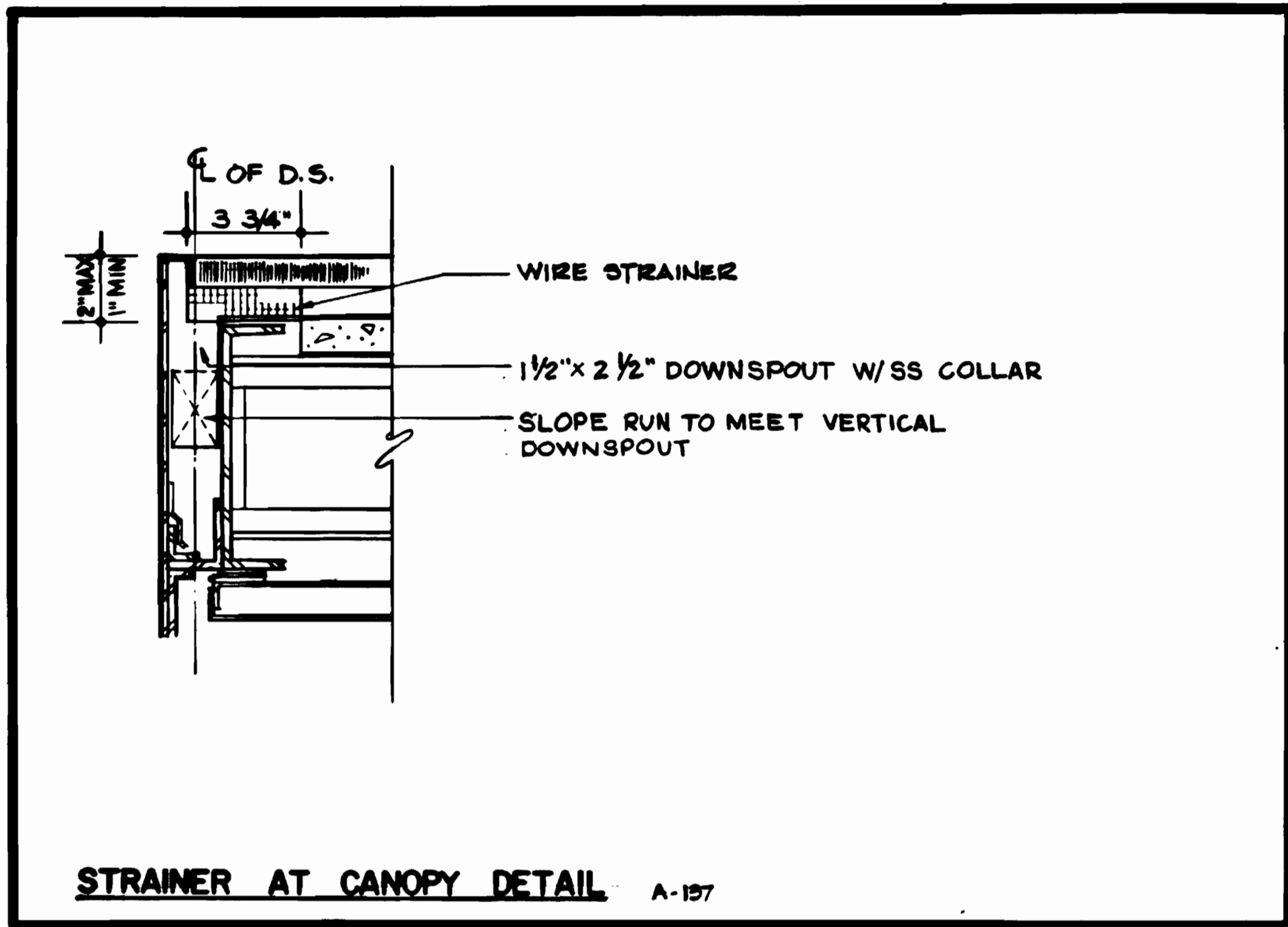
HARRY WEESE & ASSOCIATES  
 GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *Jerry R. Fries* DATE 8-15-80 APPROVED *Paul K. ...*

**ROCKVILLE ROUTE**  
 DETAILS AND DIAGRAMS

SCALE: NONE DRAWING NO. FA 11-M-32 M334-118





DESIGNED	D.B. FOLLAIN	01/18/75
DRAWN	D.B. FOLLAIN	02/10/75
CHECKED	R.R. MICHAELS	03/10/77
APPROVED	R.R. MICHAELS	10/24/77

REFERENCE DRAWINGS		REVISIONS		
NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

MATHEWS • CHATELAIN • BEALL  
ENGINEERS AND ARCHITECTS  
SECTION DESIGNER

DE LEUW, CATHIER & COMPANY  
GENERAL ENGINEERING CONSULTANT

HARRY WEISSE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *Grady R. Press* DATE 8-15-80 APPROVED *Paul J. ...*

AS-BUILT CONDITION

SEP 19 1980

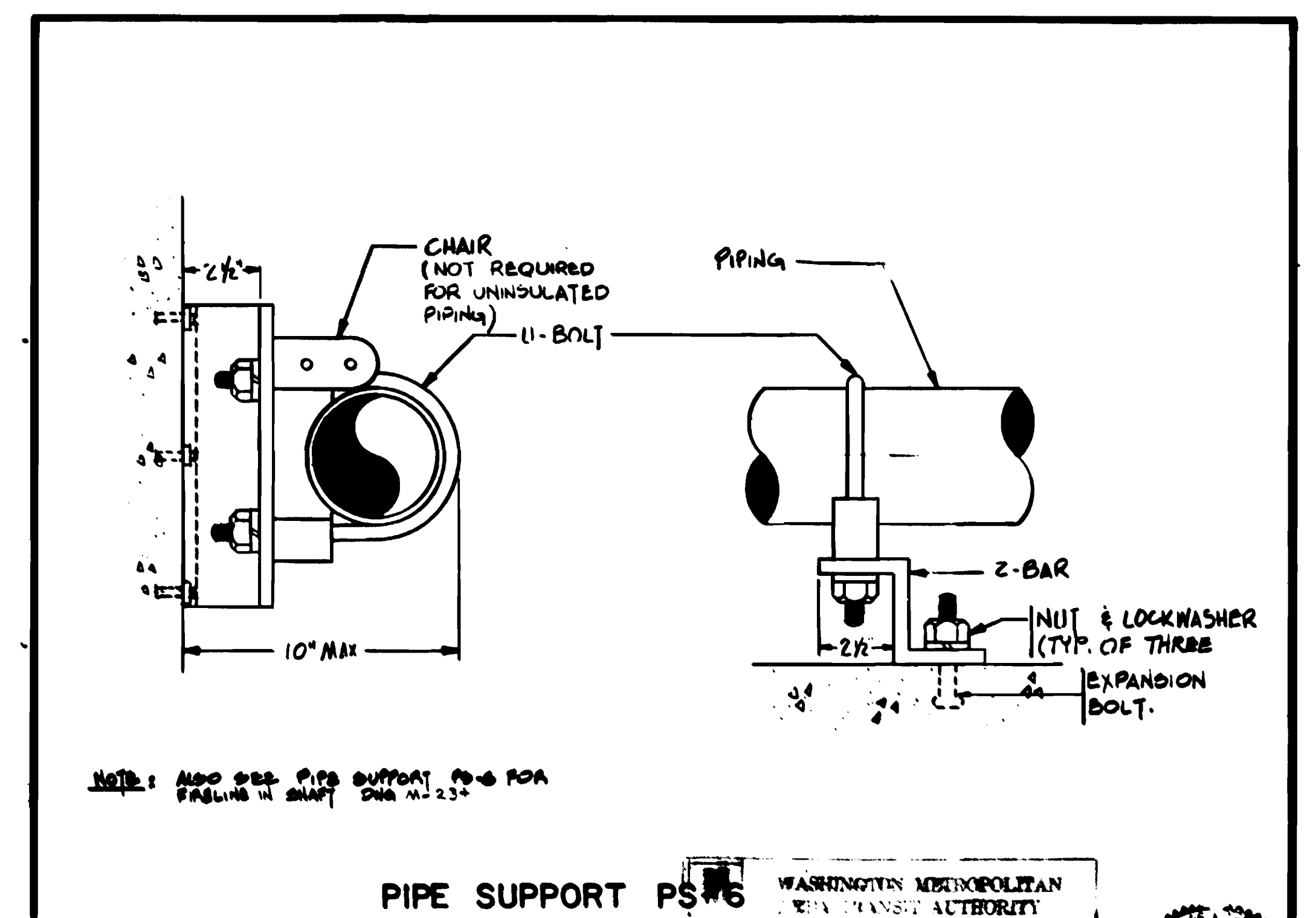
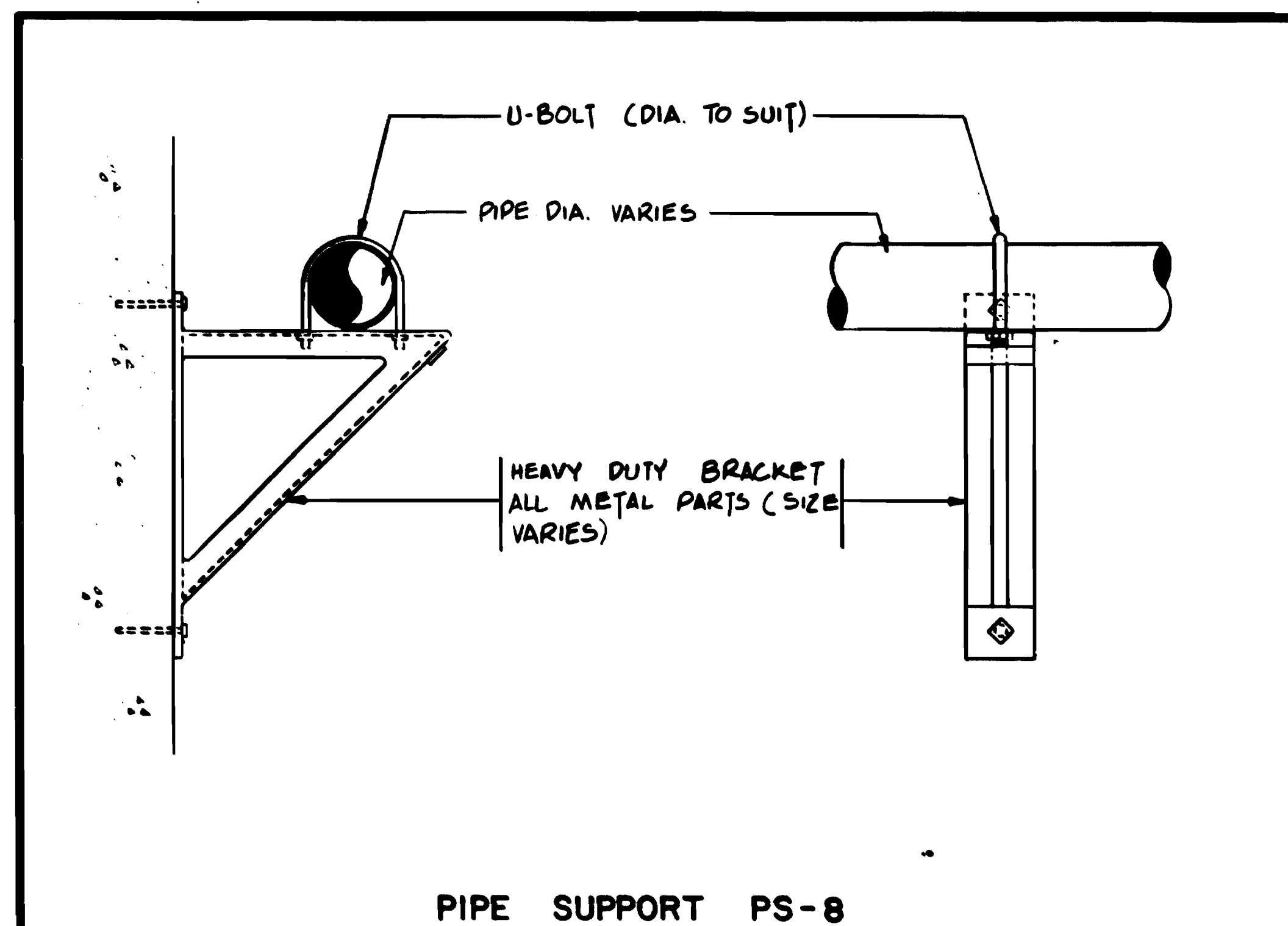
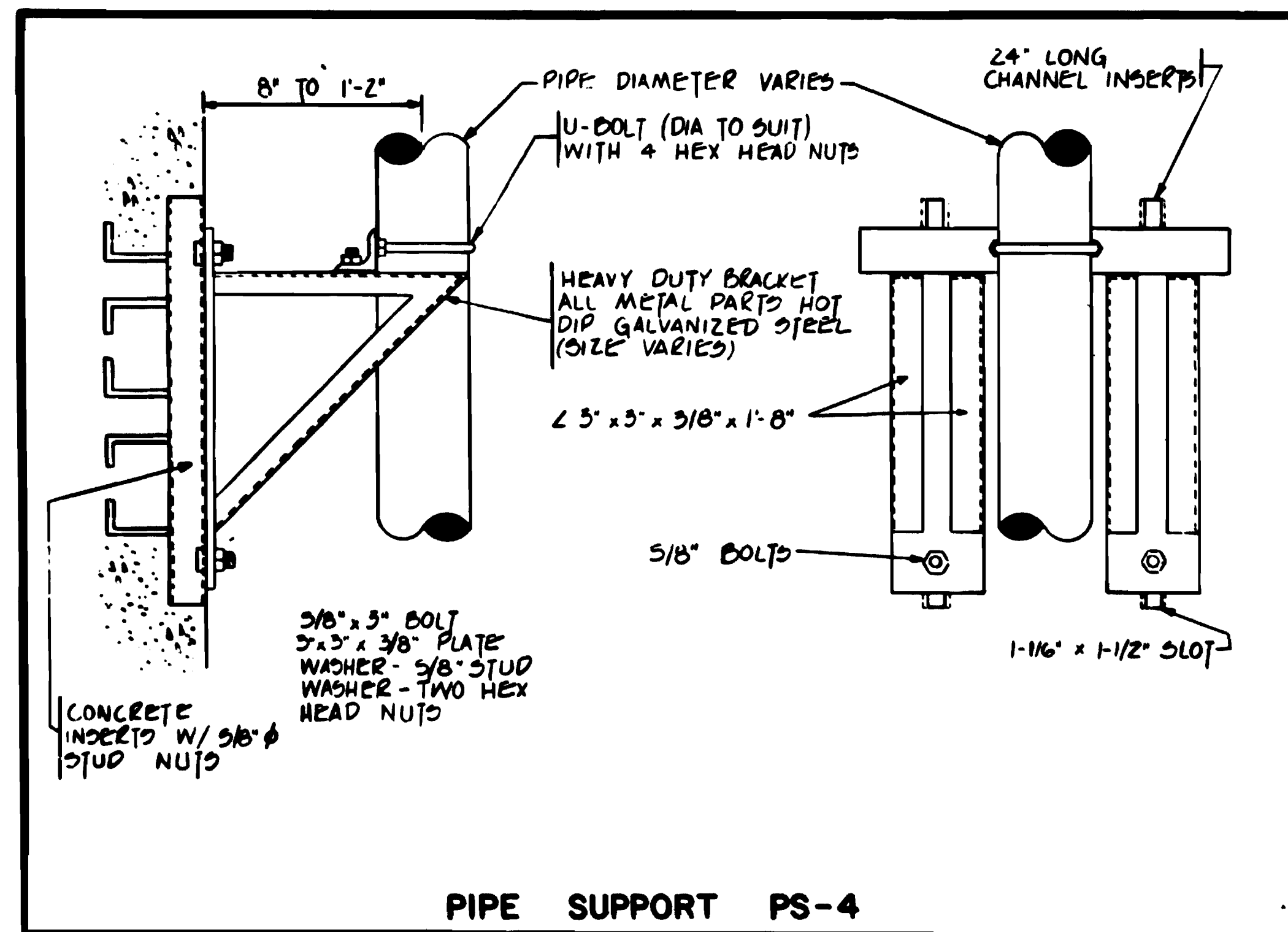
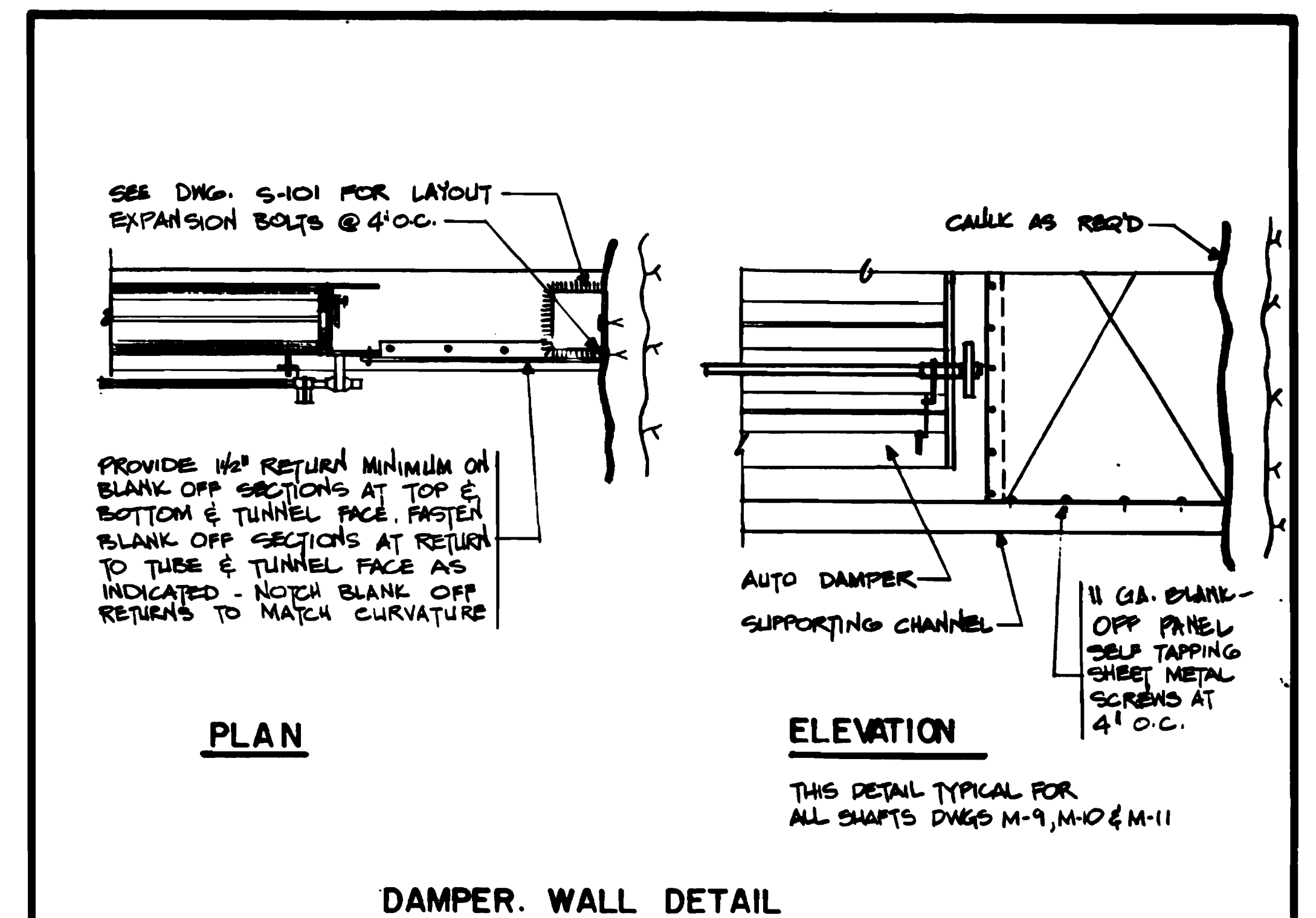
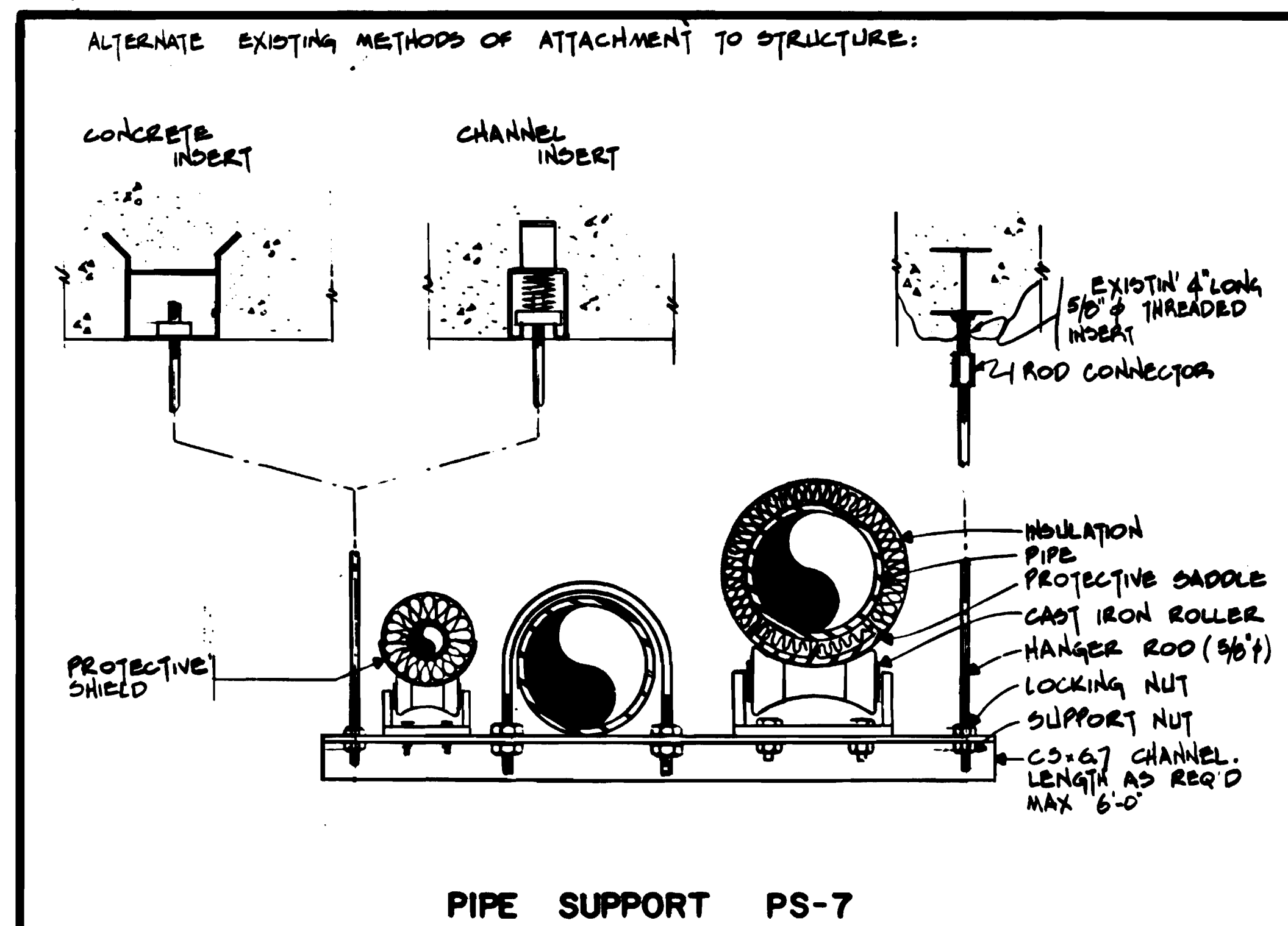
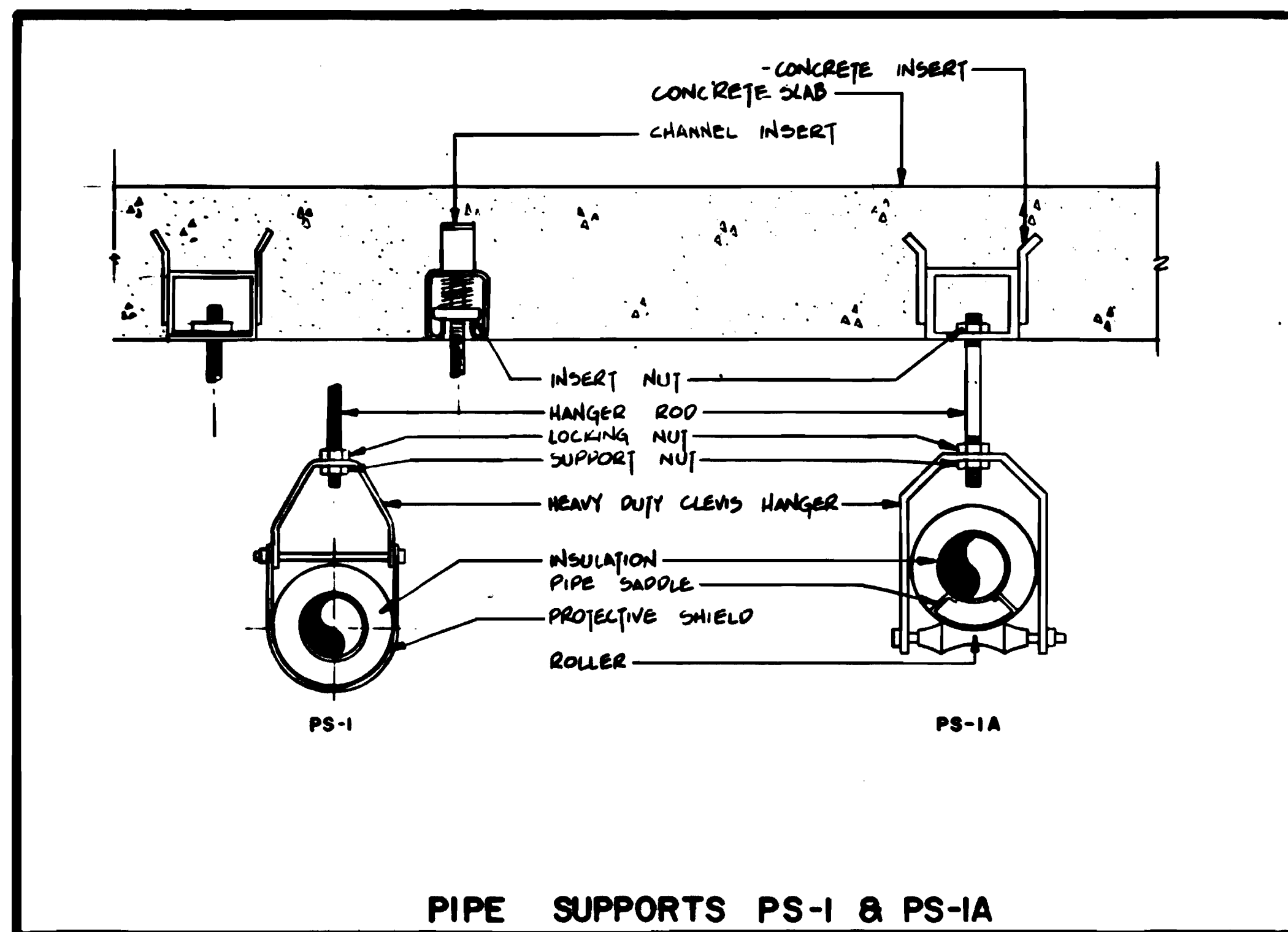
**ROCKVILLE ROUTE**  
MECHANICAL DETAILS

SCALE NONE

DRAWING NO. FA 11-M-33

M334-119





DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS		
		NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
J.C. SAKER	8/23/79					
DRAWN	DATE					
J.C. SAKER	8/23/79					
CHECKED	DATE					
S. MICHAELIS	8/23/79					
APPROVED	DATE					
S.R. MICHAELIS	8/24/79					

**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

MATHÉWS • CHATELAIN • BEALL  
ENGINEERS AND ARCHITECTS  
SECTION DESIGNER

DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

**ROCKVILLE ROUTE  
DETAILS**

DESIGNED: J.C. SAKER DATE: 8/23/79  
DRAWN: J.C. SAKER DATE: 8/23/79  
CHECKED: S. MICHAELIS DATE: 8/23/79  
APPROVED: S.R. MICHAELIS DATE: 8/24/79

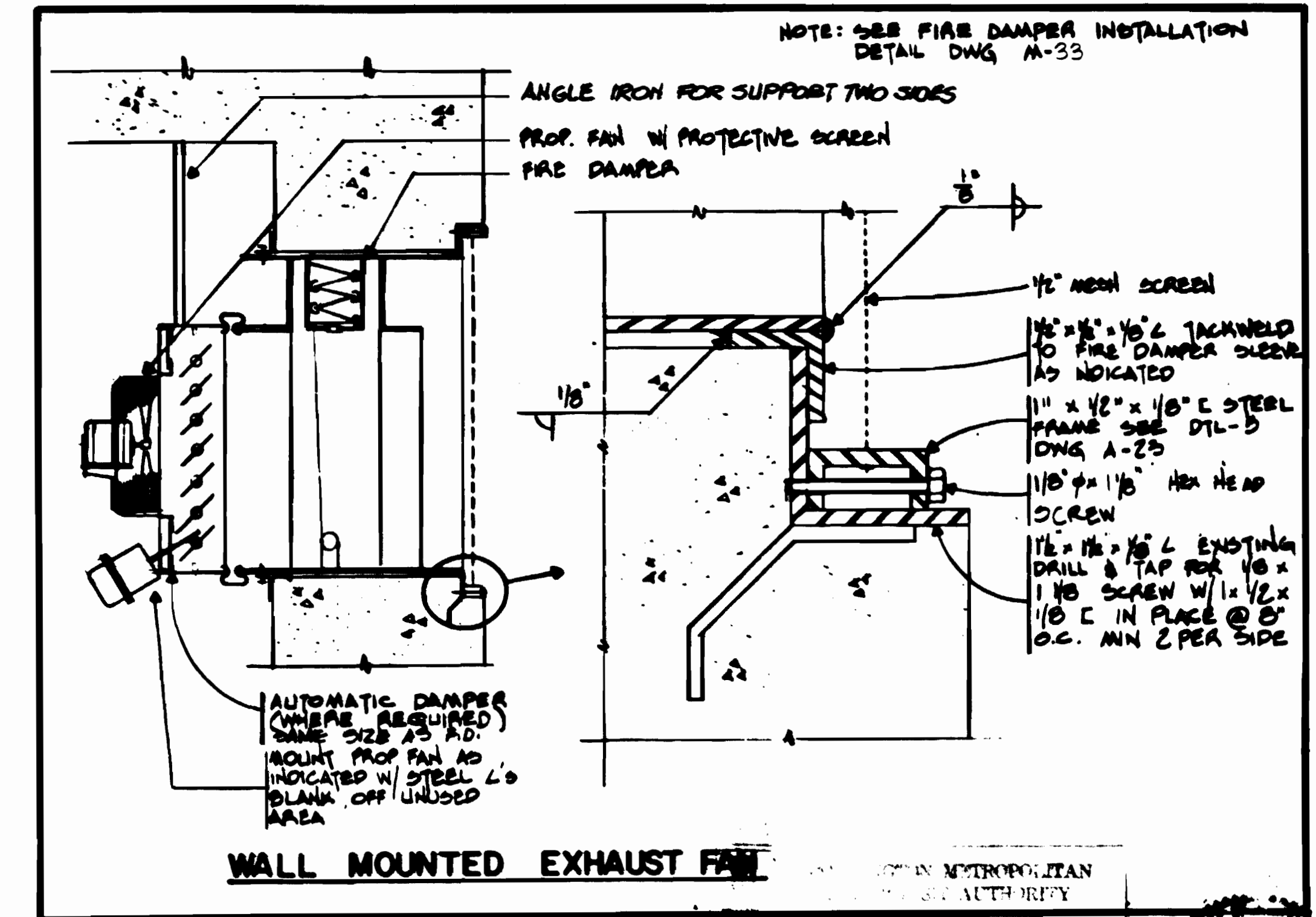
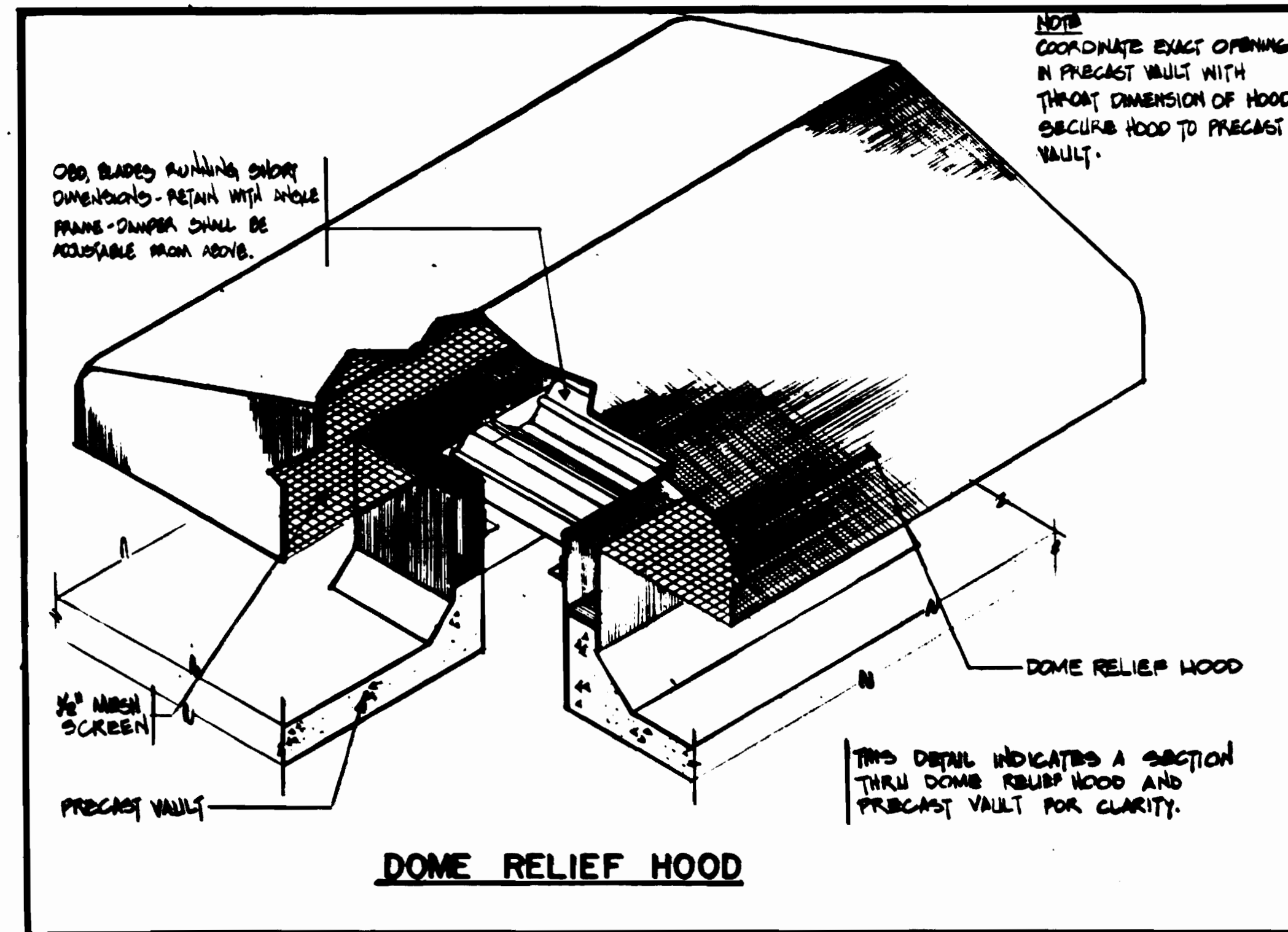
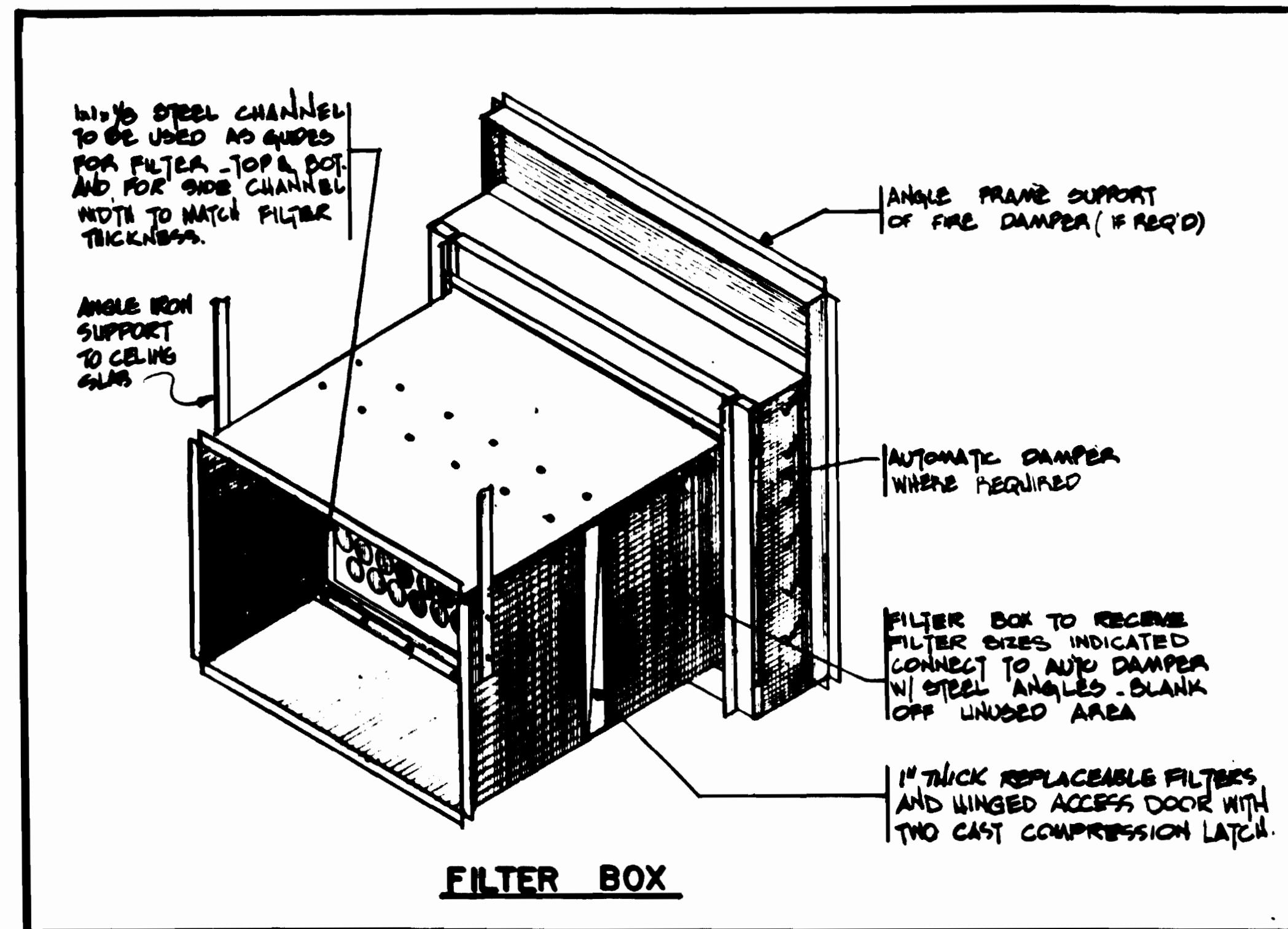
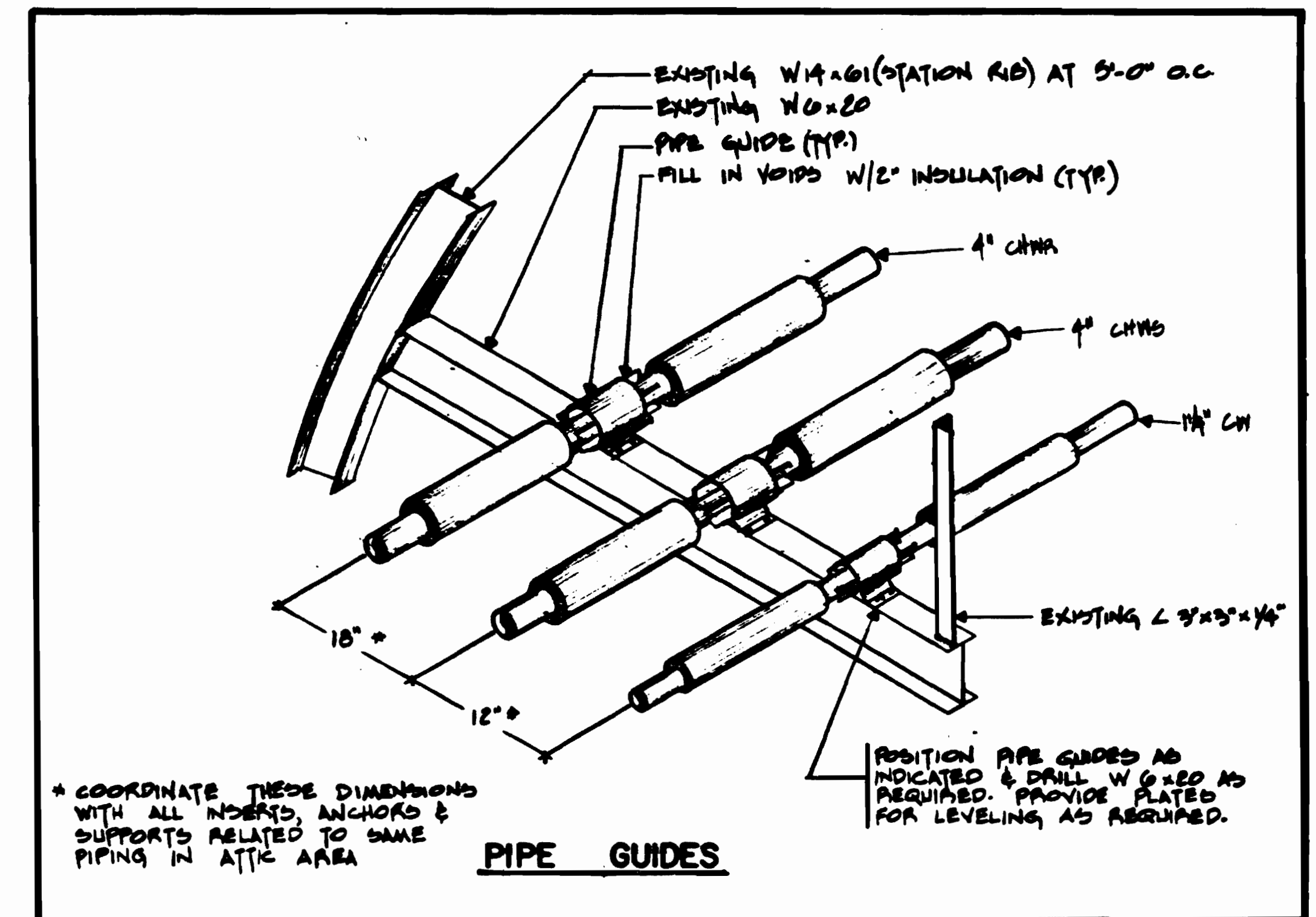
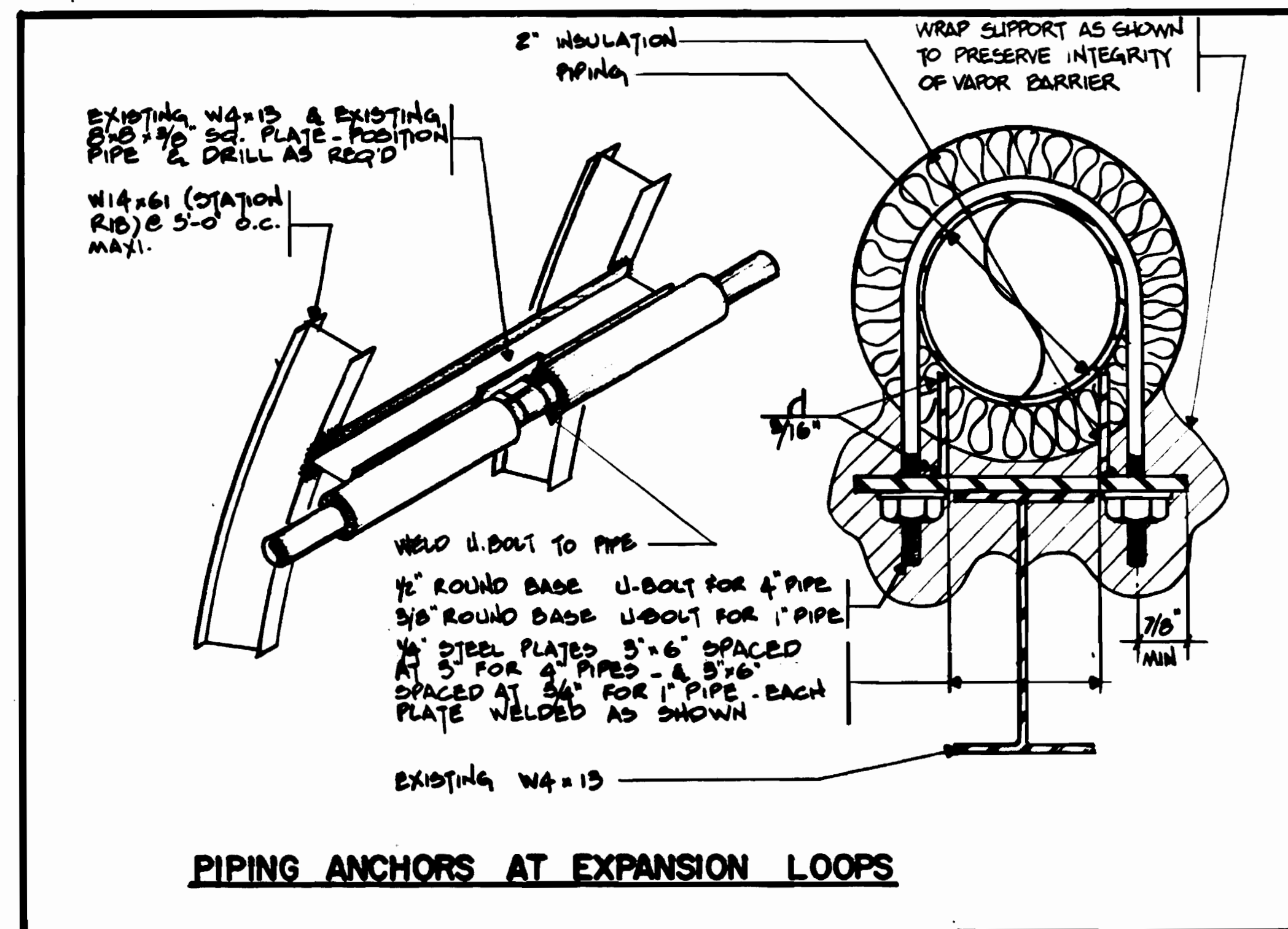
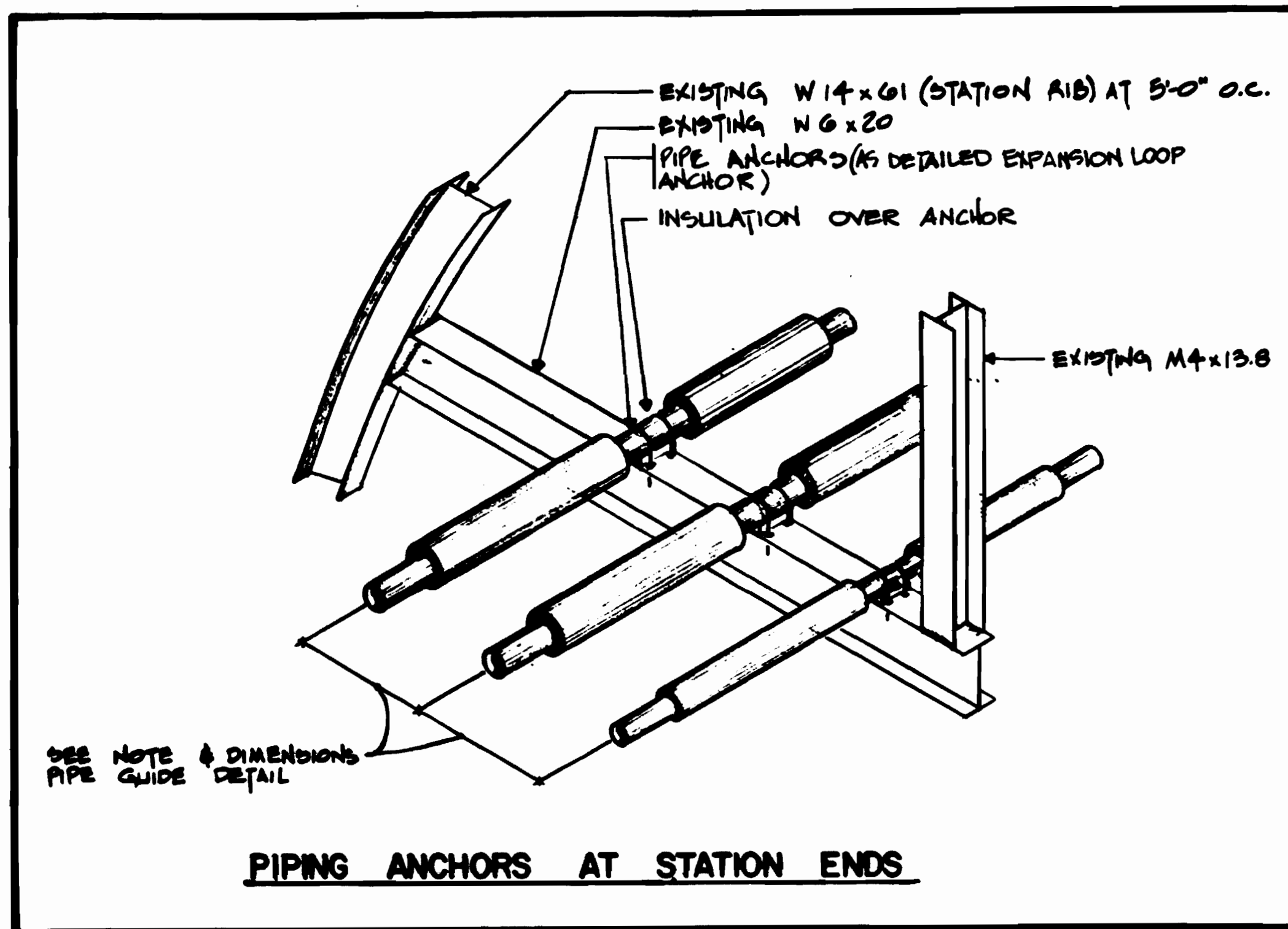
3899-R  
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

SUBMITTED: *Jerry R. Kress* DATE: 8-15-80 APPROVED: *Paul J. Kress*

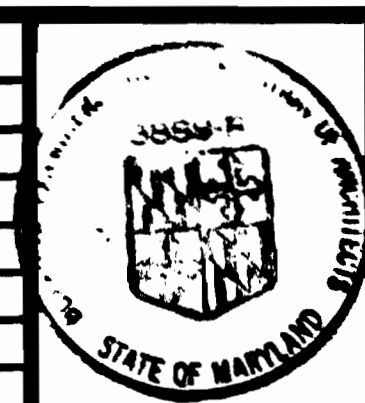
SCALE: NONE DRAWING NO. FA11-M-34 M334-120

AS BUILT CONDITION





DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS		
		NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
J.C. SAGER	05/19/79					
J.C. SAGER	05/20/79					
J.S. NEWMAN	11/19/79					
J.S. NEWMAN	05/21/79					



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

MATHEWS • CHATELAIN • BEALL  
 ENGINEERS AND ARCHITECTS  
 SECTION DESIGNER

DE LEUW, CATHNER & COMPANY  
 GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
 GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *Gene R. Jones* DATE 5-15-80 APPROVED *John P. ...*

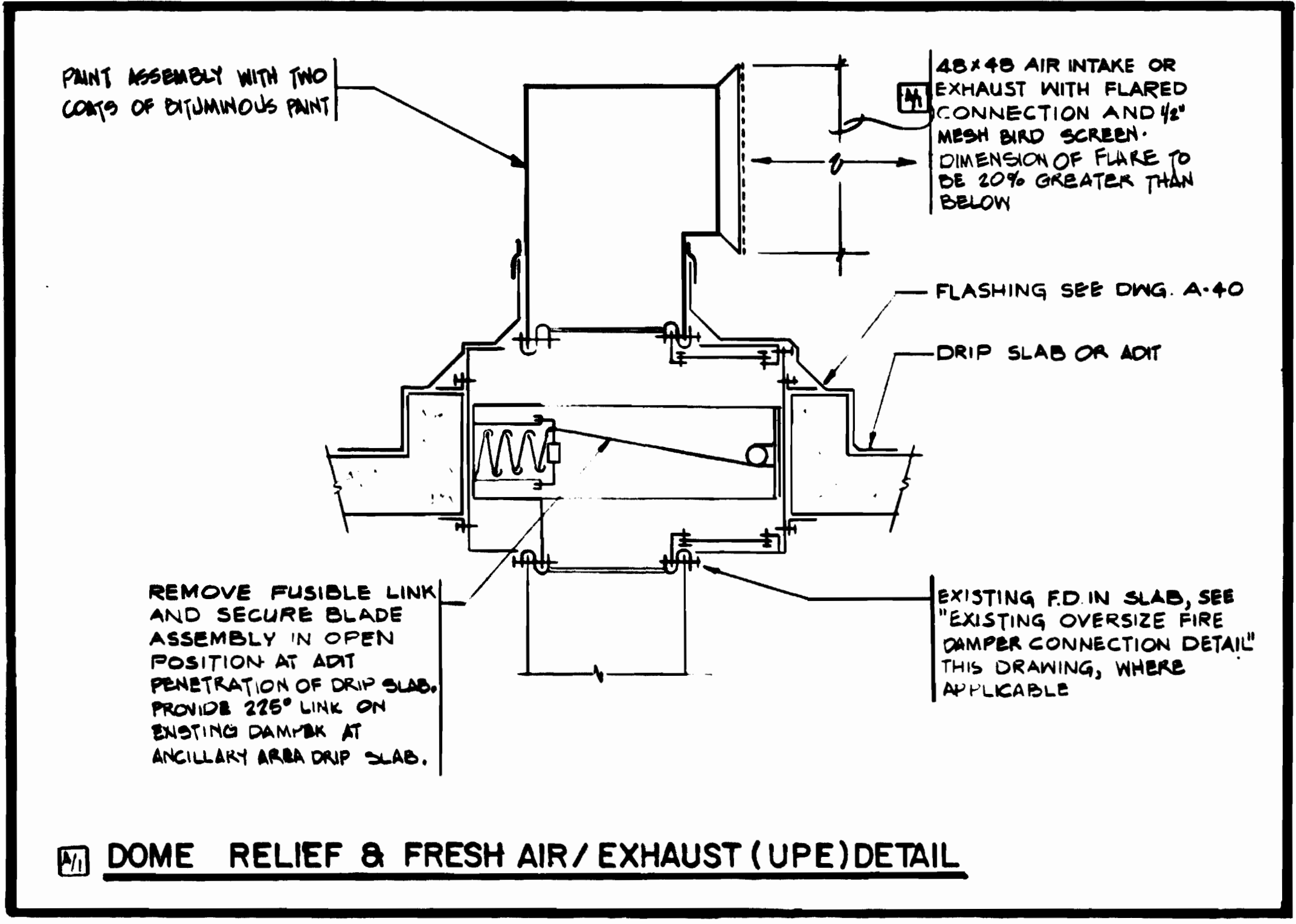
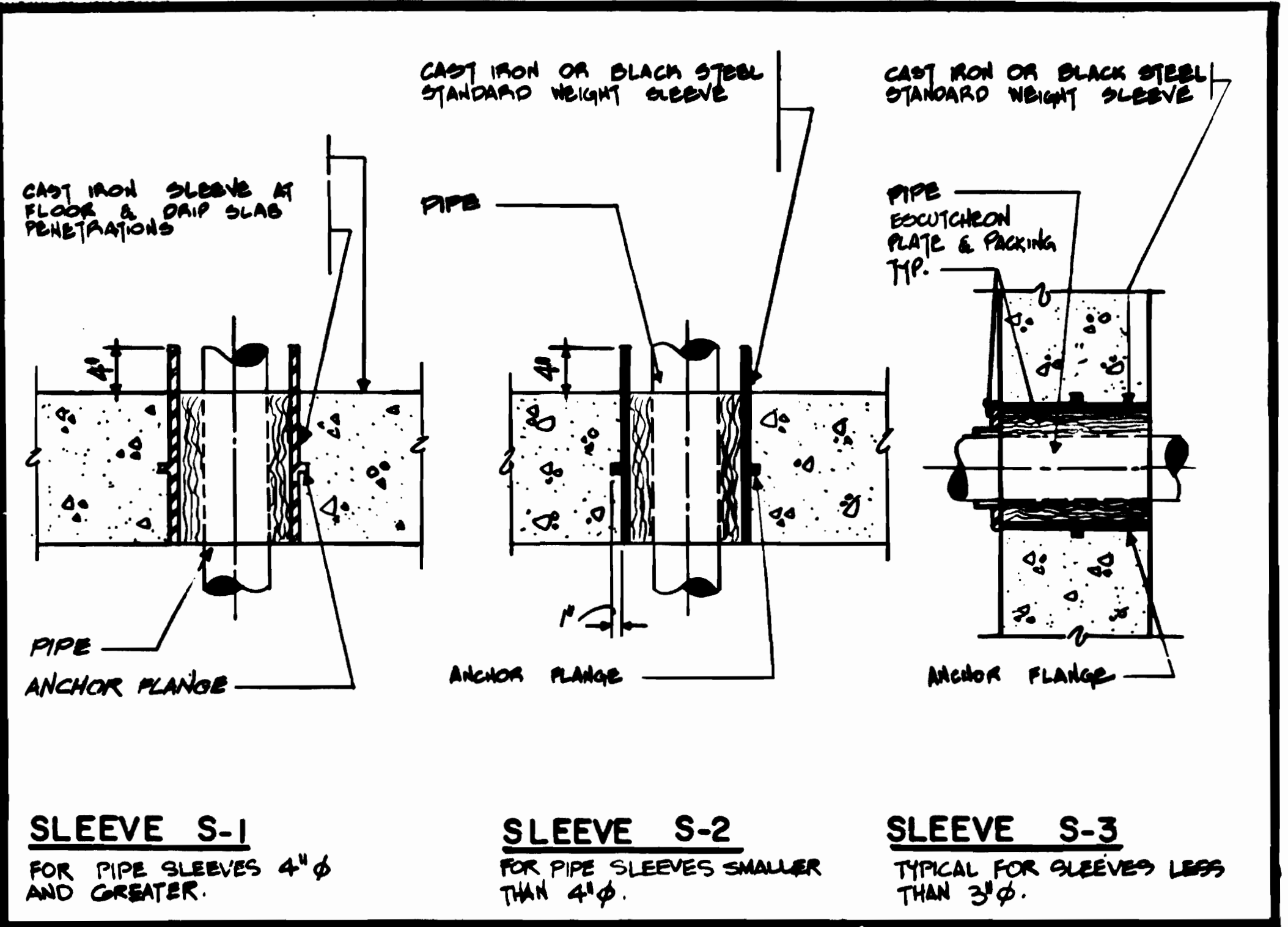
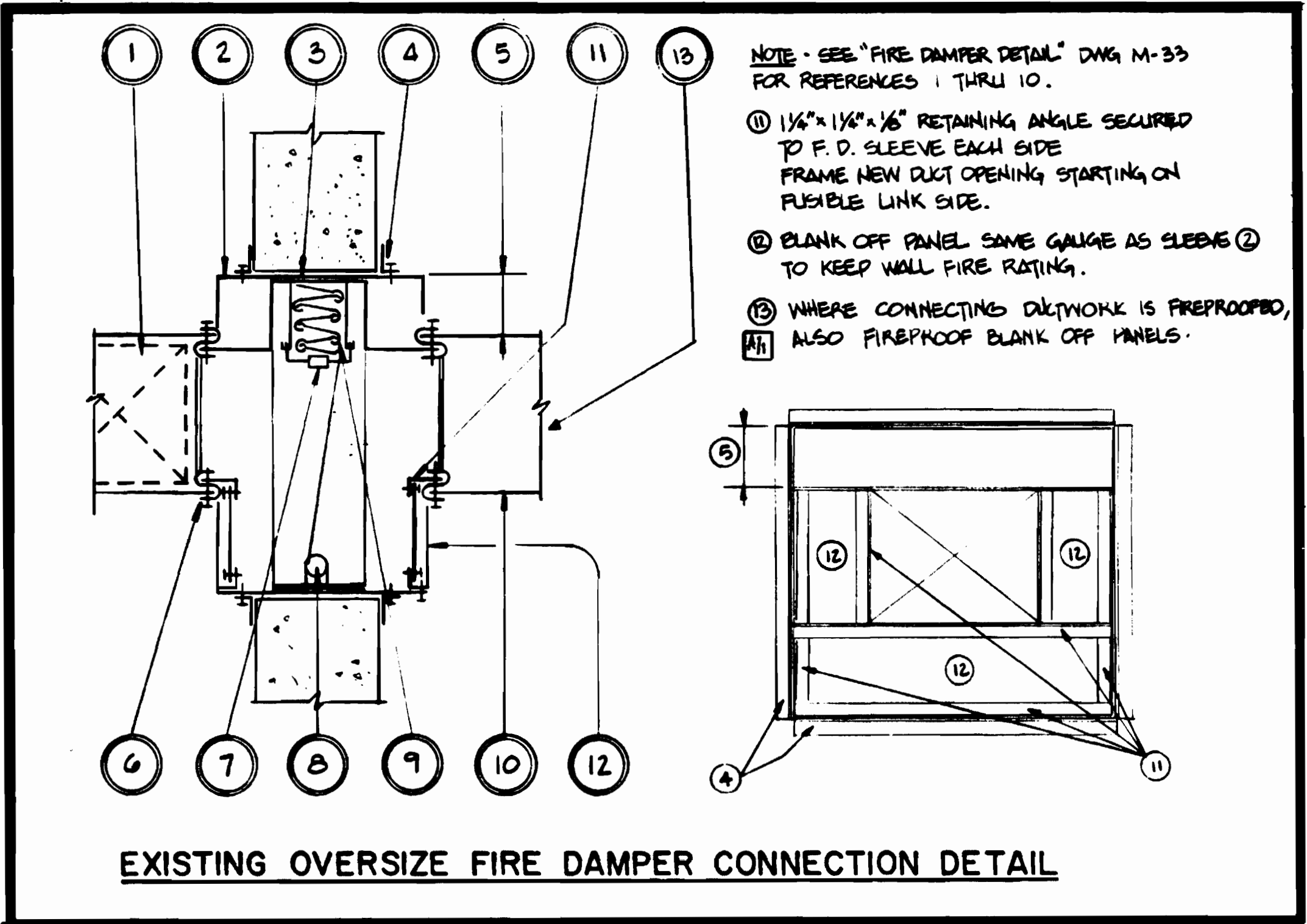
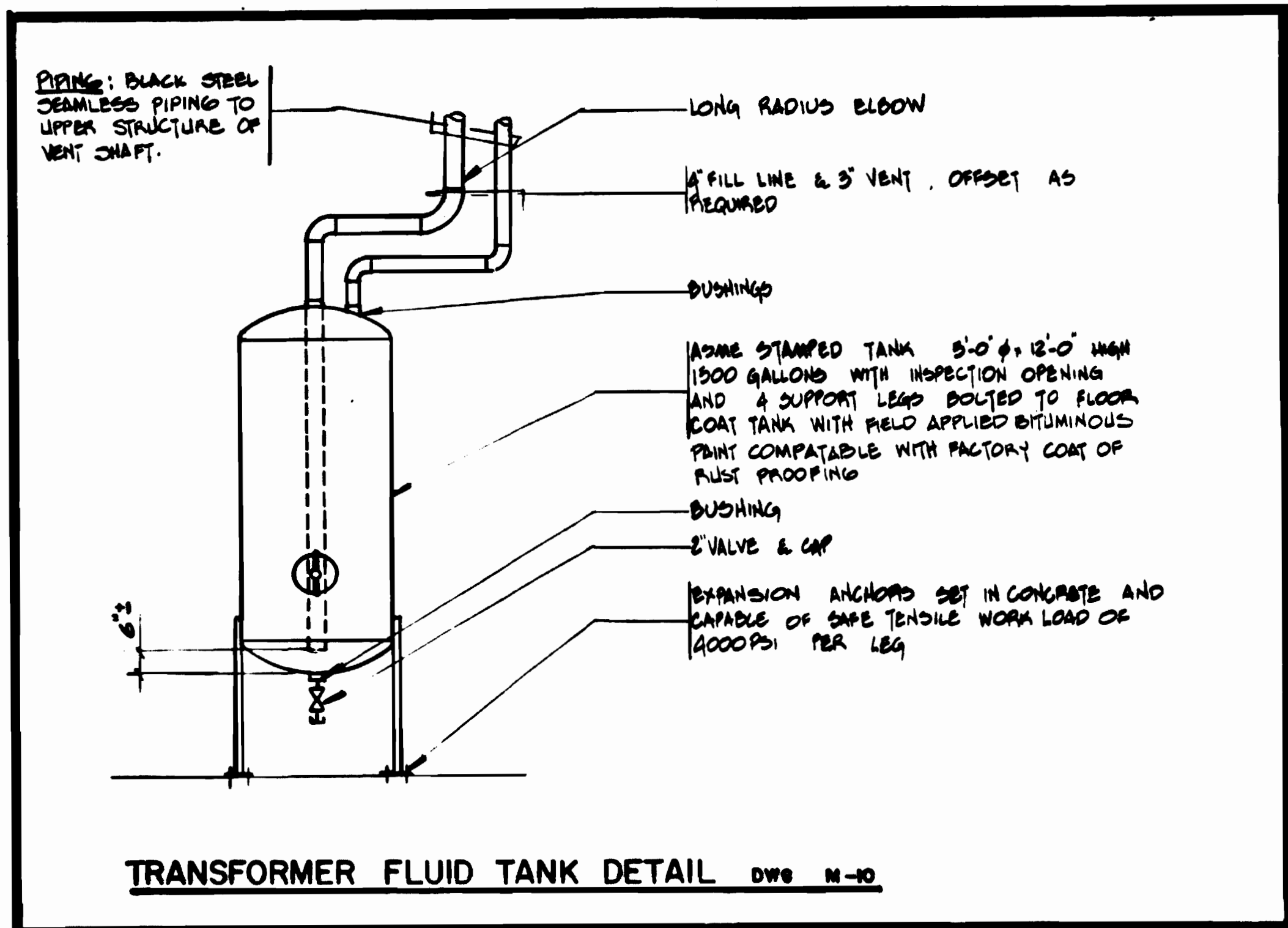
**ROCKVILLE ROUTE**

DETAILS

SCALE NONE DRAWING NO. FALL-M-134 M334-121

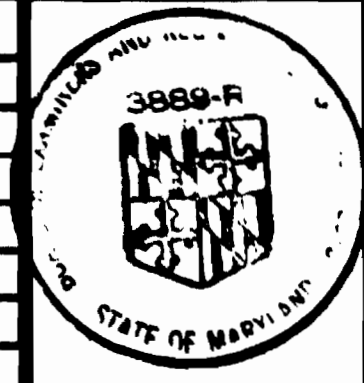
APPROVED *Michael P. ...*





WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY  
AS-BUILT CONDITION  
DATE

DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS		
		NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
D. B. FOLLAM	08/27/77	A-39	STATION VAULT OPENINGS & SECTION	9/12/80	PKM	GENERAL REVISIONS
DRAWN	D. B. FOLLAM					
CHECKED	J. R. MICHAELIS					
APPROVED	J. R. MICHAELIS					



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

MATHEWS • CHATELAIN • BEALL  
ENGINEERS AND ARCHITECTS  
SECTION DESIGNER

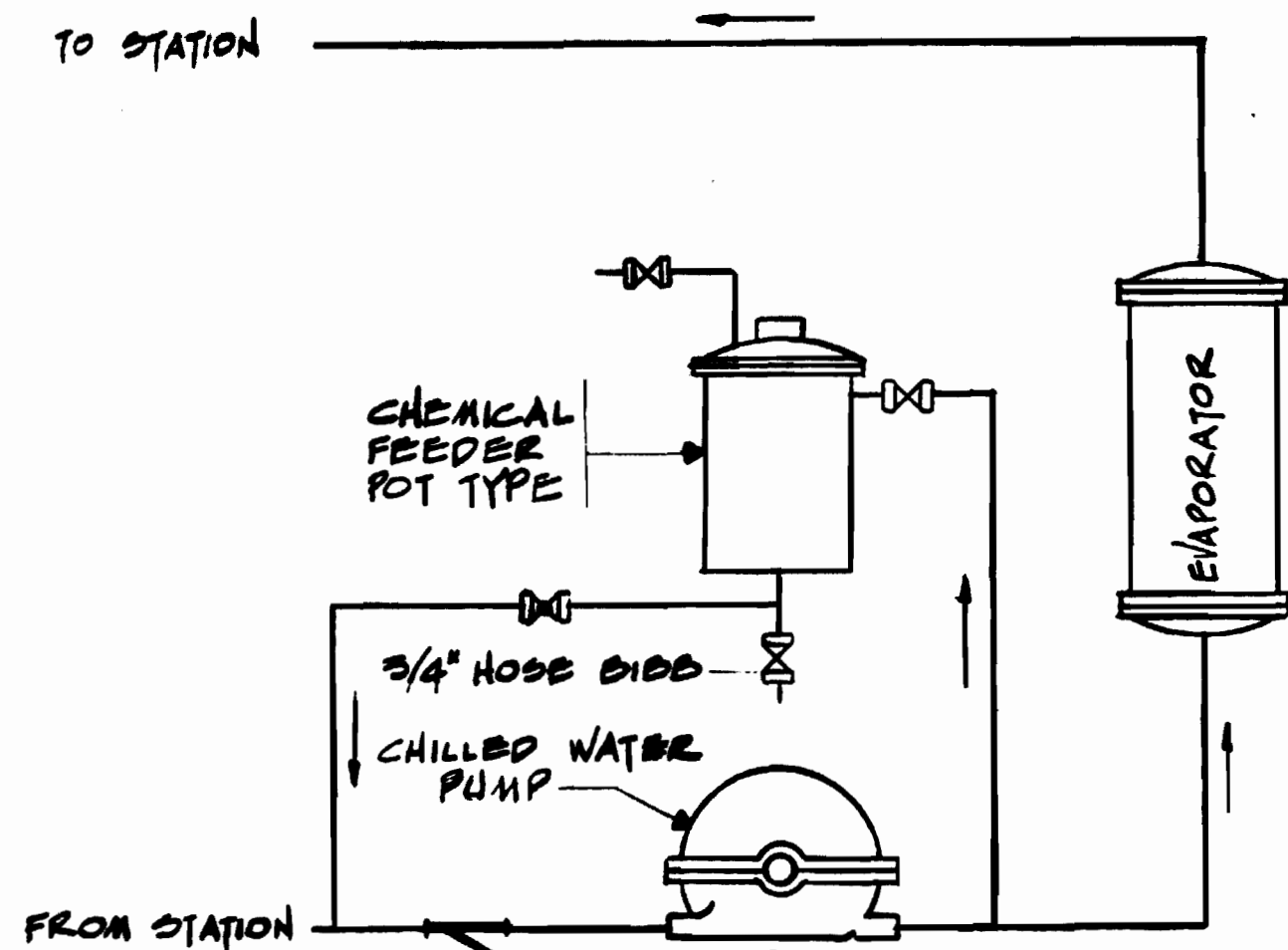
DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *George P. Jones* DATE 8-15-80 APPROVED *Carl K. ...*

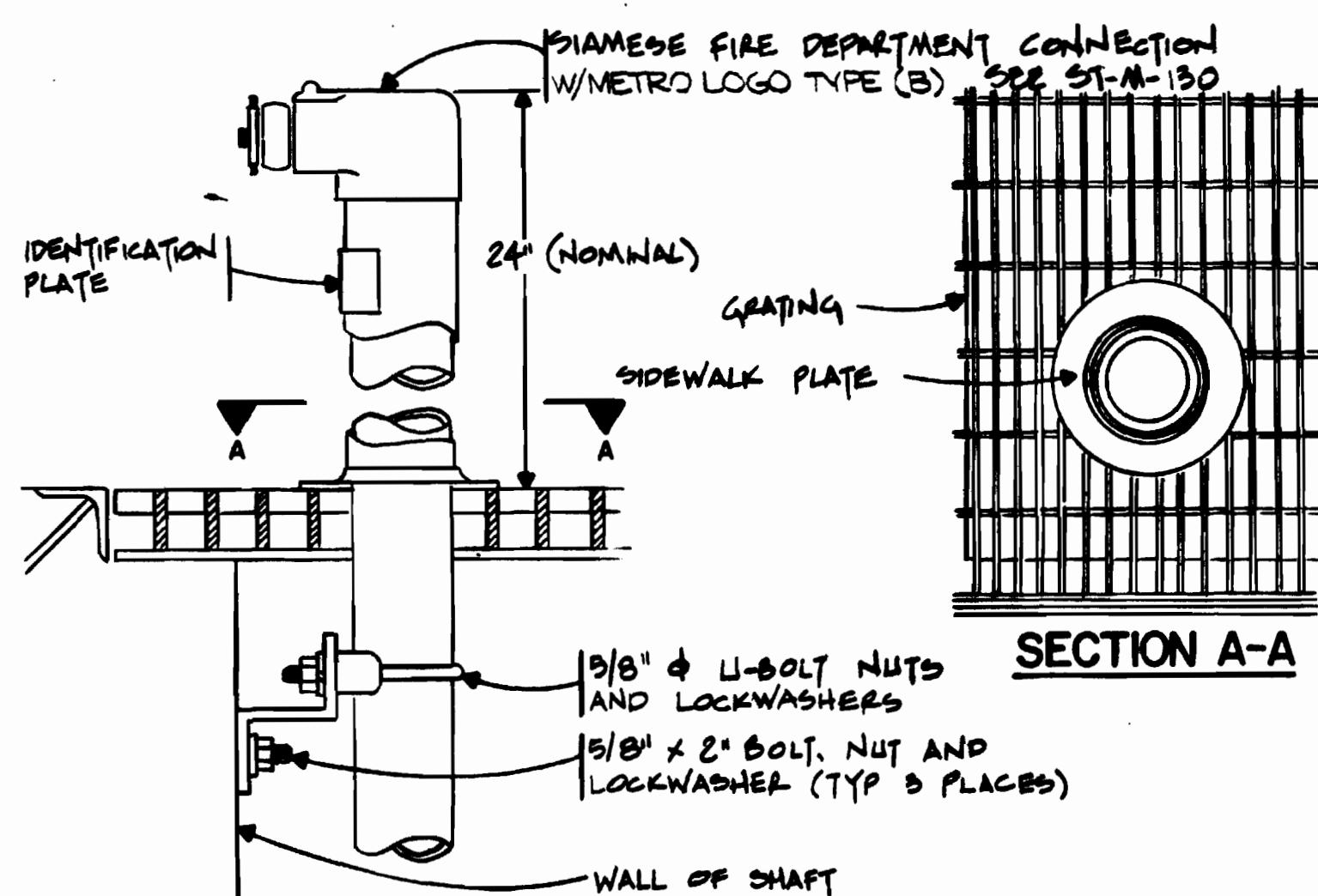
<b>ROCKVILLE ROUTE</b>		DRAWING NO. FAI-M-234	M334-122
DETAILS			
SCALE	NONE		





**CHILLED WATER TREATMENT SYSTEM**

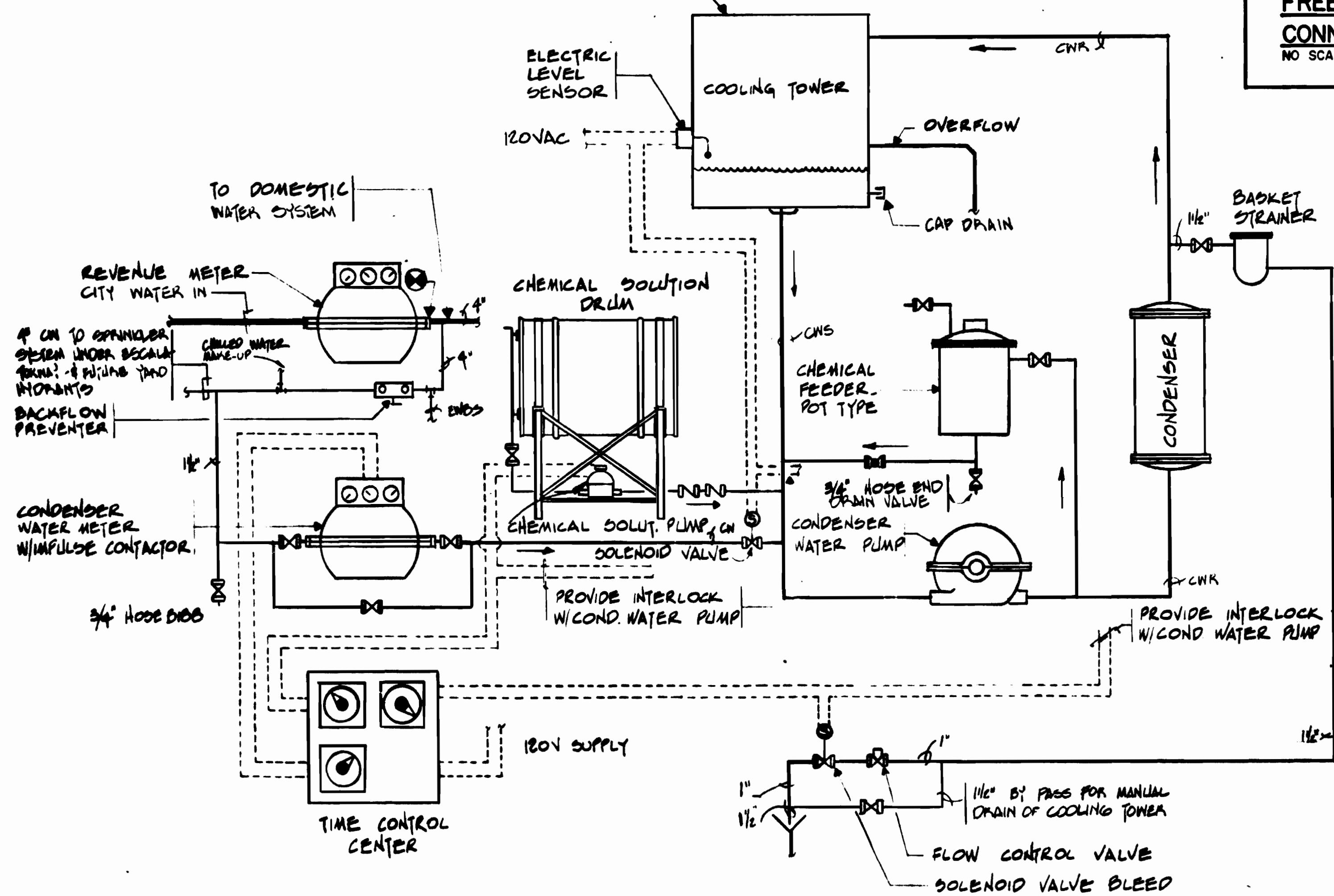
TEMPORARY LOCATION OF TOWER IS AT GRADE. SHALL OVERFLOW ON SPLASH BLOCK



NOTE: COORDINATE CUTTING OF GRATING WITH EXACT LOCATION OF FIRELINE

SERVICE	SHAFT IDENT. NO.	VERTICAL DROP	HORIZONTAL RUN
TUNNEL	VA-20	140'	1000'
TUNNEL STATION	VA-21	140'	1150'
TUNNEL	FA-13	150'	1150'

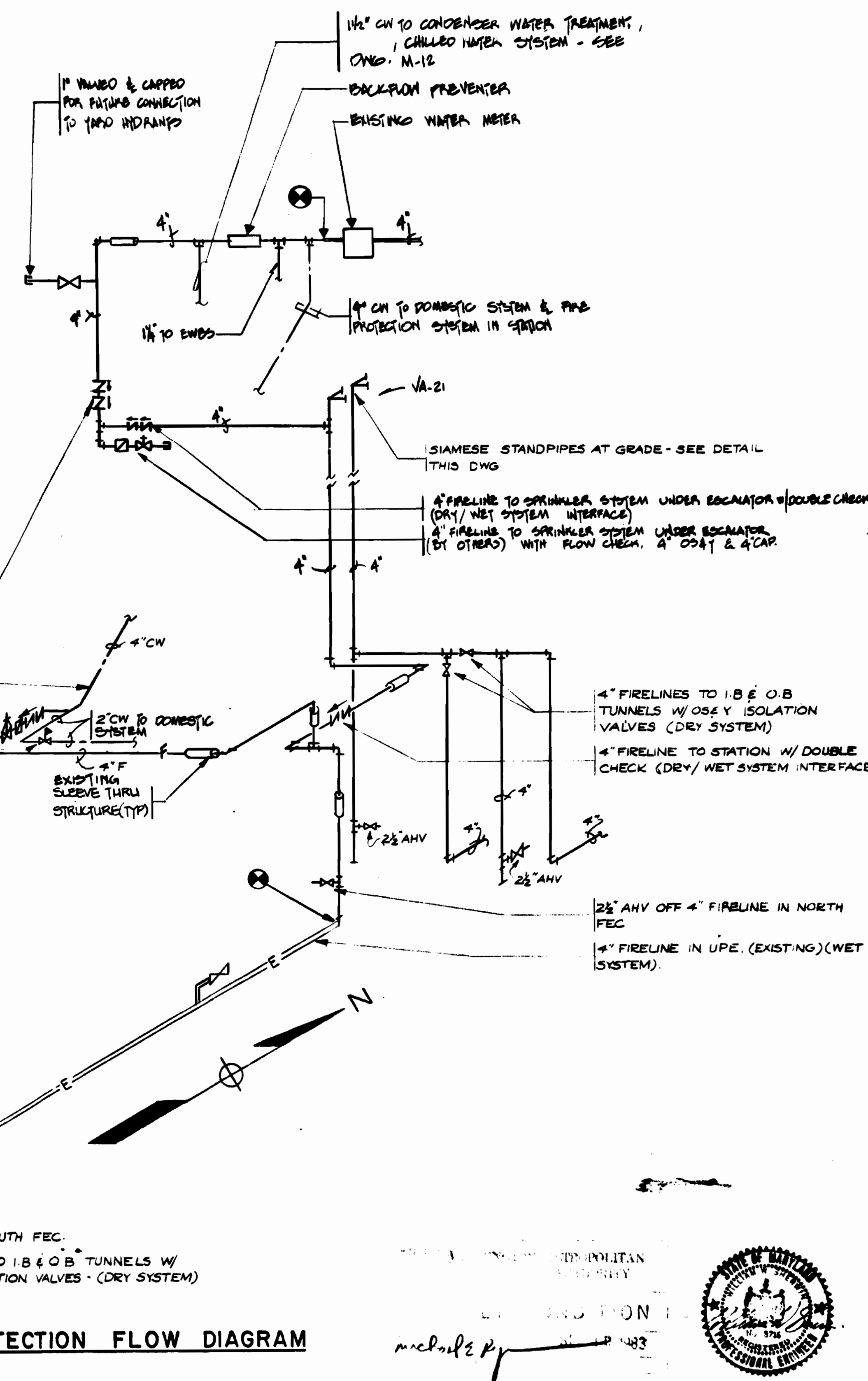
**FREE STANDING SIAMESE HOSE CONNECTION AT GRADE**  
NO SCALE



**CONDENSER WATER TREATMENT SYSTEM**

4" CW W/ DOUBLE CHECK TO SPRINKLER SYSTEM UNDER ESCALATOR

4" CW DN FROM CHILLER PLANT (WATER METER).  
4" CW W/ DOUBLE CHECK, FLOW CHECK, O.S. & Y TO 4" FIRELINE WET SYSTEM.  
PRESSURE REDUCING STATION, SEE DETAIL DWG. M-27.  
4" FIRELINE DN TO 2 1/2" AHV IN PASSAGEWAY FEC.  
SIAMESE STANDPIPE AT GRADE 4" FIRELINE DN IN ELM STREET VENT SHAFT.



**FIRE PROTECTION FLOW DIAGRAM**  
NO SCALE

DESIGNED	S.R. MICHAELIS	08/20/78	REFERENCE DRAWINGS		REVISIONS	
			NUMBER	DESCRIPTION	DATE	BY
DRAWN	D.B. FOLLAIN	08/19/78				
CHECKED	S.R. MICHAELIS	10/19/78				
APPROVED	S.R. MICHAELIS	4/15/80				



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

MATHEWS • CHATELAIN • BEALL  
ENGINEERS AND ARCHITECTS  
SECTION DESIGNER

DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *Jessie R. Press* DATE 8-15-80 APPROVED *[Signature]*

**ROCKVILLE ROUTE**

**FLOW DIAGRAMS**

SCALE: NO SCALE

DRAWING NO. FA 11-M-35

M334-123



**AIR CONDITIONING AND VENTILATION UNITS SCHEDULE**

FAN SECTION		COOLING COIL SECTION												FILTER SECTION				NOTES									
UNIT NO.	SERVICE	LOCATION	VIB. ELIM. TYPE & DEFL.	CFM		STATIC PRESS		HP	WHEEL NO. & INCH	TYPE	RPM	AIR				WATER				MOTOR HP	SIZE	TYPE	MAX. P.D. (LOADED)	MIN. EFF%			
				TOTAL	O.A.	EXT.	TOTAL					ENT. D.B.	ENT. W.B.	LVG. D.B.	LVG. W.B.	ENT. T2	G.P.M.		MAX. P.D.								
ACU #1	PLATFORM NORTH	NORTH ANCILLARY SPACE	S-60	21400	-	1.90	3.90	30	1-36.5	DNDI-AP	1160	1527	63	1.2	78	68	52	51	43	250	20	1/2	32	AF	.50"	-	1) THE NET FACE AREA OF THE FILTER SHALL BE NO LESS THAN THE MAXIMUM COOLING COIL FACE AREA AVAILABLE FOR THE UNIT.
ACU #2	PLATFORM SOUTH	SOUTH ANCILLARY SPACE	S-60	21500	-	2.0	4.20	40	1-36.5	DNDI-AP	1220	1636	63	1.35	78	68	52	51	43	265	20	1/2	32	AF	.50"	-	2) ONE FILTER UNIT OF THE NET AREA INDICATED SHALL SERVE BOTH UNITS.
ACU #3	MEZZANINE	PASSAGEWAY	SRIS	11100	11100	1.0	3.5	15	2-15.0	DNDI-PC	1180	1036	20	1.75	75	75	52	51	43	165	20	1/2	32	AF	.50"	-	3) A.F. = AUTOMATIC FILTER; T.A. = THROWAWAY FILTER
ACU #4	COMMUN. & TRAIN CONT.	SOUTH ANCILLARY SPACE	SRIS	3100	210	0.5	2.00	2	1-10.5	DNDI-PC	1165	91	5.0	1.0	79	64	57	56	48"	55T - RBF 22	-	9-10" x 25" x 2"	TA	.25"	-	4) EXTERNAL STATIC PRESSURE DOES NOT INCLUDE FILTER PRESSURE DROP.	
VU #1	AC SWITCHBOARD - N	NORTH ANCILLARY SPACE	CS-DNS	18000	-	1.5	2.00	15	2-10.5	DNDI-PC	875	-	-	-	-	-	-	-	-	-	-	-	1/2	AF	.50"	-	5) WATER COOLING COIL CAPACITY WITH 15% BY VOLUME ETHYLENE GLYCOL SOLUTION.
VU #2	AC SWITCHBOARD - N	NORTH ANCILLARY SPACE	CS-DNS	18000	-	1.5	2.00	16	2-10.5	DNDI-PC	875	-	-	-	-	-	-	-	-	-	-	-	1/2	AF	.50"	-	
VU #3	AC SWITCHBOARD - S	SOUTH ANCILLARY SPACE	CS-DNS	18000	-	1.5	2.00	16	2-10.5	DNDI-PC	875	-	-	-	-	-	-	-	-	-	-	-	1/2	AF	.50"	-	
VU #4	AC SWITCHBOARD - S	SOUTH ANCILLARY SPACE	CS-DNS	18000	-	1.5	2.00	15	2-10.5	DNDI-PC	875	-	-	-	-	-	-	-	-	-	-	-	1/2	AF	.50"	-	
VU #5	SUBSTATION	CHILLER PLANT	CS-DNS	25000	-	0.5	1.00	10	1-33.0	DNDI-BI	750	-	-	-	-	-	-	-	-	-	-	-	1/2	AF	.50"	-	
VU #6	SUBSTATION	CHILLER PLANT	CS-DNS	25000	-	0.5	1.00	10	1-33.0	DNDI-BI	750	-	-	-	-	-	-	-	-	-	-	-	1/2	AF	.50"	-	

VIBRATION ISOLATORS  
 S = SPRINGS AT STATIC DEFLECTION SHOWN  
 SRIS = SINGLE RUBBER IN SHEAR  
 DNS = DOUBLE RUBBER IN SHEAR  
 CS = CEILING SUSPENDED  
 NOTE: RUBBER IN SHEAR UNITS SHALL HAVE DEFLECTION SPECIFIED.

**CONDENSING UNIT SCHEDULE**

NO. 1 - REFRIGERANT EFFECT TO MATCH COOLING COIL MDH INDICATED. ACU #4 AT 105.0°F DB AMBIENT AIR WITH MAXIMUM CONDENSING TEMPERATURE OF 130°F SATURATED SUCTION TEMPERATURE 45.0°F REFRIGERANT 22. COMPRESSOR 1 @ 19 FLA, 90.0 LRA, CONDENSER FANS 2 @ 1.2 FLA, EA. UNIT SUITABLE FOR 400V, 3Φ 60 HZ OPERATION. MINIMUM OPERATING TEMPERATURE 30° AMBIENT. REFRIGERANT PIPING TO COIL SIZED BY MANUFACTURER.

UNIT NO.	SERVICE	SIZE	TYPE	GPM	HEAD	HP	RPM	MIN EFF%
1	CHILLED WATER	-	-	680	42' 110'	40	1750	84
2	CONDENSER WATER	-	-	1050	75'	25	1750	84

**PUMP SCHEDULE**

UNIT NO.	SERVICE	SIZE		TYPE	GPM	HEAD	HP	RPM	MIN EFF%
		SUCTION	DISCHARGE						
1	CHILLED WATER	-	-	-	680	42' 110'	40	1750	84
2	CONDENSER WATER	-	-	-	1050	75'	25	1750	84

**FAN SCHEDULE**

UNIT NO.	SERVICE	LOCATION	VIB. ELIM. TYPE & DEFL.	TYPE	CFM	TOTAL STATIC PRESS	WHEEL #	HP	RPM
1 & 2	FRESH AIR/EXHAUST (LIFE)	NORTH & SOUTH	CS-DNS	VANE	50 000	1.20 H2O	100-26	15	873
3 & 4	ODOR RELIEF	NORTH & SOUTH	CS-DNS	VANE	25 000	0.60 H2O	45-21	5	873/435
5	ELEVATOR MACHINE RM.	NORTH ANCILLARY	SRIS	CENTR.	3 000	1.50	18-25	1 1/2	1224
6	MAINTENANCE RM.	NORTH ANCILLARY	SRIS	CENTR. FC	600	0.25	7-20	1/2	1290
7	MECHANICAL EQUIPMENT RM.	NORTH ANCILLARY	SRIS	CENTR. FC	1505	0.50	15	1/2	1155
8	MECHANICAL EQUIPMENT RM.	SOUTH ANCILLARY	SRIS	CENTR. FC	1575	0.25	15	1/2	1055
9	CLERK'S ROOM - NORTH	NORTH ANCILLARY	-	PROP.	865	0.125	12	1/2	1550
10	CLERK'S ROOM - SOUTH	SOUTH ANCILLARY	-	PROP.	495	0.10	12	1/2	1050
11	CLERK'S ROOM - SOUTH	SOUTH ANCILLARY	-	PROP.	865	0.125	12	1/2	1550
12	MECHANICAL EQUIPMENT RM.	PASSAGEWAY	SRIS	CENTR. FC	1800	0.50	15	1/2	1129
13	TOILETS	PASSAGEWAY	SRIS	CENTR. FC	1450	2.00	12-25	1	2170
14	ELEVATOR MACHINE RM.	PASSAGEWAY	SRIS	CENTR. FC	1500	2.00	12-25	1	2200
16 & 16	CHILLER PLANT	SUBSTATION	CS-SRIS	TUBER.	15 500	0.025	18	1	1735
17-22	TUNNEL VENTILATION	W.VIRGINIA SHFT	3-10"	VANE	50 000	1.90 H2O	100-26	15	873

**ELECTRIC HEATING COIL SCHEDULE**

UNIT NO.	LOCATION	CFM	DIM. INCHES	KW	STEPS CONTR.	MAX. ENT.	AIR FLOW	MAX. P.D.	VOLTS	PHASE
1	ACU #4 SOUTH ANCILLARY	300	14x6	7.5	2	-	HORIZ.	0.1	400	3Φ

**SOUND ATTENUATOR SCHEDULE**

UNIT NO.	SERVICE	CFM	MAX. P.D.	APPROX DIMENSION			OCTAVE BAND ATTENUATION (in dB)							
				W	H	L	1	2	3	4	5	6	7	8
5A	TUNNEL HEAT FANS	50 000	.37	72"	72"	60"	-	8	13	25	28	23	14	11

NOTES: 1. WHEEL # INDICATION FOR VANE AXIAL FANS IS: WHEEL # - HUB SIZE.  
 2. FANS 1, 2, 3, 4, 17, 18, 19, 20, 21, 22 ARE REVERSIBLE; THE PRIMARY MODE OF OPERATION IS BLAST AT ABOVE INDICATED CAPACITY.  
 3. FAN 5 AND 4 ARE TWO SPEED FANS.  
 4. DENOTES TOTAL PRESSURE IN LIEU OF TOTAL STATIC PRESSURE.  
 5. SEE ACU & VU SCHEDULE FOR VIBRATION ISOLATION LEGEND.

**ELECTRIC WALL CONVECTORS SCHEDULE**

UNIT NO.	LOCATION	DIMENSION			CAPACITY		HEATER		REMARKS
		L	D	H	MBH	WATTS	VOLTS	PHASE	
1		-	-	-	-	-	-	-	NOT USED
2	CLERK'S ROOM - SOUTH	48"	6"	24"	13.7	4 KW	277	1	SEMI RECESSED
3	MEN'S WASHROOM - PASSAGE	48"	6"	24"	13.7	4 KW	277	1	SEMI RECESSED
4		-	-	-	-	-	-	-	NOT USED
5	WOMEN'S WASHROOM - PASSAGE	48"	6"	24"	10.2	3 KW	277	1	SEMI RECESSED

**ELECTRIC UNIT HEATERS SCHEDULE**

UNIT NO.	SERVICE	DISCH.	KW	FAN H.P.	CFM	ELECTRICAL		REMARKS
						VOLTS	PHASE	
1	MECHANICAL RM NORTH	HORIZ.	7.5	1/30	650	400	3	
2	MECHANICAL RM NORTH	HORIZ.	7.5	1/30	650	400	3	
3	MECHANICAL RM SOUTH	HORIZ.	10.0	1/30	650	400	3	
4	MECHANICAL RM SOUTH	HORIZ.	10.0	1/30	650	400	3	
5	CLERK'S ROOM - PASSAGE	HORIZ.	7.5	1/30	650	400	3	
6		-	-	-	-	-	-	NOT USED
7	CHILLER PLANT	HORIZ.	5.0	1/100	350	400	3	
8	CHILLER PLANT	HORIZ.	5.0	1/100	350	400	3	
9 & 10	MECHANICAL RM PASSAGE	HORIZ.	10.0	1/30	350	400	3	
11	TRAIN CONTROL	HORIZ.	3.0	1/100	350	277	1	
12	COMMUNICATIONS	HORIZ.	3.0	1/100	350	400	3	

**REFRIGERATION EQUIPMENT SCHEDULE**

CHILLER  
 TO COOL 680 GPM FROM 55°F TO 42°F WITH 1050 GPM OF 85°F CONDENSER WATER LEAVING AT 95°F. WATER COOLER TWO PASS 15' H2O MAX. PRESSURE DROP, 0.0005 FOULING FACTOR, CONDENSER TWO PASS 25' H2O MAX. PRESSURE DROP, 0.001 FOULING FACTOR. MAXIMUM COMPRESSOR KW 321, FLA 442, LRA 2780, AT 400V, 3Φ, 60 HZ OPERATION. ABOVE CAPACITY SHALL BE BASED ON 15% BY VOLUME ETHYLENE GLYCOL SOLUTION.

COOLING TOWER  
 TO COOL 1050 GPM FROM 95°F TO 85°F AT 95°F DB/78°F WB AMBIENT CONDITIONS WITH 1-40 HP MOTOR. MAXIMUM WATER PRESSURE DROP INCLUDING STATIC LIFT = 22.0' H2O.

**ELECTRICAL SERVICE NOTES**

MOTORS UP TO BUT EXCLUDING 1/2 HP SHALL BE SUITABLE FOR 120V, 1Φ 60 HZ POWER UNLESS OTHERWISE INDICATED. MOTORS 1/2 HP AND ABOVE SHALL BE SUITABLE FOR 400V, 3Φ 60 HZ POWER UNLESS OTHERWISE INDICATED.

DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS	
		NUMBER	DESCRIPTION	DATE	DESCRIPTION
D.B. FOLLAIN	09/18/78			9/12/80	PKM
D.B. FOLLAIN	09/18/78			7/6/80	JTN
S.R. MICHAELIS	10/19/78				
S.R. MICHAELIS	4/18/80				

**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

MATHEWS • CHATELAIN • BEALL  
 ENGINEERS AND ARCHITECTS  
 SECTION DESIGNER

DE LEUW, CATHER & COMPANY  
 GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
 GENERAL ARCHITECTURAL CONSULTANT

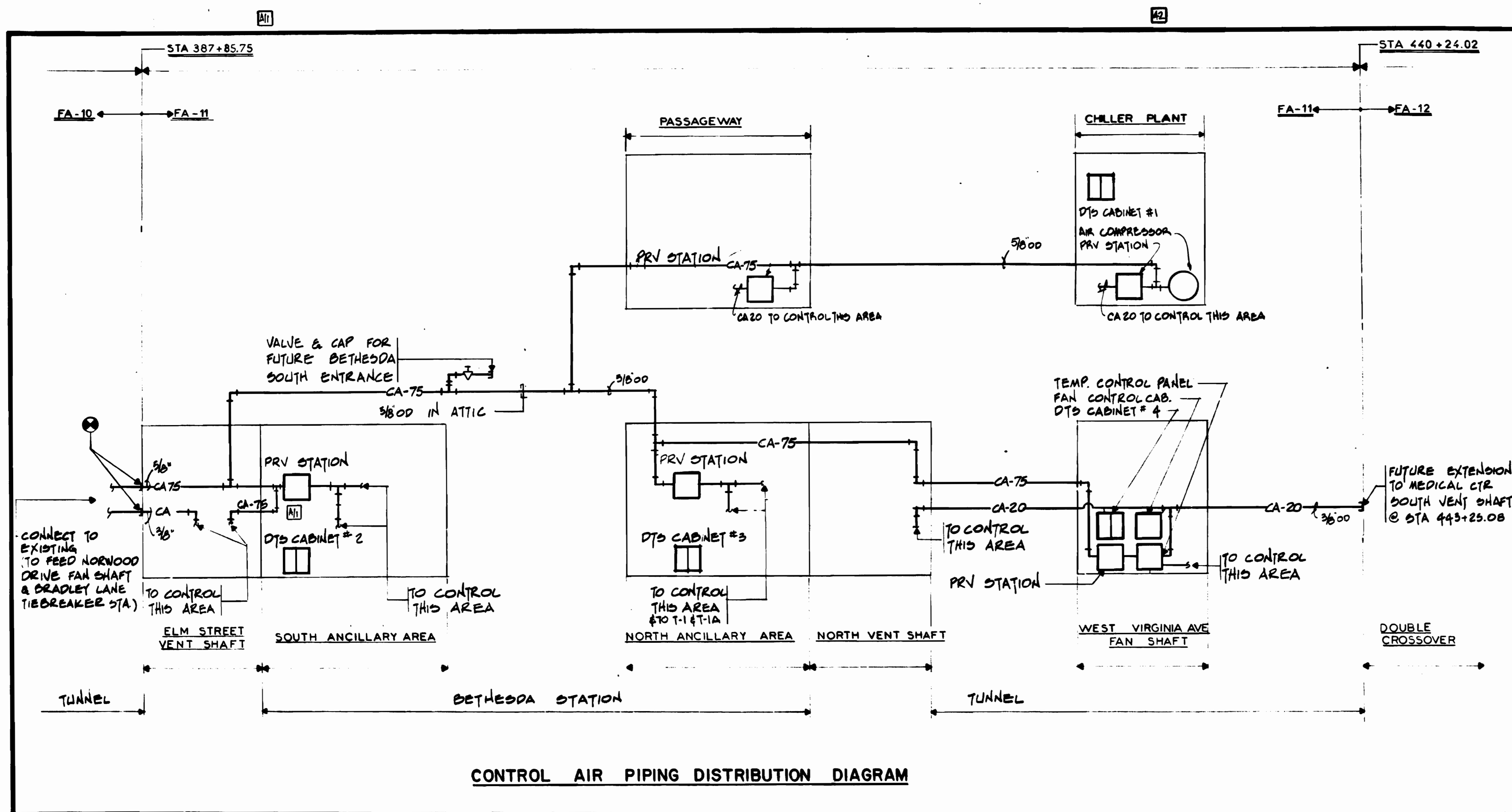
SUBMITTED *Wesley R. Gross* DATE 8-15-80 APPROVED *Paul J. ...*

**ROCKVILLE ROUTE EQUIPMENT SCHEDULE**

SCALE NONE DRAWING NO. FA II-M-36

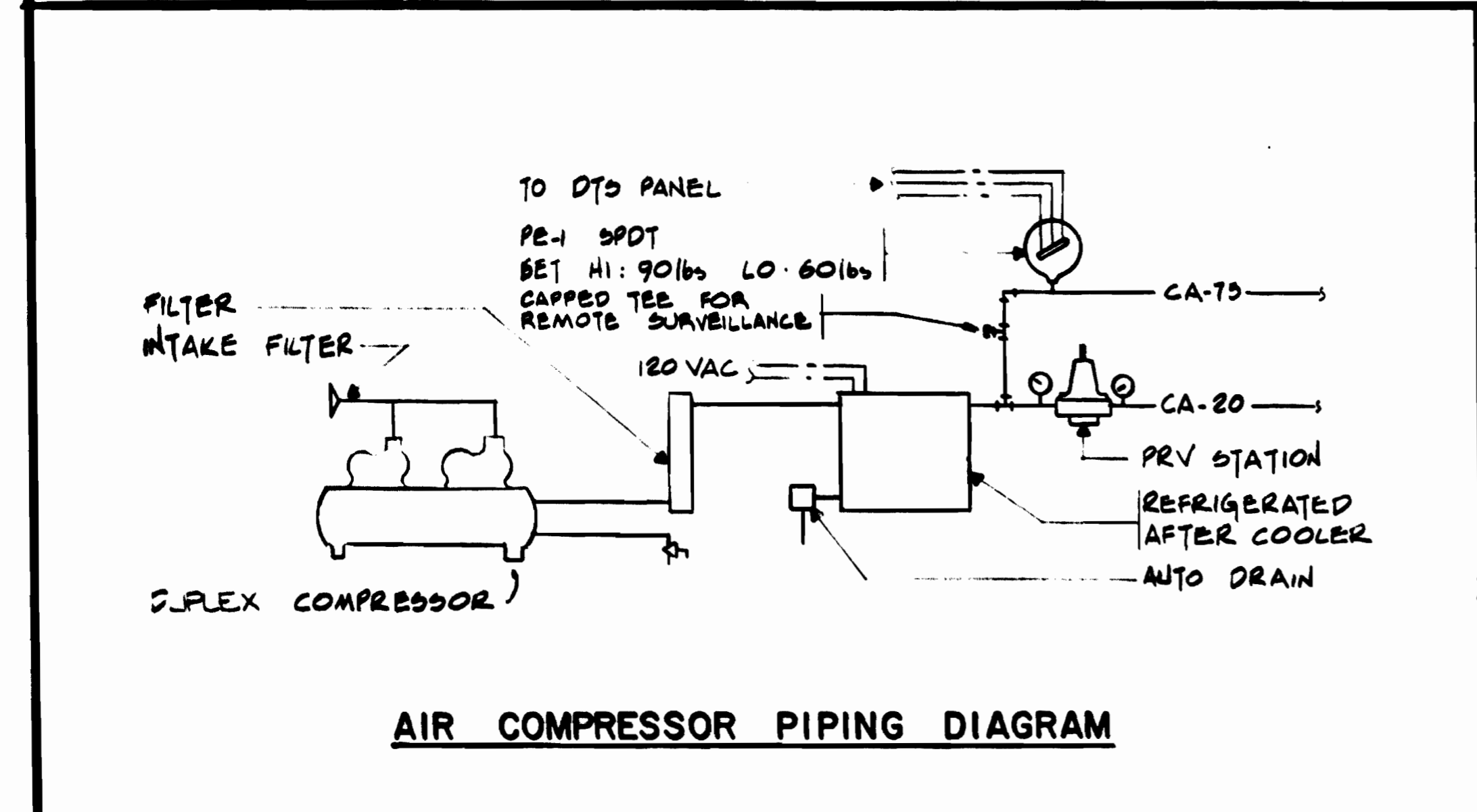
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### ABBREVIATIONS & SYMBOLS

MAIN CONTROL AIR	MA
CONTROL AIR	CA
CONTROL VALVE	V
AIR VALVE	AV
SIGNAL DIVIDER	SD
LOW PRESSURE SELECTOR	LPS
SOLENOID VALVE	SOL
HAND-OFF-AUTOMATIC	H-O-A
ELECTRIC-PNEUMATIC SWITCH	EP
PNEUMATIC-ELECTRIC SWITCH	P-E
FLOW SWITCH	Fo
MAKE	M
BRAKE	B
NORMALLY OPEN	NO
NORMALLY CLOSED	NC
LOW LIMIT	LL
AUXILIARY	AUX
LOAD SIDE FAN STARTER	LSPS
REMOTE SURVEILLANCE & CONTROL	RS&C
DATA TRANSMISSION SYSTEM	DTS
INDICATION FUNCTION RS&C	(I)
CONTROL FUNCTION RS&C	(C)
CIRCUIT RS&C	CKT
ANALOG TO DIGITAL CONVERTER	A/D
PRESSURE SWITCH RS&C	PR
PRESSURE DIFFERENTIAL SWITCH	PD
END SWITCH RS&C	ES
RELAY COIL RS&C	RC
RELAY CONTACTS RS&C	RC
FLOW METER RS&C	FM
THERMOMETER RS&C	TR

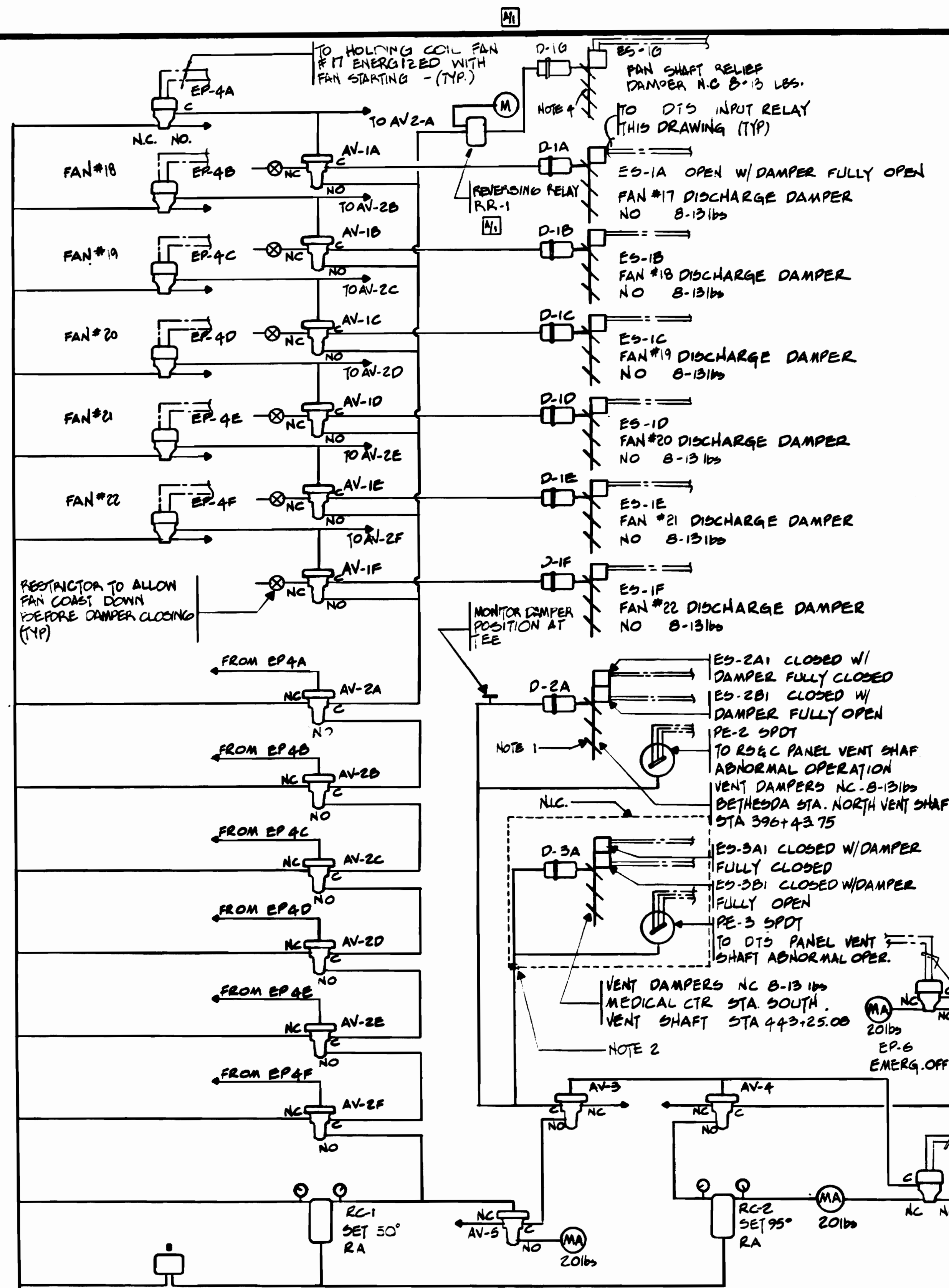


### NOTES

- TEMPERATURE CONTROL COMPRESSED AIR TUBING SIZES SHOWN ARE NOMINAL SIZES ONLY SHOWN FOR GUIDANCE. THE CONTRACTOR SHALL PROVIDE THE TUBING SIZES REQUIRED FOR THE CONTROL DEVICES ACTUALLY PROVIDED. PIPE SIZES FOR THE C.A. LINES ARE O.D. MAIN AIR PRESSURE INDICATED AS 75 PSI. SHALL BE ADJUSTED IN FIELD BETWEEN 75 AND 85 PSI AS DIRECTED BY ENGINEER.
- THE PNEUMATIC TEMPERATURE CONTROL ALARM, AND WIRING DIAGRAMS INDICATED HERE-IN ARE FOR THE CONTRACTOR'S GUIDANCE AND SHALL BE USED IN CONJUNCTION WITH THE WRITTEN SEQUENCE OF OPERATION.
- ELECTRIC UNIT HEATERS ARE CONTROLLED BY A REMOTE MOUNTED THERMOSTAT PROVIDED BY UNIT HEATER MANUFACTURER. THE CONTRACTOR SHALL MOUNT THERMOSTAT AND PROVIDE ALL CONTROL WIRING BETWEEN THE THERMOSTATS AND THEIR RESPECTIVE HEATERS.
- ALL THERMOSTATS SHALL BE MOUNTED AT 5'-0" FROM FINISH FLOOR UNLESS OTHERWISE SHOWN.
- ELECTRICAL SERVICE TO AUTOMATIC FILTERS SHALL BE PROVIDED FROM THE LOAD SIDE OF THE ASSOCIATED FAN STARTER TO ALLOW FILTER OPERATION ONLY WHEN THE FAN IS OPERATING. WHERE ALTERNATORS FOR THE VENTILATION UNITS ARE PROVIDED, EITHER FAN OPERATION SHALL ENERGIZE THE FILTERS.
- ALL AUTOMATIC DAMPERS ARE THE SAME SIZE AS DUCTWORK THEY ARE INSTALLED IN.

