WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

STANDARD DRAWINGS

AUGUST 2001

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT ▫ OFFICE OF ENGINEERING & ARCHITECTURE

Index Number	Discipline	Drawing Number	Old File Name	Drawing Name	Up Dated
1	ARCHITECTURAL	ST-A-LT-001	stal1.dwg	F-5, F-5a, L-2, L-2a, S-1, S-2, S-2a AND S-5	08/01
2	ARCHITECTURAL	ST-A-LT-002	stal2.dwg	LIGHTING FIXTURES TYPES S-7, S-8, S-9, AND PENDANT LIGHT	08/01
3	ARCHITECTURAL	ST-A-LT-003	stalt3.dwg	LIGHTING FIXTURES TYPES F-2a, F-4, F-7 AND S-11	08/01
4	ARCHITECTURAL	ST-A-LT-004	stal4.dwg	FIX. F8, F9, F9A, S15, S15A, S16, S16A, S17, S18, S18A, S19, S19A, S20 & S-20a	08/01
5	ARCHITECTURAL	ST-A-LT-005	stalt5.dwg	STANDARD EXTERIOR LIGHTING FIXTURE G-10	08/01
6	ARCHITECTURAL	ST-A-LT-006	stalt6.dwg	STANDARD EXTERIOR LIGHTING FIXTURE G-15	08/01
7	ARCHITECTURAL	ST-A-LT-007	stalt7.dwg	STANDARD EXTERIOR LIGHTING FIXTURE G-25	08/01
8	ARCHITECTURAL	ST-A-LT-008	stalt8.dwg	STANDARD EXTERIOR LIGHTING FIXTURE G-40	08/01
9	ARCHITECTURAL	ST-A-LT-009	stalt9.dwg	STANDARD EXTERIOR REFLECTOR LIGHTING FIXTURE 97G-10	08/01
10	ARCHITECTURAL	ST-A-LT-010	stalt10.dwg	STANDARD EXTERIOR LIGHTING FIXTURE 97G-15	08/01
11	ARCHITECTURAL	ST-A-LT-011	stal11.dwg	STANDARD EXTERIOR LIGHTING FIXTURE 97G-25	08/01
12	ARCHITECTURAL	ST-A-LT-012	stal12.dwg	STANDARD EXTERIOR LIGHTING FIXTURE 97G-40	08/01
13	ARCHITECTURAL	ST-A-PY-001	stapy1.dwg	PYLON A, A-1, A-2, AND B BASE DETAILS	08/01
14	ARCHITECTURAL	ST-A-PY-002	stapy2.dwg	LIGHT FIXTURE BASE DETAILS	08/01
15	ARCHITECTURAL	ST-A-PY-003	STapy3.dwg	PYLON CLADDING DETAILS	08/01
16	ARCHITECTURAL	ST-A-PY-004	STapy4.dwg	PYLON LIGHT FIXTURES	08/01
17	ARCHITECTURAL	ST-A-PY-005	STapy5.dwg	PYLON "D" AND L-5 LIGHT FIXTURE	08/01
18	ARCHITECTURAL	ST-A-SF-005	stasf5.dwg	SINGLE SHELTER PLANS, ELEVATIONS AND SECTIONS	08/01
19	ARCHITECTURAL	ST-A-SF-006	stasf6.dwg	DOUBLE SHELTER PLANS, ELEVATIONS AND SECTIONS	08/01
20	ARCHITECTURAL	ST-A-SF-007	stasf7.dwg	SHELTER SECTIONS AND DETAILS	08/01
21	ARCHITECTURAL	ST-A-SF-008	stasf8.dwg	BACKREST, SECTIONS, WINDSCREEN DETAILS & PARTIAL ELEV.	08/01
22	ARCHITECTURAL	ST-A-SF-009	stasf9.dwg	GRANITE BENCH WITH WINDSCREEN	08/01
23	ARCHITECTURAL	ST-A-SF-010	STASF10.dwg	TELEPHONE ENCLOSURE PLAN, ELEVATIONS, AND SECTIONS	08/01
24	ARCHITECTURAL	ST-A-SF-011	STASF11.dwg	TELEPHONE ENCLOSURE PLAN, ELEVATIONS	08/01
25	ARCHITECTURAL	ST-A-SF-012	STASF12.dwg	MAP CASE DETAILS	08/01
26	ARCHITECTURAL	ST-A-SF-013	STASF13.dwg	ASH RECEPTACLE DETAILS	08/01
27	ARCHITECTURAL	ST-A-SF-014	STASF14.dwg	TRASH RECEPTACLE DETAILS	08/01
28	ARCHITECTURAL	ST-A-SW-001	stasw1.dwg	STATION PAVER TILE DETAILS	08/01
29	ARCHITECTURAL	ST-A-SW-002	stasw2.dwg	DOUBLE-SWING GATE - END OF PLATFORM	08/01
30	ARCHITECTURAL	ST-A-SW-003	stasw3.dwg	PLATFORM EDGE DETAIL	08/01
31	ARCHITECTURAL	ST-A-SW-004	stasw4.dwg	OUTLETS, PLAQUE & MANHOLE	08/01

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32	ARCHITECTURAL	ST-A-SW-005	Stasw5.DWG	FARE COLLECTION AREA ENCLOSURE	08/01
33	CIVIL	ST-C-001	st-c-01.dwg	KEY PLAN OF SYSTEM & GENERAL CONSTRUCTION SITE PLAN SECTION NUMBER	08/01
34	CIVIL	ST-C-002	st-c-02.dwg	METRO HORIZONTAL CURVES	08/01
35	CIVIL	ST-C-003	st-c-3.dwg	SURVEY MONUMENTS SHEET 1 OF 2	08/01
36	CIVIL	ST-C-004	st-c-04.dwg	WMATA RAPID TRANSIT CAR CLEARANCE ENVELOPE	08/01
37	CIVIL	ST-C-013	st-c-13.dwg	TEMPORARY BARRICADES AND FENCES	08/01
38	CIVIL	ST-C-016	st-c-16.dwg	TEMPORARY TREE GUARDS	08/01
39	CIVIL	ST-C-017	st-c-17.dwg	METRO PAVEMENT SECTIONS AND DETAILS	08/01
40	CIVIL	ST-C-018	st-c-18.dwg	METRO PAVEMENT BUS STALL PLANS	08/01
41	CIVIL	ST-C-019	st-c-19.dwg	SURVEY MONUMENTS SHEET 2 OF 2	08/01
42	CIVIL	ST-C-034	st-c-34.dwg	FENCE DETAILS	08/01
43	CIVIL	ST-C-067	st-c-67.dwg	PROJECT IDENTIFICATION SIGN AND FTA PROJECT IDENTIFICATION SIGN	08/01
44	CIVIL	ST-C-072	st-c-72.dwg	JOINT DETAILS FOR CONCRETE PAVEMENT	08/01
45	CIVIL	ST-C-073	st-c-73.dwg	SLOPE PROTECTION DETAILS	08/01
46	CIVIL	ST-C-ADA-001		ADA PARKING DETAILS	08/01
47	COMMUNICATIONS	ST-CM-026	dd-cm-26.dwg	Conduit and Duct Arrangement in Finish Floor Entering Blocked-out Area under Kiosk	08/01
48	COMMUNICATIONS	ST-CM-027	dd-cm-27.dwg	Use of Underfloor Duct under Fare Collection Consoles	08/01
49	COMMUNICATIONS	ST-CM-030	Dd-CM-30.dwg	Typical Communications Conduit Riser Diagram for Passenger Stations	08/01
50	COMMUNICATIONS	ST-CM-034	Dd-CM-34.dwg	Automatic Fare Collection Raceway Riser Diagram	08/01
51	COMMUNICATIONS	ST-CM-036	dd-cm-36.dwg	Typical CCTV Conduit Installations in Above Ground Stations	08/01
52	COMMUNICATIONS	ST-CM-039	Dd-cm-39.dwg	Antenna Conduit and Cable Run in Underground Stations	08/01
53	COMMUNICATIONS	ST-CM-043	dd-cm-43.dwg	Typical CCTV Camera Arrangement in Underground Passenger Stations	08/01
54	COMMUNICATIONS	ST-CM-044	Dd-CM-44.dwg	Typical Fire and Intrusion Alarm System Conduit Riser Diagram	08/01
55	COMMUNICATIONS	ST-CM-045	Dd-CM-45.dwg	Passenger Station FIA System Abbreviations and Legend	08/01
56	COMMUNICATIONS	ST-CM-046	Dd-CM-46.dwg	Passenger Station FIA System Fire Alarm Zone Requirements	08/01
57	COMMUNICATIONS	ST-CM-047	Dd-CM-47.dwg	Passenger Station FIA System Intrusion Alarm Zone Requirements	08/01
58	COMMUNICATIONS	ST-CM-048	Dd-CM-48.dwg	Passenger Station FIA System Typical FIA System Block Diagram	08/01

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59	COMMUNICATIONS	ST-CM-049	Dd-CM-49.dwg	Passenger Station FIA System Typical FIA System Wiring Diagram	08/01
60	COMMUNICATIONS	ST-CM-050	Dd-CM-50.dwg	Passenger Station FIA System Typical FIA System Wiring Diagram Remote Facilities Buildings	08/01
61	COMMUNICATIONS	ST-CM-051	Dd-CM-51.dwg	Passenger Station FIA System Fire Alarm Interface Details Sheet 1 of 5	08/01
62	COMMUNICATIONS	ST-CM-052	Dd-CM-52.dwg	Passenger Station FIA System Fire Alarm Interface Details Sheet 2 of 5	08/01
63	COMMUNICATIONS	ST-CM-053	Dd-CM-53.dwg	Passenger Station FIA System Fire Alarm Interface Details Sheet 3 of 5	08/01
64	COMMUNICATIONS	ST-CM-054	Dd-CM-54.dwg	Passenger Station FIA System Fire Alarm Interface Details Sheet 4 of 5	08/01
65	COMMUNICATIONS	ST-CM-055	Dd-CM-55.dwg	Passenger Station FIA System Fire Alarm Interface Details Sheet 5 of 5	08/01
66	COMMUNICATIONS	ST-CM-056	Dd-CM-56.dwg	Intrusion Alarm Interface Details	08/01
67	COMMUNICATIONS	ST-CM-057	Dd-CM-57.dwg	Passenger Station FIA System AC Power Distribution Equipment Layout	08/01
68	COMMUNICATIONS	ST-CM-058	Dd-CM-58.dwg	Passenger Station FIA System Typical Kiosk Annunciator Panel	08/01
69	COMMUNICATIONS	ST-CM-059	Dd-CM-59.dwg	Passenger Station FIA System Typical Kiosk Data Files for Fire Alarm Zones	08/01
70	COMMUNICATIONS	ST-CM-060	Dd-CM-60.dwg	Passenger Station FIA System Typical Kiosk Data Files for Intrusion Zones	08/01
71	COMMUNICATIONS	ST-CM-061	Dd-CM-61.dwg	Communications Conduit Riser Diagram for Remote Facilities	08/01
72	COMMUNICATIONS	ST-CM-APA-001	COMMCSI-APA-001	TYPICAL APAAS BLOCK DIAGRAM	08/01
73	COMMUNICATIONS	ST-CM-APA-002	COMMCSI-APA-002	TYPICAL KIOSK APAAS CONTROL PANEL LAYOUT	08/01
74	COMMUNICATIONS	ST-CM-APA-003	COMMCSI-APA-003	APAAS/PA INTERFACE UNIT DIAGRAM	08/01
75	COMMUNICATIONS	ST-CM-APA-004	COMMCSI-APA-004	TYPICAL APAAS/PERS DUAL POWER SUPPLIES ASSEMBLY DIAGRAM	08/01
76	COMMUNICATIONS	ST-CM-APA-005	COMMCSI-APA-005	TYPICAL APAAS PATCH PANEL	08/01
77	COMMUNICATIONS	ST-CM-APA-006	COMMCSI-APA-006	APAAS INTERFACE DETAILS	08/01
78	COMMUNICATIONS	ST-CM-APA-007	COMMCSI-APA-007	APAAS/PERS EQUIPMENT RACK LAYOUT	08/01
79	COMMUNICATIONS	ST-CM-CCTV-001	COMMCSI-CCTV-001	TYPICAL BLOCK DIAGRAM	08/01
80	COMMUNICATIONS	ST-CM-CCTV-002	COMMCSI-CCTV-002	DETAILS	08/01
81	COMMUNICATIONS	ST-CM-CTS-001	COMMCSI-CTS-001	TYPICAL CTS BLOCK DIAGRAM FOR OC-1 FIBER OPTIC SYSTEM	08/01
82	COMMUNICATIONS	ST-CM-CTS-002	COMMCSI-CTS-002	TYPICAL CTS BLOCK DIAGRAM FOR OC-3 FIBER OPTIC SYSTEM	08/01
83	COMMUNICATIONS	ST-CM-FIA-001	COMMCSI-FIA-001	TYPICAL FIA SYSTEM BLOCK DIAGRAM	08/01

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84	COMMUNICATIONS	ST-CM-FIA-002	COMMCSI-FIA-002	PICTORIAL WIRING DIAGRAM	08/01
85	COMMUNICATIONS	ST-CM-FIA-003	COMMCSI-FIA-003	TYPICAL FIA SCHEMATIC OF INTERFACES	08/01
86	COMMUNICATIONS	ST-CM-FIA-004	COMMCSI-FIA-004	TYPICAL FIA SCHEMATIC OF FIA INTERFACES	08/01
87	COMMUNICATIONS	ST-CM-FIA-005	COMMCSI-FIA-005	TYPICAL CONFIGURATIONS OF REMOTE ANCILLARY BUILDINGS	08/01
88	COMMUNICATIONS	ST-CM-FIA-006	COMMCSI-FIA-006	TYPICAL FIA DETECTOR CONFIGURATIONS IN FIRE AND INTRUSION ZONES	08/01
89	COMMUNICATIONS	ST-CM-FIA-007	COMMCSI-FIA-007	TYPICAL FIA DETECTOR CONFIGURATIONS IN FIRE AND INTRUSION ALARMS	08/01
90	COMMUNICATIONS	ST-CM-FIA-008	COMMCSI-FIA-008	TYPICAL FIA FAN SHUT DOWN INTERFACE CONFIGURATIONS	08/01
91	COMMUNICATIONS	ST-CM-FIA-009	COMMCSI-FIA-009	TYPICAL FIA FA/FAN SHUT DOWN INTERFACE BOX	08/01
92	COMMUNICATIONS	ST-CM-FIA-010	COMMCSI-FIA-010	TYPICAL FIA DISTRIBUTION FRAME LAYOUT	08/01
93	COMMUNICATIONS	ST-CM-FIA-011	COMMCSI-FIA-011	TYPICAL FIA DUCT DETECTOR INSTALLATION DETAILS	08/01
94	COMMUNICATIONS	ST-CM-FIA-012	COMMCSI-FIA-012	TEMPORARY FIA SYSTEM	08/01
95	COMMUNICATIONS	ST-CM-FOS-001	COMMCSI-FOS-001	TYPICAL FIBER OPTIC SYSTEM OC-1 BLOCK DIAGRAM	08/01
96	COMMUNICATIONS	ST-CM-FOS-002	COMMCSI-FOS-002	TYPICAL FIBER OPTIC SYSTEM OC-3 BLOCK DIAGRAM	08/01
97	COMMUNICATIONS	ST-CM-GEN-017	COMMCSI-GEN-017	TYPICAL EQUIPMENT RACKS & CABINET GROUNDING DETAILS	08/01
98	COMMUNICATIONS	ST-CM-GEN-018	COMMCSI-GEN-018	TYPICAL SHIELD AND GROUND SCHEME FOR COMMUNICATIONS CABLES	08/01
99	COMMUNICATIONS	ST-CM-GEN-019	COMMCSI-GEN-019	TYPICAL PASSENGER STATION MDF CABINET	08/01
100	COMMUNICATIONS	ST-CM-GETS-001	COMMCSI-GETS-001	TYPICAL GETS BLOCK DIAGRAM	08/01
101	COMMUNICATIONS	ST-CM-GETS-002	COMMCSI-GETS-002	TYPICAL GETS TELEPHONE INSTALLATION	08/01
102	COMMUNICATIONS	ST-CM-GETS-003	COMMCSI-GETS-003	GETS TELEPHONE RACK LAYOUT	08/01
103	COMMUNICATIONS	ST-CM-K-002	NEW DRAWING	KISK PLANS AT BASE, FLOOR, CEILING AND ROOF	08/01
104	COMMUNICATIONS	ST-CM-K-003	NEW DRAWING	KIOSK ELEVATIONS	08/01
105	COMMUNICATIONS	ST-CM-K-004	NEW DRAWING	KIOSK SECTIONS AND DETAILS	08/01
106	COMMUNICATIONS	ST-CM-K-005	NEW DRAWING	KIOSK DETAILS	08/01
107	COMMUNICATIONS	ST-CM-K-006	NEW DRAWING	KIOSK FLOOR PLAN SECTIONS DETAILS AND STRUCTURAL NOTES	08/01
108	COMMUNICATIONS	ST-CM-K-007	NEW DRAWING	KIOSK FLOOR AND ROOF FRAMING PLANS ELEVATIONS AND SECTIONS	08/01
109	COMMUNICATIONS	ST-CM-K-008	NEW DRAWING	KIOSK FLOOR PLAN ELEVATION SECTIONS AND DETAILS	08/01

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110	COMMUNICATIONS	ST-CM-K-009	NEW DRAWING	AIR CONDITIONING AND HEATING PLANS AND SECTIONS	08/01
111	COMMUNICATIONS	ST-CM-K-010	NEW DRAWING	MECHANICAL EQUIPMENT SCHEDULES DETAIL AND GENERAL NOTES	08/01
112	COMMUNICATIONS	ST-CM-K-011	NEW DRAWING	KIOSK ABBREVIATIONS LEGEND AND NOTES	08/01
113	COMMUNICATIONS	ST-CM-K-012	NEW DRAWING	KIOSK SINGLE LINE DIAGRAMS PANELS & SECTION	08/01
114	COMMUNICATIONS	ST-CM-K-013	NEW DRAWING	KIOSK RACE WAY FOR COMMUNICATION AND POWER CABLES	08/01
115	COMMUNICATIONS	ST-CM-K-014	NEW DRAWING	KIOSK POWER & LIGHTING PLANS & SECTION	08/01
116	COMMUNICATIONS	ST-CM-K-016	NEW DRAWING	KIOSK FEEDER SCHEDULES AND WIRING DIAGRAM	08/01
117	COMMUNICATIONS	ST-CM-K-017	NEW DRAWING	KIOSK GROUNDING DIAGRAM	08/01
118	COMMUNICATIONS	ST-CM-KCS-001	COMMCSI-KCS-001	KIOSK PANEL CONFIGURATION	08/01
119	COMMUNICATIONS	ST-CM-KCS-002	COMMCSI-KCS-002	KIOSK PANEL CONFIGURATION	08/01
120	COMMUNICATIONS	ST-CM-KCS-003	COMMCSI-KCS-003	DIMENSIONS	08/01
121	COMMUNICATIONS	ST-CM-KCS-004	COMMCSI-KCS-004	DIMENSIONS	08/01
122	COMMUNICATIONS	ST-CM-KCS-005	COMMCSI-KCS-005	PASSENGER/ATTENDANT INTERPHONE SPEAKER LOCATIONS	08/01
123	COMMUNICATIONS	ST-CM-KCS-006	COMMCSI-KCS-006	CEILING PLAN	08/01
124	COMMUNICATIONS	ST-CM-KCS-007	COMMCSI-KCS-007	TYPICAL EXAMPLE OF KIOSK DATA FILES	08/01
125	COMMUNICATIONS	ST-CM-KCS-008	COMMCSI-KCS-008	CABLE TERMINATION RACK ASSIGNMENTS	08/01
126	COMMUNICATIONS	ST-CM-KCS-009	COMMCSI-KCS-009	EMERGENCY COMMUNICATIONS TERMINAL PANEL	08/01
127	COMMUNICATIONS	ST-CM-KCS-010	COMMCSI-KCS-010	ESCALATOR STATUS DISPLAY PANEL	08/01
128	COMMUNICATIONS	ST-CM-KCS-011	COMMCSI-KCS-011	TYPICAL ESCALATOR DISPLAY PANEL	08/01
129	COMMUNICATIONS	ST-CM-KCS-012	COMMCSI-KCS-012	TYPICAL ESCALATOR WIRING DIAGRAM	08/01
130	COMMUNICATIONS	ST-CM-KCS-013	COMMCSI-KCS-013	TYPICAL EXAMPLE OF KIOSK DATA FILES	08/01
131	COMMUNICATIONS	ST-CM-KCS-014	COMMCSI-KCS-014	TYPICAL EXAMPLE OF KIOSK DATA FILES	08/01
132	COMMUNICATIONS	ST-CM-KCS-015	COMMCSI-KCS-015	TYPICAL EXAMPLE OF KIOSK DATA FILES	08/01
133	COMMUNICATIONS	ST-CM-KCS-016	COMMCSI-KCS-016	TYPICAL EXAMPLE OF KIOSK DATA FILES	08/01
134	COMMUNICATIONS	ST-CM-KCS-017	COMMCSI-KCS-017	TYPICAL EXAMPLE OF KIOSK DATA FILES	08/01
135	COMMUNICATIONS	ST-CM-KCS-018	COMMCSI-KCS-018	TYPICAL EXAMPLE OF KIOSK DATA FILES	08/01
136	COMMUNICATIONS	ST-CM-KCS-019	COMMCSI-KCS-019	TYPICAL EXAMPLE OF KIOSK DATA FILES	08/01
137	COMMUNICATIONS	ST-CM-KCS-020	COMMCSI-KCS-020	TYPICAL EXAMPLE OF KIOSK DATA FILES	08/01
138	COMMUNICATIONS	ST-CM-KCS-021	COMMCSI-KCS-021	TYPICAL EXAMPLE OF KIOSK DATA FILES	08/01

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139	COMMUNICATIONS	ST-CM-KCS-022	COMMCSI-KCS-022	TYPICAL EXAMPLE OF KIOSK DATA FILES	08/01
140	COMMUNICATIONS	ST-CM-KCS-023	COMMCSI-KCS-023	TYPICAL EXAMPLE OF KIOSK DATA FILES	08/01
141a	COMMUNICATIONS	ST-CM-KPI-002		INDEX OF DRAWINGS	08/01
141b	COMMUNICATIONS	ST-CM-KPI-003		INDEX OF DRAWINGS	08/01
141c	COMMUNICATIONS	ST-CM-KPI-004	COMMCSI-KPI-004	GENERAL NOTES, SYMBOLS, ABBREVIATION	08/01
142	COMMUNICATIONS	ST-CM-MRS-001	COMMCSI-MRS-001	TYPICAL END - OF -LINE DISPATCHER MRS ABOVE GROUND INSTALLATION	08/01
143	COMMUNICATIONS	ST-CM-MRS-002	COMMCSI-MRS-002	TYPICAL END - OF -LINE DISPATCHER MRS BELOW GROUND INSTALLATION	08/01
144	COMMUNICATIONS	ST-CM-PA-001	COMMCSI-PA-001	SYSTEM DIAGRAM SH. 1	08/01
145	COMMUNICATIONS	ST-CM-PA-002	COMMCSI-PA-002	SYSTEM DIAGRAM SH. 2	08/01
146	COMMUNICATIONS	ST-CM-PA-003	COMMCSI-PA-003	SYSTEM DIAGRAM SH. 3	08/01
147	COMMUNICATIONS	ST-CM-PERS-001	COMMCSI-PERS-001	TYPICAL BLOCK DIAGRAM	08/01
148	COMMUNICATIONS	ST-CM-PERS-002	COMMCSI-PERS-002	KIOSK PERS CONTROL PANEL LAYOUT	08/01
149	COMMUNICATIONS	ST-CM-PERS-003	COMMCSI-PERS-003	KIOSK PERS CONTROL PANEL RESET WIRING DIAGRAM	08/01
150	COMMUNICATIONS	ST-CM-PERS-004	COMMCSI-PERS-004	TYPICAL CALL STATION PANEL	08/01
151	COMMUNICATIONS	ST-CM-PERS-005	COMMCSI-PERS-005	TYPICAL CALL STATION PANEL MOUNTING BRACKET	08/01
152	COMMUNICATIONS	ST-CM-PERS-006	COMMCSI-PERS-006	TYPICAL CALL STATION PANEL SCHEMATIC	08/01
153	COMMUNICATIONS	ST-CM-PERS-007	COMMCSI-PERS-007	TYPICAL CALL STATION PANEL INSTALLATION DETAILS	08/01
154	COMMUNICATIONS	ST-CM-PERS-008	COMMCSI-PERS-008	PERS CALL STATION PANEL INSTALLATION DETAILS	08/01
155	COMMUNICATIONS	ST-CM-PERS-009	COMMCSI-PERS-009	PERS/APAAS STATION EQUIPMENT ROOM RACK LAYOUT	08/01
156	COMMUNICATIONS	ST-CM-PERS-010	COMMCSI-PERS-010	PAS/MUTING CIRCUITRY	08/01
157	COMMUNICATIONS	ST-CM-PWR-001	COMMCSI-PWR-001	TYPICAL COMMUNICATIONS EQUIPMENT POWER DISTRIBUTION	08/01
158	COMMUNICATIONS	ST-CM-PWR-002	COMMCSI-PWR-002	TYPICAL COMMUNICATION EQUIPMENT ROOM POWER CIRCUIT DETAILS	08/01
159	COMMUNICATIONS	ST-CM-PWR-003	COMMCSI-PWR-003	TYPICAL EQUIPMENT RACKS AND CABINET AC POWER DETAILS	08/01
160	COMMUNICATIONS	ST-CM-PWR-004	COMMCSI-PWR-004	TYPICAL EQUIPMENT RACKS AND CABINET AC POWER DETAILS	08/01
161	COMMUNICATIONS	ST-CM-PWR-005	COMMCSI-PWR-005	TYPICAL KIOSK POWER DISTRIBUTION	08/01
162	COMMUNICATIONS	ST-CM-PWR-006	COMMCSI-PWR-006	TYPICAL KIOSK POWER CIRCUIT DETAILS	08/01
163	COMMUNICATIONS	ST-CM-PWR-007	COMMCSI-PWR-007	-48VDC POWER RACK LAYOUT	08/01
164	COMMUNICATIONS	ST-CM-PWR-008	COMMCSI-PWR-008	TYPICAL -48VDC POWER DISTRIBUTION COMMUNICATIONS EQUIPMENT ROOM	08/01

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165	COMMUNICATIONS	ST-CM-TEL-001	COMMCSI-TEL-001	TYPICAL TELEPHONE SYSTEM BLOCK DIAGRAM	08/01
166	COMMUNICATIONS	ST-CM-TEL-002	COMMCSI-TEL-002	TYPICAL CABLING DETAILS FOR TELEPHONE INSTRUMENTS ALONG RIGHT-OF-WAY	08/01
167	COMMUNICATIONS	ST-CM-TEL-003	COMMCSI-TEL-003	TYPICAL WALL MOUNTED TELEPHONE AND BOOTH INSTALLATION DETAILS	08/01
168	COMMUNICATIONS	ST-CM-TEL-004	COMMCSI-TEL-004	TYPICAL AUTOMATIC ENERGY MANAGEMENT SYSTEM (AEMS)	08/01
169	COMMUNICATIONS	ST-CM-TEL-005	COMMCSI-TEL-005	KEY TELEPHONE EQUIPMENT RACK LAYOUT	08/01
170	ELECTRICAL	ST-E-014	St-e-14r.dwg	TUNNEL LIGHT FIXTURE TYPE 4/ TYPE 4A	08/01
171	ELECTRICAL	ST-E-015	St-e-15.dwg	MISCELLANEOUS DETAILS	08/01
172	ELECTRICAL	ST-E-026	St-e-26.dwg	LIGHT FIXTURE TYPES X, 7A, 7B, AND 8	08/01
173	ELECTRICAL	ST-E-301	st-e-301.dwg	CATHODIC PROTECTION DETAILS SHEET 1 OF 2	08/01
174	ELECTRICAL	ST-E-302	St-e-302.dwg	CATHODIC PROTECTION DETAILS SHEET 2 OF 2	08/01
175	ELECTRICAL	ST-E-303	St-e-303.dwg	CORROSION CONTROL SYSTEM TESTING DETAILS SHEET 1 OF 2	08/01
176	ELECTRICAL	ST-E-304	St-e-304.dwg	CORROSION CONTROL SYSTEM TESTING DETAILS SHEET 2 OF 2	08/01
177	ELEVATOR	ST-ELEV-001	SD-ELEV-01	HYDRAULIC ELEVATOR INSTALLATION CATHODIC PROTECTION OF HYDRAULIC CYLINDERS	08/01
178	ELEVATOR	ST-ELEV-002	SD-ELEV-02	HYDRAULIC ELEVATOR INSTALLATIONS ELEVATOR ELECTRICAL RACEWAY AREAS	08/01
179	ELEVATOR	ST-ELEV-003	SD-ELEV-03	HYDRAULIC ELEVATOR INSTALLATIONS GROUNDING DIAGRAM	08/01
180	ELEVATOR	ST-ELEV-004	SS-ELEV-4	HYDRAULIC ELEVATOR INSTALLATIONS AT GRADE STATION (MEZZANINE TO PED. BRIDGE)	08/01
181	ELEVATOR	ST-ELEV-005	SS-ELEV-5	HYDRAULIC ELEVATOR INSTALLATIONS AT GRADE STATION (MEZZANINE TO PLATFORM)	08/01
182	ELEVATOR	ST-ELEV-006	SS-ELEV-6	HYDRAULIC ELEVATOR INSTALLATIONS AERIAL STATION (MEZZANINE TO PLATFORM)	08/01
183	ELEVATOR	ST-ELEV-007	SS-ELEV-7	HYDRAULIC ELEVATOR INSTALLATIONS FEEDER SCHEDULE	08/01
184	ELEVATOR	ST-ELEV-008	SS-ELEV-8	ELECTRIC ELEVATOR INSTALLATIONS	08/01

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185	ELEVATOR	ST-ELEV-009	SS-ELEV-01	HYDRAULIC ELEVATOR INSTALLATIONS ELEVATOR PLANS AND SECTIONS-PLATFORM (GLASS/STEEL FRAME HOISTWAY) UNDERGROUND STATION	08/01
186	ELEVATOR	ST-ELEV-010	SS-ELEV-02	HYDRAULIC ELEVATOR INSTALLATIONS ELEVATOR PLANS INSTALLATIONS ELEVATOR PLANS AND SECTIONS- SURFACE (CONCRETE HOISTWAY-SINGLE DOOR) UNDERGROUND STATIONS	08/01
187	ELEVATOR	ST-ELEV-011	SS-ELEV-02	HYDRAULIC ELEVATOR INSTALLATIONS ELEVATOR PLANS AND SECTIONS-SURFACE (CONCRETE HOISTWAY-TWO DOOR) UNDERGROUND STATIONS	08/01
188	ESCALATOR	ST-ESC-001	SS-ESC-01	UNDERGROUND STATION ESCALATOR STRUCTURAL WELLWAY TABULATION	08/01
189	ESCALATOR	ST-ESC-002	SS-ESC-02	ESCALATOR FEEDER SCHEDULE	08/01
190	ESCALATOR	ST-ESC-003	SS-ESC-03	AT GRADE STATION ESCALATOR STRUCTURAL WELLWAY TABULATION	08/01
191	ESCALATOR	ST-ESC-004	SS-ESC-04	AERIAL STATION ESCALATOR STRUCTURAL WELLWAY TABULATION	08/01
192	ESCALATOR	ST-ESC-005	SD-ESC-02	ESCALATOR GROUNDING DIAGRAM	08/01
193	ESCALATOR	ST-ESC-006	SD-ESC-01	ESCALATOR LOADS AND DETAILS	08/01
194	LANDSCAPING	ST-LA-001	stla1.dwg	TREE AND SHRUB PLANTING	08/01
195	LANDSCAPING	ST-LA-002	stla2.dwg	PLANTING	08/01
196	LANDSCAPING	ST-LA-003	stla3.dwg	ROUND CAST-IRON TREE GRATE, PEDESTRIAN BARRIER	08/01
197	LANDSCAPING	ST-LA-004	stla4.dwg	SQUARE CAST-IRON TREE GRATE AND GUARD	08/01
198	MECHANICAL	ST-M-011	st-m-011.dwg	SERVICE DETAILS	08/01
199	MECHANICAL	ST-M-012	st-m-012.dwg	STAIRS, LADDERS, AND HANDRAILS	08/01
200	MECHANICAL	ST-M-050	st-m-050.dwg	MECHANICAL DETAILS	08/01
201	MECHANICAL	ST-M-083	st-m-083.dwg	AIR CONDITIONING PYLON SHEET 1	08/01
202	MECHANICAL	ST-M-090	st-m-90.dwg	AIR CONDITIONING PYLON SHEET 3 AND THERMOSTAT MOUNTING DETAILS	08/01
203	MECHANICAL	ST-M-100	st-m-100.dwg	MAINTENANCE HATCH FOR ESCALATORS AND ELEVATOR MACHINE ROOM 1	08/01
204	MECHANICAL	ST-M-101	st-m-101.dwg	MAINTENANCE HATCH FOR ESCALATORS AND ELEVATOR MACHINE ROOM 2	08/01
205	MECHANICAL	ST-M-102	st-m-102.dwg	CHILLED WATER PLANT DETAILS	08/01

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206	MECHANICAL	ST-M-118	St-m-118.dwg	STANDPIPE IDENTIFICATION PLATE	08/01
207	MECHANICAL	ST-M-119	ST-M-119.dwg	RAILING GATE FOR CART STORAGE AREA	08/01
208	MECHANICAL	ST-M-122	St-m-122.dwg	TYPICAL CHILLED WATER PIPING CONDUIT DETAILS	08/01
209	MECHANICAL	ST-M-130	st-m-130.dwg	ANGLE HOSE VALVE IDENTIFICATION & SIAMESE CONNECTION IDENTIFICATION	08/01
210	MECHANICAL	ST-M-134	st-m-134.dwg	CHILLED WATER PIPE HANGER SECTIONS AND DETAILS	08/01
211	MECHANICAL	ST-M-137	st-m-137.dwg	FRAMES AND GRATINGS SHEET 1 OF 2	08/01
212	MECHANICAL	ST-M-138	st-m-138.dwg	FRAMES AND GRATINGS SHEET 2 OF 2	08/01
213	MECHANICAL	ST-M-139	st-m-139.dwg	STANDARD PNEUMATIC CONTROL & FLOW DIAGRAMS, TUNNEL VENTILATION	08/01
214	MECHANICAL	ST-M-140	St-m-140.dwg	STANDARD PNEUMATIC CONTROL & FLOW DIAGRAMS, CHILLED WATER	08/01
215	MECHANICAL	ST-M-141	st-m-141.dwg	TYPICAL INSTALLATIONS OF HEATING TAPE FOR PIPING	08/01
216	MECHANICAL	ST-M-142	st-m-142.dwg	CONTROL DIAGRAM- SUBWAY VENTILATION FANS	08/01
217	MECHANICAL	ST-M-143	st-m-143.dwg	REMOTE SURVEILLANCE & CONTROL DIAGRAM- PLATFORM EXHAUST FANS	08/01
218	MECHANICAL	ST-M-145	St-m-145.dwg	HATCH FRAME OPENING & STAIR FOR EMERGENCY ACCESS & MAINTENANCE	08/01
219	MECHANICAL	ST-M-147	st-m-147.dwg	ACCESS HATCH FOR STAIRS - 250 PSF LOADING	08/01
220	MECHANICAL	ST-M-148	St-m-148R2.dwg	STANDARD CONTROL AND FLOW DIAGRAMS JET FANS	08/01
221	MECHANICAL	ST-M-149	St-m-149.dwg	REMOTE SURVEILLANCE & CONTROL DIAGRAM- DOME EXHAUST FANS	08/01
222	MECHANICAL	ST-M-150	st-m-150.dwg	AIR CONDITIONING PYLON SHEET 2	08/01
223	SOILS	ST-SO-001	st-so-1.dwg	PIEZOMETER DETAILS	08/01
224	STRUCTURAL	ST-S-001	sts1.dwg	CUT AND COVER SECTION- TYPICAL DETAILS AND REINFORCEMENT	08/01
225	STRUCTURAL	ST-S-002	sts2.dwg	EARTH TUNNEL- TYPICAL DETAILS AND REINFORCEMENT	08/01
226	STRUCTURAL	ST-S-004	St-s-004.dwg	DRAINAGE & VENT STRUCTURES- TYPICAL DETAILS AND REINFORCEMENT	08/01
227	STRUCTURAL	ST-S-007	st-s-7.dwg	ELECTRICAL BONDING OF REINFORCING STEEL, SECTIONS AND DETAILS SHEET 1/2	08/01
228	STRUCTURAL	ST-S-009	Sts9.dwg	CRITERIA FOR THE DESIGN OF TEMPORARY STRUCTURES	08/01

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229	STRUCTURAL	ST-S-021	st-s-21.dwg	ELECTRICAL BONDING OF REINFORCING STEEL, SECTIONS AND DETAILS SHEET 2/2	08/01
230	STRUCTURAL	ST-S-022	st-s-22.dwg	TYPICAL ELECTRICAL BONDING FOR STRUCTURES	08/01
231	STRUCTURAL	ST-S-023	st-s-23.dwg	ELECTRICAL BONDING DETAILS- TYPICAL POST-TENSIONED GIRDERS	08/01
232	TRACKWORK	ST-TW-001	SS-TW-1	TRACK CHART SHEET 1 OF 2	08/01
233	TRACKWORK	ST-TW-002	ST-TW-2	DIRECT FIXATION FASTENER DETAILS AND ANCHOR BOLT DETAIL	08/01
234	TRACKWORK	ST-TW-003	ST-TW-3	MISCELLANEOUS JOINT AND GROUT PAD REINFORCING DETAILS	08/01
235	TRACKWORK	ST-TW-005	ST-TW-5	EMERGENCY GUARD RAIL;DETAIL 2 OF 2	08/01
236	TRACKWORK	ST-TW-006	ST-TW-6	FIXATION/BALLASTED TRACK	08/01
237	TRACKWORK	ST-TW-RR-001	ST-TWRR-1	RAIL/RUNNING RAIL INSULATED JOINT DETAILS, BALLASTED TRACK	08/01
238	TRACKWORK	ST-TW-RR-002	ST-TWRR-2	RESTRAINING RAIL/RUNNING RAIL DIRECT FIXATION DETAILS	08/01
239	TRACKWORK	ST-TW-RR-005	ST-TWRR-5	LUBRICATOR LOCATION AT GRADE	08/01
240	TRACKWORK	ST-TW-RR-020	SS-TWRR-20	RESTRAINING RAILS AND LUBRICATORS E1 AND E2	08/01
241	TRACKWORK	ST-TW-RR-021	SS-TWRR-21	RESTRAINING RAILS AND LUBRICATORS E3 AND E4	08/01
242	TRACTION POWER	ST-TP-SSI-001	SS-SSI-01	13.8KV ABOVE GROUND REMOTE TPS CONDUIT AND CABLE TRAY PLAN	08/01
243	TRACTION POWER	ST-TP-SSI-002	SS-SSI-02	13.8KV ABOVE GROUND REMOTE TPS GROUNDING PLAN	08/01
244	TRACTION POWER	ST-TP-SSI-003	SS-SSI-03	13.8KV ABOVE GROUND REMOTE TPS SECTIONS	08/01
245	TRACTION POWER	ST-TP-SSI-004	SS-SSI-04	13.8KV ABOVE GROUND REMOTE TPS MISCELLANEOUS DETAILS	08/01
246	TRACTION POWER	ST-TP-SSI-005	SS-SSI-05	13.8KV ABOVE GROUND REMOTE TPS CABLE SCHEDULE - SHEET 1	08/01
247	TRACTION POWER	ST-TP-SSI-006	SS-SSI-06	13.8KV ABOVE GROUND REMOTE TPS CABLE SCHEDULE - SHEET 2	08/01
248	TRACTION POWER	ST-TP-SSI-007	SS-SSI-07	13.8KV ABOVE GROUND REMOTE TPS CABLE SCHEDULE - SHEET 3	08/01
249	TRACTION POWER	ST-TP-SSI-008	SS-SSI-08	13.8KV ABOVE GROUND REMOTE TPS DTS INTERCONNECTION	08/01
250	TRACTION POWER	ST-TP-SSI-009	SS-SSI-09	13.8KV ABOVE GROUND IN-LINE(PS) TPS CONDUIT AND CABLE PLAN	08/01
251	TRACTION POWER	ST-TP-SSI-010	SS-SSI-10	13.8KV ABOVE GROUND IN-LINE(PS) TPS GROUNDING PLAN	08/01

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252	TRACTION POWER	ST-TP-SSI-011	SS-SSI-11	SECTIONS13.8KV ABOVE GROUND IN-LINE(PS) TPS	08/01
253	TRACTION POWER	ST-TP-SSI-012	SS-SSI-12	13.8KV ABOVE GROUND IN-LINE(PS) TPS MISCELLANEOUS	08/01
254	TRACTION POWER	ST-TP-SSI-013	SS-SSI-13	13.8KV BELOW GROUND REMOTE TPS CONDUIT AND CABLE TRAY PLAN	08/01
255	TRACTION POWER	ST-TP-SSI-014	SS-SSI-14	13.8KV BELOW GROUND REMOTE TPS GROUNDING PLAN	08/01
256	TRACTION POWER	ST-TP-SSI-015	SS-SSI-15	13.8KV BELOW GROUND REMOTE TPS SECTIONS	08/01
257	TRACTION POWER	ST-TP-SSI-016	SS-SSI-16	13.8KV BELOW GROUND REMOTE TPS MISCELLANEOUS DETAILS	08/01
258	TRACTION POWER	ST-TP-SSI-017	SS-SSI-17	34.5KV ABOVE GROUND REMOTE TPS CONDUIT & CABLE TRAY	08/01
259	TRACTION POWER	ST-TP-SSI-018	SS-SSI-18	34.5KV ABOVE GROUND REMOTE TPS GROUNDING AND DETAILS	08/01
260	TRACTION POWER	ST-TP-SSI-019	SS-SSI-19	34.5KV ABOVE GROUND REMOTE TPS UPS, PANEL SCHEDULES AND DETAILS	08/01
261	TRACTION POWER	ST-TP-SSI-020	SS-SSI-20	EMERGENCY TRIP SWITCH LAYOUT	08/01
262	TRACTION POWER	ST-TP-SSI-021	SS-SSI-21	EMERGENCY TRIP SWITCH LAYOUT DIAGRAMS	08/01
263	TRACTION POWER	ST-TP-SSI-022	SS-SSI-22	DETAILS	08/01
264	TRACTION POWER	ST-TP-SSI-023	SS-SSI-23	CONTACT RAIL CONTACT RAIL & CONDUIT ARRANGEMENT NO. 8 DOUBLE CROSSOVER	08/01
265	TRACTION POWER	ST-TP-SSI-024	SS-SSI-24	CONTACT RAIL CONTACT RAIL & CONDUIT ARRANGEMENT NO. 10 DOUBLE CROSSOVER	08/01
266	TRACTION POWER	ST-TP-SSI-025	SS-SSI-25	CONTACT RAIL CONTACT RAIL & CONDUIT ARRANGEMENT NO. 10 SINGLE CROSSOVER	08/01
267	TRACTION POWER	ST-TP-SSI-026	SS-SSI-26	CONTACT RAIL HEATING PLAN SHEET-1	08/01
268	TRACTION POWER	ST-TP-SSI-027	SS-SSI-27	CONTACT RAIL HEATING PLAN SHEET-2	08/01
269	TRACTION POWER	ST-TP-SSI-028	SS-SSI-28	CONTACT RAIL HEATING CONTACT RAIL HEATER SCHEDULE	08/01
270	TRACTION POWER	ST-TP-SSI-029	SS-SSI-29	CONTACT RAIL HEATING ABOVE GROUND REMOTE TPS ZONE CONTROL PANEL ZONE CONTROL PANEL LOCATION & WIRING	08/01
271	TRACTION POWER	ST-TP-SSI-030	SS-SSI-30	CONTACT RAIL HEATING ABOVE GROUND IN-LINE(PS) TPS ZONE CONTROL ZONE CONTROL PANEL LOCATION & WIRING	08/01

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272	TRACTION POWER	ST-TP-SSI-031	SS-SSI-31	CONTACT RAIL HEATING YARD TRACK SIDE HEATER & MASTER CONTROL PANEL SCHEMATIC	08/01
273	TRACTION POWER	ST-TP-SSI-032	SS-SSI-32	AEMS RTU DETAILS	08/01
274	TRAIN CONTROL	ST-TC-014	Dd-tc-14.dwg	Typical Impedance Bond Installation - Aerial Structures	08/01
275	TRAIN CONTROL	ST-TC-019	dd-tc-19.dwg	Switch and Lock Movement Direct Fixation Track for Numbers 8, 10, and 15 Turnouts	08/01
276	TRAIN CONTROL	ST-TC-033	Dd-tc-33.dwg	Typical Train Control Conduit Riser Diagram for Passenger Train	08/01
277	TRAIN CONTROL	ST-TC-037	Dd-tc-37.dwg	Train Control Conduit Riser Diagram for Remote Facilities	08/01
278	TRAIN CONTROL	ST-TC-040	dd-tc-40.dwg	Switch Machine Clearance and Tunnel Conduit Requirements	08/01
279	TRAIN CONTROL	ST-TC-041	Dd-tc-41.dwg	Train Control Conduits - At Large	08/01
280	TRAIN CONTROL	ST-TC-042	dd-tc-42.dwg	Conduit Requirements for Turnouts At-Grade	08/01
281	TRAIN CONTROL	ST-TC-A5-C-001	ATCCSIA5-C-001	PLATFORM TRACK REPEATER CIRCUITS	08/01
282	TRAIN CONTROL	ST-TC-A5-C-003	ATCCSIA5-C-003	SPEED COMMAND HD LINE CIRCUITS-TRACK 1	08/01
283	TRAIN CONTROL	ST-TC-A5-C-004	ATCCSIA5-C-004	SPEED COMMAND HD LINE CIRCUITS-TRACK 2	08/01
284	TRAIN CONTROL	ST-TC-A5-C-005	ATCCSIA5-C-005	LINE TRACK REPEATER DECODE CIRCUITS- TRACK 1	08/01
285	TRAIN CONTROL	ST-TC-A5-C-006	ATCCSIA5-C-006	LINE TRACK REPEATER DECODE CIRCUITS- TRACK 2	08/01
286	TRAIN CONTROL	ST-TC-A5-C-007	ATCCSIA5-C-007	TRAFFIC INITIATION & CONTROL CIRCUITS-TRACKS 1& 2	08/01
287	TRAIN CONTROL	ST-TC-A5-C-009	ATCCSIA5-C-009	LINE REPEATER CIRCUITS	08/01
288	TRAIN CONTROL	ST-TC-A5-G-001	ATCCSIA5-G-001	CLEVELAND PARK TCR AREA EXAMPLE LOCATION A05	08/01
289	TRAIN CONTROL	ST-TC-A5-S-005	ATCCSIA5-S-005	SPEED LIMIT COMMAND CIRCUIT A1-161-163 QR	08/01
290	TRAIN CONTROL	ST-TC-A5-S-024	ATCCSIA5-S-024	BRIDGING RECEIVER TRACK CIRCUITS A1-165,A1-168R & A1-170 QR	08/01
291	TRAIN CONTROL	ST-TC-A6-G-001	ATCCSIA6-G-001	VAN NESS-UDC TCR AREA EXAMPLE LOCATION A06	08/01
292	TRAIN CONTROL	ST-TC-A6-G-007	ATCCSIA6-G-007	ATP SPEED COMMANDS CONTROL LINE DIAGRAMS-NORMAL DIRECTION	08/01
293	TRAIN CONTROL	ST-TC-A6-G-008	ATCCSIA6-G-008	ATP SPEED COMMANDS CONTROL LINE DIAGRAMS-REVERSE DIRECTION	08/01
294	TRAIN CONTROL	ST-TC-A6-S-002	ATCCSIA6-S-002	SPEED LIMIT COMMAND CIRCUIT A1-179-184 QR	08/01
295	TRAIN CONTROL	ST-TC-A6-S-004	ATCCSIA6-S-004	SPEED LIMIT COMMAND CIRCUIT A1-187-190 QR	08/01
296	TRAIN CONTROL	ST-TC-A6-S-005	ATCCSIA6-S-005	SPEED LIMIT COMMAND CIRCUIT A1-190R-3NA QR	08/01
297	TRAIN CONTROL	ST-TC-A6-S-006	ATCCSIA6-S-006	SPEED LIMIT COMMAND CIRCUIT A1-3RA-1NA QR	08/01

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298	TRAIN CONTROL	ST-TC-A6-S-007	ATCCSIA6-S-007	SPEED LIMIT COMMAND CIRCUIT A1-1RA-197 QR	08/01
299	TRAIN CONTROL	ST-TC-C-001	ATCCSI-C-001	TITLE SHEET -TYPICAL CIRCUITS-SYSTEMWIDE	08/01
300	TRAIN CONTROL	ST-TC-C-002	ATCCSI-C-002	TYPICAL PLATFORM EDEGELIGHT CONTROL CIRCUITS SHEET 1 OF 2	08/01
301	TRAIN CONTROL	ST-TC-C-003	ATCCSI-C-003	TYPICAL PLATFORM EDEGELIGHT CONTROL CIRCUITS SHEET 2 OF 2	08/01
302	TRAIN CONTROL	ST-TC-C-004	ATCCSI-C-004	TYPICAL PROGRAM STOP CONTROL CIRCUITS AND TIME PULSE INPUTS	08/01
303	TRAIN CONTROL	ST-TC-C-005	ATCCSI-C-005	MARKER CONTROL CIRCUITS	08/01
304	TRAIN CONTROL	ST-TC-C-006	ATCCSI-C-006	CONTROL CIRCUITS (EXCEPT TAIL-TRACK TERMINALS)	08/01
305	TRAIN CONTROL	ST-TC-C-008	ATCCSI-C-008	TYPICAL DOOR AND DWELL CONTROL CIRCUITS (TAIL-TRACK TERMINALS-TRACK 1)	08/01
306	TRAIN CONTROL	ST-TC-C-009	ATCCSI-C-009	TYPICAL DOOR AND DWELL CONTROL CIRCUITS (TAIL-TRACK TERMINALS-TRACK 2)	08/01
307	TRAIN CONTROL	ST-TC-C-011	ATCCSI-C-011	TYPICAL NEXT SIGN CONTROL CIRCUITS (TERMINALS)	08/01
308	TRAIN CONTROL	ST-TC-C-016	ATCCSI-C-016	TYPICAL TWC FLYBY TRANSMITTER CIRCUITS	08/01
309	TRAIN CONTROL	ST-TC-C-018	ATCCSI-C-018	TYPICAL TWC XMTR-RCVR INTERFACE CIRCUITS	08/01
310	TRAIN CONTROL	ST-TC-C-020	ATCCSI-C-020	TYPICAL TWC SELECTION CIRCUITS- SYSTEMWIDE	08/01
311	TRAIN CONTROL	ST-TC-C-022	ATCCSI-C-022	TYPICAL TWC SELECTION CIRCUITS- (TK1 INBOUND)	08/01
312	TRAIN CONTROL	ST-TC-C-023	ATCCSI-C-023	TYPICAL TEMPORARY SPEED RESTRICTION ALARM CIRCUITS	08/01
313	TRAIN CONTROL	ST-TC-C-024	ATCCSI-C-024	TYPICAL REPEATER RELAY WIRING AND NOMENCLATURE	08/01
314	TRAIN CONTROL	ST-TC-C-036	ATCCSI-C-036	TYPICAL OUTBOUND TRAIN APPROACH WARNING CIRCUITS/LOGIC	08/01
315	TRAIN CONTROL	ST-TC-CE-030	ATCCSI-CE-030	ATC CLEARENCE ENVELOPE	08/01
316	TRAIN CONTROL	ST-TC-DTS-001	ATCCSI-DTS-001	DATA TRANS SYS(DTS) INTERFACE CABINET-CABINET DETAILS AND TERM. BLOCK ARRANGEMENT	08/01
317	TRAIN CONTROL	ST-TC-DTS-002	ATCCSI-DTS-002	DATA TRANS SYS(DTS) INTERFACE CABINET-VENT SHAFT AND DRAINAGE PUMPING STATION	08/01
318	TRAIN CONTROL	ST-TC-DTS-003	ATCCSI-DTS-003	DATA TRANS SYS(DTS) INTERFACE CABINET-A.C. SERVICE/SWITCHBOARD ROOM (COMBINED)	08/01

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319	TRAIN CONTROL	ST-TC-DTS-004	ATCCSI-DTS-004	DATA TRANS SYS(DTS) INTERFACE CABINET-A.C. SERVICE/SWITCHBOARD ROOM(NEAR)	08/01
320	TRAIN CONTROL	ST-TC-DTS-005	ATCCSI-DTS-005	DATA TRANS SYS(DTS) INTERFACE CABINET-A.C. SERVICE/SWITCHBOARD ROOM(FAR)	08/01
321	TRAIN CONTROL	ST-TC-DTS-006	ATCCSI-DTS-006	DATA TRANS SYS(DTS) INTERFACE CABINET-FAN SHAFT AND JET FAN CONTROL ROOM	08/01
322	TRAIN CONTROL	ST-TC-DTS-007	ATCCSI-DTS-007	DATA TRANS SYS(DTS) INTERFACE CABINET-TRACTION POWER TIE BREAKER STATION	08/01
323	TRAIN CONTROL	ST-TC-DTS-008	ATCCSI-DTS-008	DATA TRANS SYS(DTS) INTERFACE CABINET-TRACTION POWER SUBSTATION (SH. 1 OF 2)	08/01
324	TRAIN CONTROL	ST-TC-DTS-009	ATCCSI-DTS-009	DATA TRANS SYS(DTS) INTERFACE CABINET-TRACTION POWER SUBSTATION (SH. 2 OF 2)	08/01
325	TRAIN CONTROL	ST-TC-G-021	ATCCSI-G-021	TYPICAL TRACK PLAN ABBREVIATIONS	08/01
326	TRAIN CONTROL	ST-TC-G-022	ATCCSI-G-022	TYPICAL ELECTRICAL SYMBOLS	08/01
327	TRAIN CONTROL	ST-TC-G-025	ATCCSI-G-025	TYPICAL RELAY/CONTACT LOCATION CHART	08/01
328	TRAIN CONTROL	ST-TC-G-026	ATCCSI-G-026	DATA SHEET FORMAT-SAFE BRAKING TESTS	08/01
329	TRAIN CONTROL	ST-TC-G-031	ATCCSI-G-031	TYPICAL ATC WAYSIDE CABLE PLAN	08/01
330	TRAIN CONTROL	ST-TC-G-035	ATCCSI-G-035	TYPICAL IMPEDANCE BOND LAYOUT FOR DIRECT FIXATION TO CONCRETE	08/01
331	TRAIN CONTROL	ST-TC-G-036	ATCCSI-G-036	"T" CONNECTOR AND BASE-OF- RAIL CLAMP FOR 1000 KCMIL CABLE CONNECTIONS	08/01
332	TRAIN CONTROL	ST-TC-G-037	ATCCSI-G-037	SUBSTATION RETURN NEGATIVE RETURN BONDING	08/01
333	TRAIN CONTROL	ST-TC-G-039	ATCCSI-G-039	TYPICAL MARKER COIL LAYOUTS-DIRECT FIXATION & BALLASTED TRACK	08/01
334	TRAIN CONTROL	ST-TC-G-041	ATCCSI-G-041	TYPICAL LARGE JUNCTION BOX	08/01
335	TRAIN CONTROL	ST-TC-G-042	ATCCSI-G-042	TYPICAL SMALL JUNCTION BOX	08/01
336	TRAIN CONTROL	ST-TC-G-045	ATCCSI-G-045	TYPICAL START ATC-END ATC SIGN LAYOUTS	08/01
337	TRAIN CONTROL	ST-TC-G-046	ATCCSI-G-047	TYPICAL STATION STOP AND TURNBACK SIGN LAYOUTS	08/01
338	TRAIN CONTROL	ST-TC-G-047	ATCCSI-G-047	TYPICAL BERTHING MARKER LAYOUTS	08/01
339	TRAIN CONTROL	ST-TC-G-049	ATCCSI-G-049	TYPICAL FOUNDATIONS FOR SIGNAL, SIGN AND PUSHBUTTON LAYOUTS-BALLASTED TRACK (SYSTEMWIDE)	08/01

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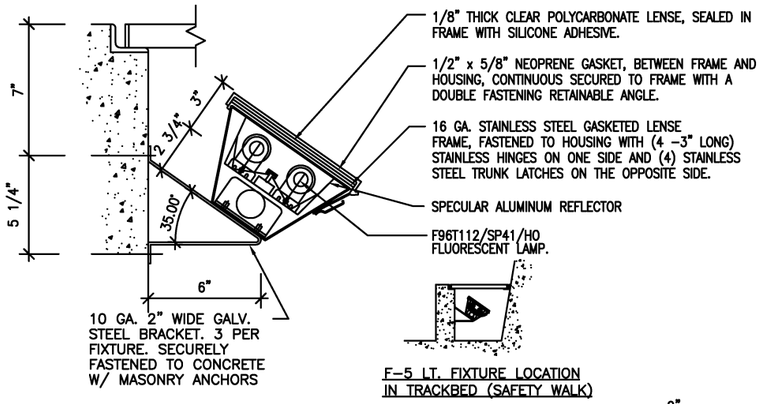
340	TRAIN CONTROL	ST-TC-G-051	ATCCSI-G-051	EDEGELIGHT AND PROGRAM STOP TRAIN DIAGRAM	08/01
341	TRAIN CONTROL	ST-TC-G-056	ATCCSI-G-056	TYPICAL ALARM AND/OR TRACK INDICATION PANEL	08/01
342	TRAIN CONTROL	ST-TC-G-061	ATCCSI-G-061	TYPICAL ATP TRACK MODULE BLOCK DIAGRAM	08/01
343	TRAIN CONTROL	ST-TC-G-062	ATCCSI-G-062	TYPICAL ATP SLAVE TRANSMITTER BLOCK DIAGRAM	08/01
				TYPICAL TWC TRANSMITTER BLOCK DIAGRAM	
343a	TRAIN CONTROL	ST-TC-IX-002		INDEX OF DRAWINGS	08/01
343b	TRAIN CONTROL	ST-TC-IX-003		INDEX OF DRAWINGS	08/01
343c	TRAIN CONTROL	ST-TC-IX-004		INDEX OF DRAWINGS	08/01
343d	TRAIN CONTROL	ST-TC-IX-005		INDEX OF DRAWINGS	08/01
344	TRAIN CONTROL	ST-TC-G-064	ATCCSI-G-064	TYPICAL TWC RECEIVER BLOCK DIAGRAM	08/01
345	TRAIN CONTROL	ST-TC-G-065	ATCCSI-G-065	TYPICAL TWC FLYBY TRANSMITTER BLOCK DIAGRAM	08/01
346	TRAIN CONTROL	ST-TC-G-066	ATCCSI-G-066	TYPICAL EXISTING RTU BLOCK DIAGRAM	08/01
347	TRAIN CONTROL	ST-TC-G-070	ATCCSI-G-070	HORIZONTAL LIMITS OF DYNAMIC OUTLINE OF DESIGN VEHICLE THROUGH TURNOUTS	08/01
348	TRAIN CONTROL	ST-TC-HDO-031	ATCCSI-HDO-031	TITLE SHEET-TYPICAL INTERLOCKING CIRCUITS	08/01
349	TRAIN CONTROL	ST-TC-I-000	ATCCSI-I-000	FLEETING CIRCUITS-SIGNALS 2, 4, 6,& 8 EMERGENCY CROSSOVERS	08/01
350	TRAIN CONTROL	ST-TC-I-001	ATCCSI-I-001	PUSHBUTTON AND FLEETING CIRCUITS-SIGNALS 10, 14, 20, & 24 (EMERGENCY CROSSOVERS)	08/01
351	TRAIN CONTROL	ST-TC-I-002	ATCCSI-I-002	TYPICAL WAYSIDE PUSHBUTTON STORAGE CIRCUITS-SIGNAL 2 - TERMINAL CROSSOVERS (TK 1 INBOUND)	08/01
352	TRAIN CONTROL	ST-TC-I-007	ATCCSI-I-007	TYPICAL WAYSIDE PUSHBUTTON STORAGE CIRCUITS - SIGNAL 4 - TERMINAL CROSSOVER (TK 1 INBOUND)	08/01
353	TRAIN CONTROL	ST-TC-I-008	ATCCSI-I-008	TYPICAL WAYSIDE PUSHBUTTON STORAGE CIRCUITS - SIGNAL 6 - TERMINAL CROSSOVER (TK 2 OUTBOUND)	08/01
354	TRAIN CONTROL	ST-TC-I-009	ATCCSI-I-009	TYPICAL WAYSIDE PUSHBUTTON STORAGE CIRCUITS - SIGNAL 8 - TERMINAL CROSSOVERS (TK 2 OUTBOUND)	08/01
355	TRAIN CONTROL	ST-TC-I-010	ATCCSI-I-010	TYPICAL TIMER CANCEL CIRCUITS FOR SIGNALS HAVING WAYSIDE PUSHBUTTON CONTROL	08/01

Index Number	Discipline	Drawing Number	Old File Name	Drawing Name	Up Dated
356	TRAIN CONTROL	ST-TC-I-011	ATCCSI-I-011	TYPICAL ROUTE STORAGE CIRCUITS	08/01
357	TRAIN CONTROL	ST-TC-I-013	ATCCSI-I-013	TYPICAL ROUTE STORAGE CIRCUITS - TERMINAL CROSSOVERS (SH. 1 OF 2) (TK 2 OUTBOUND)	08/01
358	TRAIN CONTROL	ST-TC-I-016	ATCCSI-I-016	TYPICAL ROUTE STORAGE CIRCUITS - TERMINAL CROSSOVERS (SH. 2 OF 2) (TK 2 OUTBOUND)	08/01
359	TRAIN CONTROL	ST-TC-I-017	ATCCSI-I-017	TYPICAL ROUTE INITIATION CIRCUITS - EMERGENCY CROSSOVERS	08/01
360	TRAIN CONTROL	ST-TC-I-021	ATCCSI-I-021	TYPICAL ROUTE INITIATION CIRCUITS - TERMINAL CROSSOVERS (TK2 - OUTBOUND0	08/01
361	TRAIN CONTROL	ST-TC-I-023	ATCCSI-I-023	TYPICAL ROUTE INITIATION & RESET STICK CIRCUITS TERMINAL CROSSOVERS (TK 1 - OUTBOUND)	08/01
362	TRAIN CONTROL	ST-TC-I-024	ATCCSI-I-024	TYPICAL ROUTE INITIATION & RESET STICK CANCEL CIRCUITS - TERMINAL CROSSOVERS (TK 2 - OUTBOUND)	08/01
363	TRAIN CONTROL	ST-TC-I-025	ATCCSI-I-025	TYPICAL AUTOMATIC ROUTE INITIATION STICK CIRCUITS - SIGNALS 2, 6, & 8 - TERMINAL CROSSOVERS (TK 2 - OUTBOUND)	08/01
364	TRAIN CONTROL	ST-TC-I-027	ATCCSI-I-027	TYPICAL ROUTE COMPLETION CIRCUITS - EMERGENCY CROSSOVERS	08/01
365	TRAIN CONTROL	ST-TC-I-029	ATCCSI-I-029	TYPICAL ROUTE CHECK CIRCUITS - CROSSOVERS	08/01
366	TRAIN CONTROL	ST-TC-I-031	ATCCSI-I-031	TYPICAL APPROACH STICK CIRCUITS (EMERGENCY CROSSOVERS)	08/01
367	TRAIN CONTROL	ST-TC-I-035	ATCCSI-I-035	TYPICAL ROUTE STICK & APPROACH CIRCUITS (EMERGENCY CROSSOVERS)	08/01
368	TRAIN CONTROL	ST-TC-I-036	ATCCSI-I-036	TYPICAL ROUTE STICK & APPROACH CIRCUITS (TERMINAL CROSSOVERS)	08/01
369	TRAIN CONTROL	ST-TC-I-037	ATCCSI-I-037	SIGNAL OPERATION SELECTION CIRCUITS - SIGNALS 2, 6 & 8 (TERMINAL CROSSOVERS - TK2 OUTBOUND)	08/01
370	TRAIN CONTROL	ST-TC-I-039	ATCCSI-I-039	TYPICAL SWITCH CONTROL & CORRESPONDENCE CIRCUITS - CROSSOVER 1	08/01
371	TRAIN CONTROL	ST-TC-I-041	ATCCSI-I-041	TYPICAL SWITCH CONTROL & CORRESPONDENCE CIRCUITS - CROSSOVER 3	08/01
372	TRAIN CONTROL	ST-TC-I-042	ATCCSI-I-042	TYPICAL SWITCH OPERATING & REPEATER CIRCUITS - EMERGENCY CROSSOVERS	08/01

Index Number	Discipline	Drawing Number	Old File Name	Drawing Name	Up Dated
373	TRAIN CONTROL	ST-TC-I-043	ATCCSI-I-043	TYPICAL REPEATER CIRCUITS - CROSSOVERS	08/01
374	TRAIN CONTROL	ST-TC-I-045	ATCCSI-I-045	TYPICAL SPEED COMMAND LOOP CONTROL STICK CIRCUITS (DIAMOND CROSSOVER)	08/01
375	TRAIN CONTROL	ST-TC-I-046	ATCCSI-I-046	TYPICAL SPEED COMMAND LOOP SELECTION CIRCUITS 4 FT. LOOPS AND CROSSOVER LOOPS (DIAMOND CROSSOVERS)	08/01
376	TRAIN CONTROL	ST-TC-I-047	ATCCSI-I-047	TYPICAL TRACK AMD SPEED COMMAND LOOP CIRCUITS - 2 FT. LOOPS (DIAMOND CROSSOVER)	08/01
377	TRAIN CONTROL	ST-TC-I-048	ATCCSI-I-048	TYPICAL SIGNAL CONTROL CIRCUITS (CROSSOVER INTERLOCKINGS)	08/01
378	TRAIN CONTROL	ST-TC-I-061	ATCCSI-I-061	TYPICAL SIGNAL REPEATER CIRCUITS (EMERGENCY CROSSOVERS)	08/01
379	TRAIN CONTROL	ST-TC-I-062	ATCCSI-I-062	TYPICAL SIGNAL REPEATER CIRCUITS (TERMINAL CROSSOVERS - TK 2 OUTBOUND)	08/01
380	TRAIN CONTROL	ST-TC-I-064	ATCCSI-I-064	TYPICAL SIGNAL LIGHTING AND AC TRACK RELAY CIRCUITS (EMERGENCY CROSSOVERS)	08/01
381	TRAIN CONTROL	ST-TC-I-066	ATCCSI-I-066	TYPICAL MARKER SIGNAL LIGHTING CIRCUITS (TERMINALS)	08/01
382	TRAIN CONTROL	ST-TC-I-067	ATCCSI-I-067	TYPICAL DETECTOR TRACK REPEATER CIRCUITS (DIAMOND CROSSOVERS)	08/01
383	TRAIN CONTROL	ST-TC-I-069	ATCCSI-I-069	TYPICAL LOCAL/REMOTE SELECTION CIRCUITS - NON-TERMINAL INTERLOCKINGS	08/01
384	TRAIN CONTROL	ST-TC-I-071	ATCCSI-I-071	TYPICAL LOCAL/REMOTE SELECTION CIRCUITS - TERMINALS	08/01
385	TRAIN CONTROL	ST-TC-I-072	ATCCSI-I-072	TYPICAL TERMINAL MODE SELECTION CIRCUITS (TERMINAL INTERLOCKINGS)	08/01
386	TRAIN CONTROL	ST-TC-I-074	ATCCSI-I-074	TYPICAL LOCAL/REMOTE LOCKOUT CIRCUITS (TERMINALS - TK 2 OUTBOUND)	08/01
387	TRAIN CONTROL	ST-TC-I-077	ATCCSI-I-077	TYPICAL LOCAL, REMOTE, PANEL & FLASHING B28G ENERGY DISTRIBUTION	08/01
388	TRAIN CONTROL	ST-TC-I-079	ATCCSI-I-079	TYPICAL AUXILIARY SWITCH PUSHBUTTON AND SWITCH POSITION INDICATION CIRCUITS - SWITCH 1 (EMERGENCY CROSSOVERS)	08/01

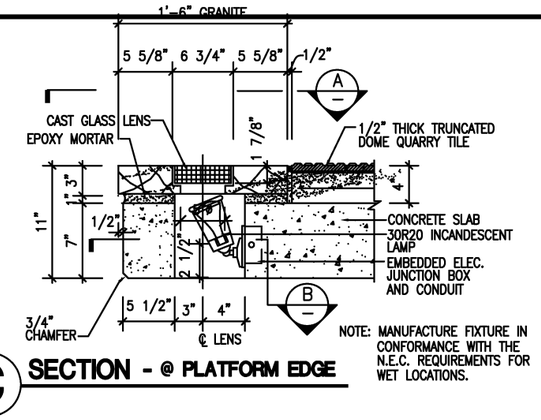
Index Number	Discipline	Drawing Number	Old File Name	Drawing Name	Up Dated
389	TRAIN CONTROL	ST-TC-I-081	ATCCSI-I-081	TYPICAL AUXILIARY SWITCH PUSHBUTTON AND SWITCH POSITION INDICATION CIRCUITS - SWITCH 3 (EMERGENCY CROSSOVERS)	08/01
390	TRAIN CONTROL	ST-TC-I-082	ATCCSI-I-082	CONTROL PANEL INDICATION CIRCUITS, TRACK OCCUPANCY AND TRAFFIC (DIAMOND CROSSOVER)	08/01
391	TRAIN CONTROL	ST-TC-I-085	ATCCSI-I-085	CONTROL PANEL INDICATION CIRCUITS, SIGNAL FLEETING AND ROUTE (DIAMOND CROSSOVER)	08/01
392	TRAIN CONTROL	ST-TC-I-086	ATCCSI-I-086	TITLE SHEET - TYPICAL EQUIPMENT LAYOUTS	08/01
393	TRAIN CONTROL	ST-TC-I-100	ATCCSI-I-100	TYPICAL INTER INTERLOCKING CONFIGURATION DIAMOND CROSSOVER	08/01
394	TRAIN CONTROL	ST-TC-I-101	ATCCSI-I-101	TYPICAL INDUCTIVE TRACK LOOP LAYOUT - 4 FT. LOOPS WITH IMPEDANCE BOND (INTERLOCKINGS - DIRECT FIXATION)	08/01
395	TRAIN CONTROL	ST-TC-I-103	ATCCSI-I-103	TYPICAL INDUCTIVE TRACK LOOP LAYOUT - 2 FT. LOOPS WITH SHUNT BAR (INTERLOCKINGS - DIRECT FIXATION)	08/01
396	TRAIN CONTROL	ST-TC-I-104	ATCCSI-I-104	TYPICAL SPEED COMMAND CROSSOVER LOOP LAYOUT (DIAMOND CROSSOVER)	08/01
397	TRAIN CONTROL	ST-TC-I-105	ATCCSI-I-105	TYPICAL AC TRACK CIRCUIT CONNECTIONS	08/01
398	TRAIN CONTROL	ST-TC-I-107	ATCCSI-I-107	TYPICAL MAINLINE SIGNAL RAIL BONDING (SYSTEMWIDE)	08/01
399	TRAIN CONTROL	ST-TC-I-108	ATCCSI-I-108	NEGATIVE RETURN BONDING	08/01
400	TRAIN CONTROL	ST-TC-I-109	ATCCSI-I-109	TYPICAL SWITCH - AND - LOCK MOVEMENT LAYOUT ON BALLASTED TRACK (INTERLOCKINGS)	08/01
401	TRAIN CONTROL	ST-TC-I-111	ATCCSI-I-111	TYPICAL SWITCH - AND - LOCK MOVEMENT LAYOUT - DIRECT FIXATION	08/01
402	TRAIN CONTROL	ST-TC-I-112	ATCCSI-I-112	TYPICAL SNOWMELTER LAYOUT	08/01
403	TRAIN CONTROL	ST-TC-I-114	ATCCSI-I-114	TYPICAL SNOW CONTROL CASE (INTERLOCKINGS EXPOSED TO WEATHER)	08/01
404	TRAIN CONTROL	ST-TC-I-115	ATCCSI-I-115	TYPICAL SNOWMELTER HEATING ELEMENT MOUNTING DETAILS	08/01
405	TRAIN CONTROL	ST-TC-I-116	ATCCSI-I-116	TYPICAL SWITCH ROD HEATER LAYOUT ON BALLAST	08/01

Index Number	Discipline	Drawing Number	Old File Name	Drawing Name	Up Dated
406	TRAIN CONTROL	ST-TC-I-117	ATCCSI-I-117	TYPICAL SIGNAL LAYOUTS (INTERLOCKINGS AND TAIL TRACKS)	08/01
407	TRAIN CONTROL	ST-TC-I-121	ATCCSI-I-121	PUSHBUTTON LAYOUT - AUTOMATIC INTERLOCKINGS	08/01
408	TRAIN CONTROL	ST-TC-I-123	ATCCSI-I-123	INTERLOCKING VITAL PROCESSOR SYSTEM FUNCTION BLOCK DIAGRAM	08/01
409	TRAIN CONTROL	ST-TC-I-131	ATCCSI-I-131	REMOTE TERMINAL UNIT TO TYPICAL NON-VITAL PROCESSOR OUTPUTS	08/01
409a	TRAIN CONTROL	ST-TC-INF-000		INFORMATION DRAWINGS	08/01
410	TRAIN CONTROL	ST-TC-NVP-001	ATCCSI-NVP-001	REMOTE TERMINAL UNIT TYPICAL NON-VITAL PROCESSOR INPUTS	08/01
411	TRAIN CONTROL	ST-TC-NVP-002	ATCCSI-NVP-002	TITLE SHEET - TYPICAL POWER DRAWINGS	08/01
412	TRAIN CONTROL	ST-TC-P-000	ATCCSI-P-000	TYPICAL POWER DISTRIBUTION SCHEMATIC FOR TRAIN CONTROL ROOMS (TCRs)	08/01
413	TRAIN CONTROL	ST-TC-P-001	ATCCSI-P-001	TYPICAL DC POWER DISTRIBUTION	08/01
414	TRAIN CONTROL	ST-TC-P-002	ATCCSI-P-002	TYPICAL POWER DISTRIBUTION SCHEMATIC DISTRIBUTION	08/01
415	TRAIN CONTROL	ST-TC-P-003	ATCCSI-P-003	TYPICAL POWER FAILURE AND BLOWN FUSE CIRCUITS (INLINE STATIONS)	08/01
416	TRAIN CONTROL	ST-TC-P-004	ATCCSI-P-004	TYPICAL POWER FAILURE AND BLOWN FUSE CIRCUITS (INTERLOCKING STATIONS)	08/01
417	TRAIN CONTROL	ST-TC-P-005	ATCCSI-P-005	TYPICAL GROUND DETECTOR CIRCUITS	08/01
418	TRAIN CONTROL	ST-TC-P-006	ATCCSI-P-006	TYPICAL SNOWMELETER CONTROL & INDICATION CIRCUIT (DIAMOND CROSSOVERS)	08/01
419	TRAIN CONTROL	ST-TC-P-007	ATCCSI-P-007	TYPICAL SNOWMELTER CONTROL CASE CIRCUITS (INTERLOCKINGS EXPOSED TO WEATHER)	08/01
420	TRAIN CONTROL	ST-TC-P-008	ATCCSI-P-008	TYPICAL ALARM AND/OR TRACK INDICATION PANEL - INTERNAL CIRCUITS	08/01
421	TRAIN CONTROL	ST-TC-P-009	ATCCSI-P-009	TYPICAL RTU WIRING COMM ROOM MAIN DIST. FRAME	08/01
422	TRAIN CONTROL	ST-TC-RTU-011	ATCCSI-RTU-011	TYPICAL RTU WIRING TC/COM INTERFACE CABINET	08/01
423	TRAIN CONTROL	ST-TC-RTU-012	ATCCSI-RTU-012	TYPICAL RTU WIRING TIEBEAKER STATIONS (SH 1 OF 3)	08/01
424	TRAIN CONTROL	ST-TC-RTU-013	ATCCSI-RTU-013	TYPICAL RTU WIRING TIEBEAKER STATIONS (SH 2 OF 3)	08/01
425	TRAIN CONTROL	ST-TC-RTU-014	ATCCSI-RTU-014	TYPICAL RTU WIRING TIEBEAKER STATIONS (SH 3 OF 3)	08/01

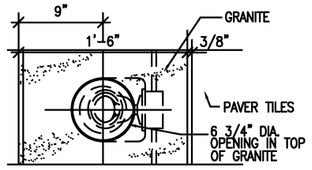


F-5 TRACK BED - CENTER PLATFORM

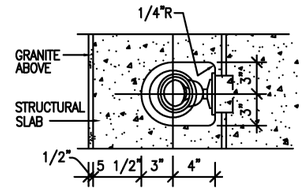
3"=1'-0" 0 3" 6" 1'



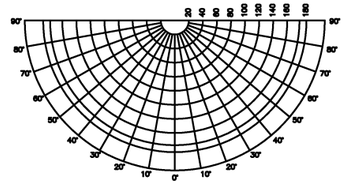
C SECTION - @ PLATFORM EDGE



A LIGHT FIXTURE - PARTIAL PLAN

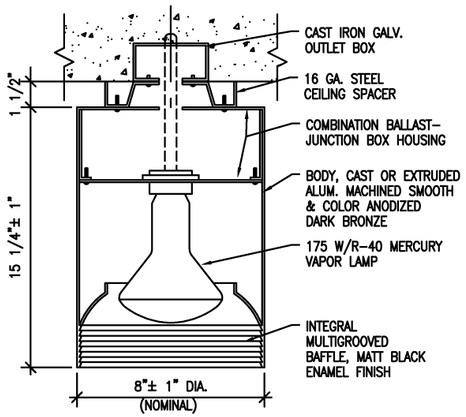


B LIGHT FIXTURE - PARTIAL REFLECTED PLAN



SPHERICAL CANDLEPOWER EXCEPT AT MOUNTING STEM TYPE L-2 & TYPE S-2

NOTE: CURVE REPRESENTS STANDARD LIGHT OUTPUT OF FIXTURE AT SOURCE



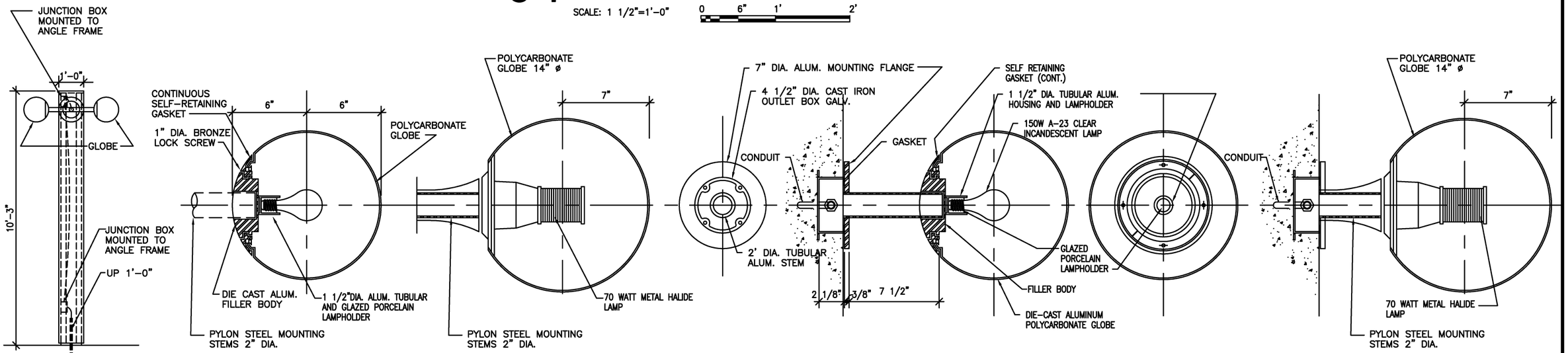
NOTE: THIS LIGHT IS NO LONGER SPECIFIED FOR NEW PROJECTS.

S-5 MEZZANINE DOWNLIGHT

SCALE: 3"=1'-0" 0 3" 6" 1'

S-1 LIGHT FIXTURE - @ PLATFORM EDGE

SCALE: 1 1/2"=1'-0" 0 6" 1' 2'



1 ELECTRICAL WIRING - FOR TYPE "A-T" PYLON

SCALE: 1/2"=1'-0" 0 1' 2' 4'

L-2 LIGHT FIXTURE FOR TYPE "A-T" PYLON

3" = 1'-0" 0 3" 6" 1'

L-2a

COMPACT FLUORESCENT LAMP SHOULD BE USED FOR RETROFIT WORK

SCALE: 3"=1'-0" 0 3" 6" 1'

S-2 LIGHT FIXTURE - SECTION CANOPY MOUNT

SCALE: 3"=1'-0" 0 3" 6" 1'

S-2a

COMPACT FLUORESCENT LAMP SHOULD BE USED FOR RETROFIT WORK

0 3" 6" 1'

DESIGNED	D. MUNSON	1998 DATE
DRAWN	W. SCOTT	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
08/2001	ENGA	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF ENGINEERING AND ARCHITECTURE

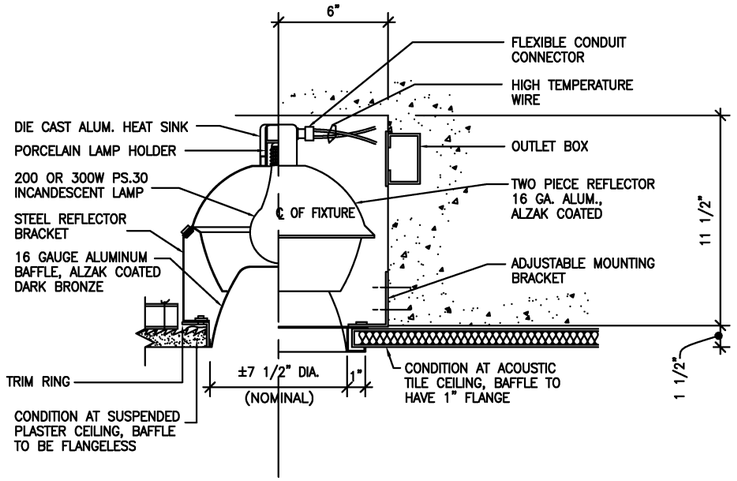
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
LIGHTING FIXTURES F-5, F-5a, L-2, L-2a, S-1, S-2, S-2a, AND S-5

SCALE: AS SHOWN

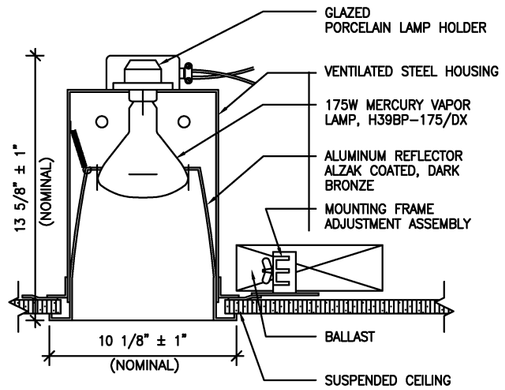
DRAWING NO. ST-A-LT-001



S-7 RECESSED LIGHT FIXTURE

SCALE: 3"=1'-0"

0 3" 6" 1'

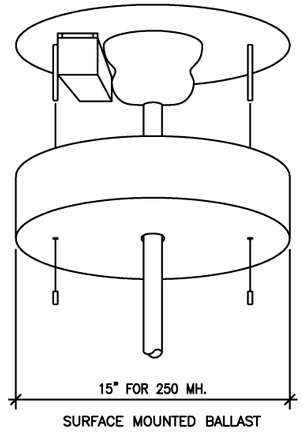


NOTE: THIS FIXTURE IS NO LONGER SPECIFIED FOR NEW PROJECTS.

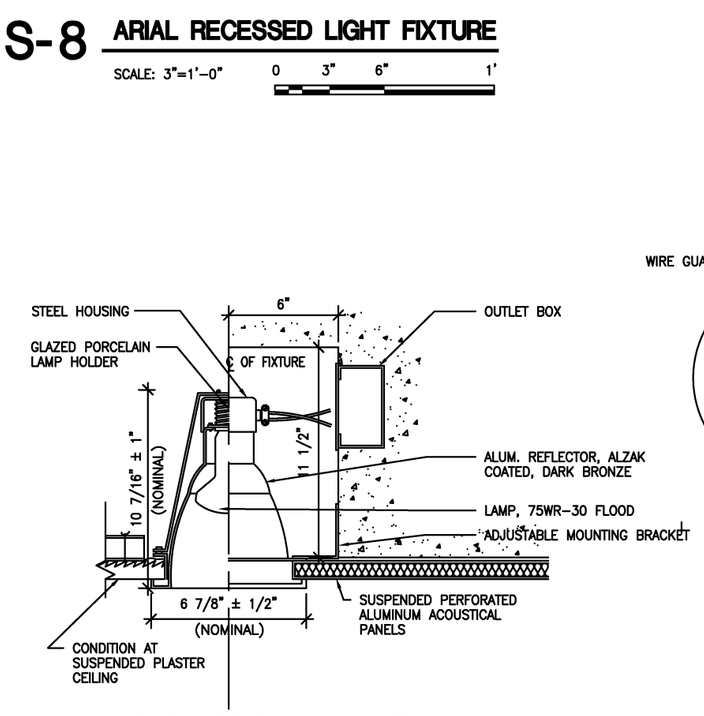
S-8 ARIAL RECESSED LIGHT FIXTURE

SCALE: 3"=1'-0"

0 3" 6" 1'



SURFACE MOUNTED BALLAST

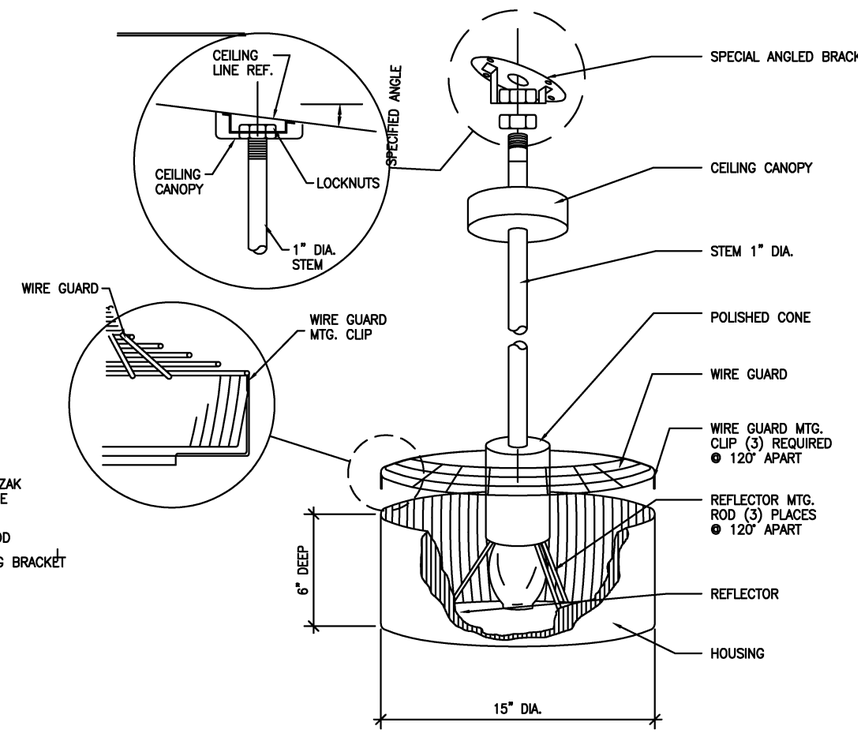


NOTE: THIS FIXTURE IS NO LONGER SPECIFIED FOR NEW PROJECTS.

S-9 PASSAGEWAY RECESSED LIGHT FIXTURE

SCALE: 3"=1'-0"

0 3" 6" 1'



1 PENDANT LIGHT -MOUNTING DETAILS

SCALE: 3"=1'-0"

0 3" 6" 1'

DESIGNED	D. MUNSON	1998	DATE
DRAWN	W. SCOTT	1998	DATE
CHECKED	K. LANDESZ	1998	DATE
APPROVED	J. CORLEY	1998	DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

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WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF ENGINEERING AND ARCHITECTURE

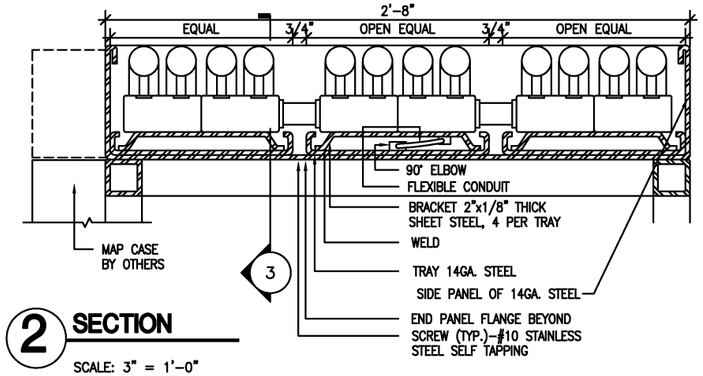
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
LIGHTING FIXTURES S-7, S-8, S-9 AND PENDANT LIGHT

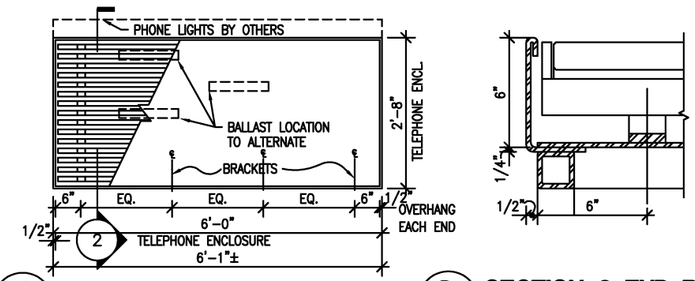
SCALE 3"=1'-0"

DRAWING NO. ST-A-LT-002



2 SECTION

SCALE: 3" = 1'-0"



1 PLAN

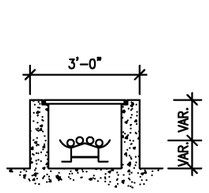
3/4" = 1'-0" 0 1' 2' 4'

3 SECTION @ END PANEL

SCALE: 3" = 1'-0"

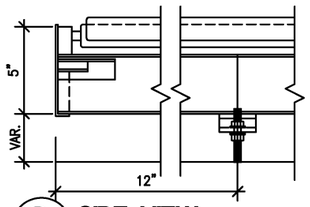
0 3" 6" 1'

F-7 LIGHT FIXTURE



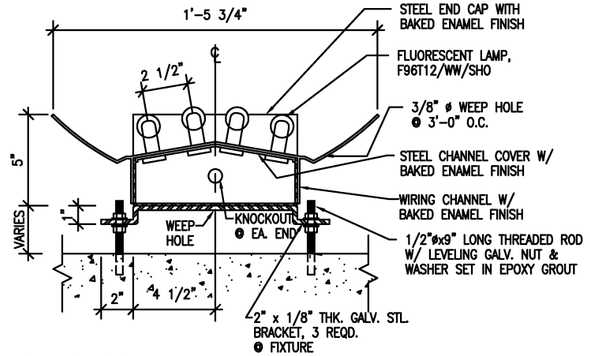
2 TRACKBED LOCATION

SCALE: 1/2" = 1'-0"



3 SIDE VIEW

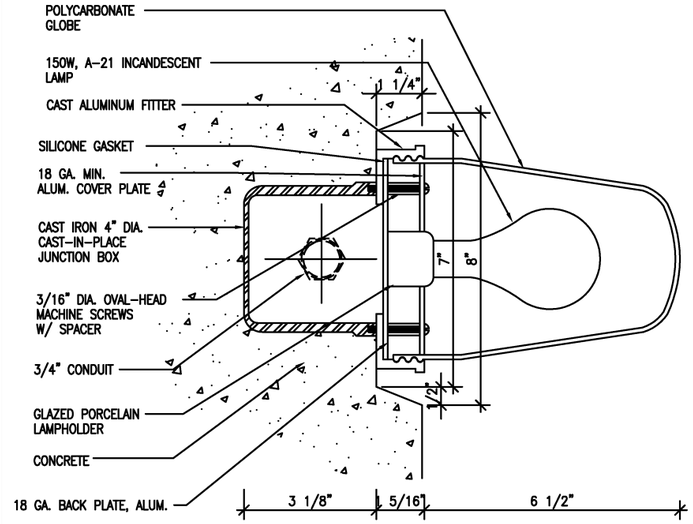
SCALE: 3" = 1'-0" 0 3" 6" 1'



1 END VIEW

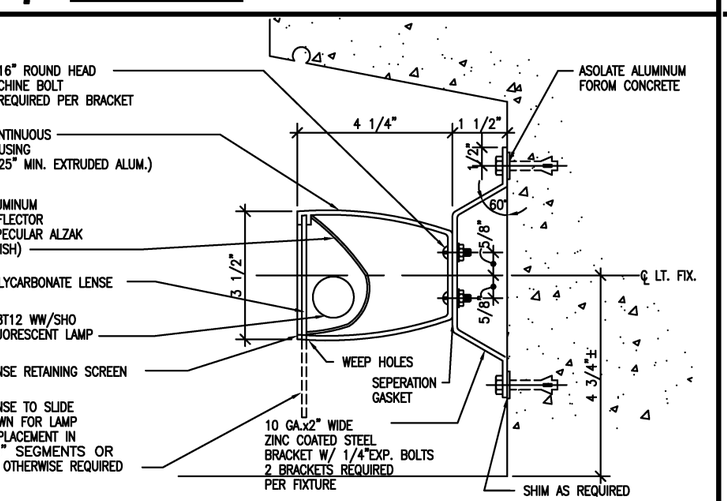
SCALE: 3" = 1'-0" 0 3" 6" 1'

F-4 LIGHT FIXTURE



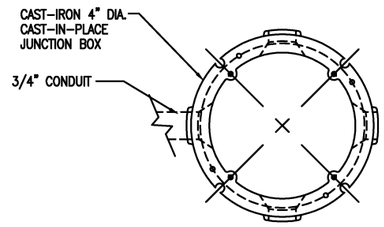
2 FIXTURE SECTION

SCALE: 6"=1'-0" 0 1" 2" 4" 6"



F-2A SECTION - LIGHT FIXTURE

SCALE: 6"=1'-0" 0 1" 2" 4" 6"



1 DETAIL - JUNCTION BOX

SCALE: 6"=1'-0" 0 1" 2" 4" 6"

NOTE: THIS LIGHT IS NO LONGER SPECIFIED FOR NEW PROJECTS.

S-11 LIGHT FIXTURE

MANUFACTUER FIXTURE IN CONFORMANCE WITH THE N.E.C. REQUIREMENTS FOR WET LOCATIONS

DESIGNED	D. MUNSON	1998 DATE
DRAWN	W. SCOTT	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

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DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF ENGINEERING AND ARCHITECTURE

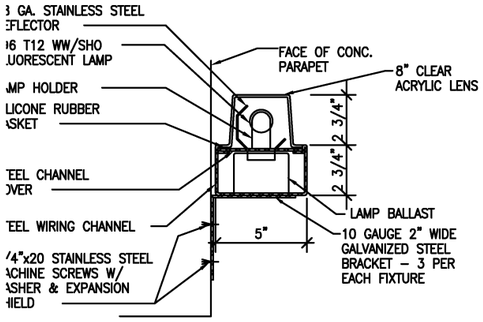
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
LIGHTING FIXTURES F2a, F-4, F-7 AND S-11

SCALE: AS SHOWN

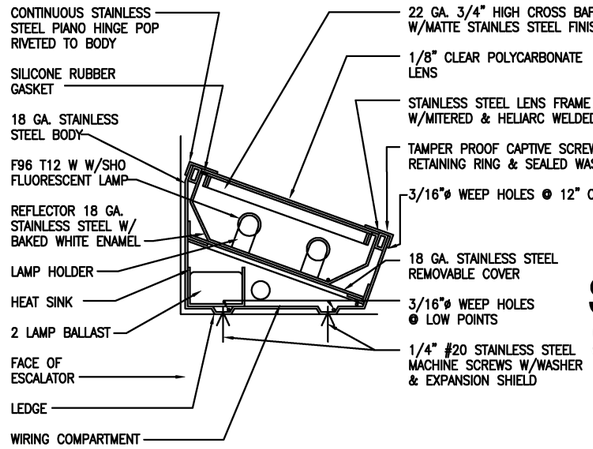
DRAWING NO.: ST-A-LT-003



F-9 PLATFORM RAILING FIXTURE

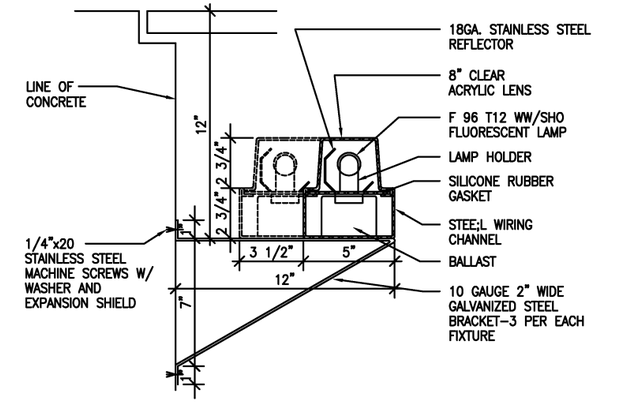
SCALE: 3"=1'–0" 0 3" 6" 1'

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy



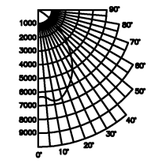
F-8 ESCALATOR - LIGHT FIXTURE

SCALE: 3"=1'–0" 0 3" 6" 1'



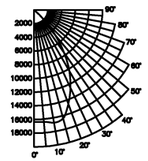
F-9 TRACK BED - 1 LAMP (AS SHOWN)
F-9A TRACK BED - 2 LAMP (AS SHOWN & DOTTED)

SCALE: 3"=1'–0" 0 3" 6" 1'



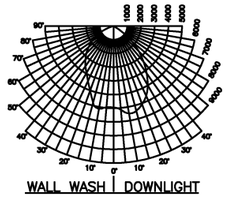
CANDLEPOWER

TYPE S–15
TYPE S–16
TYPE S–18
TYPE S–19
BOTH FIXTURES
TYPE S–20



CANDLEPOWER

TYPE S–17

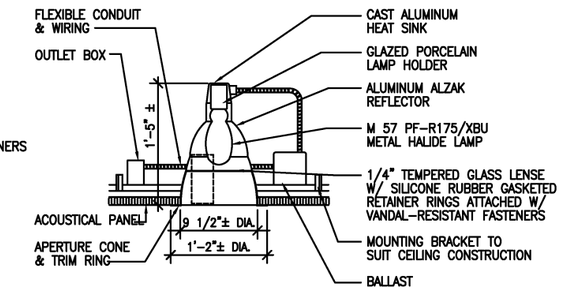


WALL WASH | DOWNLIGHT

CANDLEPOWER

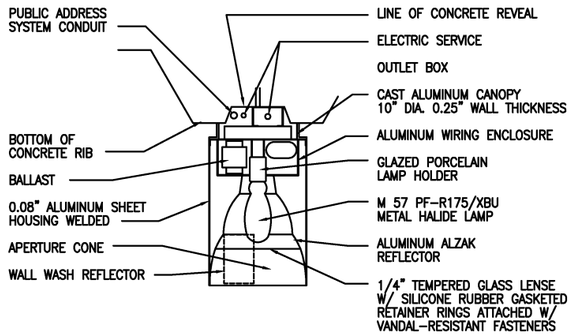
TYPE S–19A
BOTH FIXTURES
TYPE S–15A
TYPE S–16A
TYPE S–20A

NOTE:
CURVE REPRESENTS STANDARD LIGHT OUTPUT OF FIXTURE AT SOURCE



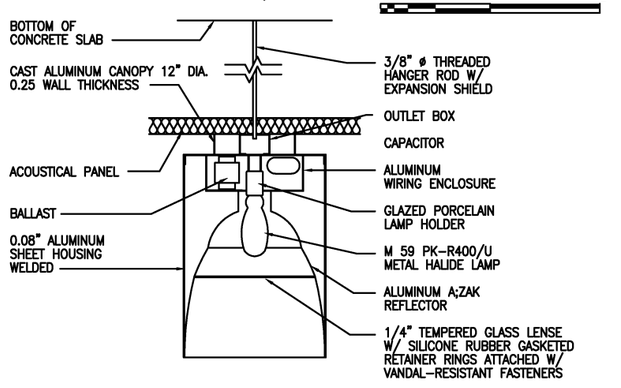
S-15 WITHOUT WALL WASH REFLECTOR
S-15A WITH WALL WASH REFLECTOR(SHOWN DOTTED)

SCALE: 1 1/2"=1'–0" 0 6" 1' 2'



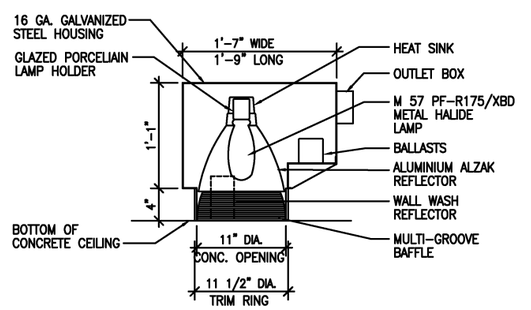
S-16 WITHOUT WALL WASH REFLECTOR
S-16A WITH WALL WASH REFLECTOR(SHOWN DOTTED)

SCALE: 1 1/2"=1'–0" 0 6" 1' 2'



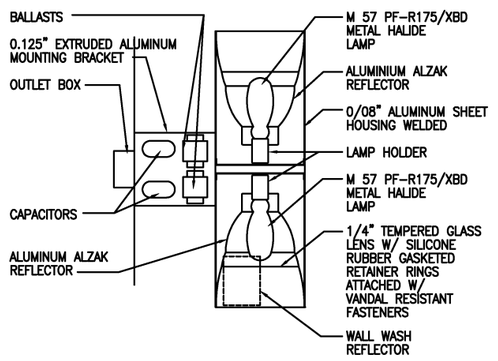
S-17 HIGH INTENSITY DISCHARGE - LIGHTING FIXTURE

SCALE: 1 1/2"=1'–0" 0 6" 1' 2'



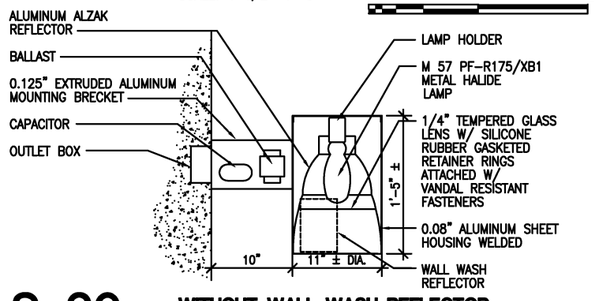
S-18 WITHOUT WALL WASH REFLECTOR
S-18A WITH WALL WASH REFLECTOR(SHOWN DOTTED)

SCALE: 1 1/2"=1'–0" 0 6" 1' 2'



S-19 WITHOUT WALL WASH REFLECTOR
S-19A WITH WALL WASH REFLECTOR(SHOWN DOTTED)

SCALE: 1 1/2"=1'–0" 0 6" 1' 2'



S-20 WITHOUT WALL WASH REFLECTOR
S-20A WITH WALL WASH REFLECTOR(SHOWN DOTTED)

SCALE: 1 1/2"=1'–0"

DESIGNED	D. MUNSON	1998 DATE
DRAWN	W. SCOTT	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
08/2001	ENGA	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF ENGINEERING AND ARCHITECTURE

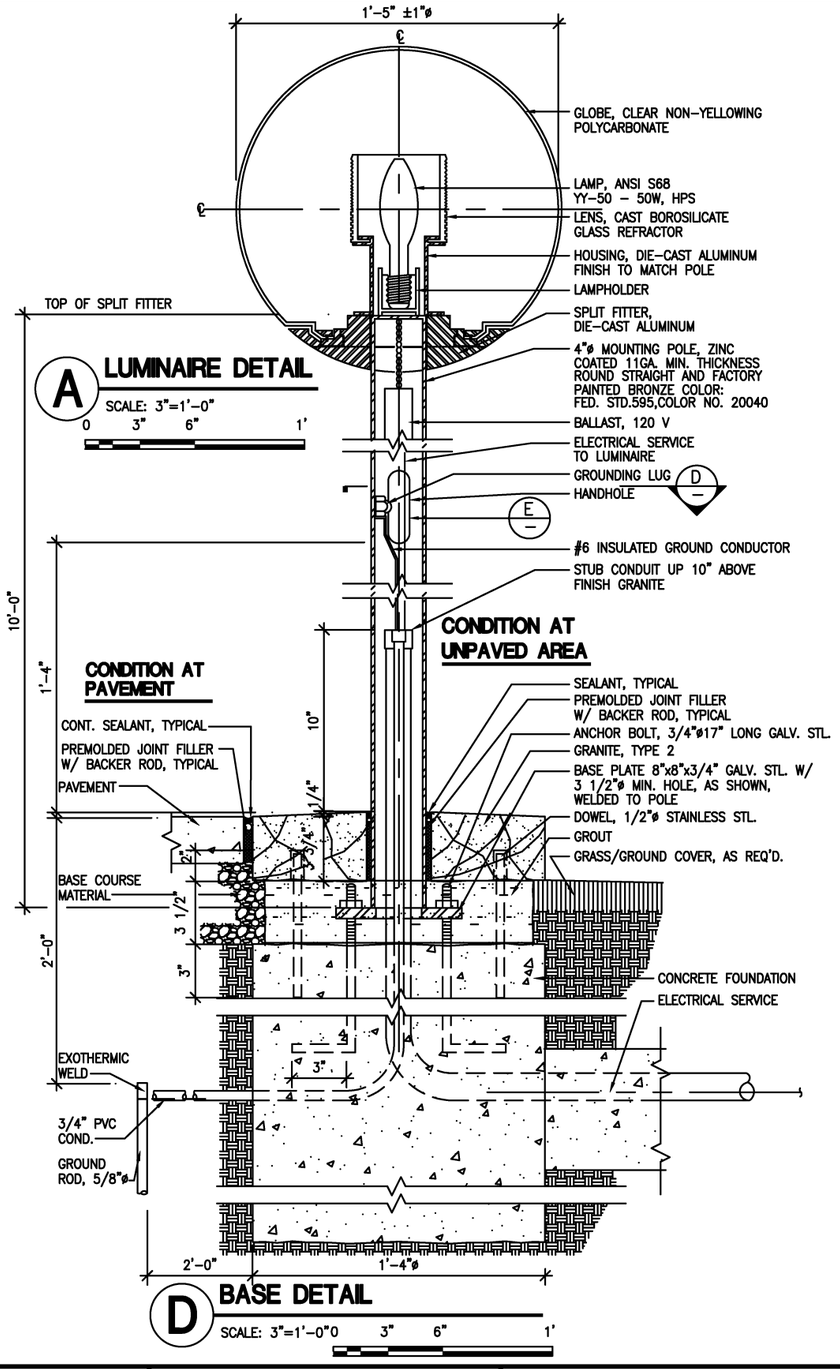
SUBMITTED _____ DATE

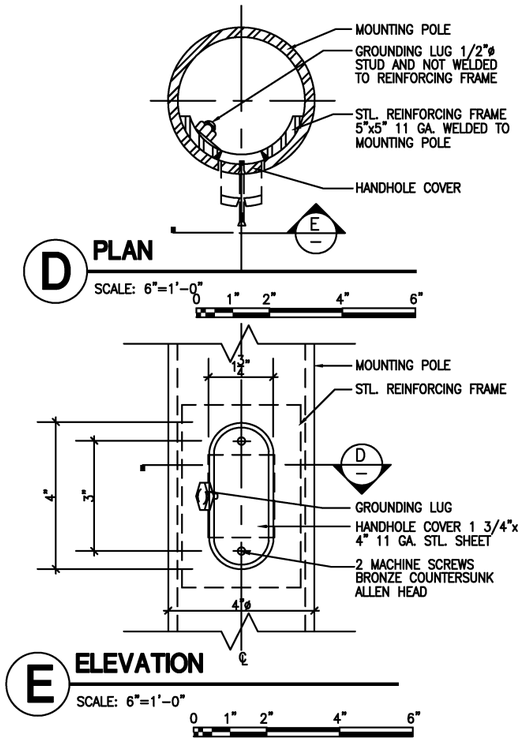
APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
LIGHTING FIXTURE F–8, F–9, F–9a, S–15, S–15a
S–16, S–16a, S–17, S–18, S–18a, S–19
S–19a, S–20, S–20a

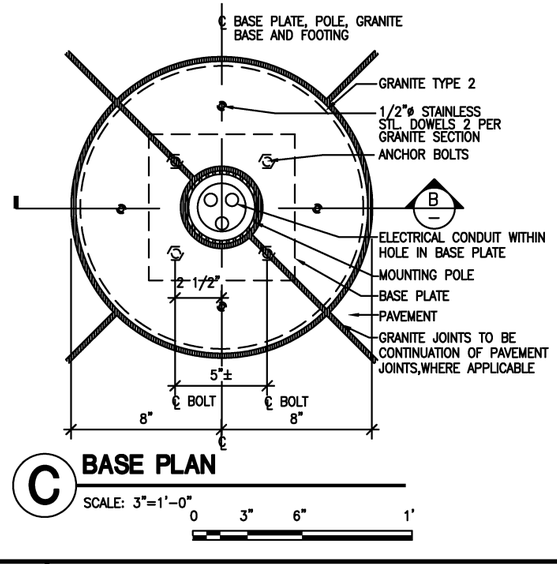
SCALE: AS SHOWN

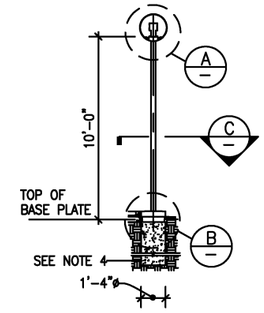
DRAWING NO. ST–A–LT–004





HANDHOLE DETAILS



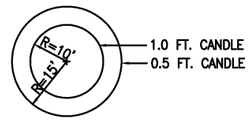


F FIXTURE ELEVATION

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

0 3' 6' 12'

FIXTURE G-10, WHICH IS STILL PRESENT IN MANY WMATA FACILITIES, IS NO LONGER USED AND IS SHOWN HERE FOR REFERENCE ONLY. WMATA'S NEW STANDARD FIXTURE FOR ALL NEW INSTALLATIONS IS 97G-10 (DWG. ST-A-LT-9)



G-10-1-V-50
LES TYPE V DISTRIBUTION

PHOTOMETRICS - INITIAL F.C.