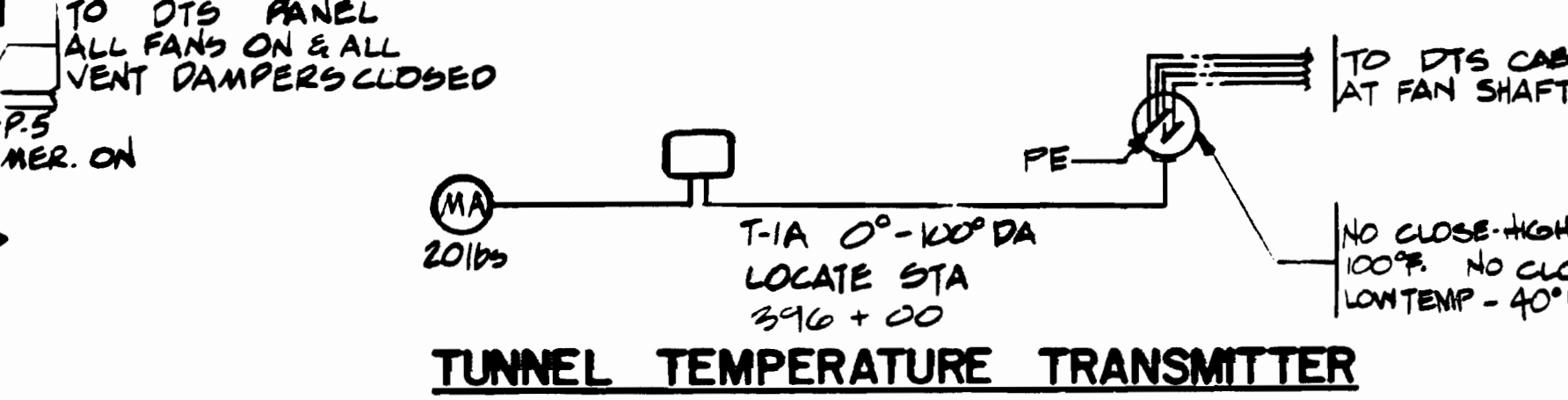
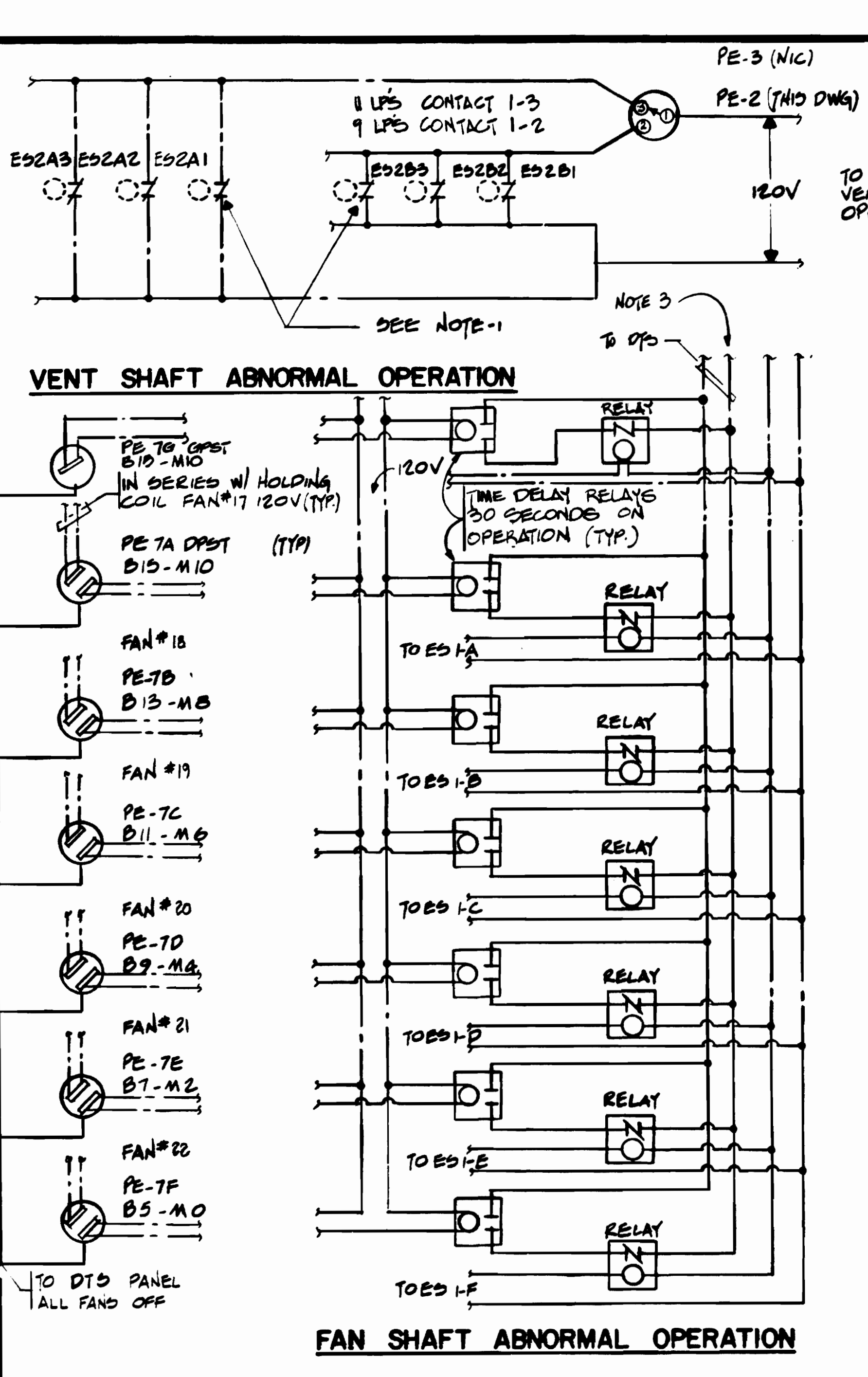
DESIGNED <b>S.R. MICHAELIS</b> 08/17/78 DATE	REFERENCE DRAWINGS	REVISIONS	<b>WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY</b> MATHEWS • CHATELAIN • BEALL ENGINEERS AND ARCHITECTS SECTION DESIGNER		DE LEUW, CATHER & COMPANY GENERAL ENGINEERING CONSULTANT HARRY WEESE & ASSOCIATES GENERAL ARCHITECTURAL CONSULTANT	<b>ROCKVILLE ROUTE</b> REMOTE SURVEILLANCE AND CONTROL - AUTOMATIC TEMPERATURE CONTROL	
DRAWN <b>D.B. FOLLAIN</b> 08/18/78 DATE	NUMBER	DESCRIPTION				DATE	BY
CHECKED <b>S.R. MICHAELIS</b> 12/19/78 DATE			9/15/80	PKH	CONTROL AIR DIAGRAM	NONE	FA 11-M-37
APPROVED <b>S.R. MICHAELIS</b> 4/18/80 DATE							M334-125





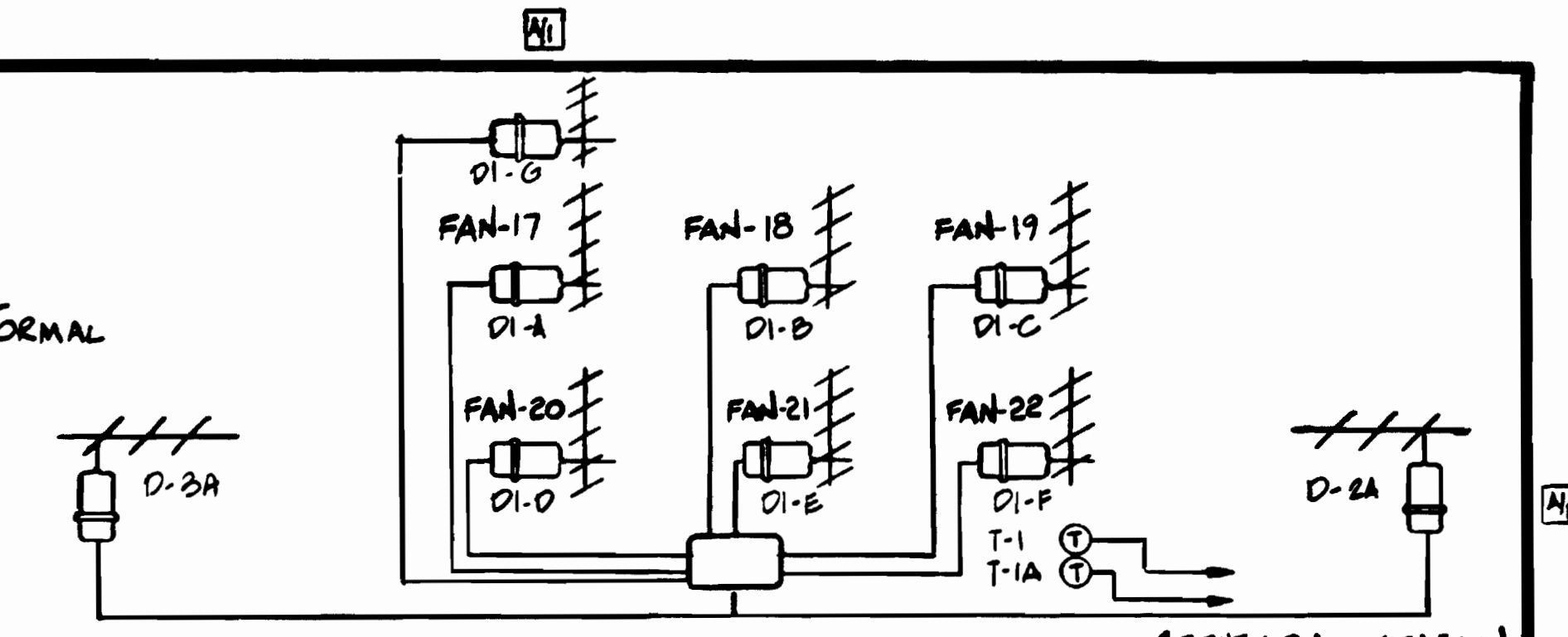
CONTROL DIAGRAM

TUNNEL VENTILATION



**NOTES:**

- 1-THE NUMBER OF DAMPER OUTFITS INCLUDING DAMPER MOTOR END SWITCHES SHALL BE AS DETERMINED BY CONTRACTOR SEE DWG M-10 FOR VENT SHAFT DAMPER SIZE & CONFIGURATION
- 2- EXTEND CONTROL TUBING TO END OF CONTRACT LINE AND CAP. SEE DWG M-3 & M-8
- 3- SEE DWG M-44 FOR CONTINUATION OF WIRING REQUIREMENTS TO DTS PANEL
- 4- THE NUMBER OF DAMPER OUTFITS INCLUDING DAMPER MOTOR END SWITCHES SHALL BE AS DETERMINED BY CONTRACTOR. SEE DWG M-9 FOR FAN SHAFT RELIEF DAMPER SIZE & CONFIGURATION.



FLOW DIAGRAM

TUNNEL TEMPERATURE IS TRANSMITTED TO RECEIVER CONTROLLER RC-1 AND RC-2 BY TUNNEL TRANSMITTER T-1. WHEN THE TUNNEL TEMPERATURE RISES ABOVE THE SETTING OF RC-1 FAN DISCHARGE DAMPERS D-1A THRU D-1F, VENT SHAFT DAMPERS D-2A (AND D-3A NIC) ARE OPENED. IF THE TEMPERATURE RISES ABOVE THE SETTING OF RC-2 IT SHALL START IN SEQUENCE FANS 17, 18, 19, 20, 21, 22 THRU EACH FANS RESPECTIVE PE SWITCH, PE-7A THRU PE-7F, WHEN A FAN IS STARTED ITS RESPECTIVE EP SWITCH EP-4A THRU 4F SHALL ALLOW THE PASSAGE OF MAIN AIR TO ITS RESPECTIVE AIR VALVE AV-2A THRU 2F ALLOWING ITS FAN DISCHARGE DAMPER TO REMAIN OPEN WHILE CLOSING THE REMAINING FAN DISCHARGE DAMPERS OF THE DE-ENERGIZED FANS WITH AV-2A THRU 2F. AS EACH ADDITIONAL FAN IS STARTED THE ABOVE SEQUENCE IS REPEATED THRU EACH FANS RESPECTIVE EP AND AV'S. T-1A SHALL PROVIDE TUNNEL HI & LO TEMPERATURES THRU PNEUMATIC ELECTRIC SWITCH AND DTS AT THE CENTRAL CONTROL PANEL.

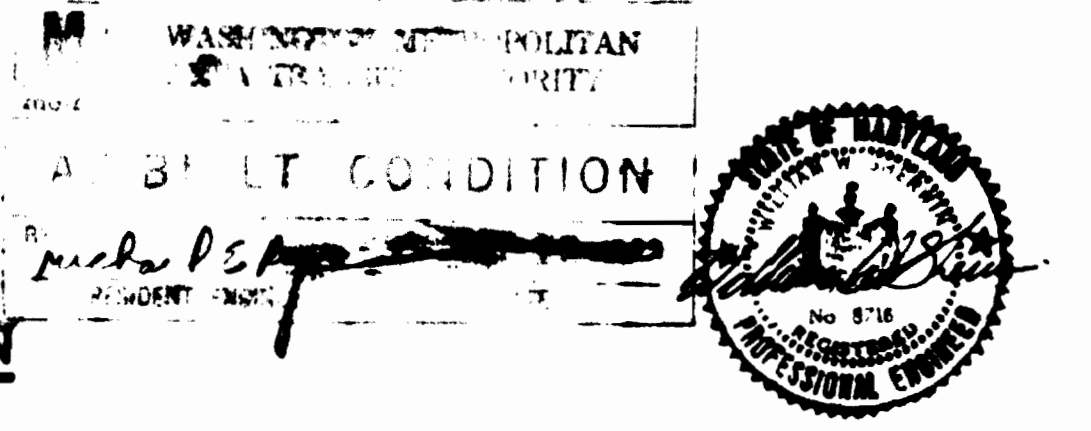
ON EACH FAN SHAFT A SECOND CONTACT IN PE-7 IS PROVIDED FOR REMOTE SURVEILLANCE. EACH CONTACT IN PE-7A THRU PE-7F SHALL ACT THRU A TIME DELAY RELAY TO PERMIT THE FAN DISCHARGE DAMPERS TO OPEN AND TRIP THEIR RESPECTIVE END SWITCH ES-1A THRU ES-1F. IF THE DAMPERS DO NOT OPEN AN ALARM SHALL REGISTER AT THE CENTRAL CONTROL PANEL THRU THE TIME DELAY RELAY AND END SWITCH CONTACTS. ON A FALL IN TUNNEL TEMPERATURE, ALL OF THE ABOVE SEQUENCES SHALL BE REVERSED. PE-2 SHALL BE INDEXED BY CONTROL AIR TO EITHER VENT SHAFT DAMPERS FULLY OPEN OR FULLY CLOSED POSITION. ES-2A1, IN SERIES WITH PE-2 SHALL OPEN ITS CONTACT WHEN THE DAMPER FULLY OPENS, OPENING THE ALARM CIRCUIT THRU THE PE AND ES. ES-2B1 IN SERIES WITH PE-2 SHALL OPEN ITS CONTACT WHEN THE DAMPER FULLY CLOSES OPENING THE ALARM CIRCUIT THRU THE PE-5 AND ES-5. IF EITHER END SWITCH FAILS TO OPEN DUE TO IMPROPER DAMPER POSITIONING THE ALARM CIRCUIT THRU THE PE'S AND ES'S SHALL BE COMPLETED INDICATING AN ALARM. THE ALARM SHALL BE REGISTERED AT THE CENTRAL CONTROL PANEL THRU THE DTS.

BY CLOSING CONTACT AT THE CENTRAL CONTROL PANEL THE COILS OF EP-5 AND 6 CAN BE ENERGIZED THRU THE DTS OVERRIDING THE NORMAL CONTROL FUNCTIONS. ENERGIZING EP-5 ALL FANS SHALL BE SEQUENCED ON AND ALL VENT SHAFT DAMPERS SHALL BE CLOSED THRU AV-4 AND 3 RESPECTIVELY. ENERGIZING EP-6 SHALL CYCLE ALL FANS OFF. SEE TUNNEL VENTILATION DWG. M-39 FOR FURTHER AUTOMATIC CONTROL OVERRIDE.

A FAN SHAFT RELIEF DAMPER SHALL BE ARRANGED TO OPEN WHEN TUNNEL TEMPERATURES EXCEED 50°F THROUGH THE ACTION OF RC-1, RC-2 & SHALL CLOSE UPON THE STARTING OF ANY TUNNEL FAN. PE-7G SHALL ACT THRU A TIME DELAY RELAY TO PERMIT THE RELIEF DAMPER TO OPEN AND TRIP ES-1G. IF THE DAMPER DOES NOT CLOSE UPON THE START OF ANY FAN AN ALARM SHALL REGISTER AT THE CENTRAL CONTROL PANEL THRU THE TIME DELAY RELAY AND THE DAMPER END SWITCH ACTIVATED RELAY.

SEQUENCE OF OPERATION

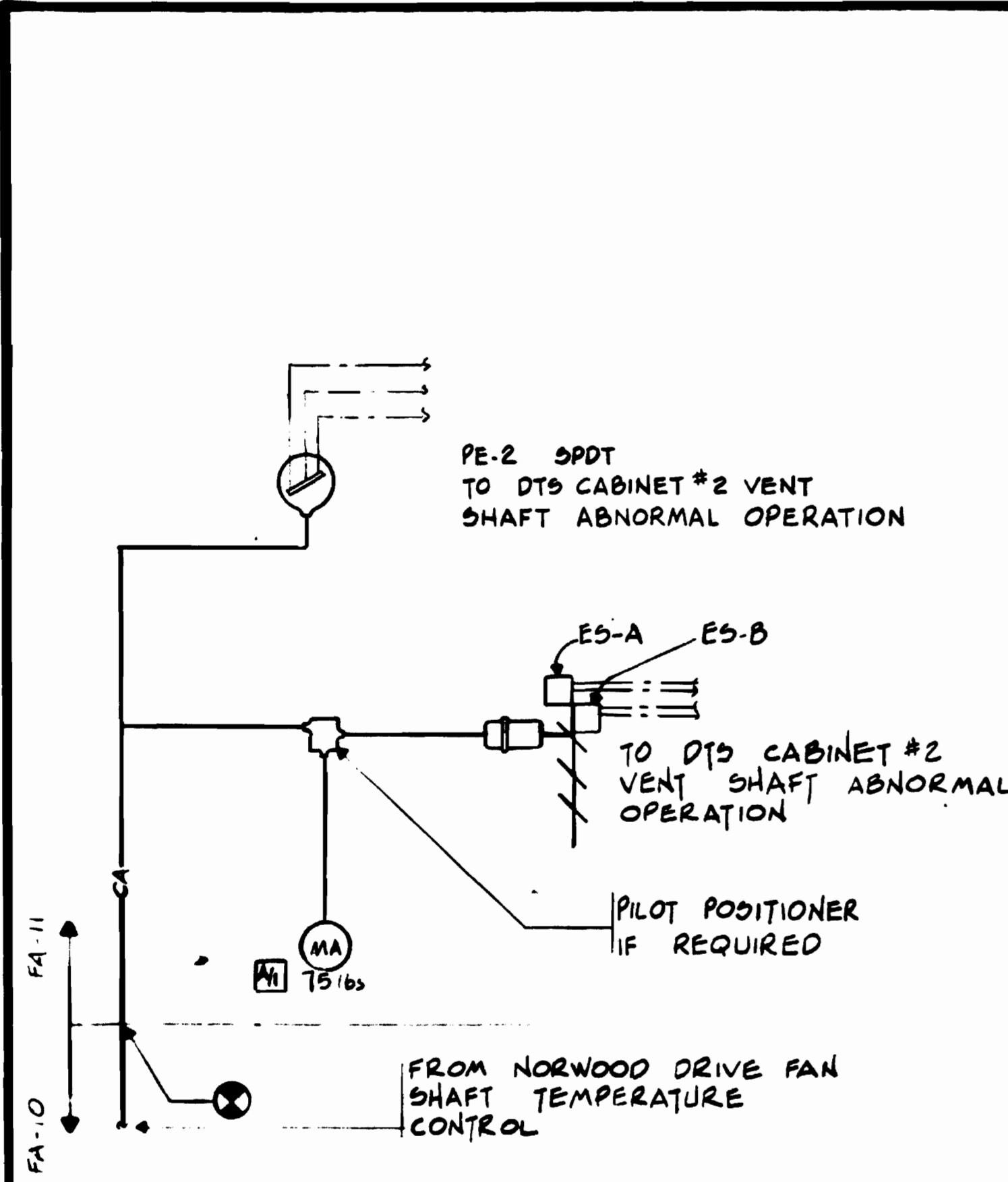
DESIGNED		REFERENCE DRAWINGS		REVISIONS		WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY				
DATE	BY	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION	MATHews • CHATELAIN • BEALL		DE LEUW, CATHER & COMPANY	
08/18/75	S.R. MICHAELIS			9/18/80	PKM	RELAY AND NOTE	ENGINEERS AND ARCHITECTS		GENERAL ENGINEERING CONSULTANT	
08/18/75	D.B. FOLLAIN						SECTION DESIGNER		HARRY WEESE & ASSOCIATES	
10/12/75	S.R. MICHAELIS								GENERAL ARCHITECTURAL CONSULTANT	
4/19/80	S.R. MICHAELIS								SCALE NONE	



ROCKVILLE ROUTE  
REMOTE SURVEILLANCE AND CONTROL-  
AUTOMATIC TEMPERATURE CONTROL

DRAWING NO. FA 11-M-38 M334-126





CONTROL DIAGRAM

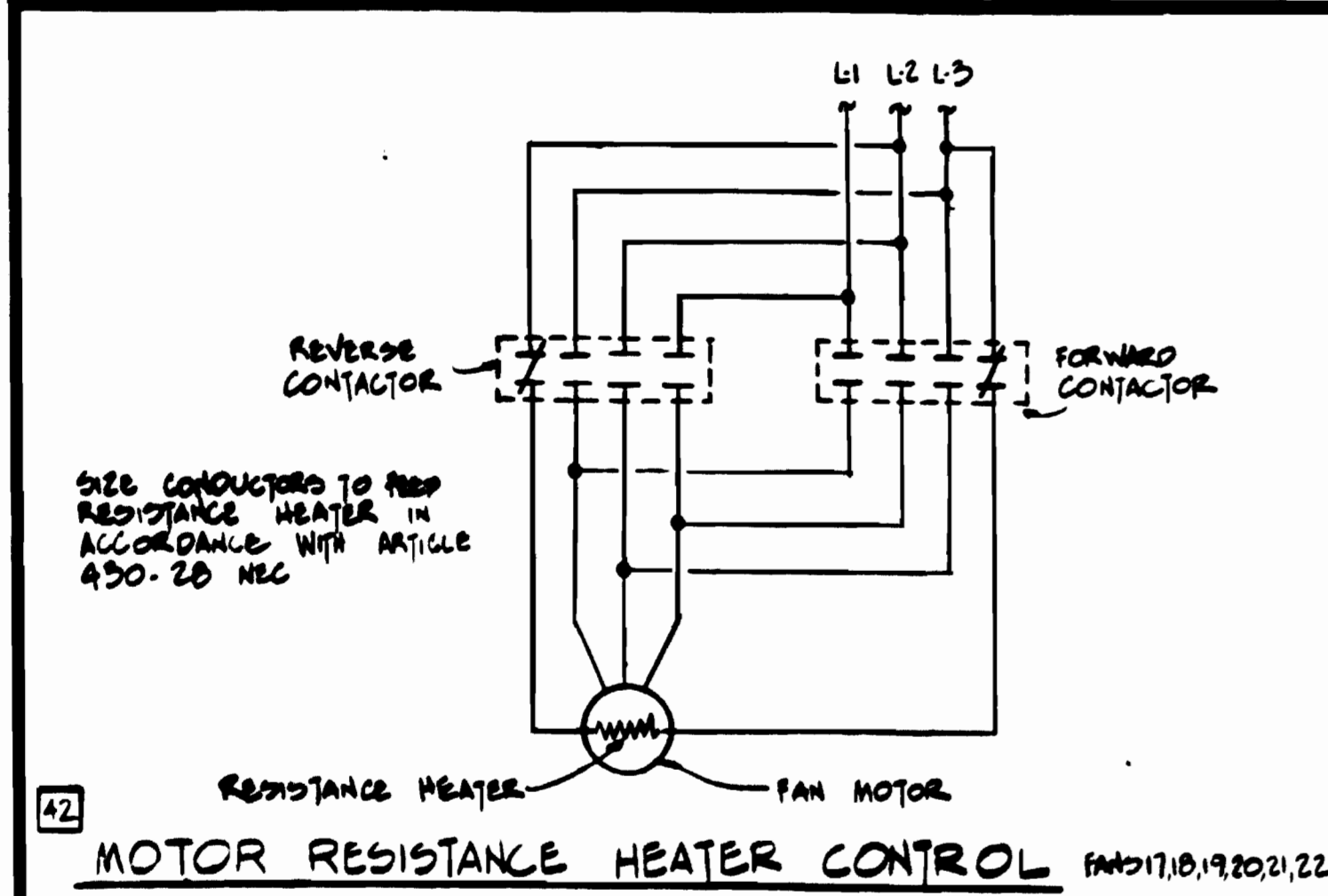
SEE CONTRACT FA-10 FOR CONTROL SEQUENCE AND CONTROL REQUIREMENTS FOR THIS VENT SHAFT. COORDINATE THE ACTUAL FA-10 FIELD REQUIREMENTS WITH ENGINEER BEFORE PROCEEDING WITH WORK.

SEE DWG M-38 FOR METHOD OF VENT SHAFT ABNORMAL OPERATION.

THE NUMBER OF DAMPER OUTFITS INCLUDING DAMPER END SWITCHES SHALL BE AS DETERMINED BY CONTRACTOR. SEE DWG M-11 FOR VENT SHAFT DAMPER SIZE & CONFIGURATION.

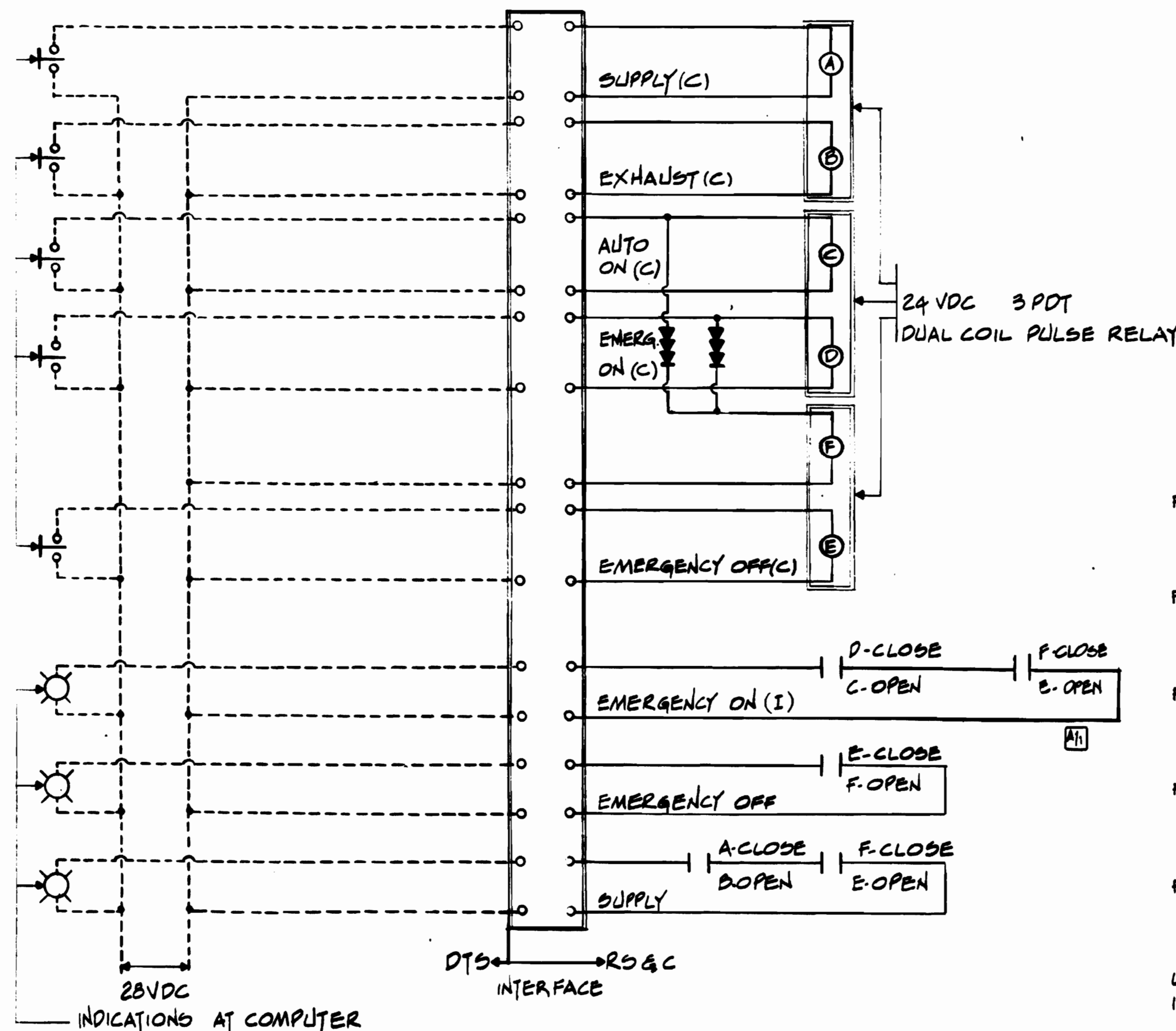
SEQUENCE OF OPERATION

ELM STREET VENT SHAFT



MOTOR RESISTANCE HEATER CONTROL

DTS CONTROL CONTACTS IN CENTRAL CONTROL

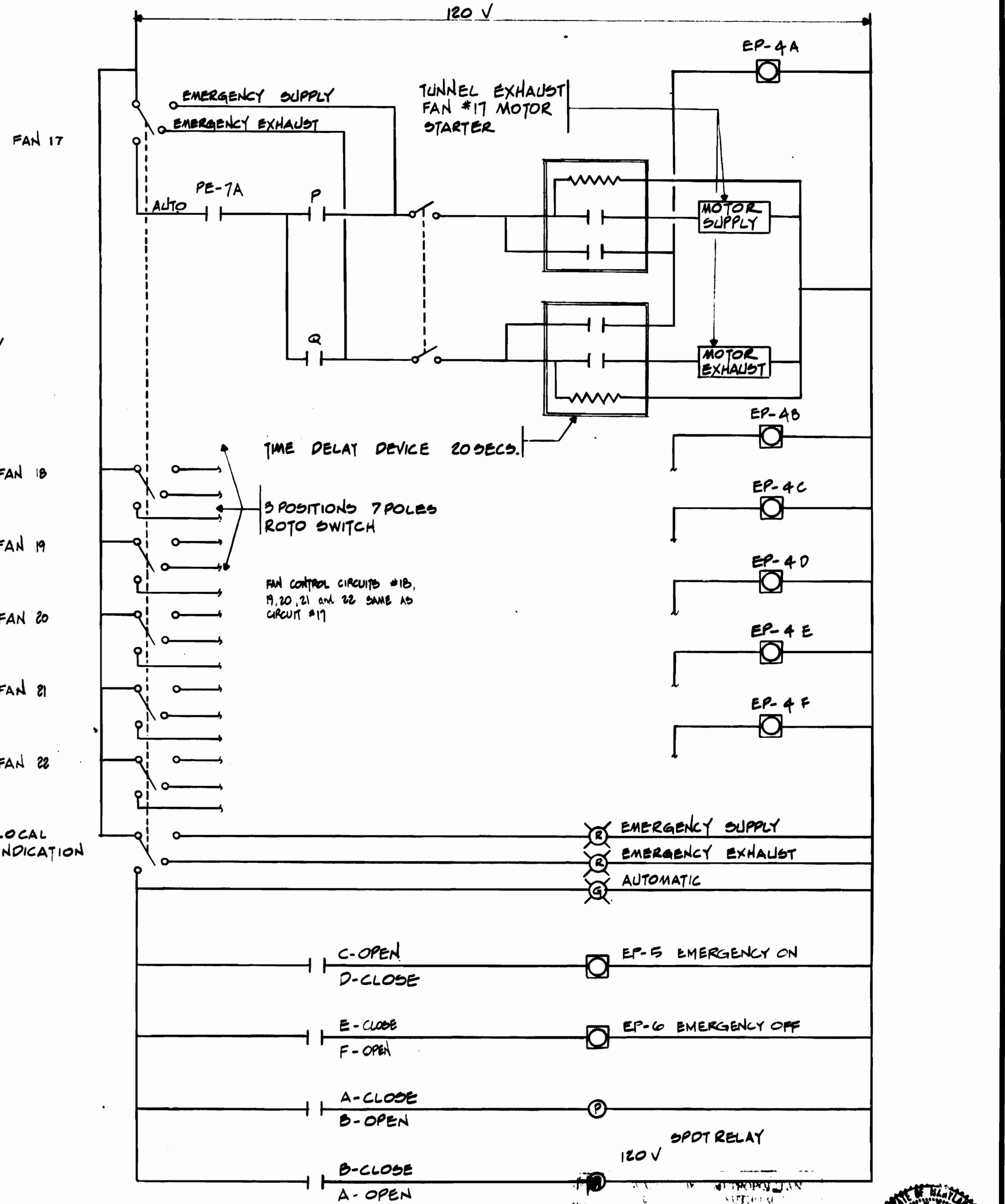


WIRING DIAGRAM

A THREE POSITION ROTARY SWITCH AT EACH FAN SHAFT INDEXED: AUTOMATIC, EMERGENCY EXHAUST & EMERGENCY SUPPLY SHALL BE USED TO SELECT THE OPERATION MODE. IN THE AUTOMATIC POSITION AUTOMATIC CONTROL, EMERGENCY ON, EMERGENCY OFF, EXHAUST OPERATION AND SUPPLY OPERATIONS SHALL BE DIRECTED FROM THE CENTRAL CONTROL PANEL THRU THE DTS TO DUAL COIL PULSE RELAYS A-B, C-D AND E-F. EMERGENCY SUPPLY OR EMERGENCY EXHAUST MODES SHALL BE SELECTED LOCALLY THRU THE ROTARY SWITCH WHICH REMOVES CONTROL ACTIONS AVAILABLE IN THE AUTOMATIC MODE FROM THE CENTRAL CONTROL PANEL.

SEQUENCE OF OPERATION

TUNNEL VENTILATION



WIRING DIAGRAM

NOTES

- 1) SEE DWG M-38 FOR FUNCTION OF EP-5 AND EP-6
- 2) RELAY FIXING THE DTS. EXCEPT WHERE INDICATED DIFFERENTLY SHALL BE MOMENTARY CONTACT LATCHING DOUBLE COIL TYPE.

DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS		
		NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
S. R. MICHAELIS	08/19/76			9/15/80	PKH	WIRING DIAGRAM
D. B. FOLLAIN	08/19/76					
S. R. MICHAELIS	10/17/78					
S. R. MICHAELIS	4/29/80					



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT

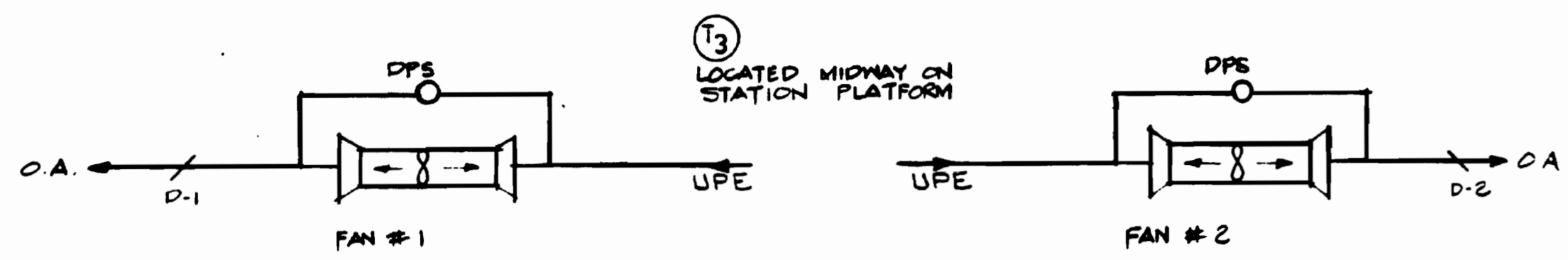
HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *James R. Green* DATE 8-15-80 APPROVED *Paul K. ...*

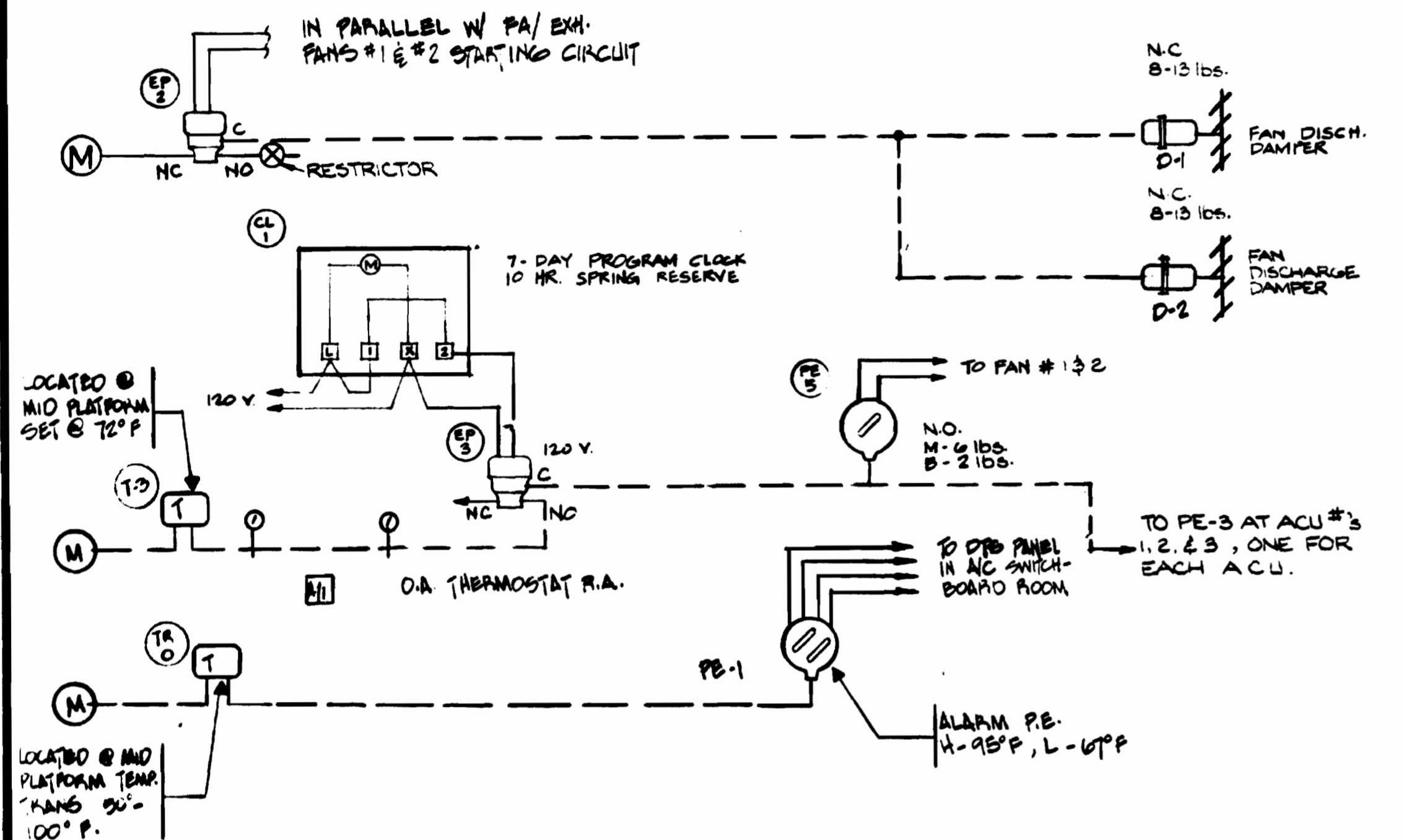
ROCKVILLE ROUTE		DRAWING NO.	
REMOTE SURVEILLANCE AND CONTROL -		FA 11-M-39	
AUTOMATIC TEMPERATURE CONTROL		M334-127	
SCALE	NONE		







**FLOW DIAGRAM**

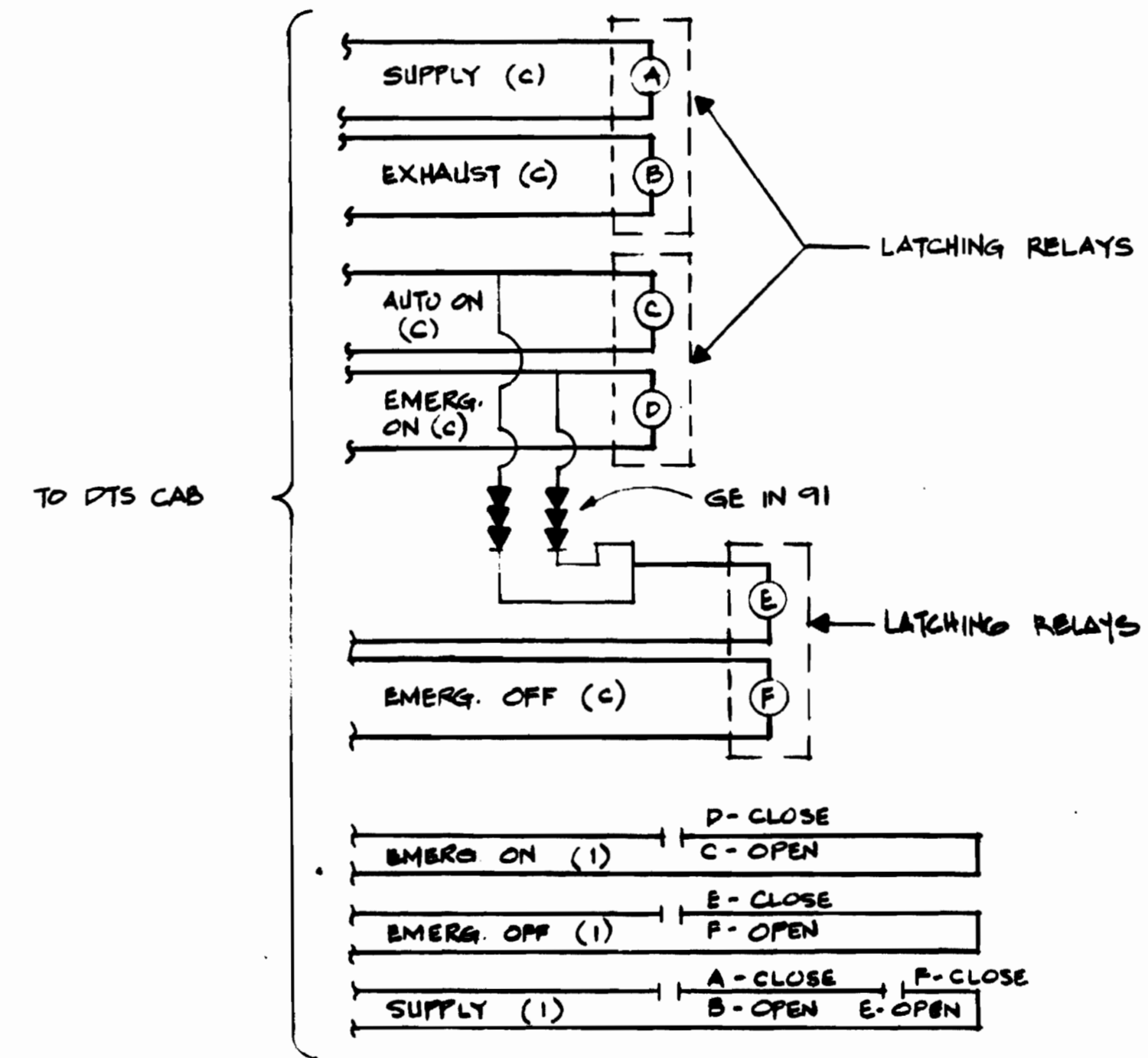


**CONTROL DIAGRAM**

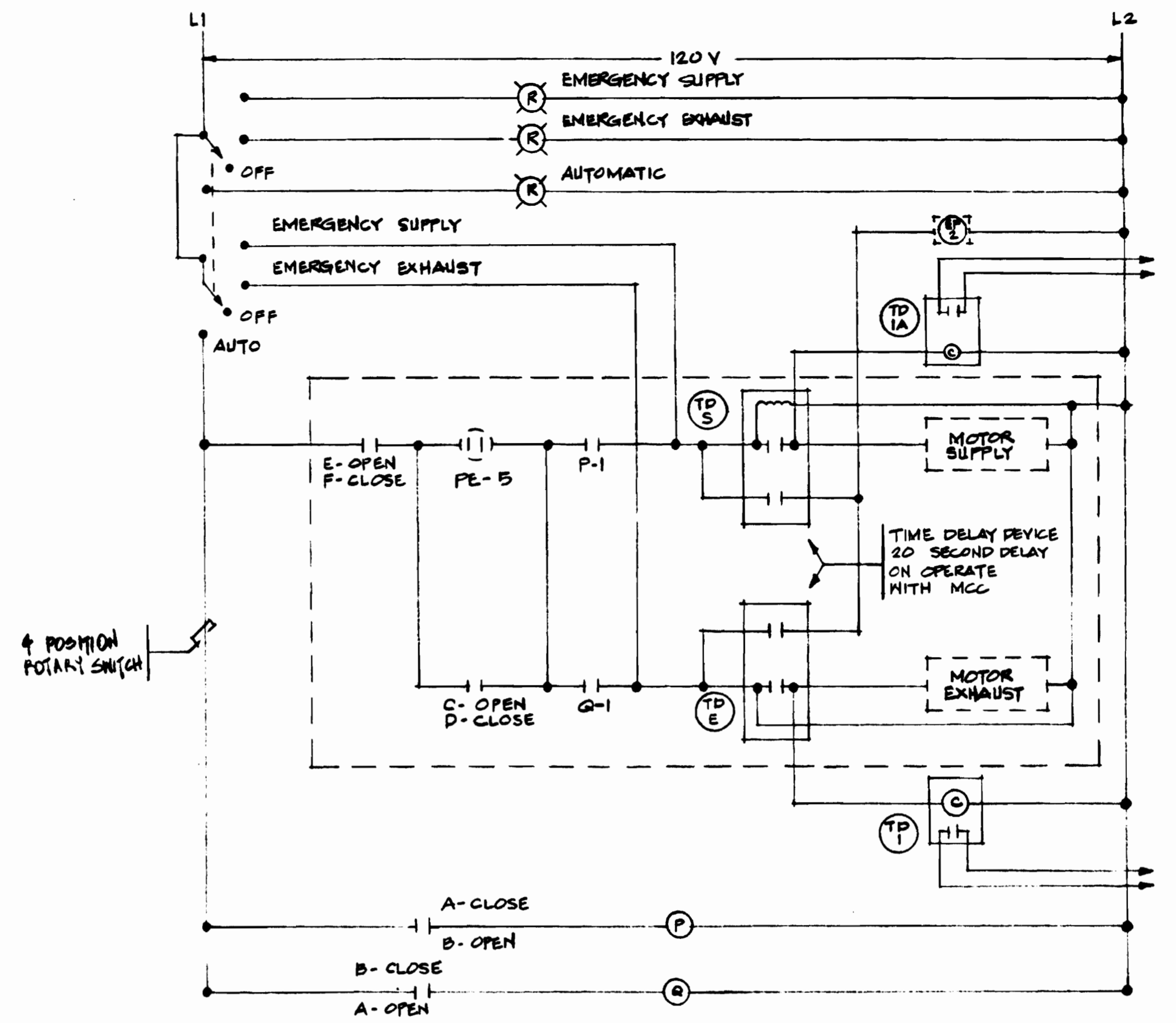
WHEN THE TEMPERATURE AT SPACE THERMOSTAT T-3 RISES ABOVE 72°F THE PA/EXH FANS ARE STARTED THROUGH PE-5. FAN DISCHARGE DAMPERS SHALL OPEN THROUGH THE ACTION OF EP-2. THE FAN DISCHARGE DAMPER SHALL REMAIN OPEN UNTIL THE FAN COASTS DOWN UPON STOPPING FANS. THE PA/EXH FANS SHALL ALSO BE STARTED WHEN EVER ACU #1, 2 OR 3 ARE STARTED. TIME CLOCK SHALL ALLOW FAN OPERATION AT SCHEDULED TIME THROUGH EP-3. PROVIDE A HIGH AND LOW TEMPERATURE ALARM TO THE DTS PANEL THROUGH THE TRO.

**SEQUENCE OF OPERATION**

**STATION PLATFORM VENTILATION FRESH AIR EXHAUST FANS 1 & 2 (UFE)**  
SIMILAR WIRING, RSC AND SEQUENCE FOR FANS 3 & 4 DOME RELIEF



**WIRING DIAGRAM — RSC**



**WIRING DIAGRAM**

PROVIDE A ROTARY SWITCH FOR EACH OF FANS NO'S 1, 2, 3 AND 4 LOCATED AS FOLLOWS: FANS 2 AND 4 SOUTH A/C SWITCHBOARD ROOM; FAN 1 AND 3 NORTH A/C SWITCHBOARD ROOM. THE ROTARY SWITCH OPERATION IS SIMILAR TO TUNNEL VENTILATION ROTARY SWITCH OPERATION DRAWING M-29.

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY  
AS SHOWN IN CONDITION

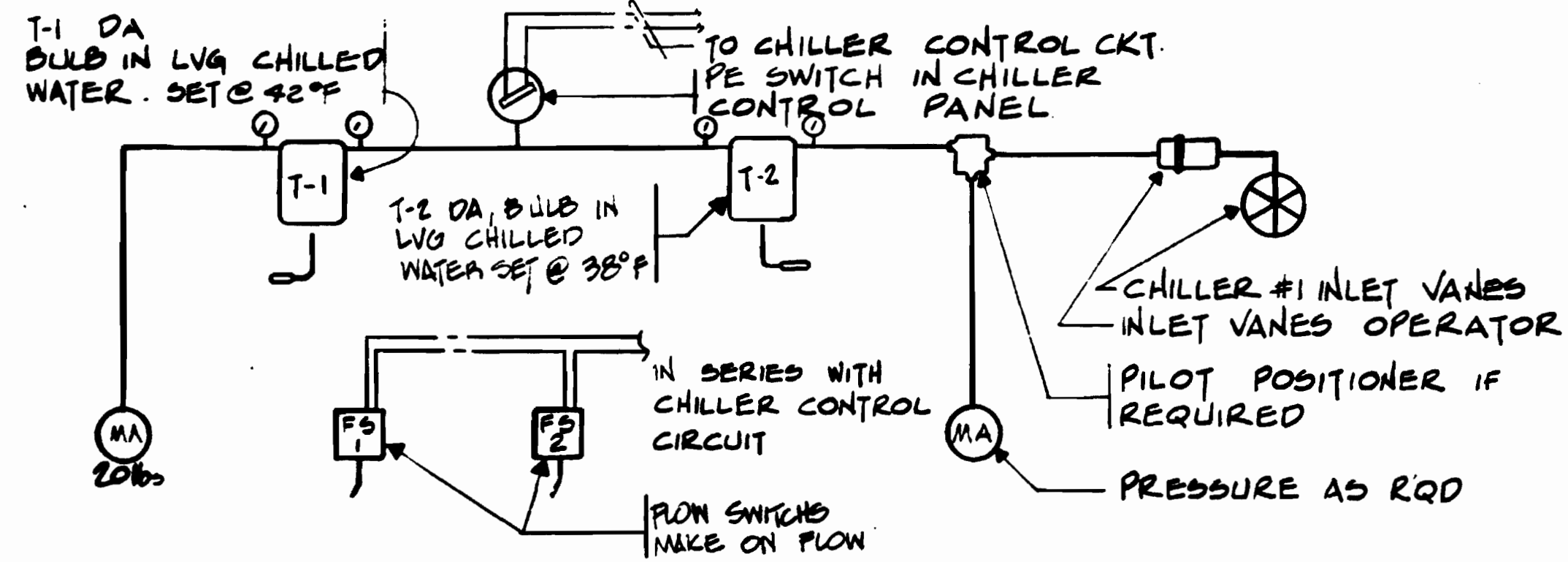


DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS	
		NUMBER	DESCRIPTION	DATE	DESCRIPTION
D.B. FOLLAN	04/18/77				
DRAWN	04/18/77				
CHECKED	04/18/77				
APPROVED	04/18/80				



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SECTION DESIGNER  
SUBMITTED *James R. Jones* DATE 0-15-80 APPROVED *Paul J. [Signature]*

**ROCKVILLE ROUTE**  
**REMOTE SURVEILLANCE**  
SCALE NONE DRAWING NO. FAIL-M-40 M334-128



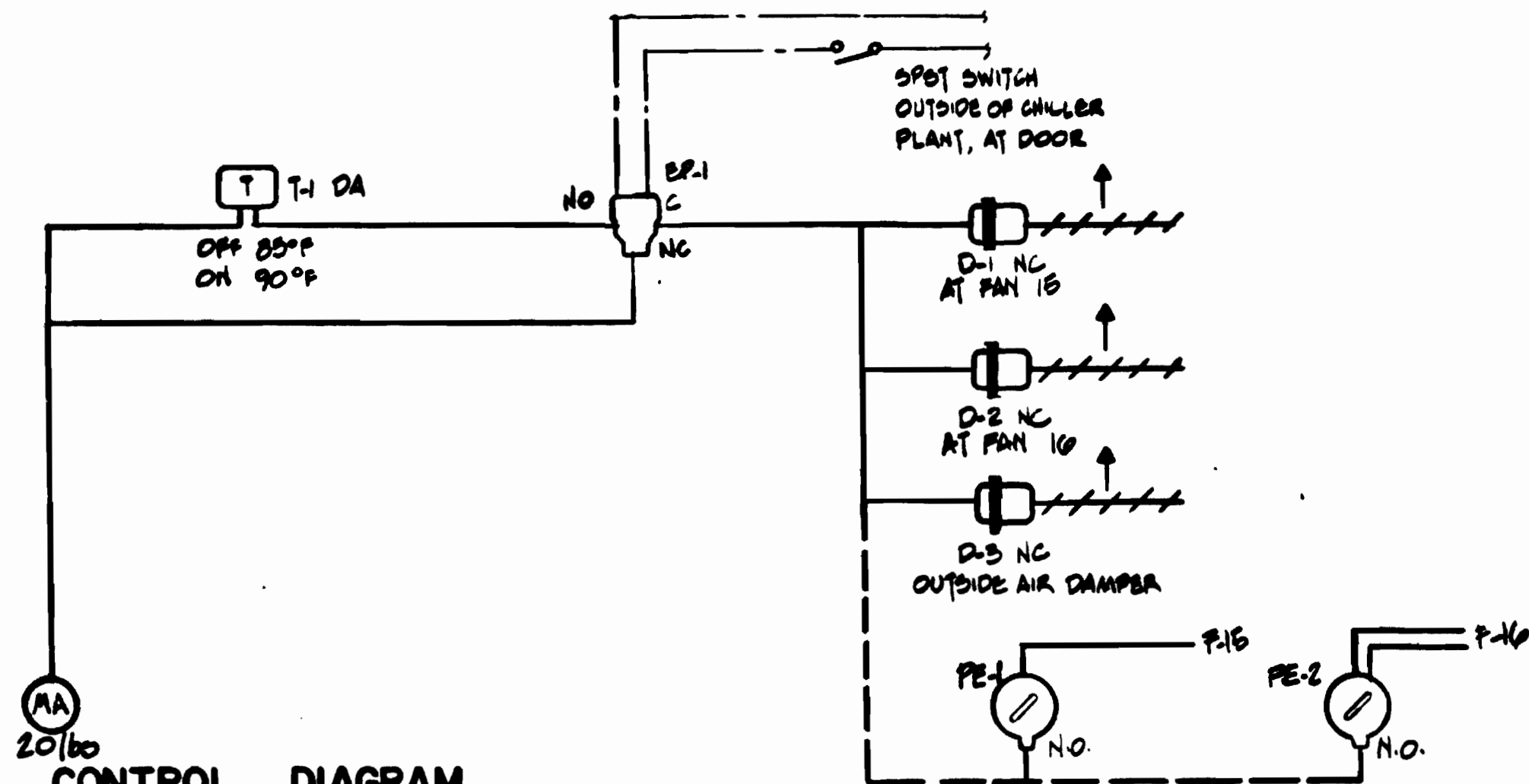
**CONTROL DIAGRAM**

CHILLED WATER PUMP IS STARTED AND STOPPED MANUALLY AT CENTRAL CONTROL CONSOLE THRU DTS. CONDENSER WATER PUMP IS ELECTRICALLY INTERLOCKED TO START AND STOP WITH THE CHILLED WATER PUMP. CHILLER CONTROL CIRCUIT SHALL BE ENERGIZED ONLY AFTER WATER FLOW HAS BEEN PROVEN IN THE CHILLED WATER AND THE CONDENSER WATER PIPING THRU FLOW SWITCHES FS1 & 2. THERMOSTAT T-1 MAINTAINS CHILLED WATER SUPPLY TEMPERATURE BY REPOSITIONING COMPRESSOR INLET VANES THRU INLET VANE OPERATOR. LOW LIMIT THERMOSTAT T-2 WILL OVERRIDE T-1 AND CLOSE COMPRESSOR INLET VANES IF CHILLED WATER SUPPLY TEMPERATURE DROPS BELOW 38°F. PE SWITCH SHALL ALLOW COMPRESSOR OPERATION WHEN CONTROL PRESSURE IS AVAILABLE AT INLET VANE OPERATOR. CONDENSER WATER TEMPERATURE CONTROL INDICATED UNDER COOLING TOWER SPECIFICATION

**SEQUENCE OF OPERATION**

**CHILLER CONTROL**

SEE ST-M-58

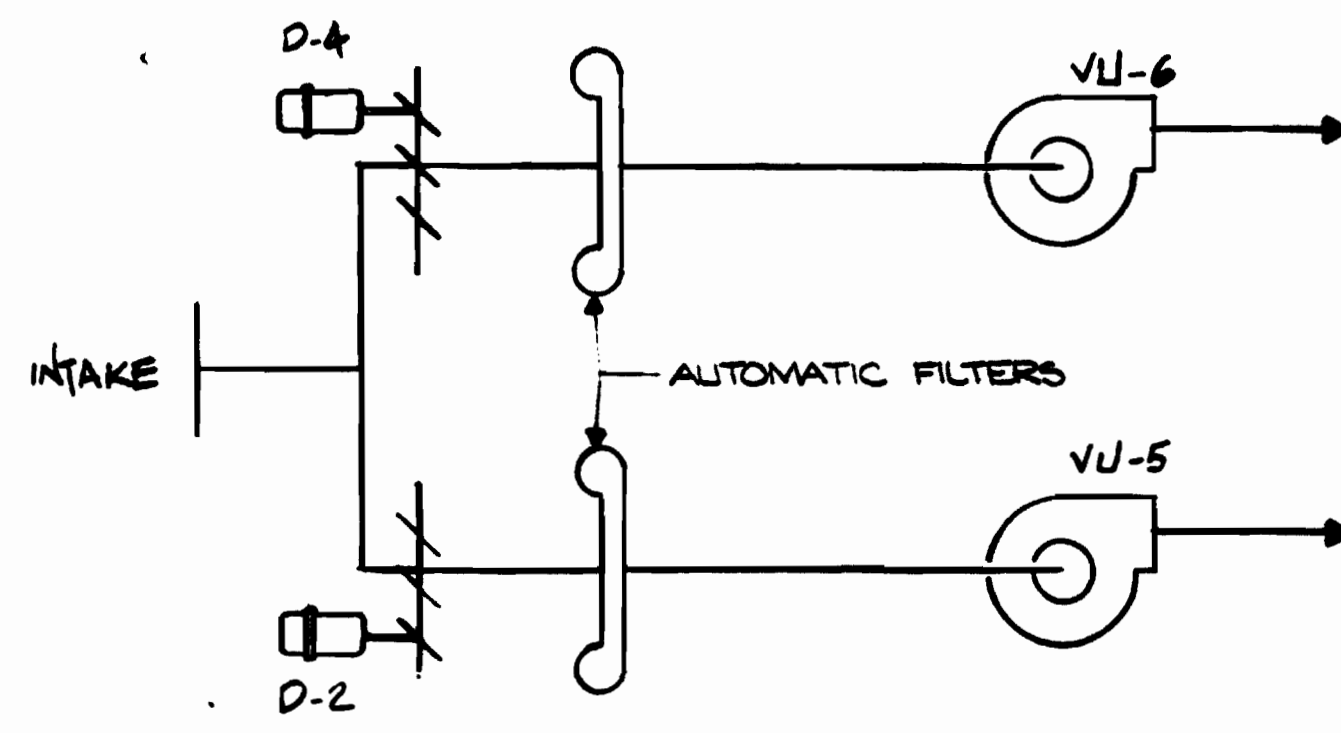


**CONTROL DIAGRAM**

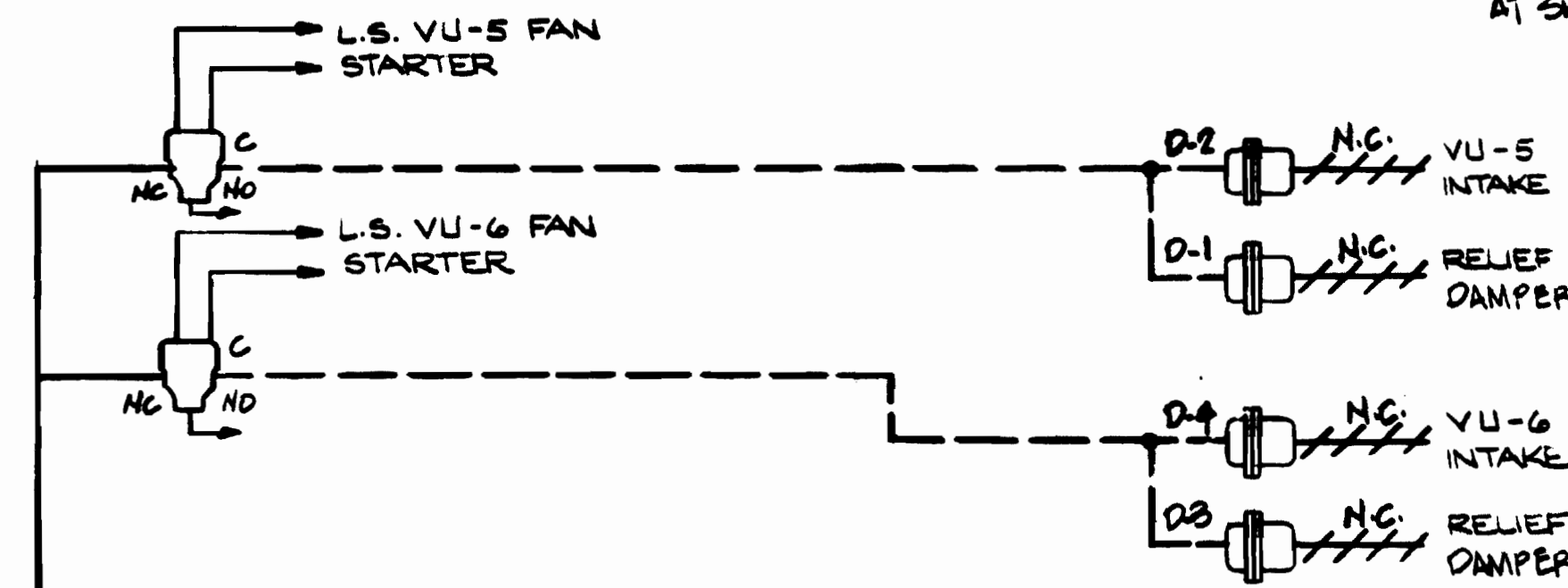
ON A RISE IN SPACE TEMPERATURE THERMOSTAT T-1 SHALL MAINTAIN ITS SET POINT BY STARTING FANS #15 AND #16 AND OPENING THEIR RESPECTIVE DAMPERS IN SEQUENCE. THE OUTSIDE AIR DAMPER SHALL OPEN WHENEVER A FAN IS ENERGIZED. PROVIDE A TOGGLE SWITCH OUTSIDE OF THE CHILLER PLANT DOOR WHICH SHALL OVERRIDE THE ACTION OF T-1 AND START BOTH FANS SIMULTANEOUSLY

**SEQUENCE OF OPERATION**

**CHILLED WATER PLANT VENTILATION FANS 15 & 16**



**FLOW DIAGRAM VU 5 and 6**

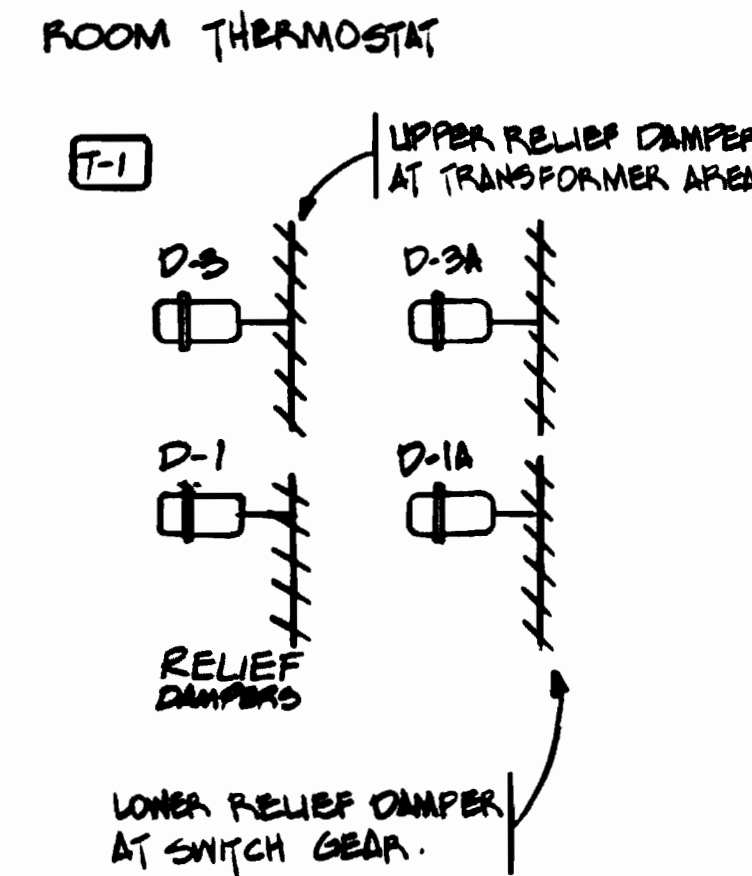


ON A RISE IN TEMPERATURE T-1 WILL ENERGIZE VU-5 AND VU-6 IN SEQUENCE THROUGH PE-1, PE-2 AND ALTERNATOR PANEL. WHEN THE UNIT FAN STARTS, ITS RESPECTIVE INTAKE AND RELIEF DAMPERS OPEN AT BOTH SUBSTATION LEVELS. THE ALTERNATOR SHALL REVERSE THE LEAD LEG SEQUENCE AFTER EACH OPERATING CYCLE. THE OPPOSITE SEQUENCE SHALL OCCUR ON A DROP IN SPACE TEMPERATURE. INTERLOCK MOLL FILTERS TO PREVENT OPERATION UNLESS UNIT SUPPLY FAN IS RUNNING. FOR VU'S 1 & 2, 3 & 4 THE ALTERNATOR SHALL BE ARRANGED TO PERMIT ONLY THE OPERATION OF ONE UNIT AT A TIME REGARDLESS OF THE THERMOSTAT'S REQUIREMENT. STAND-BY SHALL START IF LEAD UNIT DOES NOT START. PROVIDE A UNIT SELECTOR SWITCH ON THE ALTERNATOR PANEL.

**SEQUENCE OF OPERATION**

**TRACTION POWER SUBSTATION VENTILATION & A/C SWITCHBOARD ROOM VENTILATION**

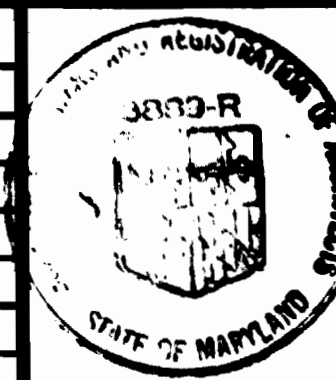
VU# 182, 384, 688



**FLOW DIAGRAM VU 1 and 2**

SAME FOR VU 3 & 4

SEQUENCE OF OPERATION FOR VU 1 & 2; 3 & 4 SAME AS VU 5 & 6 EXCEPT AS AMENDED BELOW.



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GENERAL ENGINEERING CONSULTANT  
HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *Jerry R. Jones* DATE 8-15-80

APPROVED *Carl J. [Signature]*

**ROCKVILLE ROUTE  
AUTOMATIC TEMPERATURE CONTROL**

SCALE

NONE

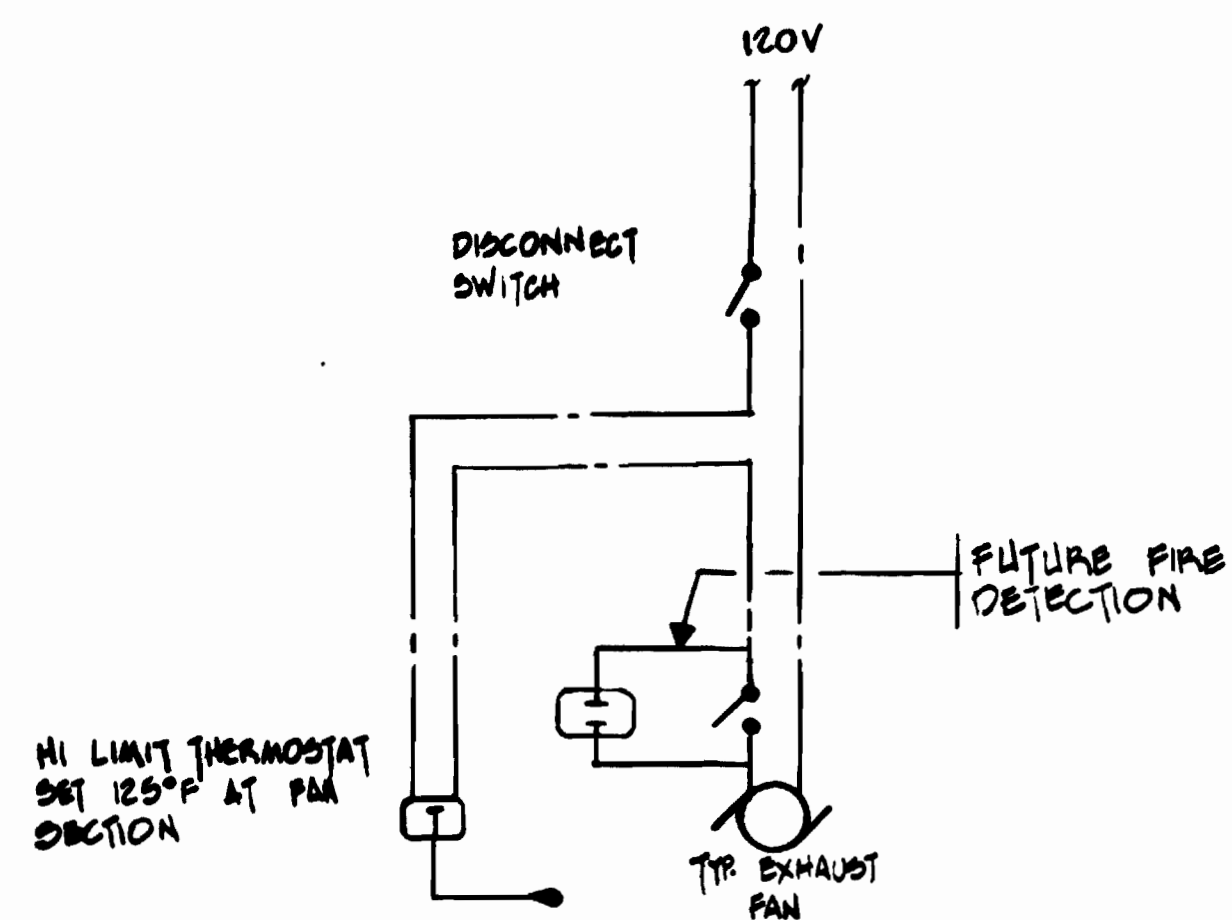
DRAWING NO.

FA 11-M-41

M334-129





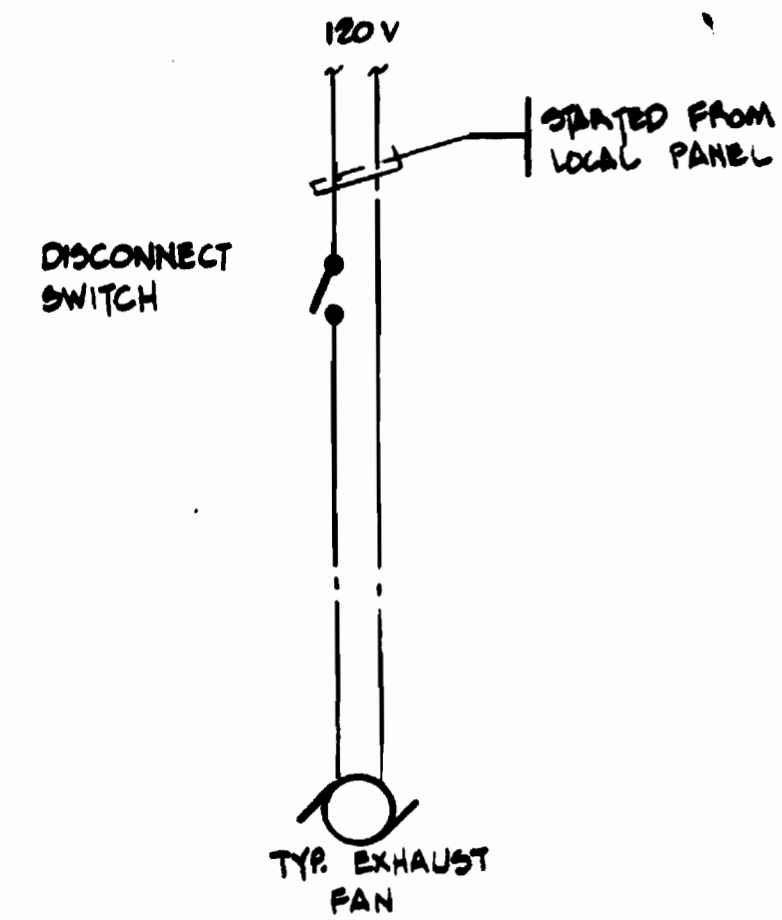


**CONTROL DIAGRAM**

WHEN TEMPERATURE RISES ABOVE THE SET POINT OF THE HI LIMIT THERMOSTAT (FIRESTAT) THE EXHAUST FAN SHALL BE SHUT OFF. THE HI-LIMIT THERMOSTAT SHALL HAVE A MANUAL RESET. THE HI-LIMIT THERMOSTAT SHALL BE EITHER LINE OR LOW VOLTAGE WITH NECESSARY WIRING AND RELAYS AT CONTRACTORS OPTION.

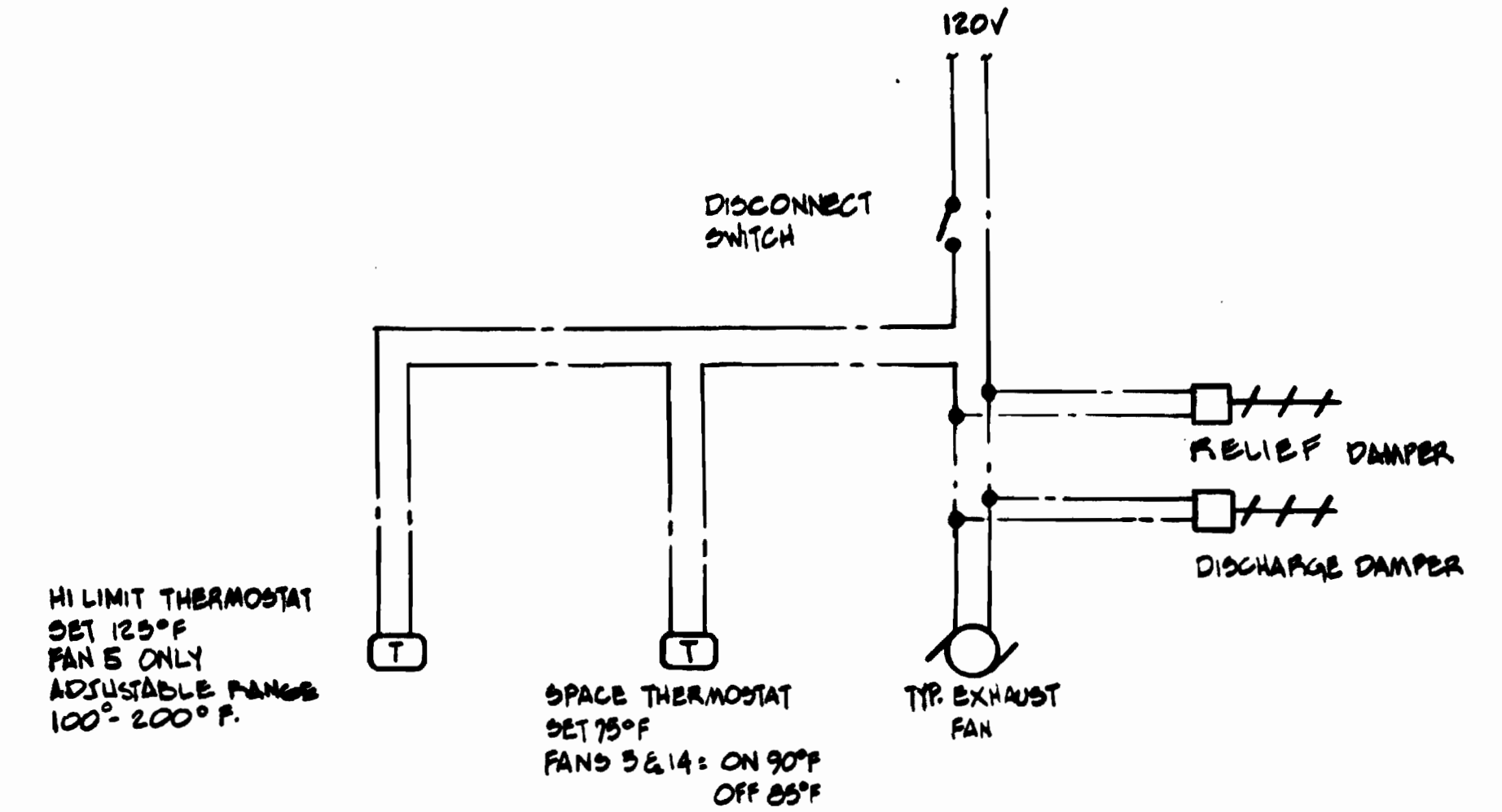
THE DIFFERENTIAL PRESSURE SWITCH SHALL OPEN CONTACTS WITH AIR FLOW AND SHALL REMAIN CLOSED WITH NO FLOW CAUSING AN ALARM SIGNAL TO BE RECEIVED AT DTS CABINET.

**SEQUENCE OF OPERATION**



**CONTROL DIAGRAM**

**EXHAUST FANS NO's 13 and 10**

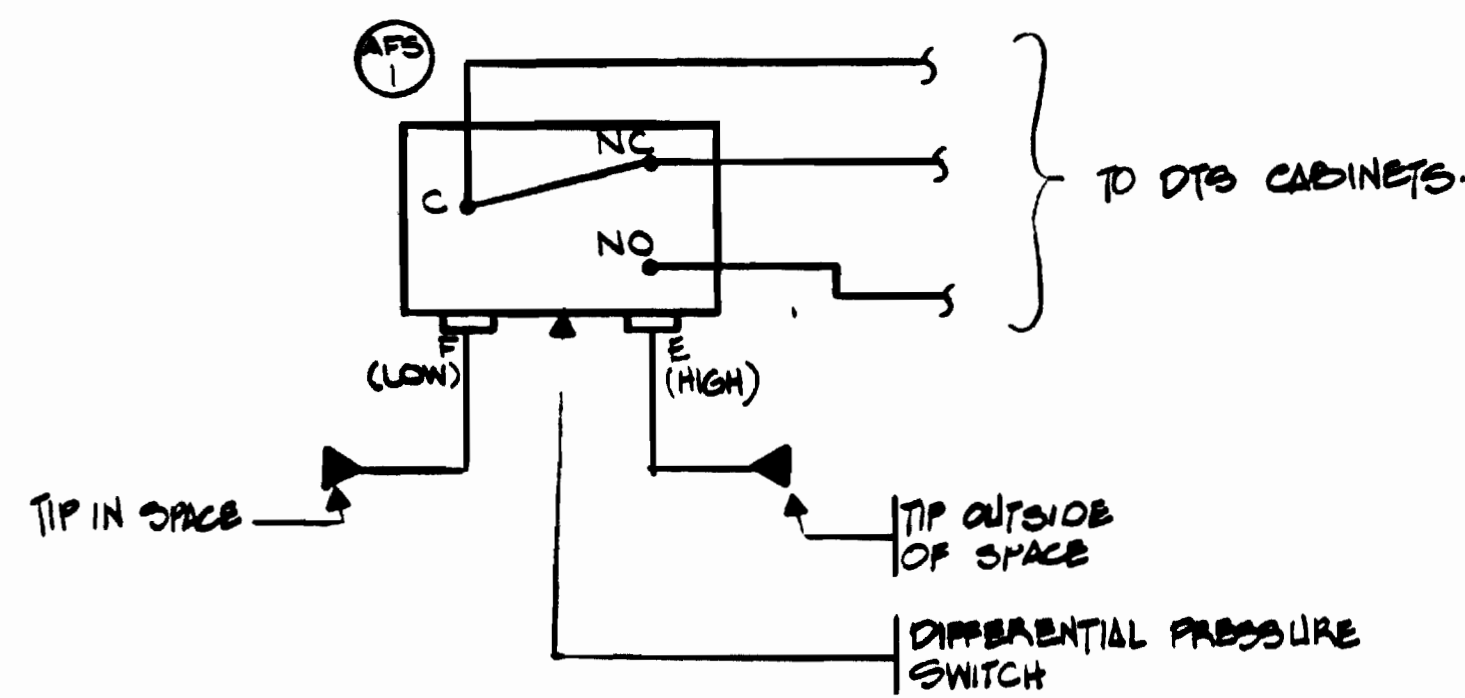


**CONTROL DIAGRAM**

WHEN TEMPERATURE RISES ABOVE SET POINT OF SPACE THERMOSTAT, THE FAN WILL BE STARTED. THE FAN SHALL STOP ON A DROP IN SPACE TEMPERATURE. WHEN THE TEMPERATURE RISES ABOVE THE SET POINT OF THE HI-LIMIT THERMOSTAT (FIRESTAT), THE FAN SHALL BE SHUT DOWN. THE HI-LIMIT SHALL HAVE A MANUAL RESET. THE HI-LIMIT AND SPACE THERMOSTATS SHALL BE EITHER LINE OR LOW VOLTAGE WITH NECESSARY WIRING AND RELAYS AT CONTRACTORS OPTION. (PROVIDE MOTORIZED INTAKE AND/OR RELIEF DAMPERS WHERE SHOWN THAT SHALL OPEN AND CLOSE WITH FAN OPERATION.)

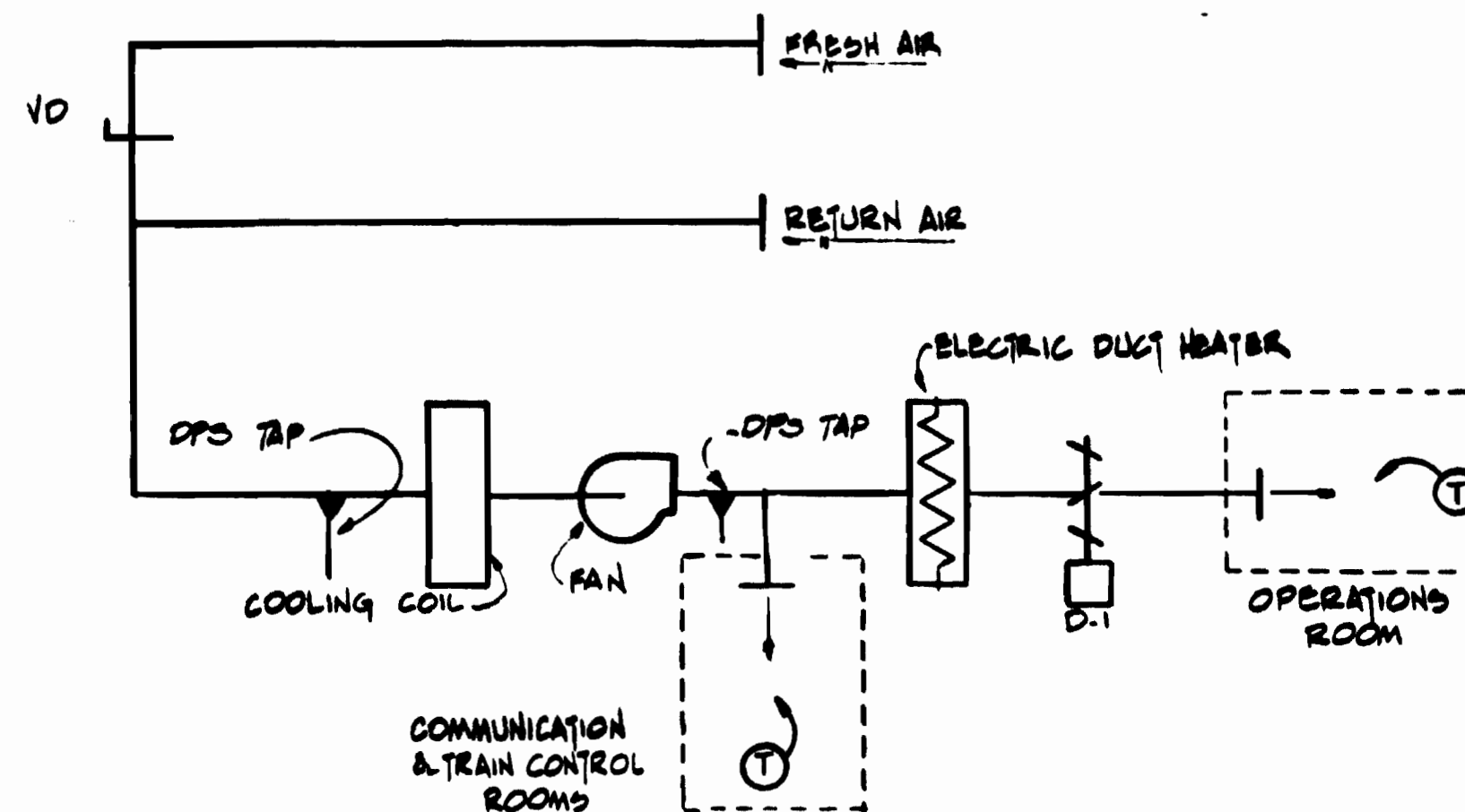
**SEQUENCE OF OPERATION**

**EXHAUST FANS NO's 5, 6, 7, 8, 12 & 14.**



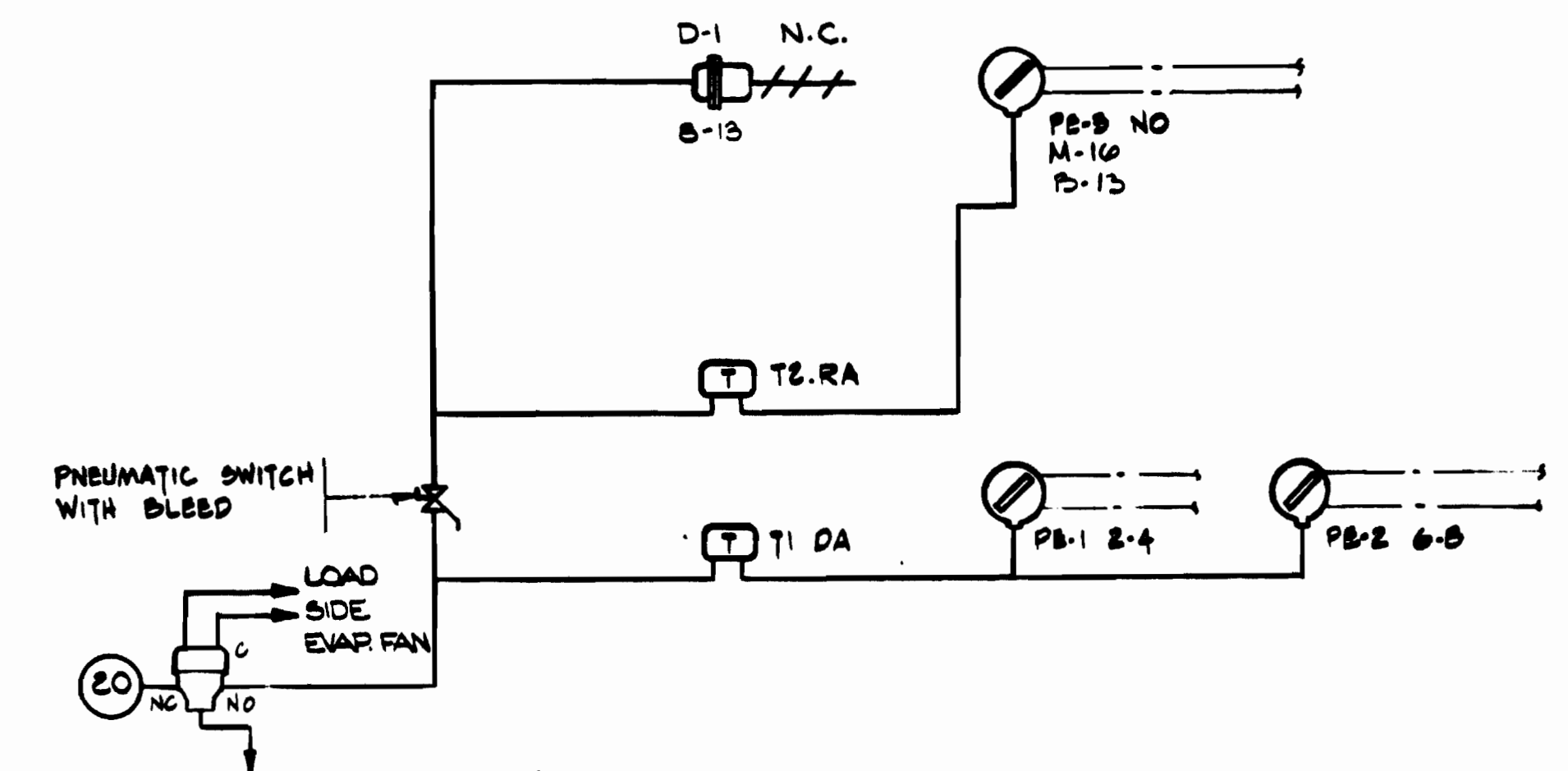
**FAN SURVEILLANCE**

**EXHAUST FANS NO's 9 and 11**



**FLOW DIAGRAM**

**COMMUNICATION TRAIN CONTROL AND OPERATIONS ACU #4**



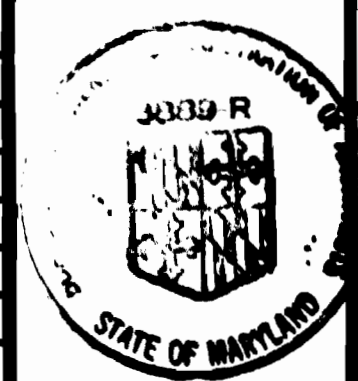
**CONTROL DIAGRAM**

THERMOSTAT T-1, ON A RISE IN ROOM TEMPERATURE ABOVE 78°F SHALL MAINTAIN ITS SET POINT BY ENERGIZING IN SEQUENCE TWO STEPS OF REFRIGERATION SOLENOID VALVES THRU PE-1 AND PE-2. THERMOSTAT T-2, ON A DROP IN ROOM TEMPERATURE BELOW 78°F SHALL MAINTAIN ITS SET POINT BY ENERGIZING THRU P-3 THE ELECTRIC DUCT HEATER. THE DUCT HEATER CONTACTS SHALL BE ENERGIZED AFTER SYSTEM AIR FLOW HAS BEEN PROVEN.

ADJACENT TO THERMOSTAT T-2, MOUNT A PNEUMATIC SWITCH INDEXED ON-OFF WHICH SHALL ALLOW ROOM OCCUPANTS TO DE-ENERGIZE THE HEATING AND COOLING TO THE SPACE WITH THE SWITCH IN THE "ON" POSITION. ON OPENING AND T-1 CONTACTS THE ELECTRIC REHEAT COIL WITH THE SWITCH IN THE "OFF" POSITION. D-1 CLOSED AND HEATER REMAINS DE-ENERGIZED. PROVIDE A FANSTAT IN THE RETURN AIR TO UNIT THAT SHALL DE-ENERGIZE THE UNIT WHENEVER ITS SET POINT IS REACHED. PROVIDE ANY REQUIRED INTERLOCK WIRING OR CONTROL TO CONDENSING UNIT.

**SEQUENCE OF OPERATION**

DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS	
		NUMBER	DESCRIPTION	DATE	DESCRIPTION
D.B. FOLLAN	04/18/77				
D.B. FOLLAN	04/18/78				
S.R. MICHAELIS	04/18/79				
S.R. MICHAELIS	04/18/80				



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SECTION DESIGNER

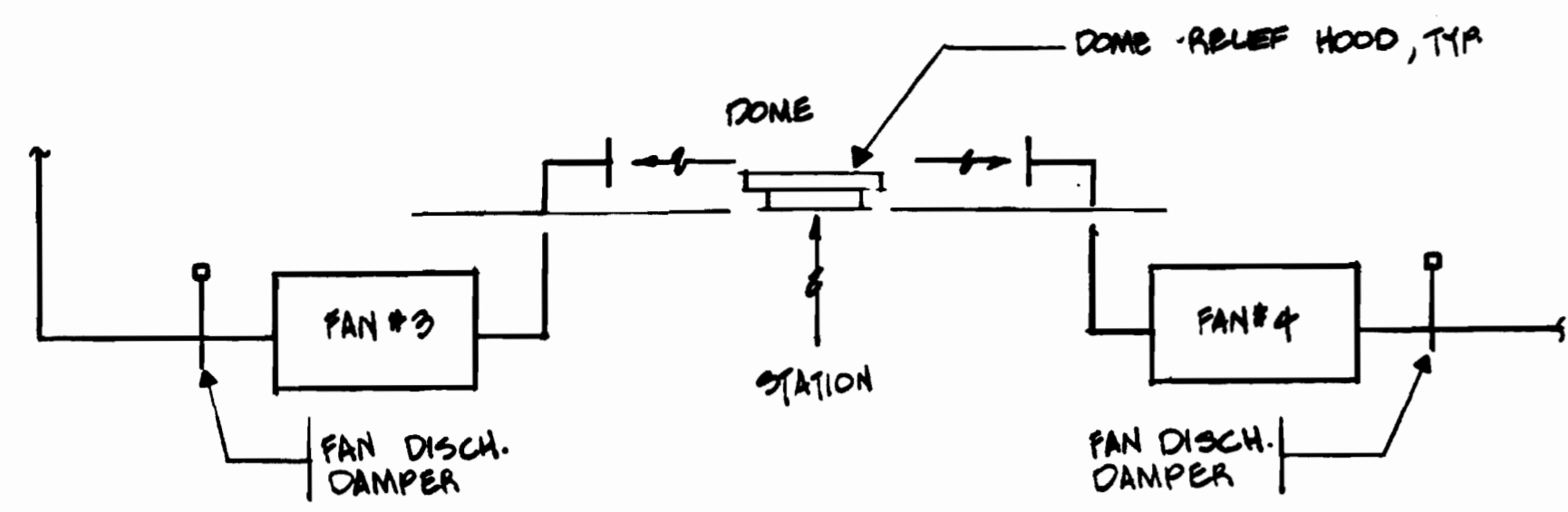
SUBMITTED *Jan 15 1980* DATE 0-15-80

DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT  
HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

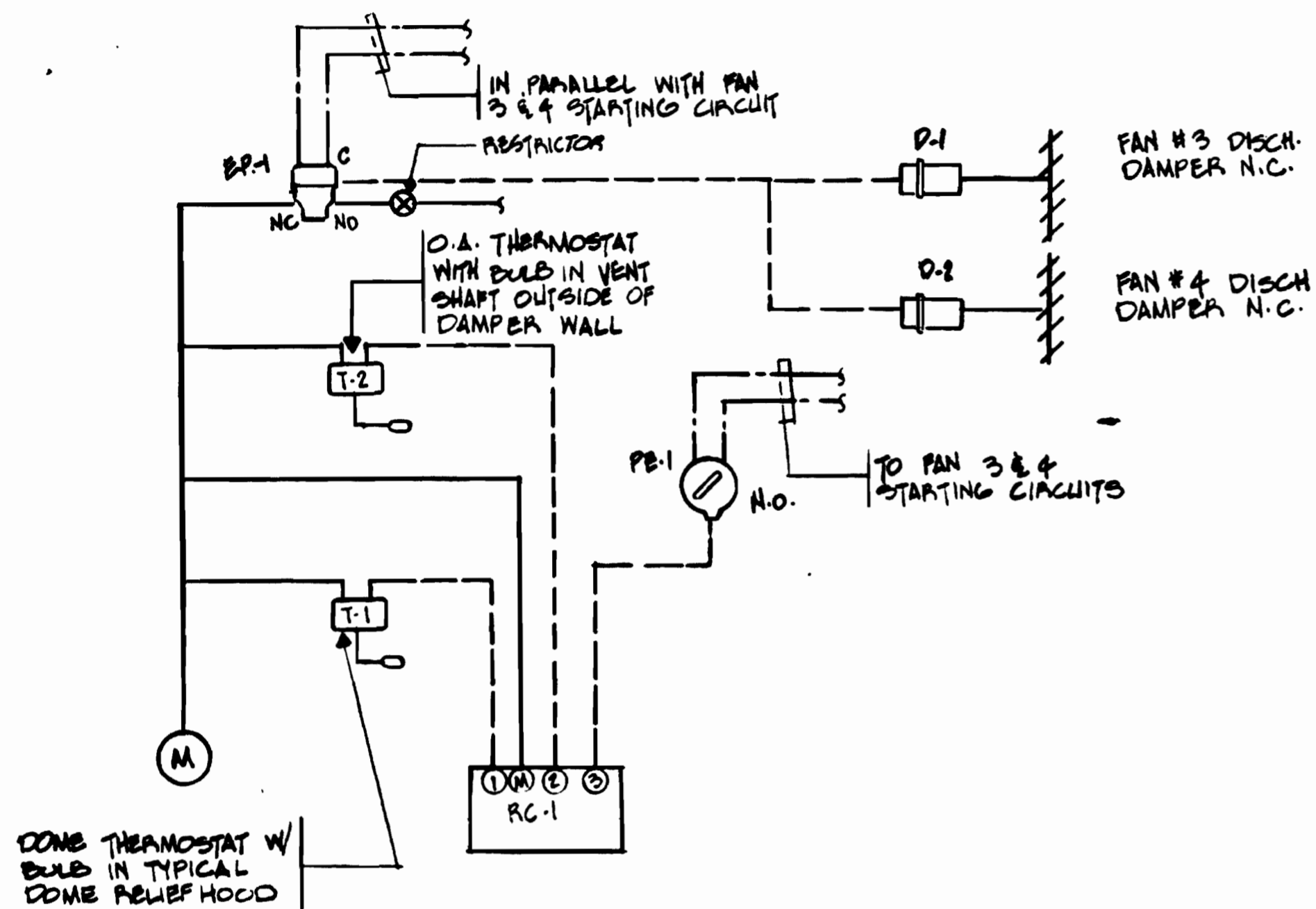
APPROVED *Paul J. ...*

ROCKVILLE ROUTE		
AUTOMATIC TEMPERATURE CONTROL		
SCALE	DRAWING NO.	DRAWING NO.
NONE	FALL-M-141	M334-130





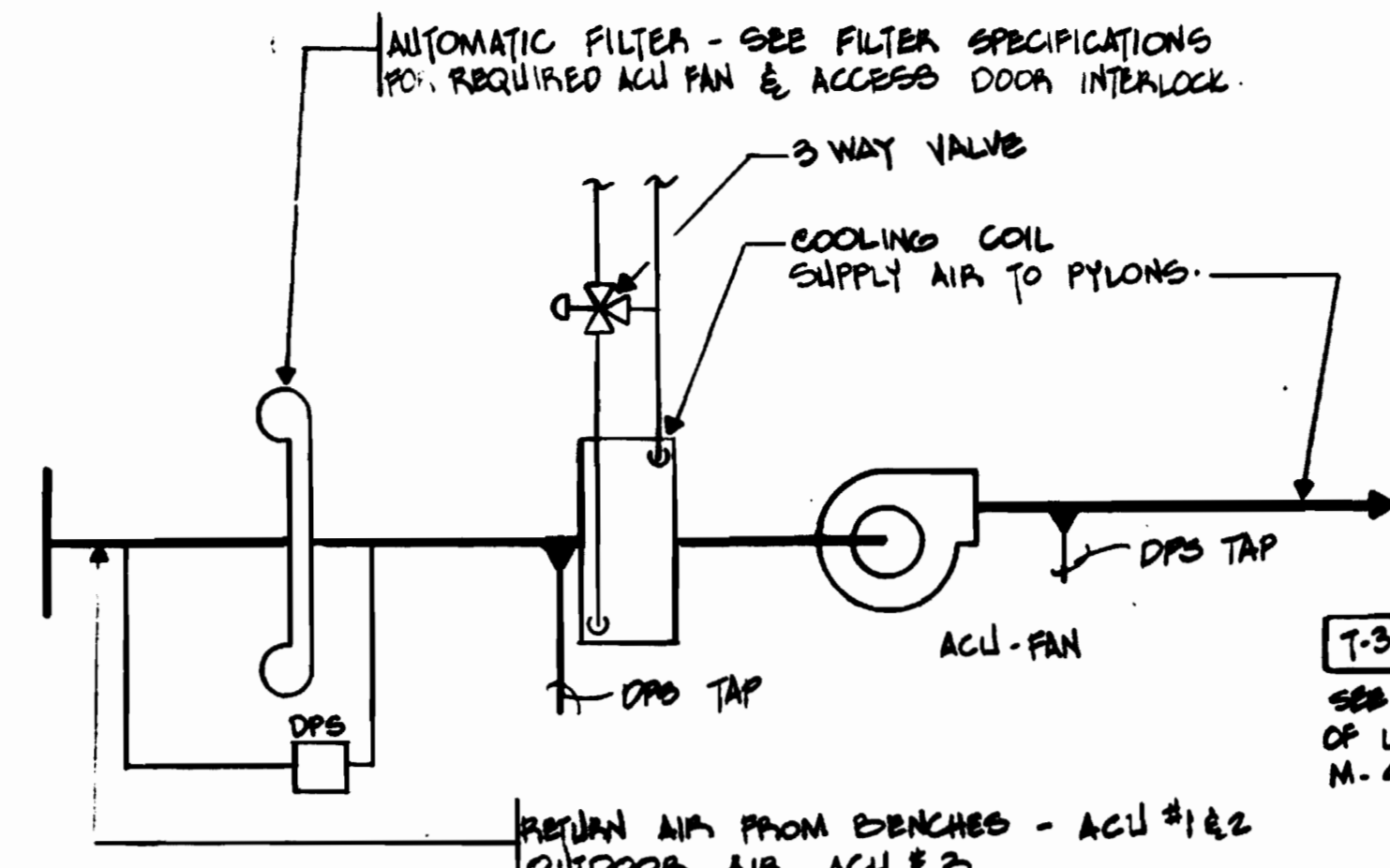
**FLOW DIAGRAM**



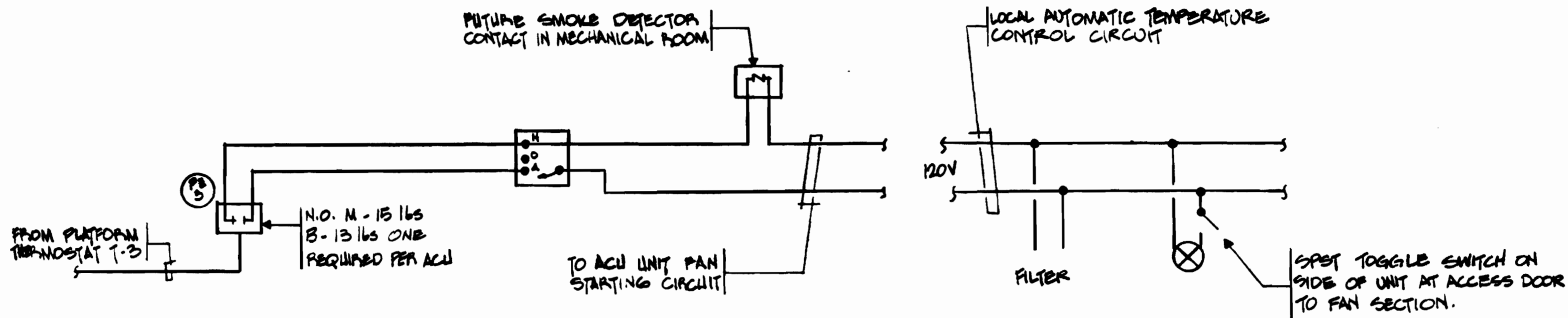
**CONTROL DIAGRAM**

WHEN THE TEMPERATURE AT DOME THERMOSTAT T-1 EXCEEDS 91°F AND THE TEMPERATURE OF THE OUTDOOR AIR IS AT A MINIMUM 5°F LOWER THAN THE DOME TEMPERATURE AS MEASURED BY THERMOSTAT T-2, THEN FANS 3 & 4 SHALL BE STARTED AT LOW SPEED ONLY THROUGH PE-1. THE FANS SHALL BE ALLOWED TO COAST DOWN BEFORE THE DISCH. DAMPERS CLOSE. PROVIDE A ROTARY SWITCH FOR EACH FAN WITH ASSOCIATED FAN INTERLOCK WIRING THE SAME AS INDICATED FOR LIFE FANS 1 & 2 THAT SHALL PROVIDE THE SAME FUNCTION WITH THE FOLLOWING EXCEPTIONS: IN THE EMERGENCY SUPPLY OR EXHAUST MODE THE FAN SHALL OPERATE AT HIGH SPEED. AN INTERLOCK SHALL BE PROVIDED BETWEEN THE ROTARY SWITCHES THAT SHALL PREVENT SIMULTANEOUS OPERATION OF THE FANS IN THE OPPOSITE MODE (SUPPLY VS. EXHAUST) SEE DWG. M-40 FOR FURTHER DETAILS. PROVIDE COMPLETE REMOTE SURVEILLANCE AND CONTROL SYSTEM TO THE DTS CABINETS AS INDICATED FOR LIFE FANS 1 & 2.

**SEQUENCE OF OPERATION**  
**DOME RELIEF FANS 3 & 4**



**FLOW DIAGRAM #2**



**CONTROL DIAGRAM #2**

THE AIR CONDITIONING UNIT FAN SHALL BE STARTED WHEN TEMPERATURE AT SPACE THERMOSTAT T-3 EXCEEDS 72°F (SEE FRESH AIR/EXHAUST FAN CONTACTS) T-1A LOCATED IN THE RETURN AIR OUT OF ACU 1 & 2 CONTROLS THE 3 WAY MIXING VALVE V-1 OF ACU #1 & #2 TO MAINTAIN A 80°F RETURN AIR TEMPERATURE. IF THE TEMPERATURE FALLS BELOW 75° AT THE PLATFORM THE UNITS WILL STOP. DURING THE TIME THE ACU IS IN OPERATION THE COIL OF SOLENOID AIR VALVE EP-1 IS ENERGIZED STARTING THE FRESH AIR/EXHAUST FANS THROUGH PE-1. CONTROL OF ACU #3 SIMILAR EXCEPT UNITS 3 WAY VALVE IS CONTROLLED FROM PYLON MOUNTED THERMOSTAT ON THE MEZZANINE. TIME CLOCK CL-1 SHALL STOP THE ACU FANS THRU EP-3 & PE-3, DRAWING M-40, AS PROGRAMMED, SEE DRAWING M-40. VALVE V-1 RETURNS TO ITS NORMAL POSITION WHENEVER ITS ASSOCIATED ACU IS DE-ENERGIZED.

**SEQUENCE OF OPERATION #2**  
**PLATFORM & MEZZANINE AIR CONDITIONING UNITS 1, 2 and 3**

DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS		
		NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
D.S. FOLLAM	04/17/77					
DRAWN	04/18/77				DDK	DELETE PAGE 6 BY PASS PER REC-05, AS BUILT
CHECKED	04/18/77					
APPROVED	04/18/77					



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SECTION DESIGNER

DE LEUW, CATHAR & COMPANY  
GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *Janice R. H. H. H.* DATE 0-15-80 APPROVED *[Signature]*

**ROCKVILLE ROUTE**  
**AUTOMATIC TEMPERATURE CONTROL**

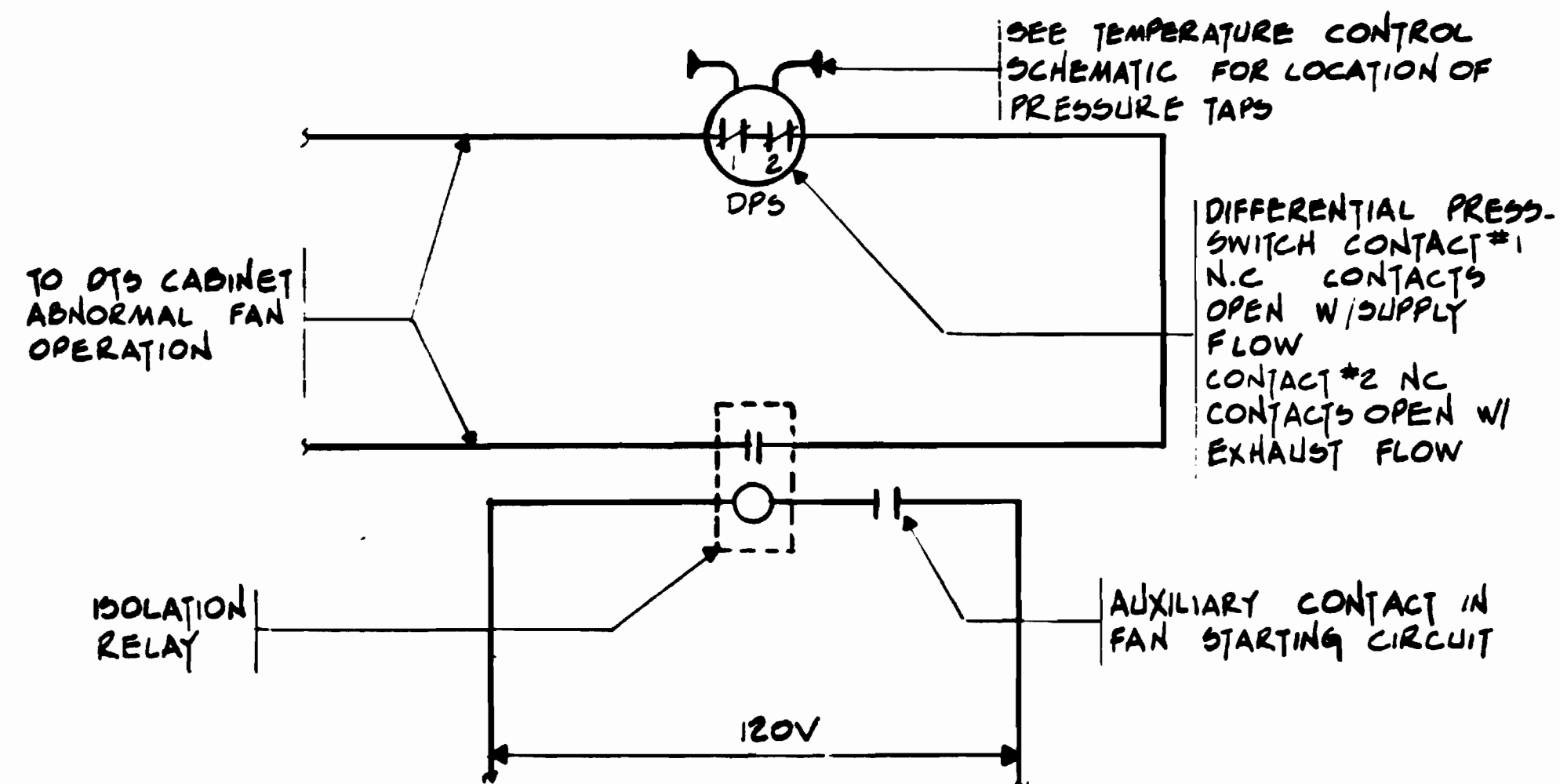
SCALE NONE

DRAWING NO. FA 11-M-43 M334-131

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY  
AS BUILT CONDITION  
*[Signature]*





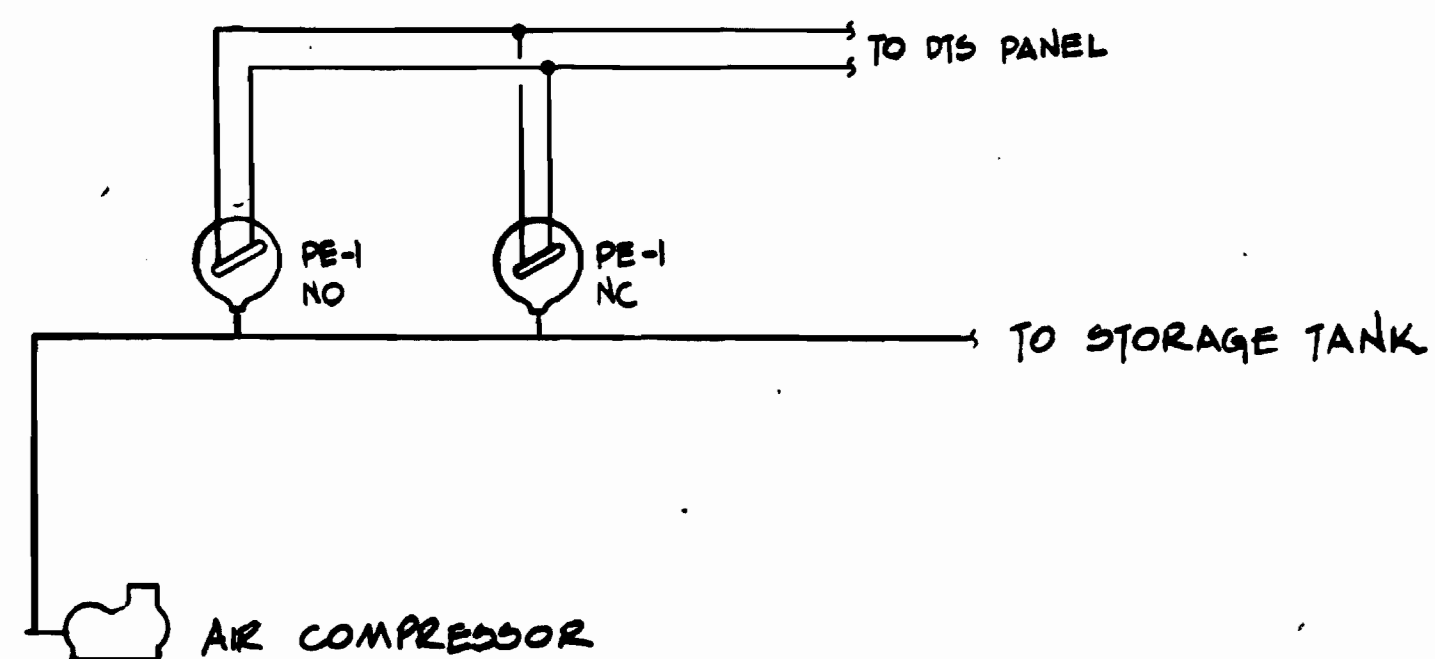


**CONTROL DIAGRAM**

THE DIFFERENTIAL PRESSURE SWITCH DPS SHALL OPEN CONTACTS 1 OR 2 FOR EITHER SUPPLY OR EXHAUST FLOW. THE AUXILIARY CONTACT IN THE FAN STARTING CIRCUIT WILL CLOSE WHEN THE FAN IS ENERGIZED CAUSING THE CONTACT IN THE ISOLATION RELAY TO CLOSE IF THE FAN DOES NOT OPERATE THE DPS SWITCH CONTACT SHALL REMAIN CLOSED. AN ALARM SIGNAL WILL BE RECEIVED AT THE DTS

**SEQUENCE OF OPERATION**

**FAN SURVEILLANCE (FANS NO'S 1, 2, 3, & 4.)**

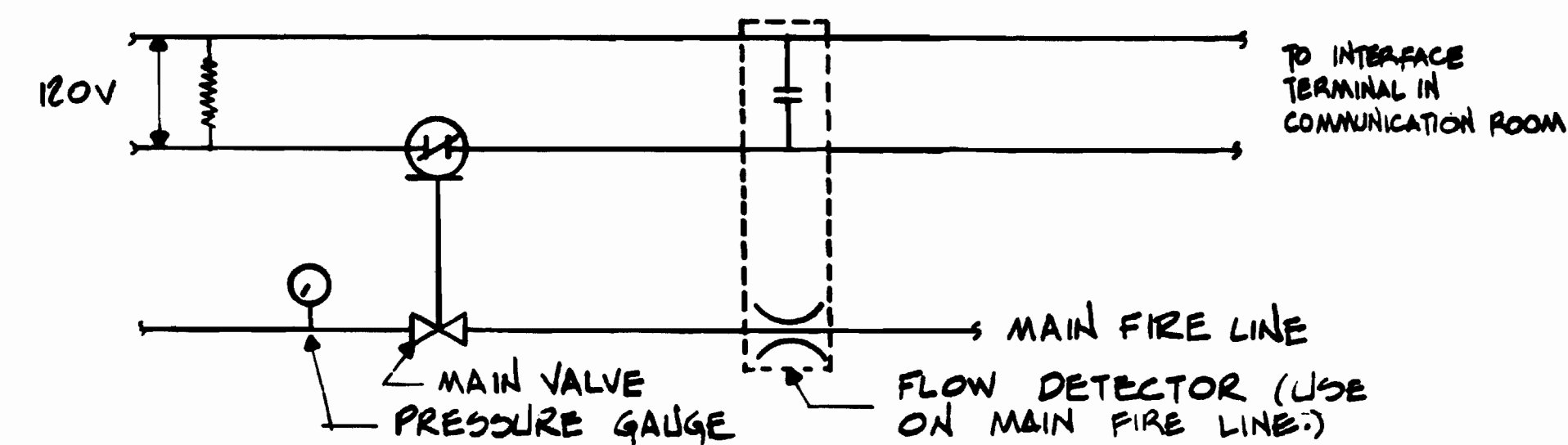


**CONTROL DIAGRAM**

ON A LOSS OF SYSTEM AIR PRESSURE, PE-1 WILL CLOSE, PROVIDING CLOSURE OF AN ALARM CIRCUIT TO THE INDICATING TERMINALS AT THE DTS CABINET. ON A RISE IN SYSTEM AIR PRESSURE OVER 105 PSI, PE-2 WILL CLOSE, PROVIDING CLOSURE OF SAME ALARM CIRCUIT TO THE INDICATED TERMINALS AT THE DTS CABINET.

**SEQUENCE OF OPERATION**

**SEWAGE EJECTOR AIR PRESSURE SURVEILLANCE**



**CONTROL DIAGRAM**

IF THE MAIN MANUAL SUPPLY VALVE IS CLOSED OR IF THERE IS A DETECTION OF FLOW IN A PIPE MAIN, VALVE SWITCH OR FLOW SWITCH WILL BE OPENED CAUSING THE ALARM RELAY NC CONTACT TO OPEN INDICATING AN ALARM AT THE FIRE ALARM CABINET IN THE COMMUNICATION ROOM.

**SEQUENCE OF OPERATION**

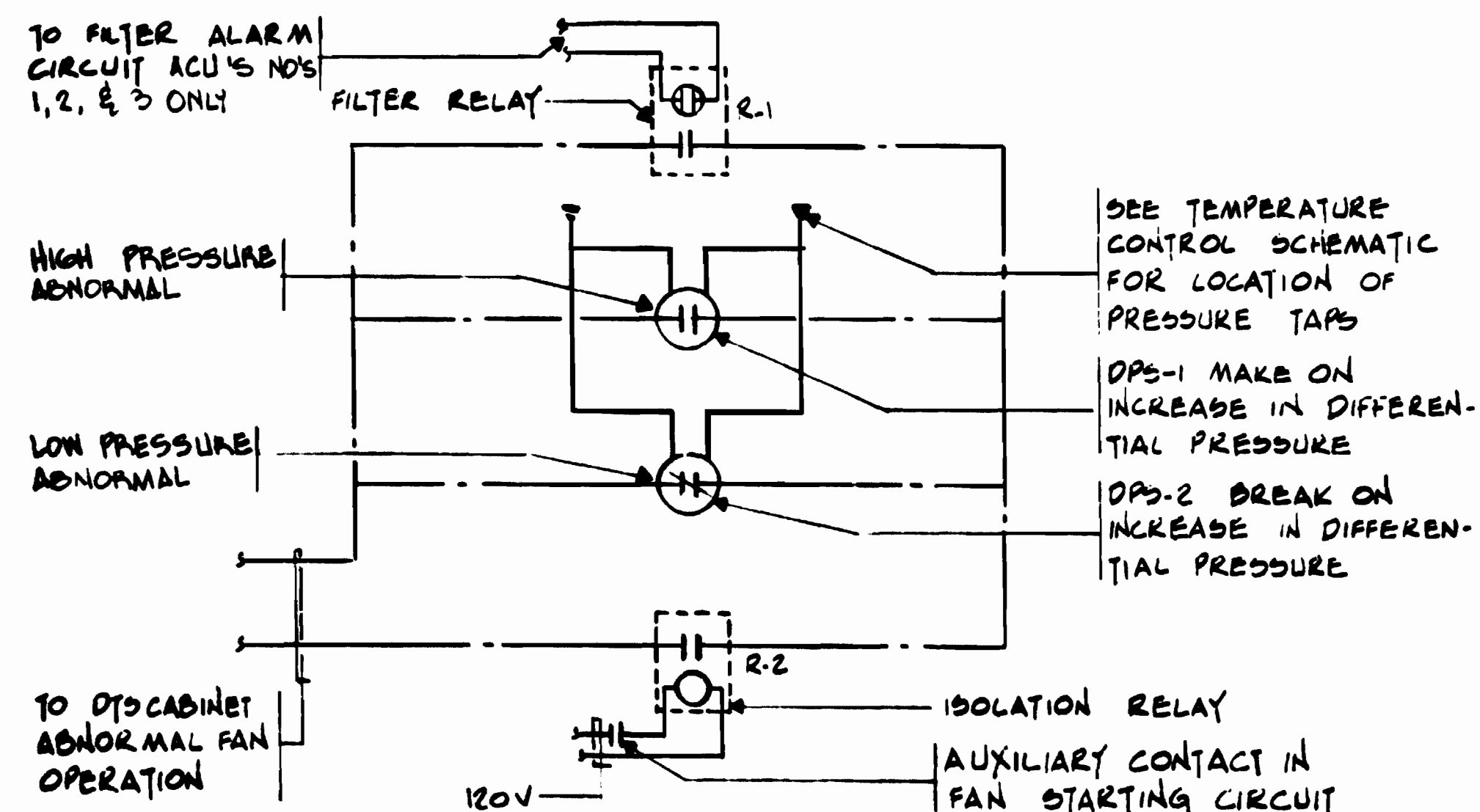
**FIRE PROTECTION SURVEILLANCE** ALL WIRING & CONNECTIONS BY COMMUNICATIONS CONTRACTOR.

**SENSOR SCHEDULE**

TYPE	FUNCTION	LOCATION	SCALE READING		INDICATION		SCALE INCREMENTS	NOTES
			RANGE	ACCURACY	HI	LO		
TEMPERATURE	SPACE AIR	TUNNEL AT FAN SHAFT	ALARM INDICATION ONLY		100°	50°	—	5
TEMPERATURE	SPACE AIR	STATION PLATFORM	ABNORMAL INDICATION ONLY		105°	50°	—	5
TEMPERATURE	CHILLED WATER IN	ON CHILLER	30° - 110°	1°	58°	44°	1°	2,3,4,9
TEMPERATURE	CHILLED WATER OUT	ON CHILLER	30° - 110°	1°	50°	39°	1°	2,3,4,9
PRESSURE	EVAPORATOR	ON CHILLER	RANGE AS REQUIRED BY CHILLER MANUFACT.		—	—	—	3,4,9
FLOW (PRESS DIFFER)	CHILLED WATER	ON CHILLER	0-5 PSIG	5% OF SCALE	—	—	—	1,3,9
TEMPERATURE	CONDENSER WATER IN	ON CHILLER	ALARM INDICATION ONLY		105°	45°	N/A	2,3,4
TEMPERATURE	CONDENSER WATER OUT	ON CHILLER	ALARM INDICATION ONLY		120°	55°	N/A	2,3,4
PRESSURE	REFRIGERANT DISCHARGE	ON CHILLER	RANGE AS REQUIRED BY CHILLER MANUFACT.		—	—	—	3,4,9
TEMPERATURE	LUBRICATING OIL	ON CHILLER	ALARM INDICATION ONLY		—	—	N/A	2,3,4
PRESSURE (DIFF)	CONDENSER FLOW	ON CHILLER	ALARM INDICATION ONLY		—	—	N/A	3,4
PRESSURE	CHILLER PURGE AIR	ON CHILLER	ALARM INDICATION ONLY		20 PSIG	10 PSIG	N/A	3,4
PRESSURE	CONTROL AIR	DISCHARGE COMPRESSED AIR	ALARM INDICATION ONLY		105 PSIG	60 PSIG	N/A	—
TEMPERATURE	SPACE AIR	CHILLER PLANT SEE DWG'S	ALARM INDICATION ONLY		100°	50°	N/A	—
PRESSURE (DIFF)	AIR FLOW (S.P)	CROSS FILTER SEE DWG'S	ALARM INDICATION ONLY		AS REQUIRED	—	N/A	6
PRESSURE	COMPRESSED AIR	SEWAGE PLANT AIR LINE SUBJECT	ALARM INDICATION ONLY		—	—	N/A	8
WATER FLOW	SPRINKLER LINE	FIRE PROTECT. SPRINKLER LINE	ALARM INDICATION ONLY		—	—	N/A	11,13
VALVE INDICATOR	VALVE POSITION	MAIN FIRE LINE	ALARM INDICATION ONLY		N/A	N/A	N/A	15
PRESSURE DIFFERENTIAL	AIR FLOW (S.P)	EXHAUST FANS	ALARM INDICATION ONLY		AS REQUIRED BY SPECIFIC FAN	—	N/A	7

**NOTES**

- ORIFICE PLATE PROVIDED UNDER CONTROL SECTION COORDINATE FLOW INDICATOR WITH ORIFICE PROVIDED ORIFICE PLATE, METER & CONVERTER SHALL READ TO 5% ACCURACY - 10GPM DIGITAL SPACING
- SENSOR WELLS REQUIRED
- WELLS & SENSORS SHALL BE DELIVERED TO CHILLER MANUFACTURER FOR INSTALLATION ON CHILLER COORDINATE RANGE ACCURACY AND SCALE INCREMENTS OF PRESSURES & TEMPERATURES SIGNALS SHALL BE CONNECTED TO INDICATED TERMINALS
- COORDINATE WITH CHILLER MANUFACTURER FOR OPERATING & ABNORMAL HI/LOW PRESSURE
- SEE AIR CONDITIONING & VENTILATION PLANS FOR LOCATION OF ACU, VU AND FANS
- COORDINATE W/ FILTER & ACU - VU MANUFACTURERS FOR OPERATING & ABNORMAL PRESSURE VALUES
- COORDINATE W/ FAN MANUFACTURER FOR OPERATING AND ABNORMAL PRESSURES
- COORDINATE W/ SEWAGE EJECTOR MANUFACTURER SELECT PRESSURE TO SUIT SITE
- HI-LO INDICATION TO BE PART OF COMPUTER SOFTWARE PROGRAM
- COORDINATE WITH FIRE PROTECTION SYSTEM MANUFACTURER FOR MAXIMUM WATERFLOW PERMISSIBLE
- SENSORS PROVIDED BY OTHERS.
- SEE FIRE PROTECTION SURVEILLANCE DIAGRAM THIS DRAWING.

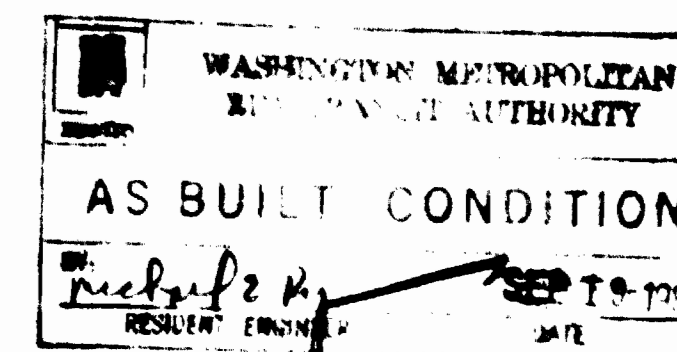


**CONTROL DIAGRAM**

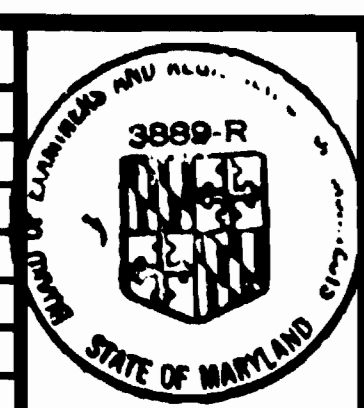
DIFFERENTIAL PRESSURE SWITCH DPS-1 SHALL CLOSE ITS CONTACTS ON AN INCREASE OF PRESSURE OVER NORMAL OPERATING CONDITIONS DPS-2 SHALL BREAK ITS CONTACTS ON INCREASE OF PRESSURE. RELAY R-1 (FILTER RELAY) SHALL RECEIVE ANY ABNORMAL SIGNALS FROM THE EXTERNAL LEADS AT THE FILTER CONTROL PANEL AND CLOSE THE CONTACTS THE AUXILIARY CONTACT IN THE FAN STARTING CIRCUIT WILL CLOSE WHEN THE FAN IS ENERGIZED CAUSING THE CONTACT IN THE ISOLATION RELAY R-2 TO CLOSE. IF EITHER DPS-1 AND R-1 CONTACTS CLOSE OR DPS-2 REMAINS CLOSED AFTER R-2 CONTACTS ARE CLOSED AN ALARM SIGNAL WILL BE RECEIVED AT THE DTS.

**SEQUENCE OF OPERATION**

**COIL FAN & FILTER SURVEILLANCE (ACU 1, 2, 3, & 4)**



DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS	
		NUMBER	DESCRIPTION	DATE	DESCRIPTION
DRAWN	D.B. FOLLAIN				
CHECKED	S.R. MICHAELIS				
APPROVED	S.R. MICHAELIS				



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

MATHEWS • CHATELAIN • BEALL  
ENGINEERS AND ARCHITECTS  
SECTION DESIGNER

DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT

HARRY WEISE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *Jan 15, 1980* DATE 0-15-80 APPROVED *[Signature]*

**ROCKVILLE ROUTE**  
REMOTE SURVEILLANCE AND CONTROL  
SENSOR SCHEDULE

SCALE NONE DRAWING NO. FA 11-M-42 M334-132

**DTS CABINET #1**  
AT CHILLER PLANT

CHILLED WATER PUMPS (AUTO)	(C)	1
CHILLED WATER PUMPS NORMAL OFF	(C)	2
CHILLED WATER PUMPS NORMAL OFF	(I)	3
CHILLED WATER PUMPS EMERG OFF	(C)	4
CHILLED WATER PUMPS EMERG OFF	(I)	5
SPACE TEMP ABNORMAL	(I)	6
SYSTEM CONTROL AIR ABNORMAL	(I)	7
CHILLER ON	(C)	8
CHILLER OFF	(C)	9
CHILLER OFF	(I)	10
CHILLED WATER TEMPERATURE IN (T IN) (FROM A/D CONVERTER)		20-36
CHILLED WATER TEMPERATURE OUT (T OUT) (FROM A/D CONVERTER)		37-52
CHILLED WATER FLOW (FROM A/D CONVERTER)		53-62

REFRIGERANT EVAPORATOR PRESSURE (FROM A/D CONVERTER)

CONDENSER WATER ABNORMAL FLOW (I)

CONDENSER WATER T OUT ABNORMAL (I)

CONDENSER WATER T IN ABNORMAL (I)

REFRIGERANT DISCHARGE PRESSURE (FROM A/D CONVERTER)

OIL TEMPERATURE ABNORMAL (I)

PURGE AIR PRESSURE ABNORMAL (I)

EXTERNAL SINC-RONIZATION

CHILLED WATER TEMP IN

CHILLED WATER TEMP OUT

CHILLED WATER FLOW

REFRIGERANT EVAPORATOR PRESSURE

REFRIGERANT DISCHARGE PRESSURE

**DTS CABINET #2**  
SOUTH A/C SWITCHBOARD RM

ELM. ST. VENT SHAFT ABNORMAL OPERATION		1
STATION TEMPERATURE ABNORMAL (I)		2
FAN & FILTER (ACU #2) ABNORMAL OPERATION	(I)	3
PNEUMATIC SEWAGE EJECTOR ABNORMAL OPERATION	(I)	4
F-2 ABNORMAL OPERATION (I)		5
F-2 EMERGENCY OFF (I)		6
F-2 EMERGENCY ON (I)		7
F-2 SUPPLY (I)		8
F-2 AUTOMATIC (C)		9
F-2 EMERGENCY OFF (C)		10
F-2 EMERGENCY ON (C)		11
F-2 SUPPLY (C)		12
F-2 EXHAUST (C)		13
F-4 ABNORMAL OPERATION (I)		14
F-4 EMERGENCY OFF (I)		15
F-4 EMERGENCY ON (I)		16
F-4 SUPPLY (I)		17
F-4 AUTOMATIC (C)		18
F-4 EMERGENCY OFF (C)		19
F-4 EMERGENCY ON (C)		20
F-4 SUPPLY (C)		21
F-4 EXHAUST (C)		22
FAN #1 BATTERY NORMAL OPERATION		23
FAN #1 BATTERY FAILURE		24
FAN #2 BATTERY NORMAL OPERATION		25
FAN #2 BATTERY FAILURE		26

**DTS CABINET #3**  
NORTH A/C SWITCHBOARD

VENT SHAFT ABNORMAL OPERATION (I)		1
FAN & FILTER ACU #1 ABNORMAL OPERATION	(I)	2
FAN & FILTER ACU #3		3
F-1 ABNORMAL OPERATION (I)		4
F-1 EMERGENCY OFF (I)		5
F-1 EMERGENCY ON (I)		6
F-1 SUPPLY (I)		7
F-1 AUTOMATIC (C)		8
F-1 EMERGENCY OFF (C)		9
F-1 EMERGENCY ON (C)		10
F-1 SUPPLY (C)		11
F-1 EXHAUST (C)		12
F-3 ABNORMAL OPERATION (I)		13
F-3 EMERGENCY OFF (I)		14
F-3 EMERGENCY ON (I)		15
F-3 SUPPLY (I)		16
F-3 AUTOMATIC (C)		17
F-3 EMERGENCY OFF (C)		18
F-3 EMERGENCY ON (C)		19
F-3 SUPPLY (C)		20
F-3 EXHAUST (C)		21
FAN #2 BATTERY NORMAL OPERATION		22
FAN #2 BATTERY FAILURE		23
FAN #3 BATTERY NORMAL OPERATION		24
FAN #3 BATTERY FAILURE		25

**DTS CABINET #5**  
WEST VIRGINIA FAN SHAFT

FAN SHAFT ABNORMAL OPERATION (I)		1
EMERGENCY OFF (I)		2
EMERGENCY ON (I)		3
AUTOMATIC (I)		4
FANS EXHAUST (C)		5
FANS SUPPLY (C)		6
EMERGENCY OFF (C)		7
EMERGENCY ON (C)		8
SUPPLY (I)		9
TUNNEL TEMPERATURE TRANSMITTER (I) ABNORMAL HIGH		20
TUNNEL TEMPERATURE TRANSMITTER (I) ABNORMAL LOW		21

DESIGNED	D. B. FOLLAIN	08/19/78
DRAWN	D. B. FOLLAIN	08/19/78
CHECKED	S. R. MICHAELIS	02/19/80
APPROVED	S. R. MICHAELIS	04/18/80

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION
9/13/80	SRM	GENERAL REVISIONS



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

MATHEWS • CHATELAIN • BEALL  
ENGINEERS AND ARCHITECTS  
SECTION DESIGNER

DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT

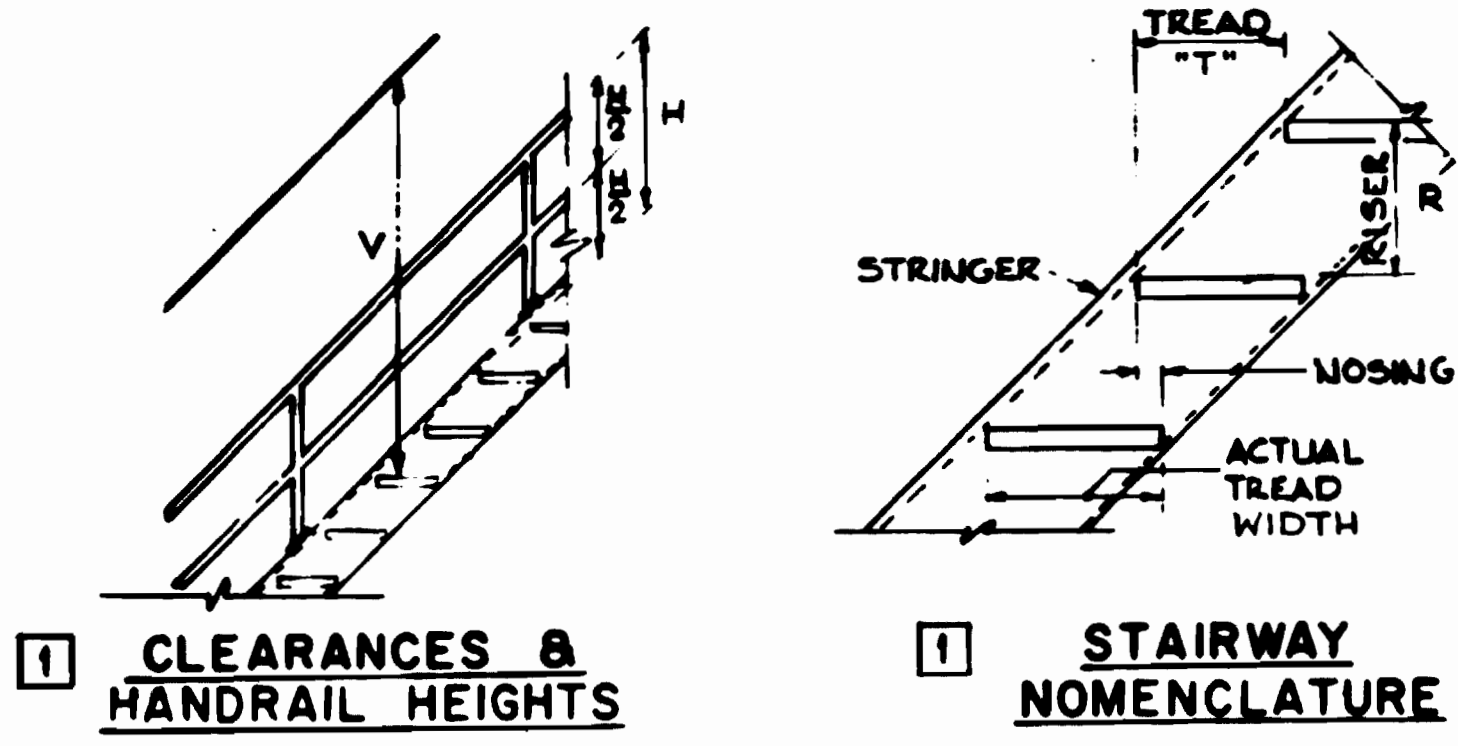
HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *Jan 15 1980* DATE 0-15-80 APPROVED *[Signature]*

**ROCKVILLE ROUTE**  
REMOTE SURVEILLANCE AND CONTROL

SCALE NONE DRAWING NO. FA II-M-44 M334-133

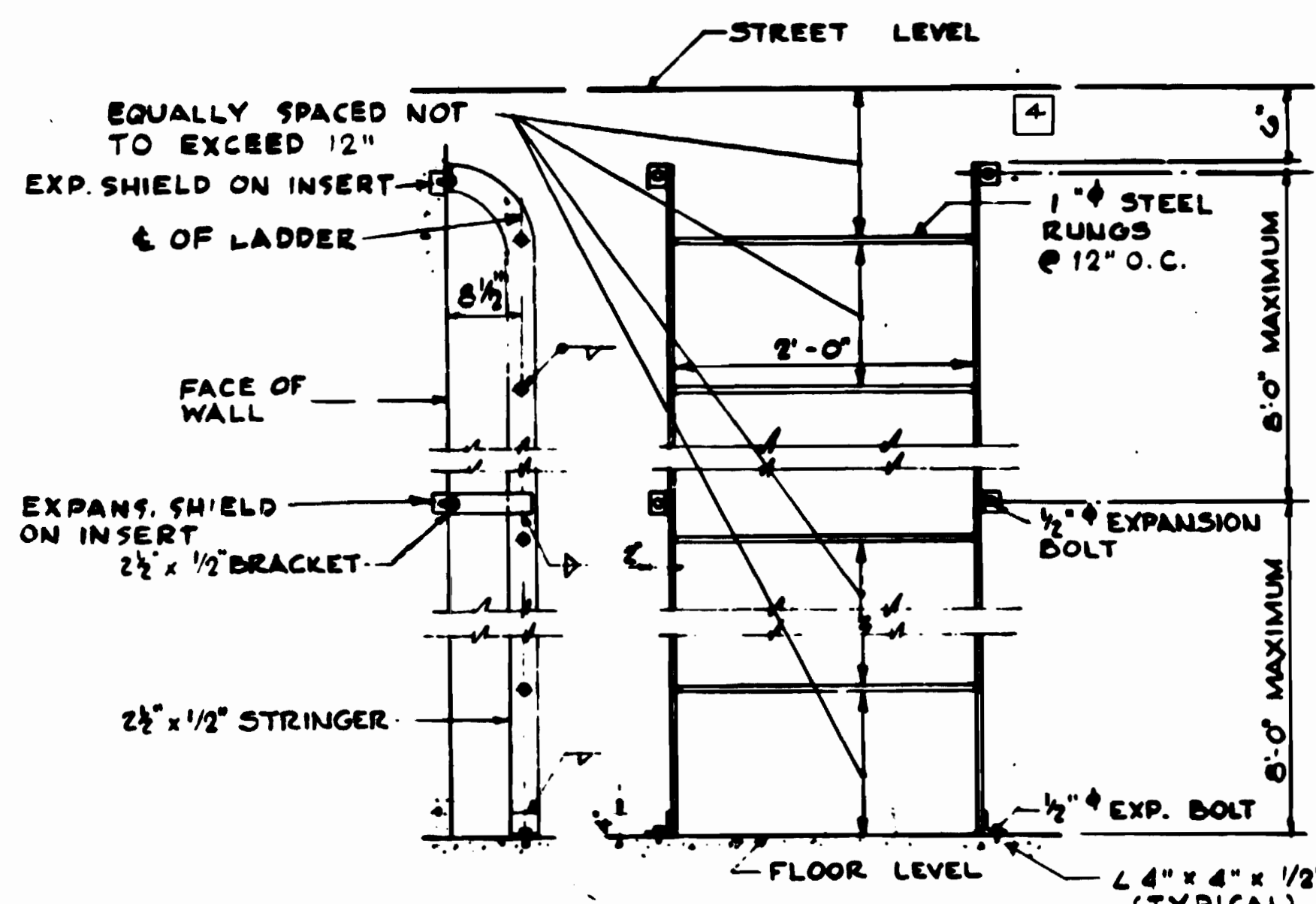




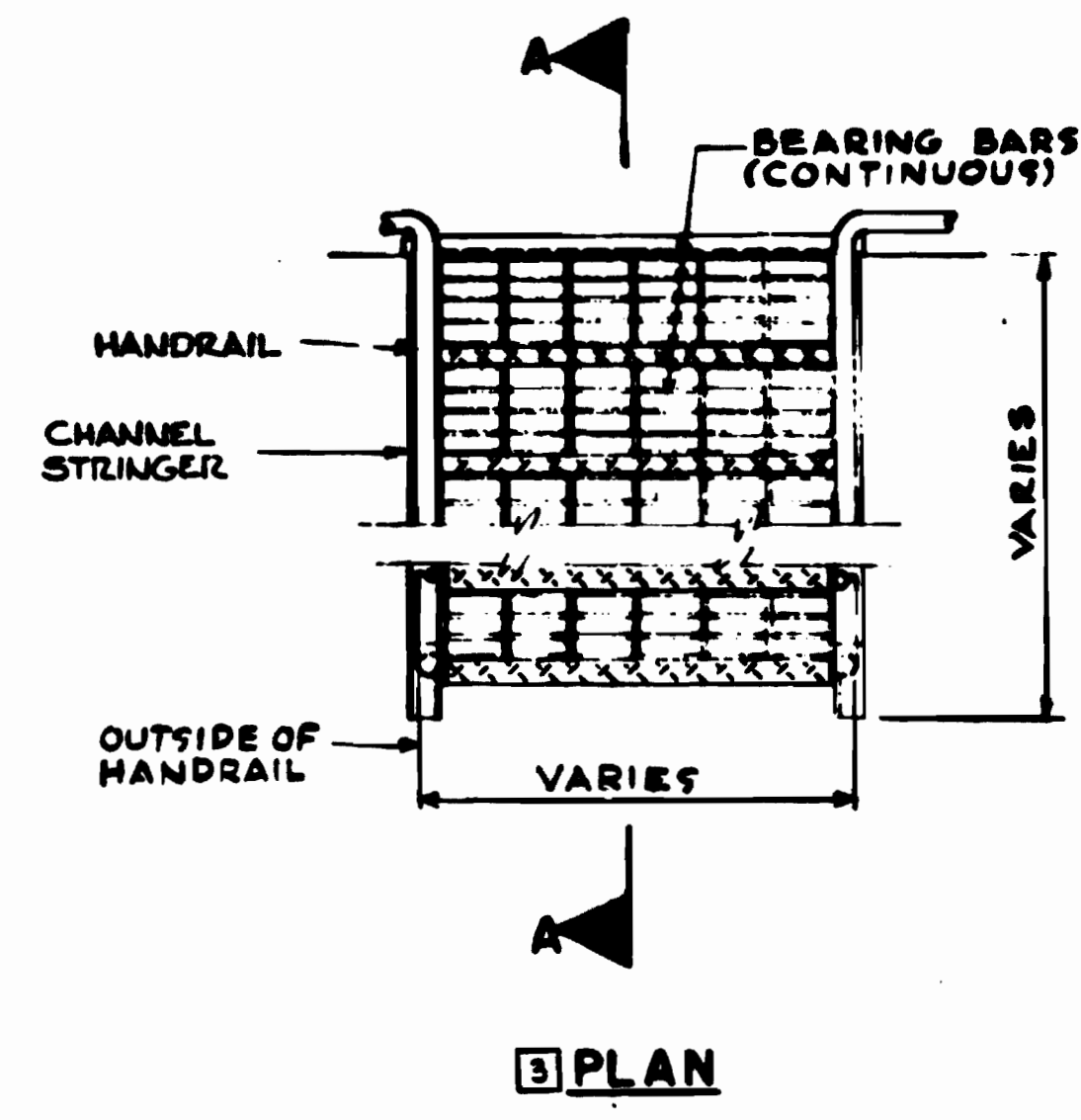
1 CLEARANCES & HANDRAIL HEIGHTS  
1 STAIRWAY NOMENCLATURE

**METAL STAIRWAY DETAILS**

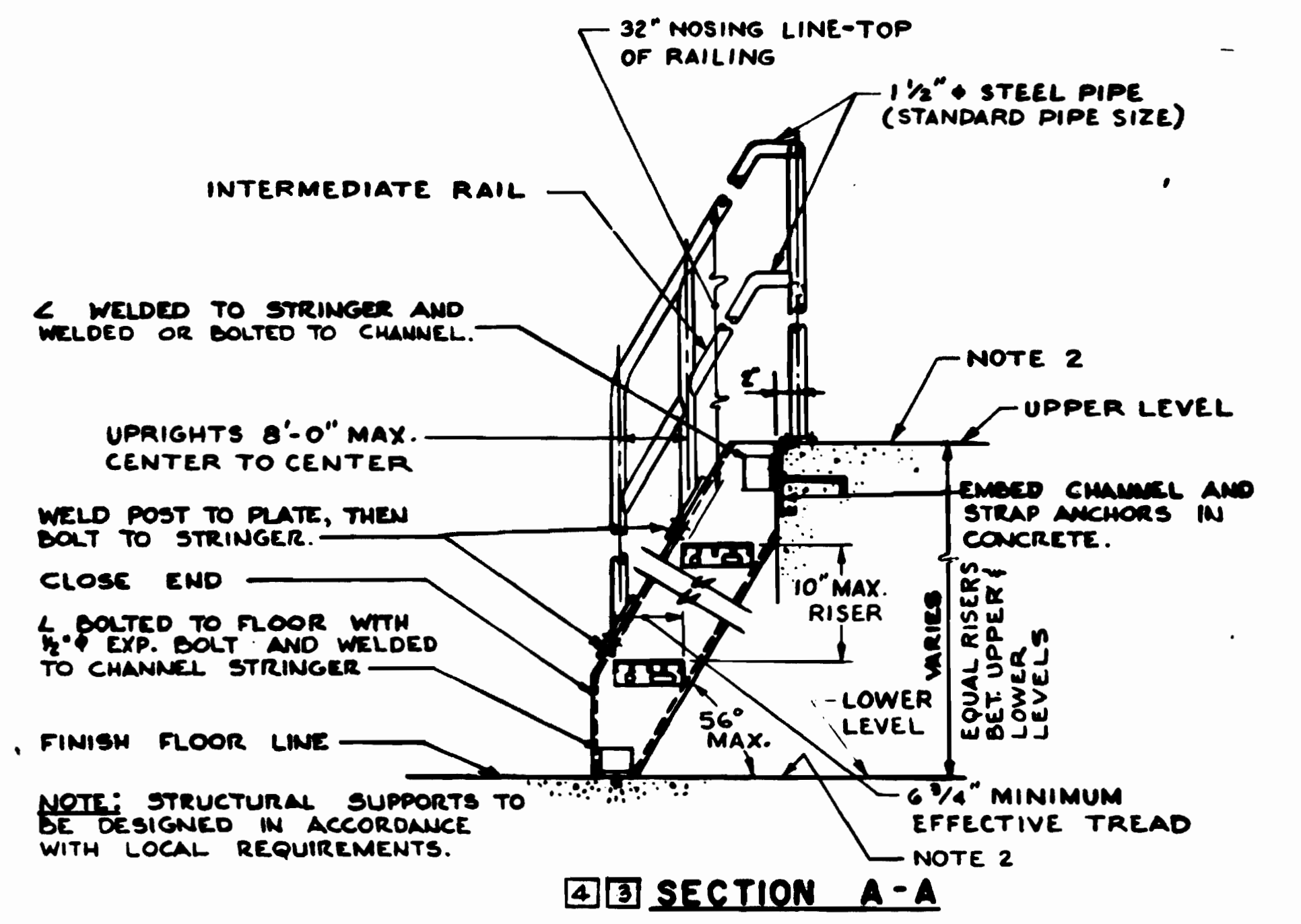
DIMENSIONS	DISTRICT OF COLUMBIA	MARYLAND & VIRGINIA
H	3'-0"	2'-9"
V	6'-8"	6'-8"
R	7 3/4" MAX.	7 1/2" MAX.
T	9 1/2" MIN.	9 1/2" MIN.



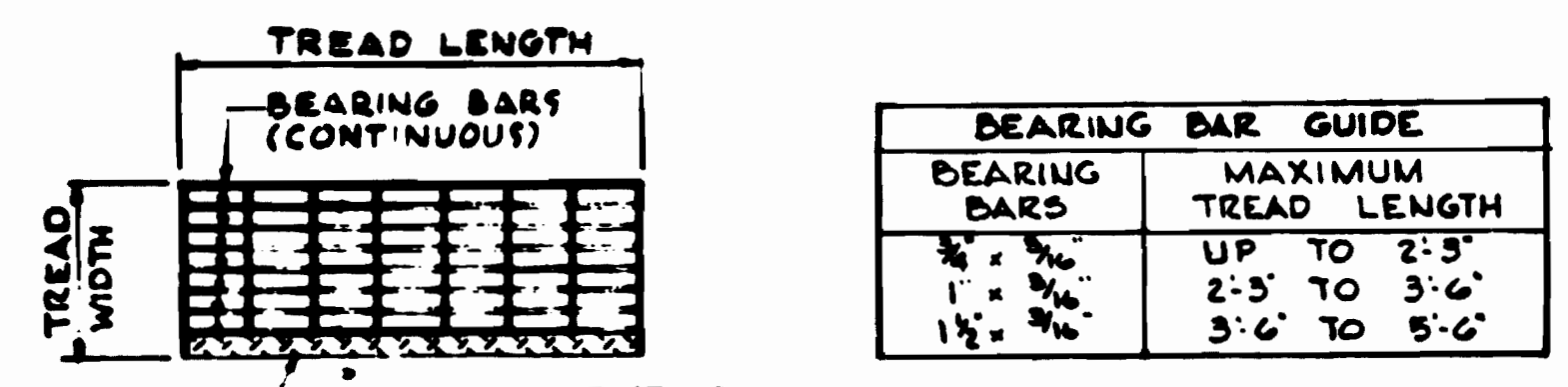
2 1 METAL FIXED LADDER (TYPE 1)



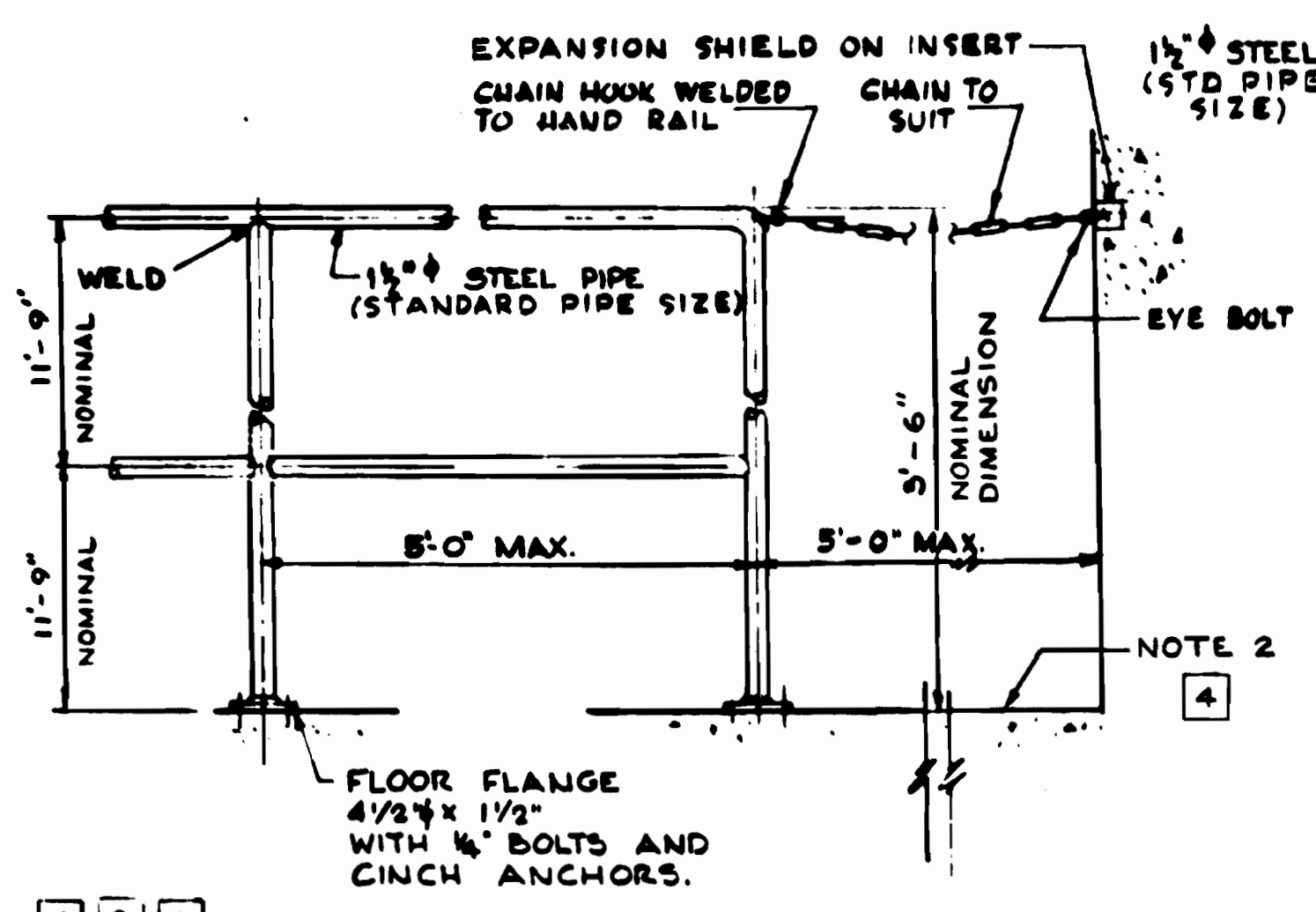
3 PLAN



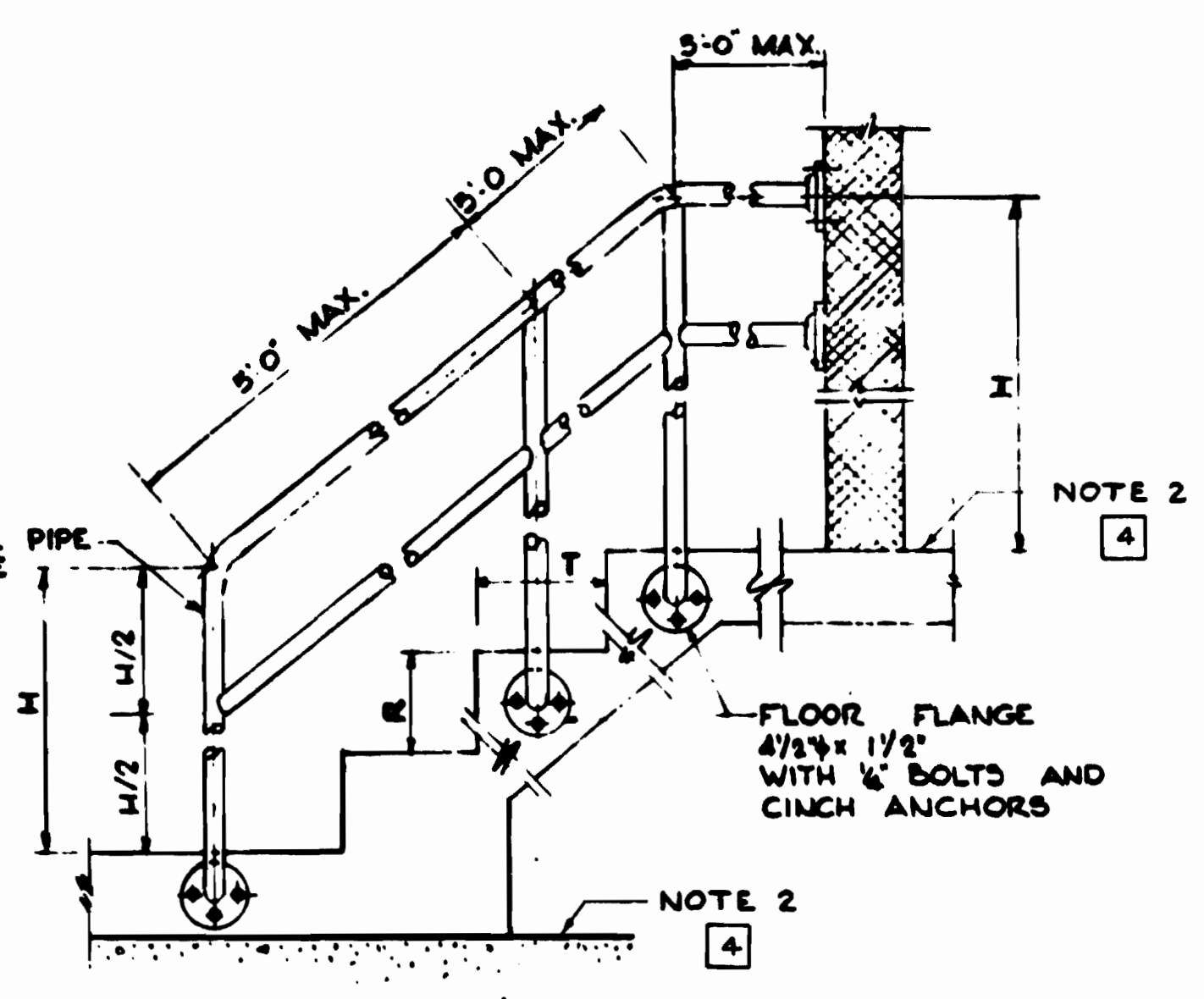
METAL SHIP'S LADDER



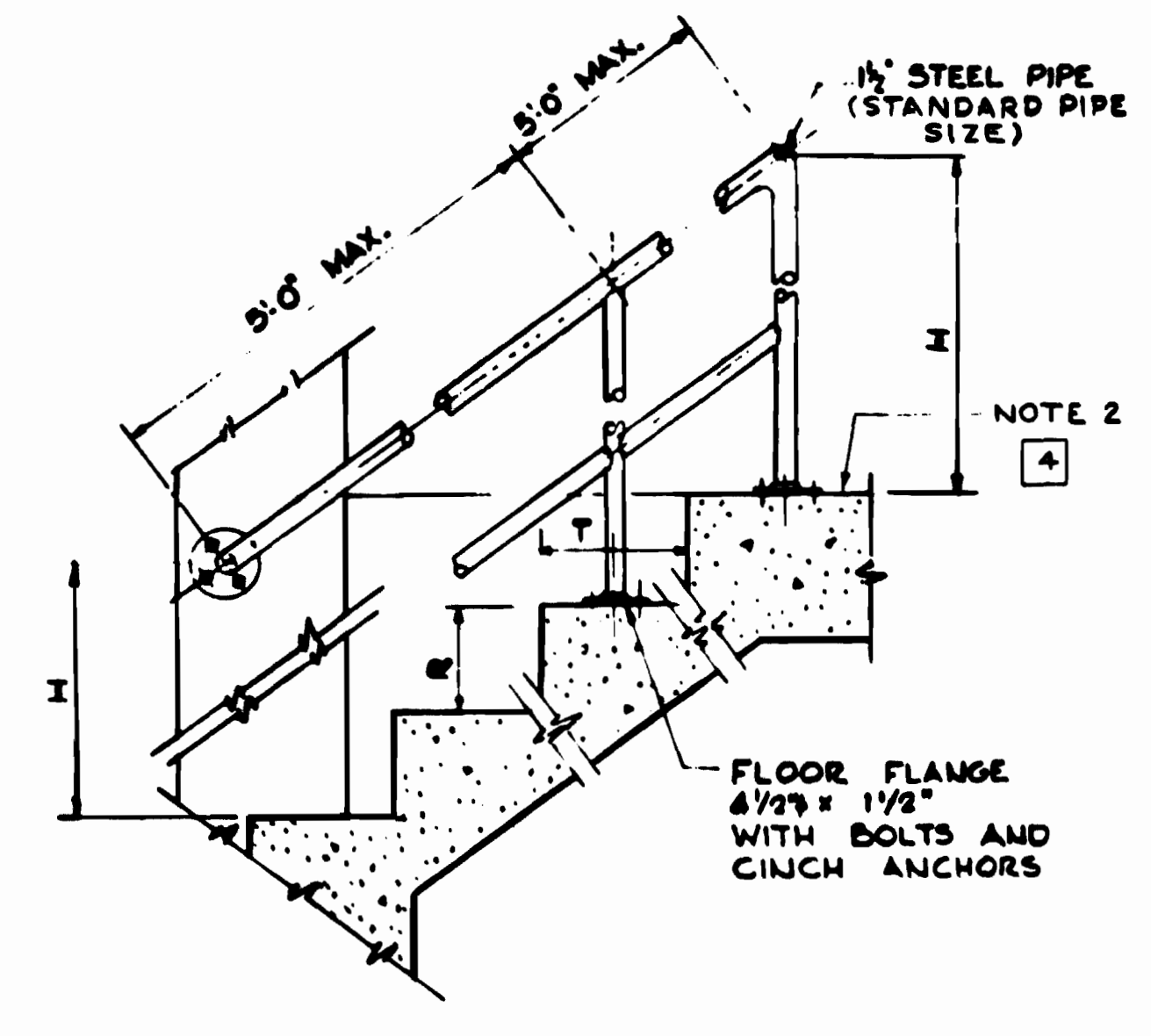
TREAD DETAILS



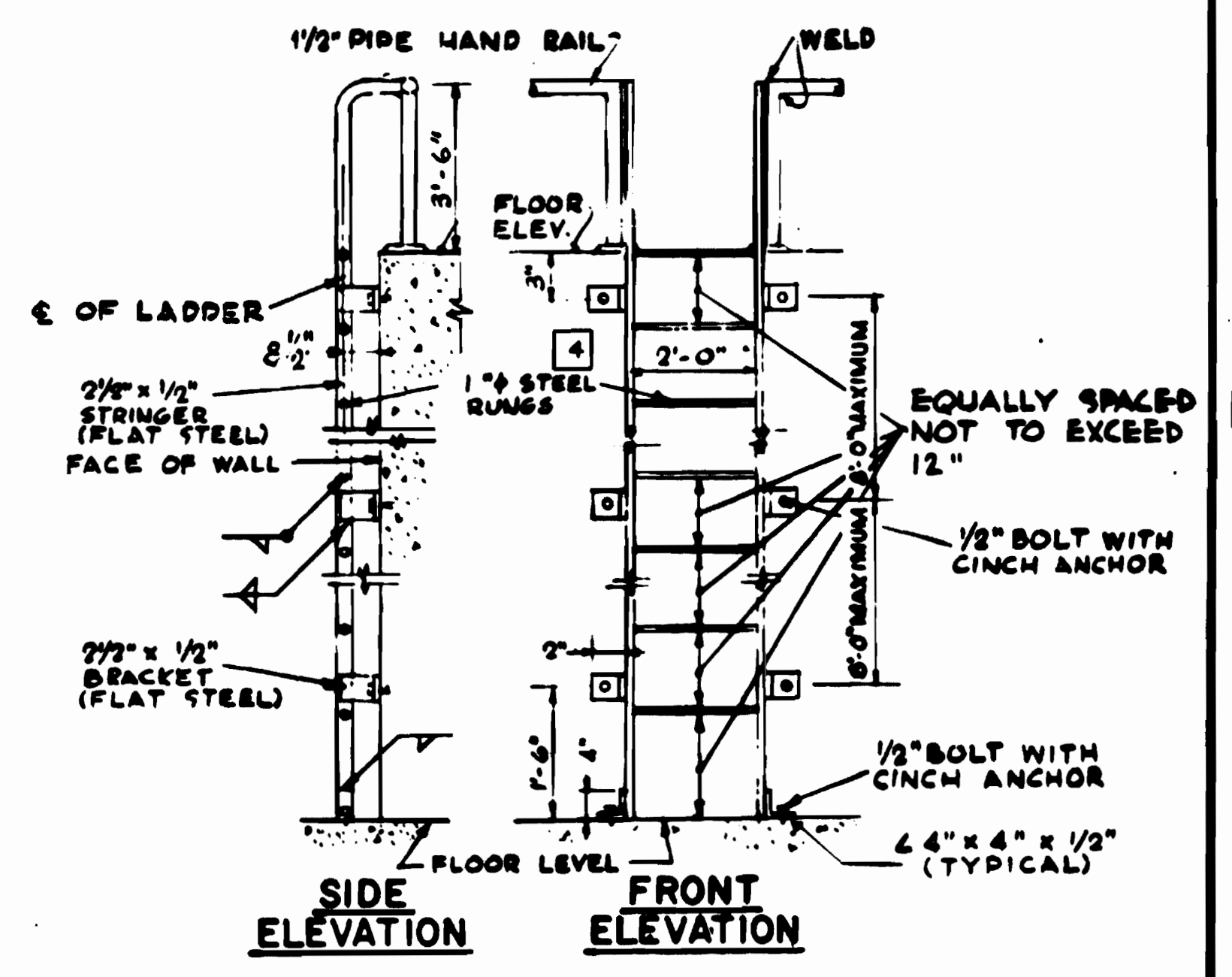
2 1 TYPICAL HANDRAIL (FLOOR MOUNTED) SHOWING CHAIN GUARD ARRANGEMENT (WHERE APPLICABLE)



2 1 TYPICAL STAIR HANDRAIL (SIDE MOUNTED)



2 1 TYPICAL STAIR HANDRAIL (FLOOR MOUNTED)

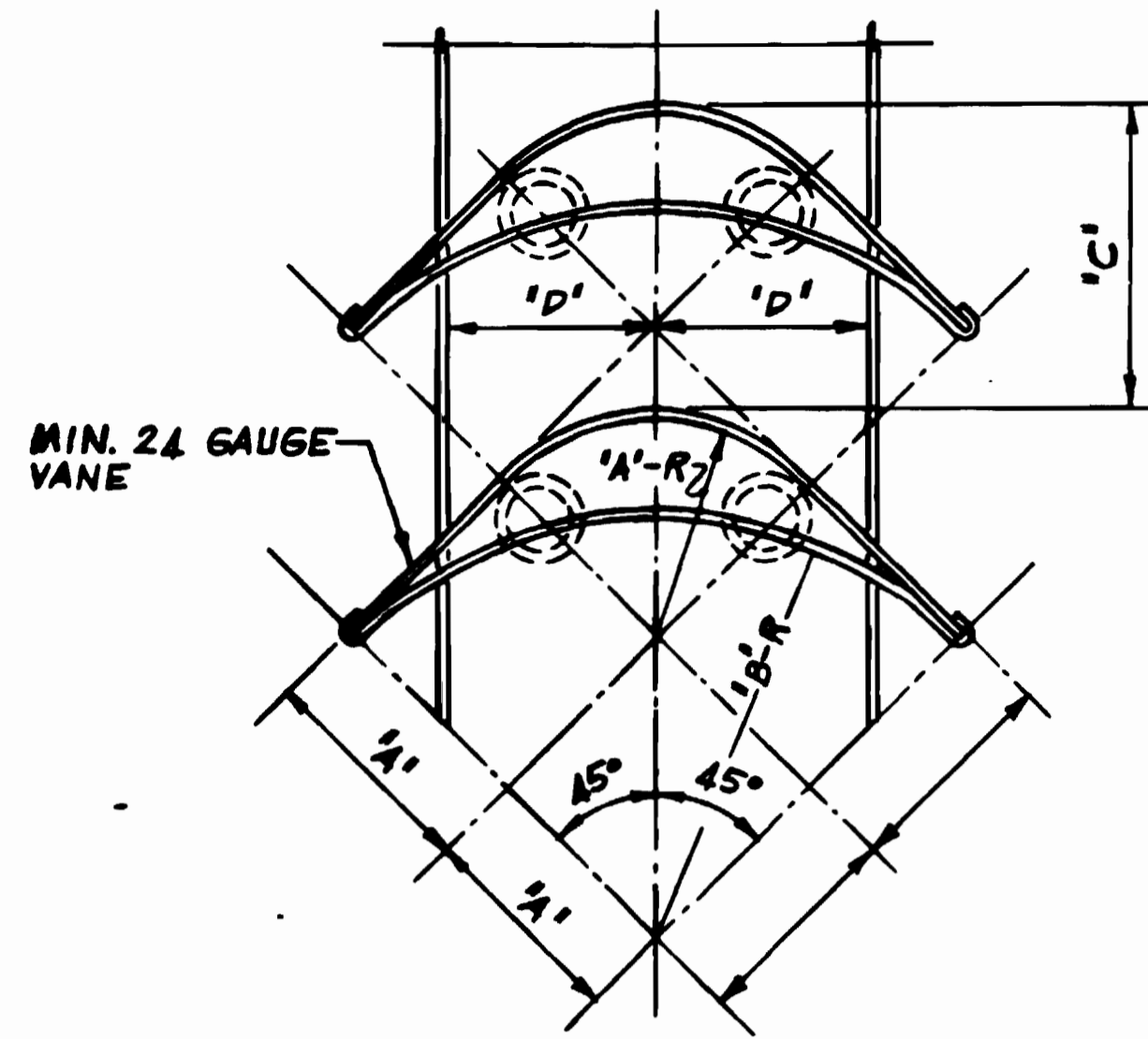


2 1 METAL FIXED LADDER (TYPE 2)

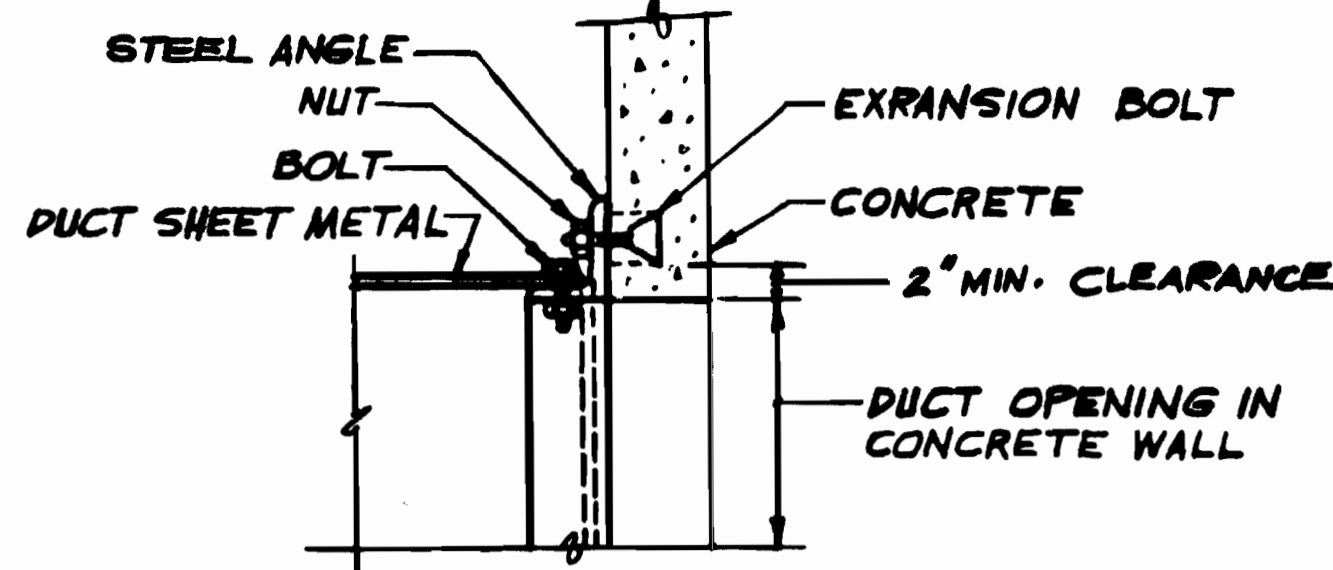
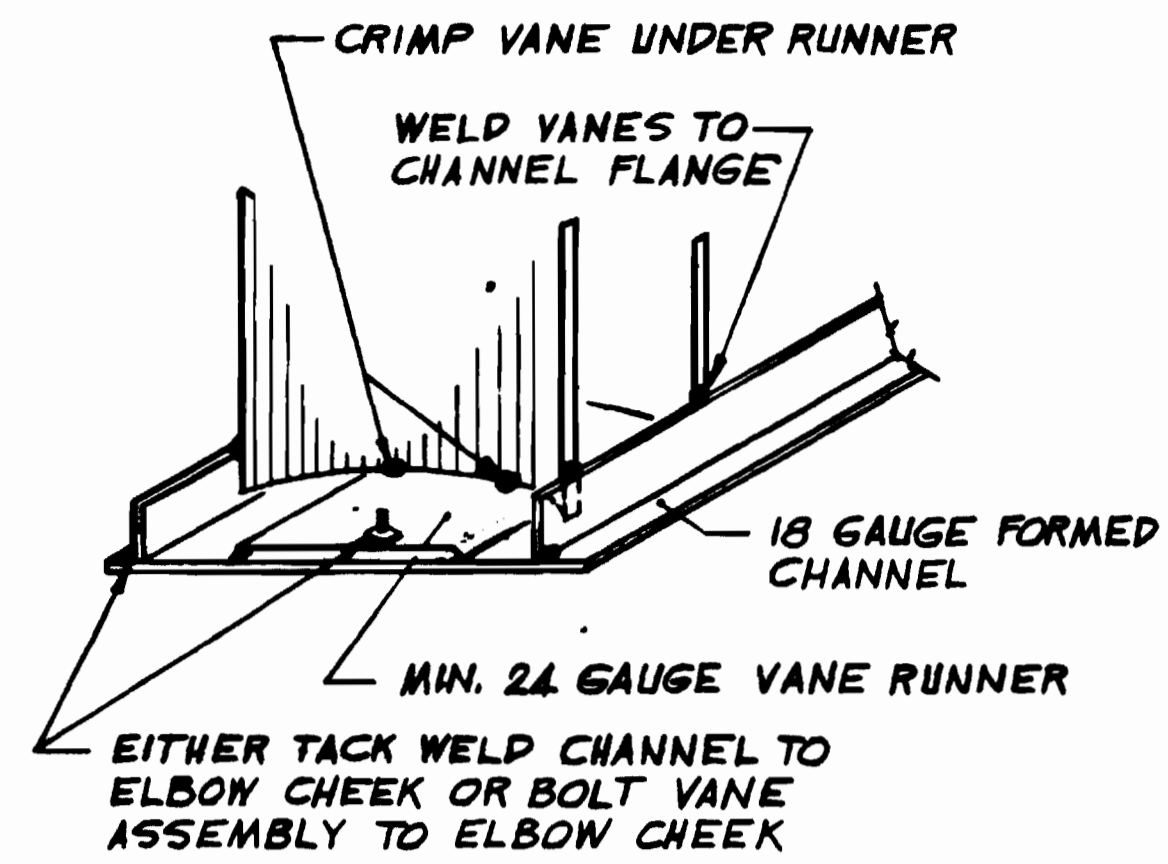
FOR STAIR AND HANDRAIL DIMENSIONS SEE "METAL STAIRWAY DETAIL NOTES"

- GENERAL NOTES**
1. ALL METAL PARTS SHALL BE HOT DIP GALVANIZED STEEL.
  2. TOEBOARDS SHALL BE PROVIDED IN ACCORDANCE WITH OSHA STANDARDS.

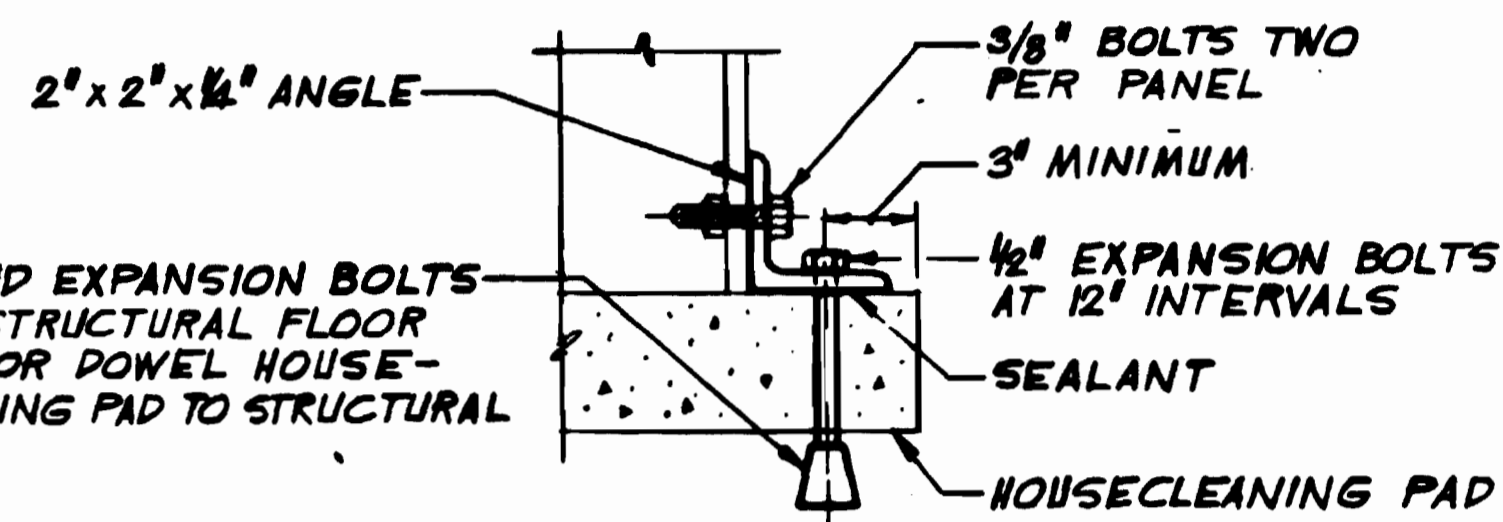
DESIGNED A.C. CHAWLA 8/1/66 DATE	REFERENCE DRAWINGS	REVISIONS		WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY		MECHANICAL STANDARD DRAWING	
DRAWN D.F. HERBERT 8/8/66 DATE	NUMBER DESCRIPTION	DATE BY DESCRIPTION		APPROVED <i>Harold N. Lyman</i>	DE LEUW, CATHAR & COMPANY GENERAL ENGINEERING CONSULTANT	STAIRS, LADDERS, AND HANDRAILS	
CHECKED C.M. BISHOP 8/15/66 DATE				HARRY WEESE & ASSOCIATES GENERAL ARCHITECTURAL CONSULTANT	SECTION NO. FA 11		
APPROVED <i>Michael Skyp</i> 2/29/69 DATE				APPROVED <i>J. G. ...</i>	SCALE NOT TO SCALE	DRAWING NO. ST-M-12	M334-134



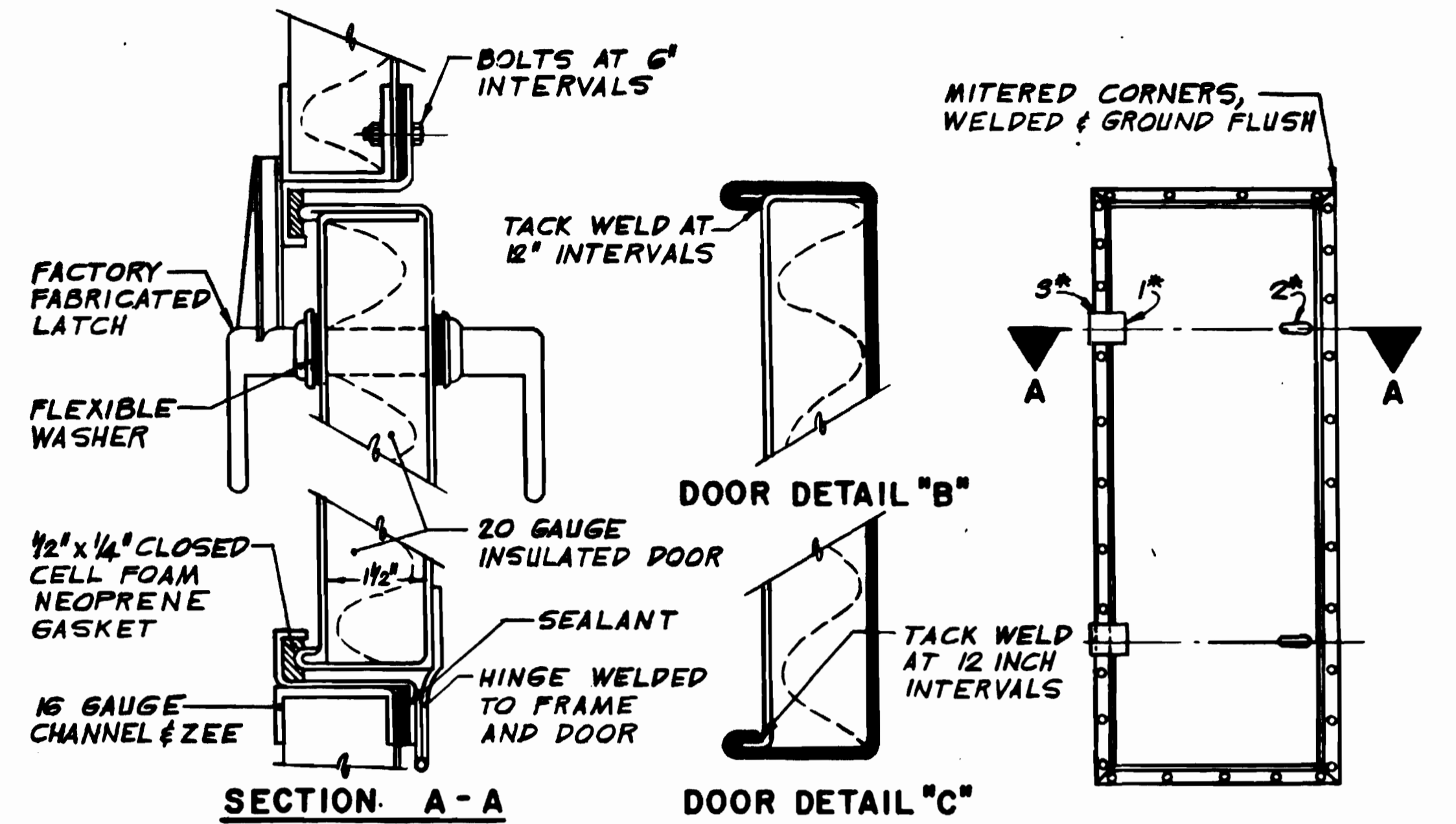
**TURNING VANES DETAIL**



**DETAIL OF CONNECTION OF METAL DUCT TO CONCRETE DUCT**

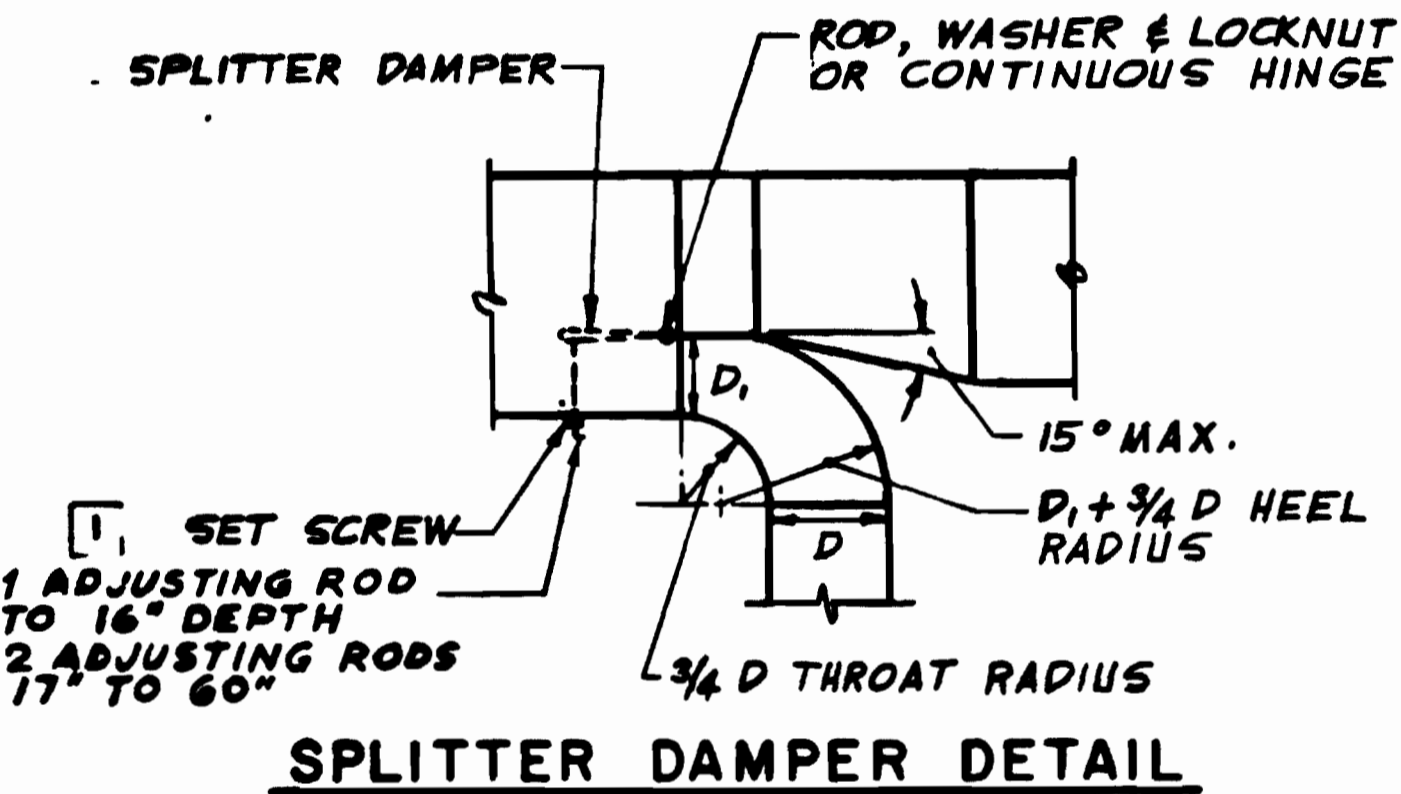


**PLENUM CASING DETAIL**

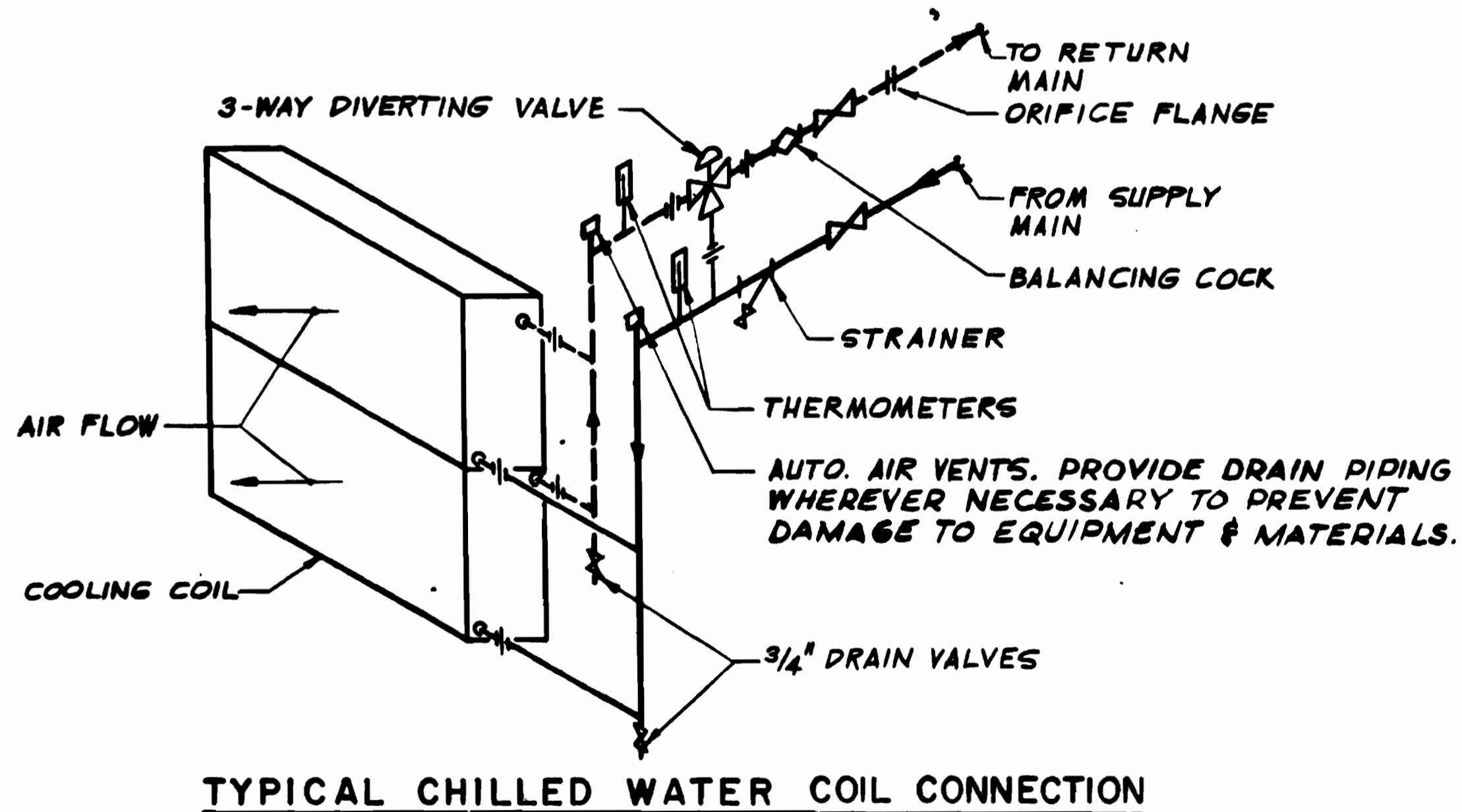


NOTES: 1. 2 HINGES MINIMUM  
2. 2 LATCHES ON DOORS OVER 16" x 16"  
3. HINGES TO BE MADE OF 1/8" THICK GALVANIZED IRON WITH BRASS PINS.

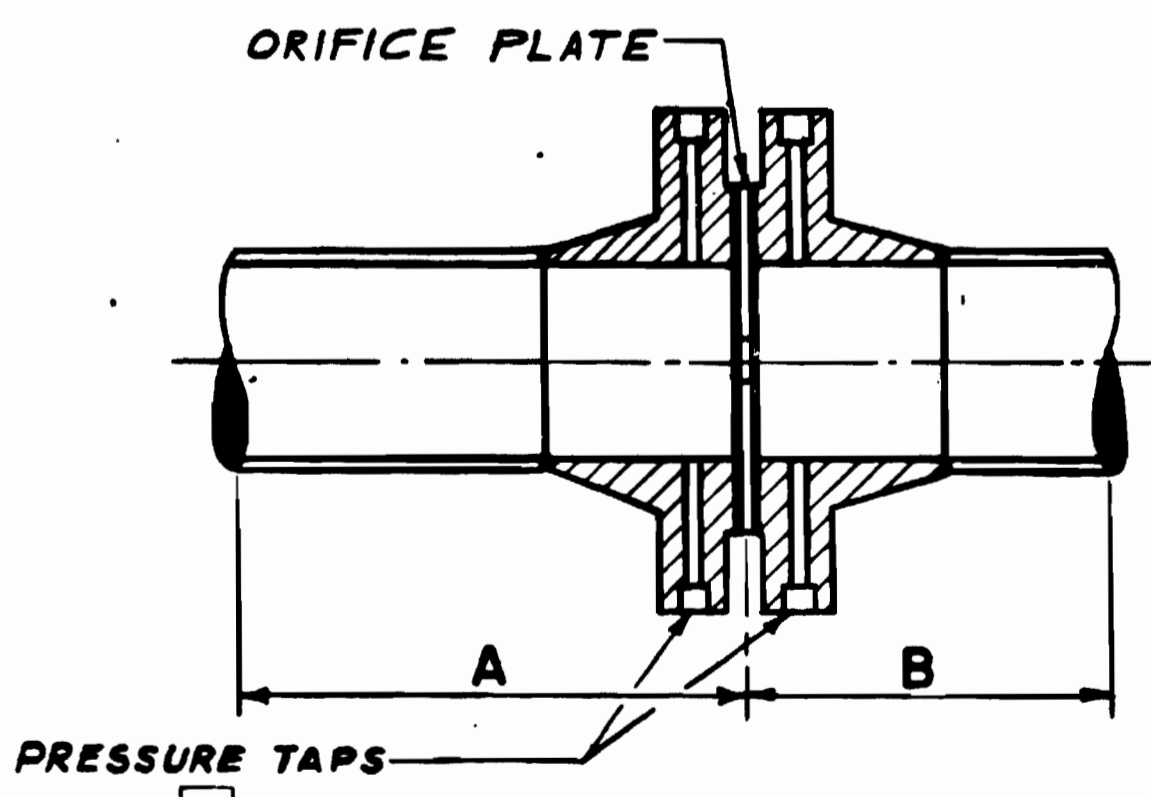
**PLENUM ACCESS DOOR DETAIL**



**SPLITTER DAMPER DETAIL**



**TYPICAL CHILLED WATER COIL CONNECTION**

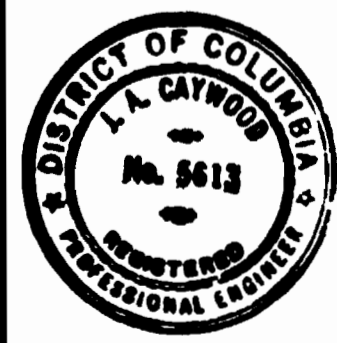


**ORIFICE FLANGE DETAIL**

PIPE SIZE	MINIMUM STRAIGHT LENGTH A	MINIMUM STRAIGHT LENGTH B
	IN FEET	IN FEET
1"	1'-6"	0'-6"
1 1/4"	2'-0"	0'-6"
1 1/2"	2'-0"	0'-6"
2"	3'-0"	0'-6"
2 1/2"	3'-6"	1'-0"
3"	4'-6"	1'-4"
4"	5'-6"	2'-0"
6"	8'-0"	2'-6"
8"	11'-0"	3'-6"
10"	13'-6"	4'-0"
12"	16'-0"	5'-0"

*mech. P.S. H.*

DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS	
		NUMBER	DESCRIPTION	DATE	DESCRIPTION
K.S. PARROTT	11-4-70			11-20-75	TERMINOLOGY AGREE WITH STD. SPECS. [1]
B.L. QUARJAS	11-4-70				



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

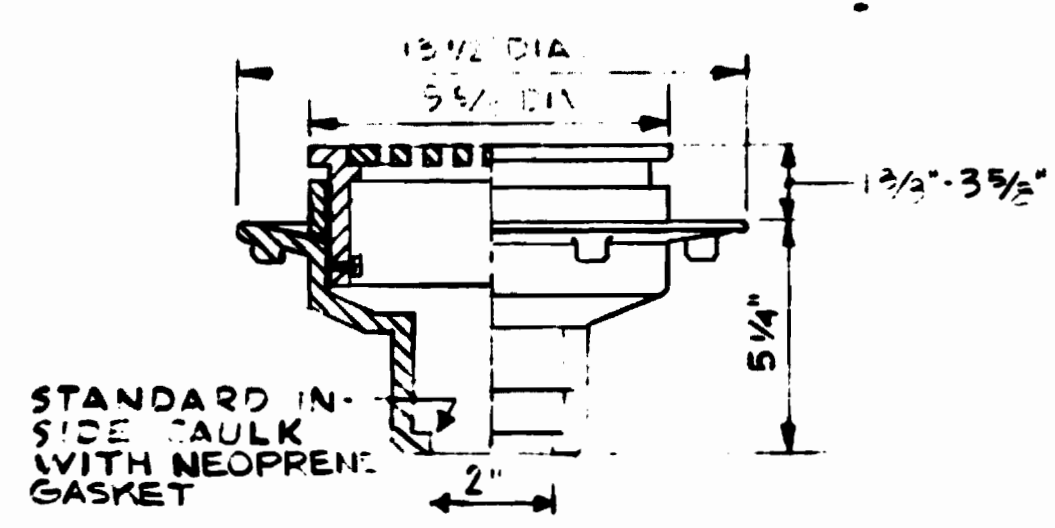
WMATA  
APPROVED [Signature] DIRECTOR OF ENGINEERING  
APPROVED [Signature] ASSISTANT CHIEF OF ENGINEERING AND OPERATIONS

DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT  
HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

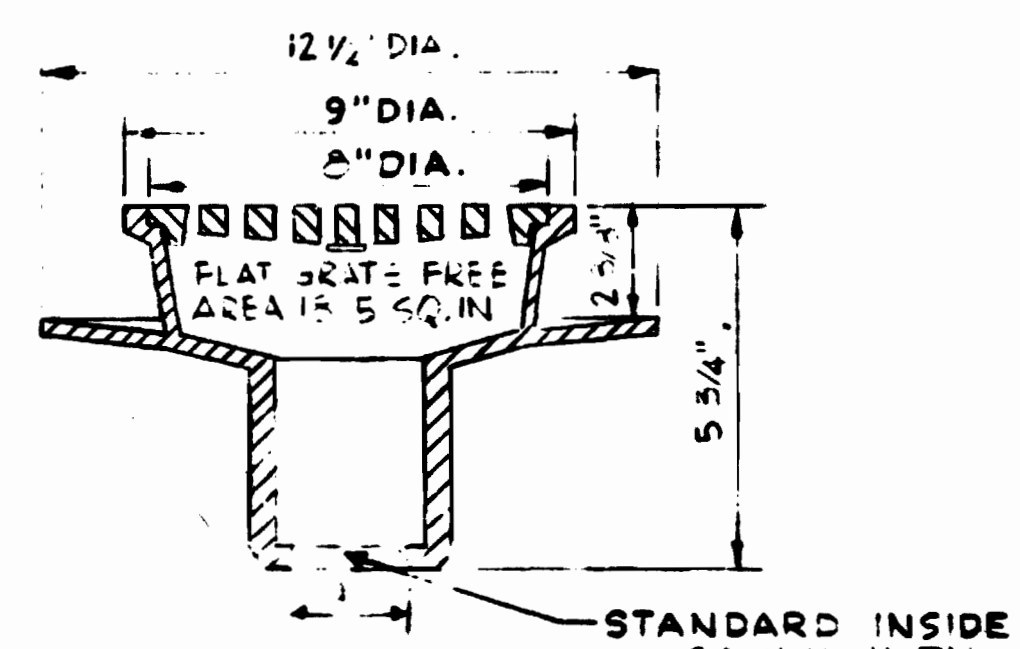
**MECHANICAL STANDARD DRAWING  
MECHANICAL DETAILS  
SECTION NO. FA II**

SCALE	DRAWING NO.	
NO SCALE	ST-M-46	M334-135

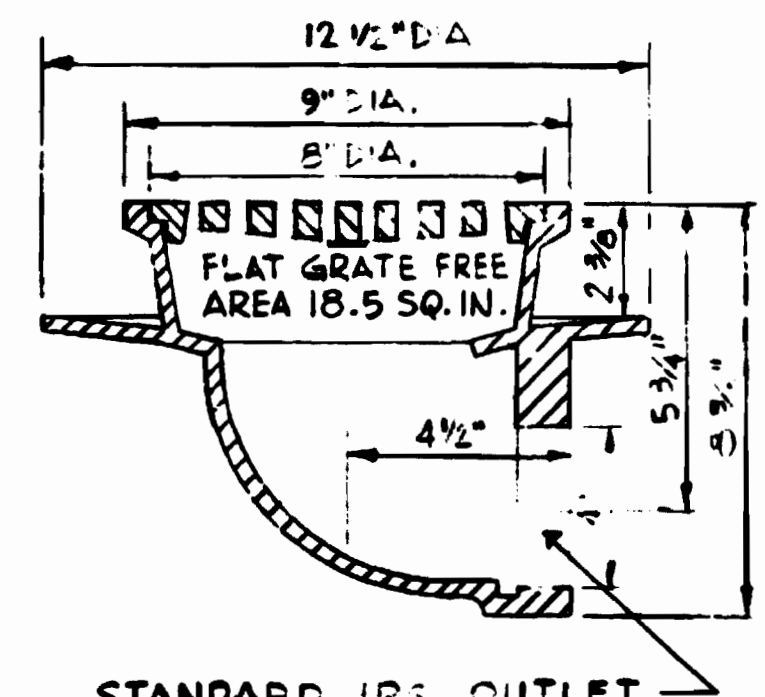




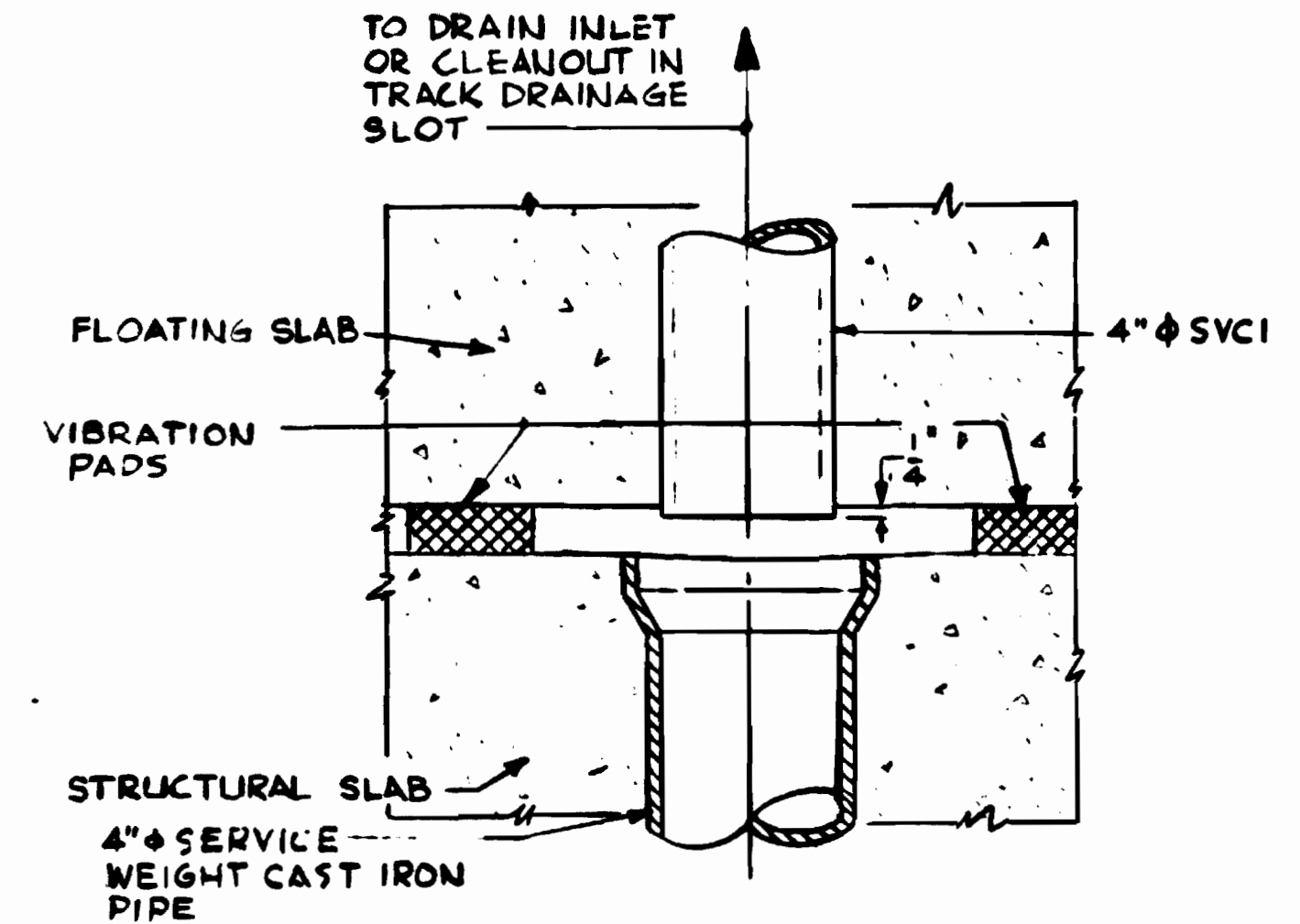
FLOOR DRAIN - TYPE 6



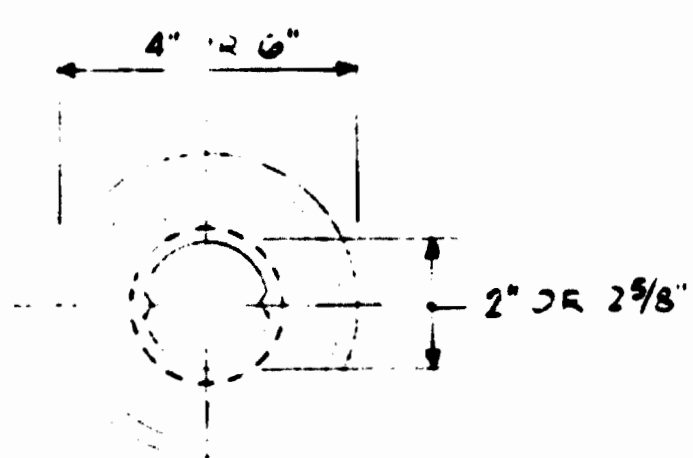
AREA DRAIN - TYPE 1



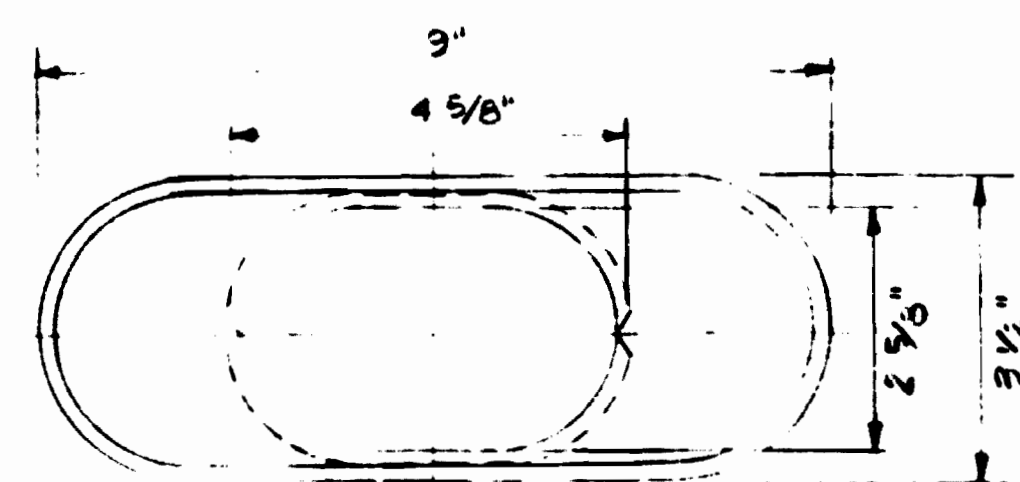
AREA DRAIN - TYPE 2



STANDARD DRAIN CONNECTION THRU FLOATING SLAB

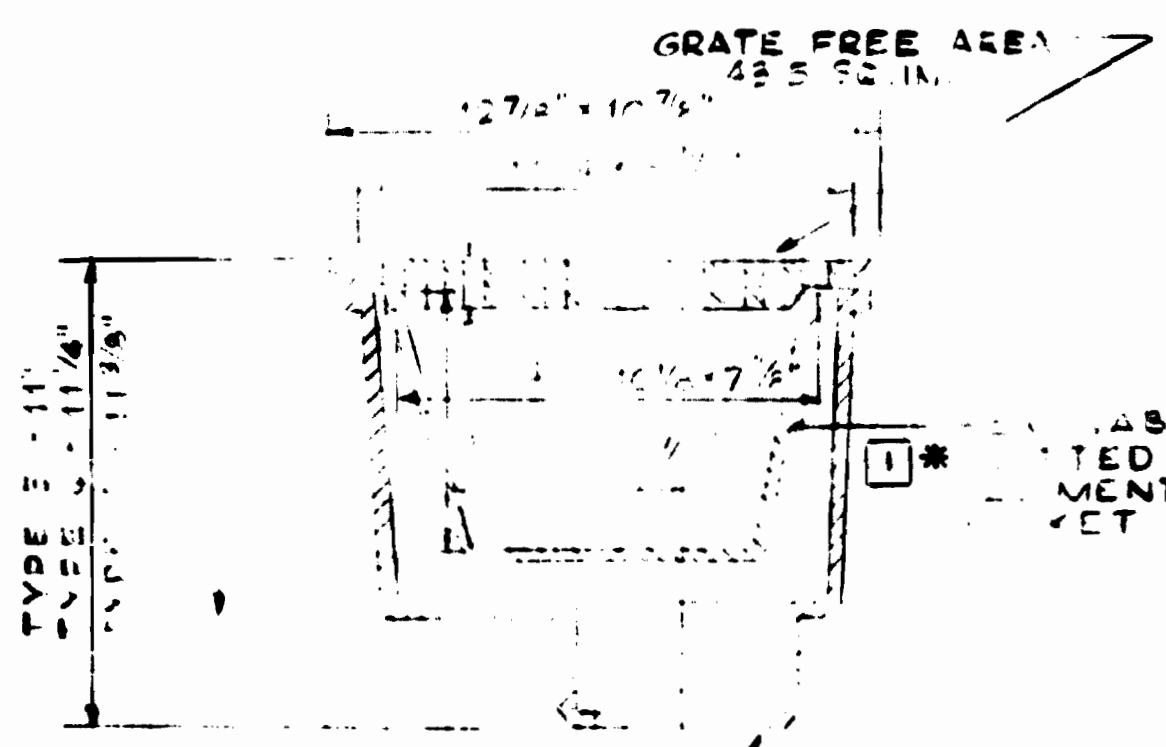
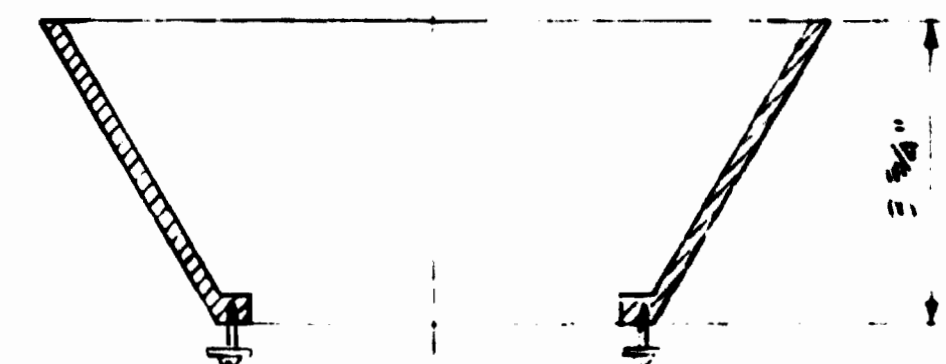
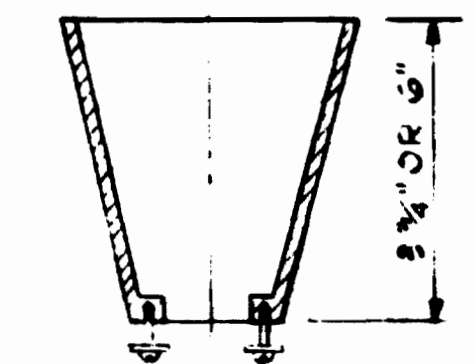


TYPE 1



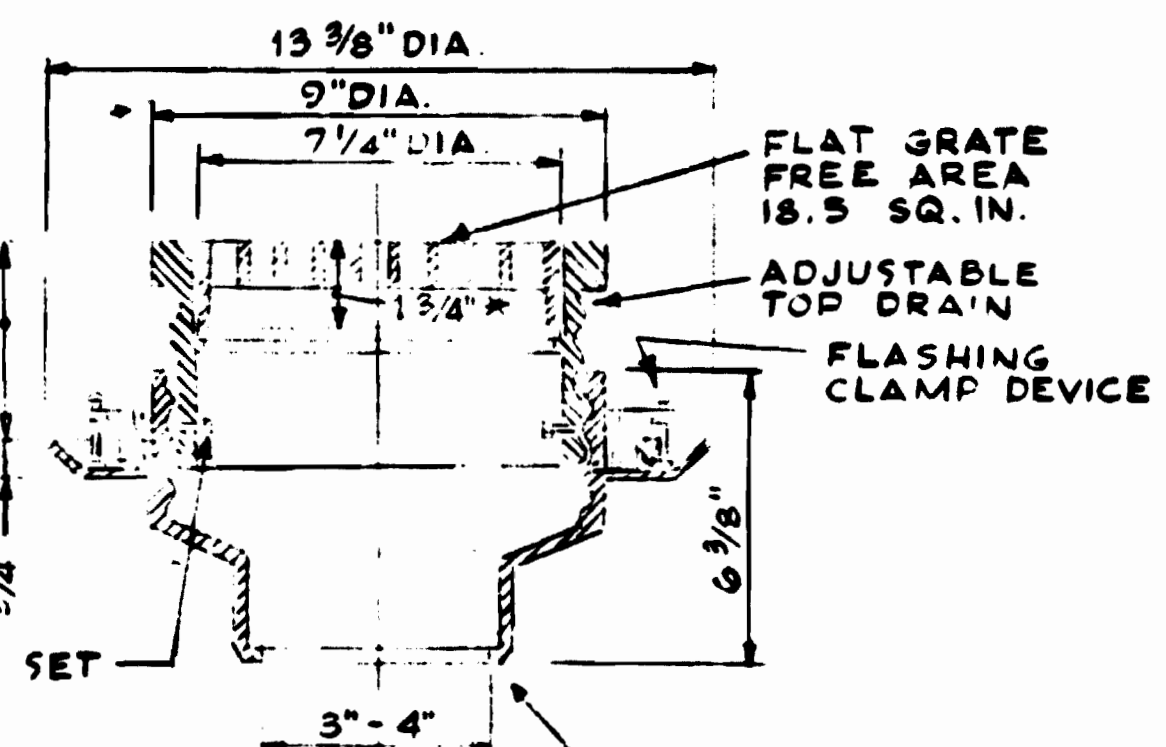
TYPE 2

FUNNEL CONVERSION ASSEMBLY (FOR USE WITH ANY FLAT GRATE OR STRAINER)



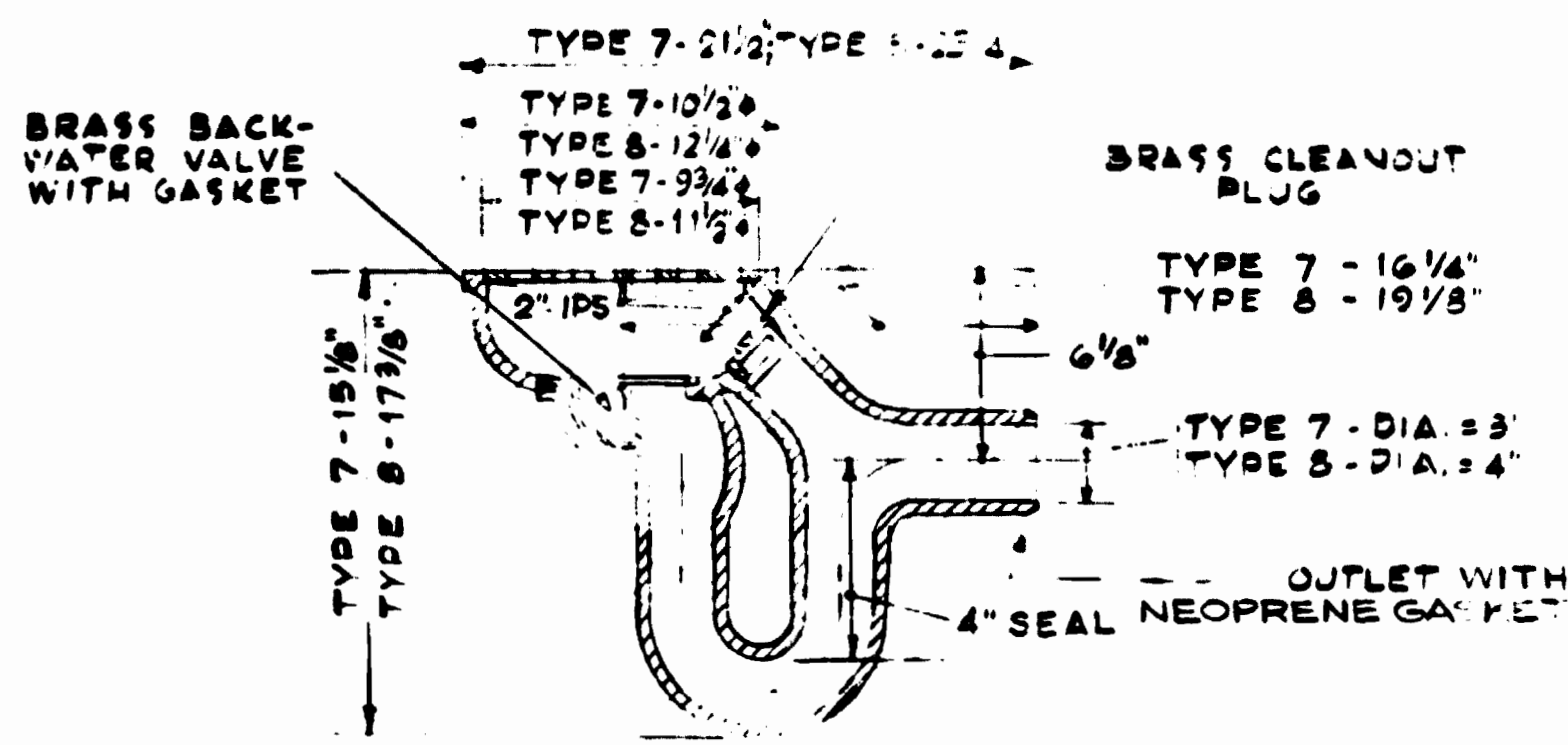
DRAIN INLET - TYPE 5, 6 & 7

\*NOTE: REMOVABLE SLOTTED SEDIMENT BUCKET SHALL HAVE FROST-PROOF HOLES WHERE DRAIN INLETS - TYPES 5, 6 & 7 ARE USED IN LOCATIONS SUBJECT TO FREEZING.



ROOF DRAIN - TYPE 4

\* NOTE: ADD 1/4" WHEN FURNISHED WITH BRASS TOP



FLOOR DRAIN - TYPE 7 & 8

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY  
 AS-BUILT CONDITION  
 SEP-16 1977

NOTE  
 NO OAKUM AND LEAD CAULKING - ALL CASTINGS TO BE USED WITH NEOPRENE GASKET SYSTEM UNLESS OTHERWISE NOTED. NEOPRENE GASKETS SHALL BE DESIGNED EXCLUSIVELY FOR USE WITH AREA, FLOOR OR ROOF DRAINS

DESIGNED I. M. SOLOMON DATE 1-8-79	REFERENCE DRAWINGS	REVISIONS	WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY		MECHANICAL STANDARD DRAWING DRAINAGE DETAILS AND CASTINGS SH. 3 SECTION NO. FA-11
DRAWN P. E. KASLEY DATE 1-18-79	NUMBER DESCRIPTION ST-M-1 DRAINAGE DETAILS AND CASTINGS SH. 1 ST-M-26 DRAINAGE DETAILS AND CASTINGS SH. 2	DATE BY DESCRIPTION 8/9/77 ADDED SEDIMENT BUCKET REQUIREMENT [1]	WMATA	DE LEUW, CATHAR & COMPANY GENERAL ENGINEERING CONSULTANT	
CHECKED DATE			APPROVED DIRECTOR OF ENGINEERING	HARRY WEESE & ASSOCIATES GENERAL ARCHITECTURAL CONSULTANT	SCALE NOT TO SCALE
APPROVED DATE			APPROVED CHIEF OF ENGINEERING AND OPERATIONS	APPROVED	DRAWING NO. ST-M-48 M338-136



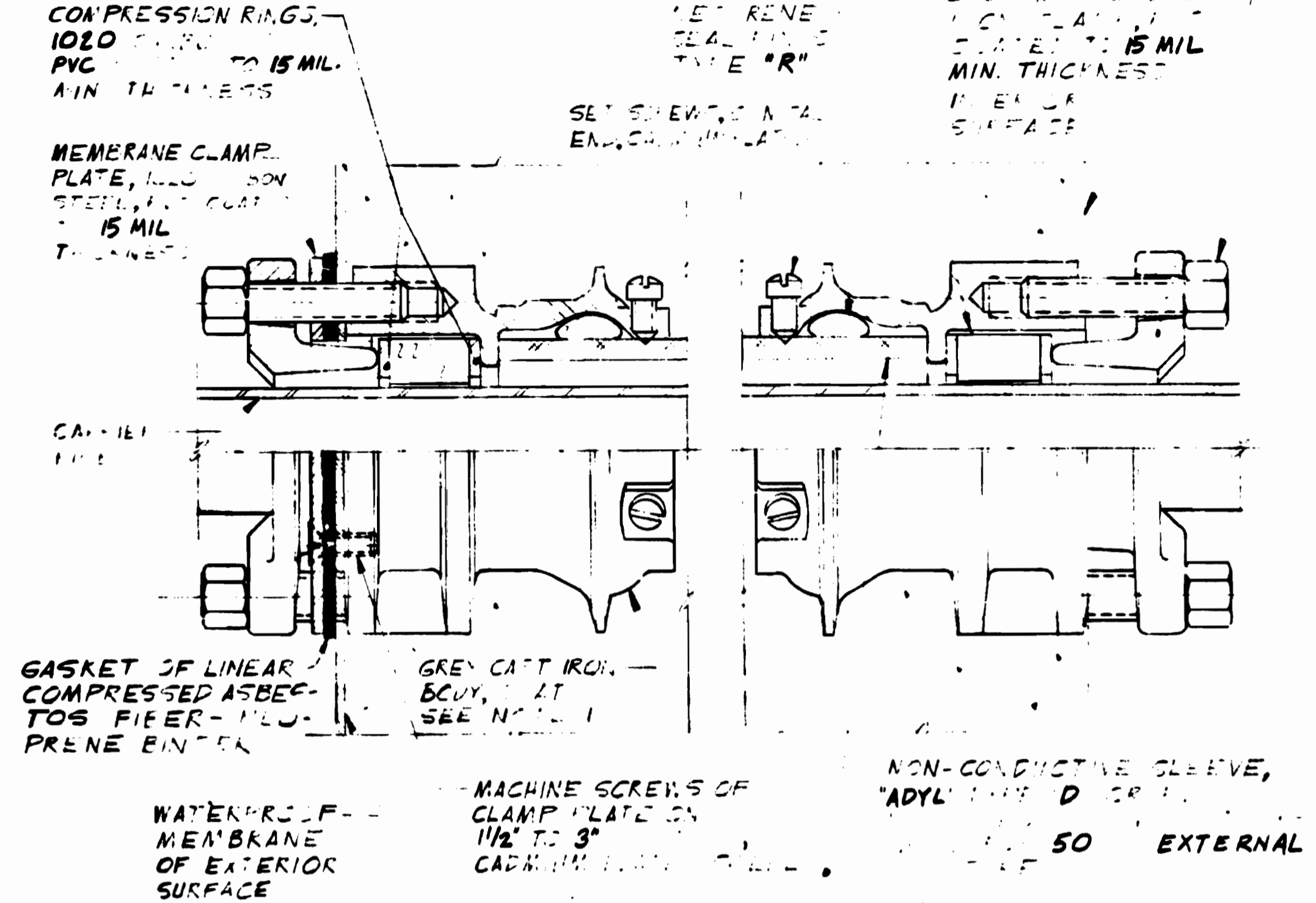
3

2

2

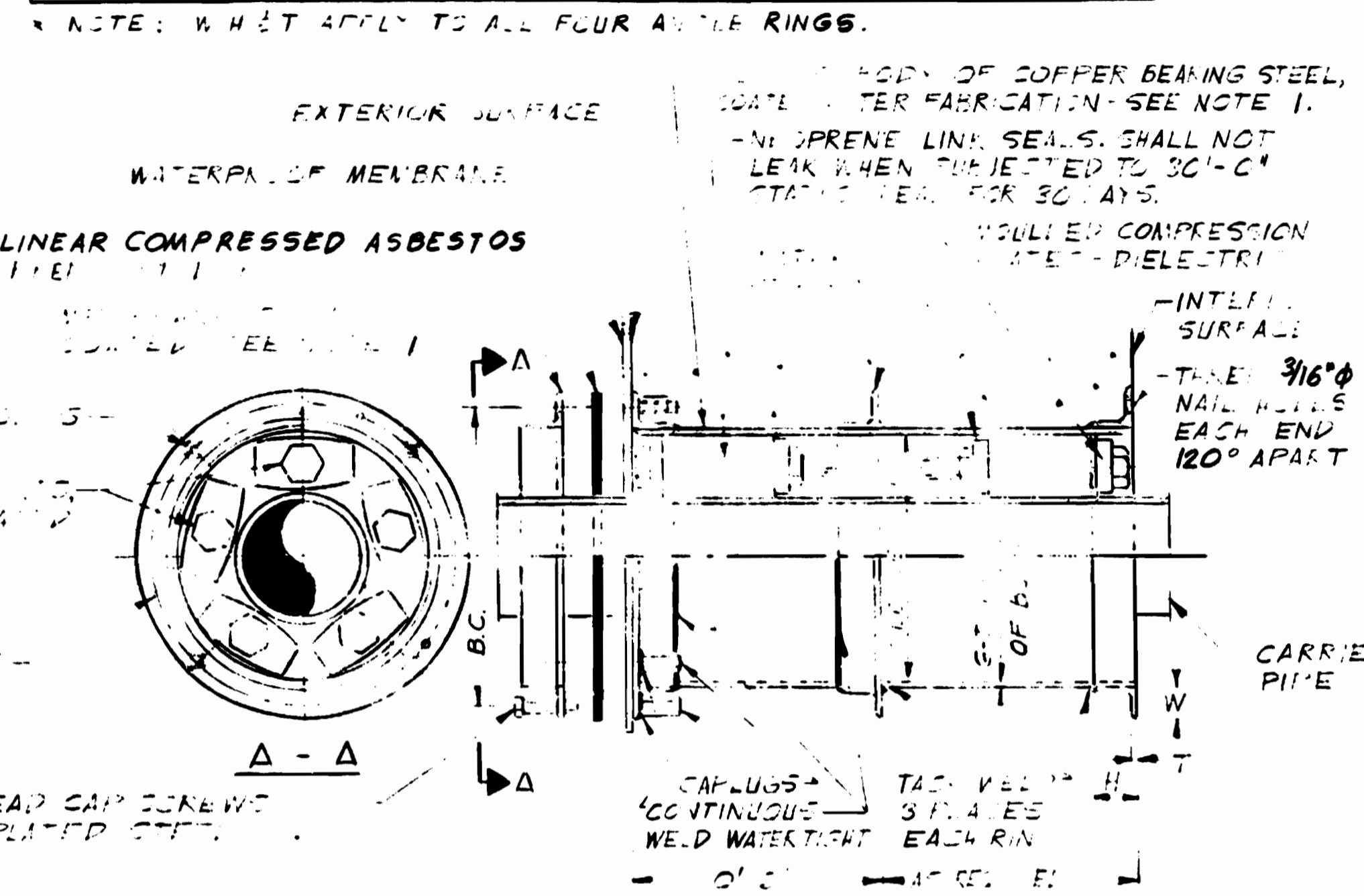
NEOPRENE ASTM D-2000 (BCC 420A14-B14-Z, SEALING GROMMETS PROVIDE FOR A MINIMUM OF 3/4 INCH AXIAL MOVEMENT & 1/8 INCH SIMULTANEOUS TRANSVERSE MOVEMENT OF CARRIER PIPE WITHOUT LEAKS AT STATIC HEAD OF 150'-0" OF WATER.