1" = 20'-0"

NOTES:

1. U.L. CERTIFICATION: PROVIDE FIXTURES CONFORMING TO N.E.C. REQUIREMENTS FOR WET LOCATIONS.
2. LAMP HOLDER RATED: 4 KV PULSE.
3. WHEN CONDUIT IS ROUGHED-IN PROVIDE TEMPORARY CONDUIT CAPS TO INSURE THE EXCLUSION OF DIRT DURING SUBSEQUENT CONSTRUCTION AND UNTIL INSTALLATION OF LIGHTING FIXTURE.
4. SEE STRUCTURAL DWGS. FOR FOOTING DEPTH AND REINFORCEMENT.

DESIGNED	D. MUNSON	1998 DATE
DRAWN	N. IBIEBELE	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

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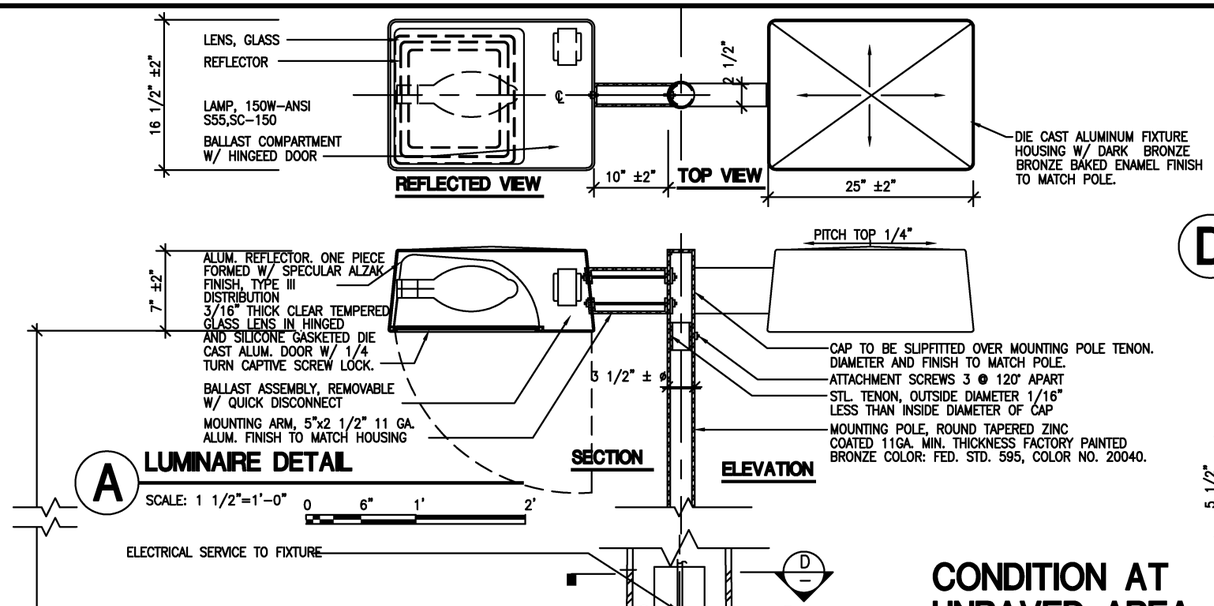
ARCHITECTURAL STANDARD DRAWING
STANDARD EXTERIOR LIGHTING
FIXTURE G-10

SCALE: AS SHOWN

DRAWING NO. ST-A-LT-005



FIXTURE G–15, WHICH IS STILL PRESENT IN MANY WMATA FACILITIES, IS NO LONGER USED AND IS SHOWN HERE FOR REFERENCE ONLY. WMATA'S NEW STANDARD FIXTURE FOR ALL NEW INSTALLATIONS IS 97G–15 (DWG. ST–A–LT–10)

NOTES:

1. U.L. CERTIFICATION: PRIVIDE FIXTURES CONFORMING TO N.E.C. REQUIREMENTS FOR WET LOCATIONS.
2. WHEN CONDUIT IS ROUGHED–IN PROVIDE TEMPORARY CONDUIT CAPS TO INSURE THE EXCLUSION OF DIRT DURING SUBSEQUENT CONSTRUCTION AND UNTIL INSTALLATION OF LIGHTING FIXTURE.
3. SEE STRUCTURAL DWG'S. FOR FOOTING DEPTH AND REINFORCEMENT.

DESIGNED	D. MUNSON	1998 DATE
DRAWN	N. IBIEBELE	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

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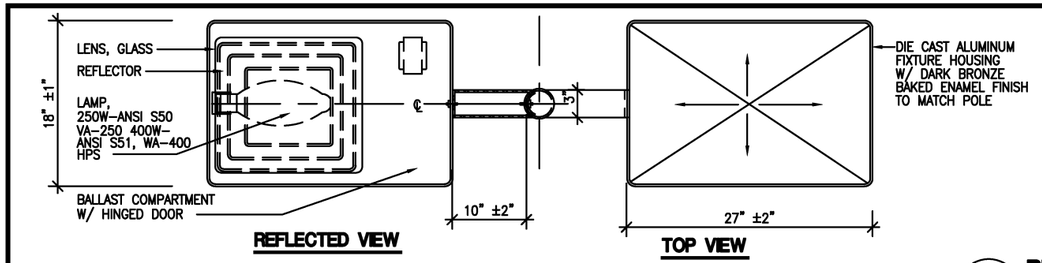
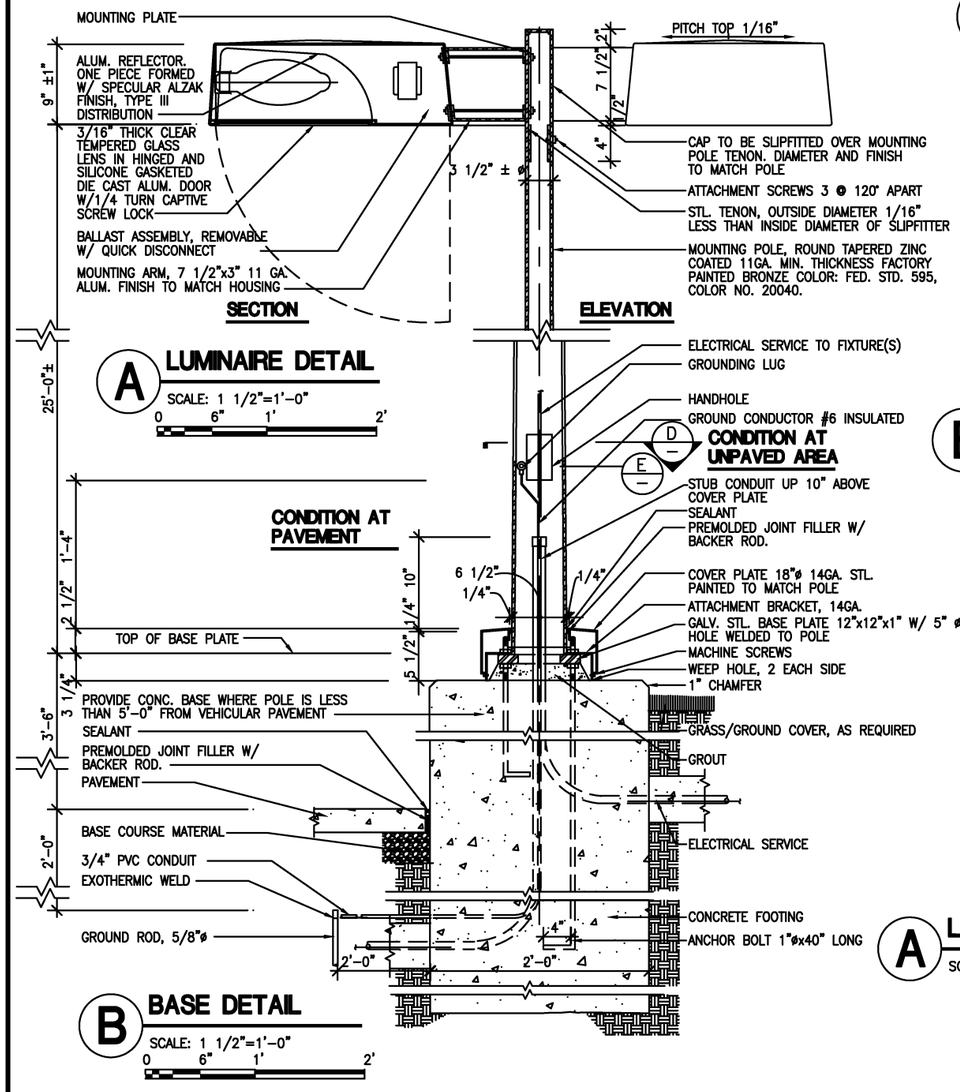
ARCHITECTURAL STANDARD DRAWING
STANDARD EXTERIOR LIGHTING FIXTURE G–15

SCALE: AS SHOWN

DRAWING NO.: ST–A–LT–006





A LUMINAIRE DETAIL

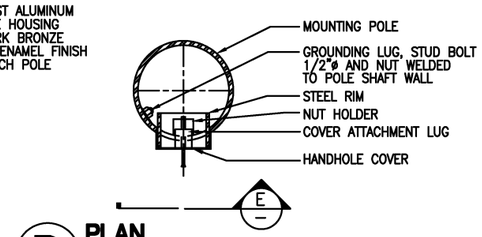
SCALE: 1 1/2"=1'–0"

0 6" 1' 2'

B BASE DETAIL

SCALE: 1 1/2"=1'–0"

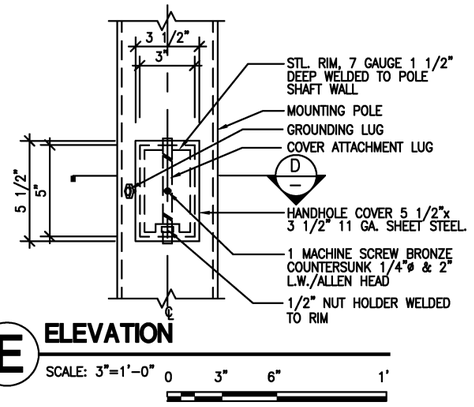
0 6" 1' 2'



D PLAN

SCALE: 3"=1'–0"

0 3" 6" 1'

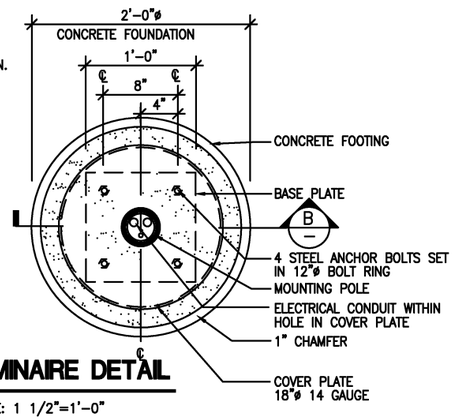


E ELEVATION

SCALE: 3"=1'–0"

0 3" 6" 1'

HANDHOLE DETAILS

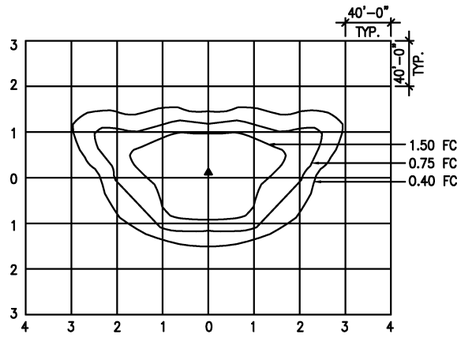


A LUMINAIRE DETAIL

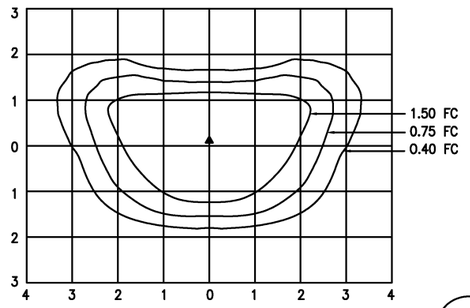
SCALE: 1 1/2"=1'–0"

C BASE PLAN

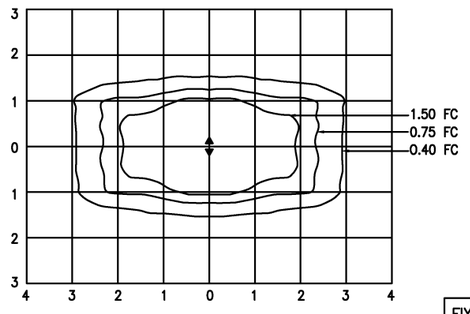
1 1/2"=1'–0" 0 6" 1' 2'



G–25–1–III–250
I.E.S. TYPE III MEDIUM CUT–OFF



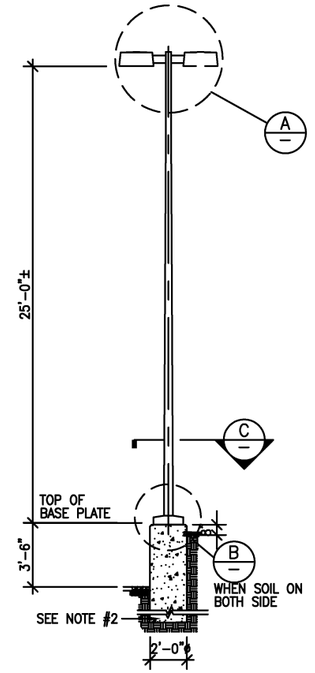
G–25–1–III–400
I.E.S. TYPE III MEDIUM CUT–OFF



G–25–2–III–250
I.E.S. TYPE III MEDIUM CUT–OFF

PHOTOMETRICS – INITIAL F.C.

NO SCALE



F FIXTURE ELEVATION

SCALE: 1/4"=1'–0"

0 3' 6' 12'

NOTES:

1. U.L. CERTIFICATION: PROVIDE FIXTURES CONFORMING TO N.E.C. REQUIREMENTS FOR WET LOCATIONS.
2. WHEN CONDUIT IS ROUGHED–IN PROVIDE TEMPORARY CONDUIT CAPS TO INSURE THE EXCLUSION OF DIRT DURING SUBSEQUENT CONSTRUCTION AND UNTIL INSTALLATION OF LIGHTING FIXTURE.
3. SEE STRUCTURAL DWG'S. FOR FOOTING DEPTH AND REINFORCEMENT.

FIXTURE G–25, WHICH IS STILL PRESENT IN MANY WMATA FACILITIES, IS NO LONGER USED AND IS SHOWN HERE FOR REFERENCE ONLY. WMATA'S NEW STANDARD FIXTURE FOR ALL NEW INSTALLATION IS 97G–25 (DWG. ST–A–LT–11)

DESIGNED	D. MUNSON	1998 DATE
DRAWN	N. IBIEBELE	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

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WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF ENGINEERING AND ARCHITECTURE

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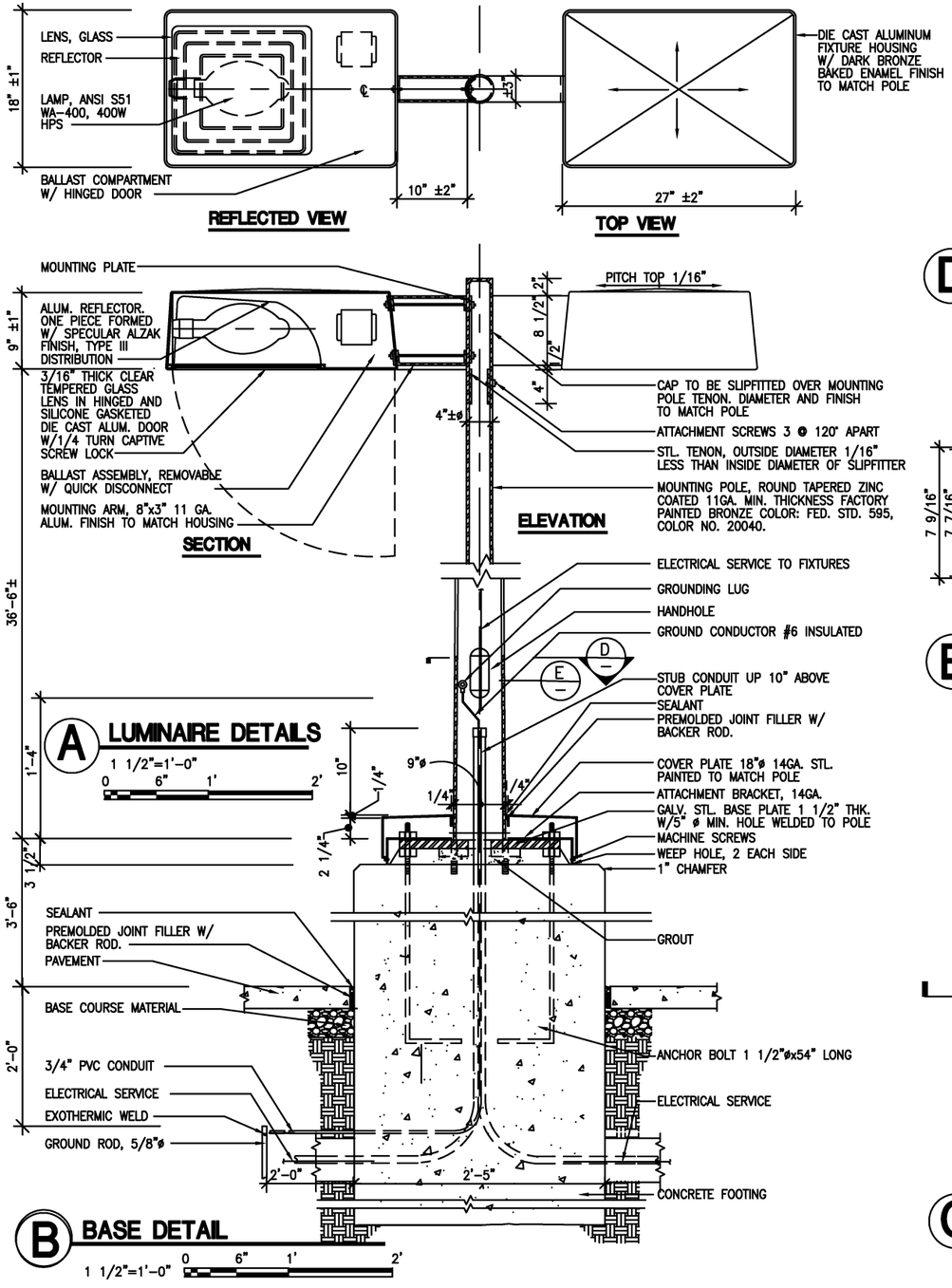
APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
STANDARD EXTERIOR LIGHTING FIXTURE G–25

SCALE: AS SHOWN

DRAWING NO.: ST–A–LT–007



NOTES:

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2. WHEN CONDUIT IS ROUGHED-IN PROVIDE TEMPORARY CONDUIT CAPS TO INSURE THE EXCLUSION OF DIRT DURING SUBSEQUENT CONSTRUCTION AND UNTIL INSTALLATION OF LIGHTING FIXTURE.
3. SEE STRUCTURAL DWG'S. FOR FOOTING DEPTH AND REINFORCEMENT.

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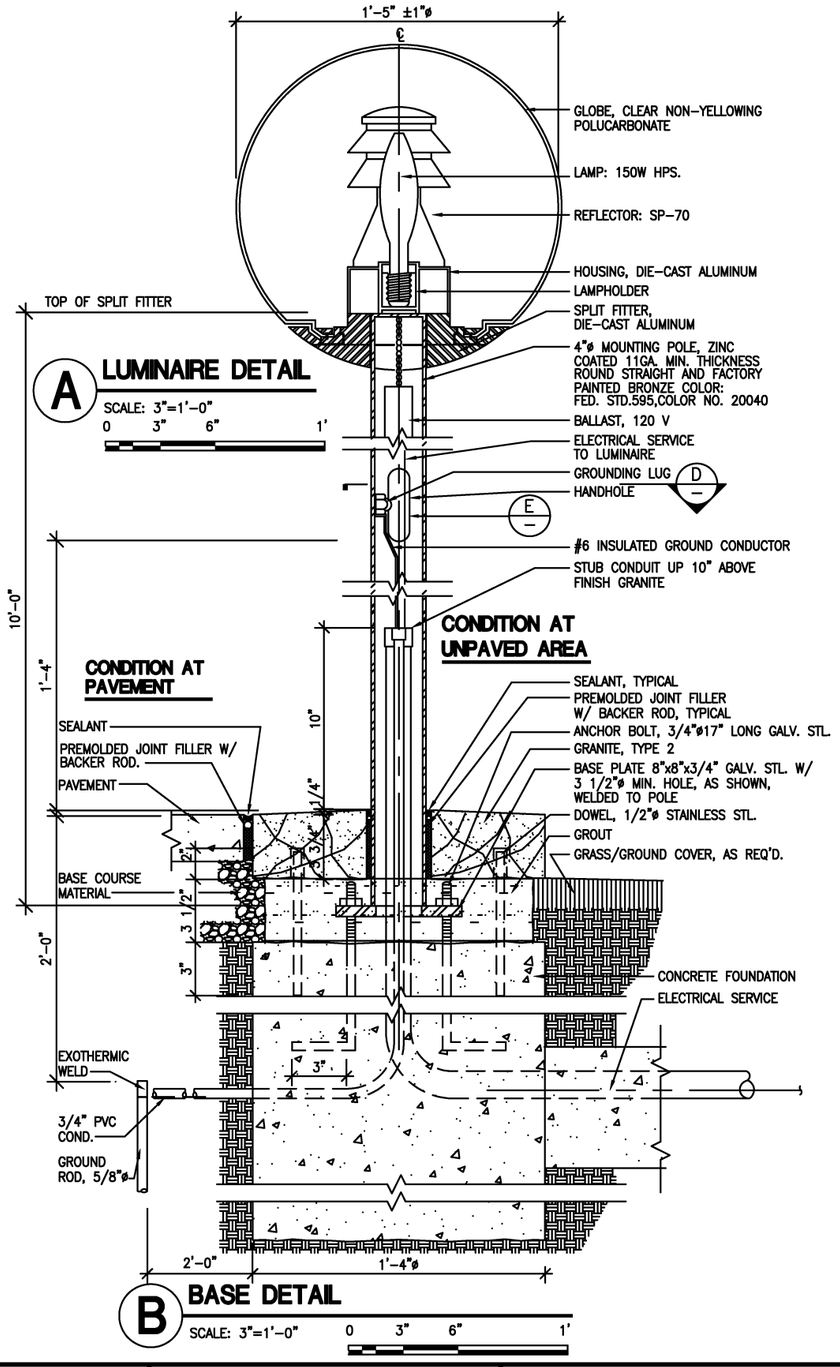
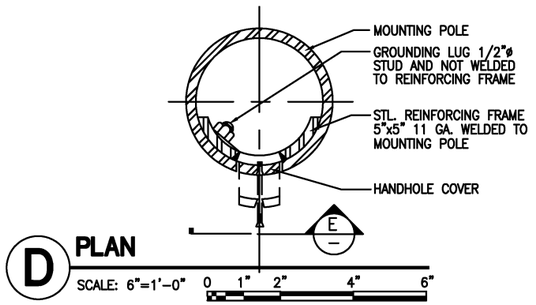
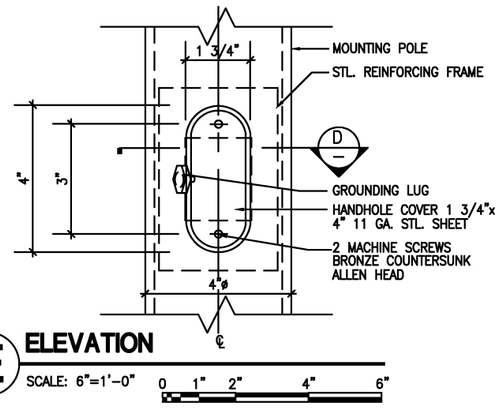
ARCHITECTURAL STANDARD DRAWING
STANDARD EXTERIOR LIGHTING FIXTURE G-40

SCALE: AS SHOWN

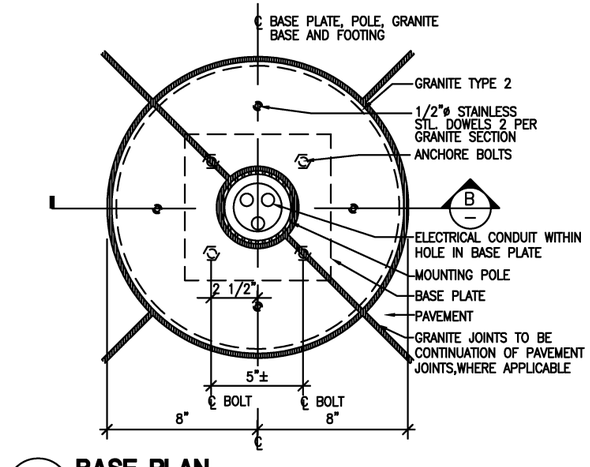
DRAWING NO.: ST-A-LT-008

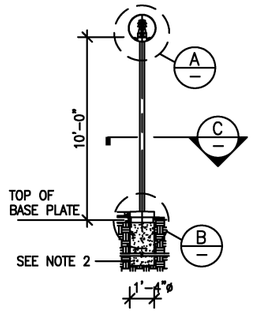


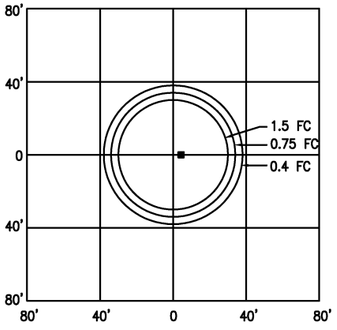




HANDHOLE DETAILS







PHOTOMETRICS – INITIAL F.C.

1" = 40'-0" 0 20' 40' 80'

NOTES:

1. U.L. CERTIFICATION: PROVIDE FIXTURES CONFORMING TO N.E.C. REQUIREMENTS FOR WET LOCATIONS.
2. WHEN CONDUIT IS ROUGHED-IN PROVIDE TEMPORARY CONDUIT CAPS TO INSURE THE EXCLUSION OF DIRT DURING SUBSEQUENT CONSTRUCTION AND UNTIL INSTALLATION OF LIGHTING FIXTURE.
3. SEE STRUCTURAL DWGS. FOR FOOTING DEPTH AND REINFORCEMENT.

DESIGNED	D. MUNSON	1998 DATE
DRAWN	N. IBIEBELE	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

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OFFICE OF ENGINEERING AND ARCHITECTURE

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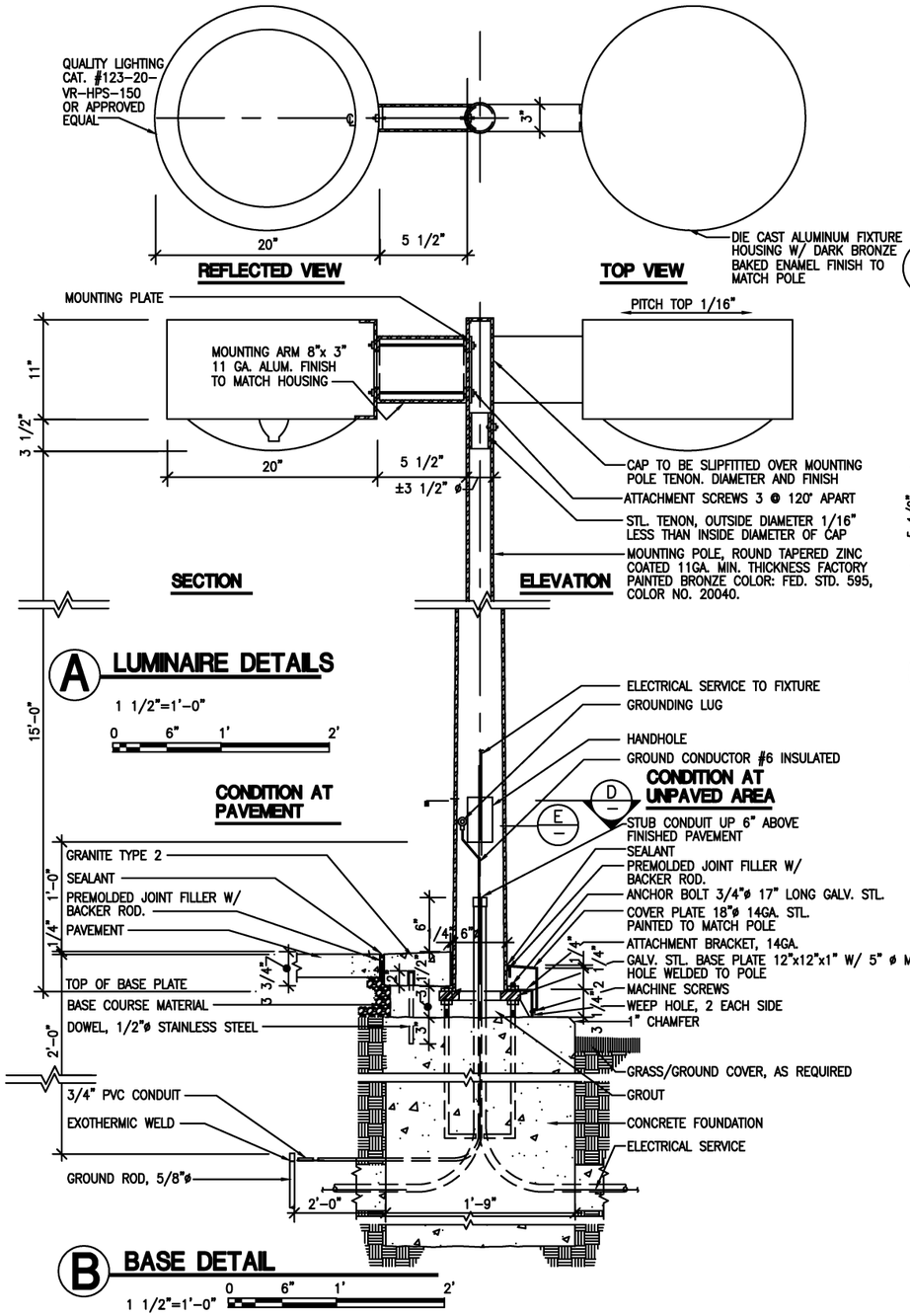
APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
STANDARD EXTERIOR REFLECTOR LIGHTING FIXTURE 97G-10

SCALE	DRAWING NO.
AS SHOWN	ST-A-LT-009



NOTES:

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2. WHEN CONDUIT IS ROUGHED-IN PROVIDE TEMPORARY CONDUIT CAPS TO INSURE THE EXCLUSION OF DIRT DURING SUBSEQUENT CONSTRUCTION AND UNTIL INSTALLATION OF LIGHTING FIXTURE.
3. SEE STRUCTURAL DWG'S. FOR FOOTING DEPTH AND REINFORCEMENT.

DESIGNED D. MUNSON 1998 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN N. IBIEBELE 1998 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED K. LANDESZ 1998 DATE		08/2001 ENGA Revised and issued by the Authority
APPROVED J. CORLEY 1998 DATE		

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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OFFICE OF ENGINEERING AND ARCHITECTURE

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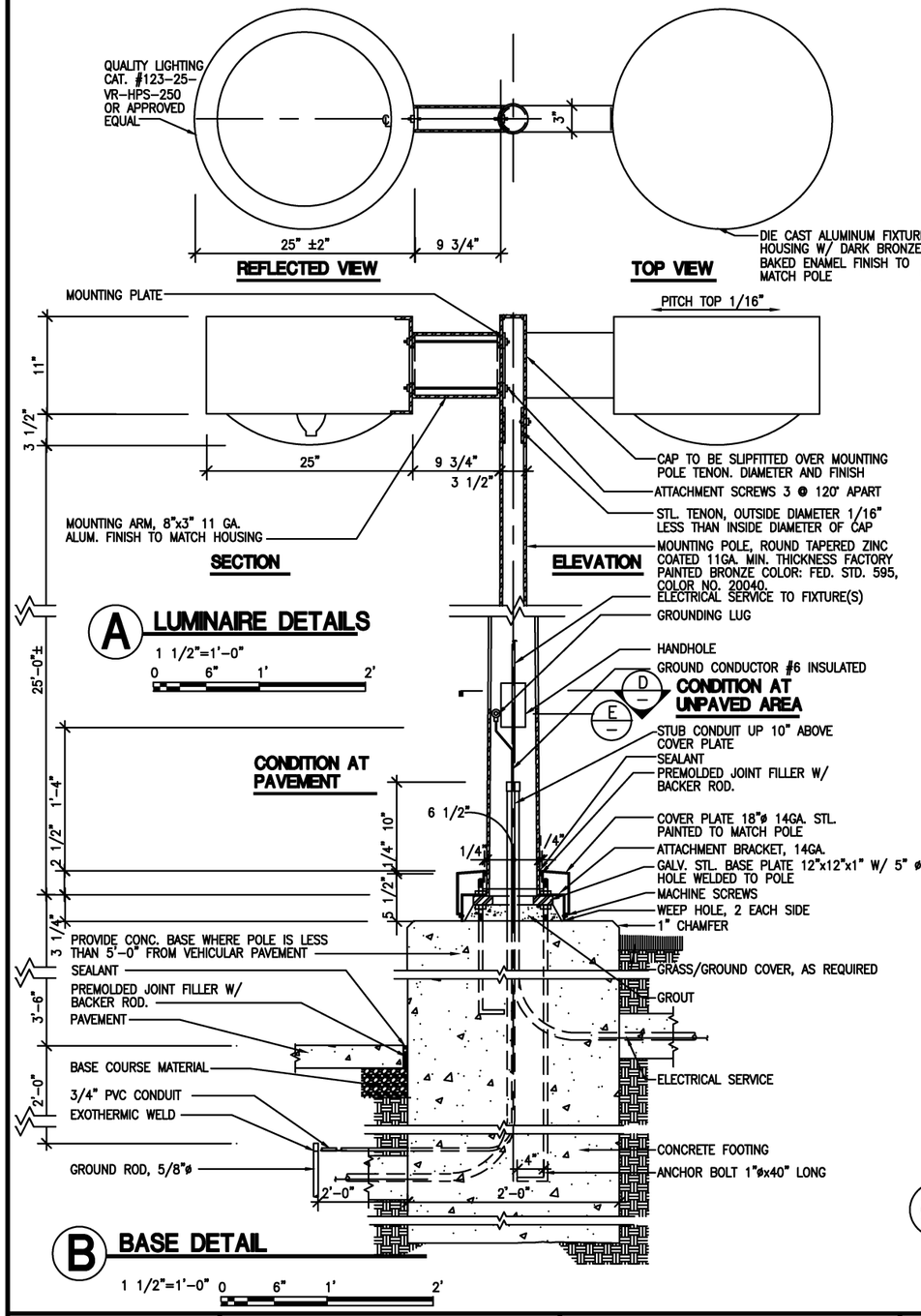
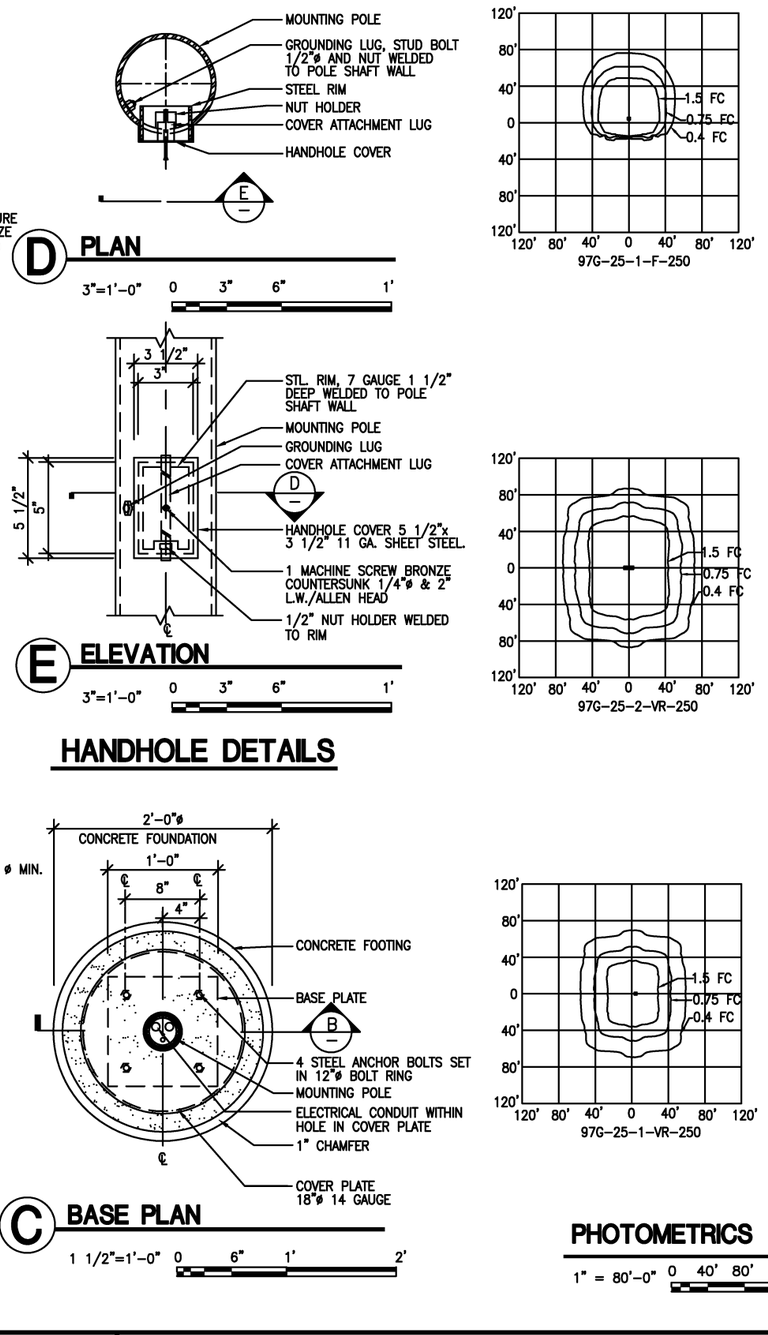
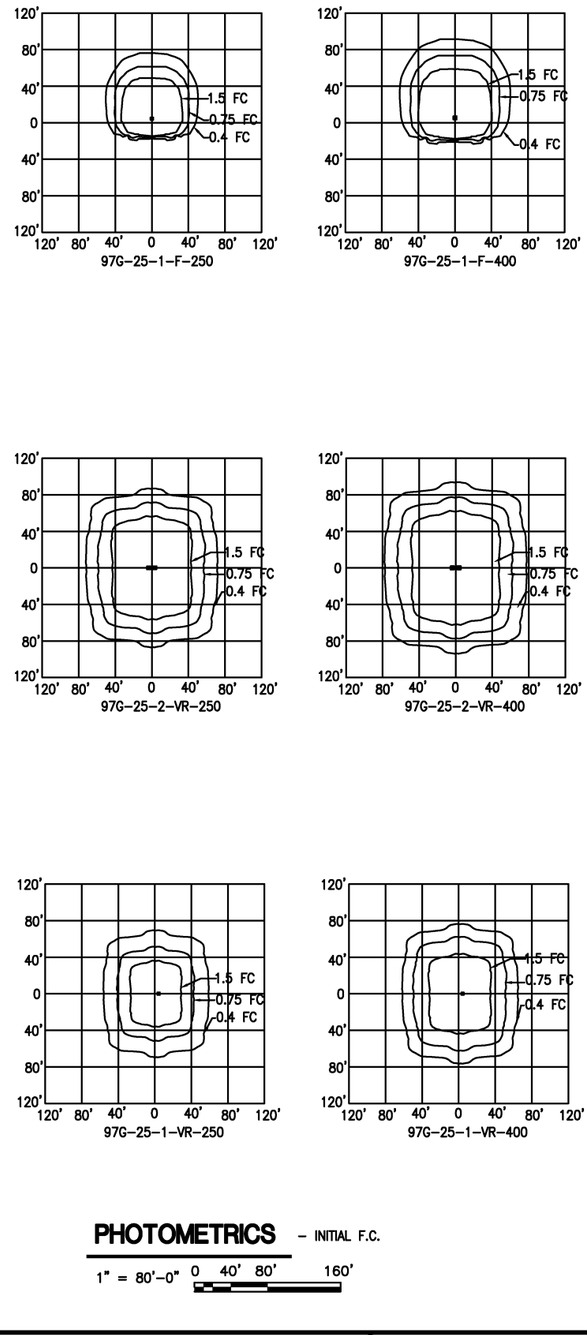
ARCHITECTURAL STANDARD DRAWING
STANDARD EXTERIOR LIGHTING
FIXTURE 97G-15

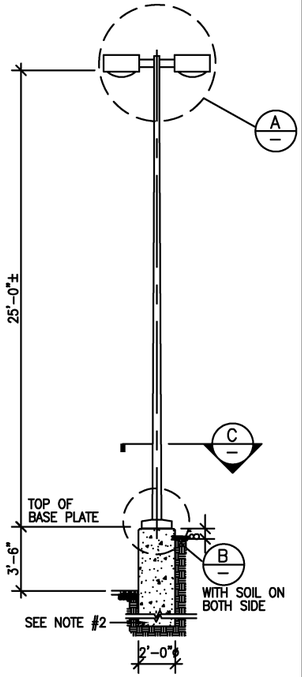
SCALE: AS SHOWN

DRAWING NO.: ST-A-LT-010









NOTES:

1. U.L. CERTIFICATION: PROVIDE FIXTURES CONFORMING TO N.E.C. REQUIREMENTS FOR WET LOCATIONS.
2. WHEN CONDUIT IS ROUGHED-IN PROVIDE TEMPORARY CONDUIT CAPS TO INSURE THE EXCLUSION OF DIRT DURING SUBSEQUENT CONSTRUCTION AND UNTIL INSTALLATION OF LIGHTING FIXTURE.
3. SEE STRUCTURAL DWG'S. FOR FOOTING DEPTH AND REINFORCEMENT.

DESIGNED	D. MUNSON	1998 DATE
DRAWN	N. IBIEBELE	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

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WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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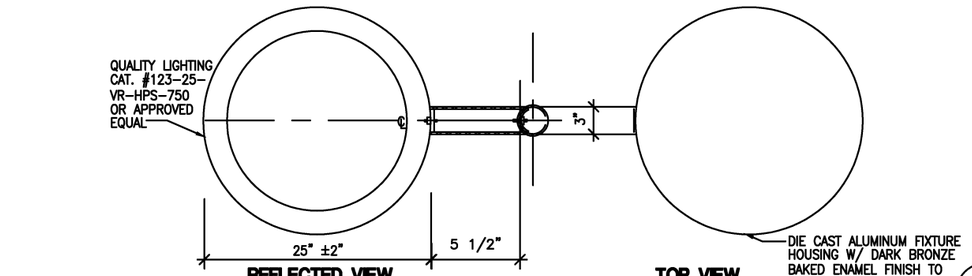
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
STANDARD EXTERIOR LIGHTING
FIXTURE 97G-25

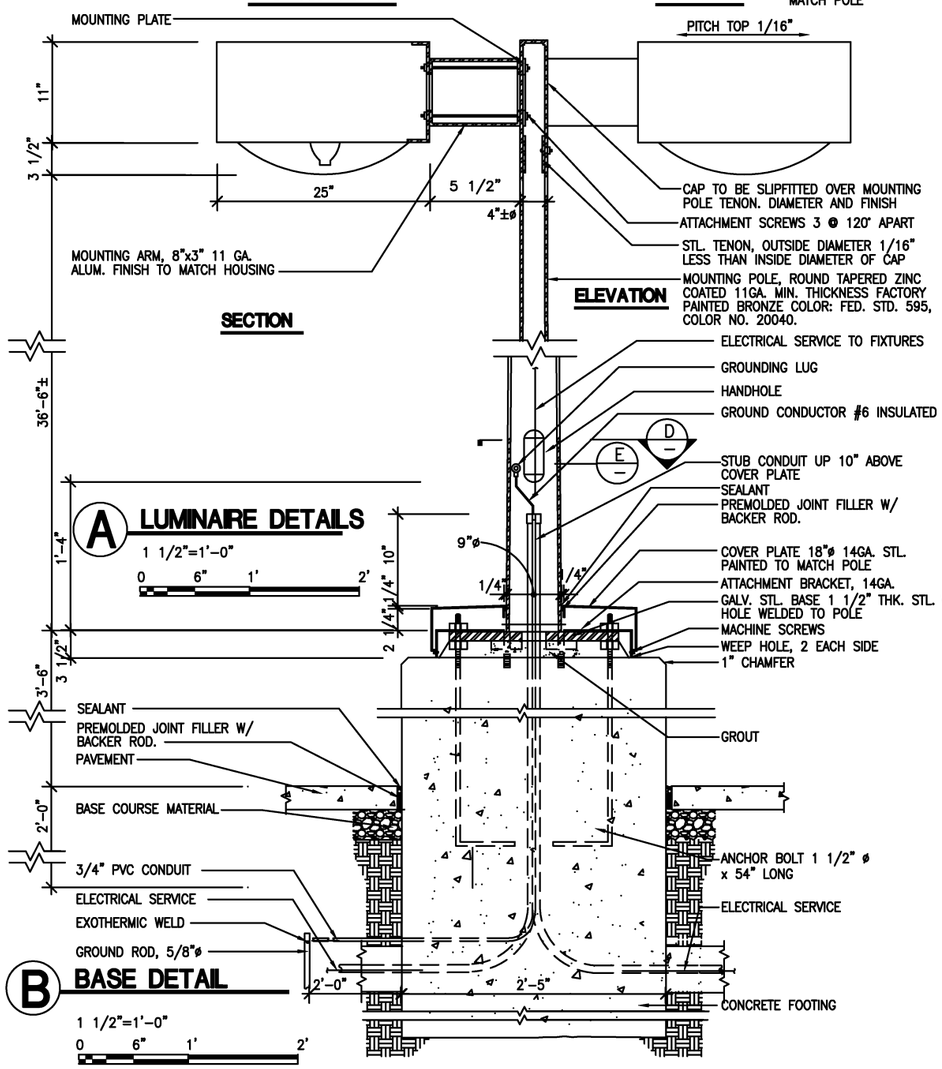
SCALE: AS SHOWN

DRAWING NO.: ST-A-LT-011



REFLECTED VIEW

TOP VIEW



SECTION

ELEVATION

A LUMINAIRE DETAILS

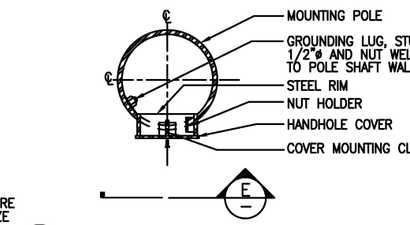
1 1/2"=1'-0"

0 6" 1' 2'

B BASE DETAIL

1 1/2"=1'-0"

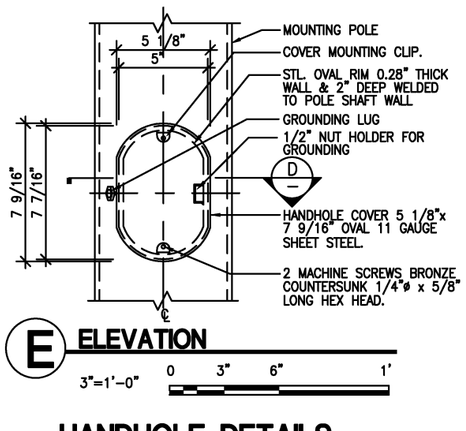
0 6" 1' 2'



D PLAN

3"=1'-0"

0 3" 6" 1'

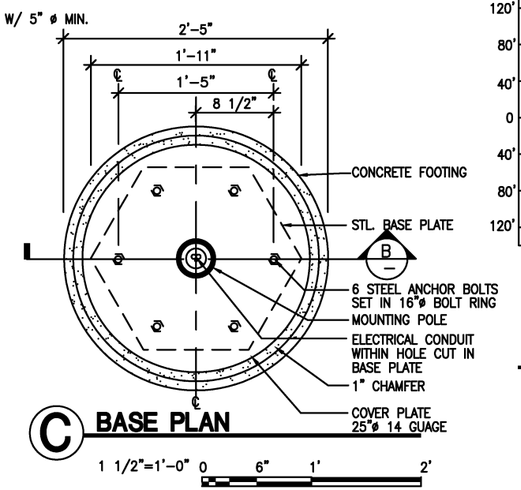


E ELEVATION

3"=1'-0"

0 3" 6" 1'

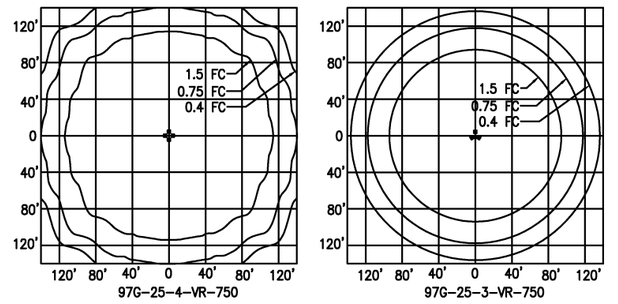
HANDHOLE DETAILS

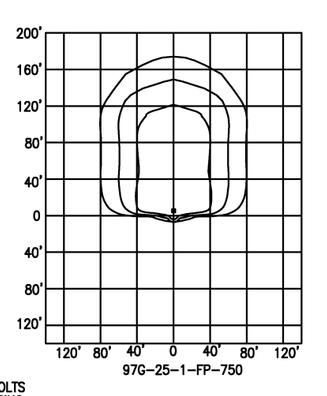


C BASE PLAN

1 1/2"=1'-0"

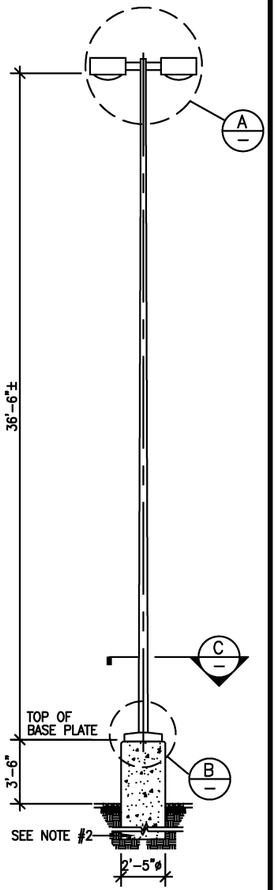
0 6" 1' 2'





PHOTOMETRICS – INITIAL F.C.

1" = 80'-0" 0 80' 160' 240'



FIXTURE ELEVATION

1/4"=1'-0"

0 3' 6' 12'

NOTES:

1. U.L. CERTIFICATION: PROVIDE FIXTURES CONFORMING TO N.E.C. REQUIREMENTS FOR WET LOCATIONS.
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3. SEE STRUCTURAL DWG'S. FOR FOOTING DEPTH AND REINFORCEMENT.

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APPROVED	J. CORLEY	1998 DATE

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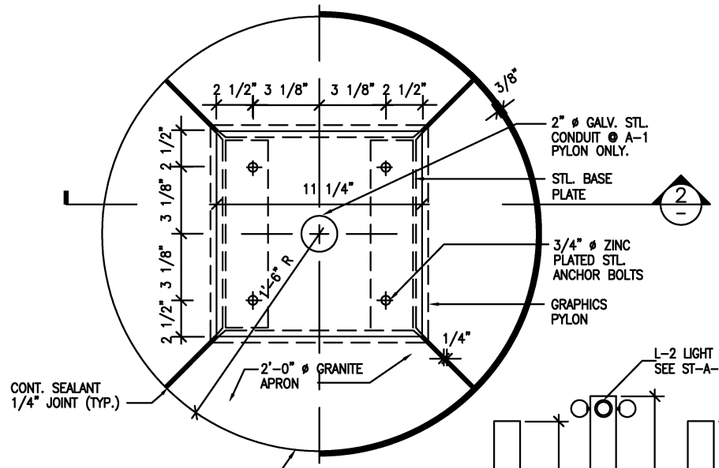
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

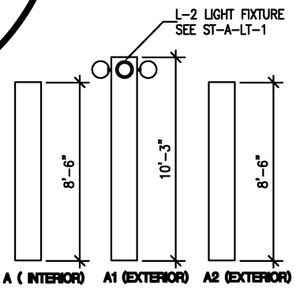
ARCHITECTURE STANDARD DRAWING
STANDARD EXTERIOR LIGHTING
FIXTURE 97G-40

SCALE: AS SHOWN

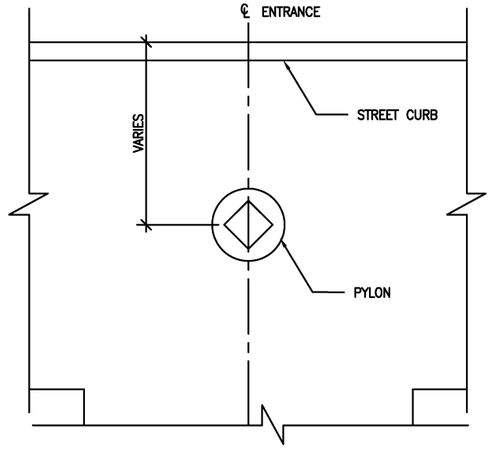
DRAWING NO.: ST-A-LT-012



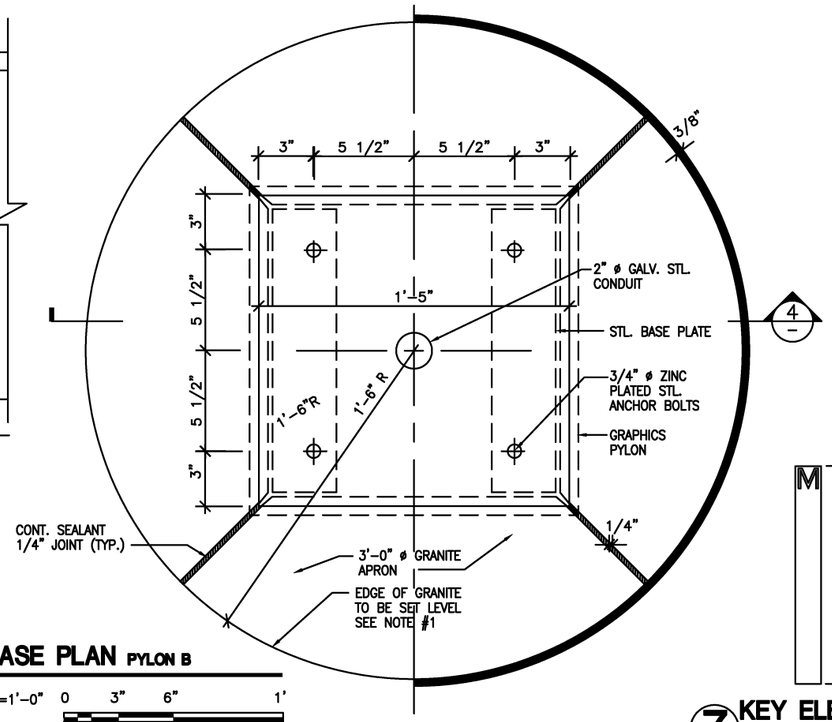
PYLON A,A1 & A2
1 BASE PLAN
3"=1'-0" 0 3" 6" 1'



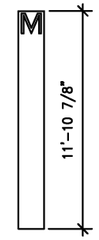
6 KEY ELEVATION
N.T.S.



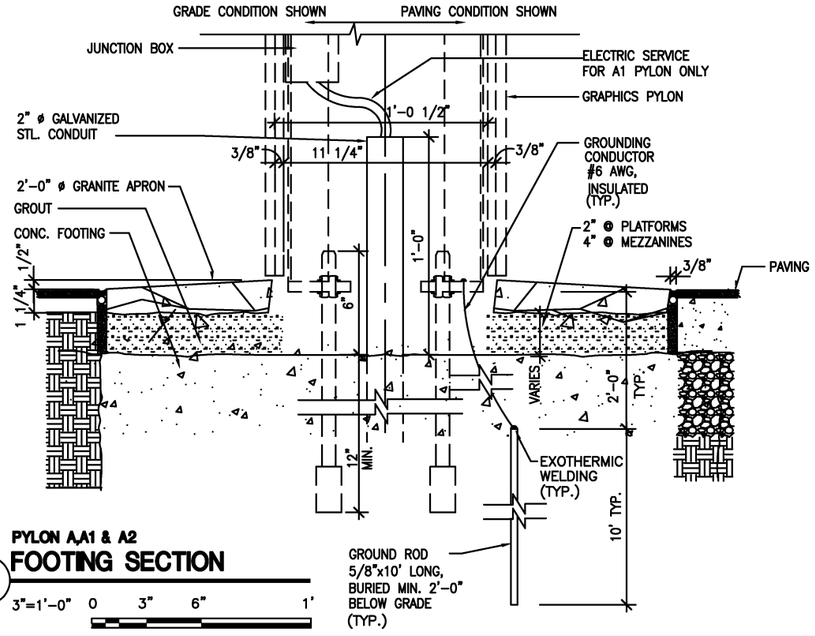
5 PYLON ORIENTATION
1/2" = 1'-0" 0 1' 2' 4'



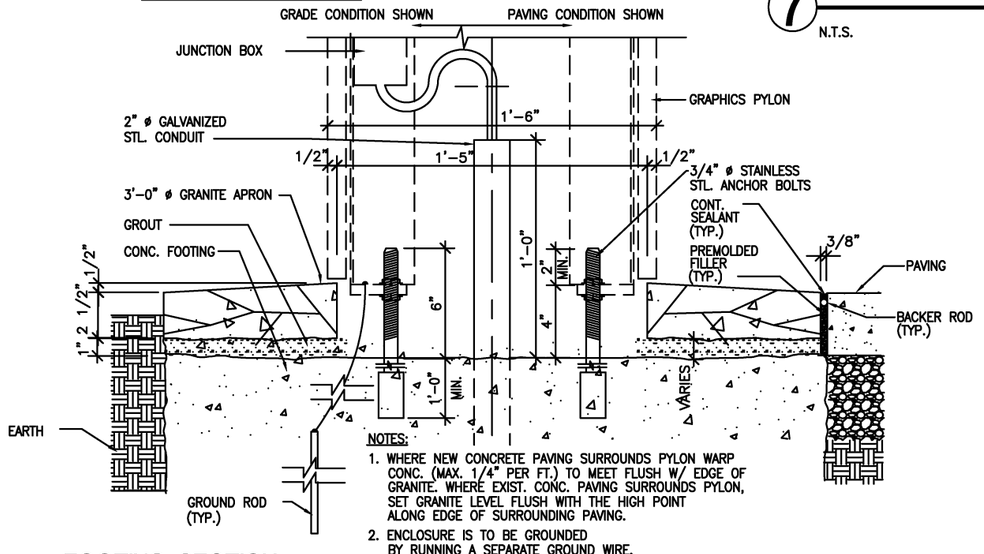
3 BASE PLAN PYLON B
3"=1'-0" 0 3" 6" 1'



7 KEY ELEVATION
N.T.S.



PYLON A,A1 & A2
2 FOOTING SECTION
3"=1'-0" 0 3" 6" 1'



4 FOOTING SECTION PYLON B
3"=1'-0" 0 3" 6" 1'

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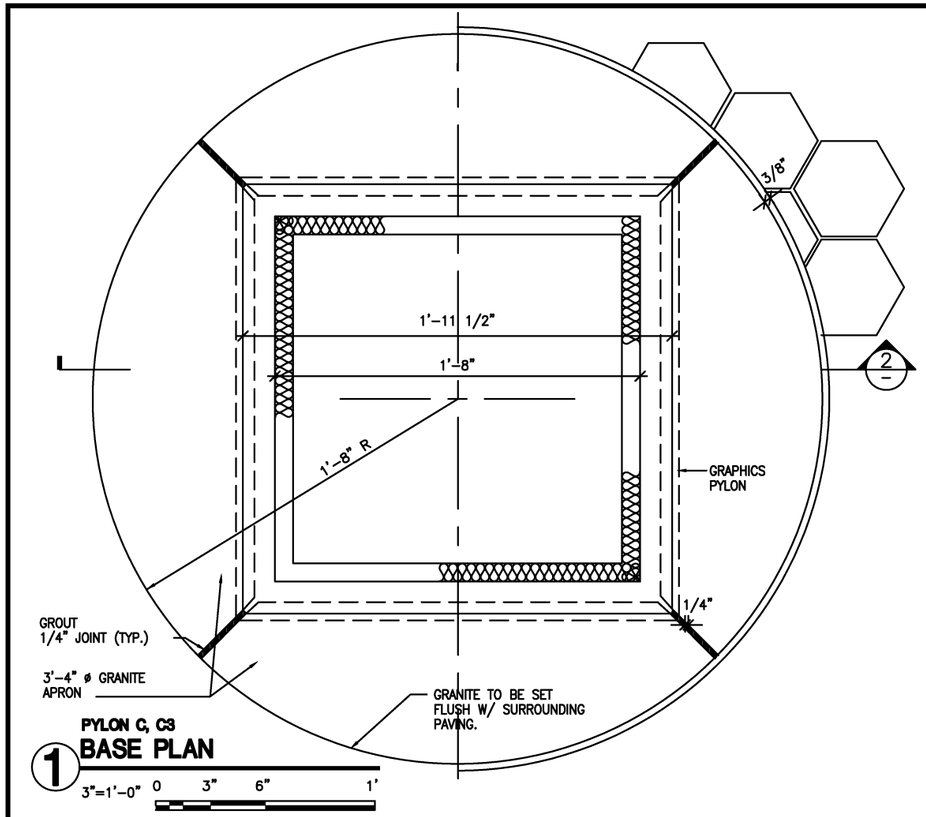
APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
PYLON A, A-1, A-2, AND B BASE DETAILS

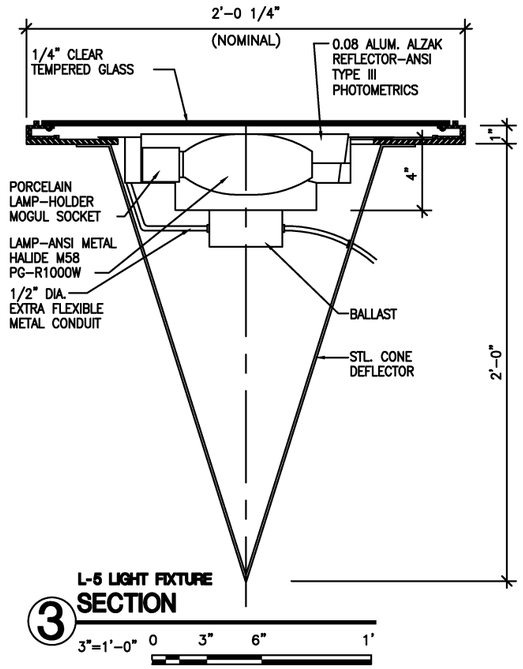
SCALE	DRAWING NO.
AS SHOWN	ST-A-PY-001



PYLON C, C3

1 BASE PLAN

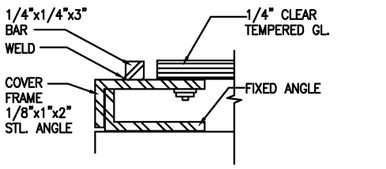
3"=1'-0" 0 3" 6" 1'



L-5 LIGHT FIXTURE

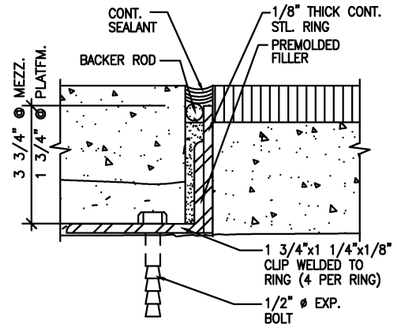
3 SECTION

3"=1'-0" 0 3" 6" 1'



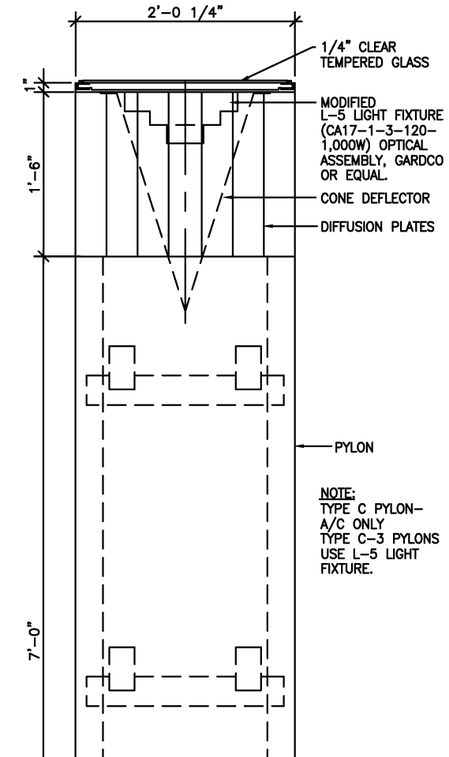
4 SECTION

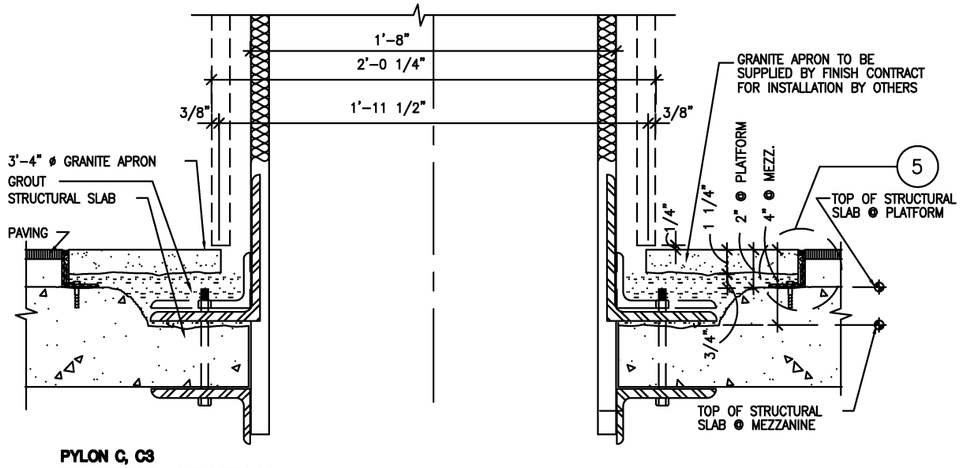
FULL SIZE 0 1 1/2" 3"



5 DETAIL

FULL SIZE 0 1 1/2" 3"

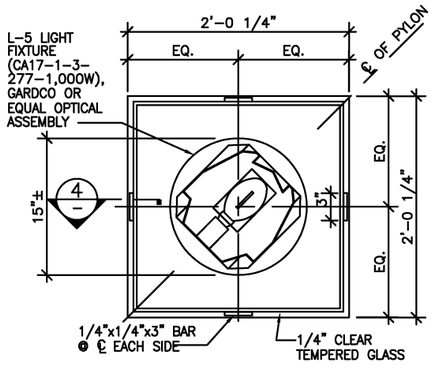




PYLON C, C3

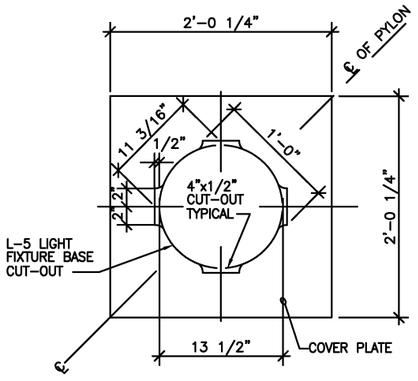
2 FOOTING SECTION

3"=1'-0" 0 3" 6" 1'



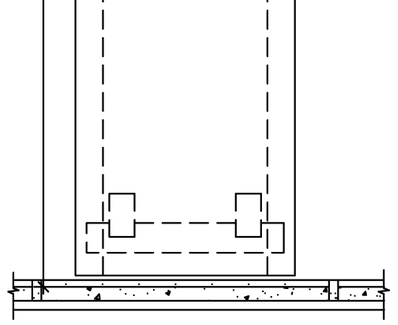
6 PLAN - COVER FRAME

1 1/2"=1'-0" 0 6" 1' 2'



7 PLAN - COVER PLATE

1 1/2"=1'-0" 0 6" 1' 2'



8 PYLON ELEVATION

1 1/2"=1'-0" 0 6" 1' 2'

NOTE 1. FOR CLADDING DETAILS SEE DD-A-PY-1

DESIGNED	D. MUNSON	1998 DATE
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ARCHITECTURAL STANDARD DRAWING
PYLON C, C3 WITH L-5 LIGHT FIXTURE & BASE DETAILS

SCALE: AS SHOWN

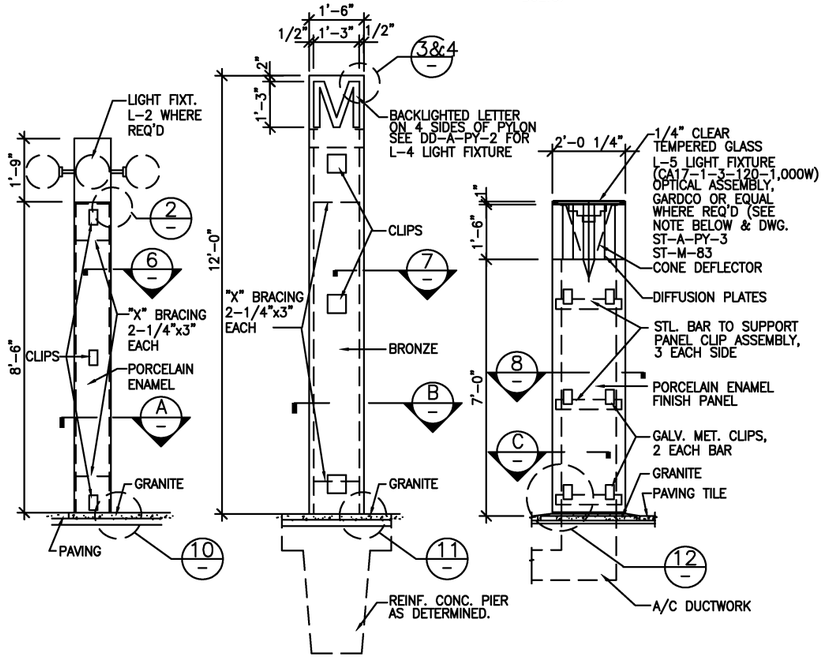
DRAWING NO.: ST-A-PY-002

PARTS OF GRAPHICS PANEL STAGE PHASE CONTRACT:

1. PYLONS TYPE A & B
2. PYLON C GRAPHICS PANELS AND SUPPORTING STRUCTURE.
3. LIGHT FIXTURE L-4 IN PYLON TYPE B

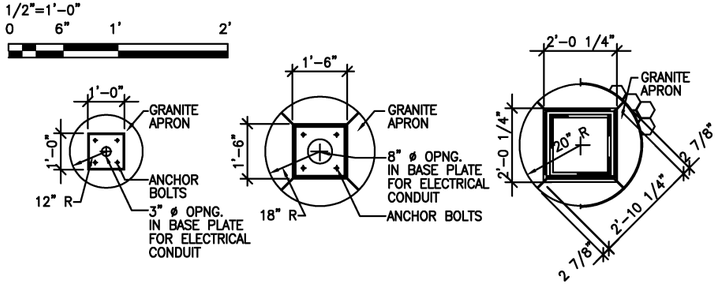
PARTS OF STRUCTURAL AND FINISH STAGE PHASE CONTRACT:

1. PYLON TYPE C WITH THE EXCEPTION OF GRAPHICS PANELS AND SUPPORTING STRUCTURE.
2. GRANITE APRONS FOR PYLONS TYPE A, B & C.
3. REQUIRED ELECTRICAL STUB-UPS TO BE PROVIDED .
4. REQUIRED CAST-IN-PLACE CONCRETE FOOTINGS AND ANCHOR BOLTS.



PYLON TYPES

1/2"=1'-0"
0 6" 1' 2'



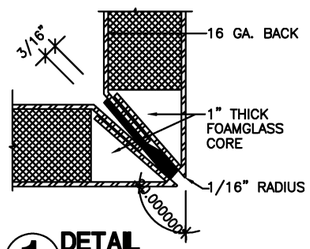
A INTERIOR - NO LIGHT
A-1 EXTERIOR-LIGHT
A-2 EXTERIOR-NO LIGHT

NOTE:
FOR PYLONS A-1 AND B MOUNT JUNCTION BOX TO INSIDE FACE OF ANGLE FRAME 1'-0" ABOVE BASE AND PREWIRE TO LIGHT FIXTURE.

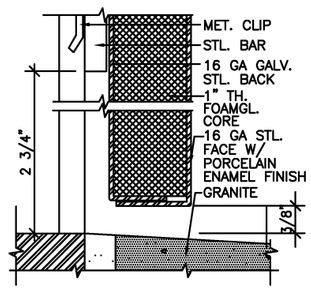
B

C A/C & L-5 LIGHT

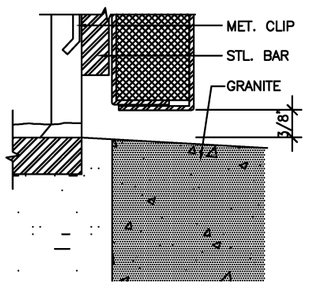
NOTE:
1. FOR TYPE C-3 PYLONS, USE TYPE "L-5" LIGHT FIXTURE AT PLATFORM AND "L-5" LIGHT FIXTURE AT MEZZANINE.



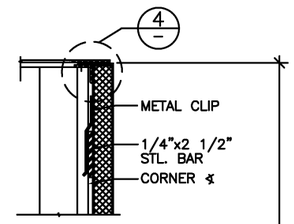
1 DETAIL
FULL SIZE
0 1 1/2" 3"



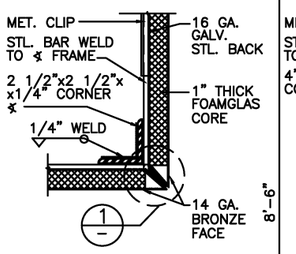
5 DETAIL
FULL SIZE
0 1 1/2" 3"



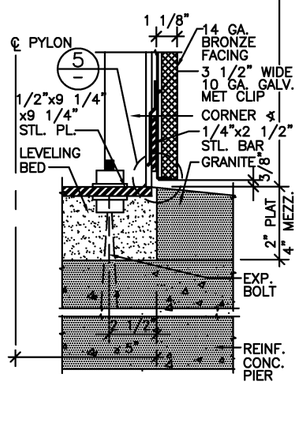
9 DETAIL
FULL SIZE
0 1 1/2" 3"



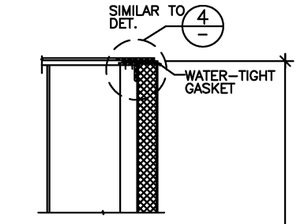
2 DETAIL
3"=1'-0"
0 3" 6" 1'



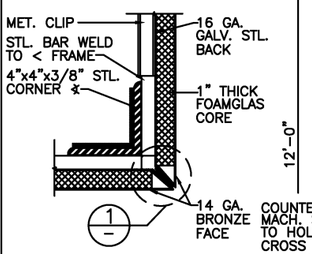
6 DETAIL
3"=1'-0"
0 3" 6" 1'



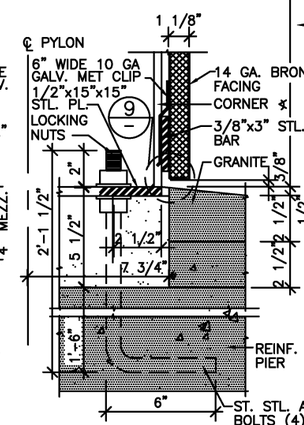
10 DETAIL
3"=1'-0"
0 3" 6" 1'



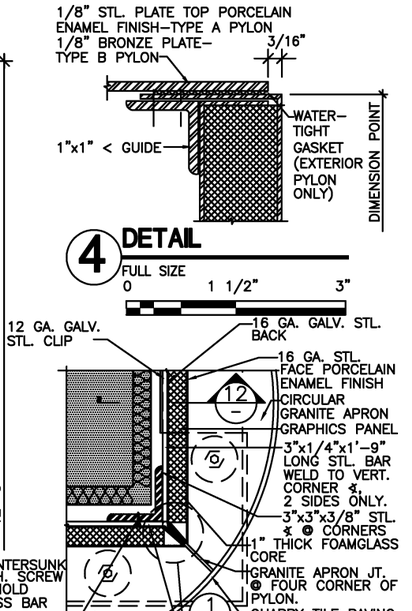
3 DETAIL
3"=1'-0"
0 3" 6" 1'



7 DETAIL
3"=1'-0"
0 3" 6" 1'

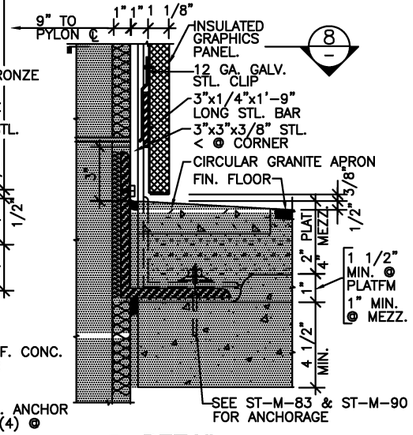


11 DETAIL
3"=1'-0"
0 3" 6" 1'



4 DETAIL
FULL SIZE
0 1 1/2" 3"

8 DETAIL
3"=1'-0"
0 3" 6" 1'



12 DETAIL
3"=1'-0"
0 3" 6" 1'

NOTE:
SHADED AREA INDICATES SEPARATION OF THE GRAPHICS PANEL STAGE CONTRACT FROM THE STRUCTURAL & FINISH CONTRACT.

DESIGNED	D. MUNSON	1988 DATE
DRAWN	N. IBIEBELE	1988 DATE
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APPROVED	J. CORLEY	1988 DATE

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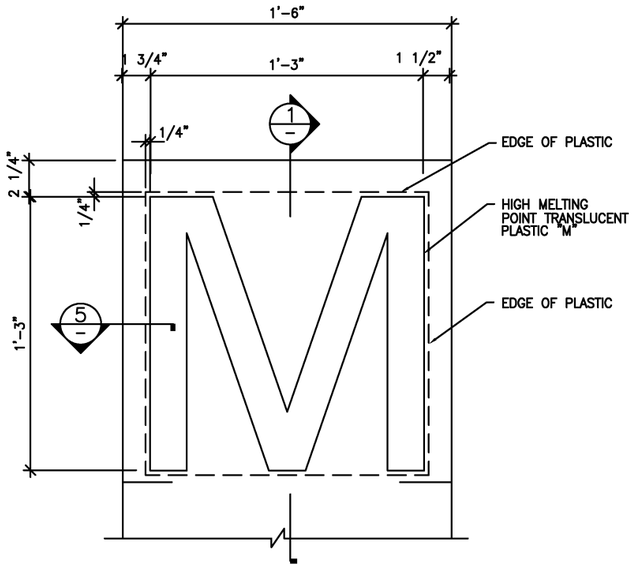
APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
PYLON CLADDING DETAILS

SCALE: AS SHOWN

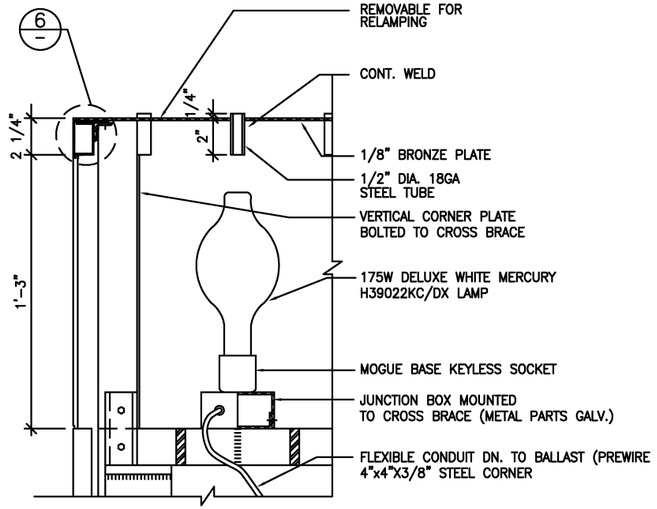
DRAWING NO.: ST-A-PY-003



4 ELEVATION

3"=1'-0"

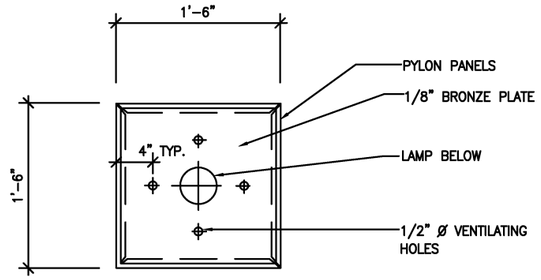
0 3" 6" 1'



1 SECTION

3"=1'-0"

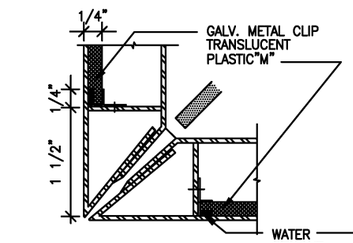
0 3" 6" 1'



3 TOP VIEW

1 1/2"=1'-0"

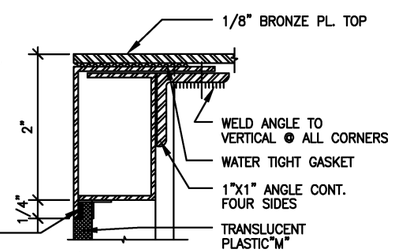
0 3" 6" 1' 2'



5 DETAIL

FULL SIZE

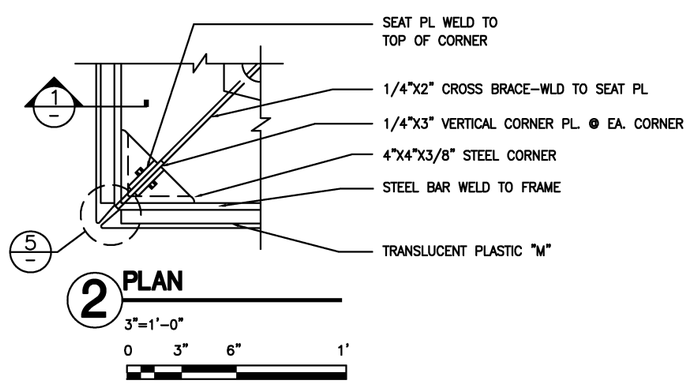
0 1 1/2" 3"



6 DETAIL

FULL SIZE

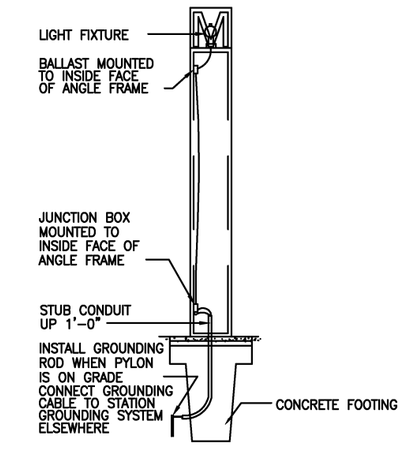
0 1 1/2" 3"



2 PLAN

3"=1'-0"

0 3" 6" 1'



7 ELECTRICAL DIAGRAM

3/8"=1'-0"

0 6"1' 2' 4' 8'

L-4 LIGHT FIX.-PYLON TYPE B

NOTE:
ALL STEEL WITHIN PYLON TO BE GALVANIZED

DESIGNED	D. MUNSON	1998 DATE
DRAWN	N. IBIEBELE	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
08/2001	ENGA	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

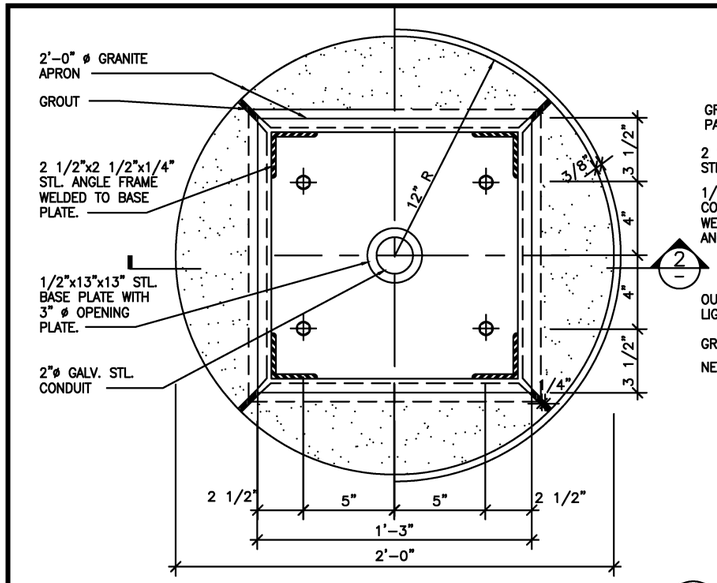
DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF ENGINEERING AND ARCHITECTURE

SUBMITTED _____ DATE

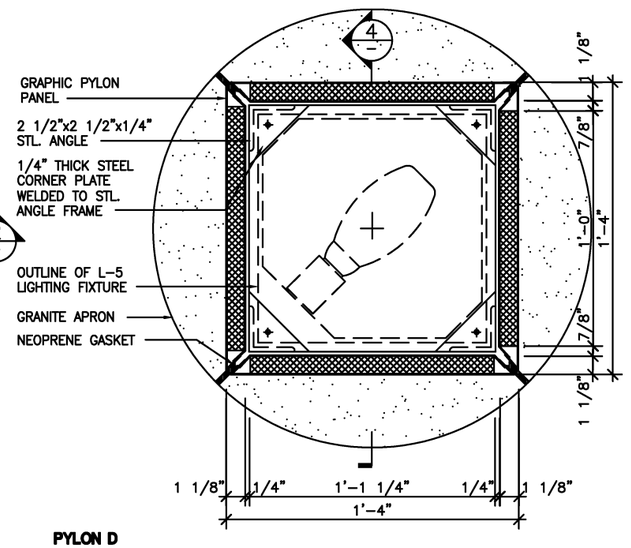
APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
PYLON LIGHT FIXTURES

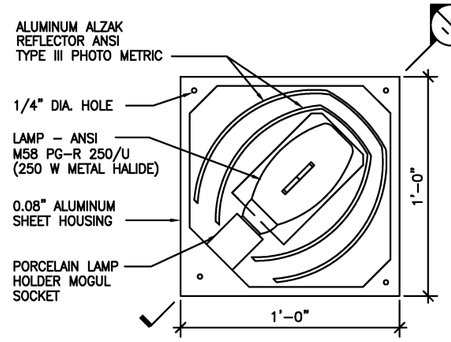
SCALE	DRAWING NO.
AS SHOWN	ST-A-PY-004



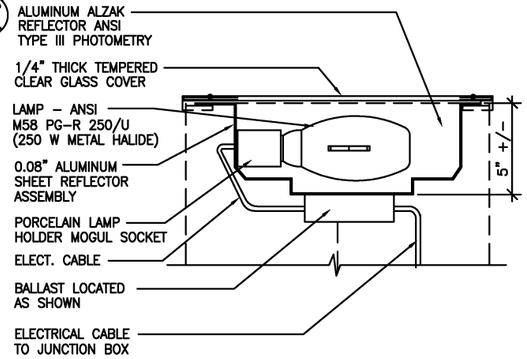
PYLON D
1 BASE PLAN
3"=1'-0" 0 3" 6" 1'



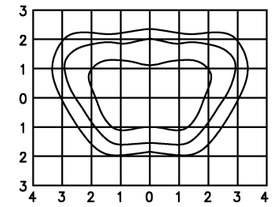
PYLON D
3 PLAN WITH L-5 LIGHTING FIXTURE
3"=1'-0" 0 3" 6" 1'



5 L-5 LIGHTING FIXTURE PLAN
3"=1'-0" 0 3" 6" 1'

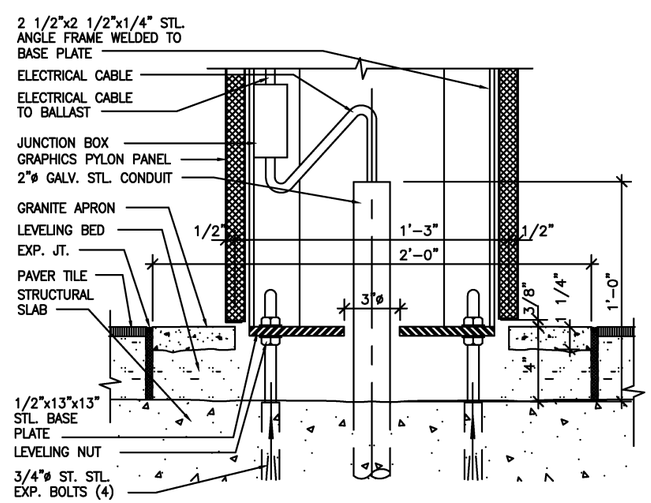


6 L-5 LIGHTING FIXTURE SECTION
3"=1'-0" 0 3" 6" 1'

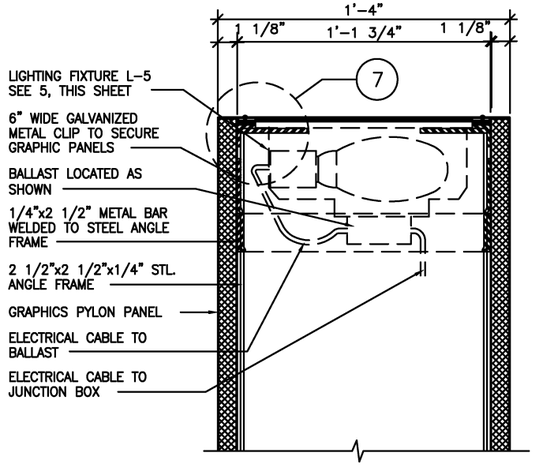


250 W METAL HALIDE (CLEAR) ANSI LAMP
TYPE III DISTRIBUTION REFLECTOR
MOUNTING HEIGHT : 6'0" +/- FROM TEST PLANE

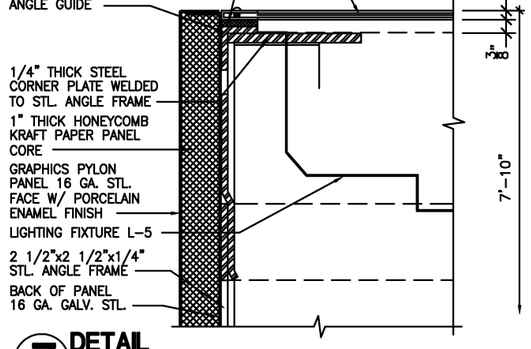
8 PHOTOMETRICS
1" =40'-0"



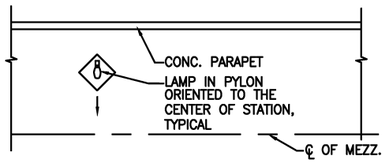
PYLON D
2 BASE SECTION
3"=1'-0" 0 3" 6" 1'



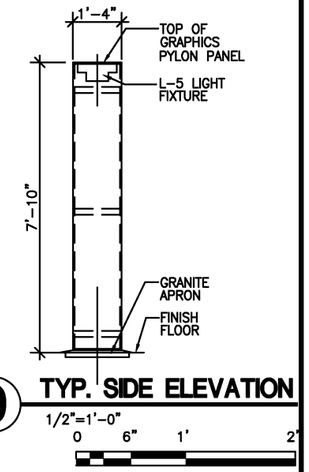
4 SECTION
3"=1'-0" 0 3" 6" 1'



7 DETAIL
6"=1'-0" 0 1 1/2" 3" 6"



10 LOCATION PLAN
NOT TO SCALE



9 TYP. SIDE ELEVATION
1/2"=1'-0" 0 6" 1' 2'

DESIGNED	D. MUNSON	1998 DATE
DRAWN	N. IBIEBELE	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION
08/2001	ENGA	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF ENGINEERING AND ARCHITECTURE

SUBMITTED _____ DATE

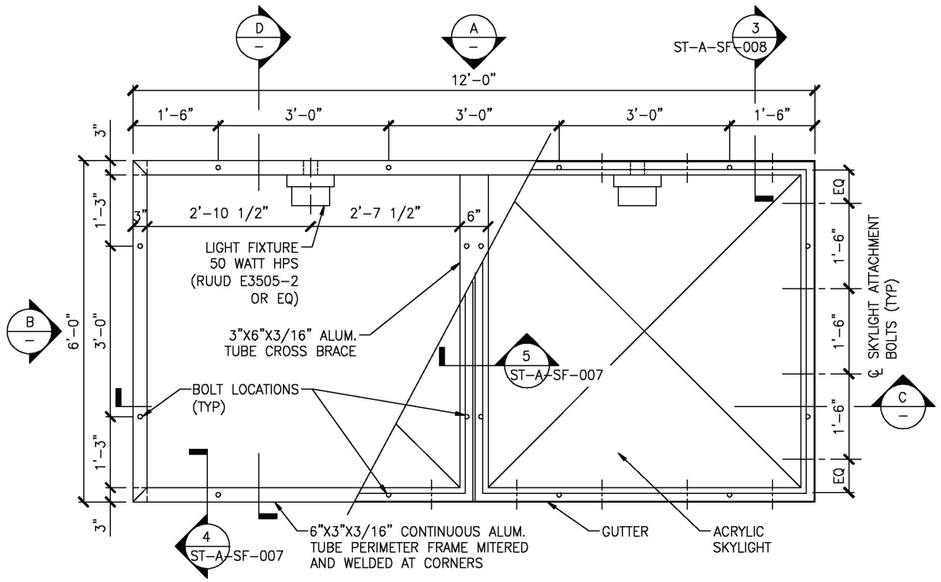
APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
PYLON D & L-5 LIGHT FIXTURE

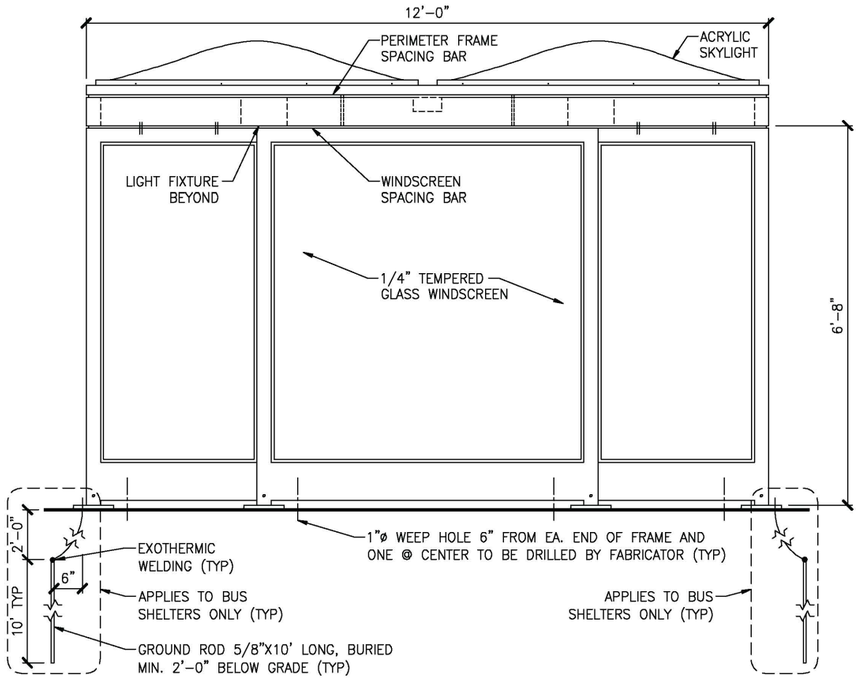
SCALE: AS SHOWN

DRAWING NO.: ST-A-PY-005

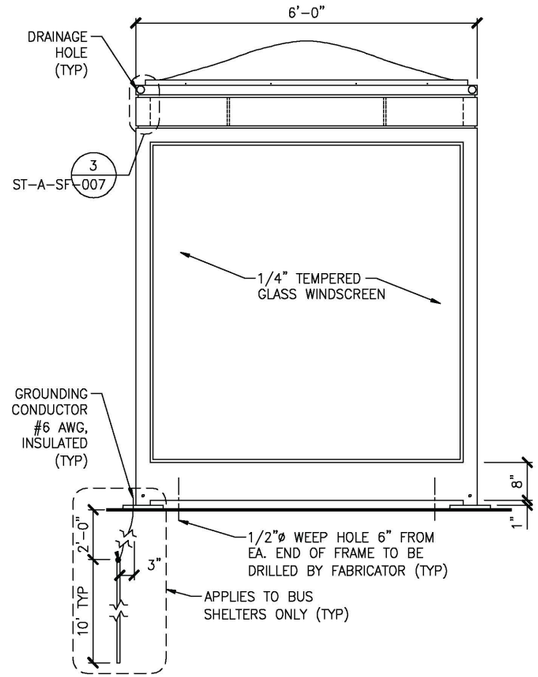
GENERAL NOTES:
1. SEE GENERAL NOTES ON DWG. ST-A-SF-006.



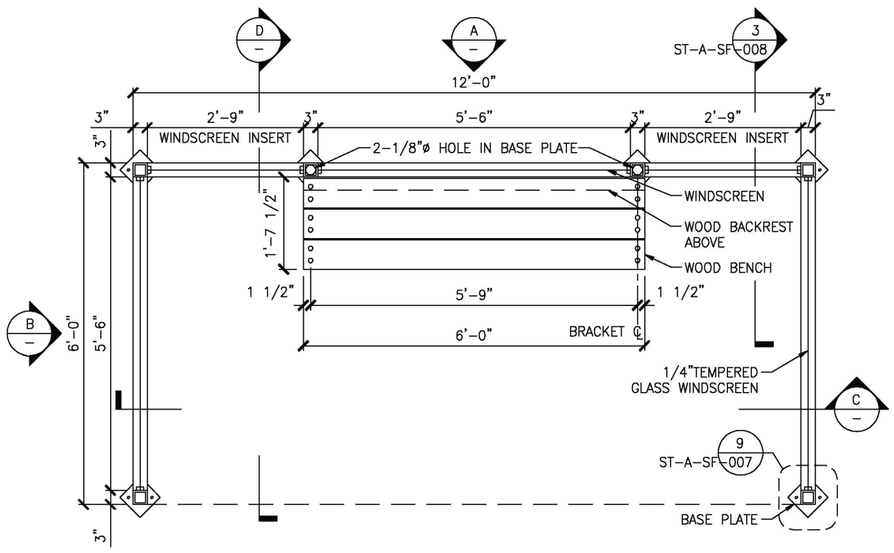
1 SINGLE SHELTER ROOF PLAN
3/4" = 1'-0"



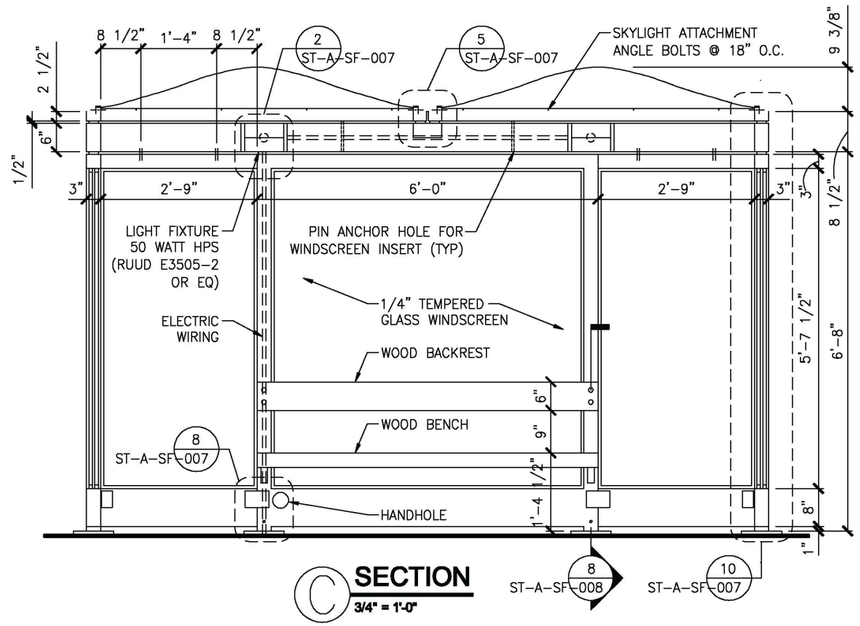
A ELEVATION
3/4" = 1'-0"



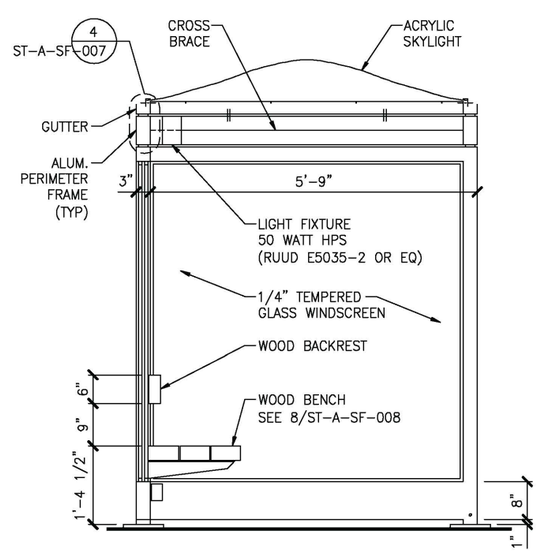
B ELEVATION
3/4" = 1'-0"



2 SINGLE SHELTER PLAN
3/4" = 1'-0"



C SECTION
3/4" = 1'-0"



D SECTION
3/4" = 1'-0"

DESIGNED		01/08 DATE
DRAWN	P. FANFULIK	01/08 DATE
CHECKED	E. RILEY	01/08 DATE
APPROVED	E. RILEY	01/08 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

SUBMITTED Edward V. Riley 01/2008 DATE

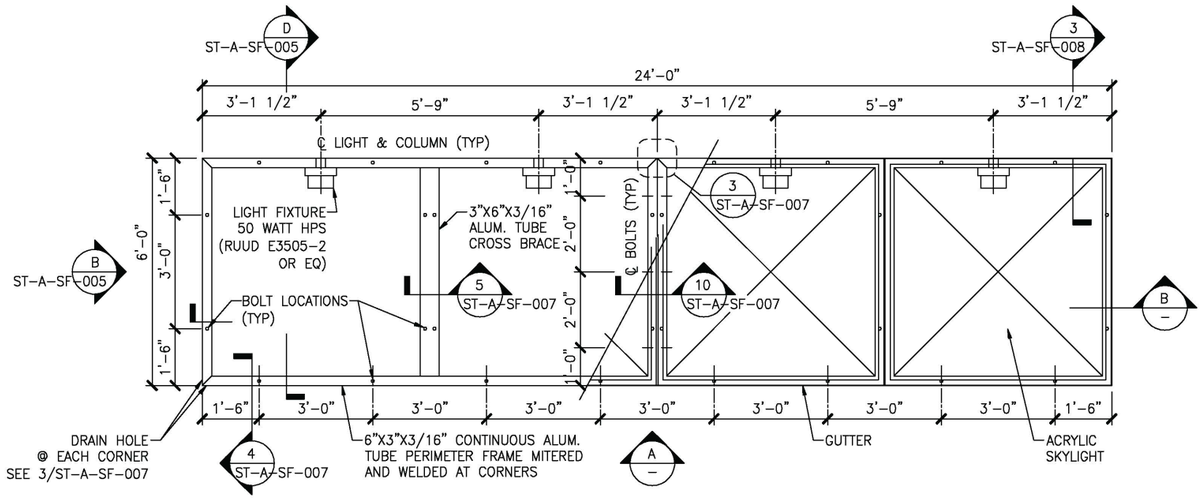
APPROVED [signature] 01/2008 DATE

ARCHITECTURAL STANDARD DRAWING
SINGLE SHELTER
PLANS, ELEVATIONS AND SECTIONS

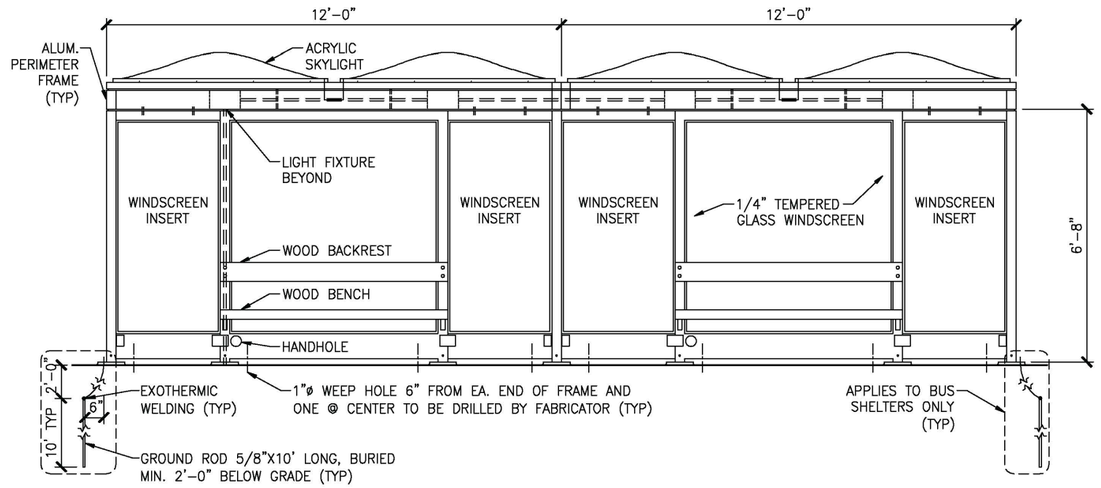
SCALE 3/4"=1'-0" 0 1 2

DRAWING NO. ST-A-SF-005

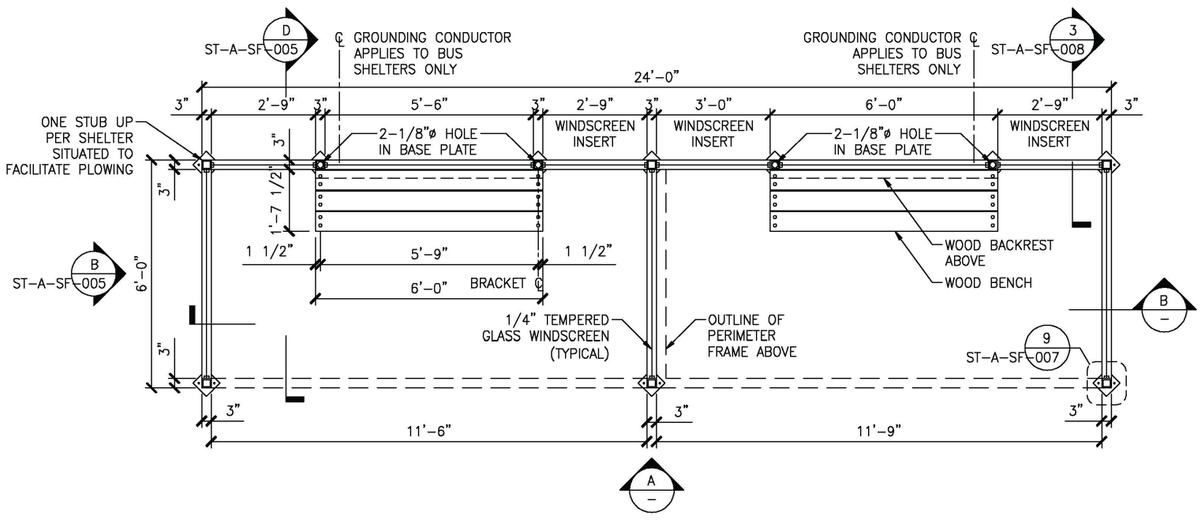
GENERAL NOTES:
1. ALL ALUMINUM TO BE ANODIZED, ALLOY 6061 OR 6063. WHERE ALUMINUM IS IN CONTACT WITH DISSIMILAR METALS OR CONCRETE, COAT CONTACT SURFACES.
2. FOR MOUNTING DETAIL AT BUS SHELTER, SEE DETAIL 8/ST-A-SF-008.
3. FOR MOUNTING DETAIL AT PLATFORM SHELTER, SEE DETAILS 9 & 10/ST-A-SF-007.
4. INTENT IS TO REPLACE EXISTING STEEL/ALUM. PLATFORM SHELTERS AND BUS SHELTERS. COORDINATE WITH WMATA.