HEX HEAD CAP SCREWS SHALL BE TYPE 2

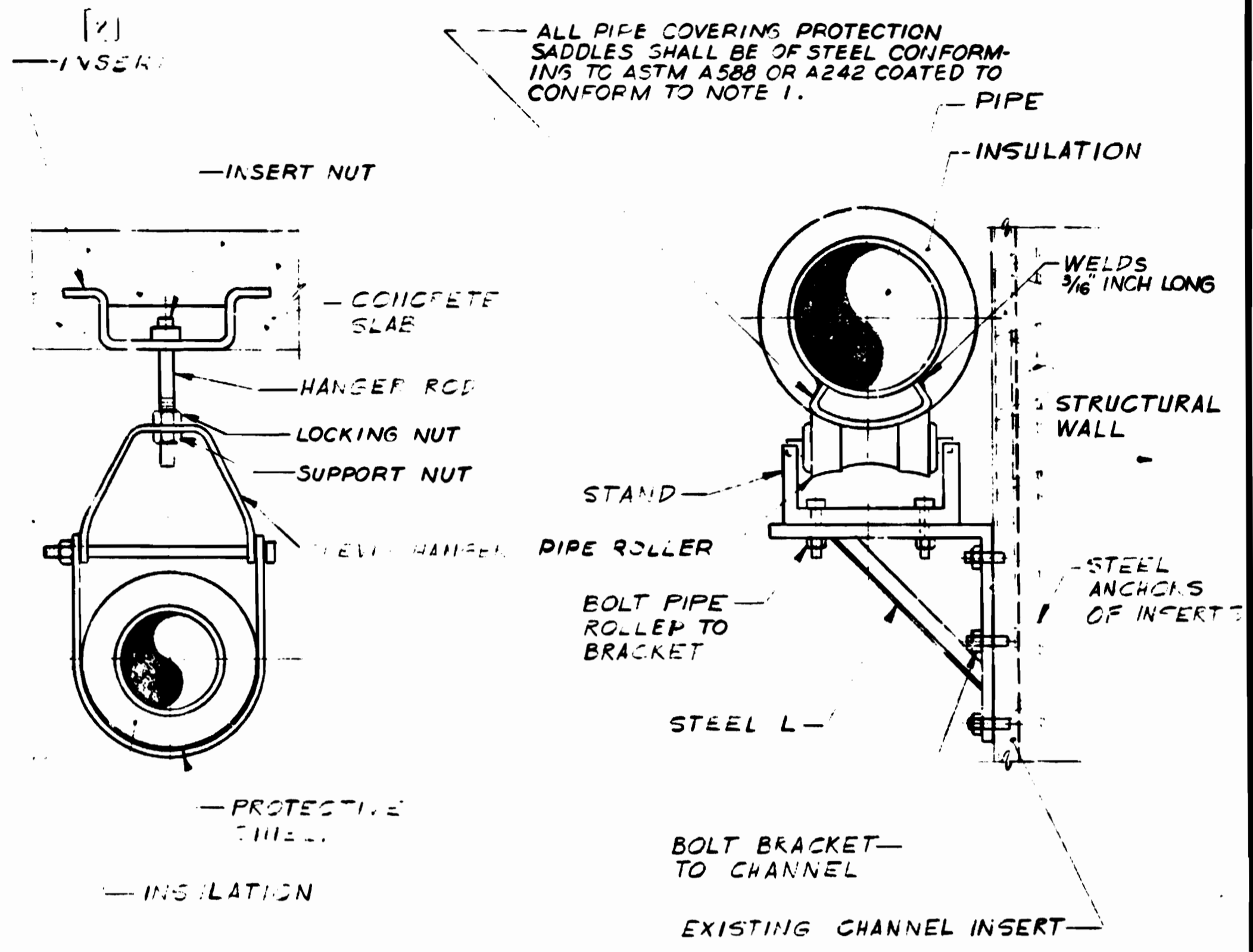


**PIPE SLEEVE FOR EXTERIOR STRUCTURAL ELEMENTS TYPE "H"**  
FOR INSTALLATION MORE THAN 15'-0" BELOW GROUND SURFACE ELEVATION (INSTALL IN PAIRS AS SHOWN)

PIPE SLEEVE DATA															
SLEEVE NO.	SLEEVE I.D.	G	B.C.	H	N	T	W	SLEEVE NO.	SLEEVE I.D.	G	B.C.	H	N	T	W
0	2-7/8	3/16	4 1/2	1 1/4	6	3/16	1 1/4	8	8-7/16	3/16	10 1/2	1 1/4	8	3/16	1 1/4
1	3-5/8	3/16	5 1/4	1 1/4	6	3/16	1 1/4	10	11-1/4	3/16	13	1 1/4	12	3/16	1 1/4
2	4-1/8	3/16	5 3/4	1 1/4	6	3/16	1 1/4	12	13-1/4	3/16	15	1 1/4	12	3/16	1 1/4
3	4-5/8	3/16	6 1/4	1 1/4	6	3/16	1 1/4	14	15-1/4	3/16	17 1/4	1 1/4	16	3/16	1 1/2
4	5-1/8	3/16	6 3/4	1 1/4	6	3/16	1 1/4	16	16-1/2	3/16	18 1/4	1 1/4	16	3/16	1 1/2
5	5-5/8	3/16	7 1/4	1 1/4	6	3/16	1 1/4	18	18-1/2	3/16	20 1/2	1 1/4	16	3/16	1 1/2
6	6-5/8	3/16	7 3/4	1 1/4	8	3/16	1 1/4								

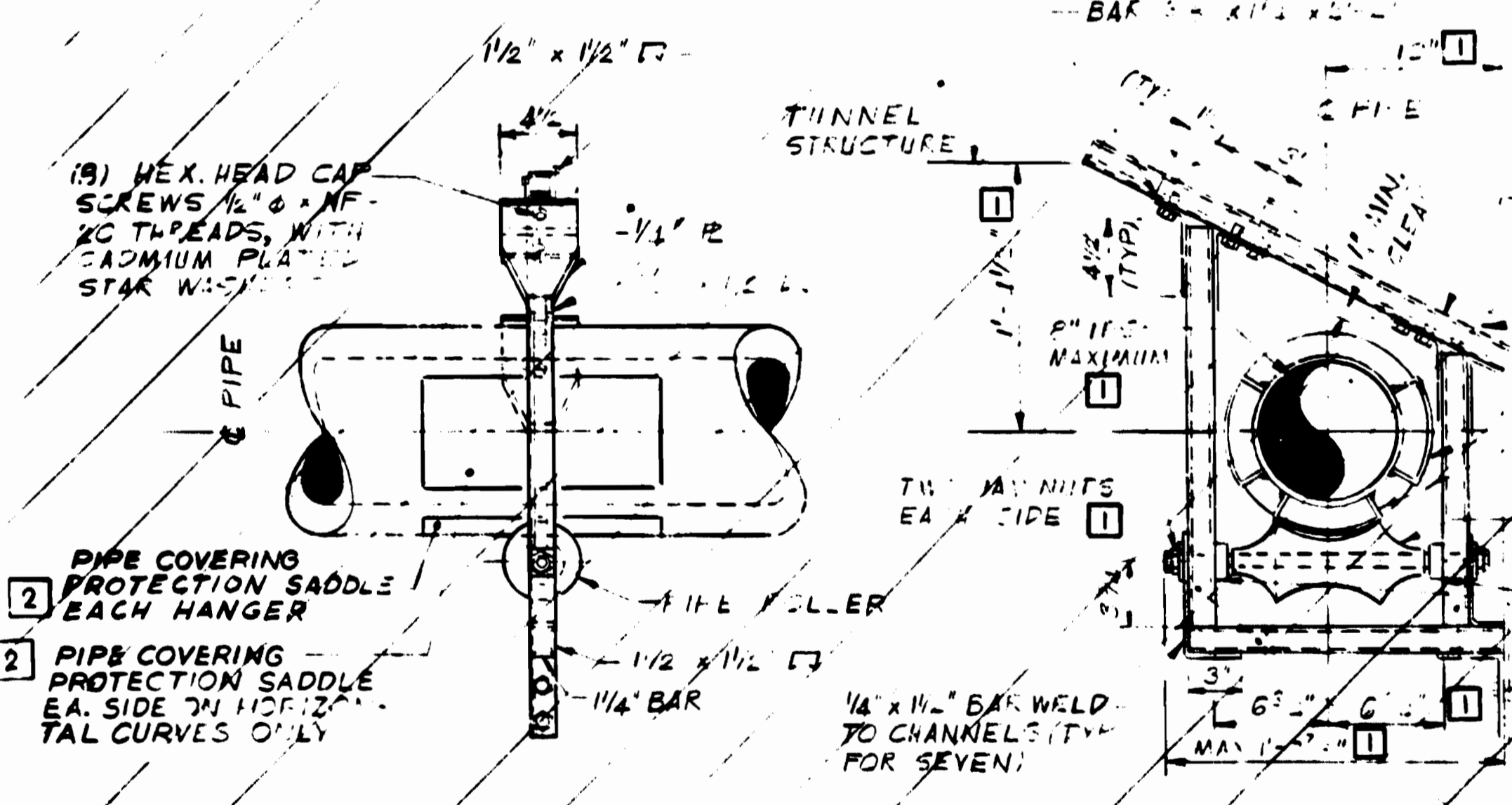


**PIPE SLEEVE FOR EXTERIOR STRUCTURAL ELEMENTS TYPE "L"**  
FOR INSTALLATION 15'-0" OR LESS BELOW GROUND SURFACE ELEVATION

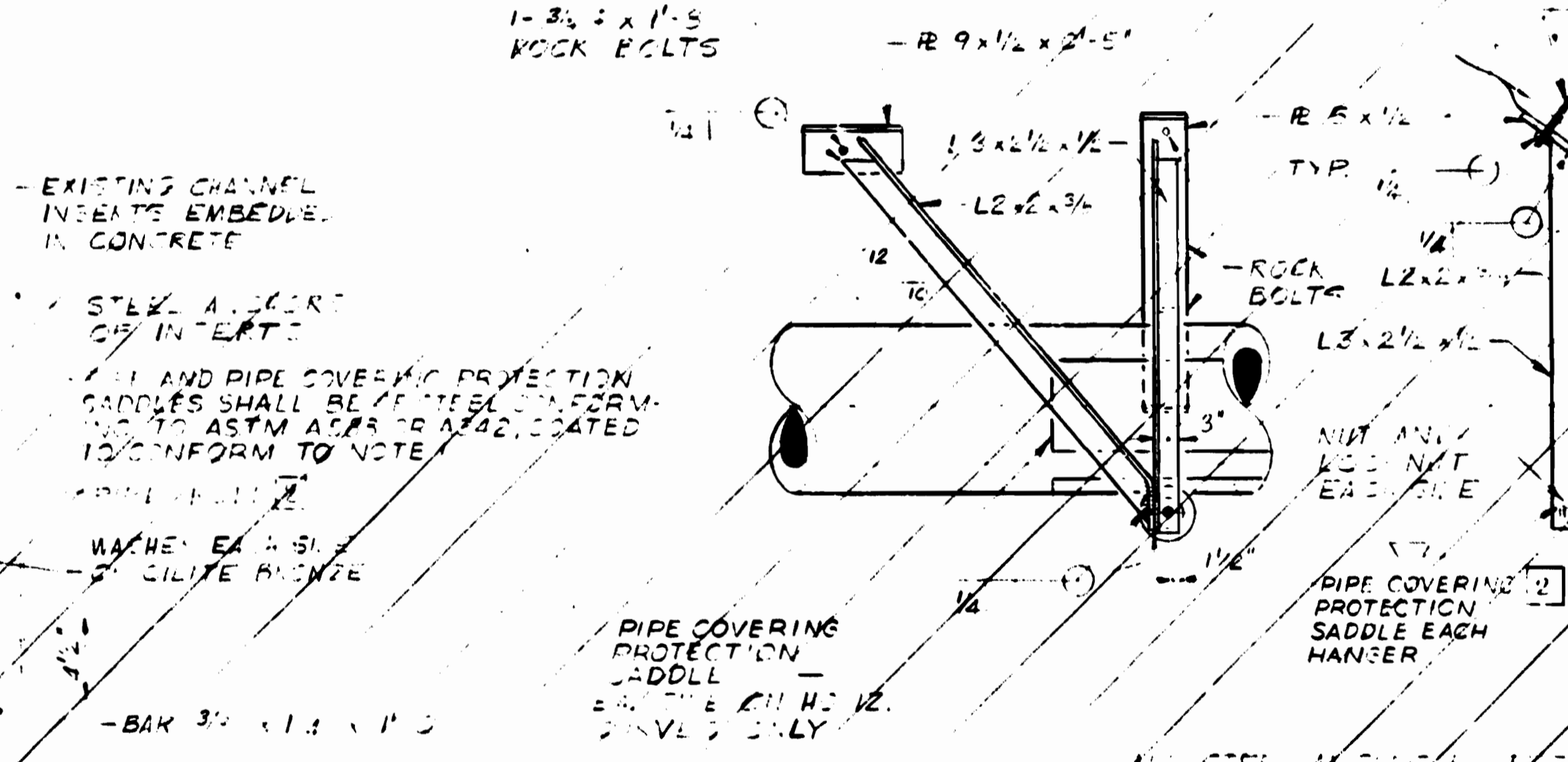


**PIPE HANGER DETAIL**

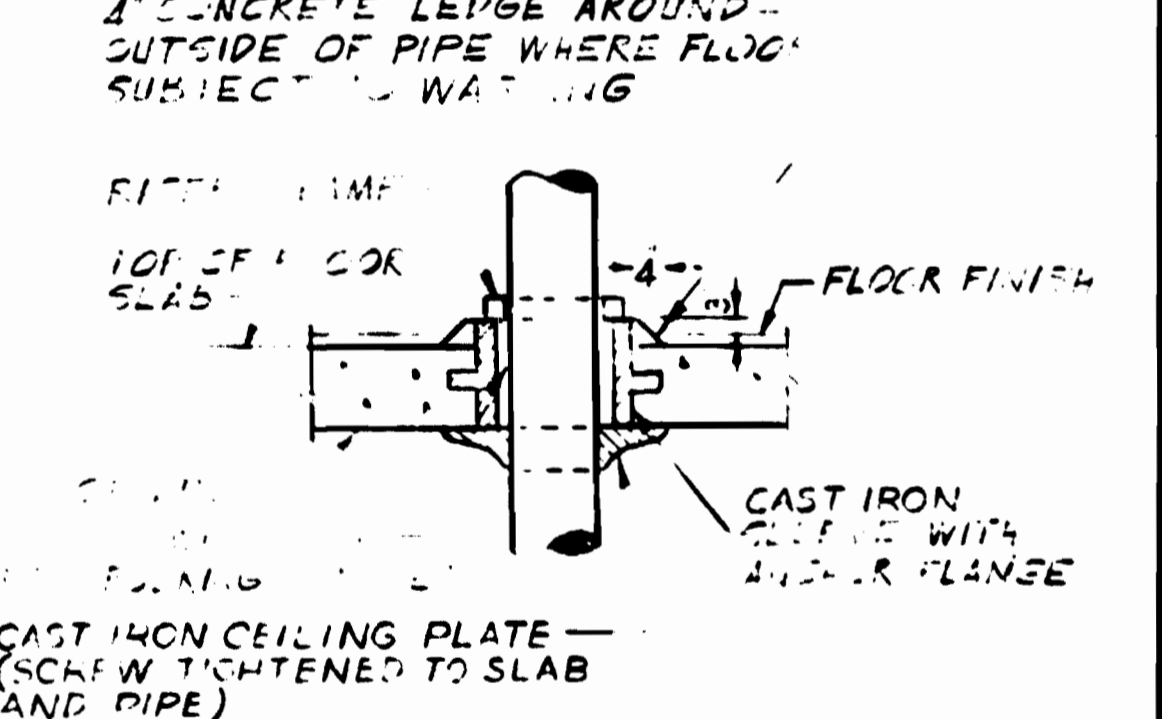
**PIPE SUPPORT BRACKET DETAIL**



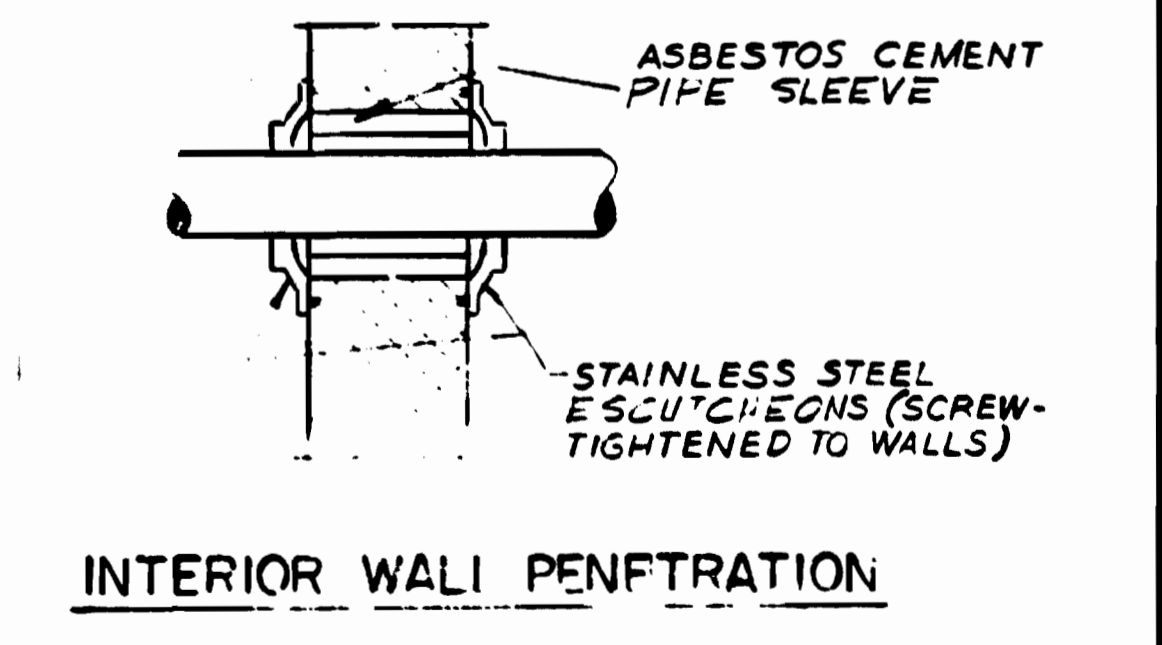
**PIPE HANGER DETAIL**  
FOR CHWS & CHWR IN CUT AND COVER TUNNELS



**PIPE HANGER DETAIL**  
FOR CHWS & CHWR IN ROCK TUNNEL CONSTRUCTION



**FLOOR AND CEILING PENETRATION**

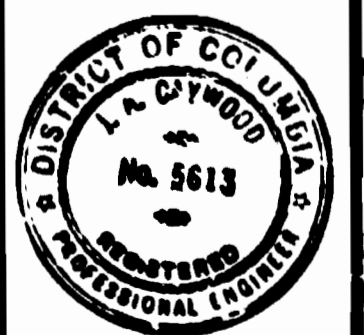


**INTERIOR WALL PENETRATION**

DESIGNED	K.S. PARNOTT	10-24-70
DRAWN	B.J. CHARUNAS	10-24-70
CHECKED	R. S. O'NEILL	4-5-71
APPROVED	R. S. O'NEILL	4-5-71

NUMBER	DESCRIPTION	DATE	BY
1	TERMINOLOGY AGREE WITH STD. SPECS. (M)	1-20-70	
2	DELETED PIPE HANGER DETAILS CHWS & CHWR SUPERSEDED BY ST-M-134-133 AND REVISED NEOPRENE DETAILS. (S)	8-13-70	

DATE	BY	DESCRIPTION
8/10/73		LIMIT DIMENSIONS OF HANGER, HEX NUTS & PIPE, ALSO REVISE 8/2" DIMENSIONS TO 6 3/4"



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

WMATA

APPROVED \_\_\_\_\_ DIRECTOR OF ENGINEERING

APPROVED \_\_\_\_\_ CHIEF OF ENGINEERING AND OPERATIONS

DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT

HARRY WESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

<b>MECHANICAL STANDARD DRAWING</b>	
MECHANICAL DETAILS	
SECTION NO. FA 11	
SCALE	DRAWING NO.
NO SCALE	ST-M-50
M334-137	



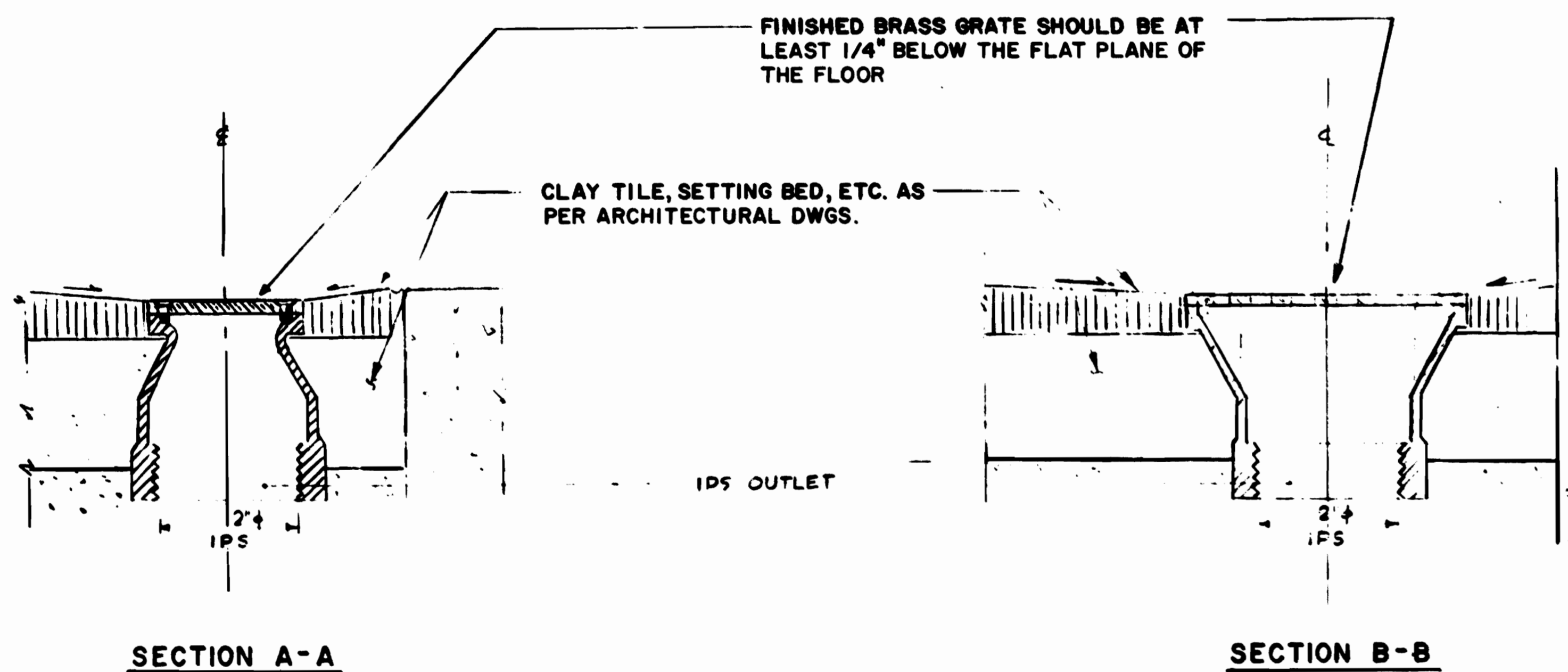
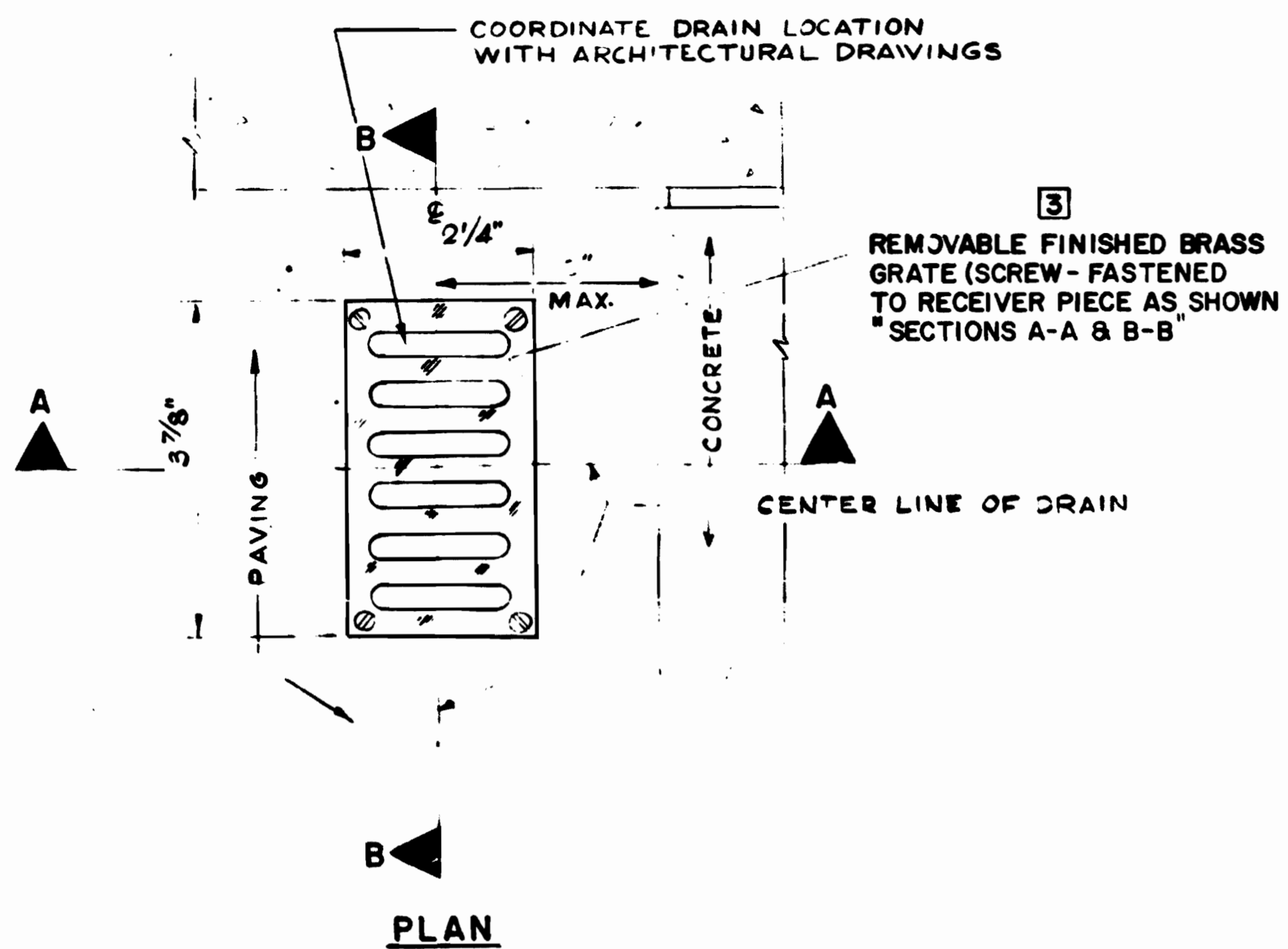
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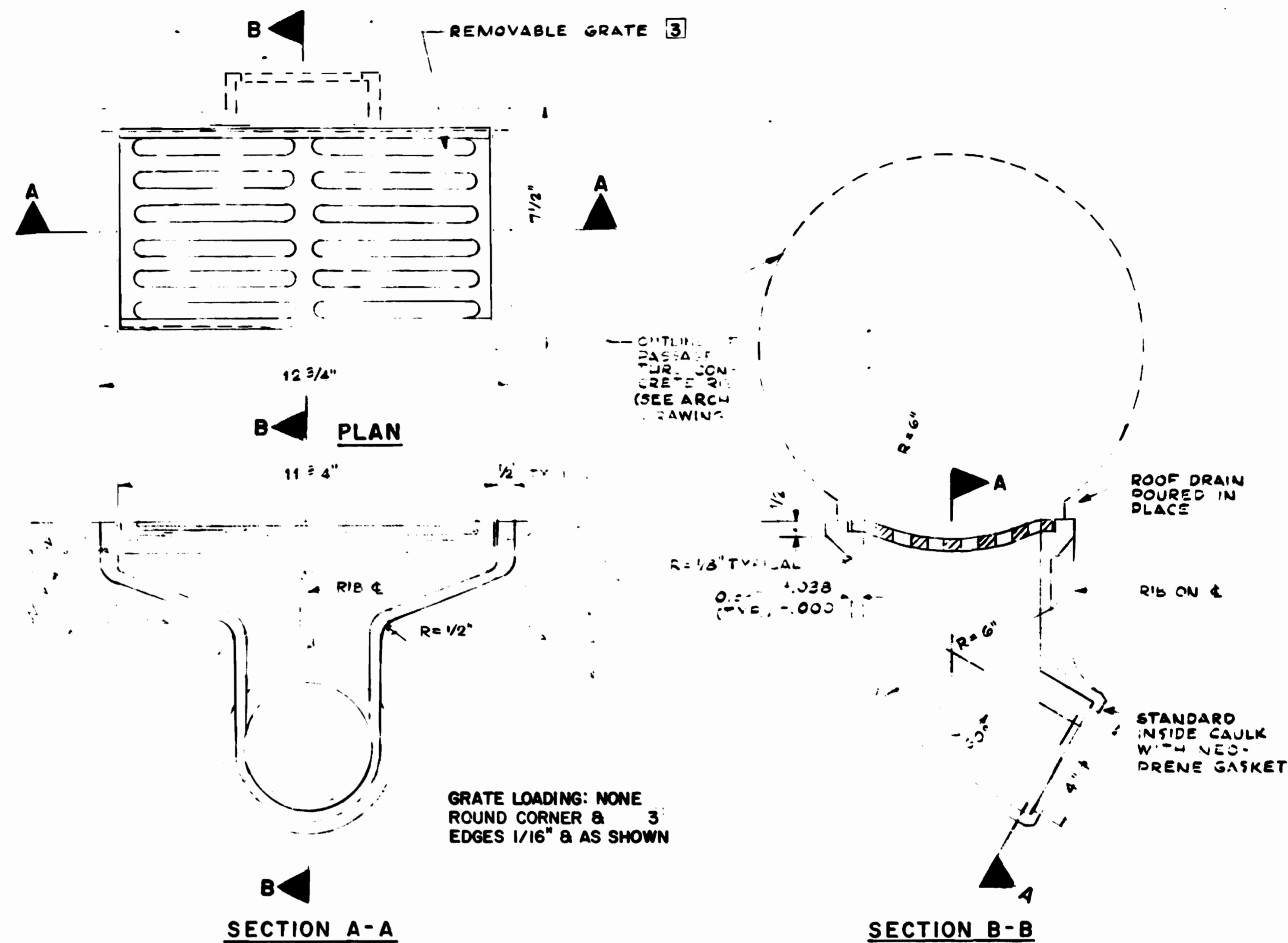
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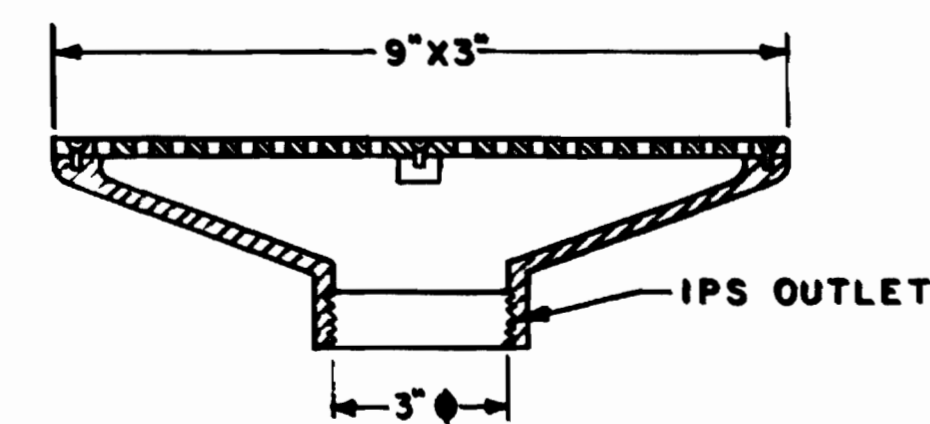
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2) PASSAGEWAY FLOOR DRAIN 3)  
NOT TO SCALE



ROOF DRAIN - TYPE 5  
(FOR USE WITH ABOVE GROUND STATION CANOPIES)  
SCALE: 3/8" = 1 INCH



4) DRAIN INLET-TYPE 8  
NOT TO SCALE

WASHINGTON METROPOLITAN  
TRANSIT AUTHORITY  
AS SHOWN CONDITION  
SEP 28 1977

DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS	
		NUMBER	DESCRIPTION	DATE	DESCRIPTION
J. M. SOLOMON	1/15/70			8-31-72	ADJUSTED PASSAGEWAY DRAIN 1
P. E. EASLEY	1/25/70			3-8-73	ADJUSTED STRAINER PLATE 2
				1-20-75	TERMINOLOGY AGREE WITH STD. SPECS. 3
				9-13-77	ADDED DRAIN INLET-TYPE 8 4

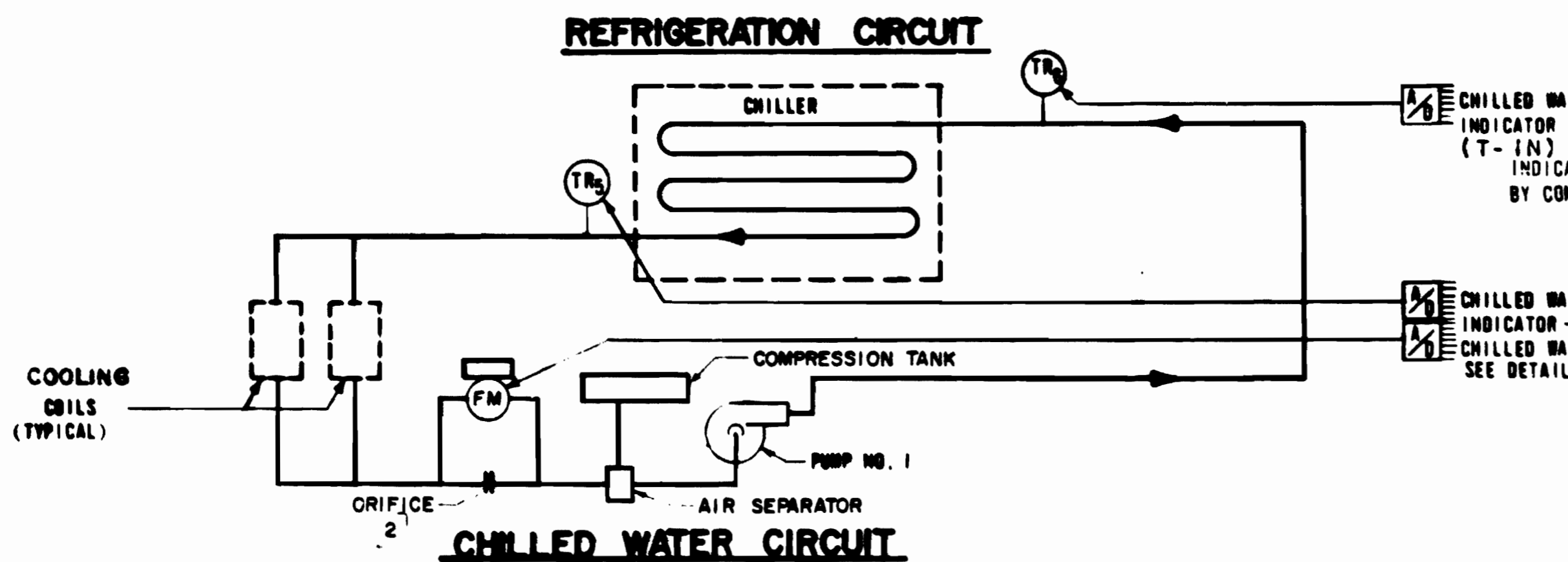
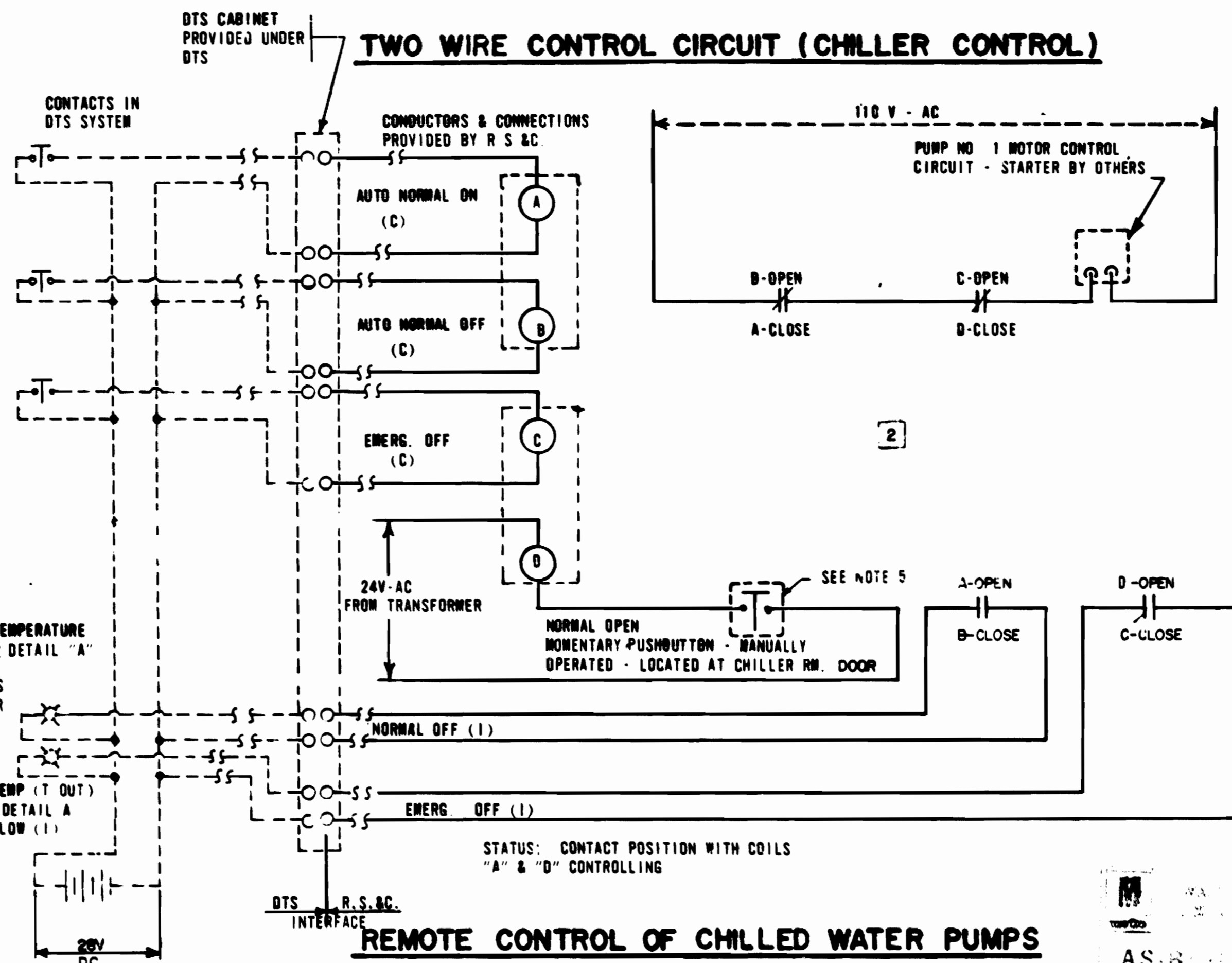
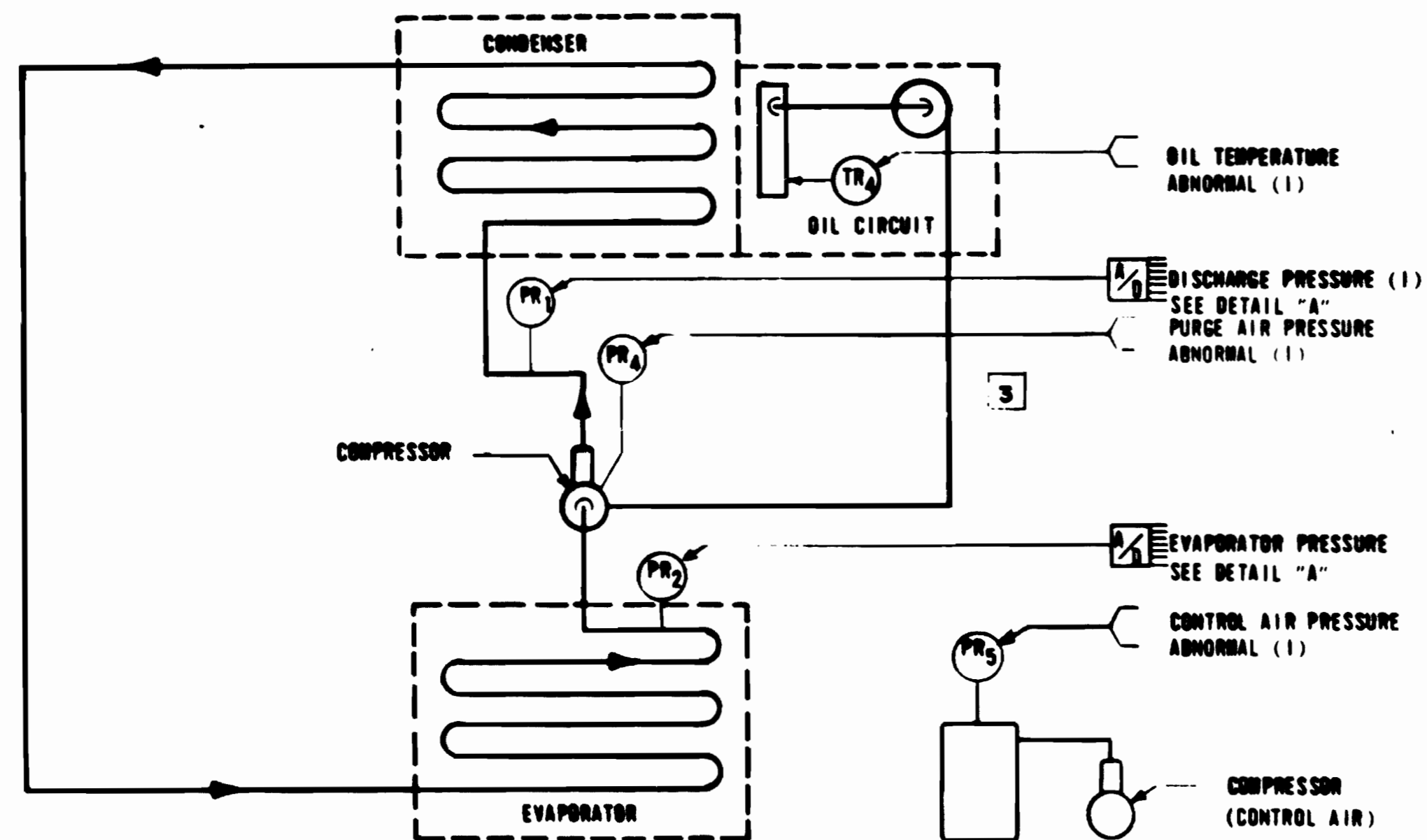
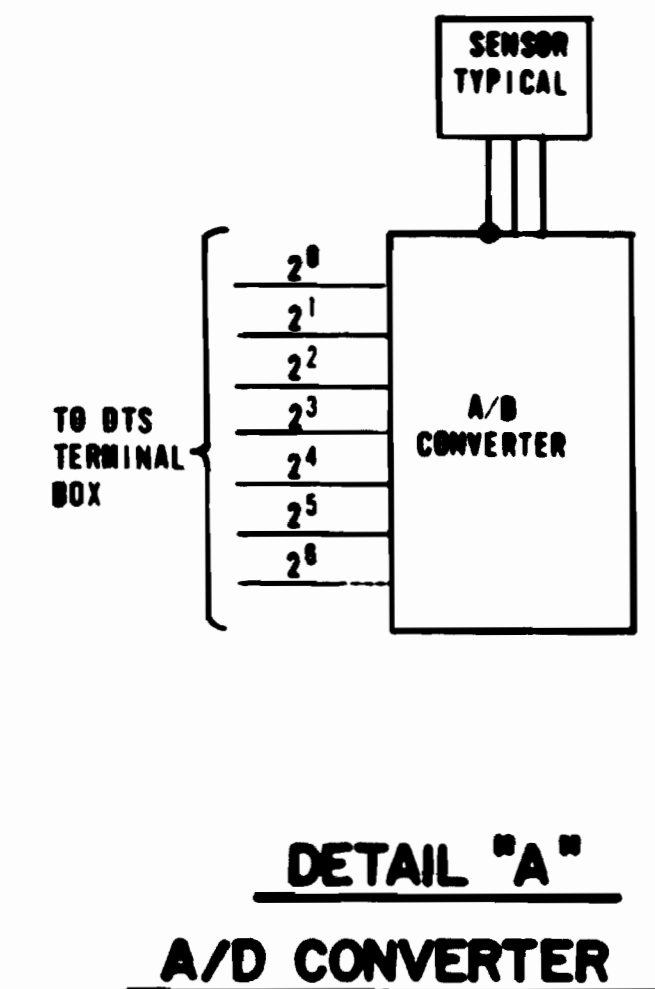
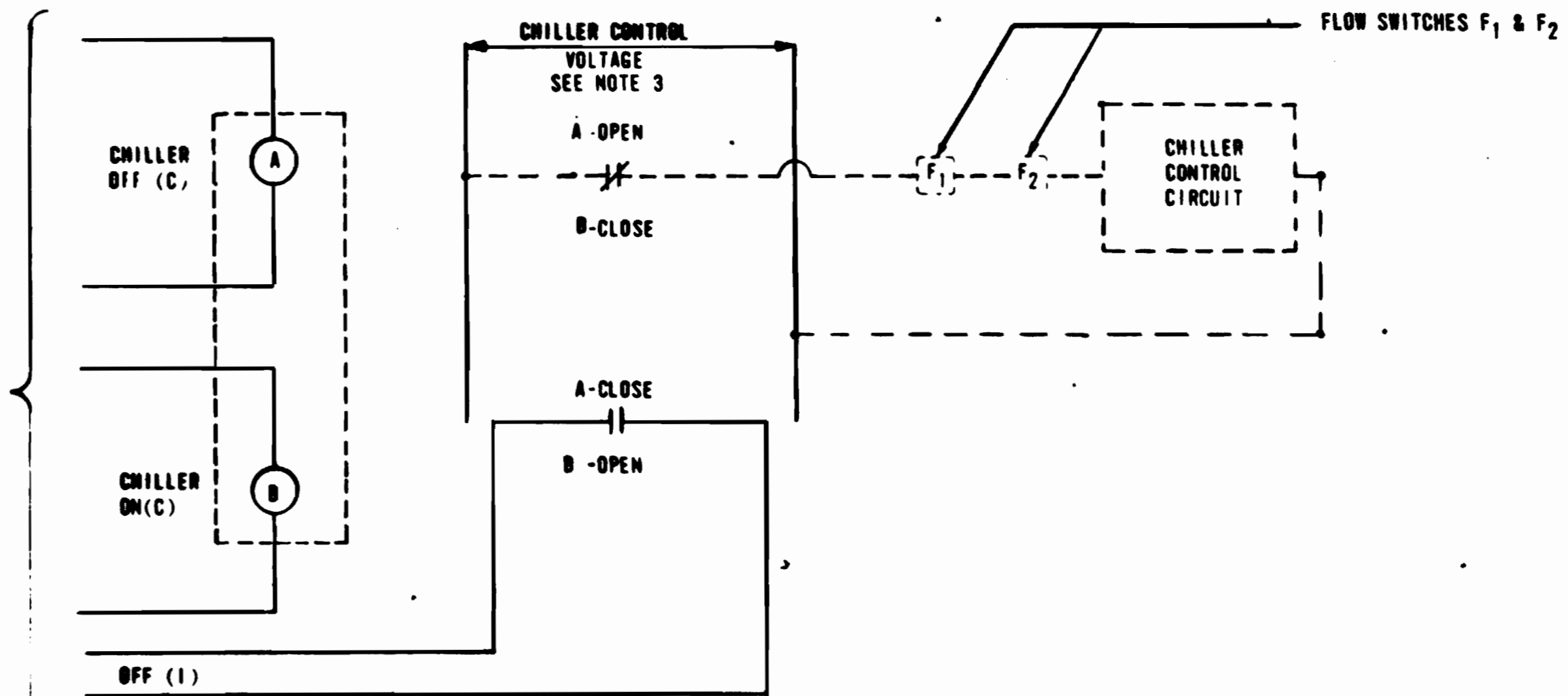
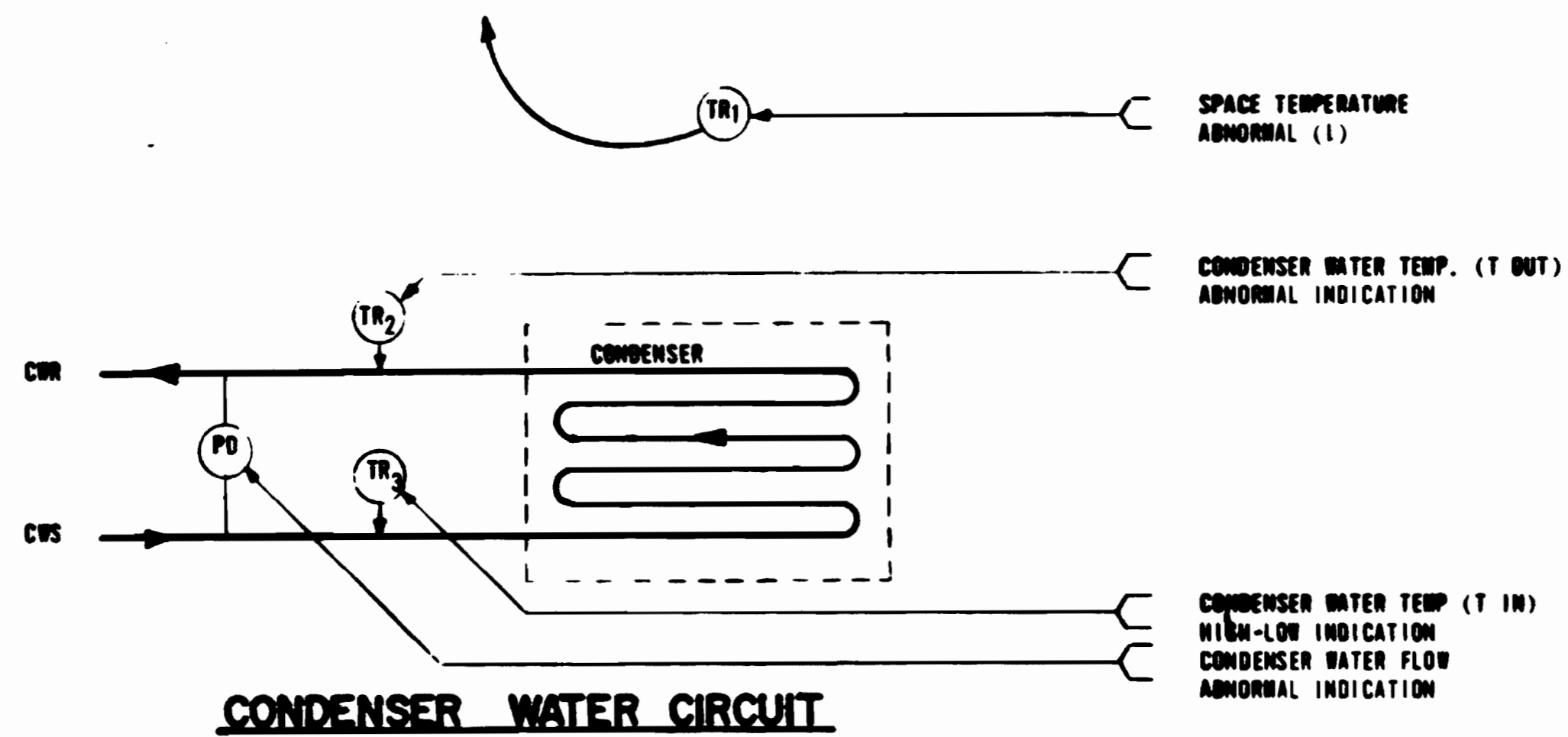
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

WMATA  
APPROVED [Signature]  
DIRECTOR OF ENGINEERING  
APPROVED [Signature]  
CHIEF OF ENGINEERING AND OPERATIONS

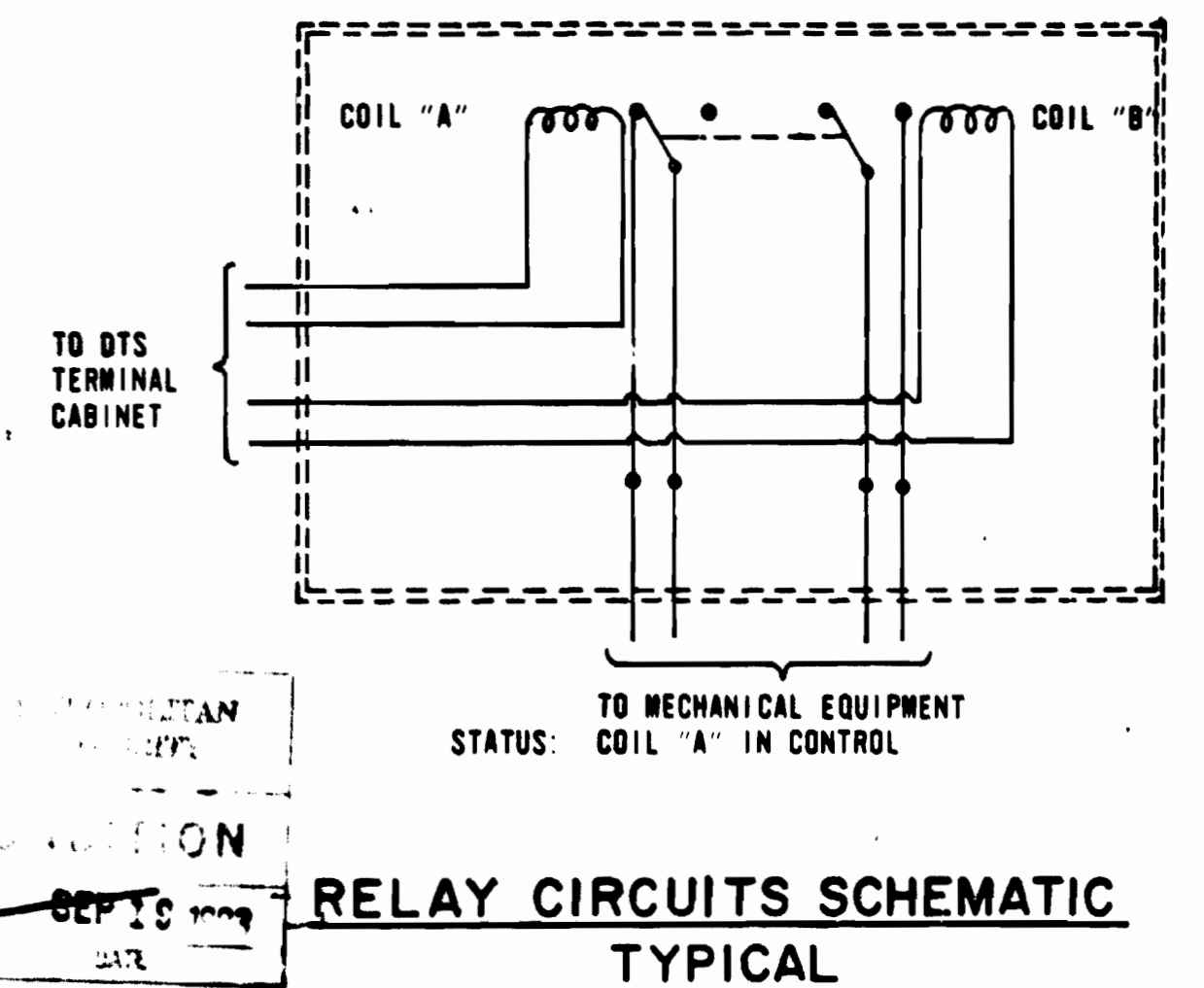
DE LEUW, CATHAR & COMPANY  
GENERAL ENGINEERING CONSULTANT  
HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT  
APPROVED

MECHANICAL STANDARD DRAWING  
DRAINAGE DETAILS AND CASTINGS SHT. 4

SECTION NO. FA-11  
SCALE AS NOTED  
DRAWING NO. ST-M-53  
M334-138



- NOTES**
1. CHW PUMPS CLOSE CONTROL CIRCUIT TO INITIATE OPERATION OF CHILLER PLANT
  2. RELAY COILS SHALL ACTIVATE CONTACTS AS INDICATED: I.E. ( ) - OPEN ENERGIZE X COIL CONTACTS OPEN. ENERGIZE Y COIL CONTACTS CLOSE.
  3. VOLTAGE SHALL BE 120V-AC OR 24V-AC - PROVIDED BY CHILLER MANUFACTURER
  4. DIGITAL SIGNALS AND LIMIT SWITCH CLOSURES SHALL TERMINATE AT THE DTS TERMINAL CABINET.
  5. START OF CHILLED WATER CIRCULATING PUMP AFTER EMERGENCY STOP BY REMOTE CONTROL SHALL BE BY MEANS OF A MANUALLY OPERATED PUSH BUTTON LOCATED IN EQUIPMENT ROOM
  6. FOR ABBREVIATIONS & SYMBOLS. SEE DRAWING NUMBER ST-AC-49. AIR CONDITIONING & VENTILATION SYMBOLS.
  7. RELAYS FACING THE DTS (EXCEPT WHERE INDICATED ON FAN SHAFT CONTROL AND FRESH AIR FAN CONTROL) SHALL BE MOMENTARY CONTACT. LATCHING DOUBLE COIL TYPE. CONTACTS AND COILS SHALL BE IN ACCORDANCE WITH SPECIFICATIONS. SEE SCHEMATIC THIS SHEET.



ST-M-140		STAND. A.C. CONTROL & FLOW DIAGRAMS, CH. WATER SUPPLY & A.C. UNITS	
NUMBER	DESCRIPTION	DATE	BY
ST-AC-470	STAND. A.C. CONTROL DIAGRAM ONE CHILLER		
ST-AC-471	TWO		
ST-AC-472	THREE		
ST-M-92	ONE SCHEME 2	11/77	
ST-M-93	TWO		
ST-M-94	THREE	11/28/78	

REVISIONS	
DATE	DESCRIPTION
	ADDED REFERENCE DRAWINGS ST-M-92, ST-M-93, AND ST-M-94, ADDED DTS INTERFACE SCHEMATIC [1]
	DELETED CHILLED WATER PUMP NO. 1, ADDED AIR SEPARATOR & COMPRESSION TANK, RELOCATED FLOW METER [2]
	DELETE CHILLER OIL PRESSURE [3]



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

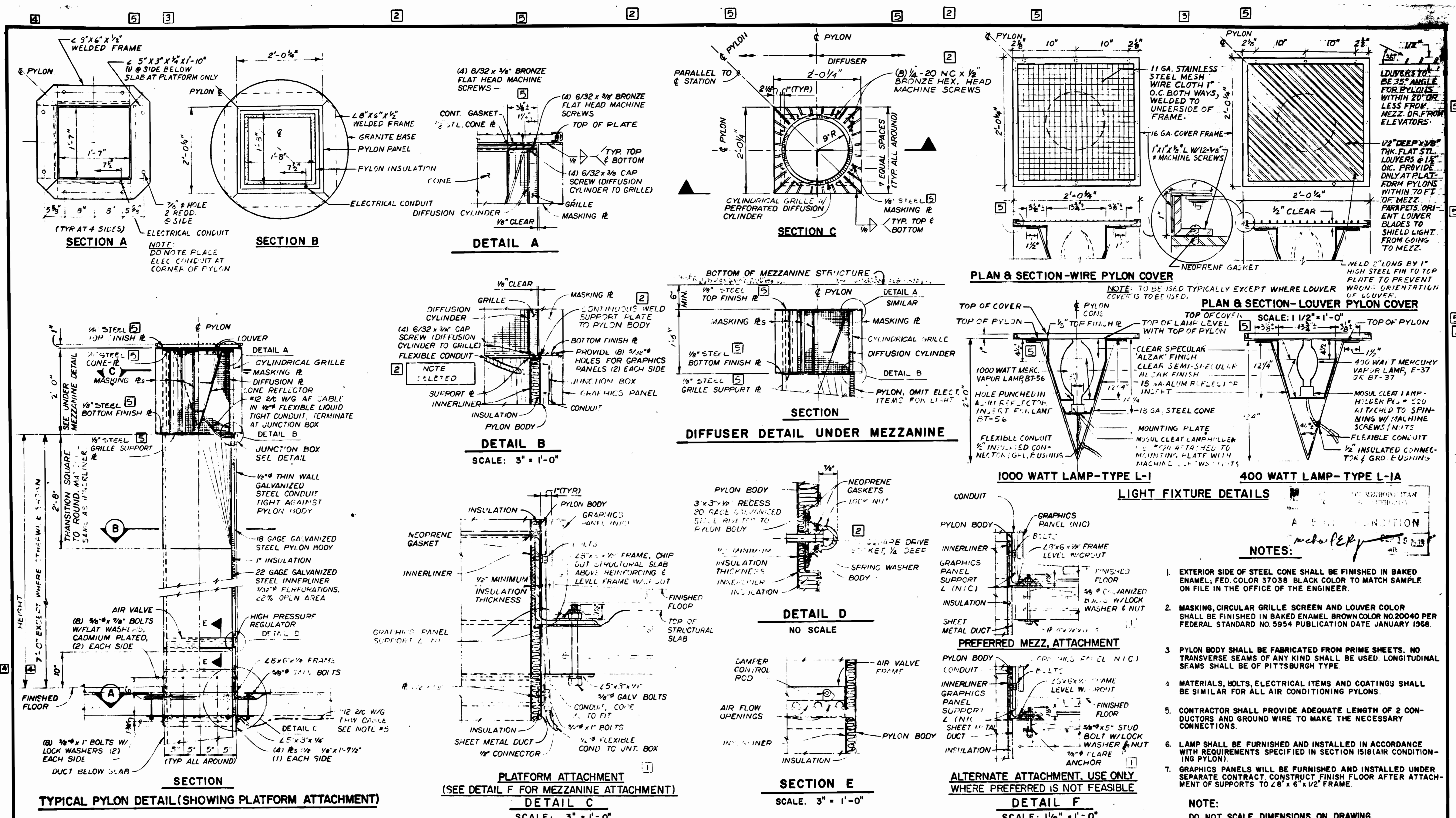
WMATA  
 APPROVED: *[Signature]* DIRECTOR OF ENGINEERING  
 APPROVED: *[Signature]* CHIEF OF ENGINEERING AND OPERATIONS

DE LEU, CATHER & COMPANY  
 GENERAL ENGINEERING CONSULTANT  
 HARRY WEESE & ASSOCIATES  
 GENERAL ARCHITECTURAL CONSULTANT

**MECHANICAL STANDARD DRAWING**  
**SUPERVISORY CONTROL & INDICATION**  
**CHILLED WATER PLANT DETAILS SECTION NO. FA-11**

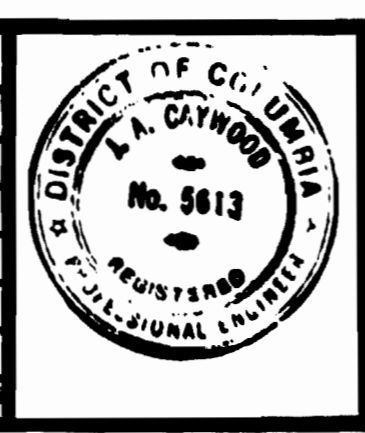
SCALE: NONE  
 DRAWING NO.: ST-M-58  
 M334-139





DESIGNED K.S. PARROTT 4/14/71  
 DRAWN M. SULLIVAN 4/14/71  
 CHECKED [Signature] 4/15/71  
 APPROVED [Signature] 4/15/71

NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
ST-M-90	AIR CONDITIONING PYLON-SHT. 2	4-25-72	[Signature]	CHANGED ARCHON BOOTS TO ACCOMMODATE SUPPORT FOR GRAPHICS PANEL
ST-A-24	PYLON BASE DETAILS	2-28-73	[Signature]	REVISED LAMP SCREEN WELD SUPPORT PLATE, REVISE AIR VALVE OPERATOR DRIVE
		7-1-75	[Signature]	REVISED PYLON LAMP CONE & COVER
		11-18-75	[Signature]	REVISE PYLON HEIGHT DIMENSION
		8-12-76	[Signature]	REVISED REFLECTOR DIMENSIONS AND MATERIAL CALL OUT



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WMATA  
 APPROVED [Signature] DIRECTOR OF ENGINEERING  
 APPROVED [Signature] CHIEF OF ENGINEERING AND OPERATIONS

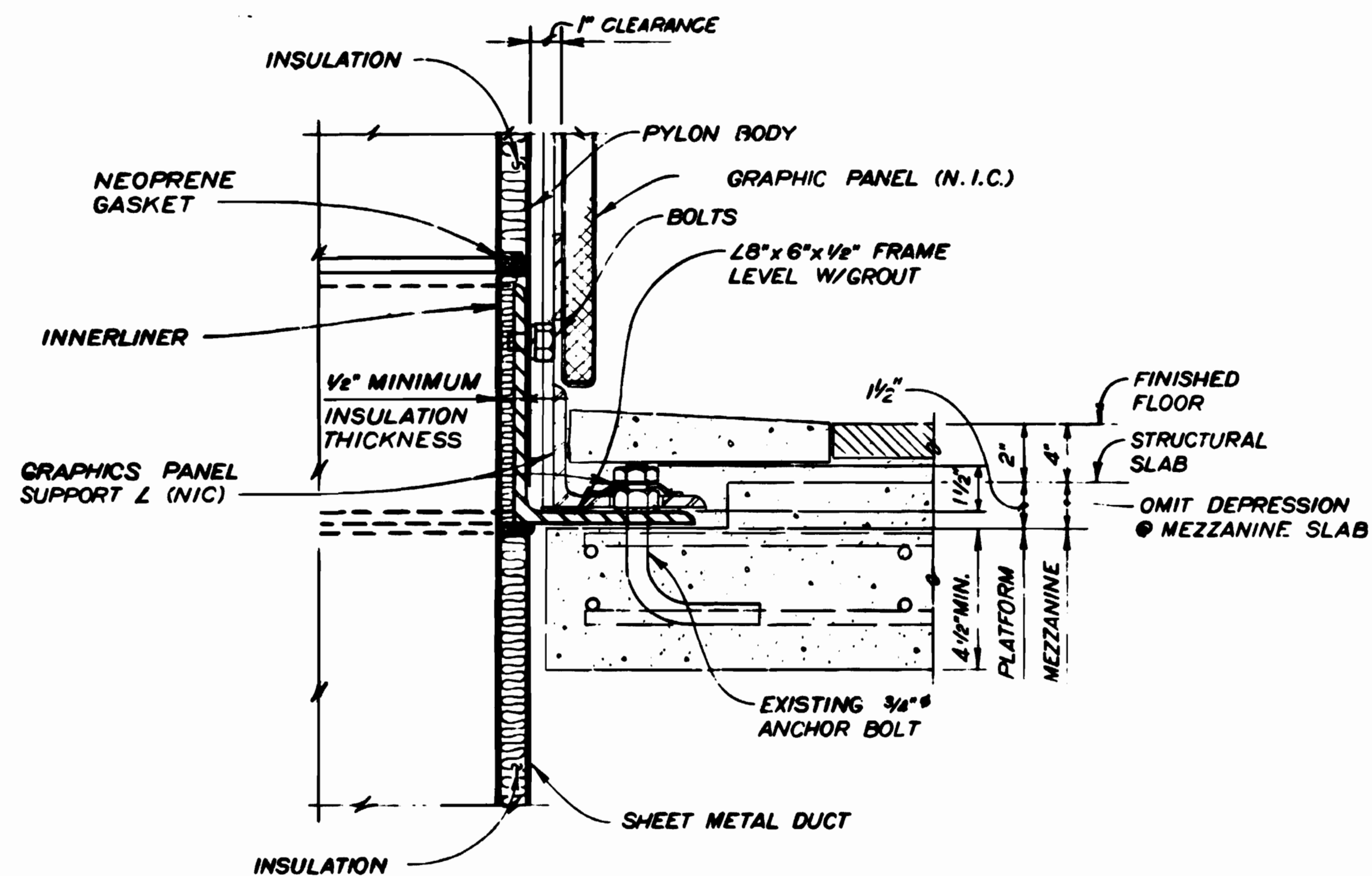
DE LEUW, CATHER & COMPANY  
 GENERAL ENGINEERING CONSULTANT  
 HARRY WEESE & ASSOCIATES  
 GENERAL ARCHITECTURAL CONSULTANT

**MECHANICAL STANDARD DRAWING**  
 AIR CONDITIONING PYLON SHT. I  
 SECTION NO. FA II

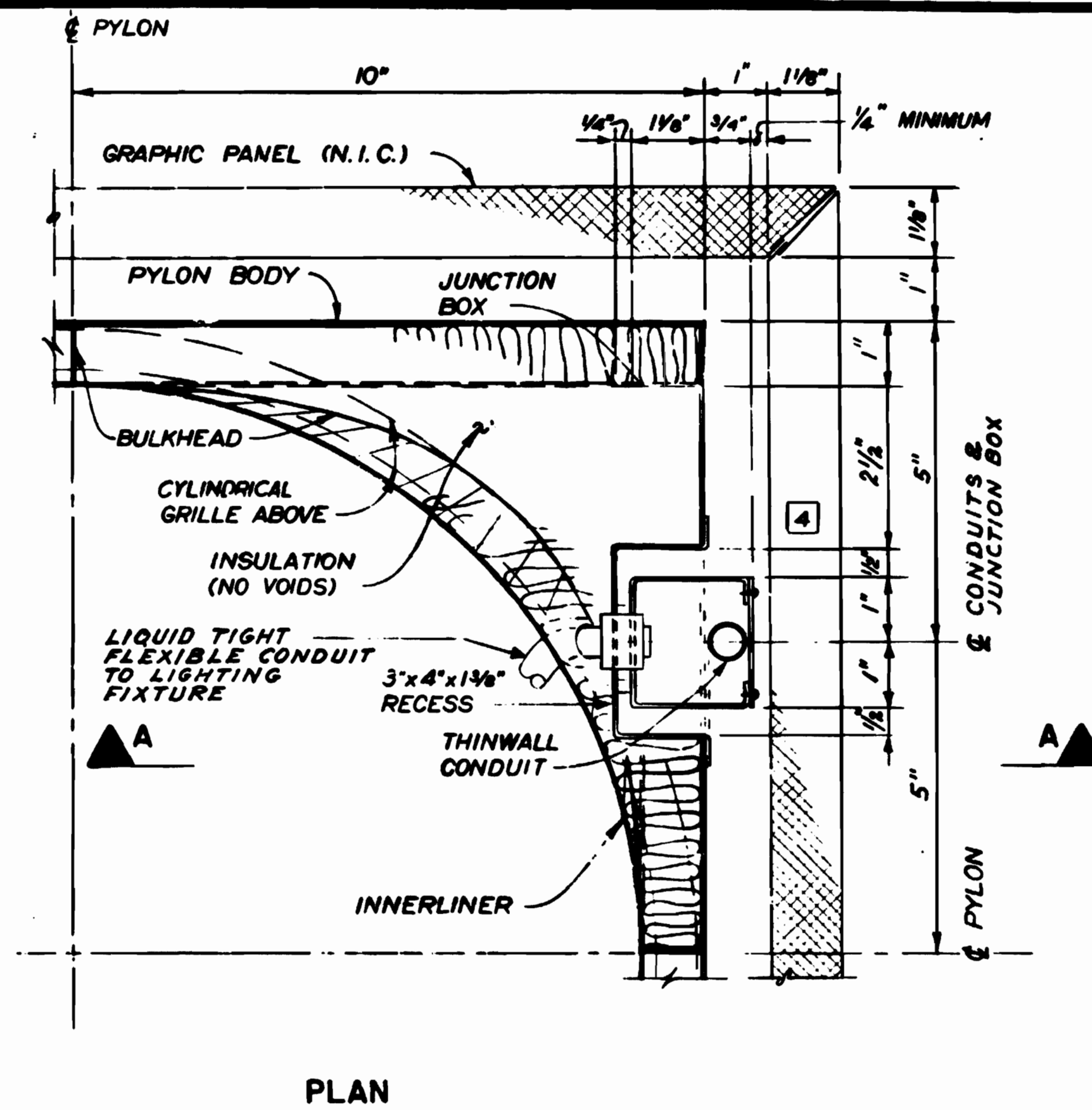
SCALE: 1" = 1'-0" AND AS NOTED  
 DRAWING NO. ST-M-83 M334-140

- NOTES:**
- EXTERIOR SIDE OF STEEL CONE SHALL BE FINISHED IN BAKED ENAMEL, FED. COLOR 37038 BLACK COLOR TO MATCH SAMPLE ON FILE IN THE OFFICE OF THE ENGINEER.
  - MASKING, CIRCULAR GRILLE SCREEN AND LOUVER COLOR SHALL BE FINISHED IN BAKED ENAMEL BROWN COLOR NO. 20040 PER FEDERAL STANDARD NO. 5954 PUBLICATION DATE JANUARY 1968.
  - PYLON BODY SHALL BE FABRICATED FROM PRIME SHEETS. NO TRANSVERSE SEAMS OF ANY KIND SHALL BE USED. LONGITUDINAL SEAMS SHALL BE OF PITTSBURGH TYPE.
  - MATERIALS, BOLTS, ELECTRICAL ITEMS AND COATINGS SHALL BE SIMILAR FOR ALL AIR CONDITIONING PYLONS.
  - CONTRACTOR SHALL PROVIDE ADEQUATE LENGTH OF 2 CONDUCTORS AND GROUND WIRE TO MAKE THE NECESSARY CONNECTIONS.
  - LAMP SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH REQUIREMENTS SPECIFIED IN SECTION 1518(AIR CONDITIONING PYLON).
  - GRAPHICS PANELS WILL BE FURNISHED AND INSTALLED UNDER SEPARATE CONTRACT. CONSTRUCT FINISH FLOOR AFTER ATTACHMENT OF SUPPORTS TO 28" x 6" x 1/2" FRAME.
- NOTE:  
DO NOT SCALE DIMENSIONS ON DRAWING.

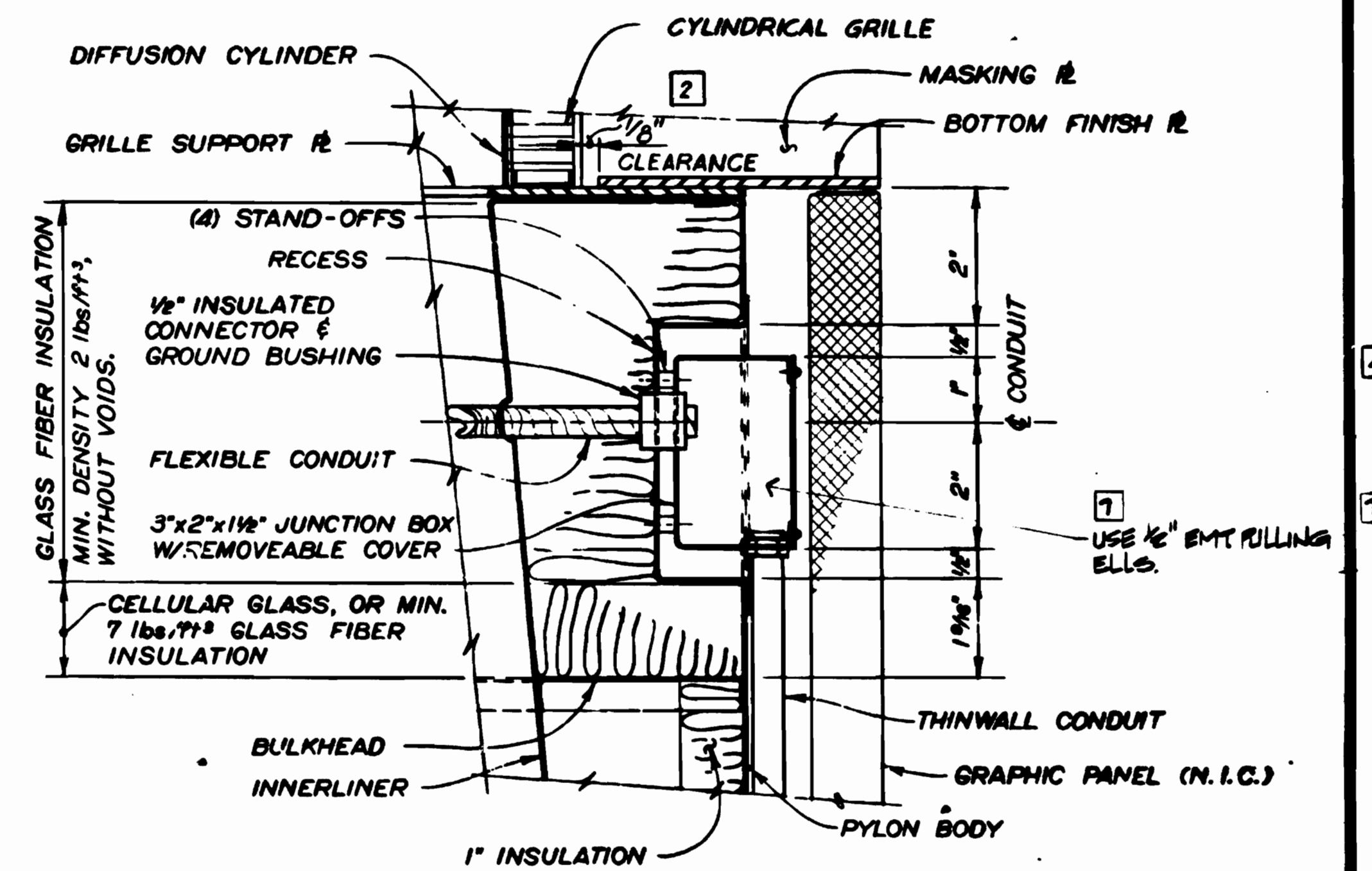




**DETAIL G**  
SCALE: 3" = 1'-0"

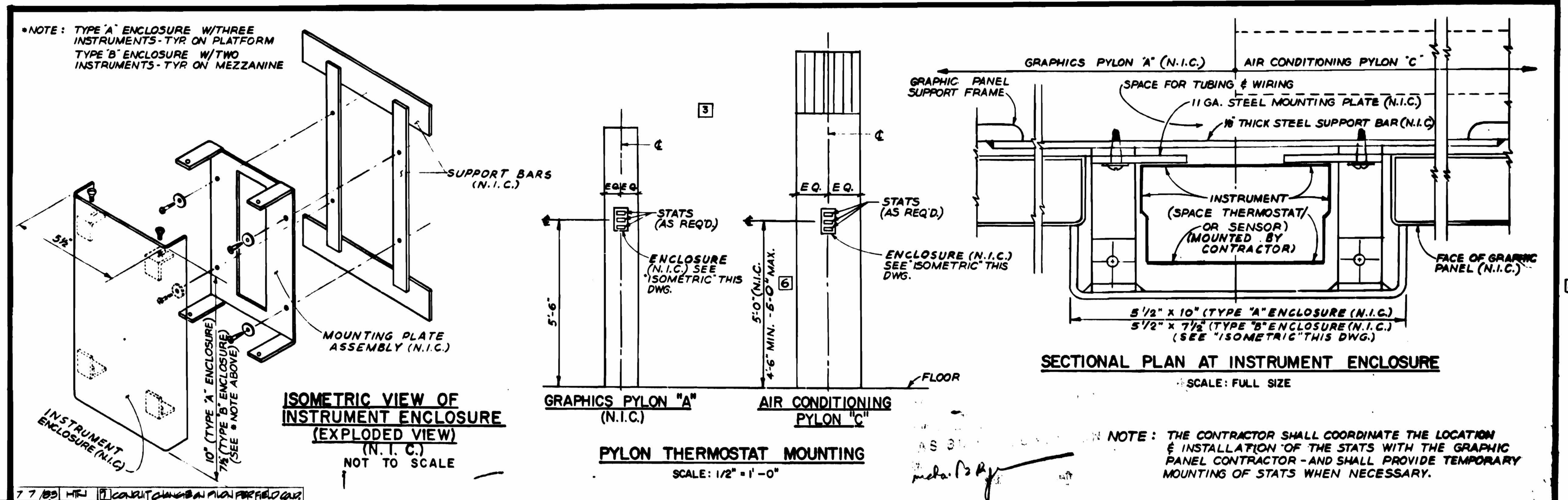


**PLAN**

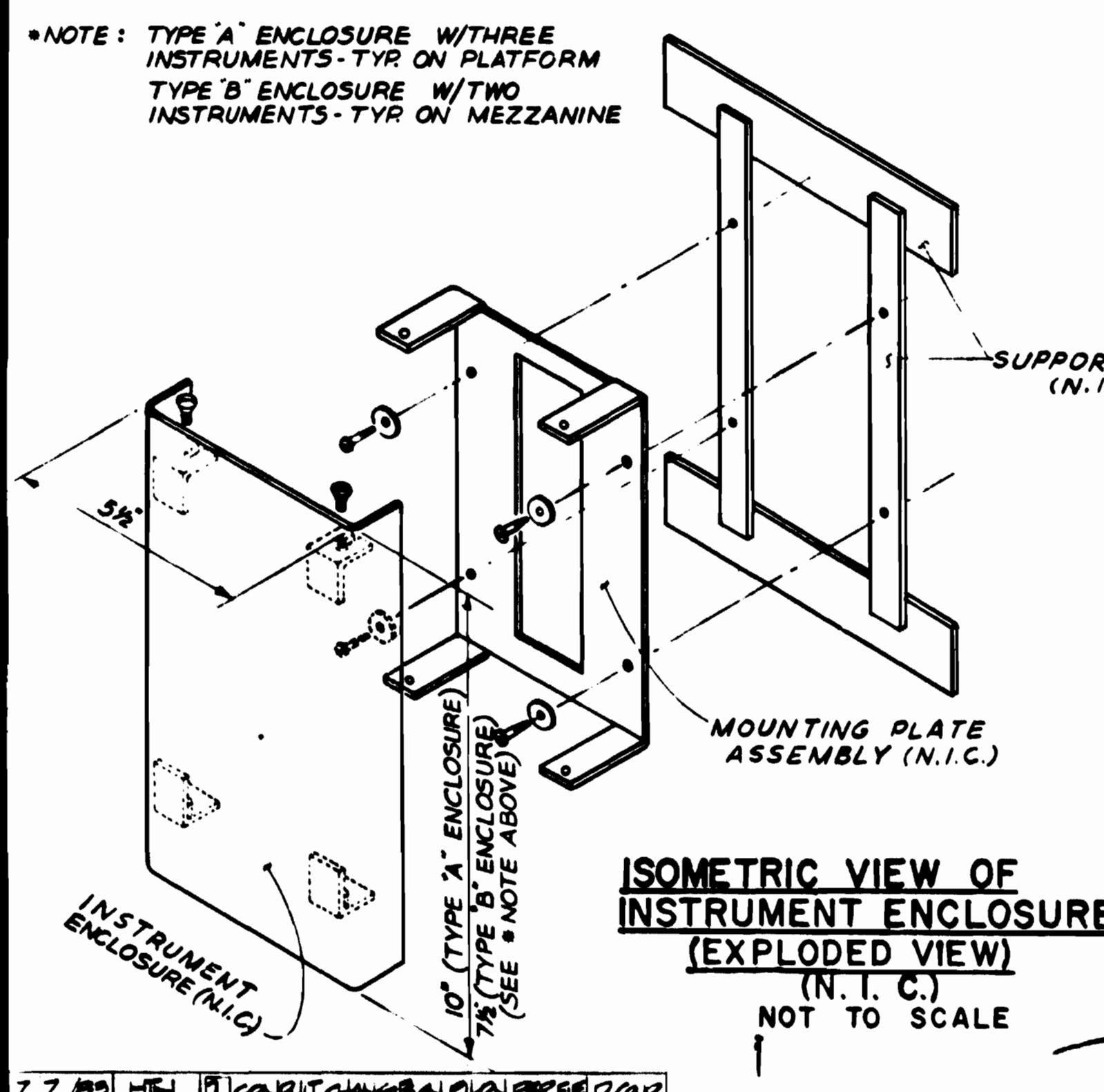


**SECTION A-A**

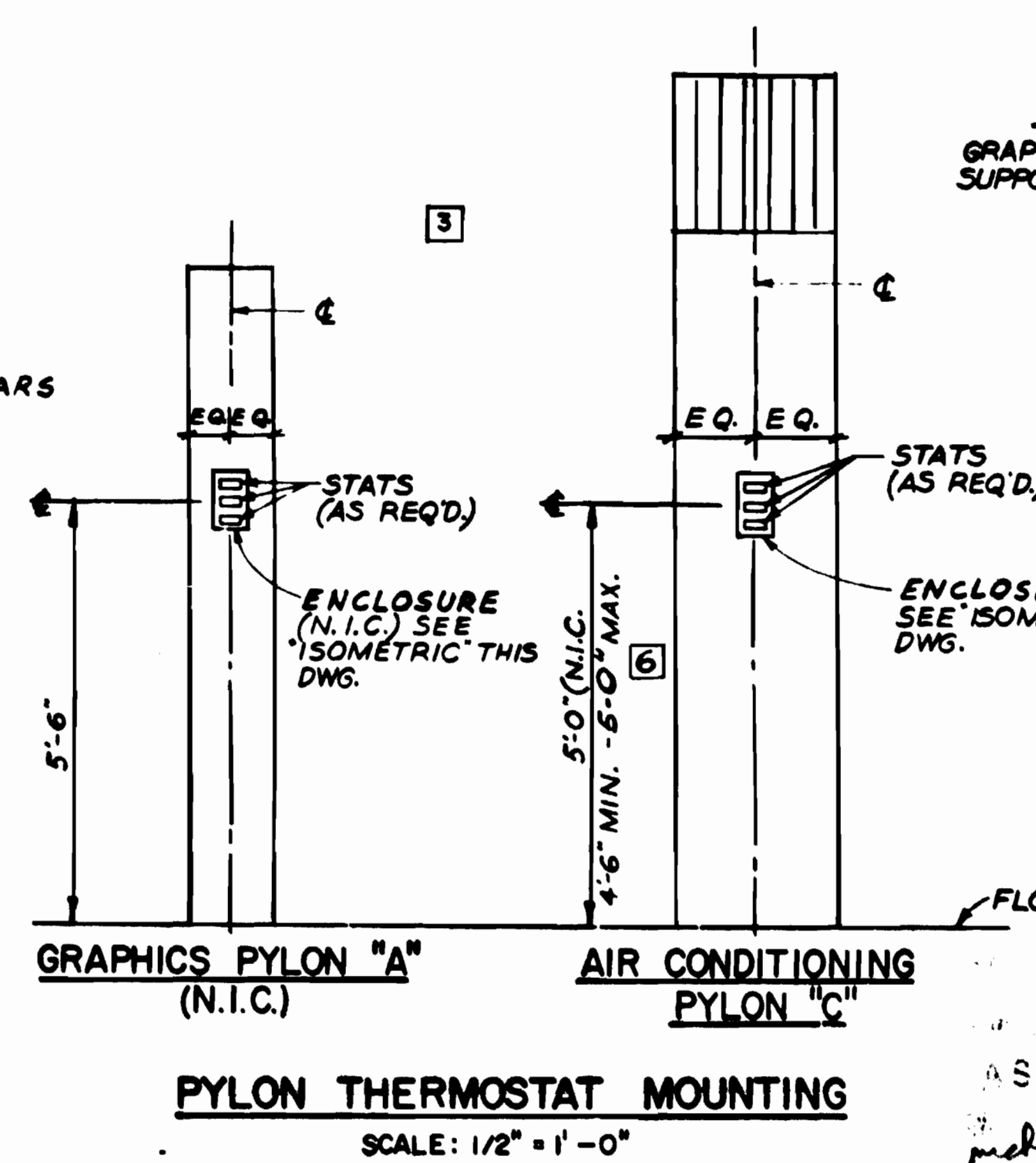
**JUNCTION BOX DETAIL FOR PYLON LIGHT**  
SCALE: 6" = 1'-0"



**SECTIONAL PLAN AT INSTRUMENT ENCLOSURE**  
SCALE: FULL SIZE



**ISOMETRIC VIEW OF INSTRUMENT ENCLOSURE (EXPLODED VIEW)**  
(N.I.C.)  
NOT TO SCALE

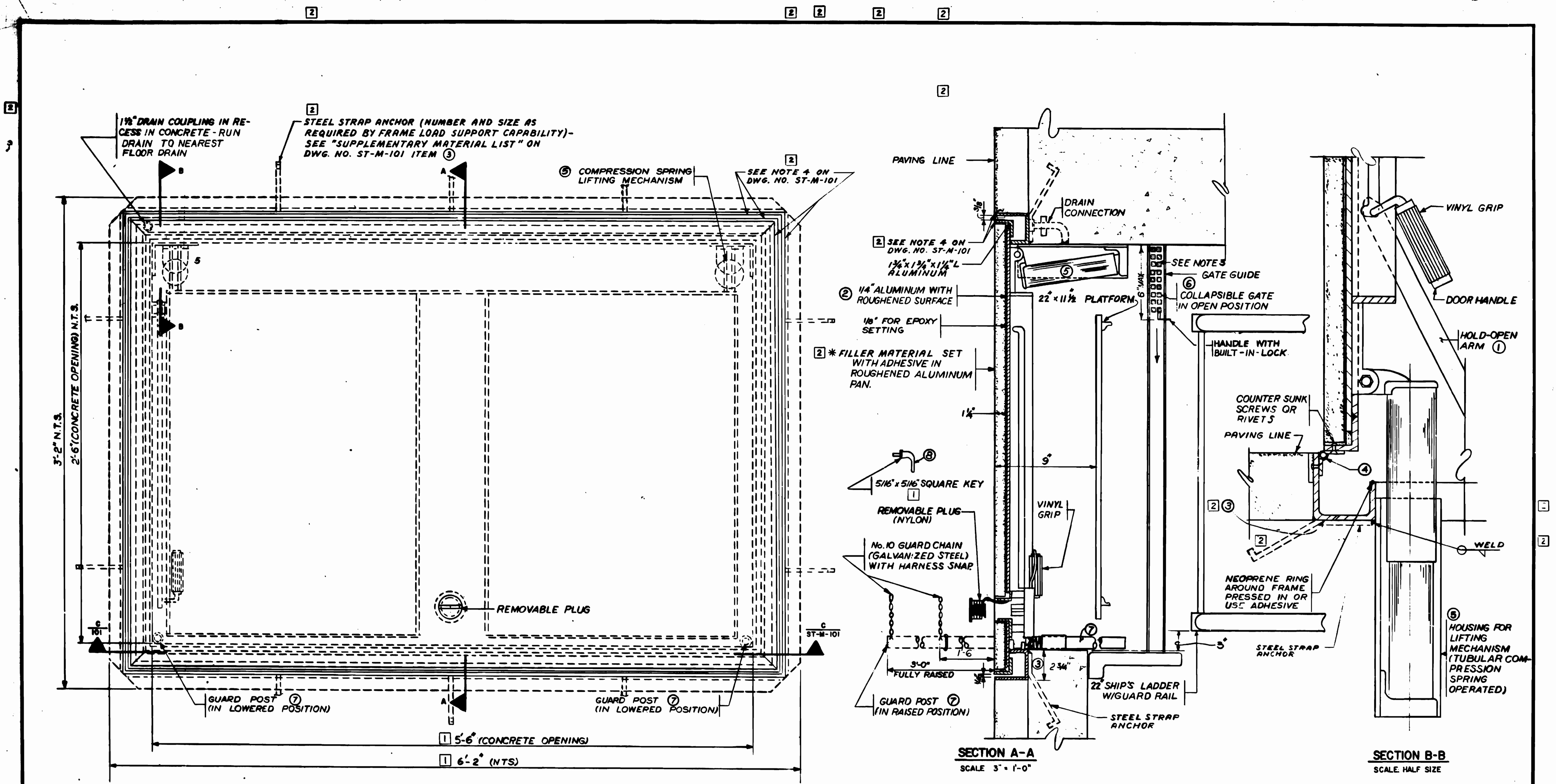


**PYLON THERMOSTAT MOUNTING**  
SCALE: 1/2" = 1'-0"

NOTE: THE CONTRACTOR SHALL COORDINATE THE LOCATION & INSTALLATION OF THE STATS WITH THE GRAPHIC PANEL CONTRACTOR - AND SHALL PROVIDE TEMPORARY MOUNTING OF STATS WHEN NECESSARY.

DESIGNED		DATE		REFERENCE DRAWINGS		REVISIONS		WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY		MECHANICAL STANDARD DRAWING	
K.S. PARROTT	5/19/71	ST-M-63	AIR CONDITIONING PYLON-SHT.1	4-25-72	REVISIONS	WHATA		DE LEUW, CATHER & COMPANY		AIR CONDITIONING PYLON SHT. 2	
W.D. BROWN	8/24/71			2-28-73	ADJUSTED Pylon THERMOSTAT MOUNTING	APPROVED		GENERAL ENGINEERING CONSULTANT		B PYLON THERMOSTAT MOUNTING, SECTION NO. FA II	
M.D. SULLIVAN	DATE			10-19-73	ADJUSTED DRAWING TITLE	APPROVED		HARRY WEESE & ASSOCIATES		SCALE AS NOTED	
				5-4-75	CHANGED LOCATION OF PYLON JUNCTION BOX	APPROVED		GENERAL ARCHITECTURAL CONSULTANT		DRAWING NO. ST-M-90	
				6-27-75	DETAIL "B" OMITTED; SEE DETAIL "A" ON ST-M-63	APPROVED		GENERAL ARCHITECTURAL CONSULTANT		M334-141	
				11-18-78	REVISION NO. 2, DN. FOR THERMOSTAT	APPROVED		GENERAL ARCHITECTURAL CONSULTANT			





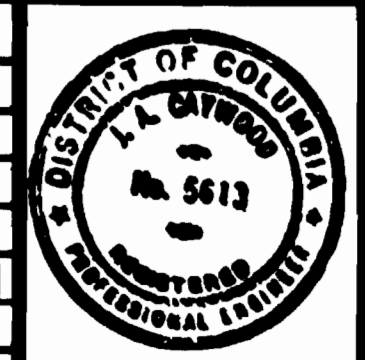
**PLAN**  
SCALE: 3" = 1'-0"

**SECTION A-A**  
SCALE 3" = 1'-0"

**SECTION B-B**  
SCALE HALF SIZE  
**DETAIL W/HATCH DOOR OPEN**

**NOTE:**  
[2] FILLER MATERIAL SHALL BE COMPATIBLE WITH ADJACENT PAVING SURFACE.

DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS	
		NUMBER	DESCRIPTION	DATE	DESCRIPTION
A.S. GILL	11/17/77	ST-M-101	MAINTENANCE HATCH FOR ESCALATOR MACHINE ROOM - SHT. 1	6-2-73	ADJUSTED DIMENSIONS FOR LENGTH OF CONC. OPENING & DOOR [1]
DRAWN	11/17/77			6-2-75	ADJUSTED DRAWING TITLE, FILLER MATERIAL, FRAME MATERIAL AND METHOD OF ANCHERING FRAME TO CONCRETE. [2]
CHECKED	1/22/78				
APPROVED	1-22-78				



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

WMATA

APPROVED *[Signature]*  
DIRECTOR OF ENGINEERING

APPROVED *[Signature]*  
CHIEF OF ENGINEERING AND OPERATIONS

DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT

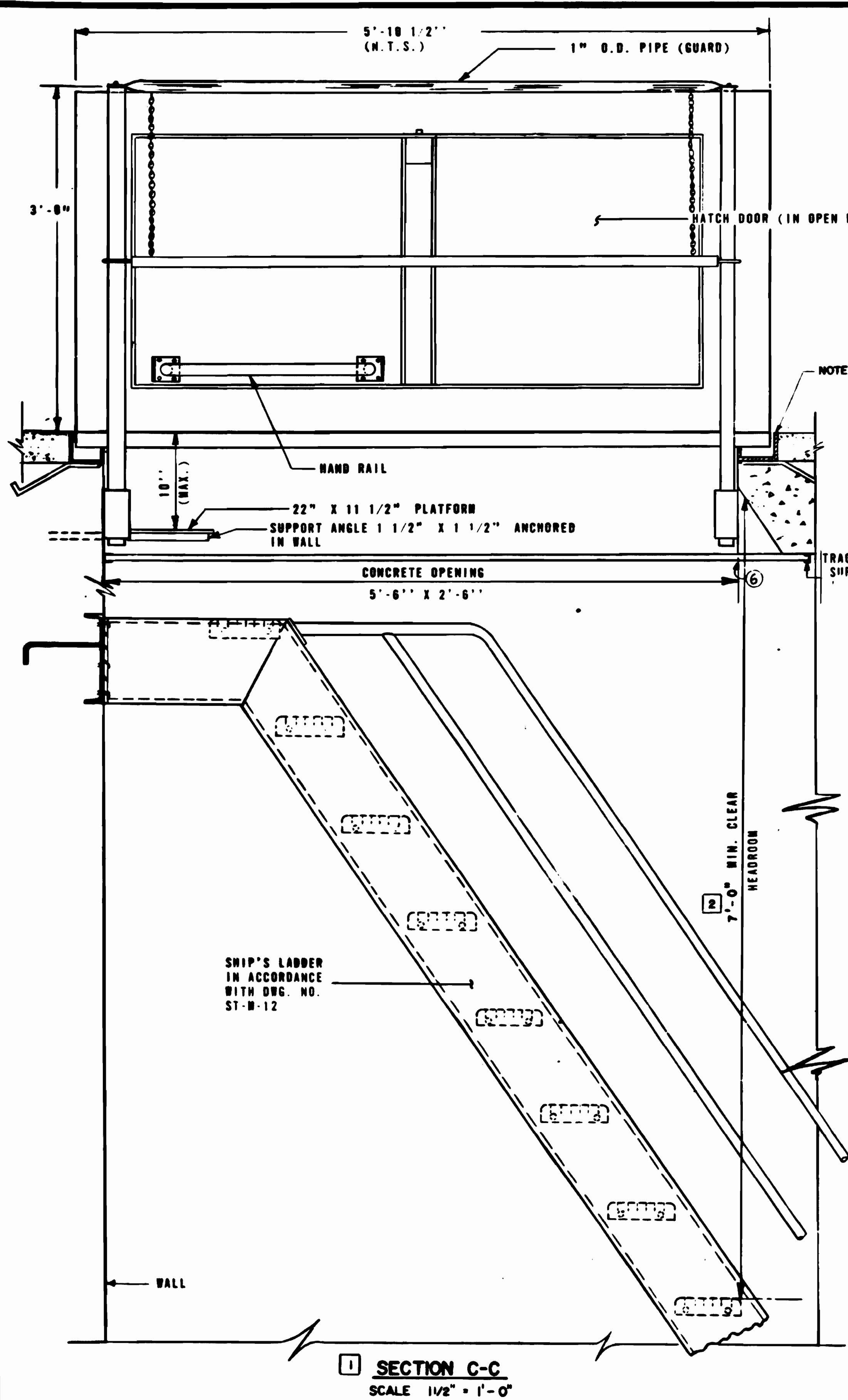
HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

**MECHANICAL STANDARD DRAWING**  
**MAINTENANCE HATCH FOR ESCALATOR AND ELEVATOR MACHINE ROOM SHT. 1**  
SECTION NO. FA II

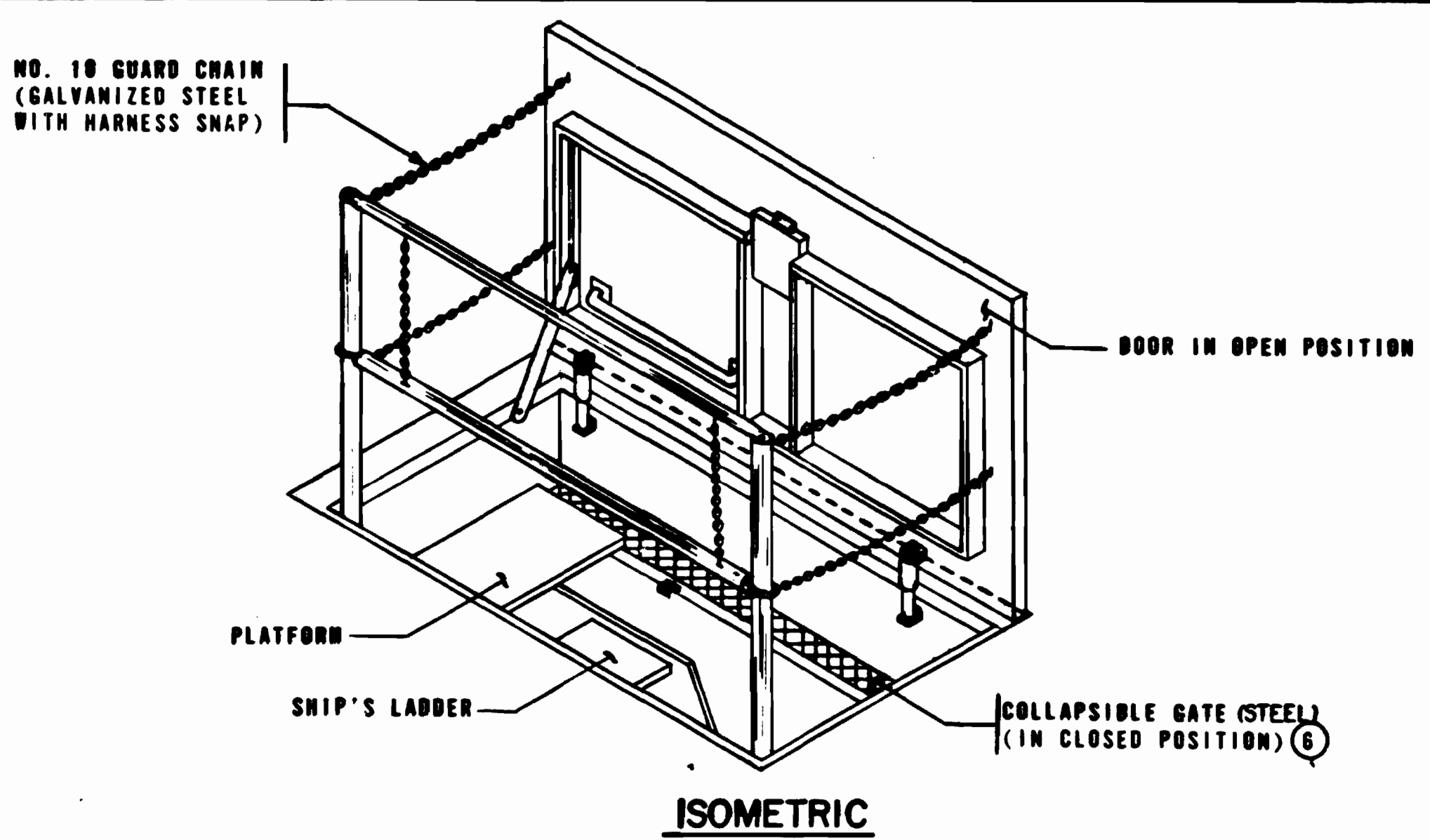
SCALE AS NOTED

DRAWING NO. ST-M-100

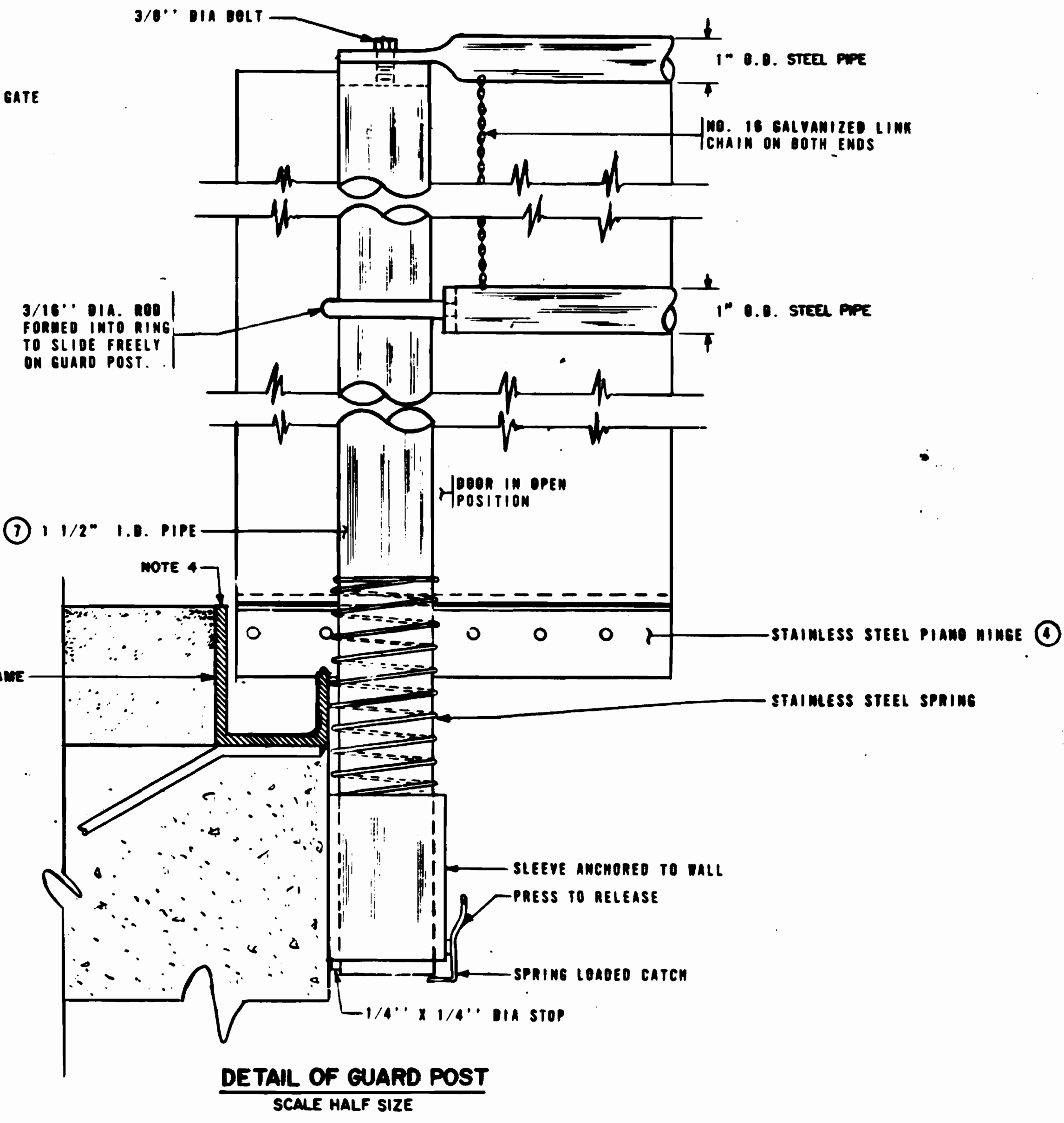
M334-142



SECTION C-C  
SCALE 1/2" = 1'-0"



ISOMETRIC



DETAIL OF GUARD POST  
SCALE HALF SIZE

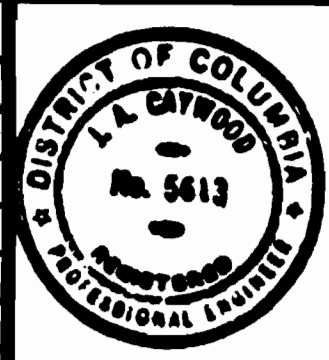
SUPPLEMENTARY MATERIAL LIST:

- ① HEAVY DUTY AUTOMATIC HOLD-OPEN ARM WITH VINYL GRIP.
- ② 1/4" ALUMINUM COVER (REINFORCED FOR 300 LBS. PER SQ. FOOT LIVE LOAD).
- ③ 1/4" STEEL FRAME.
- ④ STAINLESS STEEL 1 1/2" PIANO HINGE WITH STAINLESS STEEL PINS.
- ⑤ COMPRESSION SPRING LIFTING MECHANISM. NUMBER AS REQUIRED.
- ⑥ COLLAPSIBLE GATE WITH AUTOMATIC LOCKING MECHANISM TO BE LOCKED AND UNLOCKED FROM INSIDE HATCH PIT WITH 3/8" X 3/8" SQUARE KEY.
- ⑦ 1-1/2" ID STEEL GUARD POST.
- ⑧ 5/16" X 5/16" SQUARE KEY AND HANDLE FOR UNLOCKING SLAD TYPE LOCK ON HATCH DOOR AND COLLAPSIBLE GATE.

NOTES

- 1. SUITABLE ARRANGEMENT TO BE MADE TO STORE GUARD CHAINS WHEN NOT IN USE.
- 2. COLLAPSIBLE GATE TO BE INSTALLED TO GIVE A MINIMUM HEAD CLEARANCE OF 7'-0" FROM TOP OF TREAD.
- 3. DOOR SERVES AS GUARD WHEN IN OPEN POSITION.
- ④ THE VISIBLE METAL SURFACES OF DOOR AND FRAME SHALL BE PAINTED. COLOR: FEDERAL STANDARD 596, COLOR 200-40.