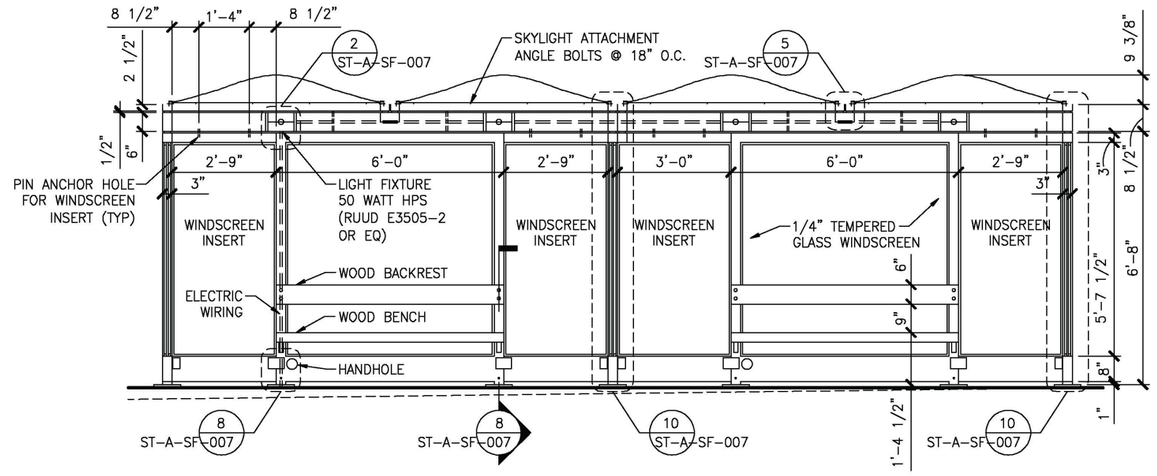
1 DOUBLE SHELTER ROOF PLAN
1/2" = 1'-0"



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



2 DOUBLE SHELTER PLAN
1/2" = 1'-0"



B SECTION
1/2" = 1'-0"

DESIGNED		01/08 DATE
DRAWN	P. FANFULIK	01/08 DATE
CHECKED	E. RILEY	01/08 DATE
APPROVED	E. RILEY	01/08 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

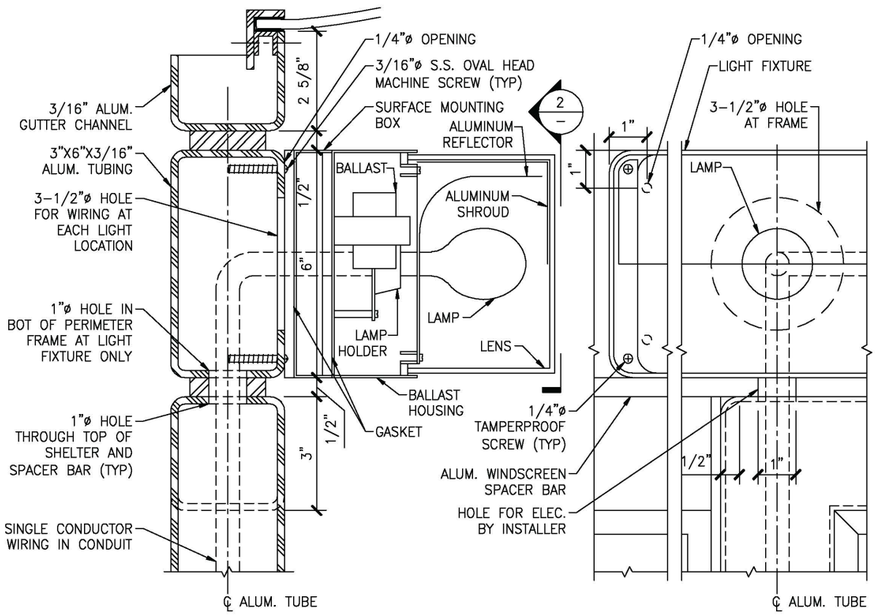
SUBMITTED Edward V. Riley 01/2008 DATE

APPROVED [illegible] 01/2008 DATE

ARCHITECTURAL STANDARD DRAWING
DOUBLE SHELTER
PLANS, ELEVATIONS AND SECTIONS

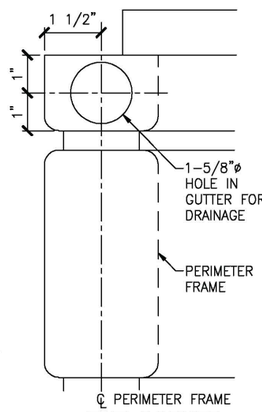
SCALE 1/2"=1'-0" (0 1 2 3)

DRAWING NO. ST-A-SF-006

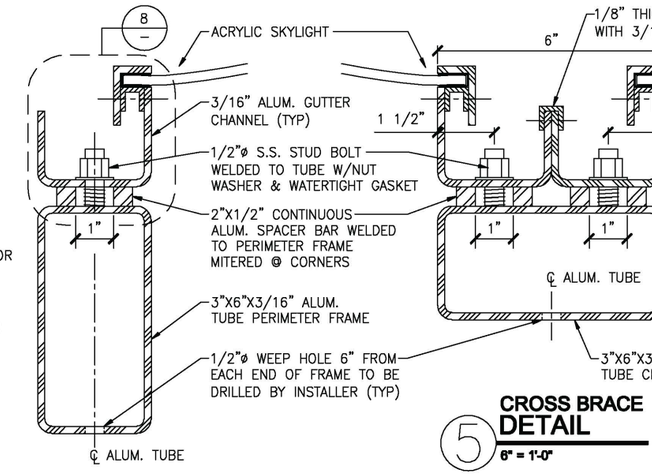


1 DETAIL @ LIGHT FIXTURE
6" = 1'-0"

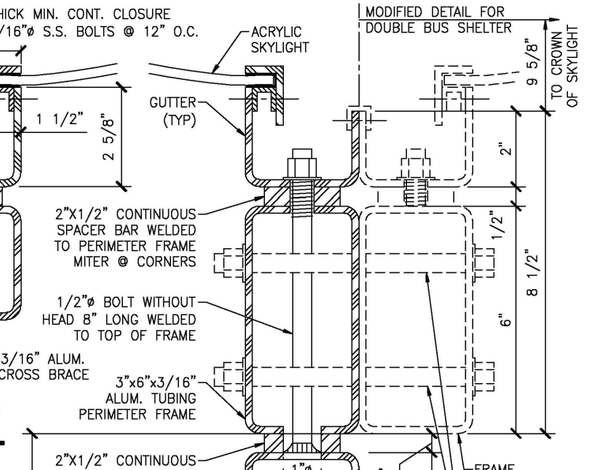
2 ELEV. @ LIGHT FIXTURE
6" = 1'-0"



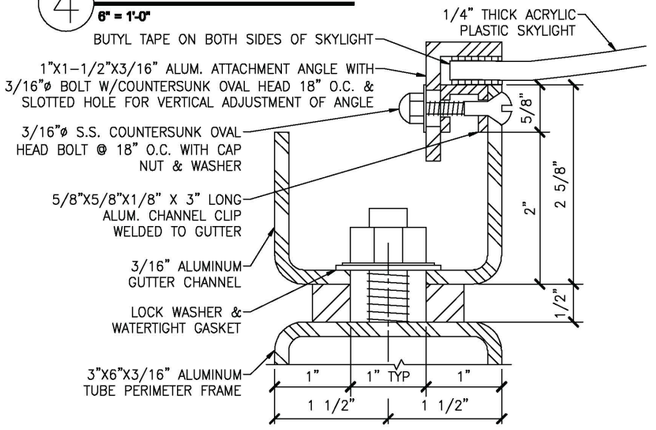
3 EXT. CORNER DETAIL
6" = 1'-0"



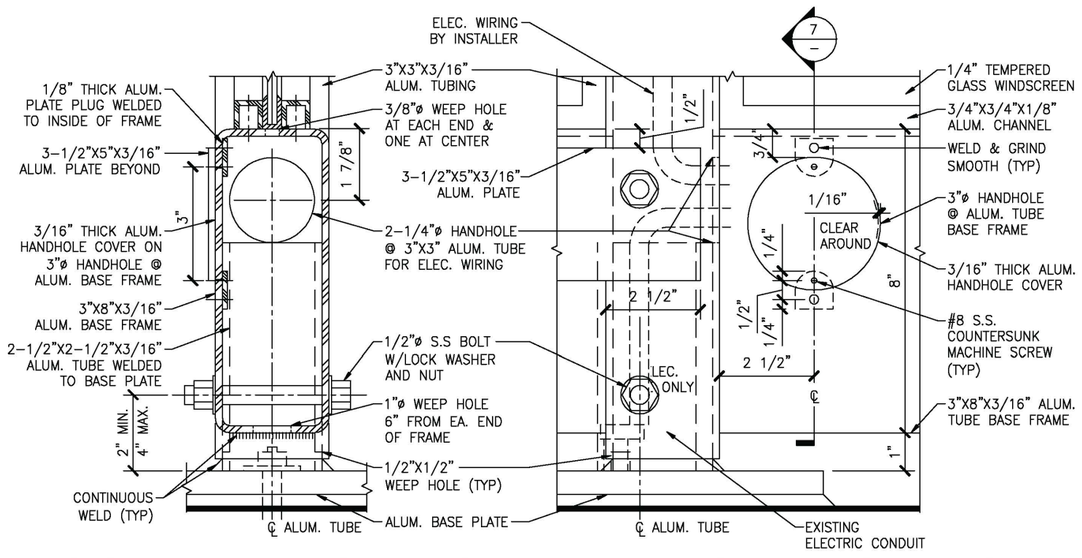
5 CROSS BRACE DETAIL
6" = 1'-0"



10 SECTION THRU SHELTER
6" = 1'-0"

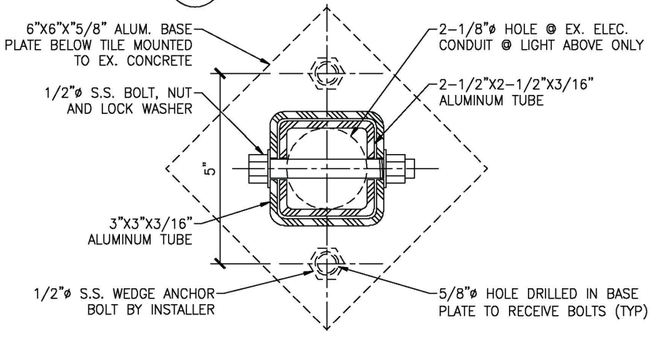


4 PERIMETER DETAIL
6" = 1'-0"



7 SECT. THRU FRAME @ HANDHOLE
6" = 1'-0"

8 ELEV. OF FRAME @ HANDHOLE
6" = 1'-0"



9 DETAIL OF BASE PLATE
6" = 1'-0"

GENERAL NOTES:
1. SEE GENERAL NOTES ON DWG. ST-A-SF-008.

6"=1'-0" (0, 1", 2", 3")
1-0"=1'-0" (0, 1/2", 1", 1-1/2")

DESIGNED		DATE
DRAWN	P. FANFULIK	01/08 DATE
CHECKED	E. RILEY	01/08 DATE
APPROVED	E. RILEY	01/08 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

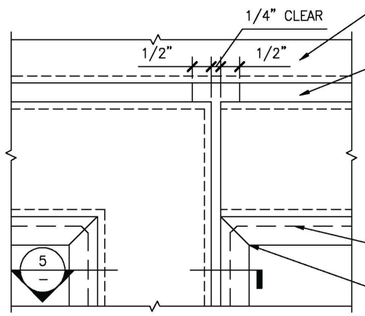
OFFICE OF ENGINEERING SUPPORT SERVICES

SUBMITTED Edward V Roby 01/2008 DATE

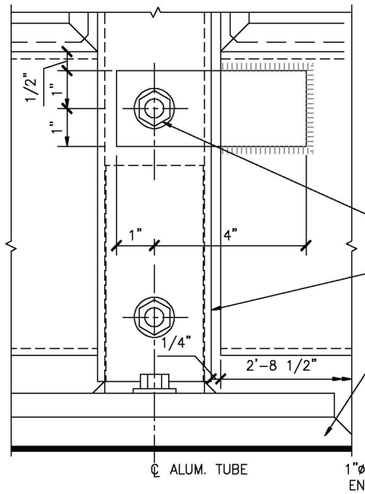
APPROVED 01/2008 DATE

ARCHITECTURAL STANDARD DRAWING
SHELTER
SECTIONS AND DETAILS

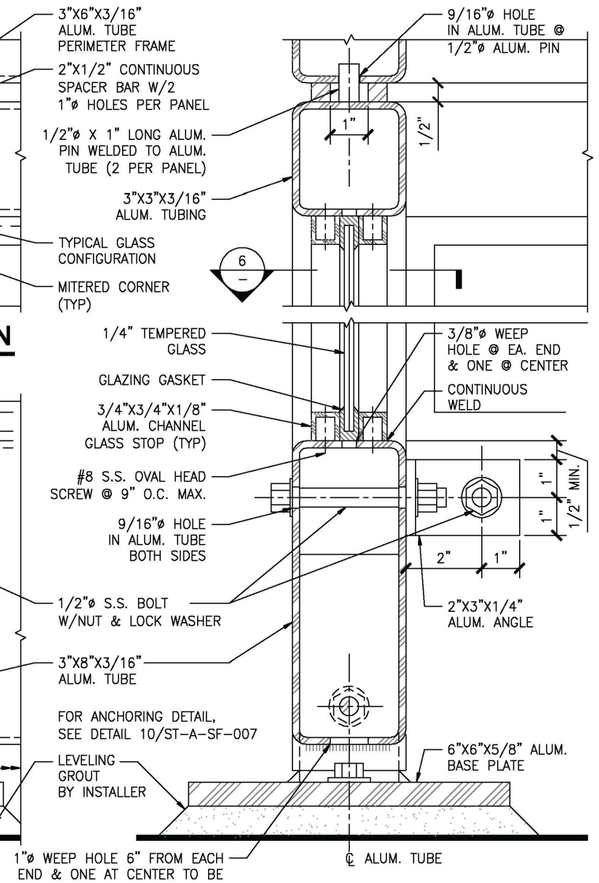
SCALE	DRAWING NO.
AS SHOWN	ST-A-SF-007



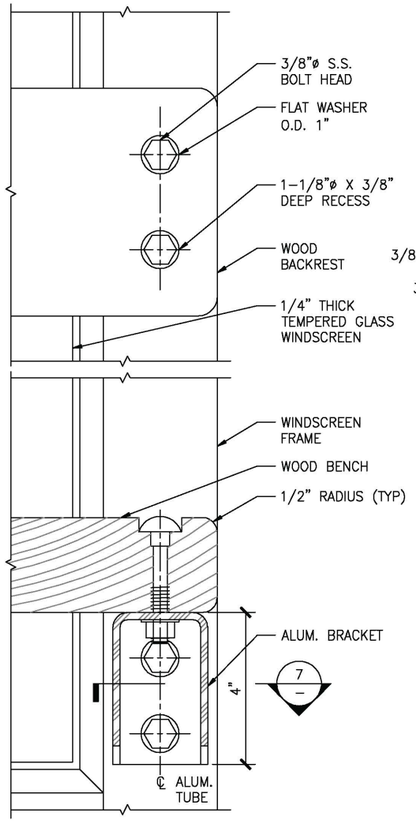
1 PARTIAL ELEVATION
6" = 1'-0"



2 PARTIAL ELEVATION
6" = 1'-0"



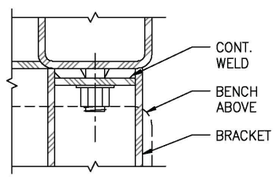
3 SECTION
6" = 1'-0"



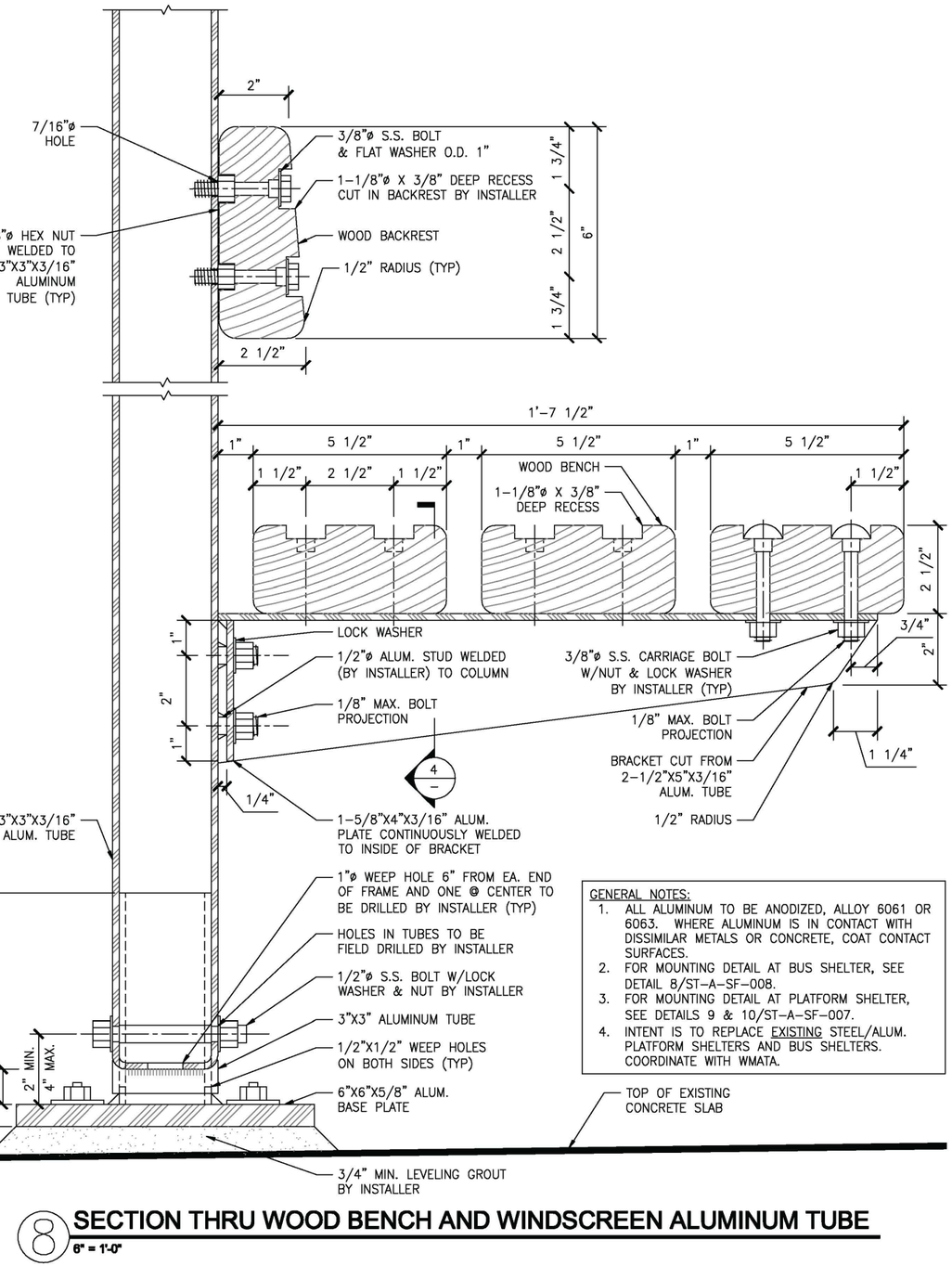
4 EXT. CORNER DETAIL
6" = 1'-0"

5 WINDSCREEN INSERT DETAIL
6" = 1'-0"

6 WINDSCREEN INSERT DETAIL
6" = 1'-0"



7 BENCH BRACKET DETAIL
6" = 1'-0"



GENERAL NOTES:
1. ALL ALUMINUM TO BE ANODIZED, ALLOY 6061 OR 6063. WHERE ALUMINUM IS IN CONTACT WITH DISSIMILAR METALS OR CONCRETE, COAT CONTACT SURFACES.
2. FOR MOUNTING DETAIL AT BUS SHELTER, SEE DETAIL 8/ST-A-SF-008.
3. FOR MOUNTING DETAIL AT PLATFORM SHELTER, SEE DETAILS 9 & 10/ST-A-SF-007.
4. INTENT IS TO REPLACE EXISTING STEEL/ALUM. PLATFORM SHELTERS AND BUS SHELTERS. COORDINATE WITH WMATA.

8 SECTION THRU WOOD BENCH AND WINDSCREEN ALUMINUM TUBE
6" = 1'-0"

DESIGNED		01/08 DATE
DRAWN	P. FANFULIK	01/08 DATE
CHECKED	E. RILEY	01/08 DATE
APPROVED	E. RILEY	01/08 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
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WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

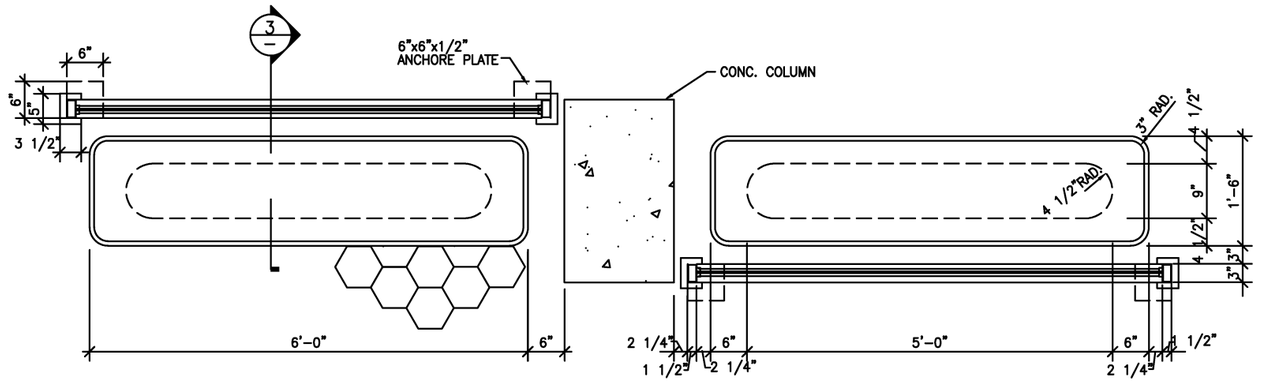
SUBMITTED Edward V Roby 01/2008 DATE

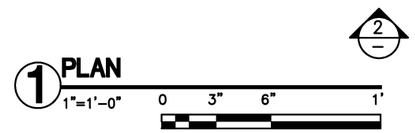
APPROVED 01/2008 DATE

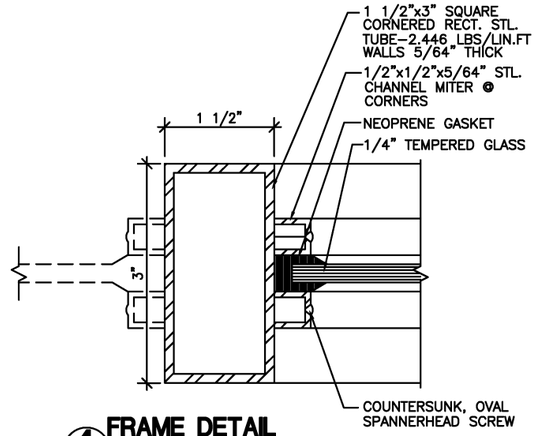
ARCHITECTURAL STANDARD DRAWING
PARTIAL ELEVATIONS, SECTIONS & DETAILS, SHELTER BENCH SECTION

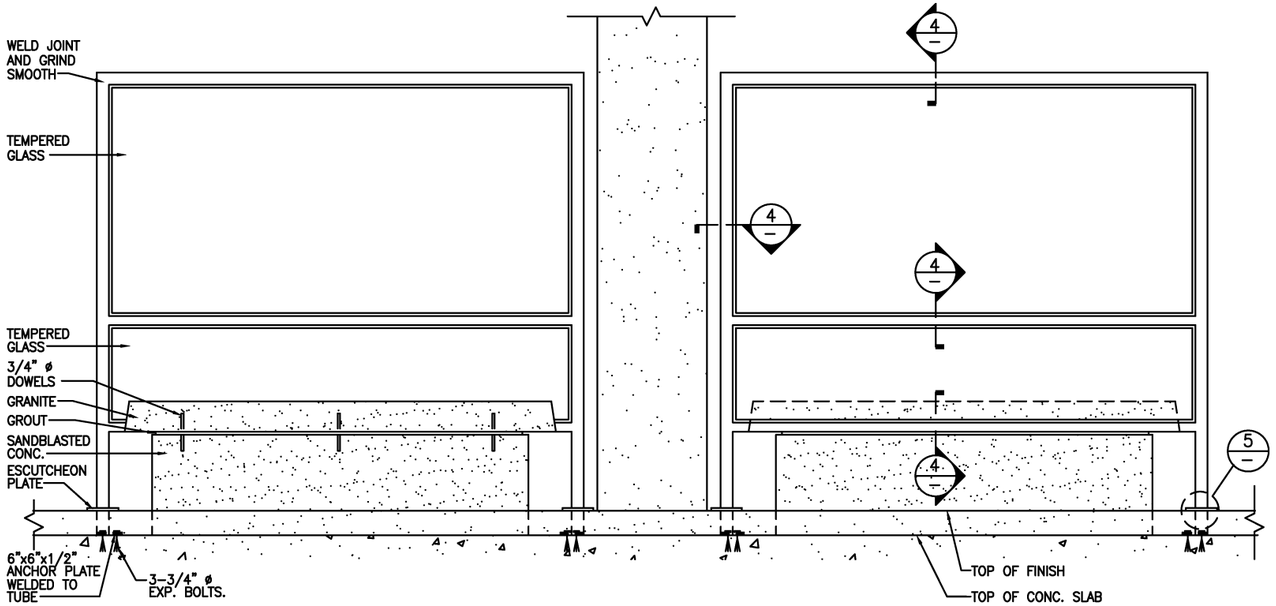
SCALE 6"=1'-0" (0, 1", 2", 3")

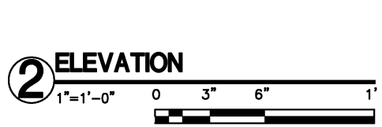
DRAWING NO. ST-A-SF-008

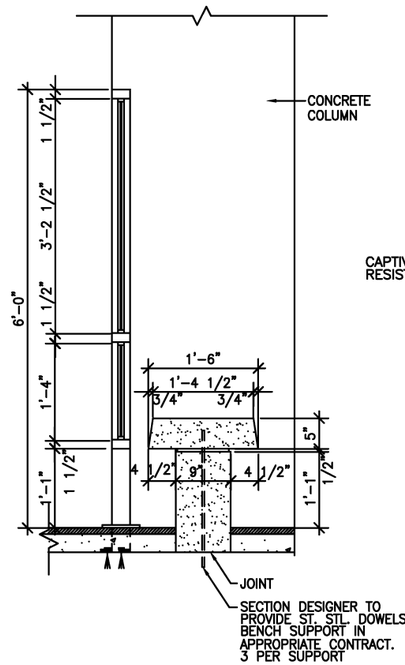


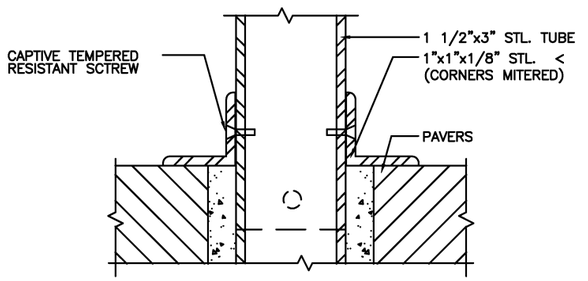












DESIGNED	D. MUNSON	1998	DATE
DRAWN	N. IBIEBELE	1998	DATE
CHECKED	K. LANDESZ	1998	DATE
APPROVED	J. CORLEY	1998	DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION
08/2001	ENGA	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF ENGINEERING AND ARCHITECTURE

SUBMITTED _____ DATE

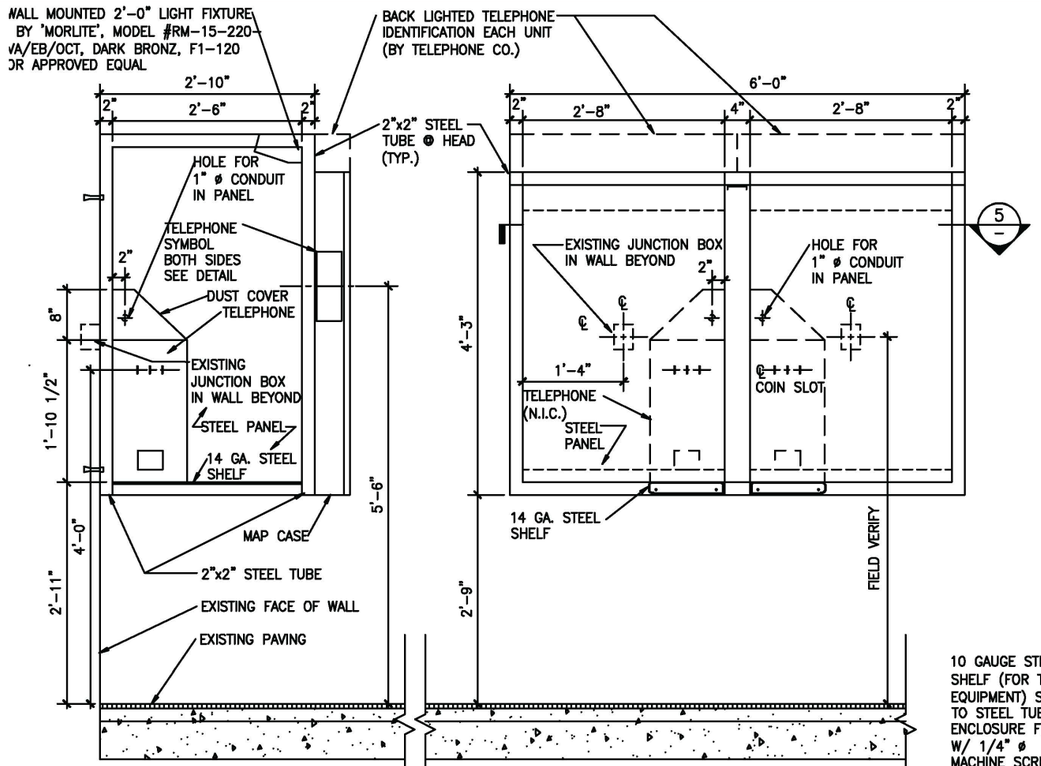
APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
GRANITE BENCH WITH WINDSCREEN

SCALE: AS SHOWN

DRAWING NO.: ST-A-SF-009

(DRAWING IS FOR EXISTING OLDER STATIONS ONLY)

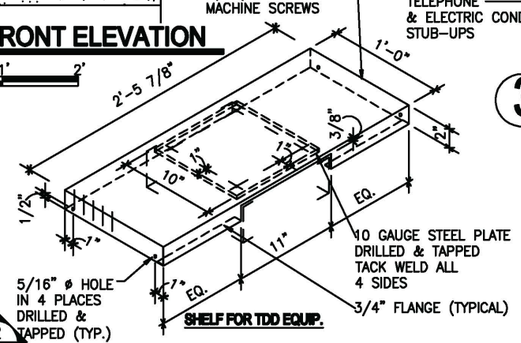


1 WALL MOUNTED UNIT SIDE ELEVATION

1" = 1'-0"

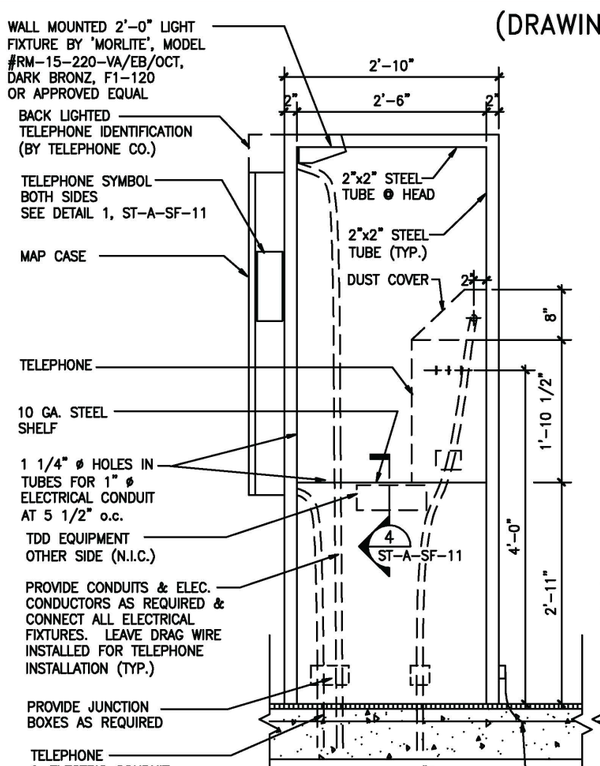
2 WALL MOUNTED UNIT FRONT ELEVATION

1" = 1'-0"



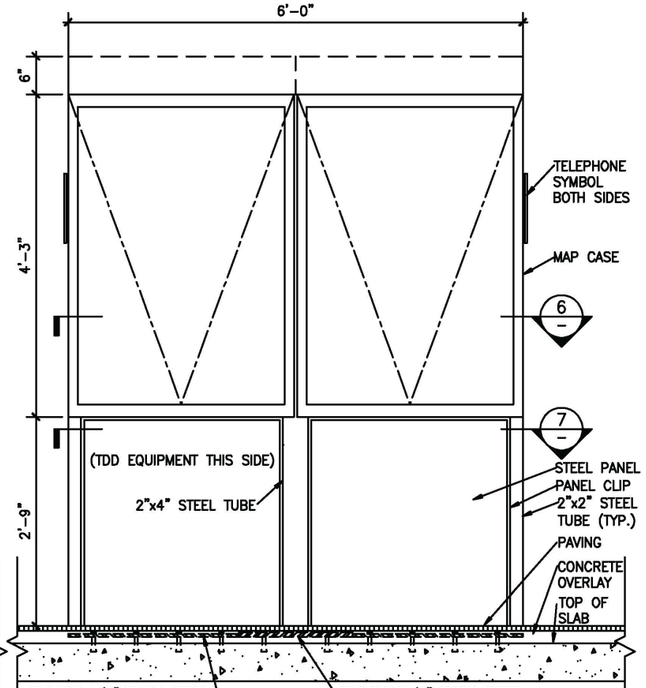
8 SHELF DETAIL

1 1/2" = 1'-0"



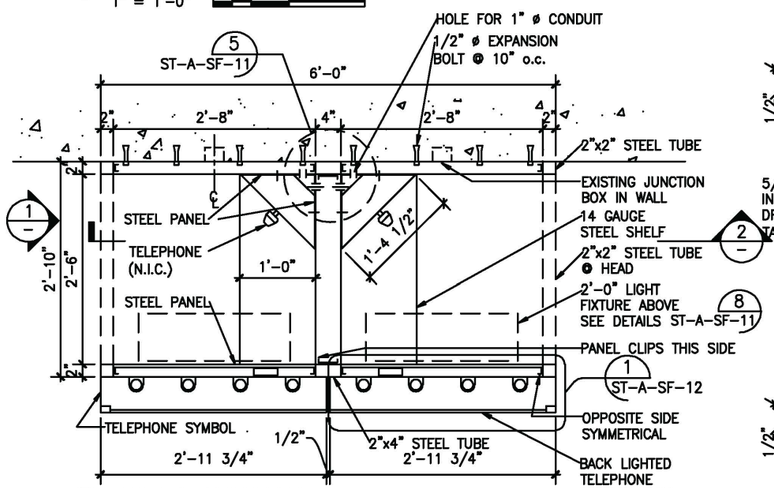
3 SIDE ELEVATION FLOOR MOUNTED UNIT

1" = 1'-0"



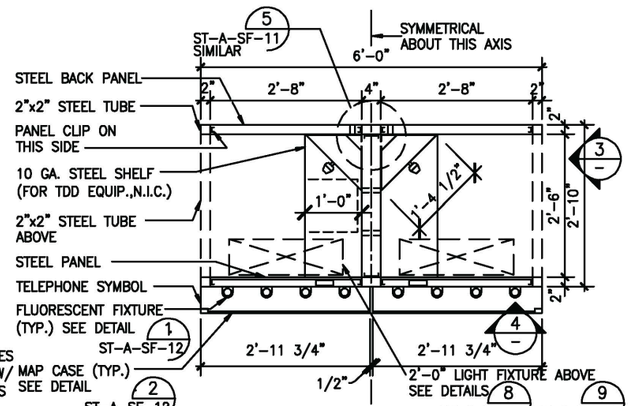
4 FRONT ELEVATION FLOOR MOUNTED UNIT

1" = 1'-0"



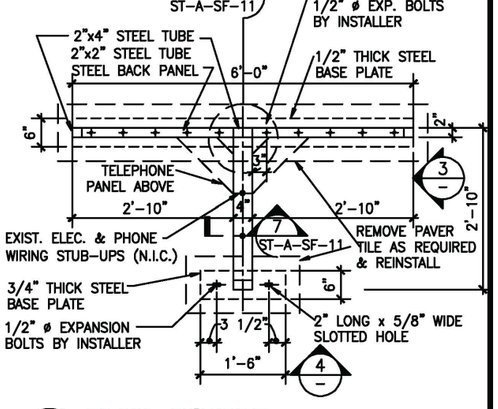
5 PLAN - DOUBLE WALL MOUNTED UNIT

1" = 1'-0"



6 PLAN - DOUBLE FLOOR MOUNTED

3/4" = 1'-0"



7 PLAN - DOUBLE FLOOR MOUNTED

3/4" = 1'-0"

DESIGNED	D. MUNSON	01/08 DATE
DRAWN	V. WOHLLEBEN	01/08 DATE
CHECKED	E. RILEY	01/08 DATE
APPROVED	E. RILEY	01/08 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

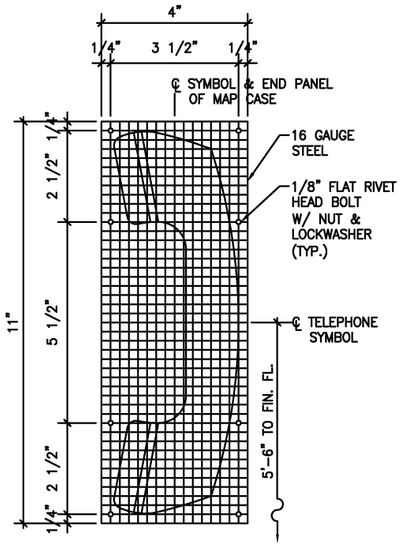
SUBMITTED Edward V. Riley 01/2008 DATE

APPROVED [signature] 01/2008 DATE

ARCHITECTURAL STANDARD DRAWING
TELEPHONE ENCLOSURE PLAN, ELEVATIONS AND SECTIONS

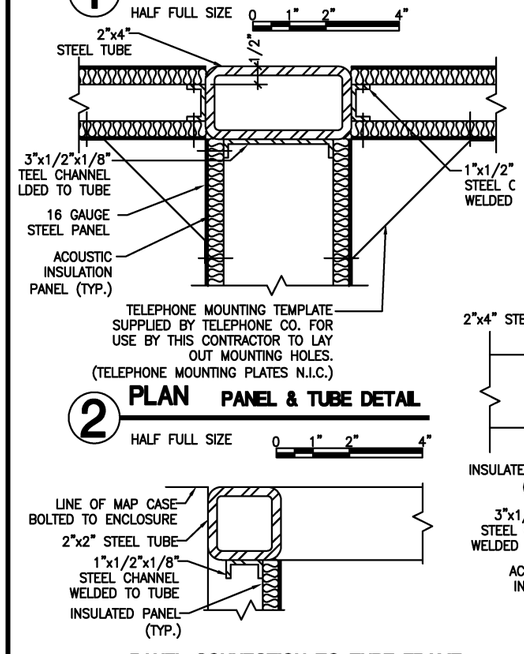
SCALE: AS SHOWN

DRAWING NO.: ST-A-SF-010



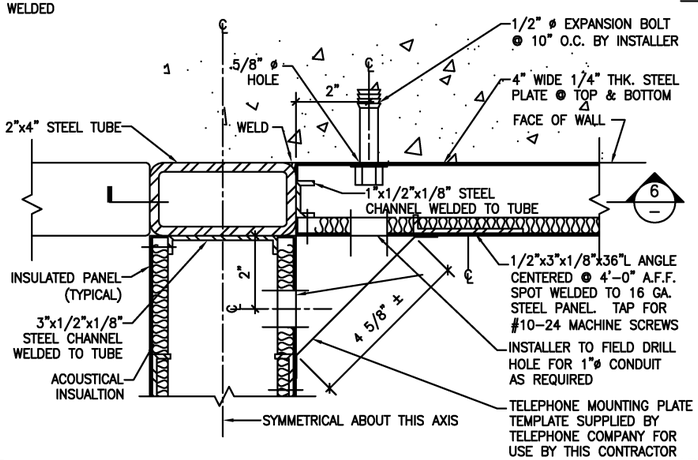
1 TELEPHONE SYMBOL

HALF FULL SIZE 0 1" 2" 4"



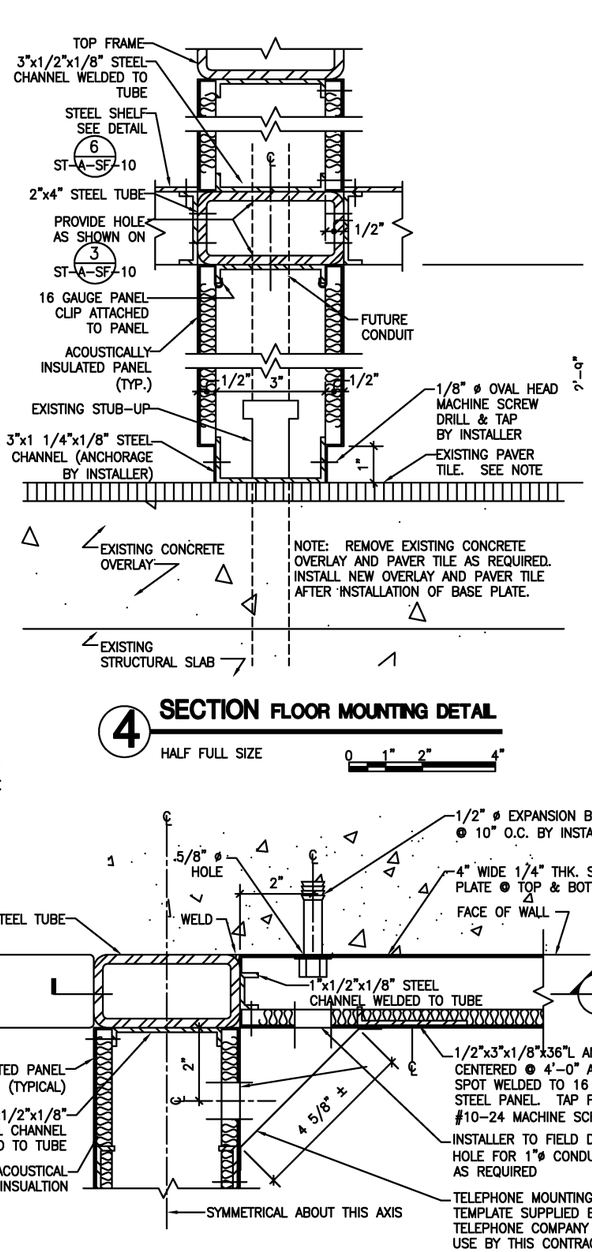
2 PLAN PANEL & TUBE DETAIL

HALF FULL SIZE 0 1" 2" 4"



3 PANEL CONNECTION TO TUBE FRAME DETAIL

HALF FULL SIZE 0 1" 2" 4"

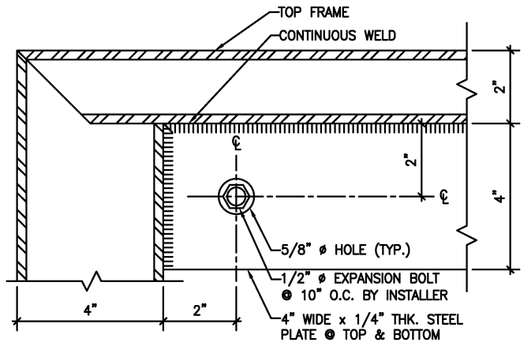


4 SECTION FLOOR MOUNTING DETAIL

HALF FULL SIZE 0 1" 2" 4"

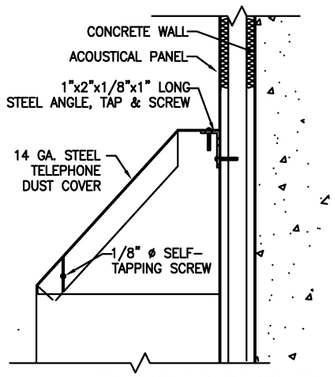
5 PLAN WALL MOUNTING DETAIL

HALF FULL SIZE 0 1" 2" 4"



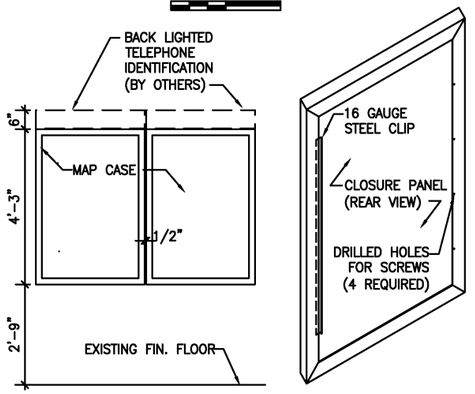
6 SECTION WALL MOUNTING DETAIL

HALF FULL SIZE 0 1" 2" 4"



TELEPHONE DUST COVER MOUNTING DETAIL 7

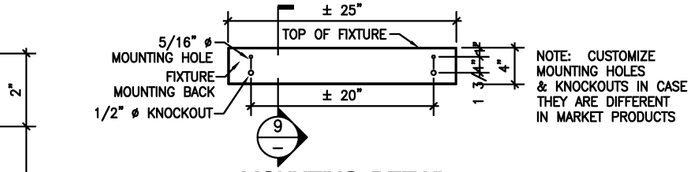
3"=1'-0" 0 1" 3" 6"



D KEY ELEVATION

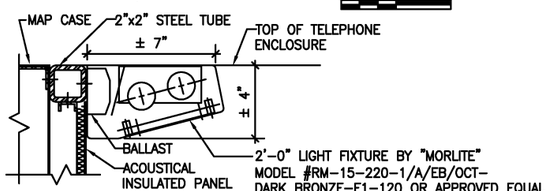
N.T.S

ISOMETRIC



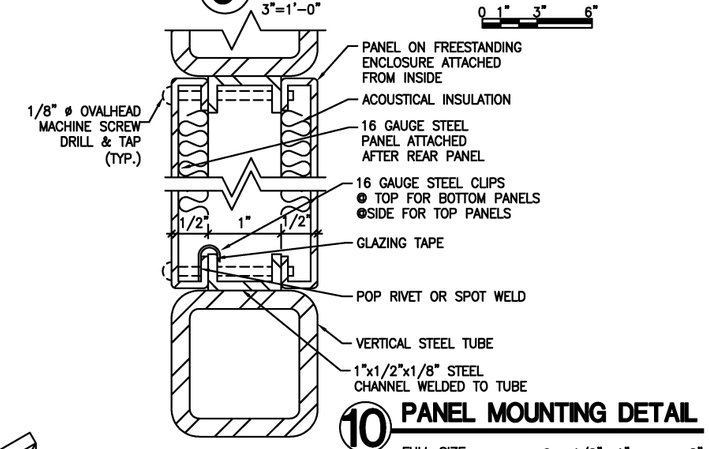
8 MOUNTING DETAIL LIGHT FIXTURE

1 1/2"=1'-0" 0 2" 6" 1'



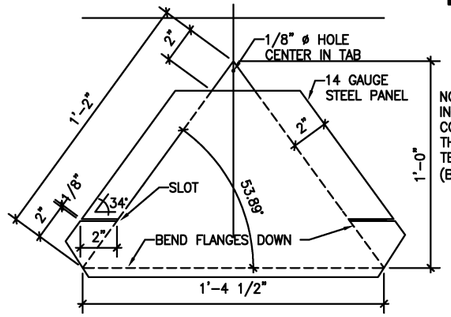
9 SECTION LIGHT FIXTURE MOUNTING

3"=1'-0" 0 1" 3" 6"



10 PANEL MOUNTING DETAIL

FULL SIZE 0 1/2" 1" 2"



NOTE: INSTALLATION OF DUST COVER TO BE DONE AFTER THE INSTALLATION OF TELEPHONE UNIT (BY TELEPHONE CO.).

11 TELEPHONE DUST COVER

3" = 1'-0" 0 1" 3" 6"

DESIGNED	D. MUNSON	1998 DATE
DRAWN	V. WOHLLEBEN	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
08/2001	ENGA	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF ENGINEERING AND ARCHITECTURE

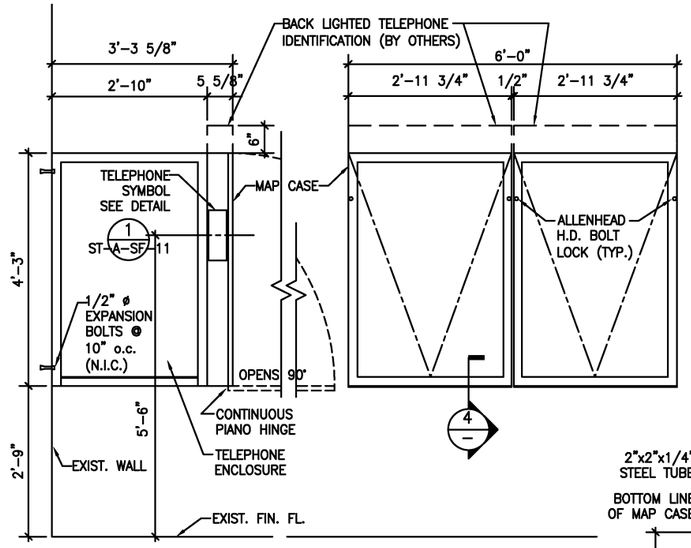
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
TELEPHONE ENCLOSURE DETAILS

SCALE AS SHOWN

DRAWING NO. ST-A-SF-011

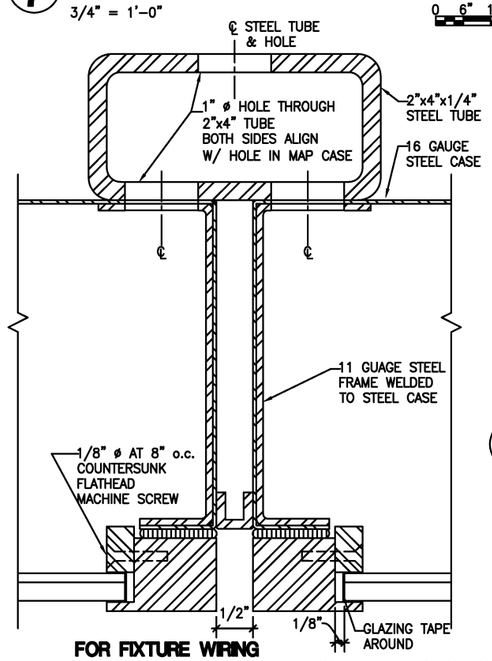


SIDE ELEVATION **FRONT ELEVATION**

7 MAP CASE MOUNTED ON TELEPHONE ENCLOSURE

3/4" = 1'-0"

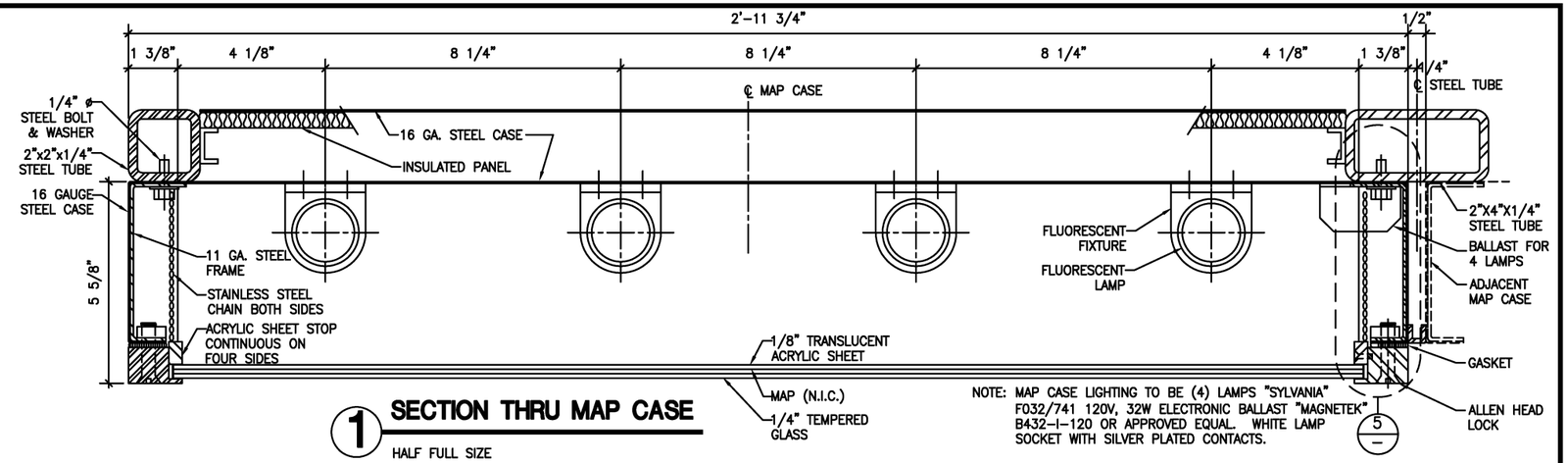
0 6" 1' 2'



FOR FIXTURE WIRING

6 SECTION THRU HOLES IN MAP CASE

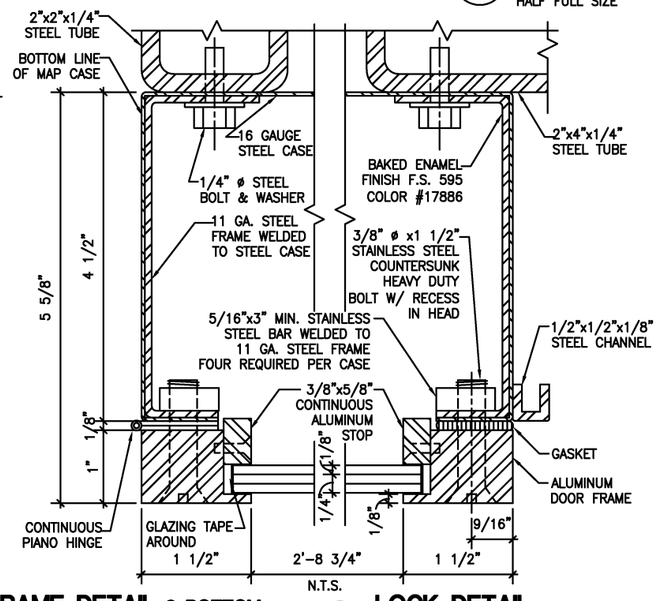
FULL SIZE



NOTE: MAP CASE LIGHTING TO BE (4) LAMPS "SYLVANIA" F032/741 120V, 32W ELECTRONIC BALLAST "MAGNETEK" B432-I-120 OR APPROVED EQUAL. WHITE LAMP SOCKET WITH SILVER PLATED CONTACTS.

1 SECTION THRU MAP CASE

HALF FULL SIZE

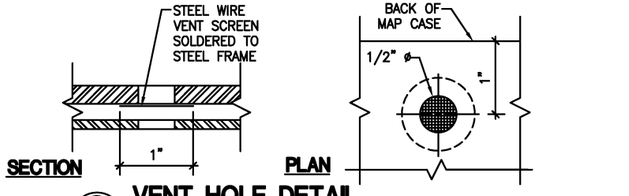


4 FRAME DETAIL @ BOTTOM

FULL SIZE

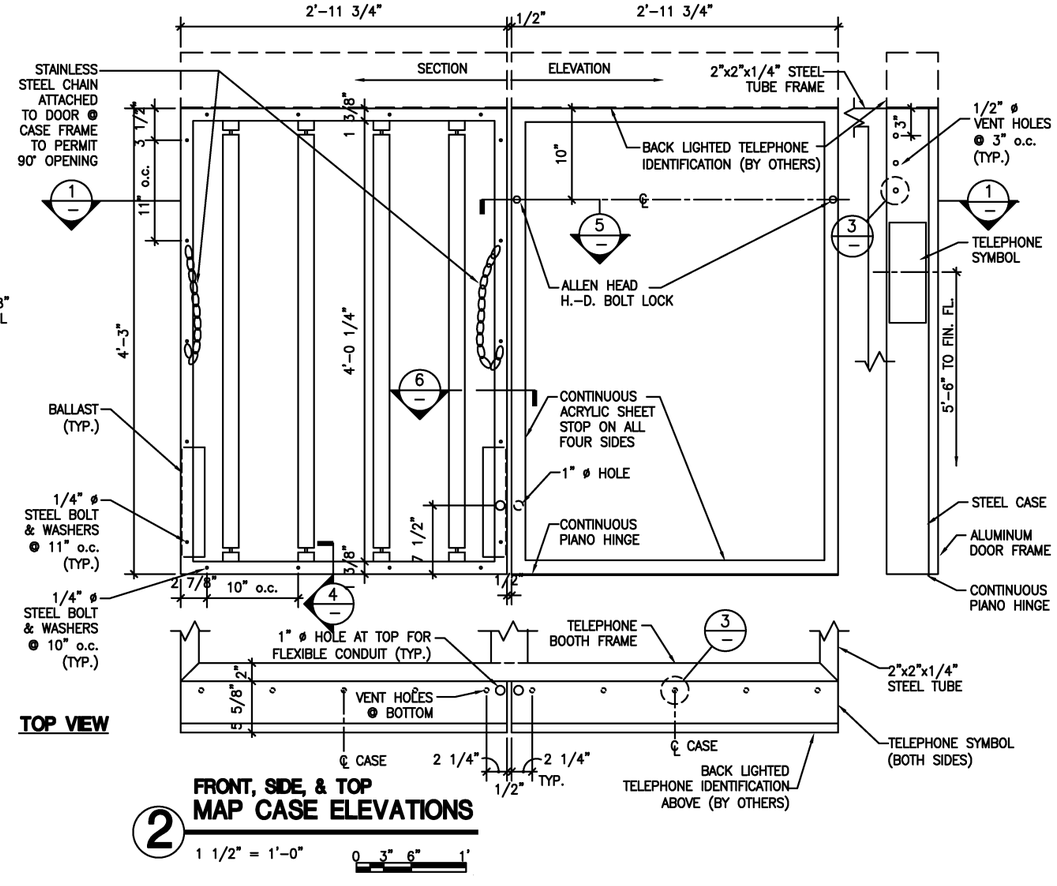
5 LOCK DETAIL

FULL SIZE



3 VENT HOLE DETAIL

FULL SIZE



TOP VIEW

2 FRONT, SIDE, & TOP MAP CASE ELEVATIONS

1 1/2" = 1'-0"

0 3" 6" 1'

DESIGNED	D.MUNSON	1998 DATE
DRAWN	V. WOHLLEBEN	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

REFERENCE DRAWINGS

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WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

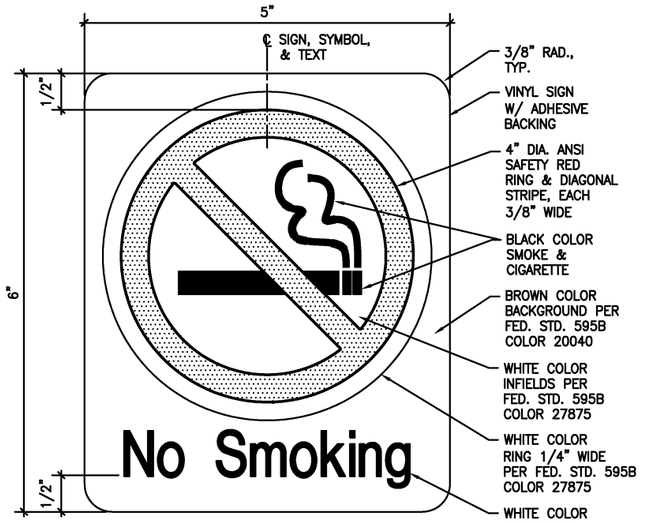
DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF ENGINEERING AND ARCHITECTURE

SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

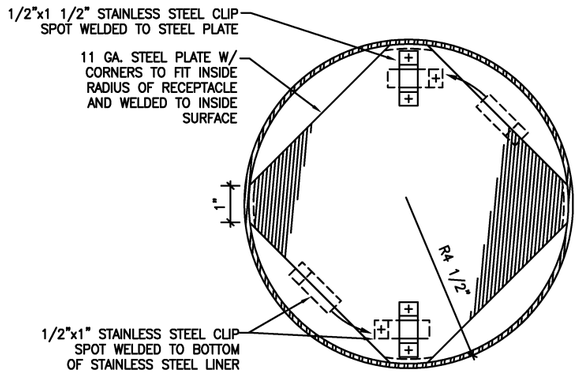
ARCHITECTURAL STANDARD DRAWING
MAP CASE DETAILS

SCALE	DRAWING NO.
AS SHOWN	ST-A-SF-012



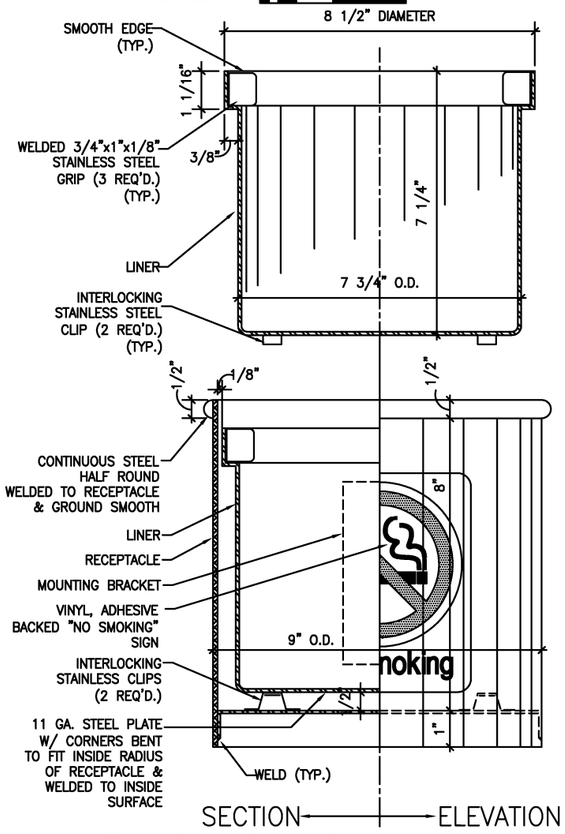
1 NO SMOKING SIGN

FULL SCALE



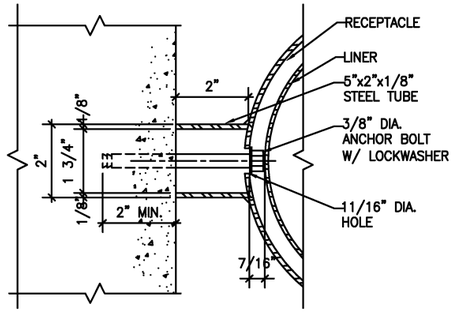
2 BOTTOM PLAN

HALF FULL SIZE 0 1" 2" 4"



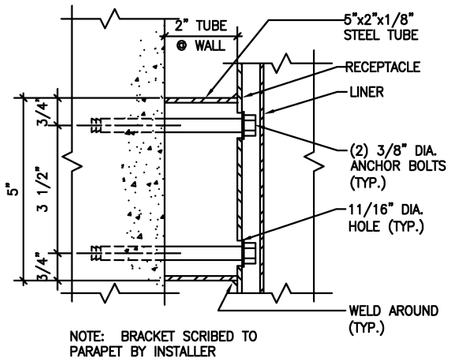
3 ASH RECEPTACLE

HALF FULL SIZE 0 1" 2" 4"



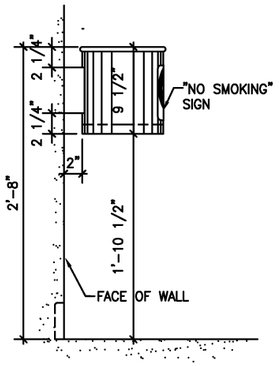
4 BRACKET PLAN

HALF FULL SIZE 0 1" 2" 4"



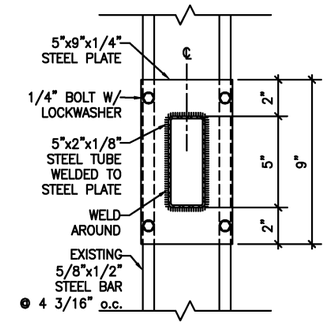
5 BRACKET SECTION

HALF FULL SIZE 0 1" 2" 4"



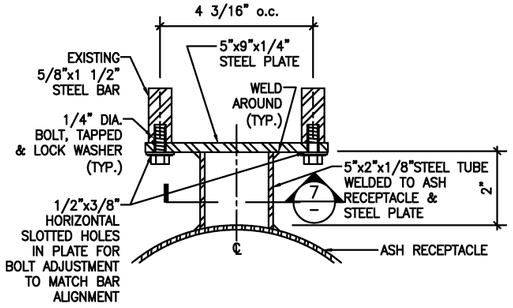
6 ELEVATION WALL MOUNTED

1 1/2" = 1'-0" 0 3" 6" 1'



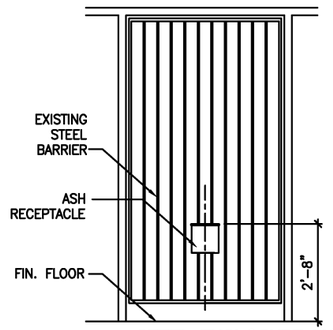
7 SECTION

3" = 1'-0" 0 1" 3" 6"



8 MOUNTING DETAIL

HALF FULL SIZE 0 1" 2" 4"



STEEL ENCLOSURE MOUNTED

9 ELEVATION

1/2"=1'-0" 0 6" 1' 2' 4'

DESIGNED	D. MUNSON	1998 DATE
DRAWN	V. WOHLLEBEN	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

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08/2001	ENGA	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF ENGINEERING AND ARCHITECTURE

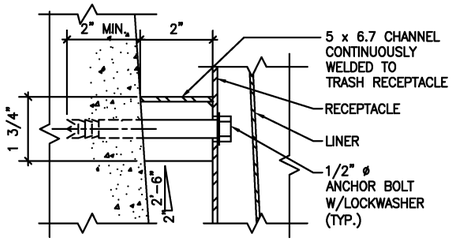
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
ASH RECEPTACLES DETAILS

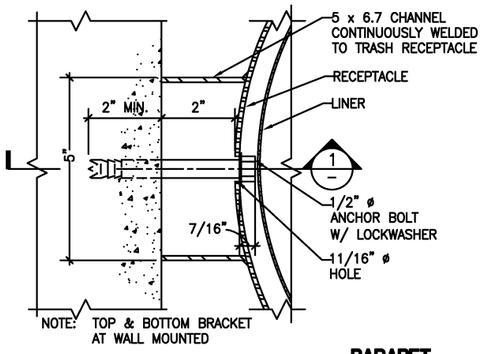
SCALE AS SHOWN

DRAWING NO. ST-A-SF-013



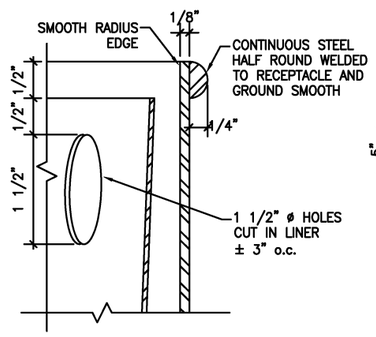
1 SECTION PARAPET MOUNTED

HALF FULL SIZE 0 1" 2" 4"



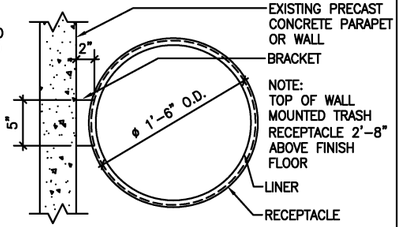
4 TOP BRACKET PLAN PARAPET MOUNTED

HALF FULL SIZE 0 1" 2" 4"



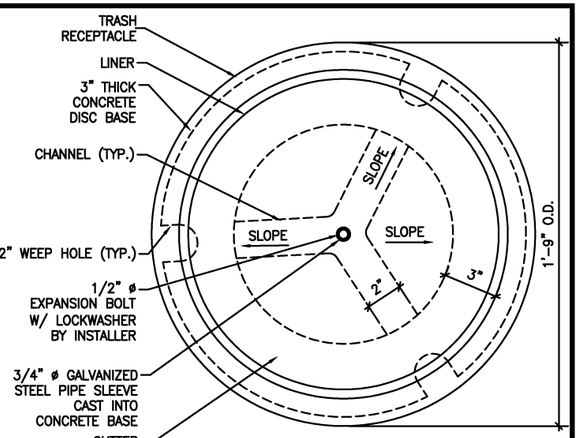
7 EDGE DETAIL

FULL SIZE



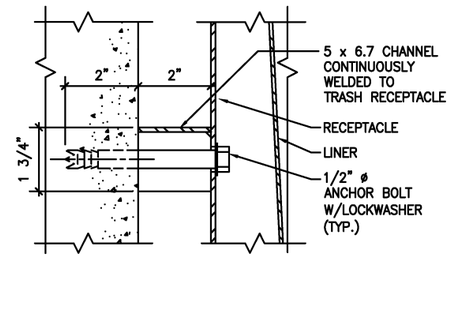
10 TOP PLAN PARAPET MOUNTED WALL MOUNTED

1 1/2" = 1'-0" 0 3" 6" 1'



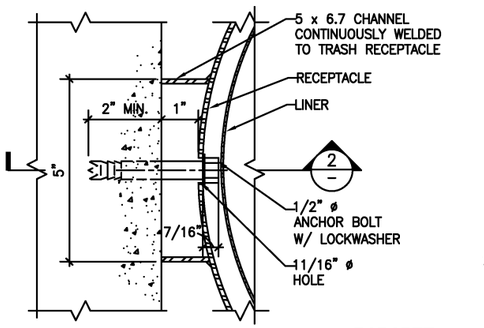
13 PLAN

3" = 1'-0" 0 1" 3" 6"



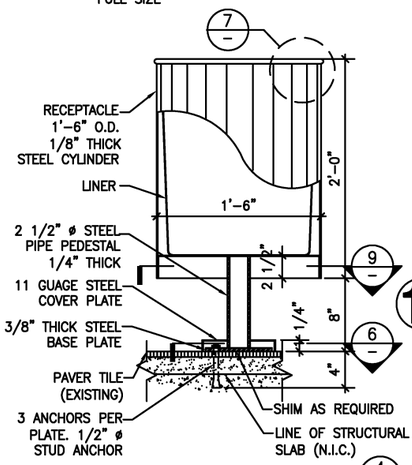
2 SECTION TOP & BOTTOM BRACKET WALL MOUNTED

HALF FULL SIZE 0 1" 2" 4"



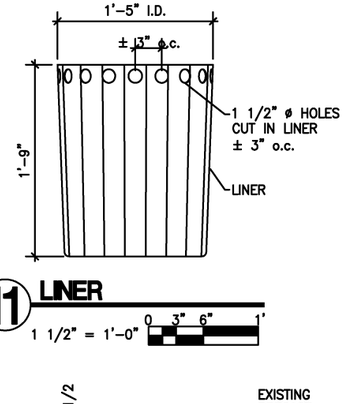
5 BOT. BRACKET PLAN PARAPET MOUNTED

HALF FULL SIZE 0 1" 2" 4"



FLOOR MOUNTED 8 ELEVATION/SECTION

1 1/2" = 1'-0" 0 3" 6" 1'



11 LINER

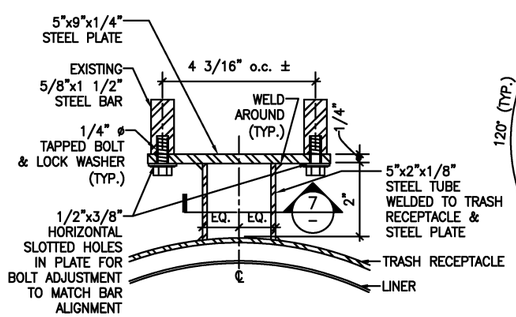
1 1/2" = 1'-0" 0 3" 6" 1'

12 ELEVATION PARAPET MOUNTED

1 1/2" = 1'-0" 0 3" 6" 1'

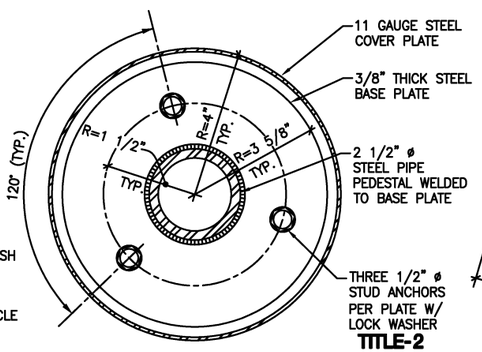
14 SECTION / ELEVATION

3" = 1'-0" 0 1" 3" 6"



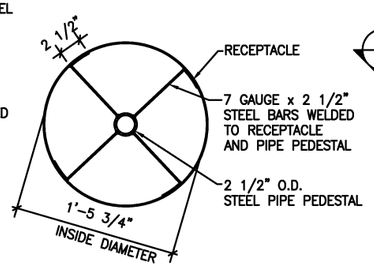
3 MOUNTING DETAIL @ STEEL ENCLOSURE

HALF FULL SIZE 0 1" 2" 4"



6 BASE PLAN FLOOR MOUNTED

HALF FULL SIZE 0 1" 2" 4"



9 PLAN WALL MOUNTED

1 1/2" = 1'-0" 0 3" 6" 1'

METAL TRASH RECEPTACLE

CONCRETE TRASH RECEPTACLE

DESIGNED	D. MUNSON	1998 DATE
DRAWN	V. WOHLLEBEN	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION
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WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF ENGINEERING AND ARCHITECTURE

SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
TRASH RECEPTACLES DETAILS

SCALE AS SHOWN

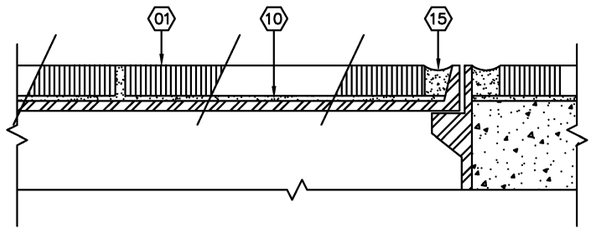
DRAWING NO. ST-A-SF-014

LEGEND

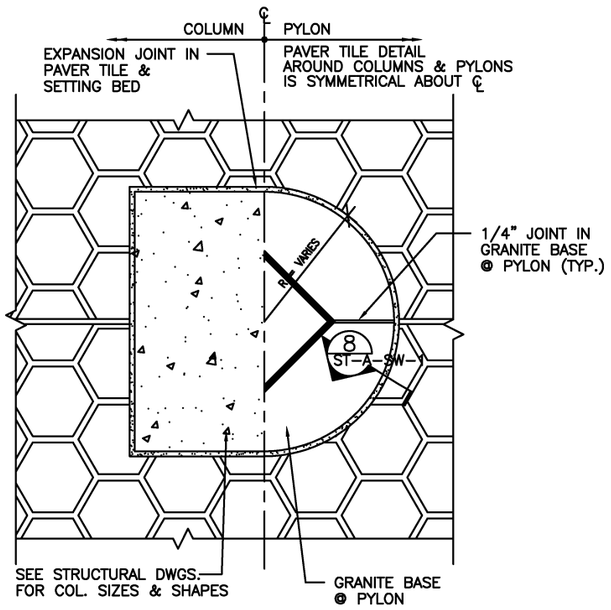
01 PAVER TILE
02 LATEX – PORTLAND CEMENT GROUT (TYP.)
03 POLYURETHANE SETTING COMPOUND
04 POLYURETHANE JOINT SEALANT
05 BACKER ROD (TYP.)
06 PREMOULDED EXPANSION JOINT FILLER
07 CONCRETE SETTING BED – 3–1/8" MIN. NOMINAL THICKNESS (3500 PSI MIN. COMPRESSIVE STRENGTH)
08 4 X 4 W 4.0/4.0 WELDED WIRE MESH SHEET NOT ROLL (GALVANIZED FINISH)
09 PREFABRICATED EXPANSION JOINT
10 EPOXY MORTAR
11 COLD JOINT WHERE REQ'D– SEE STRUCT. PAVER TILE EXP. JT. @ 16'–8" O.C. TO COINCIDE
12 STRUCTURAL FLOOR SLAB
13 BOND BREAKER TAPE
14 BONDED CONSTRUCTION JOINT
15 EPOXY GROUT
16 SPRAY WATERPROOFING IN VOIDS
17 CONTINUOUS EXTRUDED FLEXIBLE GASKET
18 BRONZE CAP
19 GRANITE EDGING
20 1/4" X 1 3/4" MASONRY ANCHORS 24" O.C.
21 1/2"ø STAINLESS STL. DOWELS EPOXY GROUTED INTO GRANITE EDGING & CONC. SLAB EMBED MIN. 4 1/2" INTO SLAB
22 RUBBERIZED MORTAR W/ BOND BREAKER TAPE
23 1/2" THICK TRUNCATED DOME QUARRY TILE (SEE ST–A. SW–3)

GENERAL NOTES:

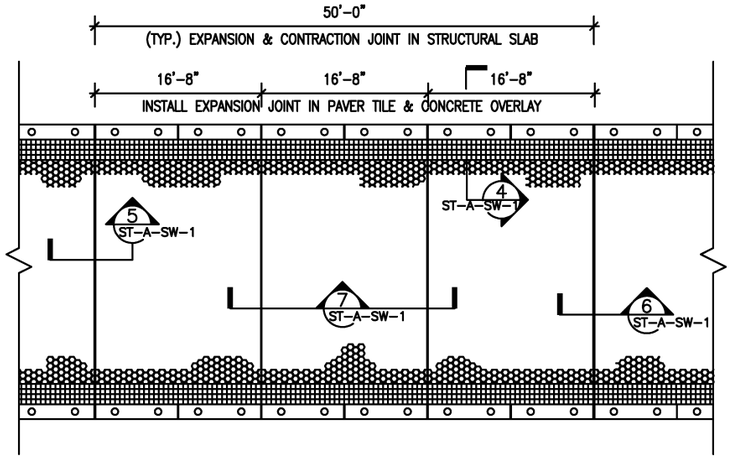
1. PROVIDE EXPANSION JOINTS THRU PAVER TILE AND SETTING BED AT INTERVALS NOT EXCEEDING 16'–8" OR CONTAINING AN AREA NOT EXCEEDING 256 SQUARE FEET.
2. WHERE JOINTS IN STRUCTURAL SLAB VARY, LOCATE EXPANSION JOINTS IN PAVER TILE AND SETTING BED IN SAME LOCATIONS AS CONTRACTION JOINTS IN STRUCTURAL SLAB AND AT 1/3 POINTS AS SHOWN.
3. CUT TILE BACK AS REQUIRED @ UNDER FLOOR JUNCTION BOXES.
4. PREFABRICATED EXPANSION JOINT, DETAIL 3, IS CONTINUOUS ACROSS MEZZANINE.
5. INSTALL PAVER TILE AT PLATFORM SHELTERS AFTER SHELTERS HAVE BEEN INSTALLED. SEE DWG. ST–A–SF 5 & 6 FOR DETAILS.



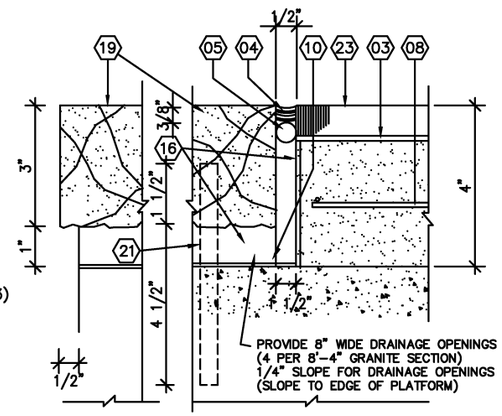
1 DETAIL - PAVING OVER METAL PAN
SCALE: 6"=1'–0"
0 1" 3" 6"



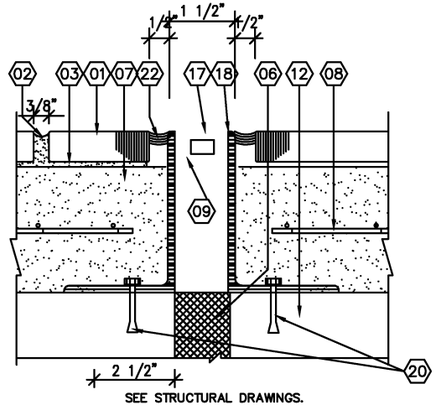
2 PLAN - TYP. PAVING WITH EXPANSION JOINT
SCALE: 1 1/2"=1'–0"
0 6' 1' 2'



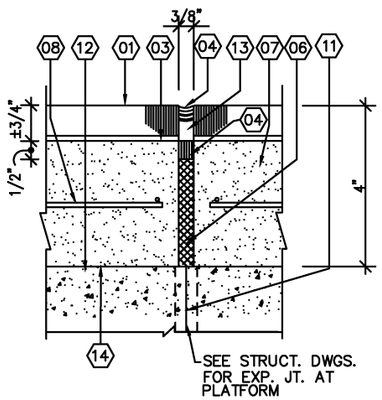
3 PLAN - TYP. PAVING EXPANSION JOINT PATTERN AT CENTER PLATFORM STATIONS
SCALE: 1/8" = 1'–0"
0 4' 8' 16'



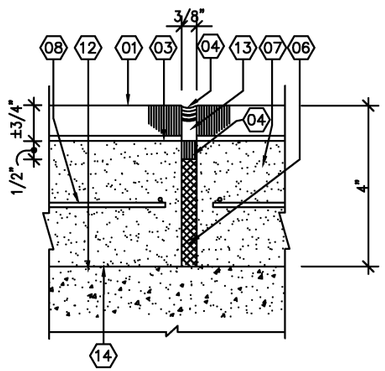
4 DETAIL - JOINT @ GRANITE EDGE
SCALE: 6"=1'–0" 0 1 1/2" 3" 6"



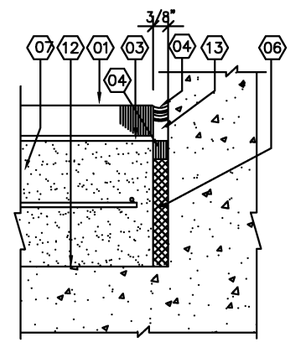
5 DETAIL - EXP. JOINT IN STRUCTURE
SCALE: 6"=1'–0" 0 1 1/2" 3" 6"



6 DETAIL -EXP. JT. @ CONTROL JT.
SCALE: 6"=1'–0" 0 1 1/2" 3" 6"



7 DETAIL - TYPICAL EXP. JT.
SCALE: 6"=1'–0"
0 1 1/2" 3" 6"



8 DETAIL - EXP. JT. @ COL. (SIM. @ PYLON)
SCALE: 6"=1'–0" 0 1 1/2" 3" 6"

DESIGNED	D. MUNSON	1998 DATE
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CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE
UPDATED	ENGA (PAF)	08/2000

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

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08/2001	ENGA	Revised and issued by the Authority
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WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF ENGINEERING AND ARCHITECTURE

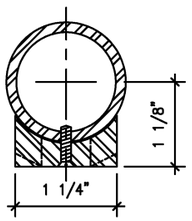
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

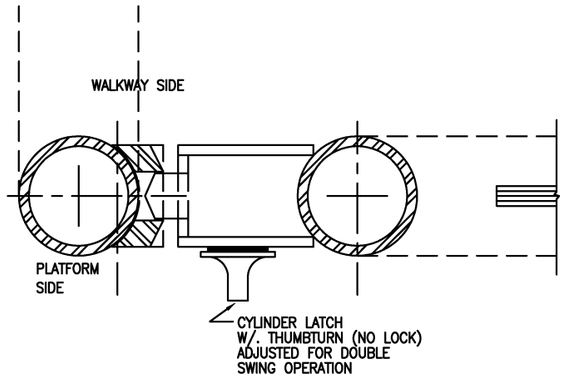
ARCHITECTURAL STANDARD DRAWING
STATION PAVER TILE DETAILS

SCALE: AS SHOWN

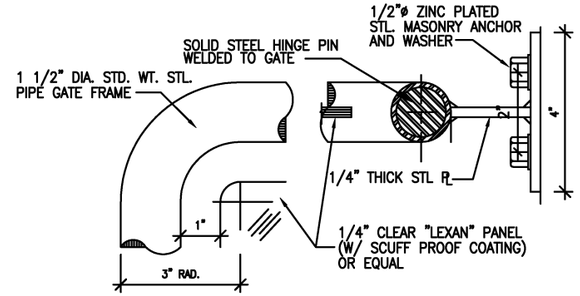
DRAWING NO. ST–A–SW–001

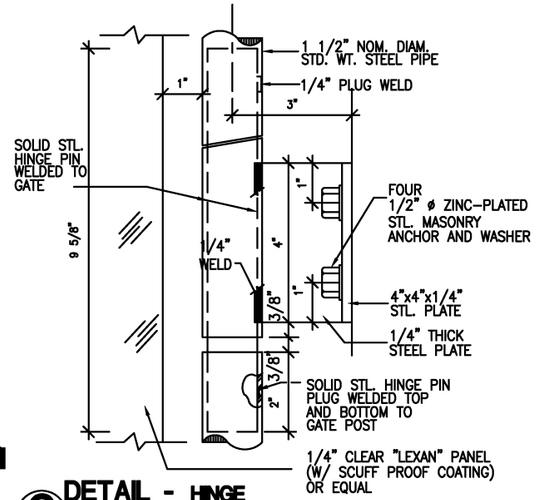


A SECTION



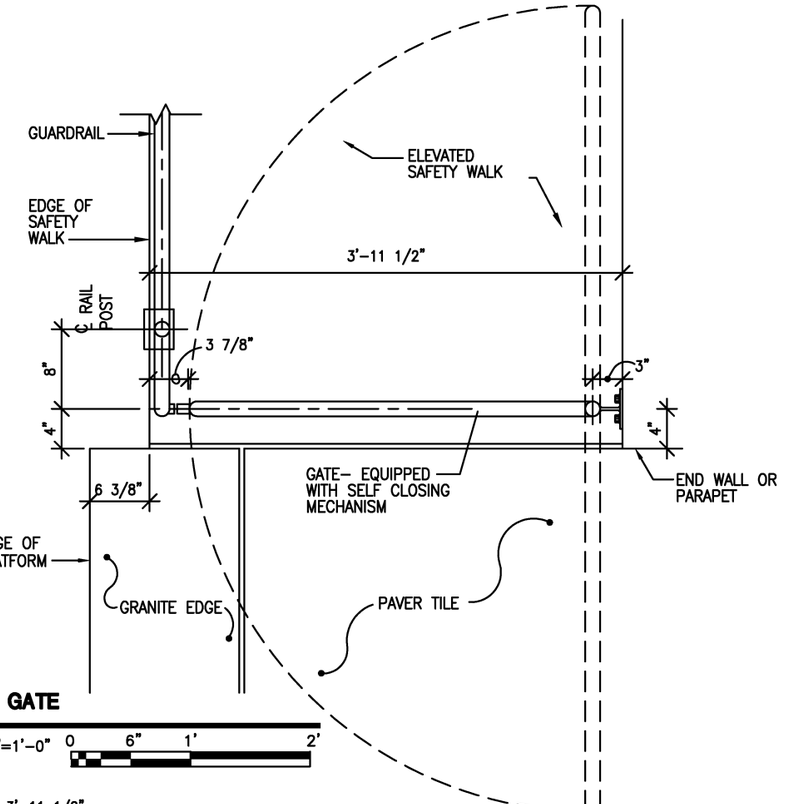
B SECTION





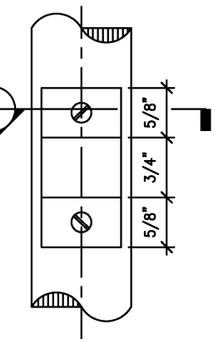
2 DETAIL - HINGE

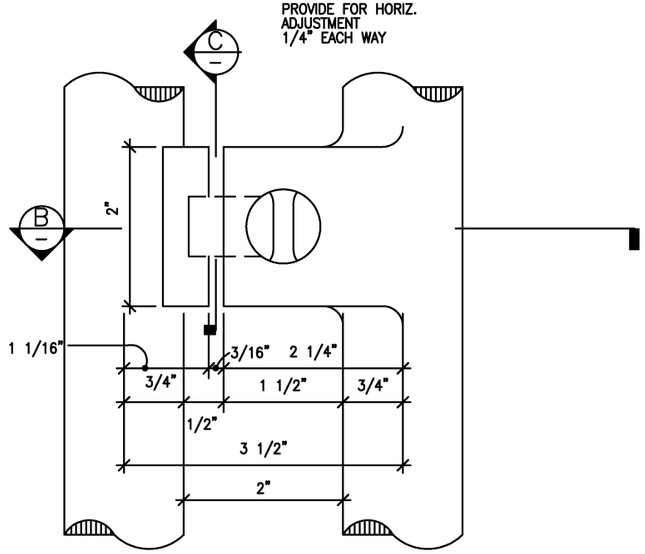
SCALE: 6"=1'-0" 0 1" 2" 4"



3 PLAN - GATE

SCALE: 1 1/2"=1'-0" 0 6" 1' 2'

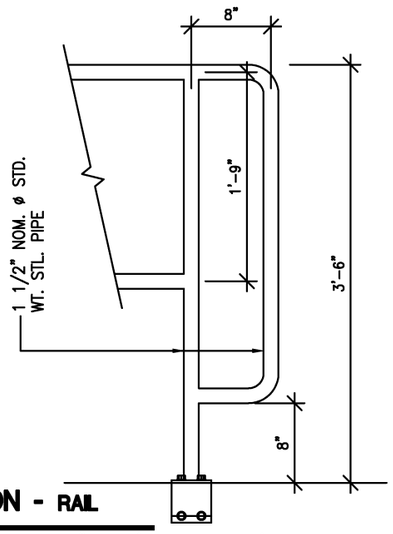




C SECTION

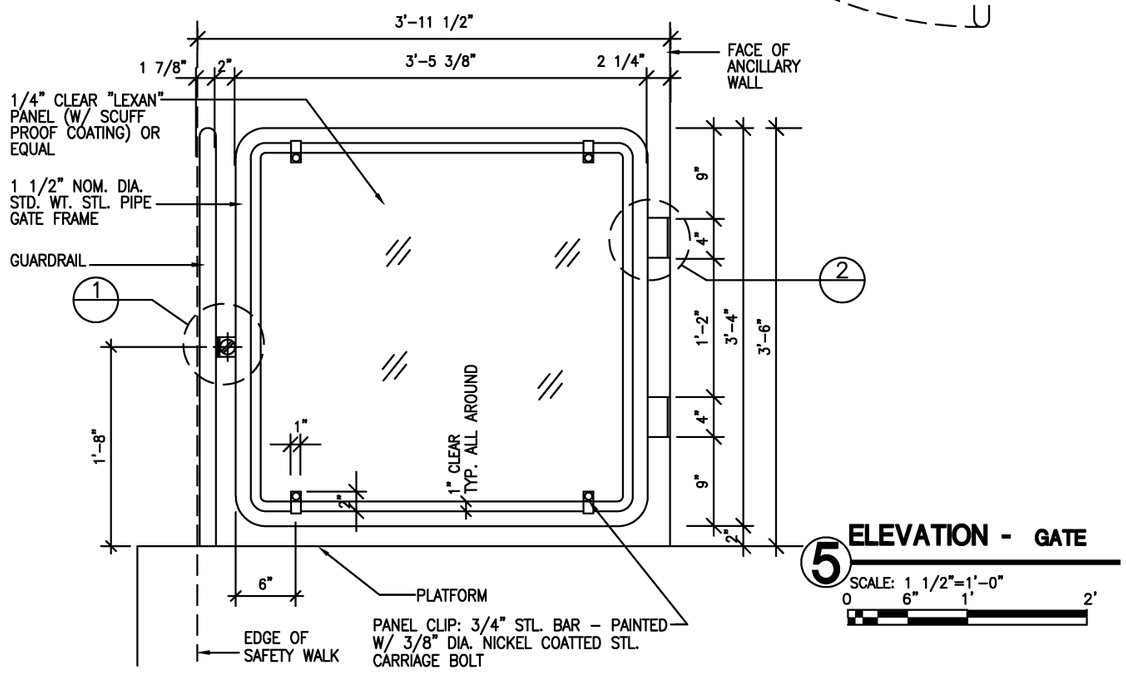
1 DETAIL - GATE LATCH

SCALE: FULL SIZE 0 1/2" 1" 2"



4 ELEVATION - RAIL

1 1/2"=1'-0" 0 6" 1' 2'



5 ELEVATION - GATE

SCALE: 1 1/2"=1'-0" 0 6" 1' 2'

NOTE

1. HORIZONTAL RAILING SHOWN (SINGLE INTERMEDIATE RAIL) IS ILLUSTRATIVE FOR SECTIONS IN MARYLAND, VIRGINIA & DISTRICT OF COLUMBIA. PROVIDE THREE (3) HORIZONTAL RAILINGS AND 6" TOEBOARDS IN ACCORDANCE WITH DRAWING NO. ST-M-12. REFER TO DRAWING DD-S-93 FOR RAILINGS ON AERIAL TRACKWAYS OUTSIDE OF STATIONS, BEYOND SAFETY WALK.

DESIGNED	D. MUNSON	1998 DATE
DRAWN	W. SCOTT	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

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08/2001	ENGA	Revised and issued by the Authority
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WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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SUBMITTED _____ DATE

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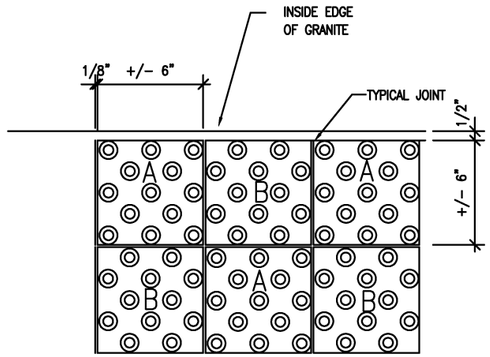
ARCHITECTURAL STANDARD DRAWING
DOUBLE - SWING GATE - END OF PLATFORM

SCALE: AS SHOWN

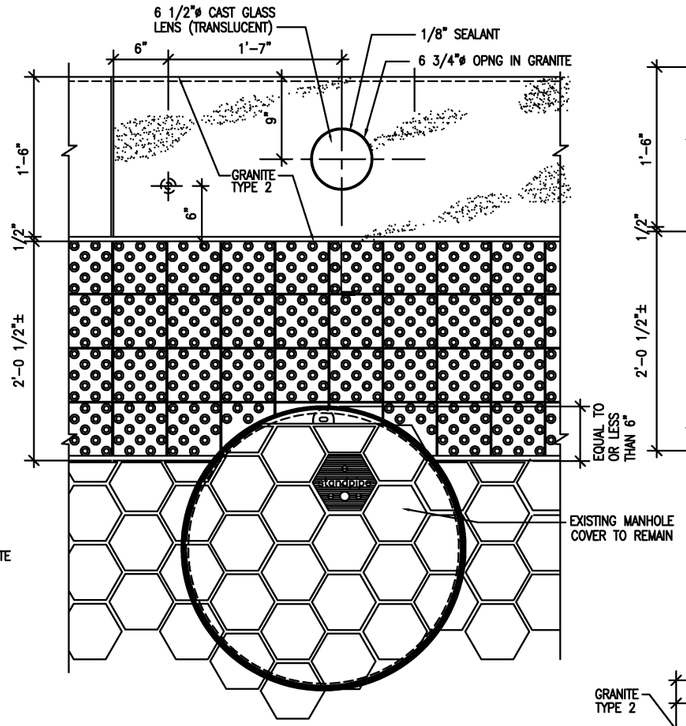
DRAWING NO. ST-A-SW-002



G TRUNCATED DOME QUARRY TILE PATTERN

SCALE: 3" = 1'-0"

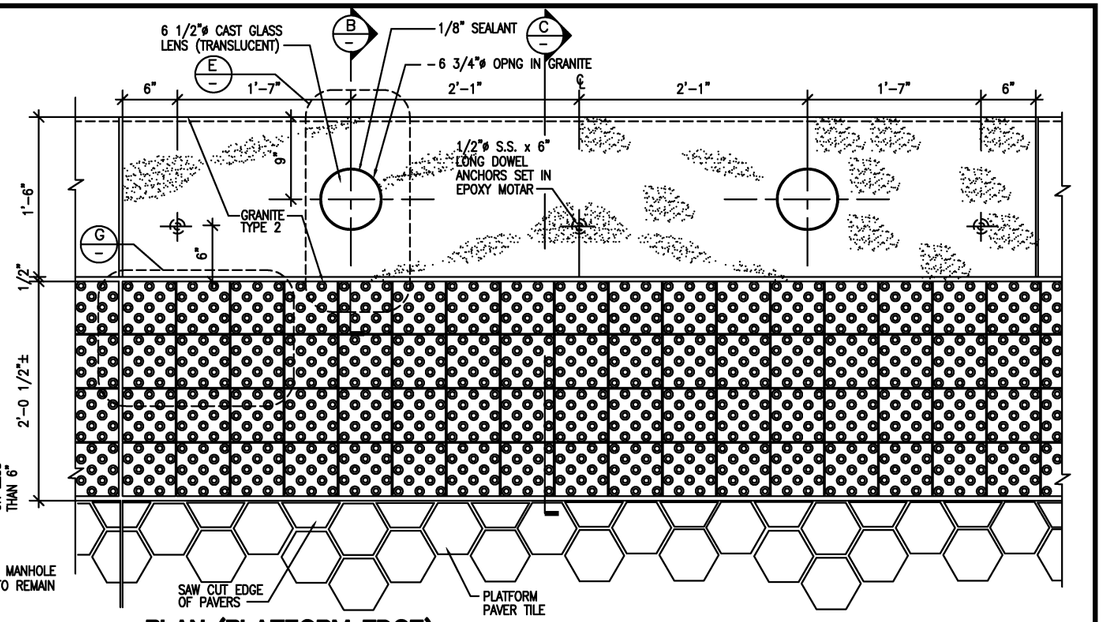
0 3" 6" 1'



H MANHOLE FRAME AND COVER PLAN

SCALE: 1 1/2" = 1'-0"

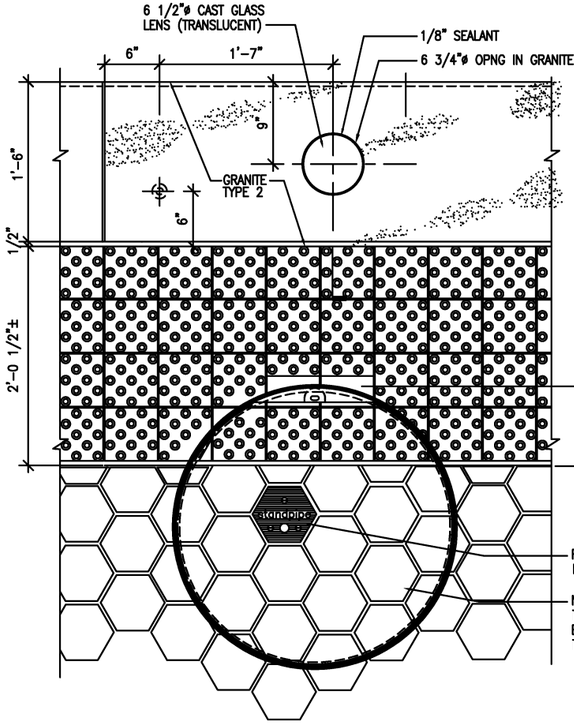
0 6" 1' 2'



A PLAN (PLATFORM EDGE)

SCALE: 1 1/2" = 1'-0"

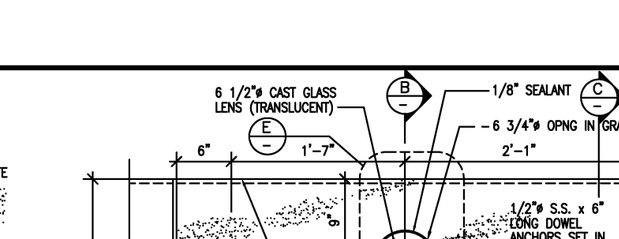
0 6" 1' 2'



I MANHOLE FRAME AND COVER PLAN

SCALE: 1 1/2" = 1'-0"

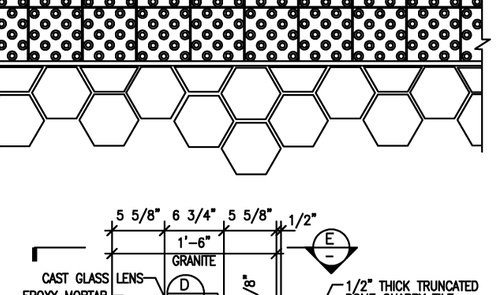
0 6" 1' 2'



C SECTION

SCALE: 1 1/2" = 1'-0"

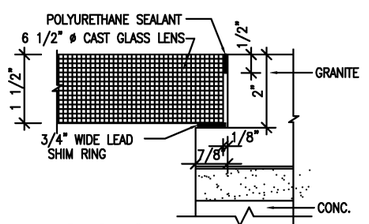
0 6" 1' 2'



B SECTION

SCALE: 1 1/2" = 1'-0"

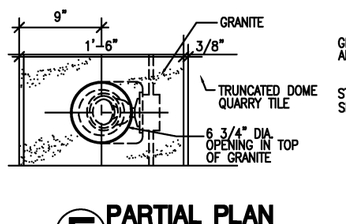
0 6" 1' 2'



D SECTION

HALF – SIZE

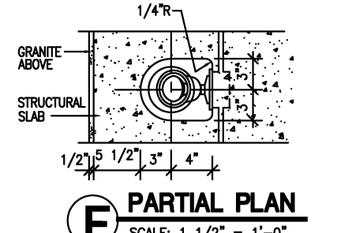
0 1 1/2" 3" 6"



E PARTIAL PLAN

SCALE: 1 1/2" = 1'-0"

0 6" 1' 2'



F PARTIAL PLAN

SCALE: 1 1/2" = 1'-0"

0 6" 1' 2'

DESIGNED	D. MUNSON	1998 DATE
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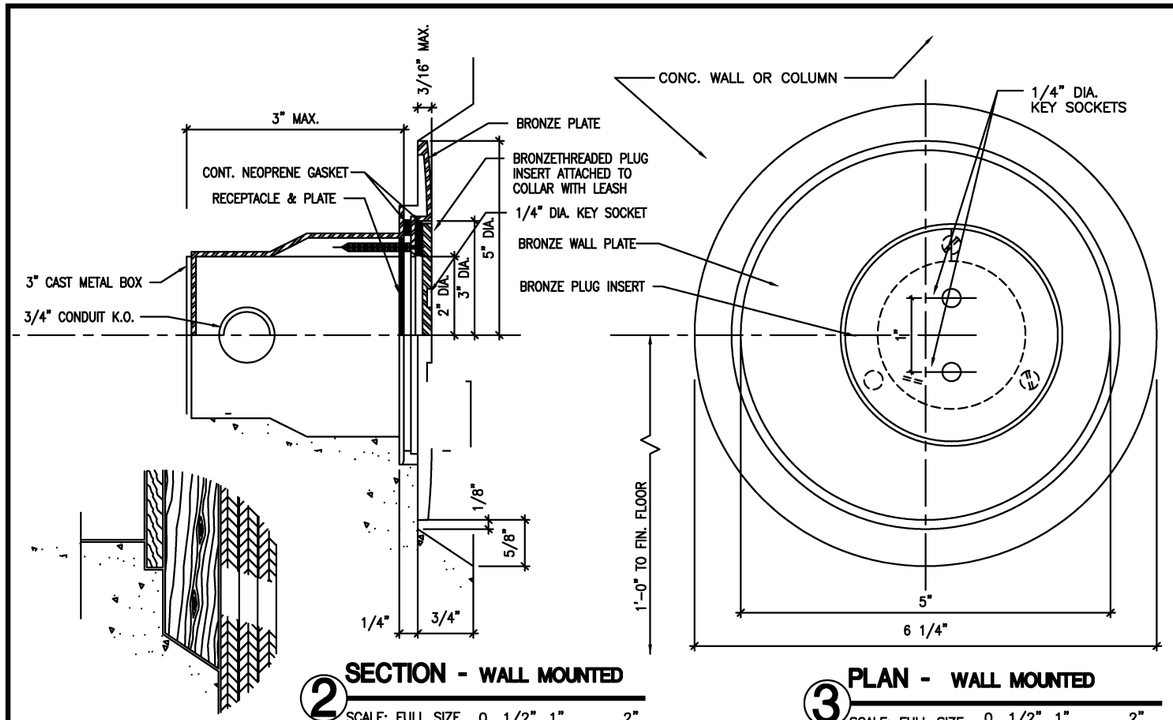
APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
PLATFORM EDGE DETAIL

SCALE	DRAWING NO.
AS SHOWN	ST-A-SW-003

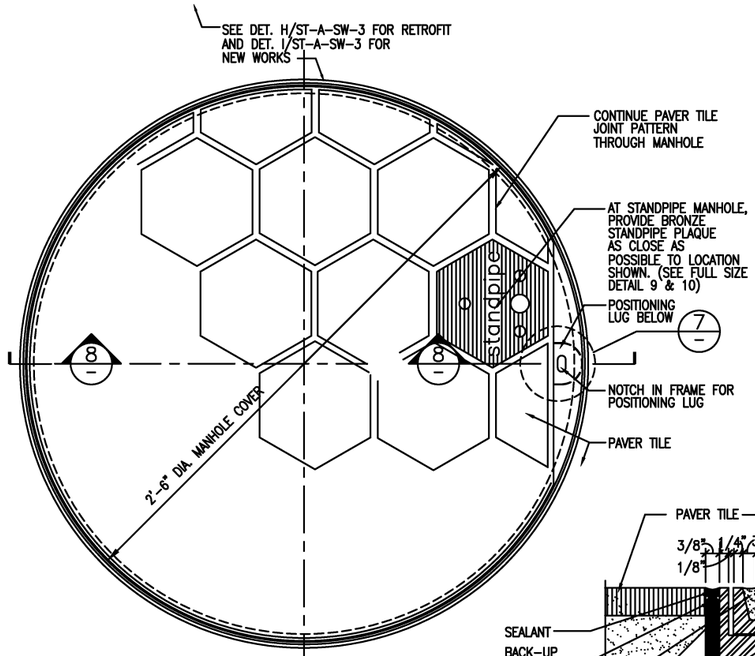


2 SECTION - WALL MOUNTED

SCALE: FULL SIZE 0 1/2" 1" 2"

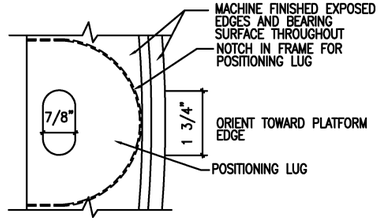
3 PLAN - WALL MOUNTED

SCALE: FULL SIZE 0 1/2" 1" 2"



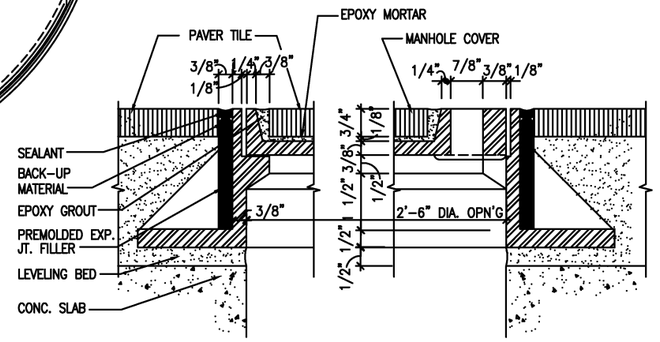
6 PLAN - MANHOLE COVER

SCALE: 3" = 1'-0" 0 2" 4" 8"



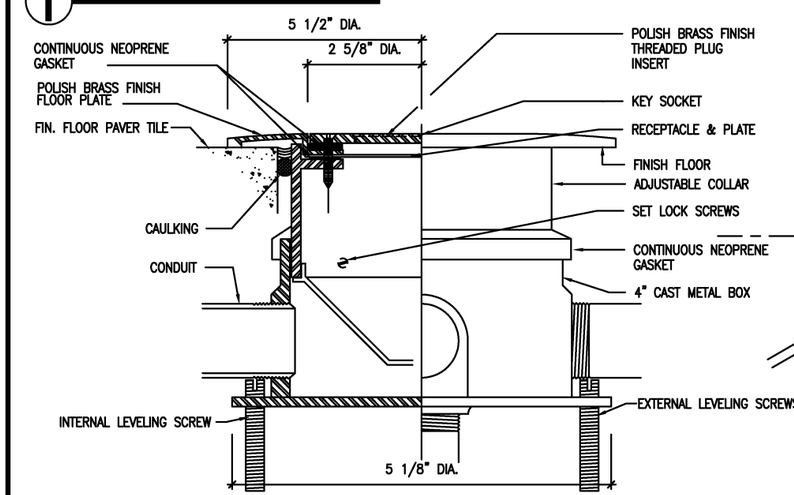
7 PLAN - POSITIONING LUG

SCALE: HALF SIZE



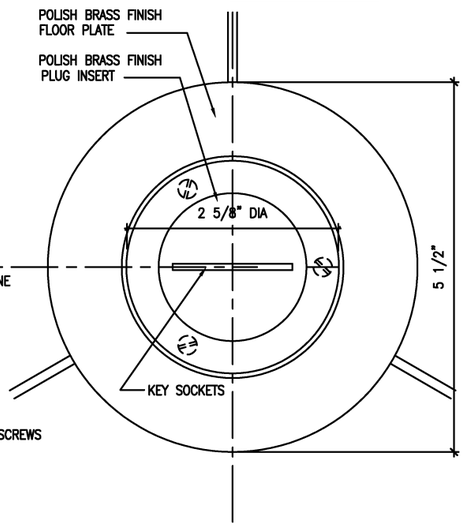
8 SECTION - @ MANHOLE COVER

SCALE: 1/2" = 1'-0" 0 1' 2' 4'



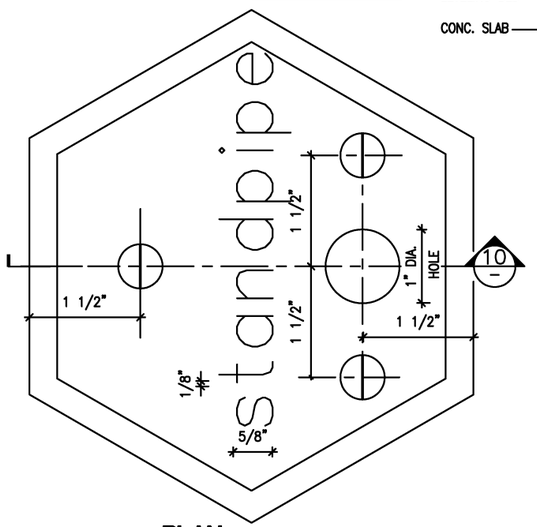
4 SECTION -FLOOR MOUNTED

SCALE: FULL SIZE 0 1/2" 1" 2"



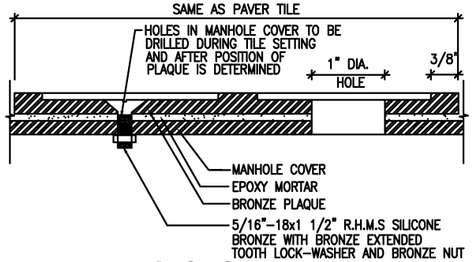
5 PLAN - FLOOR MOUNTED

SCALE: FULL SIZE 0 1/2" 1" 2"



9 PLAN - PLAQUE

SCALE: FULL SIZE 0 1/2" 1" 2"



10 SECTION - @ PLAQUE

SCALE: FULL SIZE

1 SUGGESTED METHOD OF FORMING

ELECTRICAL CONVENIENCE OUTLETS

DESIGNED	D. MUNSON	1998 DATE
DRAWN	W. SCOTT	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

REFERENCE DRAWINGS	
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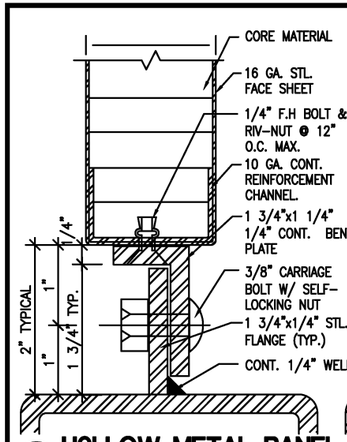
ARCHITECTURAL STANDARD DRAWING
OUTLETS, PLAQUE & MANHOLE

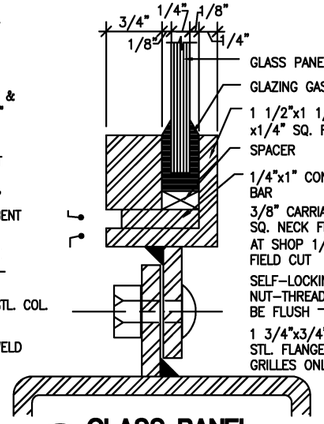
SCALE: AS SHOWN

DRAWING NO.: ST-A-SW-004



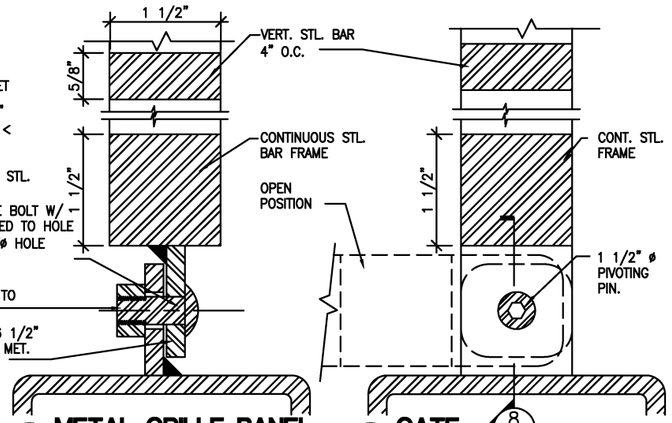
1 HOLLOW METAL PANEL

FULL SIZE
0 1 1/2" 3"



2 GLASS PANEL

FULL SIZE
0 1 1/2" 3"

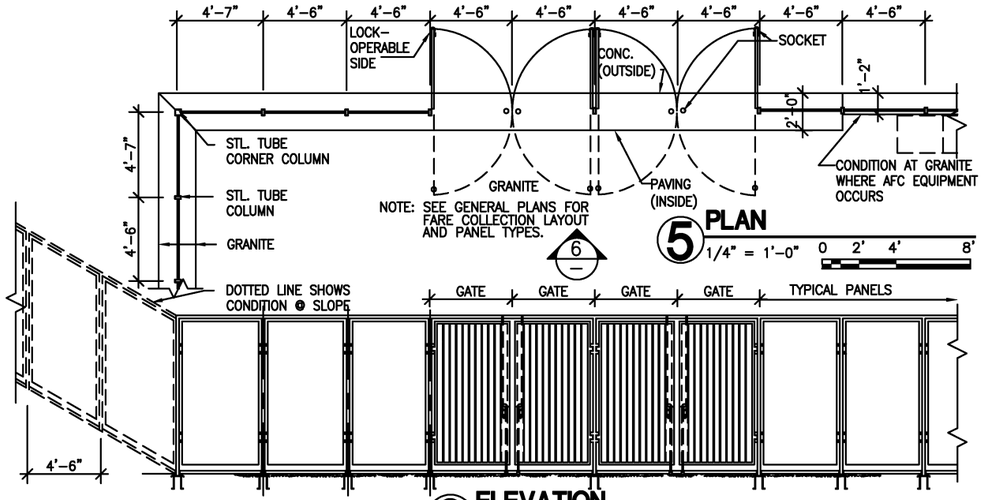


3 METAL GRILLE PANEL

FULL SIZE
0 1 1/2" 3"

4 GATE

FULL SIZE
0 1 1/2" 3"

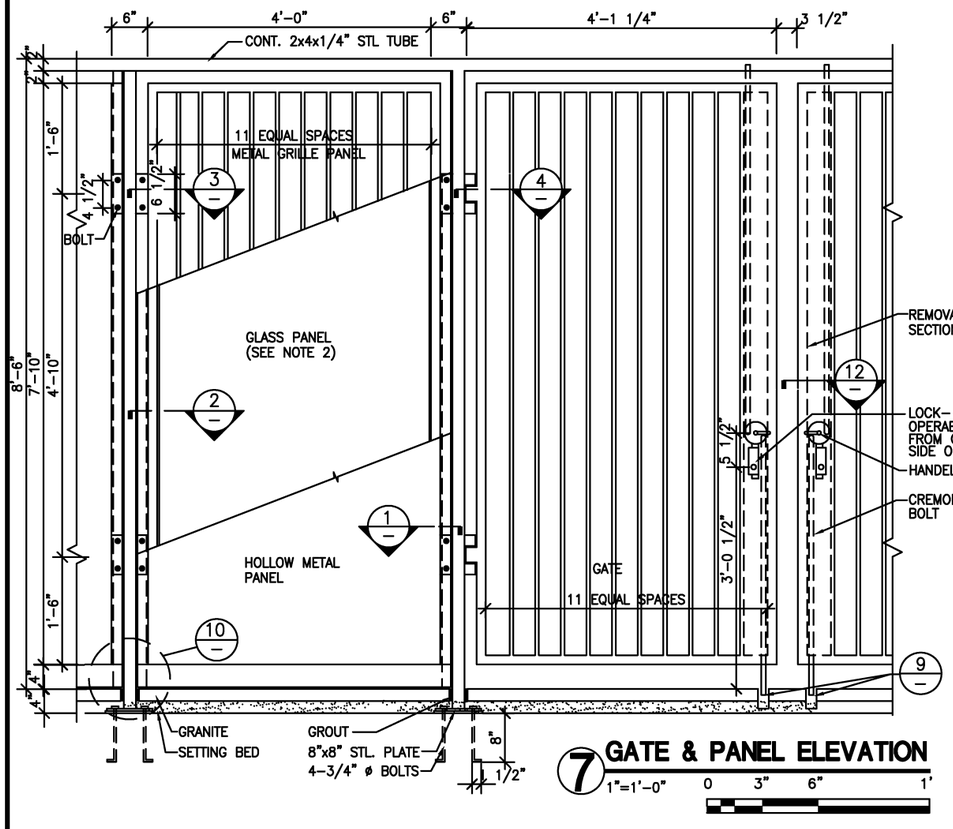


5 PLAN

1/4" = 1'-0"
0 2' 4' 8'

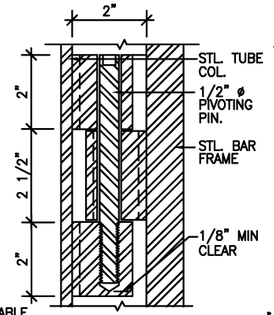
6 ELEVATION

1/4" = 1'-0"
0 2' 4' 8'



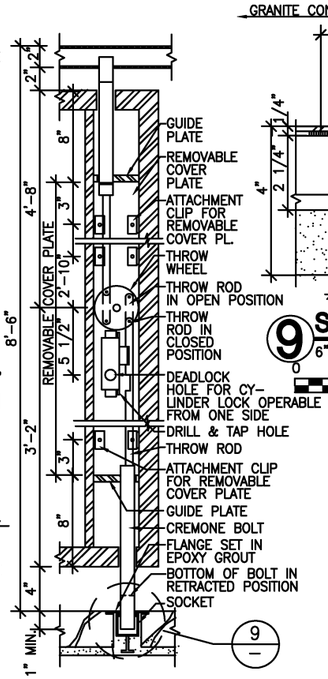
7 GATE & PANEL ELEVATION

1"=1'-0"
0 3" 6" 1'



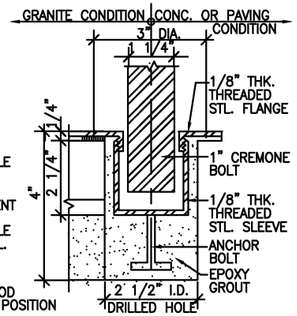
8 HINGE DETAIL

6"=1'-0"
0 3" 6"



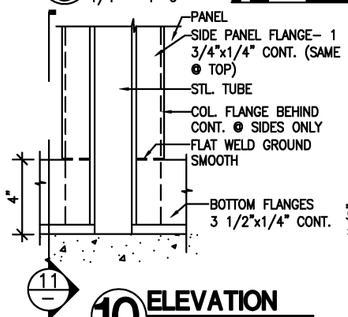
13 CREMONE BOLT DET.

NOT TO SCALE



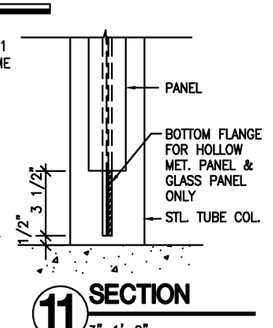
9 SOCKET DET.

6"=1'-0"
0 3" 6"



10 ELEVATION

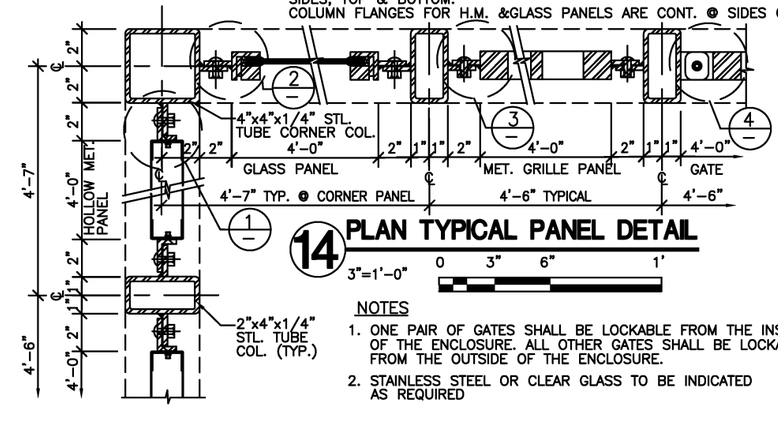
3"=1'-0"
0 3" 6" 1'



11 SECTION

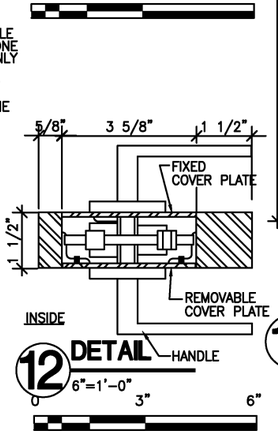
3"=1'-0"
0 3" 6" 1'

NOTE: PANEL FLANGES FOR H.M. & GLASS PANELS ARE CONT. @ SIDES, TOP & BOTTOM.
COLUMN FLANGES FOR H.M. &GLASS PANELS ARE CONT. @ SIDES ONLY.



14 PLAN TYPICAL PANEL DETAIL

3"=1'-0"
0 3" 6" 1'



12 DETAIL

6"=1'-0"
0 3" 6"

NOTES

1. ONE PAIR OF GATES SHALL BE LOCKABLE FROM THE INSIDE OF THE ENCLOSURE. ALL OTHER GATES SHALL BE LOCKABLE FROM THE OUTSIDE OF THE ENCLOSURE.
2. STAINLESS STEEL OR CLEAR GLASS TO BE INDICATED AS REQUIRED

DESIGNED	D. MUNSON	1998 DATE
DRAWN	N. IBIEBELE	1998 DATE
CHECKED	K. LANDESZ	1998 DATE
APPROVED	J. CORLEY	1998 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
08/2001	ENGA	Revised and Issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF ENGINEERING AND ARCHITECTURE

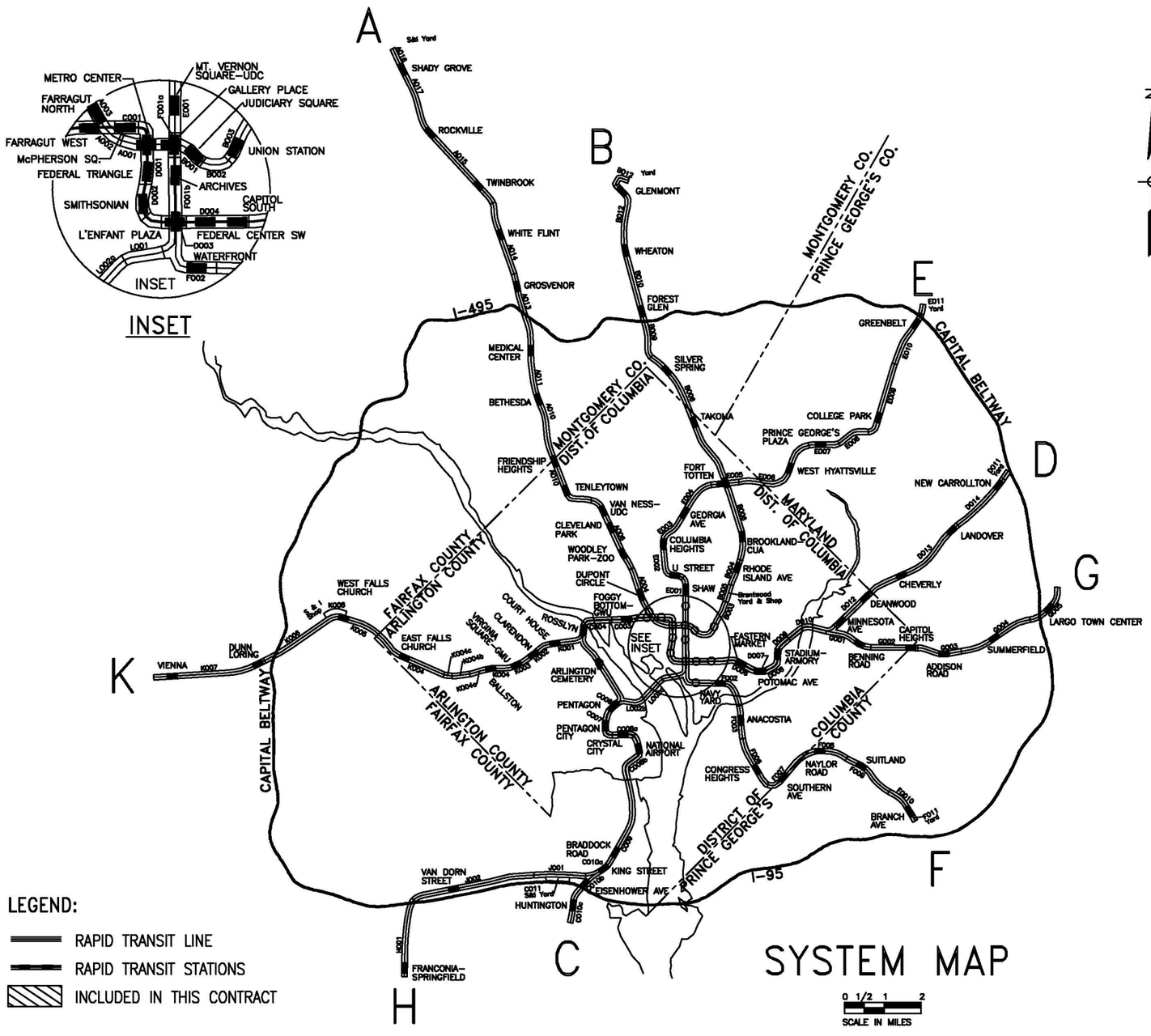
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

ARCHITECTURAL STANDARD DRAWING
FARE COLLECTION AREA ENCLOSURE

SCALE: AS SHOWN

DRAWING NO.: ST-A-SW-005



LEGEND:

- RAPID TRANSIT LINE
- RAPID TRANSIT STATIONS
- INCLUDED IN THIS CONTRACT

SYSTEM MAP

0 1/2 1 2
SCALE IN MILES

GENERAL CONSTRUCTION SITE PLAN

CONTRACT DRAWINGS, FILE NOS. TO
APPROVED FOR CONSTRUCTION
DATE

DESIGNED DATE
DRAWN DATE
CHECKED DATE
APPROVED DATE
UPDATED K. OAKBERG 10–96

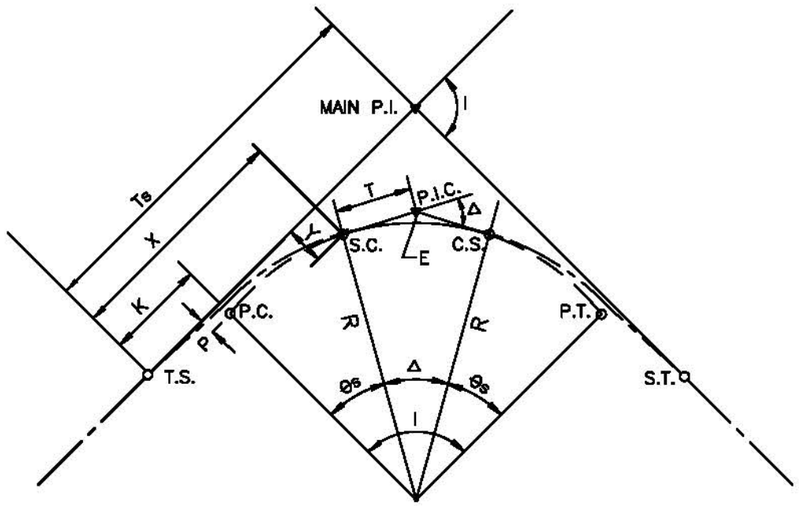
REFERENCE DRAWINGS		REVISIONS		
NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
		06/2007	ENGA	REVISED AND ISSUED BY THE AUTHORITY

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
OFFICE OF ENGINEERING SUPPORT SERVICES

SUBMITTED 10/2007 DATE
APPROVED 10/2007 DATE

KEY PLAN OF SYSTEM AND
GENERAL CONSTRUCTION SITE PLAN
SECTION NO.

SCALE NOT TO SCALE
DRAWING NO. ST–C–001



I = TOTAL INTERSECTION ANGLE
Θs = SPIRAL ANGLE = $\frac{LsDc}{200}$
Δ = CENTRAL ANGLE OF CIRCULAR CURVE = I − (2Θs) (EQUAL SPIRAL LENGTHS ONLY)
R = RADIUS OF CIRCULAR CURVE
T = TANGENT LENGTH OF CIRCULAR CURVE = R TAN $\frac{\Delta}{2}$
L = LENGTH OF CIRCULAR CURVE = $\frac{\Delta \pi R}{180}$
E = EXTERNAL DISTANCE = R EXSEC $\frac{\Delta}{2}$
Ts = TANGENT LENGTH FROM T.S. TO P.I. = (R+P) TAN (I/2) + K
P.C. = POINT OF CURVATURE
P.T. = POINT OF TANGENCY
T.S. = TANGENT TO SPIRAL
S.C. = SPIRAL TO CURVE
C.S. = CURVE TO SPIRAL
S.T. = SPIRAL TO TANGENT
P.I. = POINT OF INTERSECTION
P.I.C.= POINT OF INTERSECTION OF CURVE

Ls = LENGTH OF SPIRAL (BARNETT SPIRAL)
Θs = $\frac{LsDc}{200}$

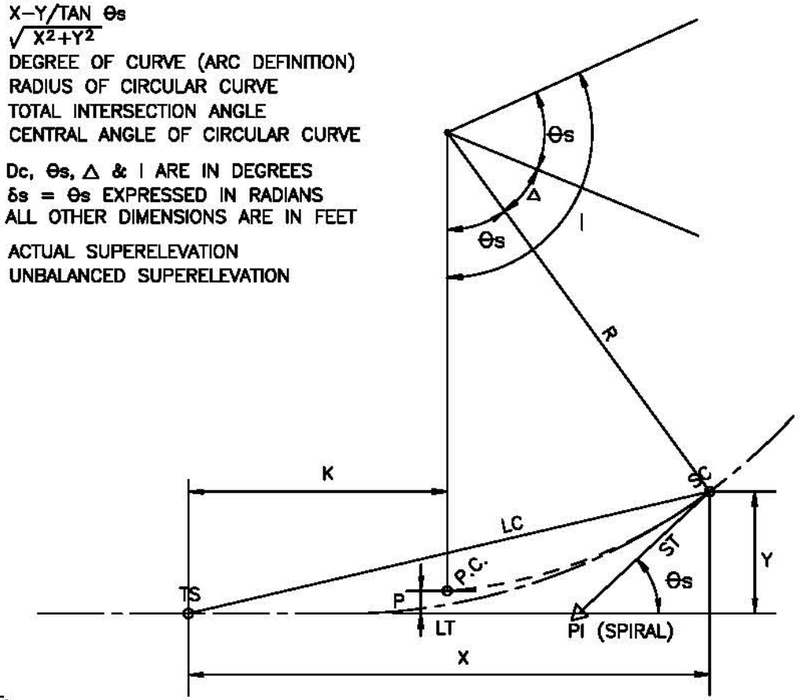
$$X = Ls\left(1 - \frac{\delta s^2}{10} + \frac{\delta s^4}{216} - \frac{\delta s^6}{9360} + \frac{\delta s^8}{685440} - \frac{\delta s^{10}}{76204800} + \frac{\delta s^{12}}{11975040000}\right)$$

$$Y = Ls\left(\frac{\delta s}{3} - \frac{\delta s^3}{42} + \frac{\delta s^5}{1320} - \frac{\delta s^7}{75600} + \frac{\delta s^9}{6894720} - \frac{\delta s^{11}}{918086400} + \frac{\delta s^{13}}{168129561600}\right)$$

Ts = TANGENT LENGTH FROM T.S. TO MAIN P.I. = (R+P) TAN (I/2) + K
P = Y−R (1−COS Θs)
K = X−R SIN Θs
ST = Y/SIN Θs
LT = X−Y/TAN Θs
LC = $\sqrt{X^2+Y^2}$
Dc = DEGREE OF CURVE (ARC DEFINITION)
R = RADIUS OF CIRCULAR CURVE
I = TOTAL INTERSECTION ANGLE
Δ = CENTRAL ANGLE OF CIRCULAR CURVE

Dc, Θs, Δ & I ARE IN DEGREES
δs = Θs EXPRESSED IN RADIANS
ALL OTHER DIMENSIONS ARE IN FEET

Ea = ACTUAL SUPERELEVATION
Eu = UNBALANCED SUPERELEVATION



NOTE:
1. ACTUAL SUPERELEVATION (Ea) WILL START AT THE TS AND BE PRORATED LINEARLY THROUGHOUT THE FULL LENGTH OF THE SPIRAL TRANSITION CURVE TO FULL SUPERELEVATION AT THE SC.

DESIGNED	A. KAFKA	1-7-70	DATE
DRAWN	L. DILLARD	1-20-71	DATE
CHECKED	A. KEFFLER	7-12-71	DATE
APPROVED	R.S. O'NEIL	7-13-71	DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

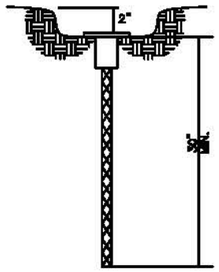
REVISIONS

DATE	BY	DESCRIPTION
06/2007	ENGA	REVISED AND ISSUED BY THE AUTHORITY

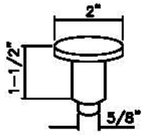
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
OFFICE OF ENGINEERING SUPPORT SERVICES
SUBMITTED 10/2007 DATE
APPROVED 10/2007 DATE

CIVIL STANDARD DRAWING
METRO HORIZONTAL CURVES

SCALE: NOT TO SCALE
DRAWING NO.: ST-C-002



DETAIL 'A'
TYPE I – TYPICAL
REBAR CAP MONUMENT



DETAIL 'B'
TYPE I – TYPICAL
REBAR CAP

TYPE I
REBAR CAP MONUMENTS

1) TYPE I REBAR CAP MONUMENTS MAY BE USED AS BOUNDARY MONUMENTS TO MARK A CORNER OR POINT ON A BOUNDARY AND INSCRIBED WITH "METRO – PROPERTY MARKER" AS SHOWN IN DETAIL 'C'.

2) TYPE I REBAR CAP MONUMENTS MAY BE USED AS RIGHT OF WAY MONUMENTS TO MARK A CORNER OR POINT ON A METRO RIGHT OF WAY AND INSCRIBED WITH "METRO – RIGHT OF WAY" AS SHOWN IN DETAIL 'D'.

3) THE "METRO – PROPERTY MARKER" AND "METRO – RIGHT OF WAY" TYPE I REBAR CAP SHALL BE SET BY A REGISTERED LAND SURVEYOR WHO SHALL COMPLY WITH ALL JURISDICTIONAL REGULATIONS. THE "METRO – PROPERTY MARKER" SHALL HAVE AN INSCRIPTION THAT IDENTIFIES THE SURVEYOR, CORPORATION OR PARTNERSHIP RESPONSIBLE FOR SETTING THE PROPERTY MARKER AS WELL AS THE WMATA REAL ESTATE PARCEL NUMBER AND POINT NUMBER.

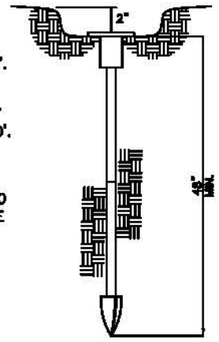
4) TYPE I REBAR CAP MONUMENTS MAY BE USED AS TEMPORARY SECONDARY CONTROL MONUMENTS DURING DESIGN AND CONSTRUCTION WHERE THERE IS A HIGH PROBABILITY THAT THE POINT WILL BE DESTROYED OR ABANDONED. THE MONUMENT SHALL BE INSCRIBED WITH "METRO – CONTROL SURVEY" AS SHOWN IN DETAIL 'E'.

5) THE CERTIFIED SURVEY TECHNICIAN SETTING THE "METRO – CONTROL SURVEY" MONUMENT IS TO INSCRIBE THE CAP WITH A WMATA APPROVED CONTROL POINT NUMBER.

6) TYPE I REBAR CAP MONUMENTS CONSIST OF A 5/8 INCH REBAR ROD HAVING A MINIMUM LENGTH OF 30 INCHES AND FITTED WITH A FLAT 2 INCH DIAMETER ALUMINUM CAP AS SHOWN IN DETAILS 'A' AND 'B'. THE REBAR CAP SHALL BE INSTALLED WITH AN INSULATOR WEDGE WHICH ISOLATES THE ALUMINUM CAP FROM THE STEEL AND DEFORMS AROUND THE RIBS OF THE REBAR FORMING A TIGHT COMPRESSION FIT.

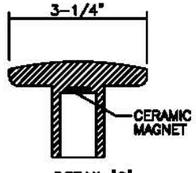
7) TYPE I REBAR CAP MONUMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURES SPECIFICATIONS AND THE FOLLOWING REQUIREMENTS. REBAR IS TO BE DRIVEN INTO OVERBURDEN UNTIL THE TOP IS AT LEAST 2 INCHES BELOW GRADE. USE A REBAR DRIVER MADE FROM DURABLE HEAT TREATED STEEL WHICH PROVIDES A 2 INCH OR GREATER DIAMETER STRIKING SURFACE. WHEN STRIKING REBAR DRIVER, USE A URETHANE FACED HAMMER. AFTER THE TOP OF THE REBAR ROD IS DRIVEN 2 INCHES BELOW GRADE, INSTALL REBAR CAP AS NOTED IN PARAGRAPH 8) SO AS TO ENSURE THAT THE CAP DOES NOT "WOBBLE" WHEN TAPPED ONTO THE REBAR.

8) ALL CAP INSCRIPTIONS SHALL BE COMPLETED PRIOR TO ATTACHING CAP TO ROD.



DETAIL 'F'
TYPE II – TYPICAL
ROD MONUMENT

DETAIL 'C'
TYPE I, VI – TYPICAL REBAR CAP
BOUNDARY MONUMENT
CAP INSCRIPTION LAYOUT



DETAIL 'G'
TYPE II, III, IV – TYPICAL
ROD MONUMENT 3-1/4 INCH
DOMED CAP

TYPE II
ROD MONUMENTS

9) TYPE II ROD MONUMENTS MAY BE USED AS BOUNDARY MONUMENTS TO MARK A CORNER OR POINT ON A BOUNDARY. THE MONUMENT SHALL BE INSCRIBED WITH "METRO – PROPERTY MARKER" AS SHOWN IN DETAIL 'H'.

10) TYPE II ROD MONUMENTS MAY BE USED AS RIGHT-OF-WAY MONUMENTS TO MARK ANGLE POINTS, BEGINNING AND ENDS OF CURVES AND INTERMEDIATE POINTS WITH INTERVALS NOT GREATER THAN 1500 FEET AS APPROVED BY WMATA. THE MONUMENT SHALL BE INSCRIBED WITH "METRO – RIGHT OF WAY" AS SHOWN IN DETAIL 'I'.

11) THE "METRO – PROPERTY MARKER" AND "METRO – RIGHT OF WAY" TYPE II ROD MONUMENTS SHALL BE SET BY A REGISTERED LAND SURVEYOR AND COMPLY WITH ALL JURISDICTIONAL REGULATIONS. THE "METRO – PROPERTY MARKER" SHALL HAVE AN INSCRIPTION THAT IDENTIFIES THE SURVEYOR, CORPORATION OR PARTNERSHIP RESPONSIBLE FOR SETTING THE PROPERTY MARKER AS WELL AS THE WMATA REAL ESTATE PARCEL NUMBER AND POINT NUMBER.

12) TYPE II ROD MONUMENTS MAY BE USED AS PERMANENT SECONDARY CONTROL MONUMENTS DURING DESIGN AND CONSTRUCTION SURVEYS. THE MONUMENT SHALL BE INSCRIBED WITH "METRO – CONTROL SURVEY" AS SHOWN IN DETAIL 'J'.

13) CONTROL SURVEY POINT NUMBERING SHALL BE IN ACCORDANCE WITH PARAGRAPH 5).

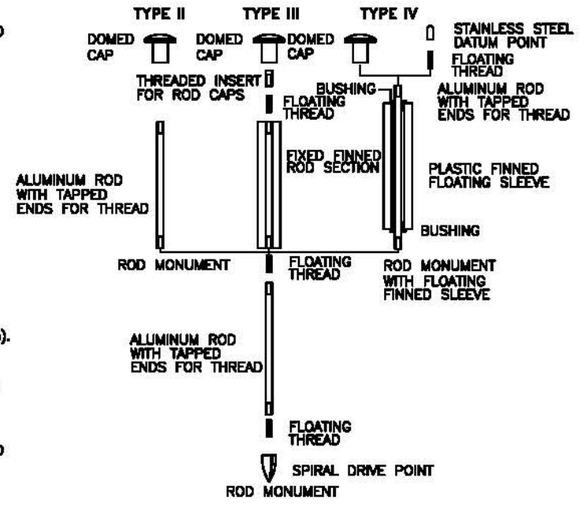
14) TYPE II ROD MONUMENTS ARE A SERIES OF 3/4 INCH INTERLOCKING ALUMINUM RODS WHICH VARY IN LENGTH FROM 1 FOOT TO 5 FOOT, FITTED WITH A DOMED 3 1/4 INCH DIAMETER ALUMINUM OR BRONZE CAP ON TOP AND A SPIRAL DRIVING POINT ON THE TIP AS SHOWN IN DETAILS 'F', 'G', AND 'K'.

15) THE 3 1/4 INCH DOMED CAP SHALL HAVE A PERMANENT CERAMIC MAGNET EPOXIED TO THE INSIDE OF THE CAP SOCKET AS SHOWN IN DETAIL 'G'.

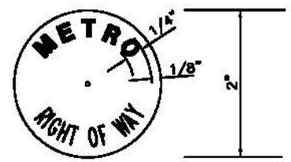
16) THE CAP SHALL BE INSTALLED BY USING A THREADED INSERT OR COMPRESSION FITTING WHICH DEFORMS AROUND THE BODY OF THE ROD FORMING A TIGHT CONNECTION WHICH WILL NOT "WOBBLE" OR ROTATE AFTER ATTACHMENT.

17) TYPE II ROD MONUMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S SPECIFICATIONS AND THE FOLLOWING REQUIREMENTS. THE ROD IS TO BE DRIVEN TO A MINIMUM DEPTH OF 48 INCHES INTO OVERBURDEN OR UNTIL IT REACHES STABLE GROUND. THE TOP OF THE ROD IS TO BE INSTALLED 2 INCHES BELOW GRADE. USE OF A MANUAL DRIVING ADAPTER IS REQUIRED IN ORDER TO PROTECT THE TOP OF THE ROD. WHEN STRIKING THE MANUAL DRIVING ADAPTER USE A URETHANE FACED HAMMER. AFTER THE TOP OF THE ROD IS DRIVEN 2 INCHES BELOW GRADE, INSTALL CAP AS NOTED IN PARAGRAPH 16).

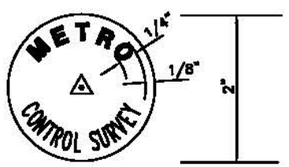
18) CAP INSCRIPTION SHALL BE PERFORMED IN ACCORDANCE WITH PARAGRAPH 8).



DETAIL 'K'
TYPE II, III, IV – TYPICAL
ROD MONUMENT SYSTEM CONFIGURATION SUMMARY



DETAIL 'D'
TYPE I, VI – TYPICAL REBAR CAP
RIGHT OF WAY
CAP INSCRIPTION LAYOUT



DETAIL 'E'
TYPE I, VI – TYPICAL REBAR CAP
CONTROL SURVEY
CAP INSCRIPTION LAYOUT

DETAIL 'H'
TYPE II, III, IV, VII, VIII– TYPICAL
BOUNDARY MONUMENT
CAP INSCRIPTION LAYOUT

DETAIL 'I'
TYPE II, III, IV, VII, VIII – TYPICAL
RIGHT OF WAY
CAP INSCRIPTION LAYOUT

DETAIL 'J'
TYPE II, III, IV, VII, VIII – TYPICAL
CONTROL SURVEY
CAP INSCRIPTION LAYOUT

MONUMENT TYPE

APPLICATION	REBAR CAP TYPE I	ROD TYPE II	FINNED ROD TYPE III	SLEEVE ROD TYPE IV	DEEP BENCH TYPE V	2-1/2" CONC TYPE VI	3-1/2" CONC. TYPE VII	CONC. MON. TYPE VIII
BOUNDARY	X	X				X	X	X
ROW	X	X				X	X	X
SECONDARY	X	X	X			X	X	X
PRIMARY			X				X	X
3-D GPS				X	X			
MOVEMENT DETECTION				X	X			
TRACKWAY						X		

DESIGNED	D. FALKEN	09-2007 DATE
DRAWN	N. BRIDGES	09-2007 DATE
CHECKED	K. WOODWARD	09-2007 DATE
APPROVED	D. FALKEN	09-2007 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
08/2001	ENGA	Revised and issued by the Authority
08/2007	ENSS	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

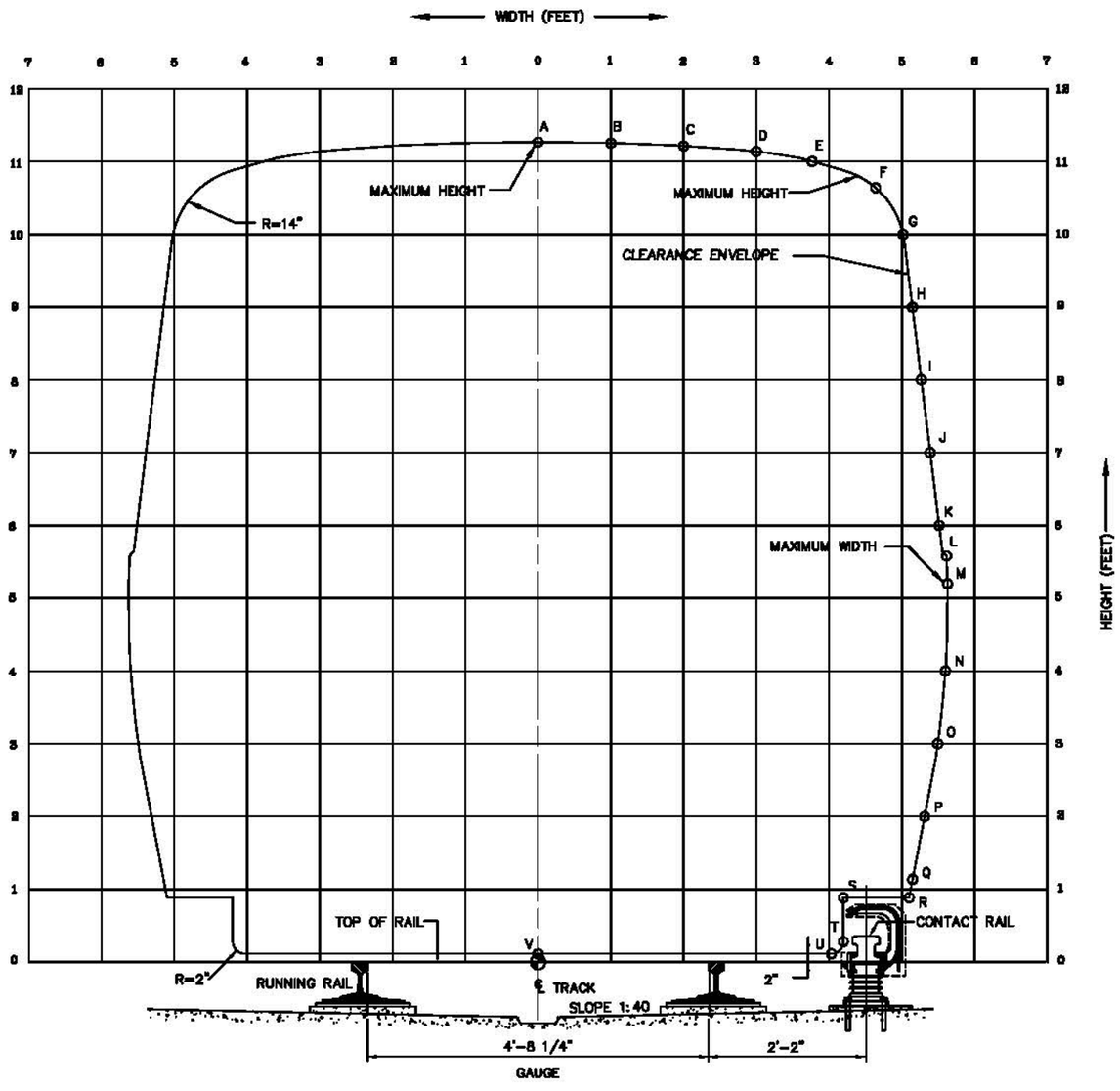
SUBMITTED R.P. Padgett 10/2007 DATE

APPROVED 10/2007 DATE

CIVIL STANDARD DRAWING
SURVEY MONUMENTS
SHEET 1 OF 3

SCALE: NOT TO SCALE

DRAWING NO.: ST-C-003



COORDINATES		
POINT	WIDTH	HEIGHT
A	0.000	11.267
B	1.000	11.252
C	2.000	11.213
D	3.000	11.136
E	3.761	11.000
F	4.638	10.838
G	5.018	10.000
H	5.148	9.000
I	5.268	8.000
J	5.388	7.000
K	5.511	6.000
L	5.616	5.580
M	5.627	5.200
N	5.593	4.000
O	5.498	3.000
P	5.316	2.000
Q	5.149	1.138
R	5.100	0.885
S	4.198	0.885
T	4.198	0.281
U	4.031	0.167
V	0.000	0.167

NOTES:

1. THIS DIAGRAM IS TO BE USED TO VERIFY CLEARANCES TO WAYSIDE FACILITIES AND UNDERCAR FIXTURES. FOR EXAMPLE, FIRELINES, SPECIAL TRACK HARDWARE AND SAFETY WALKS.

2. THIS DIAGRAM DOES NOT APPLY TO PLATFORMS AND MAJOR STRUCTURAL ELEMENTS, SUCH AS TUNNEL WALLS AND CEILINGS, RETAINING WALLS, AND PIERS. USE THE MANUAL OF DESIGN CRITERIA.

3. THIS DIAGRAM IS DIRECTLY APPLICABLE ONLY FOR LEVEL, TANGENT TRACK. USE THE MANUAL OF DESIGN CRITERIA TO COMPENSATE FOR HORIZONTAL CURVATURE, TRACK SUPERELEVATION, AND MOVEMENT THROUGH TURNOUTS AND CROSSOVERS.

4. THIS DIAGRAM AND DIMENSIONS ARE BASED ON THE FOLLOWING:

   a. CAR BODY – THE CLEARANCE CAR FEELER OUTLINE, OR CLEARANCE ENVELOPE. THIS IS THE ROHR CAR MAXIMUM POSSIBLE DYNAMIC OUTLINE PLUS AN ADDITIONAL ALLOWANCE OF 2 INCHES.

   b. UNDERCAR – THE LOWEST POINT OF THE VEHICLE MINIMUM PROJECTED CLEARANCE. THIS IS DEFINED BY THE COLLECTOR PEDESTAL ASSEMBLY OF THE UNDERCARRIAGE. THESE CLEARANCES ARE DEFINED BY THE CLEARANCE ENVELOPE AND SHOULD ALSO ALLOW FOR AN ADDITIONAL 1/2 INCH AVERAGE PERMISSIBLE TOP RAIL WEAR.

   c. CONTACT RAIL – THE RAIL CAR MAXIMUM POSSIBLE DYNAMIC OUTLINE FOR LOWER CAR BODY APPENDAGES.

DESIGNED	F. BLAGAY	9-06 DATE
DRAWN	R. ROBERTS	9-06 DATE
CHECKED	T. FOX	10-06 DATE
APPROVED	K. OAKBERG	10-06 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION
06/2007	ENGA	REVISED AND ISSUED BY THE AUTHORITY

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

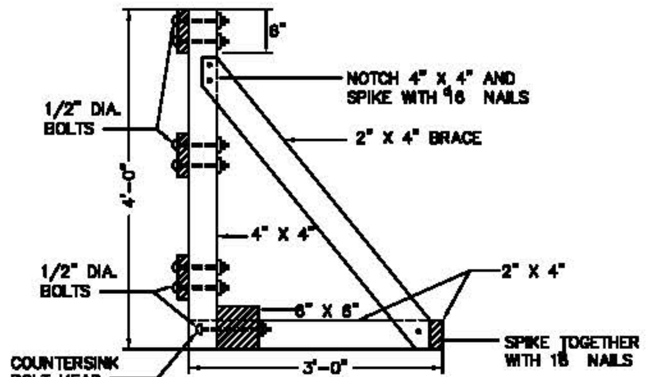
SUBMITTED 10/2007 DATE

APPROVED 10/2007 DATE

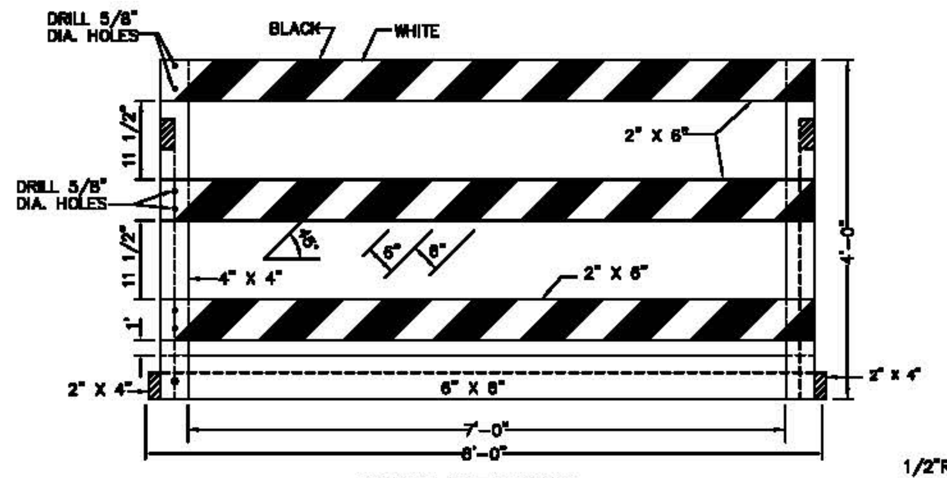
CIVIL STANDARD DRAWING
WMATA RAPID TRANSIT CAR CLEARANCE ENVELOPE

SCALE 0.5 0 0.5 1.0
1" = 1'-0"

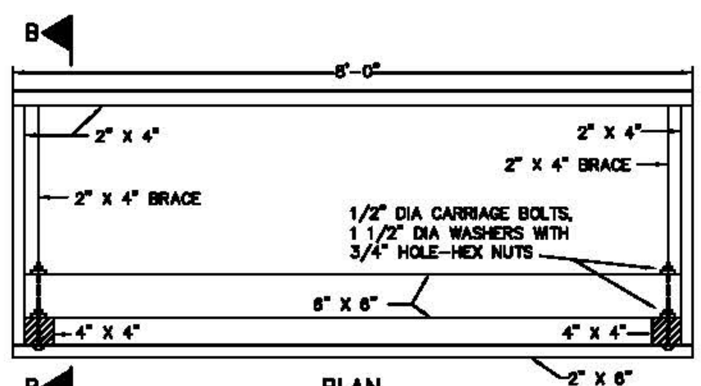
DRAWING NO. ST-C-004



SECTION B-B



FRONT ELEVATION

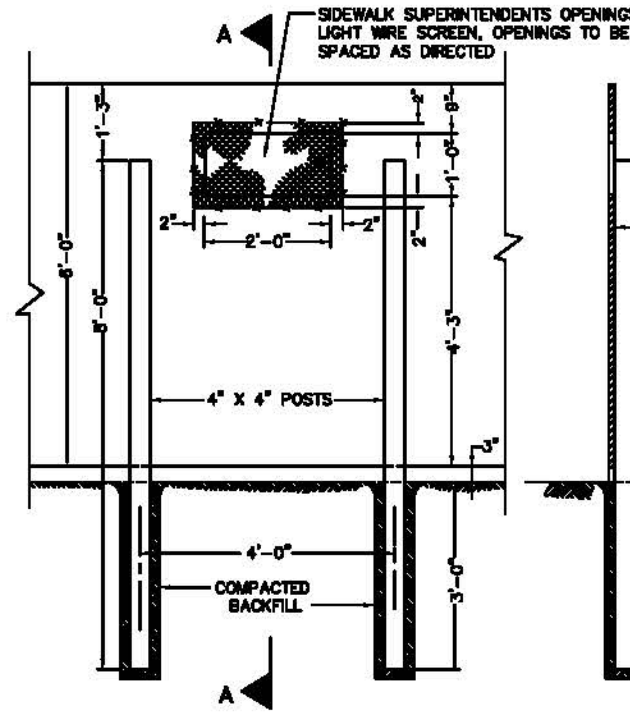


PLAN

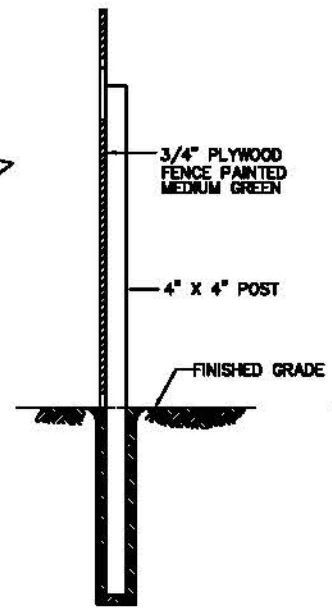
DETAIL 1

TYPICAL MOVABLE BARRICADE FOR NON-VEHICLE AREAS

SCALE: 1" = 1'-0"



REAR ELEVATION

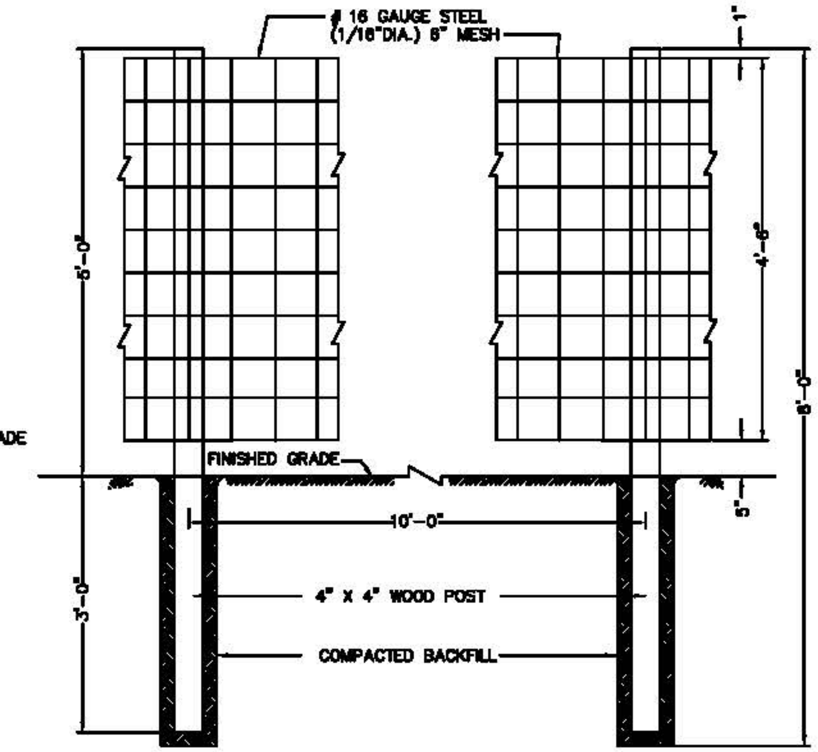


SECTION A-A

DETAIL 2

TYPICAL WORKING AREA WOODEN FENCE

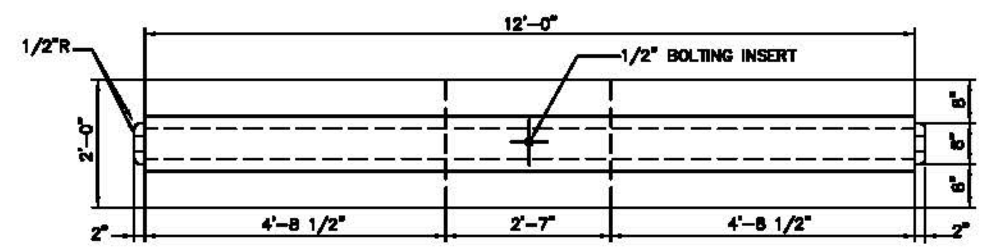
(OTHER DESIGNS OF EQUAL STRENGTH MAY BE USED SUBJECT TO PRIOR APPROVAL)
SCALE: 3/4" = 1'-0"



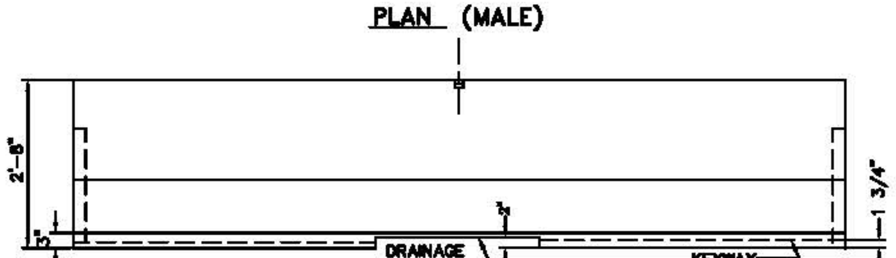
DETAIL 3

TYPICAL WORKING AREA WIRE FENCE

SCALE: 1"=1'-0"



PLAN (MALE)

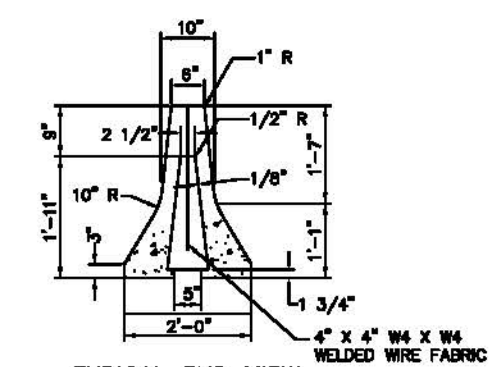


ELEVATION (FEMALE)

DETAIL 4

TYPICAL TEMPORARY PRECAST CONCRETE VEHICLE BARRIER

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



TYPICAL END VIEW

NOTE:

TEMPORARY VEHICLE CHANNELIZATION SHALL BE ACCOMPLISHED BY NON-WOODEN DEVICES (BARRICADES, CONES, PANELS AND/OR DRUMS) AS INDICATED IN THE FHWA "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", AND SUBJECT TO APPROVAL BY THE LOCAL JURISDICTION

DESIGNED	O'CONNER	1-7-80 DATE
DRAWN	HICKS/BURNO	2-20-80 DATE
CHECKED	R. O'NEIL	2-20-80 DATE
APPROVED	K. OWENS	10-80 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
09/2007	EMA	REVISED AND ISSUED BY THE AUTHORITY

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

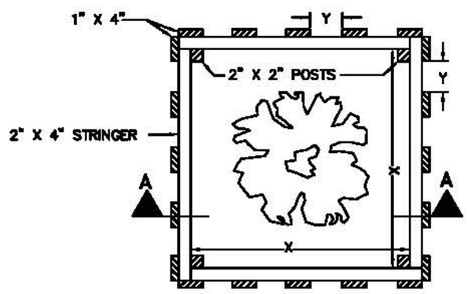
SUBMITTED R. Padgett 10/2007 DATE — APPROVED [signature] 10/2007 DATE

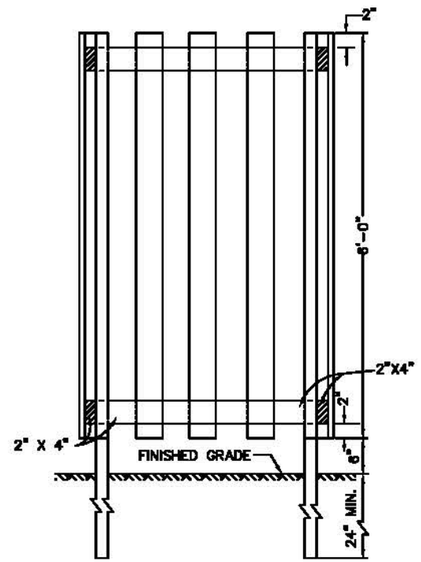
CIVIL STANDARD DRAWING
TEMPORARY BERRICADES AND FENCES

SCALE: NOT TO SCALE — DRAWING NO. ST-C-013

DIAMETER TREE ABOVE	DIAMETER TREE INCLUDING	"X"	NO 1"X4"	"Y" (APP.)
–	12"	24"	4	4"
12"	18"	30"	4	6"
18"	24"	36"	5	5"
24"	30"	42"	6	4 1/2"

NOTE:
AREA OF TREE SPACE MAY REQUIRE MODIFICATIONS IN CERTAIN INSTANCES



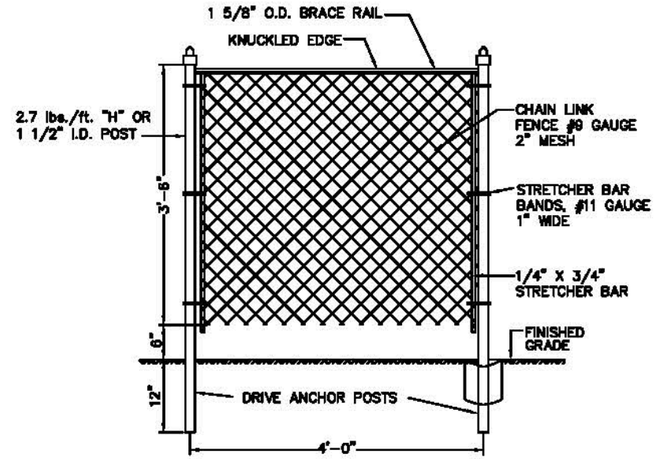


SECTION A–A

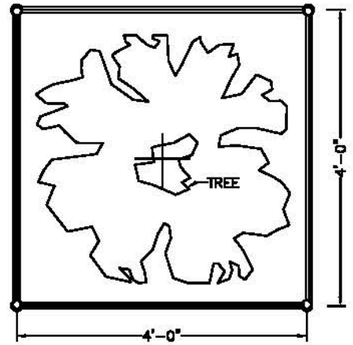
DETAIL 1

TYPICAL WOODEN TREE GUARD

FOR TREES ON D.C. PROPERTY



ELEVATION



PLAN

PAINT PARK GREEN

DETAIL–2

TYPICAL CHAIN LINK TREE GUARD

FOR TREES ON U.S. PARK SERVICE PROPERTY

DESIGNED	T.E. O'CONNOR	11–67 DATE
DRAWN	C.H. VAUGHAN	12–67 DATE
CHECKED		DATE
APPROVED	R.S. O'NEIL	12–67 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION
08/2007	ENGA	REVISED AND ISSUED BY THE AUTHORITY

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

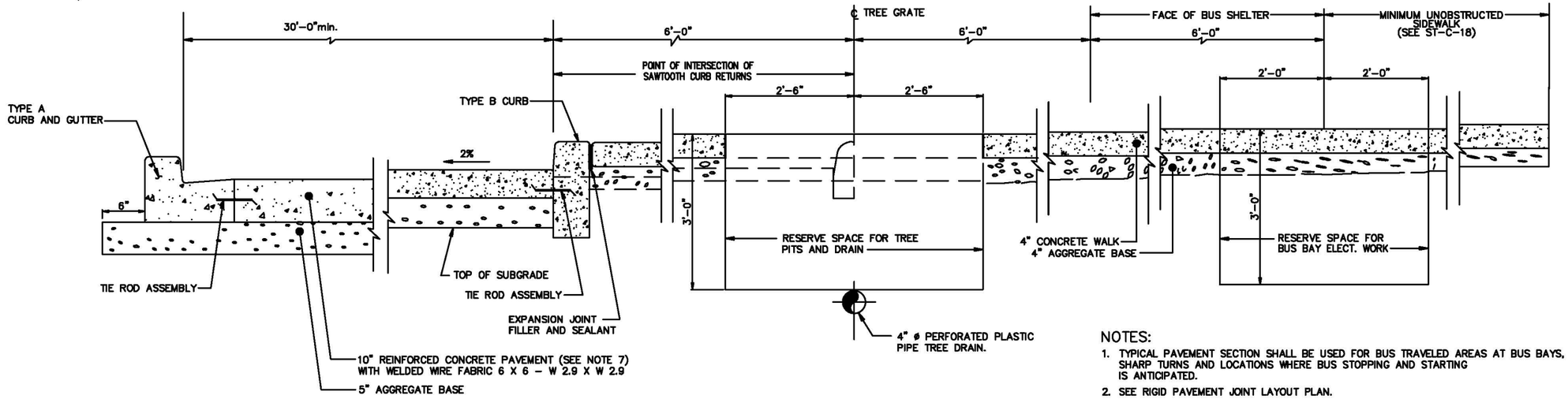
SUBMITTED LR Padgett 10/2007 DATE

APPROVED 10/2007 DATE

CIVIL STANDARD DRAWING
TEMPORARY TREE GUARDS

SCALE: NOT TO SCALE

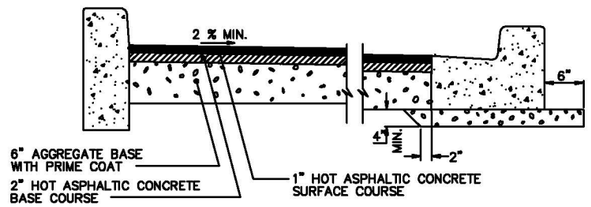
DRAWING NO.: ST–C–016



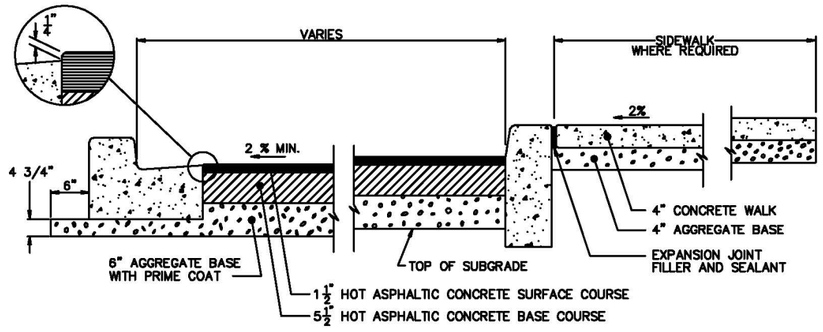
TYPICAL PAVEMENT SECTION A
ENTRANCE ROADWAYS AND BUS AREAS

NOTES:

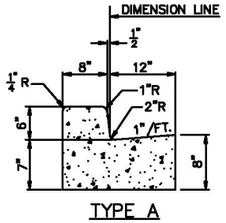
1. TYPICAL PAVEMENT SECTION SHALL BE USED FOR BUS TRAVELED AREAS AT BUS BAYS, SHARP TURNS AND LOCATIONS WHERE BUS STOPPING AND STARTING IS ANTICIPATED.
2. SEE RIGID PAVEMENT JOINT LAYOUT PLAN.
3. PROVIDE EXPANSION JOINTS AT 300' MAXIMUM INTERVALS AT UNSYMMETRICAL INTERSECTIONS, AT ABUTTING CONCRETE PAVEMENTS AND AT BRIDGE APPROACHES.



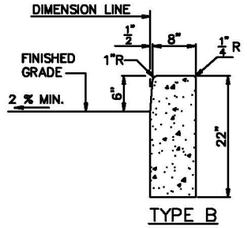
TYPICAL PAVEMENT SECTION B
PARKING AREAS FOR PASSENGER CARS ONLY



TYPICAL PAVEMENT SECTION C
ENTRANCE ROADWAYS



TYPE A
CURB & GUTTER DETAIL



TYPE B
CURB DETAIL

GENERAL NOTES

1. THIS DRAWING APPLIES TO METRO ON-SITE LOCATIONS.
2. PAVEMENTS:
   A. ASPHALT INSTITUTE AND PORTLAND CEMENT ASSOCIATION CRITERIA APPLY.
   B. MININUM SOIL STRENGTH CBR-9
   C. DESIGN PERIOD 20 YEARS
   D. TRAFFIC 200 BUSES PER HOUR, 1000 CARS PER DAY
   E. LOAD (BUSES) 25,000 POUNDS EQUIVALENT SINGLE AXLE LOAD
3. USE TYPE A CURB AND GUTTER ON LOW SIDE AND TYPE B CURB ON HIGH SIDE OF PAVEMENT CROSS SLOPE.
4. FOR BUS TRAVELED AREAS AT BUS BAYS, SHARP TURNS AND LOCATIONS WHERE BUS STOPPING AND STARTING IS ANTICIPATED, SECTION A SHALL BE USED.
5. CROWN OR SLOPE ENTRANCE ROADWAYS AS REQUIRED, 2% MIN. DESIRABLE CROSS SLOPE.
6. MODIFIED TYPE A CURB AND GUTTER, GUTTER PAN MAINTAINS THE SAME CROSS SLOPE AS THE PAVEMENT.
7. CBR OF NATURAL SUBGRADE AND IMPROVED SOIL AREAS SHOULD BE ESTIMATED FROM THE AVAILABLE SOIL TEST DATA. THE PAVEMENT SECTIONS PRESENTED ON THE CIVIL STANDARD DRAWINGS HAVE BEEN DESIGNED FOR A SUBGRADE STRENGTH OF CBR-9. IF THE LOCAL SOIL CONDITIONS DO NOT MEET THIS STRENGTH REQUIREMENT, THE SECTION DESIGNER SHALL EITHER DEVISE A CONSTRUCTION METHOD TO IMPROVE THE SOIL SUBGRADE TO THE CBR-9 OR PROVIDE NEW PAVEMENT DESIGN.

DESIGNED	F. BLAGHLY	8-98 DATE
DRAWN	R. ROBERTS	8-98 DATE
CHECKED	A.A. DIZON	8-98 DATE
APPROVED	K. OAKBERG	DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
08/2007	ENGA	REVISED AND ISSUED BY THE AUTHORITY

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

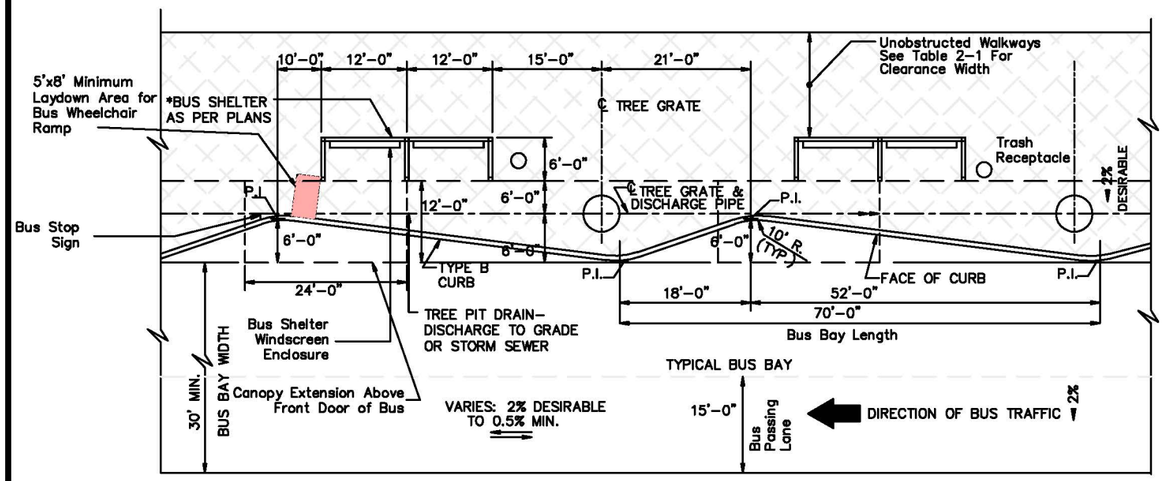
SUBMITTED 10/2007 DATE

APPROVED 10/2007 DATE

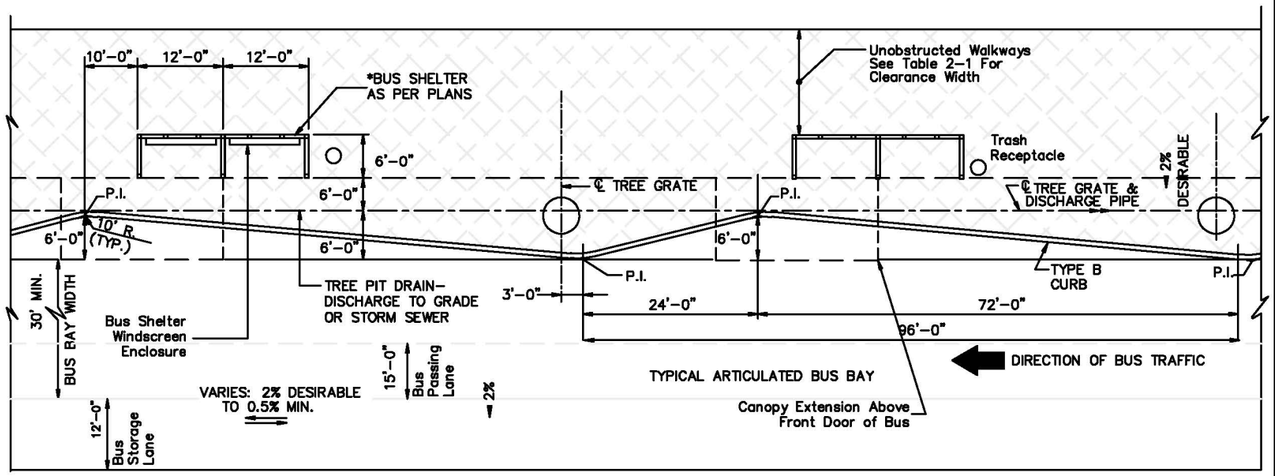
CIVIL STANDARD DRAWING
METRO PAVEMENT SECTIONS AND DETAILS

SCALE NOT TO SCALE

DRAWING NO. ST-C-017



PLAN–BUS STALLS WITH BUS SHELTER



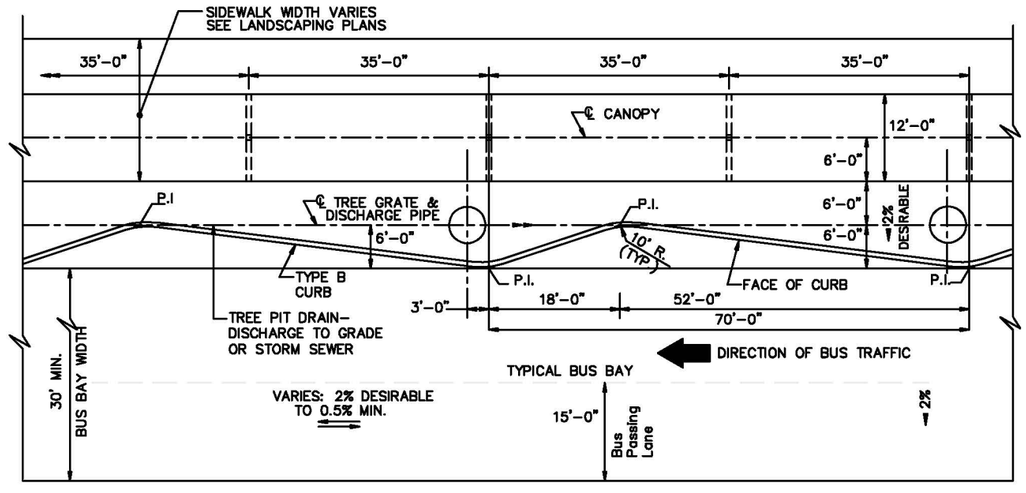
PLAN–ARTICULATED BUS STALLS WITH BUS SHELTER

TOTAL NUMBER OF BUS STALLS IN SERIES	MINIMUM UNOBSTRUCTED SIDEWALK WIDTH (FEET)*
1	6
2	6
3	6
4	8
5	10
6	12

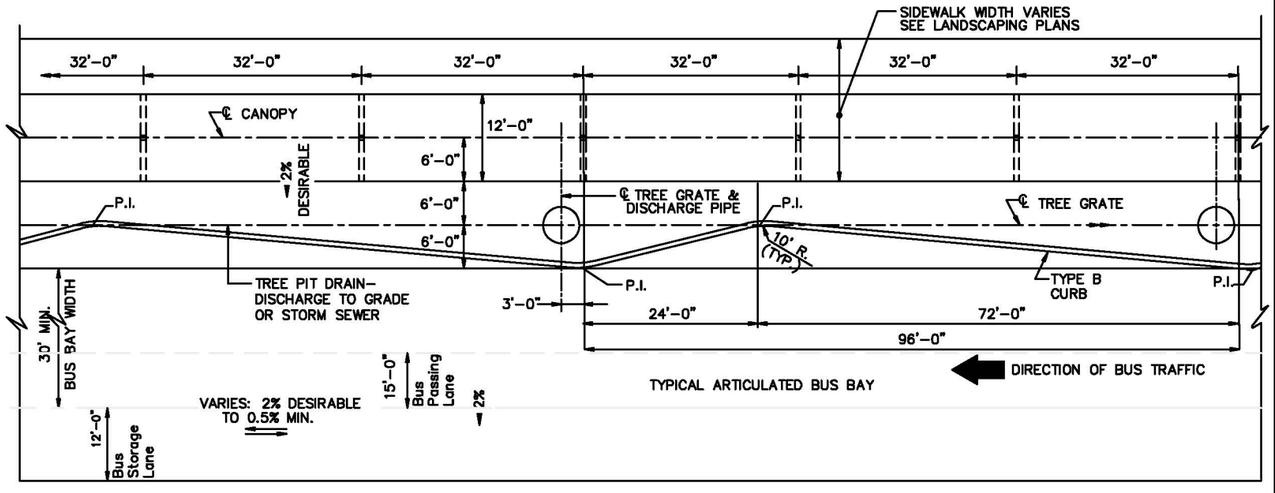
* MINIMUM UNOBSTRUCTED SIDEWALK WIDTH IS THE CONTINUOUS SIDEWALK WIDTH CLEAR OF INTERFERENCE WITH SHELTER SUPPORTS, BENCHES, WINDSCREENS, ETC. SEE LANDSCAPE PLANS FOR EXACT SIDEWALK WIDTH.

GENERAL NOTES

1. GEOMETRICS:
   A. AASHTO POLICIES APPLY.
   B. BUS TURNS 55' MINIMUM RADIUS AT CURB



PLAN–BUS STALLS WITH CANOPY



PLAN–ARTICULATED BUS STALLS WITH CANOPY

5 0 5 10

DESIGNED _____ DATE
DRAWN T. RHODES 5/08 DATE
CHECKED R. WILLIAMS 5/08 DATE
APPROVED _____ DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION
ST-C-017	METRO PAVEMENTS SECTIONS & DETAILS

REVISIONS

DATE	BY	DESCRIPTION
5/08	ENSS	REVISED AND ISSUED BY THE AUTHORITY

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

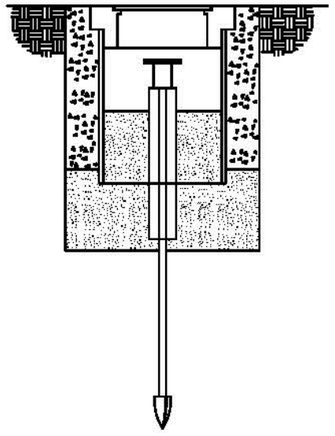
SUBMITTED _____ 10/2007 DATE

APPROVED _____ 10/2007 DATE

CIVIL STANDARD DRAWING
METRO PAVEMENT BUS STALL PLANS

SCALE

DRAWING NO. ST-C-018



DETAIL 'L'
TYPE III – TYPICAL
FIXED FINNED ROD MONUMENT
WITH PROTECTIVE ACCESS
COVER

TYPE III
FIXED FINNED ROD MONUMENTS

19) TYPE III FIXED FINNED ROD MONUMENTS MAY BE USED AS PERMANENT PRIMARY AND SECONDARY CONTROL MONUMENTS AND INSCRIBED WITH "METRO – CONTROL SURVEY" AS SHOWN IN DETAIL 'J'.

20) CONTROL SURVEY POINT NUMBERING SHALL BE IN ACCORDANCE WITH PARAGRAPH 5).

21) TYPE III FIXED FINNED ROD MONUMENTS ARE A SERIES OF 3/4 INCH INTERLOCKING ALUMINUM RODS WHICH VARY IN LENGTH FROM 1 FOOT TO 5 FOOT, FITTED WITH A DOMED 3 1/4 INCH DIAMETER ALUMINUM CAP ON TOP AND A SPIRAL DRIVING POINT ON THE TIP AS SHOWN IN DETAILS 'G', 'K' AND 'L'.

22) THE TOP 3 FOOT SECTION WILL HAVE 3 FIXED ALUMINUM FINS TO INCREASE STABILITY OF THE MONUMENT AS SHOWN IN DETAILS 'K', 'L' AND 'M'.

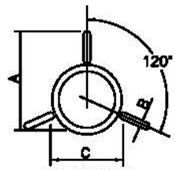
23) THE CAP SHALL BE INSTALLED AS DESCRIBED IN PARAGRAPH 18).

24) FIXED FINNED ROD MONUMENTS SHALL BE ENCASED IN A PROTECTIVE ACCESS COVER WITH FULLY RECESSED HINGES. THE COVER SHALL CONSIST OF A 6 INCH DIAMETER SCHEDULE 40 PVC HOUSING 3 FEET IN LENGTH AND AN ALUMINUM LID WITH 5 INCH DIAMETER OPENING (MINIMUM). THE ALUMINUM LID SHALL BE GLUED TO THE PVC PIPE. THE HOLE AND PIPE SHALL BE BACK–FILLED WITH SAND WITH THE EXCEPTION THE TOP 12 INCHES OF THE HOLE OUTSIDE THE PVC PIPE, WHICH SHALL BE BACK–FILLED WITH CONCRETE (SEE DETAIL 'L'). THE ALUMINUM LID SHALL BE INSCRIBED WITH "METRO – CONTROL SURVEY" (SEE DETAIL 'O').

25) PROTECTIVE ACCESS COVERS SHALL BE USED ON ALL FIXED FINNED ROD MONUMENTS AS SHOWN IN DETAIL 'O' UNLESS OTHERWISE APPROVED BY WMATA. IN SITUATIONS WHERE A PROTECTIVE ACCESS COVER IS NOT PRACTICAL, THE TOP OF THE FIXED FINNED ROD MONUMENT SHALL BE ENCASED IN A CONCRETE COLLAR 9 INCHES DIAMETER (MINIMUM) AND 1 FOOT IN DEPTH (MINIMUM).

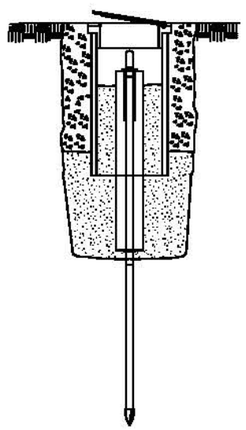
26) TYPE III FIXED FINNED ROD MONUMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURES SPECIFICATIONS AND THE FOLLOWING REQUIREMENTS. ROD IS TO BE DRIVEN TO A MINIMUM DEPTH OF 48 INCHES INTO OVERBURDEN OR UNTIL IT REACHES STABLE GROUND. THE TOP OF THE ROD IS TO BE INSTALLED 6 INCHES BELOW GRADE. USE OF A MANUAL DRIVING ADAPTER IS REQUIRED IN ORDER TO PROTECT THE TOP OF THE ROD. WHEN STRIKING THE MANUAL DRIVING ADAPTER USE A URETHANE FACED HAMMER. AFTER THE TOP OF THE ROD IS DRIVEN 6 INCHES BELOW GRADE, INSTALL CAP AS NOTED IN PARAGRAPH 16).

27) CAP INSCRIPTION SHALL BE PERFORMED IN ACCORDANCE WITH PARAGRAPH 8).

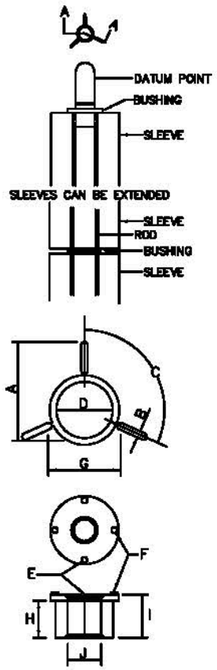


TOP VIEW OF
TOP SECURITY TM ROD
SOLID TOP SECURITY TOP
IS AVAILABLE IN TWO SIZES:
A=1 3/16"
B=1/8"
C=3/4"

DETAIL 'M'
TYPE III FIXED FINNED
TOP VIEW OF
TOP 3 FOOT SECTION



DETAIL 'N'
TYPE IV – TYPICAL
HIGH PRECISION
ROD MONUMENT WITH
FLOATING SLEEVE AND
PROTECTIVE
ACCESS COVER



A = 1"
B = 1/8"
C = 120°
D = 1"
E = RECESS FOR PIN
F = RAISED ALIGNMENT PIN
G = 1 1/2"
H = 1/2"
I = 9/16"
J = 3/4"

DETAIL 'P'
TYPE IV – TYPICAL
FINNED FLOATING
SLEEVE SECTIONS

TYPE IV
HIGH PRECISION ROD MONUMENTS

28) TYPE IV HIGH PRECISION ROD MONUMENTS WITH FLOATING SLEEVE SHALL BE USED AS PERMANENT 3–DIMENSIONAL PRIMARY CONTROL MONUMENTS AND INSCRIBED WITH "METRO – CONTROL SURVEY" AS SHOWN IN DETAILS 'J', 'N' AND 'P'.

29) CONTROL SURVEY POINT NUMBERING SHALL BE IN ACCORDANCE WITH PARAGRAPH 5).

30) TYPE IV HIGH PRECISION ROD MONUMENTS WITH FLOATING SLEEVE SHALL BE USED AS PERMANENT VERTICAL MOVEMENT DETECTION CONTROL POINTS. IN THIS APPLICATION THE ROD ASSEMBLY SHALL CONSIST OF ALUMINUM AND SHALL BE FITTED WITH A STAINLESS STEEL DATA POINT AS SHOWN IN DETAILS 'K' 'N' AND 'P'.

31) TYPE IV HIGH PRECISION ROD MONUMENTS WITH FLOATING SLEEVE ARE A SERIES OF 3/4 INCH INTERLOCKING ALUMINUM RODS (EXCEPT AS NOTED IN PARAGRAPH 30) WHICH VARY IN LENGTH FROM 1 FOOT TO 5 FOOT, FITTED WITH A DOMED 3 1/4 INCH DIAMETER ALUMINUM CAP ON TOP (EXCEPT AS NOTED IN PARAGRAPH 30) AND A SPIRAL DRIVING POINT ON THE TIP AS SHOWN IN DETAILS 'G', 'K' AND 'N'.

32) THE TOP 4 FOOT SECTION OF ROD SHALL BE ENCASED IN AN ENVIRONMENTALLY SAFE GREASE–FILLED PLASTIC SLEEVE WITH END CAP ALIGNMENT BUSHINGS, THUS ISOLATING THE ROD FROM ANY MOVEMENT FROM THE SURROUNDING SOIL AS SHOWN IN DETAIL 'P'.

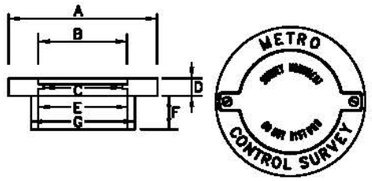
33) THE CAP OR DATA POINT SHALL BE INSTALLED AS DESCRIBED IN PARAGRAPH 16).

34) TYPE IV HIGH PRECISION ROD MONUMENTS WITH FLOATING SLEEVE SHALL BE ENCASED IN A PROTECTIVE ACCESS COVER AS DESCRIBED IN PARAGRAPH 24) WITH THE FOLLOWING EXCEPTION. THE HOLE AND PIPE SHALL BE BACK–FILLED WITH SAND WITH THE EXCEPTION THE TOP 30 INCHES OF THE HOLE OUTSIDE THE PVC PIPE, WHICH SHALL BE BACK–FILLED WITH CONCRETE. SEE DETAILS 'N', 'O' AND 'P'.

35) PROTECTIVE ACCESS COVERS SHALL BE USED ON ALL HIGH PRECISION ROD MONUMENTS WITH FLOATING SLEEVE.

36) TYPE IV ROD MONUMENT WITH FLOATING SLEEVE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURES SPECIFICATIONS AND THE FOLLOWING REQUIREMENTS. ROD IS TO BE DRIVEN TO REFUSAL WHICH IS DEFINED AS NO MORE THAN ONE (1) FOOT OF FURTHER PENETRATION OF A ROD MONUMENT IN ONE MINUTE OF IMPACTING WITH A GASOLINE POWERED RECIPROCATING IMPACT HAMMER. THE TOP OF THE ROD IS TO BE INSTALLED 6 INCHES BELOW GRADE. AFTER THE TOP OF THE ROD IS DRIVEN 6 INCHES BELOW GRADE, INSTALL CAP AS NOTED IN PARAGRAPH 16).

37) CAP INSCRIPTION SHALL BE PERFORMED IN ACCORDANCE WITH PARAGRAPH 8).

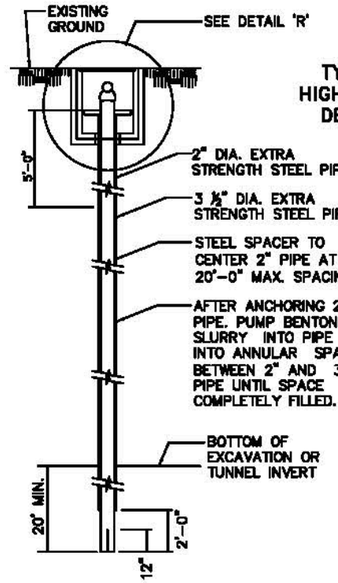


DETAIL 'O'
TYPE III AND IV
PROTECTIVE ACCESS LID

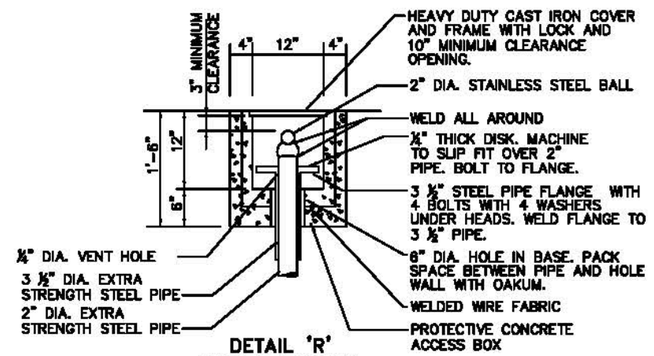
TYPE V
HIGH PRECISION
CASED DEEP BENCH MARK

38) TYPE V HIGH PRECISION CASED DEEP BENCH MARKS SHALL BE USED AS PERMANENT VERTICAL CONTROL MONUMENTS FOR MOVEMENT DETECTION SURVEYS IN COMBINATION WITH GEOTECHNICAL INSTRUMENTATION.

39) COMPONENT DESCRIPTION, INSTALLATION AND APPLICATION INSTRUCTIONS ARE CONTAINED IN DETAILS 'Q', 'R' AND THE CONTRACT SPECIFICATION ENTITLED "SECTION 02291 GEOTECHNICAL INSTRUMENTATION".



DETAIL 'Q'
TYPE V – TYPICAL
HIGH PRECISION CASED
DEEP BENCH MARK



DETAIL 'R'
TYPE V–TYPICAL
HIGH PRECISION CASED DEEP BENCH MARK
UPPER SECTION CONFIGURATION

DESIGNED	D. FALKEN	09–2007 DATE
DRAWN	N. BRIDGES	09–2007 DATE
CHECKED	K. WOODWARD	09–2007 DATE
APPROVED	D. FALKEN	09–2007 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
08/2001	ENGA	Revised and Issued by the Authority
09/2007	ENSS	Revised and Issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

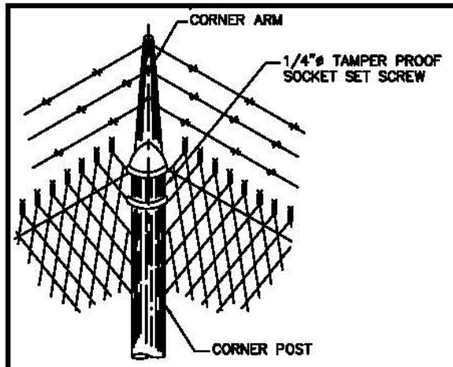
SUBMITTED 10/2007 DATE

APPROVED 10/2007 DATE

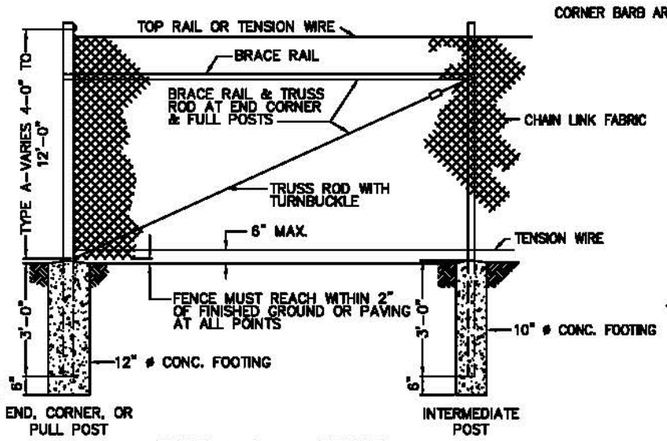
CIVIL STANDARD DRAWING
SURVEY MONUMENTS
SHEET 2 OF 3

SCALE: NOT TO SCALE

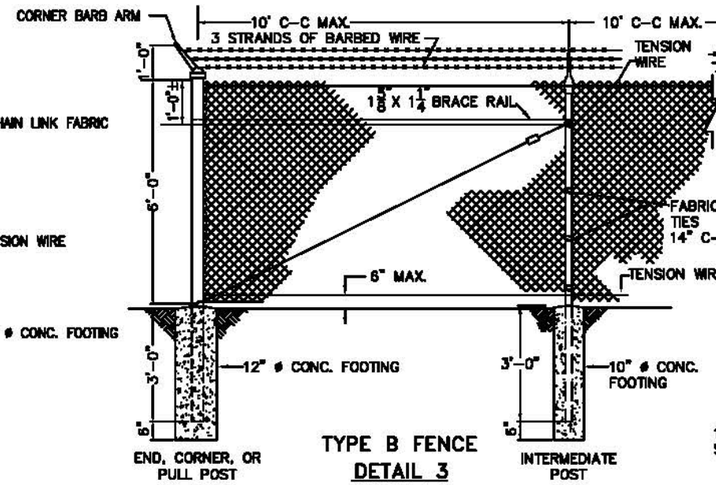
DRAWING NO.: ST–C–019



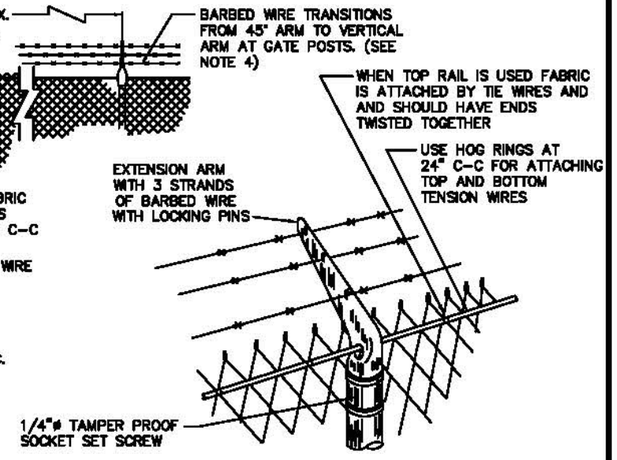
CORNER POST AND ARM FOR TYPE B FENCE
DETAIL 1



TYPE A & A1 FENCE
DETAIL 2

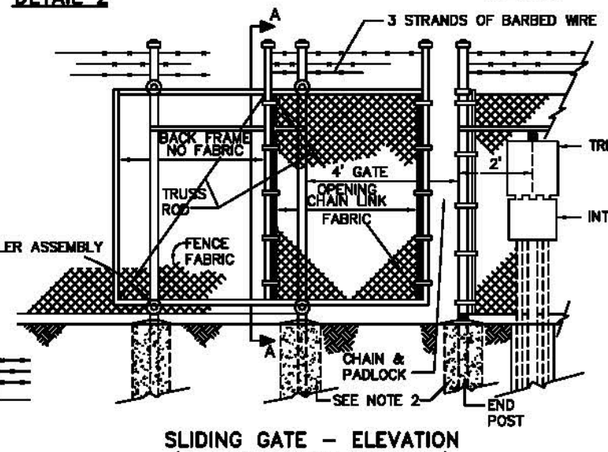


TYPE B FENCE
DETAIL 3

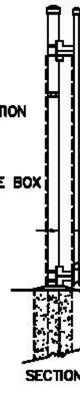


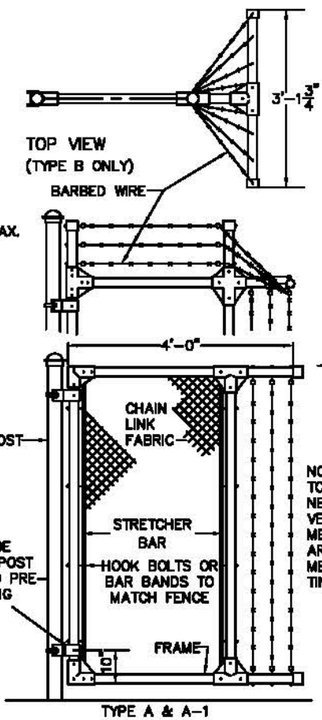
TYPE B INTERMEDIATE POST TOP
DETAIL 7

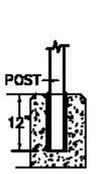
CHART					
TYPE	FENCE HEIGHT	TOP LINE	BOTTOM LINE	SELVAGE	REFERENCE
A	4' TO 12'	TENSION WIRE	TENSION WIRE	TOP TWISTED & BARBED TOP & BOTTOM KNUCKLED	DETAIL 2
A-1	4' TO 12'	TOP RAIL	TENSION WIRE	TOP TWISTED & BARBED TOP & BOTTOM KNUCKLED	DETAIL 2
B	6" WIDTH BARBED WIRE	TENSION WIRE	TENSION WIRE	TOP TWISTED & BARBED TOP & BOTTOM KNUCKLED	DETAIL 3

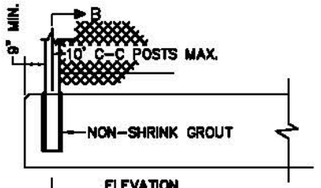


SLIDING GATE – ELEVATION
(VIEW FROM WITHIN METRO PROPERTY)

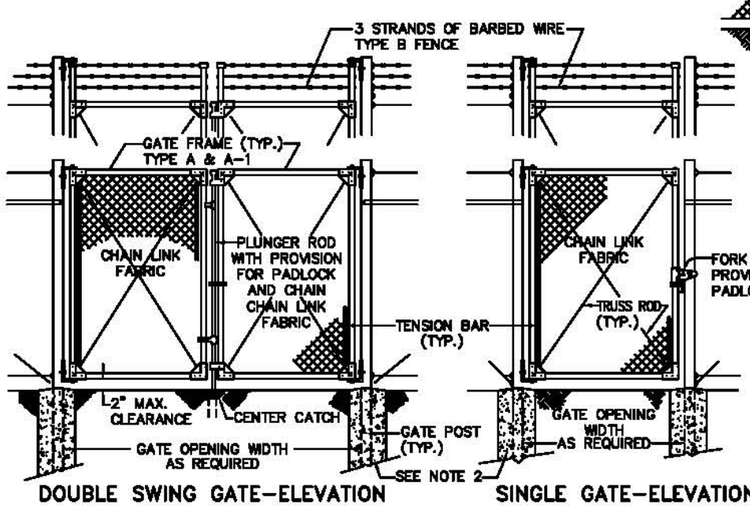








FENCE ON RETAINING WALL
DETAIL 8



SWINGING GATES
DETAIL 4

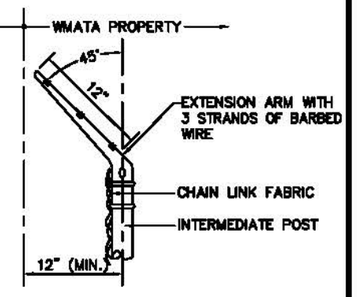
SLIDING GATE – PLAN
DETAIL 5

NOTES

1. GATE FABRIC SHALL BE KNUCKLED ON TOP SELVAGES
2. SIZE OF CONCRETE FOUNDATIONS AT GATES, AS RECOMMENDED BY THE GATE MANUFACTURER
3. FENCE, GATE POSTS, AND FRAMES SHALL BE GROUNDED IN ACCORDANCE WITH WMATA STANDARD SPECIFICATION No. 16060
4. WHEN 3-STRAND BARBED WIRE IS TO BE ADDED TO TOP OF FENCE, POST EXTENSIONS AND BARBED WIRE ARMS ON THE GATE SHALL BE VERTICAL
5. DETAILS OF THE SELECTED FENCE POSTS, GATES AND ACCESSORIES MAY NOT AGREE WITH THIS DRAWING BUT MUST CONFORM TO FS RR-F-191
6. POSTS, RAILS AND RODS TO BE INSTALLED INSIDE FENCE FABRIC

NOTE: FAN GUARD TO BE USED AS NEEDED TO PREVENT ACCESS TO METRO R.O.W. IN AREAS WHERE FENCE MEETS OTHER EXISTING STRUCTURES.

FAN GUARD – TYPE A, A-1 & B FENCE
DETAIL 6



TYPICAL LOCATION OF TYPE 'B' FENCE ALONG WMATA PROPERTY
DETAIL 9

DESIGNED	A.W. KEITH	1-6-70 DATE
DRAWN	NICKS	1-6-70 DATE
CHECKED		DATE
APPROVED	R.S. O'NEIL	3-20-70 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION
06/2007	ENGA	REVISED AND ISSUED BY THE AUTHORITY

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

SUBMITTED 10/2007 DATE

APPROVED 10/2007 DATE

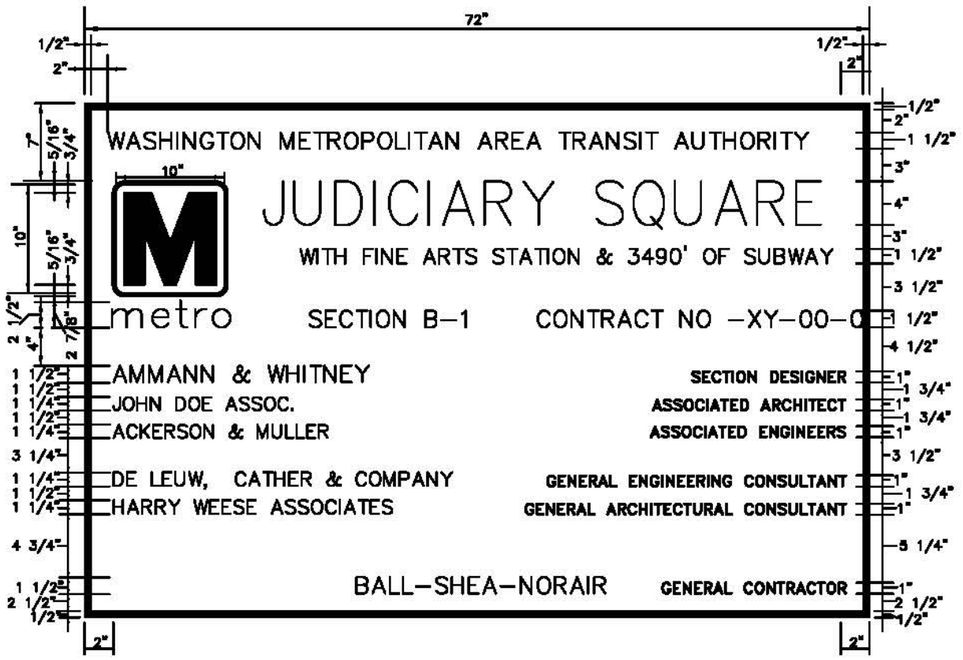
CIVIL STANDARD DRAWING
FENCE DETAILS

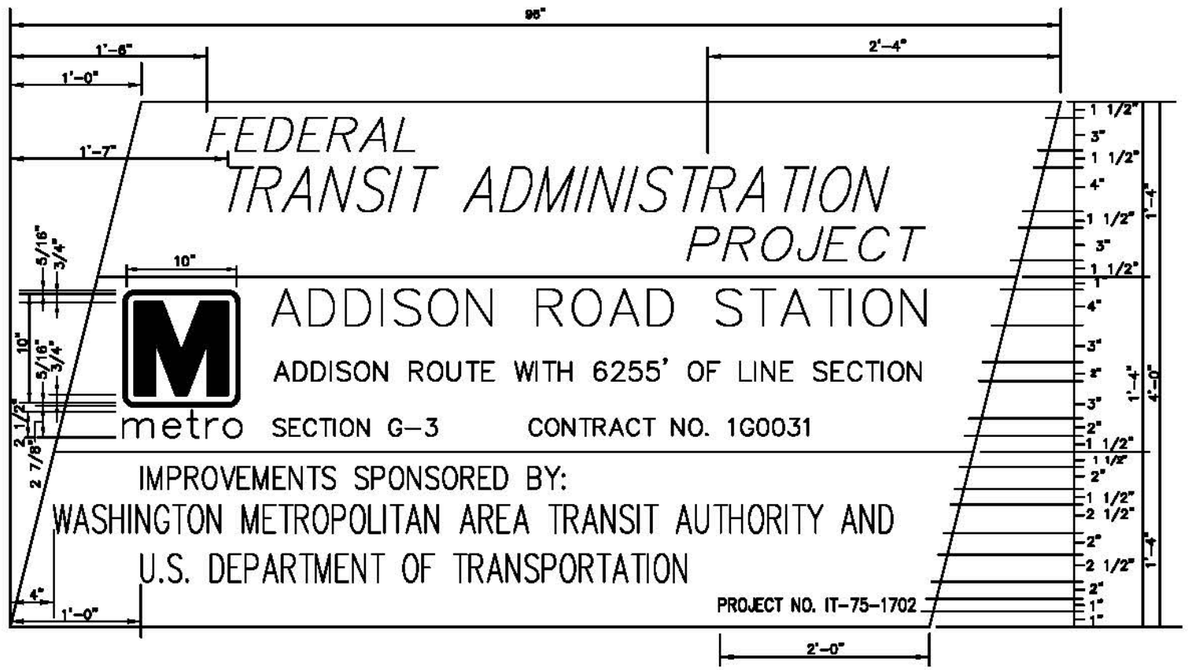
SCALE NOT TO SCALE

DRAWING NO. ST-C-034

NOTES:

1. THE GENERAL CONTRACTOR SHALL PROVIDE TWO PROJECT SIGNS OF THE TYPE SHOWN ON RIGHT AND SHALL ERECT THEM IN A LOCATION APPROVED BY THE AUTHORITY.
2. SIGN BACKING SHALL BE CUT FROM 3/4" STANDARD 4' X 8' EXTERIOR GRADE PLYWOOD SHEETS AND SUPPORTED ON 4" X 4" 10'-0" POSTS THAT ARE SET 3'-0" IN GROUND OR ON AN APPROVED PLACE ON THE CONSTRUCTION FENCE.
3. SIGNS SHALL BE BLACK ON WHITE WITH BLACK BORDER. ALL LETTERING SHALL BE HELVETICA OR HELVETICA MEDIUM STYLE. WORDING SHALL CONFORM IN GENERAL TO THE ARRANGEMENT SHOWN.
4. EXACT WORDING OF PROJECT DESCRIPTION, SECTION NUMBER, CONTRACT NUMBER, AND NAMES OF THE SECTION DESIGNER AND ASSOCIATED ARCHITECTURAL AND ENGINEERING FIRMS SHALL BE AS SHOWN BELOW:





NOTES:

1. THE GENERAL CONTRACTOR SHALL PROVIDE TWO PROJECT SIGNS OF THE TYPE SHOWN ABOVE AND SHALL ERECT THEM IN A LOCATION APPROVED BY THE AUTHORITY.
2. SIGN BACKING SHALL BE CUT FROM 3/4" STANDARD 4' X 8' EXTERIOR GRADE PLYWOOD SHEETS AND SUPPORTED ON 4" X 4" 10'-0" POSTS THAT ARE SET 3'-0" IN GROUND OR ON AN APPROVED PLACE ON CONSTRUCTION FENCE.
3. SIGNS SHALL BE TRI-COLOR AND WORDING SHALL CONFORM IN GENERAL TO THE ARRANGEMENT SHOWN AS FOLLOWS:
   A. TOP PANEL SHALL BE WHITE LETTERING ON RED BACKGROUND. ALL LETTERING SHALL BE FUTURA BOLD ITALIC.
   B. CENTER PANEL SHALL BE BLUE LETTERING ON WHITE BACKGROUND. ALL LETTERING SHALL BE FUTURA BOLD.
   C. BOTTOM PANEL SHALL BE WHITE LETTERING ON BLUE BACKGROUND. ALL LETTERING SHALL BE FUTURA DEMIBOLD.
4. NO INFORMATION SHALL BE INCLUDED ON THE PROJECT SIGNS EXCEPT THAT STIPULATED IN NOTE 5.
5. EXACT WORDING OF PROJECT DESCRIPTION, SECTION NUMBER, CONTRACT NUMBER AND USDOT PROJECT NUMBER SHALL BE AS SHOWN ON LEFT:

DESIGNED	E.R. SAUSMANN	7-6-95 DATE
DRAWN	SOUCY, EUGENE	7-6-95 DATE
CHECKED	A. BURNSIDE	7-10-95 DATE
APPROVED	K.CONGERO	10-95 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
09/2007	ENGA	REVISED AND ISSUED BY THE AUTHORITY

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

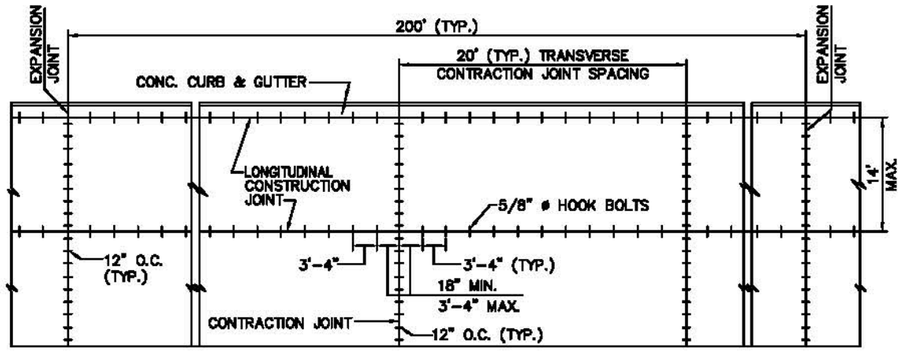
SUBMITTED -RPadgett 10/2007 DATE

APPROVED 10/2007 DATE

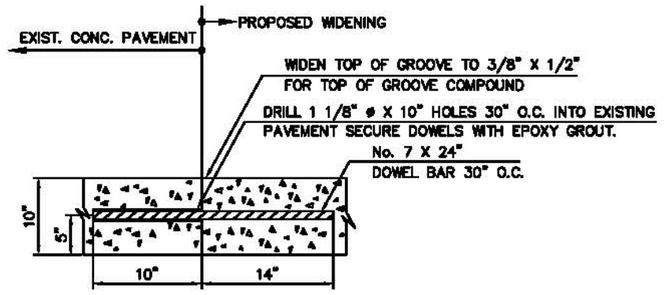
CIVIL STANDARD DRAWING
PROJECT IDENTIFICATION SIGN
FTA PROJECT IDENTIFICATION SIGN

SCALE: NOT TO SCALE

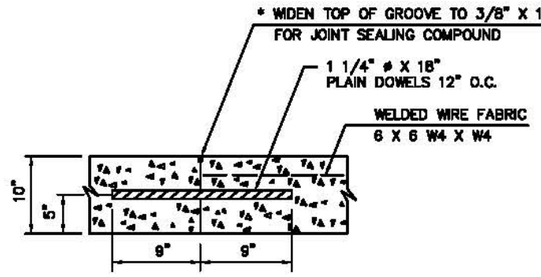
DRAWING NO.: ST-C-067



TYPICAL JOINT PLAN FOR LOAD TRANSFER DEVICES
DETAIL-1

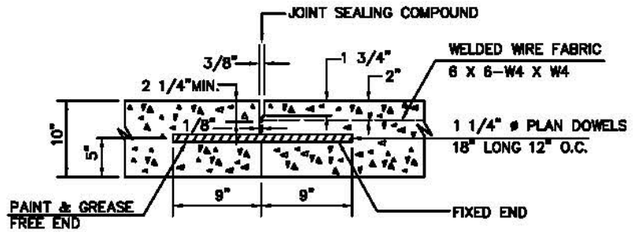


METHOD OF WIDENING CONC. PAVEMENT
DETAIL-4

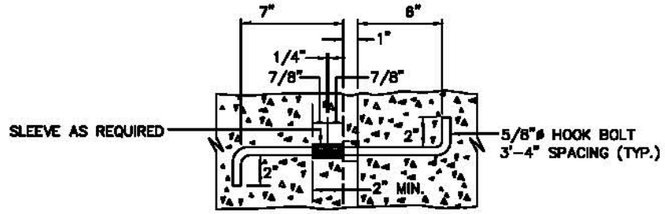


TRANSVERSE CONSTRUCTION (BUTT) JOINT
DETAIL-6

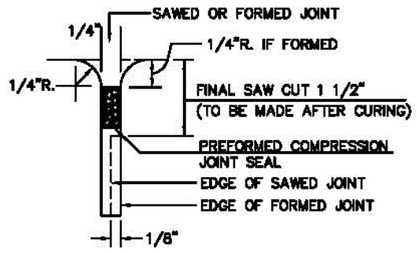
* IF JOINT COINCIDES WITH SPECIFIED JOINT, CONSTRUCT IN ACCORDANCE WITH DETAIL SHOWN.

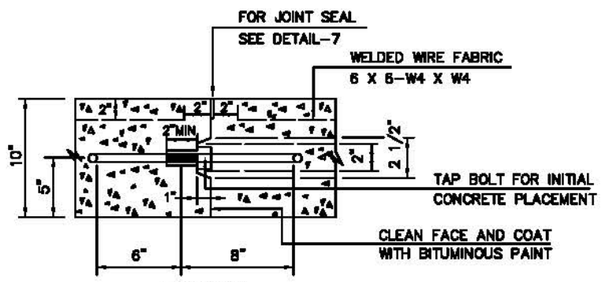


CONTRACTION JOINT
DETAIL-2



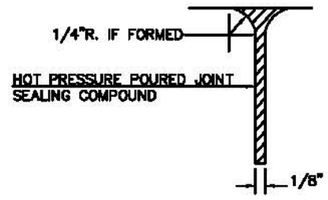
PLAN



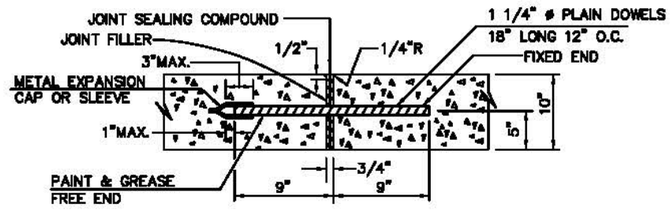


SECTION

TIE ROD ASSEMBLY & LONGITUDINAL CONSTRUCTION JOINT
DETAIL-5



JOINT SEAL
DETAIL-7

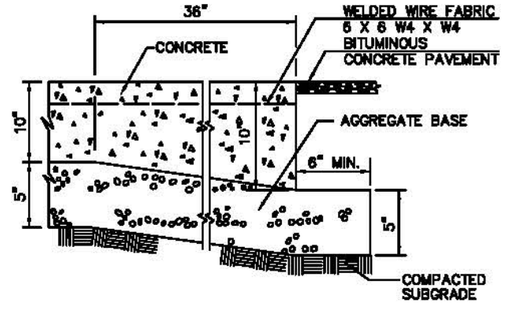


TRANSVERSE EXPANSION JOINT
DETAIL-3

NOTE:
A BOND BREAKING MATERIAL IS TO BE PROVIDED BETWEEN THE JOINT FILLER AND JOINT SEALING COMPOUND.

GENERAL NOTES

1. ALL LONGITUDINAL AND TRANSVERSE JOINTS SHALL HAVE LOAD TRANSFER DEVICES AS SHOWN.
2. PROVIDE BOND BREAKER COMPOUND AROUND FIXED STRUCTURES (MANHOLES, INLETS, ETC.) BEFORE PLACING THE CONCRETE PAVEMENT.