DESIGNED	DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
A. S. GILL	12/9/71	ST-M-100	MECHANICAL STANDARD DRAWING MAINTENANCE HATCH FOR ESCALATOR MACHINE ROOM	4-6-73	[Signature]	ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED TO BE IN INCHES AND DECIMALS THEREOF.
DRAWN	12/9/71	ST-M-12	STAIRS, LADDERS AND HANDRAILS	6-2-75	[Signature]	REVISIONS TO THIS DRAWING SHALL BE INDICATED BY A CIRCLED NUMBER AND A DESCRIPTION OF THE CHANGE.
CHECKED	12/9/71					FRAME MATERIAL TO STEEL, PROVIDED STEEL ANCHOR
APPROVED						



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

WMATA

APPROVED [Signature]

APPROVED [Signature]

DE LEUW, CATHIER & COMPANY  
GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

**MECHANICAL STANDARD DRAWING**  
MAINTENANCE HATCH FOR ESCALATOR AND ELEVATOR MACHINE ROOM SHT. 2  
SECTION NO. FA 11

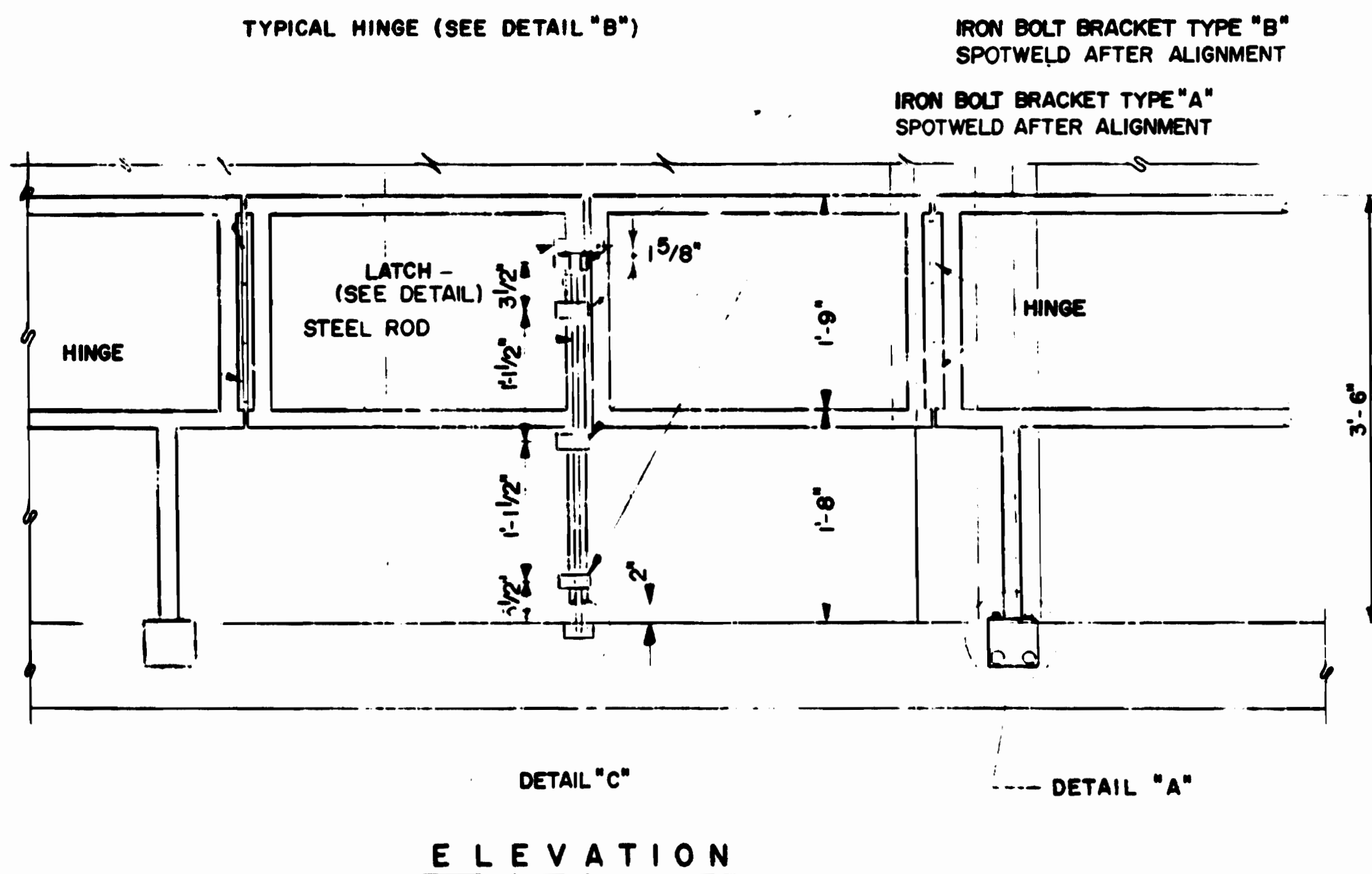
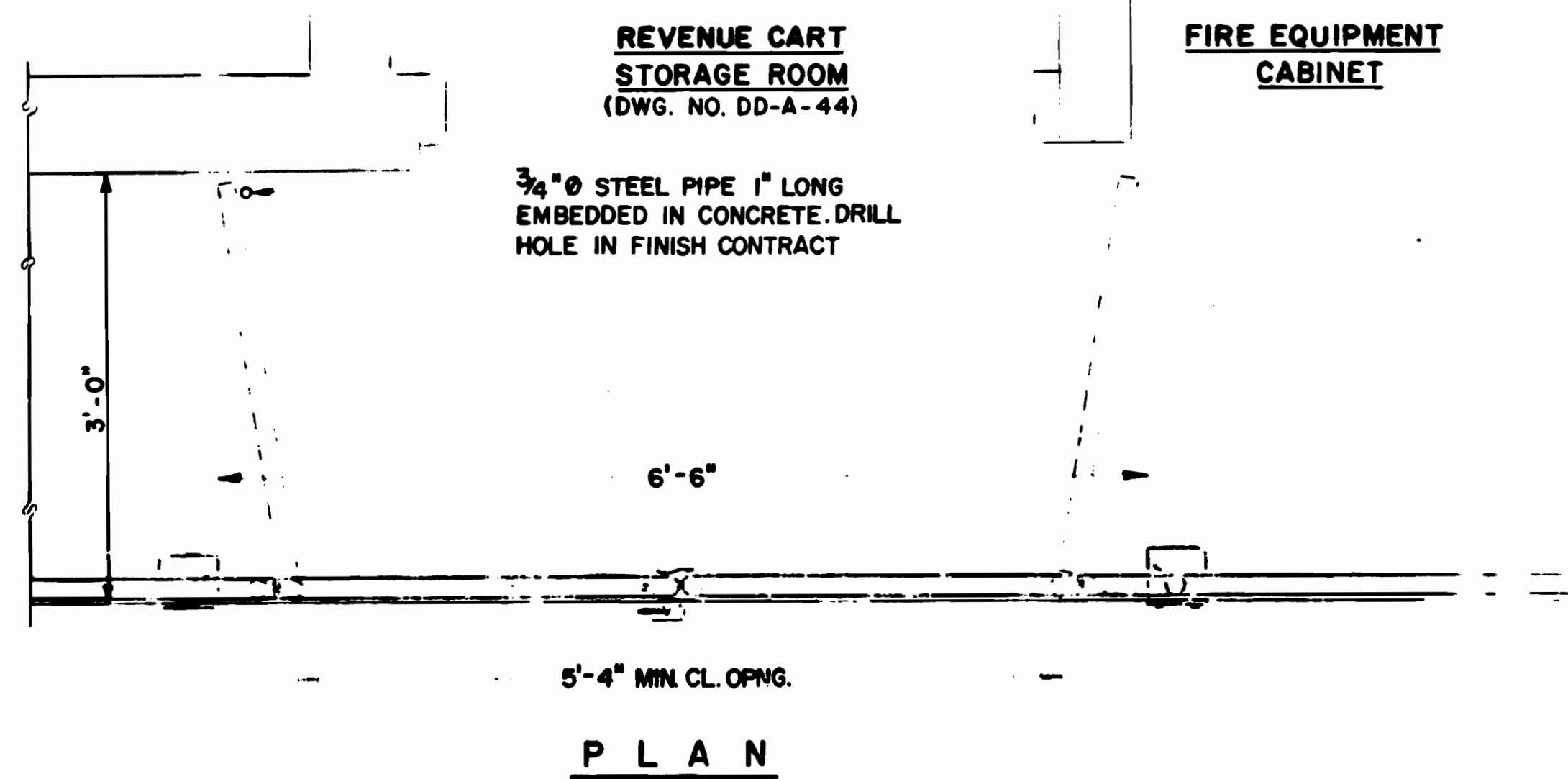
SCALE: AS NOTED

DRAWING NO. ST-M-101

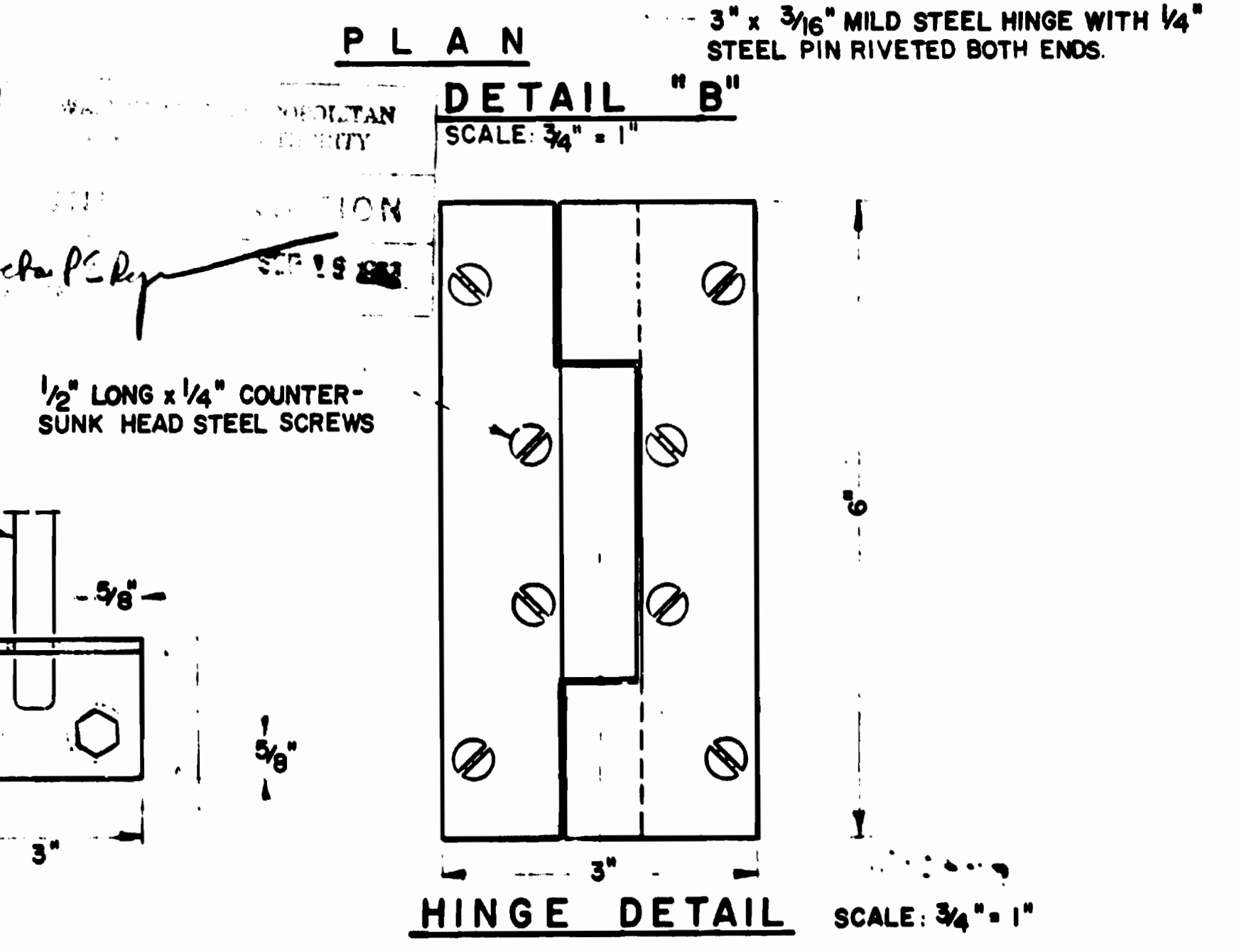
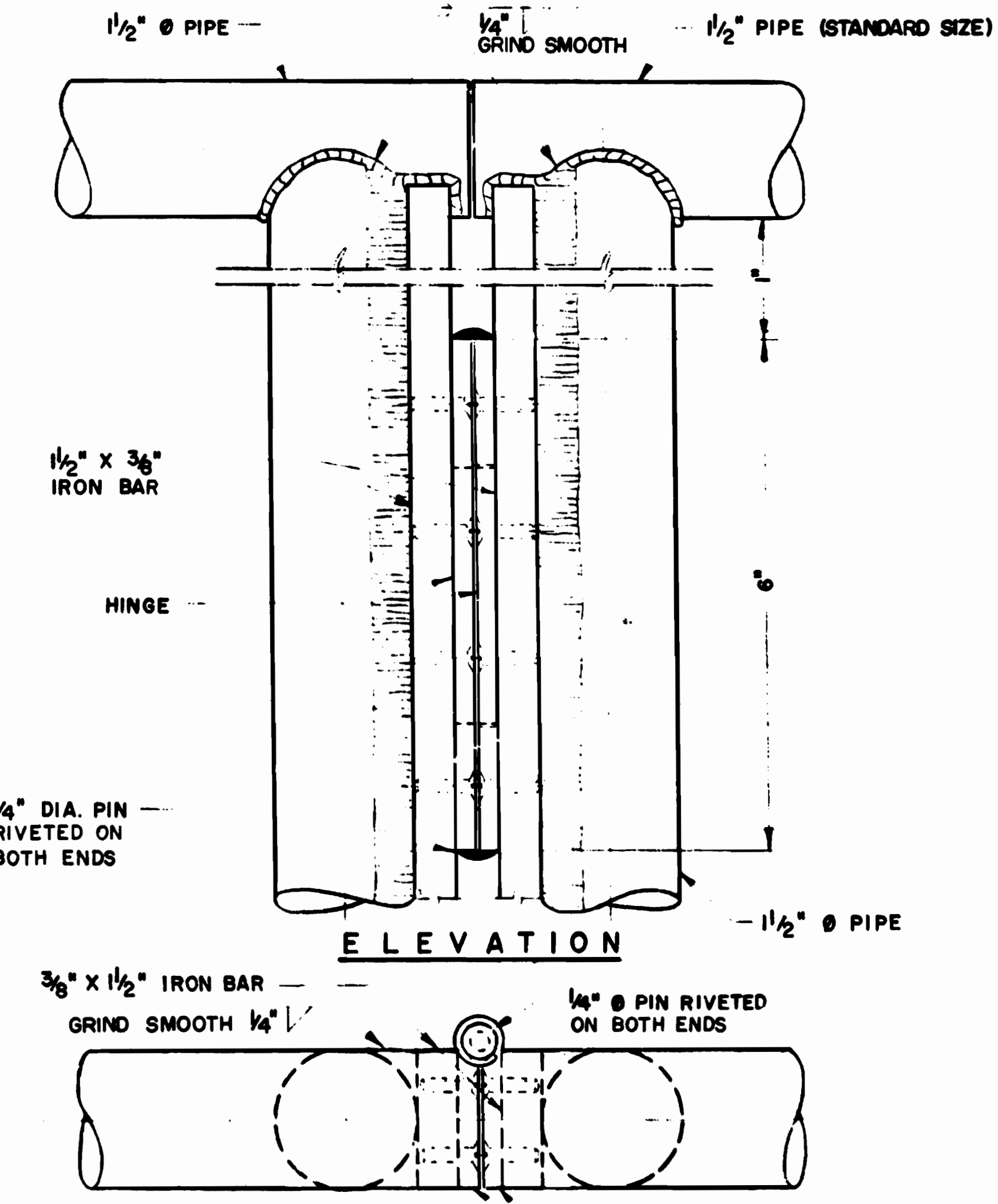
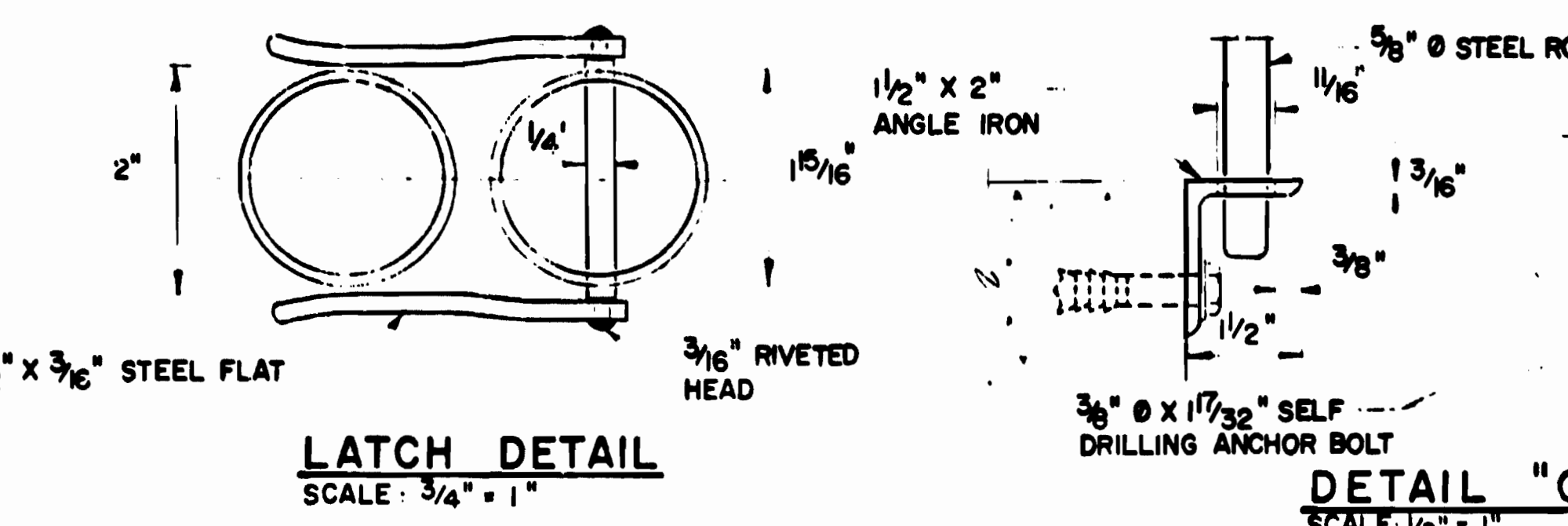
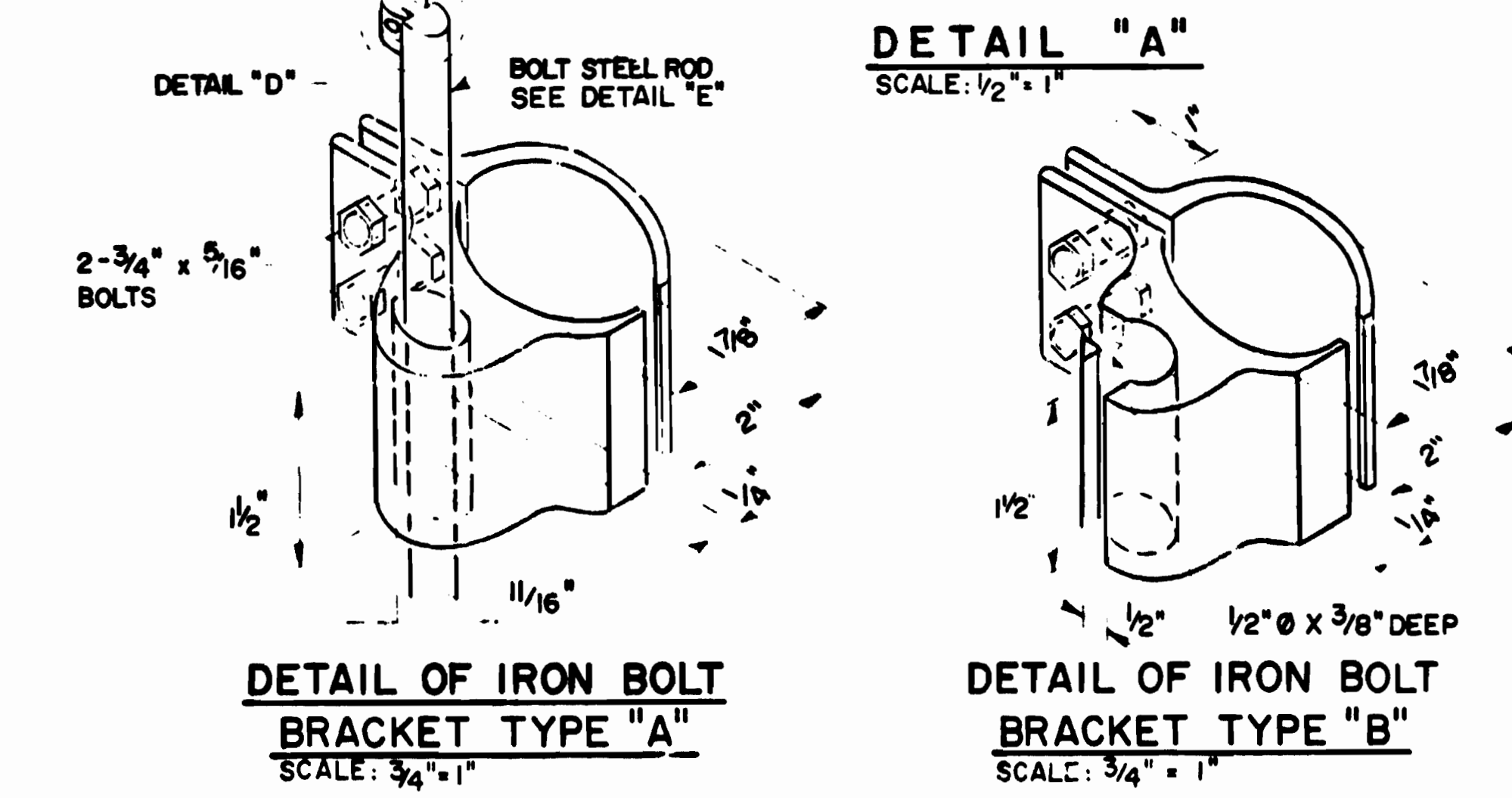
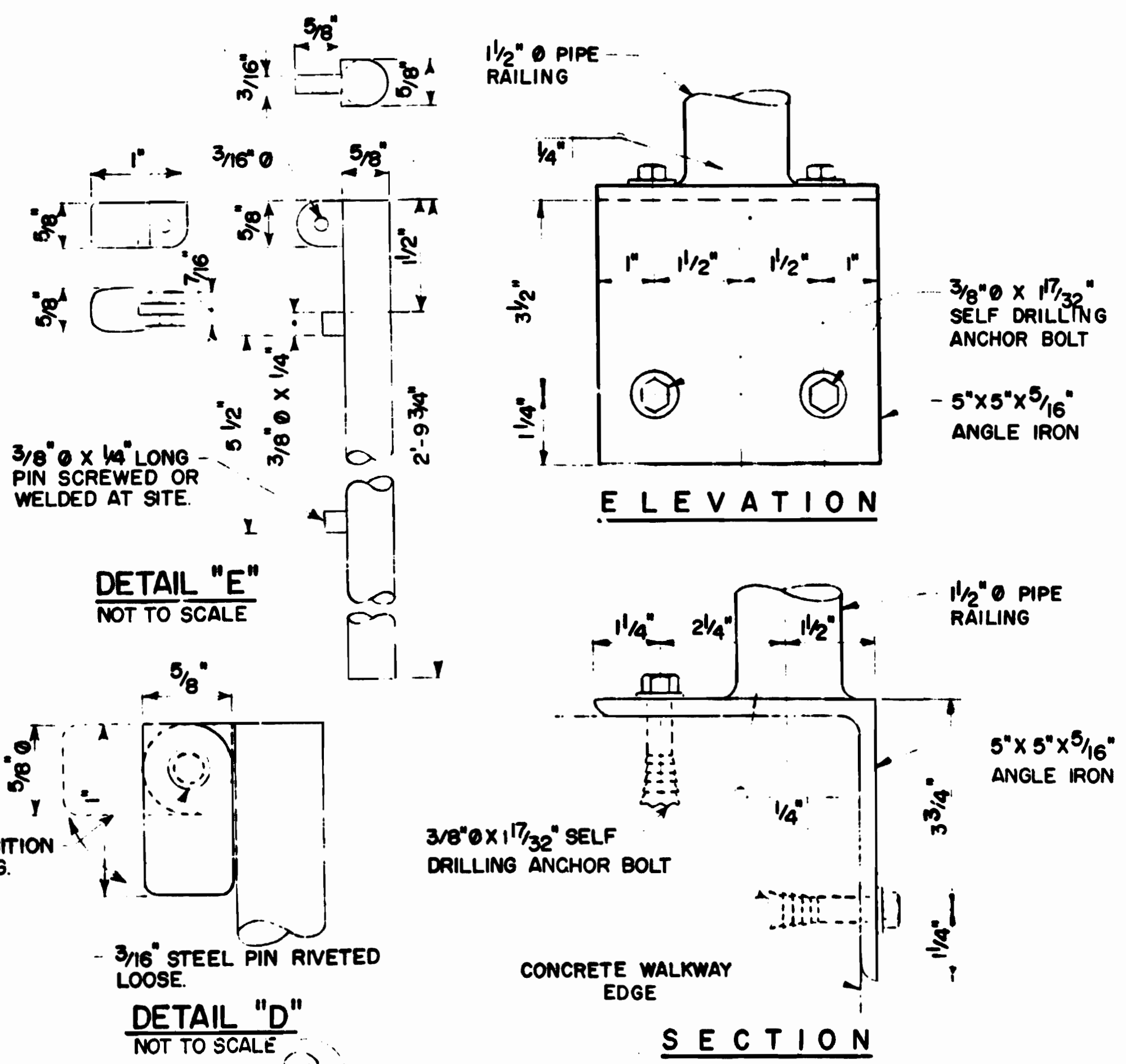
M334-143

*Michael E. [Signature]*





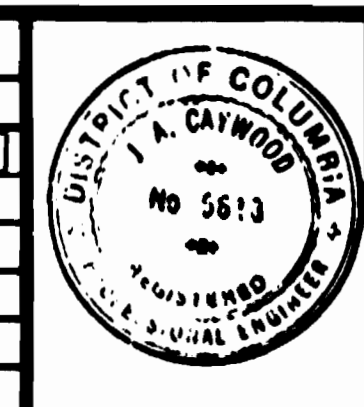
**RAILING GATE**  
SCALE: 1" = 1'-0"



DESIGNED A. S. GILL 12/31/71  
DATE  
DRAWN B. U. CHARUHAS 2/1/72  
DATE  
CHECKED [Signature] 3-3-72  
DATE  
APPROVED [Signature] [Signature]  
DATE

NUMBER	DESCRIPTION	DATE	BY	REVISIONS
DD-A-44	REVENUE CART STORAGE ROOM SIDE AND CENTER PLATFORM	6/18/75	[Signature]	ADJUSTED LOCATION OF RAILING GATE [1]

NUMBER	DESCRIPTION	DATE	BY	REVISIONS
DD-A-44	REVENUE CART STORAGE ROOM SIDE AND CENTER PLATFORM	6/18/75	[Signature]	ADJUSTED LOCATION OF RAILING GATE [1]



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

APPROVED [Signature] DIRECTOR OF ENGINEERING  
WMATA  
APPROVED [Signature] CHIEF OF DESIGN AND CONSTRUCTION

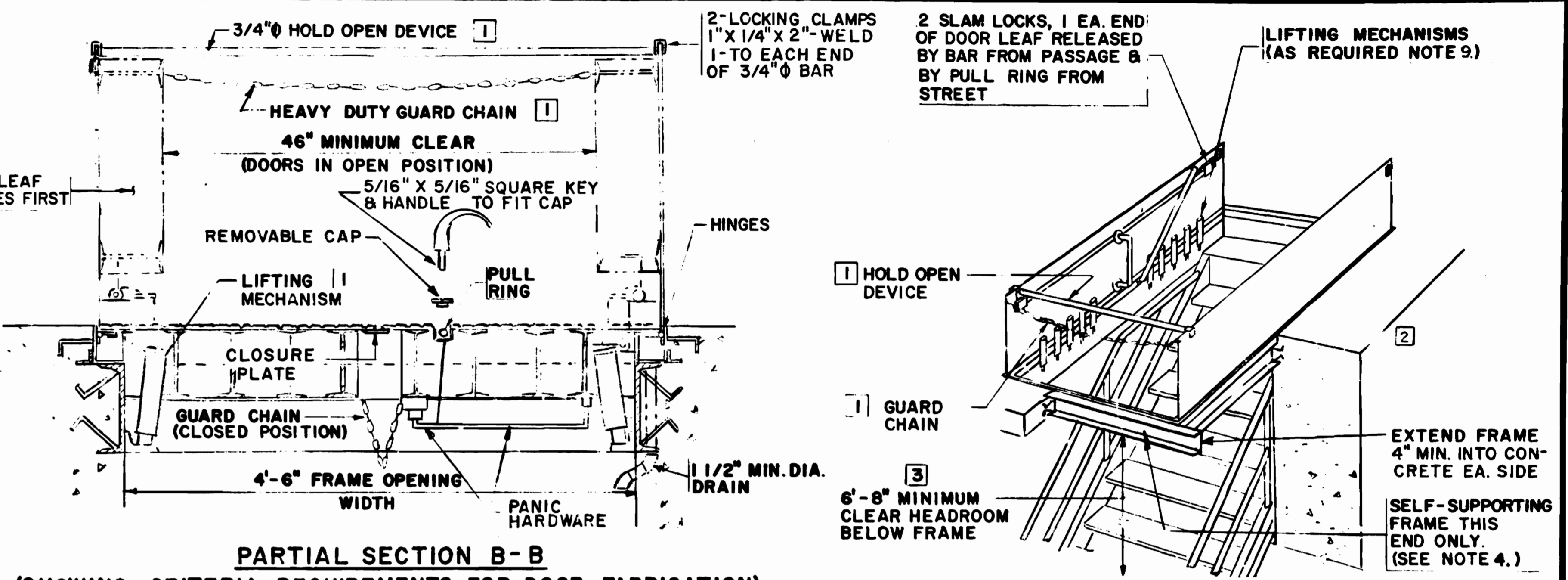
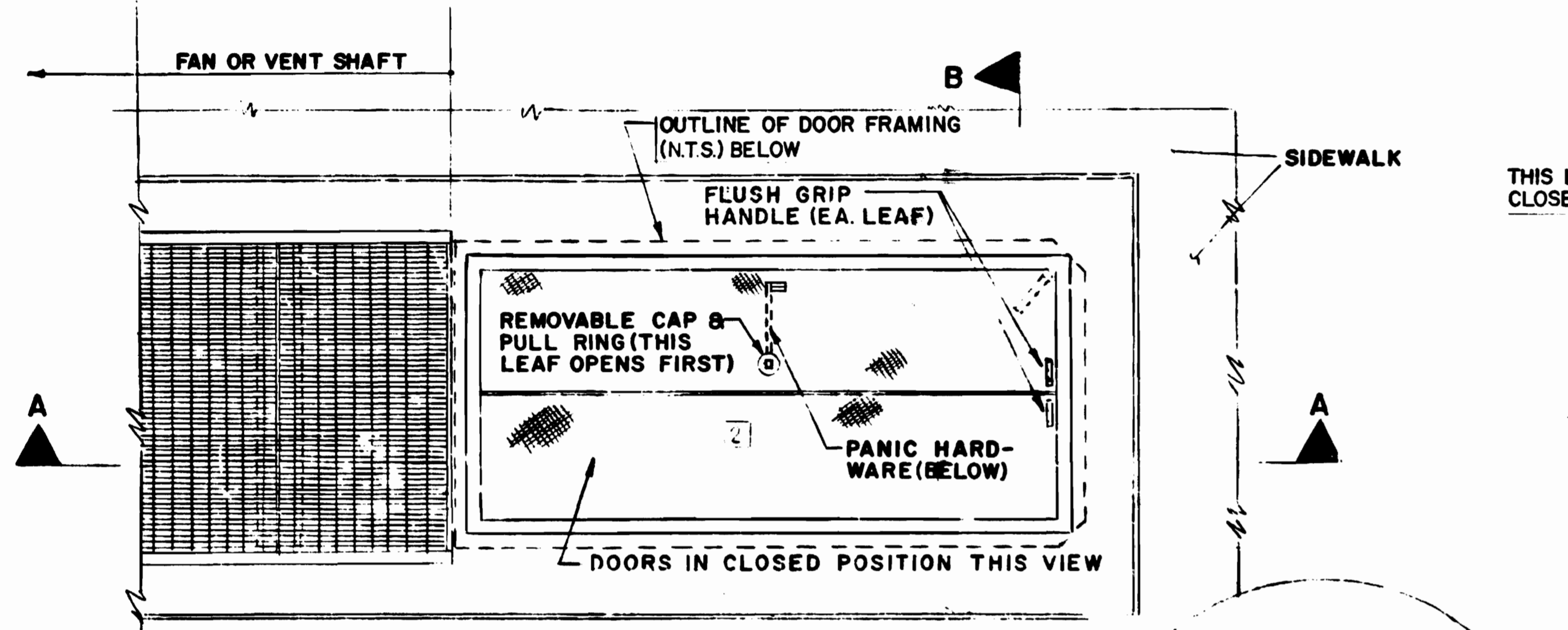
DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT  
HARRY WEESSE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

**MECHANICAL STANDARD DRAWING**  
RAILING GATE FOR  
REVENUE CART STORAGE AREA  
SECTION NO. FA 11

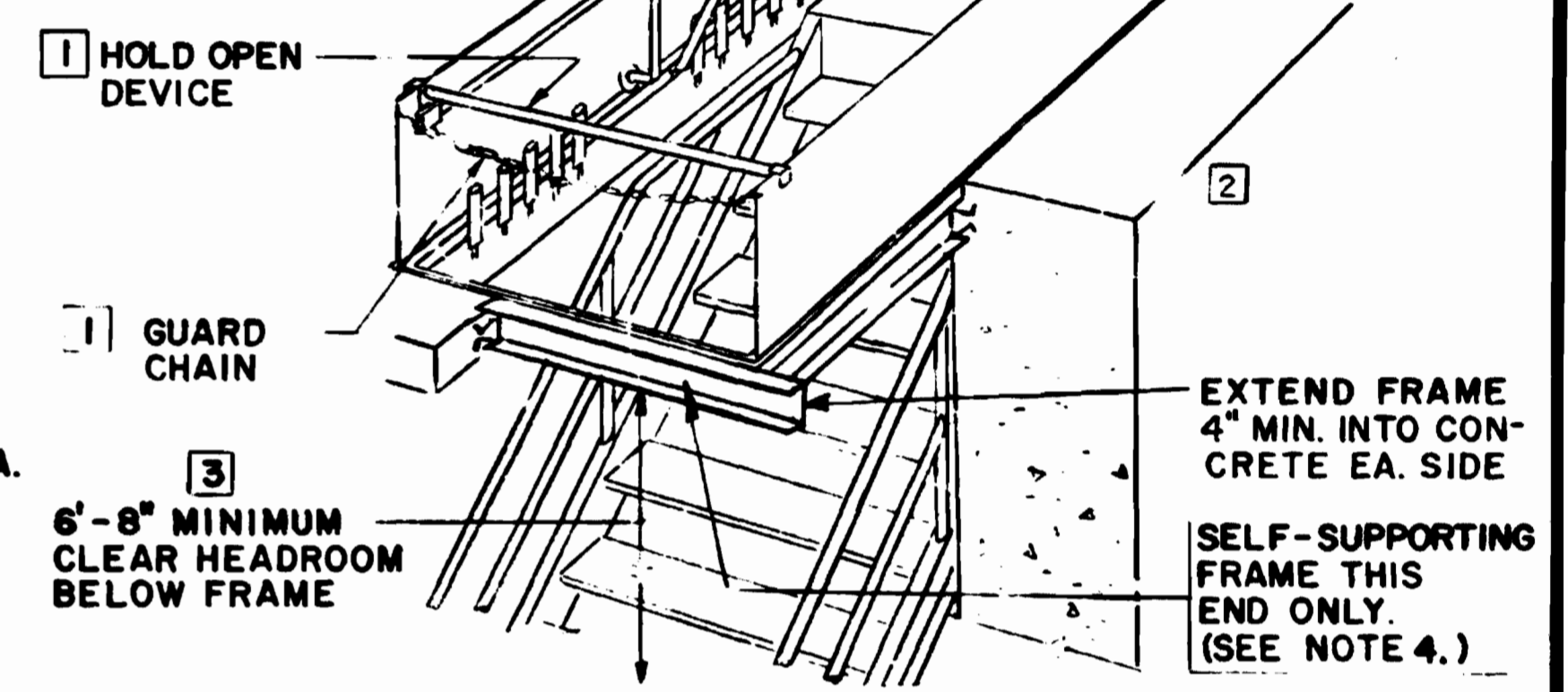
SCALE: 1" = 1'-0" AND AS NOTED  
DRAWING NO. ST-M-102 M334-144



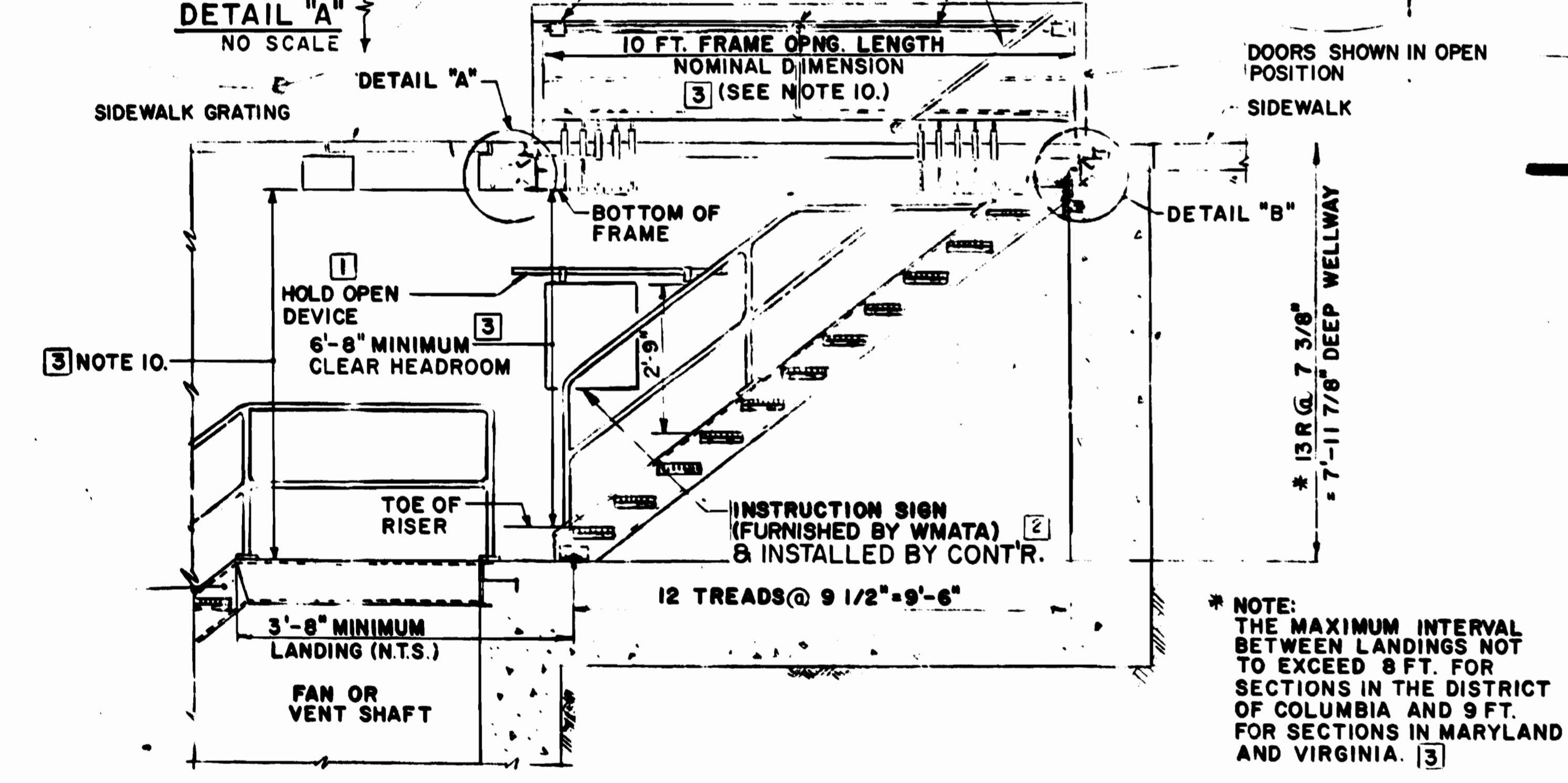
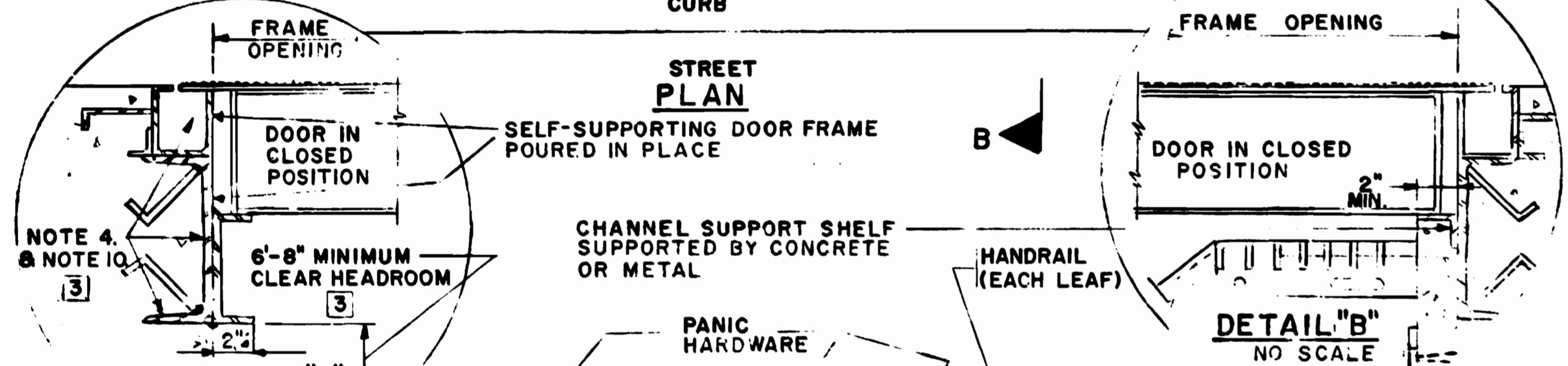
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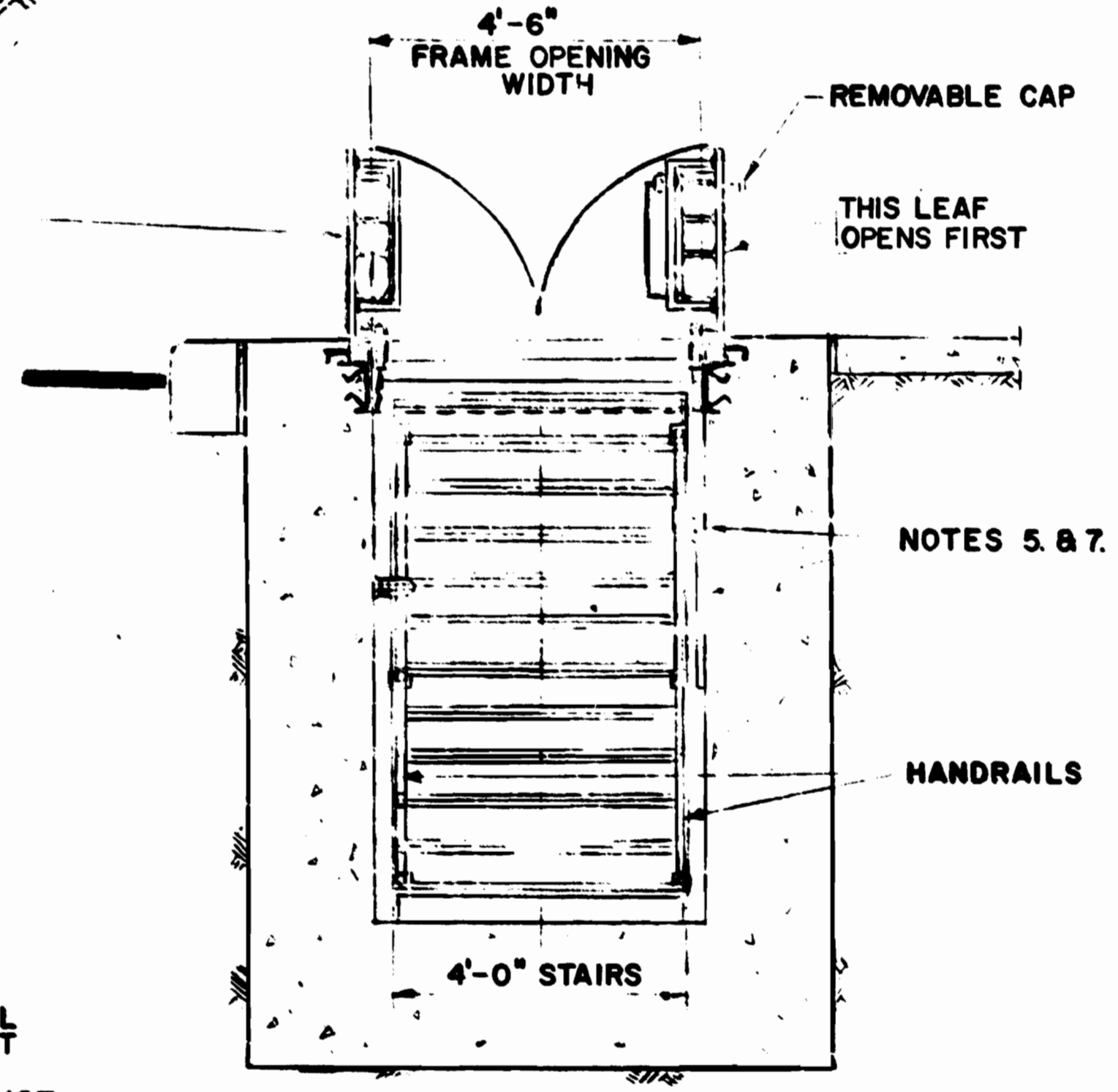
**PARTIAL SECTION B-B**  
(SHOWING CRITERIA REQUIREMENTS FOR DOOR FABRICATION)  
NOT TO SCALE



**SCHEMATIC**  
NOT TO SCALE



**SECTION A-A**



**SECTION B-B**

**GENERAL NOTES**

1. DOOR FRAME SHALL BE FITTED WITHOUT WARPAGE.
2. DELETED
3. WHERE EMERGENCY ACCESS SHAFTS ARE SITUATED IN THE VICINITY OF CURB, STREET, AND SIDEWALK (ILLUSTRATED THIS DRAWING) DOOR REINFORCEMENT, HINGES, ETC. SHALL BE AS NECESSARY FOR AASHO HS-20-44 LOADING.
4. THE DOOR FRAME FOR THIS SIDE SHALL BE STRUCTURALLY SELF-SUPPORTING AS NECESSARY FOR AASHO HS-20-44 LOADING.
5. HOLD OPEN DEVICE SHALL BE PAINTED WITH WHITE ENAMEL WITH THE INSCRIPTION "Positive Locking Bar" PAINTED IN RED 72 PT. HELVETICA MEDIUM LETTERING ON 2 SIDES OF BAR.
6. DELETED
7. PROVIDE STORAGE FOR HOLD OPEN DEVICE AND INSTRUCTION SIGN IN A CONSPICUOUS AND WELL-ILLUMINATED POSITION.
8. SET UNIT WITH SLIGHT PITCH TOWARD DRAIN.
9. HARDWARE SHALL INCORPORATE HEAVY DUTY HELICAL SPRING OPERATORS AND HOUSINGS OF STAINLESS STEEL WHICH WILL PROVIDE CONSISTENT AND RELIABLE EASE OF OPENING AND CLOSING THROUGH THE ENTIRE ARC OF SWING, AND A CUSHIONING EFFECT WHILE RETARDING THE DOWNWARD MOTION OF THE DOORS. A VERTICAL FORCE OF LESS THAN 30 POUNDS SHALL START OPENING.
10. THE DEPTH OF SELF-SUPPORTING DOOR FRAME SHALL BE COORDINATED WITH THE DOOR LENGTH (10 FT. NOMINAL) AND THE RISE AND TREAD OF STAIRS TO MAINTAIN A MINIMUM HEADROOM OF 6'-8" THROUGHOUT ENTIRE PATH OF EGRESS.

DESIGNED		REFERENCE DRAWINGS		REVISIONS	
NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION	
1-20-75	TERMINOLOGY AGREE WITH STD. SPECS.	1-20-75		TERMINOLOGY AGREE WITH STD. SPECS.	1
8-7-75	DELETED STANDPIPE I.D. PLATE	8-7-75		DELETED STANDPIPE I.D. PLATE	2
8-23-76	CLARIFIED HEADROOM & EXPANDED ON LANDING INTERVAL REQUIREMENTS; DELETED NOTE 2	8-23-76		CLARIFIED HEADROOM & EXPANDED ON LANDING INTERVAL REQUIREMENTS; DELETED NOTE 2	3

**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

APPROVED: [Signature] DIRECTOR OF ENGINEERING

APPROVED: [Signature] CHIEF OF DESIGN AND CONSTRUCTION

DE LEUW, CATHAR & COMPANY  
GENERAL ENGINEERING CONSULTANT

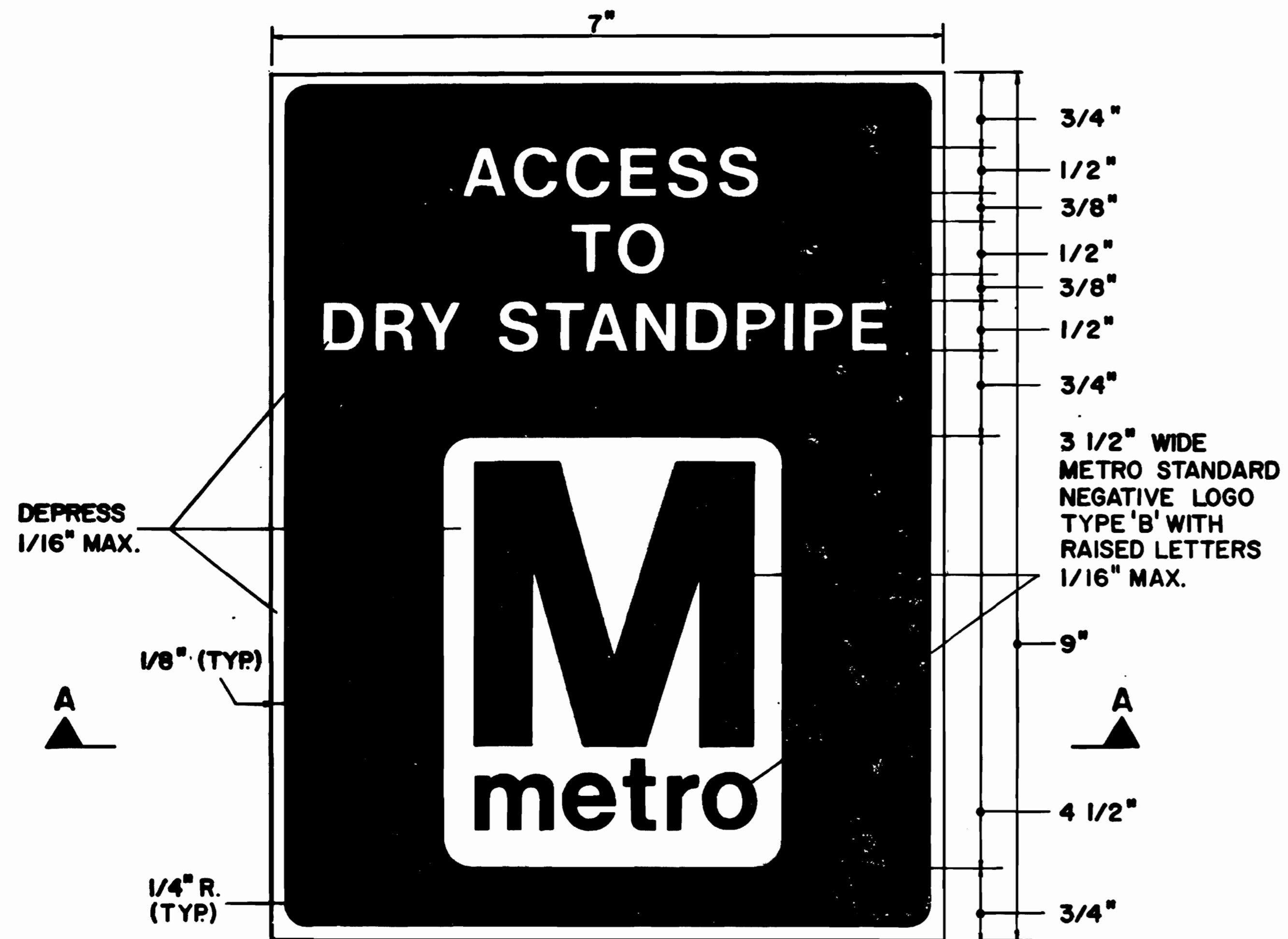
HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

**MECHANICAL STANDARD DRAWING**  
ACCESS DOOR AND STAIR ARRANGEMENT  
FOR PASSENGER EMERGENCY EXIT  
SECTION NO. FA II

SCALE: 1/2" = 1'-0" AND AS NOTED

DRAWING NO. ST-M-106 M334-145

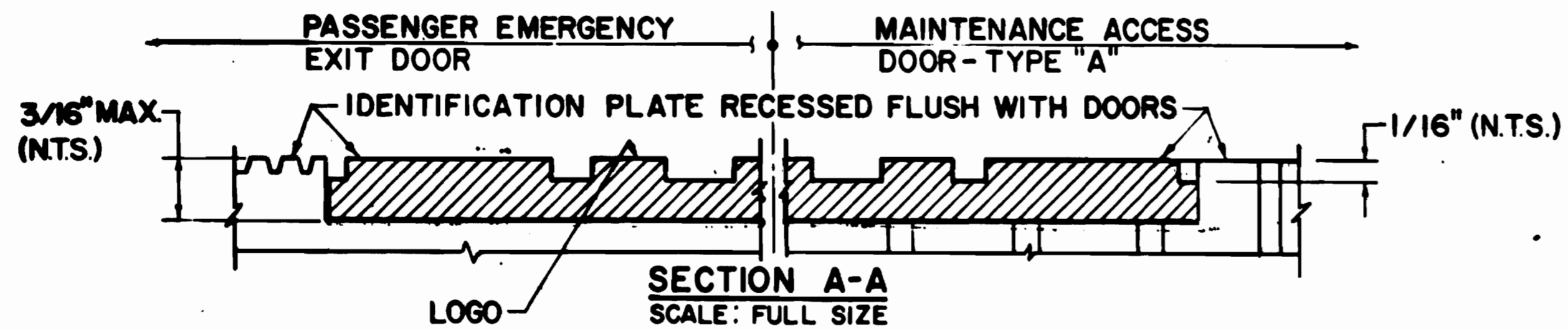




**STANDPIPE IDENTIFICATION PLATE**

SCALE: FULL SIZE

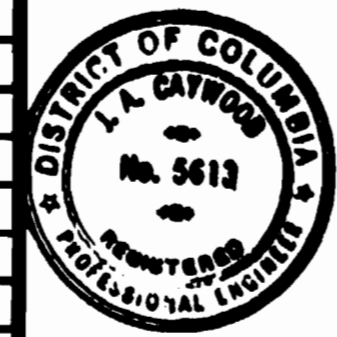
- NOTES:**
1. STANDPIPE IDENTIFICATION PLATE SHALL BE MILLED FROM 3/16" (MAX.) STEEL PLATE. LETTERING AND LOGO SHALL BE SIZED AND RAISED/OR DEPRESSED AS NOTED. STEEL PLATE SHALL BE GALVANIZED AFTER FABRICATION.
  2. DOOR FABRICATOR SHALL RECESS IDENTIFICATION PLATES IN SINGLE LEAF MAINTENANCE ACCESS DOORS AND PASSENGER EMERGENCY EXIT DOORS IN ACCORDANCE WITH THE LOCATIONS SHOWN ON DWG. No's ST-M-106 AND ST-M-9. PROVIDE STANDPIPE IDENTIFICATION PLATE ONLY WHERE STAND-PIPES ARE REQUIRED.
  3. STANDPIPE IDENTIFICATION PLATES SHALL BE FURNISHED AND INSTALLED BY THE DOOR MANUFACTURER OR FABRICATOR.



**GENERAL NOTES**

ALL SIGN LETTERING SHALL BE HELVETICA MEDIUM STYLE. COPY SHALL CONFORM TO THE SIZES AND ARRANGEMENTS SHOWN.

DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS	
		NUMBER	DESCRIPTION	DATE	DESCRIPTION
M. D. SULLIVAN	8/22/72	ST-M-9	FRAMES AND GRATINGS		
E. T. HARVEY	9/29/72	ST-M-106	ACCESS DOOR AND STAIR ARRANGEMENT FOR PASSENGER EMERGENCY EXIT		



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

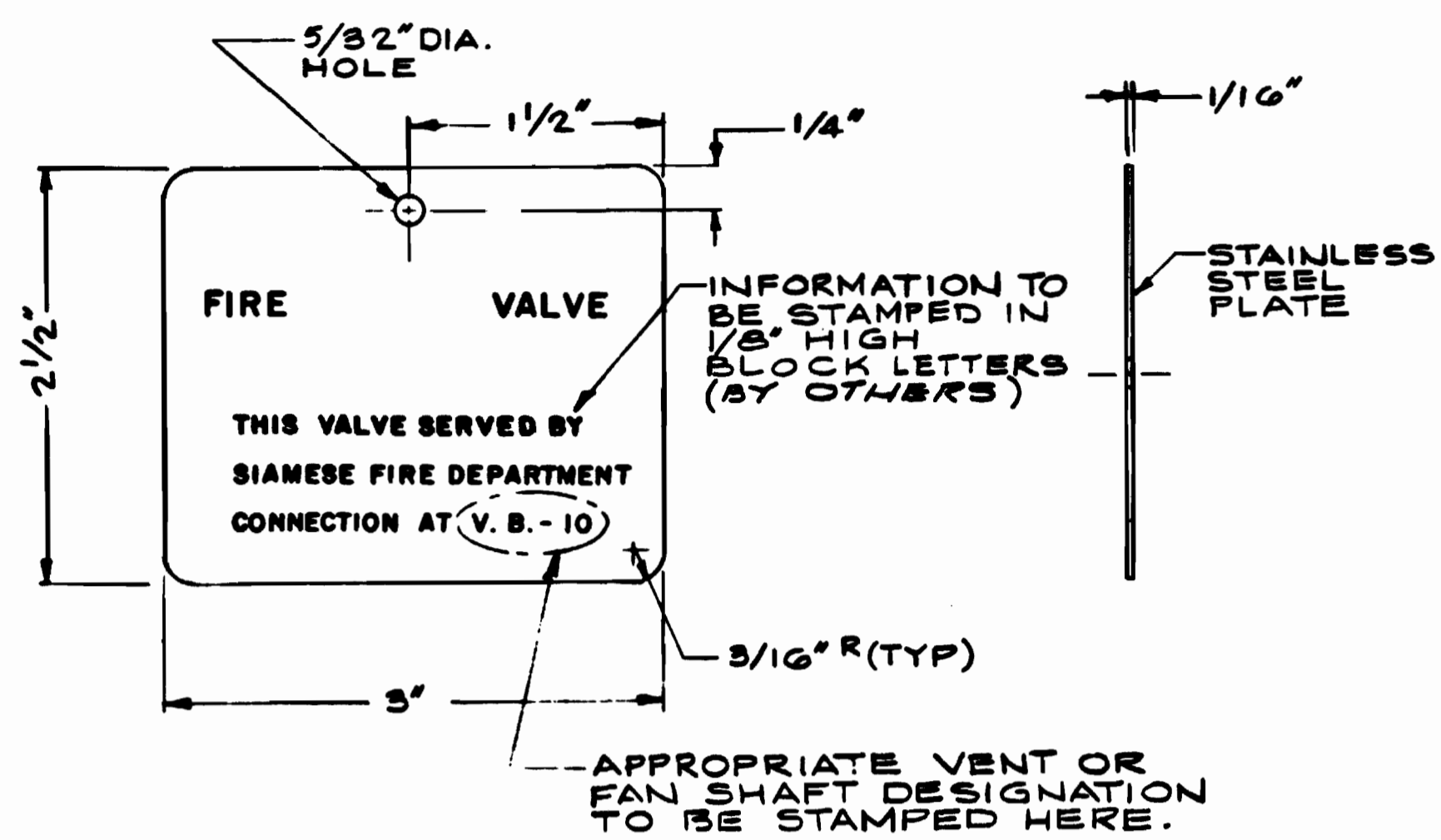
APPROVED *[Signature]* DIRECTOR OF ENGINEERING  
 VMATA  
 APPROVED *[Signature]* 1/4/73 CHIEF OF DESIGN AND CONSTRUCTION

DE LEUW, CATHER & COMPANY  
 GENERAL ENGINEERING CONSULTANT  
 HARRY WEESE & ASSOCIATES  
 GENERAL ARCHITECTURAL CONSULTANT

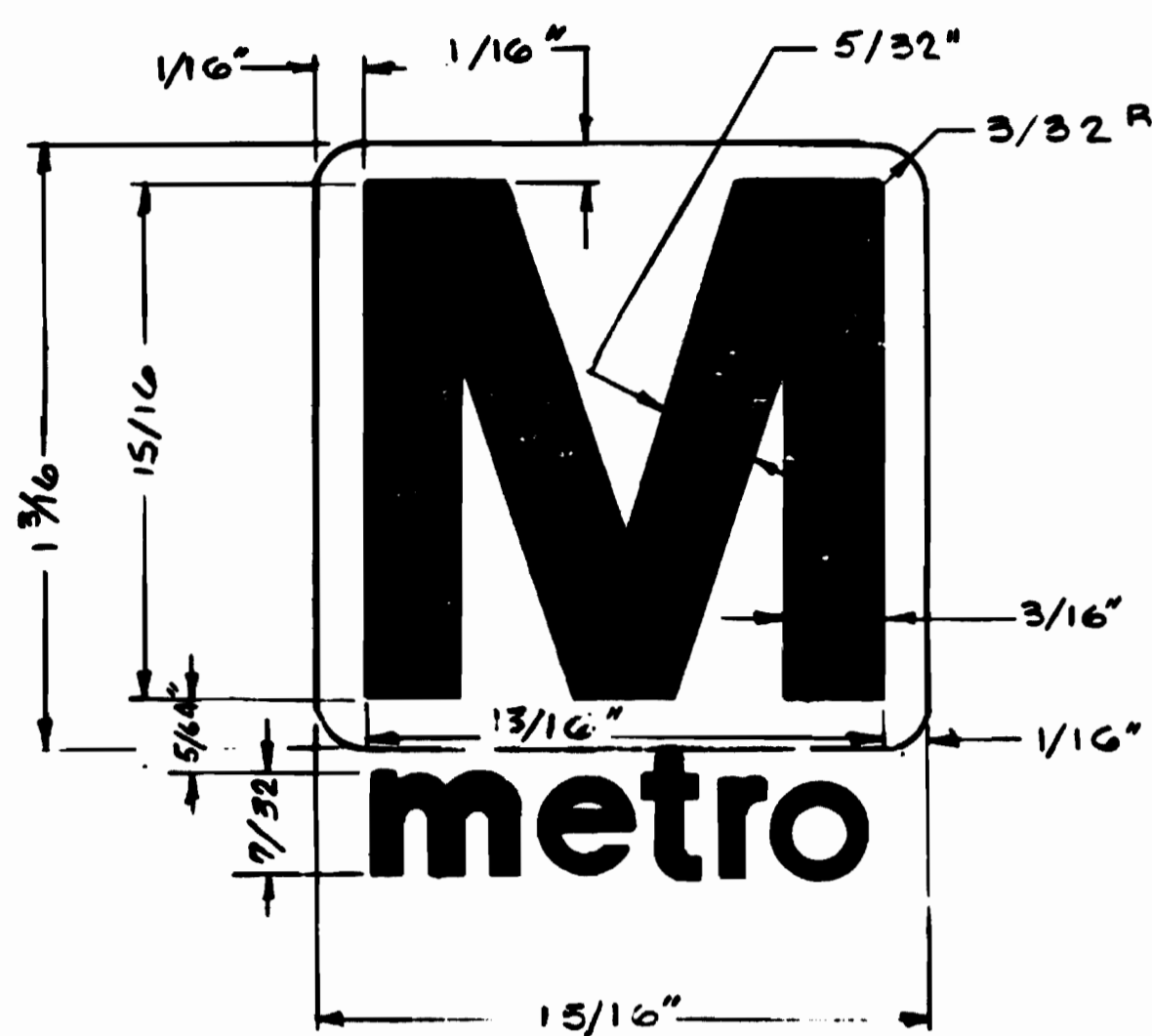
**MECHANICAL STANDARD DRAWING  
 STANDPIPE IDENTIFICATION PLATE  
 SECTION NO. FA II**

SCALE: AS NOTED  
 DRAWING NO. ST-M-119  
 M334-146

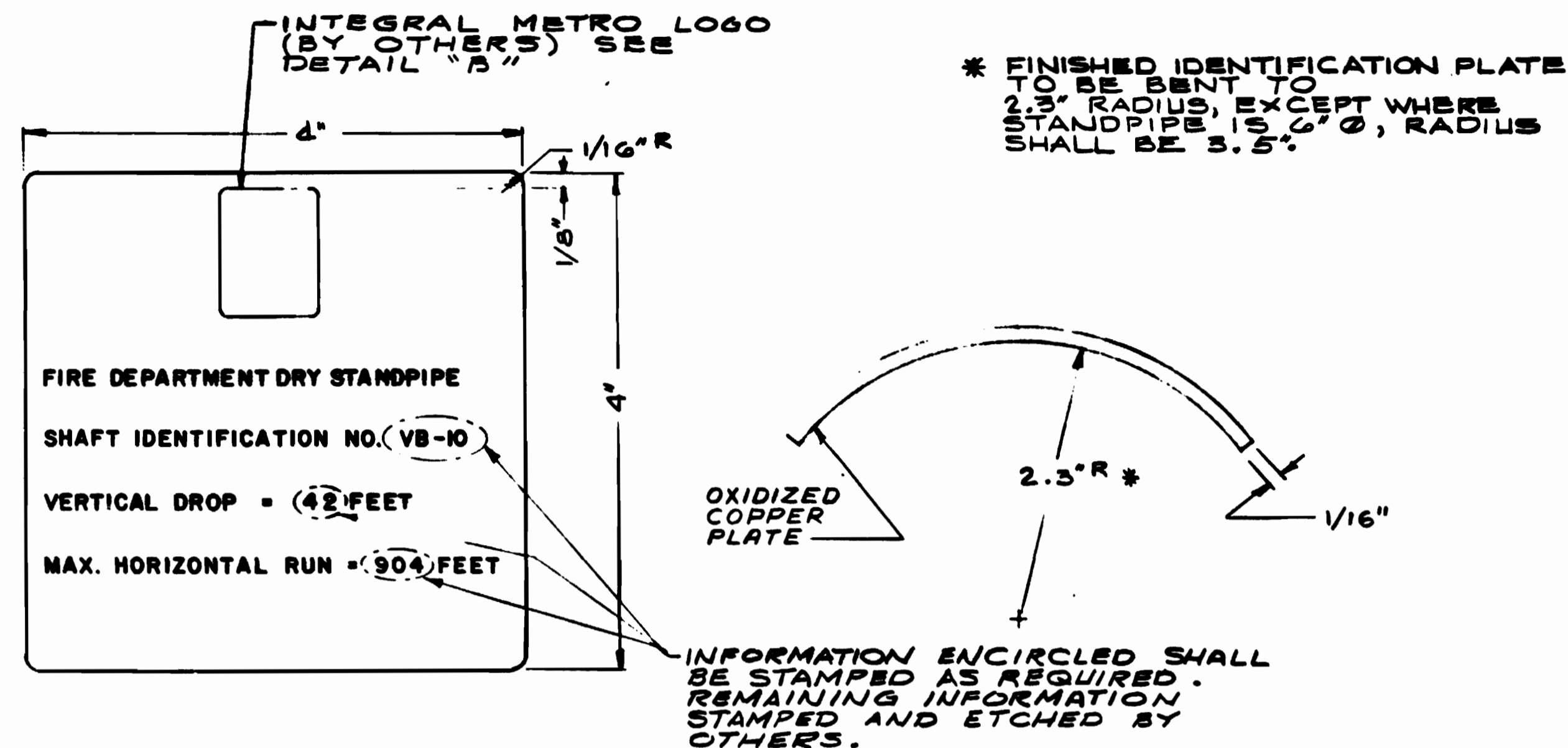
*[Handwritten signature]*



**DETAIL A**  
**FIRELINE VALVE IDENTIFICATION TAG DETAIL**  
 SCALE: 1" = 1"



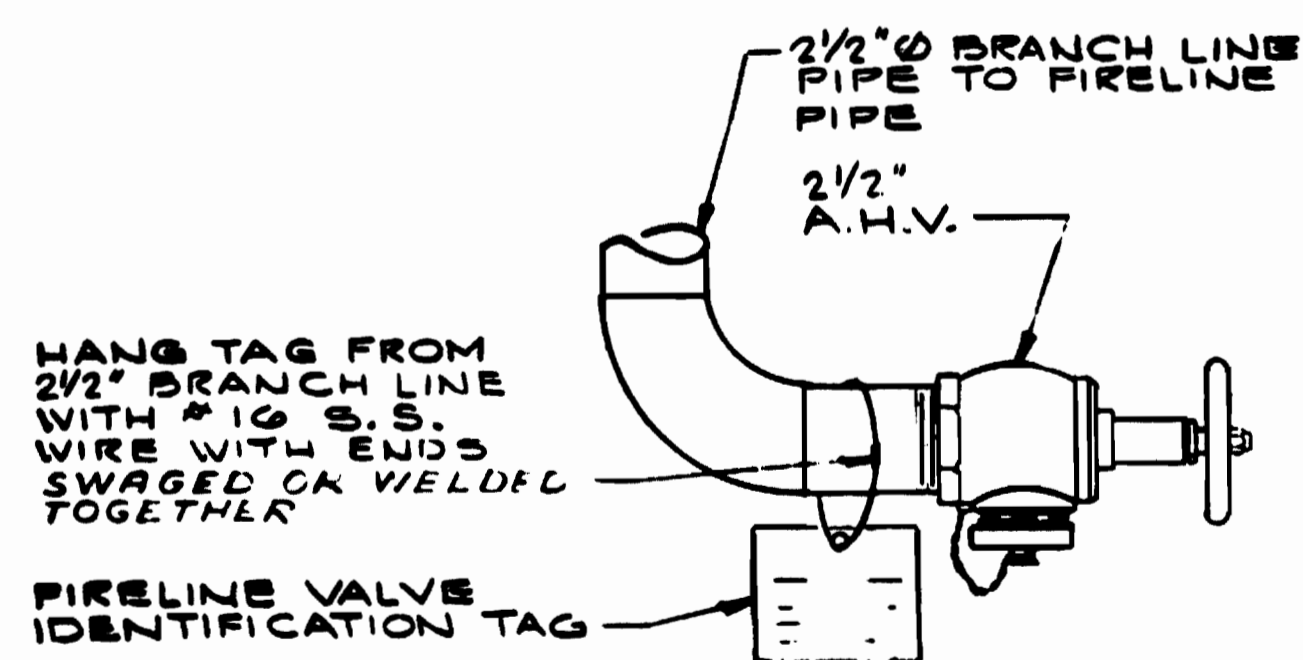
**DETAIL B**  
**METRO LOGO**  
 SCALE: NONE



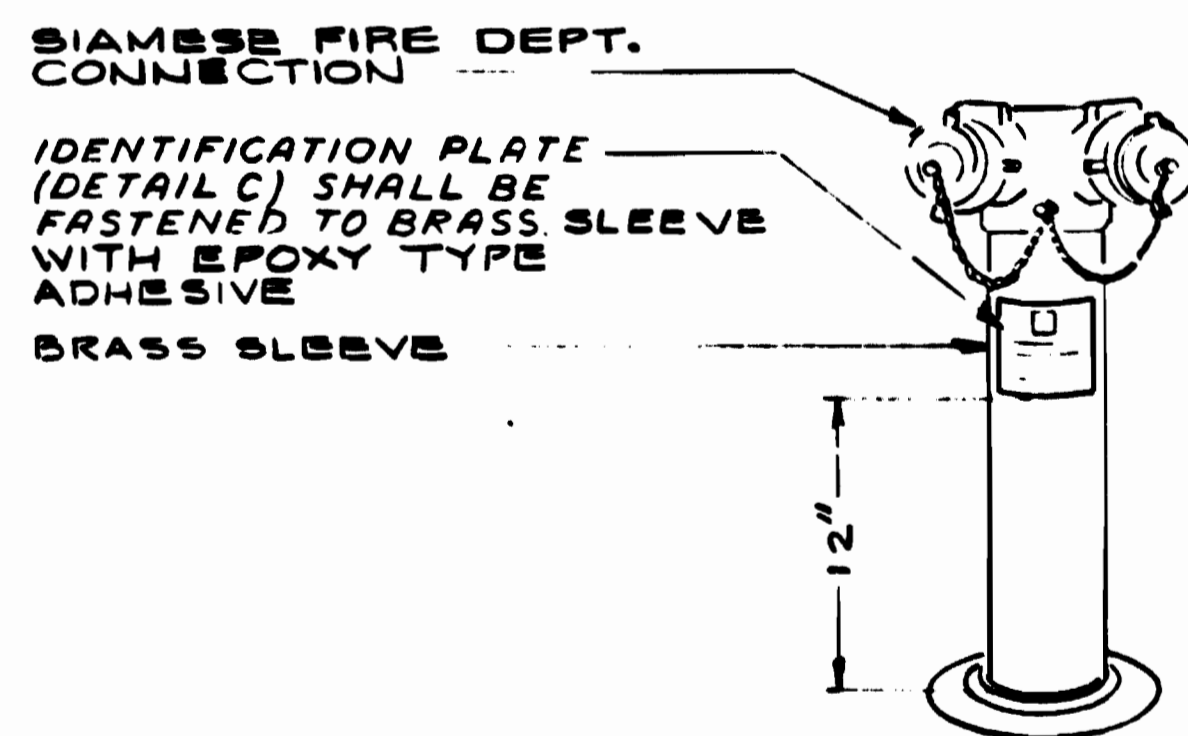
**DETAIL C**  
**SIAMESE FIRE DEPARTMENT CONNECTION IDENTIFICATION PLATE**  
 SCALE: 1" = 1"

**NOTES**

1. IDENTIFICATION PLATES AND TAGS TO BE PROVIDED BY OTHERS.
2. CONTRACT DRAWINGS SHALL GIVE THE ESSENTIAL DATA FOR COMPLETION OF THE IDENTIFICATION PLATES.
3. LETTERING-WHITE ENAMEL FILLED & HELVETICA MEDIUM IF POSSIBLE. (SIAMESE IDENTIFICATION PLATE ONLY).



**VALVE IDENTIFICATION TAG INSTALLATION DETAIL**  
 SCALE: NONE



**SIAMESE FIRE DEPARTMENT CONNECTION IDENTIFICATION PLATE INSTALLATION**  
 SCALE: NONE

DESIGNED W.M. ELL D.H. KERR 1/22/79 DATE	REFERENCE DRAWINGS NUMBER DESCRIPTION 99-M-129 ABOVE GRADE SIAMESE FIRE DEPARTMENT CONNECTION ST-M-88 PLUMBING AND FIRE PROTECTION SYMBOLS	REVISIONS DATE BY DESCRIPTION		<b>WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY</b>		<b>MECHANICAL STANDARD DRAWING</b> FIRELINE VALVE IDENTIFICATION TAG & SIAMESE FIRE DEPARTMENT CONNECTION IDENTIFICATION PLATE DETAILS SECTION NO. FA II	
DRAWN D.H. KERR 1/22/79 DATE				APPROVED <i>[Signature]</i> DIRECTOR OF ENGINEERING	DE LEUW, CATHER & COMPANY GENERAL ENGINEERING CONSULTANT	SCALE AS NOTED	DRAWING NO. ST-M-130
CHECKED <i>[Signature]</i> 4/7/75 DATE			APPROVED <i>[Signature]</i> CHIEF OF DESIGN AND CONSTRUCTION	HARRY WEESE & ASSOCIATES GENERAL ARCHITECTURAL CONSULTANT			
APPROVED <i>[Signature]</i> DATE							



TABLE 1

WATTS PER FOOT REQUIRED WITH 1.0" THICK CELLULAR GLASS INSULATION (SEE NOTE 8)

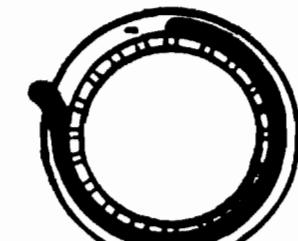
PIPE SIZE	WATTS PER FT.	INSULATION PIPE SIZE
1/2"	2.7	3/4"
3/4"	3.1	1"
1"	3.5	1 1/4"
1 1/2"	4.5	2"
2"	5.2	2 1/2"
3"	7.0	3 1/2"
4"	8.4	4 1/2"
5"	10.2	6"
6"	11.3	7"
7"	13.0	8"
8"	14.5	9"
9"	16.0	10"
10"	17.5	10"
12"	20.7	12"

TABLE 2

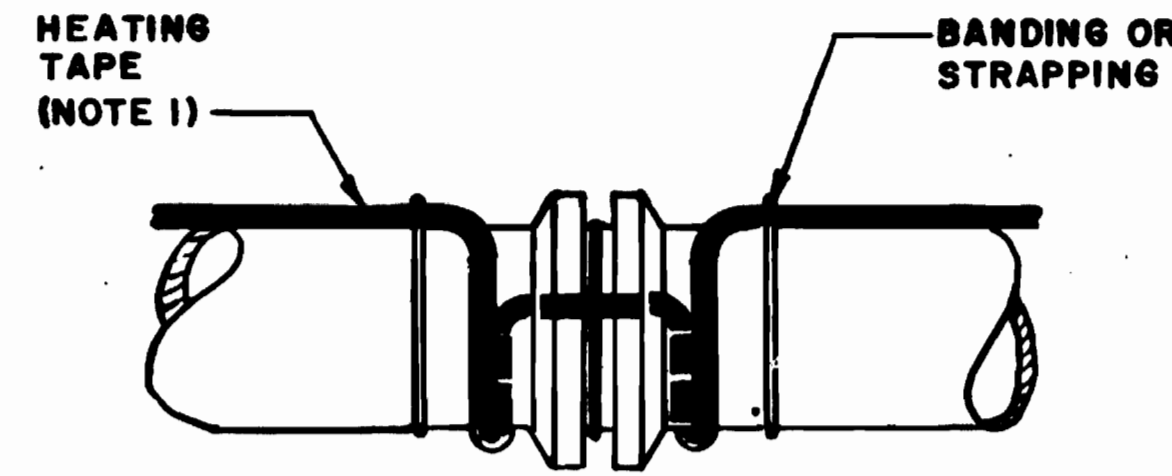
FITTINGS - HEAT SINKS  
MINIMUM WATTS REQUIRED WITH 1.0" THICK CELLULAR GLASS INSULATION (SEE NOTE 8)

PIPE SIZE	VALVE	CHECK VALVE	PIPE # SUPPORT	FLANGE
1/2"	2.7	2.7	8.1	2.0
3/4"	3.1	3.1	8.5	2.3
1"	5.3	4.4	8.8	2.6
1 1/2"	9.0	6.8	9.0	3.4
2"	10.4	7.8	9.4	3.9
3"	21.0	10.5	10.0	5.3
4"	25.2	12.5	10.5	6.3
5"	30.6	15.3	11.0	7.8
6"	33.9	17.0	11.5	8.5
7"	39.0	19.5	12.0	9.8
8"	43.5	21.8	12.5	11.5
9"	48.0	24.0	13.0	16.0
10"	52.5	26.3	14.0	17.5
12"	69.0	31.0	15.6	20.7

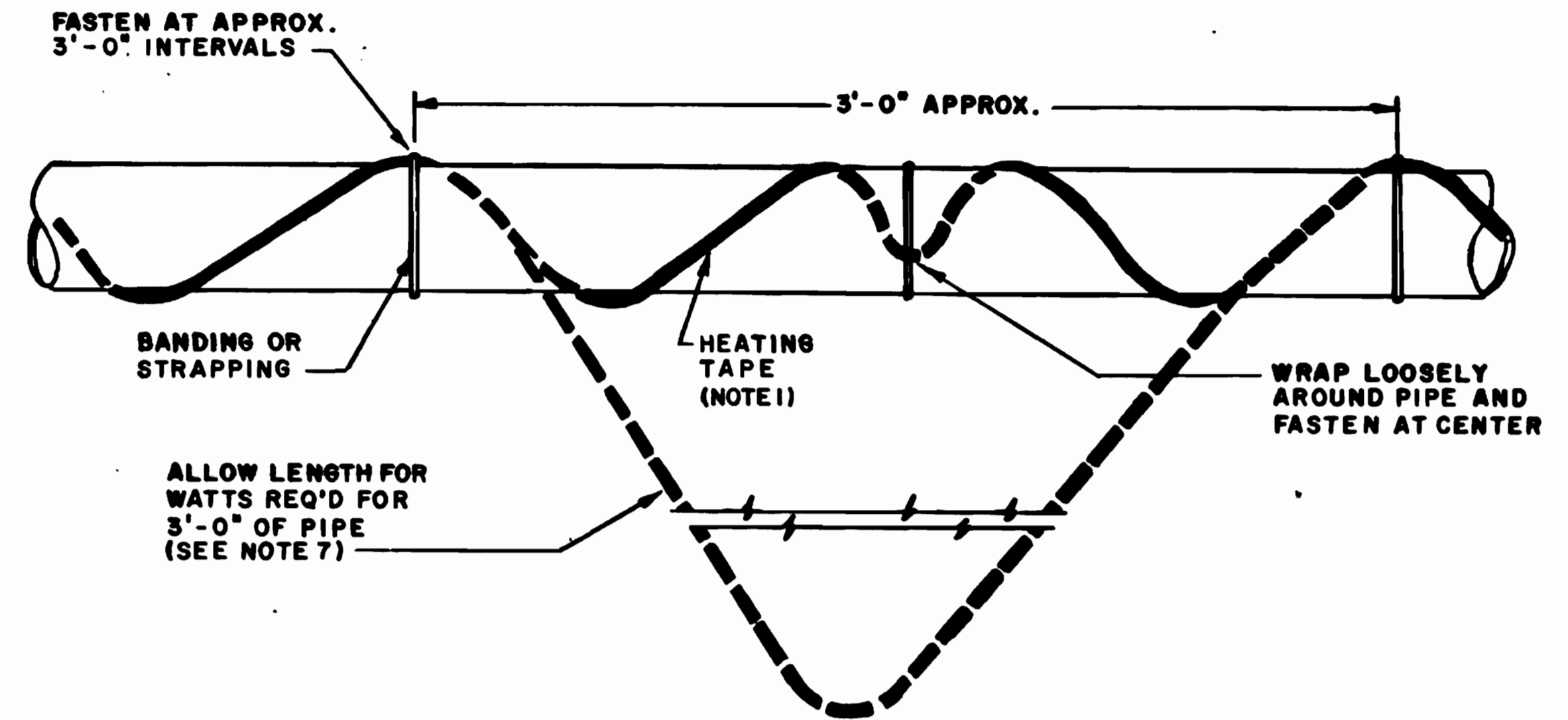
\* SEE NOTE 6



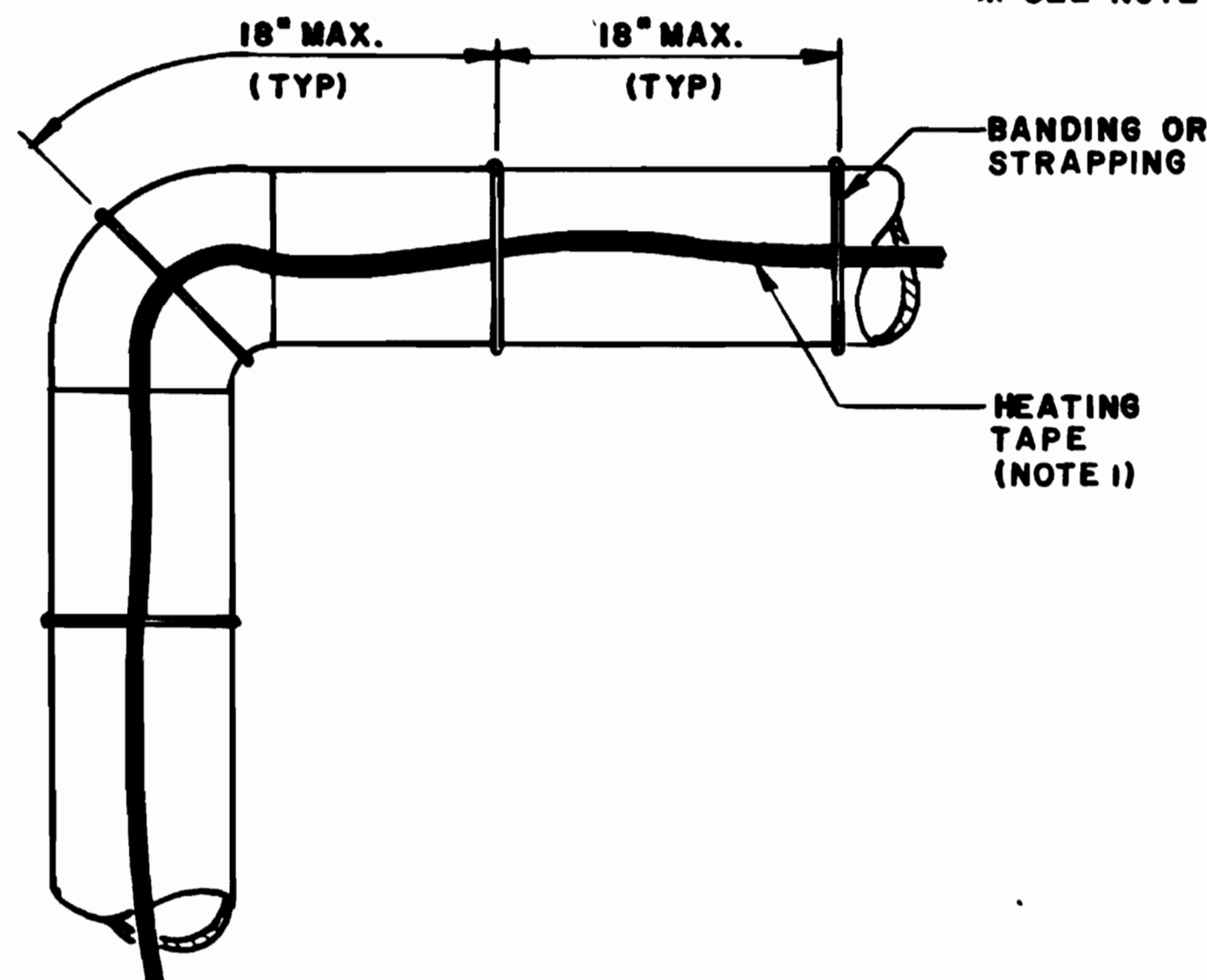
END VIEW



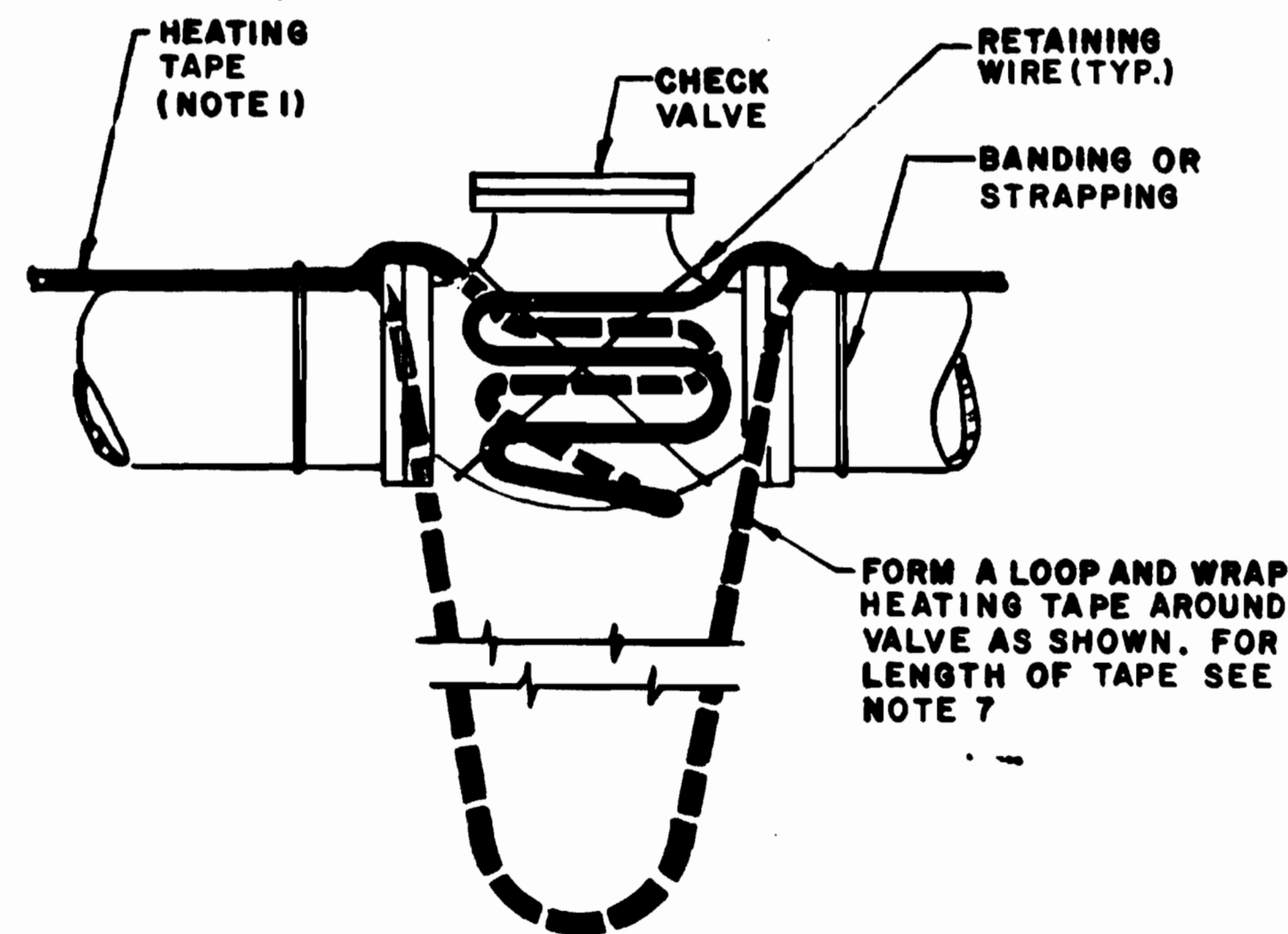
ELEVATION  
HEATING TAPE ON PIPE FLANGE



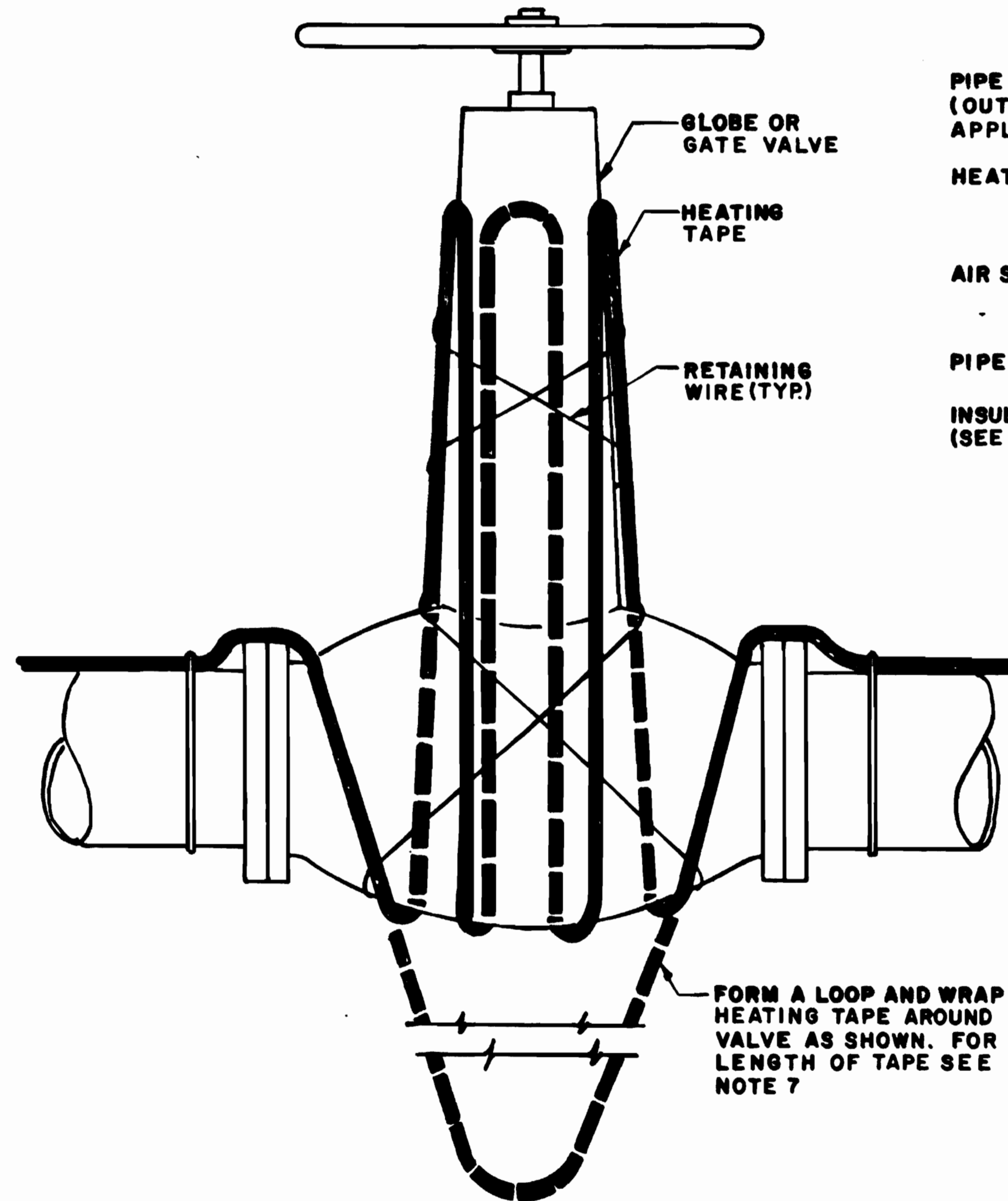
HEATING TAPE INSTALLATION ON PIPE



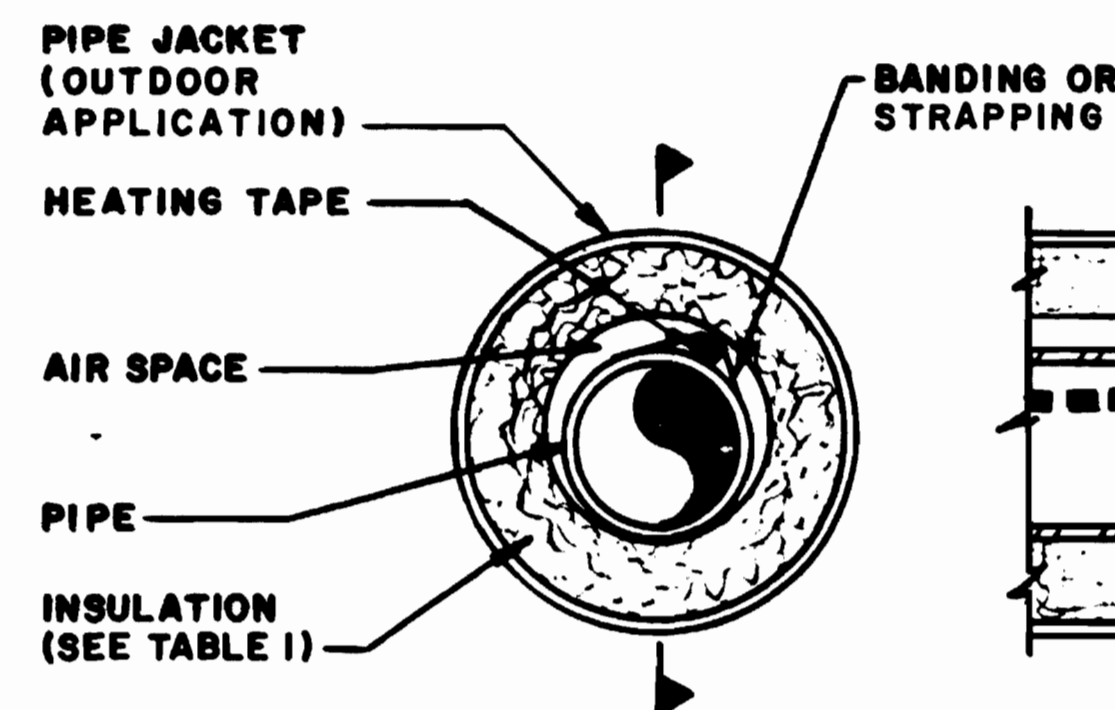
HEATING TAPE ON ELBOW



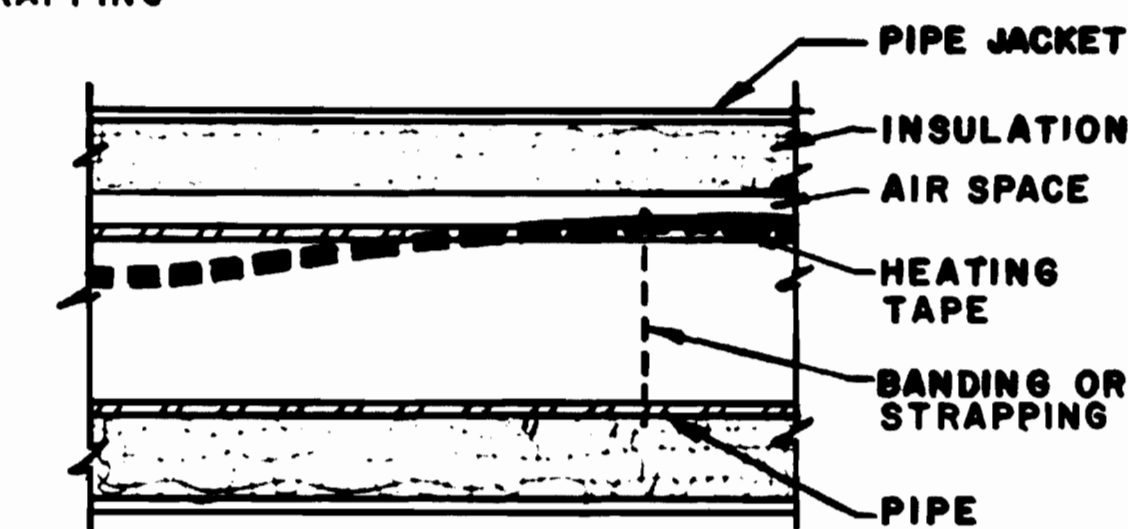
HEATING TAPE ON CHECK VALVE



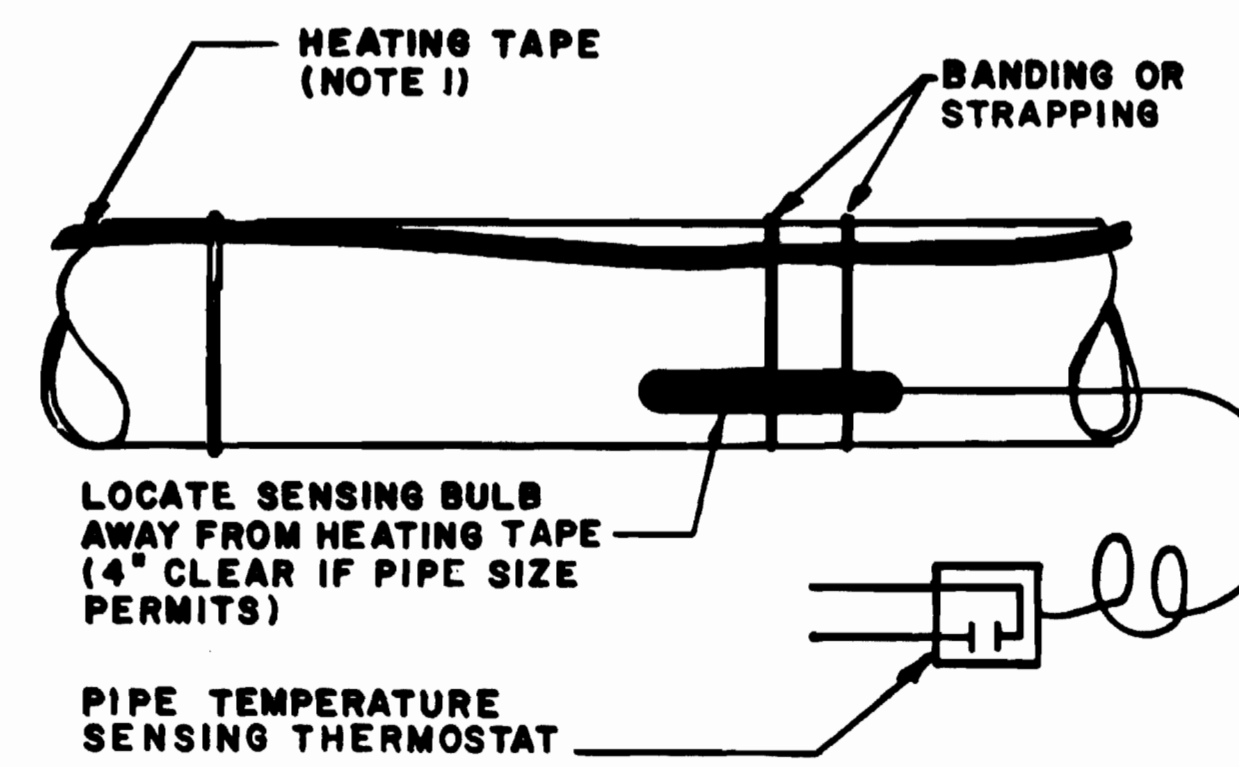
HEATING TAPE ON GATE OR GLOBE VALVE



END VIEW  
INSULATION FOR HEATING TAPE



SECTION



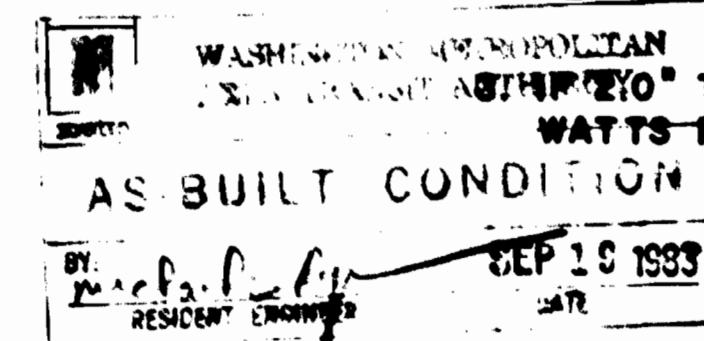
THERMOSTAT BULB INSTALLATION

NOTES

1. PROVIDE REQUIRED WATTS PER FOOT BY A SINGLE TAPE ALONG THE SIDE OF, OR SPIRALING AROUND THE PIPE OR BY MULTIPLE TAPES PARALLELING THE PIPE.
2. DO NOT BEND TAPE TOO SHARPLY (MINIMUM BENDING RADIUS IS 6 TIMES THE TAPE DIAMETER).
3. DO NOT ALLOW TAPES TO OVERLAP OR TOUCH.
4. DO NOT PULL TAPES TIGHT. ALLOW FOR HEAT EXPANSION.
5. BANDING OR STRAPPING - MAXIMUM SPACE BETWEEN FASTENERS - 18 INCHES:
  - A. STRAPPING - 1/2" X .020 STAINLESS STEEL STRAP AND CLIPS FOR APPLICATIONS ABOVE 10 WATTS/FT.
  - B. WIRE - 18 GAUGE (1.047" DIA.) DEAD SOFT ANNEALED STAINLESS STEEL WIRE, FOR APPLICATION TO AND INCLUDING 10 WATTS/FT.
  - C. GLASS TAPE - ACCEPTABLE FOR APPLICATIONS BELOW 6 WATTS/FT.
6. NOT REQUIRED IF INSULATED PIPE SUPPORTS ARE USED.
7. L = LENGTH OF HEATING TAPE REQUIRED IN FEET. (PER FOOT OF PIPE)

L = WATTS (PER FT. OF PIPE) REQUIRED (TABLE 1 OR 2)  
HEATING TAPE OUTPUT WATTS/FT.

IF 1.0" THICK INSULATION IS PROVIDED, REDUCE WATTS PER FOOT BY 35%.



DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS	
		NUMBER	DESCRIPTION	DATE	DESCRIPTION
J.F. BAUER	4/78				
DH KERR	4/78				

**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

APPROVED *[Signature]* DIRECTOR OF ENGINEERING

WMATA

APPROVED *[Signature]* 256/1993 ASSISTANT GENERAL MANAGER, DESIGN AND CONSTRUCTION

DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT

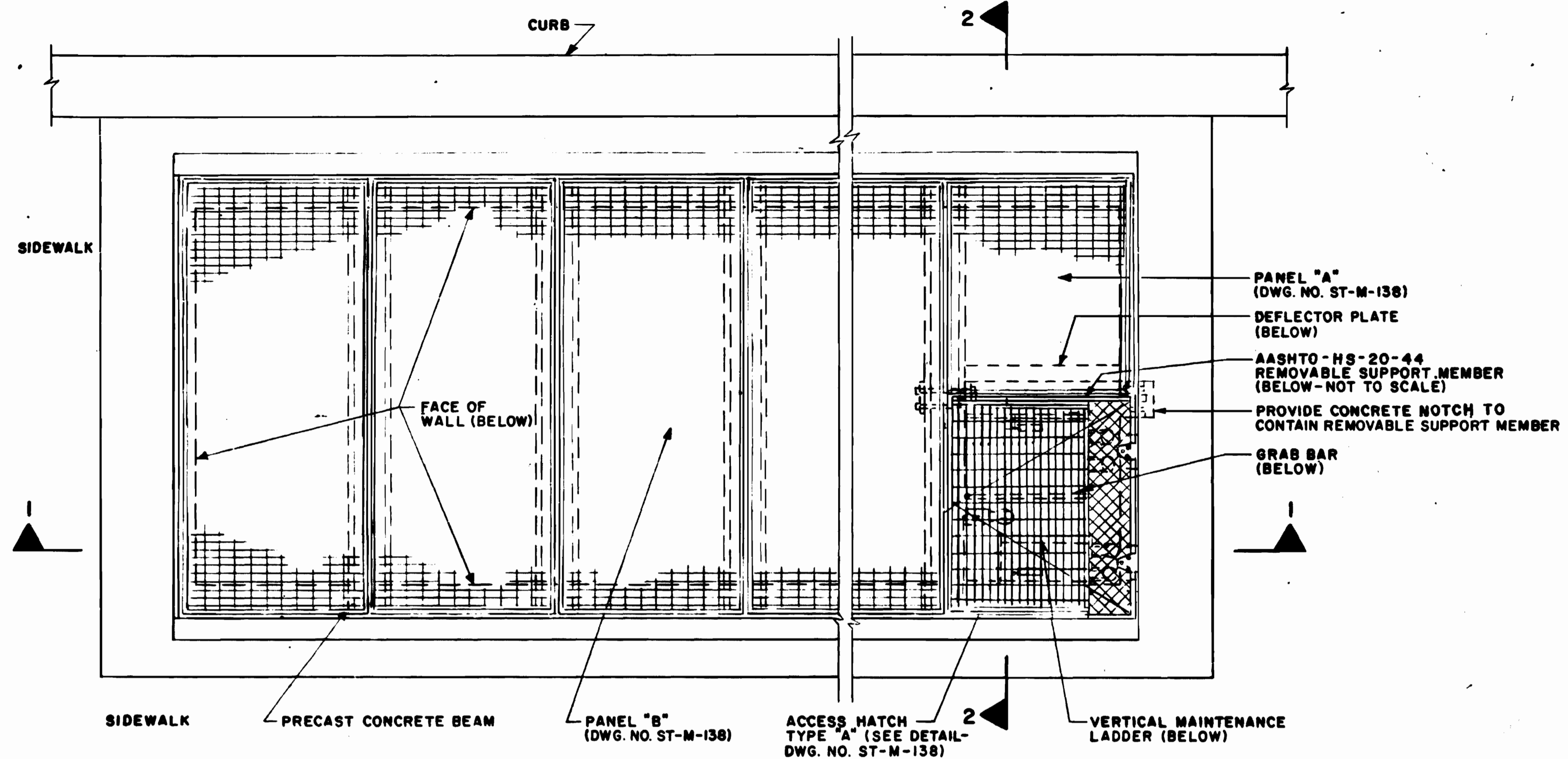
HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

**MECHANICAL STANDARD DRAWING**  
TYPICAL INSTALLATIONS  
HEATING TAPE FOR PIPING  
SECTION NO. FA-II

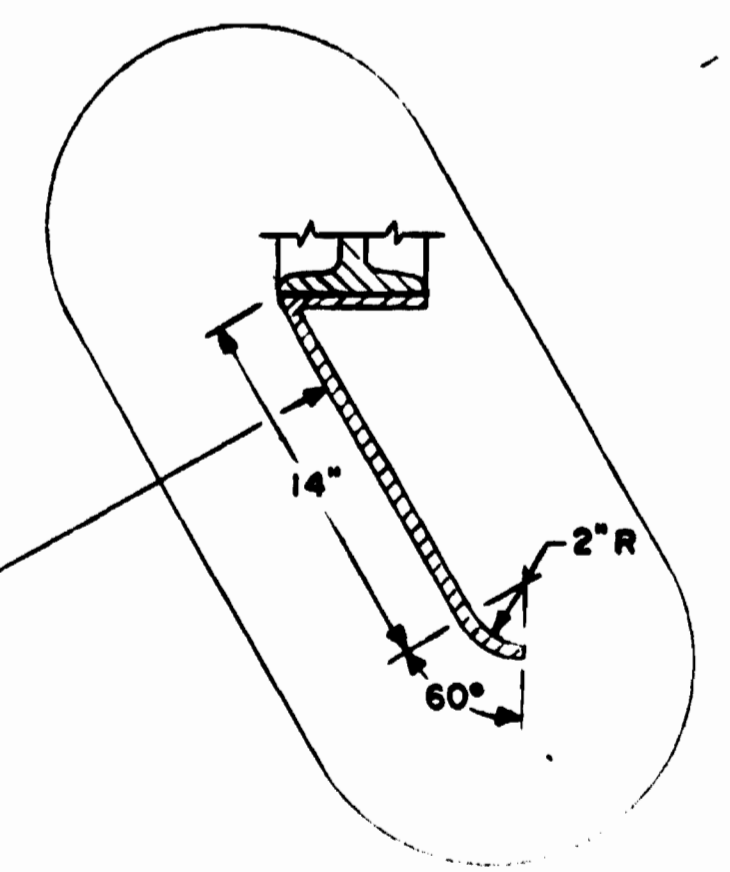
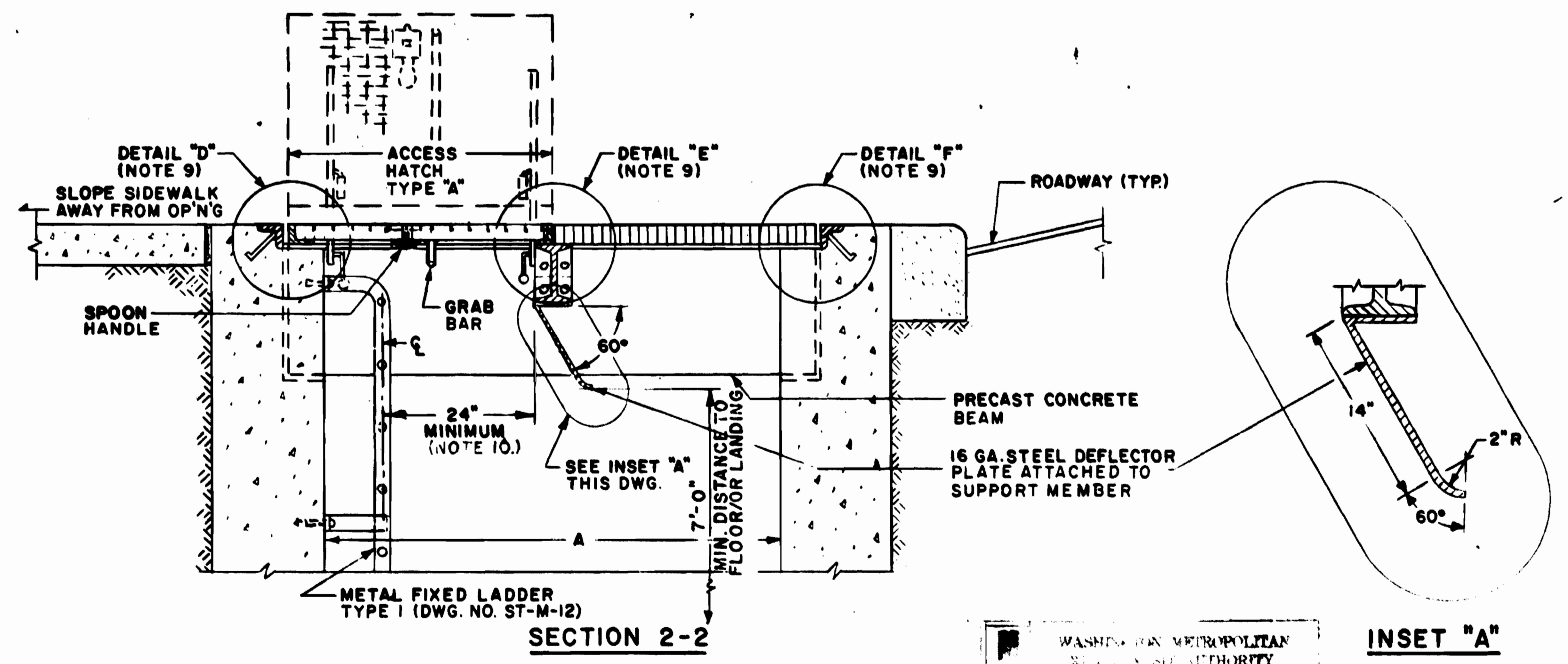
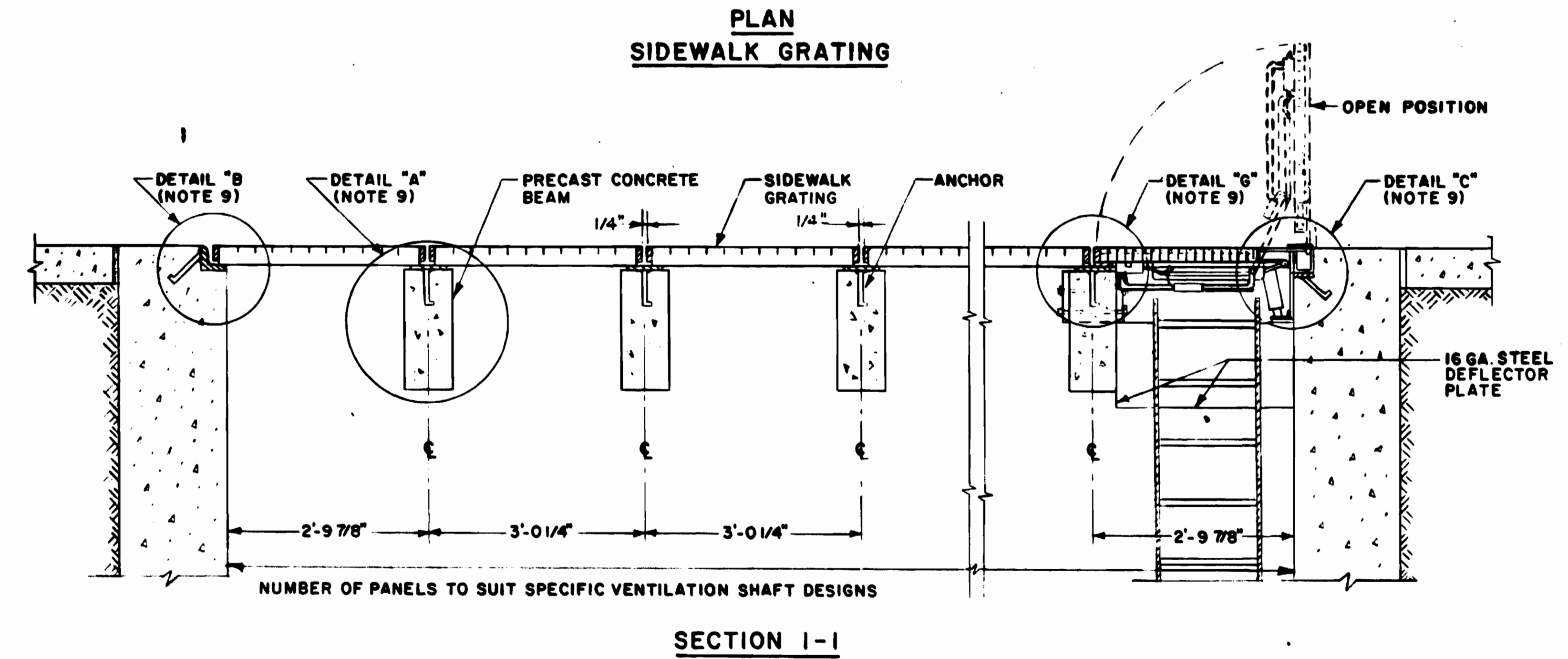
SCALE NONE

DRAWING NO. ST-M-141

M334-148



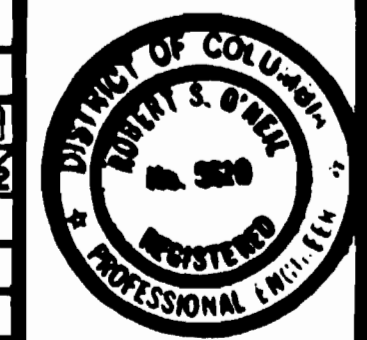
- GENERAL NOTES**
- FOR ARRANGEMENT OF PANELS SEE SHAFT DRAWINGS.
  - ALL PANELS (AND ACCESS HATCH TYPE "A") SHALL BE TACK WELDED WITH A MINIMUM OF 3'-1" LONG WELDS PER PANEL (OR HATCH).
  - FOR DETAILS OF PRECAST CONCRETE BEAMS SEE STRUCTURAL DRAWING NO. ST-S-4.
  - PRECAST BEAMS TO BE REMOVABLE FOR EQUIPMENT INSTALLATION.
  - ACCESS HATCH TYPE "A" WITH 3'-6" x 3'-0" OPENING IS FOR MAINTENANCE ACCESS ONLY.
  - INSTALLER NOTE: BE CAREFUL NOT TO RACK OR TWIST FRAME WHEN SETTING. CLOSE HATCH COVER AND BE SURE IT RESTS ON FRAME ALL AROUND. SHIM AS REQUIRED.
  - SIAMESE FIRE DEPARTMENT CONNECTION NOT SHOWN DUE TO MANY VARIATIONS IN LOCATIONS AND ORIENTATION.
  - NOTE FOR ACCESS HATCH TYPE "A": HARDWARE SHALL INCORPORATE HEAVY DUTY HELICAL SPRING OPERATORS AND HOUSINGS OF STAINLESS STEEL WHICH WILL PROVIDE CONSISTENT AND RELIABLE EASE OF OPENING AND CLOSING THROUGH THE ENTIRE ARC OF SWING, AND A CUSHIONING EFFECT WHILE RETARDING THE DOWNWARD MOTION OF THE DOORS. A VERTICAL FORCE OF LESS THAN 30 POUNDS SHALL START HATCH OPENING.
  - FOR "DETAILS A THRU G" REFER TO DRAWING NO. ST-M-138.
  - CONTRACTOR SHALL INSURE THAT NO FIRE LINES, INTRUSION ALARMS, ETC. ENCR OACH ON THE 24" MINIMUM CLEARANCE SHOWN THIS DWG.
  - STEEL TO BE A36 GALVANIZED OR HIGH-STRENGTH CORROSION-RESISTANT STEEL.