CONC. PAVEMENT THICKENED EDGE
DETAIL-8

DESIGNED	AA. RZW	4-81	DATE
DRAWN	AM. SUEND	4-81	DATE
CHECKED	REGN. PATRICK	4-81	DATE
APPROVED	E.Y. LIOU	4-81	DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION
06/2007	ENGA	REVISED AND ISSUED BY THE AUTHORITY

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

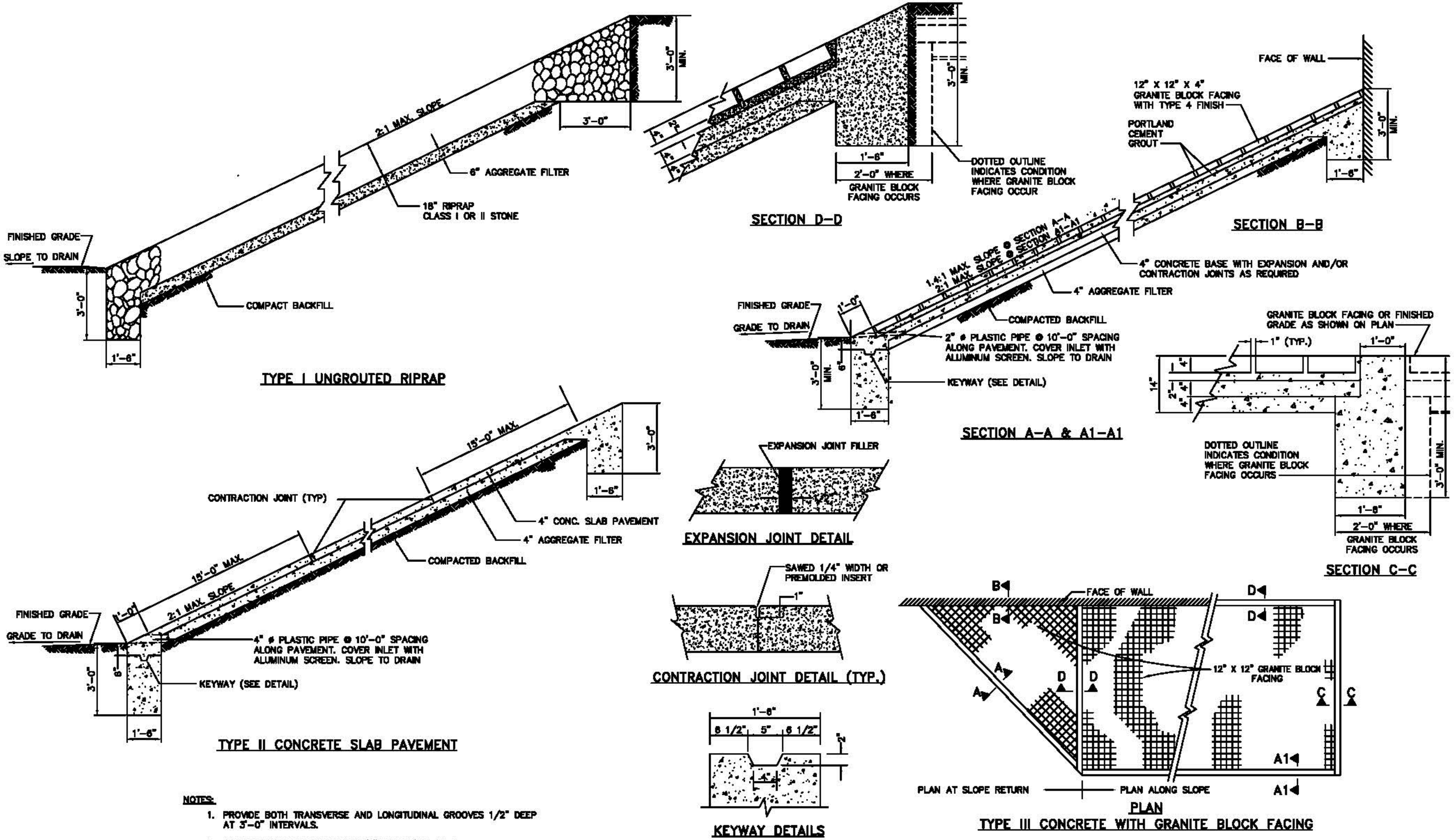
SUBMITTED R.R. Padgett 10/2007 DATE

APPROVED 10/2007 DATE

CIVIL STANDARD DRAWING
JOINT DETAILS FOR CONCRETE PAVEMENT

SCALE: NOT TO SCALE

DRAWING NO.: ST-C-072



NOTES:

1. PROVIDE BOTH TRANSVERSE AND LONGITUDINAL GROOVES 1/2" DEEP AT 3'-0" INTERVALS.
2. PROVIDE EXPANSION JOINTS (1/2") AT 45' C. TO C.

DESIGNED	[illegible]	[illegible] DATE
DRAWN	[illegible]	[illegible] DATE
CHECKED	[illegible]	[illegible] DATE
APPROVED	[illegible]	[illegible] DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
06/2007	ENGA	REVISED AND ISSUED BY THE AUTHORITY

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

SUBMITTED (signature) 10/2007 DATE — APPROVED (signature) 10/2007 DATE

CIVIL STANDARD DRAWING

SLOPE PROTECTION DETAILS

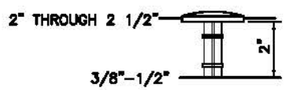
SCALE: NOT TO SCALE — DRAWING NO. ST-C-073

TYPE VI
2 INCH THROUGH 2 1/2 INCH CONCRETE MONUMENT

40) TYPE VI CONCRETE MONUMENTS MAY BE USED AS BOUNDARY, RIGHT-OF-WAY, PERMANENT SECONDARY CONTROL MONUMENTS AND TRACKWAY MONUMENTS. ALL TYPE VI CONCRETE MONUMENTS (EXCEPT TRACKWAY MONUMENTS) SHALL BE INSCRIBED AS SHOWN IN DETAILS 'C', 'D' OR 'E' CONTINGENT UPON APPLICATION. TRACKWAY MONUMENTS SHALL BE INSCRIBED WITH A WMATA APPROVED STATION (HZ) OR BENCHMARK (VT) NUMBER.

41) THE INSTALLATION OF TYPE VI CONCRETE MONUMENTS SHALL BE IN ACCORDANCE DETAIL 'T'. THE EPOXY CEMENT USED FOR INSTALLATION SHALL BE LIKE OR EQUIVALENT TO HILTI HIT HY 150.

42) CONTROL SURVEY POINT NUMBERING SHALL BE IN ACCORDANCE WITH PARAGRAPH 5).



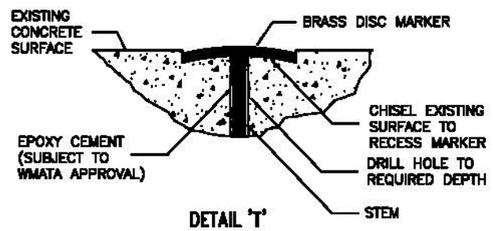
DETAIL 'S'
TYPE VI - TYPICAL
2" THROUGH 2 1/2" INCH
CONCRETE MONUMENT

TYPE VII
3 1/2 INCH CONCRETE MONUMENT

43) TYPE VII 3 1/2 INCH CONCRETE MONUMENTS MAY BE USED AS BOUNDARY, RIGHT-OF-WAY OR PERMANENT PRIMARY/SECONDARY CONTROL MONUMENTS. TYPE VII 3 1/2 INCH CONCRETE MONUMENTS SHALL BE INSCRIBED AS SHOWN IN DETAILS 'H', 'I' OR 'J' CONTINGENT UPON APPLICATION.

44) THE INSTALLATION OF TYPE VII 3 1/2 INCH CONCRETE MONUMENTS SHALL BE IN ACCORDANCE WITH DETAIL 'T'. THE EPOXY CEMENT USED FOR INSTALLATION SHALL BE LIKE OR EQUIVALENT TO HILTI HIT HY 150.

45) CONTROL SURVEY POINT NUMBERING SHALL BE IN ACCORDANCE WITH PARAGRAPH 5).

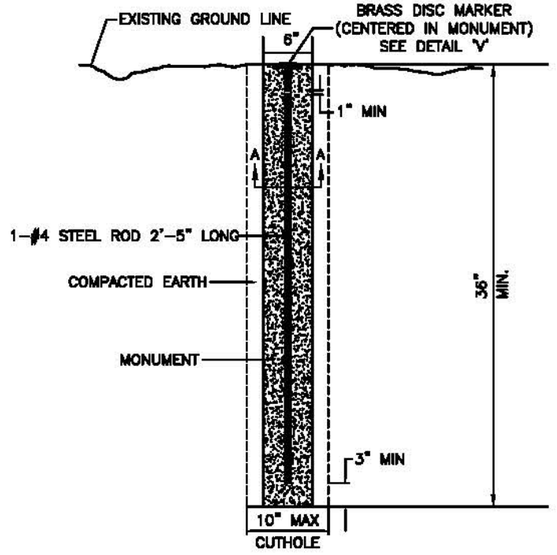


DETAIL 'T'
TYPE VI AND VII - TYPICAL
CONCRETE MONUMENT
INSTALLATION INSTRUCTIONS

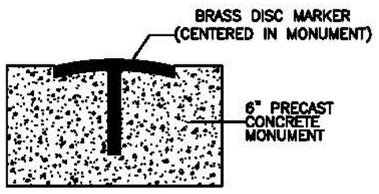
TYPE VIII
PRECAST CONCRETE MONUMENT

46) TYPE VIII PRECAST CONCRETE (3500 PSI) MONUMENTS MAY BE USED AS BOUNDARY, RIGHT-OF-WAY AND PERMANENT PRIMARY / SECONDARY CONTROL MONUMENTS. ALL TYPE VIII PRECAST CONCRETE MONUMENTS SHALL BE INSCRIBED AS SHOWN IN DETAILS 'H', 'I' OR 'J' CONTINGENT UPON APPLICATION.

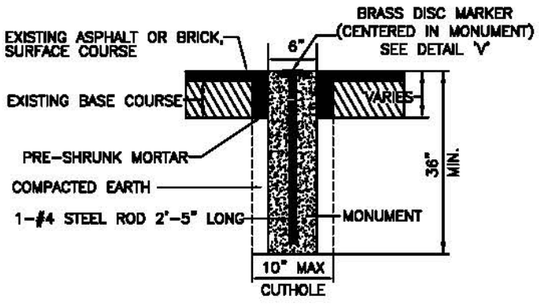
47) TYPE VIII PRECAST CONCRETE MONUMENTS SHALL BE INSTALLED WITH THE FOLLOWING REQUIREMENTS. MONUMENTS ARE IS TO BE SET A TO A MINIMUM DEPTH OF 36 INCHES INTO OVERBURDEN STABLE GROUND. THE TOP OF THE PRECAST CONCRETE MONUMENTS IS TO BE INSTALLED FLUSH WITH EXISTING GRADE. THE WIDTH OF THE RECEIVING HOLE IS NOT TO EXCEED 10 INCHES IN WIDTH AND THE SURROUNDING BACKFILL IS TO BE COMPACTED EARTH, AS SHOWN IN DETAILS 'U' AND 'W'. TYPE VIII CONCRETE MONUMENTS SHALL BE SUBJECT TO THE REQUIREMENTS CONTAINED IN DETAILS 'V' AND 'W'.



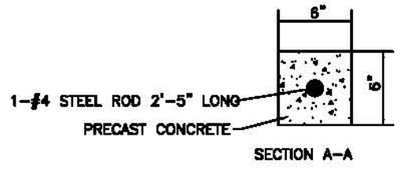
DETAIL 'U'
TYPE VIII - TYPICAL
PRECAST CONCRETE MONUMENT



DETAIL 'V'
BRASS DISC MARKER CAST IN
THE TOP OF MONUMENT



DETAIL 'W'
TYPE VIII - TYPICAL
PRECAST CONCRETE MONUMENT



SECTION A-A

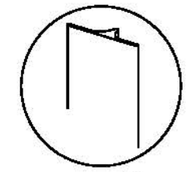
FLEXIBLE WITNESS POST

48) FLEXIBLE FIBERGLASS WITNESS POSTS SHALL BE USED AS DETERMINED BY WMATA TO CALL ATTENTION TO BOUNDARY MARKERS, RIGHT-OF-WAY AND PERMANENT CONTROL MONUMENTS. WITNESS POSTS SHALL BE CAPABLE OF BEING SUBJECTED TO REPEATED FLEXING AND ABUSE. STANDARD WITNESS POSTS SHALL BE CONSTRUCTED OF REINFORCED COMPOSITE MATERIAL WHICH PROVIDES MAXIMUM WEATHER RESISTANCE AGAINST ROT AND EMBRITTLEMENT FROM COLD OR UV EXPOSURE. STANDARD WITNESS POSTS, AS SHOWN IN DETAILS 'X' AND 'Y', SHALL BE WHITE AND MEASURE 6 FEET LONG AND 2 1/4 INCHES MINIMUM WIDTH. EACH WITNESS POST SHALL BE AFFIXED WITH A STANDARD DECAL HAVING BLACK LETTERS ON WHITE BACKGROUND AS SHOWN IN DETAIL 'X'.

49) FLEXIBLE FIBERGLASS WITNESS POSTS SHALL BE DRIVEN 18 TO 24 INCHES INTO THE GROUND FACING THE WITNESSED MONUMENT. THE OFFSET DISTANCE AND NAME OF THE MONUMENT SHALL BE INSCRIBED ON THE MONUMENT SIDE OF THE POST AT GROUND LEVEL.

50) THE INSTALLATION OF FLEXIBLE FIBERGLASS WITNESS POSTS SHALL BE IN ACCORDANCE WITH THE MANUFACTURES SPECIFICATIONS.

DETAIL 'X'
TYPICAL DECAL FLEXIBLE
FIBERGLASS WITNESS POST



DETAIL 'Y'
FLEXIBLE FIBERGLASS
WITNESS POST

DESIGNED	D. FALKEN	09-2007 DATE
DRAWN	N. BRIDGES	09-2007 DATE
CHECKED	K. WOODWARD	09-2007 DATE
APPROVED	D. FALKEN	09-2007 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
08/2007	ENGA	Revised and Issued by the Authority
09/2007	ENSS	Revised and Issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

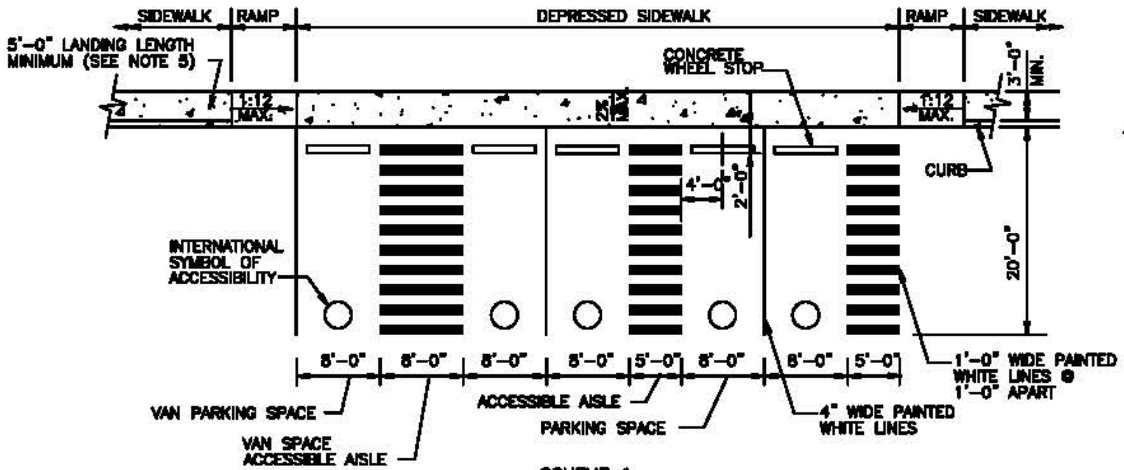
SUBMITTED 10/2007 DATE

APPROVED 10/2007 DATE

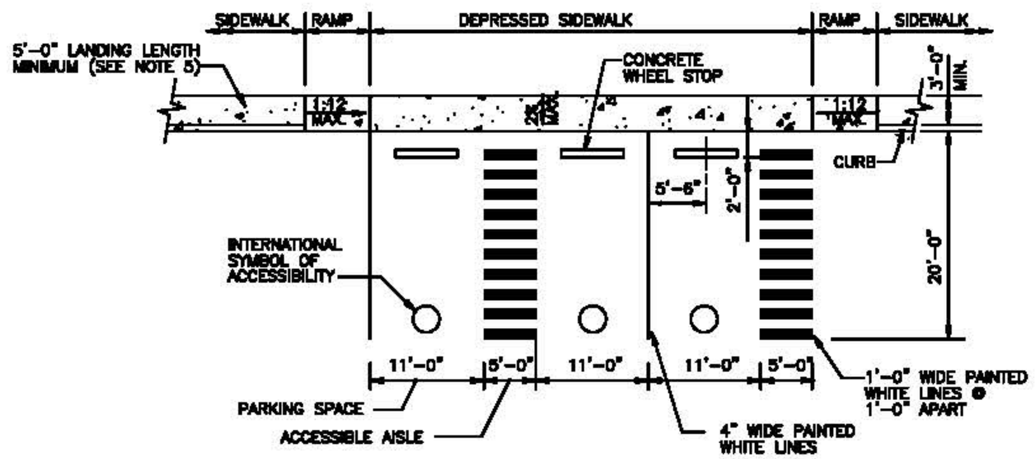
CIVIL STANDARD DRAWING
SURVEY MONUMENTS
SHEET 3 OF 3

SCALE: NOT TO SCALE

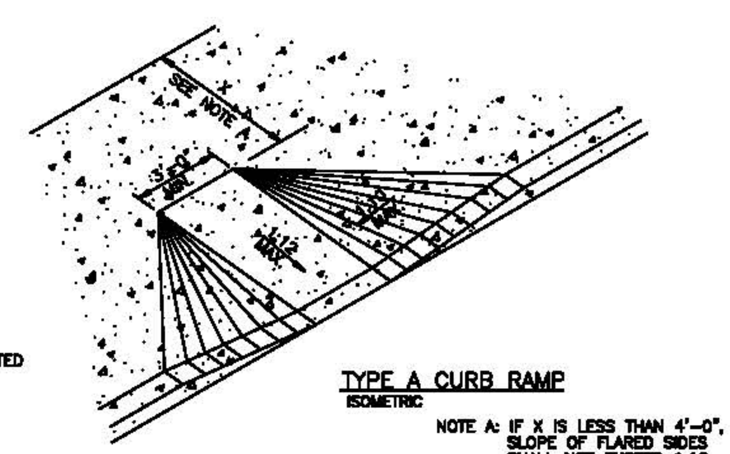
DRAWING NO.: ST-C-074



SCHEME 1
ACCESSIBLE PARKING SPACE LAYOUT
NOT TO SCALE

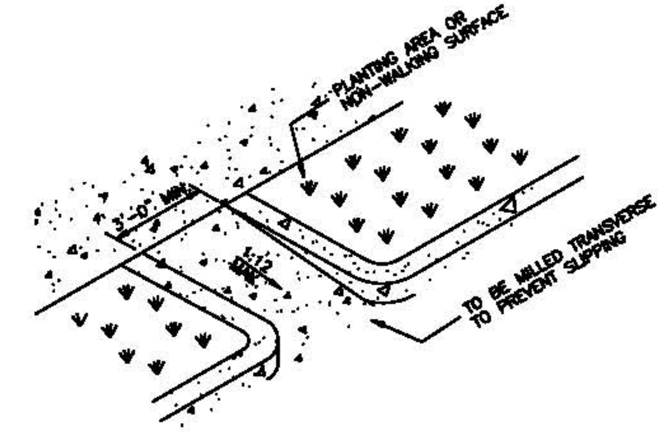


SCHEME 2 (ALTERNATIVE)
UNIVERSAL PARKING SPACE DESIGN
NOT TO SCALE

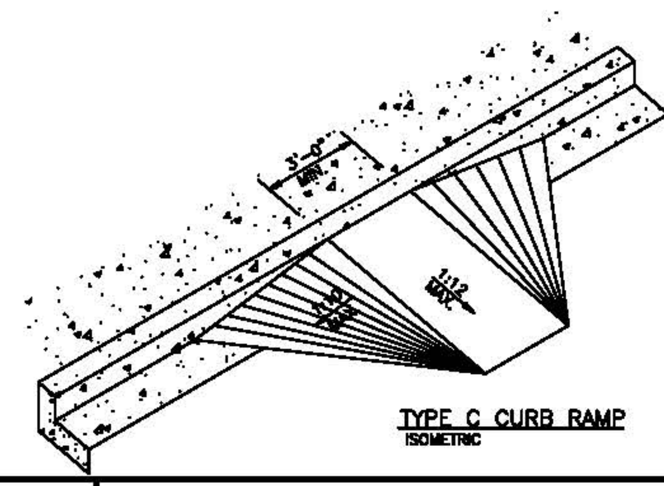


TYPE A CURB RAMP
ISOMETRIC

NOTE A: IF X IS LESS THAN 4'-0", SLOPE OF FLARED SIDES SHALL NOT EXCEED 1:12.



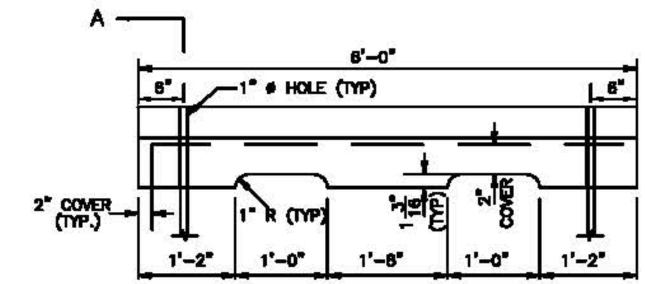
TYPE B CURB RAMP
ISOMETRIC



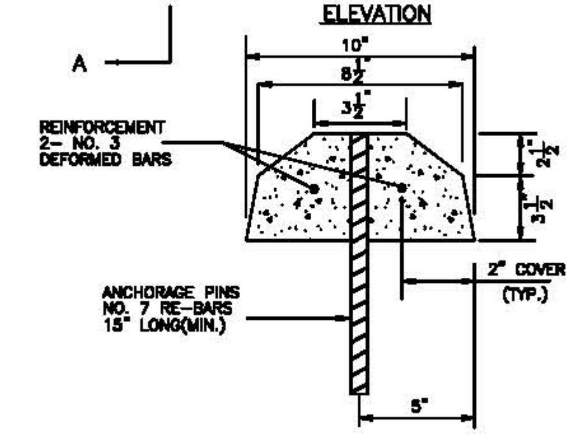
TYPE C CURB RAMP
ISOMETRIC

NOTES:

1. ACCESSIBLE ELEMENTS AND SPACES SHALL COMPLY WITH THE GUIDELINES OF AMERICANS WITH DISABILITIES ACT (ADA).
2. NEW EXTERIOR PARKING FACILITIES SHALL HAVE AT LEAST ONE ACCESSIBLE ROUTE FROM PUBLIC TRANSPORTATION STOPS, ACCESSIBLE PARKING SPACES, PASSENGER LOADING ZONES, AND PUBLIC STREETS OR SIDEWALKS, TO AN ACCESSIBLE STRUCTURE ENTRANCE.
3. THE ACCESSIBLE ROUTE SHALL, TO THE MAXIMUM EXTENT FEASIBLE, COINCIDE WITH THE ROUTE FOR THE GENERAL PUBLIC. THE MINIMUM CLEAR WIDTH SHALL BE 3'-0", AND THE SURFACE STABLE, FIRM AND SLIP-RESISTANT, WITH CROSS SLOPE NO GREATER THAN 1:50.
4. ANY PART OF AN ACCESSIBLE ROUTE WITH A SLOPE GREATER THAN 1:20 SHALL BE CONSIDERED A RAMP, AND THE MAXIMUM SLOPE IN NEW CONSTRUCTION SHALL BE 1:12. THE MAXIMUM RISE FOR ANY RUN SHALL BE 30 INCHES.
5. RAMPS SHALL HAVE LEVEL LANDINGS AT BOTTOM AND TOP OF EACH RAMP RUN. THE LANDINGS SHALL BE AT LEAST AS WIDE AS THE RAMP LEADING TO IT, AND THE LENGTH SHALL BE A MINIMUM OF 5'-0" CLEAR.
6. IF RAMPS CHANGE DIRECTION AT LANDINGS, THE MINIMUM LANDING SIZE SHALL BE 60 INCHES BY 60 INCHES.
7. IF AN ACCESSIBLE ROUTE HAS LESS THAN 60 INCHES CLEAR WIDTH, PROVIDE AT LEAST 60 INCHES BY 60 INCHES PASSING SPACES AT INTERVALS NOT TO EXCEED 200 FEET.
8. CURB RAMPS SHALL BE PROVIDED WHEREVER AN ACCESSIBLE ROUTE CROSSES A CURB.
9. ONE IN EVERY EIGHT ACCESSIBLE SPACES, BUT NOT LESS THAN ONE, SHALL BE SERVED BY AN ACCESS AISLE, 8'-0" WIDE MINIMUM AND SHALL BE DESIGNATED "VAN ACCESSIBLE".
10. PARKING ACCESS AISLES SHALL BE PART OF AN ACCESSIBLE ROUTE. TWO ACCESSIBLE PARKING SPACES MAY SHARE A COMMON ACCESS AISLE.
11. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 IN ALL DIRECTIONS.



ELEVATION

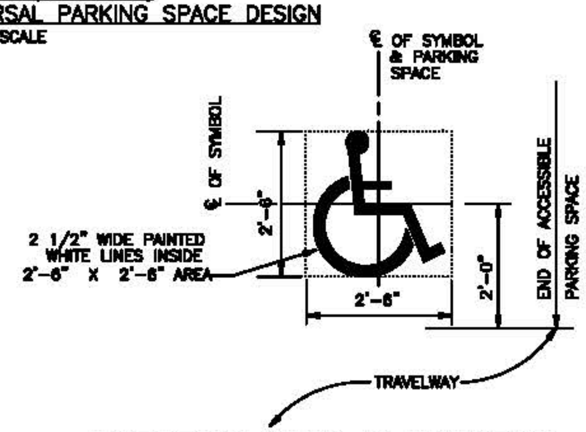


SECTION A-A

CONCRETE WHEEL STOP

ACCESSIBLE PARKING REQUIREMENTS

TOTAL PARKING SPACES IN LOT	MINIMUM NUMBER OF ACCESSIBLE SPACES
1 TO 25	1
26 TO 50	2
51 TO 75	3
76 TO 100	4
101 TO 150	5
151 TO 200	6
201 TO 300	7
301 TO 400	8
401 TO 500	9
501 TO 1000	2 PERCENT OF TOTAL
1001 AND OVER	20 PLUS 1 FOR EACH 100 OVER 1000



INTERNATIONAL SYMBOL OF ACCESSIBILITY

DESIGNED	AA ...	8-06	DATE
DRAWN	R. ROBERTS	8-06	DATE
CHECKED	F. BLACHLY	8-06	DATE
APPROVED	K. GANBERG	10-06	DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
08/2007	ENGA	REVISED AND ISSUED BY THE AUTHORITY

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF ENGINEERING SUPPORT SERVICES

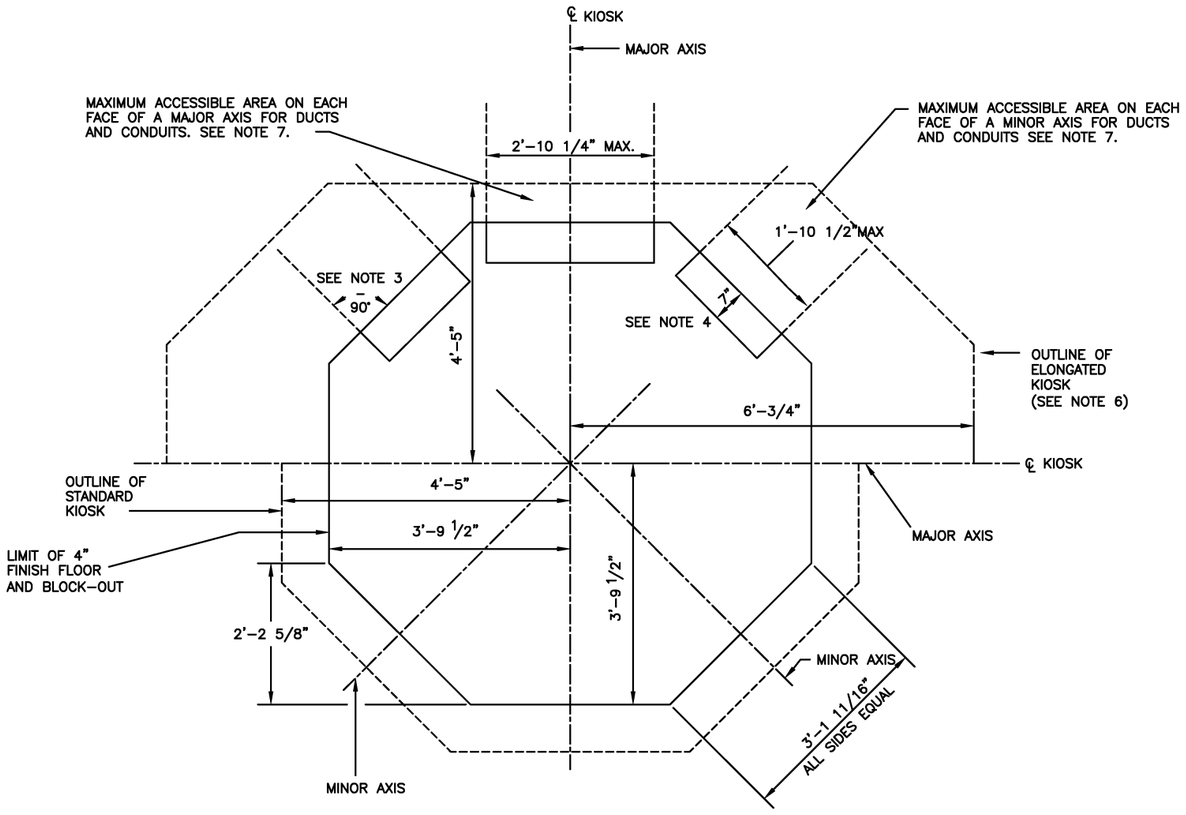
SUBMITTED [signature] 10/2007 DATE

APPROVED [signature] 10/2007 DATE

CIVIL STANDARD DRAWING
ADA PARKING DETAILS

SCALE: NOT TO SCALE

DRAWING NO.: ST-C-ADA-001

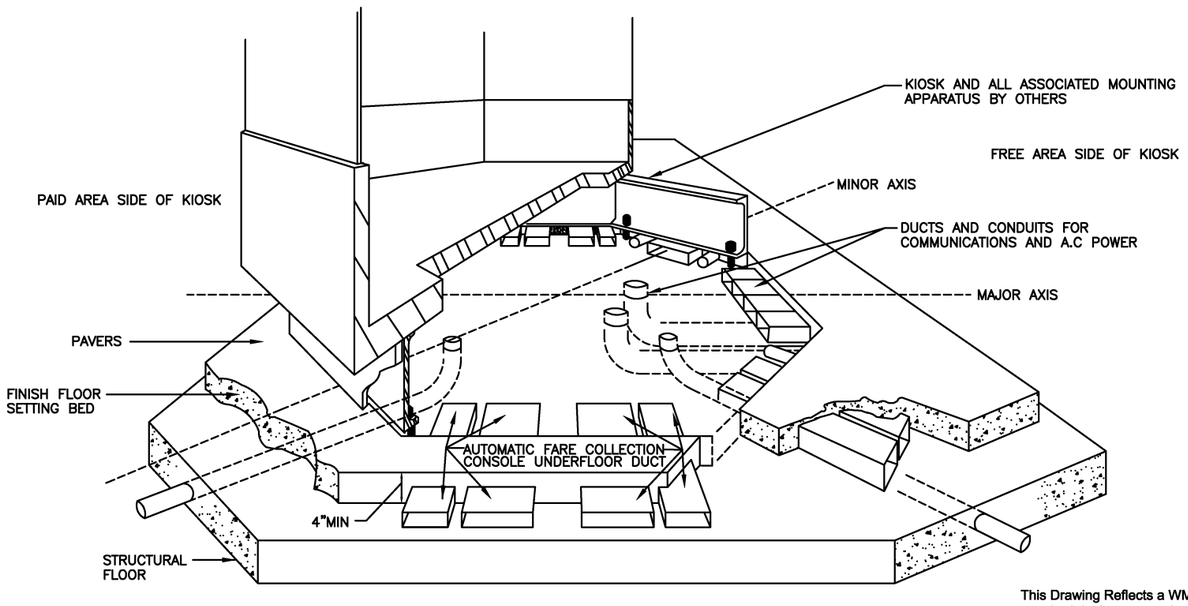


TEMPLATE SHOWING TYPICAL DIMENSIONS OF OCTAGONAL BLOCKED–OUT AREA TO BE PROVIDED UNDER KIOSK

(THESE DIMENSIONS MUST BE VERIFIED OR ADJUSTED DURING FINAL DESIGN)

NOTES:

1. TYPICALLY THE ALIGNMENT OF ONE MAJOR AXIS OF THE KIOSK BLOCK–OUT IS PARALLEL TO, AND OTHER PERPENDICULAR TO, THE MEZZANINE LENGTH.
2. SINGLE OR GROUPS OF DUCTS OR CONDUITS TO BE CENTERED ON AXIS LINES.
3. DUCTS TO ENTER KIOSK BLOCK–OUT AT A 90° ANGLE TO THE LIMIT OF THE 4" FINISH FLOOR.
4. DUCTS AND CONDUITS SHOULD EXTEND 7 INCHES BEYOND THE LIMIT OF THE FINISH FLOOR.
5. ALL DUCTS AND CONDUITS TERMINATING UNDER THE KIOSK ARE TO HAVE AN END BUSHING TO PREVENT EXPOSURE OF SHARP EDGES.
6. ELONGATED KIOSKS ARE REQUIRED AT STATIONS WHERE MORE THAN NINE SECURITY CCTV MONITORS ARE PROVIDED.
7. CONDUITS SHOULD BE EMBEDDED IN OR ROUTED UNDER THE STRUCTURAL FLOOR.
8. A MINIMUM OF 1/2" SHOULD BE PROVIDED BETWEEN ADJACENT DUCTS AND CONDUITS.
9. FOR TERMINATION OF CONDUITS, SEE DETAIL 'A' ON DRAWING DD–E–85.



TYPICAL DUCT AND CONDUIT INSTALLATION UNDER KIOSK

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	B. WALKER	1–73 DATE
DRAWN	E. HARVEY	2–73 DATE
CHECKED	L. HIMMEL	3–73 DATE
APPROVED	R. S. ONEAL	3–74 DATE
UPDATED	R. GANERIWAL	9–98 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION
ST–E–085	MEZZANINE RACEWAY LAYOUT

REVISIONS

DATE	BY	DESCRIPTION
08/2001	SYSP	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

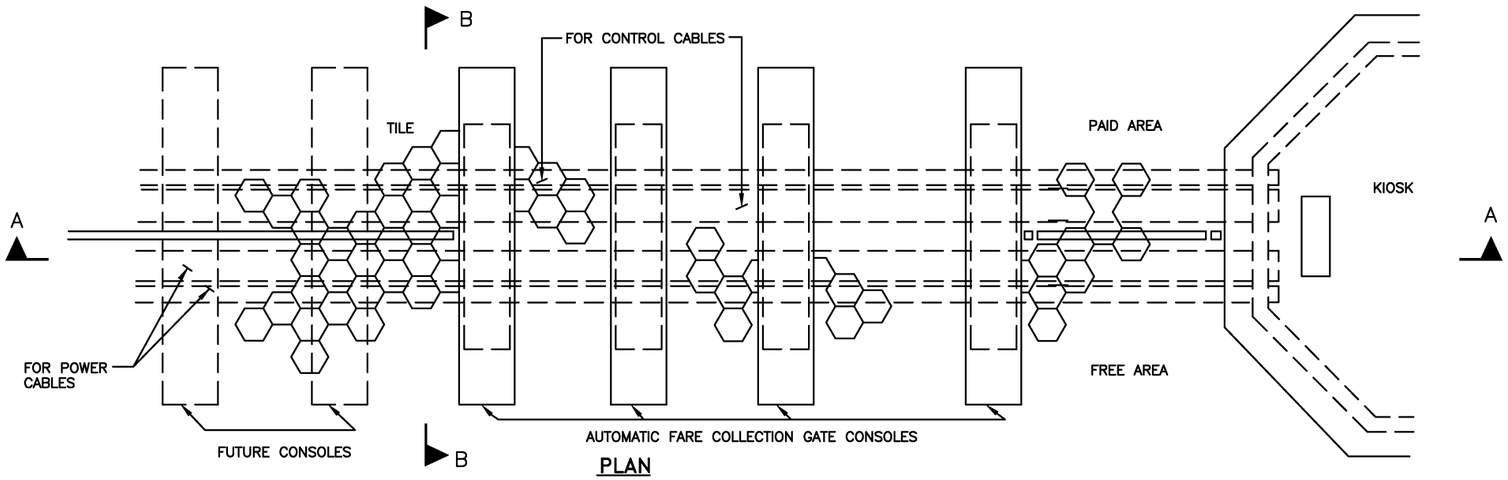
DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

SUBMITTED _____ DATE

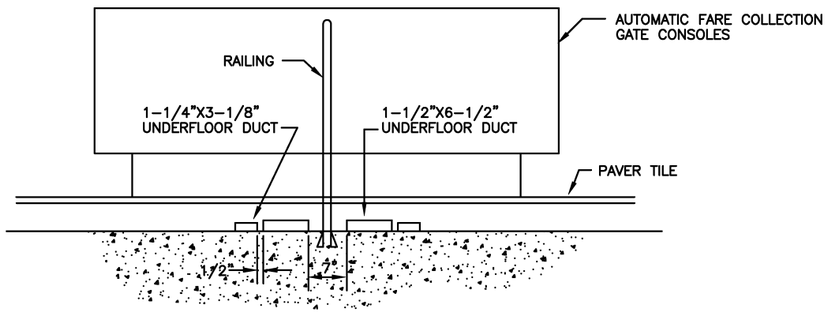
APPROVED _____ DIRECTOR May 3, 2001 DATE

COMMUNICATIONS DESIGN DRAWINGS
CONDUIT AND DUCT ARRANGEMENT IN FINISH FLOOR ENTERING BLOCKED–OUT AREA UNDER KIOSK

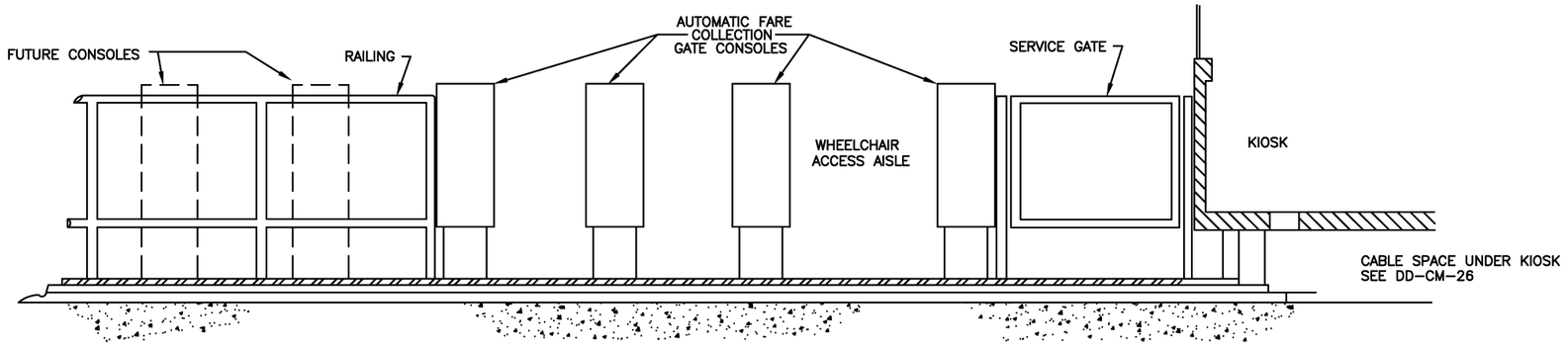
SCALE	DRAWING NO.
NO SCALE	ST–CM–026



PLAN



SECTION B–B



SECTION A–A

NOTES

1. THE DUCTS ON THE PAID AREA SIDE OF THE KIOSK ARE FOR CONTROL CABLES AND THE DUCTS ON THE FREE AREA SIDE OF THE KIOSK ARE FOR POWER CABLES.

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	B. WALKER	1–73 DATE
DRAWN	E. HARVEY	2–73 DATE
CHECKED	L. HIMMEL	3–73 DATE
APPROVED	R. S. ONEAL	3–74 DATE
UPDATED	R. GANERIWAL	9–98 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
08/2001	SYSP	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

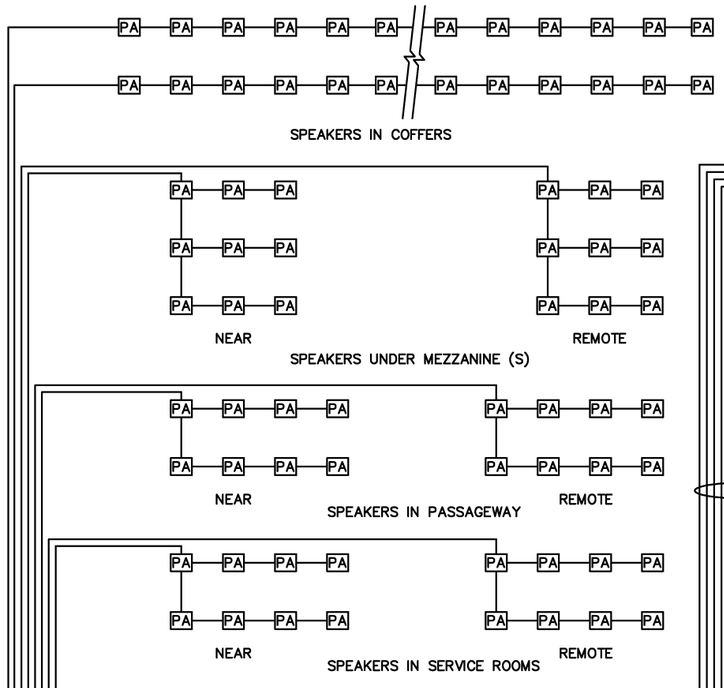
SUBMITTED _____ DATE

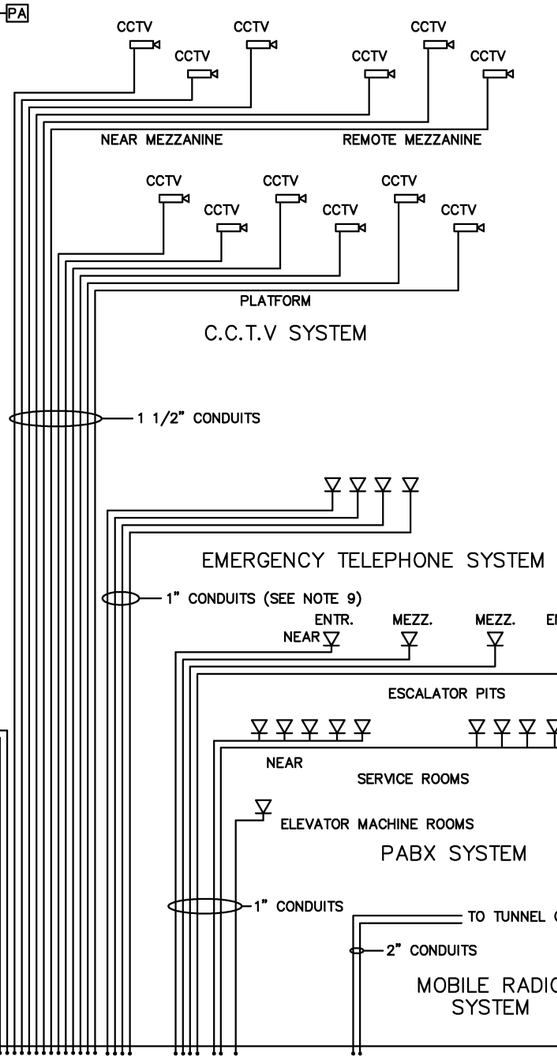
APPROVED _____ DIRECTOR May 3, 2001 DATE

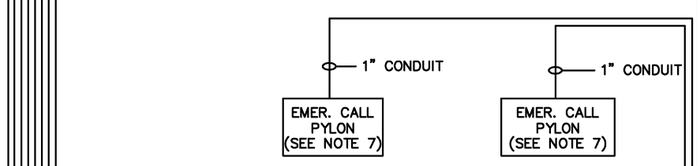
COMMUNICATIONS DESIGN DRAWING
USE OF UNDERFLOOR DUCT UNDER FARE COLLECTION CONSOLES

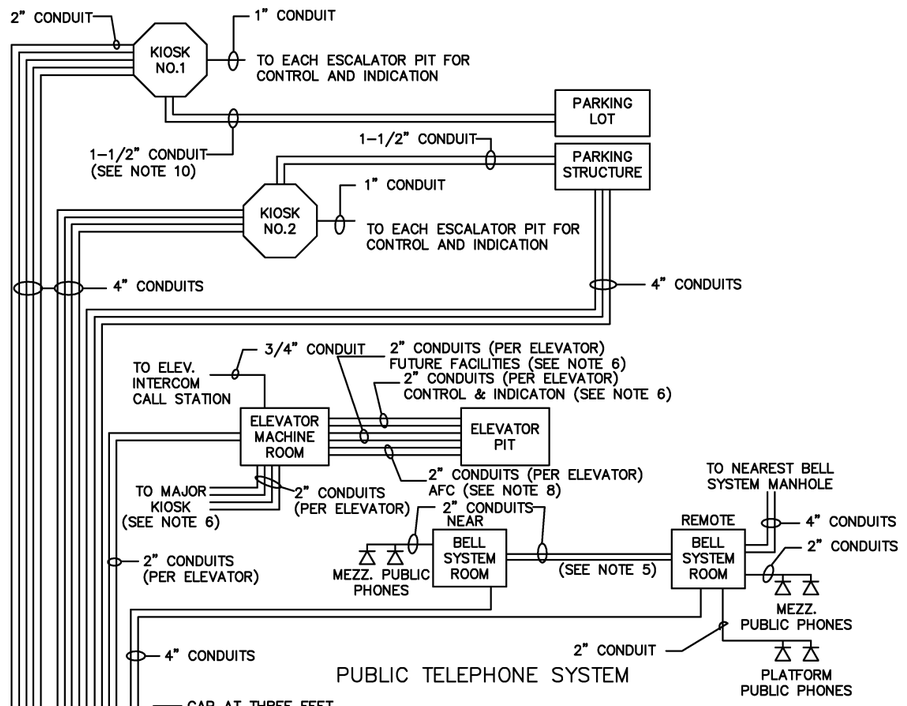
SCALE: NONE

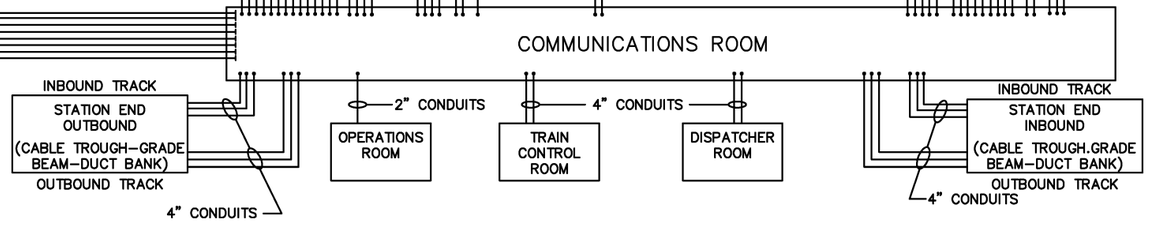
DRAWING NO.: ST–CM–027











NOTES

1. THE END OF THE STATION WHERE THE COMMUNICATIONS ROOM IS LOCATED SHALL BE DESIGNATED AS "NEAR", AND THE END OF THE STATION OPPOSITE OF WHERE THE COMMUNICATIONS ROOM IS LOCATED SHALL BE DESIGNATED "REMOTE".
2. CONDUIT QUANTITIES AND SIZES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. EXACT QUANTITIES AND SIZES TO BE COORDINATED WITH THE AUTHORITY
3. DEPENDING UPON STATION CHARACTERISTICS, ADDITIONAL CONDUITS MAY BE REQUIRED FOR FACILITIES NOT SHOWN ON THIS DRAWING.
4. SPECIFIC LOCATIONS, QUANTITIES AND TYPES OF APPARATUS ARE TO BE DETERMINED DURING FINAL DESIGN. A SINGLE SYMBOL MAY DENOTE ONE OR MORE UNITS OF APPARATUS.
5. BELL SYSTEM CONDUIT RUNS SHALL BE CONTINUOUS THRU AIR HANDLING SPACES. ALL BELL SYSTEM CONDUITS ARE TO BE PREFIXED "B".
6. ELEVATOR CONTROL CONDUITS MUST BE CONTINUOUS RUNS.
7. PROVIDE CONDUIT TO A PYLON 200 FEET FROM INBOUND AND OUTBOUND END OF EACH PLATFORM. THE EXACT TERMINATION POINT AND METHOD OF TERMINATING CONDUIT WILL BE COORDINATED WITH THE AUTHORITY.
8. PROVIDE ONLY WHERE THE NORMAL FARE COLLECTION SYSTEM IS CIRCUMVENTED.
9. EMERGENCY TELEPHONE CONDUITS ROUTED TO EMERGENCY TRIP STATION BOXES AT PLATFORM ENDS.
10. PROVIDE CONDUITS FROM KIOSK TO PARKING CONTROL EQUIPMENT ARRAY NEAREST TO STATION ENTRANCE.

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	B. WALKER	1-73
DRAWN	E. HARVEY	2-73
CHECKED	L. HIMMEL	3-73
APPROVED	R. S. ONEAL	3-74
UPDATED	R. GANESWAL	9-98

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION
ST-CM-061	COMM. CONDUIT RISER-REMOTE FACILITIES

REVISIONS		
DATE	BY	DESCRIPTION
08/2001	SYSP	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

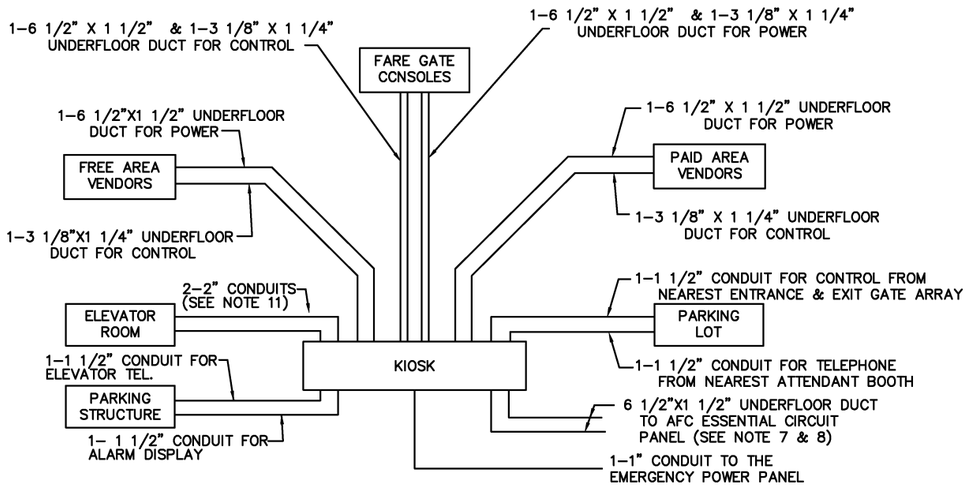
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

COMMUNICATIONS DESIGN DRAWING
TYPICAL COMMUNICATIONS CONDUIT RISER DIAGRAM FOR PASSENGER STATIONS

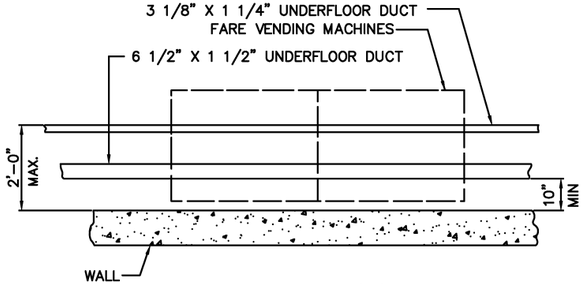
SCALE: NONE

DRAWING NO.: ST-CM-030



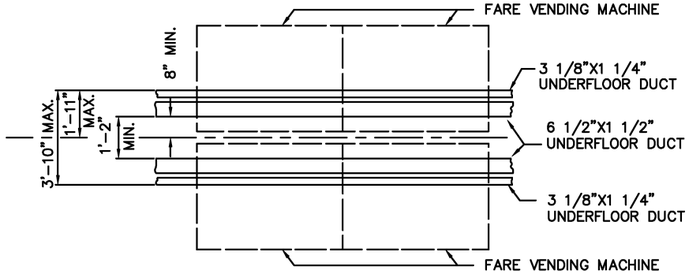
RACEWAY RISER DIAGRAM

SEE PLAN VIEW 'A'



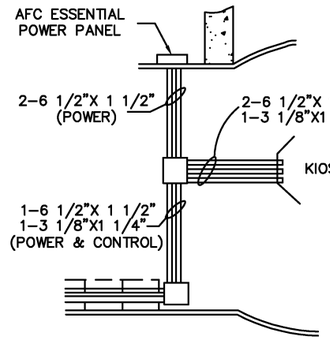
DETAIL 'A'

TYPICAL LOCATION OF UNDERFLOOR DUCTS UNDER VENDING MACHINES



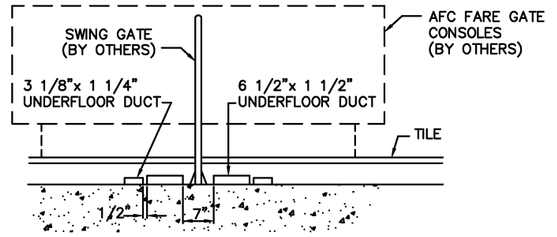
DETAIL 'B'

TYPICAL LOCATION OF UNDERFLOOR DUCTS UNDER BACK TO BACK VENDING MACHINES

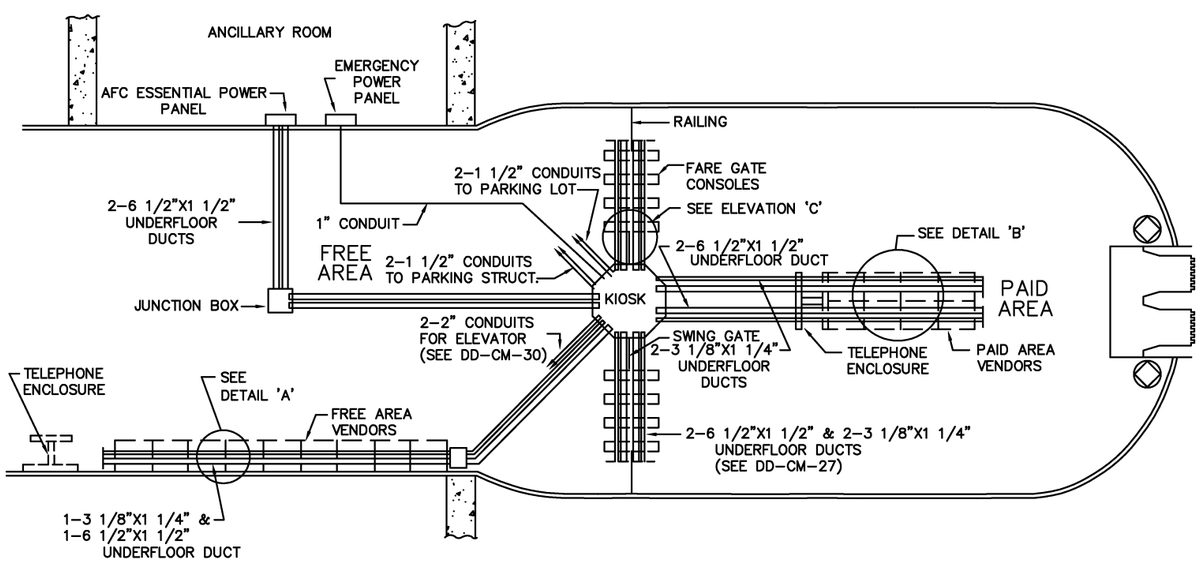


DETAIL 'D'

ALTERNATE CONFIGURATION OF UNDERFLOOR DUCT FROM THE AFC ESSENTIAL POWER PANEL



ELEVATION 'C'



PLAN 'A'

TYPICAL MEZZANINE LAYOUT

NOTES

1. THIS DRAWING SHOWS PROVISIONS FOR AUTOMATIC FARE COLLECTION ONLY, AND DOES NOT REPRESENT ALL RACEWAY REQUIREMENTS FOR A STATION MEZZANINE.
2. ALL UNDERFLOOR DUCTS TO GATE CONSOLES, FREE AREA VENDORS MACHINES, AND PAID AREA VENDING MACHINES MUST BE RUN COMPLETELY UNDER THE EQUIPMENT.
3. UNDERFLOOR DUCTS SHALL NOT HAVE INSERTS. PROVIDE INDICATING MARKERS EVERY THREE FEET ON UNDERFLOOR DUCTS FOR VENDING MACHINES AND FARE GATE CONSOLES.
4. JUNCTION BOXES ARE NOT TO BE LOCATED UNDER VENDING MACHINES.
5. THERE MUST BE A 6–1/2"X1–1/2" UNDERFLOOR DUCT AND A 3–1/8"X1–1/4" UNDERFLOOR DUCT UNDER EACH VENDING MACHINE.
6. ALL CONDUITS OR UNDERFLOOR DUCTS MUST HAVE NYLON PULL LINES INSTALLED.
7. ALL AFC POWER WIRING FROM POWER DISTRIBUTION PANELS WILL BE PROVIDED BY THE AFC STAGE CONTRACTOR.
8. UNDERFLOOR DUCT FOR POWER FROM THE AFC ESSENTIAL POWER PANEL CAN BE ROUTED DIRECTLY TO FARE VENDING MACHINES WHEN CONVENIENT TO ELIMINATE EXTRA UNDERFLOOR DUCTS. SEE DETAIL "D".
9. COORDINATE INSTALLATION OF UNDERFLOOR DUCTS WITH AFC STAGE CONTRACTOR.
10. JUNCTION BOXES WILL BE REQUIRED AT BENDS IN UNDERFLOOR DUCTS. THE LOCATION OF THESE JUNCTION BOXES MUST BE COORDINATED WITH THE AUTHORITY. ACCESS COVERS MUST BE COORDINATED WITH FINISH FLOOR.
11. PROVIDE ONLY WHERE THE NORMAL FARE COLLECTION SYSTEM IS CIRCUMVENTED BY THE ELEVATOR. (SEE DD–CM–30)

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	E. LEE	9–75 DATE
DRAWN	P. BRANDENBERG	9–75 DATE
CHECKED	L. HIMMEL	4–76 DATE
APPROVED	R. O'NEIL	4–76 DATE
UPDATED	R. GANERIWAL	6–98 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION
08/2001	SYSP	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

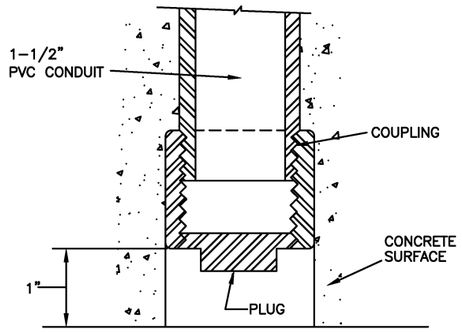
DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

COMMUNICATIONS DESIGN DRAWING
AUTOMATIC FARE COLLECTION
RACEWAY RISER DIAGRAM

SCALE	DRAWING NO.
NONE	ST–CM–034

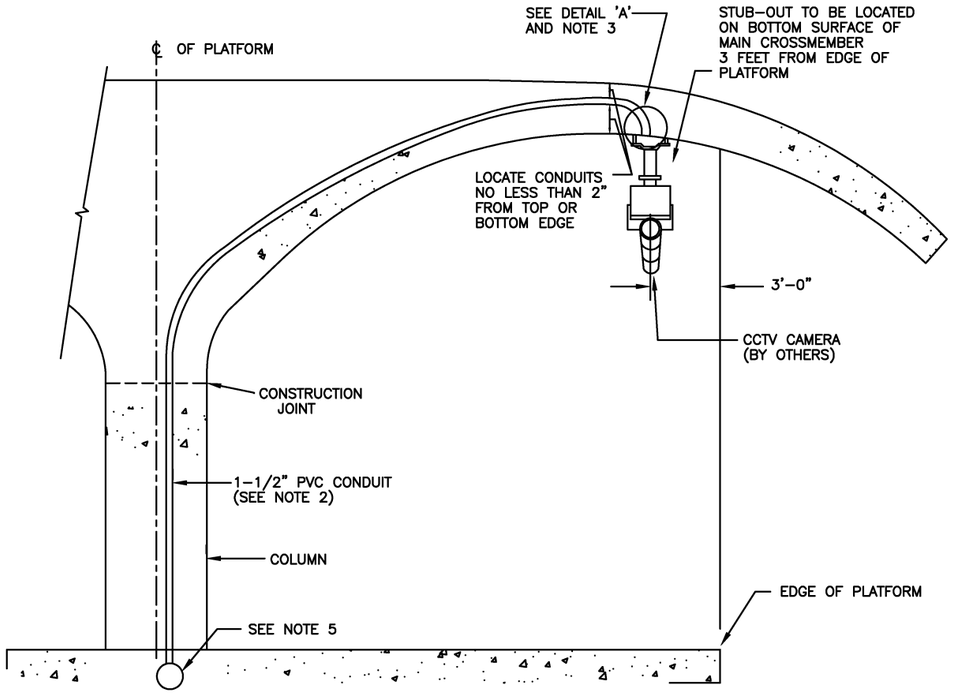


DETAIL 'A'

TYPICAL CCTV CONDUIT TERMINATION
NOT TO SCALE

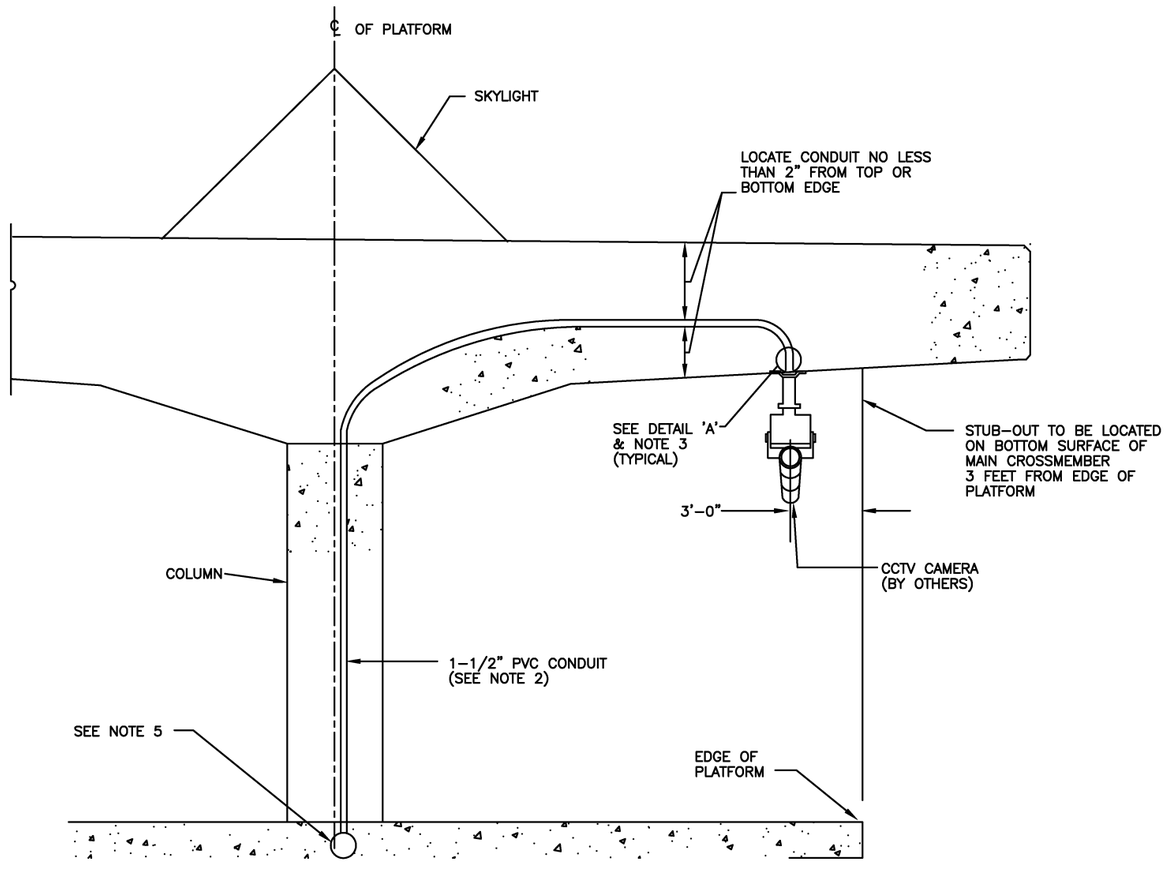
GENERAL NOTES

1. NO CCTV CONDUIT SHALL BE EXPOSED. ALL RUNS SHALL BE EMBEDDED IN THE STRUCTURE.
2. EACH CCTV CONDUIT SHALL BE INDIVIDUALLY RUN TO THE COMMUNICATIONS ROOM.
3. DETAIL 'A' IS TYPICAL FOR ALL CCTV CONDUIT STUB–OUTS IN PASSENGER STATIONS.
4. ALL CCTV STUB–OUT LOCATIONS SHALL BE LOCATED AT A MINIMUM CLEARANCE OF 9'–6" FROM THE FINISH FLOOR BUT NOT MORE THAN 24' ABOVE PLATFORM.
5. TERMINATE CONDUIT IN JUNCTION BOX UNDER PLATFORM NOT MORE THAN 4' FROM COLUMN.



SECTION GULL–WING CANOPY

CCTV CONDUIT INSTALLATION – MAIN CROSSBEAM



SECTION FLAT–ROOF CANOPY

CCTV CONDUIT INSTALLATION – MAIN CROSSBEAM

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	HARVEY	7–75 DATE
DRAWN	BRANDENBERG	7–75 DATE
CHECKED	L. HIMMEL	17/10/7 DATE
APPROVED	T.HANSON	17/10/7 DATE
UPDATED	R. GANERIWAL	9–98 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION
DD–A–11	CANOPY GEOMETRY

REVISIONS

DATE	BY	DESCRIPTION
08/2001	SYSP	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

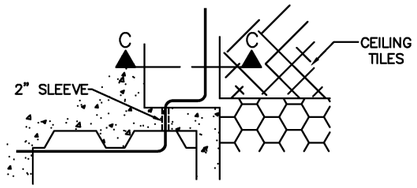
SUBMITTED _____ DATE

APPROVED DIRECTOR _____ May 3, 2001 DATE

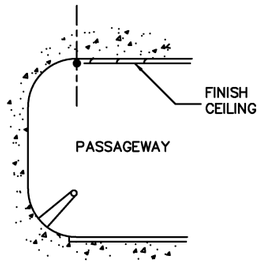
COMMUNICATIONS DESIGN DRAWING
TYPICAL CCTV CONDUIT INSTALLATIONS IN ABOVE GROUND STATIONS

SCALE: NOT TO SCALE

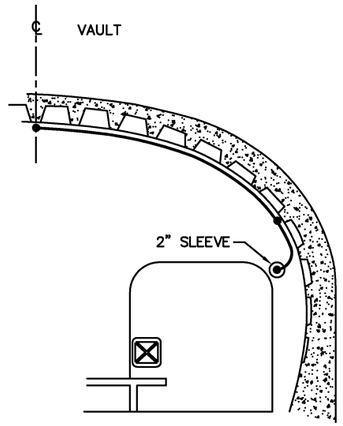
DRAWING NO. ST–CM–036



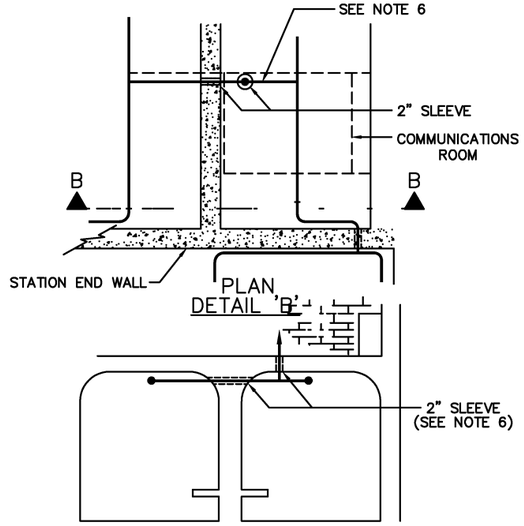
PLAN
DETAIL 'C'



SECTION C–C
DETAIL 'C'



SECTION A–A

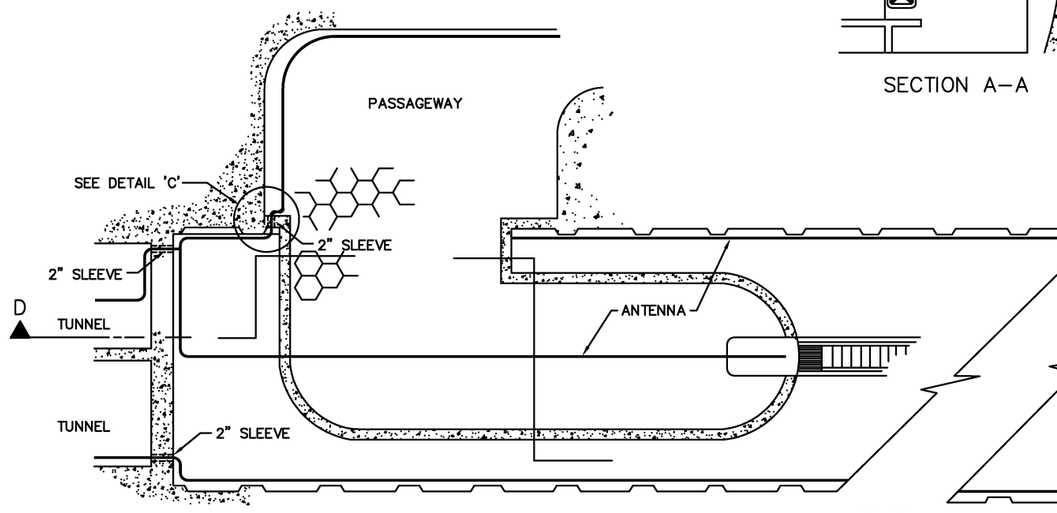


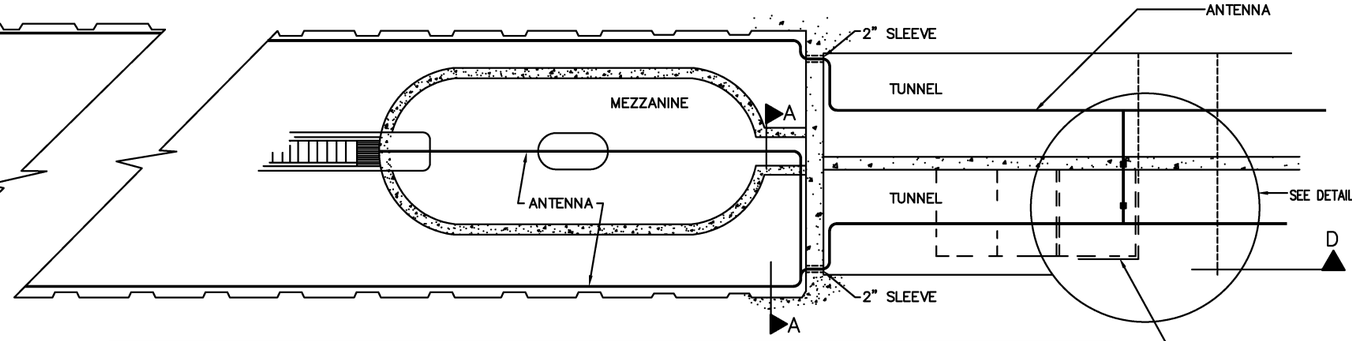
PLAN
DETAIL 'B'

SECTION B–B

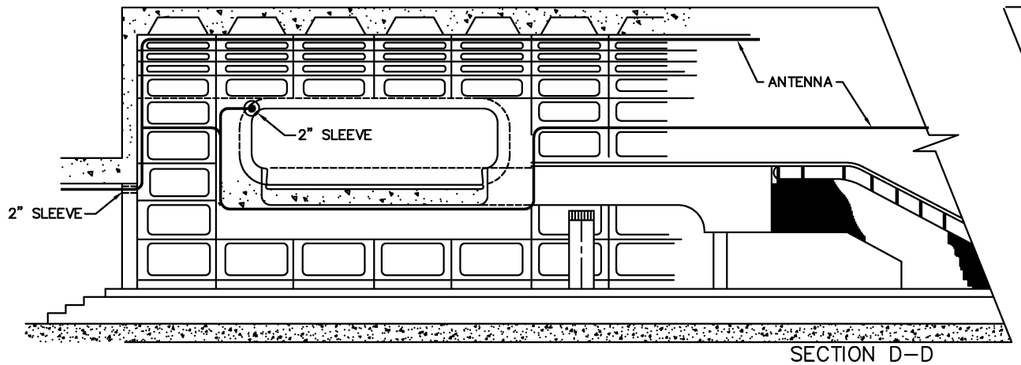
NOTES:

1. ALL EMBEDDED CONDUIT IS TO BE INSTALLED BY THE STRUCTURAL CONTRACTOR. THE ANTENNA AND SPLITTERS ARE TO BE INSTALLED BY THE COMMUNICATIONS STAGE CONTRACTOR.
2. THE ANTENNA ALONG THE STATION WALLS IS TO BE LOCATED ON BOTH INBOUND AND OUTBOUND WALLS INSIDE THE REVEALS. SEE ARCHITECTURAL DESIGN DRAWINGS FOR SPECIFIC LOCATIONS FOR TYPES OF STATION
3. NO JUNCTION BOXES ARE TO BE USED IN THE CONDUIT RUNS, ANTENNA POWER SPLITTERS ARE TO BE USED AT JUNCTION POINTS.
4. 2" EMBEDDED PVC CONDUIT MUST BE USED.
5. TERMINATE CONDUITS AT ALL ENDS WITH A PROTECTIVE COLLAR AND FLUSH WITH THE STRUCTURE, OPEN ENDS SHALL BE TEMPORARILY PLUGGED FOR PROTECTION.
6. ACCESS FROM BOTH TUNNELS TO THE COMMUNICATIONS ROOM IS REQUIRED.
7. THIS DRAWING APPLIES TO UNDERGROUND STATIONS WITH SIDE OR CENTER PLATFORMS. FINAL LOCATIONS OF EXPOSED ANTENNA SHALL BE COORDINATED WITH THE AUTHORITY.

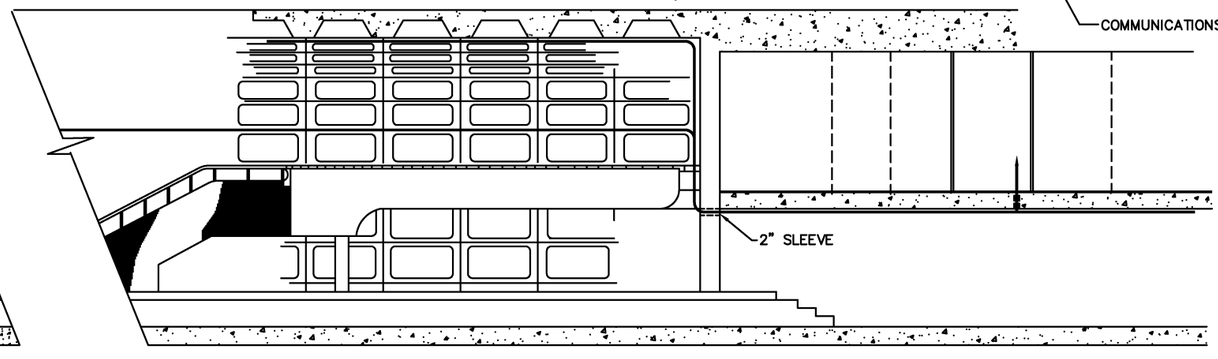




PLAN



SECTION D–D



This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	E. HARVEY	1–76 DATE
DRAWN	D. MILNER	2–76 DATE
CHECKED	L. HIMMEL	7–76 DATE
APPROVED	T. HANSEN	7–76 DATE
UPDATED	R. GANERIWAL	6–98 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
08/2001	SYSP	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

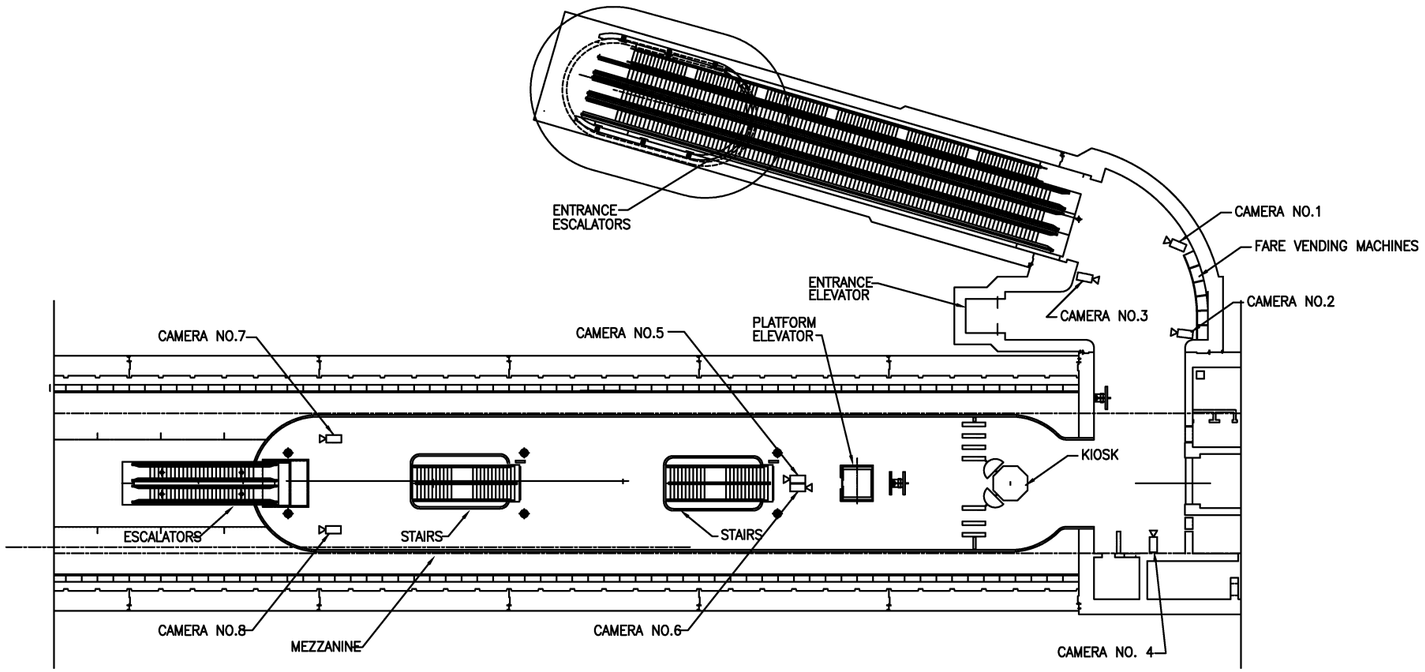
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

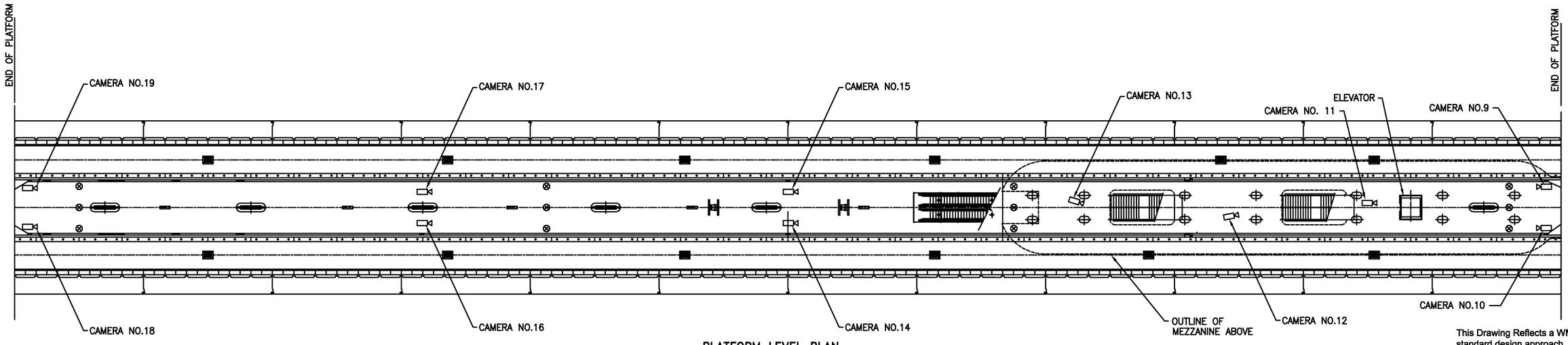
COMMUNICATIONS DESIGN DRAWING
ANTENNA CONDUIT & CABLE RUN IN UNDERGROUND STATIONS

SCALE: NONE

DRAWING NO.: ST–CM–039



MEZZANINE LEVEL PLAN



PLATFORM LEVEL PLAN

NOTES:

1. THE CLOSED CIRCUIT TELEVISION (CCTV) SYSTEM CAMERAS SHOULD PROVIDE A MINIMUM COVERAGE OF 90 PERCENT OF THE STATION PUBLIC AREAS EXCLUDING THE AREA IN DIRECT VIEW OF A STATION ATTENDANT IN THE KIOSK.
2. CAMERAS SHOULD BE LOCATED TO PROVIDE THE BEST POSSIBLE VIEW OF THE FOLLOWING FACILITIES
   a. FARE VENDING MACHINES
   b. ELEVATOR LANDINGS
   c. STAIRS
   d. ESCALATORS, WITH PARTICULAR ATTENTION TO LANDINGS
   e. PASSAGEWAY, ENTRANCES TO STATION
3. CAMERA HEIGHTS SHALL BE A MINIMUM OF 9'–6" AND A MAXIMUM OF 24'–0" ABOVE FINISH FLOOR.
4. TO PROVIDE FOR THE SAFETY OF MAINTENANCE PERSONNEL AND TO AVOID INTERFERENCE WITH RAIL OPERATIONS, CAMERAS SHALL NOT BE LOCATED OVER THE TRACKBED AND SHALL BE SET BACK FROM THE PLATFORM EDGE OR ANY VERTICAL OBSTRUCTION BY AT LEAST 3 FEET.

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	J. BISHOP	9–98 DATE
DRAWN	C. BUITRAGO	9–98 DATE
CHECKED	W. TINKHAM	9–98 DATE
APPROVED	R. GANERIWAL	9–98 DATE
UPDATED		DATE

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WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

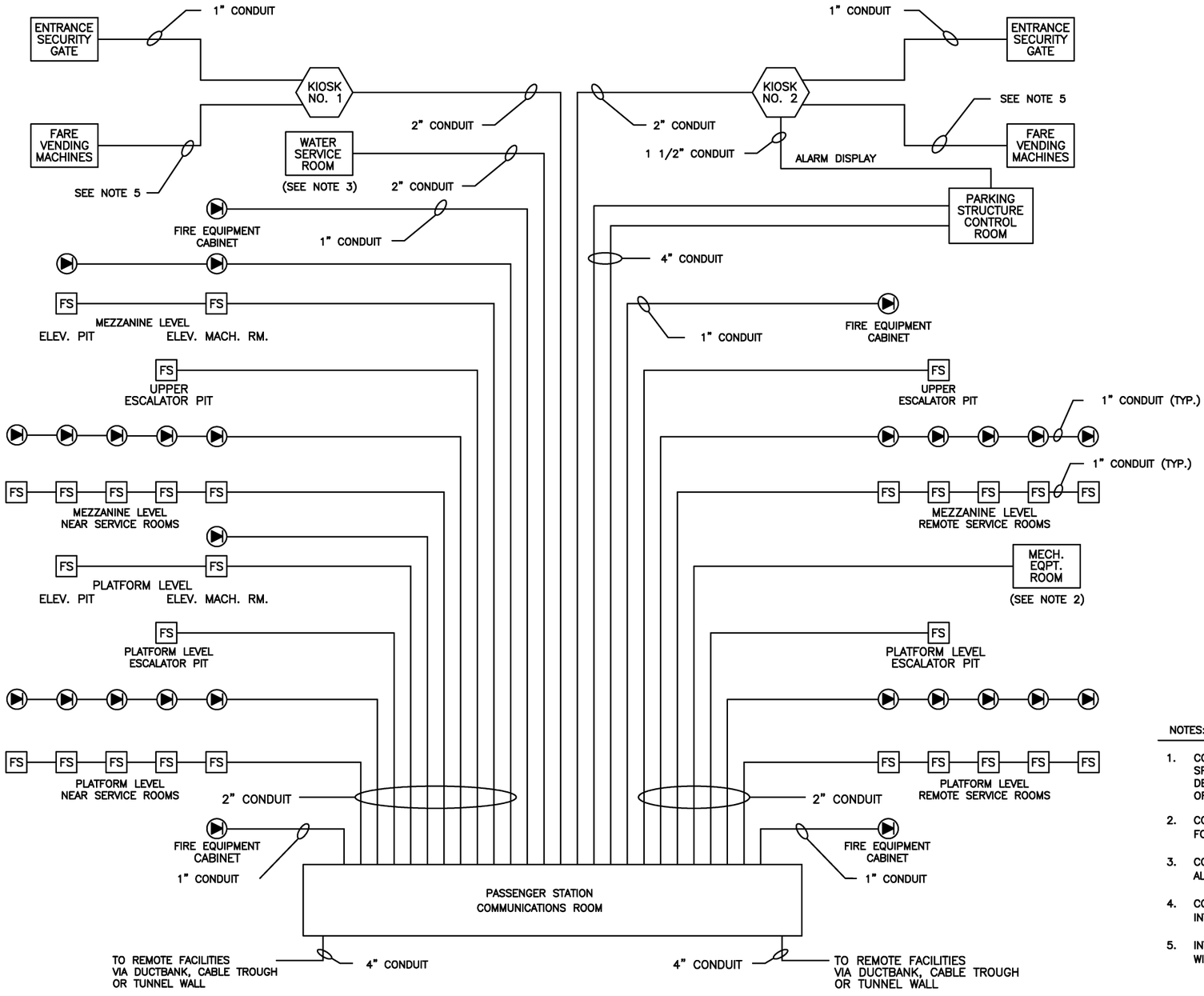
SUBMITTED _____ DATE

APPROVED DIRECTOR _____ May 3, 2001 DATE

COMMUNICATIONS DESIGN DRAWING
TYPICAL CCTV CAMERA ARRANGEMENT IN UNDERGROUND PASSENGER STATIONS

SCALE 1"= 20'
10 0 10 20

DRAWING NO. ST–CM–043



NOTES:

1. CONDUITS SHALL BE PROVIDED FOR ALL FIRE ALARM SYSTEM CABLING. SPECIFIC LOCATIONS, QUANTITIES AND TYPE OF APPARATUS ARE TO BE DETERMINED DURING FINAL DESIGN. A SINGLE SYMBOL MAY DENOTE ONE OR MORE UNITS OF APPARATUS.
2. CONDUITS SHALL BE PROVIDED TO EACH MECHANICAL EQUIPMENT ROOM FOR FIRE ALARM SYSTEM INTERFACES WITH HVAC FANS.
3. CONDUIT SHALL BE PROVIDED TO THE WATER SERVICE ROOM FOR FIRE ALARM SYSTEM INTERFACE WITH THE SPRINKLER SUPPRESSION SYSTEM.
4. CONDUIT SHALL BE PROVIDED AS REQUIRED FOR FIRE ALARM SYSTEM INTERFACE WITH CHEMICAL SUPPRESSION SYSTEMS.
5. INTRUSION ALARM SYSTEM CABLING FOR FARE VENDING EQUIPMENT WILL BE INSTALLED IN UNDERFLOOR DUCTS BY OTHERS.

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	J.P. BISHOP	DATE
DRAWN	J.L. BISHOP	DATE
CHECKED		DATE
APPROVED	R. GANERIWAL	DATE
UPDATED		DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
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SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM
TYPICAL FIRE AND INTRUSION ALARM SYSTEM CONDUIT RISER DIAGRAM

SCALE: NONE

DRAWING NO.: ST-CM-044

FIRE AND INTRUSION ALARM (FIA) SYSTEM

LEGEND

	INDICATES THAT THE NOTE CORRESPONDS TO AN ITEM ON THE DRAWING
	DIRECTION OF SIGNAL PROPAGATION
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	WALL MOUNTED DTMF TELEPHONE
	TELEPHONE DPDT TRANSFER SWITCH
	FUSED DISCONNECT SWITCH

ABBREVIATIONS

CD	=	COMBINATION DETECTOR
FTD	=	FIXED TEMPERATURE DETECTOR
ID	=	IONIZATION DETECTOR
SPD	=	SPECIAL PURPOSE DETECTOR
FV/T	=	FLOW VALVE & TAMPER SWITCH
MP/H	=	MANUAL PULL STATION & LOCAL HORN ANNUNCIATOR
DSV	=	DELUGE SOLENOID VALVE
DTMF	=	DIAL TONE MULTIPLE FREQUENCY
DPDT	=	DOUBLE POLE, DOUBLE THROW
DUCT	=	DUCT DETECTOR
FIA/COMM	=	FIRE & INTRUSION COMMUNICATIONS INTERFACE WALL TERMINAL
FIA/IC	=	FIRE & INTRUSION INTERCONNECT WALL TERMINAL
APAAS	=	AUTOMATIC PUBLIC ADDRESS ANNOUNCEMENT SYSTEM
AFC	=	AUTOMATIC FARE COLLECTION
TC/COMM	=	TRAIN CONTROL/COMMUNICATIONS INTERFACE WALL TERMINAL
DTS	=	DATA TRANSMISSION SYSTEM
SAS	=	SUPERVISORY ALARM SYSTEM
FA/FIB	=	FIRE ALARM FAN INTERFACE BOX
EOL	=	END–OF–LINE RESISTOR
TS	=	TERMINAL STRIP
N.C.	=	NORMALLY CLOSED
N.O.	=	NORMALLY OPEN
–V	=	NEGATIVE VOLTAGE
TCR	=	TRAIN CONTROL ROOM
PABX	=	PRIVATE AUTOMATIC BRANCH EXCHANGE
N.I.C.	=	NOT IN CONTRACT
TBS	=	TIE BREAKER STATION
TPSS	=	TRACTION POWER SUBSTATION

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	RIS/Q&H	12–92 DATE
DRAWN	J.L.BISHOP	8–98 DATE
CHECKED	J.P. BISHOP	10–98 DATE
APPROVED	R. GANERIWAL	10–98 DATE
UPDATED		DATE

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WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM
ABBREVIATIONS AND LEGEND

SCALE: NONE

DRAWING NO.: ST–CM–045

FIRE DETECTOR ASSIGNMENT CHART

NOTES:

1. THE NUMBER OF FIRE ZONES FOR EACH PASSENGER STATION VARIES WITH EACH PASSENGER STATION CONFIGURATION. THE STATION DESIGNER SHALL DETERMINE THE NUMBER OF ZONES BY ASSIGNING ZONES IN ACCORDANCE WITH THE FOLLOWING CRITERIA:

   A. NO FIRE ZONE SHALL CONTAIN MORE THAN 10,000 SQUARE FEET. THE 10,000 SQUARE FEET ZONE SHALL BE CONTIGUOUS, EXCEPT AS NOTED.

   B. NO FIRE ZONE SHALL CONTAIN MORE THAN FOUR ROOMS PLUS A CONNECTING PASSAGEWAY.

   C. SEPARATE FIRE ZONES SHALL BE ALLOCATED FOR ESCALATORS. THE NUMBER OF DETECTORS REQUIRED FOR ADEQUATE COVERAGE OF EACH ESCALATOR OR GROUP OF ESCALATORS SHALL BE BASED UPON THE LENGTH OF THE ESCALATOR(S) AND THE COVERAGE CHARACTERISTICS OF THE DETECTORS FURNISHED. ESCALATOR ZONES MAY CONTAIN MORE THAN ONE ESCALATOR. GROUPING OF ESCALATORS SHALL CONFORM TO THE FOLLOWING GUIDELINES:

      (1). ENTRANCE ESCALATORS – ONE FIRE ZONE SHALL BE ASSIGNED FOR EACH GROUP OF ESCALATORS IN EACH STATION ENTRANCE. AT SINGLE–ENTRANCE PASSENGER STATIONS, A SEPARATE FIRE ZONE SHALL BE ASSIGNED EXCLUSIVELY FOR IONIZATION DETECTORS WHICH HAVE EXTRA CONTACTS TO OPERATE THE DELUGE SOLENOID.

      (2). MEZZANINE ESCALATORS – ONE ESCALATOR FIRE ZONE SHALL BE ASSIGNED FOR EACH PASSENGER STATION MEZZANINE.

      (3). ESCALATORS GROUPED WITHIN A SINGLE FIRE ZONE SHALL BE LOCATED WITHIN 150 FEET OF EACH OTHER.

   D. NO FIRE ZONE SHALL CONTAIN MORE THAN TEN IONIZATION DETECTORS.

   E. A SEPARATE FIRE ZONE SHALL BE ASSIGNED TO EACH REMOTE ANCILLARY BUILDING ALONG THE MAIN LINE, UNLESS OTHERWISE SPECIFIED.

   F. A SEPARATE FIRE ZONE SHALL BE ASSIGNED TO EACH ELEVATOR.

   G. EACH MEZZANINE LEVEL SHALL BE ASSIGNED A SEPARATE FIRE ZONE.

   H. EACH PLATFORM LEVEL SHALL BE ASSIGNED A SEPARATE FIRE ZONE.

   I. ONE FIRE ZONE SHALL BE ASSIGNED TO THE MAIN WET FIRE SUPPRESSION SYSTEM.

   J. THE MAXIMUM DISTANCE BETWEEN ANY TWO POINTS OF A FIRE ZONE SHALL NOT EXCEED 300 FEET.

   K. EACH TIE–BREAKER STATION SHALL BE ASSIGNED A SEPARATE FIRE ZONE.

   L. EACH TRACTION POWER SUBSTATION SHALL BE ASSIGNED A SEPARATE FIRE ZONE.

   M. ALLOWABLE VARIATIONS IN ZONING SHALL BE UTILIZED AS NECESSARY TO LIMIT THE LOCAL (PASSENGER STATION) AND REMOTE (ANCILLARY STRUCTURE) TO LESS THAN A TOTAL OF 24 ZONES. THE ANNUNCIATOR PANEL IS LIMITED TO 24 ZONES, AND A SPARE ZONE IS REQUIRED.

DESIGNATED ROOM, AREA OR ANCILLARY BUILDING	CD	FTD	ID	SPECIAL PURPOSE DETECTORS	MISC. INTERFACE
AC SWITCHBOARD ROOM	X	X	1		
AC SERVICE ROOM	X	X	1		
AREA OF RESCUE ASSISTANCE	X		1		
BATTERY ROOM	X		1		
BELL SYSTEM ROOM	X		1		
CABLE/CABINET ROOMS	X		1		
CHILLED WATER PLANT	X		1^		
CLEANER'S ROOM	X		1		FV/T
COMMUNICATIONS EQUIPMENT ROOM	X		1		
DRAINAGE PUMPING STATION	X		1^		
DISPATCHER OFFICE	X		1		
ELECTRICAL ROOM	X		1		
ELEVATOR	X				
ELEVATOR MACHINE ROOM	X		1		
EMERGENCY EXIT	X				
ESCALATOR MACHINE ROOM AND/OR PITS		X	1**		DSV
FAN ROOM		X			
FAN SHAFT		X			
FLAMMABLES LIQUID STORAGE				$	
HALLWAYS BETWEEN EQUIPMENT ROOMS AND PUBLIC AREAS	X		1		MP/H
HALLWAYS	X		1		
KIOSK	X		1		
MAINTENANCE ROOM	X				
MECHANICAL EQUIPMENT ROOM	X		1*		
OPERATIONS ROOM	X		1		
PARKING STRUCTURE SERVICE ROOMS	X		1		
POLICE SERVICE ROOM	X		1		
REVENUE CART STORAGE	X				
SEWAGE EJECTOR	X		1		
STATION RECIRCULATION AIR INTAKE, FILTERED SIDE				DUCT	
STORAGE ROOM	X				
SUMP PUMP	X				
TIE–BREAKER STATION	X		1^		
TRACTION POWER SUBSTATION	X		1^		
TRAIN CONTROL ROOM	X		1		
LOCKER ROOMS	X				
WATER SERVICE ROOM	X				FV/T
WASHROOMS	X				
VENT SHAFT		X			
ALL OTHER STATION SERVICE ROOMS	X				
TRAIN ROOM, MEZZANINES, PLATFORMS, PASSAGEWAYS	--	--	--	--	

13

LEGEND:

- X – DETECTORS AS REQUIRED.
- 1 – ONE IONIZATION DETECTOR.
- * – IONIZATION DETECTOR WITHIN ROOM/AREA PLACED IN THE AIR FLOW STREAM TO PUBLIC AREA.
- ^ – ONE IONIZATION DETECTOR PER EACH FLOOR LEVEL.
- ** – IONIZATION DETECTOR INSTALLED AT THE TOP OF EACH ESCALATOR PIT (WELLWAY).
- $ – EXPLOSION PROOF COMBINATION DETECTORS ARE REQUIRED.

NOTES (CONTINUED):

2. THE STATION DESIGNER SHALL DETERMINE IF FIRE DETECTORS ARE REQUIRED IN THE ROOMS AND AREAS WITHIN EACH PASSENGER STATION, ON A CASE–BY–CASE BASIS.
3. NOT ALL ROOMS, AREAS AND/OR ANCILLARY BUILDINGS LISTED HEREIN ARE ASSOCIATED WITH EACH PASSENGER STATION.
4. A PASSENGER STATION MAY CONTAIN OR BE ASSOCIATED WITH MORE THAN ONE TYPE OF ROOM, AREA AND/OR ANCILLARY BUILDING LISTED HEREIN. EACH OF THESE ROOMS, AREAS AND/OR ANCILLARY BUILDINGS SHALL BE PROVIDED WITH THE APPROPRIATE TYPE OF DETECTORS.
5. TWO OR MORE ROOMS, AREAS AND/OR ANCILLARY BUILDINGS MAY BE COMBINED AND CONSIDERED AS A SINGLE ROOM. THE DETECTOR REQUIREMENTS FOR EACH INDIVIDUAL LISTED ROOM, AREA AND/OR ANCILLARY BUILDING SHALL APPLY TO COMBINATION ROOMS, AREAS AND/OR ANCILLARY BUILDINGS.
6. IONIZATION DETECTORS SHALL CONTAIN ANCILLARY CONTACTS (NORMALLY CLOSED) FOR LOCAL FAN SHUTDOWN CONTROL.
7. IONIZATION DETECTORS IN ENTRANCE ESCALATOR PITS/ROOMS SHALL CONTAIN ANCILLARY CONTACTS (NORMALLY CLOSED) FOR CONTROL OF DELUGE SOLENOID VALVE – SINGLE ENTRANCE PASSENGER STATIONS ONLY.
8. COMBINATION DETECTORS SHALL CONTAIN ANCILLARY CONTACTS (NORMALLY OPENED) FOR LOCAL FAN SHUTDOWN CONTROL AT SELECTED LOCATIONS.
9. THE FIRE ALARM SYSTEM SHALL INTERFACE WITH AND PROVIDE STATION ALARMS FOR AREAS EQUIPPED WITH CHEMICAL SUPPRESSION SYSTEMS.
10. ROOMS WITH ONLY ONE ENTRANCE AND ADJOINING HALLWAY SHALL BE EQUIPPED ONLY WITH COMBINATION DETECTOR(S). THE ASSOCIATED HALLWAY SHALL BE EQUIPPED WITH COMBINATION DETECTORS AND IONIZATION DETECTORS AS REQUIRED.
11. THE STATION DESIGNER SHALL REFER TO THE MANUFACTURER'S SPECIFICATIONS FOR DETECTORS SELECTED TO DETERMINED QUANTITIES REQUIRED FOR EACH AREA IN WHICH THE DEVICE IS INSTALLED.
12. THE STATION DESIGNER SHALL DEVELOP A STATION FLOOR PLAN LAYOUT (FROM GENERAL PLAN DRAWINGS) SHOWING THE NUMBER AND TYPES OF FIRE DETECTORS. THESE DRAWINGS SHALL SHOW HOW DETECTORS ARE DISTRIBUTED IN THE STATION SERVICE ROOMS, HALLWAYS AND ASSOCIATED AREAS. CONDUIT RUNS AND THEIR SIZES SHALL BE SHOWN ON THIS FLOOR PLAN. THE STATION DESIGNER SHALL DEVELOP A CONDUIT RISER DIAGRAM, AND CONDUIT SCHEDULE.

13. DETECTORS ARE NOT UTILIZED IN THE STATION PUBLIC AREAS, EXCEPT AS SPECIFIED ABOVE (DUE TO SPECIAL TRANSIT OPERATIONAL AND MAINTAINABILITY CONSIDERATIONS).

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	RISI/G&H	12–92 DATE
DRAWN	J.L. BISHOP	8–96 DATE
CHECKED	J.P. BISHOP	10–96 DATE
APPROVED	R. GANERIWAL	10–96 DATE
UPDATED		DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
08/2001	SYSP	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM
FIRE ALARM ZONE
REQUIREMENTS

SCALE: NONE

DRAWING NO.: ST–CM–046

INTRUSION ALARM ASSIGNMENT CHART

ASSIGNMENT OF INTRUSION ZONES

1. THE STATION DESIGNER SHALL PROVIDE "TAMPERPROOF" INTRUSION PROTECTION. THE DETECTORS SPECIFIED SHALL BE ARRANGED SO THAT A SINGLE ALARM INDICATION SHALL BE GIVEN FOR EACH ZONE ENCOMPASSING A NUMBER OF ROOMS DIRECTLY ACCESSIBLE TO EACH OTHER AND AS A GROUP ACCESSIBLE FROM A PUBLIC OR OUTSIDE AREA. A SINGLE ALARM SHALL BE GIVEN FOR A SINGLE ROOM ONLY IF IT IS DIRECTLY ACCESSIBLE FROM A PUBLIC OR OUTSIDE AREA AND IS NOT DIRECTLY ACCESSIBLE TO OTHER ROOMS. ALTHOUGH THE INTRUSION ZONES NEED NOT MATCH THE COVERAGE OF THE FIRE PROTECTION ZONES IN DETAIL (DUE TO CRITERIA DIFFERENCES), THE GENERAL AREAS OF COVERAGE SHALL BE MATCHED WHERE PRACTICAL. THE NUMBER OF INTRUSION ZONES FOR THE PASSENGER STATION VARIES WITH THE PASSENGER STATION CONFIGURATION. THE STATION DESIGNER SHALL ASSIGN INTRUSION ZONES IN ACCORDANCE WITH THE FOLLOWING CRITERIA:

   A. A SEPARATE ZONE SHALL BE ASSIGNED TO EACH ENTRANCE ELEVATOR DOOR.

   B. A SEPARATE ZONE SHALL BE ASSIGNED TO THE FARE COLLECTION EQUIPMENT FOR EACH STATION. FOR STATIONS WITH TWO KIOSKS, A ZONE SHALL BE ASSIGNED TO THE FARE COLLECTION EQUIPMENT FOR EACH KIOSK.

   C. A SEPARATE ZONE SHALL BE ASSIGNED FOR PROTECTED DOORS TO AREAS CONTAINING MULTIPLE ROOMS.

   D. A SEPARATE ZONE SHALL BE ASSIGNED FOR EACH TIE–BREAKER STATION.

   E. A SEPARATE ZONE SHALL BE ASSIGNED FOR EACH REMOTE ANCILLARY BUILDING ALONG THE RIGHT–OF–WAY.

   F. A SEPARATE ZONE SHALL BE ASSIGNED FOR EACH TRACTION POWER SUBSTATION.

   G. NO ZONE MAY CONTAIN MORE THAN 10,000 SQUARE FEET. THE ZONE AREA SHALL BE CONTIGUOUS.

   H. NO ZONE MAY CONTAIN MORE THAN THREE ROOMS WITH PROTECTED DOORS.

   I. NO ZONE MAY CONTAIN MORE THAN ONE PASSENGER STATION LEVEL.

   J. A SEPARATE ZONE SHALL BE ASSIGNED TO EACH PASSENGER STATION REVENUE CART STORAGE AREA/ROOM.

   K. ALLOWABLE VARIATIONS IN ZONING SHALL BE UTILIZED AS NECESSARY TO LIMIT THE LOCAL (PASSENGER STATION) AND REMOTE (ANCILLARY STRUCTURE) TO LESS THAN A TOTAL OF 24 ZONES. THE ANNUNCIATOR PANEL IS LIMITED TO 24 ZONES, AND A SPARE ZONE IS REQUIRED.

   L. A SEPARATE ZONE SHALL BE ASSIGNED FOR (AFC) FARE CARD VENDING MACHINE. STATIONS WITH MORE THAN ONE KIOSK SHALL HAVE A SECOND AFC INTRUSION ZONE.

DESIGNATED ROOMS/AREAS	DETECTION DEVICE	REQUIRED ACCESSORIES	NOTES
AC SWITCHBOARD ROOM	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
AC SERVICE ROOM	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
AFC SYSTEMS	PROVIDED BY AFC CONTRACTOR		4
ACCESS HATCHES	TRIP WIRE		
AREA OF RESCUE ASSISTANCE	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
BATTERY ROOM	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
BELL SYSTEM ROOMS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
CABLE/CABINET ROOMS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
CHILLED WATER PLANTS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
CLEANER'S ROOM	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
COMMUNICATIONS EQUIP. ROOMS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
DISPATCHER'S OFFICES	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
DRAINAGE PUMPING STATIONS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
ELECTRICAL ROOMS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
ELEVATORS (ENTRANCE TYPE ONLY)	PROVIDED BY ELEVATOR CONTRACTOR		5
ELEVATOR MACHINE ROOMS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
EMERGENCY EXITS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
FAN ROOMS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
FAN SHAFTS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
FLAMMABLES LIQUID STORAGE	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2

DESIGNATED ROOMS/AREAS	DETECTION DEVICE	REQUIRED ACCESSORIES	NOTES
GRATINGS (WITH ENTRANCE POINTS)	MAGNETIC SWITCH		6
KIOSKS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
MAINTENANCE ROOMS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
MECHANICAL EQUIPMENT ROOMS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
OPERATIONS ROOMS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
PARKING STRUCTURE SERVICE ROOMS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
REVENUE CART STORAGE ROOM	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
ROLL–UP DOORS (TBS & TPSS)	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
ROLL–UP GRILL (AFC VENDORS)	LIMIT SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
SERVICE ROOM ACCESS HALLWAYS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
STORAGE ROOMS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
TIE–BREAKER STATIONS (TBS)	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
TRACTION POWER SUBSTATIONS (TPSS)	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
TRAIN CONTROL ROOMS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
LOCKER ROOMS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
WATER SERVICE ROOMS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
WASHROOMS	MAGNETIC SWITCH	KEYSWITCH/ PUSHBUTTON	1, 2
VENT SHAFTS (WITH ACCESS)	MAGNETIC SWITCH		6

NOTES (CONTINUED):

2. THE QUANTITY OF REQUIRED DETECTION DEVICES FOR ALL DESIGNATED ROOMS/AREAS SHALL BE DETERMINED BASED ON THE CONFIGURATION OF THE PARTICULAR ROOM/AREA, AS FOLLOWS:

   ALL SINGLE DOOR ENTRANCES SHALL BE EQUIPPED WITH ONE REQUIRED DETECTION DEVICE.

   ALL DOUBLE DOOR ENTRANCES SHALL BE EQUIPPED WITH TWO (ONE DEVICE FOR EACH DOOR) DETECTION DEVICES.

3. DESIGNATED ROOM/AREAS WITH ONLY ONE ENTRANCE WHICH IS ACCESSIBLE ONLY FROM A SERVICE ROOM HALLWAY DO NOT NEED TO BE EQUIPPED WITH ANY INTRUSION DETECTION DEVICES, AS LONG AS ALL ENTRANCES TO THE SERVICE ROOM HALLWAY ARE APPROPRIATELY EQUIPPED WITH INTRUSION DETECTION DEVICES.

   DESIGNATED ROOM/AREAS WITH TWO ENTRANCES; ONE ENTRANCE WHICH IS ACCESSIBLE ONLY FROM A SERVICE ROOM HALLWAY, AND ONE ENTRANCE ACCESSIBLE FROM A PUBLIC AND/OR UNSECURED AREA ONLY NEED INTRUSION DEVICES (AS INDICATED) FOR THE ENTRANCE ACCESSIBLE FROM THE PUBLIC AND/OR UNSECURED AREA.

4. ALL AUTOMATIC FARE COLLECTION (AFC) EQUIPMENT INTRUSION DEVICES ARE PROVIDED BY OTHERS.

5. EACH ENTRANCE ELEVATOR SHALL BE WIRED AS AN INDIVIDUAL INTRUSION ZONE CIRCUIT.

6. GRATINGS AT THE TOP OF VENT SHAFTS, FAN SHAFTS AND EMERGENCY EXITS SHALL BE EQUIPPED WITH A MAGNETIC SWITCH DETECTOR.

7. EACH KEY SWITCH (ACCESS CONTROL) SHALL BE CHICAGO LOCK CO. NUMBER 3039. THE LOCK SHALL BE PROVIDED WITH KEY NUMBER AMP–585. THIS IS TO ASSURE THAT WMATA KEY SWITCHES WILL BE THE SAME AS THOSE CURRENTLY IN OPERATION.

8. THE STATION DESIGNER SHALL DEVELOP A STATION FLOOR PLAN LAYOUT (FROM GENERAL PLAN DRAWINGS) SHOWING THE NUMBER AND LOCATION OF INTRUSION DETECTORS. THESE DRAWINGS SHALL SHOW HOW DETECTORS ARE DISTRIBUTED IN THE STATION SERVICE ROOMS, HALLWAYS AND ASSOCIATED AREAS. CONDUIT RUNS AND THEIR SIZES SHALL BE SHOWN ON THIS FLOOR PLAN. THE STATION DESIGNER SHALL DEVELOP A CONDUIT RISER DIAGRAM AND CONDUIT SCHEDULE.

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED RISI/G&H 12–92 DATE
DRAWN J.L. BISHOP 8–98 DATE
CHECKED J.P. BISHOP 10–98 DATE
APPROVED R. GANERIWAL 10–98 DATE
UPDATED _____ DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

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WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

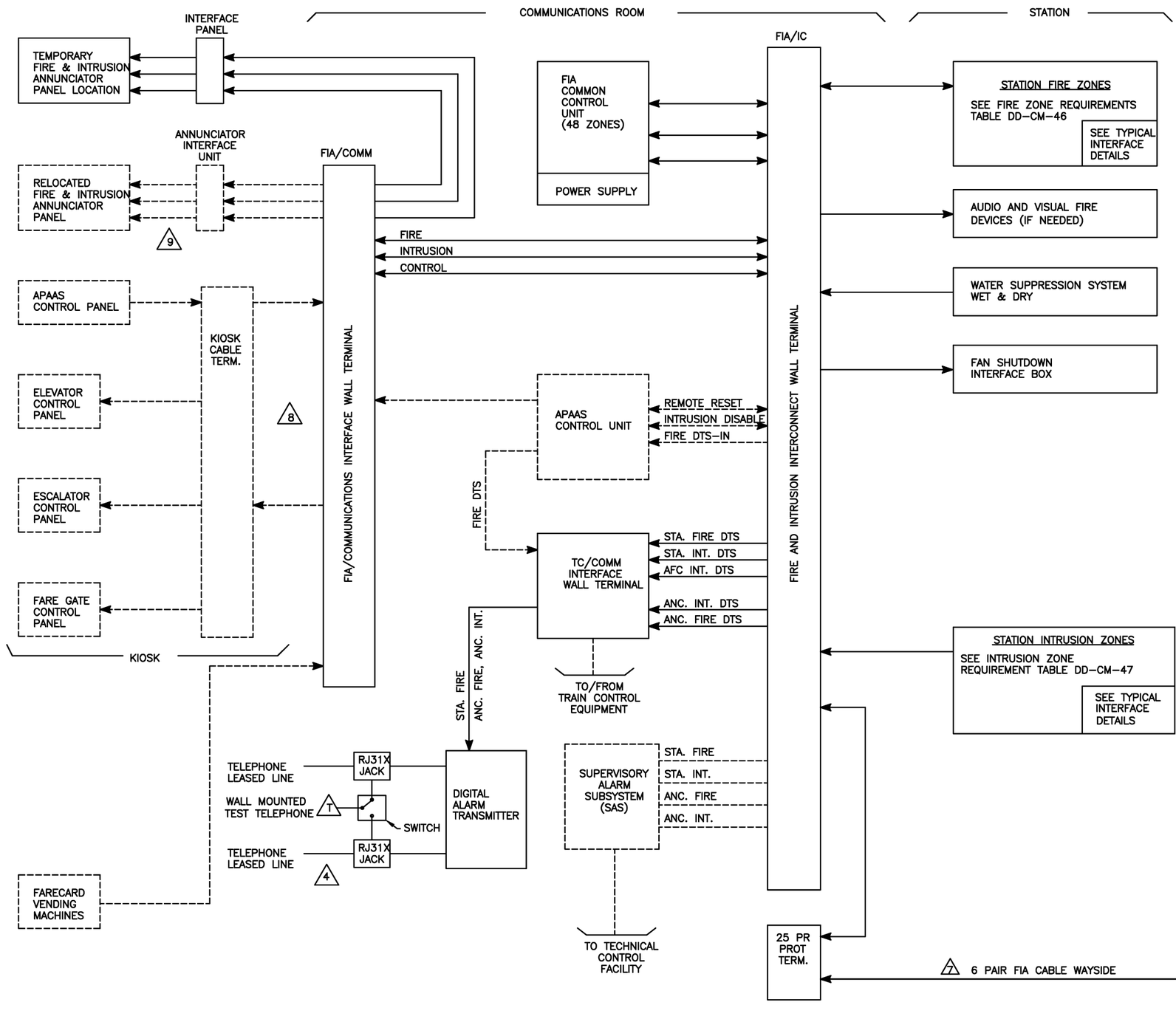
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM
INTRUSION ALARM ZONE
REQUIREMENTS

SCALE NONE

DRAWING NO. ST–CM–047



NOTES:

1. THOSE BOXES AND INTERCONNECT LINES SHOWN WITH SOLID LINES ARE THE RESPONSIBILITY OF THE STATION CONSTRUCTION CONTRACTOR. THOSE BOXES AND LINES SHOWN WITH DASHED LINES ARE THE RESPONSIBILITY OF THE COMMUNICATIONS SYSTEMS CONTRACTOR.
2. ALL INTERFACE BETWEEN THE STATION CONSTRUCTION CONTRACTOR AND COMMUNICATIONS SYSTEMS CONTRACTOR WILL BE AT THE FIA/COMM INTERFACE WALL TERMINAL.
3. THE STATION CONSTRUCTION CONTRACTOR SHALL HAVE OVERALL RESPONSIBILITY FOR ENSURING PROPER FUNCTIONING OF THE FIA SYSTEM PRIOR TO COMMUNICATION SYSTEM CONTRACT WORK COMMENCING.

△4 WMATA WILL LEASE TWO TELEPHONE LINES TO JACKSON GRAHAM BUILDING FOR TEMPORARY DIGITAL COMMUNICATOR AT EACH NEW PASSENGER STATION.

5. THE COMMON CONTROL UNIT AND THE WALL TERMINAL SHALL BE ISOLATED FROM BUILDING AND POWER GROUND. THE SHIELDED CABLES INSTALLED BY THE CONTRACTOR WILL BE GROUNDED IN THE COMMUNICATIONS EQUIPMENT ROOM TO THE COMMUNICATIONS GROUND BUS BAR.

△6 THE STATION CONSTRUCTION CONTRACTOR SHALL INSTALL A 6 PAIR TELEPHONE PROTECTED BLOCK TERMINAL. SEE INSTALLATION DETAILS ON DD-CM-50 AT EACH ANCILLARY BUILDING.

△7 THE STATION CONSTRUCTION CONTRACTOR SHALL INSTALL A 6 PAIR TELEPHONE CABLE (ARMORED OUT DOOR TYPE) TO EACH ANCILLARY BUILDING.

△8 DRAWING DD-CM-49 SHOWS ADDITIONAL FIA INTERFACE REQUIREMENTS.

△9 FIA ANNUNCIATOR PANEL AND FIA INTERFACE PANEL SHALL BE LOCATED OUTSIDE THE COMMUNICATIONS ROOM. THEY WILL BE RELOCATED BY THE COMMUNICATION SYSTEMS CONTRACTOR, WHO WILL BE RESPONSIBLE FOR ALL WIRING FROM FIA/COMM INTERFACE WALL TERMINAL TO THE KIOSK.

LEGEND:

STATION CONSTRUCTION CONTRACTOR RESPONSIBILITY

COMMUNICATIONS SYSTEMS CONTRACTOR RESPONSIBILITY

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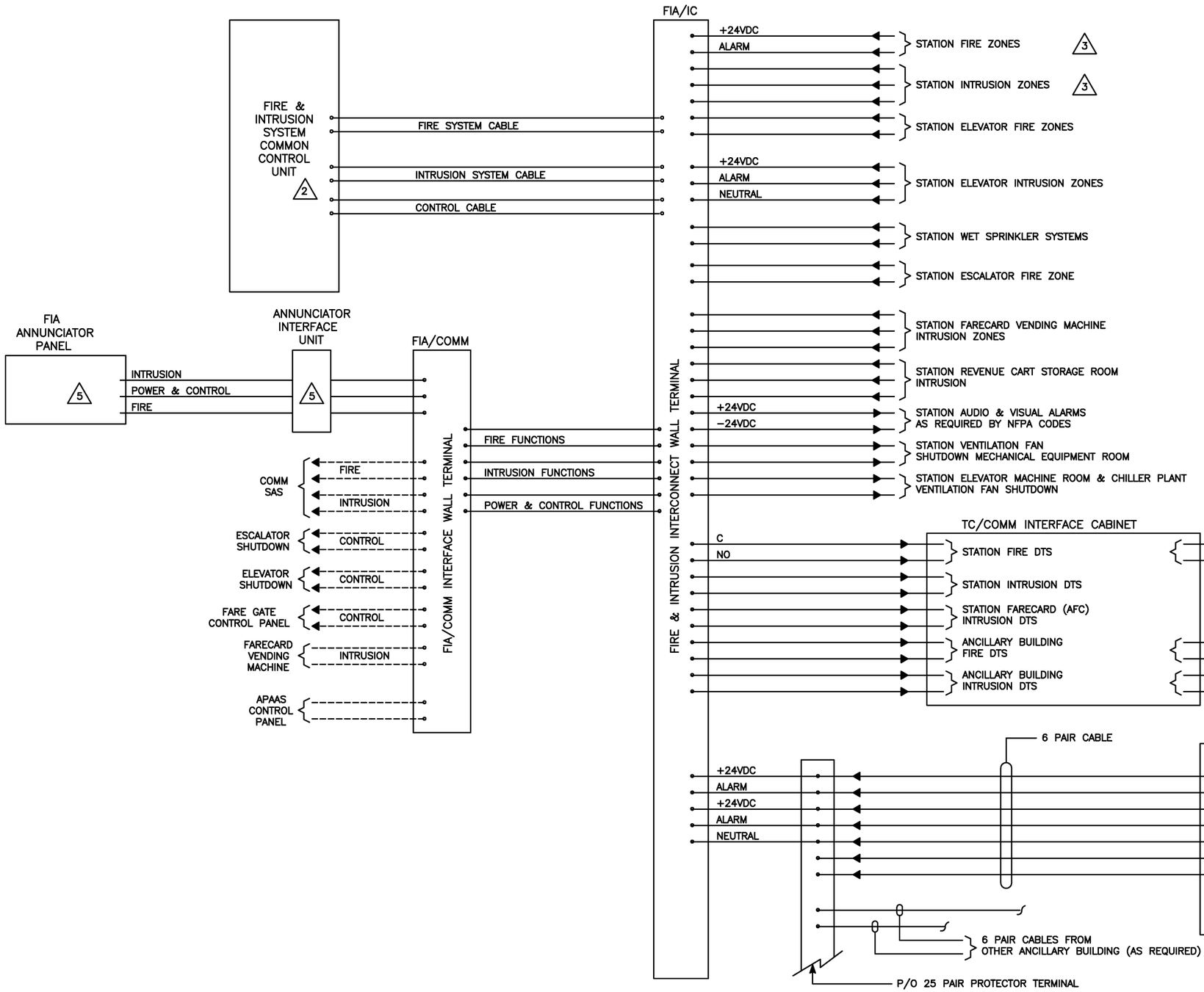
COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM
TYPICAL FIA SYSTEM BLOCK DIAGRAM

SCALE: NONE

DRAWING NO.: ST-CM-048



NOTES:

1. ALL WORK SHOWN ON THIS DRAWING IS THE RESPONSIBILITY OF THE STATION CONSTRUCTION CONTRACTOR EXCEPT AS NOTED.

2 SEPARATE CABLE SHALL BE USED FOR FIRE & INTRUSION FUNCTIONS. 24 VDC POWER LEADS SHALL BE IN THE CONTROL CABLE.

3 DRAWING SHOWS TYPICAL INPUT FOR ONE FIRE ZONE AND ONE INTRUSION ZONE. SYSTEM SHALL BE CAPABLE OF SUPPORTING UP TO 24 ZONES OF EACH.

4 DRAWING SHOWS TYPICAL CONNECTIONS FOR ONE REMOTE ANCILLARY BUILDING. CABLING SHALL BE PROVIDED TO SERVE ALL REMOTE ANCILLARY BUILDINGS. SEE DD–CM–46 & DD–CM–47 FOR ANCILLARY BUILDING FIA REQUIREMENTS.

5 FIA ANNUNCIATOR PANEL AND FIA INTERFACE PANEL SHALL BE LOCATED OUTSIDE THE COMMUNICATIONS ROOM. THEY WILL BE RELOCATED BY THE COMMUNICATION SYSTEMS CONTRACTOR, WHO WILL BE RESPONSIBLE FOR ALL WIRING FROM FIA/COMM INTERFACE WALL TERMINAL TO THE KIOSK.

LEGEND:

STATION CONSTRUCTION CONTRACTOR RESPONSIBILITY

COMMUNICATIONS SYSTEMS CONTRACTOR RESPONSIBILITY

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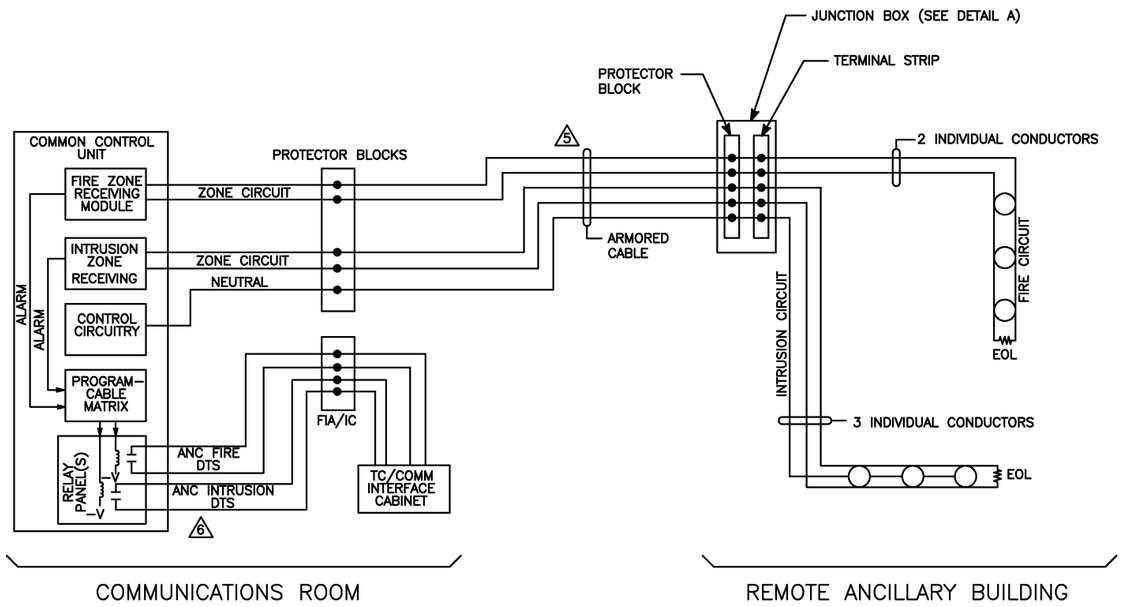
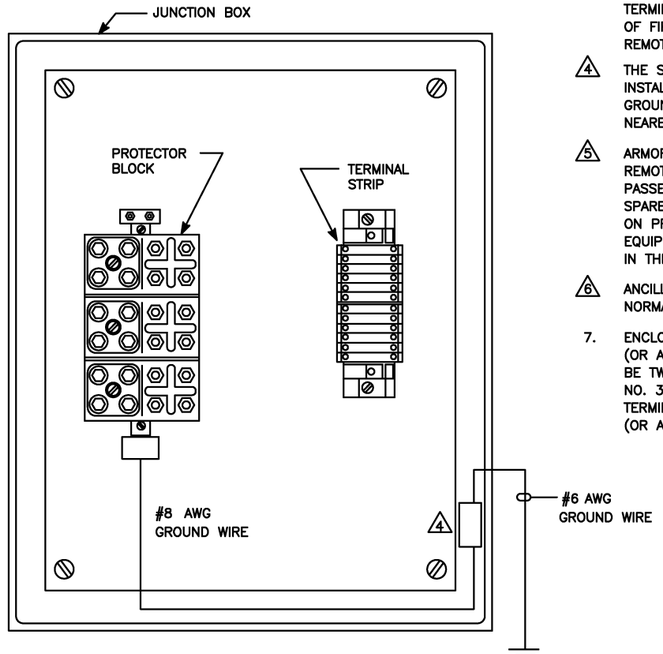
COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM
TYPICAL FIA SYSTEM WIRING DIAGRAM

SCALE: NONE

DRAWING NO. ST–CM–049





DETAIL A

NOTES:

1. ALL WORK SHOWN ON THIS DRAWING IS THE RESPONSIBILITY OF THE STATION CONSTRUCTION CONTRACTOR EXCEPT AS NOTED.
2. DETECTORS SHOWN IN THE REMOTE ANCILLARY BUILDING ARE TYPICAL.
3. JUNCTION BOX SHALL CONTAIN THE REQUIRED NUMBER OF PROTECTOR BLOCKS AND TERMINALS TO TERMINATE ALL CONDUCTORS (INCLUDING SPARES) OF FIRE AND INTRUSION SYSTEMS OF THE REMOTE ANCILLARY BUILDING.

4 THE STATION CONSTRUCTION CONTRACTOR SHALL INSTALL A #6AWG GROUND WIRE FROM THE GROUND BLOCK IN THE JUNCTION BOX TO THE NEAREST GROUND IN THE ANCILLARY BUILDING.

5 ARMORED CABLE SHALL BE INSTALLED BETWEEN REMOTE ANCILLARY BUILDING AND ASSOCIATED PASSENGER STATIONS. ALL CONDUCTORS (INCLUDING SPARES) OF THE ARMORED CABLE SHALL BE TERMINATED ON PROTECTOR BLOCKS IN THE COMMUNICATIONS EQUIPMENT ROOM AND AT THE JUNCTION BOX IN THE REMOTE ANCILLARY BUILDING.

6 ANCILLARY FIRE AND INTRUSION CONTACTS ARE NORMALLY OPEN, CLOSED UPON AN ALARM.

7. ENCLOSURES SHALL BE HOFFMAN NEMA 4 TYPE (OR APPROVED EQUAL). PROTECTOR BLOCKS SHALL BE TWO PAIR, RELIABLE ELECTRIC CO. MODEL NO. 391SVSR–2 (OR APPROVED EQUAL). TERMINALS SHALL BE WEIDMULLER TYPE SAKR (OR APPROVED EQUAL).

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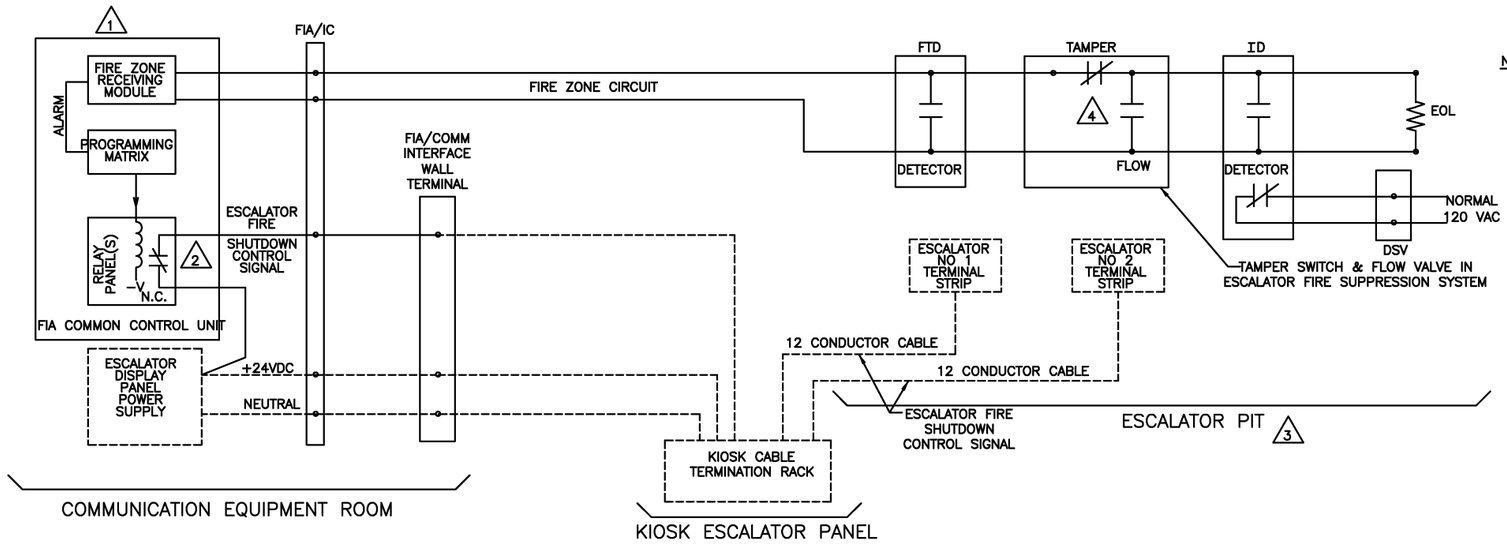
COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM
TYPICAL FIA SYSTEM WIRING DIAGRAM
REMOTE FACILITIES BUILDINGS

SCALE NONE

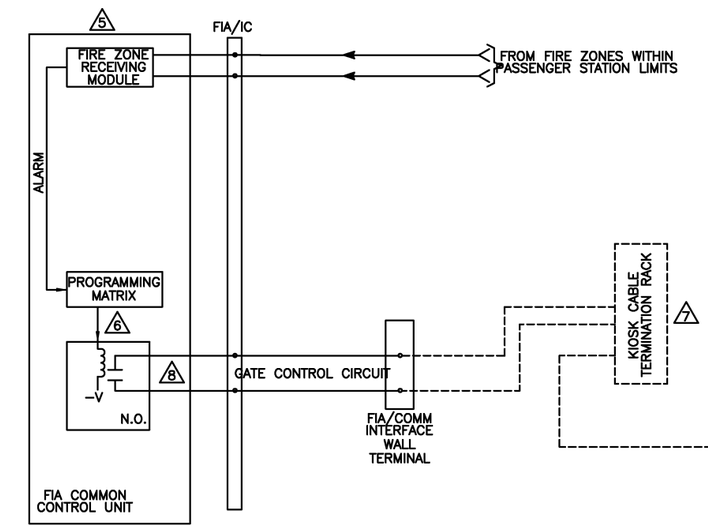
DRAWING NO. ST–CM–050



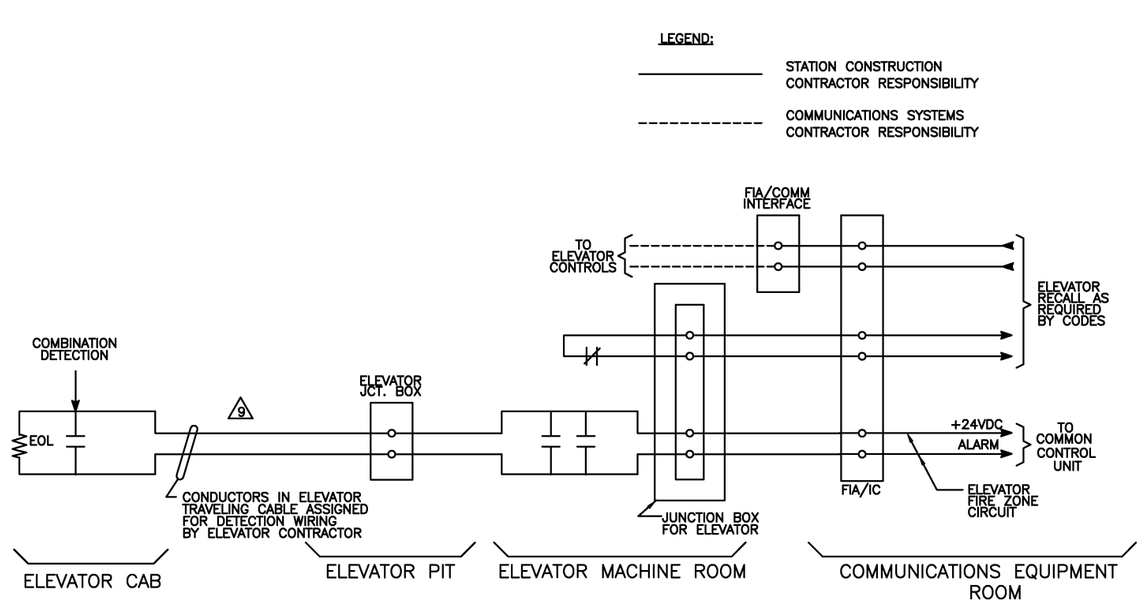
TYPICAL ESCALATOR CONFIGURATION

NOTES:

1. DRAWING ONLY SHOWS ONE FIRE ZONE CIRCUIT (COVERAGE OF AN ESCALATOR PIT). THERE SHALL BE ONE ZONE PER ESCALATOR PIT.
2. THE ESCALATOR FIRE SHUTDOWN CONTROL SIGNAL SHALL BE DISTRIBUTED TO ALL ESCALATORS VIA THE TWELVE CONDUCTOR CABLE TERMINATION RACK.
3. IN SINGLE ENTRANCE PASSENGER STATION ENTRANCE ESCALATOR PITS, IONIZATION DETECTORS SHALL CONTROL A DELUGE VALVE SOLENOID (PROVIDED BY OTHERS).
4. THE ESCALATOR FIRE SUPPRESSION SYSTEM TAMPER SWITCH & FLOW VALVE IS LOCATED IN THE ENTRANCE ESCALATOR PIT.
5. DRAWING ONLY SHOWS ONE FIRE ZONE CIRCUIT. AN ALARM BY ANY FIRE ZONE CIRCUIT ASSOCIATED WITH ROOMS OR ANCILLARY BUILDINGS WITHIN THE PASSENGER STATION SHALL ACTIVATE THE AFC CONTROL RELAY VIA THE PROGRAMMABLE PANEL AND OPEN THE FARE GATE.
6. ONLY AN ALARM FROM THE FIRE ZONES WITHIN PASSENGER STATION LIMITS SHALL ACTIVATE THE GATE CONTROL RELAY VIA THE PROGRAMMABLE PANEL. THE RELAY IS SHOWN DE-ENERGIZED.
7. CONNECTION TO AFC EQUIPMENT SHALL BE INSTALLED BY OTHERS.
8. RELAY IS DE-ENERGIZED IN NON-ALARM STATE.
9. ELEVATOR CONTRACTOR WILL WIRE FIRE DETECTORS THROUGH ELEVATOR TRAVELING CABLE.
10. ALL CIRCUITS ARE SHOWN IN NON-ALARM STATE.



TYPICAL AUTOMATIC FARE COLLECTION CONFIGURATION



TYPICAL ELEVATOR CONFIGURATION

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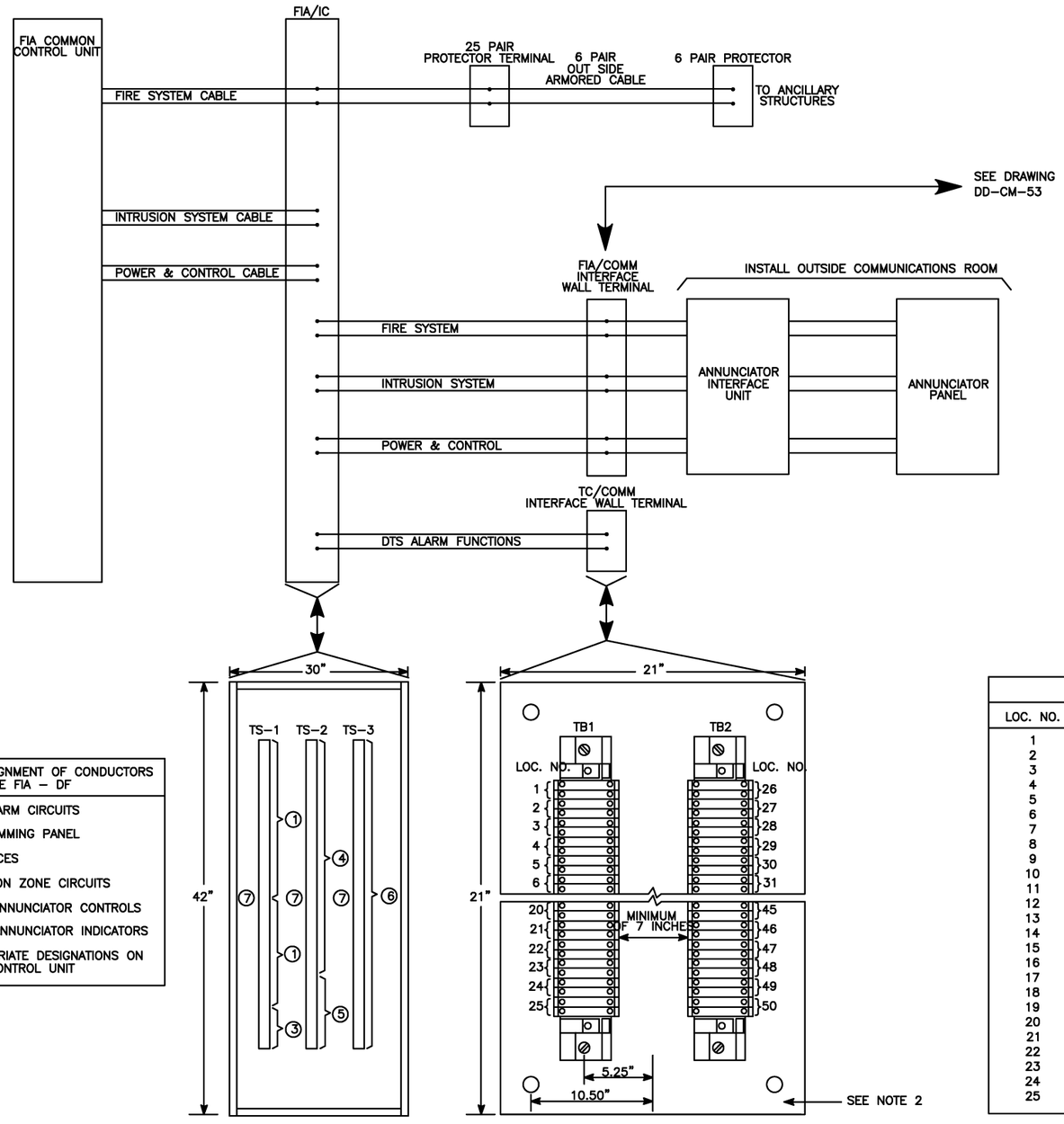
COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM
FIRE ALARM INTERFACE DETAILS
SHEET 1 of 5

SCALE NONE

DRAWING NO. ST-CM-051



FIA – INTERCONNECT WALL TERMINAL

PASSENGER STATION TC/COMM INTERFACE WALL TERMINAL LAYOUT

SCHEDULE OF ASSIGNMENT OF CONDUCTORS TO THE FIA – DF	
①	TO FIRE ALARM CIRCUITS
②	TO PROGRAMMING PANEL
③	TO INTERFACES
④	TO INTRUSION ZONE CIRCUITS
⑤	TO KIOSK ANNUNCIATOR CONTROLS
⑥	TO KIOSK ANNUNCIATOR INDICATORS
⑦	TO APPROPRIATE DESIGNATIONS ON COMMON CONTROL UNIT

TB1

SCHEDULE OF ASSIGNMENTS	
LOC. NO.	USE
1	SPARE
2	SPARE
3	SPARE
4	SPARE
5	SPARE
6	SPARE
7	SPARE
8	SPARE
9	SPARE
10	SPARE
11	TIME HR/24 HR
12	TIME MIN
13	SPARE
14	SPARE
15	SPARE
16	SPARE
17	ACI-1 (RESERVED)
18	ACI-2 (RESERVED)
19	SPARE
20	SPARE
21	SPARE
22	SPARE
23	SPARE
24	SPARE
25	TCM TELEPHONE

TB2

SCHEDULE OF ASSIGNMENTS	
LOC. NO.	USE
26	STA INTRUSION DTS
27	STA FIRE DTS
28	AFC INTRUSION DTS
29	SPARE
30	ANCILLARY BLDG 1 INT DTS
31	ANCILLARY BLDG 1 FIRE DTS
32	ANCILLARY BLDG 2 INT DTS
33	ANCILLARY BLDG 2 FIRE DTS
34	ANCILLARY BLDG 3 INT DTS
35	ANCILLARY BLDG 3 FIRE DTS
36	ANCILLARY BLDG 4 INT DTS
37	ANCILLARY BLDG 4 FIRE DTS
38	ANCILLARY BLDG 5 INT DTS
39	ANCILLARY BLDG 5 FIRE DTS
40	ANCILLARY BLDG 6 INT DTS
41	ANCILLARY BLDG 6 FIRE DTS
42	ANCILLARY BLDG 7 INT DTS
43	ANCILLARY BLDG 7 FIRE DTS
44	ANCILLARY BLDG 8 INT DTS
45	ANCILLARY BLDG 8 FIRE DTS
46	ANCILLARY BLDG 9 INT DTS
47	ANCILLARY BLDG 9 FIRE DTS
48	ANCILLARY BLDG 10 INT DTS
49	ANCILLARY BLDG 10 FIRE DTS
50	SPARE

SEE NOTE 1

NOTES:

1. ALL REMOTE FACILITIES COVERED BY THE PASSENGER STATION FIRE AND INTRUSION ALARM SYSTEM SHALL BE IDENTIFIED AND ASSIGNED TO LOCATIONS IN AN OUTBOUND TO OUTBOUND SEQUENCE.
2. THE TC/COMM INTERFACE WALL TERMINAL CABINET SHALL BE HOFFMAN NEMA 4 WITH WEIDMULLER SAKR TERMINALS (OR APPROVED EQUALS).

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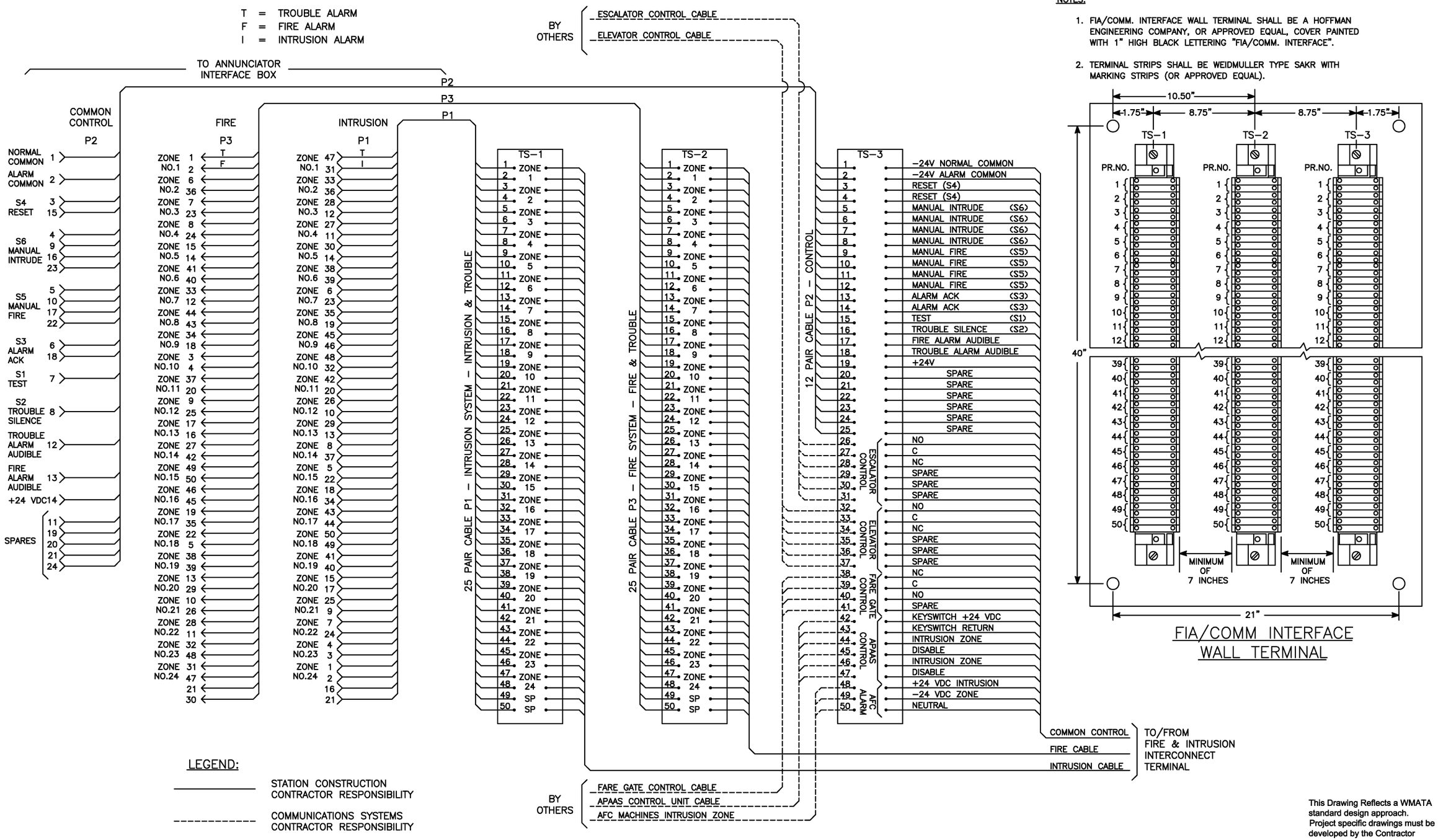
COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM
FIRE ALARM INTERFACE DETAILS
SHEET 2 of 5

SCALE NONE

DRAWING NO. ST-CM-052

LEGEND:

T = TROUBLE ALARM
F = FIRE ALARM
I = INTRUSION ALARM



LEGEND:

STATION CONSTRUCTION CONTRACTOR RESPONSIBILITY

COMMUNICATIONS SYSTEMS CONTRACTOR RESPONSIBILITY

NOTES:

1. FIA/COMM. INTERFACE WALL TERMINAL SHALL BE A HOFFMAN ENGINEERING COMPANY, OR APPROVED EQUAL, COVER PAINTED WITH 1" HIGH BLACK LETTERING "FIA/COMM. INTERFACE".
2. TERMINAL STRIPS SHALL BE WEIDMULLER TYPE SAKR WITH MARKING STRIPS (OR APPROVED EQUAL).

FIA/COMM INTERFACE WALL TERMINAL

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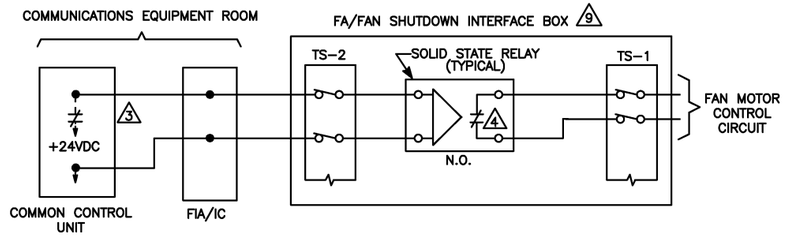
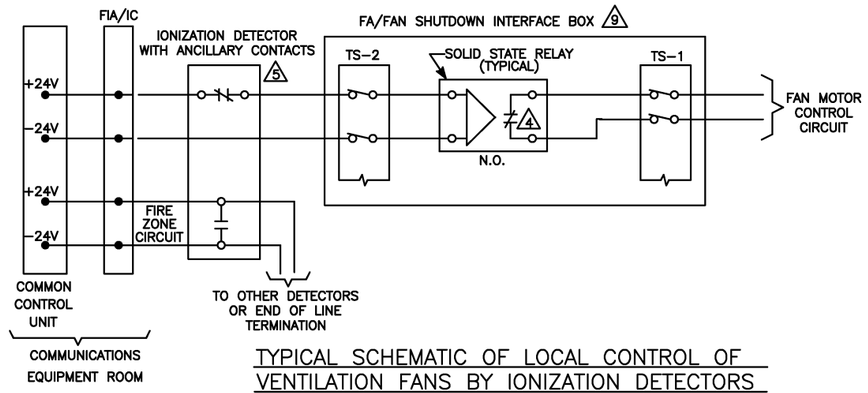
COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM
FIRE ALARM INTERFACE DETAILS
SHEET 3 of 5

SCALE: NONE

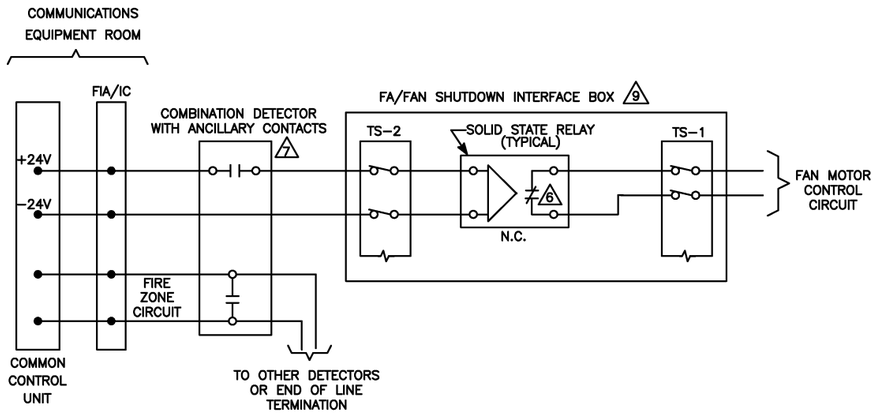
DRAWING NO.: ST-CM-053



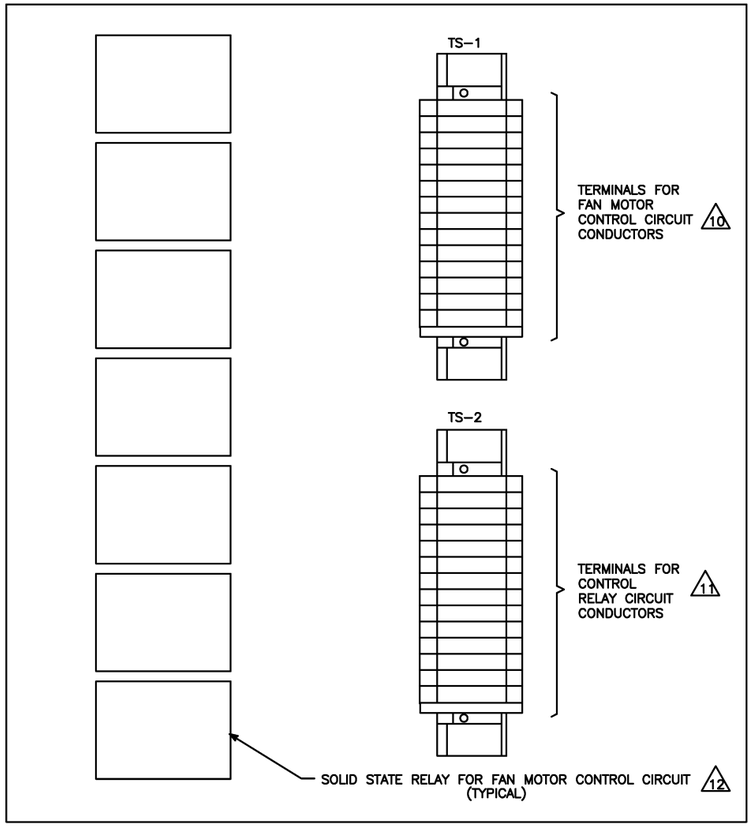
TYPICAL SCHEMATIC OF FIA SYSTEM CONTROLLING VENTILATION FANS FROM THE COMMON CONTROL UNIT



TYPICAL SCHEMATIC OF LOCAL CONTROL OF VENTILATION FANS BY IONIZATION DETECTORS



TYPICAL SCHEMATIC OF LOCAL CONTROL OF VENTILATION FANS BY COMBINATION DETECTOR



TYPICAL FA/FAN SHUTDOWN INTERFACE BOX

NOTES:

1. ALL WORK SHOWN ON THIS DRAWING IS THE RESPONSIBILITY OF THE STATION CONSTRUCTION CONTRACTOR, EXCEPT AS NOTED.
2. THE END OF LINE TERMINATION DEVICE SHALL BE INSTALLED AFTER THE LAST DETECTOR.

3. UPON RECEIPT OF A FIRE ALARM WITHIN THE STATION, THE COMMON CONTROL UNIT SHALL DISCONNECT THE +24VDC FROM THE CIRCUIT.
4. SOLID STATE RELAY IS SHOWN DE-ENERGIZED.
5. ANCILLARY CONTACTS OF IONIZATION DETECTORS SHALL BE NORMALLY CLOSED. DETECTOR IS SHOWN IN NON-ALARM STATE.
6. SOLID STATE RELAY IS SHOWN DE-ENERGIZED.
7. ANCILLARY CONTACTS OF COMBINATION DETECTORS SHALL BE NORMALLY OPEN. DETECTOR IS SHOWN IN NON-ALARM STATE.

8. FAN SHUTDOWN CRITERIA:
THE STATION DESIGNER SHALL DEVELOP SPECIFICATIONS AND DRAWINGS PROVIDING FAN SEQUENCING (SHUTDOWN, STARTUP, REVERSAL), AS NECESSARY TO CONTROL VENTILATION OF SMOKE DURING A FIRE. SHUTDOWN TABLE IDENTIFYING THE FAN NUMBER; FAN LOCATION; TYPE OF SHUTDOWN CONTROL; AND THE AREA SERVED BY THE FAN. FAN SHUTDOWN INFORMATION MUST BE SUBMITTED FOR PRIOR APPROVAL.

9. THE STATION CONSTRUCTION CONTRACTOR SHALL PROVIDE THE FA/FAN INTERFACE BOX ENCLOSURES. THEY SHALL BE HOFFMAN ENGINEERING COMPANY CATALOG NO. A-1614 CHNF (16"x 14"x 6") (OR APPROVED EQUAL). THE ENCLOSURES SHALL BE PAINTED OSHA RED WITH 1-INCH HIGH OSHA YELLOW LETTERING "FA/FAN SHUTDOWN" ON THE EXTERIOR OF THE FRONT COVER.
10. TS-1 IN THE FA/FAN INTERFACE BOX IS FOR INTERFACING FAN MOTOR CONTROL CIRCUITS.
11. TS-2 IN THE FA/FAN INTERFACE BOX IS FOR INTERFACING SOLID STATE RELAYS.
12. THE STATION CONSTRUCTION CONTRACTOR SHALL PROVIDE THE REQUIRED SOLID STATE RELAYS IN EACH FA/FAN INTERFACE BOX. ONE SOLID STATE RELAY SHALL BE PROVIDED FOR EACH FAN MOTOR CONTROL CIRCUIT THAT IS TO BE CONTROLLED BY THE FIA SYSTEM.

13. TS-1 AND TS-2 SHALL BE WEIDMULLER TYPE SAKR DISCONNECT AND TEST TERMINALS WITH PERMANENT MARKING STRIPS (OR APPROVED EQUAL). THE SOLID STATE FAN RELAYS (NORMALLY OPEN, NORMALLY CLOSED) SHALL BE TELEDYNE PART NO. 615-2 (OR APPROVED EQUAL).

14. THE STATION CONSTRUCTION CONTRACTOR SHALL PROVIDE TS-1 AND TS-2 TERMINAL STRIPS AND PROVIDE THE CONNECTIONS BETWEEN THEM.

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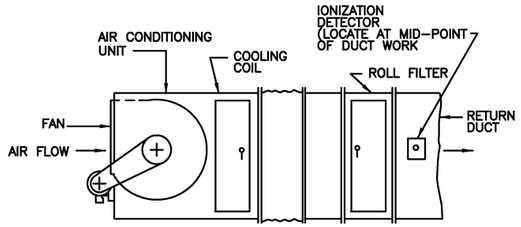
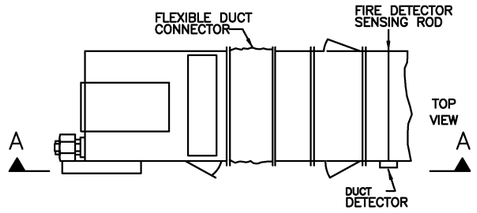
COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM
FIRE ALARM INTERFACE DETAILS
SHEET 4 of 5

SCALE NONE

DRAWING NO. ST-CM-054

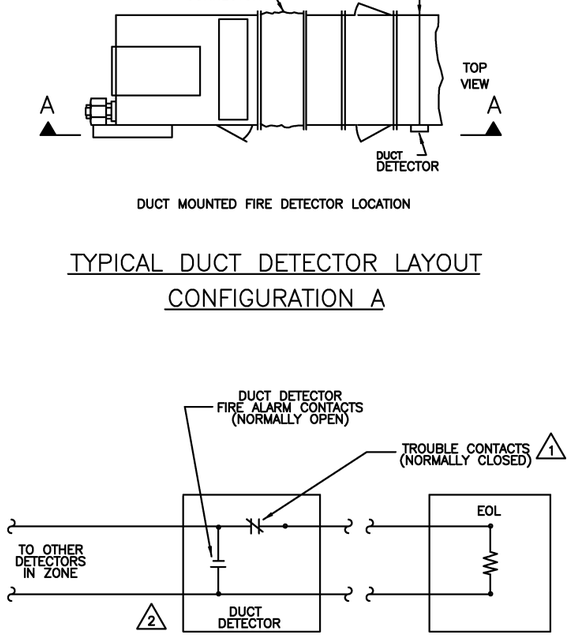


SECTION A–A

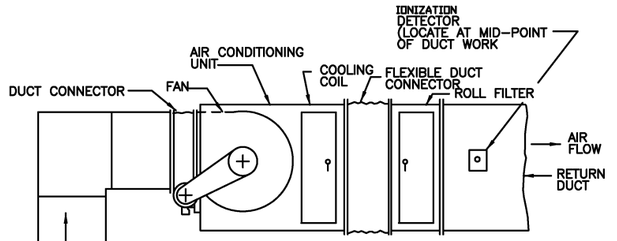


DUCT MOUNTED FIRE DETECTOR LOCATION

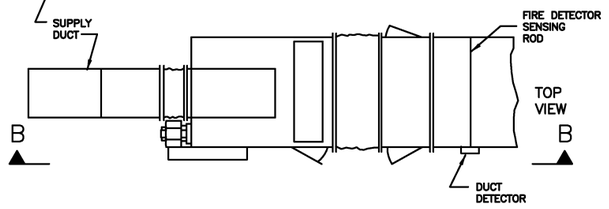
TYPICAL DUCT DETECTOR LAYOUT
CONFIGURATION A



TYPICAL SCHEMATIC OF
DUCT DETECTOR



SECTION B–B

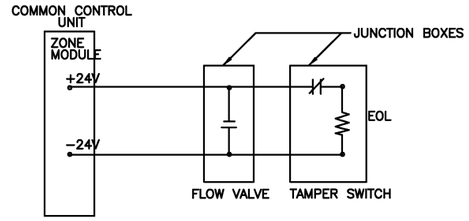


DUCT MOUNTED FIRE DETECTOR LOCATION

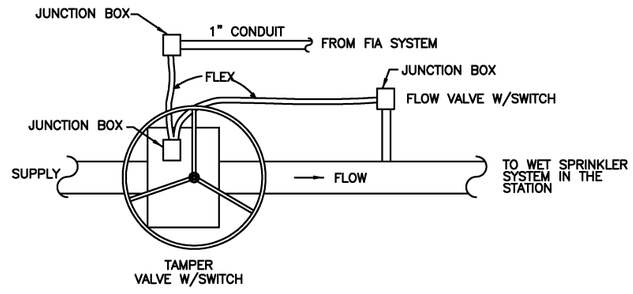
TYPICAL DUCT DETECTOR LAYOUT
CONFIGURATION B

NOTES:

1. DUCT DETECTOR TROUBLE CONTACTS SHALL BE WIRED IN SERIES WITH THE SUPERVISORY LOOP TROUBLE SIGNALS GENERATED.
2. CIRCUIT IS SHOWN IN NON–ALARM STATE.



TYPICAL SCHEMATIC OF
WET SPRINKLER SYSTEM
FLOW VALVE TAMPER SWITCH
CLEANERS ROOM



TYPICAL LAYOUT
WET SPRINKLER SYSTEM

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	RISI/GAH	12–92 DATE
DRAWN	J.L. BISHOP	8–93 DATE
CHECKED	J.P. BISHOP	10–96 DATE
APPROVED	R. GANERIWAL	10–96 DATE
UPDATED		DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION
08/2001	SYSP	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

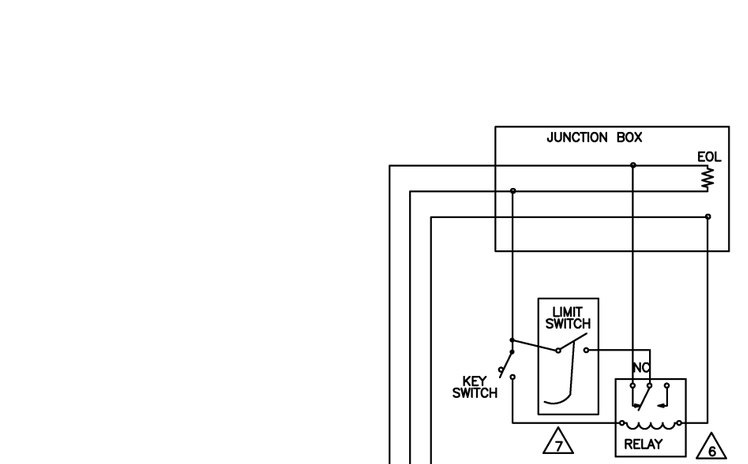
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

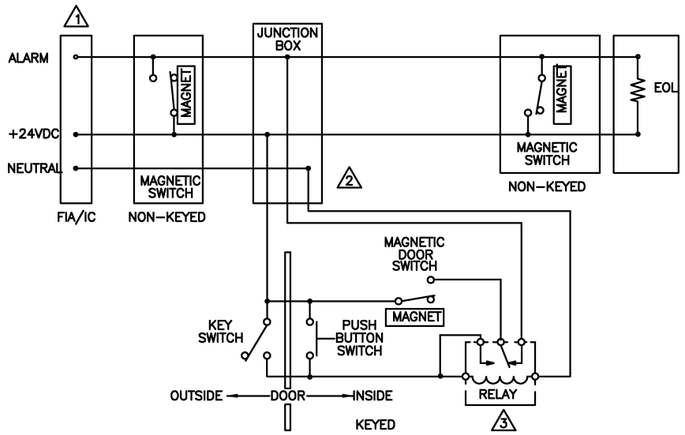
COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM
FIRE ALARM INTERFACE DETAILS
SHEET 5 of 5

SCALE NONE

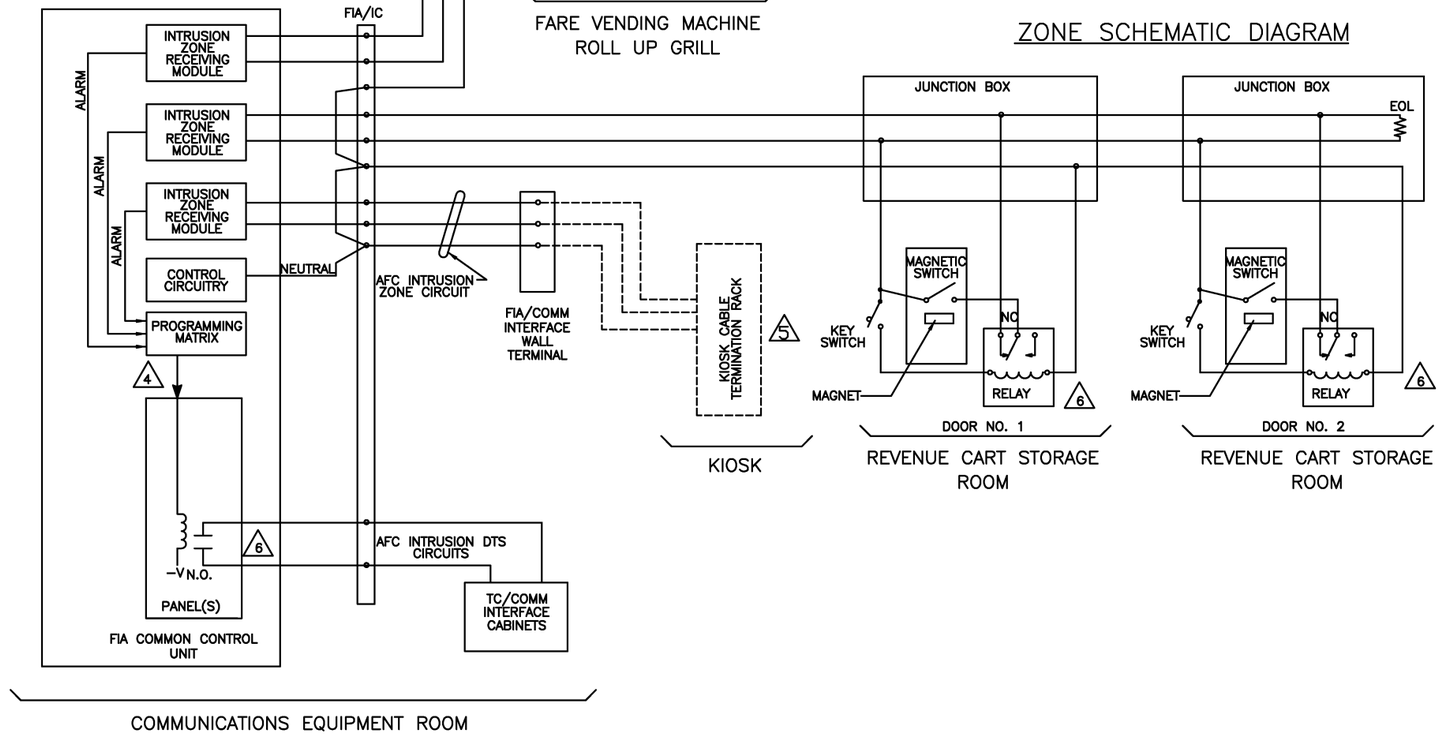
DRAWING NO. ST–CM–055



FARE VENDING MACHINE ROLL UP GRILL



TYPICAL INTRUSION ZONE SCHEMATIC DIAGRAM



TYPICAL AUTOMATIC FARE COLLECTION CONFIGURATION

NOTES:

1. THESE POINTS ORIGINATE ON THE FIA/IC. IN CASE OF ZONES IN REMOTE ANCILLARY STRUCTURES, THOSE POINTS ARE VIA PROTECTOR BLOCKS
2. THIS CONFIGURATION SHALL BE INSTALLED AT DOORS BETWEEN PUBLIC (AND OUTSIDE) AREA AND PROTECTED AREAS.
3. RELAY IS DE–ENERGIZED IN "ARMED" STATE.
4. AN ALARM FROM THE AFC INTRUSION ZONE CIRCUIT, THE AFC ROLL UP GRILLS OR THE REVENUE CART STORAGE INTRUSION ZONE CIRCUIT SHALL ACTIVATE THE AFC INTRUSION DTS RELAY VIA THE PROGRAMMABLE PANEL. THE RELAY IS SHOWN DE–ENERGIZED.
5. CONNECTION TO AFC EQUIPMENT SHALL BE INSTALLED BY OTHERS.
6. RELAY IS DE–ENERGIZED IN NON–ALARM STATE.
7. ALL FARE VENDING MACHINE ROLL UP GRILLS TO BE COMBINED IN A SINGLE ZONE.

LEGEND:

———— STATION CONSTRUCTION CONTRACTOR RESPONSIBILITY

– – – – – – – – – – – – COMMUNICATIONS SYSTEMS CONTRACTOR RESPONSIBILITY

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	RISI/G&H	12–92 DATE
DRAWN	J.L. BISHOP	8–98 DATE
CHECKED	J.P. BISHOP	10–98 DATE
APPROVED	R. GANERIWAL	10–98 DATE
UPDATED		DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
08/2001	SYSP	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

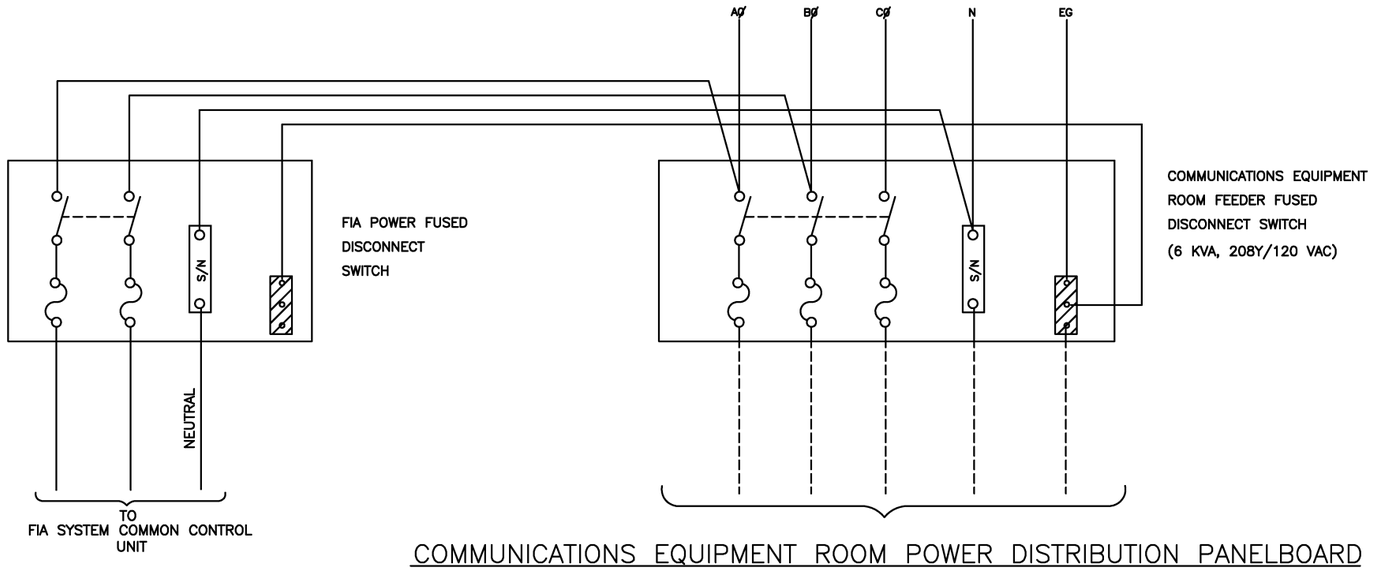
SUBMITTED _____ DATE

APPROVED DIRECTOR _____ May 3, 2001 DATE

COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM
INTRUSION ALARM INTERFACE
DETAILS

SCALE NONE

DRAWING NO. ST–CM–056



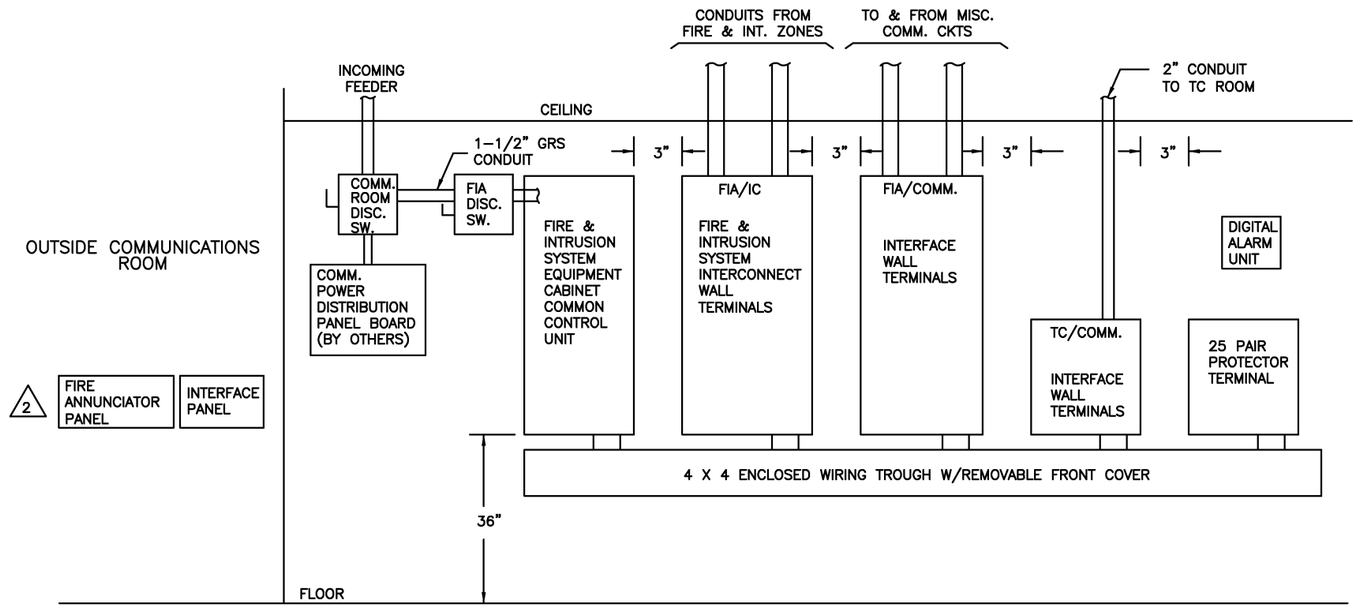
COMMUNICATIONS EQUIPMENT ROOM POWER DISTRIBUTION PANELBOARD

NOTES:

1. ALL WORK SHOWN ON THIS DRAWING IS THE RESPONSIBILITY OF THE STATION CONSTRUCTION CONTRACTOR, EXCEPT AS NOTED.
2. THE FIRE ANNUNCIATOR PANEL IS TEMPORARILY MOUNTED OUTSIDE THE COMMUNICATIONS ROOM. THE PANEL WILL BE MOVED TO ITS PERMANENT POSITION BY THE COMMUNICATIONS SYSTEMS CONTRACTOR.

LEGEND

- S/N — INDICATES ISOLATED SOLID NEUTRAL BUS
- INDICATES GROUND BUS
- STATION CONSTRUCTION CONTRACTOR RESPONSIBILITY
- COMMUNICATIONS SYSTEMS CONTRACTOR RESPONSIBILITY



TYPICAL FIRE & INTRUSION SYSTEM EQUIPMENT WALL LAYOUT

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	RISI/G&H	12-92 DATE
DRAWN	J.L. BISHOP	8-98 DATE
CHECKED	J.P. BISHOP	10-98 DATE
APPROVED	R. GANERIWAL	10-98 DATE
UPDATED		DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION
08/2001	SYSP	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

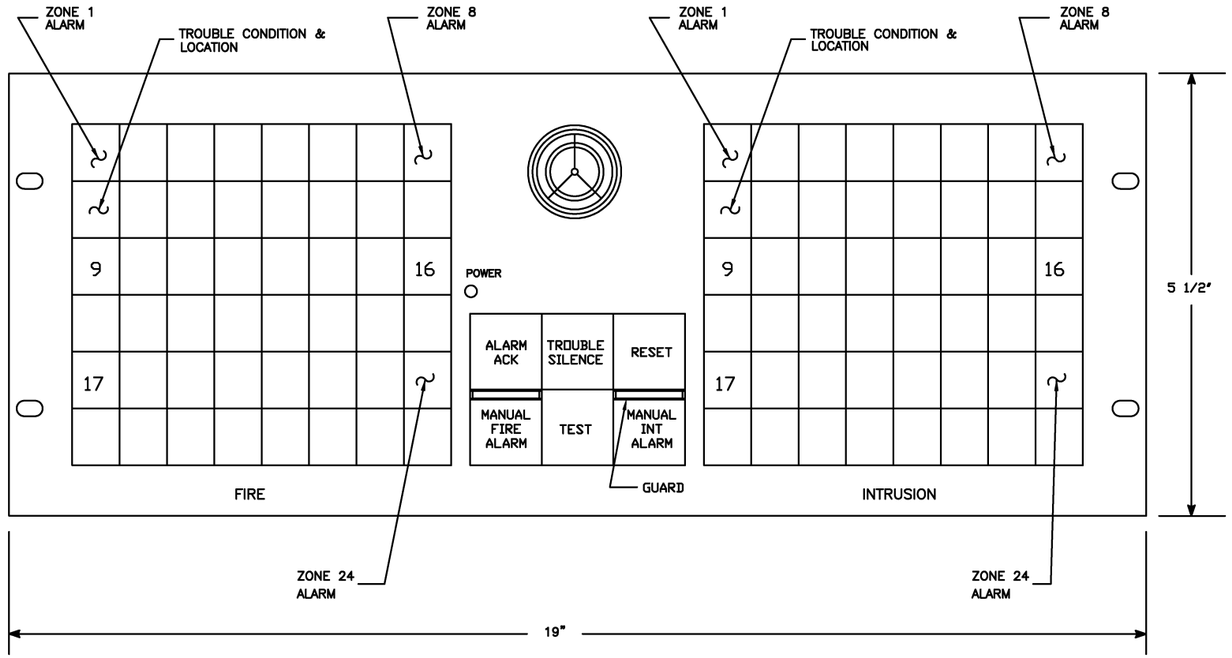
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

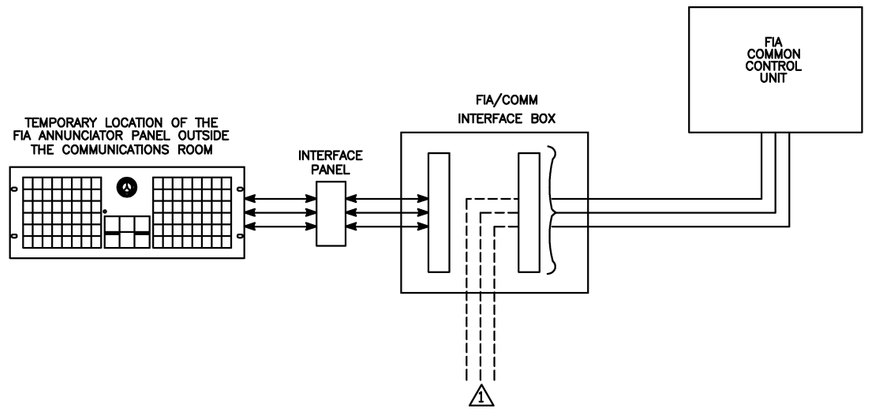
COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM AC POWER DISTRIBUTION AND EQUIPMENT LAYOUT

SCALE: NONE

DRAWING NO.: ST-CM-057



PICTORIAL FRONT
VIEW OF ANNUNCIATOR PANEL



TYPICAL BLOCK
DIAGRAM

NOTES:

1. THE COMMUNICATION SYSTEMS CONTRACTOR WILL REMOVE CONNECTIONS FROM THE FIA ANNUNCIATOR PANEL AND THE FIA/COMM, INTERFACE BOX. HE WILL MOVE THE FIA ANNUNCIATOR PANEL TO THE KIOSK AND RUN A CABLE BETWEEN THE FIA COMM. INTERFACE TO THE ANNUNCIATOR PANEL.
2. THE STATION CONSTRUCTION CONTRACTOR SHALL MAKE CONNECTIONS AS SHOWN ON DD-CM-53, AND REFERENCE DRAWINGS. THE ANNUNCIATOR PANEL SHALL BE MOUNTED TEMPORARILY ON THE WALL OUTSIDE THE COMMUNICATIONS ROOM.
3. THE STATION CONSTRUCTION CONTRACTOR SHALL PROVIDE LABELS FOR BUTTONS THAT SHOW ZONES AND THE LOCATION OF EACH ZONE.

ANNUNCIATOR PANEL DESCRIPTION

THE ANNUNCIATOR PANEL, CONTAINS INDICATORS IDENTIFYING THE "ALARM" CONDITION, "TROUBLE" CONDITION AND THE LOCATION OF EACH ZONE.

THERE SHALL BE TWO INDICATORS ASSOCIATED WITH EACH FIRE ZONE AND TWO INDICATORS ASSOCIATED WITH EACH INTRUSION ZONE. THE UPPER STATUS INDICATOR OF EACH ZONE INDICATES AN "ALARM" CONDITION. THE LOWER STATUS INDICATOR OF EACH ZONE INDICATES A "TROUBLE" CONDITION.

THE ANNUNCIATOR PANEL ALSO CONTAINS THE FOLLOWING INDICATORS AND PUSHBUTTONS FOR COMMON SYSTEM CONTROLS:

1. TROUBLE SILENCE MOMENTARY CONTACT PUSHBUTTON.
2. ALARM ACKNOWLEDGE MOMENTARY CONTACT PUSHBUTTON.
3. RESET MOMENTARY CONTACT PUSHBUTTON.
4. LAMP (LED) TEST MOMENTARY CONTACT PUSHBUTTON.
5. POWER "ON" INDICATOR.
6. MANUAL FIRE ALARM PUSHBUTTON.
7. MANUAL INTRUSION ALARM PUSHBUTTON.

THE ANNUNCIATOR PANEL CONTAINS AN AUDIBLE ANNUNCIATOR THAT INDICATES AN ALARM CONDITION USING ONE TONE AND INDICATES A TROUBLE CONDITION BY USING A DIFFERENT TONE.

LEGEND:

_____ STATION CONSTRUCTION CONTRACTOR RESPONSIBILITY

- - - - - - - - - - COMMUNICATIONS SYSTEMS CONTRACTOR RESPONSIBILITY

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

		DATE
DESIGNED	RISI/G&H	12-92
DRAWN	J.L. BISHOP	8-98
CHECKED	J.P. BISHOP	10-98
APPROVED	R. GANERIWAL	10-98
UPDATED		

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION
08/2001	SYSP	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

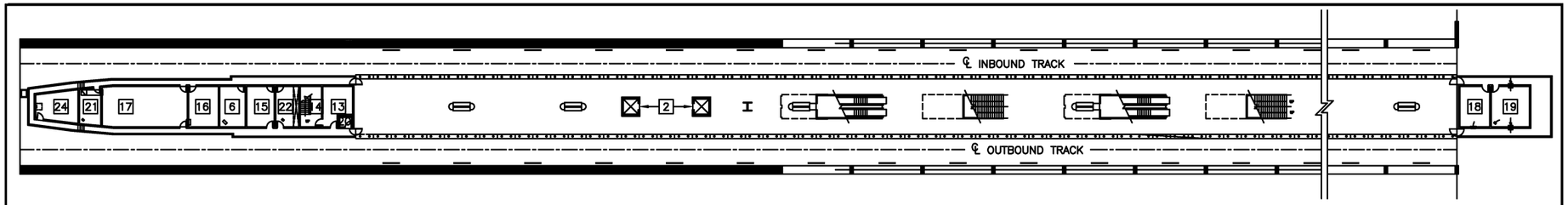
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

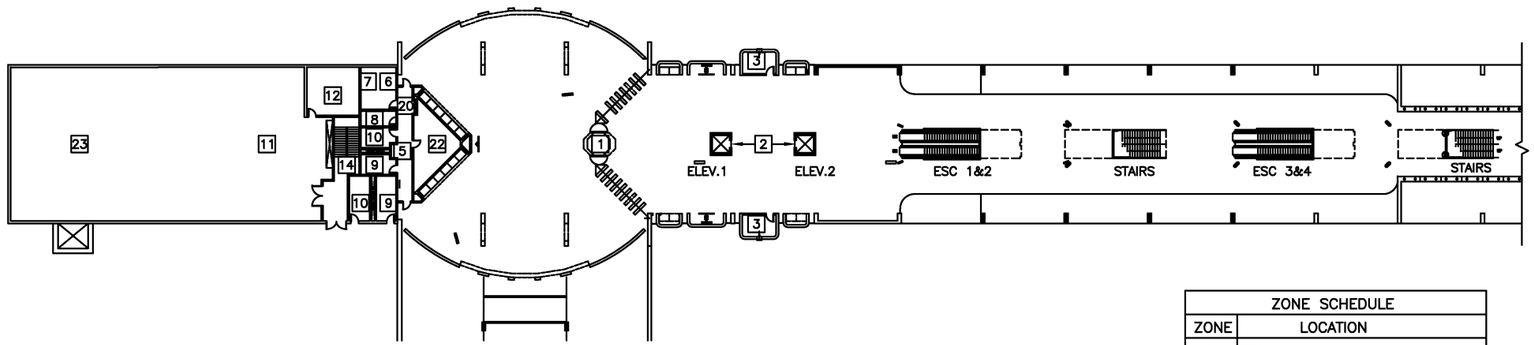
COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM
TYPICAL KIOSK
ANNUNCIATOR PANEL

SCALE NONE

DRAWING NO. ST-CM-058



PLATFORM LEVEL



MEZZANINE LEVEL

ROOM SCHEDULE	
ROOM NO.	DESCRIPTION
1	KIOSK
2	ELEVATORS
3	ELEV. MECH. ROOM
4	ESCALATORS
5	HALLWAY
6	CLEANERS ROOM
7	WATER SERVICE ROOM
8	BELL SYSTEM ROOM
9	WOMEN WASHROOM
10	MEN WASHROOM
11	A/C SERVICE ROOM
12	BATTERY ROOM
13	AREA OF RESCUE ASST.
14	STAIRWAY
15	CART STORAGE ROOM
16	COMMUNICATIONS ROOM
17	TRAIN CONTROL ROOM
18	OPERATIONS ROOM
19	MAINTENANCE ROOM
20	FIRE EQPT. CABINET
21	MECHANICAL ROOM
22	ELECT. EQUIPMENT ROOM
23	TP SUBSTATION
24	TPSS CABLE ROOM

ZONE SCHEDULE	
ZONE	LOCATION
1	TBD
2	TBD
3	TBD
4	TBD
5	TBD
6	TBD
7	TBD
8	TBD
9	TBD
10	TBD
11	TBD
12	TBD
13	TBD
14	TBD

FOR INFORMATION ONLY

KIOSK DATA FILES

1. THE STATION CONTRACTOR SHALL ENGINEER, DRAW AND PRINT KIOSK DATA FILES FOR EACH PASSENGER STATION UNDER THIS CONTRACT. THE STATION CONTRACTOR SHALL DELIVER 12 SETS OF KIOSK DATA FILES FOR EACH PASSENGER STATION UNDER THIS CONTRACT TO THE AUTHORITY. THE DATA, FLOOR PLAN AND LAYOUT WILL BE DIFFERENT FOR EACH PASSENGER STATION AND ITS ASSOCIATED ANCILLARY BUILDINGS.
2. KIOSK DATA FILE DRAWINGS SHALL BE PREPARED TO DOCUMENT EACH OF THE FOLLOWING SUBJECTS:
   A. FIRE ZONES (PASSENGER STATION) – A CROSS–REFERENCE OF THE DESIGNATED FIRE ZONES, ROOM NUMBERS AND ROOM DESCRIPTIONS FOR ALL AREAS WITHIN THE PASSENGER STATION, INCLUDING ANCILLARY BUILDINGS WITHIN THE PASSENGER STATION LIMITS.
   B. FIRE ZONES (ANCILLARY BUILDINGS) – A CROSS–REFERENCE OF THE DESIGNATED FIRE ZONES IN REMOTE ANCILLARY BUILDINGS ASSOCIATED WITH THE PASSENGER STATION.
   C. ESCALATORS – A CROSS–REFERENCE OF ASSIGNED ESCALATOR NUMBERS AND ESCALATOR LOCATIONS WITHIN THE PASSENGER STATION.
3. EACH DRAWING SHALL BE SEALED IN A PROTECTIVE PLASTIC LAMINATE. EACH KIOSK DATA FILE SET SHALL BE 11" x 17". THE COVER MATERIAL SHALL BE MINIMUM OF 60 POUND PUNCHED PAPER WITH HOLES REINFORCED WITH PLASTIC, CLOTH OR METAL. COVERS SHALL BE SEALED IN A PROTECTIVE PLASTIC LAMINATE.
4. A DRAFT COPY OF EACH KIOSK DATA FILE FOR EACH PASSENGER STATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO REPRODUCTION, LAMINATION AND ASSEMBLY.
5. THE STATION CONTRACTOR SHALL ALSO FURNISH A COMPLETE SET OF MYLAR REPRODUCIBLE DRAWINGS AND AUTOCAD DWG FILES ON DISK FOR KIOSK DATA FILES OF EACH PASSENGER STATION.

TBD – TO BE DETERMINED

		REFERENCE DRAWINGS		REVISIONS		
DESIGNED	DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN	DATE					
CHECKED	DATE					
APPROVED	DATE					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

KIOSK DATA FILE
(STATION NAME)
FIRE ZONES

SCALE | DRAWING NO.

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

		REFERENCE DRAWINGS		REVISIONS		
DESIGNED	RSI/G&H 12–92 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN	J.L. BISHOP 8–98 DATE			08/2001	SYSP	Revised and issued by the Authority
CHECKED	J.P. BISHOP 10–98 DATE					
APPROVED	R. GANERIWAL 10–98 DATE					
UPDATED	DATE					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

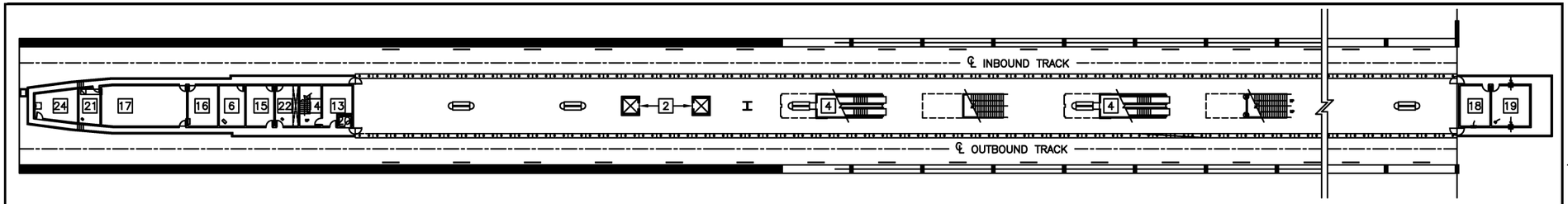
DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

SUBMITTED DATE

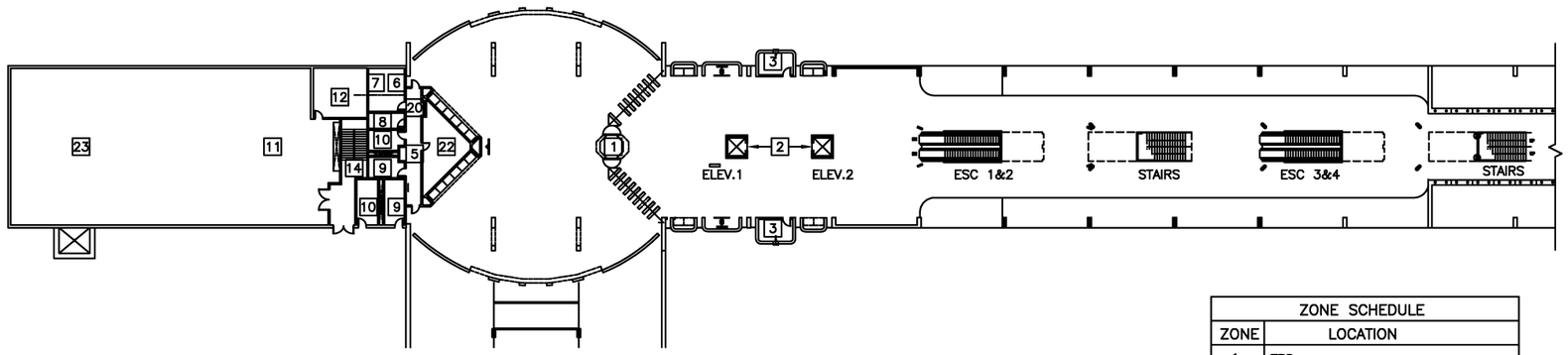
APPROVED DIRECTOR May 3, 2001 DATE

COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM
TYPICAL KIOSK DATA FILES
FOR FIRE ALARM ZONES

SCALE NONE | DRAWING NO. ST–CM–059



PLATFORM LEVEL



MEZZANINE LEVEL

ROOM SCHEDULE	
ROOM NO.	DESCRIPTION
1	KIOSK
2	ELEVATORS
3	ELEV. MECH. ROOM
4	ESCALATORS
5	HALLWAY
6	CLEANERS ROOM
7	WATER SERVICE ROOM
8	BELL SYSTEM ROOM
9	WOMEN WASHROOM
10	MEN WASHROOM
11	A/C SERVICE ROOM
12	BATTERY ROOM
13	AREA OF RESCUE ASST.
14	STAIRWAY
15	CART STORAGE ROOM
16	COMMUNICATIONS ROOM
17	TRAIN CONTROL ROOM
18	OPERATIONS ROOM
19	MAINTENANCE ROOM
20	FIRE EQPT. CABINET
21	MECHANICAL ROOM
22	ELECT. EQUIPMENT ROOM
23	TP SUBSTATION
24	TPSS CABLE ROOM

ZONE SCHEDULE	
ZONE	LOCATION
1	TBD
2	TBD
3	TBD
4	TBD
5	TBD
6	TBD
7	TBD
8	TBD
9	TBD
10	TBD
11	TBD
12	TBD
13	TBD
14	TBD

FOR INFORMATION ONLY

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1. THE STATION CONTRACTOR SHALL ENGINEER, DRAW AND PRINT KIOSK DATA FILES FOR EACH PASSENGER STATION UNDER THIS CONTRACT. THE STATION CONTRACTOR SHALL DELIVER 12 SETS OF KIOSK DATA FILES FOR EACH PASSENGER STATION UNDER THIS CONTRACT TO THE AUTHORITY. THE DATA, FLOOR PLAN AND LAYOUT WILL BE DIFFERENT FOR EACH PASSENGER STATION AND ITS ASSOCIATED ANCILLARY BUILDINGS.
2. KIOSK DATA FILE DRAWINGS SHALL BE PREPARED TO DOCUMENT EACH OF THE FOLLOWING SUBJECTS:
   A. INTRUSION ZONES (PASSENGER STATION) – A CROSS–REFERENCE OF THE DESIGNATED INTRUSION ZONES, ROOM NUMBERS AND ROOM DESCRIPTIONS FOR ALL AREAS WITHIN THE PASSENGER STATION, INCLUDING ANCILLARY BUILDINGS WITHIN THE PASSENGER STATION LIMITS.
   B. INTRUSION ZONES (ANCILLARY BUILDINGS) – A CROSS–REFERENCE OF THE DESIGNATED INTRUSION ZONES IN REMOTE ANCILLARY BUILDINGS ASSOCIATED WITH THE PASSENGER STATION.
   C. ESCALATORS – A CROSS–REFERENCE OF ASSIGNED ESCALATOR NUMBERS AND ESCALATOR LOCATIONS WITHIN THE PASSENGER STATION.
3. EACH DRAWING SHALL BE SEALED IN A PROTECTIVE PLASTIC LAMINATE. EACH KIOSK DATA FILE SET SHALL BE 11" x 17". THE COVER MATERIAL SHALL BE MINIMUM OF 60 POUND PUNCHED PAPER WITH HOLES REINFORCED WITH PLASTIC, CLOTH OR METAL. COVERS SHALL BE SEALED IN A PROTECTIVE PLASTIC LAMINATE.
4. A DRAFT COPY OF EACH KIOSK DATA FILE FOR EACH PASSENGER STATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO REPRODUCTION, LAMINATION AND ASSEMBLY.
5. THE STATION CONTRACTOR SHALL ALSO FURNISH A COMPLETE SET OF MYLAR REPRODUCIBLE DRAWINGS AND AUTOCAD DWG FILES ON DISK FOR KIOSK DATA FILES OF EACH PASSENGER STATION.

TBD – TO BE DETERMINED

DESIGNED _____ DATE
DRAWN _____ DATE
CHECKED _____ DATE
APPROVED _____ DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

KIOSK DATA FILE
(STATION NAME)
INTRUSION ZONES

SCALE | DRAWING NO.

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED RISI/G&H 12–92 DATE
DRAWN J.L. BISHOP 5–96 DATE
CHECKED J.P. BISHOP 10–96 DATE
APPROVED R. GANERIWAL 10–96 DATE
UPDATED _____ DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION
08/2001	SYSP	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

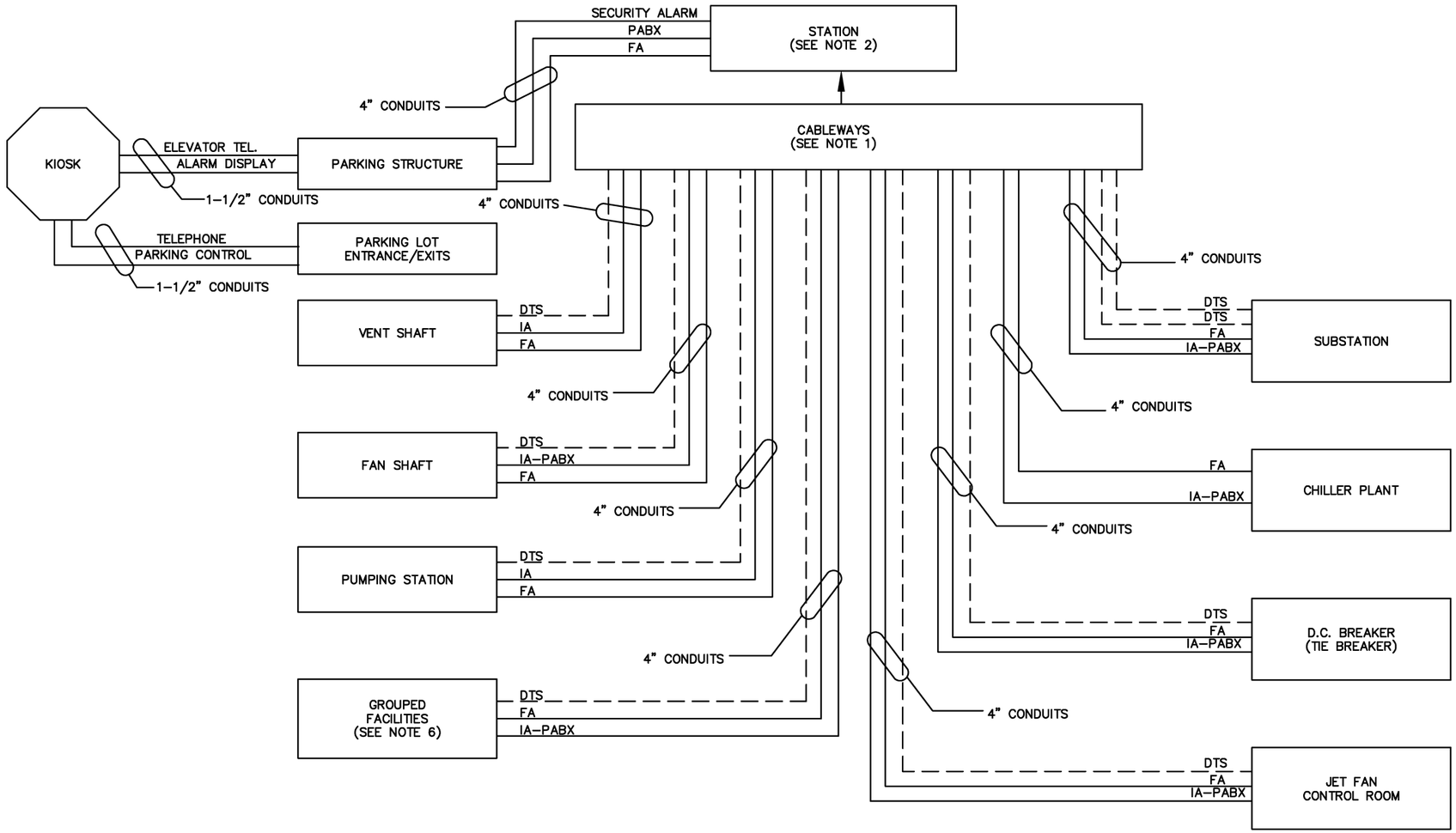
DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

SUBMITTED _____ DATE

APPROVED DIRECTOR _____ May 3, 2001 DATE

COMMUNICATIONS DESIGN DRAWING
PASSENGER STATION FIA SYSTEM
TYPICAL KIOSK DATA FILE FOR INTRUSION ZONES

SCALE: NONE | DRAWING NO.: ST–CM–060



LEGEND

————	COMMUNICATIONS
— — — —	TRAIN CONTROL (SEE DD-TC-37)
DTS	DATA TRANSMISSION SYSTEM
IA	INTRUSION ALARM
FA	FIRE ALARM
PABX	PRIVATE AUTOMATIC BRANCH EXCHANGE

NOTES

1. MAINLINE DUCTBANKS, TUNNEL WALLS, CABLE TROUGHS OR GRADE BEAMS NORMALLY PROVIDE CABLE PASSAGE MEANS TO OR NEAR THE REMOTE FACILITY. CONDUITS TO BE PROVIDED ARE FROM A CABLEWAY INTO THE REMOTE FACILITY, (e.g CONDUIT FROM NEAREST POINT ON TUNNEL WALL TO A REMOTE SUBSTATION) CONDUIT NOT TO BE PLACED ON TUNNEL WALLS.
2. SEE DRAWINGS DD-TC-33 AND DD-CM-30 FOR CABLE ENTRANCE TO TRAIN CONTROL AND COMMUNICATIONS ROOMS.
3. CONDUIT RUNS ARE SCHEMATIC AND DEPICT THE SIZE OF ACCESS. INSTALL CONDUITS OR SLEEVES AS REQUIRED FROM CABLEWAYS TO REMOTE FACILITIES
4. CONDUIT QUANTITIES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. EXACT QUANTITIES TO BE COORDINATED WITH THE AUTHORITY.
5. DEPENDING ON FACILITY CHARACTERISTICS, ADDITIONAL CONDUITS MAY BE REQUIRED FOR FACILITY NOT SHOWN ON THIS DRAWING
6. WHEN REMOTE FACILITY ARE HOUSED WITHIN THE SAME BUILDING, ROUTES (SLEEVES, BLOCKOUTS, EXPOSED OR EMBEDDED CONDUIT) SHALL BE PROVIDED AS PASSAGE MEANS FROM EACH ROOM TO A CENTRAL COLLECTING POINT. 4-4" CONDUITS SHALL BE PROVIDED FROM THIS POINT TO THE RIGHT-OF-WAY CABLEWAY.
7. SEE DD-CM-30 FOR COMMUNICATIONS CONDUIT REQUIREMENTS AT ELEVATOR INSTALLATION REMOVED FROM STATION LIMITS.

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	E. HARVEY	9-75 DATE
DRAWN	D. MILNER	10-75 DATE
CHECKED	L. HIMMEL	11-75 DATE
APPROVED	T. HANSEN	11-75 DATE
UPDATED	R. GANERIWAL	6-98 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION
ST-CM-030	TYP. COMM. CONDUIT RISER DIA.-STATIONS
ST-TC-033	TYP. T.C. CONDUIT RISER DIA. STATIONS
ST-TC-037	T.C. CONDUIT DIAG. REMOTE FAC.

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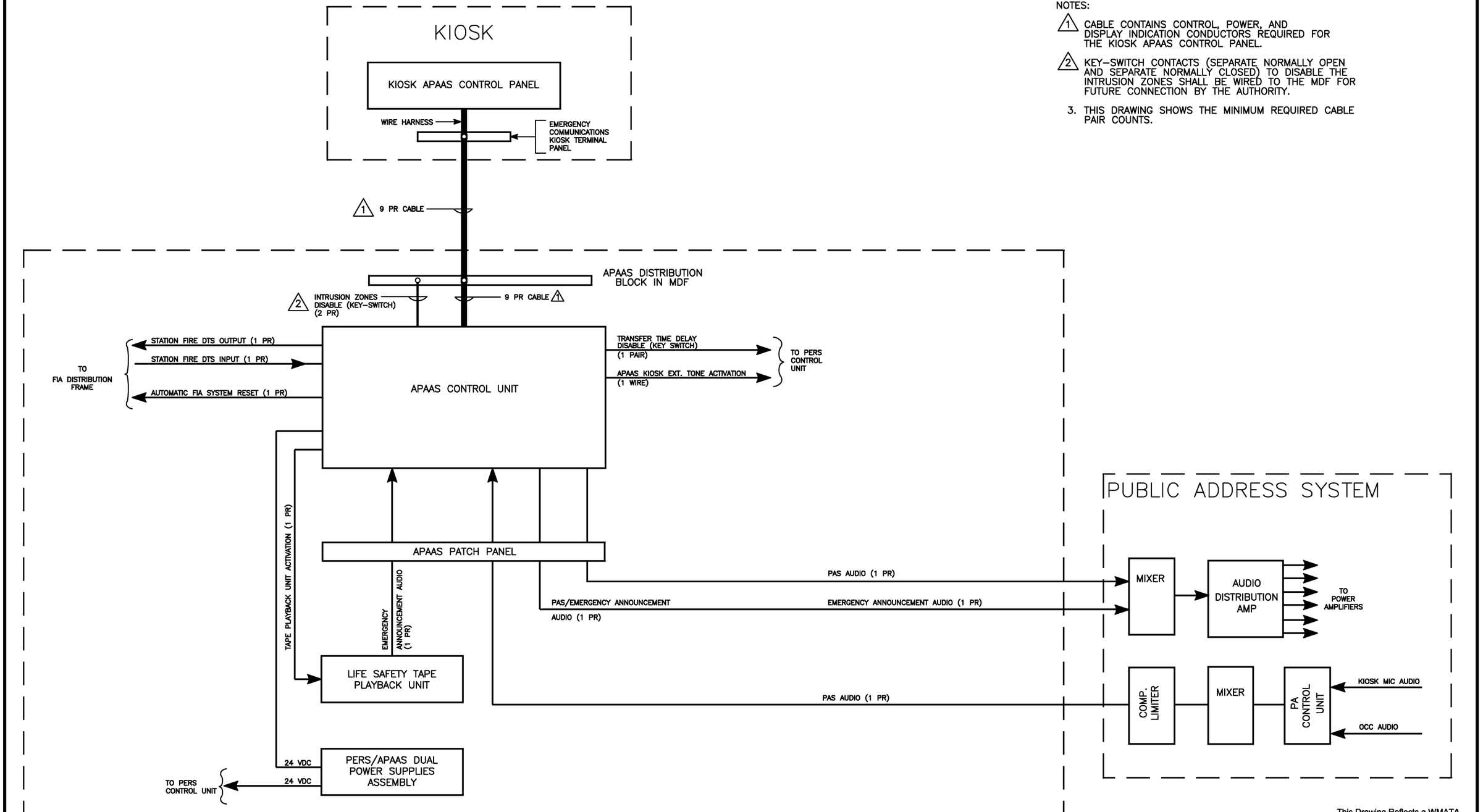
COMMUNICATIONS DESIGN DRAWING
COMMUNICATIONS CONDUITS
RISER DIAGRAM FOR REMOTE FACILITIES

SCALE: NONE

DRAWING NO. ST-CM-061

NOTES:

1. CABLE CONTAINS CONTROL, POWER, AND DISPLAY INDICATION CONDUCTORS REQUIRED FOR THE KIOSK APAAS CONTROL PANEL.
2. KEY–SWITCH CONTACTS (SEPARATE NORMALLY OPEN AND SEPARATE NORMALLY CLOSED) TO DISABLE THE INTRUSION ZONES SHALL BE WIRED TO THE MDF FOR FUTURE CONNECTION BY THE AUTHORITY.
3. THIS DRAWING SHOWS THE MINIMUM REQUIRED CABLE PAIR COUNTS.



This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

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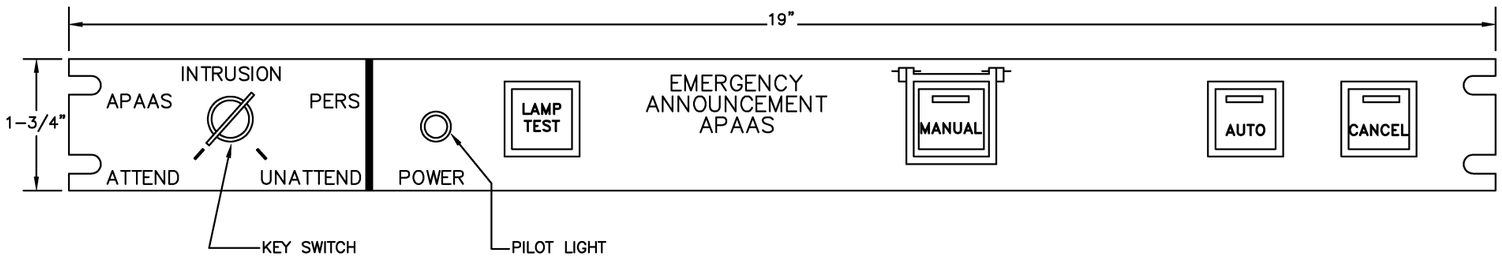
TYPICAL APAAS BLOCK DIAGRAM

SCALE: NONE

DRAWING NO.: ST–CM–APA–001

NOTES:

1. THIS DRAWING ILLUSTRATES THE APPROXIMATE LAYOUT OF THE KIOSK APAAS CONTROL PANEL. THE ACTUAL CONFIGURATION MAY VARY.
2. THE "POWER" INDICATOR ILLUMINATES GREEN.
3. THE "CANCEL" PUSHBUTTON ILLUMINATES FLASHING AMBER WHEN ACTIVATED.
4. THE "AUTO" INDICATOR ILLUMINATES FLASHING RED WHEN ACTIVATED.
5. THE "MANUAL" PUSHBUTTON ILLUMINATES FLASHING RED WHEN ACTIVATED.
6. THE LAMP TEST PUSHBUTTON IS A WHITE (NON-ILLUMINATING) AND TESTS ALL INDICATORS EXCEPT "POWER"
7. THE "CANCEL" PUSHBUTTON IS A PUSH LOCK/PUSH RELEASE OPERATION. ALL OTHER PUSHBUTTONS BE MOMENTARY OPERATION.



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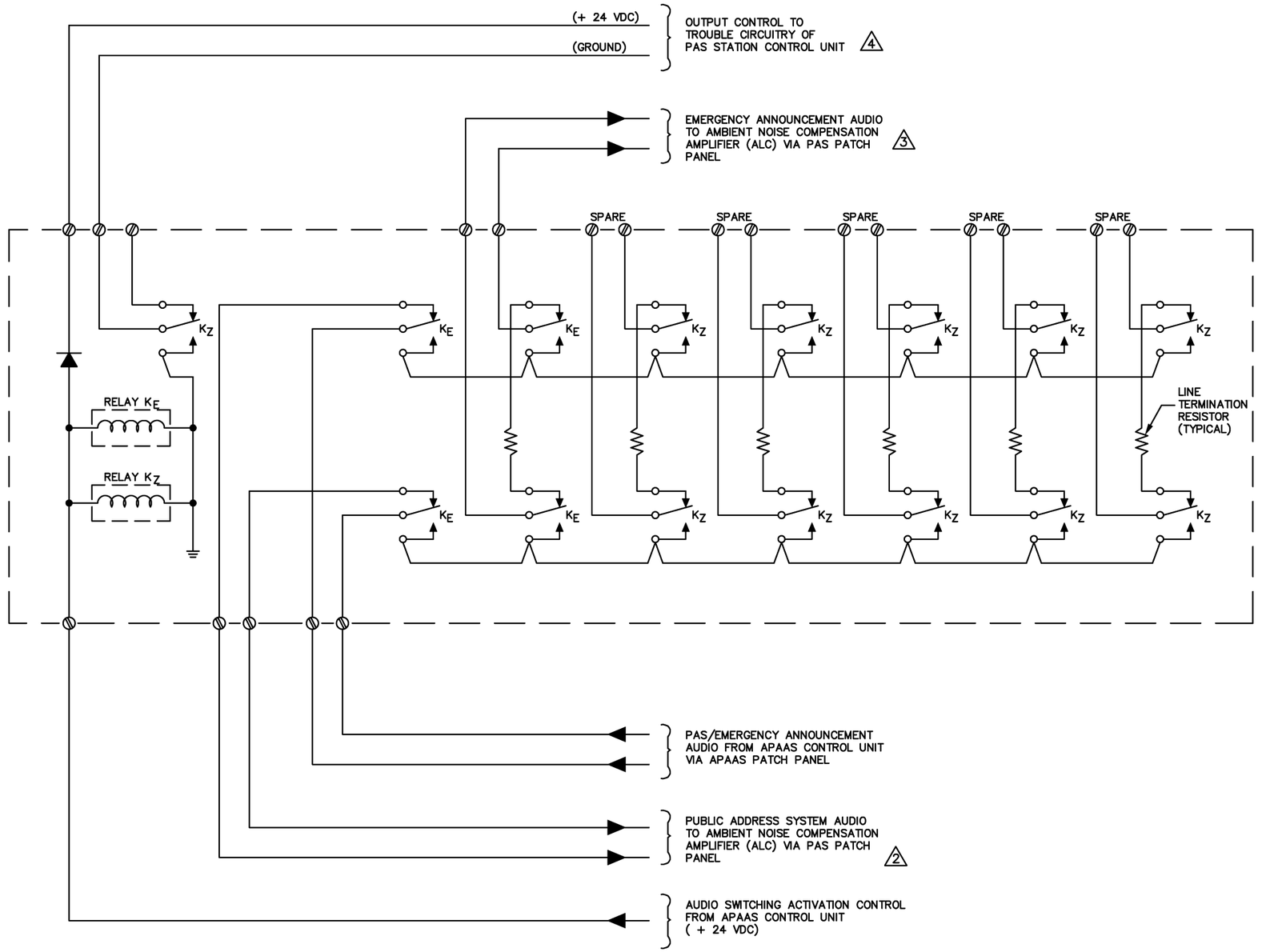
TYPICAL KIOSK APAAS CONTROL PANEL LAYOUT

SCALE: NONE

DRAWING NO.: ST-CM-APA-002



NOTES:

1. THE PA INTERFACE UNIT REROUTES THE EMERGENCY ANNOUNCEMENT TO THE MUSIC INPUT OF THE AMBIENT NOISE COMPENSATION AMPLIFIER (ALC) TO OBTAIN MAXIMUM GAIN (VOLUME) IN THE PUBLIC ADDRESS SYSTEM.
2. CONNECTED TO THE NORMAL INPUT OF THE AMBIENT NOISE COMPENSATION AMPLIFIER (ALC).
3. CONNECTED TO THE MUSIC INPUT OF THE AMBIENT NOISE COMPENSATION AMPLIFIER (ALC).
4. OUTPUT CONTROLS PROVIDE APPROPRIATE SIGNALING TO THE PAS STATION CONTROL UNIT TO PREVENT A TROUBLE ALARM FROM BEING ACTIVATED.
5. THE PA INTERFACE UNIT SHALL BE DESIGNED AND EQUIPPED TO REROUTE THE EMERGENCY ANNOUNCEMENT TO SIX OUTPUTS.
6. ALL COMPONENTS OF THE PA INTERFACE UNIT SHALL BE FULLY ENCLOSED IN A SINGLE CHASSIS.

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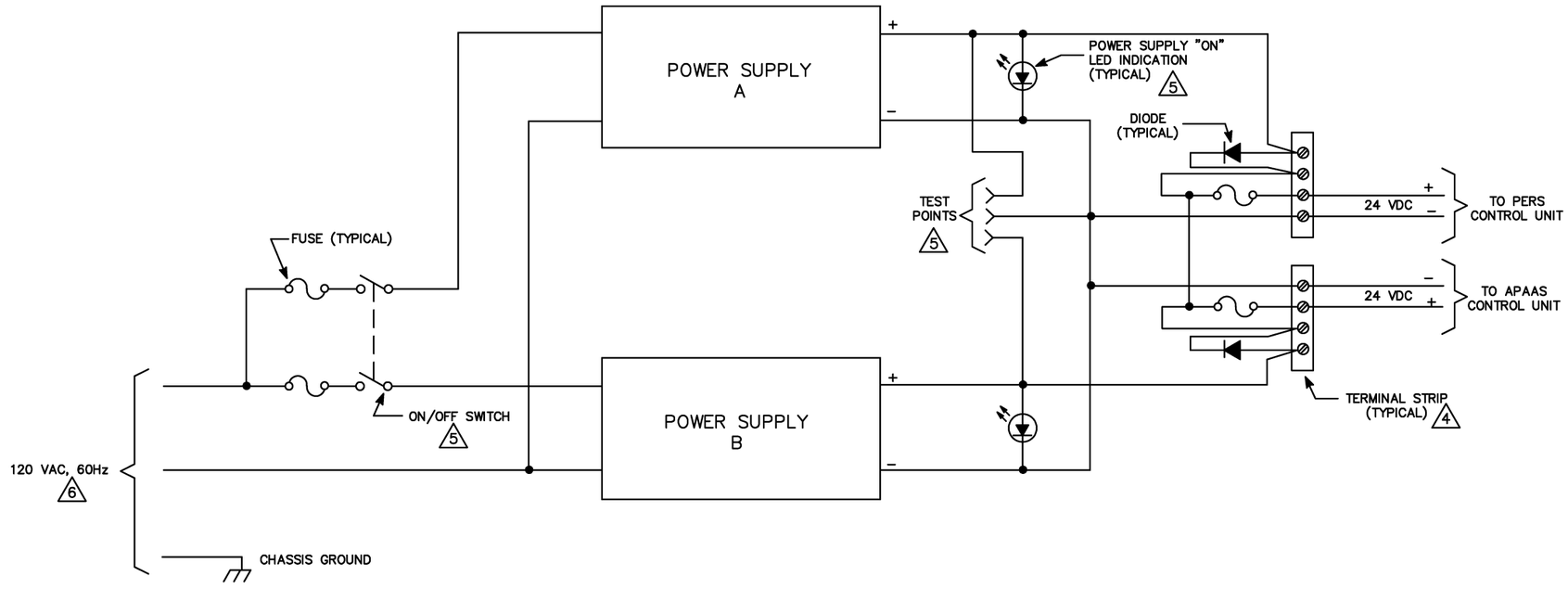
APAAS/PA INTERFACE UNIT DIAGRAM

SCALE: NONE

DRAWING NO.: ST-CM-APA-003



NOTES:

1. DRAWING SHOWS TYPICAL CONFIGURATION OF PERS/APAAS DUAL POWER SUPPLIES ASSEMBLY. ACTUAL CONFIGURATION MAY VARY.
2. ALL FUSES SHALL BE PROVIDED ON THE REAR OF THE CHASSIS. CONTRACTOR SHALL DETERMINE FUSE RATINGS.
3. ALL COMPONENTS, INCLUDING THE TWO POWER SUPPLIES, SHALL BE INSTALLED WITHIN A SINGLE CHASSIS.

4. A SEPARATE TERMINAL STRIP SHALL BE PROVIDED AT THE REAR OF THE CHASSIS FOR CONNECTIONS TO THE PERS CONTROL UNIT AND THE APAAS CONTROL UNIT.

5. THE ON/OFF SWITCH, TEST POINTS, AND LED INDICATORS SHALL BE PROVIDED ON THE FRONT PANEL OF THE CHASSIS.

6. THE PERS/APAAS DUAL POWER SUPPLIES ASSEMBLY SHALL BE CONNECTED TO THE 120 VAC, 60 Hz VIA A POWER CORD WITH PLUG. THE POWER CORD SHALL EXIT THE CHASSIS AT THE REAR PANEL.