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY  
 AS BUILT CONDITION  
 DATE: SEP 19 1989

DESIGNED P. EASLEY 2/15/76  
 DRAWN L. PROCK 3/1/76  
 CHECKED [Signature] 10-5-80  
 APPROVED [Signature]

REFERENCE DRAWINGS		REVISIONS	
NUMBER	DESCRIPTION	DATE	BY
ST-M-138	FRAMES AND GRATINGS SHT. 2		
ST-S-4	DRAINAGE AND VENTILATION STRUCTURES TYPICAL DETAILS AND REINFORCEMENT	9-25-80	PKM
ST-M-12	STAIRS, LADDERS, & HANDRAILS		



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

APPROVED [Signature] 10/28/76  
 DIRECTOR OF ENGINEERING

APPROVED [Signature] Nov 11 1976  
 CHIEF OF DESIGN AND CONSTRUCTION

DE LEUW, CATHER & COMPANY  
 GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
 GENERAL ARCHITECTURAL CONSULTANT

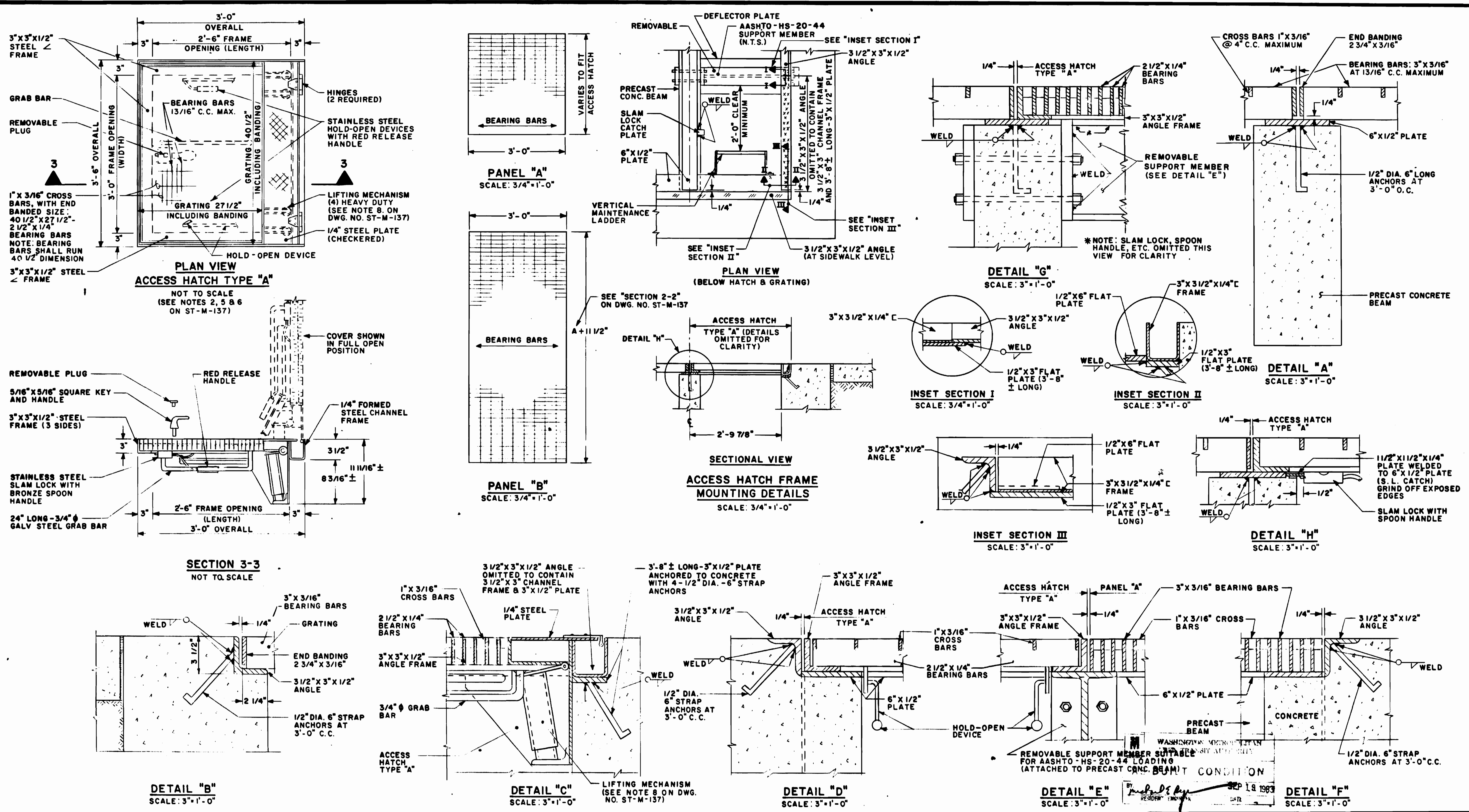
THIS DRAWING SUPERSEDES DRAWING NO. ST-M-9

**MECHANICAL STANDARD DRAWING**  
**FRAMES AND GRATINGS SHT. 1**  
**SECTION NO. FA1**

SCALE: 3/4" = 1'-0"

DRAWING NO. ST-M-137  
 M334-148a

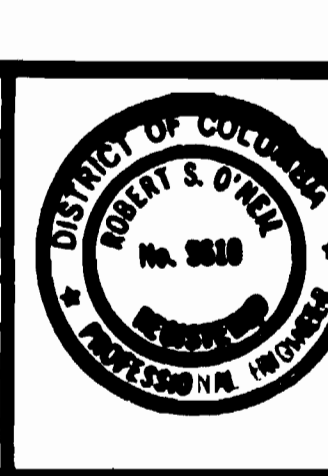




DESIGNED	P. EASLEY	3/1/76
DRAWN	L. PROCVK	3/15/76
CHECKED	<i>[Signature]</i>	10/15/76
APPROVED	<i>[Signature]</i>	10/16/76

NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
ST-M-137	FRAMES AND GRATINGS	9-25-80	PKH	ADDED
ST-S-4	DRAINAGE AND VENTILATION STRUCTURES			

NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
ST-M-9	REDRAWN			



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

APPROVED *[Signature]* 10/28/76  
DIRECTOR OF ENGINEERING

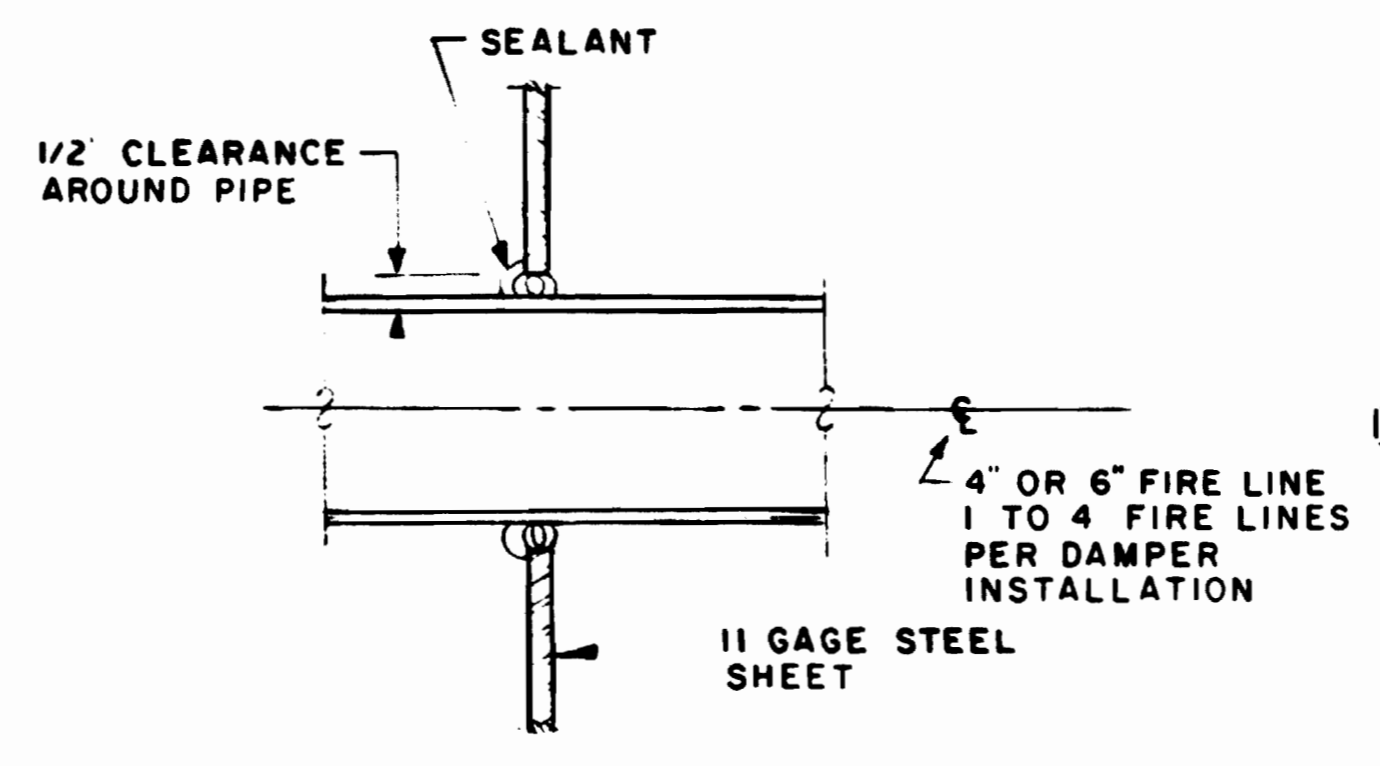
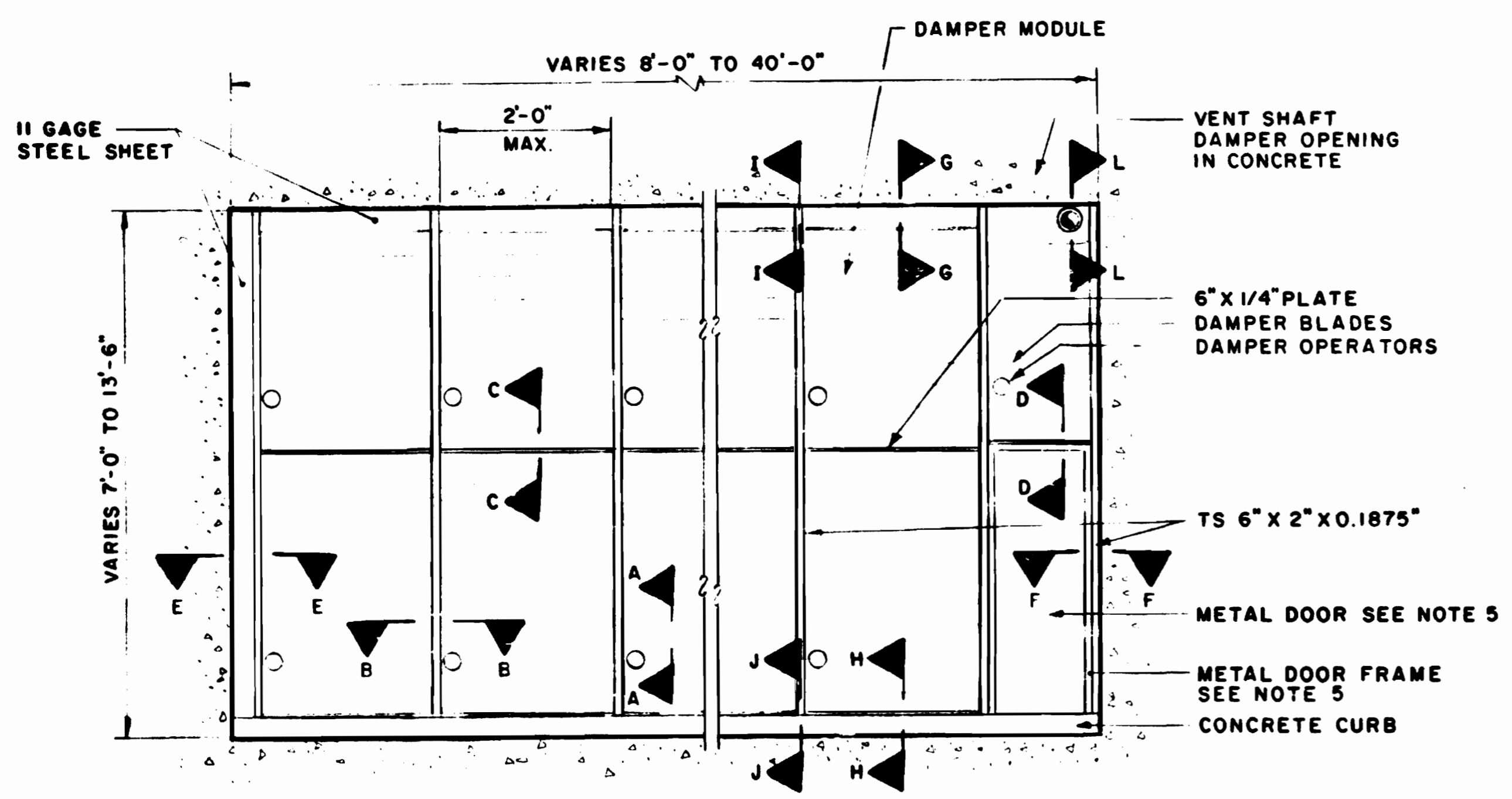
APPROVED *[Signature]* Nov 1 1976  
CHIEF OF DESIGN AND CONSTRUCTION

DE LEUW, CATHIER & COMPANY  
GENERAL ENGINEERING CONSULTANT

HARRY WEESSE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

THIS DRAWING SUPERSEDES DRAWING NO. ST-M-9		
<b>MECHANICAL STANDARD DRAWING</b>		
<b>FRAMES AND GRATINGS SHT. 2</b>		
<b>SECTION NO. FA1</b>		
SCALE	AS NOTED	DRAWING NO.
		ST-M-138
		M334-148b



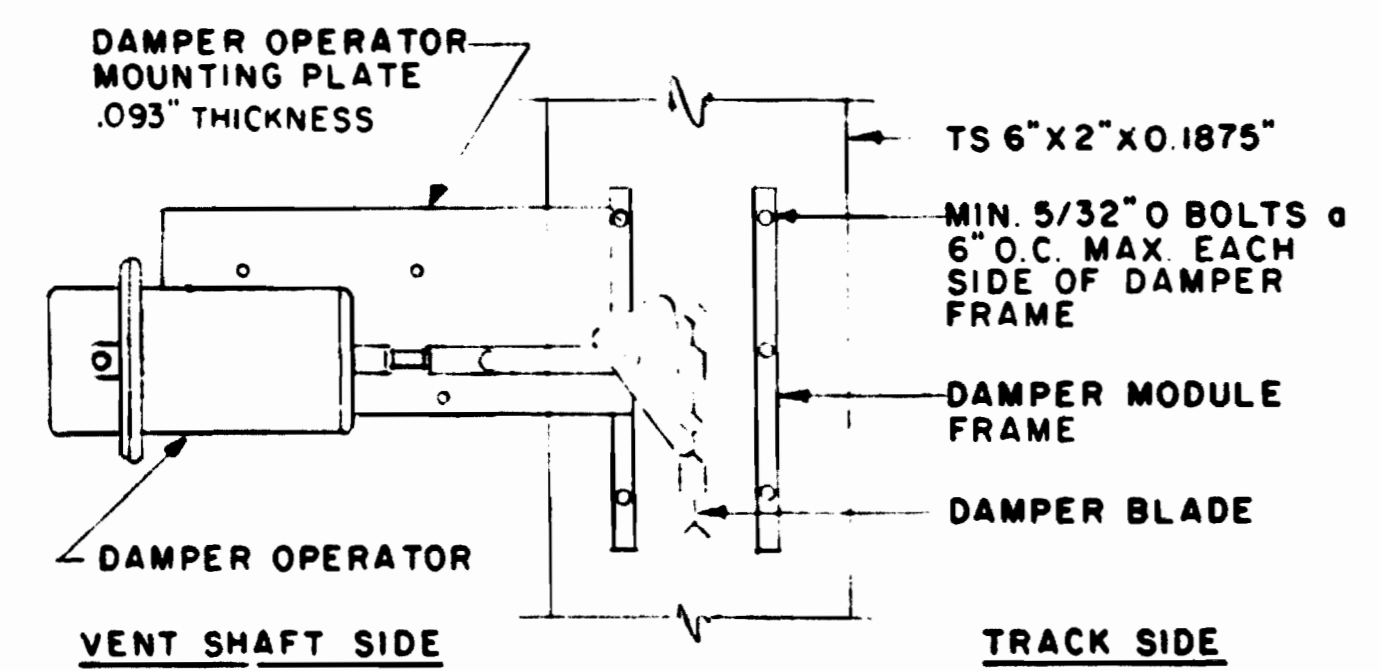


SECTION L-L

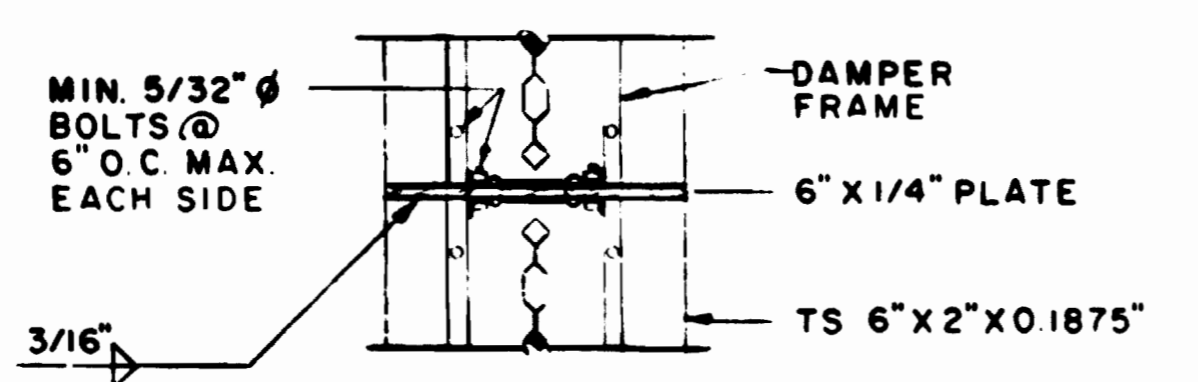
GENERAL NOTES

1. TUBES, ANGLES, BENT PLATES AND STRUT PLATE ARE TO BE A-36 GALVANIZED STEEL. STEEL SHEET TO BE GALVANIZED.
2. DAMPER MODULES WITH DAMPER BLADES AND DAMPER OPERATORS ARE TO BE SUPPLIED BY THE DAMPER MANUFACTURER.
3. DAMPER MODULE DIMENSIONS: 12" TO 96" HIGH IN 6" INCREMENTS, 12" TO 24" WIDE IN 3" INCREMENTS.
4. DAMPER OPERATORS SHALL BE MOUNTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
5. REFER TO DD-A-39 FOR DOOR TYPE & SIZE.
6. STEEL SHEET DETAILS SHOWN ARE TO APPLY ONLY WHERE MODULES FOR DAMPER DO NOT CLOSE ONLY CONCRETE OPENING COMPLETELY. WHERE STEEL SHEET IS NOT REQUIRED EXPANSION BOLTING SHALL BE DIRECTLY TO THE CONCRETE SIMILAR TO SECTIONS H-H AND FF.
7. DOORS SHALL OPEN OUTWARD FROM THE TRACK SIDE.
8. ALL BOLTED CONNECTIONS TO BE THROUGH BOLTED. SHEET METAL SCREWS ARE PROHIBITED.
9. WHERE EXPANSION BOLTS ARE INDICATED THERE SHALL BE NO SUBSTITUTIONS.
10. GALVANIZING DAMAGED BY WELDING SHALL BE REPAIRED BY COLD GALVANIZE OR HOT STICK GALVANIZE.
11. INSERT BOLTS IN ALL HOLES PROVIDED BY THE MANUFACTURER IN THE VERTICAL DAMPER MEMBERS.
12. AN EXHAUST ATTACHMENT TO BE USED WHEN WELDING TO AVOID EFFECTS OF TOXIC ZINC OXIDE FUMES.
13. THIS DESIGN IS APPROPRIATE FOR VENT SHAFT DAMPER INSTALLATIONS ADJACENT TO STATIONS. CONSULT WITH THE GEC REGARDING VENT SHAFT DAMPER INSTALLATIONS LOCATED BETWEEN STATIONS.

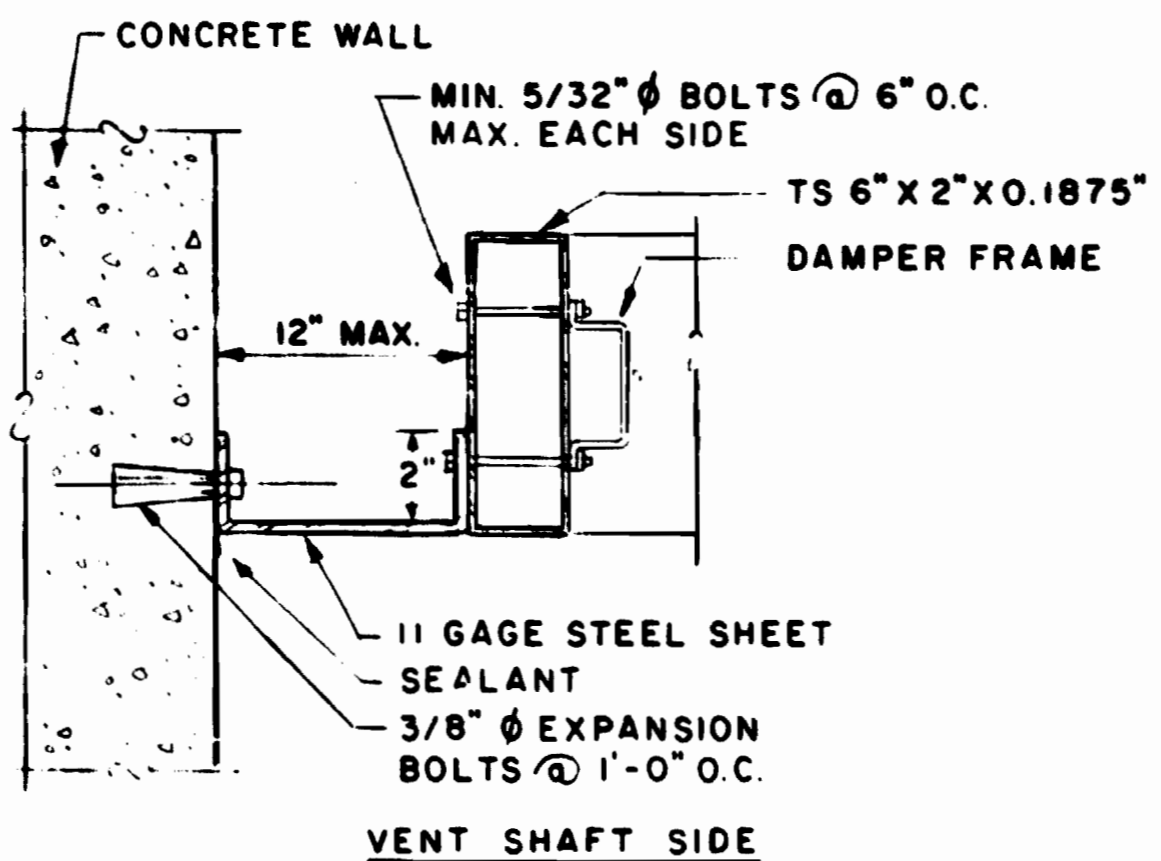
ELEVATION OF TYPICAL DAMPER INSTALLATION



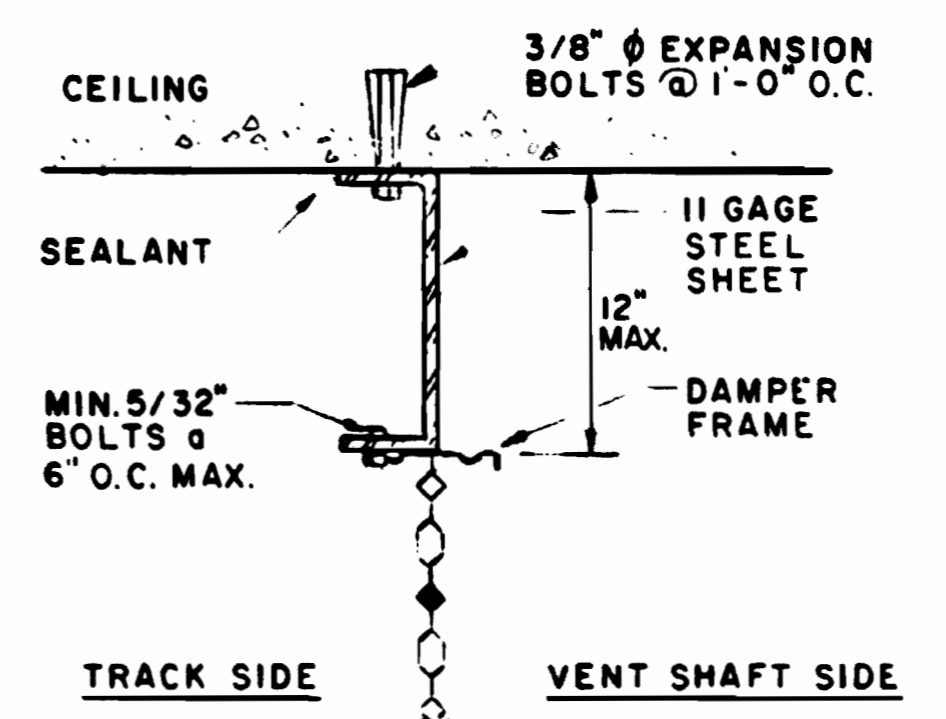
SECTION A-A



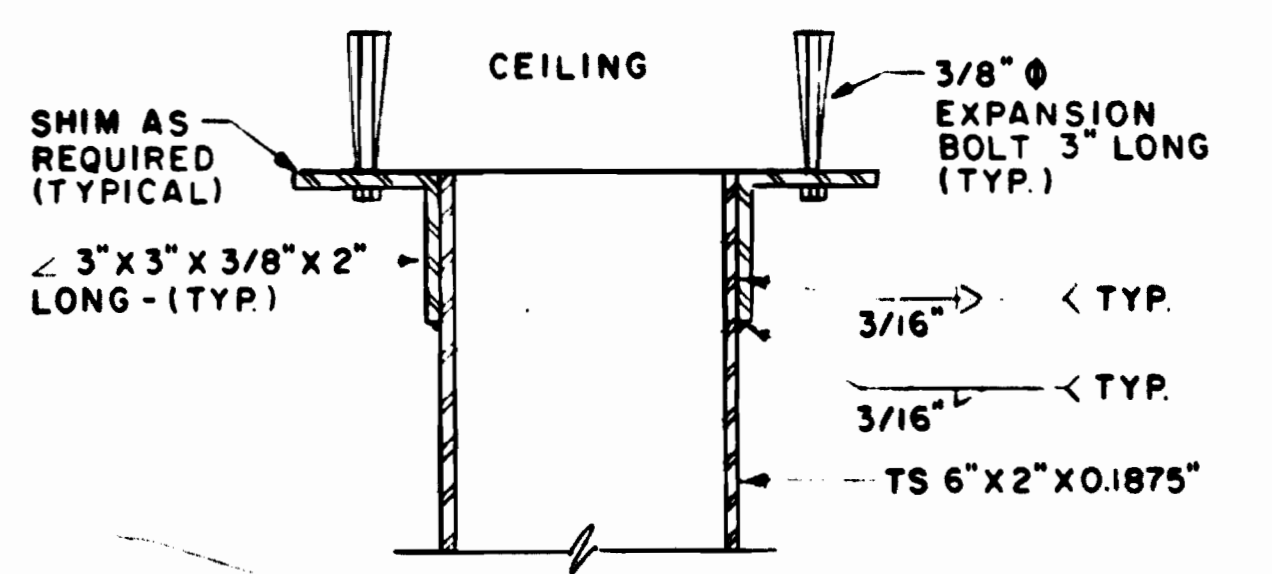
SECTION C-C



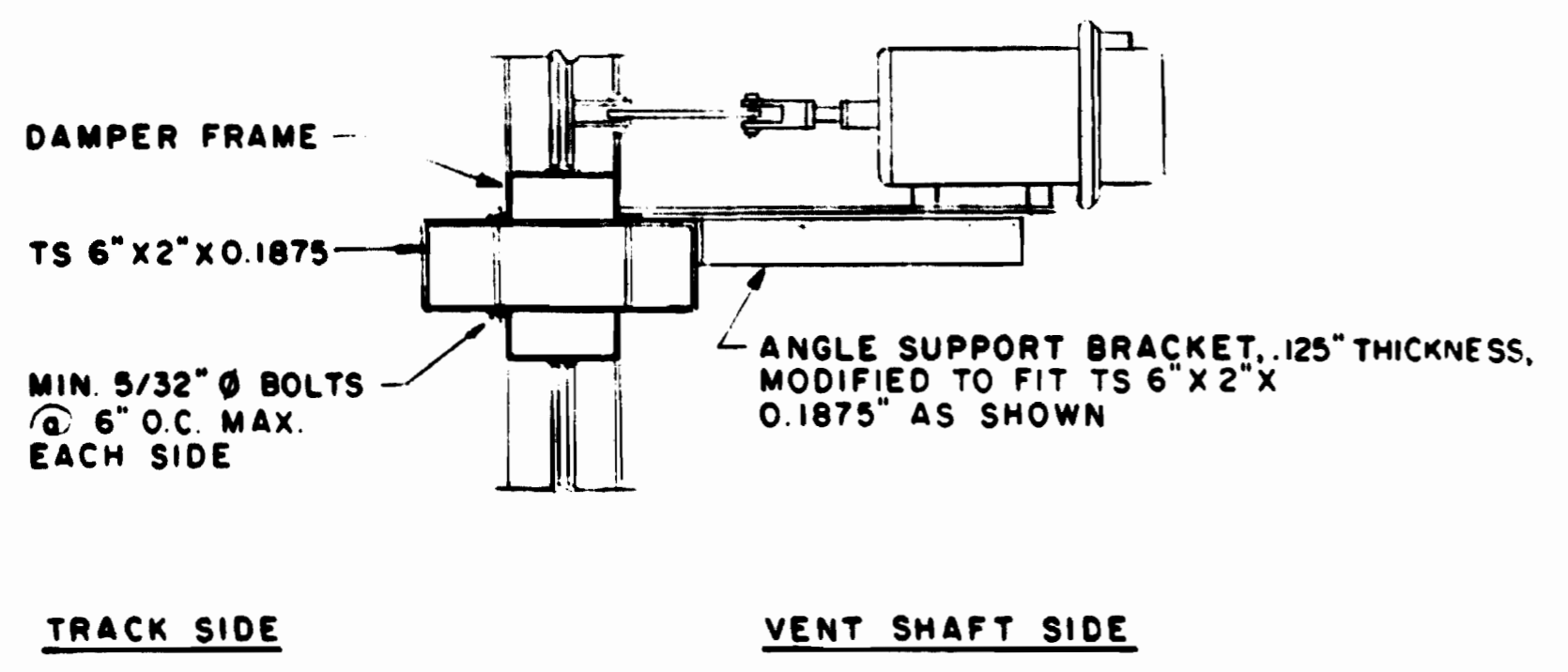
SECTION E-E



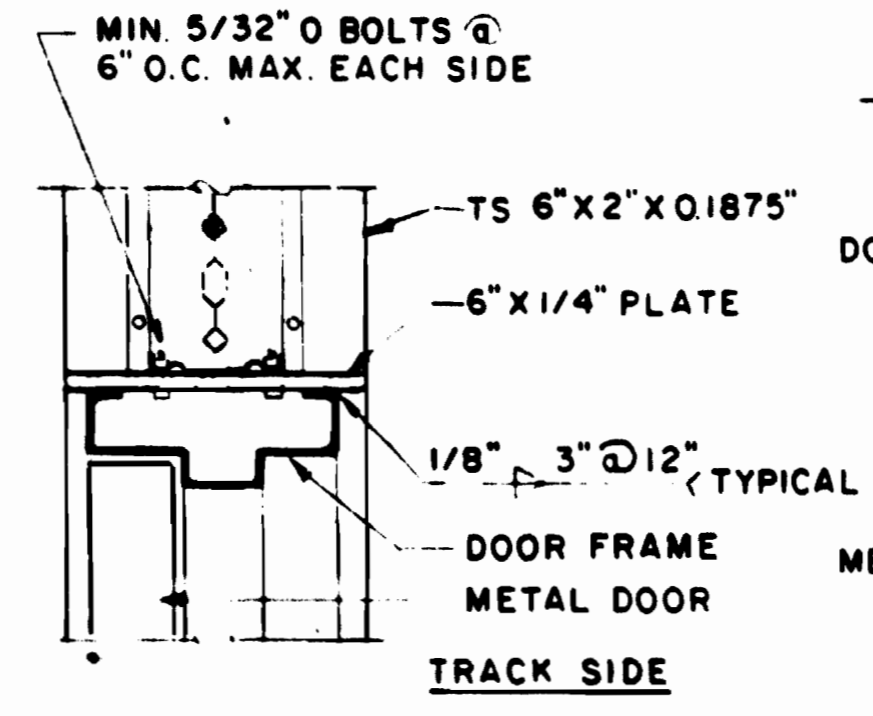
SECTION G-G



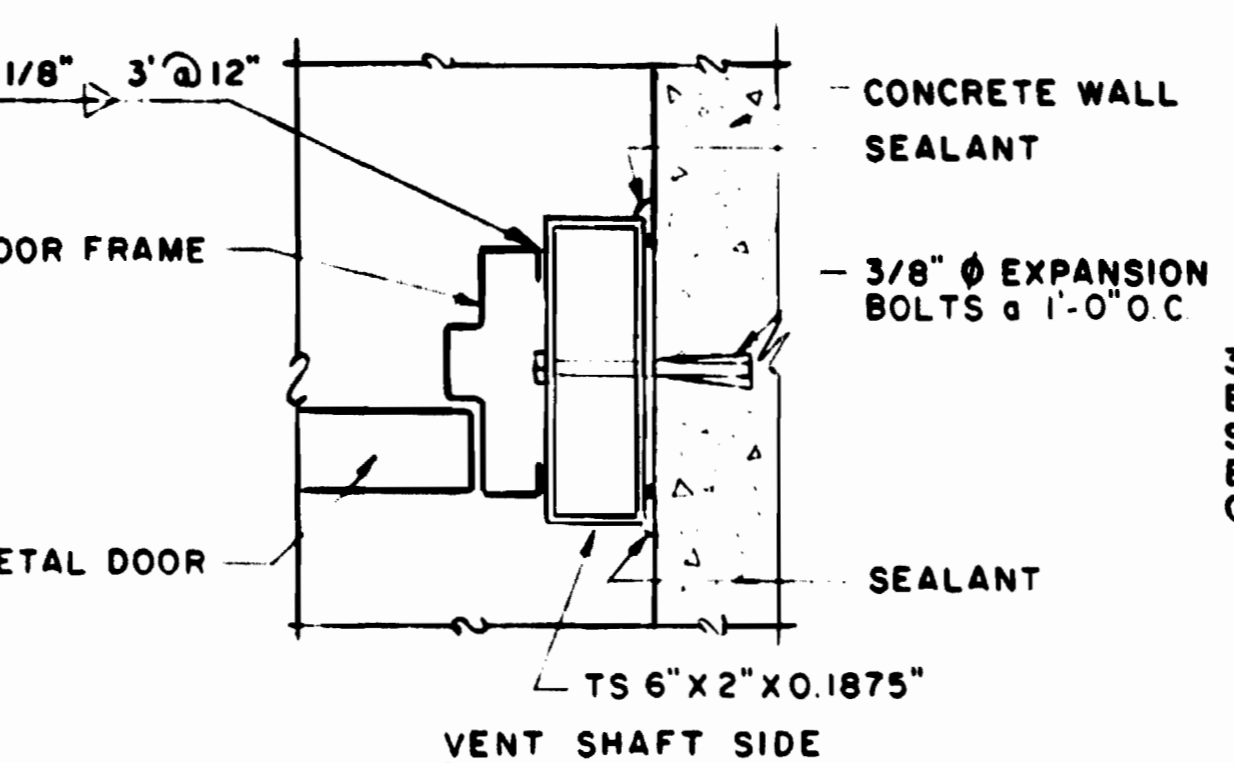
SECTION I-I



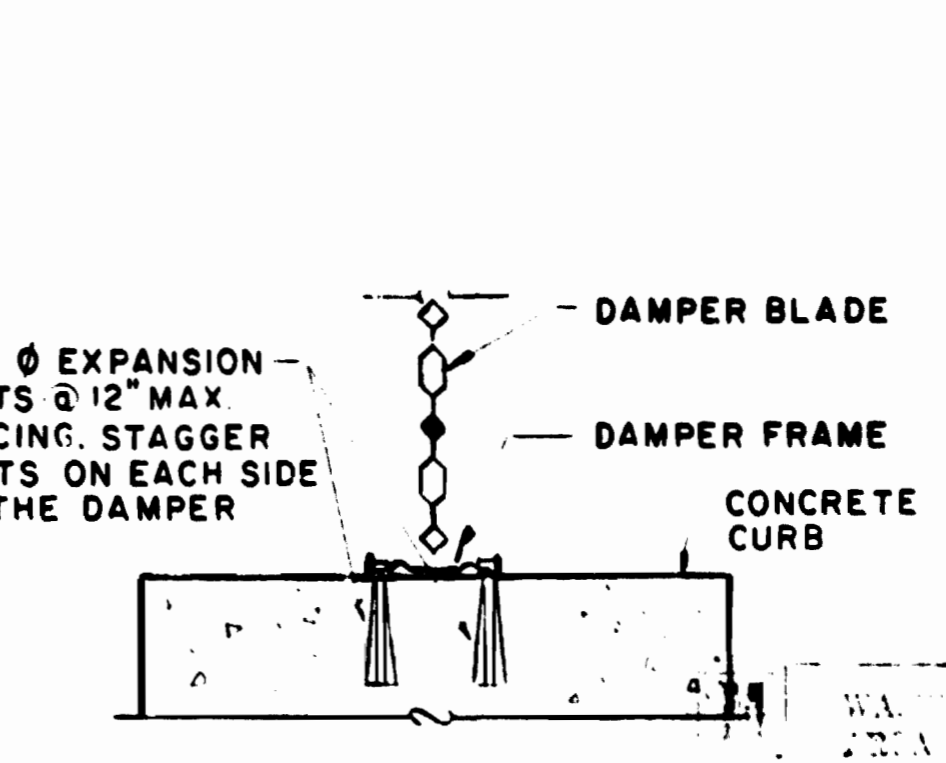
SECTION B-B



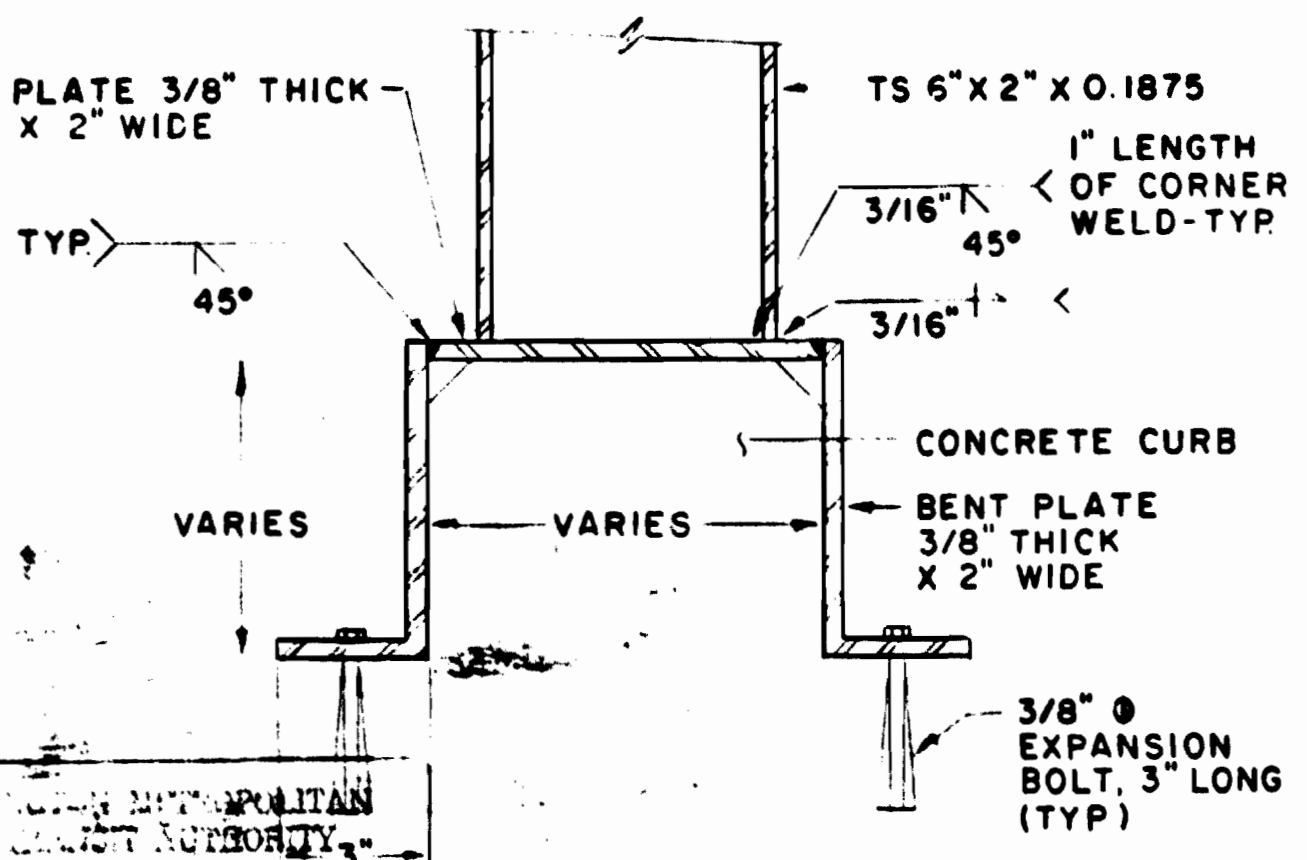
SECTION D-D



SECTION F-F



SECTION H-H



SECTION J-J

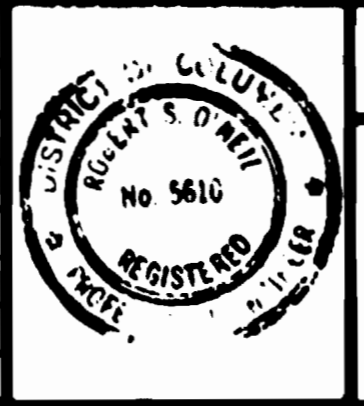
AS-BUILT CONDITION  
 DATE: 10/10/09  
 RESIDENT ENGINEER

DD-A-39 DOOR SCHEDULE, ELEV & DETAILS 1

DESIGNED	A. JAHODA	DATE	9-15-05
DRAWN	J. BOYD	DATE	9-15-06
CHECKED		DATE	
APPROVED		DATE	

NUMBER	DESCRIPTION	DATE	BY
DD-M-14	TYP. INTER. VENT SHAFT IN EARTH - TYPE 1		
DD-M-15	TYPICAL INTER. VENT SHAFT IN EARTH - TYPE 3		
DD-M-24	TYPICAL INTER. VENT SHAFT IN EARTH - TYPE 2		
DD-M-29	TYPICAL STATION END VENT SHAFT IN EARTH		
DD-M-31	TYPICAL INTERMEDIATE VENT SHAFT IN ROCK		
DD-M-32	TYP. STA. END VENT SHAFT ROCK TUNNEL CONST.		

NUMBER	DESCRIPTION	DATE	BY
	REVISED NOTE # 5		
	AS-BUILT	10-10-09	HTN



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

APPROVED \_\_\_\_\_ DIRECTOR OF ENGINEERING

APPROVED \_\_\_\_\_ CHIEF OF DESIGN AND CONSTRUCTION

DE LEUW, CATHER & COMPANY  
 GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
 GENERAL ARCHITECTURAL CONSULTANT

**MECHANICAL DIRECTIVE DRAWING**

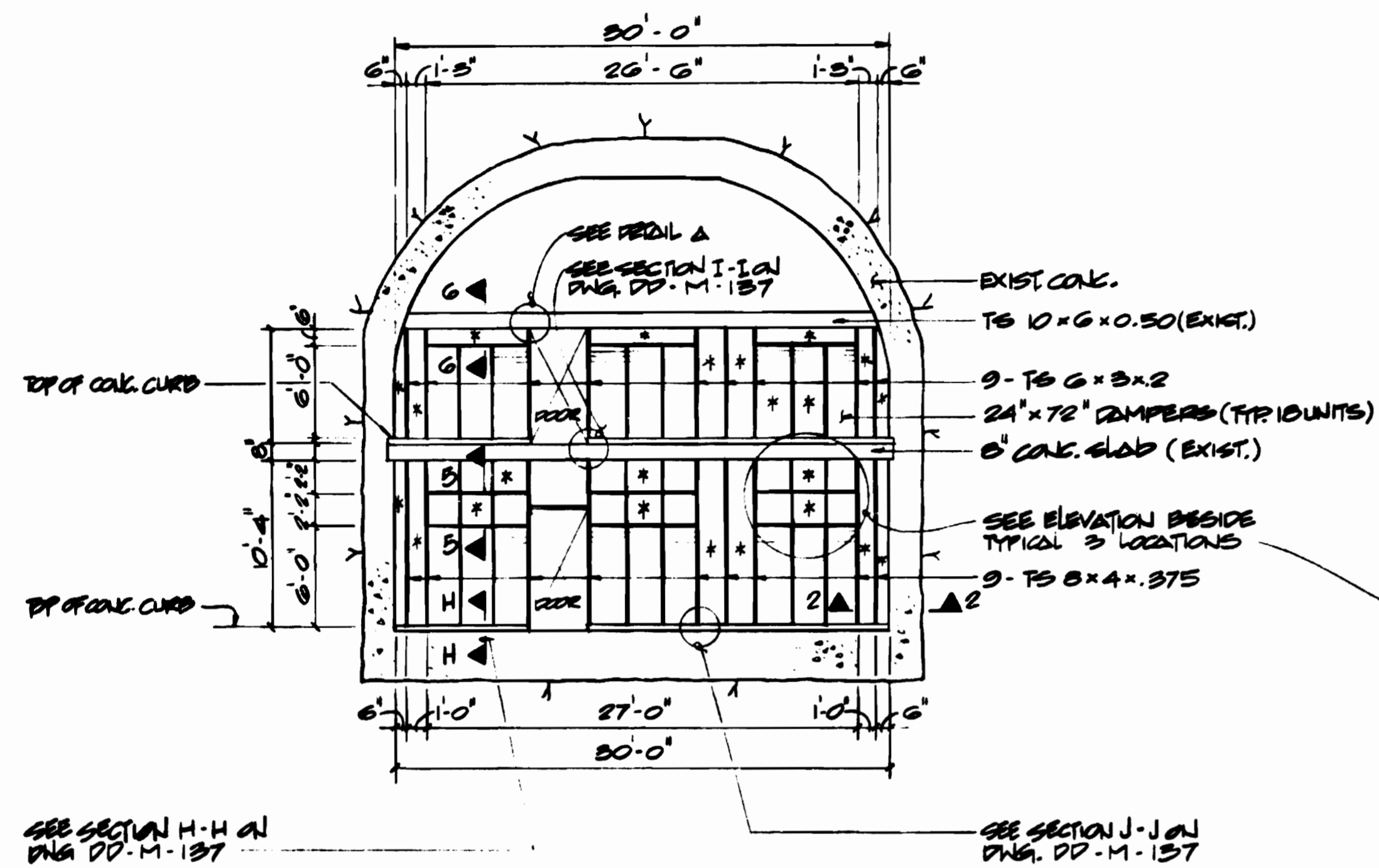
TYPICAL VENT SHAFT DAMPER INSTALLATION DETAILS

SCALE: NO SCALE

DRAWING NO. DD-M-137

M334-148c



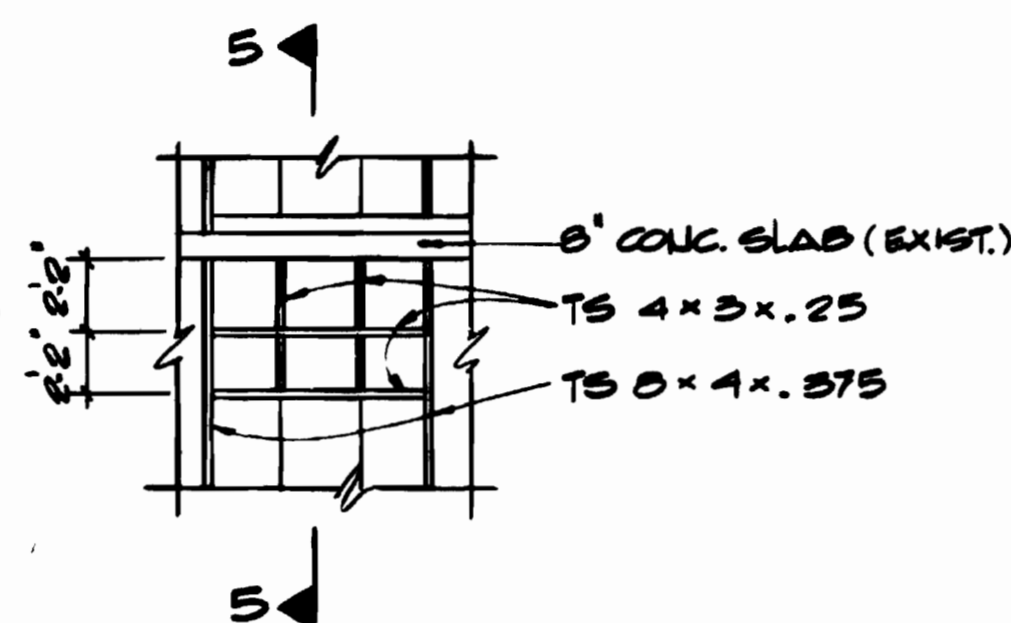


**WEST VIRGINIA AVENUE FAN SHAFT  
DETAIL SECTION A-A (PNG. M-9)  
SCALE: 1/8" = 1'-0"**

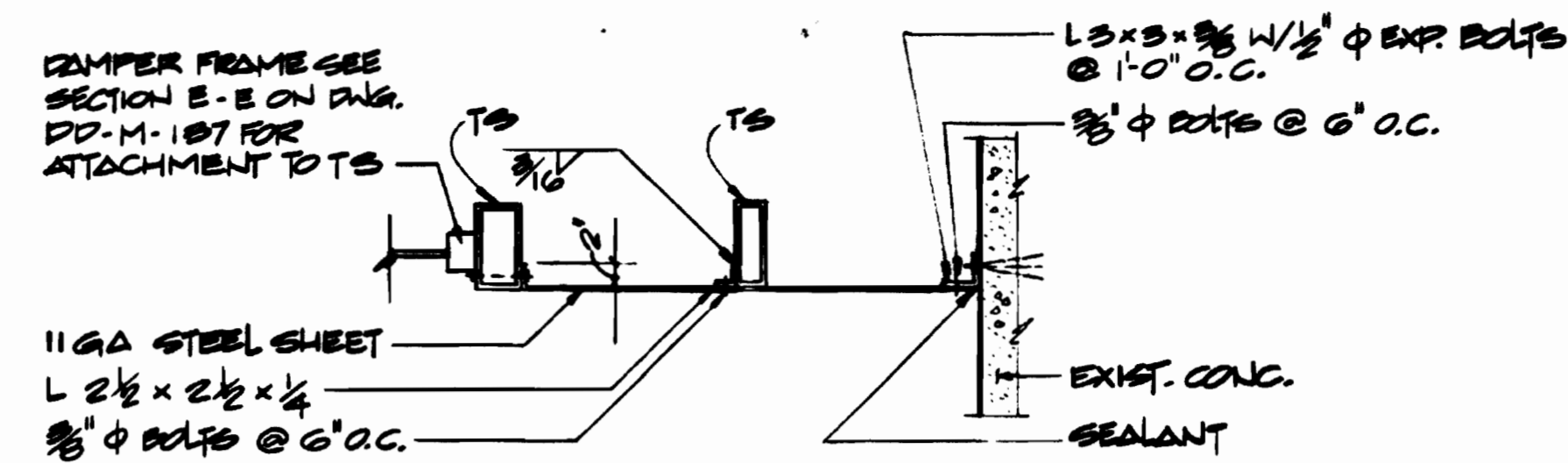
**NOTES:**

1. AREAS MARKED WITH \* INDICATE 11 GA. GALVANIZED STEEL BLANK OFF PANELS.
2. ALL STRUCTURAL STEEL SHALL BE GALVANIZED
3. COORDINATE WITH ELECT. DWGS. IN THE FIELD FOR ELECTRICAL CONDUIT PENETRATIONS.
4. ALL DIMENSIONS SHOWN SHALL BE FIELD VERIFIED.
5. ALL BOLTS, WASHERS & NUTS SHALL BE GALVANIZED OR CADMIUM PLATED.

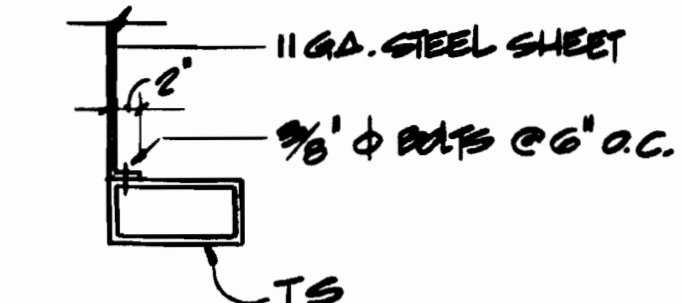
**SECTION 1-1**



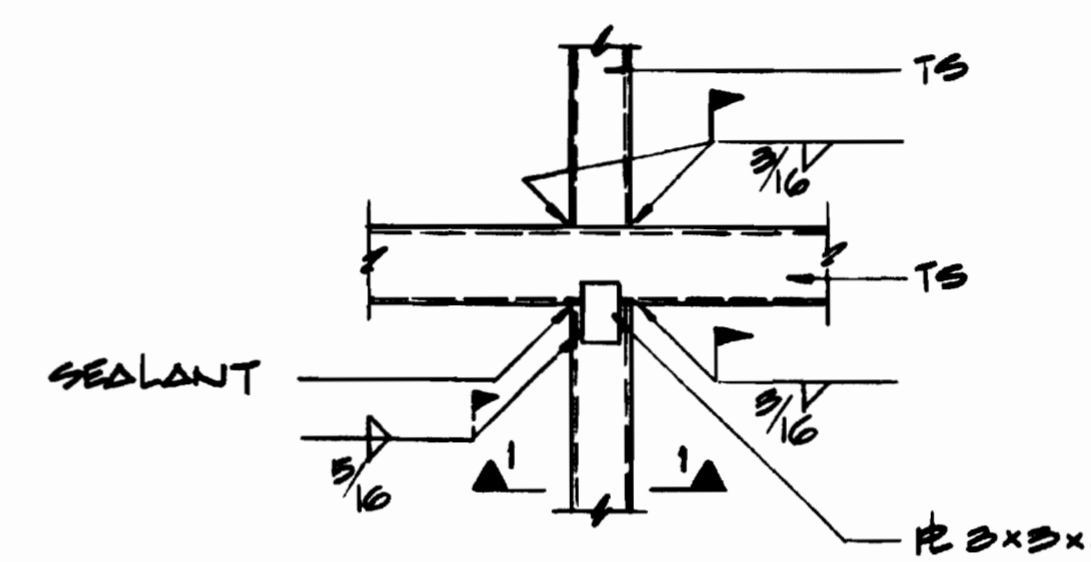
**SUGGESTED ELEVATION**



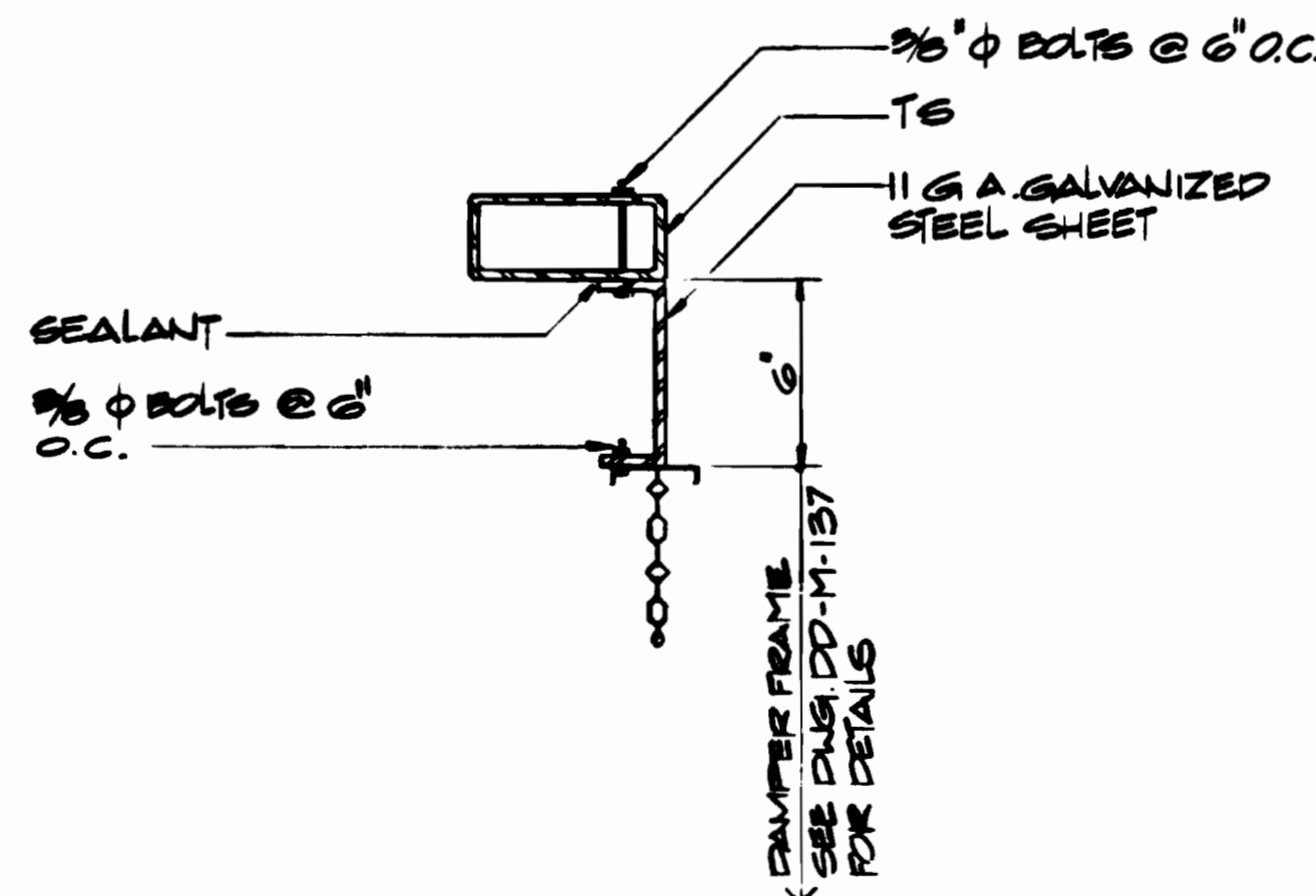
**SECTION 2-2  
TYP. ATTACHMENT DETAIL OF BLANK  
OFF PANEL AT VERTICAL TS**



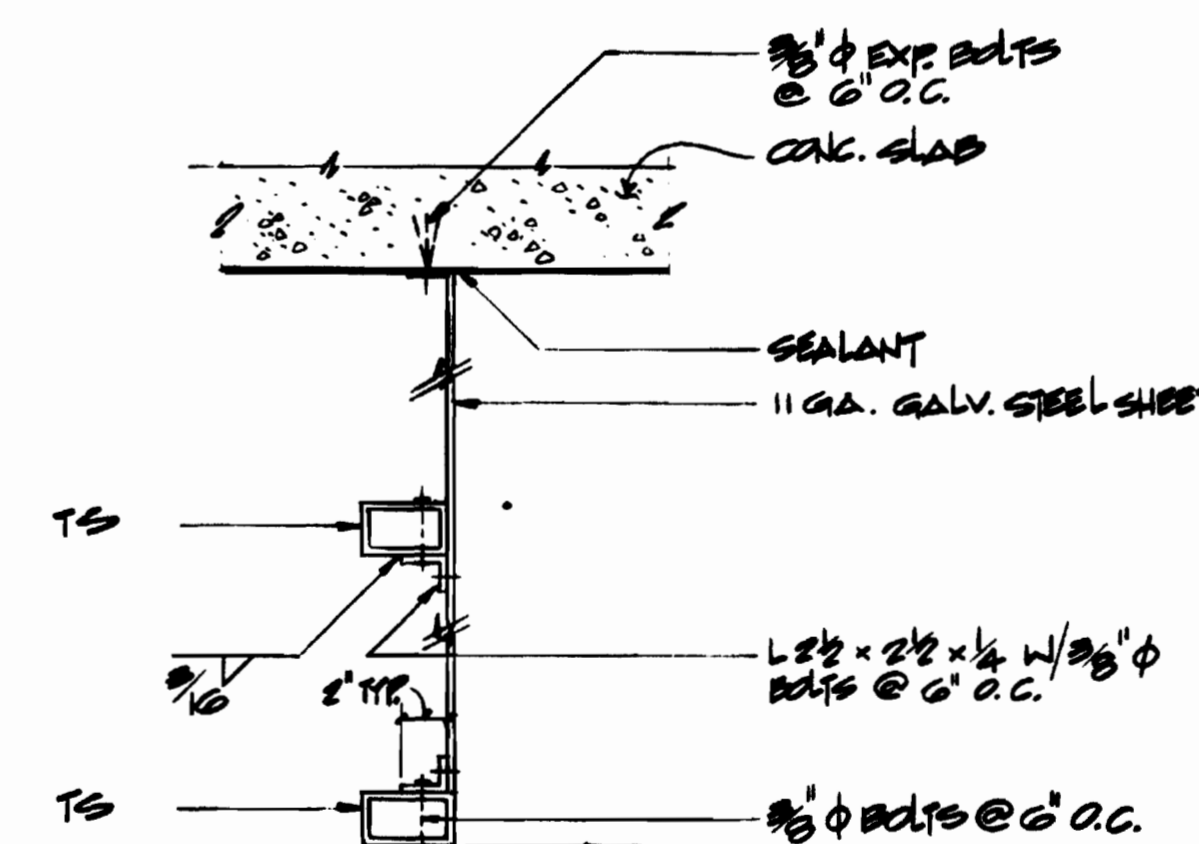
**SECTION 3-3  
TYP. ATTACHMENT DETAIL OF BLANK  
OFF PANEL AT HORIZONTAL TS**



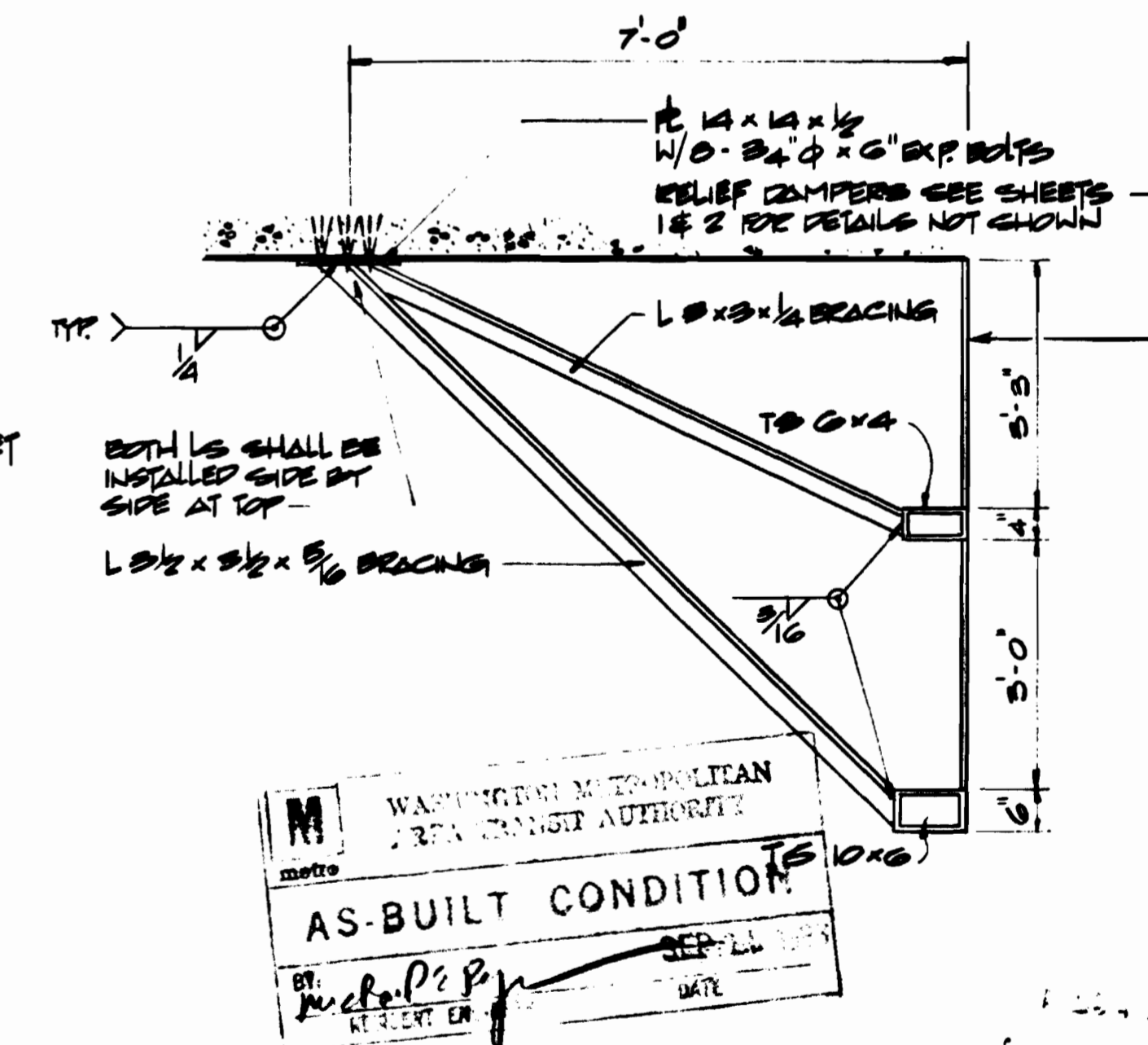
**SUGGESTED DETAIL A**



**SECTION 6-6**



**SECTION 5-5**



**SECTION 4-4**

DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS			
		NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION	
DRAWN	06/22/83	M-9	WEST VIRGINIA AVENUE FAN SHAFT PLAN AND SECT.	6/22/83	HTN	1	NEW DWG. ADDED PER PCO-39, AS BUILT
CHECKED		M-10	BETHESDA STATION NORTH VENT SHAFT PLAN & SECT.				
APPROVED		M-11	BETHESDA STATION ELM ST VENT SHAFT PLAN & SECT.				

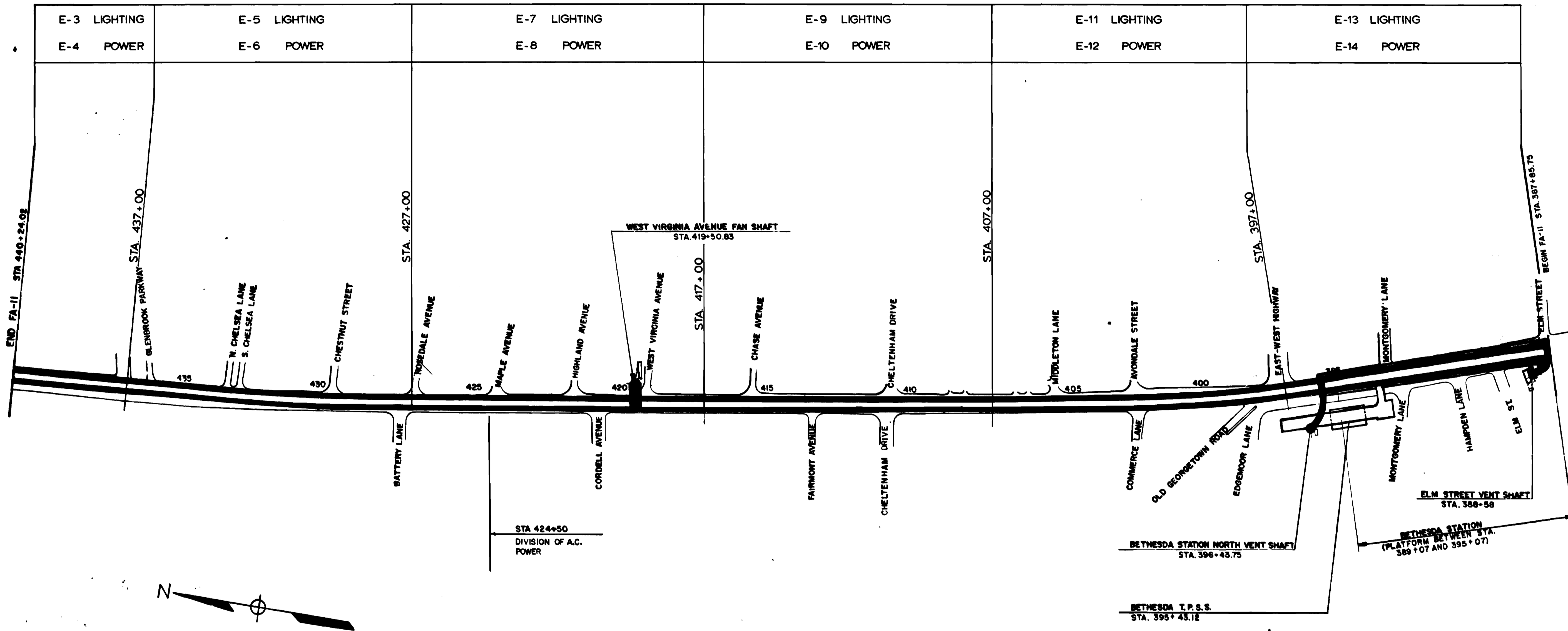
**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

APPROVED \_\_\_\_\_  
DIRECTOR OF ENGINEERING AND ARCHITECTURE  
WMATA  
APPROVED \_\_\_\_\_  
ASSISTANT GENERAL MANAGER  
FOR DESIGN AND CONSTRUCTION

DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT  
HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

**ROCKVILLE ROUTE  
TYPICAL VENT SHAFT DAMPER  
INSTALLATION DETAILS**

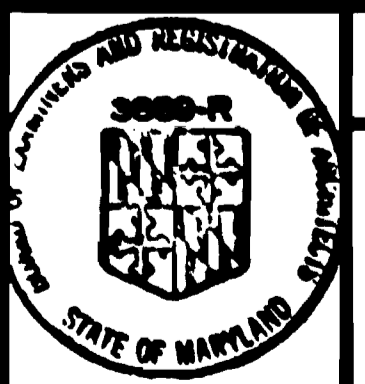
SCALE: NO SCALE  
DRAWING NO.: FA-M-45  
CONTRACT NO.: M334-148 d



WASHINGTON METROPOLITAN  
 AUTHORITY  
 AS BUILT CONDITION  
 HARRY WEESE & ASSOCIATES  
 SEP 13 1983

DESIGNED P.S. CHU  
 DATE 5-1-79  
 DRAWN C.J. REID  
 DATE 5-1-79  
 CHECKED H.B. ZACKRISON  
 DATE 6-16-80  
 APPROVED H.B. ZACKRISON  
 DATE 6-16-80

REFERENCE DRAWINGS		REVISIONS	
NUMBER	DESCRIPTION	DATE	BY
A-1	ABBREVS., DEN. NOTES, LEG. OF SYMS., KEY PLAN		
M-2	KEY PLAN		
E-2	SYMBOLS, ABBREVIATIONS AND GENERAL NOTES		



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**  
 MATHEWS • CHATELAIN • BEALL  
 ENGINEERS AND ARCHITECTS  
 SECTION DESIGNER  
 DE LEUW, CATHER & COMPANY  
 GENERAL ENGINEERING CONSULTANT  
 HARRY WEESE & ASSOCIATES  
 GENERAL ARCHITECTURAL CONSULTANT  
 SUBMITTED *Gerilynn R. Jones* DATE 8-15-80 APPROVED *Carl P. [Signature]*

**ROCKVILLE ROUTE  
 KEY PLAN  
 ELECTRICAL DRAWINGS**  
 SCALE 1" = 200'  
 DRAWING NO. FAI-E-1  
 M334-149



# ELECTRICAL SYMBOLS

	UNDER FLOOR DUCT		JUNCTION BOX, SURFACE MOUNTED ON CEILING. SUBSCRIPT "R" DENOTES RECESS MOUNTED.
	CONDUIT OR CABLE RUN, EXPOSED.		DUPLEX RECEPTACLE, SURFACE MOUNTED, 20A, 125V, 2P, 3 WIRE, WITH SEPARATE GROUNDED POLE, NEMA TYPE 5-20R, M.H. 12" A.F.F. UNLESS OTHERWISE NOTED.
	CONDUIT RUN CONCEALED		DUPLEX RECEPTACLE, 20A, SAME AS ABOVE WITH WEATHERPROOF BOX AND COVER WITH SPRING-HINGED LIDS.
	HOMERUN TO PANELBOARD, ARROWHEADS INDICATE NUMBER OF CIRCUITS IN RUN, CROSS-MARKS INDICATE NUMBER OF #12 CONDUCTORS IF MORE THAN TWO ARE USED. "G" INDICATES GROUND CONDUCTOR.		ACROSS-THE-LINE MAGNETIC STARTER. SUBSCRIPT NUMERAL INDICATE NEMA SIZE RATING "R" INDICATES REVERSING M.H. 4'-6" A.F.F. U.O.N.
	HOMERUN INDICATION WHEN OTHER THAN #12 CONDUCTORS ARE USED.		COMBINATION NON-FUSED DSC SWITCH & ACROSS-THE-LINE MAGNETIC STARTER. TRIP RATING AND NEMA SIZE AS SHOWN 30A, 3P, DISC. SW. U.O.N. "R" INDICATES REVERSING M.H. 4'-6" A.F.F. U.O.N.
	CONDUIT TURNED UPWARD.		NON-FUSED DISCONNECT SWITCH, RATING AS NOTED. M.H. 4'-6" UNLESS OTHERWISE NOTED. 30A, 3P, U.O.N.
	CONDUIT TURNED DOWN OR AWAY.		FUSE
	CONDUIT CAPPED.		CIRCUIT BREAKER, MCB INDICATES (400-FRAME) PANELBOARD MAIN CIRCUIT BREAKER (300-TRIP)
	GROUNDING CONDUCTORS.		DIGITAL TRANSMISSION SYSTEM REMOTE TERMINAL
	ELECTRICAL PANELBOARD M.H. 4'-6" A.F.F. TO CENTERLINE, EXCEPT THAT NO. CKT. BKR. OPERATING HANDLE SHALL BE HIGHER THEN 6'-6" A.F.F.		CLOSED CIRCUIT TELEVISION (CCTV) CAMERA OUTLET
	SPEAKER WIRING CENTERLINE		NOT USED
	INCANDESCENT OR H.I.D. LIGHT OUTLET, CEILING MOUNTED. NUMERAL INDICATES CIRCUIT NUMBER, SUB-LETTER INDICATES CONTROLLING SWITCH.		RECESSED SPEAKER OUTLET RACEWAY AND ENCLOSURE ONLY
	INCANDESCENT OR H.I.D. LIGHT FIXTURE CEILING MOUNTED ON EMERGENCY CIRCUIT.		PYLON LIGHTING
	INCANDESCENT OR H.I.D. LIGHT FIXTURE WALL MOUNTED ON EMERGENCY CIRCUIT.		GROUND
	FLUORESCENT FIXTURE, LETTERS INDICATE CONTROLLING SWITCH, NUMERALS INDICATE CIRCUIT NUMBER.		CCTV WIRING
	FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT.		GROUND CONDUCTOR - PIGTAIL
	LIGHTING FIXTURE DESCRIPTION, UPPER NUMERAL DENOTES TYPE OF FIXTURE, LOWER NUMERAL INDICATES NUMBER OF FIXTURES IN THE ROOM, SUBSCRIPT INDICATES THE MOUNTING HEIGHT (MEASURE TO THE LOWEST POINT OF THE FIXTURE); "R" DENOTES RECESSED. "CLG" DENOTES MOUNTED DIRECTLY BELOW CEILING. EMERGENCY TRIP STATION		EXISTING CONDUIT OR SLEEVE
	TRANSFORMER DRY TYPE. SEE ONE-LINE DIAGRAMS FOR KVA RATING.		GROUND BUS 1/4"x2" COPPER
	LOAD CENTER - COMBINATION DRY TYPE TRANSFORMER AND CIRCUIT BREAKERS.		SINGLE POLE SNAP SWITCH WEATHERPROOF 20A M.H. 4'-6" A.F.F. 120-277V.
	SINGLE POLE SNAP SW. M.H. 4'-6" A.F.F. SUBSCRIPT DENOTES ITEM CONTROLLED. 20A, 120-277V.		TERMINAL BOX
	THREE WAY SNAP SW, 20A, 120-277V, M.H. 4'-6" A.F.F.		FIRE ALARM SENSOR JUNCTION BOX
	MANUAL STARTER M.H. 4'-6" A.F.F.		INTRUSION ALARM JUNCTION BOX
	WALL MOUNTED RECEPTACLE 20A, 125V, 2P, 3-WIRE, THIRD POLE GROUNDED, NEMA TYPE 5-20R. (SINGLE) 12" A.F.F.		FUSED DISCONNECT SWITCH, RATING AS NOTED. M.H. 4'-6" U.O.N.
	MOTOR NUMBER DENOTES MOTOR HORSEPOWER.		INDICATES A GROUP OF CONDUITS RUNNING TOGETHER. INDIVIDUAL DESIGNATIONS OF CONDUITS IN GROUPS GIVEN ON PROJECT DWGS.
	JUNCTION BOX, SURFACE MOUNTED M.H. 18" A.F.F. UNLESS OTHERWISE NOTED. SUBSCRIPT "R" DENOTES RECESS MOUNTED.		TUNNEL LIGHTING FIXTURE TYPE 4. SEE DETAIL 3 DWG. E-5.
			TUNNEL LTG FIXTURE TYPE 4 ON EMER. CKT.
			PABX TELEPHONE SYSTEM JUNCTION BOX

# ABBREVIATIONS

A	AMPERE	FVR	FULL VOLTAGE REVERSING	P	POLE
ⓐ	AT	FL	FLOOR	P.A.	PUBLIC ADDRESS (SYSTEM)
A.C.	ALTERNATING CURRENT	FUT.	FUTURE	P.A.B.X.	PRIVATE AUTOMATIC BRANCH EXCHANGE
A-C	ASBESTOS CEMENT	FS	FAN SHAFT	P.B.	PULL BOX
A.C.B.	AIR CIRCUIT BREAKER	FVNR.	FULL VOLTAGE NON-REVERSING	P.B.S.	PUSH BUTTON STATION
A.C.U.	AIR CONDITIONING UNIT	GALV.	GALVANIZED	P.E.P.CO.	POTOMAC ELECTRIC POWER COMPANY
A.F.F.	ABOVE FINISHED FLOOR	G.A.S.R.	GALVANIZED ALLOY STEEL RIGID	PLATF.	PLATFORM
A.H.U.	AIR HANDLING UNIT	GEN.	GENERAL	PNL	PANEL
ALT.	ALTERNATOR	GND.	GROUND	POS.	POSITIVE
ANCIL.	ANCILLARY	HTG.	HEATING	P.S.	PRESSURE SWITCH
APPROX.	APPROXIMATELY	HC.	HANDICAPPED	P.T.	POTENTIAL TRANSFORMER
A.T.S.W.	AUTOMATIC TRANSFER SWITCH	H.I.D.	HIGH INTENSITY DISCHARGE	PVC.	POLYVINYL CHLORIDE
AUTO.	AUTOMATIC	HP.	HORSEPOWER	PWR.	POWER
AUX.	AUXILIARY	HTR.	HEATER	PASS.	PASSAGEWAY
A.W.G.	AMERICAN WIRE GAUGE	HZ.	HERTZ (CYCLES PER SECOND)	R	RECESSED
&	AND	I.A.	INTRUSION ALARM	R.A.	RETURN AIR
A.F.C.	AUTOMATIC FARE COLLECTION	I.B.	INBOUND	RECEPT.	RECEPTACLE
		IND.	INDICATION	RECT.	RECTIFIER
BATT.	BATTERY	INV.	INVERTER	REF.	REFERENCE
B.C.	BATTERY CHARGER			RM.	ROOM
BKR.	BREAKER	J.B.	JUNCTION BOX	S	SOUTH
BLDG.	BUILDING			SCH.	SCHEDULE
		KV.	KILOVOLT	S.E.	SOUTHEAST
CHRG.	CHARGER	KVA.	KILOVOLT-AMPERE	SEL.	SELECTOR
CAB.	CABINET	KW.	KILOWATT	S/N	SOLID NEUTRAL
C.B.	CIRCUIT BREAKER			SPKR.	SPEAKER
C/C	CENTER TO CENTER	LTG.	LIGHTING	STA.	STATION
C.C.T.V.	CLOSED CIRCUIT TELEVISION SYSTEM	MACH.	MACHINE	STRUC.	STRUCTURAL
		MAINT.	MAINTENANCE	SS.	SUBSTATION
CKT	CIRCUIT	MAX.	MAXIMUM	SUPV.	SUPERVISORY
CL	CENTERLINE	M.C.C.	MOTOR CONTROL CENTER	S.W.	SOUTHWEST
CL.	CLEARANCE	MECH.	MECHANICAL	SW.	SWITCH
CLG.	CEILING	MEZZ.	MEZZANINE	SWBD.	SWITCHBOARD
COL.	COLUMN	M.H.	MOUNTING HEIGHT	SYS.	SYSTEM
COMM.	COMMUNICATION	MIN.	MINIMUM	SPDT	SINGLE POLE, DOUBLE THROW
COND.	CONDUIT	MISC.	MISCELLANEOUS	S.E.D.	SEWAGE EJECTOR DICHARGE
CONT'D.	CONTINUED	MTD.	MOUNTED	T	THERMOSTAT
CONV.	CONVENIENCE	MTG.	MOUNTING	T.B.	TERMINAL BLOCK
CONN.	CONNECTED	M.V.	MERCURY VAPOR	T.C.	TRAIN CONTROL
		MULTI	MULTIPLE	TEL.	TELEPHONE
D.C.	DIRECT CURRENT	N	NORTH	THRU.	THROUGH
DESIG.	DESIGNATION	N.C.	NORMAL CLOSED	T/R	TOP-OF-RAIL
DET.	DETAIL	N.E.	NORTHEAST	TRANSF.	TRANSFORMER
DIA.	DIAMETER	N.E.C.	NATIONAL ELECTRICAL CODE	T.S.W.	TRANSFER SWITCH
DISC.	DISCONNECT	NEG.	NEGATIVE	T.U.	TURN UP
DIST.	DISTRIBUTION	N.E.M.A.	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION	TUN.	TUNNEL
DN.	DOWN	NOT IN CONTRACT		TV.	TELEVISION
DWG.	DRAWING	N.O.	NUMBER	TYP.	TYPICAL
D.T.S.	DATA TRANSMISSION SYSTEM	N.O.	NORMALLY OPEN	TPSS	TRACTION POWER SUBSTATION
		NORM.	NORMAL	UPS	UNINTERRUPTABLE POWER SYSTEM
E.R.R.	ETHYLENE-PROPYLENE RUBBER	N.T.S.	NOT-TO-SCALE	UFD	UNDERGROUND DUCT
E	EAST	N.F.	NON-FUSIBLE	U.O.N.	UNLESS OTHERWISE NOTED
EA.	EACH			VENT	VENTILATION
EL.	ELEVATION			V.S.	VENT SHAFT
ELEC.	ELECTRICAL	O.B.	OUTBOUND	VU.	VENTILATING UNIT
ELEV.	ELEVATOR	OC.	OVERCURRENT	V	VOLT OR VOLTAGE
EMER.	EMERGENCY	OPER.	OPERATION	W	WATTS
ENT.	ENTRANCE	OPNG.	OPENING	WP.	WEATHERPROOF
EQUIP.	EQUIPMENT			W/	WITH
ESCAL.	ESCALATOR			W	WEST
EXH.	EXHAUST				
EXIST.	EXISTING				
E.C.	EMPTY CONDUIT				
E.T.S.	EMERGENCY TRIP STATION				
E.W.C.	ELECTRIC WATER COOLER				
FDR.	FEEDER				
FIN.	FINISHED				
F.E.	FIRE EQUIPMENT				

# GEN. NOTES

- ALL EMPTY CONDUITS SHALL HAVE ONE #14 GALVANIZED DRAG WIRE INSTALLED IN THEM.
  - THESE SYMBOLS, ABBREVIATIONS AND GENERAL NOTES APPLY TO ALL OF THE CONTRACT DRAWINGS.
  - ALL EXPOSED CONDUITS SHALL BE SUPPORTED BY EXISTING EMBEDDED OR NEW SURFACE MOUNTED CHANNEL INSERTS AT SPACING AS REMENDED IN ART. 346 12 IN 1978 N.E.C.. NEW CHAN CHANNEL INSERTS SHALL BE FIXED TO CONCRETE BY EXPANSION BOLTS.
  - ALL ELECTRICAL EQUIPMENT AND WIRING DEVICES INSTALLED IN TUNNEL AND SHAFTS SHALL BE ENCLOSED IN EITHER NEMA 3R OR NEMA 4 ENCLOSURES.
  - ALL EXISTING CONDUITS EMBEDDED IN CONCRETE STRUCTURE (FLOOR, WALL, CEILING) ARE STUBBED OR WITH COUPLINGS FLUSH WITH CONCRETE AND EMBEDDED (TRACTION POWER CONDUITS EXCLUDED)
  - ALL CONDUITS, JUNCTION AND PULL BOXES: SURFACE MOUNTED UNLESS OTHERWISE NOTED. CONDUITS PASSING THROUGH WALLS OR FLOOR SLABS SHALL GO THROUGH CONDUIT SLEEVES (EXISTING FOR CONCRETE STRUCTURE AND NEW FOR OTHERS) WHICH SHALL THEN BE PACKED WITH OAKUM OR DUCT-SEAL TO PRESERVE THE CONTINUITY AND FIRE RATING OF THE STRUCTURE PENETRATED. SEE SLEEVE DETAIL, DWG. E-47.
  - CONDUIT & CABLE ROUTING SHOWN IS GENERALLY SCHEMATIC UNON WITH DIMENSIONS. INSTALL CONDUIT & CABLE AS REQUIRED BY EXISTING STRUCTURAL CONDITIONS.
    - INSTALL NEMA 1 PULL BOXES AT NORTH VENT SHAFT.
    - SEAL THE PULL BOXES SEAMS USING SILICONE SEALANT.
    - DELETE THE STEEL NIPPLE AT THE TERMINATION OF CONDUITS IN THE PULL BOXES.
  - PROVIDE TEMPORARY POWER FEED FROM WEST SER. AREA TO AIR COMPRESSOR IN CHILLER PLANT.
  - INSTALL HANGERS AS REQUIRED FOR CONDUIT IN PLATFORM PLENUM.
- AS-BUILT CONDITION
- SEP 13 1983

DESIGNED	P.S. CHU	DATE	9-18-79
DRAWN	U.H. WING	DATE	9-24-79
CHECKED	H.B. ZACKRISON	DATE	6-16-80
APPROVED	H.B. ZACKRISON	DATE	6-16-80

REFERENCE DRAWINGS		REVISIONS	
NUMBER	DESCRIPTION	DATE	BY
S-100	ABBREVIATIONS, SYMBOLS AND STRUCTURAL NOTES	6-27-83	MD
A-1	ABBREVS. GEN. NOTES, LEGEND OF SYMBOLS, KEY PLAN		

**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

MATHEWS • CHATELAIN • BEALL  
ENGINEERS AND ARCHITECTS  
SECTION DESIGNER

DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

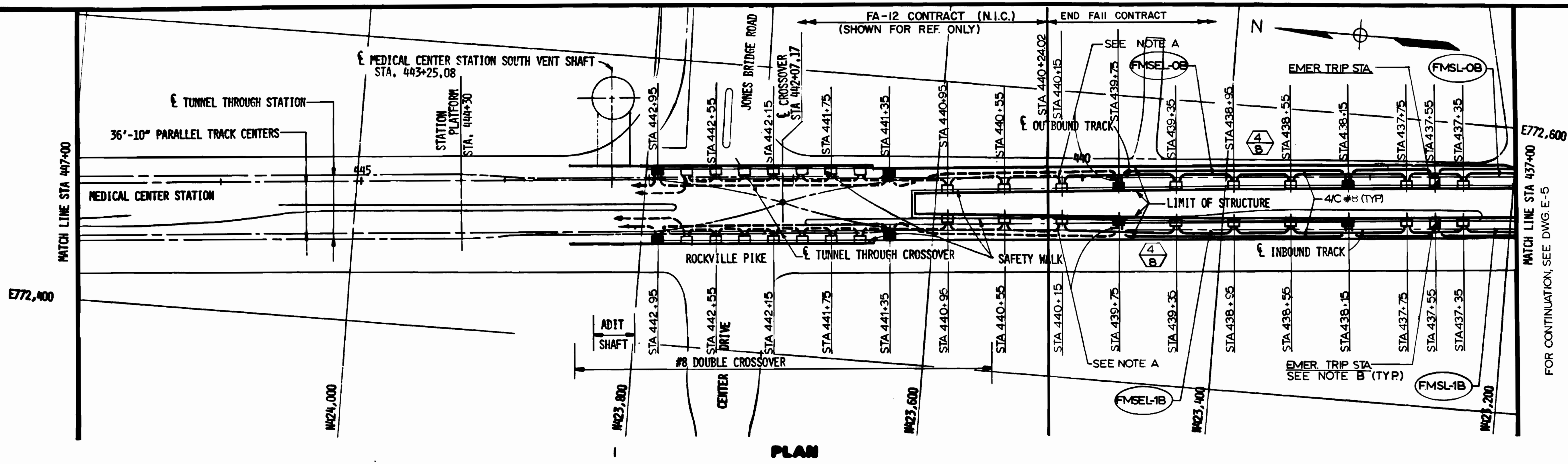
SUBMITTED *Jerry R. Fress* DATE 8-15-80 APPROVED *Paul J. ...*

**ROCKVILLE ROUTE**

SYMBOLS, ABBREVIATIONS AND  
GENERAL NOTES

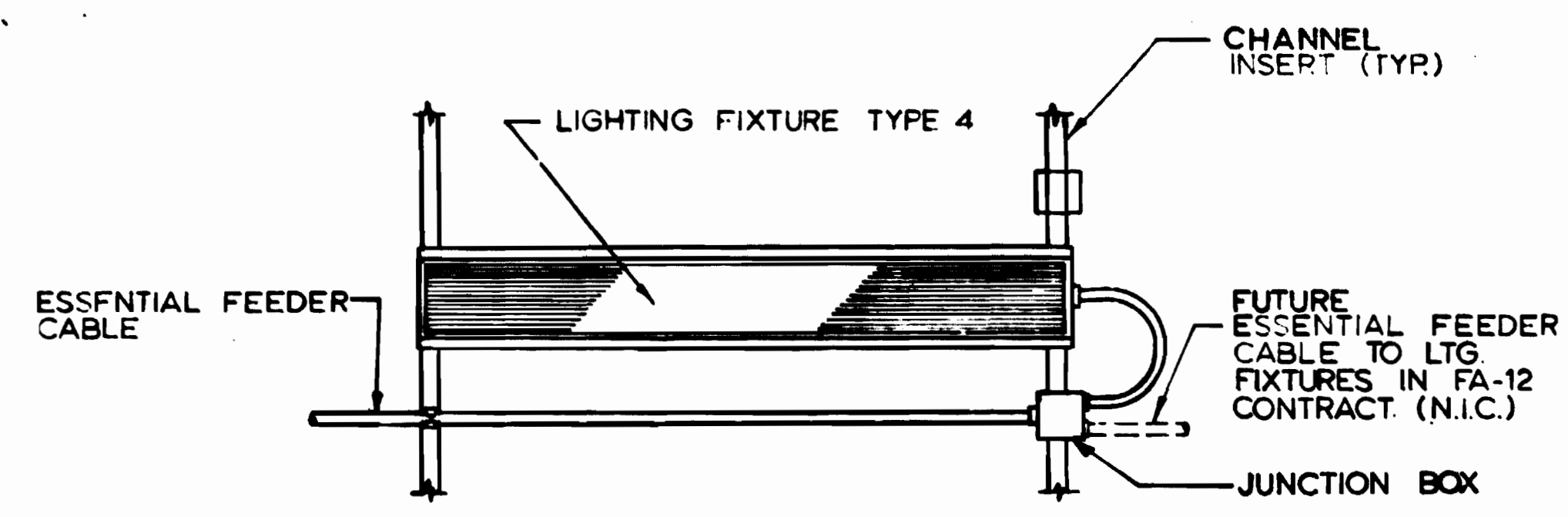
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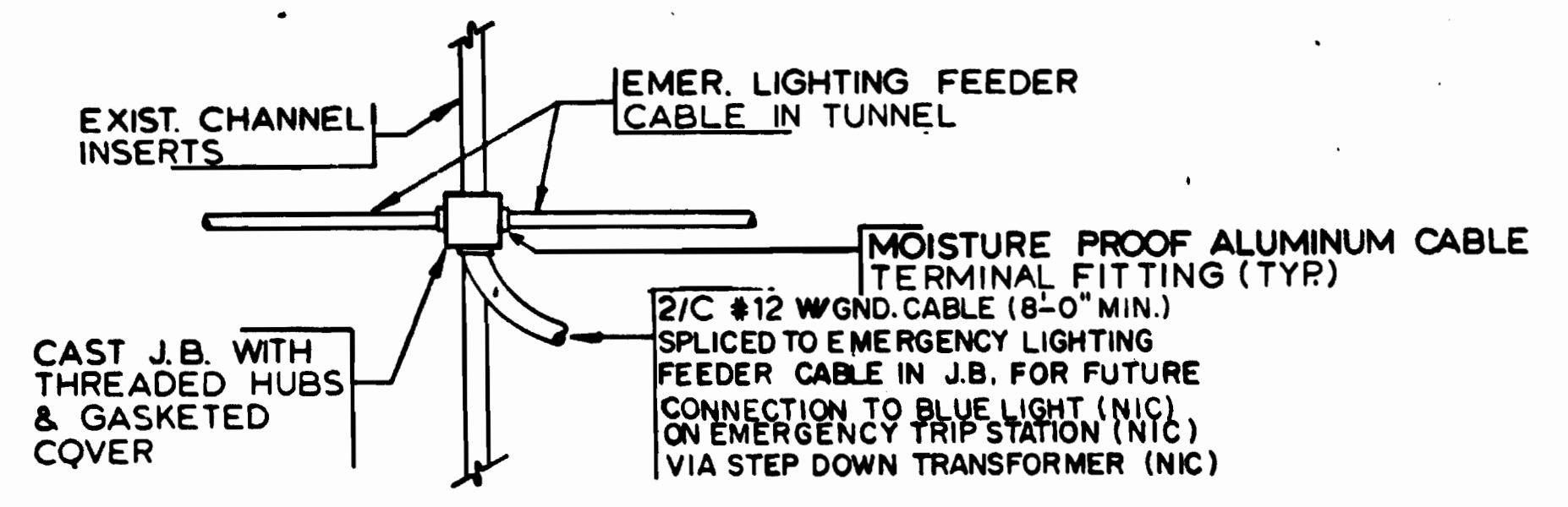


PLAN

FOR CONTINUATION SEE DWG. E-5



1 TYPICAL INTERFACE CONNECTION FOR LIGHTING CIRCUIT  
NOT TO SCALE  
(SIMILAR ARRANGEMENT FOR EMERGENCY LTG FEEDERS)



2 TYPICAL EMERGENCY TRIP STATION CONNECTION DETAIL  
NOT TO SCALE

NOTES

- A. THE INTERFACE WIRING SHALL BE INSTALLED AND FURNISHED BY OTHERS. SEE DETAIL 1 THIS DWG.
- B. THE ENCLOSURE OF SURFACE MOUNTED TYPE EMERGENCY TRIP STATION, BLUE LIGHT FIXTURES AND STEP-DOWN TRANSFORMERS FOR TUNNEL SHALL BE FURNISHED BY WMATA AND INSTALLED BY OTHERS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH, INSTALL AND CONNECT A 277V. SINGLE PHASE 60HZ SUPPLY. FURNISH 8 FT OF SLACK 2#2 WITH GND. CABLE SPLICED ON TO THE EMERGENCY LIGHTING FEEDER CABLE IN A JUNCTION BOX. SEE TYPICAL DETAIL 2 THIS DRAWING.
- C. SEE NOTES A, B, C & D ON DWG. E-5.
- D. SEE NOTE C, DWG. E-7.

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY  
AS BUILT CONDITION  
*[Signature]*



DESIGNED	P. S. CHU	7-24-79
DATE		
DRAWN	C. J. REID	7-24-79
DATE		
CHECKED	H. B. ZACKRISON	6-16-80
DATE		
APPROVED	H. B. ZACKRISON	6-16-80
DATE		

REFERENCE DRAWINGS		REVISIONS	
NUMBER	DESCRIPTION	DATE	BY
M-3	KEY PLAN & PROFILE STA 447.00 TO STA 443.00		



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

**MATHEWS • CHATELAIN • BEALL**  
ENGINEERS AND ARCHITECTS  
SECTION DESIGNER

DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

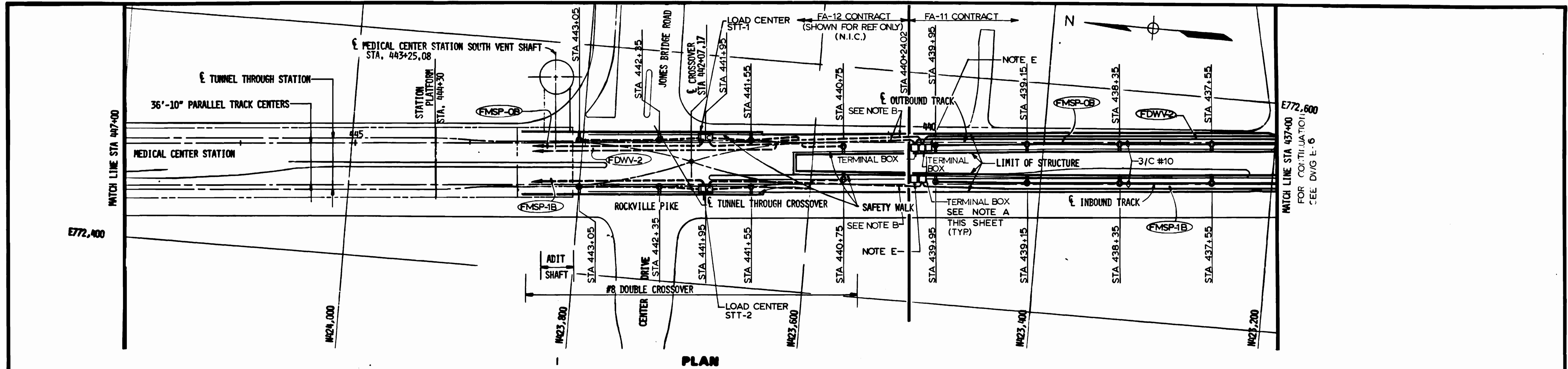
SUBMITTED *[Signature]* DATE 8-16-80 APPROVED *[Signature]*

**ROCKVILLE ROUTE**  
ELECTRICAL KEY PLAN  
STA 440+24.02 TO STA. 437+00 - LIGHTING

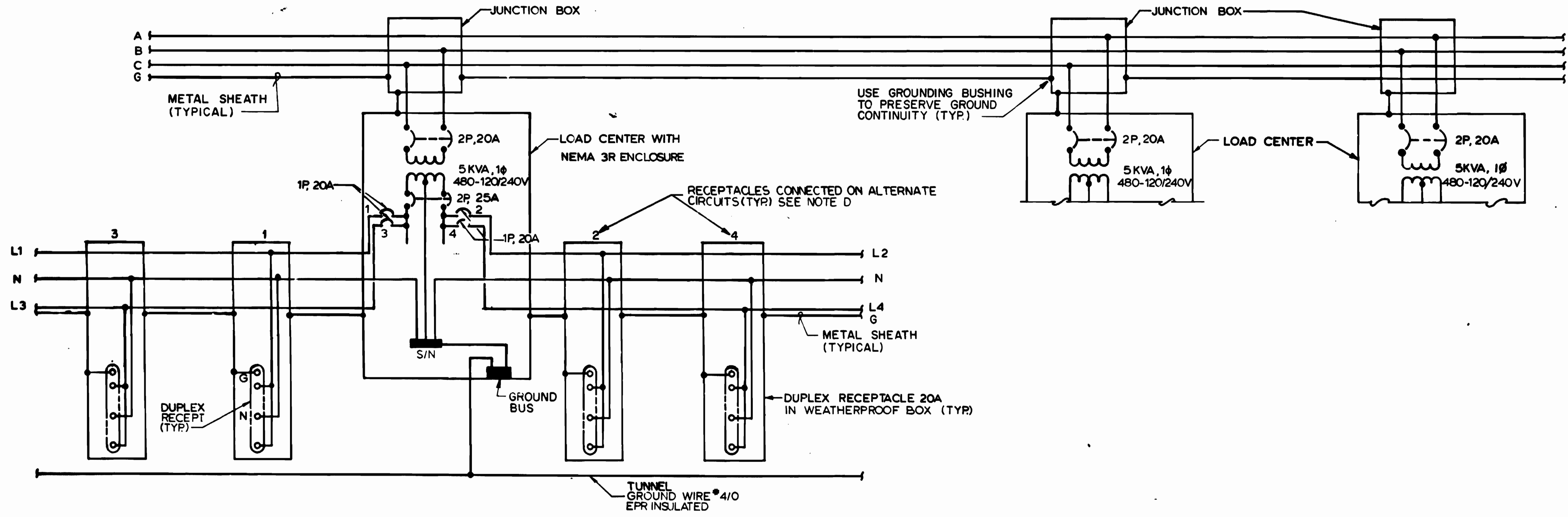
SCALE: HORIZ. 1"=40' AND AS NOTED

DRAWING NO. **FA11-E-3** M334-151





PLAN



1 TYPICAL LOAD CENTER WIRING DIAGRAM  
NOT TO SCALE (EVEN-NUMBERED DWGS. E-4 THRU E-14) SEE NOTE C

NON-ESSENTIAL FEEDER CABLE

NOTES

- A. SEE DWG E-49 FOR TERMINAL BOX DETAILS. (E-49)
  - B. THIS PORTION SHALL BE FURNISHED, INSTALLED AND CONNECTED BY OTHERS.
  - C. FOR TYPICAL LOAD CENTER DETAILS, SEE DWG. E-6.
  - D. FOR TYPICAL LOAD CENTER, CONNECT AS FOLLOWS:
- | BRANCH CIRCUIT NO. | NO. OF DUPLEX RECEPTACLES |
|--------------------|---------------------------|
| 1                  | 3                         |
| 2                  | 3                         |
| 3                  | 2                         |
| 4                  | 2                         |
- E. TERMINAL BOX FOR TUNNEL GROUND CONDUCTOR SEE NOTE C, DWG E-7.

AS-BUILT CONDITION



DESIGNED	P.J. CHU	7-24-74
DATE		
DRAWN	C.L. BEID	7-24-74
DATE		
CHECKED	H.B. ZACKRISON	8-16-80
DATE		
APPROVED	H.B. ZACKRISON	8-16-80
DATE		

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION
M-3	KEY PLAN & PROFILE STA. 447+00 TO STA. 437+00

REVISIONS		
NUMBER	DATE	DESCRIPTION



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

MATHews • CHATELAIN • BEALL  
ENGINEERS AND ARCHITECTS  
SECTION DESIGNER

DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT

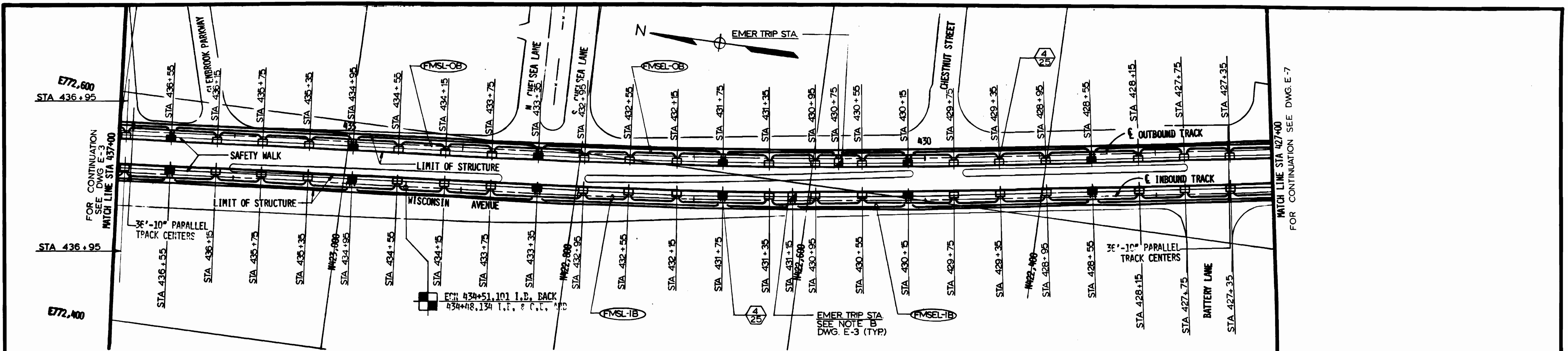
HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *April 15, 1980* DATE 8-16-80 APPROVED

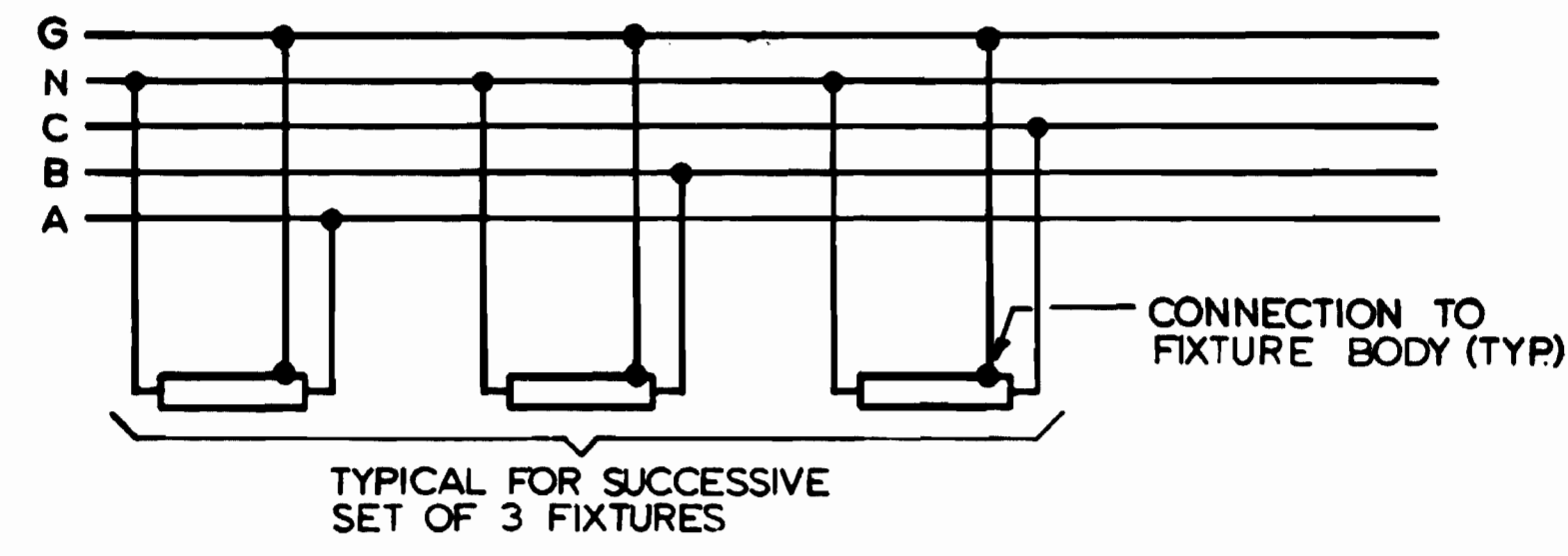
**ROCKVILLE ROUTE**  
ELECTRICAL KEY PLAN  
STA. 440+24.02 TO STA. 437+00 - POWER

SCALE: HORIZ. 1"=40' AND AS NOTED

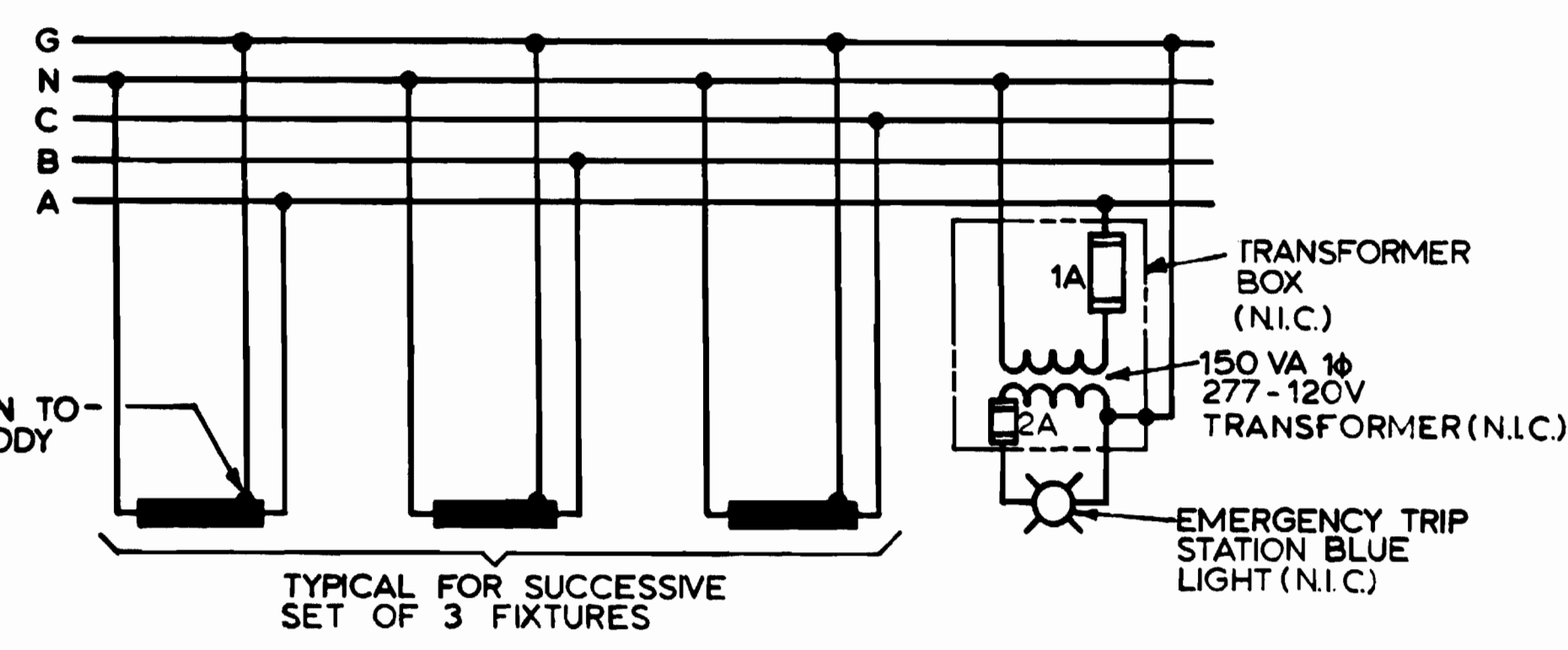
DRAWING NO. **FA11-E-4** M334-152



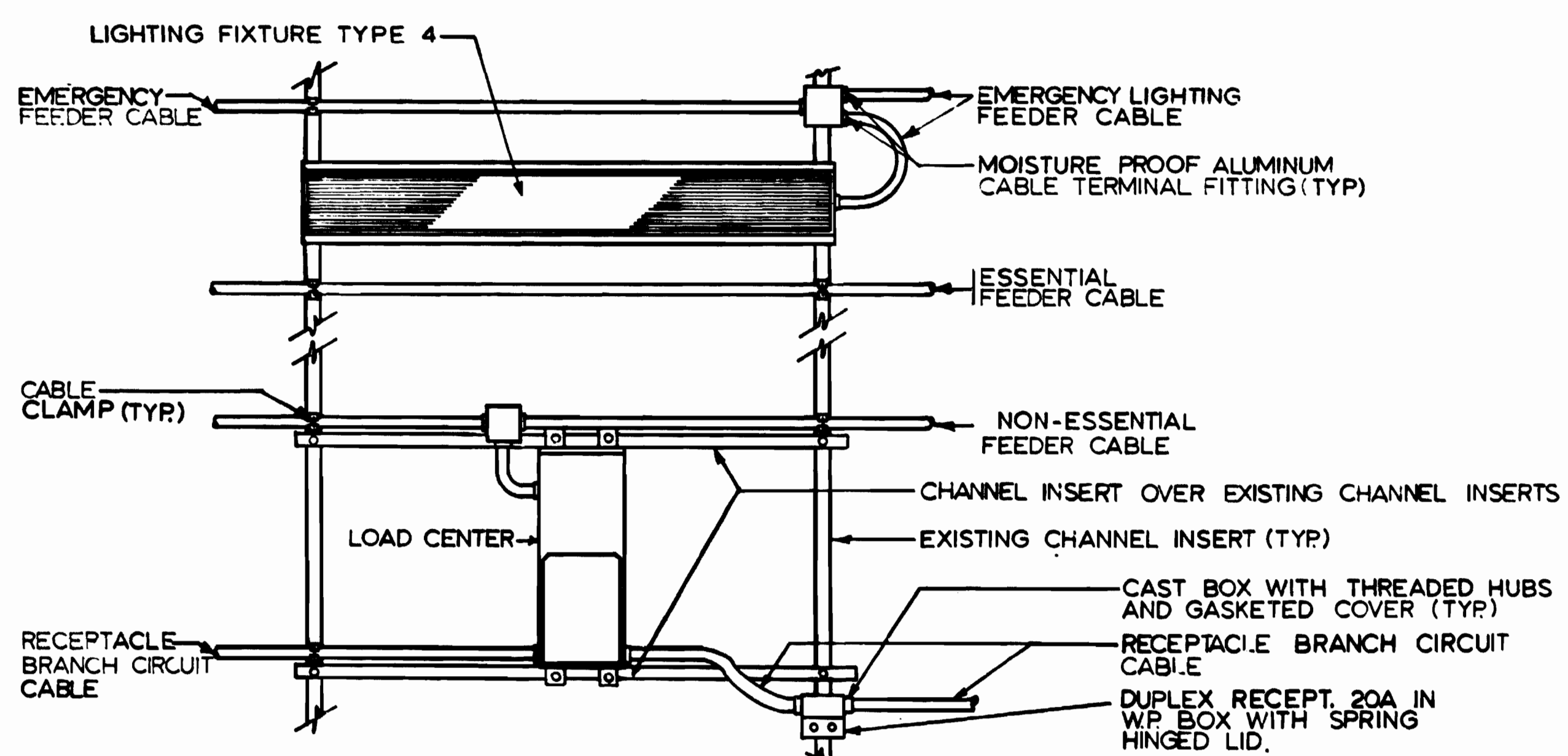
PLAN



1 TYPICAL TRACK LIGHTING FOR NORMAL CIRCUIT  
NOT TO SCALE SEE NOTE D



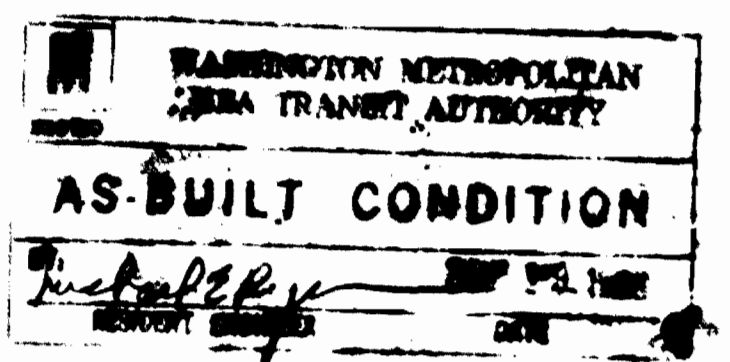
2 TYPICAL TRACK LIGHTING FOR EMERGENCY CIRCUIT  
NOT TO SCALE SEE NOTE D



3 TYPICAL TUNNEL LIGHTING, LOAD CENTER, & RECEPTACLE DETAILS  
NOT TO SCALE (ODD NUMBERED DRAWINGS E-5 THRU E-13)

NOTES

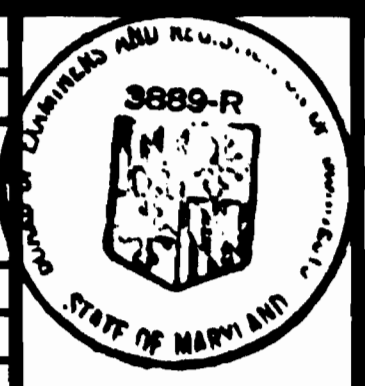
- A. LIGHTING FIXTURES, AC POWER EQUIPMENT AND ASSOCIATED WIRING SHALL BE INSTALLED WITHIN THE ALLOCATED SPACE ON EXISTING CHANNEL INSERTS.
- B. FOR CABLE OR CONDUIT INSTALLATION ON TUNNEL WALL SEE DETAILS ON DWG E-6.
- C. FOR TYPICAL LOAD CENTER INSTALLATION DETAILS SEE DWG E-6. FOR TYPICAL WIRING FOR LOAD CENTERS AND RECEPTACLES, SEE WIRING DIAGRAM ON DWG E-4.
- D. DETAILS 1 & 2 INDICATE ONLY CONNECTION OF LIGHTING FIXTURES ON ALTERNATE PHASES OF 3Ø, 4W TUNNEL FEEDERS. SEE ALSO DETAILS 1 & 2 ON DWG E-3.
- E. SEE NOTE C, DWG E-7.



DESIGNED	P.S. CHU	7-24-80
DATE		
DRAWN	C.J. REID	7-24-80
DATE		
CHECKED	H.B. ZACKRISON	8-16-80
DATE		
APPROVED	H.B. ZACKRISON	8-16-80
DATE		

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

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DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *Yerrida P. Jones* DATE 8-15-80 APPROVED *John P. Jones*

**ROCKVILLE ROUTE  
ELECTRICAL KEY PLAN  
STA. 437+00 TO STA. 427+00 - LIGHTING**

SCALE: HORIZ. 1"=40' AND AS NOTED

DRAWING NO. **FALL-E-5** M334-153

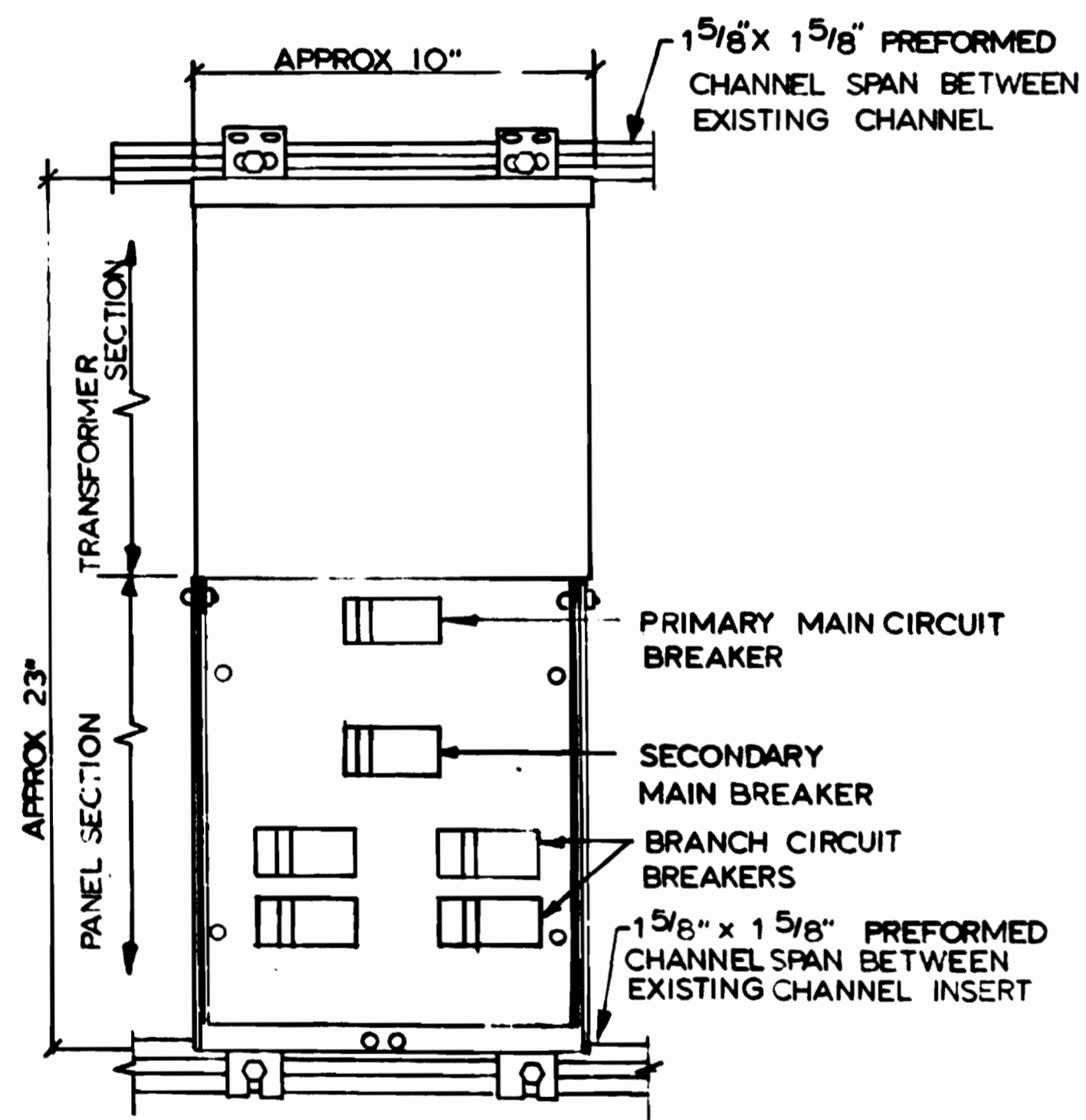
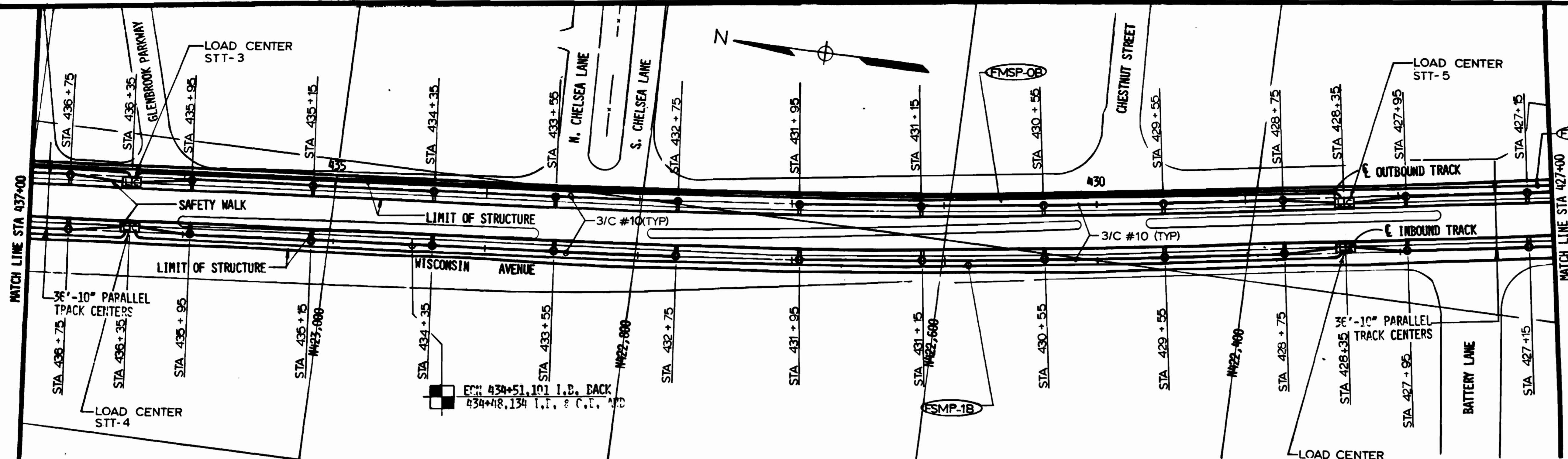


ET72.600

ET72.400

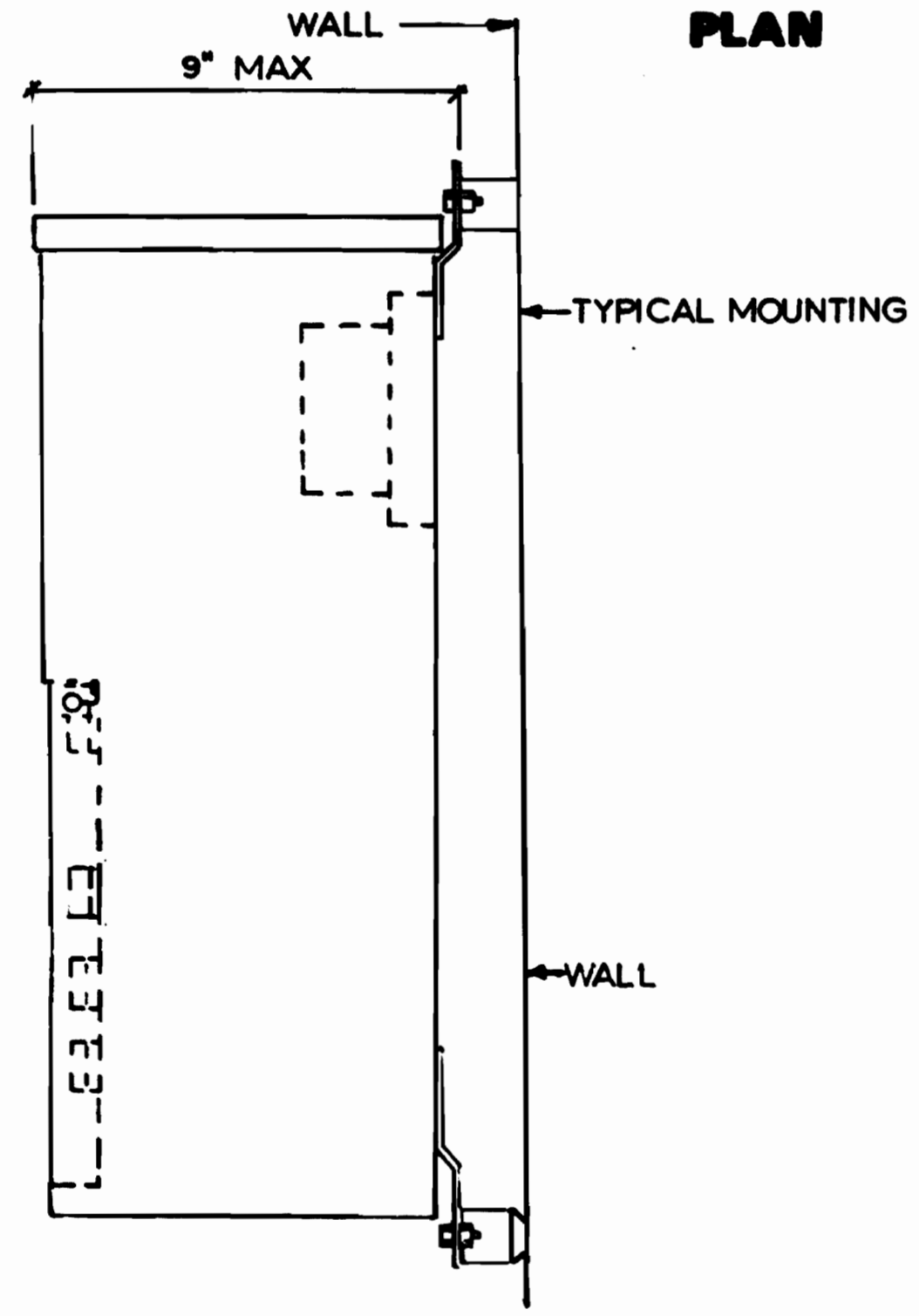
FOR CONTINUATION SEE DWG. E-4

FOR CONTINUATION SEE DWG. E-8



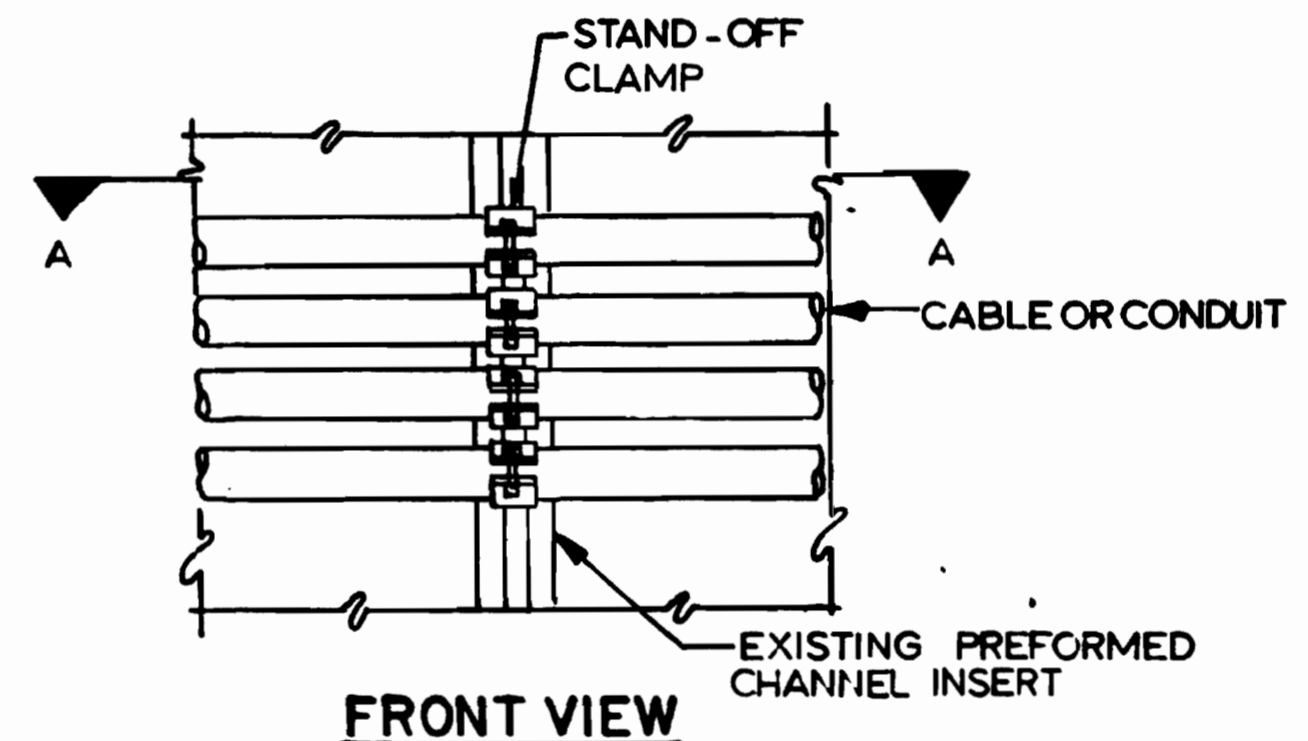
FRONT VIEW (DOCR REMOVED)

1 TYPICAL LOAD CENTER DETAILS SCALE: NONE (E-4, E-6, E-8, E-10, E-12, E-14)

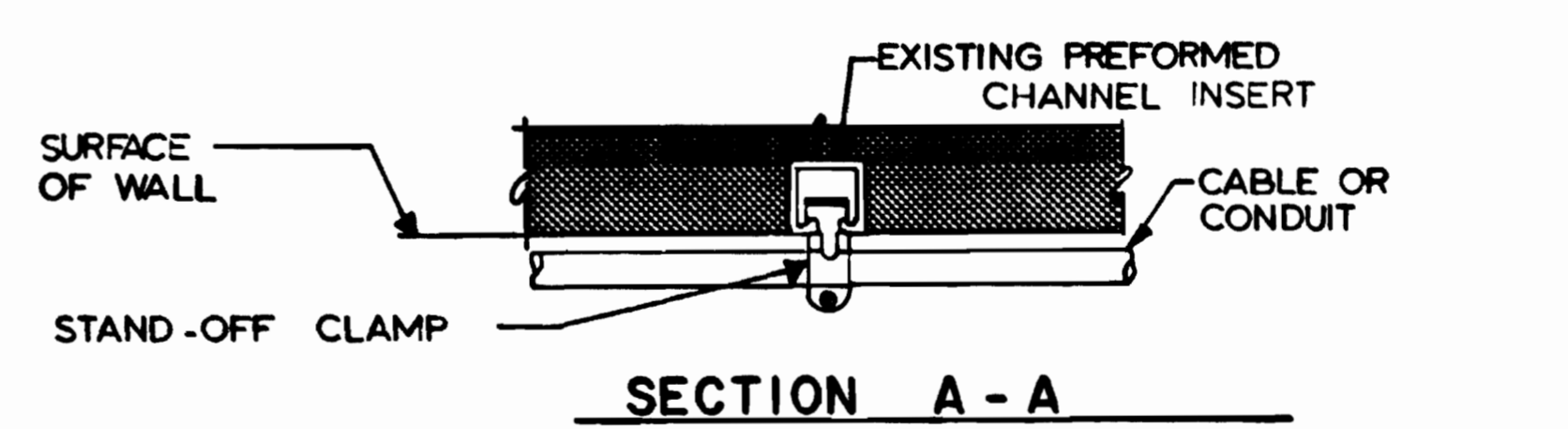


SIDE VIEW

PLAN



FRONT VIEW



SECTION A - A

2 CABLE OR CONDUIT INSTALLATION ON TUNNEL WALL NOT TO SCALE

NOTES

- A. SEE NOTES A, B & C ON DWG. E-5.
- B. SEE NOTE C, DWG. E-7.

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY  
**AS-BUILT CONDITION**  
*Richard P. ...*



DESIGNED	P. S. CHU	7-24-79
DRAWN	C. J. BEID	7-24-79
CHECKED	H. B. ZACKRISON	6-16-80
APPROVED	H. B. ZACKRISON	6-16-80

NUMBER	DESCRIPTION	DATE	BY
M-4	KEY PLAN AND PROFILE STA. 437+00 TO STA. 427+00		

REVISIONS	
DATE	DESCRIPTION



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 SECTION DESIGNER

DE LEUW, CATHER & COMPANY  
 GENERAL ENGINEERING CONSULTANT

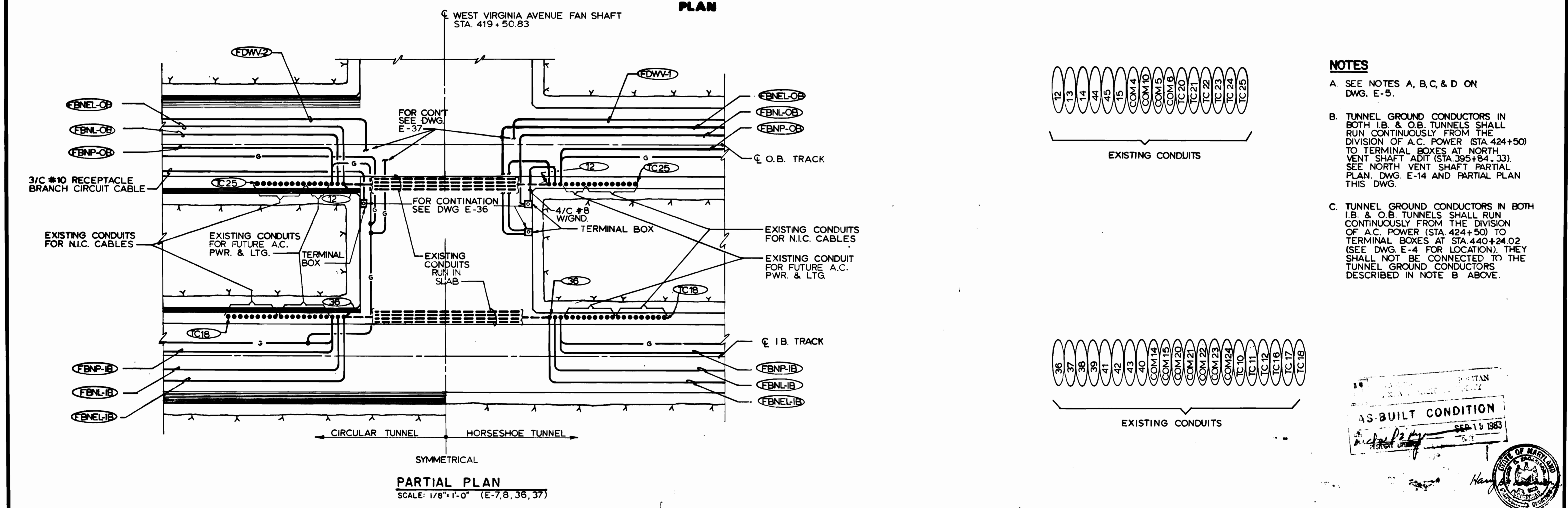
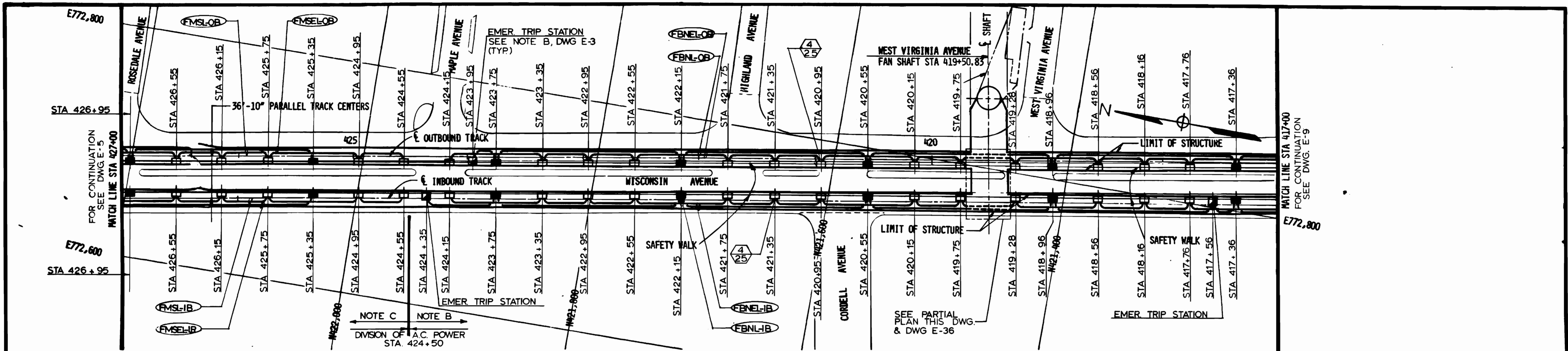
HARRY WEESE & ASSOCIATES  
 GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *Jerry R. ...* DATE 6-15-80 APPROVED *[Signature]*

**ROCKVILLE ROUTE**  
 ELECTRICAL KEY PLAN  
 STA. 437+00 TO STA. 427+00 - POWER

SCALE: HORIZ. 1" = 40' AND AS NOTED

DRAWING NO. FA 11-E-6 M334-154



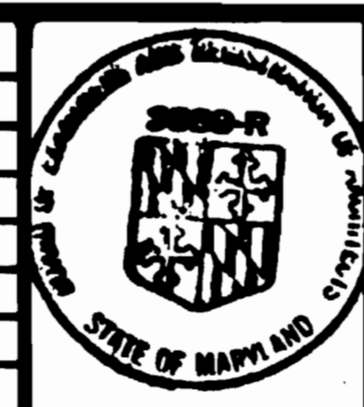
- NOTES**
- A. SEE NOTES A, B, C, & D ON DWG. E-5.
  - B. TUNNEL GROUND CONDUCTORS IN BOTH I.B. & O.B. TUNNELS SHALL RUN CONTINUOUSLY FROM THE DIVISION OF A.C. POWER (STA 424+50) TO TERMINAL BOXES AT NORTH VENT SHAFT ADIT (STA 395+84.33). SEE NORTH VENT SHAFT PARTIAL PLAN, DWG. E-14 AND PARTIAL PLAN THIS DWG.
  - C. TUNNEL GROUND CONDUCTORS IN BOTH I.B. & O.B. TUNNELS SHALL RUN CONTINUOUSLY FROM THE DIVISION OF A.C. POWER (STA 424+50) TO TERMINAL BOXES AT STA 440+24.02 (SEE DWG. E-4 FOR LOCATION). THEY SHALL NOT BE CONNECTED TO THE TUNNEL GROUND CONDUCTORS DESCRIBED IN NOTE B ABOVE.

AS-BUILT CONDITION  
 SEP 19 1983  
 HARRY WEESE & ASSOCIATES

DESIGNED	P. S. CHU	7-24-79
DATE		
DRAWN	C. J. RED	7-24-79
DATE		
CHECKED	H. B. ZACKRISON	6-16-80
DATE		
APPROVED	H. B. ZACKRISON	6-16-80
DATE		

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION
S-1	KEY PLAN AND PROFILE WEST VA. AVE. FAN SHAFT
M-5	KEY PLAN AND PROFILE STA 427+00 TO STA 417+00

REVISIONS		
DATE	BY	DESCRIPTION



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 SECTION DESIGNER

DE LEUW, CATHER & COMPANY  
 GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
 GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *[Signature]* DATE 8-15-80 APPROVED *[Signature]*

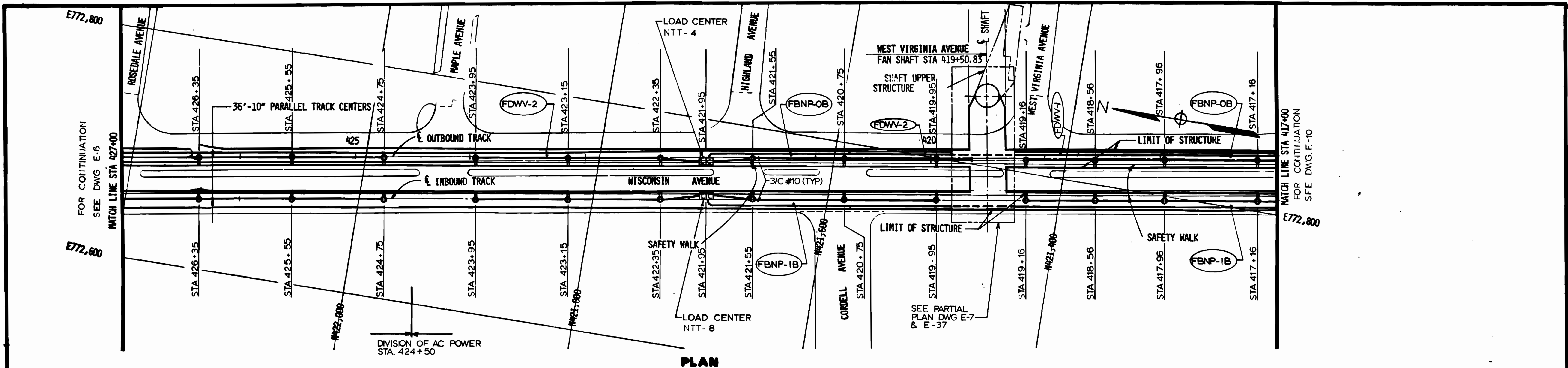
**ROCKVILLE ROUTE**  
 ELECTRICAL KEY PLAN  
 STA. 427+00 TO STA. 417+00 - LIGHTING

SCALE: HORIZ. 1"=40' AND AS NOTED

DRAWING NO. **FAIL - E-7**

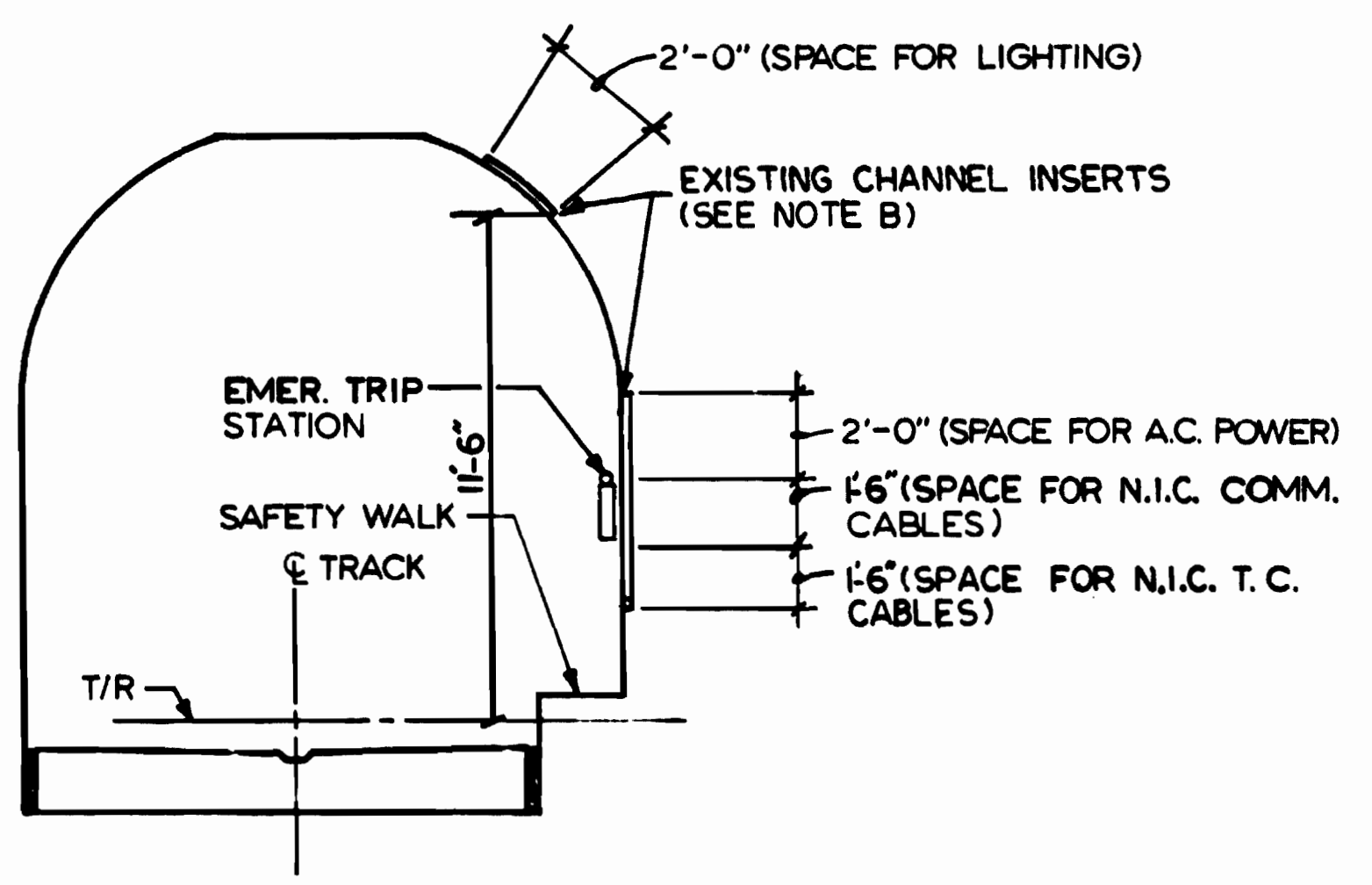
**M334-155**



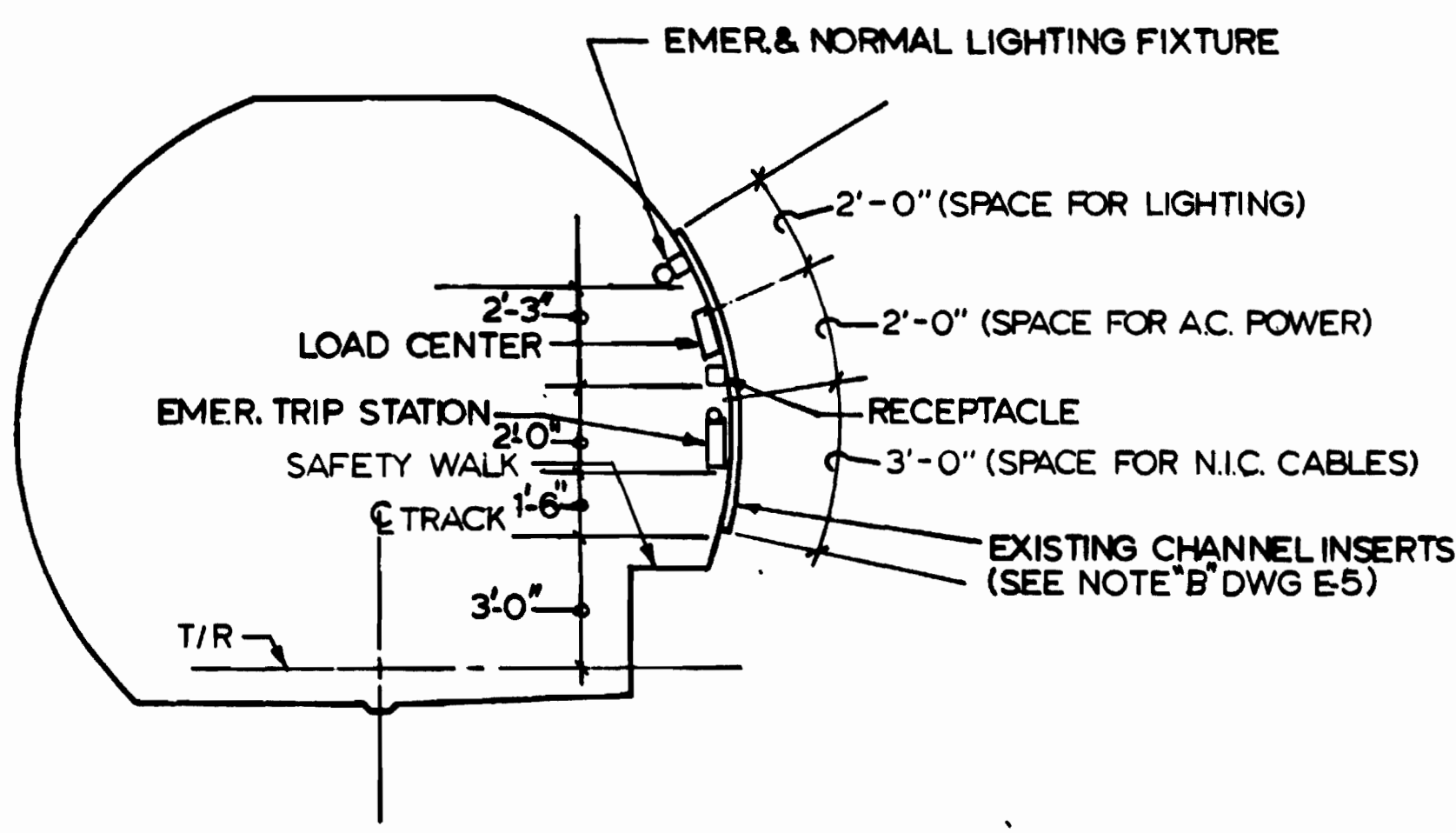


**NOTES:**

- A. SEE NOTES A, B & C DWG. E-5.
- NOT USED** B. LIGHTING, A.C. POWER SYSTEM EQUIPMENT AND WIRING SHALL BE INSTALLED WITHIN THE ALLOCATED SPACES ON EXISTING CHANNEL INSERTS.
- C. SEE NOTE B, DWG. E-7.
- 1** D. DRILL & INSTALL ANCHORS FOR TUNNEL LIGHT FIXTURES WHERE IMBEDDED CHANNELS FAIL TO PROVIDE PROPER ELEV.

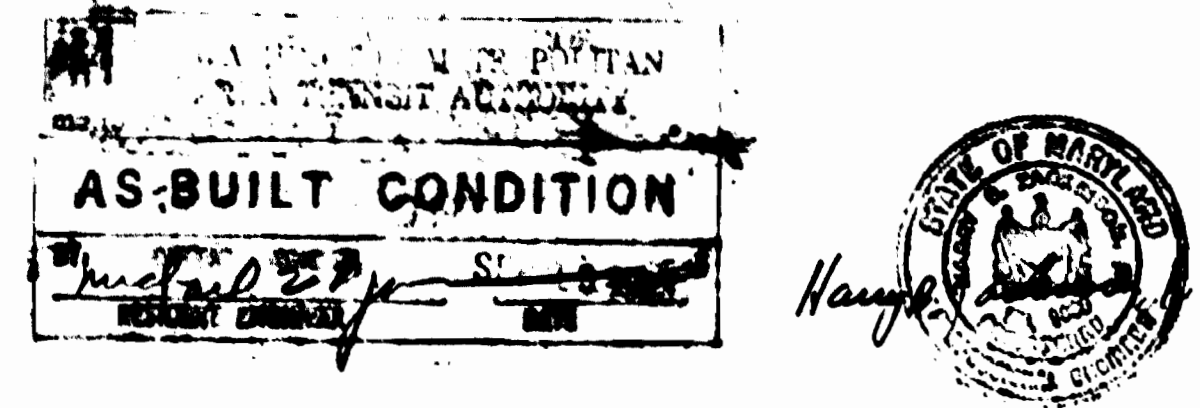


**HORSESHOE TUNNEL**



**CIRCULAR TUNNEL**

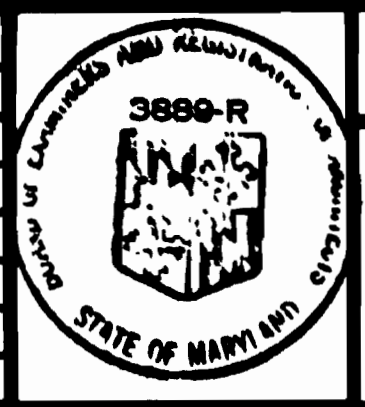
**1 CHANNEL INSERT SPACE ALLOCATION FOR HORSESHOE & CIRCULAR TUNNELS**  
SCALE: 1/4" = 1'-0"



DESIGNED	P. S. CHU	7-24-83
DRAWN	C. J. REP	7-24-83
CHECKED	N. B. ZACKRISON	8-16-80
APPROVED	N. B. ZACKRISON	8-16-80

NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
S-1	KEY PLAN AND PROFILE WEST VA AVE FAN SHAFT	6-27-83	MD	1   ADDED NOTE PER PCO. 78, AS-BUILT
M-5	KEY PLAN AND PROFILE STA. 427+00 TO STA 417+00			

NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
S-1	KEY PLAN AND PROFILE WEST VA AVE FAN SHAFT	6-27-83	MD	1   ADDED NOTE PER PCO. 78, AS-BUILT
M-5	KEY PLAN AND PROFILE STA. 427+00 TO STA 417+00			



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GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

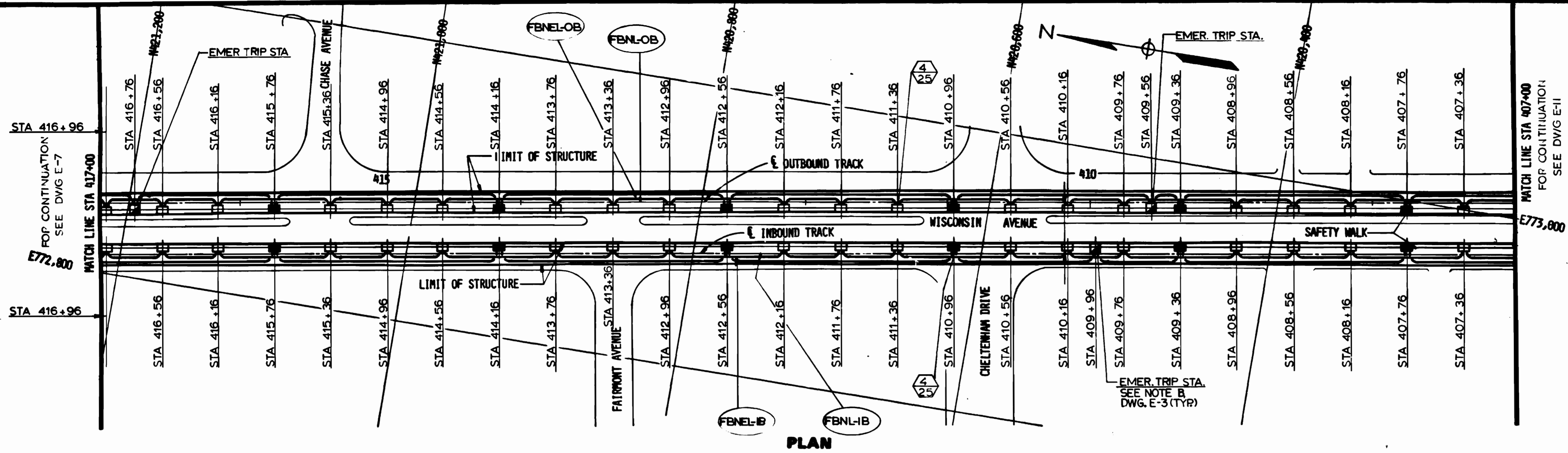
SUBMITTED *Janice R. Jones* DATE 8-16-80 APPROVED *[Signature]*

**ROCKVILLE ROUTE**  
ELECTRICAL KEY PLAN  
STA. 427+00 TO STA. 417+00 - POWER

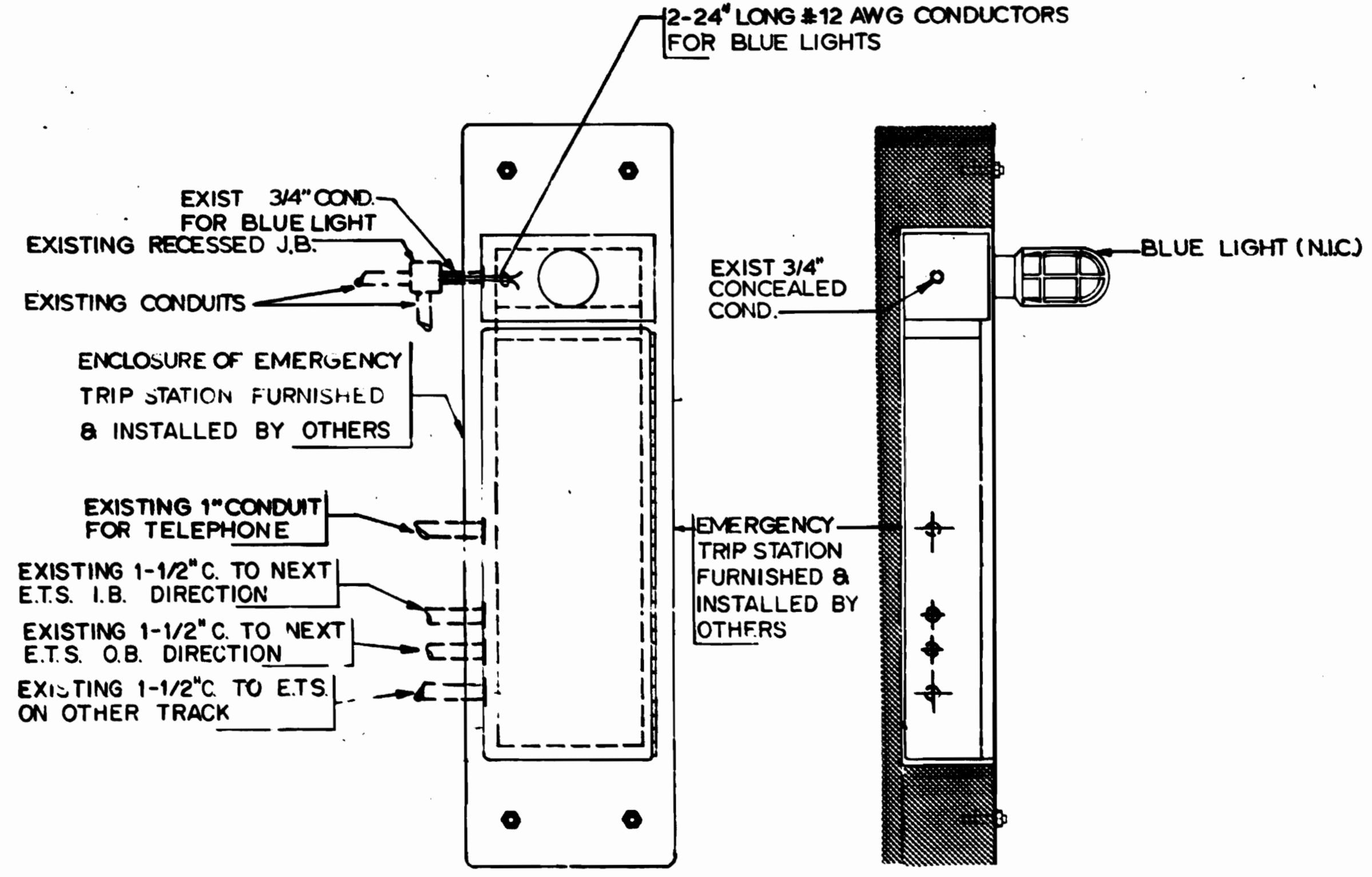
SCALE: HORIZ. 1" = 40' AND AS NOTED

DRAWING NO. **FA 11 - E - 8**

**M334-156**



PLAN



FRONT VIEW      SIDE VIEW

INSTALLATION OF  
**2** EMERGENCY TRIP STATION - RECESSED  
 SCALE: NONE  
 NOTE A

- NOTES**
- A. EXISTING CONDUIT LOCATIONS INDICATED ARE TYPICAL. ACTUAL LOCATIONS MAY VARY
  - B. SEE NOTES A, B, C & D ON DWG. E-5.
  - C. SEE NOTE B, DWG. E-7.

APPROVAL METROPOLITAN AREA TRANSIT AUTHORITY

**AS-BUILT CONDITION**

*[Signatures]*

DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS	
		NUMBER	DESCRIPTION	DATE	BY
P.S. CHU	7-24-74	M-6	KEY PLAN AND PROFILE STA 417+00 TO STA 407+00		
DRAWN	7-24-74				
CHECKED	8-16-80				
APPROVED	8-16-80				

**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

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 SECTION DESIGNER

DE LEUW, CATHER & COMPANY  
 GENERAL ENGINEERING CONSULTANT

HARRY WEISE & ASSOCIATES  
 GENERAL ARCHITECTURAL CONSULTANT

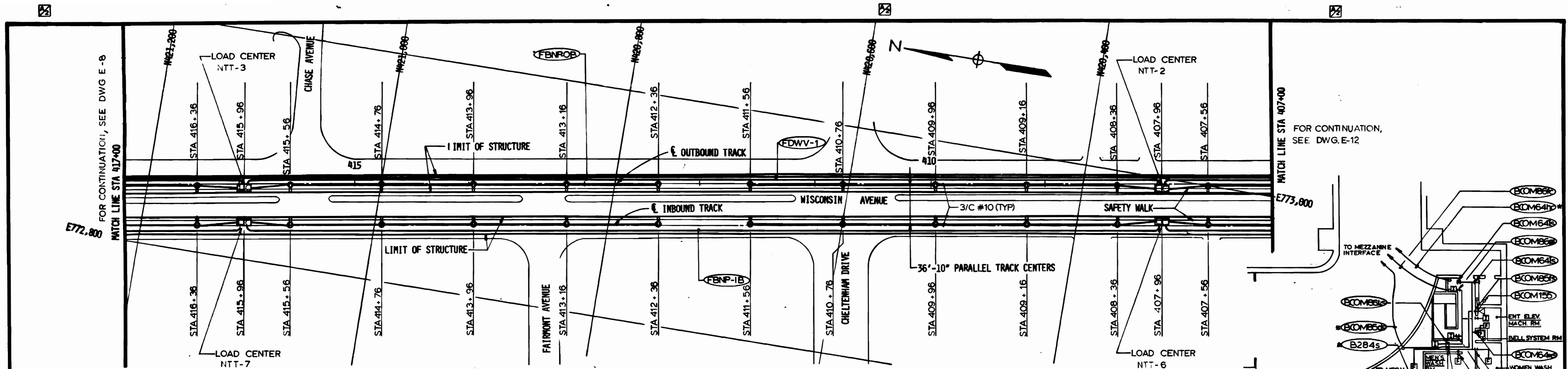
SUBMITTED *[Signature]* DATE 8-15-80 APPROVED *[Signature]*

**ROCKVILLE ROUTE**  
 ELECTRICAL KEY PLAN  
 STA. 417+00 TO STA. 407+00 - LIGHTING

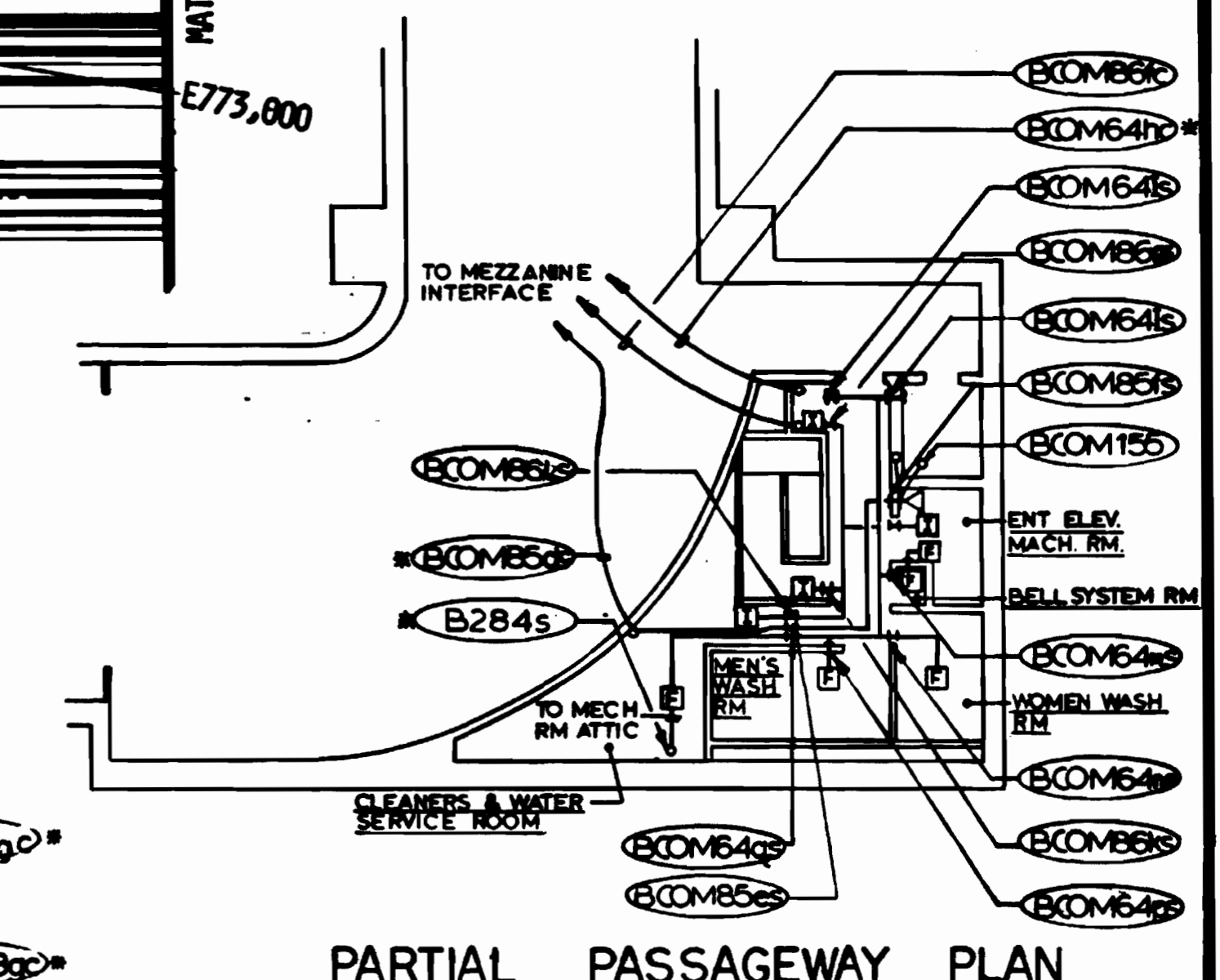
SCALE: HORIZ. 1"=40'  
 AND AS NOTED

DRAWING NO. **FA11-E-9**  
**M334-157**

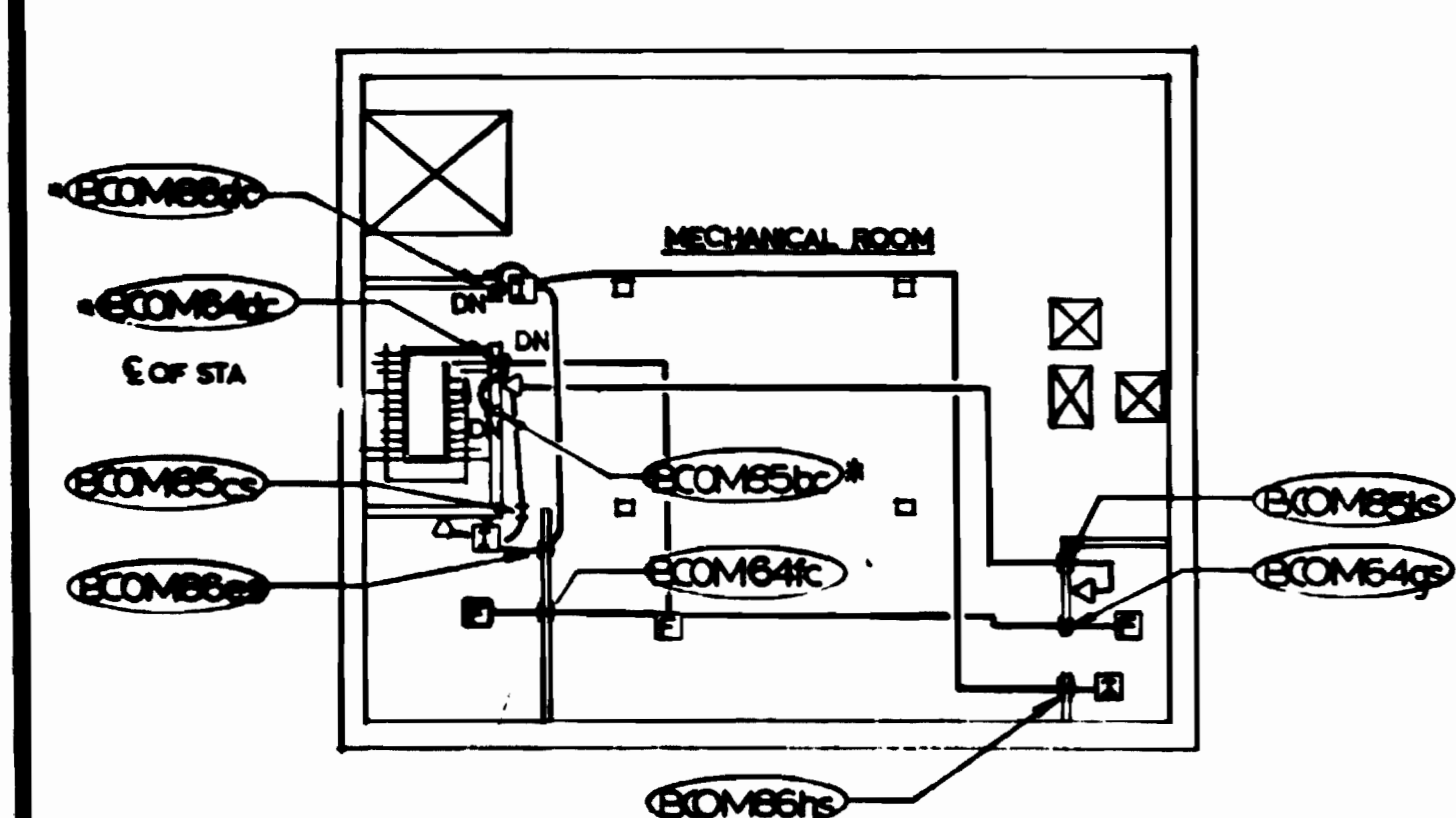




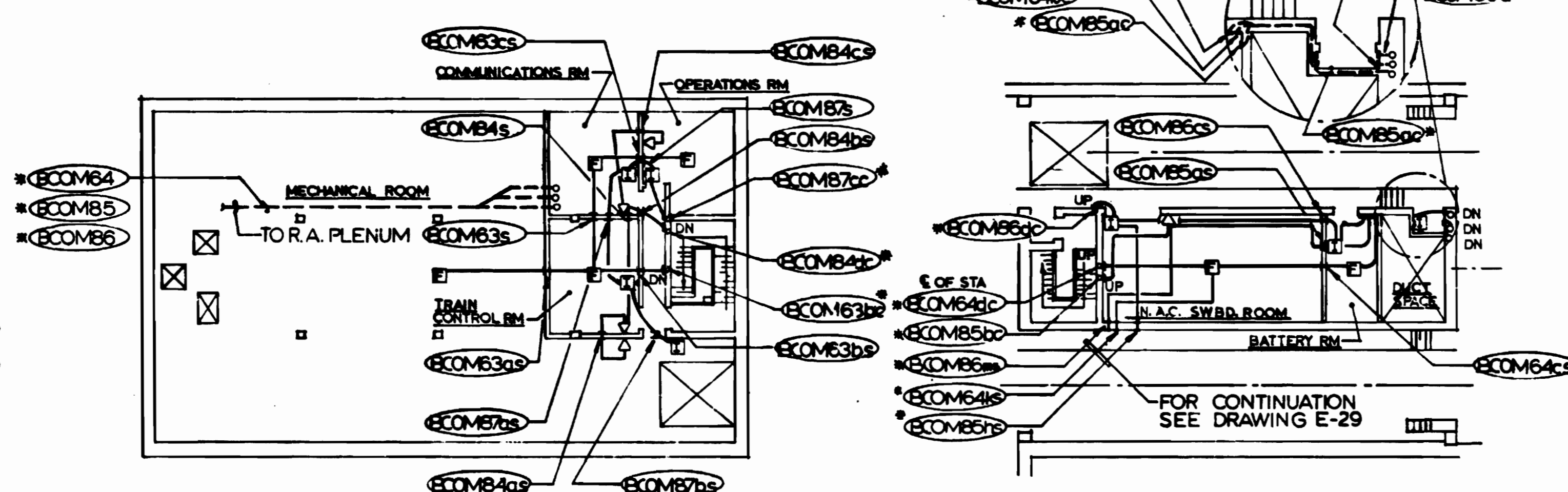
**PLAN**



**PARTIAL PASSAGEWAY PLAN**



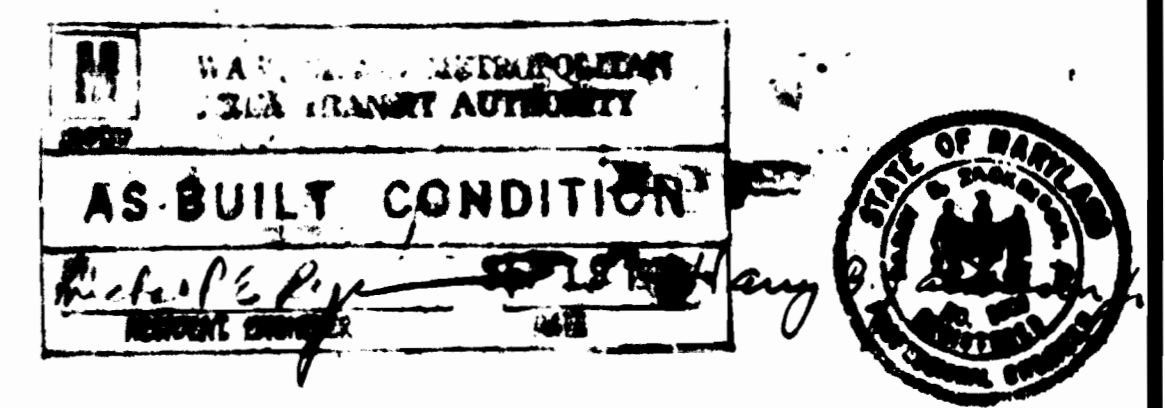
**PLAN - MEZZANINE LEVEL**



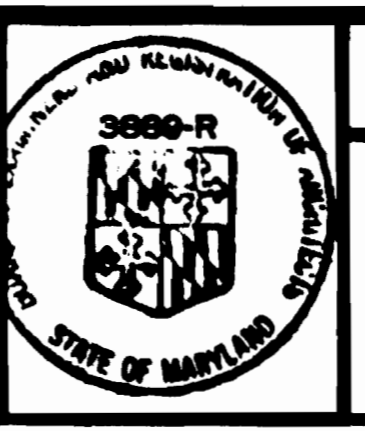
**PLAN - PLATFORM LEVEL**

**PROPOSED DESIGN FOR FIRE ALARM, INTRUSION ALARM & PABX-TELEPHONE SYS. - NORTH & SOUTH ANCIL. SPACES**  
 SCALE: 1/16" = 1'-0" (E-3 & E-9) NOTE C

- NOTES**
- A. SEE NOTES A, B, & C ON DWG. E-5.
  - B. SEE NOTE B, DWG. E-7.
  - C. ALL "THRU THE WALL" SLEEVES SHALL BE LOCATED AT 8'-0" A.F.F. UNLESS STATED OTHERWISE.



DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS	
		NUMBER	DESCRIPTION	DATE	DESCRIPTION
P. S. CHU	7-24-78	M-6	KEY PLAN AND PROFILE STA. 417+00 TO STA. 407+00 - POW	9-25-80	H.Z. REVISED NOTES
C. J. REID	7-24-78				
H. B. ZACKRISON	8-16-80				
H. B. ZACKRISON	8-16-80				



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 ENGINEERS AND ARCHITECTS  
 SECTION DESIGNER

DE LEUW, CATHER & COMPANY  
 GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
 GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *Janet R. Jones* DATE 8-15-80 APPROVED *Paul J. ...*

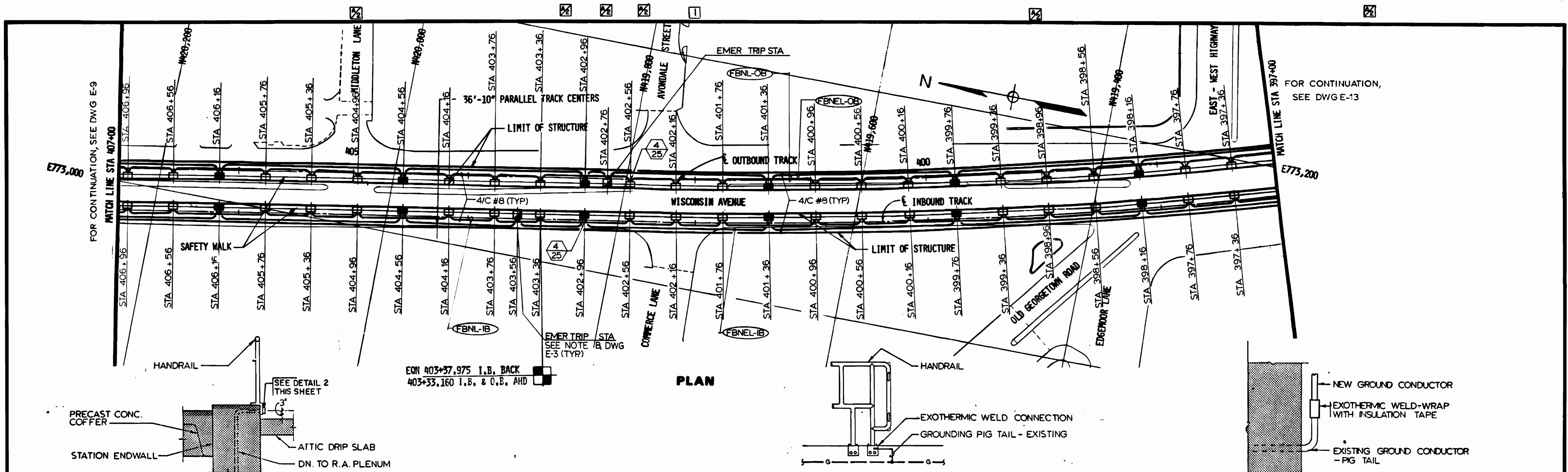
**ROCKVILLE ROUTE  
 ELECTRICAL KEY PLAN  
 STA. 417+00 TO STA. 407+00 - POWER**

SCALE: HORIZ. 1" = 40' AND AS NOTED

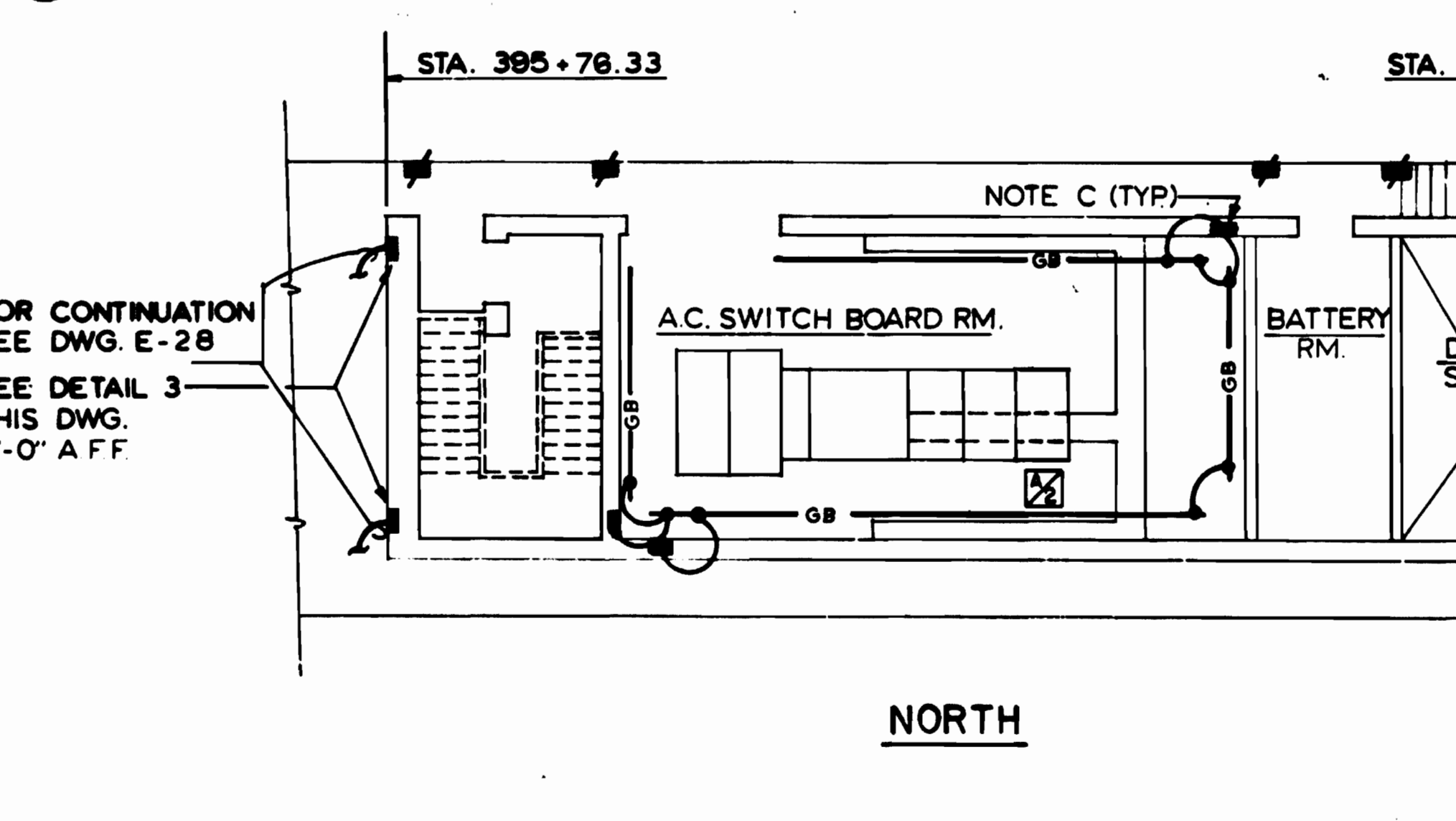
DRAWING NO. **FALL-E-10**

**M334-158**

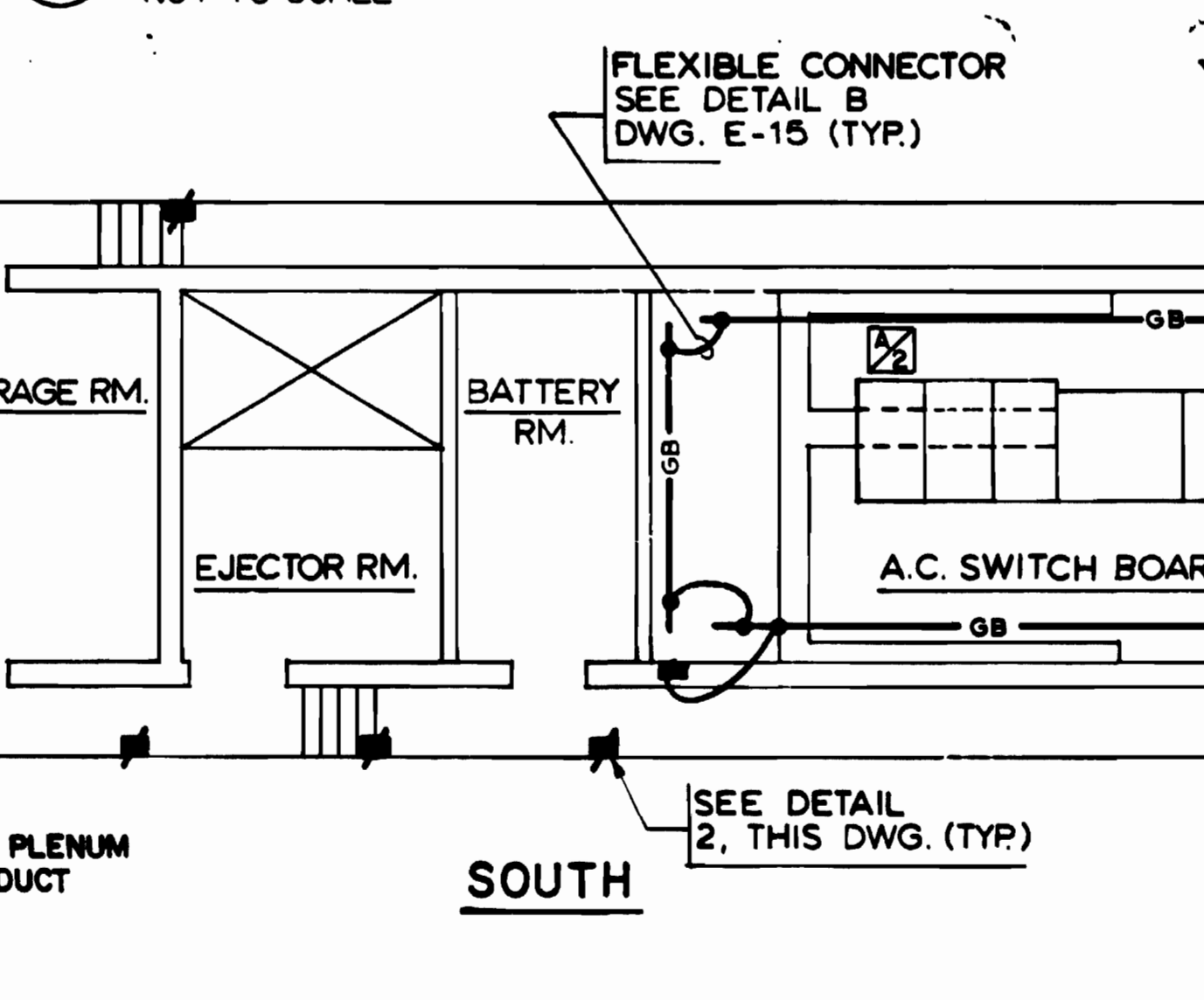




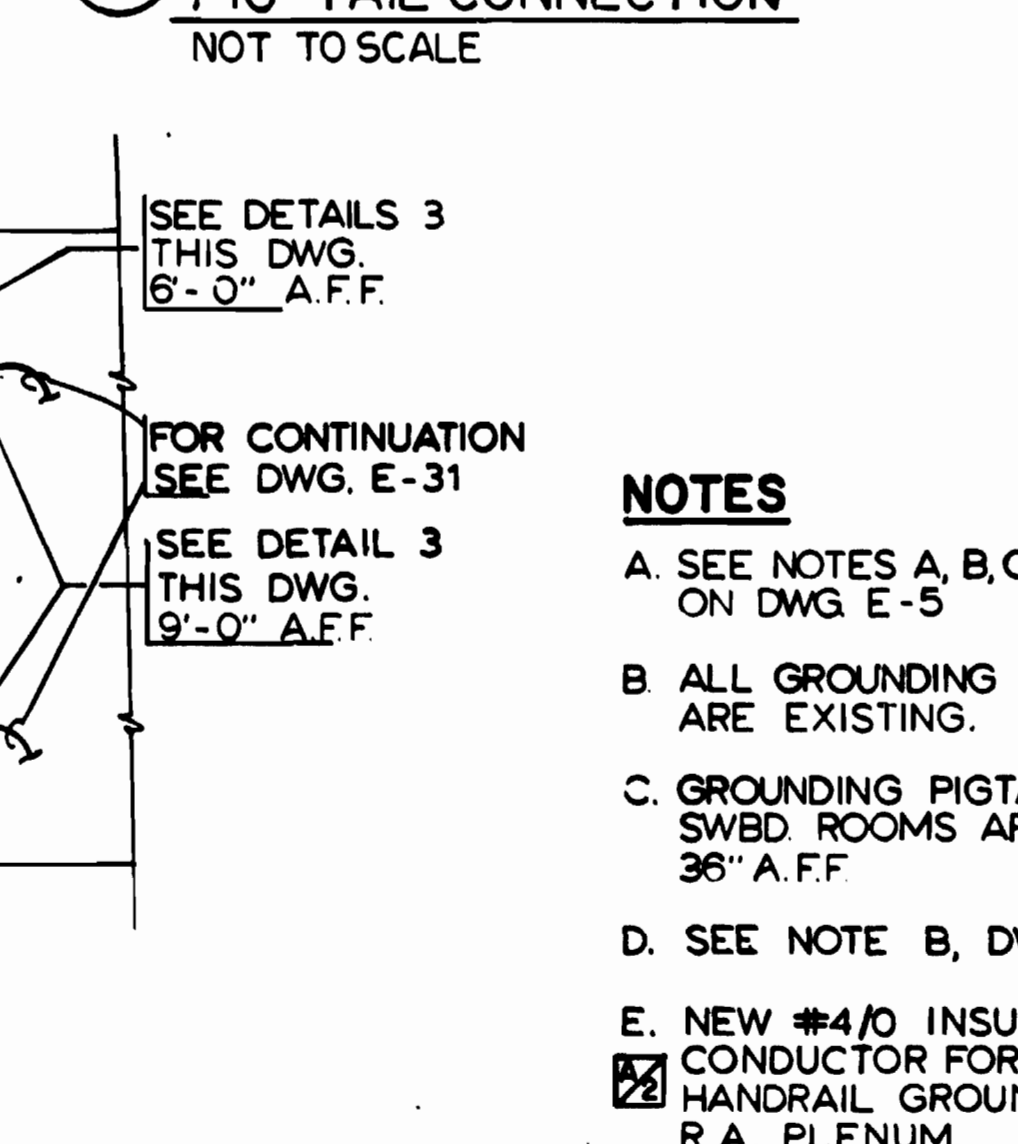
1 DOME SPACE HANDRAIL GROUNDING DETAIL - SECTION AT ENDWALL  
NOT TO SCALE



2 HAND RAIL GROUNDING CONNECTIONS (TYP.)  
NOT TO SCALE



3 TYPICAL GROUND CONDUCTOR PIG TAIL CONNECTION  
NOT TO SCALE



FOR CONTINUATION  
SEE DWG. E-28  
SEE DETAIL 3  
THIS DWG.  
9'-0" A.F.F.

FOR CONTINUATION  
SEE DWG. E-31  
SEE DETAIL 3  
THIS DWG.  
9'-0" A.F.F.

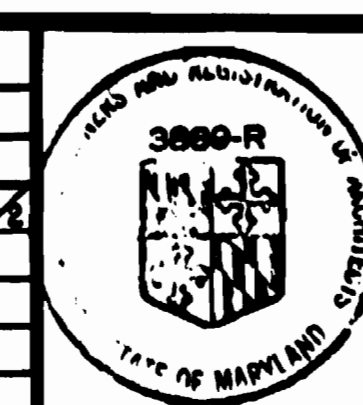
- NOTES**
- A. SEE NOTES A, B, C & D ON DWG. E-5
  - B. ALL GROUNDING PIGTAILS SHOWN ARE EXISTING.
  - C. GROUNDING PIGTAILS IN A.C. SWBD ROOMS ARE MOUNTED 36" A.F.F.
  - D. SEE NOTE B, DWG. E-7
  - E. NEW #4/0 INSULATED GROUNDING CONDUCTOR FOR ESCALATOR HANDRAIL GROUNDING. RUN IN R.A. PLENUM.

ANCILLARY SPACES GROUNDING ARRANGEMENT  
SCALE: 1/8" = 1'-0" (FA-11-E-17) NOTE B



DESIGNED	P.S. CHU	7-24-74
DATE		
DRAWN	C.J. REID	7-24-74
DATE		
CHECKED	H.B. ZACKRISON	8-16-80
DATE		
APPROVED	H.B. ZACKRISON	8-16-80
DATE		

REFERENCE DRAWINGS		REVISIONS	
NUMBER	DESCRIPTION	DATE	BY
M-7	KEY PLAN AND PROFILE STA 407+00 TO STA 397+00	9-25-80	H.Z.
	ADDED ESCAL. HANDRAIL GND. CONDUCTOR		
	1 REV. PER FIELD COND., AS-BUILT	8-28-83	MD



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

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DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *Jerilyn J. Spess* DATE 8-16-80 APPROVED *Ted H. ...*

**ROCKVILLE ROUTE**  
ELECTRICAL KEY PLAN  
STA. 407+00 TO STA. 397+00 - LIGHTING

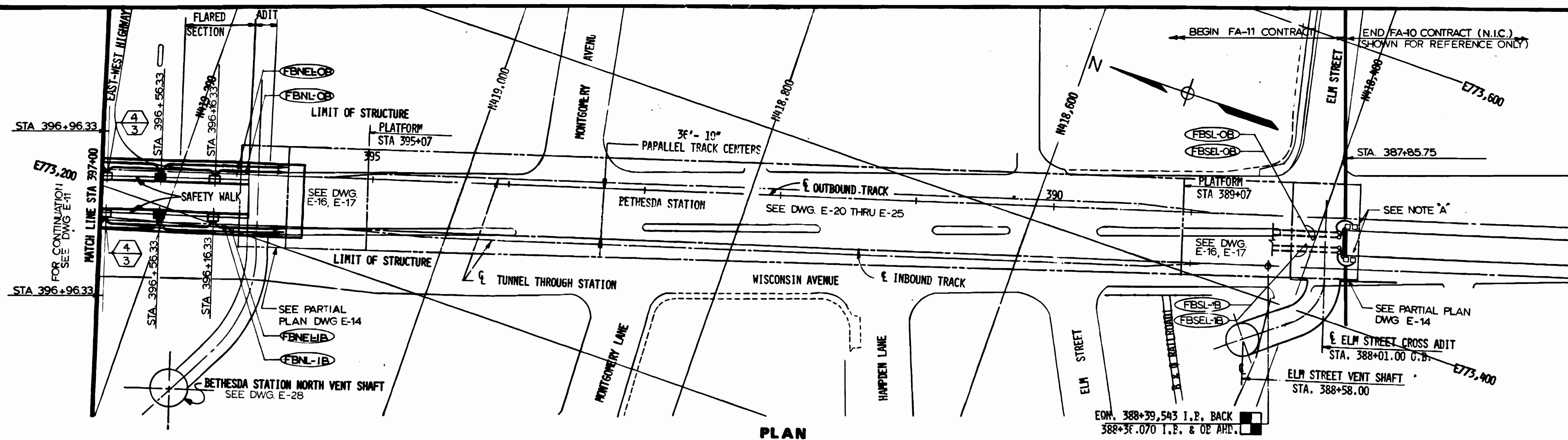
SCALE: HORIZ. 1" = 40' AND AS NOTED

DRAWING NO. **FA11-E-11** M334-159

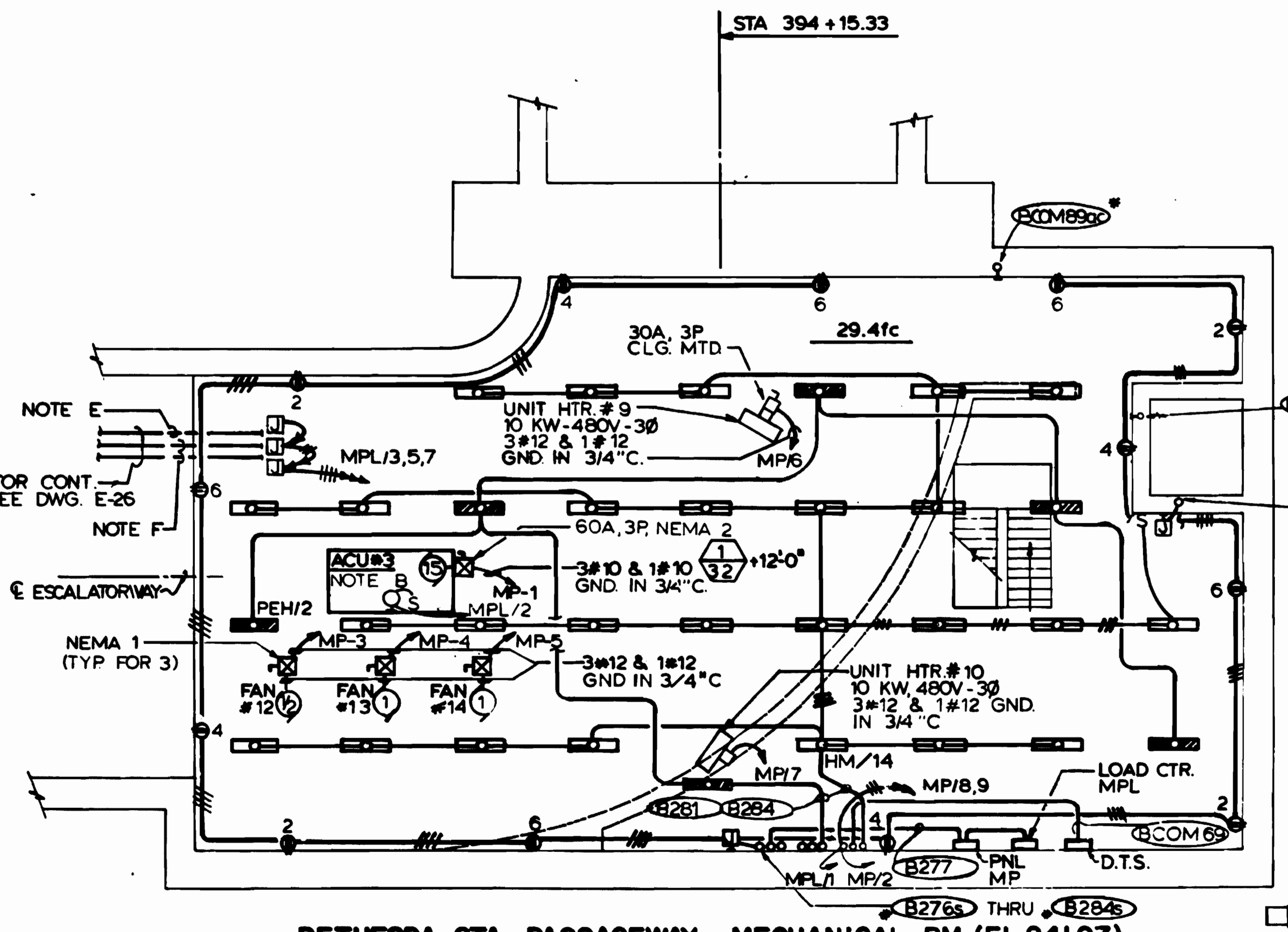
AS-BUILT CONDITION







**PLAN**



**BETHESDA STA. PASSAGEWAY - MECHANICAL RM. (EL.241.97)**  
**LIGHTING & POWER**  
 SCALE: 1/8"=1'-0" (E-25)

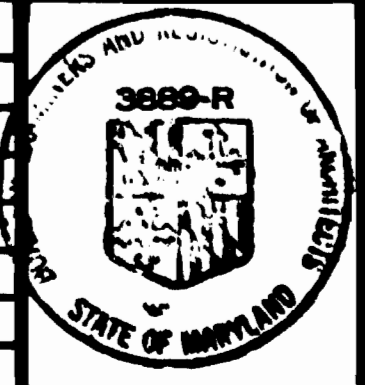
**NOTES**

- A. EXISTING INTERFACE TERMINAL BOXES. EXTEND FEEDERS AS SHOWN.
- B. LOCATE LIGHT (TYPE 6D) & SWITCH WITHIN ACU #3 AS DIRECTED BY MECH. CONTRACTOR.
- C. SEE NOTES A, B, C & D ON DWG. E-5.
- D. SEE NOTE B, DWG. E-7.
- E. 4" COLD WATER PIPE WITH ELEC. HEAT TRACING. 140 FT. AT 8.4 WATTS/FT. TOTAL LOAD 1176 WATTS. CIRCUIT MPL/7.
- F. TWO 6" CHILLED WATER PIPES WITH ELEC. HEAT TRACING. EACH 140 FT. AT 11.3 WATTS/FT. TOTAL LOAD EACH PIPE 1582 WATTS. CIRCUITS MPL/3,5.

AS-BUILT CONDITION

DESIGNED	P.S. CHU	7-24-79
DATE		
DRAWN	C.J. REID/E. BOGHA	7-24-79
DATE		
CHECKED	H.B. ZACKRISON	8-16-80
DATE		
APPROVED	H.B. ZACKRISON	8-16-80
DATE		

NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
S-2	KEY PLAN AND PROFILE BETHESDA STATION			
M-8	KEY PLAN AND PROFILE STA. 397+00 TO STA. 387+00			



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

MATHEWS • CHATELAIN • BEALL  
 ENGINEERS AND ARCHITECTS  
 SECTION DESIGNER

DE LEUW, CATHER & COMPANY  
 GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
 GENERAL ARCHITECTURAL CONSULTANT

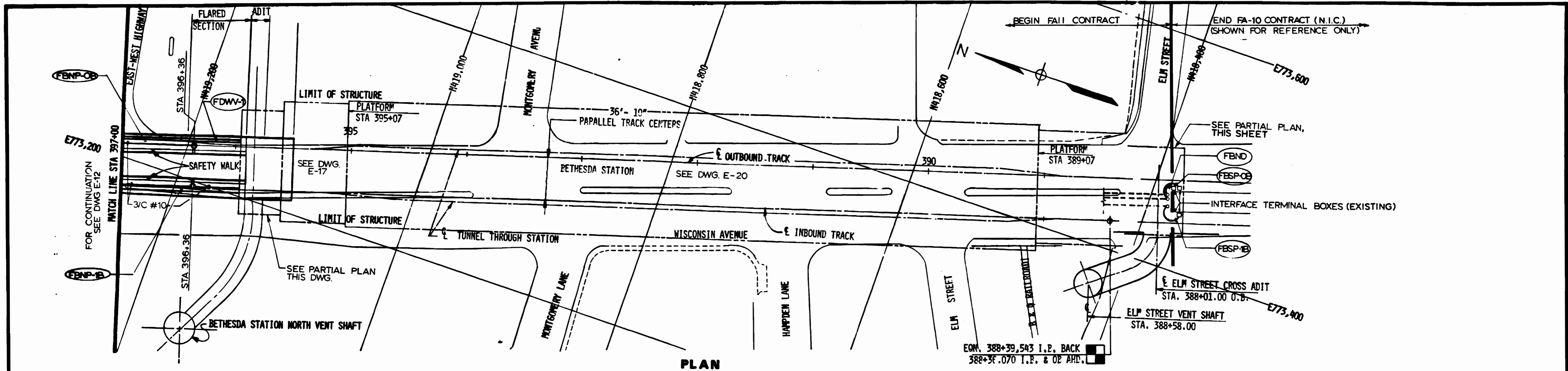
SUBMITTED *Jerry R. Press* DATE 8-16-80 APPROVED *[Signature]*

**ROCKVILLE ROUTE**  
**ELECTRICAL KEY PLAN**  
 STA. 397+00 TO STA. 387+85.75 - LIGHTING

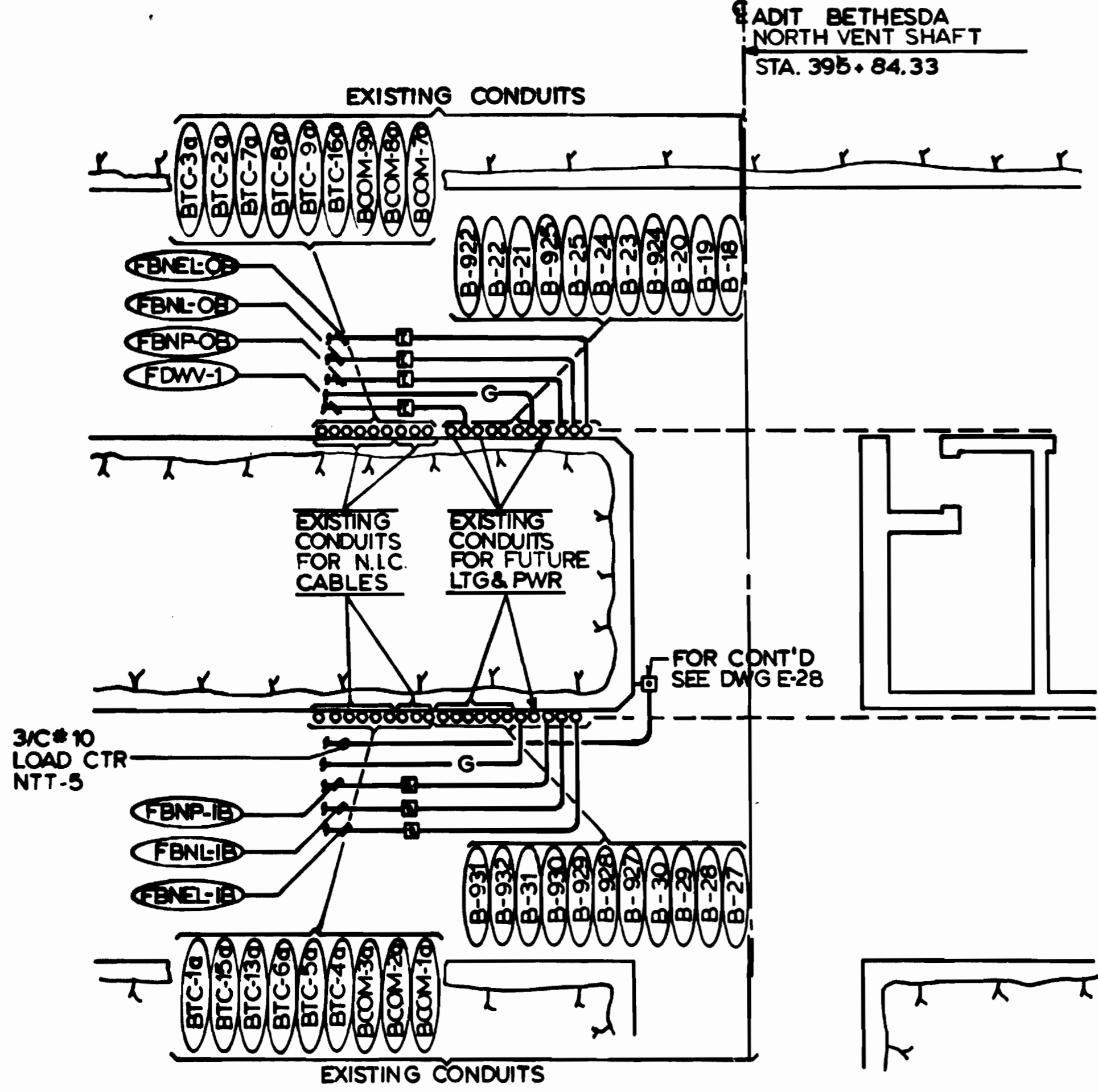
SCALE: HORIZ. 1"=40' AND AS NOTED

DRAWING NO. **FA11-E-13** M334-161

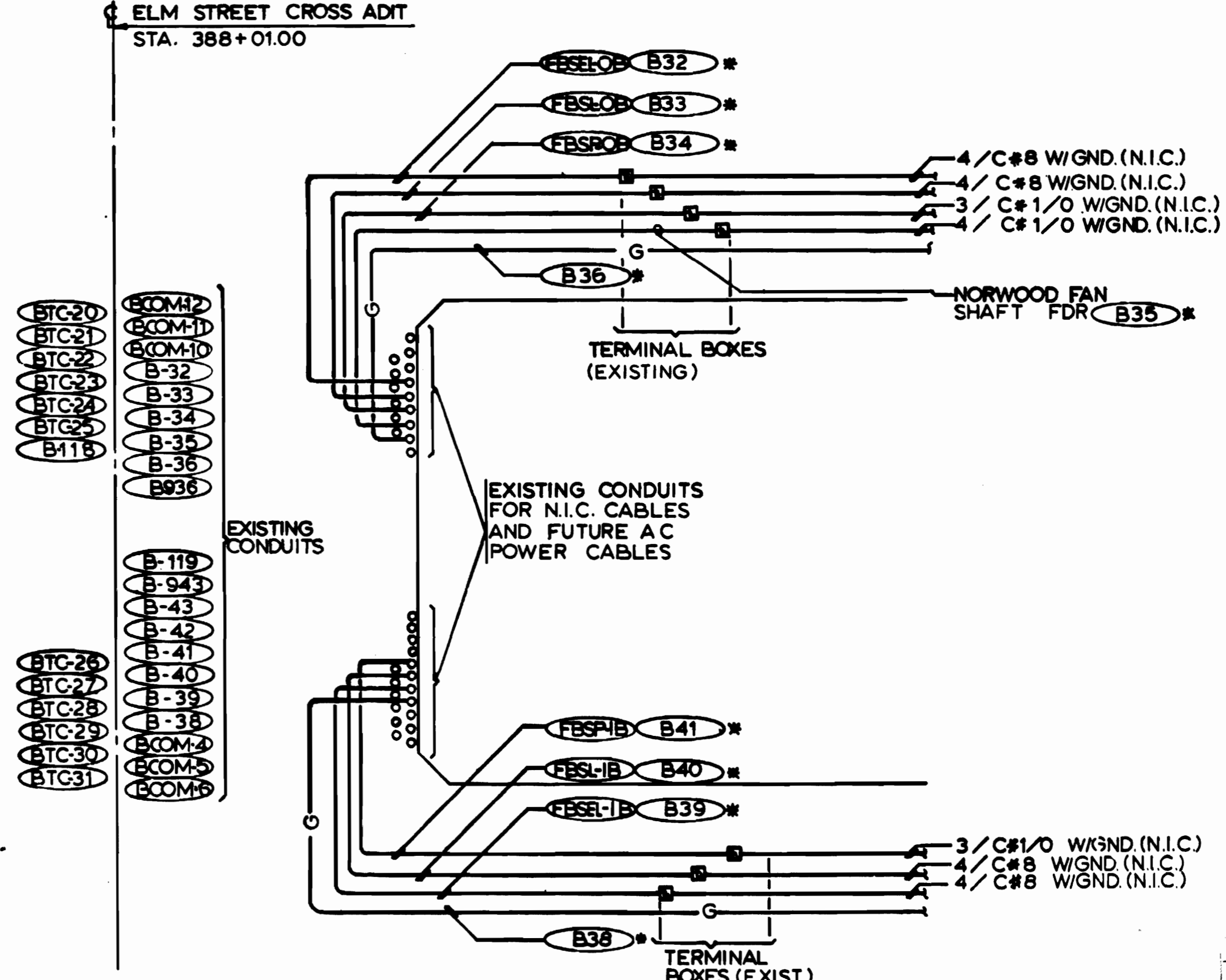




PLAN



NORTH VENT SHAFT PARTIAL PLAN  
NOT TO SCALE (E 14)



ELM STREET VENT SHAFT PARTIAL PLAN  
NOT TO SCALE (E-14)

**NOTES**

- A. SEE NOTES A, B & C ON DWG. E-5.
- B. SEE NOTE B, DWG. E-7.

DESIGNED		DATE		REFERENCE DRAWINGS		REVISIONS	
NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
S-2	KEY PLAN AND PROFILE OF BETHESDA STATION	7-24-74	C.J. REID				
M-8	KEY PLAN AND PROFILE OF STA. 397+00 TO STA. 387+00	7-24-74	C.J. REID				
		6-16-80	H.B. ZACKRISON				
		6-16-80	H.B. ZACKRISON				



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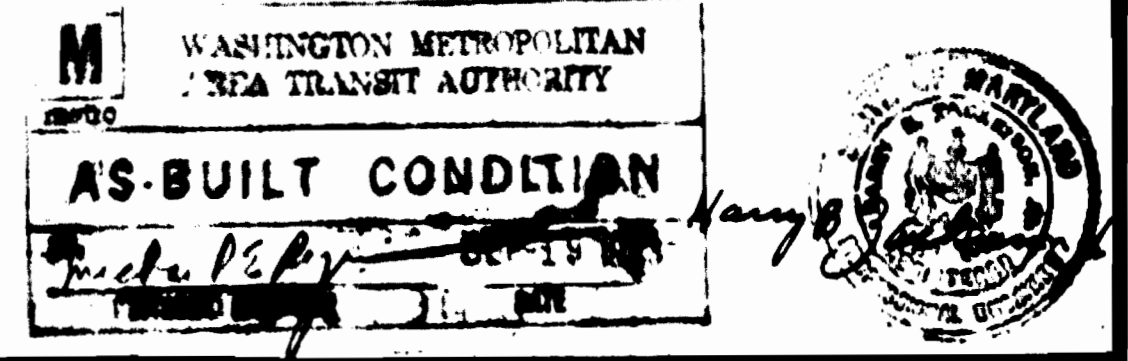
SUBMITTED *Jan 15, 1980* DATE *2-15-80* APPROVED *[Signature]*

**ROCKVILLE ROUTE  
ELECTRICAL KEY PLAN  
STA. 397+00 TO STA. 388+33 - POWER**

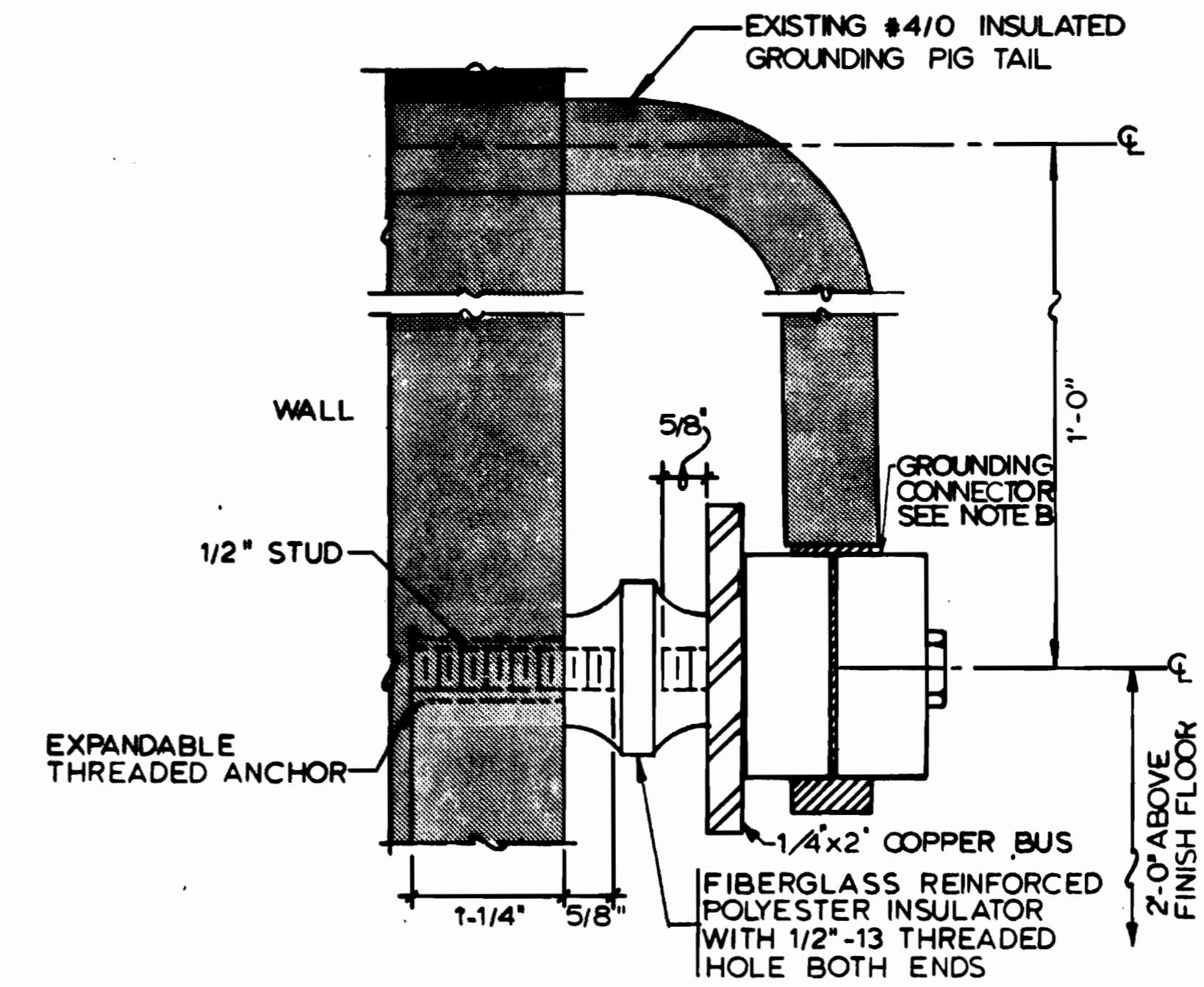
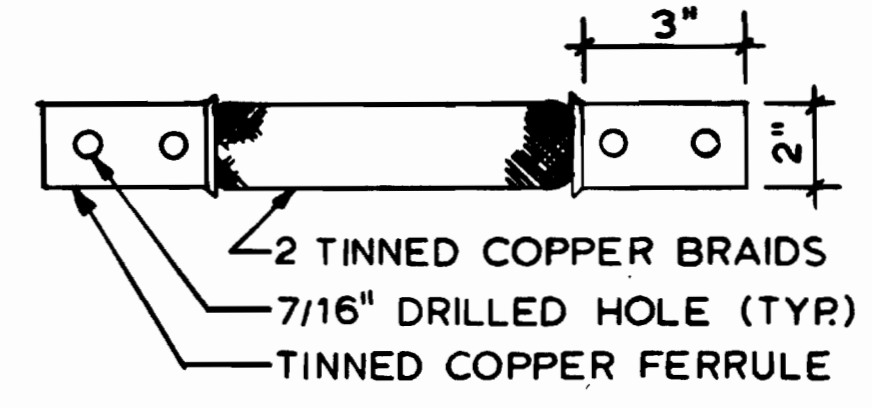
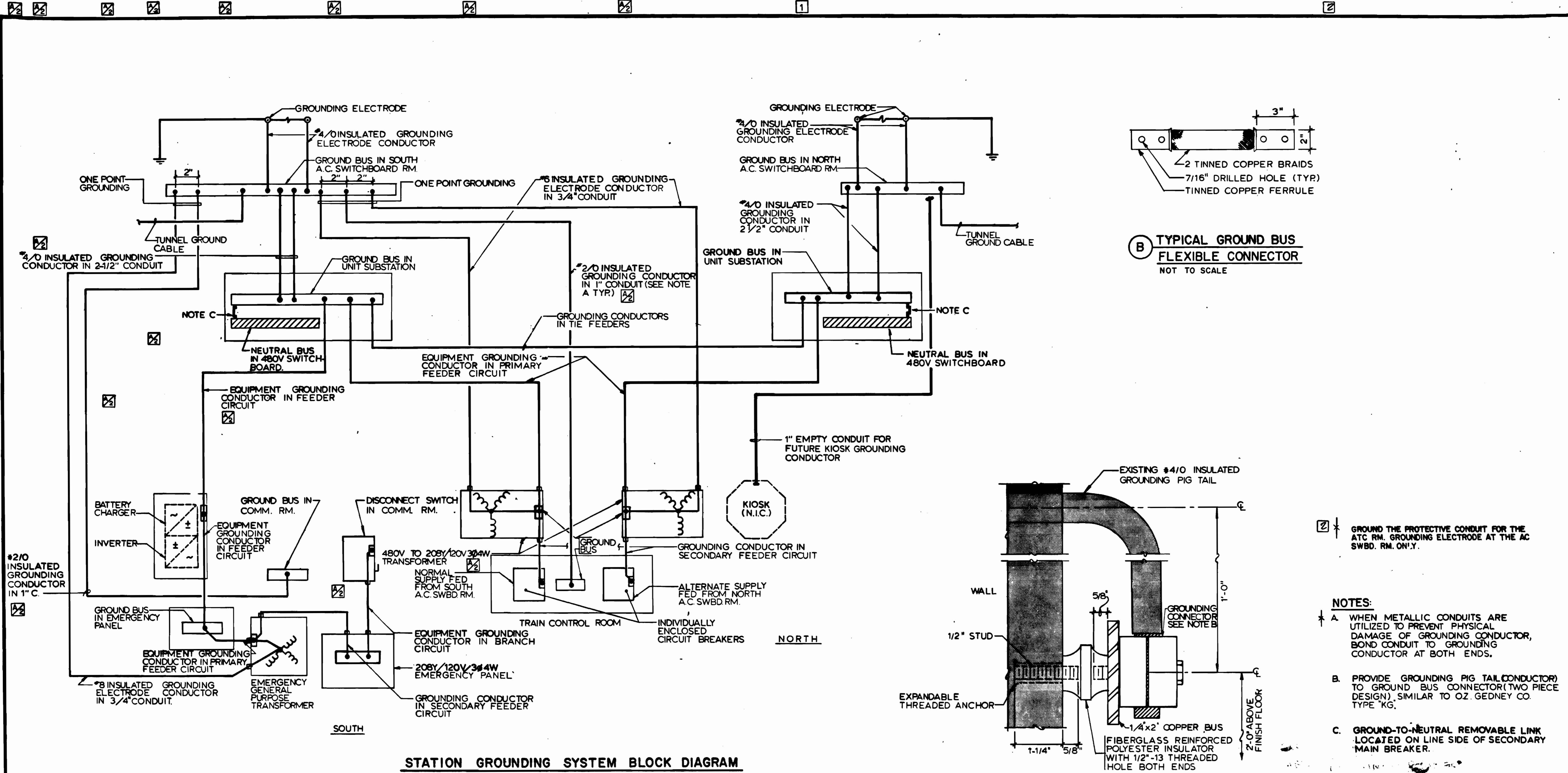
SCALE: HORIZ. 1" = 40'  
AND AS NOTED

DRAWING NO. **FA11-E-14**

M334-162







- NOTES:**
- A. WHEN METALLIC CONDUITS ARE UTILIZED TO PREVENT PHYSICAL DAMAGE OF GROUNDING CONDUCTOR, BOND CONDUIT TO GROUNDING CONDUCTOR AT BOTH ENDS.
  - B. PROVIDE GROUNDING PIG TAIL (CONDUCTOR) TO GROUND BUS CONNECTOR (TWO PIECE DESIGN), SIMILAR TO OZ. GEDNEY CO. TYPE "KG".
  - C. GROUND-TO-NEUTRAL REMOVABLE LINK LOCATED ON LINE SIDE OF SECONDARY MAIN BREAKER.