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

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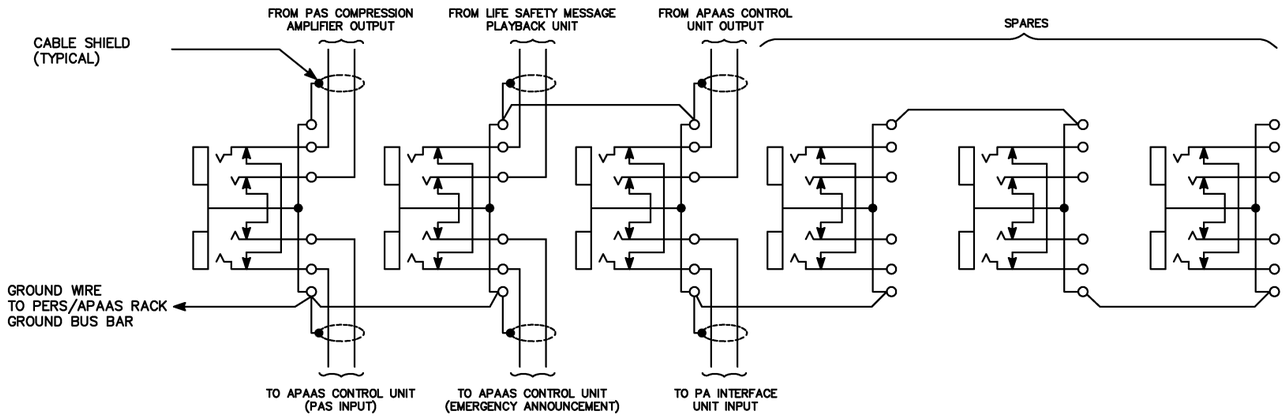
TYPICAL APAAS/PERS DUAL POWER SUPPLIES ASSEMBLY DIAGRAM

SCALE: NONE

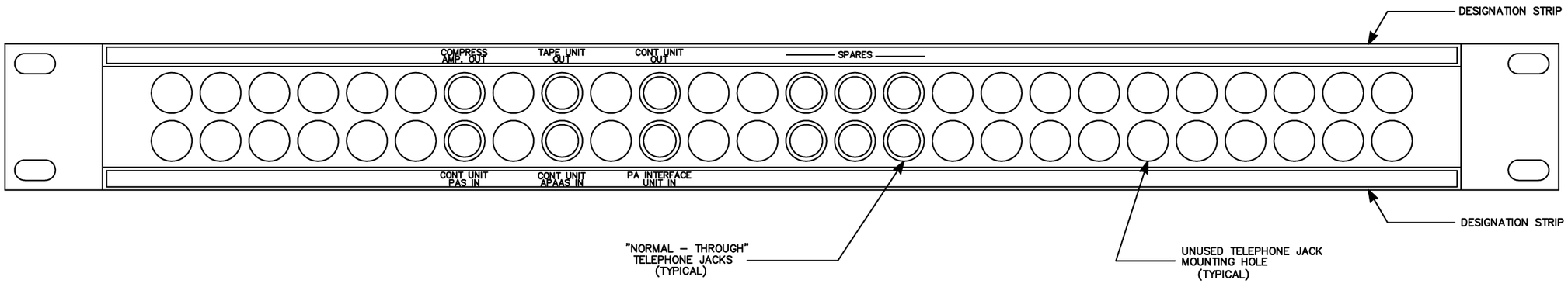
DRAWING NO.: ST-CM-APA-004



WIRING DIAGRAM

NOTES:

1. ALL UNUSED TELEPHONE JACK MOUNTING HOLES SHALL BE FILLED WITH A MOLDED NYLON HOLE PLUG.
2. GROUND WIRES BETWEEN THE TELEPHONE JACKS SHALL BE INSULATED.
3. ALL CABLE SHIELDS SHALL ONLY BE GROUNDED AT THE APAAS PATCH PANEL.



LAYOUT (FRONT VIEW)

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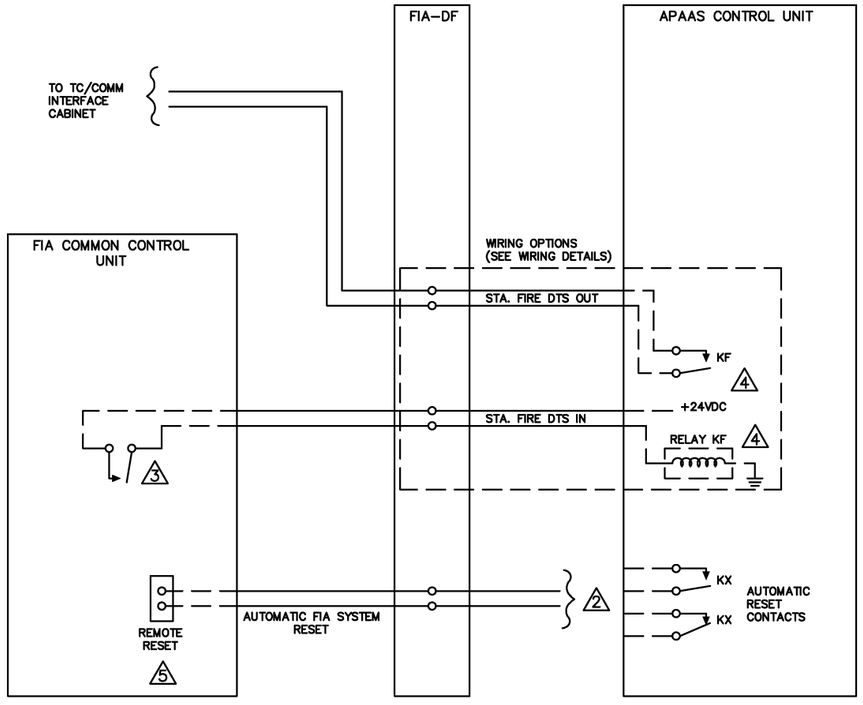
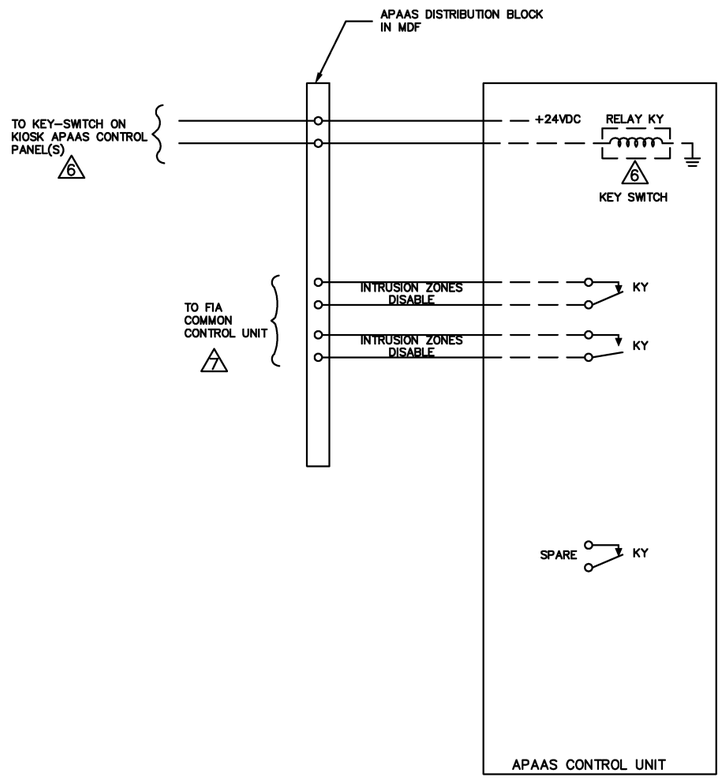
TYPICAL APAAS PATCH PANEL

SCALE NONE

DRAWING NO. ST-CM-APA-005

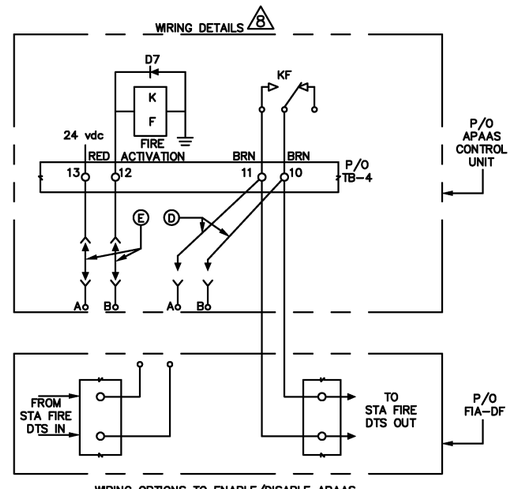


FIA/APAAS INTERFACE



INTRUSION–PERS KEY–SWITCH

INTERFACE



NOTES:

1. THIS IS A CONCEPTUAL DRAWING ILLUSTRATING CONTROL FUNCTIONS.
2. THE APAAS CONTROL UNIT SHALL PROVIDE A SEPARATE NORMALLY OPEN CONTACT AND A NORMALLY CLOSED CONTACT FOR THE AUTOMATIC RESET OF THE FIA SYSTEM. CONTRACTOR SHALL CONNECT TO THE APPROPRIATE RESET CONTROL FOR THE PROVIDED FIA COMMON CONTROL UNIT.
3. FIA COMMON CONTROL UNIT SHALL PROVIDE A CONTACT CLOSURE (STA. FIRE DTS) TO THE APAAS CONTROL UNIT UPON DETECTION OF A FIRE WITHIN THE PASSENGER STATION LIMITS.
4. ACTIVATION OF THE FIRE DETECTION RELAY (KF) SHALL PROVIDE A CONTACT CLOSURE TO THE DTS VIA THE TC/COMM INTERFACE CABINET. IN ADDITION, ACTIVATION OF THE FIRE DETECTION RELAY INITIATES TIMING CIRCUITS FOR AUTOMATIC FIA SYSTEM RESET AND EMERGENCY ANNOUNCEMENT (NOT SHOWN ON DRAWING).
5. APPROPRIATE REMOTE RESET TERMINALS IN THE FIA COMMON CONTROL UNIT.
6. WIRING TO KEY–SWITCH INCLUDED IN THE 9 PR. CABLE TO EACH KIOSK APAAS CONTROL PANEL.
7. THE APAAS CONTROL UNIT SHALL PROVIDE A SEPARATE NORMALLY OPEN CONTACT AND A NORMALLY CLOSED CONTACT FOR DISABLING SELECTED INTRUSION ZONES.
8. THE CONTRACTOR SHALL PROVIDE 2 WIRING OPTIONS TO BE UTILIZED BY THE AUTHORITY FOR FUTURE USE. THE OPTIONS SHALL BE APPROVED BY THE ENGINEER.

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

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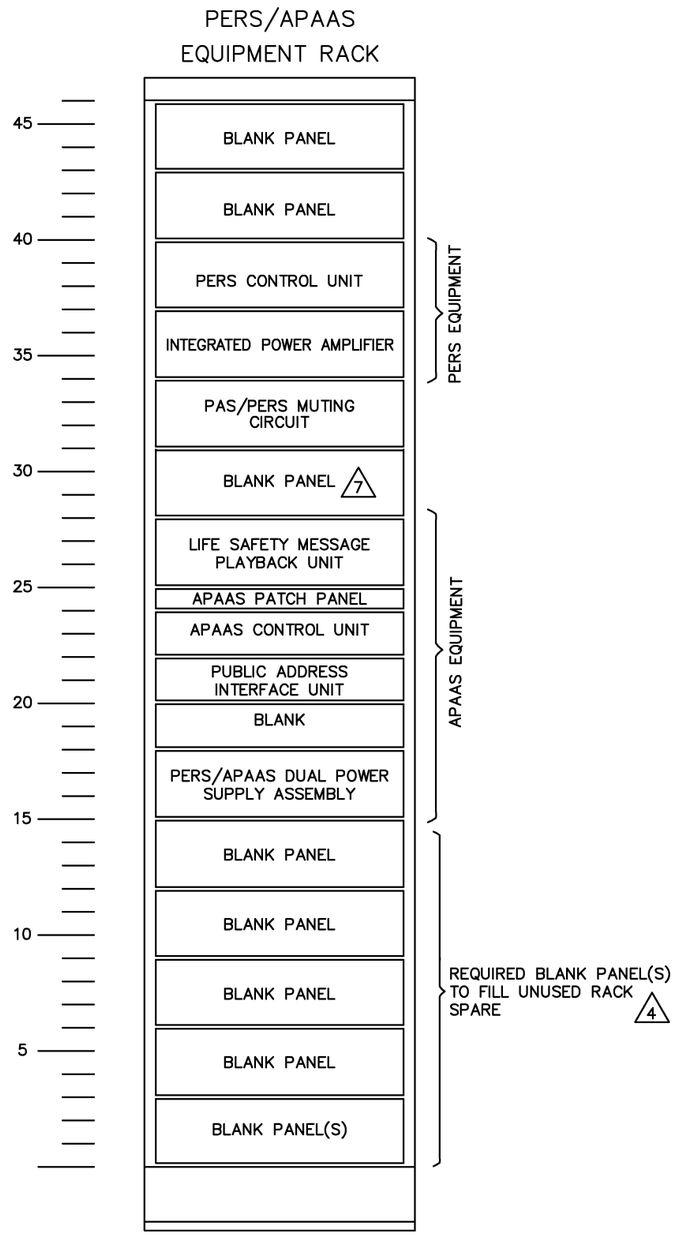
APAAS INTERFACE DETAILS

SCALE NONE

DRAWING NO. ST–CM–APA–006



FRONT VIEW

NOTES:

1. CONTRACTOR SHALL USE THE SAME EQUIPMENT RACK FOR THE PASSENGER EMERGENCY REPORTING SYSTEM AS FOR THE AUTOMATIC PUBLIC ADDRESS ANNOUNCEMENT SYSTEM.
2. THE OPEN EQUIPMENT RACK SHALL HAVE 46 RACK UNITS OF PANEL SPACE AS DEFINED IN EIA STANDARD RS–310–C.
3. BLANK PANELS INDICATED SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

4. BLANK PANEL HEIGHTS SHALL NOT BE GREATER THAN 3 RACK UNITS EACH.

5. BLANK PANELS SHALL BE 0.125 INCHES THICK, ALUMINUM FINISH SHALL BE CLEAR ANODIZED.
6. BLANK PANEL MOUNTING CUT OUTS SHALL BE IN ACCORDANCE WITH EIA STANDARD RS–310–C.

7. THE PATCH CORD HOLDER FOR THE APAAS PATCH PANEL SHALL BE MOUNTED TO THE FRONT OF THE BLANK PANEL ON THE RIGHT SIDE.
8. THIS DRAWING SHOWS THE TYPICAL SPACING OF EQUIPMENT. THE CONTRACTOR SHALL DETERMINE THE SPACE REQUIRED FOR THE EQUIPMENT TO BE INSTALLED.

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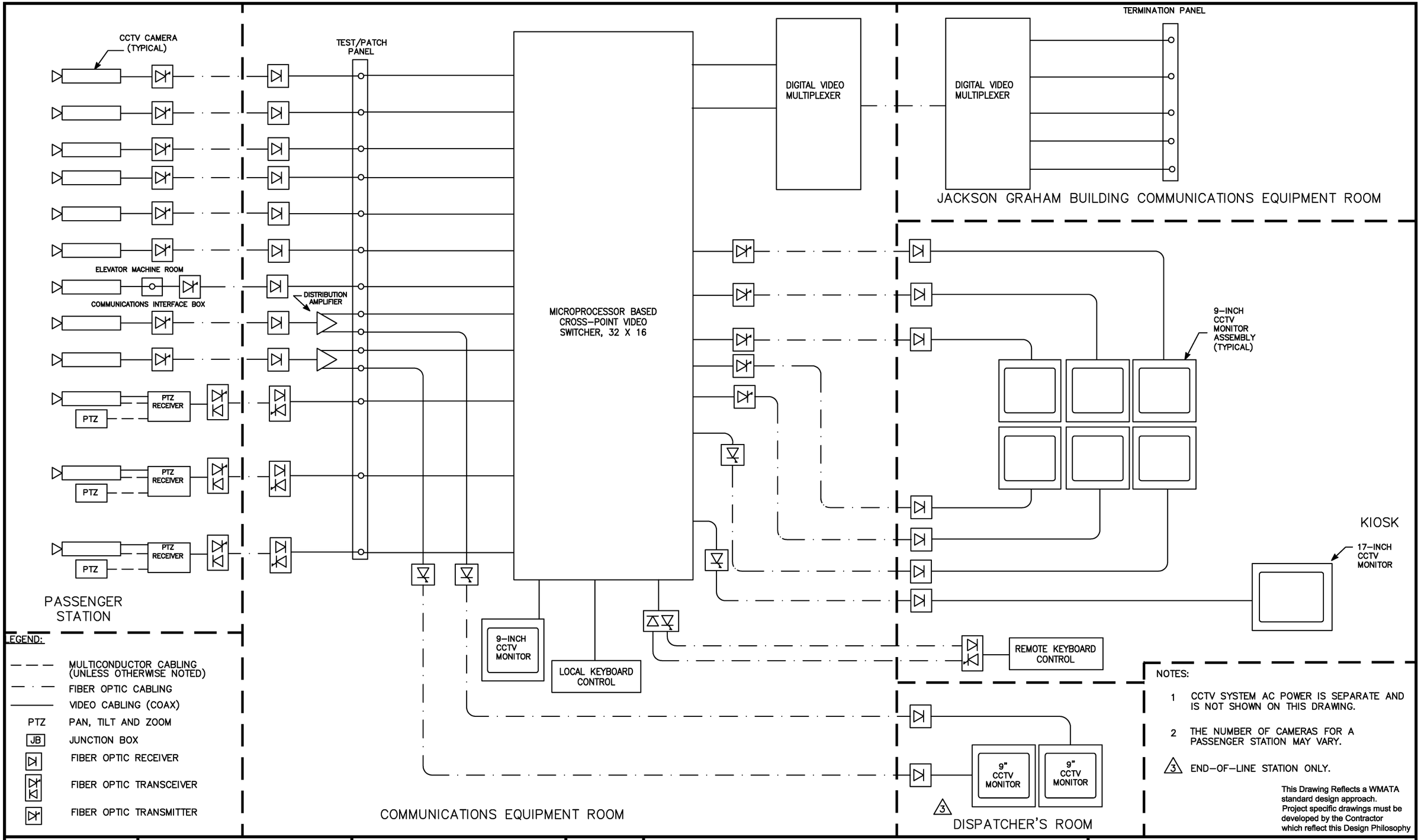
APAAS/PERS EQUIPMENT RACK LAYOUT

SCALE NONE

DRAWING NO. ST–CM–APA–007



LEGEND:

- MULTICONDUCTOR CABLING (UNLESS OTHERWISE NOTED)
- FIBER OPTIC CABLING
- VIDEO CABLING (COAX)
- PTZ — PAN, TILT AND ZOOM
- JB — JUNCTION BOX
- FIBER OPTIC RECEIVER
- FIBER OPTIC TRANSCEIVER
- FIBER OPTIC TRANSMITTER

NOTES:

1. CCTV SYSTEM AC POWER IS SEPARATE AND IS NOT SHOWN ON THIS DRAWING.
2. THE NUMBER OF CAMERAS FOR A PASSENGER STATION MAY VARY.
3. END-OF-LINE STATION ONLY.

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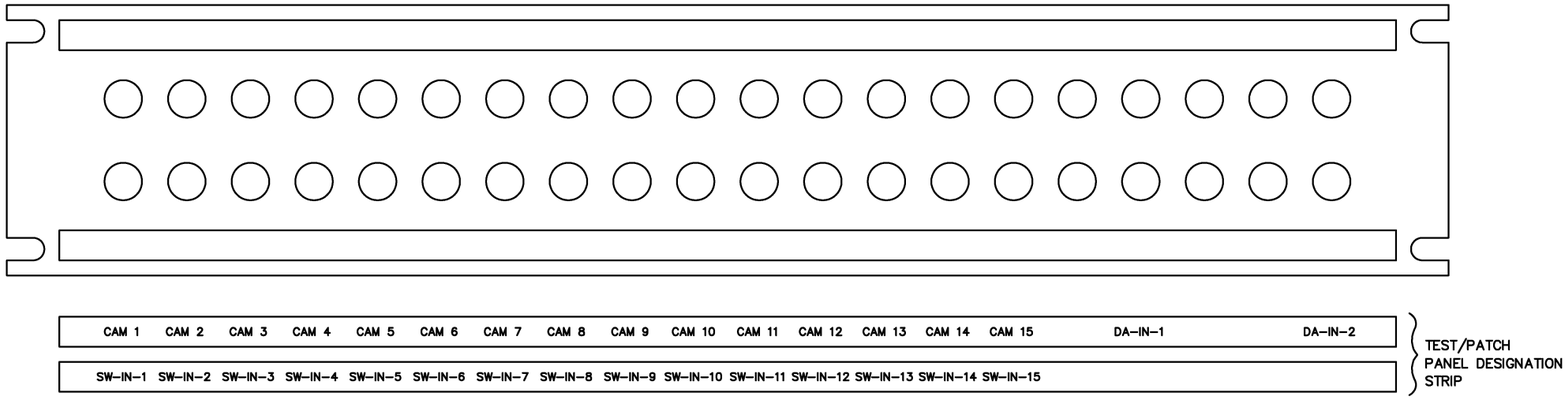
TYPICAL BLOCK DIAGRAM

SCALE: NONE

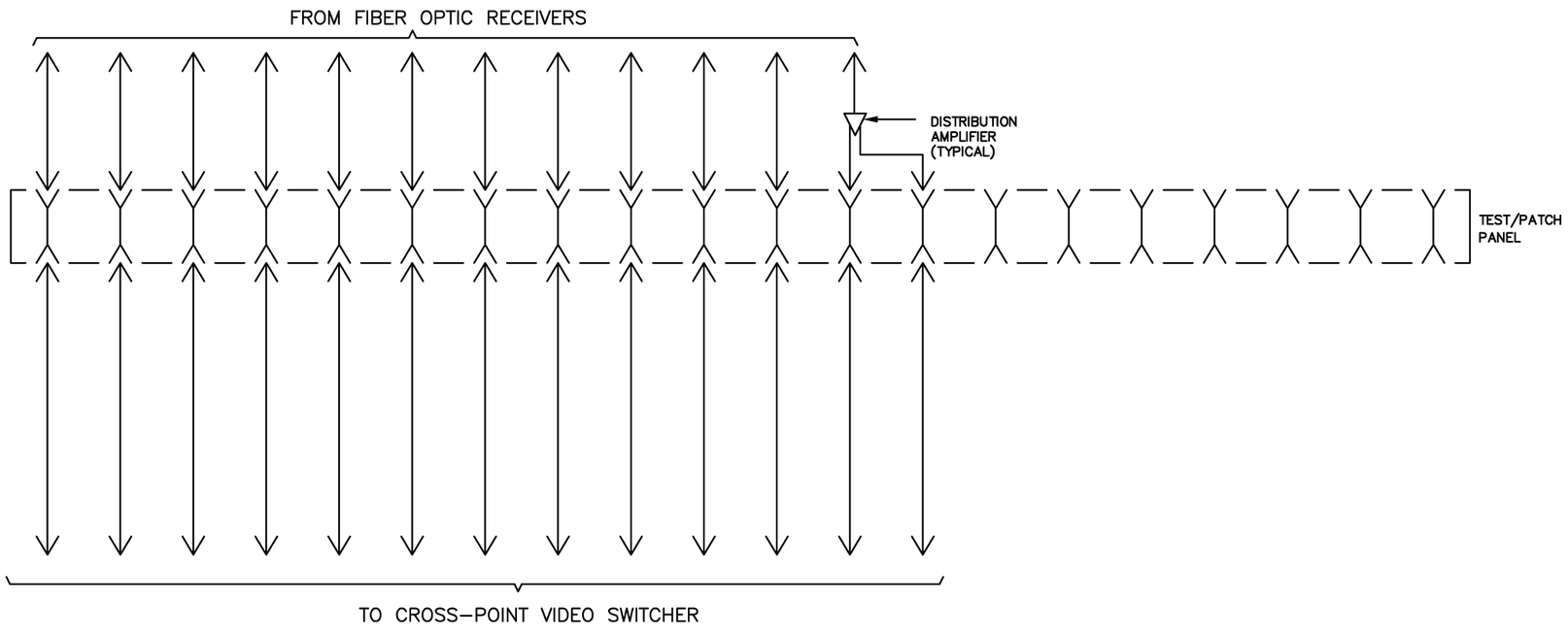
DRAWING NO.: ST-CM-CCTV-001



TEST/PATCH PANEL

NOTES:

1. THE CONTRACTOR SHALL PROVIDE PERMANENTLY MARKED DESIGNATIONS ON THE DESIGNATION STRIPS OF THE TEST/PATCH PANEL. DESIGNATIONS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL DESIGNATIONS SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.



TEST/PATCH PANEL DETAILS

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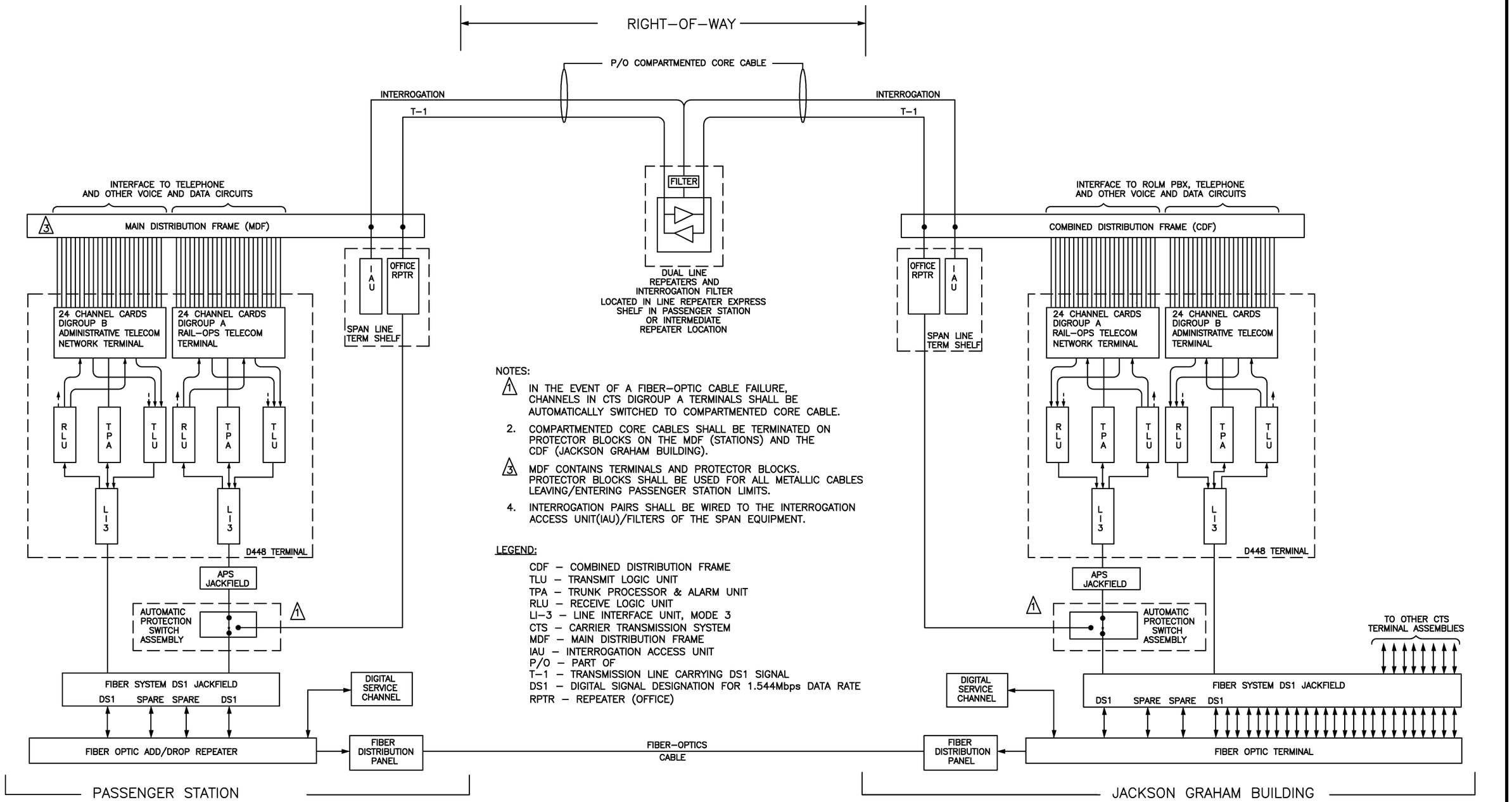
TEST/PATCH PANEL DETAILS

SCALE NONE

DRAWING NO. ST–CM–CCTV–002



NOTES:

1. IN THE EVENT OF A FIBER–OPTIC CABLE FAILURE, CHANNELS IN CTS DIGROUP A TERMINALS SHALL BE AUTOMATICALLY SWITCHED TO COMPARTMENTED CORE CABLE.
2. COMPARTMENTED CORE CABLES SHALL BE TERMINATED ON PROTECTOR BLOCKS ON THE MDF (STATIONS) AND THE CDF (JACKSON GRAHAM BUILDING).
3. MDF CONTAINS TERMINALS AND PROTECTOR BLOCKS. PROTECTOR BLOCKS SHALL BE USED FOR ALL METALLIC CABLES LEAVING/ENTERING PASSENGER STATION LIMITS.
4. INTERROGATION PAIRS SHALL BE WIRED TO THE INTERROGATION ACCESS UNIT(IAU)/FILTERS OF THE SPAN EQUIPMENT.

LEGEND:

CDF – COMBINED DISTRIBUTION FRAME
TLU – TRANSMIT LOGIC UNIT
TPA – TRUNK PROCESSOR & ALARM UNIT
RLU – RECEIVE LOGIC UNIT
LI–3 – LINE INTERFACE UNIT, MODE 3
CTS – CARRIER TRANSMISSION SYSTEM
MDF – MAIN DISTRIBUTION FRAME
IAU – INTERROGATION ACCESS UNIT
P/O – PART OF
T–1 – TRANSMISSION LINE CARRYING DS1 SIGNAL
DS1 – DIGITAL SIGNAL DESIGNATION FOR 1.544Mbps DATA RATE
RPTR – REPEATER (OFFICE)

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

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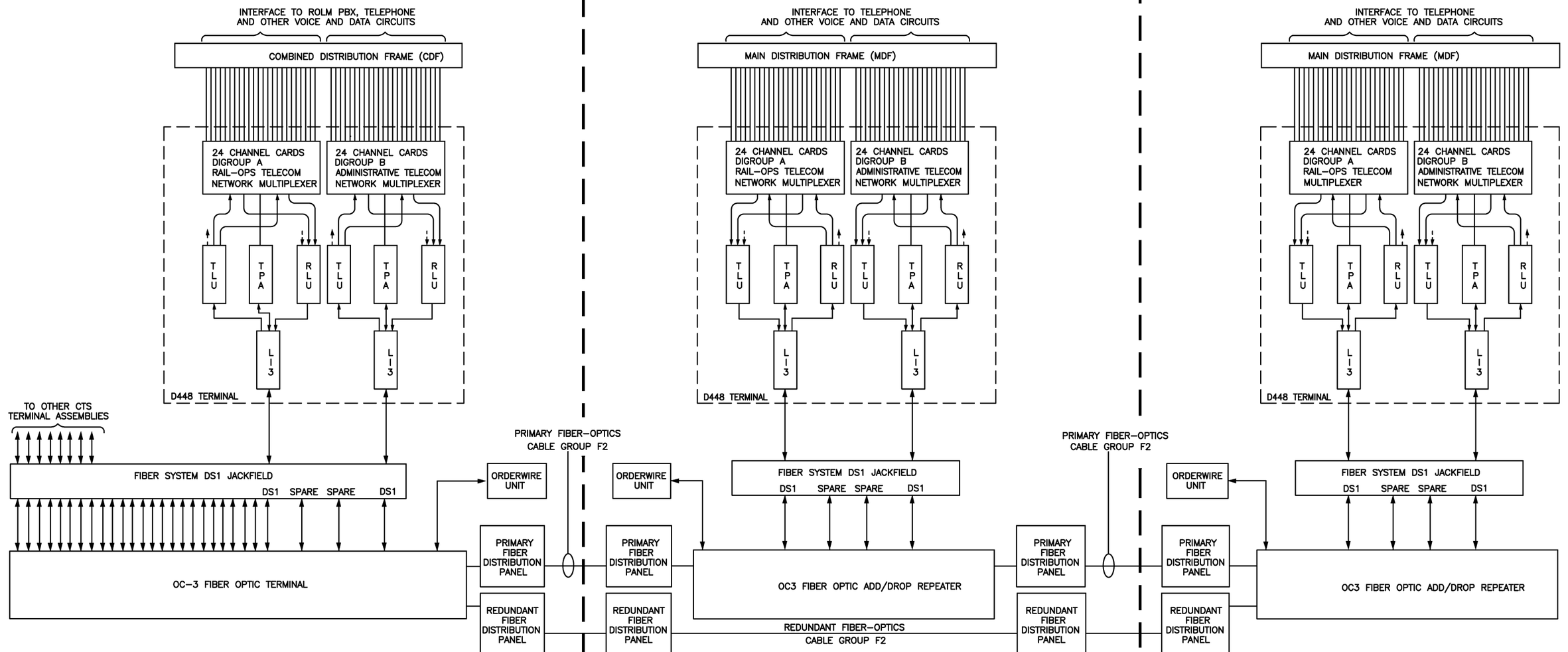
TYPICAL CTS BLOCK DIAGRAM FOR OC–1 FIBER OPTIC SYSTEM

SCALE: NONE

DRAWING NO.: ST–CM–CTS–001

LEGEND:

CDF – COMBINED DISTRIBUTION FRAME
TLU – TRANSMIT LOGIC UNIT
TPA – TRUNK PROCESSOR & ALARM UNIT
RLU – RECEIVE LOGIC UNIT
CTS – CARRIER TRANSMISSION SYSTEM
MDF – MAIN DISTRIBUTION FRAME
DS1 – DIGITAL SIGNAL DESIGNATION FOR 1.544Mbps DATA RATE
OC–3 –OPTICAL SIGNAL DESIGNATION FOR 155.52Mbps DATA RATE



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TYPICAL CTS BLOCK DIAGRAM FOR OC–3 FIBER OPTIC SYSTEM

SCALE: NONE

DRAWING NO.: ST–CM–CTS–002

KIOSK

COMMUNICATIONS EQUIPMENT ROOM

PASSENGER STATION AREA

FIA/IC

FIA/COMM

FIRE & INTRUSION ANNUNCIATION PANEL

FIA COMMON CONTROL UNIT (48 ZONES)

POWER SUPPLY

STATION FIRE ZONES

AUDIO AND VISUAL FIRE DEVICES

WATER SUPPRESSION SYSTEM FLOW VALVE & TAMPER SWITCH

FAN SHUTDOWN INTERFACE BOX

FIRE

INTRUSION

CONTROL

APAAS CONTROL PANEL

KIOSK CABLE TERM.

ELEVATOR CONTROL PANEL

ESCALATOR CONTROL PANEL

FARE GATE CONTROL PANEL

FIA/COMMUNICATIONS INTERFACE WALL TERMINAL

FIRE AND INTRUSION INTERCONNECT WALL TERMINAL

APAAS CONTROL UNIT

REMOTE RESET

INTRUSION DISABLE

FIRE DTS–IN

FIRE DTS

TC/COMM INTERFACE WALL TERMINAL

STA. FIRE DTS

STA. INT. DTS

AFC INT. DTS

ANC. INT. DTS

ANC. FIRE DTS

STA. FIRE

ANC. FIRE

ANC. INT.

STATION INTRUSION ZONES

ANCILLARY BUILDING
(TYP.) FOR

FAN SHAFT/EMERGENCY ACCESS
PRESSURE RELIEF SHAFT
FAN SHAFT/EMERGENCY ACCESS
DRAINAGE PUMPING STATION
PARKING GARAGE

FIRE ZONES

INTRUSION ZONES

PROT TERMINAL

TO/FROM TRAIN CONTROL EQUIPMENT

FARECARD VENDING MACHINES

BELL ATLANTIC LEASED LINE

RJ31X JACK

WALL MOUNTED TEST TELEPHONE

T

SWITCH

DIGITAL ALARM TRANSMITTER

BELL ATLANTIC LEASED LINE

RJ31X JACK

1

TEMPORARY ALARM EQUIPMENT

25 PR PROT TERM.

NOTES:

1. THE CONTRACTOR SHALL REMOVE THE TEMPORARY ALARM EQUIPMENT AT THE APPROPRIATE TIME.

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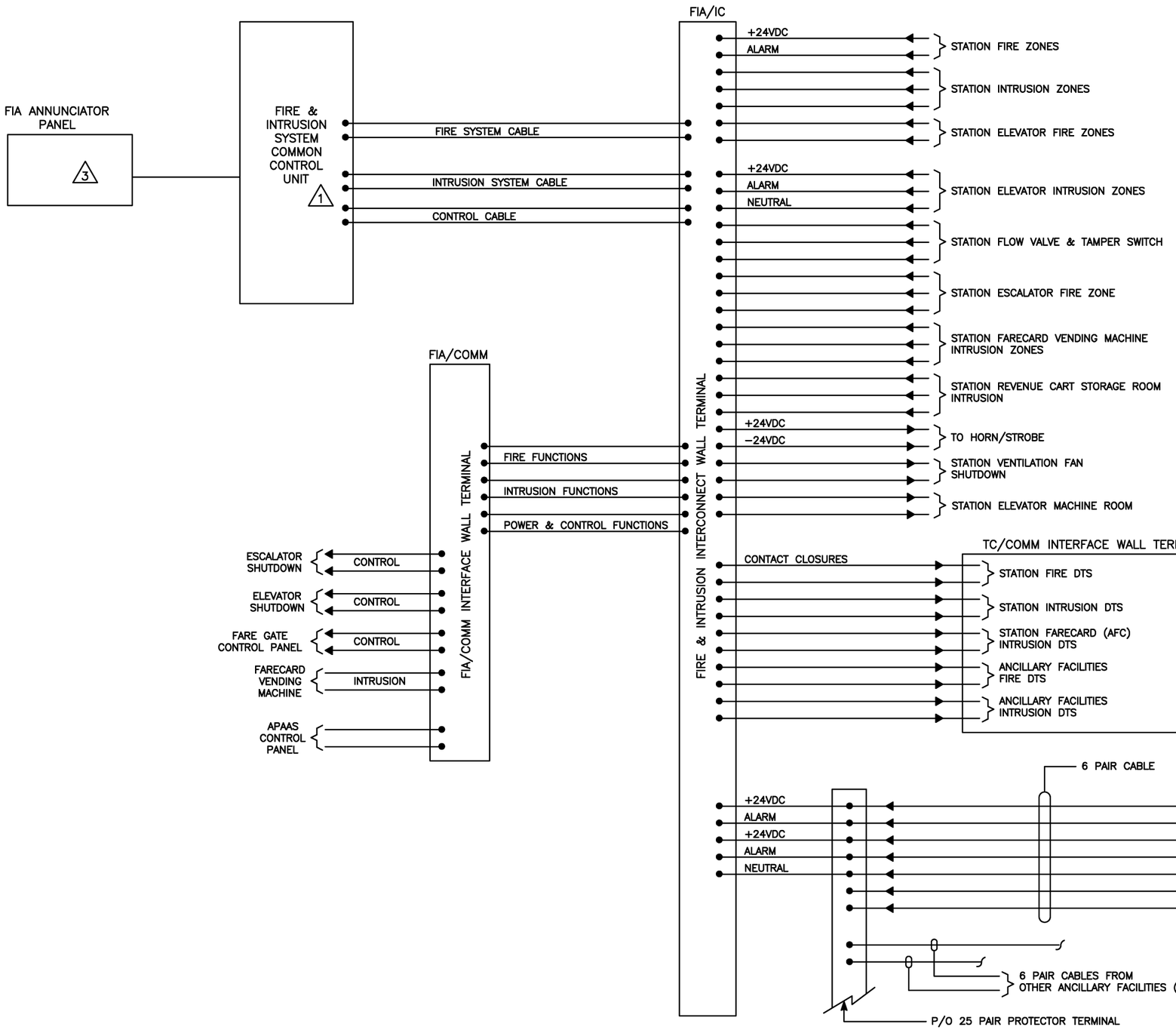
TYPICAL FIA SYSTEM BLOCK DIAGRAM

SCALE: NONE

DRAWING NO.: ST–CM–FIA–001



NOTES:

1. SEPARATE CABLE SHALL BE USED FOR FIRE & INTRUSION FUNCTIONS.
2. DRAWING SHOWS CONNECTIONS FOR ONE TYPICAL REMOTE ANCILLARY FACILITIES.
3. FIA ANNUNCIATOR PANEL SAME MAKE AS COMMON CONTROL UNIT.
4. THE CONTRACTOR SHALL REMOVE THE TEMPORARY ALARM EQUIPMENT AT THE APPROPRIATE TIME.

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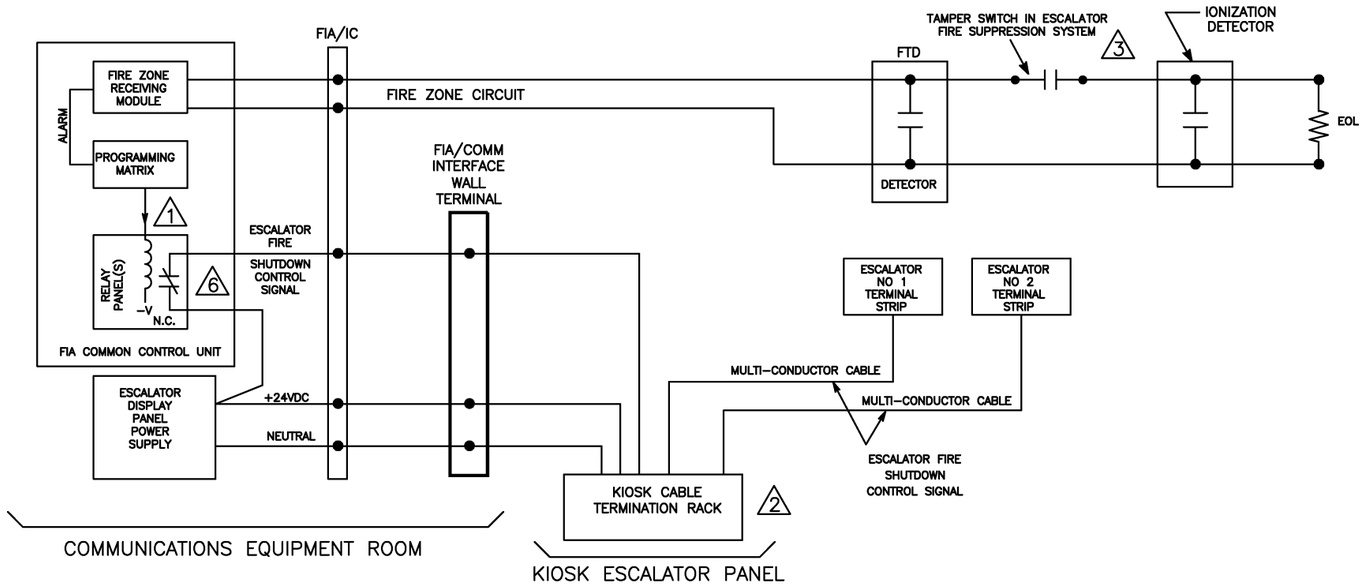
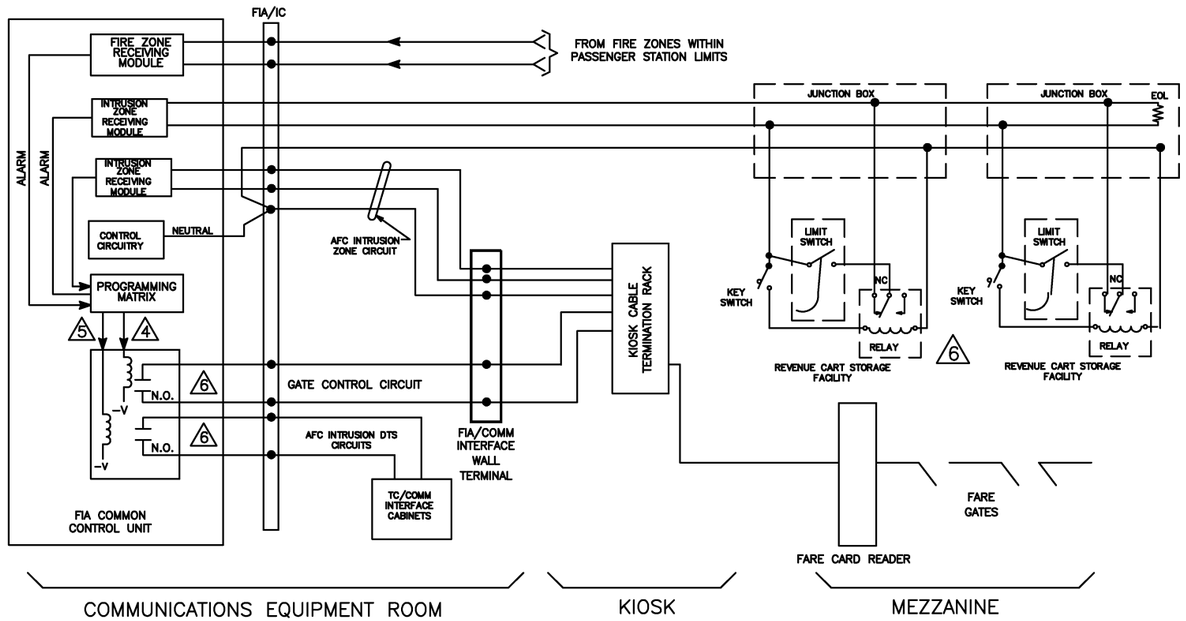
TYPICAL FIA SYSTEM PICTORIAL WIRING DIAGRAM

SCALE: NONE

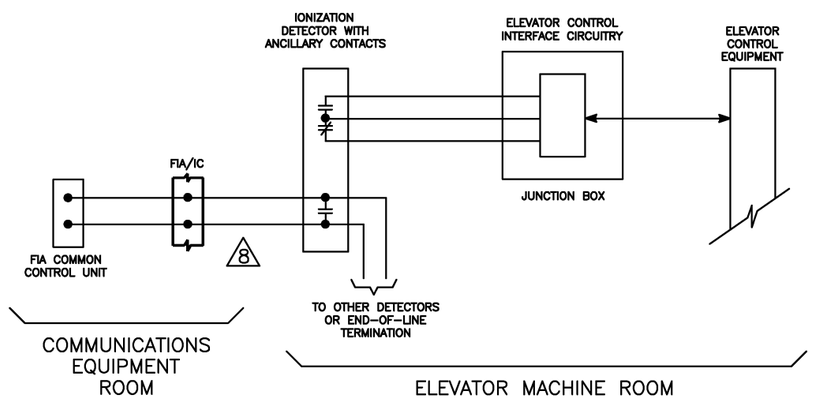
DRAWING NO.: ST-CM-FIA-002



TYPICAL ESCALATOR INTERFACE



TYPICAL AUTOMATIC FARE GATE CONTROL INTERFACE



TYPICAL ELEVATOR INTERFACE

NOTES:

1. DRAWING ONLY SHOWS ONE FIRE ZONE CIRCUIT (COVERAGE OF AN ESCALATOR PIT). AN ALARM BY ANY FIRE ZONE CIRCUIT ASSOCIATED WITH ROOMS OR ANCILLARY FACILITIES WITHIN THE PASSENGER STATIONS LIMITS SHALL ACTIVATE THE ESCALATOR FIRE SHUT–DOWN RELAY VIA THE PROGRAMMABLE PANEL.
2. THE ESCALATOR FIRE SHUT–DOWN CONTROL SIGNAL SHALL BE DISTRIBUTED TO ALL ESCALATORS VIA THE TWELVE CONDUCTOR CABLE TERMINATION RACK.
3. THE ESCALATOR FIRE SUPPRESSION SYSTEM TAMPER SWITCH IS LOCATED IN ENTRANCE ESCALATOR PIT.
4. DRAWING ONLY SHOWS ONE FIRE ZONE CIRCUIT. AN ALARM BY ANY FIRE ZONE CIRCUIT ASSOCIATED WITH ROOMS OR ANCILLARY FACILITIES WITHIN THE PASSENGER STATION LIMITS SHALL ACTIVATE THE AFC CONTROL RELAY VIA THE PROGRAMMABLE PANEL.
5. ONLY AN ALARM FROM THE AFC INTRUSION ZONE CIRCUIT OR THE REVENUE CART STORAGE INTRUSION ZONE CIRCUIT SHALL ACTIVATE THE AFC INTRUSION DTS RELAY VIA THE PROGRAMMABLE PANEL. THE RELAY IS SHOWN DE–ENERGIZED.
6. RELAY IS DE–ENERGIZED IN NON–ALARM STATE.
7. ALL CIRCUITS ARE SHOWN IN NON–ALARM STATE.
8. ELEVATOR MACHINE ROOM FIRE ZONE CIRCUIT.

LEGEND:

FIA–DF	FIRE/INTRUSION ALARM–DISTIBUTION FRAME
TC/COMM	TRAIN CONTROL/COMMUNICATIONS
AFC	AUTOMATIC FARE COLLECTION
DTS	DATA TRANSMISSION SYSTEM
EOL	END–OF–LINE ZONE TERMINATION
N.C.	NORMALLY CLOSED CONTACT
N.O.	NORMALLY OPEN CONTACT

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TYPICAL FIA SCHEMATIC OF INTERFACES

SCALE NONE

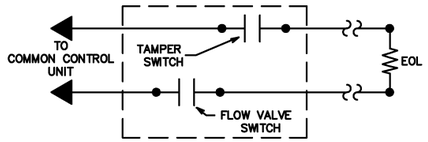
DRAWING NO. ST–CM–FIA–003

NOTES:

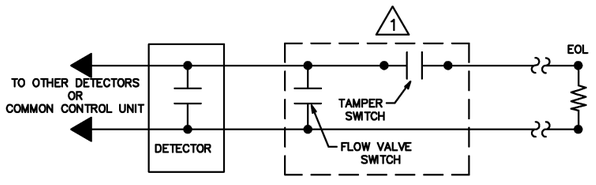
1. FLOW VALVE AND TAMPER SWITCH INSTALLED IN CLEANER'S ROOM LOCATIONS.
2. AN INTRUSION ZONE CIRCUIT SHALL ONLY BE WIRED FOR SURFACE ELEVATORS.
3. THE CONTRACTOR SHALL PROVIDE THE APPROPRIATE TYPE OF FIRE DETECTORS IN EACH ELEVATOR CAR, AND SHALL CONNECT EACH DETECTOR TO THE APPROPRIATECONDUCTORS OF THE ELEVATOR TRAVELING CABLE
4. ALL CIRCUITS ARE SHOWN IN NON–ALARM STATE.

LEGEND:

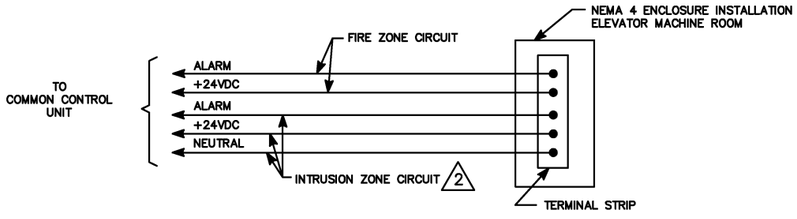
EOL END–OF–LINE ZONE TERMINATION



STANDPIPE FLOW VALVE AND
TAMPER SWITCH CONFIGURATION



SPRINKLER SYSTEM FLOW VALVE
AND TAMPER SWITCH CONFIGURATION



TYPICAL ELEVATOR
FIRE AND INTRUSION INTERFACE

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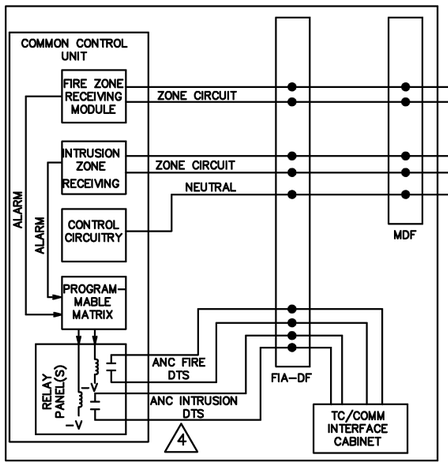
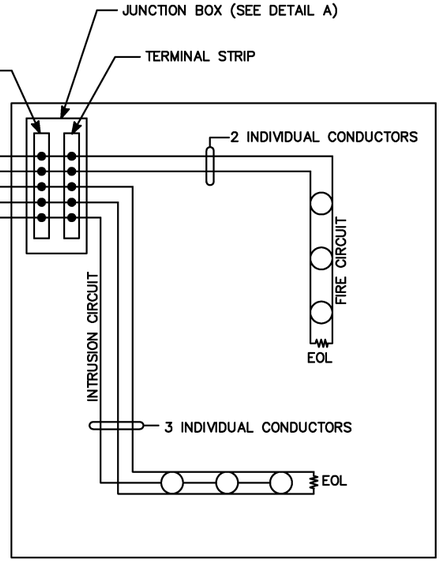
TYPICAL FIA SCHEMATIC OF FIA INTERFACES

SCALE NONE

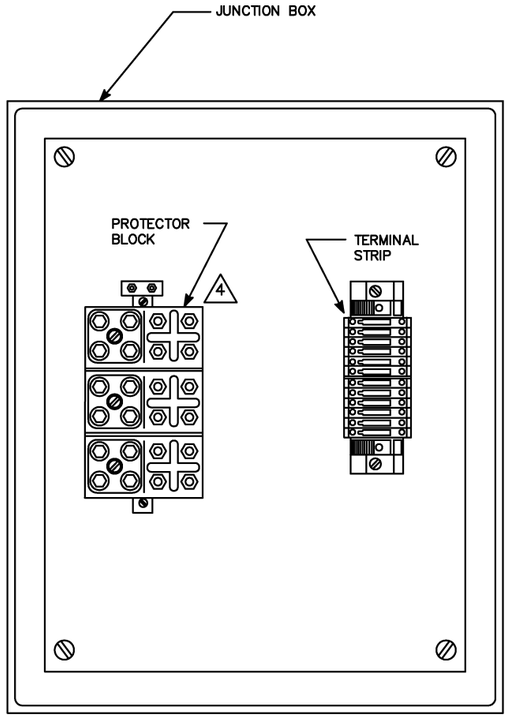
DRAWING NO. ST–CM–FIA–004



COMMUNICATIONS ROOM



REMOTE ANCILLARY FACILITIES



DETAIL A

NOTES:

1. THE JUNCTION BOX SHALL CONTAIN THE REQUIRED NUMBER OF PROTECTOR BLOCKS AND TERMINALS TO TERMINATE ALL CONDUCTORS (INCLUDING SPARES) OF THE FIRE AND INTRUSION SYSTEM FOR THE REMOTE ANCILLARY FACILITIES.

2. CONTRACTOR SHALL INSTALL A GROUND WIRE FROM THE GROUND BLOCK IN THE JUNCTION BOX TO THE NEAREST GROUND IN THE ANCILLARY FACILITIES.

3. A 6 PAIR ARMORED CABLE SHALL BE INSTALLED BETWEEN REMOTE ANCILLARY FACILITIES AND ASSOCIATED PASSENGER STATIONS. ALL CONDUCTORS (INCLUDING SPARES) OF THE ARMORED CABLE SHALL BE TERMINATED ON PROTECTOR BLOCKS ON THE MDF IN THE COMMUNICATIONS EQUIPMENT ROOM AND WITHIN THE JUNCTION BOX IN THE REMOTE ANCILLARY FACILITIES.

4. ANC FIRE AND INTRUSION CONTACTS ARE NORMALLY OPEN, AND CLOSE UPON AN ALARM.

LEGEND:

ANC	ANCILLARY
DTS	DATA TRANSMISSION SYSTEM
EOL	END-OF-LINE ZONE TERMINATION
MDF	MAIN DISTRIBUTION FRAME
FIA-DF	FIRE/INTRUSION ALARM-DISTRIBUTION FRAME

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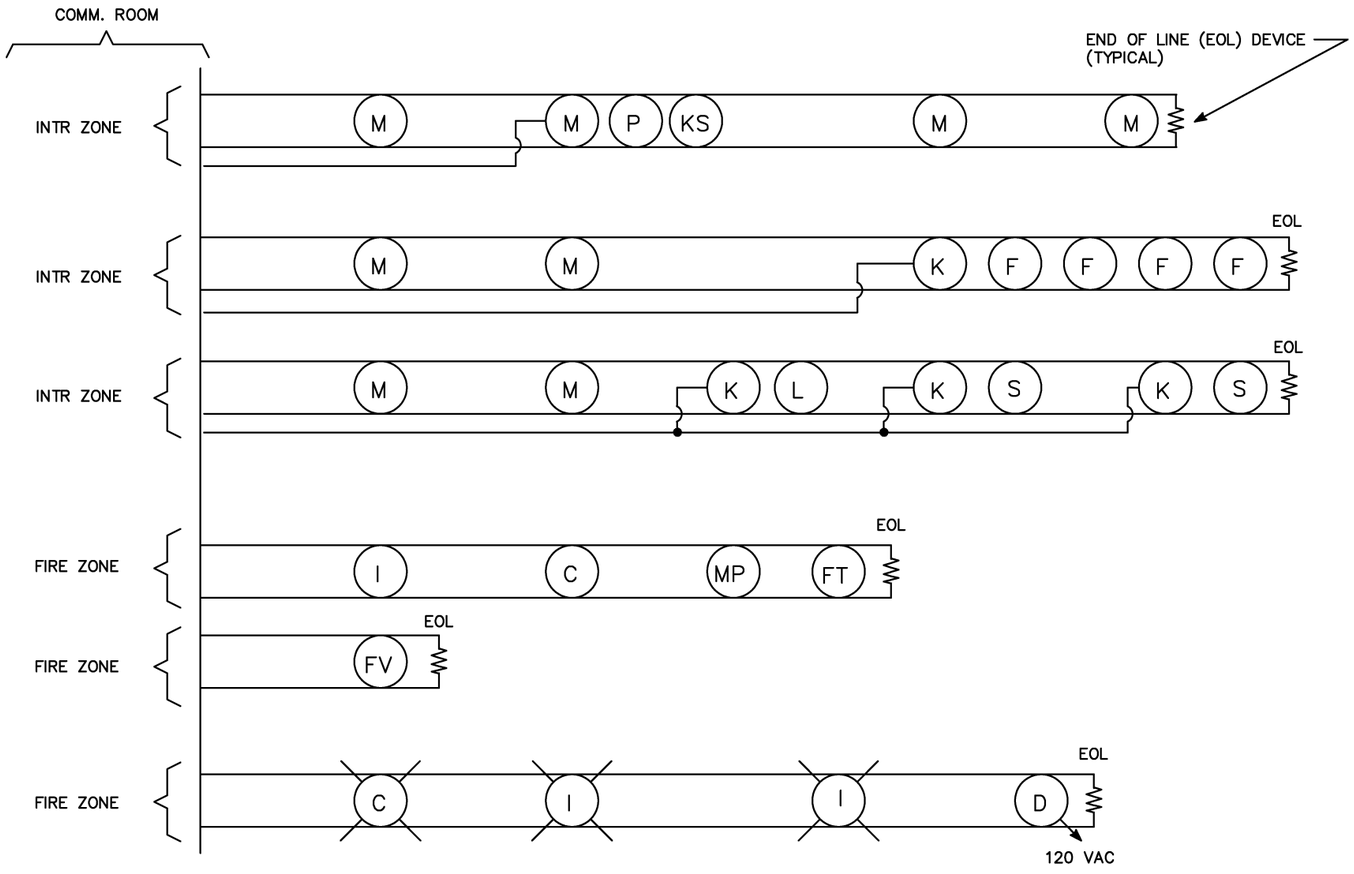
TYPICAL CONFIGURATIONS OF REMOTE ANCILLARY FACILITIES

SCALE: NONE

DRAWING NO.: ST-CM-FIA-005



LEGEND:

INTRUSION DETECTORS

- (P) PUSHBUTTON
- (M) MAGNETIC
- (KS) KEY SWITCH
- (F) FOIL
- (K) RELAY ASSOCIATED WITH FOIL, LIMIT SWITCH OR TRIP WIRE
- (S) 30 AWG TRIP WIRE
- (L) LIMIT SWITCH

FIRE DETECTORS

- (I) IONIZATION DETECTOR
- (FT) FIXED TEMPERATURE DETECTOR
- ( ) DETECTOR WITH ANCILLARY CONTACTS
- (FV) FLOW VALVE
- (D) DUCT DETECTOR
- (C) COMBINATION DETECTOR
- (MP) MANUAL PULL STATION

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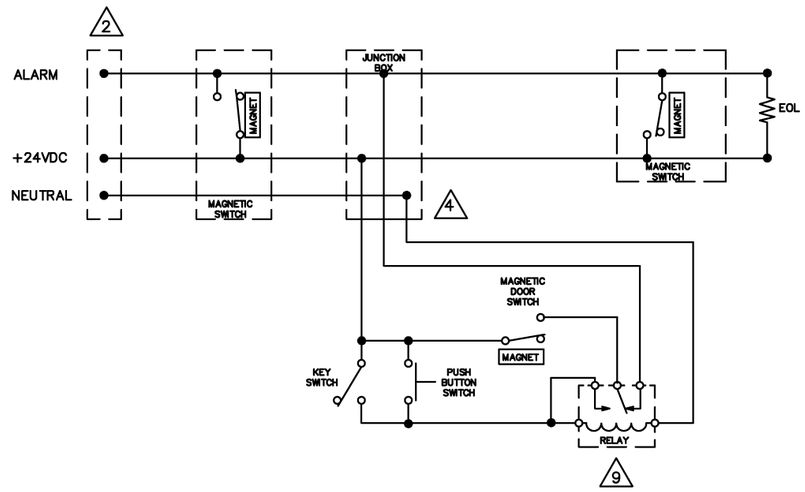
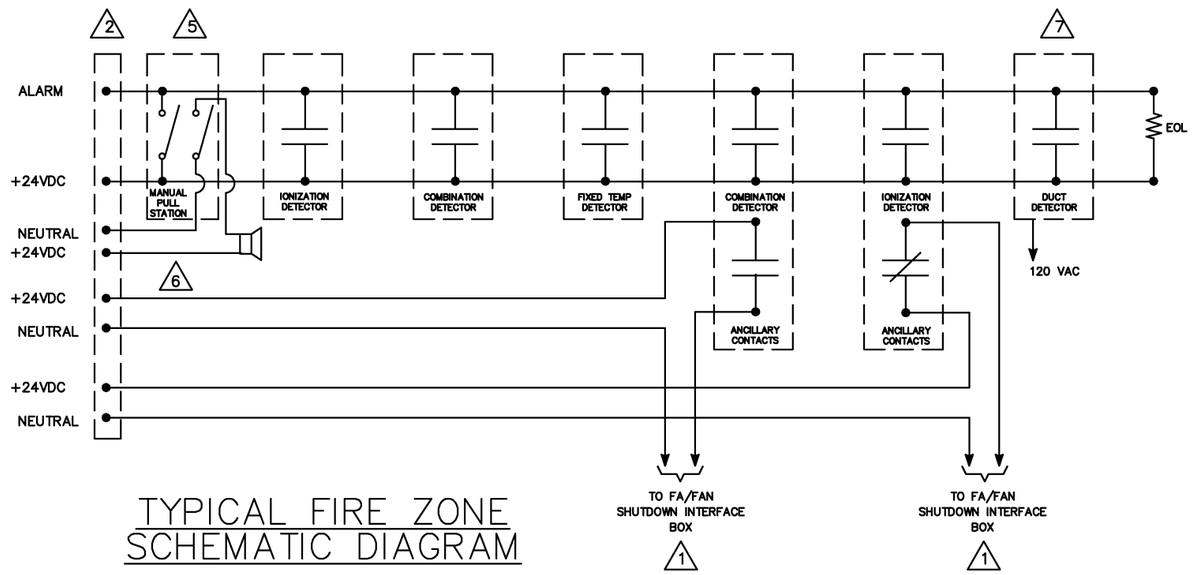
TYPICAL FIA DETECTOR CONFIGURATIONS IN FIRE AND INTRUSION ZONES

SCALE: NONE

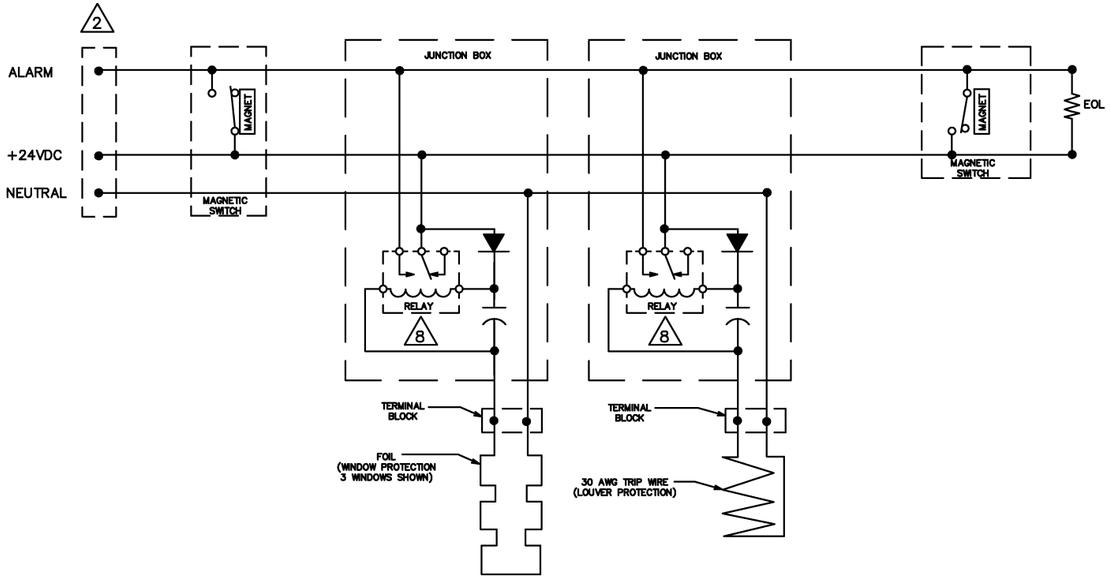
DRAWING NO.: ST-CM-FIA-006



TYPICAL INTRUSION ZONE SCHEMATIC DIAGRAM



TYPICAL FIRE ZONE SCHEMATIC DIAGRAM



TYPICAL INTRUSION ZONE SCHEMATIC DIAGRAM

NOTES:

1. LOCAL CONTROLS ARE USED TO SHUT DOWN FANS IN CASE OF FIRE. IONIZATION DETECTOR MAY ALSO CONTROL DELUGE VALVE.
2. THESE POINTS ARE DESIGNATIONS ON THE FIA–DF. IN THE CASE OF ZONES IN REMOTE ANCILLARY STRUCTURES, THESE POINTS ARE VIA A PROTECTOR BLOCK ON THE MDF.
3. ALL CIRCUITS ARE SHOWN IN THEIR NON–ALARM STATE.
4. THIS CONFIGURATION SHALL BE INSTALLED AT DOORS BETWEEN PUBLIC (AND OUTSIDE) AREA AND PROTECTED AREAS.
5. MANUAL PULL STATIONS SHALL BE LOCATED IN HALLWAYS WHICH LEAD FROM PUBLIC AREAS TO STATION ROOMS.
6. FIRE ALARM HORNS SHALL BE POWERED BY 24 VDC AVAILABLE FROM THE COMMON CONTROL UNIT.
7. DUCT DETECTORS SHALL BE POWERED BY LOCALLY AVAILABLE 120 VAC EMERGENCY POWER.
8. RELAY IS ENERGIZED IN NON–ALARM STATE.
9. RELAY IS DE–ENERGIZED IN "ARMED" STATE.

LEGEND:

EOL	END–OF–LINE ZONE TERMINATION
MDF	MAIN DISTRIBUTION FRAME
FIA–DF	FIRE/INTRUSION ALARM–DISTRIBUTION FRAME

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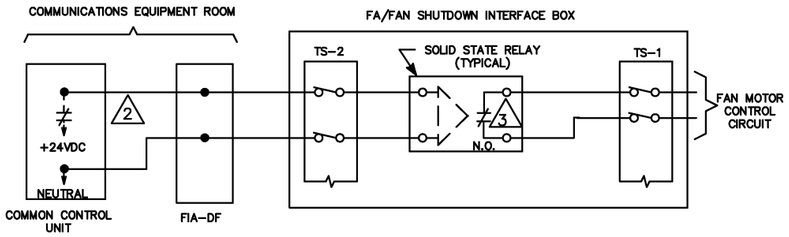
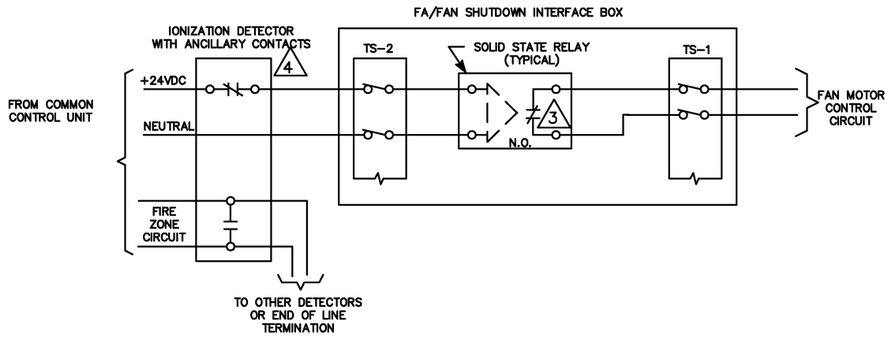
TYPICAL FIA SCHEMATIC CONFIGURATIONS FOR FIRE AND INTRUSION ALARMS

SCALE: NONE

DRAWING NO.: ST–CM–FIA–007



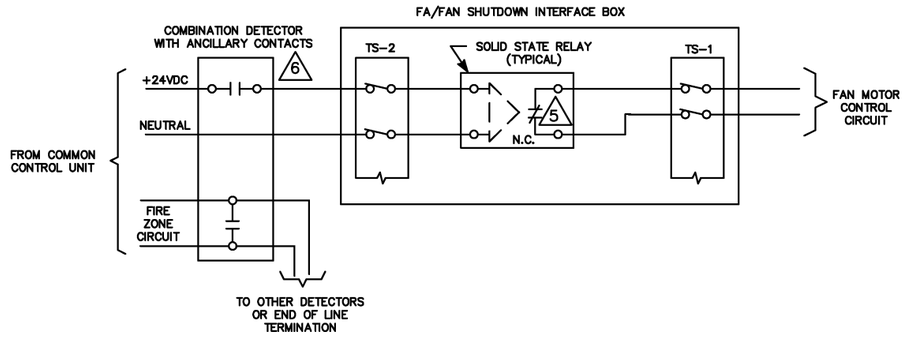
TYPICAL SCHEMATIC OF FIA SYSTEM
CONTROLLING VENTILATION FAN IN THE
MECHANICAL EQUIPMENT ROOMS AND FAN ROOMS



TYPICAL SCHEMATIC OF LOCAL CONTROL VENTILATION FANS
IN BATTERY ROOM, OPERATIONS ROOM, CLEANER'S ROOMS
AND COMMUNICATIONS EQUIPMENT ROOM

NOTES:

1. THE END OF LINE TERMINATION DEVICE SHALL BE INSTALLED AFTER THE LAST DETECTOR
2. UPON RECEIPT OF FIRE ALARM, THE COMMON CONTROL UNIT SHALL DISCONNECT THE +24VDC FROM THE CIRCUIT.
3. CONTACTS OF SOLID STATE RELAY SHALL BE NORMALLY OPEN. RELAY IS SHOWN ENERGIZED IN NON-ALARM STATE.
4. ANCILLARY CONTACTS OF IONIZATION DETECTOR SHALL BE NORMALLY CLOSED. DETECTOR IS SHOWN IN NON-ALARM STATE.
5. CONTACTS OF SOLID STATE RELAY SHALL BE NORMALLY CLOSED. RELAY IS SHOWN IN DE-ENERGIZED NON-ALARM STATE.
6. ANCILLARY CONTACTS OF COMBINATION DETECTOR SHALL BE NORMALLY OPEN. DETECTOR IS SHOWN IN NON-ALARM STATE.
7. ALL CIRCUITS ARE SHOWN IN NON-ALARM STATE.



TYPICAL SCHEMATIC OF LOCAL CONTROL
OF VENTILATION FANS IN ELEVATOR MACHINE
ROOMS, SUBSTATIONS AND CHILLER PLANTS

LEGEND:

FA	FIRE ALARM
FIA/DF	FIRE/INTRUSION ALARM-DISTRIBUTION FRAME
TS	TERMINAL STRIP
N.O.	NORMALLY OPEN CONTACTS
N.C.	NORMALLY CLOSED CONTACTS

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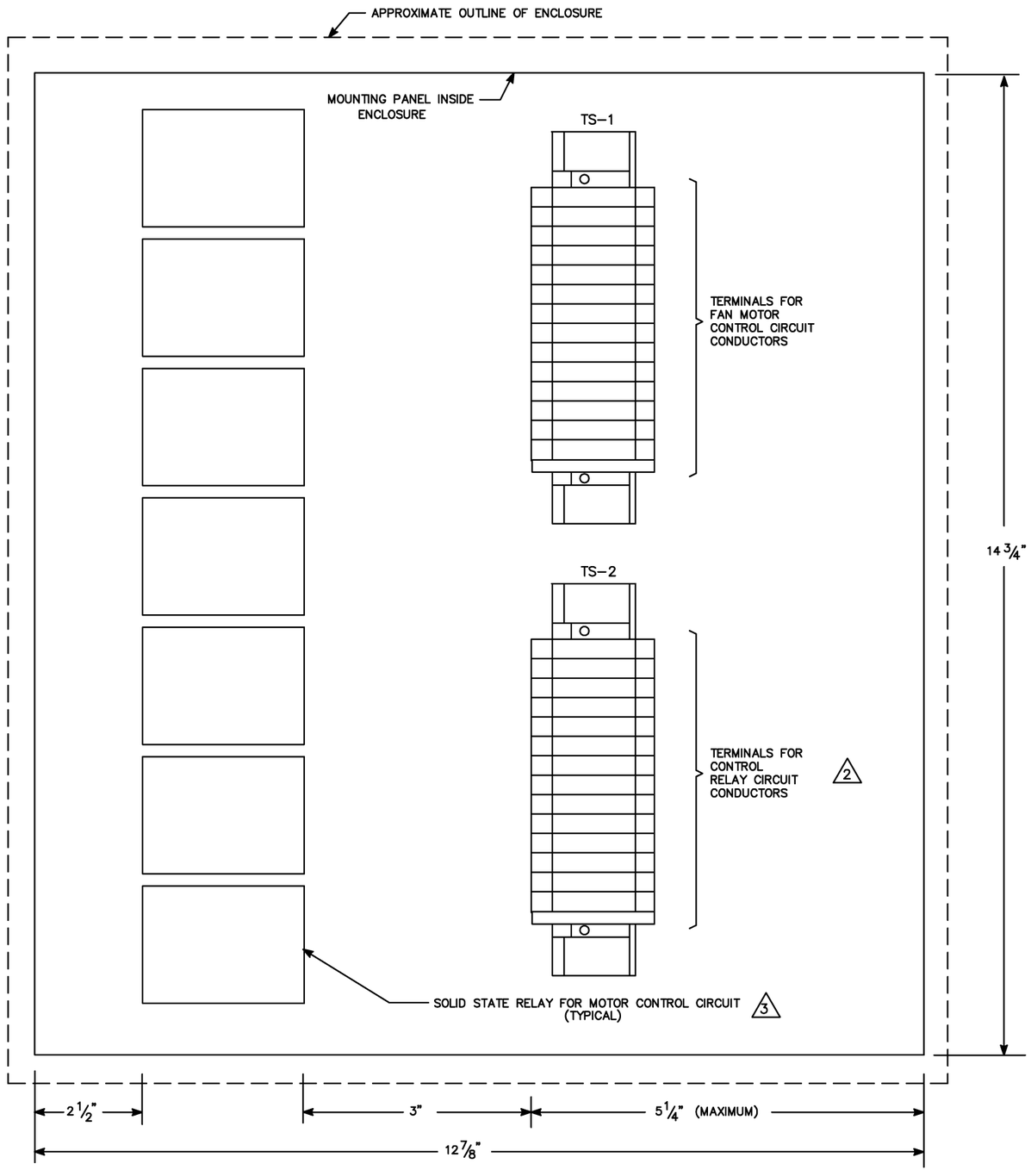
TYPICAL FIA FAN SHUT DOWN
INTERFACE CONFIGURATIONS

SCALE NONE

DRAWING NO. ST-CM-FIA-008



NOTES:

1. THE CONTRACTOR SHALL PROVIDE FA/FAN INTERFACE BOX ENCLOSURES. THE ENCLOSURES SHALL BE HOFFMAN ENGINEERING COMPANY CATALOG NO. A-1614 CHNF (16"x 14"x 6") OR APPROVED EQUAL. THE ENCLOSURES SHALL BE PAINTED OSHA RED WITH 1-INCH HIGH OSHA YELLOW LETTERING "FA/FAN SHUT DOWN" ON THE EXTERIOR OF THE FRONT COVER.

2. REQUIRED TERMINALS FOR CONTROL RELAY CIRCUIT CONDUCTORS SHALL BE PROVIDED BY THE CONTRACTOR IN ALL FA/FAN INTERFACE BOXES.

3. THE CONTRACTOR SHALL PROVIDE THE REQUIRED SOLID STATE RELAYS IN EACH FA/FAN INTERFACE BOX. ONE SOLID STATE RELAY SHALL BE PROVIDED FOR EACH FAN MOTOR CONTROL CIRCUIT THAT IS TO BE CONTROLLED BY THE FIA SYSTEM.

LEGEND:

FA	FIRE ALARM
FIA	FIRE/INTRUSION ALARM
TS	TERMINAL STRIP

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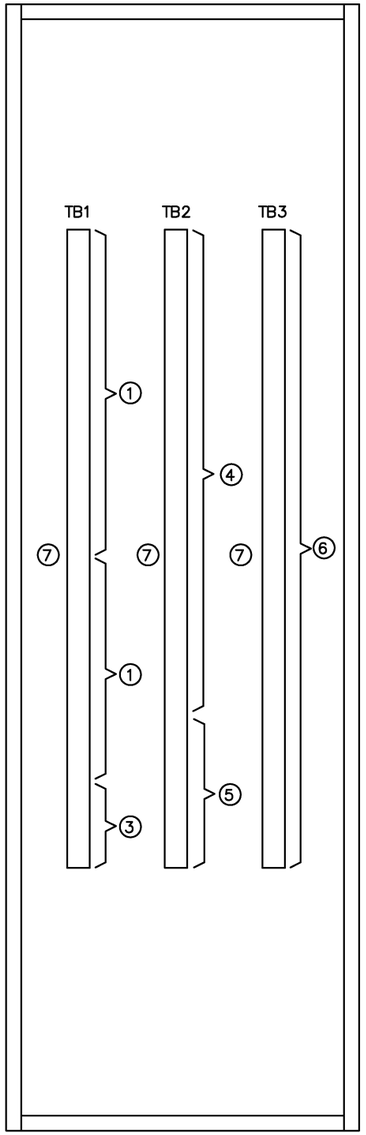
TYPICAL FIA FA/FAN SHUT DOWN INTERFACE BOX

SCALE NONE

DRAWING NO. ST-CM-FIA-009



FIA – DISTRIBUTION FRAME LAYOUT

SCHEDULE OF ASSIGNMENT OF CONDUCTORS TO THE FIA – DF	
①	TO FIRE ALARM CIRCUITS (INCLUDING HALON SYSTEMS, WHEN APPLICABLE)
②	TO PROGRAMMING PANEL
③	TO INTERFACES
④	TO INTRUSION ZONE CIRCUITS
⑤	TO KIOSK ANNUNCIATOR CONTROLS
⑥	TO KIOSK ANNUNCIATOR INDICATORS
⑦	TO APPROPRIATE DESIGNATIONS ON COMMON CONTROL UNIT

NOTES:

1. FIA–DF ENCLOSURE SHALL BE IDENTICAL TO MDF ENCLOSURE.
2. TB1, TB2, TB3 SHALL BE CAPABLE OF TERMINATING 100 CONDUCTORS EACH.
3. DRAWING SHOWS GENERAL ASSIGNMENTS OF TERMINAL STRIPS. CONTRACTOR SHALL ASSIGN INDIVIDUAL TERMINALS WITHIN EACH GENERAL ASSIGNMENT.

LEGEND:

FIA–DF	FIRE/INTRUSION ALARM–DISTRIBUTION FRAME
MDF	MAIN DISTRIBUTION FRAME
TB	TERMINAL BLOCK

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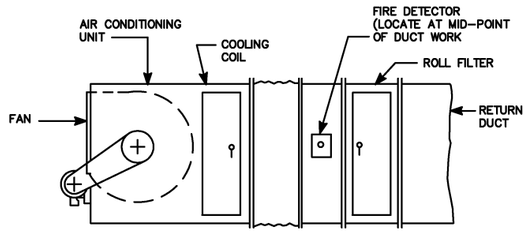
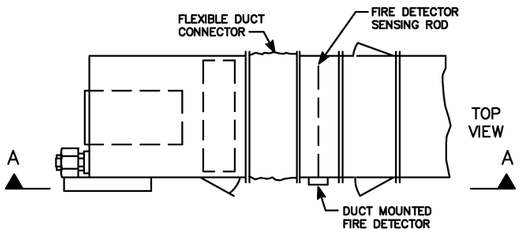
TYPICAL FIA DISTRIBUTION FRAME LAYOUT

SCALE: NONE

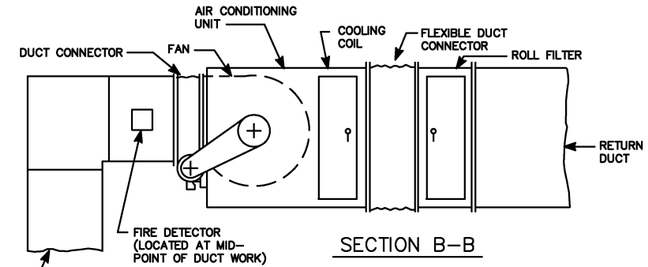
DRAWING NO.: ST–CM–FIA–010



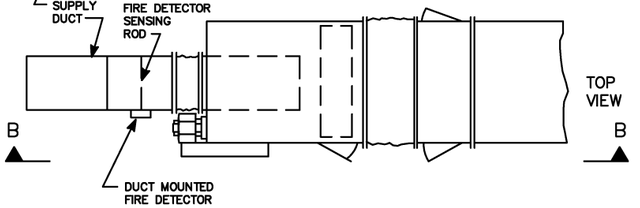
SECTION A–A



DUCT MOUNTED FIRE DETECTOR LOCATION



SECTION B–B



DUCT MOUNTED FIRE DETECTOR LOCATION

NOTES:

1. CONFIGURATION B SHALL BE USED ONLY WHEN MOUNTING IS NOT POSSIBLE (NO RIGID DUCT) BETWEEN COOLING COIL AND ROLL FILTER.

2. DUCT DETECTOR TROUBLE CONTACTS SHALL BE WIRED IN SERIES WITH THE SUPERVISORY LOOP TROUBLE SIGNALS GENERATED (FOR INSTANCE, LOSS OF LOCAL 120 VAC) SHALL OPEN THE TROUBLE CONTACTS WHICH SHALL GENERATE A TROUBLE SIGNAL IN THAT ZONE.

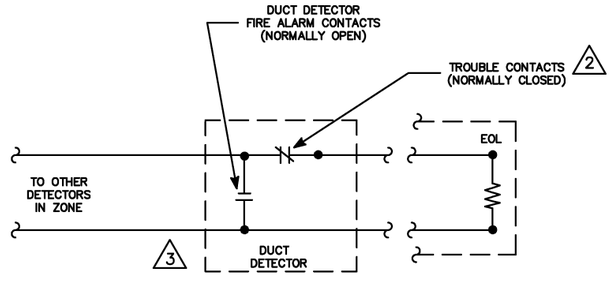
3. CIRCUIT IS SHOWN IN NON–ALARM STATE.

LEGEND:

EOL – END–OF–LINE ZONE TERMINATION

CONFIGURATION A

CONFIGURATION B



TYPICAL DUCT DETECTOR INSTALLATION DETAIL

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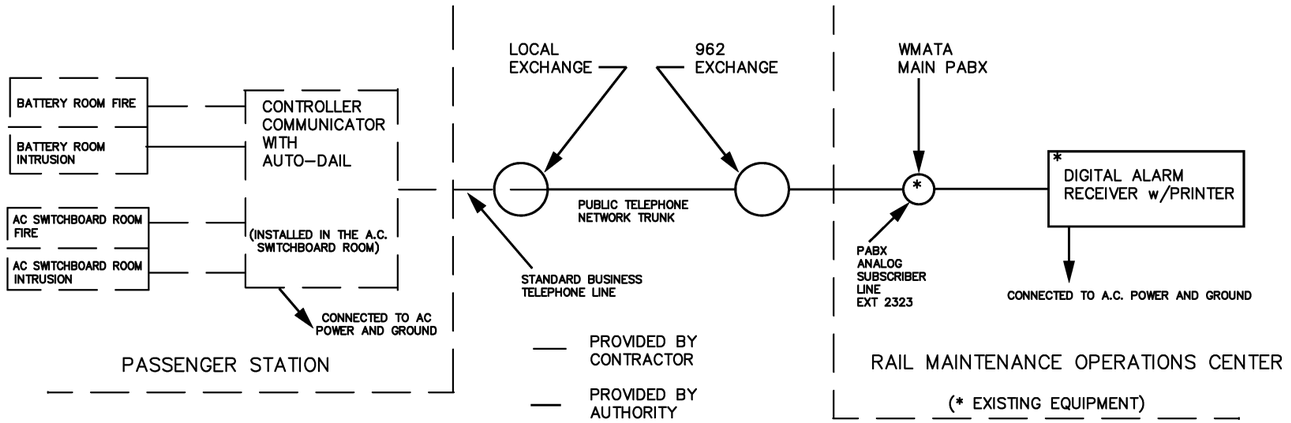
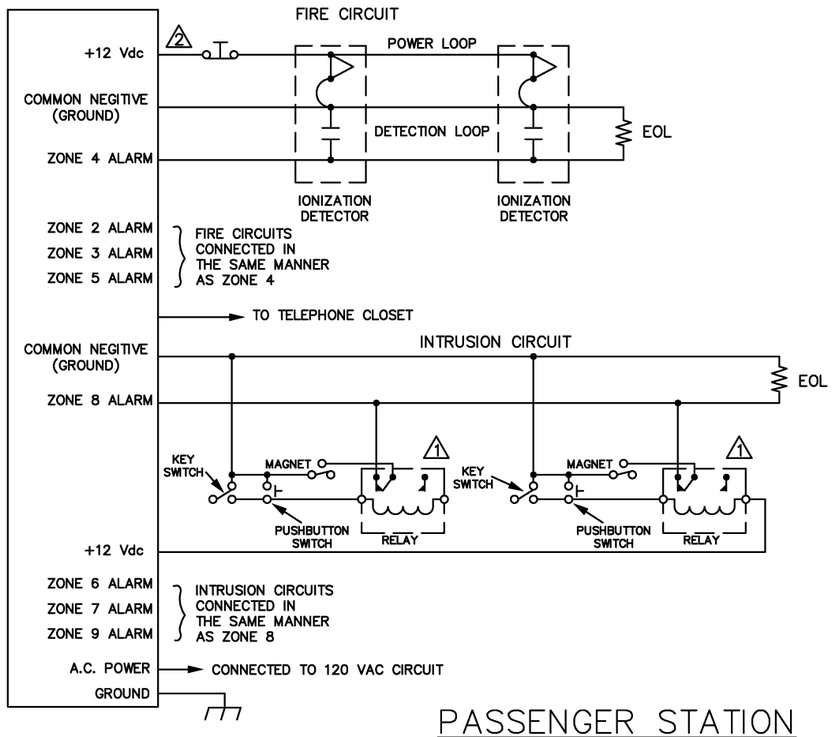
TYPICAL FIA DUCT DETECTOR INSTALLATION DETAILS

SCALE NONE

DRAWING NO. ST–CM–FIA–011



SYSTEMS BLOCK DIAGRAM



PASSENGER STATION WIRING DIAGRAM

NOTES:

1. INTRUSION CIRCUITS SHOWN IN THE NON-ALARMED STATE WITH DOORS CLOSED AND WITH KEY AND PUSHBUTTON SWITCHES IN THE NON-BYPASS POSITION.
2. FIRE CIRCUITS MUST BE MANUALLY RESET AFTER ALARM ACTIVATION BY MOMENTARILY DEPRESSING THE ZONE RESET PUSHBUTTON.

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

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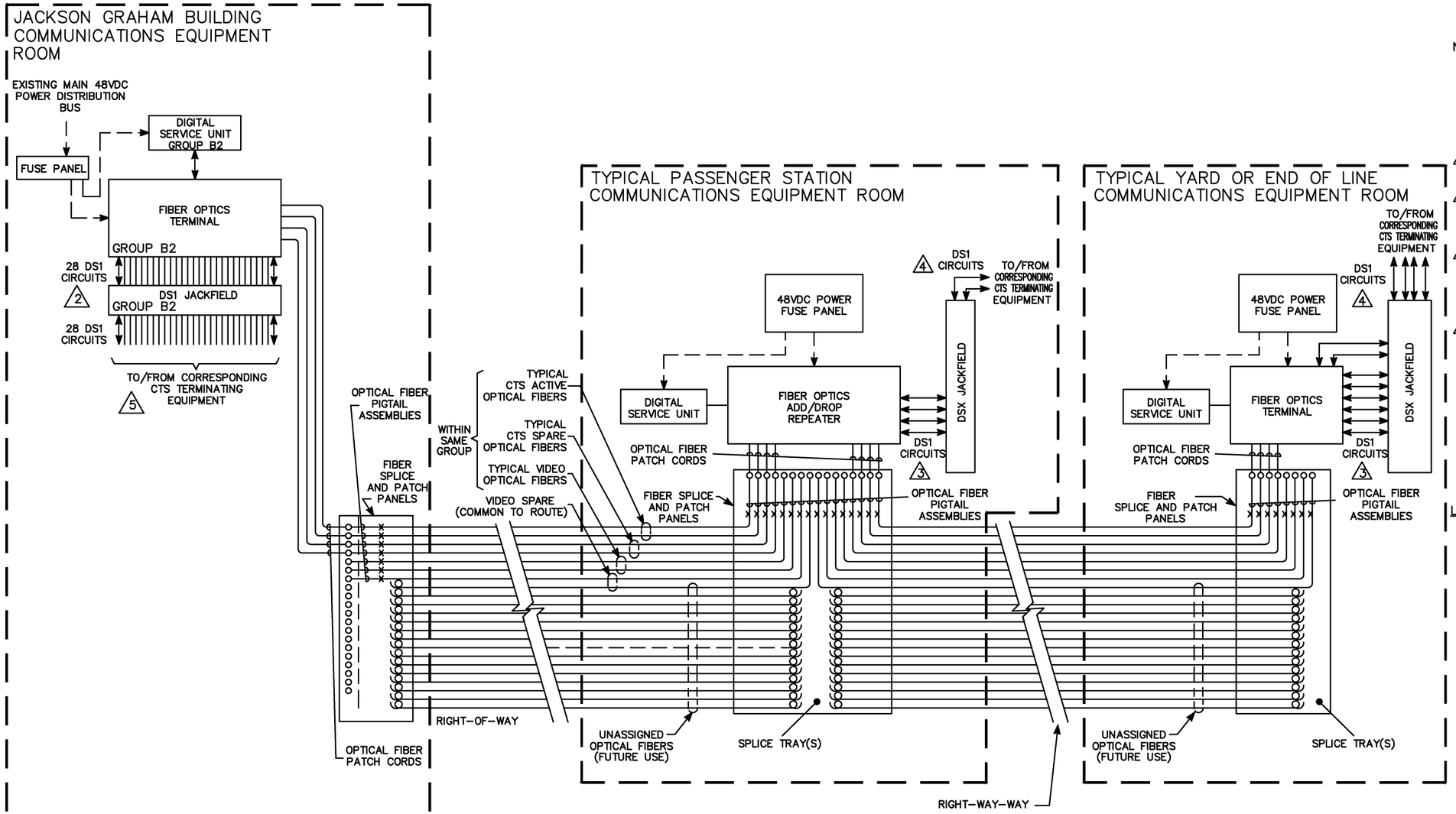
TEMPORARY FIA SYSTEM

SCALE NONE

DRAWING NO. ST-CM-FIA-012



NOTES:

1. THIS DRAWING SHOWS TYPICAL EQUIPMENT CONFIGURATION OF THE VOICE/DATA TRANSMISSION FOR A PASSENGER STATION/YARD AND FOR A FIBER OPTICS GROUP AT THE JACKSON GRAHAM BUILDING.
2. ALL 28 DS1 CIRCUITS SHALL BE WIRED TO THE ASSOCIATED DS1 JACKFIELD.
3. 4 DS1 CIRCUITS SHALL BE WIRED TO THE DS1 JACKFIELD IN PASSENGER STATIONS. 8 DSI CIRCUITS SHALL BE WIRED TO THE DS1 JACKFIELD IN YARDS.
4. THE QUANTITY OF DS1 CIRCUITS TO BE CONNECTED AT EACH PASSENGER STATION AND YARD SHALL BE BASED UPON THE TOTAL NUMBER OF CTS T1 TERMINAL ASSEMBLIES AND DI-GROUPS OF CTS TERMINAL ASSEMBLIES AT THAT LOCATION.
5. THE QUANTITY OF DS1 CIRCUITS TO BE CONNECTED SHALL BE BASED UPON THE TOTAL NUMBER OF CTS T1 TERMINAL ASSEMBLIES AND DI-GROUPS OF CTS TERMINAL ASSEMBLIES IN THE PASSENGER STATIONS AND THE YARD ASSOCIATED WITH THE FIBER OPTICS GROUP.
6. THE OPTICAL LINE RATE FOR THE VOICE/DATA TRANSMISSION OF THE FIBER OPTICS SYSTEM SHALL BE CAPABLE OF CARRYING 28 MULTIPLEXED DS1'S (1.544 Mb/s).

LEGEND:

o TYPICAL OPTICAL FIBER TERMINATION TO OPTICAL BULKHEAD ADAPTER VIA CONNECTOR

X TYPICAL FUSION SPLICE OF OPTICAL FIBERS IN FIBER DISTRIBUTION PANEL.

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

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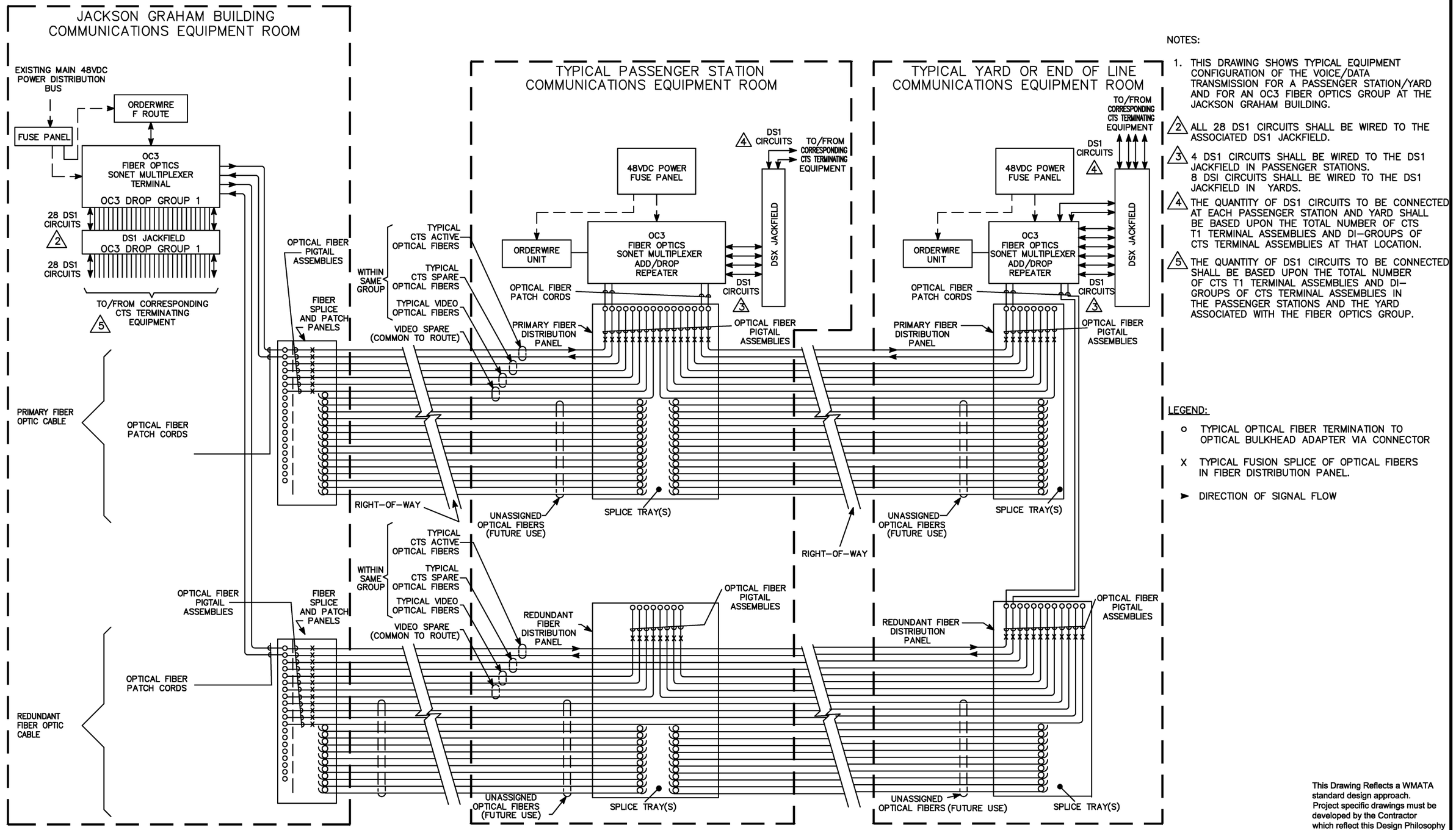
APPROVED DIRECTOR _____ May 3, 2001 DATE

TYPICAL FIBER OPTIC SYSTEM OC-1 BLOCK DIAGRAM

SCALE: NONE

DRAWING NO.: ST-CM-FOS-001



NOTES:

1. THIS DRAWING SHOWS TYPICAL EQUIPMENT CONFIGURATION OF THE VOICE/DATA TRANSMISSION FOR A PASSENGER STATION/YARD AND FOR AN OC3 FIBER OPTICS GROUP AT THE JACKSON GRAHAM BUILDING.
2. ALL 28 DS1 CIRCUITS SHALL BE WIRED TO THE ASSOCIATED DS1 JACKFIELD.
3. 4 DS1 CIRCUITS SHALL BE WIRED TO THE DS1 JACKFIELD IN PASSENGER STATIONS. 8 DSI CIRCUITS SHALL BE WIRED TO THE DS1 JACKFIELD IN YARDS.
4. THE QUANTITY OF DS1 CIRCUITS TO BE CONNECTED AT EACH PASSENGER STATION AND YARD SHALL BE BASED UPON THE TOTAL NUMBER OF CTS T1 TERMINAL ASSEMBLIES AND DI-GROUPS OF CTS TERMINAL ASSEMBLIES AT THAT LOCATION.
5. THE QUANTITY OF DS1 CIRCUITS TO BE CONNECTED SHALL BE BASED UPON THE TOTAL NUMBER OF CTS T1 TERMINAL ASSEMBLIES AND DI-GROUPS OF CTS TERMINAL ASSEMBLIES IN THE PASSENGER STATIONS AND THE YARD ASSOCIATED WITH THE FIBER OPTICS GROUP.

LEGEND:

- o TYPICAL OPTICAL FIBER TERMINATION TO OPTICAL BULKHEAD ADAPTER VIA CONNECTOR
- X TYPICAL FUSION SPLICE OF OPTICAL FIBERS IN FIBER DISTRIBUTION PANEL.
- ► DIRECTION OF SIGNAL FLOW

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

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CHECKED	DATE	
APPROVED	DATE	
UPDATED	DATE	

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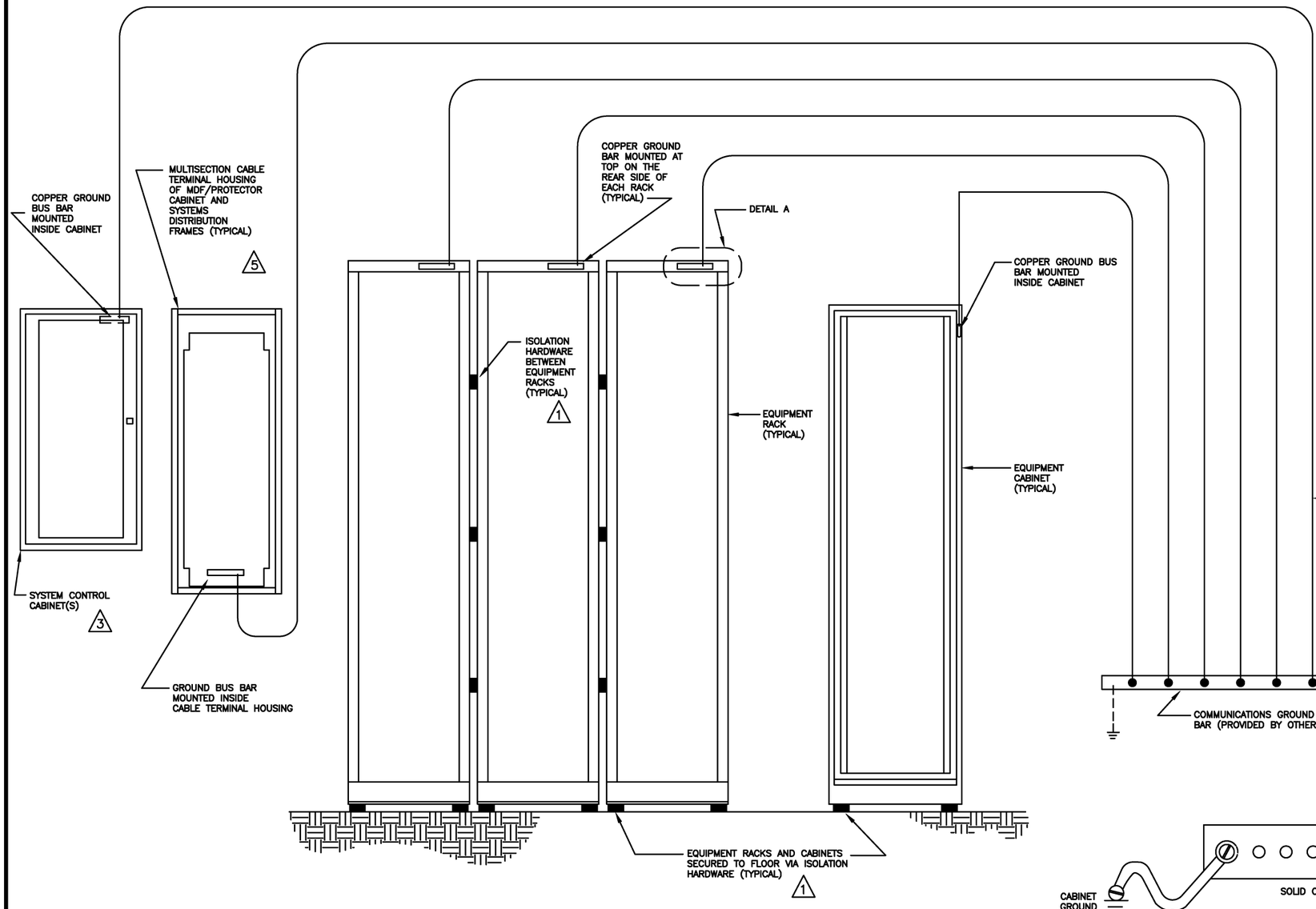
TYPICAL FIBER OPTICS SYSTEM OC-3 BLOCK DIAGRAM

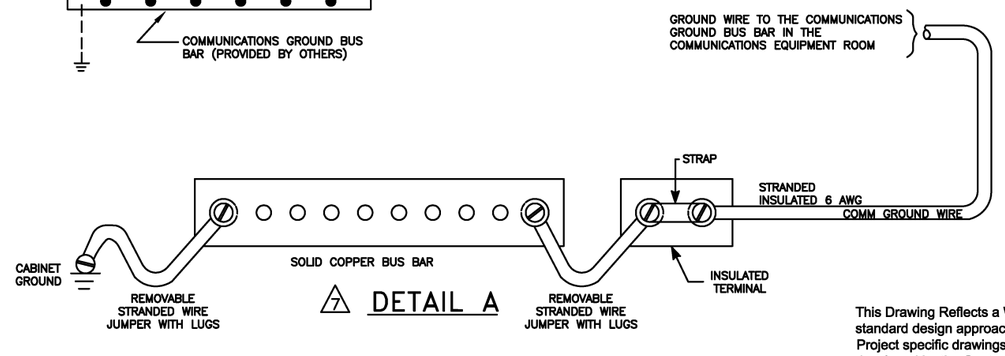
SCALE NONE

DRAWING NO. ST-CM-FOS-002



NOTES:

1. ALL EQUIPMENT RACKS AND EQUIPMENT CABINETS SHALL BE ELECTRICALLY ISOLATED FROM THE BUILDING STRUCTURE, AND ADJACENT EQUIPMENT RACKS AND EQUIPMENT CABINETS.
2. ALL EQUIPMENT RACKS AND EQUIPMENT CABINETS SHALL BE SECURED TO THE BUILDING STRUCTURE (FLOOR).
3. ALL SYSTEM CONTROL CABINET(S) SHALL BE MOUNTED ON A STRUCTURAL WALL AND SHALL BE ELECTRICALLY ISOLATED FROM THE BUILDING STRUCTURE.
4. MOUNTING AND ISOLATION HARDWARE FOR EQUIPMENT RACKS, EQUIPMENT CABINETS, AND THE SYSTEM CONTROL CABINET(S) SHALL BE APPROVED BY THE ENGINEER.
5. THE MULTISECTION CABLE TERMINAL HOUSINGS OF THE MDF/PROTECTOR CABINET AND THE SYSTEMS DISTRIBUTION FRAMES SHALL BE MOUNTED ON A STRUCTURAL WALL. THESE HOUSINGS ARE NOT REQUIRED TO BE ISOLATED FROM THE BUILDING STRUCTURE.
6. A COPPER GROUND BUS BAR SHALL BE PROVIDED ON EACH EQUIPMENT RACK, IN EACH EQUIPMENT CABINET, IN EACH SYSTEM CONTROL CABINET, AND IN EACH MULTISECTION CABLE TERMINAL HOUSING OF THE MDF/PROTECTOR CABINET AND THE SYSTEMS DISTRIBUTION FRAMES. THE COPPER GROUND BUS BAR SHALL BE ELECTRICALLY CONNECTED TO THE EQUIPMENT RACKS, EQUIPMENT CABINETS AND THE SYSTEM CONTROL CABINETS. THE COPPER GROUND BUS BAR SHALL BE ELECTRICALLY ISOLATED FROM THE MULTISECTION CABLE TERMINAL HOUSINGS.
7. DETAIL A SHOWS TYPICAL CONNECTION OF EQUIPMENT GROUND CONDUCTOR TO COPPER GROUND BUS BAR.
8. EQUIPMENT GROUND CONDUCTOR SHALL BE STRANDED COPPER, 6 AWG, INSULATED, TYPE XHHW.