DESIGNED	P. S. CHU	1/10/78 DATE
DRAWN	ELENA ROCHA	3/23/78 DATE
CHECKED	H. B. ZACKRISON	6/28/80 DATE
APPROVED	H. B. ZACKRISON	6/18/80 DATE

REFERENCE DRAWINGS		REVISIONS	
NUMBER	DESCRIPTION	DATE	BY
		9-25-80	H. Z.
		6-28-83	MD



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HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED *Jerily G. Truesdell* DATE 8-15-80 APPROVED *Tail...*

**ROCKVILLE ROUTE BETHESDA STATION**  
GROUNDING SYSTEM BLOCK DIAGRAM

AS-BUILT CONDITION

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

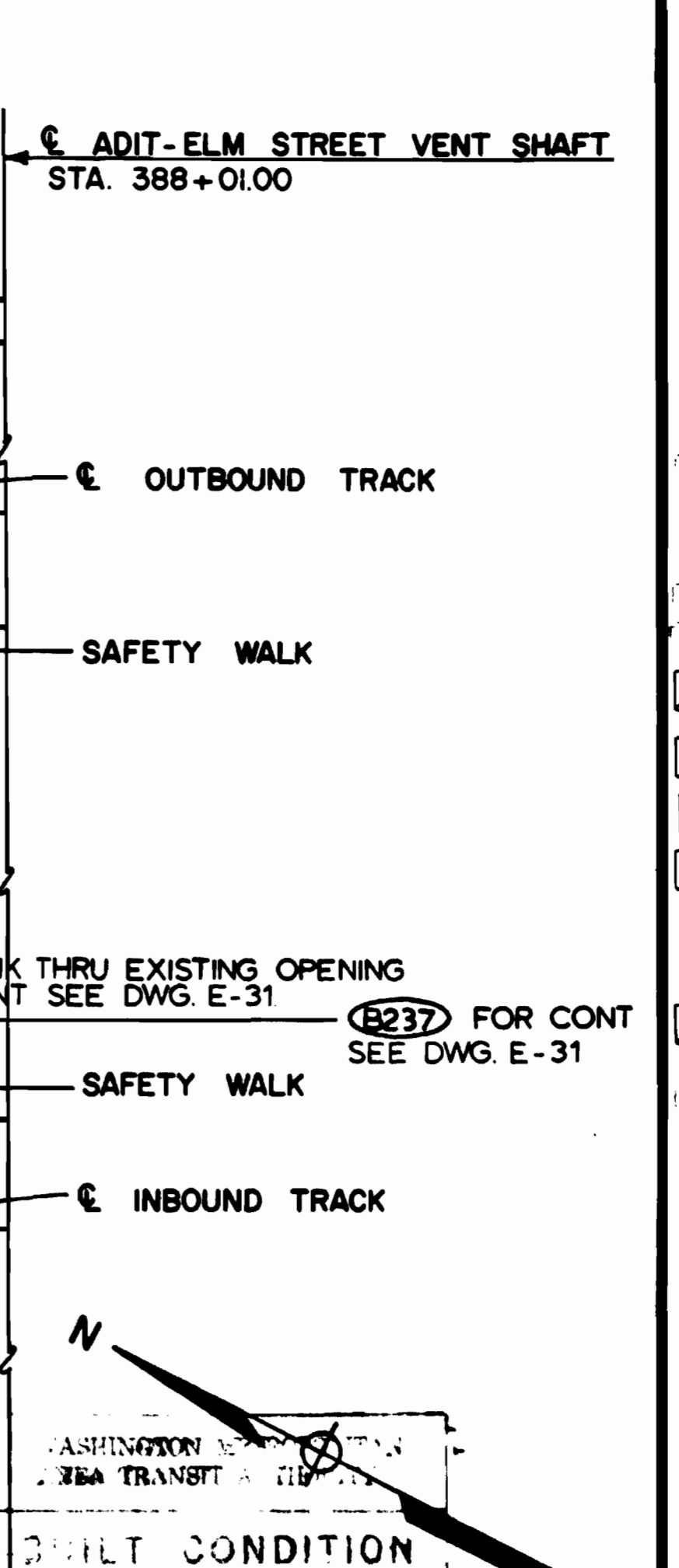
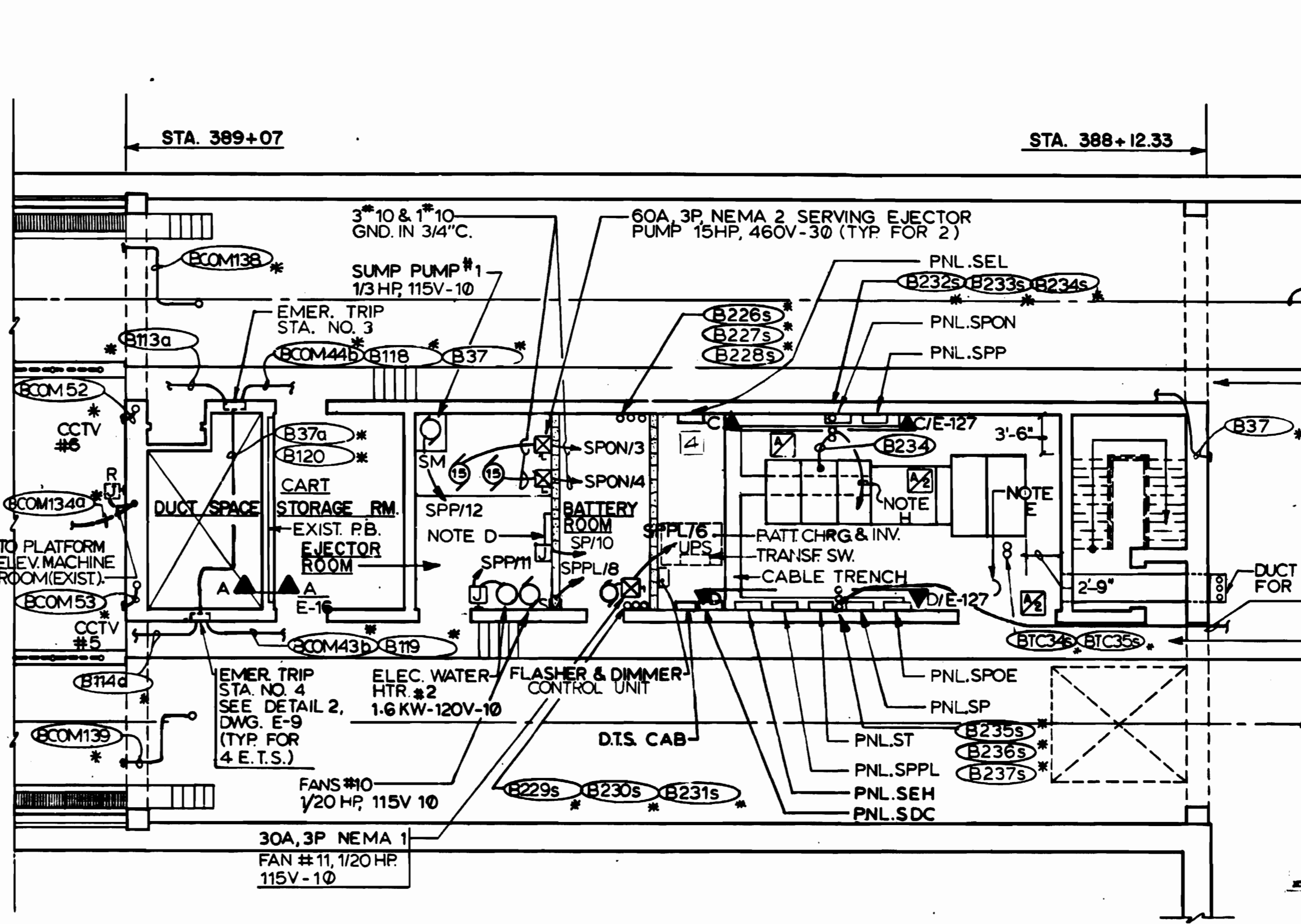
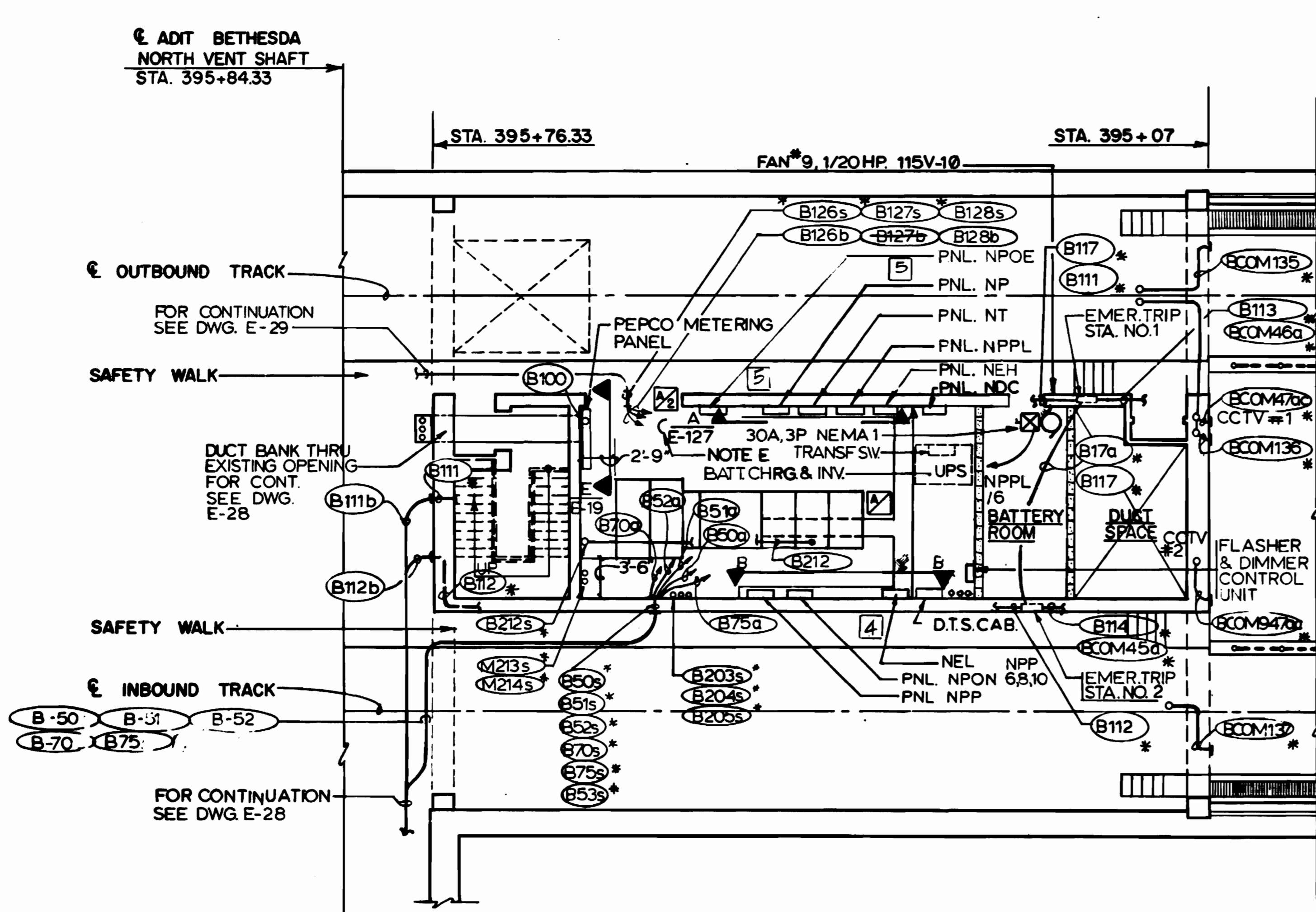
RESIDENT ENGINEER: *Michael De...* DATE: *11-13-1983*

SCALE: NOT TO SCALE DRAWING NO. FAIL-E-15 M334-163







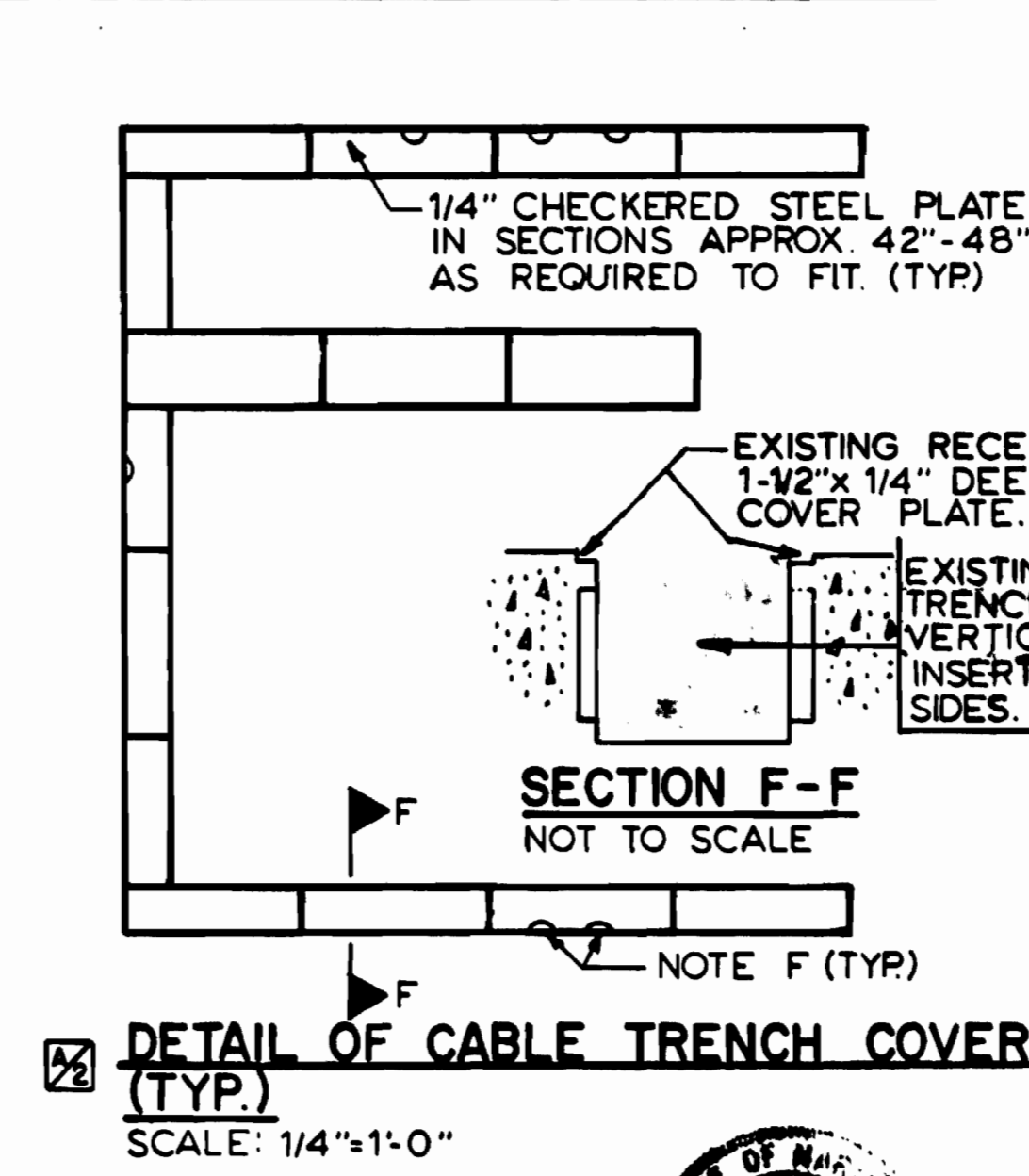
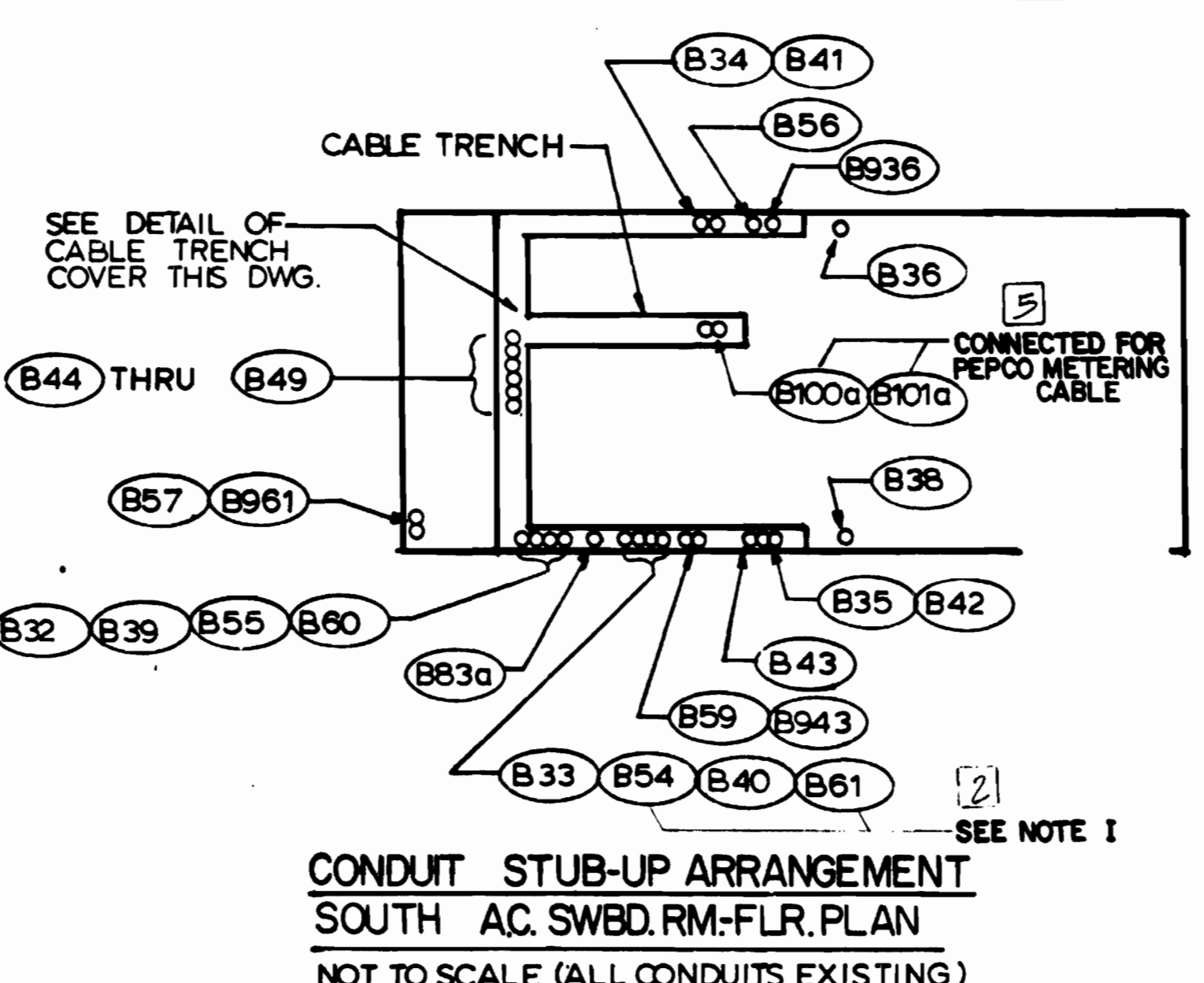
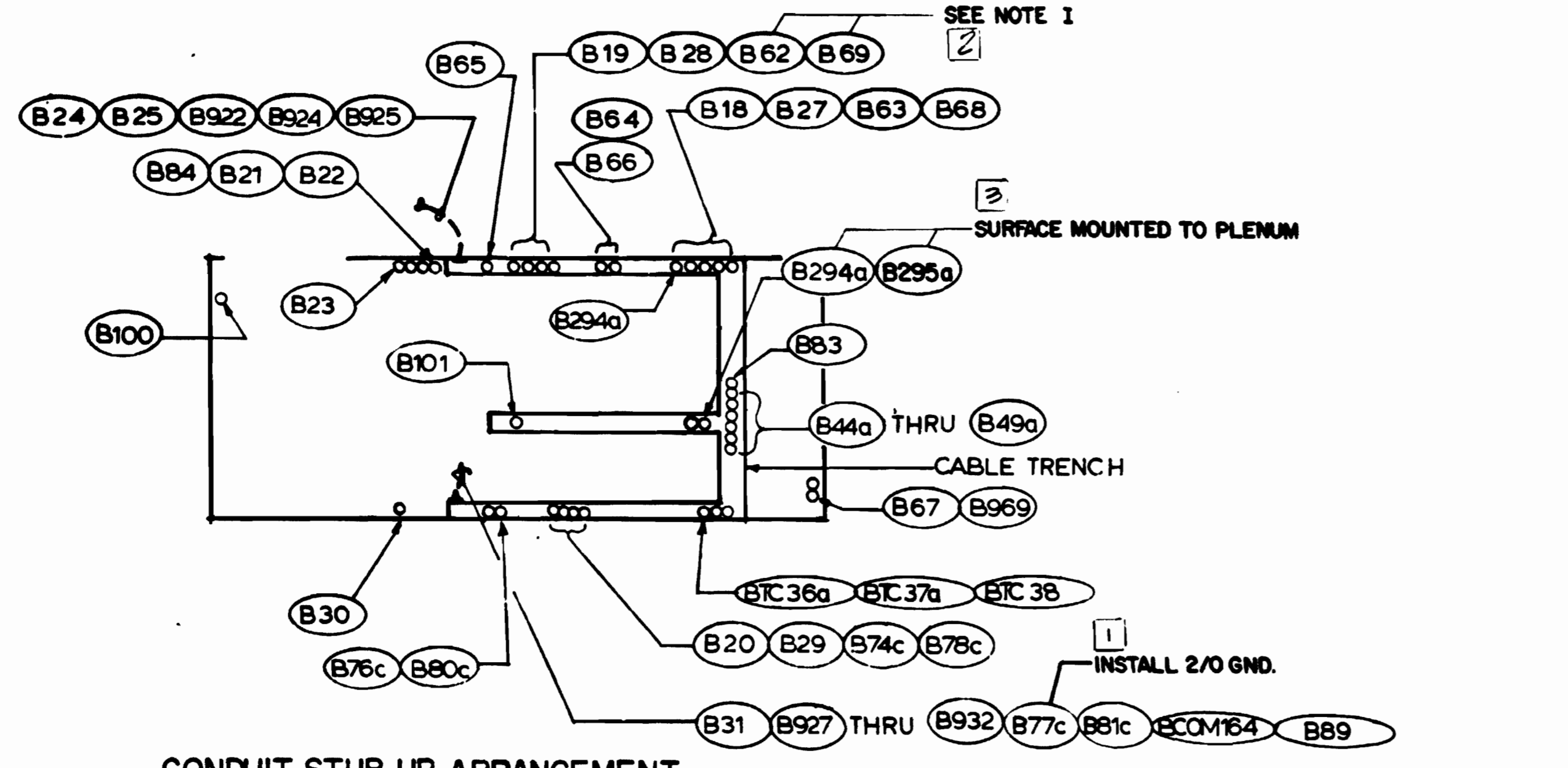


PLAN SERVICE ROOMS (NORTH)

PLAN SERVICE ROOMS (SOUTH)

AS-BUILT CONDITION

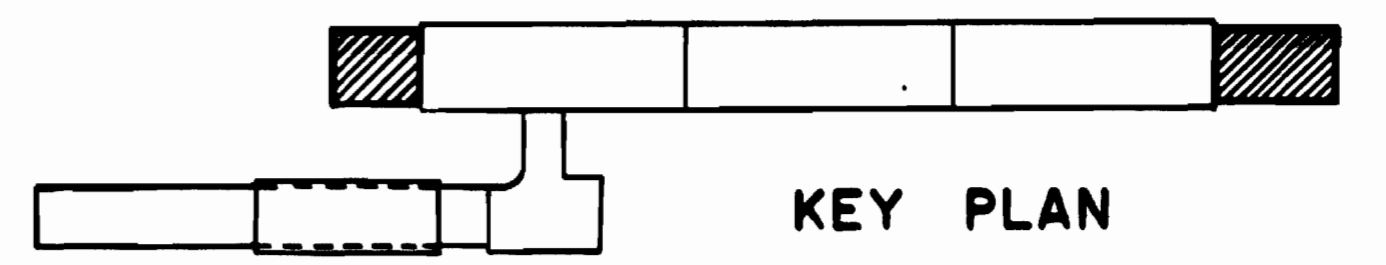
- NOTES**
- A. FOR RECEPTACLES LAYOUT, SEE DWG. E-16.
  - B. FOR CONDUIT LAYOUTS WITHIN A.C. SWBD. ROOMS, SEE DWG. E-16.
  - C. ALL SLEEVES LOCATED IN CEILING SLAB, UNLESS OTHERWISE SHOWN OR NOTED. FOR CONTINUATIONS, SEE DWG. E-24.
  - D. WALL CONVECTOR #2, 4KW, 277V-10.
  - E. EXISTING PULLING-IN IRON FOR ELECTRICAL CABLES
  - F. PROVIDE FINGER HOLES FOR LIFTING AND SLOTS FOR PASSAGE OF CONDUITS AS REQUIRED.
  - G. FOR ANCILLARY SPACES GROUNDING ARRANGEMENT, SEE DWG. E-11.
  - H. B232 AND B269 TO GROUND BUS.
  - I. PROVIDE NON-LOW-SMOKE XHHW WIRE IN EXISTING CONDUITS B-54, B-61, B-62 & B-69 ONLY.



CONDUIT STUB-UP ARRANGEMENT NORTH A.C. SWBD. RM.-FLR. PLAN NOT TO SCALE (ALL CONDUITS EXISTING)

CONDUIT STUB-UP ARRANGEMENT SOUTH A.C. SWBD. RM.-FLR. PLAN NOT TO SCALE (ALL CONDUITS EXISTING)

DETAIL OF CABLE TRENCH COVER (TYP.) SCALE: 1/4"=1'-0"



KEY PLAN

NUMBER	DATE	DESCRIPTION
5	REV. PER PCD. 78	AS-BUILT
4	REV. PER PCD. 71	AS-BUILT
3	REV. PER PCD. 36	AS-BUILT

DESIGNED	P.S. CHU	8-12-74
DATE		
DRAWN	C.V. REID	9-3-74
DATE		
CHECKED	H.B. ZACKRISON	6-16-80
DATE		
APPROVED	H.B. ZACKRISON	6-16-80
DATE		

NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
A-15	ANCILLARY SPACE - PLATFORM LEVEL	9-25-80	H.Z.	REVISED SWGR. OUTLINES & "DETAIL OF CABLE TRENCH COVER (TYP.)"
M-16	ANCILLARY AREAS - PLATFORM AREAS			REVISED CABLE PULLING IRONS & NOTE E. ADDED NOTES G & H
		8-28-83	MD	1 REV. PER PCD. 10, AS-BUILT
				2 REV. PER PCD. 33, AS-BUILT



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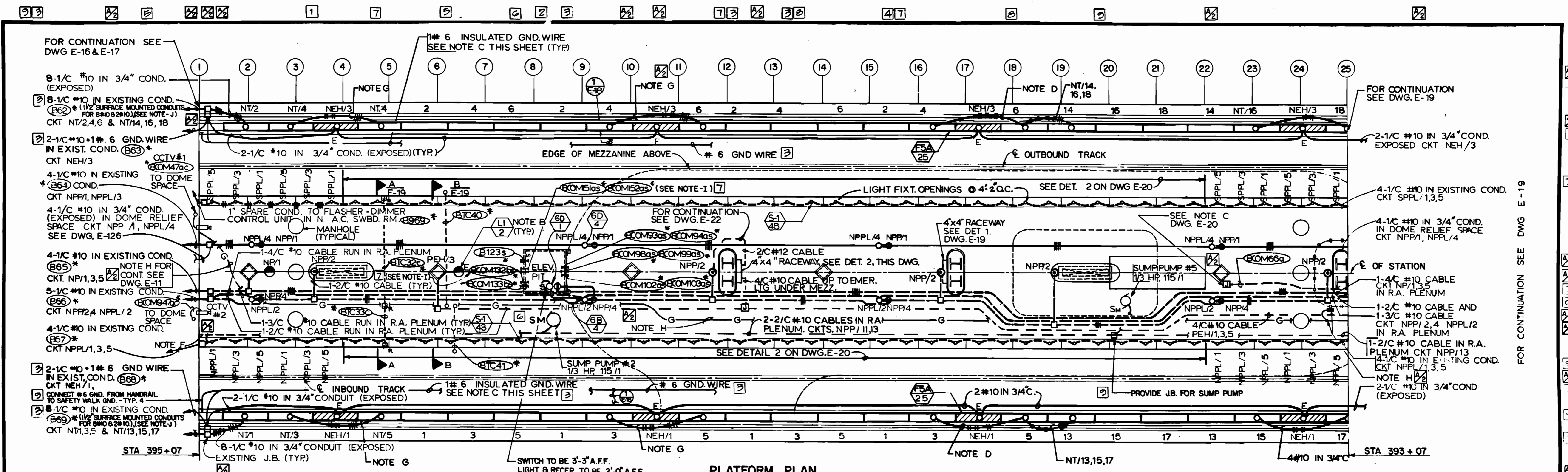
SUBMITTED: *George J. Freed* DATE: 8-16-80 APPROVED: *John P. ...*

**ROCKVILLE ROUTE**  
BETHESDA STATION  
NORTH & SOUTH ANCILLARY SPACES - POWER

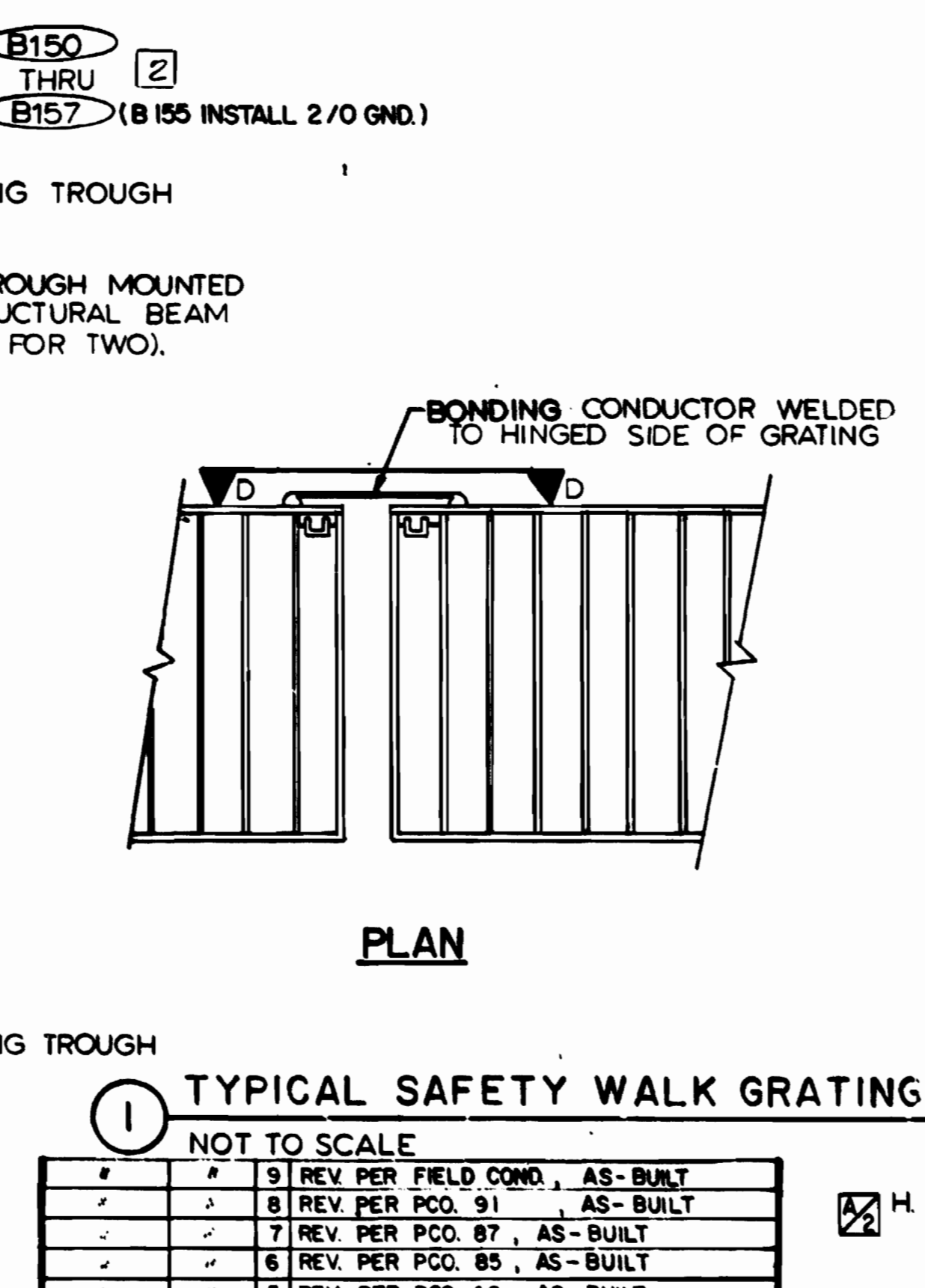
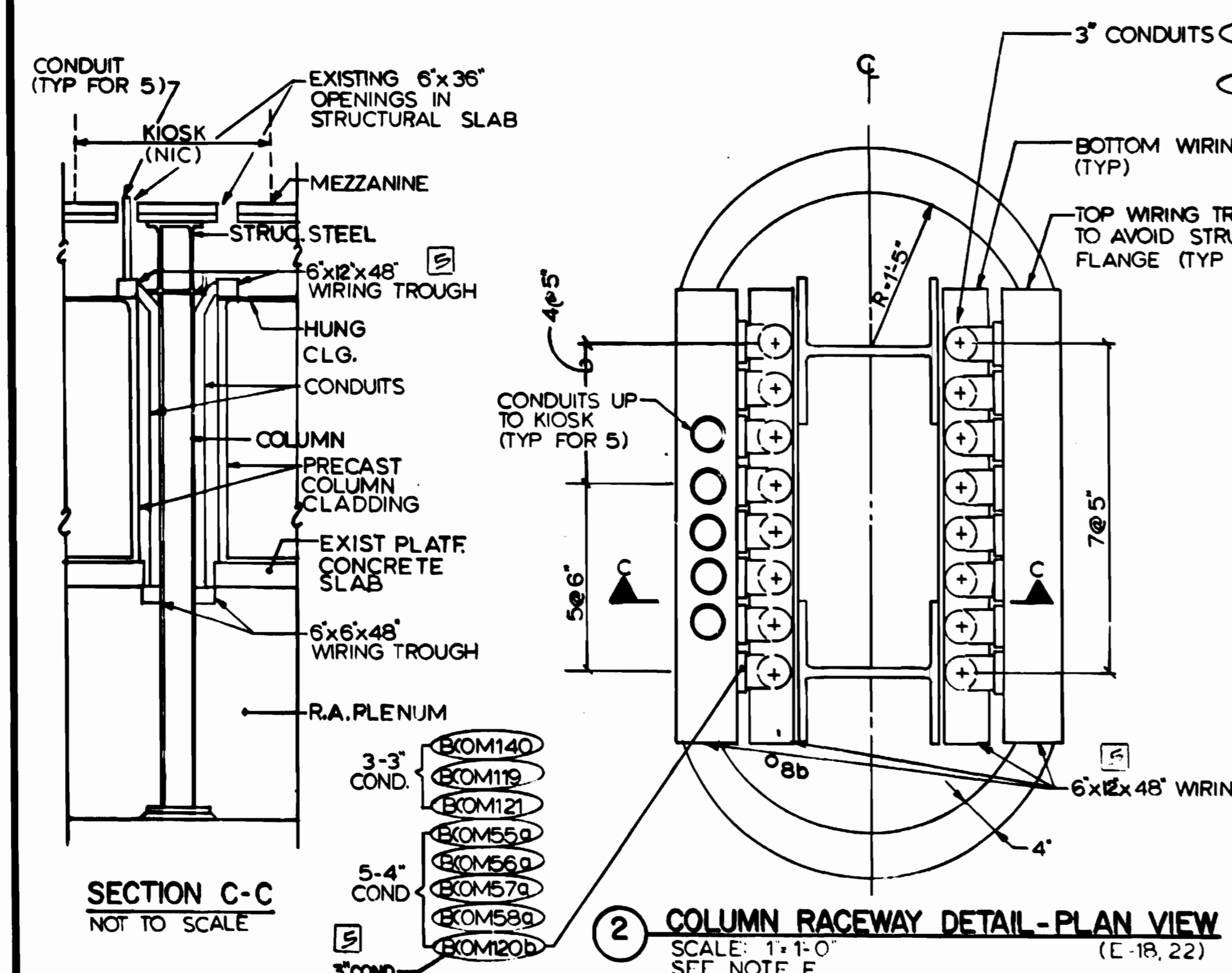
SCALE: 1/8"=1'-0" 1 0 2 4 6 8 10 AND AS NOTED

DRAWING NO. **FAIL - E-17** M334-165





PLATFORM PLAN



**NOTES**

7 I. HOISTWAY TO MACHINE ROOM: RUN 3-2" GRS CONDUITS FROM THE HOISTWAY TO THE ELEVATOR MACHINE ROOM FOR ELEVATOR CONTROL. UTILIZED SLEEVES BCOM 132 as, BCOM 133 as & BCOM 152 as (ALL 3 1/2" I.D.) AT THE HOISTWAY. CONNECT TO EMBEDDED CONDUITS BCOM 132 a, BCOM 133 a & BCOM 152 a IN THE FLOOR OF THE RETURN AIR PLENUM. LABEL SLEEVE BCOM 151 as (2 1/2" I.D.) AND EMBEDDED CONDUIT BCOM 151 as "SPARE" IN THE CONDUIT SCHEDULE.

2. MACHINE ROOM TO KIOSK: USE "SPARE" EMBEDDED CONDUITS BCOM 100 as & BCOM 102 as FROM THE MACHINE ROOM TO THE RETURN AIR PLENUM. RUN 2-2" GRS CONDUITS FROM WHERE THE EMBEDDED CONDUITS EXIT THE SLAB TO THE JUNCTION BOX LOCATED A CONVENIENT DISTANCE AWAY FROM THE JB. RUN 1-3" CONDUIT UNDER THE ELEVATOR HOISTWAY TO THE WIRE TROUGH AT THE COLUMN BELOW THE KIOSK. UTILIZE "SPARE" CONDUIT B157 FROM THE BOTTOM TO THE TOP OF THE COLUMN. EXTEND THE 3" CONDUIT FROM THE TOP OF THE COLUMN TO 6' ABOVE THE FINISH FL. BENEATH THE KIOSK.

4 J. PROVIDE NON-LOW-SMOKE XHHW WIRE IN EXISTING CONDUITS B-54, B-61, B-62, B-69 ONLY.

5. MAKE TAP FROM BOND WIRE TO EACH GRATE.

6. #6 IN 3/4" C 3 CIRCUIT HOMERUN (4 WIRES) PLUS ADDITIONAL PHASE & NEUTRAL (2 WIRES).

7. ALL CONDUITS SHALL TERMINATE AT WIRE TROUGH IN HUNG CEILING AND ONLY CONDUCTORS OR CABLES ARE ROUTED INSIDE THE RACEWAYS IN COLUMN. CIRCUITS ROUTED IN R.A. PLENUM SHALL BE MULTI-CONDUCTOR CABLES UNLESS STATED OTHERWISE.

8. 3-2/C #10 CABLES IN R.A. PLENUM TO J.B. CONNECTED TO EXISTING CONDUIT, B69 FOR CONTINUATION SEE DETAIL 1, DWG. E-126. CKT. NPP/9,11,13.

9. #4/0 INSULATED GND. CONDUCTOR RUN IN R.A. PLENUM FOR ESCAL HANDRAIL GROUNDING AND EXOTHERMICALLY WELDED TO EXISTING GROUND CONDUCTOR PITAIL.

10. 8 #10 IN 3/4" C 3 CIRCUIT HOMERUN (4 WIRES) PLUS THREE ADDITIONAL PHASES & ONE NEUTRAL (4 WIRES).

1. TYPICAL SAFETY WALK GRATING ARRANGEMENT (E-18, 19, 20)

NOT TO SCALE

1	3	REV. PER FIELD COND., AS-BUILT
2	4	REV. PER P.C.O. 91, AS-BUILT
3	5	REV. PER P.C.O. 87, AS-BUILT
4	6	REV. PER P.C.O. 85, AS-BUILT
5	7	REV. PER P.C.O. 48, AS-BUILT

DESIGNED P. S. CHU 5-3-74  
 DRAWN C. J. REID 5-3-74  
 CHECKED H.B. ZACKRISON 6-16-80  
 APPROVED H.B. ZACKRISON 6-16-80

NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
A-18	PLATFORM PLAN & SECTION	9-29-80	H. Z.	REVISED EXISTING J.B. LOCATIONS
A-120	CROSS SECTION THRU MEZZ.			ADDED GND. WIRE & SUMP PUMP NO.
M-22	NORTH PLATFORM - PLAN & SECTION		H.B.Z.	P.C.O. #42
		6-29-83	MD	2 REV. PER P.C.O. 10, AS-BUILT
				3 REV. PER P.C.O. 12 REV1, AS-BUILT
				4 REV. PER P.C.O. 33, AS-BUILT



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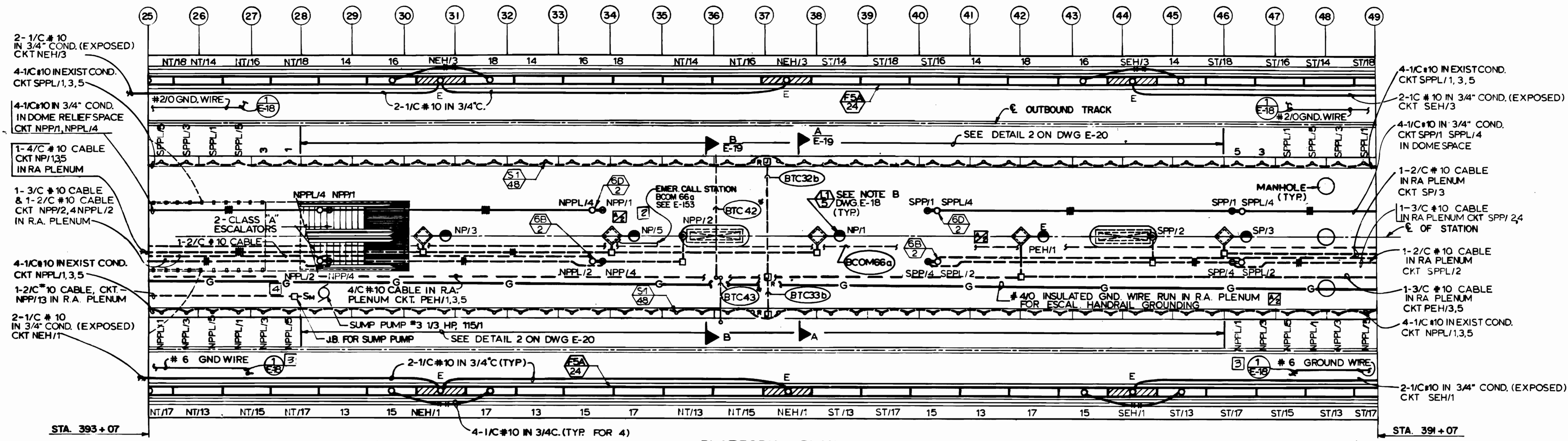
SUBMITTED *[Signature]* DATE 8-15-80 APPROVED *[Signature]*

**ROCKVILLE ROUTE**  
 BETHESDA STATION - PLATFORM PLAN  
 STA. 395+07 TO STA. 393+07 - LIGHTING & POWER

SCALE 1/8"=1'-0" 1 0 2 4 6 8 10  
 AND AS NOTED

DRAWING NO. FA11-E-18 M334-166

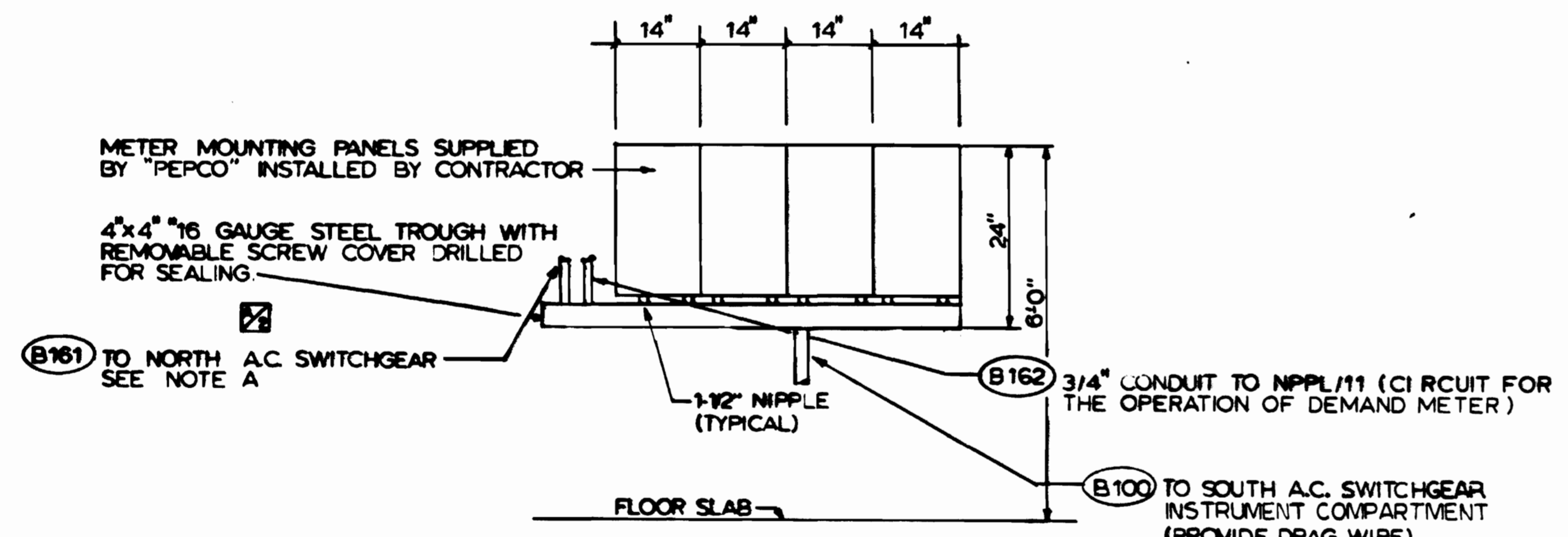




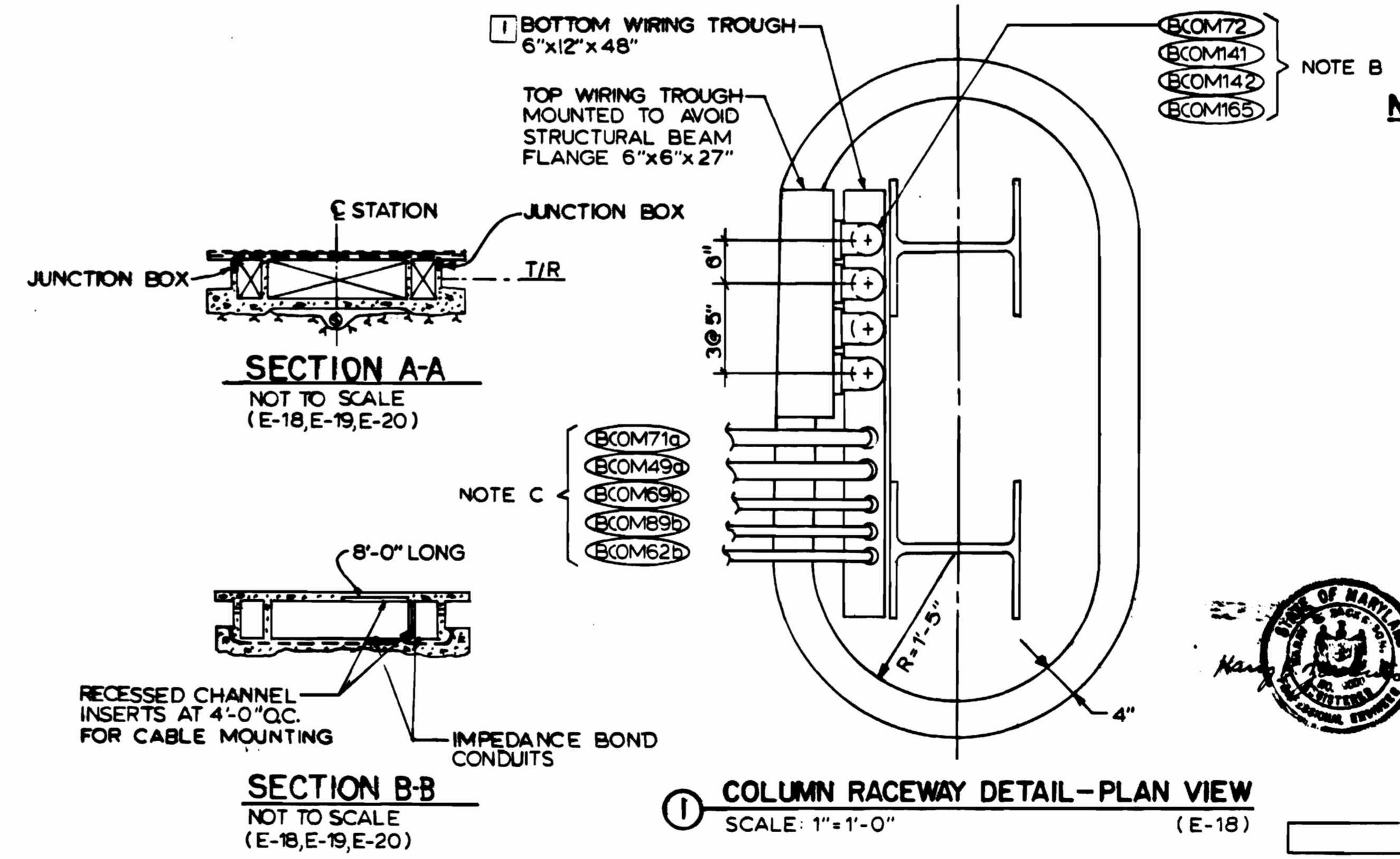
PLATFORM PLAN

FOR CONTINUATION SEE DWG. E-18

FOR CONTINUATION SEE DWG. E-20



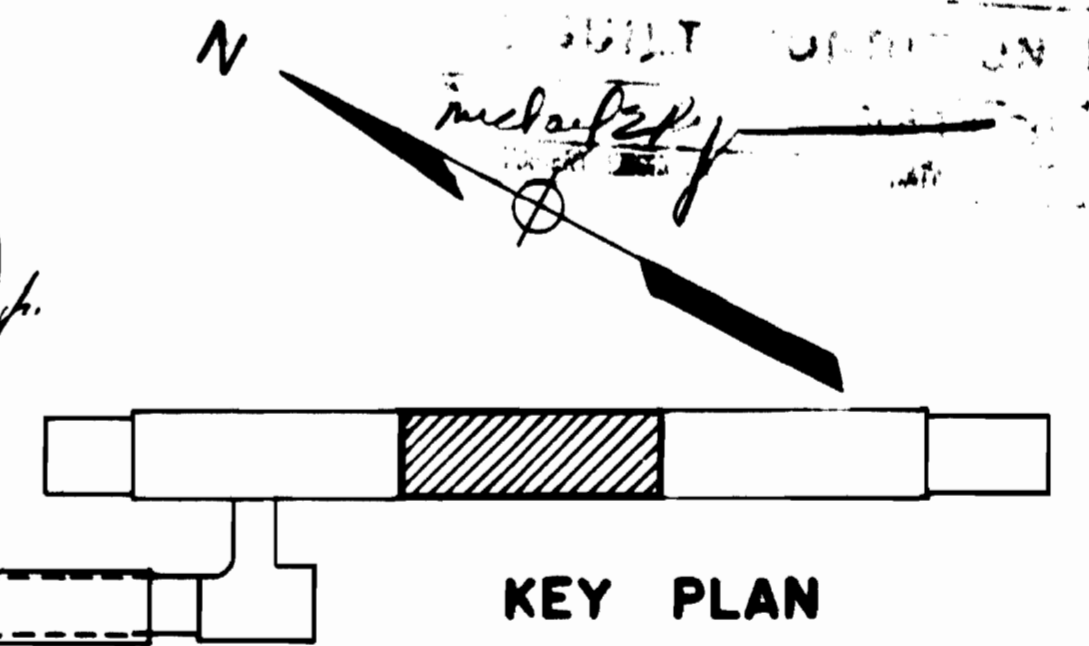
ELEVATION E-E  
NO SCALE (E-17)



1 COLUMN RACEWAY DETAIL-PLAN VIEW  
SCALE: 1"=1'-0" (E-18)

NOTES

- A 1 1/2" CONDUIT FROM METER MOUNTING PANEL TO INSTRUMENT COMPARTMENT OF 13KV SWITCHGEAR IN NORTH A.C. SWITCHBOARD RM. PROVIDE DRAG WIRE.
- B ALL CONDUITS SHALL TERMINATE AT WIRE TROUGH IN HUNG CEILING AND ONLY CONDUCTORS OR CABLES ARE ROUTED INSIDE THE RACEWAY IN COLUMN. CIRCUITS ROUTED IN R.A. PLENUM SHALL BE MULTI-CONDUCTOR CABLES UNLESS STATED OTHERWISE.
- C CONDUITS SHALL TURN DOWN THRU COLUMN AND TERMINATE DIRECTLY AT BOTTOM WIRING TROUGH.



KEY PLAN

DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS	
		NUMBER	DESCRIPTION	DATE	BY
P. S. CHU	5-5-78	A-19	PLATFORM PLAN & SECTION	9-25-80	H.Z.
C. J. REID	5-5-78	A-120	CROSS SECTION THRU MEZZ.	6-30-83	MD
H. B. ZACKERSON	6-16-80	M-21	CENTER PLATFORM - PLAN & SECTION		
H. B. ZACKERSON	6-16-80				

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HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

DESIGNED: *J. P. Green* DATE: 8-15-80

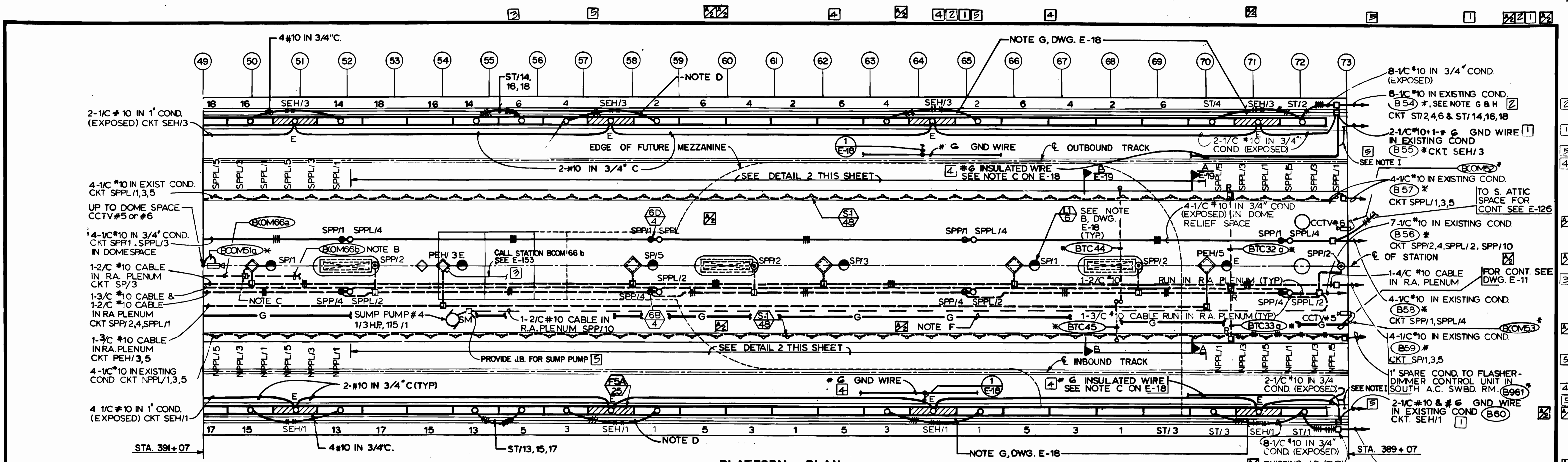
**ROCKVILLE ROUTE**

BETHESDA STATION - PLATFORM PLAN  
STA. 393+07 TO STA. 391+07 - LIGHTING & POWER

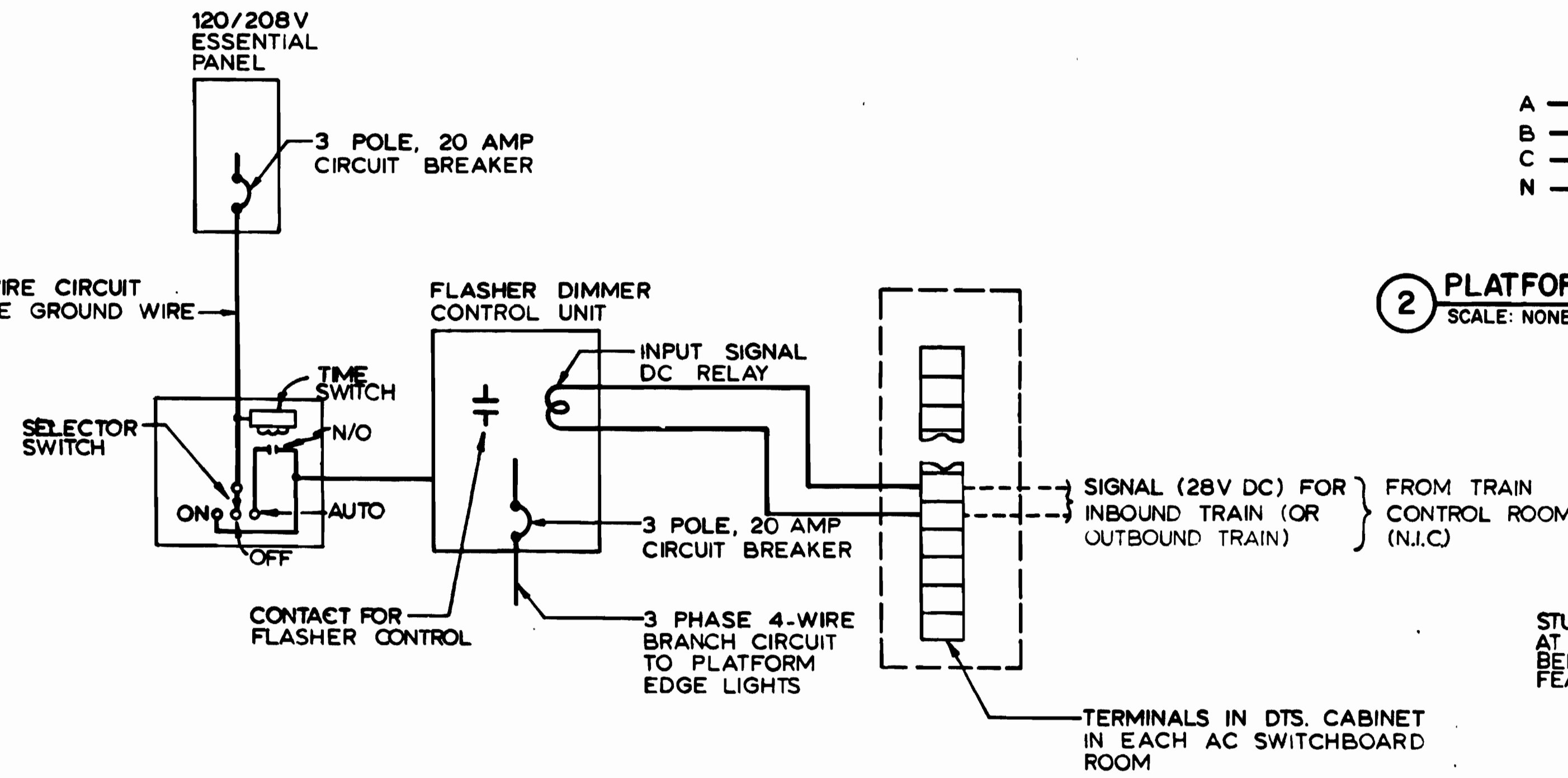
SCALE: 1/8"=1'-0" 10 2 4 6 8 10 AND AS NOTED

DRAWING NO. FA-11-E-19 M334-167

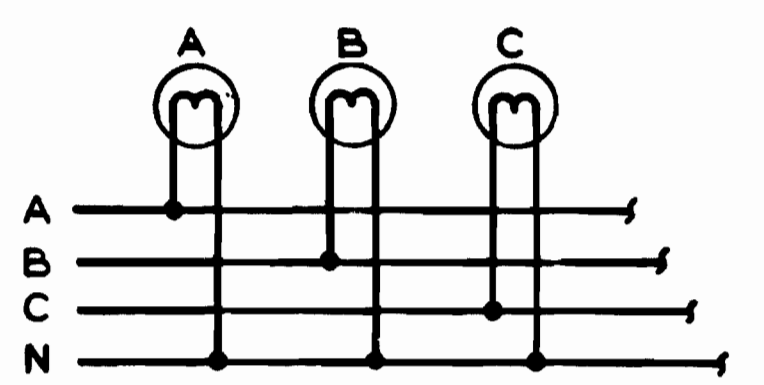




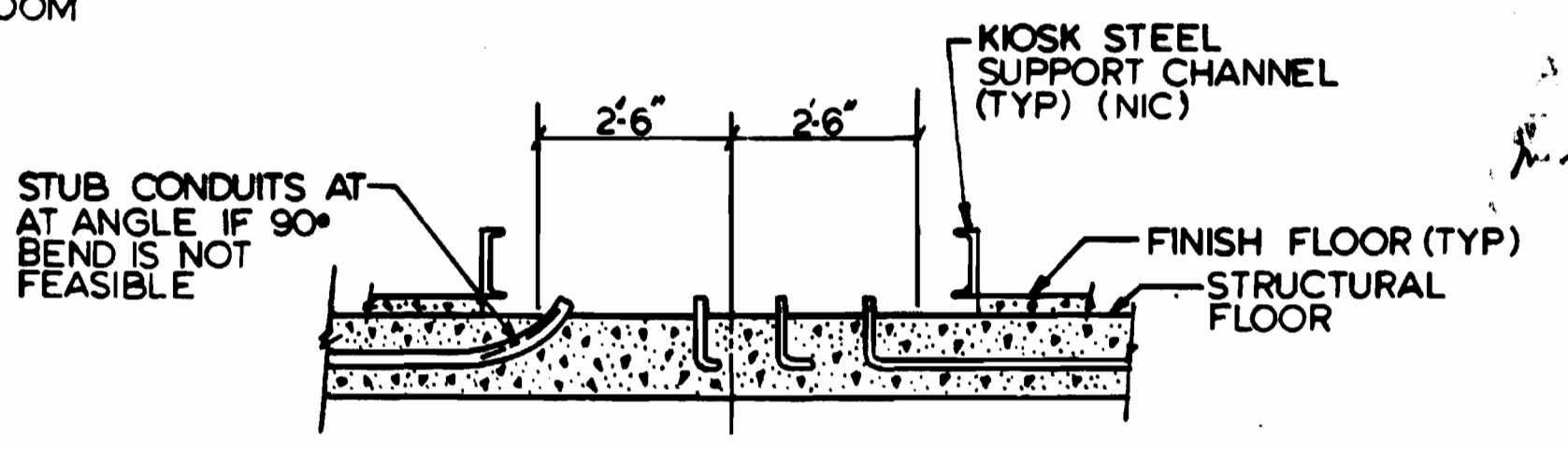
PLATFORM PLAN



1 FLASHER DIMMER CONTROL UNIT (TYPICAL WIRING)  
SCALE: NONE



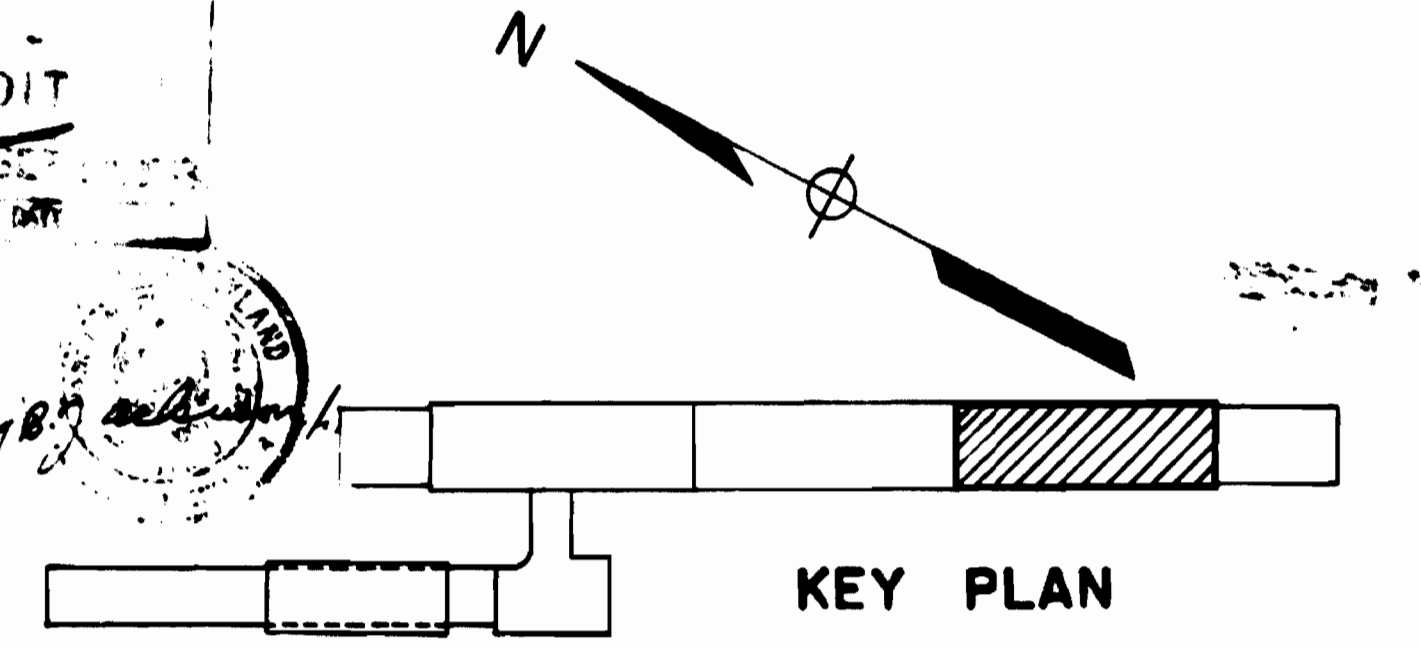
2 PLATFORM EDGE LIGHTS CONNECTION (TYPICAL)  
SCALE: NONE (E-18,19,20)



3 TYPICAL CONDUIT STUB-UPS IN KIOSK (EXISTING)  
SCALE: NONE (E-22)

NOTES

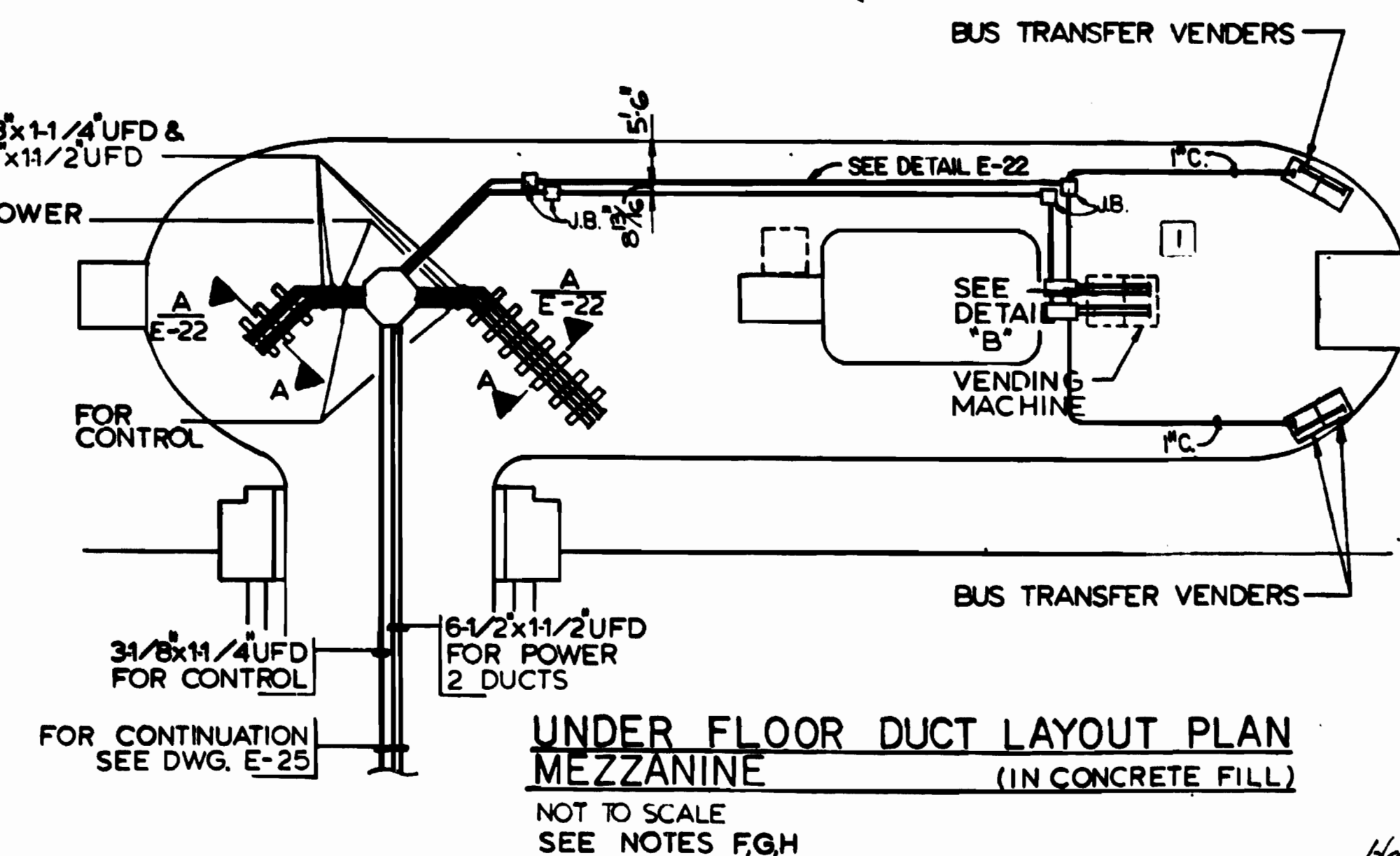
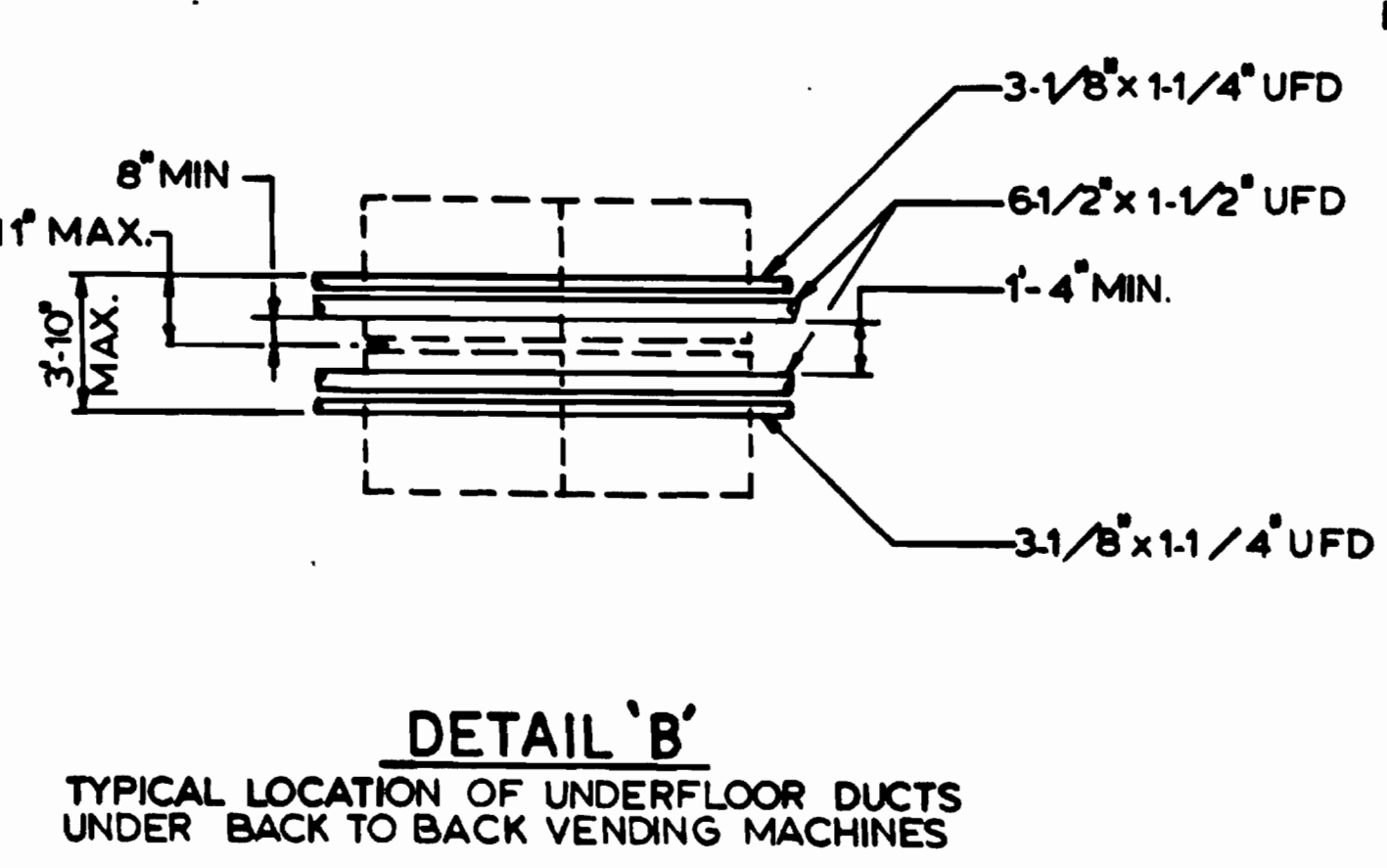
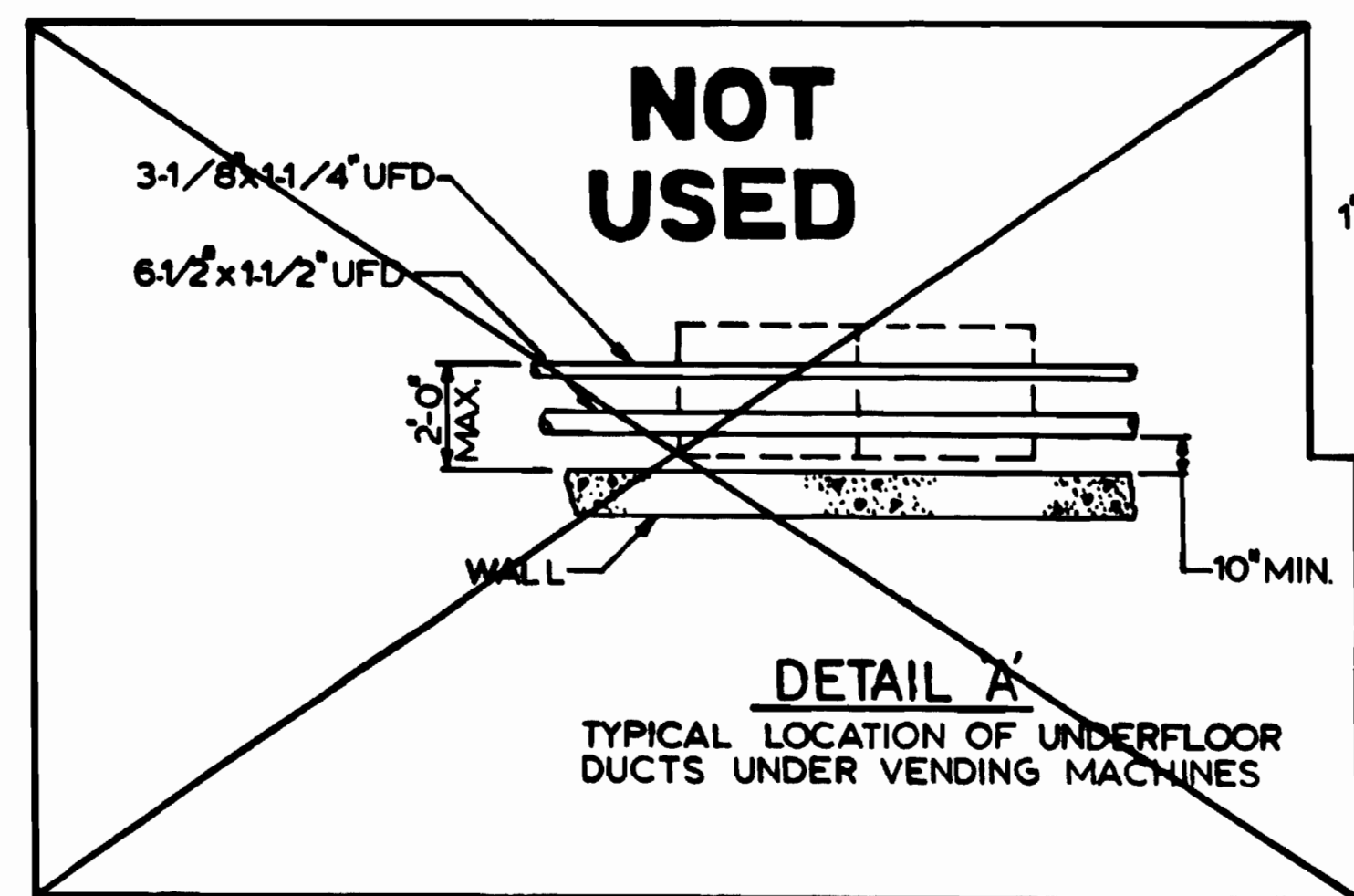
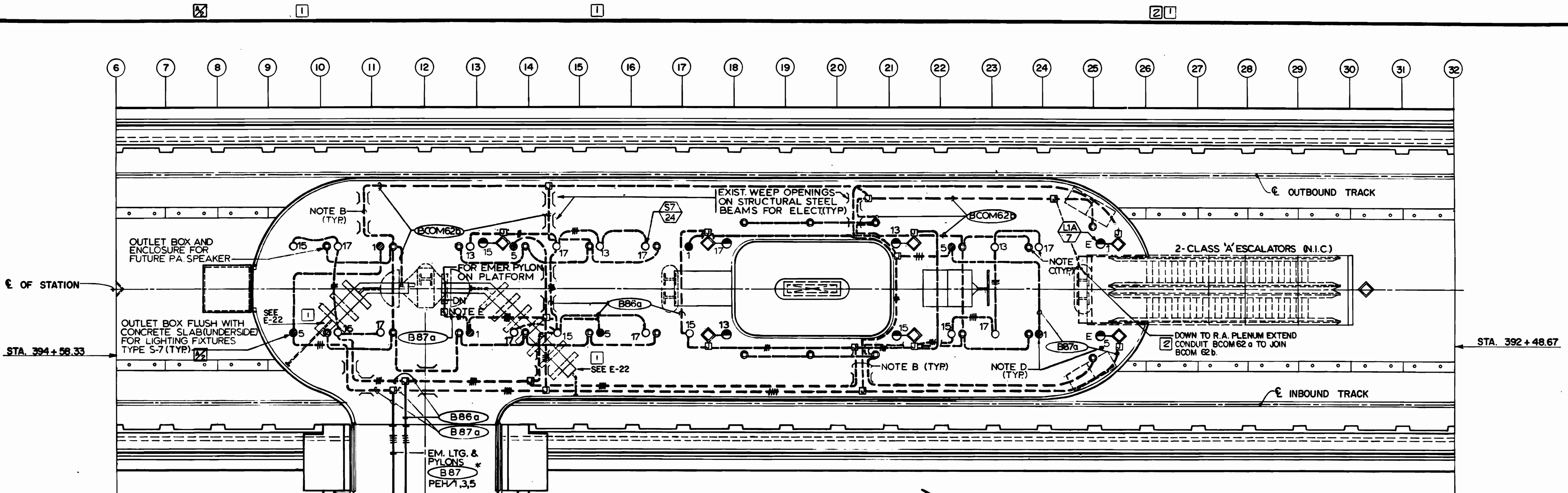
- 2 G. PROVIDE NON-LOW-SMOKE XHHW WIRE IN EXISTING CONDUITS B-54, B-61, B-62, B-69 ONLY.
- 1 H. 1/2" SURFACE MOUNTED CONDUITS FOR 8#10 & 2#10
- 5 I. CONNECT #6 FROM SAFETY WALK GND. TO HANDRAILS TYP. 4 PLACES.
- A. SEE DETAILS 1 & 2 THIS DWG. FOR TYPICAL LIGHTING FIXTURES CONNECTION FOR PLATFORM EDGE LIGHTS.
- B. FOR CONTINUATION SEE DETAIL 2, DWG. E-126.
- C. J.B. FOR EMERGENCY COMM. SYSTEM. STUB UP CONDUIT INTO PYLON IN ACCORDANCE WITH DETAIL "C", DWG. ST-M-83.
- D. 7#10 IN 3/4" C: 3 CIRCUIT HOMERUN (4 WIRES) PLUS TWO ADDITIONAL PHASES & ONE NEUTRAL (3 WIRES).
- E. SEE NOTE B, DWG. E-19.
- F. #4/0 INSULATED GROUND CONDUCTOR RUN IN R.A. PLENUM FOR ESCAL HANDRAIL GROUNDING.



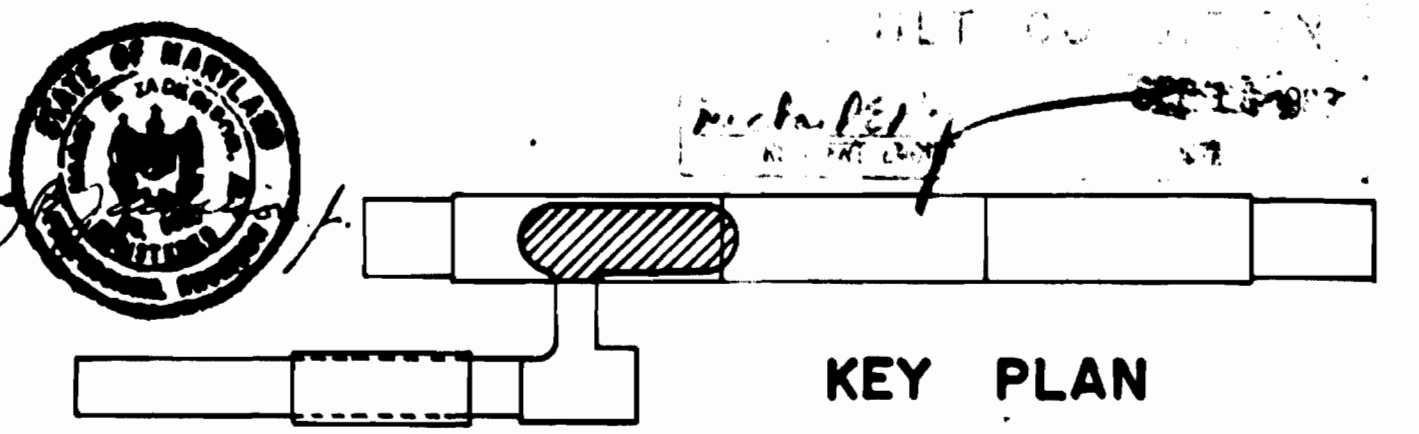
KEY PLAN

DESIGNED P. S. QUN DRAWN C. J. REID CHECKED H. ZACKRISON APPROVED H. ZACKRISON	REFERENCE DRAWINGS NUMBER DESCRIPTION A-20 PLATFORM PLAN & SECTION A-120 CROSS SECTION THRU MEZZ. M-20 SOUTH PLATFORM - PLAN & SECTION	REVISIONS DATE BY DESCRIPTION 9-25-80 H.Z. REVISED EXISTING J.B. LOCATIONS 6-30-83 MD ADDED GND. WIRE. REVISED NOTES ON PLAN 1 REV. PER PCD. 12 REV. 1, AS-BUILT 2 REV. PER PCD. 33, AS-BUILT 3 REV. PER PCD. 68, AS-BUILT 4 REV. PER PCD. 91, AS-BUILT	<b>WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY</b> MATHEWS • CHATELAIN • BEALL ENGINEERS AND ARCHITECTS SECTION DESIGNER	DE LEUW, CATHER & COMPANY GENERAL ENGINEERING CONSULTANT HARRY WEESSE & ASSOCIATES GENERAL ARCHITECTURAL CONSULTANT	<b>ROCKVILLE ROUTE</b> <b>BETHESDA STATION - PLATFORM PLAN</b> STA. 391 + 07 TO STA. 389 + 07 - LIGHTING & POWER SCALE 1/8" = 1'-0" DRAWING NO. FA11-E-20 M334-168
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- NOTES**
- ALL CONDUITS SHOWN ON THIS SHEET SHALL BE RUN IN THE HUNG CEILING BELOW THE MEZZANINE FLOOR SLAB UNLESS STATED OTHERWISE.
  - CONDUITS RUN INSIDE MEZZANINE HUNG CEILING CAVITY SHALL BE ROUTED BETWEEN THE BOTTOM OF STRUCTURAL BEAMS AND CEILING PANELS IF THE BEAMS ARE 27" DEPTH OR LESS. FOR 30" BEAMS ROUTE CONDUITS THROUGH OPENINGS ON BEAMS AS SHOWN ON THIS SHEET.
  - ALL LOUSPEAKERS AND LIGHTING FIXTURES TYPE S7 ARE LOCATED AT THE HUNG CEILING BELOW THE MEZZANINE FLOOR SLAB.
  - SEE DWG. E-61 FOR DETAILS OF FIXTURE TYPE "S7" SEE DWG. ST-M-83 FOR DETAILS OF PYLON FIXTURE TYPE "LIA."
  - PROVIDE TERMINAL BOX TO CONNECT 4 #10 IN 3/4" TO 4/C #10 CABLE SERVING PLATFORM EMERG. PYLONS ON PLATFORM LEVEL.
  - UFD SHALL NOT HAVE INSERTS. PROVIDE INDICATING MARKERS EVERY 3 FEET ON UFD USED FOR VENDING MACHINES AND FARE GATE CONSOLES.
  - ALL CONDUITS OR UFD TO HAVE PULL WIRES INSTALLED.
  - COORDINATE INSTALLATION OF UFD AND CONDUITS WITH A.F.C. STAGE CONTRACTOR.
  - COORDINATE INSTALLATION OF CONDUIT AND LIGHTING UNDER PLATFORM WITH OTHER TRADES.



DESIGNED	DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
P. S.	11-25-79	5-104	MEZZ. PRECAST PARAPET PLAN	9-25-80	H.Z.	DELETED REFERENCE TO ST-A-13
DRAWN	11-26-79	A-26	MEZZ. PLAN & SECTION		H.B.Z.	PCO #42
CHECKED	6-16-80	A-20	CROSS SECTION THRU MEZZ.	7-1-83	MD	2 REV. PER PCO. 29, AS-BUILT
APPROVED	6-16-80	M-23	MEZZ. PLAN & SECTION			3 REV. PER PCO. 48, AS-BUILT

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HARRY WEESSE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

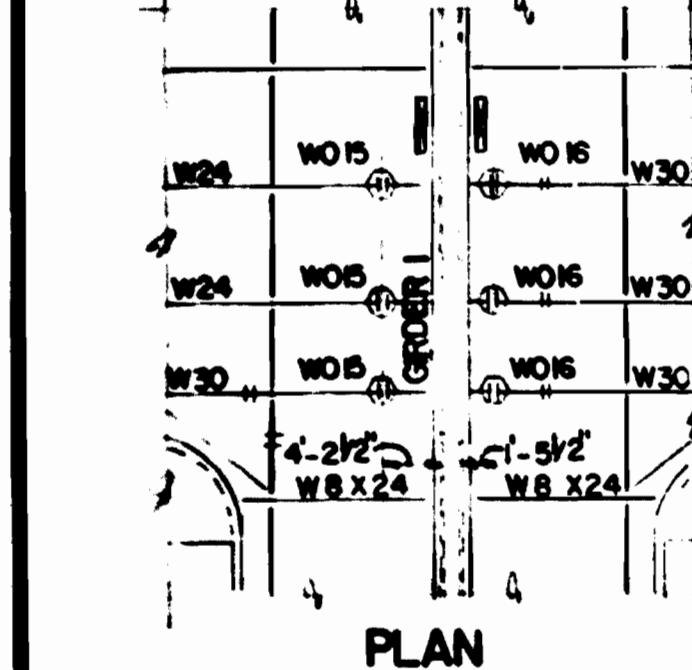
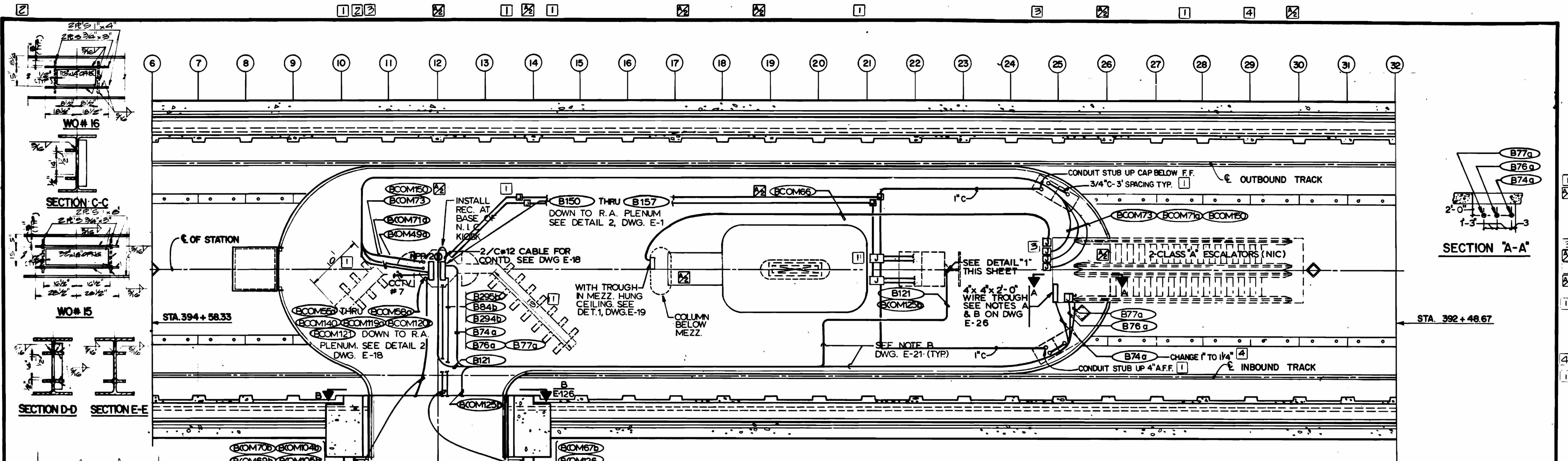
SUBMITTED *Jrilly R. Press* DATE 8-16-80 APPROVED *[Signature]*

**ROCKVILLE ROUTE  
BETHESDA STATION  
MEZZANINE PLAN - LIGHTING & POWER**

SCALE 1/8" = 1'-0" 1 2 4 6 8 10 AND AS NOTED

DRAWING NO. FALL-E-21 M334-169

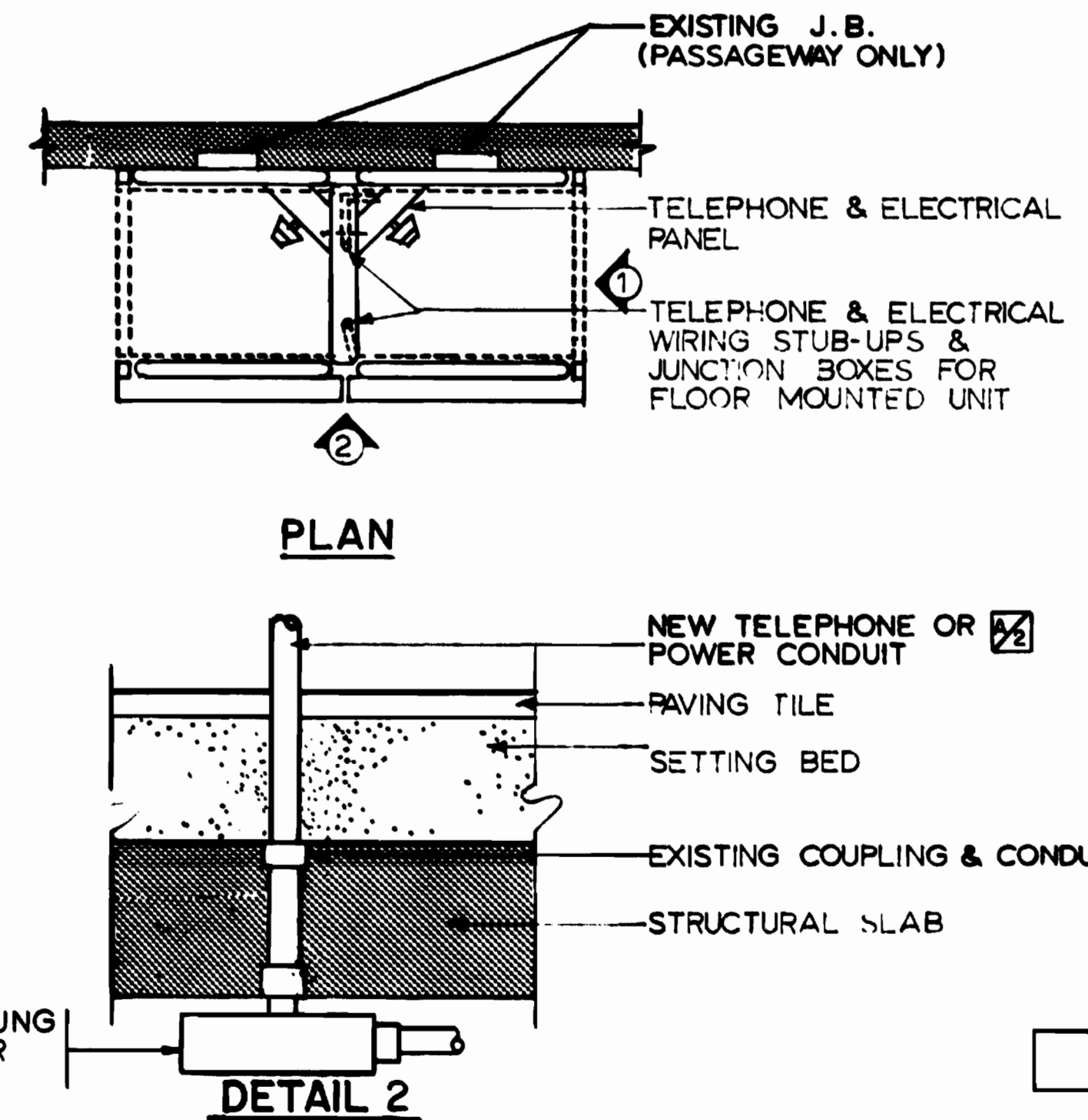
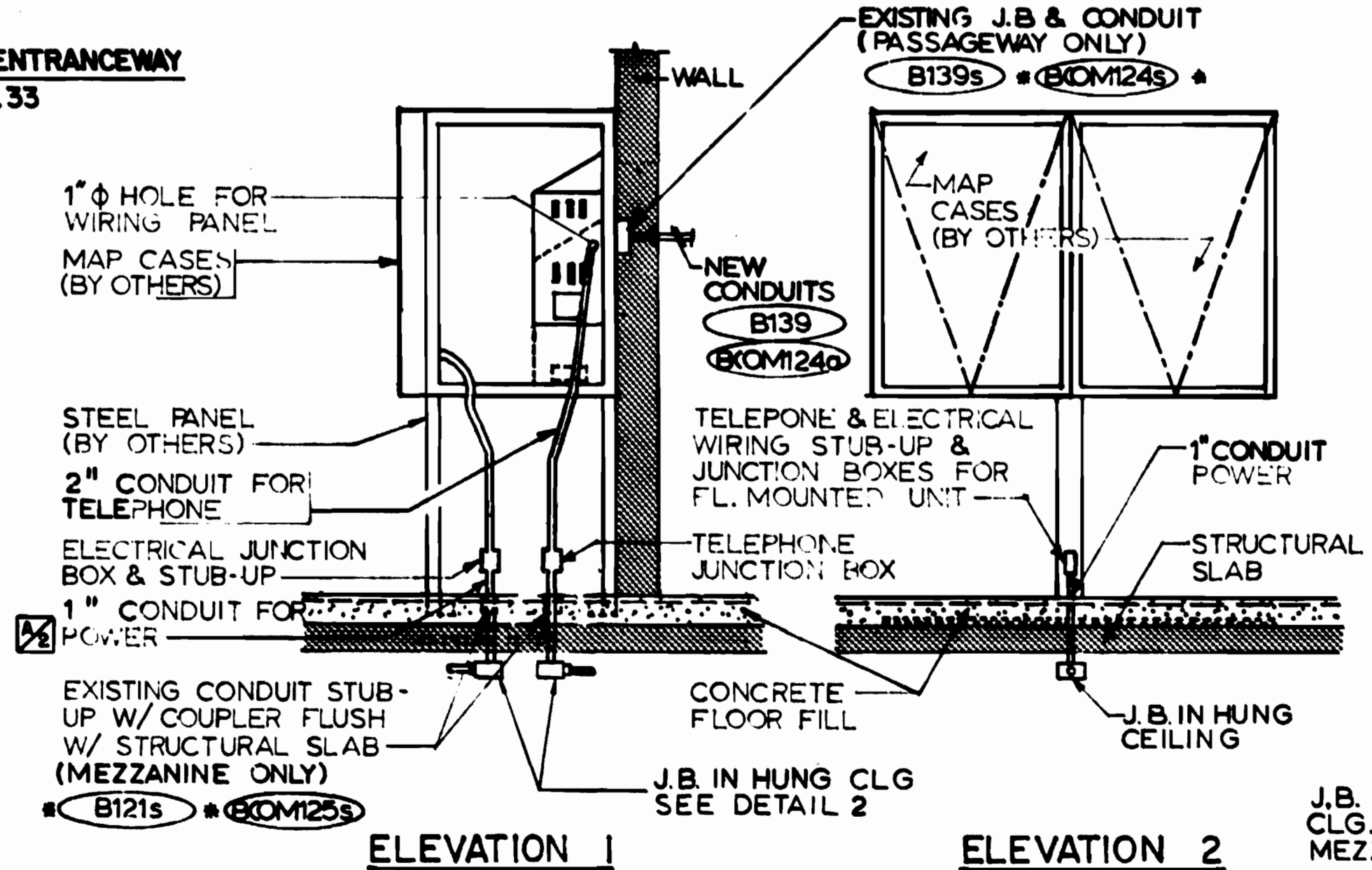
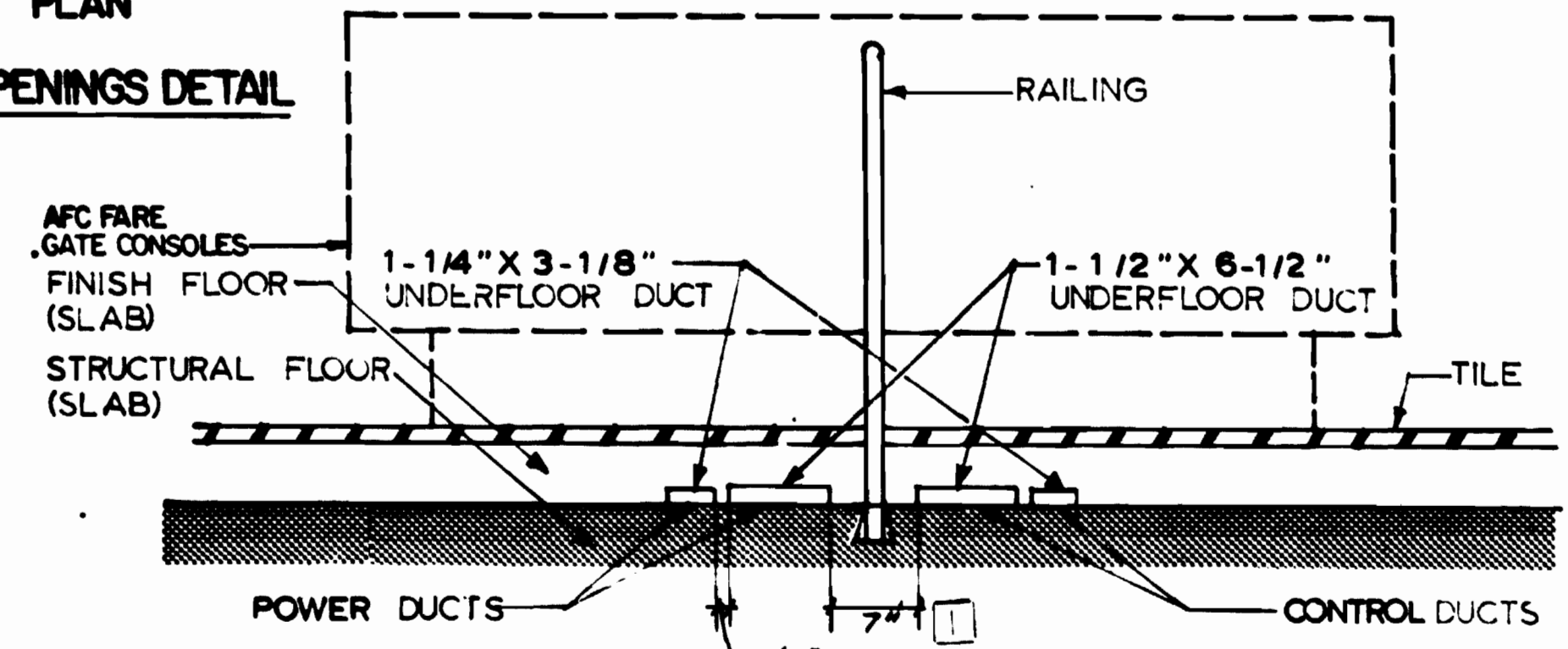




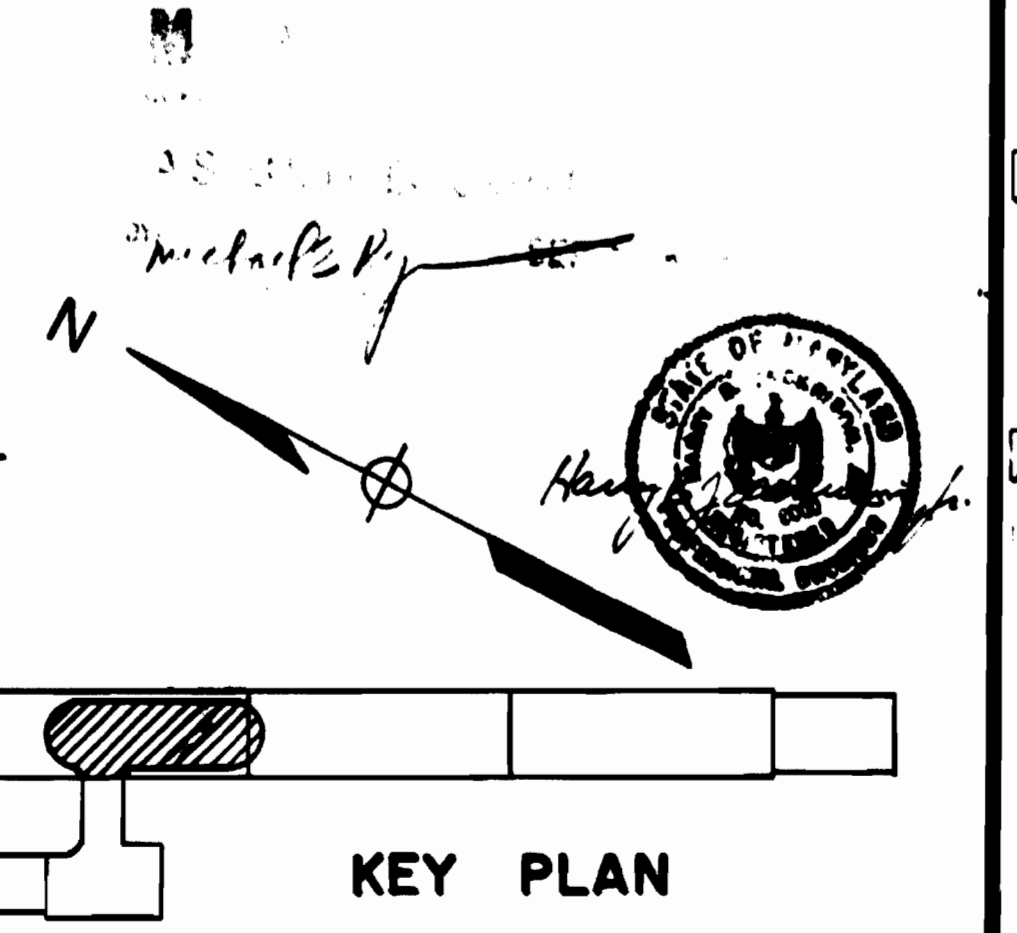
- (B)OM70b (B)OM104b
  - (B)OM69b (B)OM105b
  - B295b (B)OM65b
  - (B)OM65b (B)OM65b
  - (B)OM20b (B)OM64b
  - (B)OM105b (B)OM89b
  - (B)OM105b (B)OM110b
- (B)OM67b
  - (B)OM125
  - (B)OM127
  - (B)OM68b
  - (B)OM13d
  - (B)OM14d
  - B292g
  - B293g

CONFLICT WITH MEZZ. STR. STEEL - TO ROUTE CONDUIT FROM INTERFACE PROVIDE REINFORCED OPENINGS IN STRUCTURAL STEEL, SEE WEB OPENINGS DET. THIS DWG.  
EXTEND 3" CONDUIT THRU OPENINGS WITH NECESSARY SWEEPS/PULL BOXES.

**WEB OPENINGS DETAIL**  
NTS.



- NOTES**
- A. ALL UNDERFLOOR DUCTS SHALL BE IN FINISH FLOOR SLAB AND EXISTING CONDUITS ARE IN STRUCTURAL SLAB. FOR UFD LAYOUT SEE DWG E-21.
  - B. IN PASSAGEWAY CONDUITS RUN IN STRUCTURAL SLAB AND IN MEZZANINE AREA CONDUITS RUN IN HUNG CEILING. FOR INSTALLATION DETAILS, SEE DETAIL 1 THIS SHEET.



DESIGNED	DATE	REFERENCE DRAWINGS		REVISIONS		
		NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
P. S. CHU	11-23-79	S-104	MEZZANINE PRECAST PARAPET PLAN	9-25-80	H.Z.	REVISED CONDUITS TO ESCALATOR PIT
C. J. REID & C. A. GRAE	11-28-79	A-26	MEZZANINE PLAN AND SECTION			REVISED DETAIL "1"
H. B. ZACKRISON	6-16-80	M-23	MEZZANINE PLAN AND SECTION	7-5-83	MD	1. REV. PER PCO. 29, AS-BUILT
H. B. ZACKRISON	6-16-80					2. REV. PER PCO. 38, AS-BUILT
						3. REV. PER PCO. 48, AS-BUILT
						4. REV. PER PCO. 79, AS-BUILT

**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

MATHews • CHATELAIN • BEALL  
ENGINEERS AND ARCHITECTS  
SECTION DESIGNER

DE LEUW, CATHER & COMPANY  
GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES  
GENERAL ARCHITECTURAL CONSULTANT

**ROCKVILLE ROUTE**  
**BETHESDA STATION**  
**MEZZANINE PLAN - MISC. POWER & COMMUNICATION**

SCALE: 1/8" = 1'-0" (1, 2, 4, 8, 16) AND AS NOTED

DRAWING NO. **FALL -E-22**

M334-170

SUBMITTED: *Jerry G. Gress* DATE: 8-15-80

APPROVED: *[Signature]*