7 DETAIL A

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

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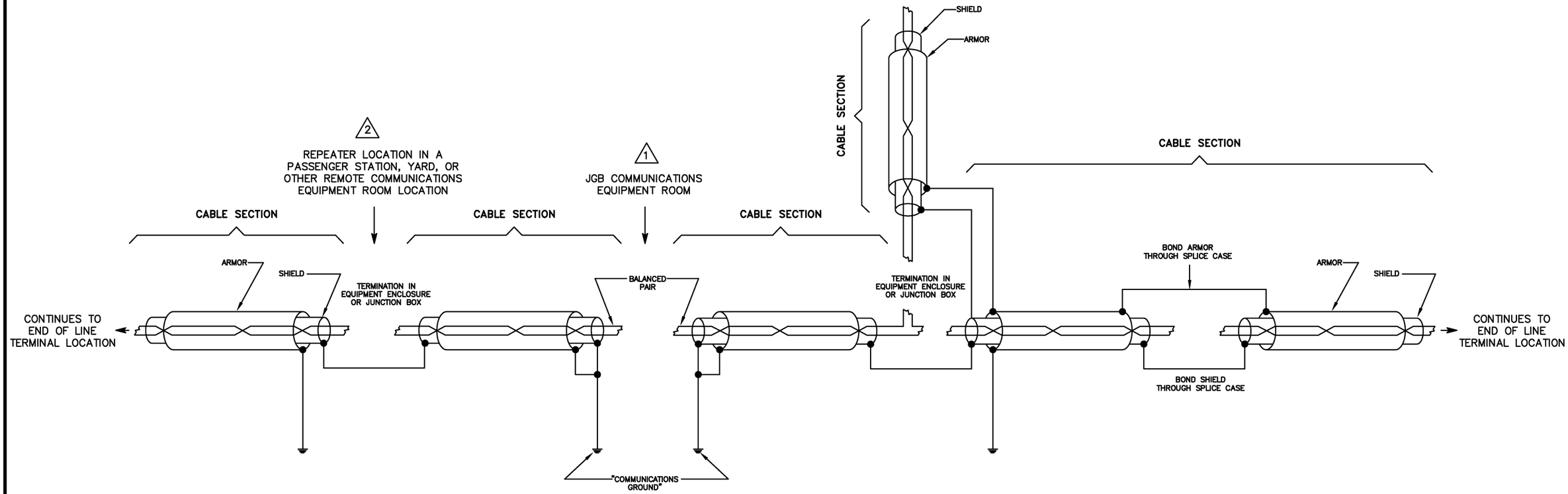
TYPICAL EQUIPMENT RACKS & CABINET GROUNDING DETAILS

SCALE: NONE

DRAWING NO.: ST-CM-GEN-017

NOTES:

1. AT THE JACKSON GRAHAM BUILDING, THE ARMORS OF THE CARRIER TRANSMISSION CABLES SHALL BE GROUNDED TO THE "COMMUNICATIONS GROUND" AT A SINGLE POINT IN THE COMMUNICATIONS EQUIPMENT ROOM.
2. THE ARMORS OF THE CARRIER TRANSMISSION CABLE BETWEEN TWO COMMUNICATIONS EQUIPMENT ROOM LOCATIONS SHALL BE GROUNDED TO THE "COMMUNICATIONS GROUND" AT A SINGLE POINT IN THE COMMUNICATIONS EQUIPMENT ROOM CLOSEST TO THE JACKSON GRAHAM BUILDING (JGB)



STRAIGHT THRU CONFIGURATION

BRANCH CONFIGURATION

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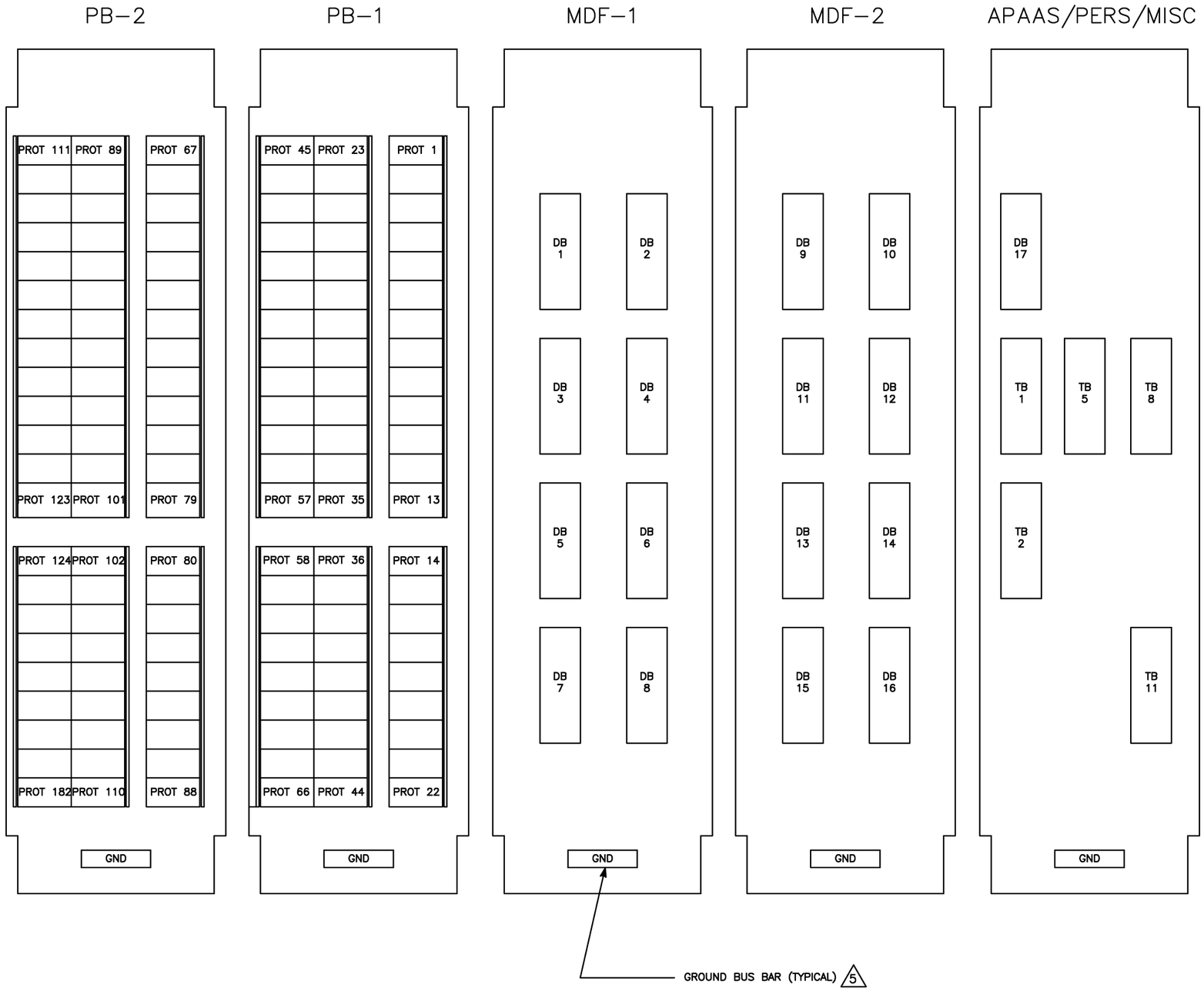
TYPICAL SHIELD AND GROUND SCHEME FOR COMMUNICATIONS CABLES

SCALE: NONE

DRAWING NO.: ST-CM-GEN-018



NOTES:

1. THIS DRAWING ILLUSTRATES THE MAXIMUM QUANTITY OF PROTECTOR BLOCKS WHICH MAY BE INSTALLED IN A TWO MULTISECTION HOUSING CONFIGURATION. THE CONTRACTOR SHALL FURNISH AND INSTALL ONLY THE QUANTITY OF PROTECTOR BLOCKS REQUIRED AT EACH PASSENGER STATION.
2. THE CONTRACTOR SHALL FURNISH AND INSTALL THE REQUIRED PROTECTOR BLOCKS TO TERMINATE (INCLUDING SPARES) ALL CTS COMPARTMENTED CORE CABLES, TO REMOTE ANCILLARY FACILITIES, AND TELEPHONE CABLES TO ETS TELEPHONES AND REMOTE ANCILLARY FACILITIES ASSOCIATED WITH EACH PASSENGER STATION.
3. PROTECTOR BLOCKS PROVIDED FOR THE FIA SYSTEM AND THE TELEPHONE SYSTEM SHALL BE INSTALLED AFTER THE CTS COMPARTMENTED CORE CABLES. CTS COMPARTMENTED CORE CABLES SHALL BE TERMINATED BEGINNING WITH PROTECTOR BLOCK NO. 1.
4. ABBREVIATIONS:

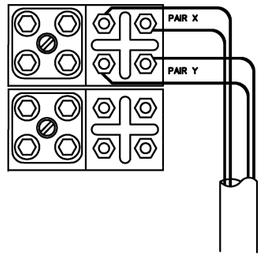
DB	DISTRIBUTION (LINE TERMINAL) BLOCK
PROT	2 PAIR LINE PROTECTOR BLOCK
SMADS	STATION MONITOR AND DISPLAY SYSTEM
PERS	PASSENGER EMERGENCY REPORTING SYSTEM
CTS	CARRIER TRANSMISSION SYSTEM
ETS	EMERGENCY TRIP STATION
APAAS	AUTOMATIC PUBLIC ADDRESS ANNOUNCEMENT SYSTEM
TB	TERMINAL BLOCK
PB	PROTECTOR BLOCK
MISC	MISCELLANEOUS

5 EACH GROUND BUS BAR SHALL BE SEPARATELY WIRED TO THE COMMUNICATIONS GROUND BUS IN THE COMMUNICATIONS EQUIPMENT ROOM.

TYPICAL – LINE TERMINAL BLOCK ASSIGNMENTS

	DESIGNATION
DB 1	CTS CHANNELS A (T,R,T1,R1)
DB 2	CTS CHANNELS B (T,R,T1,R1)
DB 3	CTS CHANNELS A (E,M,MB,F)
DB 4	CTS CHANNELS B (E,M,MB,F)
DB 5	SYSTEM ALARMS
DB 6	SPARE
DB 7	SPARE
DB 8	BELL SYSTEM ROOM
DB 9	KEY EQUIPMENT
DB 10	KIOSK TELEPHONE
DB 11	PAS
DB 12	STATION TELEPHONES
DB 13	SPARE
DB 14	STATIONS TELEPHONES
DB 15	ETS TELEPHONES
DB 16	AEMS
DB 17	SMADS
TB 1	PERS–CALL BOX #1
TB 2	PERS–CALL BOX #2
TB 5	PERS–KIOSK
TB 8	APAAS–KIOSK
TB 11	PERS–JGB + SMADS

PROTECTOR BLOCK WIRING DETAILS



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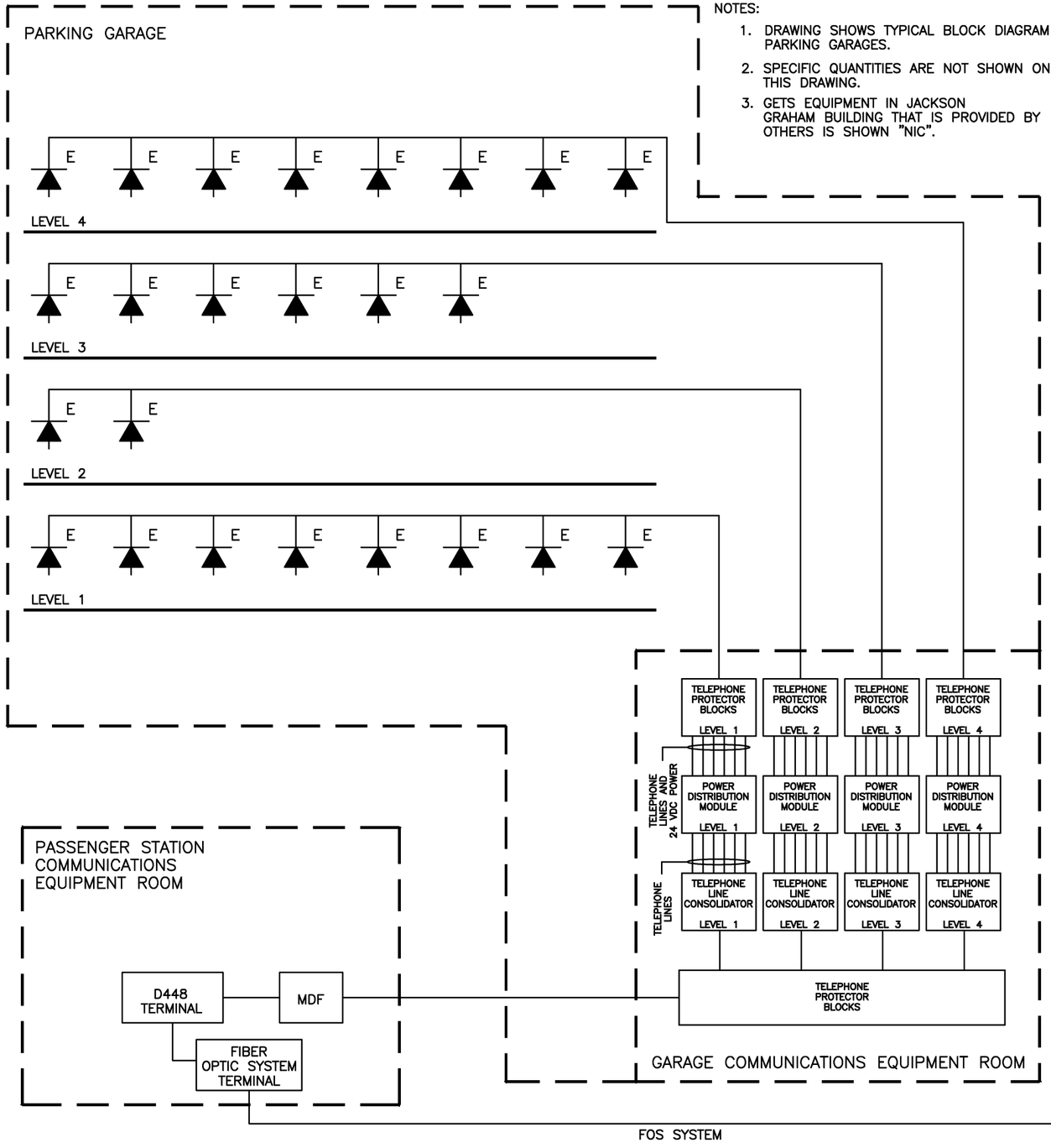
TYPICAL PASSENGER STATION MDF CABINET

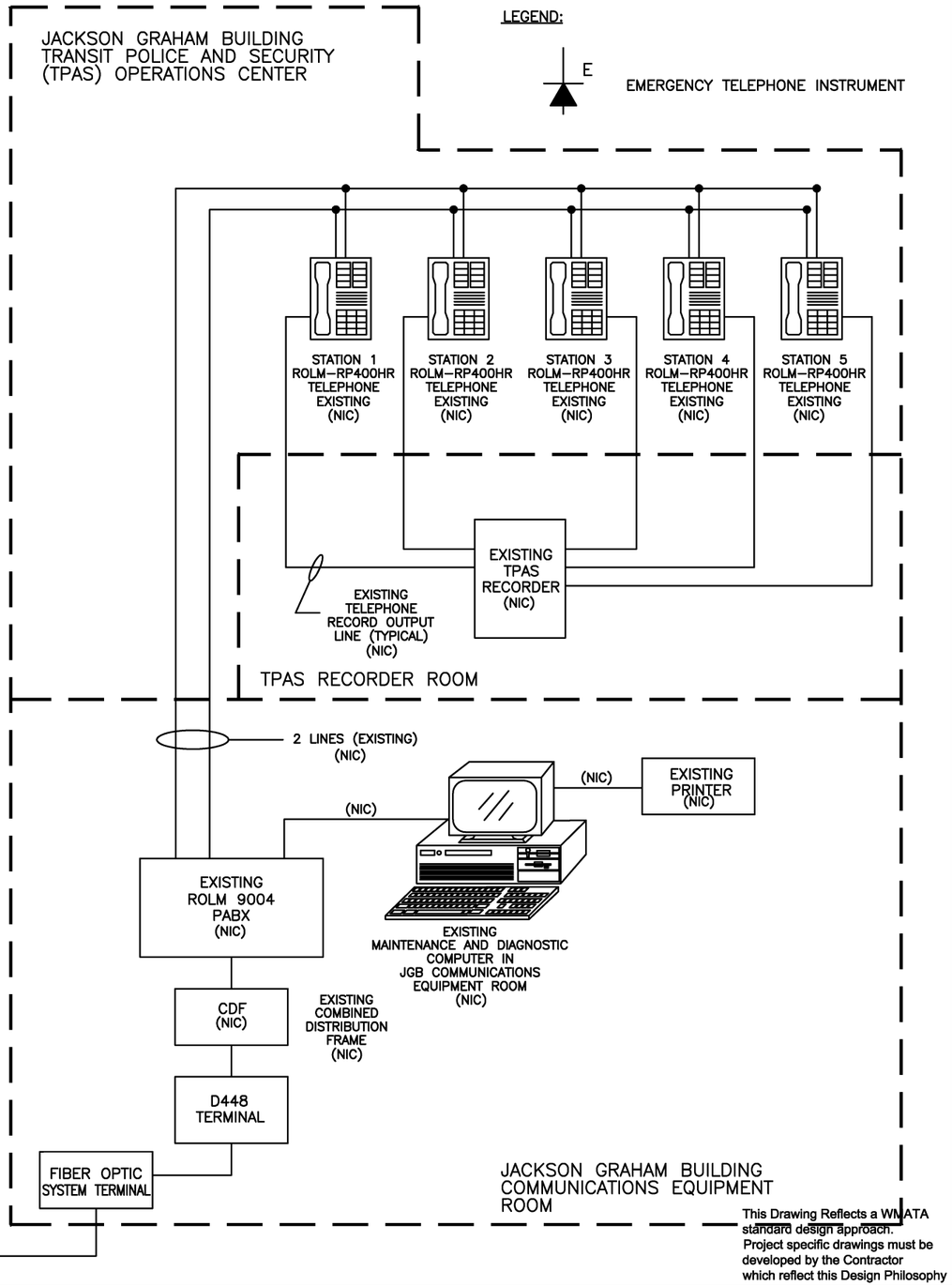
SCALE NONE

DRAWING NO. ST–CM–GEN–019

NOTES:

1. DRAWING SHOWS TYPICAL BLOCK DIAGRAM FOR PARKING GARAGES.
2. SPECIFIC QUANTITIES ARE NOT SHOWN ON THIS DRAWING.
3. GETS EQUIPMENT IN JACKSON GRAHAM BUILDING THAT IS PROVIDED BY OTHERS IS SHOWN "NIC".





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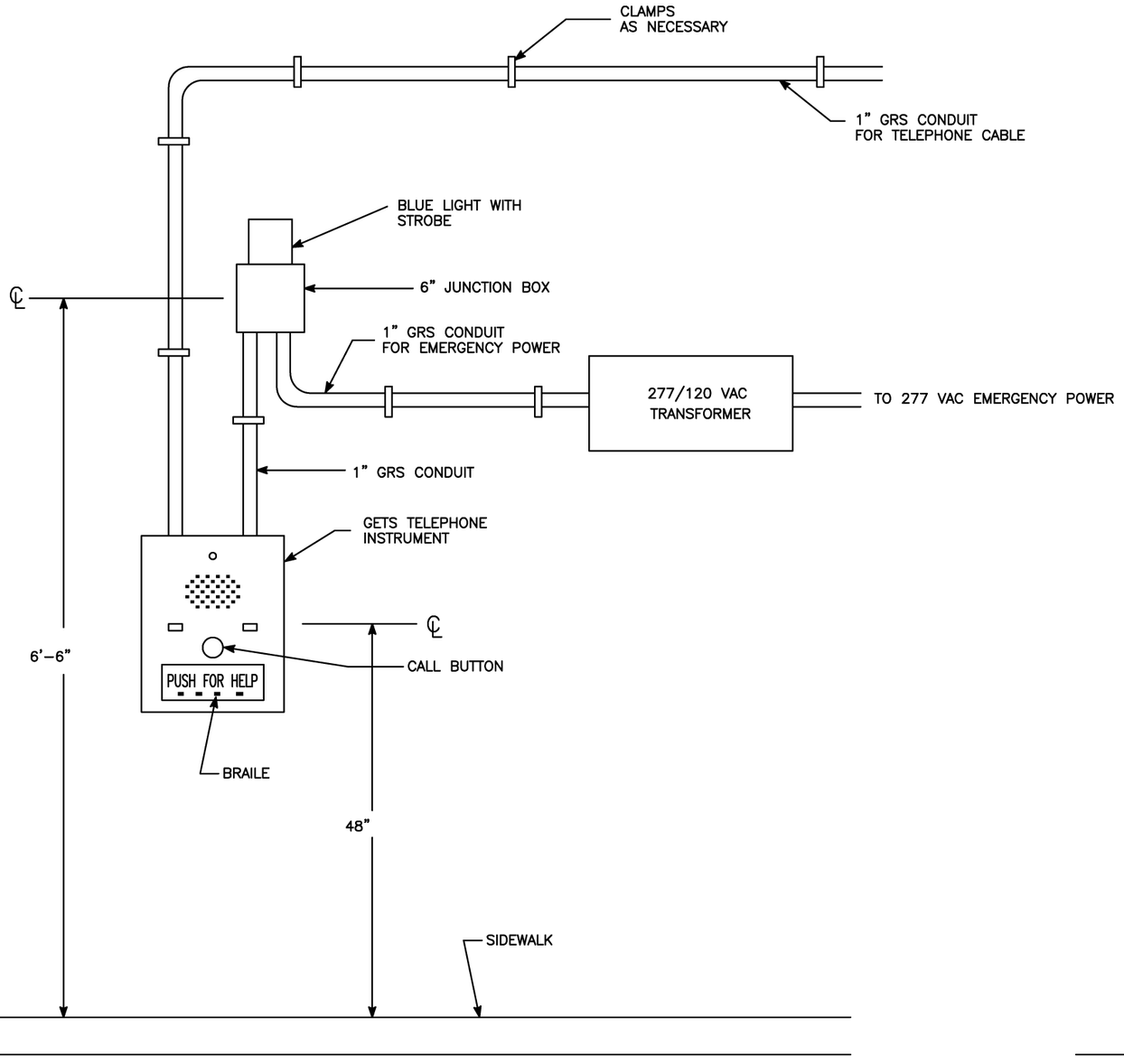
TYPICAL GETS BLOCK DIAGRAM

SCALE: NONE

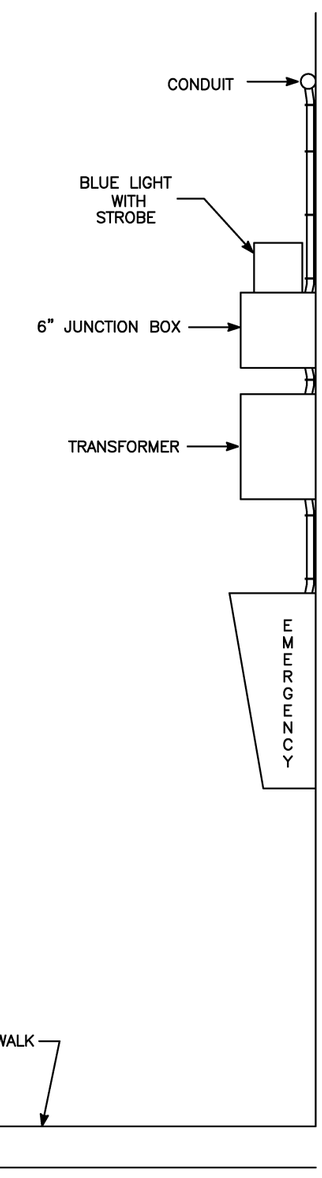
DRAWING NO.: ST-CM-GETS-001

NOTES:

1. THIS DRAWING SHOW AS TYPICAL INSTALLATION. THE STRUCTURAL CONFIGURATION FOR THE ACTUAL LOCATIONS AND AVAILABLE POWER MAY VARY.
2. THE BLUE LIGHT STROBE LIGHT SHALL BE VISIBLE FROM PARKING AREAS.
3. THE FINAL INSTALLATION ARRANGEMENT SHALL BE APPROVED BY THE ENGINEER.



FRONT VIEW



SIDE VIEW

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APPROVED		DATE
UPDATED		DATE

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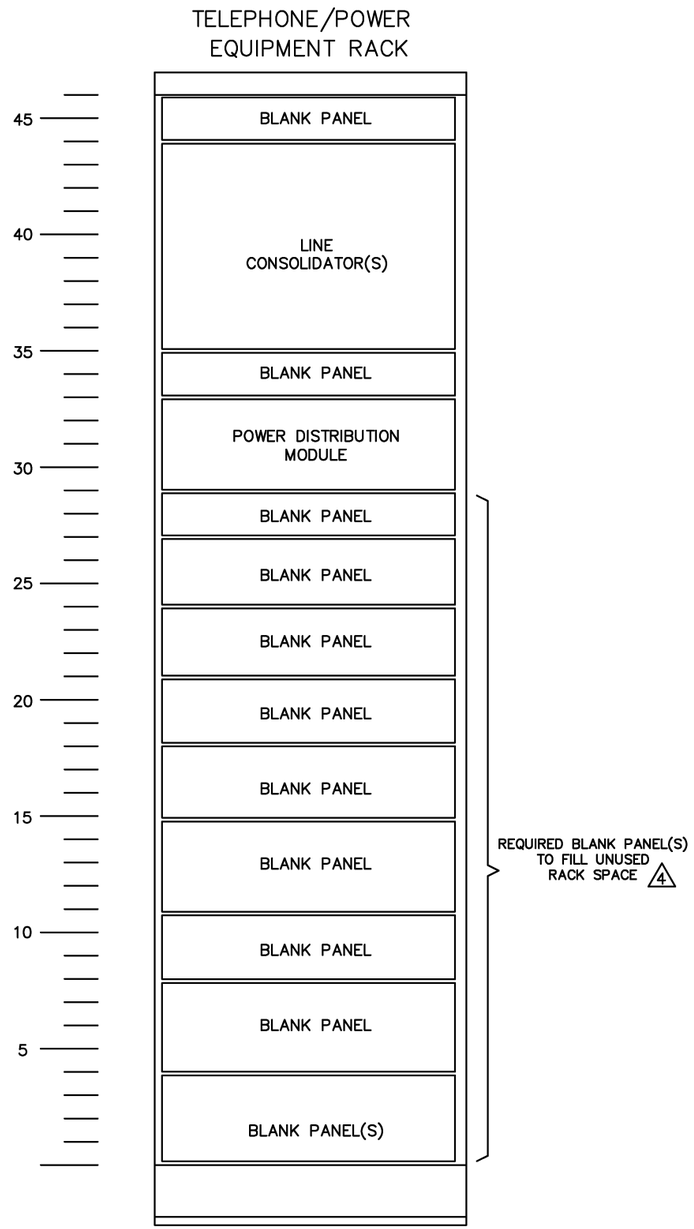
TYPICAL GETS TELEPHONE INSTALLATION

SCALE: NONE

DRAWING NO.: ST-CM-GETS-002



FRONT VIEW

NOTES:

1. CONTRACTOR SHALL PROVIDE A 23–INCH OPEN EQUIPMENT RACK.
2. THE OPEN EQUIPMENT RACK SHALL HAVE 46 RACK UNITS OF PANEL SPACE AS DEFINED IN EIA STANDARD RS–310–C.
3. BLANK PANELS INDICATED SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
4. BLANK PANEL HEIGHTS SHALL NOT BE GREATER THAN 3 RACK UNITS EACH.
5. BLANK PANELS SHALL BE 0.125 INCHES THICK ALUMINUM. FINISH SHALL BE CLEAR ANODIZED.
6. BLANK PANEL MOUNTING CUT OUTS SHALL BE IN ACCORDANCE WITH EIA STANDARD RS–310–C.
8. THIS DRAWING SHOWS THE TYPICAL SPACING OF EQUIPMENT. THE CONTRACTOR SHALL DETERMINE THE SPACE REQUIRED FOR THE EQUIPMENT TO BE INSTALLED.

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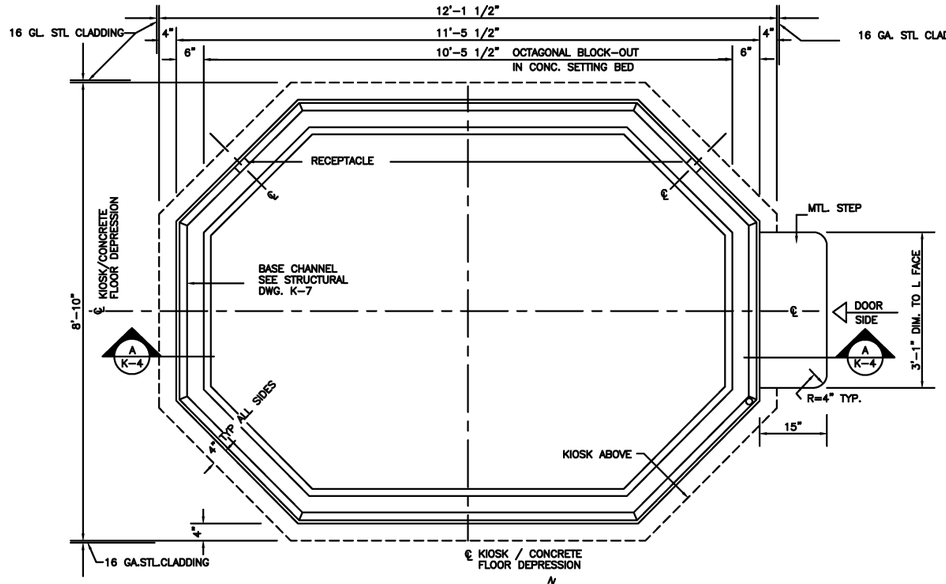
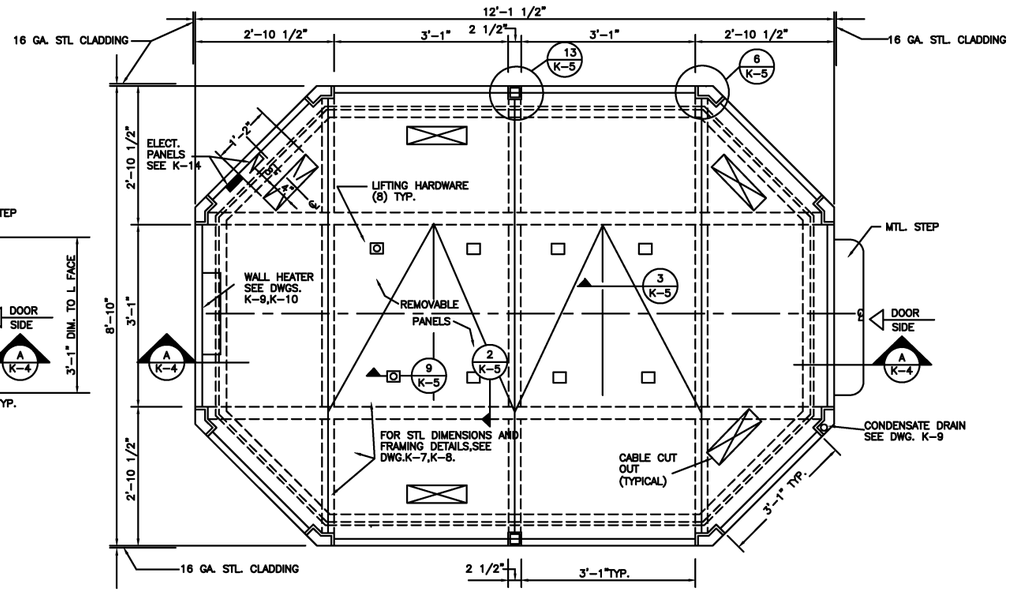
GETS TELEPHONE
RACK LAYOUT

SCALE: NONE

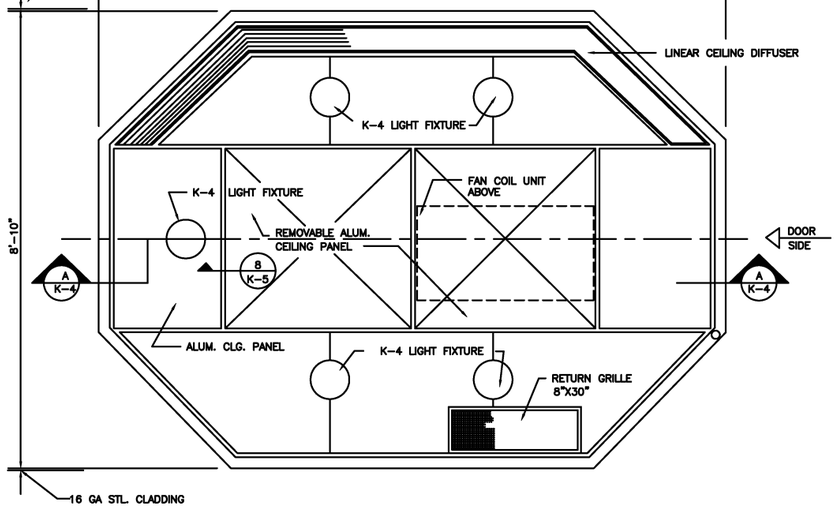
DRAWING NO.: ST–CM–GETS–003



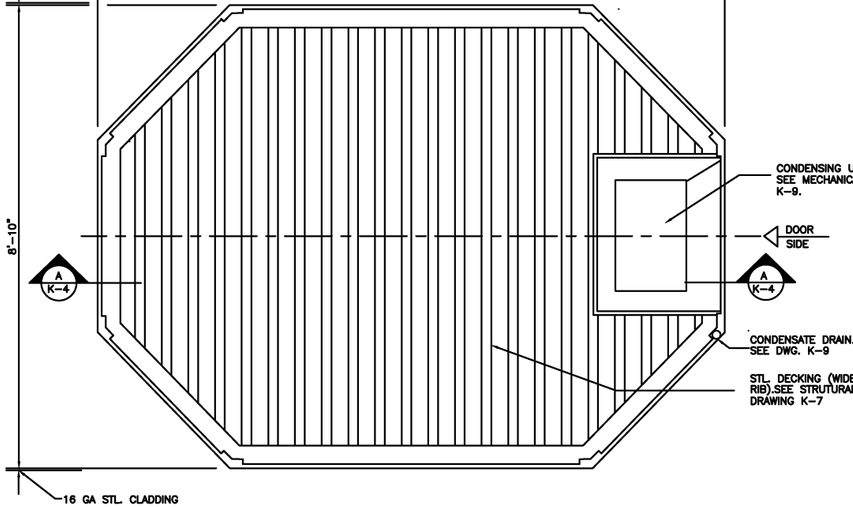
1 PLAN AT BASE



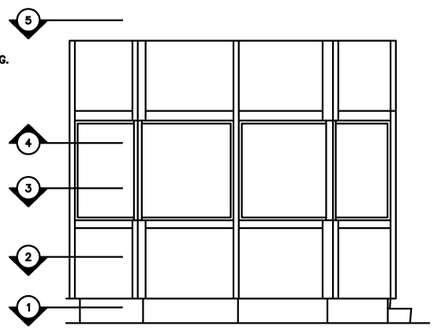
2 FLOOR PLAN



4 REFLECTED CEILING PLAN



5 ROOF PLAN



KEY ELEVATION

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DESIGNED	R.HEMAKOM	08/94 DATE
DRAWN	R.ROBERTS	08/94 DATE
CHECKED	Y.FINE O.HACKETT	08/94 DATE
APPROVED	M.IRSHAD	08/94 DATE
UPDATED		DATE

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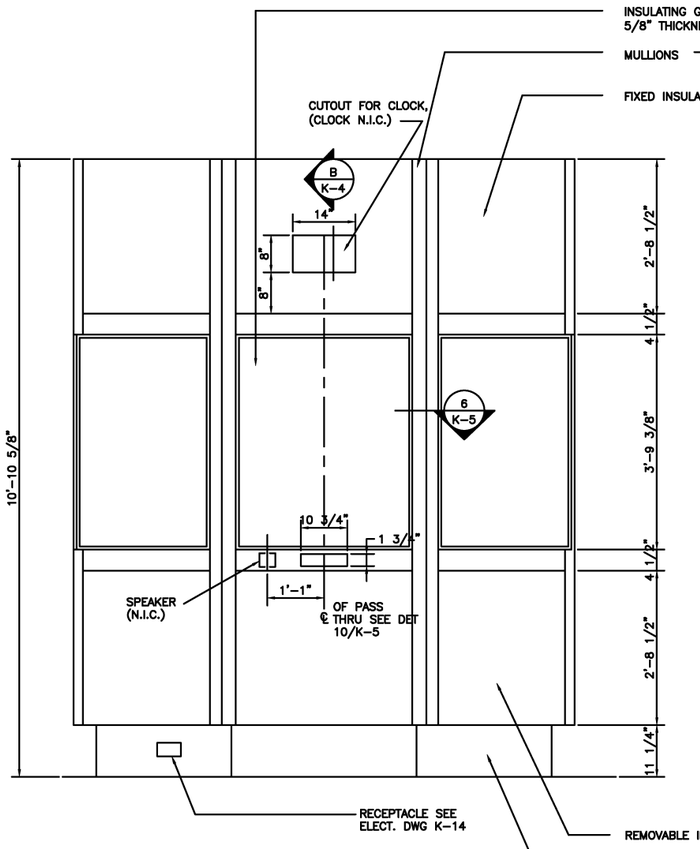
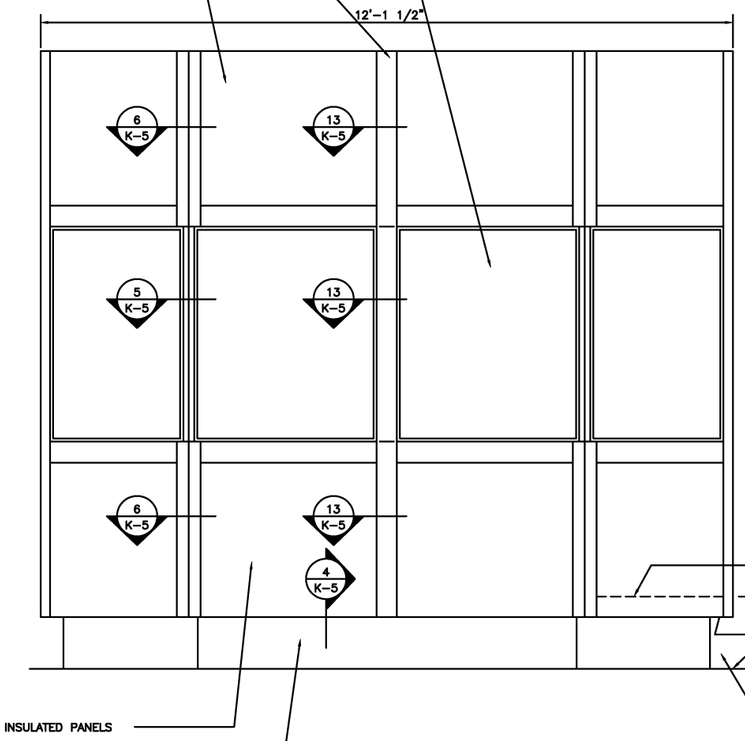
KIOSK
PLANS AT BASE,FLOOR,CEILING AND ROOF

SCALE 3/4"=1'-0" OR AS SHOWN

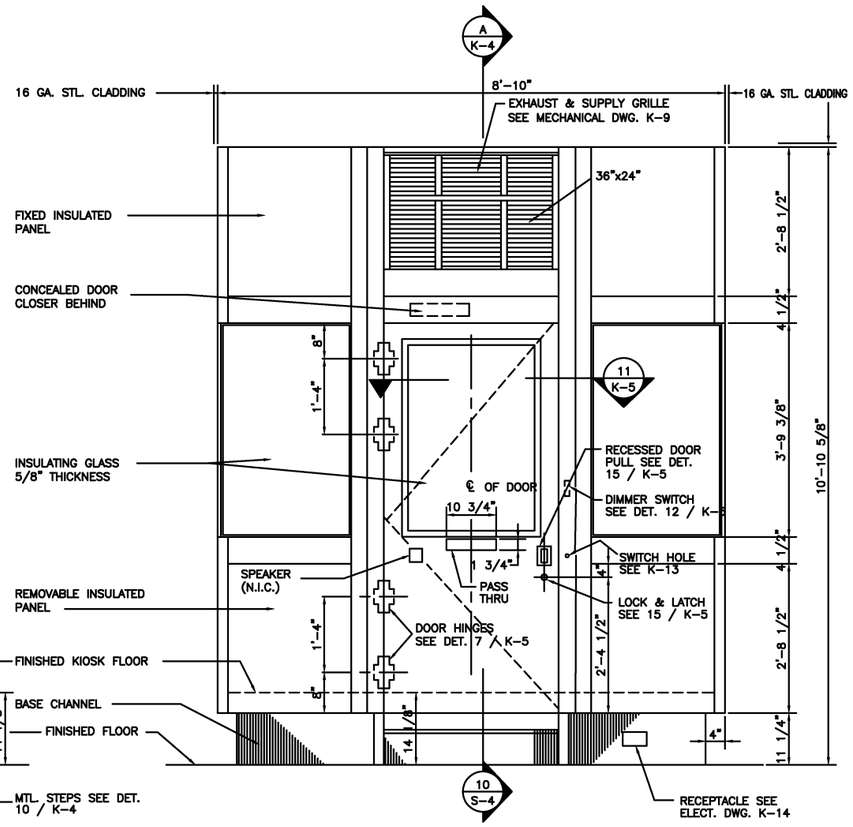
DRAWING NO. ST-CM-K-002



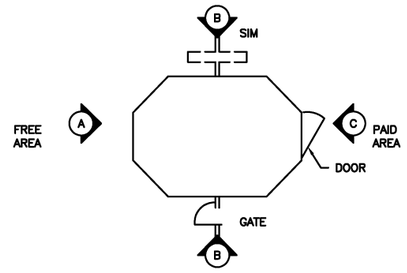
ELEVATION A



ELEVATION B



ELEVATION C



KEY PLAN

1 0 1 2 3

DESIGNED	DATE		
DRAWN	DATE		
CHECKED	DATE		
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UPDATED	DATE		

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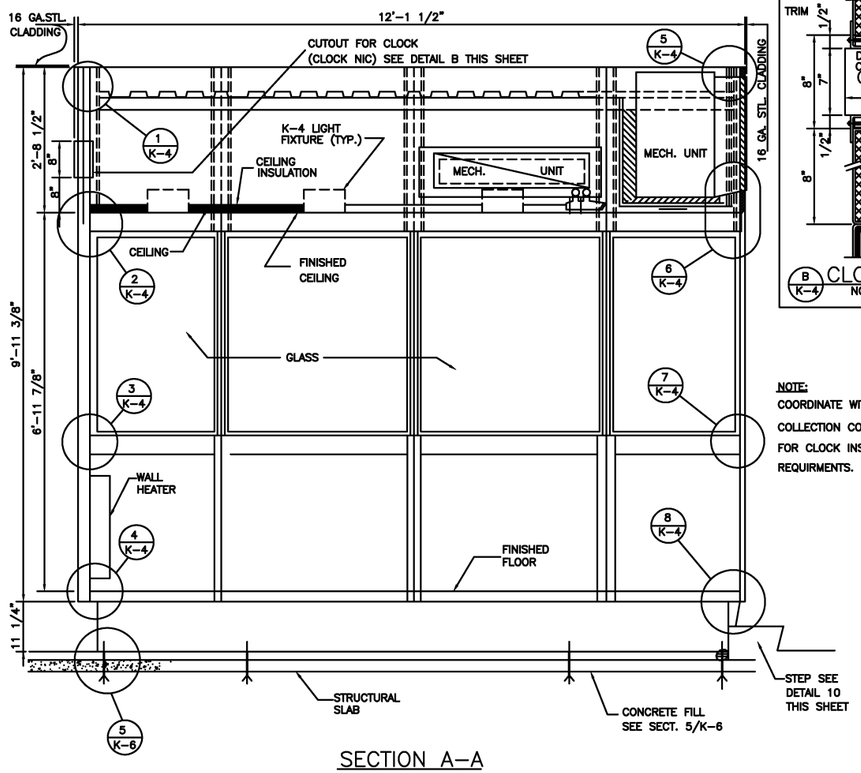
KIOSK
ELEVATIONS

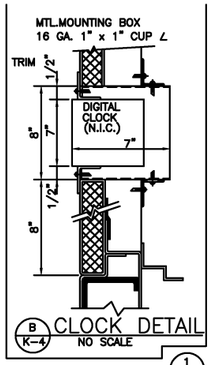
SCALE 3/4"=1'-0"

DRAWING NO. ST-CM-K-003



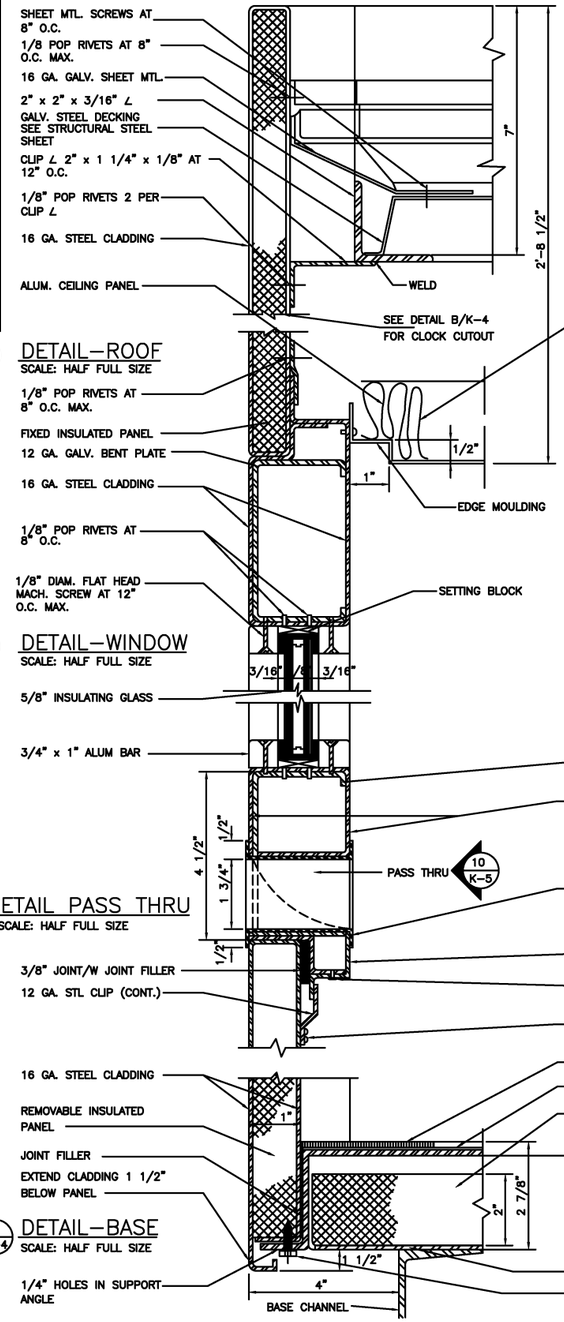
SECTION A–A

SCALE: 3/4"=1'-0" K-2
(SEE SECTION 5/K-6 AND K-7 FOR FRAMING)



B K-4 CLOCK DETAIL
NO SCALE

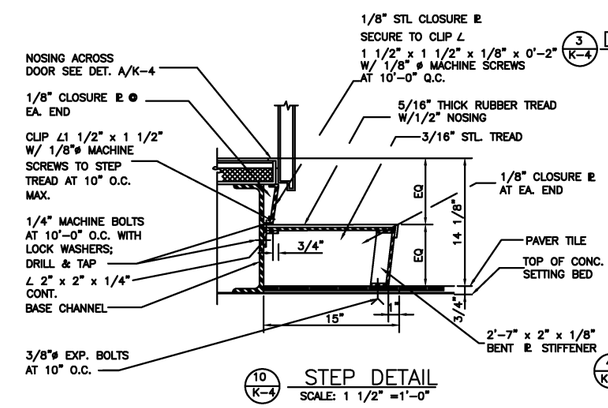
NOTE:
COORDINATE WITH FARE COLLECTION CONTRACTOR FOR CLOCK INSTALLATION REQUIRMENTS.



1/K-4 DETAIL–ROOF
SCALE: HALF FULL SIZE

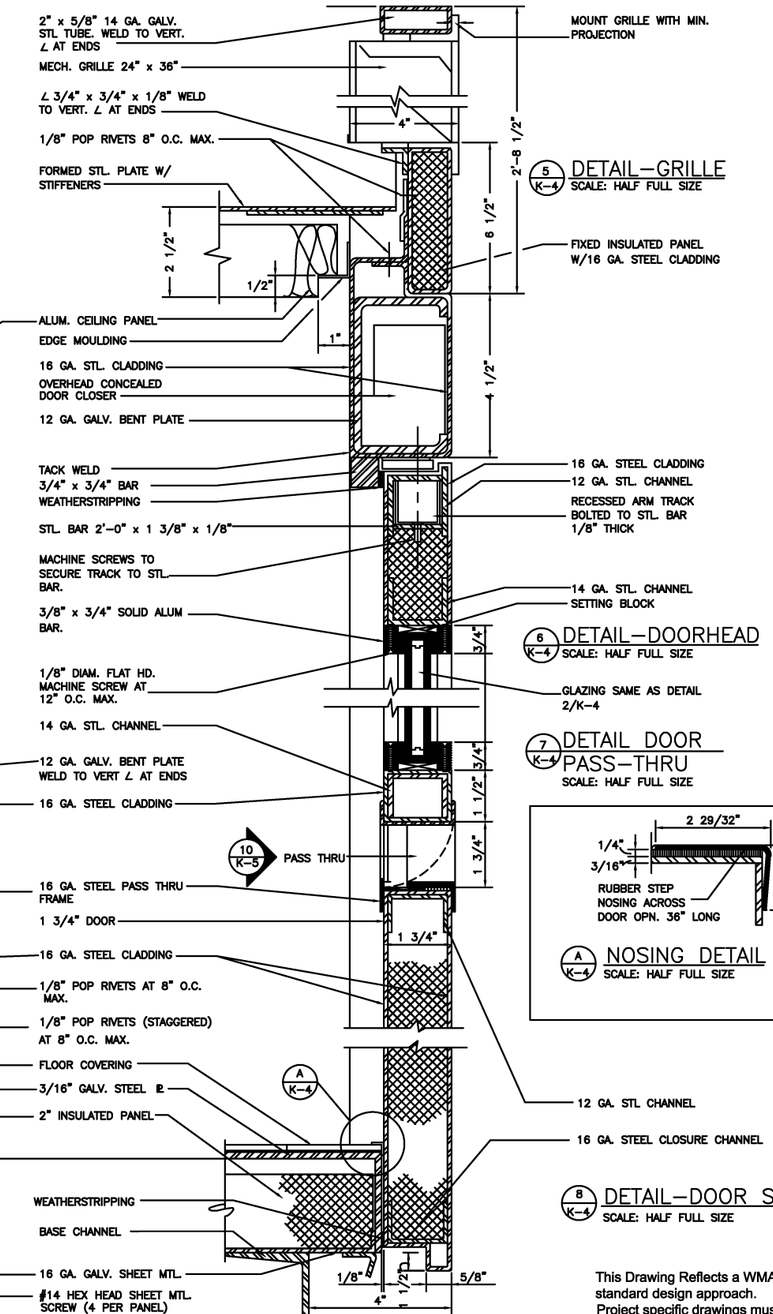
2/K-4 DETAIL–WINDOW
SCALE: HALF FULL SIZE

4/K-4 DETAIL–BASE
SCALE: HALF FULL SIZE



3/K-4 DETAIL PASS THRU
SCALE: HALF FULL SIZE

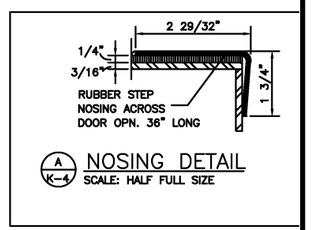
10/K-4 STEP DETAIL
SCALE: 1 1/2" =1'-0"



5/K-4 DETAIL–GRILLE
SCALE: HALF FULL SIZE

6/K-4 DETAIL–DOORHEAD
SCALE: HALF FULL SIZE

7/K-4 DETAIL DOOR PASS–THRU
SCALE: HALF FULL SIZE



A/K-4 NOSING DETAIL
SCALE: HALF FULL SIZE

8/K-4 DETAIL–DOOR SILL
SCALE: HALF FULL SIZE

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	DATE
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
UPDATED	DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
08/2001	SYSP	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

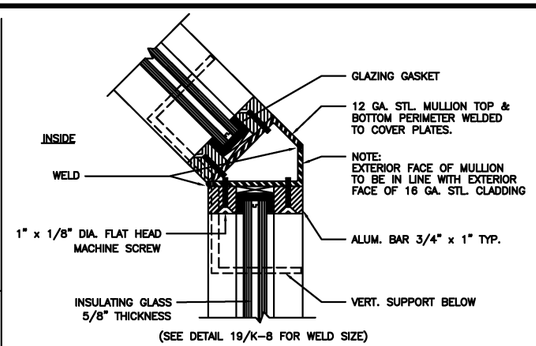
KIOSK
SECTIONS & DETAILS

SCALE: AS SHOWN

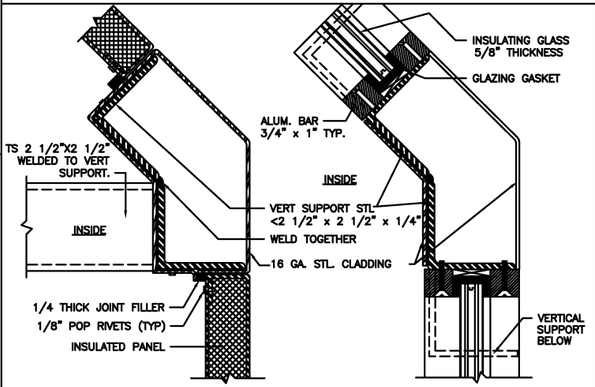
DRAWING NO.: ST–CM–K–004

2 DETAIL SECTION
SCALE: HALF FULL SIZE

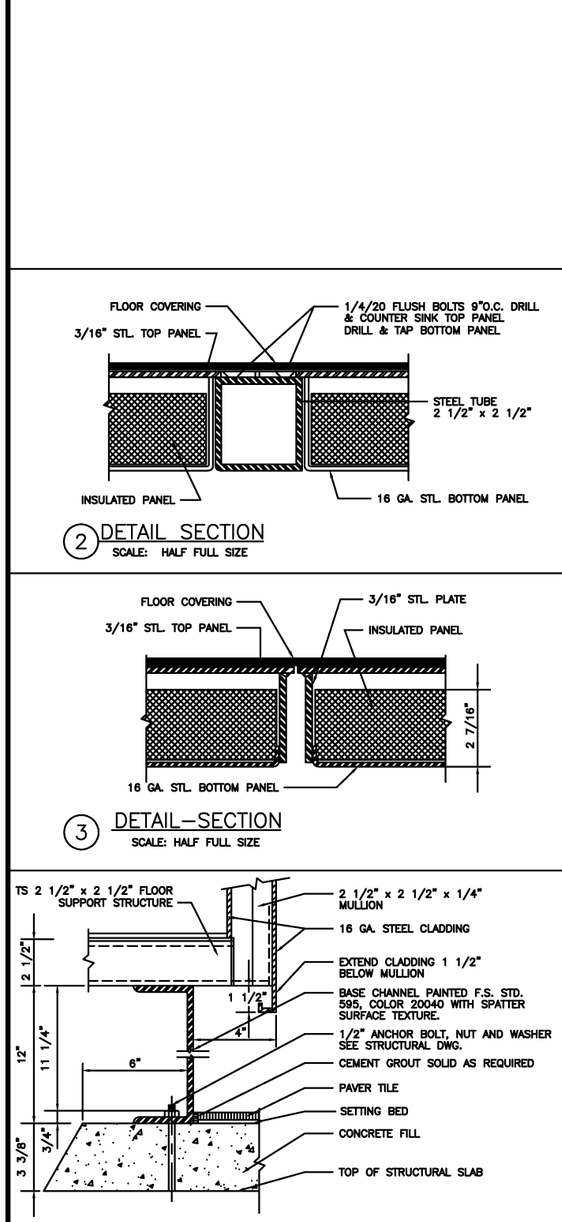
3 DETAIL—SECTION
SCALE: HALF FULL SIZE



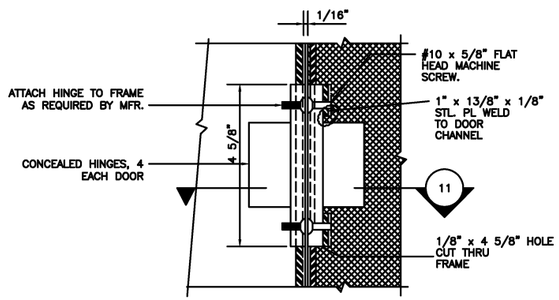
5 MULLION DETAIL PLAN
SCALE: HALF FULL SIZE



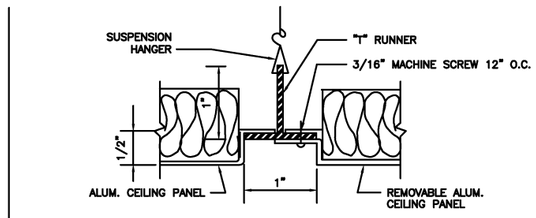
6 VERT. SUPPORT BELOW WINDOW — AT WINDOW
SCALE: HALF FULL SIZE



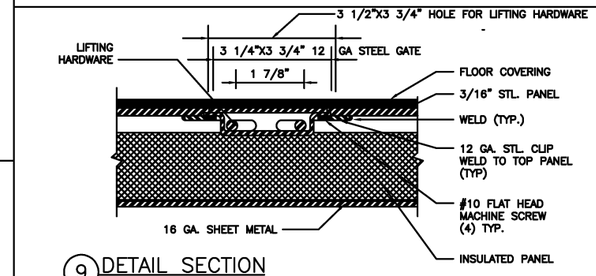
4 BASE DETAIL
SCALE: 3"=1"-0"



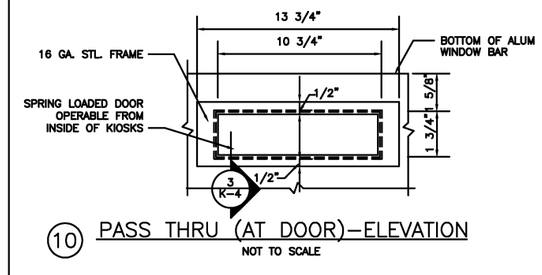
7 DOOR HINGE DETAIL
SCALE: HALF FULL SIZE



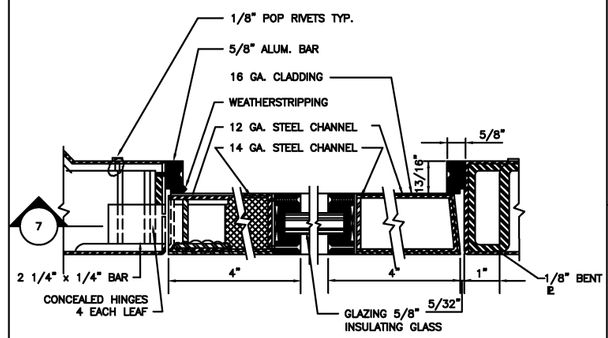
8 CEILING GRID SYSTEM DETAIL—SECTION
SCALE: FULL SIZE



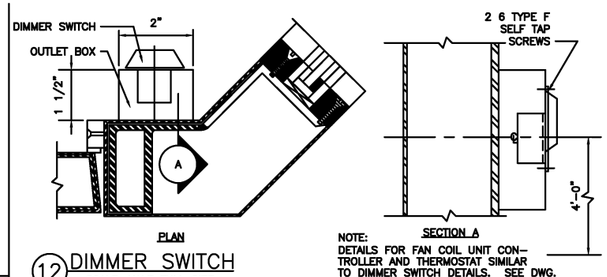
9 DETAIL SECTION
SCALE: HALF FULL SIZE



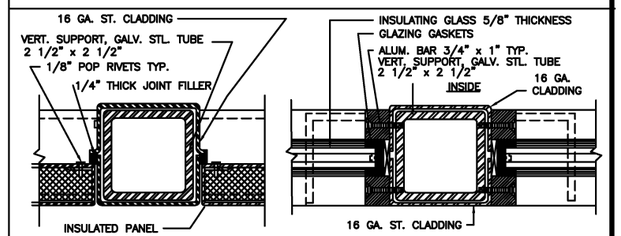
10 PASS THRU (AT DOOR)—ELEVATION
NOT TO SCALE



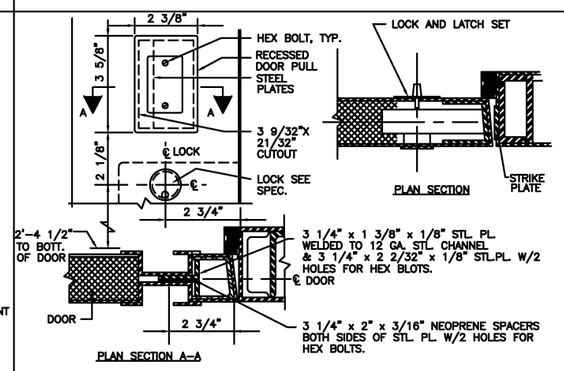
11 DOOR DETAIL—PLAN
SCALE: HALF FULL SIZE



12 DIMMER SWITCH
SCALE: HALF FULL SIZE



13 VERT. SUPPORT BELOW WINDOW—AT WINDOW
SCALE: HALF FULL SIZE



15 DOOR PULL & LOCK DETAIL
SCALE: 3/8" = 1"

DESIGNED	DATE
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
UPDATED	DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
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WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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OFFICE OF SYSTEMS

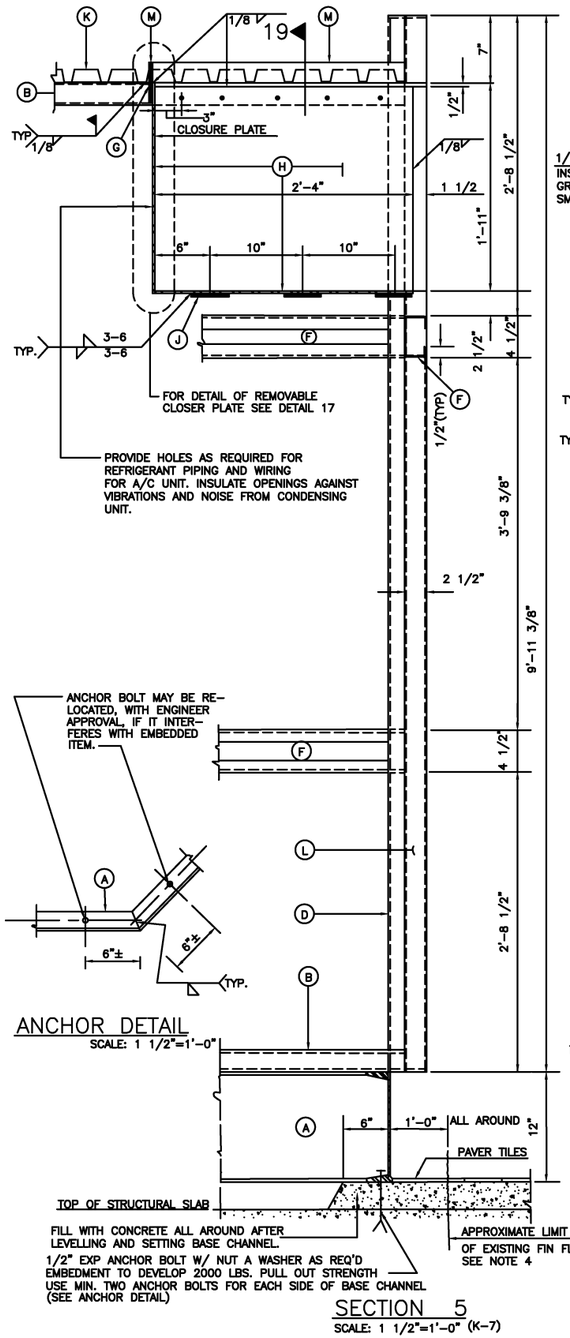
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

KIOSK
DETAILS

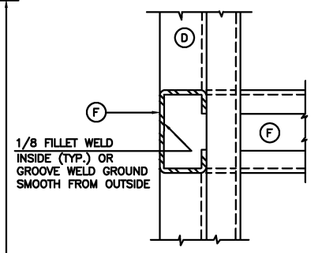
SCALE: AS SHOWN

DRAWING NO. ST—CM—K—005

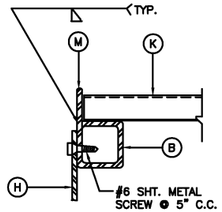


ANCHOR DETAIL
SCALE: 1 1/2"=1'-0"

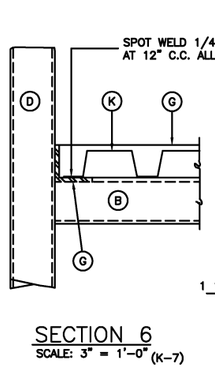
SECTION 5
SCALE: 1 1/2"=1'-0" (K-7)



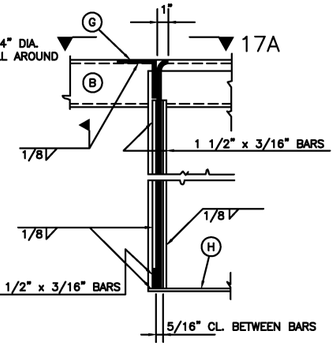
DETAIL 7
(K-8)



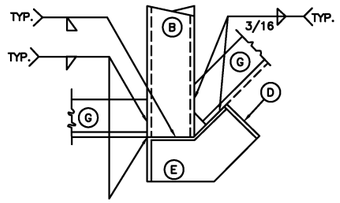
SECTION 19
SCALE: 3"=1'-0"



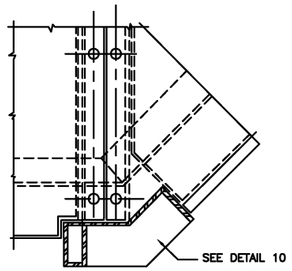
SECTION 6
SCALE: 3" = 1'-0" (K-7)



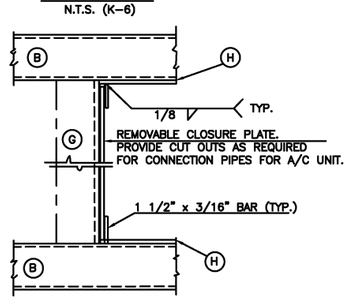
DETAIL 17
N.T.S. (K-6)



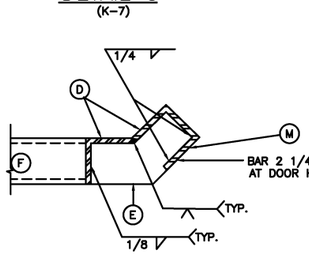
DETAIL 8
(K-7)



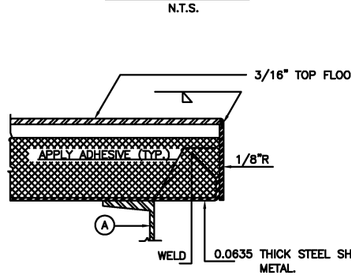
DETAIL 18
SCALE: 3" = 1'-0" (K-8)

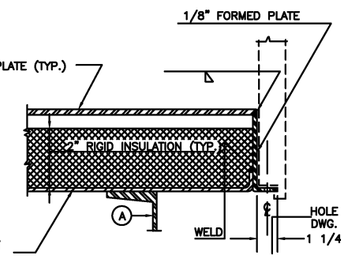


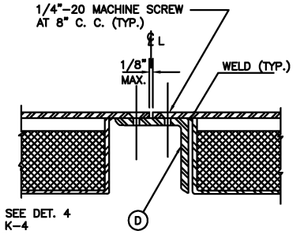
SECTION 17A
N.T.S.



DETAIL 9
(K-7)

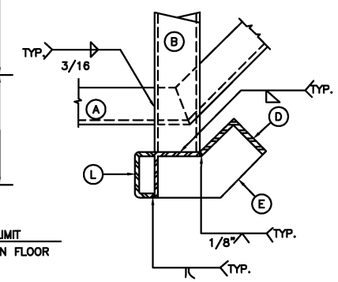




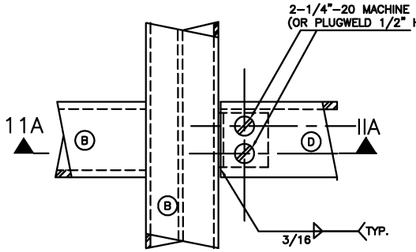


SECTION 15
N.T.S (K-8)

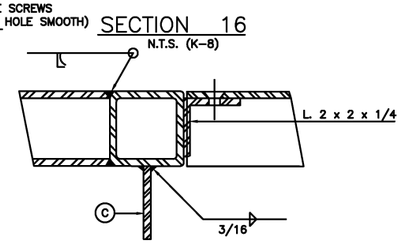
SECTION 14
N.T.S. (K-8)



DETAIL 10
SCALE: 3"=1'-0" (K-7)

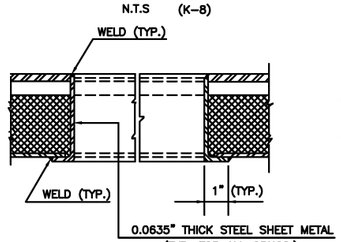


DETAIL 11
N.T.S. (K-7)

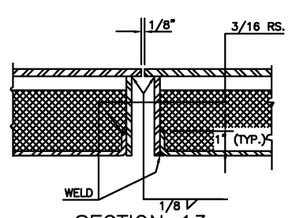


SECTION 16
N.T.S. (K-8)

SECTION IIA
N.T.S



SECTION 12
N.T.S. (K-8)



SECTION 13
N.T.S. (K-8)

STRUCTURAL NOTES:

1. IF REQUIRED, ADJUST LOCATIONS OF ANCHOR BOLTS FOR BASE CHANNEL C 12x25 TO SUIT FIELD CONDITION. SUBMIT DETAILS TO ENGINEER FOR APPROVAL.

   DO NOT LOCATE ANCHOR BOLTS WITHIN 3 INCHES OF EMBEDDED ITEMS.

2. CONTRACTOR SHALL PROVIDE "CUT OUTS" IN FLOOR PANELS, COLUMN, AND ROOF STEEL DECK AS MAY BE REQUIRED TO ACCOMMODATE OTHER FACILITIES ASSOCIATED WITH KIOSK CONSTRUCTION. DETAIL OF "CUT OUTS" SHALL BE WORKED OUT IN COORDINATION WITH MECHANICAL AND ELECTRICAL DISCIPLINES.

3. SEE DWG. K-13 FOR DETAILS OF " CUT OUTS" FOR COMMUNICATION AND POWER CABLING.

4. THE LIMIT OF PAVER TILE WORK SHOWN IS APPROXIMATE. THE CONTRACTOR IS REQUIRED TO BE FAMILIAR WITH THE EXTENT AND SCHEDULE OF THE PAVER TILE INSTALLATION BY STATION CONTRACTOR.

   (a) IF THE PAVER TILE WORK ADJACENT TO KIOSK LOCATION HAS ALREADY BEEN COMPLETED, THE CONTRACTOR SHALL CAREFULLY REMOVE THE OVERLAY AND PAVER TILES AS NECESSARY. AT THE COMPLETION OF KIOSK CONSTRUCTION, THE CONTRACTOR SHALL REINSTALL THE SAME KIND OF OVERLAY AND PAVER TILES TO THE LIMITS AS SHOWN IN THE DRAWINGS. THE UNDAMAGED PAVER TILES MAY BE USED FOR REINSTALLATION WITH THE ENGINEER'S APPROVAL.

   (b) IF THE PAVER TILE INSTALLATION IS UNDERWAY, THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF OVERLAY AND PAVER TILES WITH THE STATION CONTRACTOR. PAVER TILE WORK IN THE VICINITY OF KIOSK MAY BE RESCHEDULED WITH THE ENGINEER'S APPROVAL.

5. ALL CORNERS AT BENDS BETWEEN FREE EDGES OF SHEET METAL SHALL BE SEALED AND FINISHED AS PER APPROVAL.

6. CONTRACTOR SHALL SUBMIT STRUCTURAL SUPPORT DETAILS FOR THE AIR CONDITIONING FAN COIL UNIT INCLUDING PLENUM, DUCT WORK, AND ISOLATORS FOR THE CONTROL OF VIBRATION AND NOISE. SEE DWG. K-10 FOR MECHANICAL EQUIPMENT SCHEDULES AND DETAILS.

7. FOR WELDING OF TOP AND BOTTOM OF THE MULLIONS SEE DWG. K-7, DETAIL 19 AND SECTIONS 21, 22.

8. LEGEND OF STRUCTURAL MEMBERS: SEE DWG. K-7

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	R.HEMAKOM	8-94 DATE
DRAWN	R.ROBERTS	8-94 DATE
CHECKED	O.HACKETT	8-94 DATE
APPROVED	M.IRSHAD	8-94 DATE
UPDATED		DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION
ST-CM-K-007	PLANS, ELEVATION & SECTION
ST-CM-K-008	PLANS, ELEVATION, SECTION & DETAILS

REVISIONS

DATE	BY	DESCRIPTION
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WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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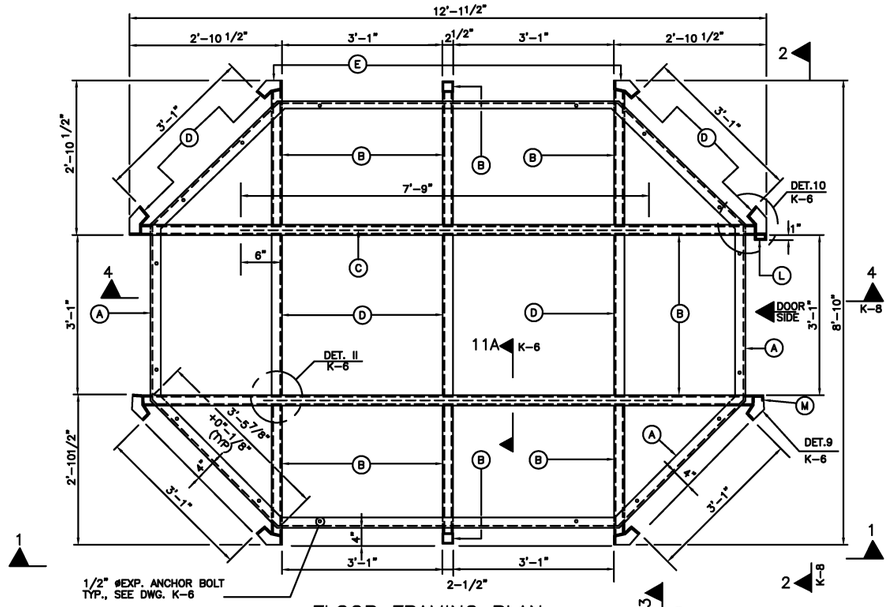
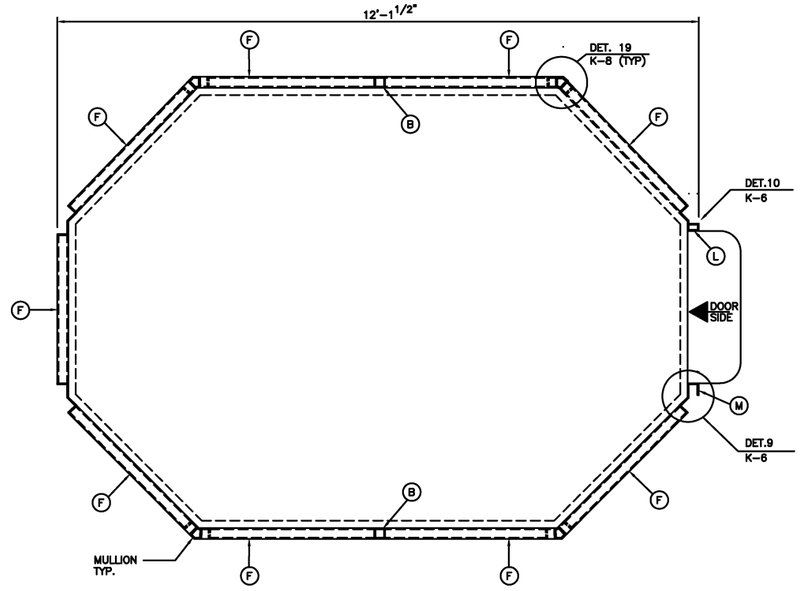
KIOSK
FLOOR PLAN, SECTIONS, DETAILS AND STRUCTURAL NOTES

SCALE 3/4"=1'-0" AND AS NOTED

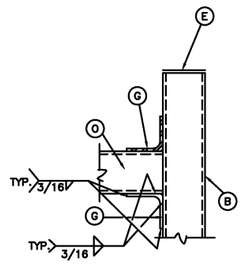
DRAWING NO. ST-CM-K-006



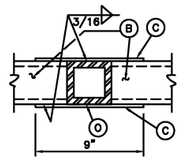
FLOOR FRAMING PLAN



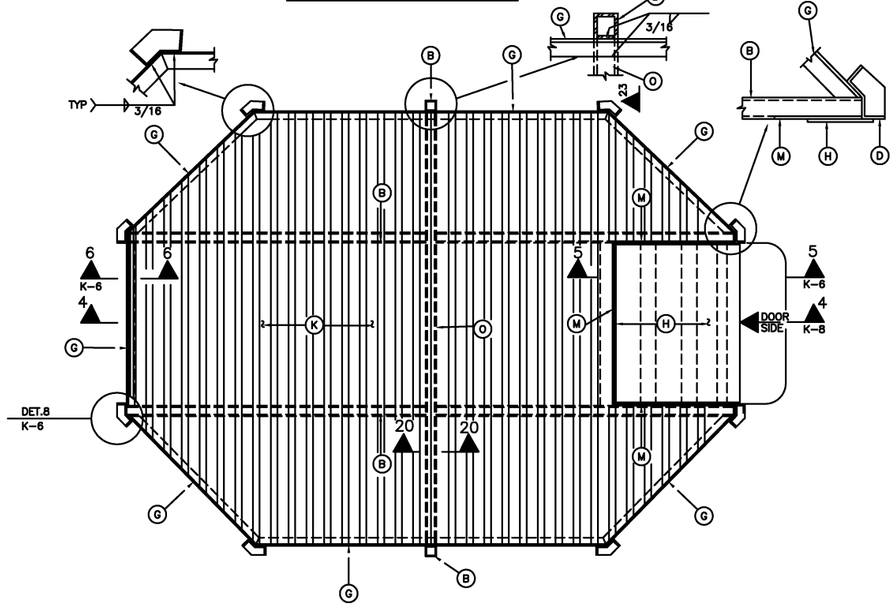
SECTION 3



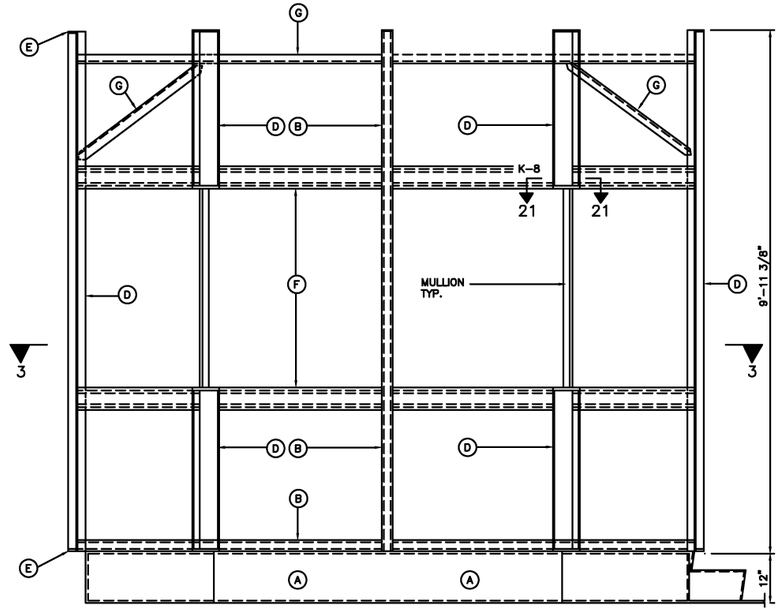
SECTION 23
N.T.S.



SECTION 20
N.T.S.



ROOF FRAMING PLAN



ELEVATION 1

LEGEND

- (A) C12 x 25 CHANNEL
- (B) TS 2 1/2 x 2 1/2 x 3/16
- (C) BAR 2 1/2 x 3/8
- (D) L 2 1/2 x 2 1/2 x 1/4
- (E) COVER PLATE 1/4" THICK
- (F) FORMED STEEL SHEET 0.1084" THICK
- (G) L 2 x 2 x 3/16
- (H) FORMED STEEL PLATE 3/16" THICK
- (J) STIFFENER PLATE 4" x 3/16"
- (K) 1 1/2" – 0.0396" THICK WIDE RIB GALVANIZED STEEL ROOF DECK. MIN. I = 0.20 IN^4 WELD IN ACCORD WITH MFR'S RECOMMENDATIONS.
- (L) BENT PLATE 1/8" THICK
- (M) BAR 2 1/4" x 1/4"
- (N) COVER PLATE 3/16" THICK
- (O) TS 2 1/2 x 2 1/2 x 1/4

DESIGNED ____ DATE
DRAWN ____ DATE
CHECKED ____ DATE
APPROVED ____ DATE
UPDATED ____ DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION
ST-CM-K-006	SECTIONS, DETAILS AND STRUCT. NOTES
ST-CM-K-008	SECTIONS & DETAILS

REVISIONS

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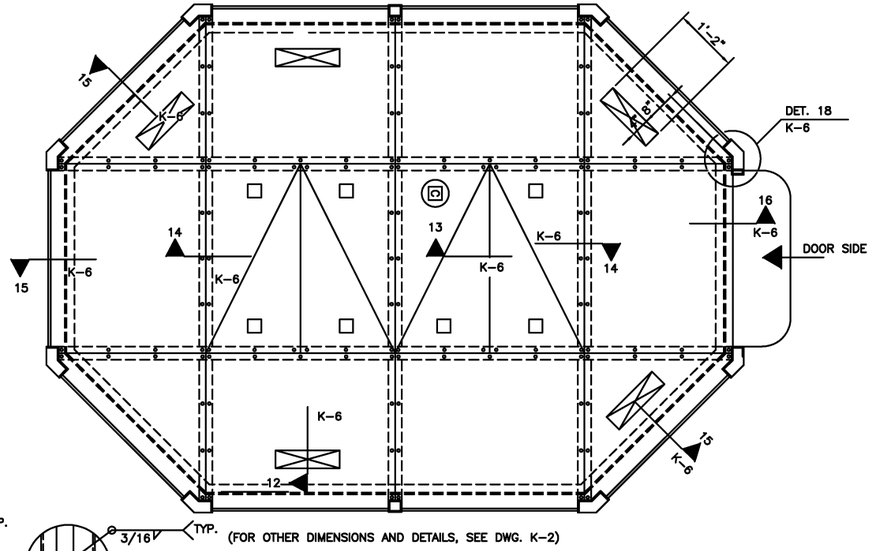
APPROVED ____ DIRECTOR ____ May 3, 2001 DATE

KIOSK

FLOOR AND ROOF FRAMING PLANS, ELEVATION AND SECTIONS.

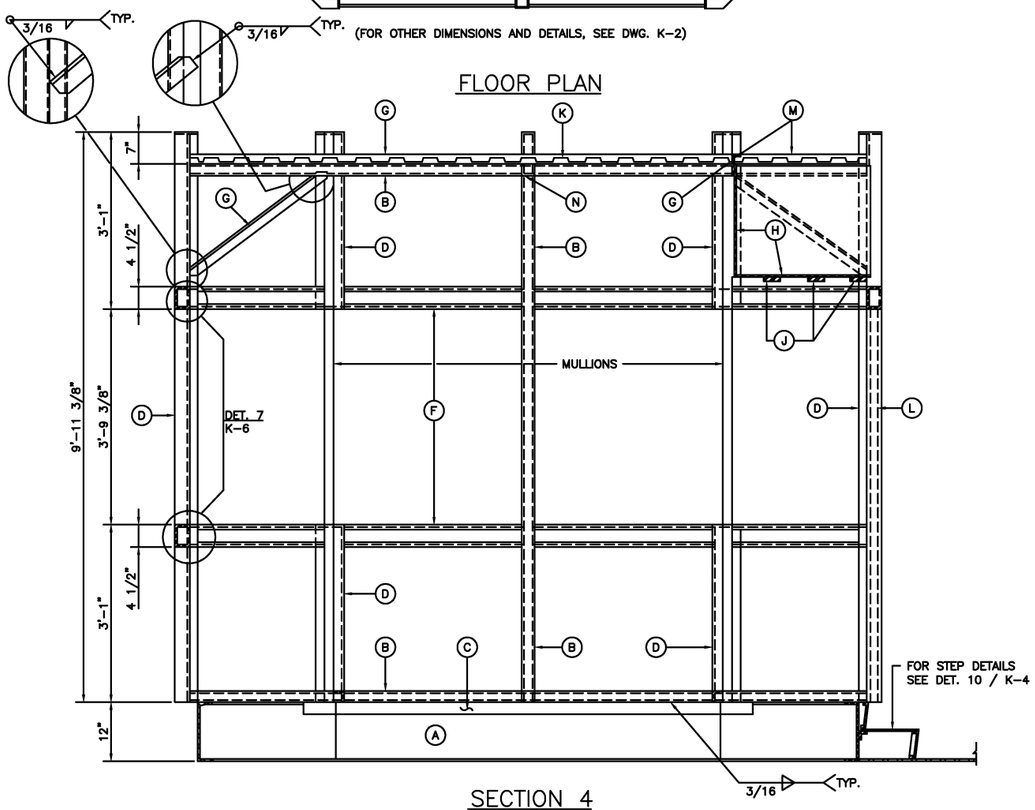
SCALE 3/4"=1'-0" (1' 0 1' 2')

DRAWING NO. ST-CM-K-007



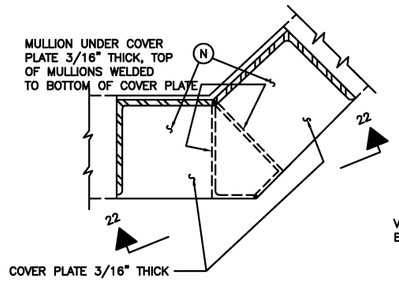
(FOR OTHER DIMENSIONS AND DETAILS, SEE DWG. K-2)

FLOOR PLAN



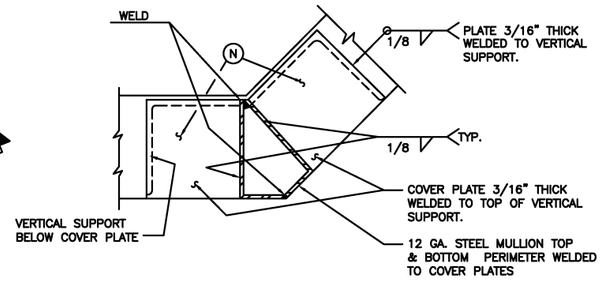
SECTION 4

K-7



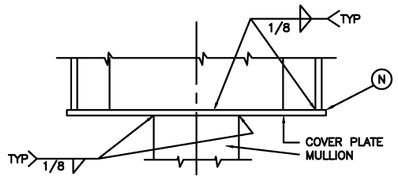
SECTION 21

N.T.S. K-7



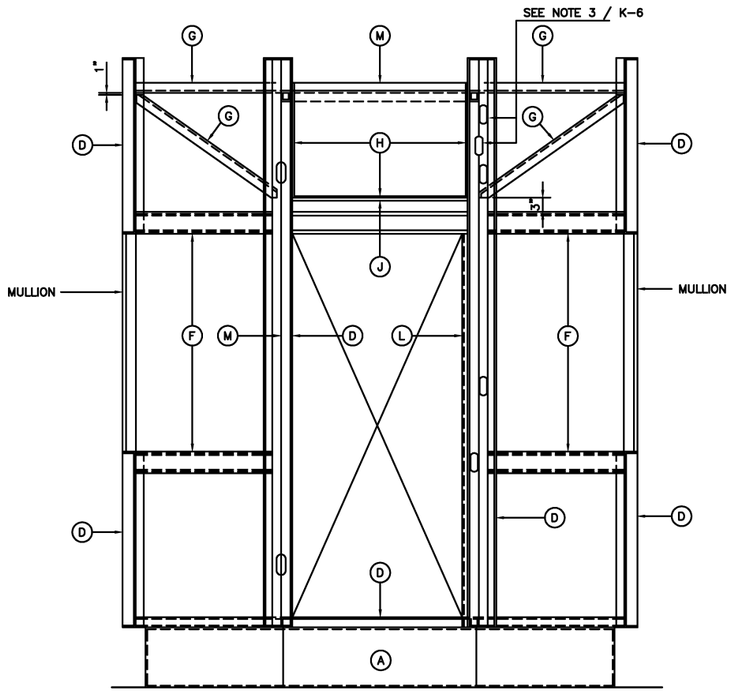
DETAILS 19

N.T.S K-7



SECTION 22

N.T.S.



ELEVATION 2

K-7

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

1' 0 1' 2'

DESIGNED ____ DATE

DRAWN ____ DATE

CHECKED ____ DATE

APPROVED ____ DATE

UPDATED ____ DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION
ST-CM-K-006	SECTIONS, DETAILS AND STRUCT. NOTES
ST-CM-K-007	PLANS, ELEVATION & SECTIONS

REVISIONS

DATE	BY	DESCRIPTION
08/2001	SYSP	Revised and issued by the Authority

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

SUBMITTED ____ DATE

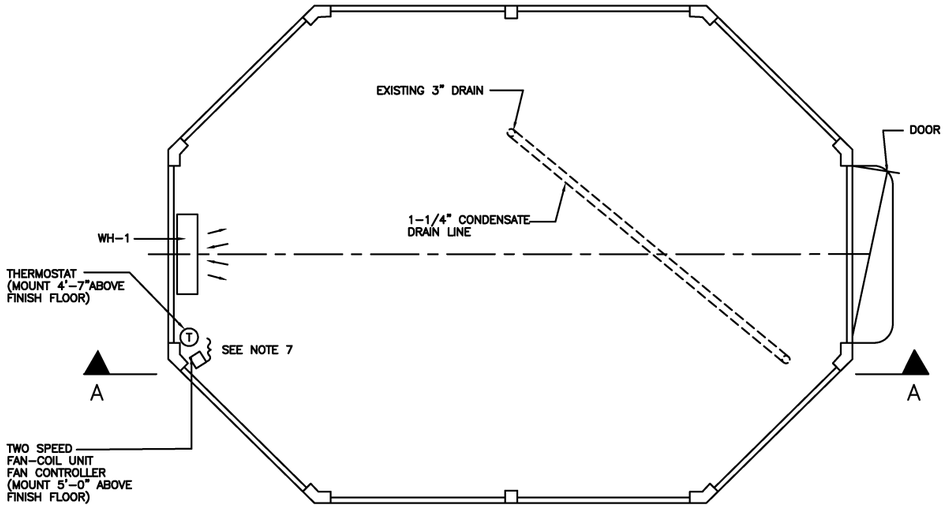
APPROVED ____ DIRECTOR

May 3, 2001 DATE

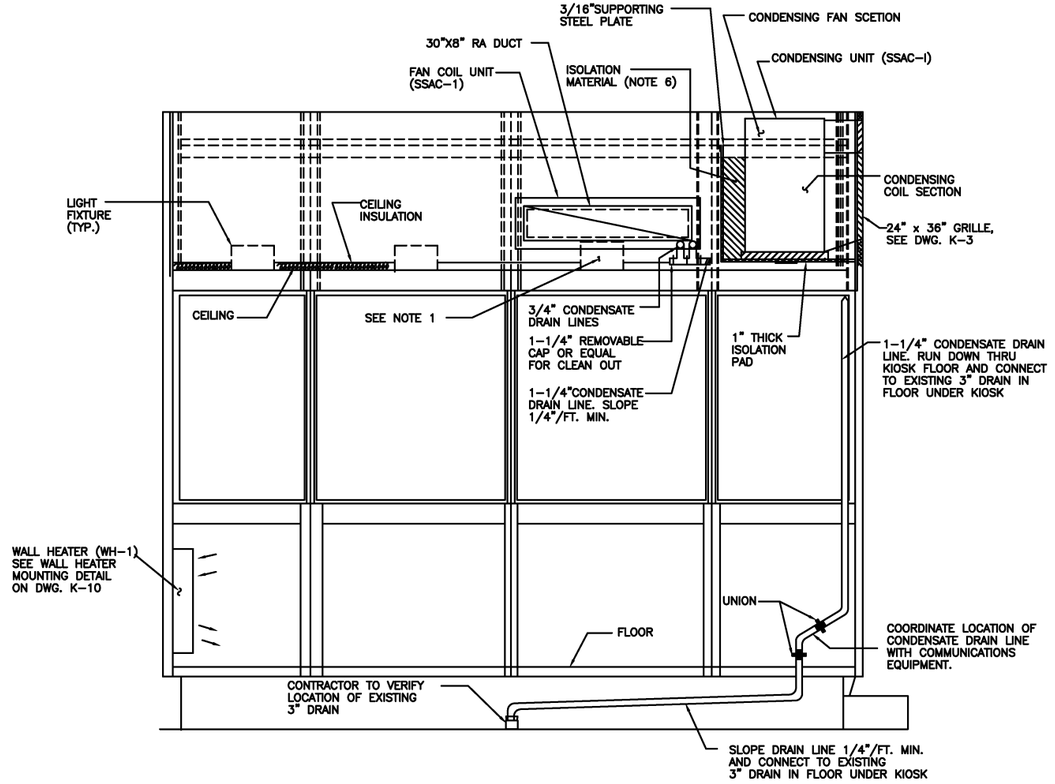
KIOSK
FLOOR PLAN, ELEVATION SECTIONS AND DETAILS

SCALE 3/4" = 1'-0"

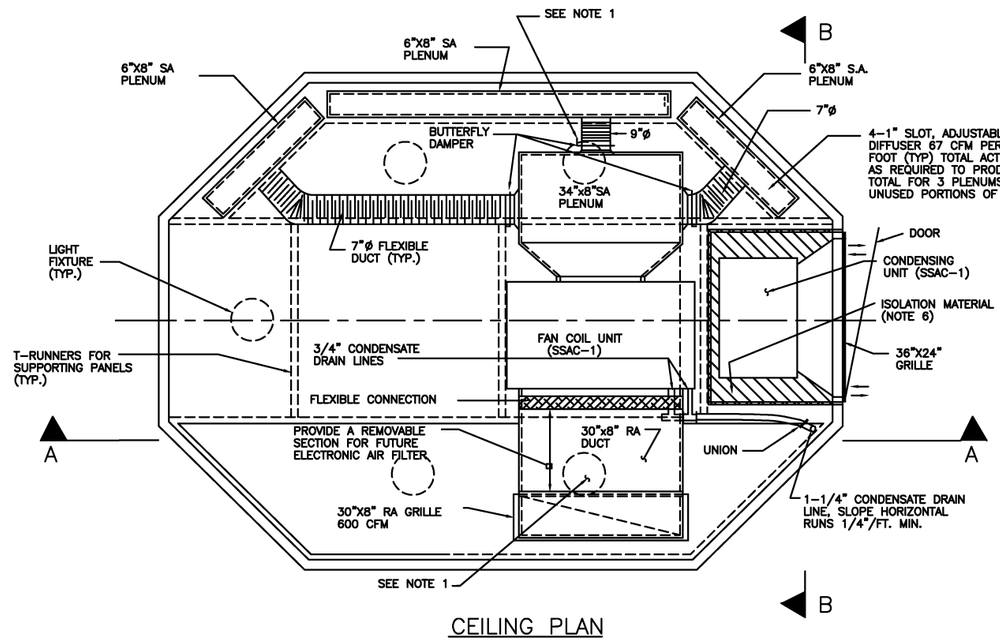
DRAWING NO. ST-CM-K-008



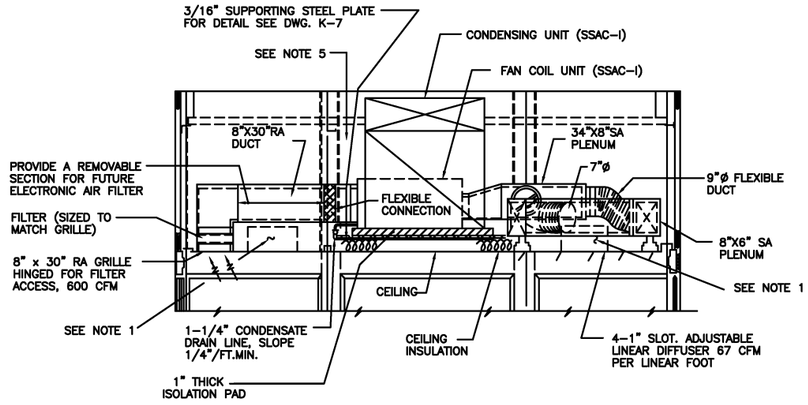
FLOOR PLAN



SECTION A-A



CEILING PLAN



SECTION B-B

NOTES:

1. MAINTAIN 2" CLEARANCE BETWEEN RA DUCT / SA PLENUM/ASSOCIATED ACCESSORIES AND LIGHT FIXTURE.
2. FOR GENERAL NOTES, SYMBOLS AND ABBREVIATIONS, EQUIPMENT SCHEDULES AND HEATER MOUNTING DETAILS, SEE DWG. K-10.
3. COORDINATE EXACT LOCATION OF FAN COIL UNIT WITH ACCESS PANEL SHOWN ON DWG. K-2.
4. FOR CONDENSING UNIT SUPPORT SEE DWG. K-7.
5. FOR CLARITY, ISOLATION MATERIAL AND 3/16" SUPPORTING PLATES NOT SHOWN.
6. MATERIAL AS SPECIFIED FOR "JOINT FILLER," SPEC. SECTION 4.4
7. CONNECT TWO ASSOCIATED OUTLET BOXES WITH 1/2" CONDUIT NIPPLE AND INSTALL CONTROL WIRING FOR THERMOSTAT VIA OUTLET BOX FOR FAN COIL UNIT CONTROLLER LOCATED DIRECTLY ABOVE.

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	K. PATEL	4-96 DATE
DRAWN	W. MASSEY	4-96 DATE
CHECKED	J. BUMANIS	4-96 DATE
APPROVED	R. GANERIWAL	4-96 DATE
UPDATED		DATE

REFERENCE DRAWINGS

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WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

KIOSK
AIR CONDITIONING AND HEATING PLANS & SECTIONS

SCALE: NONE

DRAWING NO.: ST-CM-K-009

SPLIT SYSTEM AIR CONDITIONING UNIT

UNIT IDENT. NO.	FAN COIL UNIT 9, 11											CONDENSING UNIT 10, 11										REMARKS
			EVAPORATOR COIL			ELECTRICAL CHARACTERISTICS								ELECTRICAL CHARACTERISTICS								
														COMPRESSOR 7			FAN 8					
	CFM 1	EXTERNAL 2 S P (IN. WG.)	EAT (°F)	LAT (°F)	TOTAL COOLING CAPACITY (MBH) 5	RPM 3	VOLTS	PHASE	HP	FLA	NOISE 4 LEVEL (NC)	EAT (°F)	TOTAL CAPACITY (MBH)	RPM	VOLTS	PHASE	HP	RPM	VOLTS	PHASE	CFM	NOISE 6 LEVEL (NC)	
SSAC–1	450	0.50	80DB/ 67WB	55	15.3	1650	208	1	1/5	1.3	45	105	18.4	3500	208	1	1/4	1500	208	1	1030	60	MIN. CONDENSING UNIT SEER=10.4

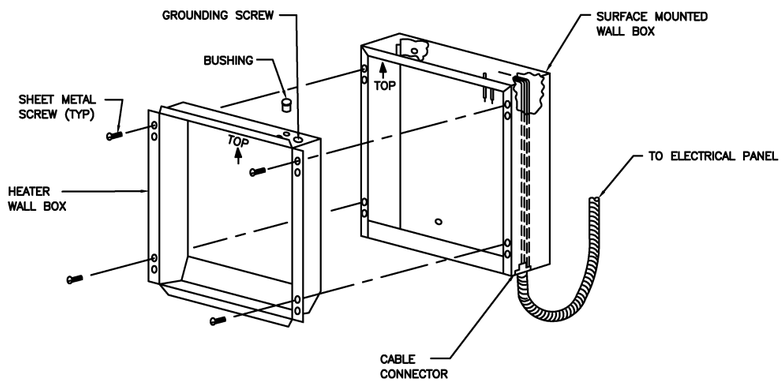
KEYED NOTES FOR AIR CONDITIONING UNIT:

1. AT LOW SPEED, 600 CFM AT HIGH SPEED.
2. EXTERNAL STATIC PRESSURE INCLUDES PRESSURE DROP DUE TO FILTER. COOLING CAPACITY IS SHOWN FOR HIGH SPEED.
3. AT HIGH SPEED.
4. INSIDE KIOSK DUE TO MECHANICAL EQUIPMENT.
5. MINIMUM TOTAL CAPACITY SHOWN AT 45°F COIL REFRIGERANT TEMPERATURE AT HIGH SPEED.
6. IN STATION AREA OUTSIDE KIOSK.
7. COMPRESSOR RLA = 9.0 & LRA = 48.0
8. CONDENSING FAN FLA = 1.5
9. MAXIMUM WEIGHT = 100 POUNDS
10. MAXIMUM WEIGHT = 200 POUNDS
11. CONTRACTOR SHALL CONFIRM FINAL EQUIPMENT WEIGHTS WITH THE ACTUAL UNITS PROVIDED.

WALL HEATER SCHEDULE 1

UNIT IDENT. NO.	CFM	EAT °F	LAT °F	CAPACITY		ELECTRICAL CHARACTERISTICS			REMARKS
				MBH	KW	VOLTS	PHASE	CYCLES	
WH–1	200	70	117	10.24	3	208	1	60	WALL MOUNTED HEATER WITH INTEGRAL T'STAT

1 HEATER SHALL BE DOWN FLOW TYPE



WALL HEATER MOUNTING DETAIL

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

ABBREVIATIONS

CFM	CUBIC FEET/MINUTE	MIN.	MINIMUM
DB	DRY BULB	NC	NOISE CRITERIA
Ø	DIAMETER	NO.	NUMBER
DWG.	DRAWING	RA	RETURN AIR
EAT	ENTERING AIR TEMPERATURE	RLA	RATED LOAD AMPS
°F	DEGREES FAHRENHEIT	RPM	REVOLUTIONS PER MINUTE
FLA	FULL LOAD AMPS	SA	SUPPLY AIR
FT.	FEET OR FOOT	SEER	SEASONAL ENERGY EFFICIENCY RATIO
HP	HORSEPOWER		
IDENT.	IDENTIFICATION	SP	STATIC PRESSURE
IN.	INCHES	T'STAT	THERMOSTAT
KW	KILOWATT	TYP.	TYPICAL
LAT	LEAVING AIR TEMPERATURE	WB	WET BULB
LRA	LOCKED ROTOR AMPS	WG	WATER GAUGE
MBH	1000 BTU/HOUR		

SYMBOLS

- LINEAR DIFFUSER
- ROUND FLEX DUCT
- SOUND LINED DUCT
- BUTTERFLY DAMPER

GENERAL NOTES:

1. LINE ALL SA AND RA SHEETMETAL DUCTWORK WITH 1 INCH THICK DUCT LINER. ALL DUCT DIMENSIONS SHOWN ON THE DRAWING ARE INTERNAL FREE AREA (WITHOUT DUCT LINER). FOR EXTERNAL DUCT DIMENSIONS WITH DUCT LINER ADD 2" TO EACH DIMENSION.
2. FAN COIL UNIT AND ALL DUCTWORK SHALL BE SUSPENDED BY SUPPORTING RODS, TIED TO THE ROOF STRUCTURE. (SEE NOTE 6, DWG. K–6).
3. FAN COIL UNIT TO BE "CARRIER MODEL FD3ANA" OR APPROVED EQUAL.
4. CONDENSING UNIT TO BE "FIRST COMPANY MODEL 18 WCU" OR APPROVED EQUAL.
5. WALL HEATER TO BE "ELECTROMODE–EWA" OR APPROVED EQUAL.

DESIGNED	K. PATEL	4–96 DATE
DRAWN	W. MASSEY	4–96 DATE
CHECKED	J. BUMANIS	4–96 DATE
APPROVED	R. GANERIWAL	4–96 DATE
UPDATED		DATE

REFERENCE DRAWINGS

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OFFICE OF SYSTEMS

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APPROVED _____ DIRECTOR May 3, 2001 DATE

KIOSK
MECHANICAL EQUIPMENT SCHEDULES, DETAILS, ABBREVIATIONS AND GENERAL NOTES

SCALE: NONE

DRAWING NO.: ST–CM–K–010

ABBREVIATIONS

A, AMP.	AMPERE
AC	ALTERNATING CURRENT
A/C	AIR CONDITIONING
AIC	AMPERES INTERRUPTING CAPACITY
&	AND
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CND.	CONDUIT
CKT.	CIRCUIT
DC	DIRECT CURRENT
DET.	DETAIL
DIA.	DIAMETER
DWG.	DRAWING
ELEV.	ELEVATION
FDR.	FEEDER
G, GND.	GROUND
HZ	HERTZ
K	KILO
KVA	KILOVOLT – AMPERE
KW	KILOWATT
MLO	MAIN LUGS ONLY
NIC	NOT IN CONTRACT
NO.	NUMBER
P	POLE
PNL.	PANEL
PWR.	POWER
QTY.	QUANTITY
REF.	REFERENCE
RM.	ROOM
SMADS	STATION MONITORING AND DISPLAY SYSTEM
SWBD.	SWITCHBOARD
TYP.	TYPICAL
UFD	UNDERFLOOR DUCT
V	VOLT
W	WIRE

LEGEND

- ϕ — DUPLEX RECEPTACLE
- DS — DIMMER SWITCH
- NON–FUSED DISCONNECT SWITCH–SIZE AS SHOWN
- J — JUNCTION BOX (NEMA 12 ENCLOSURE)
- EMERGENCY PANELBOARD
- ESSENTIAL PANELBOARD
- DIB — DIMMING INTERFACE BOX
- GND — GROUND BUS
- ø — PHASE
- S/N — SOLID NEUTRAL
- CIRCUIT BREAKER
- FUSED SWITCH
- EXPOSED CONDUIT
- CONCEALED CONDUIT

HASH MARKS INDICATE QUANTITY OF WIRES.
INDICATES EQUIPMENT GROUNDING CONDUCTOR

- E — K4 COMPACT FLUORESENT LIGHTING FIXTURE WITH TWO 13 WATT LAMPS ON EMERGENCY POWER CIRCUIT.

NOTES:

1. LOCATION OF ALL ELECTRICAL ITEMS AND ROUTING OF CABLES INSIDE BASE OF CONSOLE SHALL BE COORDINATED WITH FARE COLLECTION CONTRACTOR.
2. LOCATION AND QUANTITY OF CABLE ACCESS OPENINGS FOR POWER, FARE COLLECTION, CONTROL AND COMMUNICATIONS CABLES SHALL BE COORDINATED WITH FARE COLLECTION CONTRACTOR. SEE DWG. K–12.
3. POWER CONDUCTORS FOR FEEDERS SUPPLYING PANEL. KE & PANEL KES SHALL BE PROVIDED BY THE CONTRACTOR FROM EXISTING POWER DISTRIBUTION PANELS. SEE SCHEDULE ON DWG. K–16.
4. POWER CONNECTIONS TO FAN COIL UNIT & CONDENSING UNIT SHALL BE EASILY ACCESSIBLE TO PERMIT REMOVAL OF AIR CONDITIONING UNIT FOR SERVICING OR REPLACEMENT
5. FOR GROUND BUS BAR INSTALLATION, SEE DETAIL A ON DWG. K–14. FOR CONNECTING THE GROUND BUS TO THE LOCAL GROUND BUS BAR, A 2/0 GROUNDING ELECTRODE CONDUCTOR SHALL BE INSTALLED BY THE CONTRACTOR IN THE EXISTING CONDUIT. SEE SCHEDULE ON DWG. K–16, AND DIAGRAM ON DWG. DWG. K–17.
6. DIMMER SWITCH FOR TYPE K4 FIXTURES SHALL BE MOUNTED ADJACENT TO DOOR AS SHOWN IN DETAIL 12 ON DWG. K–5. USE STANDARD OUTLET BOX.
7. INSTALL DC CONTROL CONDUCTORS IN SEPARATE CONDUIT FROM CONDUIT FOR AC POWER CONUCTORS AS SHOWN.
8. LIGHTING FIXTURE LOCATIONS ARE SHOWN ON DWG. K–2.
9. SLOTTED HOLE DETAILS IN STRUCTURAL COLUMNS FOR CONDUITS AND CABLES ARE SHOWN ON DRAWING K–13.
10. CONTRACTOR SHALL PROVIDE PROPER FITTINGS AND/OR REDUCERS FOR CONDUITS AND UNDERFLOOR DUCT TO OBTAIN A CONTINUOUS RACEWAY SYSTEM TO ELECTRICAL PANELS.
11. THERMOSTAT & CONTROLLER FOR FAN COIL UNIT & CONDENSING UNIT SHALL BE MOUNTED AS SHOWN ON DRAWING K–9, USE STANDARD OUTLET BOXES.
12. LOCATION OF POWER & CONTROL CABLES AND ASSOCIATED ELECTRICAL EQUIPMENT SHALL BE ADJUSTED AS REQUIRED DURING INSTALLATION.

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	J. KROLIK	4–96 DATE
DRAWN	W. MASSEY	4–96 DATE
CHECKED	D. GLEN	4–96 DATE
APPROVED	R. GANERIWAL	4–96 DATE
UPDATED		DATE

REFERENCE DRAWINGS

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OFFICE OF SYSTEMS

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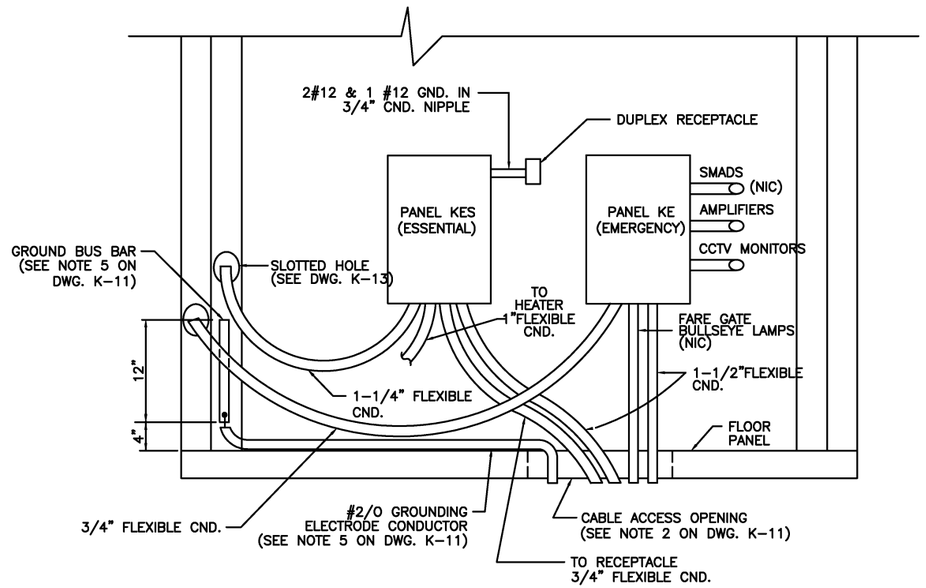
APPROVED _____ DIRECTOR May 3, 2001 DATE

KIOSK
ABBREVIATIONS, LEGEND & NOTES

SCALE: NONE

DRAWING NO.: ST–CM–K–011



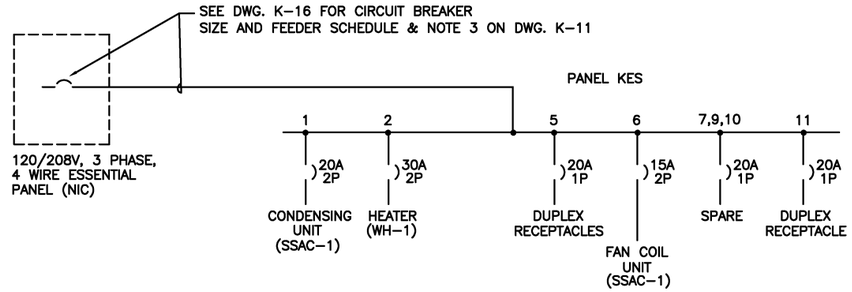
SECTION A–A
K–14

PANEL NO. – KE (EMERGENCY)
PANEL TYPE – LIGHTING & APPLIANCE BRANCH CIRCUIT
NO. OF CIRCUITS – 12
BUS RATING – 100 AMP., 1 PHASE, 3 WIRE 120/208V AC

LOCATION – KIOSK
MAIN – 100 AMP MLO
PANEL MOUNTING – SURFACE

DESCRIPTION	CONNECTED LOAD KVA A	B	C	CIRCUIT BREAKER FRAME	TRIP	AIC	CKT. NO.	A⌀ C⌀	CKT. NO.	CIRCUIT BREAKER FRAME	TRIP	AIC	CONNECTED LOAD KVA A	B	C	DESCRIPTION
SMADS (NIC)	1.5			100	20	10K	1		2	100	15	10K	.48			CCTV MONITORS
KIOSK LIGHTING			.15		20		3		4						1.0	FARE GATE BULLSEYE LAMPS (NIC)
AMPLIFIERS	.24				15		5		6							SMADS CLOCK (CLOCK NIC)
SPARE				100	15	10K	7		8	100	15	10K				SPARE
SPACE							9		10							SPACE
SPACE							11		12							SPACE
SUB–TOTAL	1.74		.15					S/N GND					.48		1.0	SUB–TOTAL

CONNECTED LOAD: 2.22 KVA A, ___ KVA B, 1.15 KVA C, 3.37 TOTAL
SUMMER OR WINTER DEMAND LOAD: 2.22 KVA, ___ KVA, 1.15 KVA, 3.37



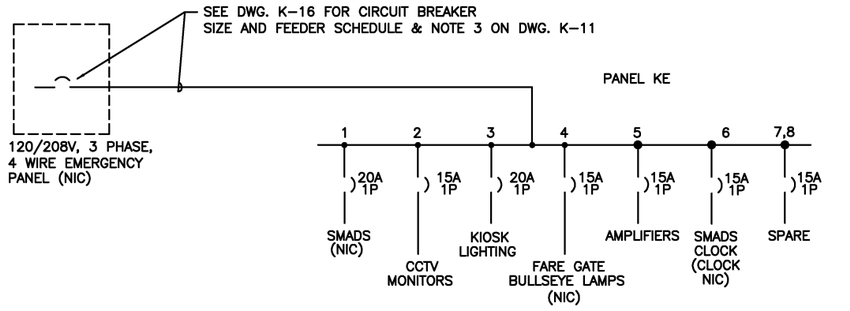
ESSENTIAL POWER SINGLE LINE DIAGRAM

PANEL NO. – KES (ESSENTIAL)
PANEL TYPE – LIGHTING & APPLIANCE BRANCH CIRCUIT
NO. OF CIRCUITS – 12
BUS RATING – 100 AMP., 3 PHASE, 4 WIRE 120/208V AC

LOCATION – KIOSK
MAIN – 100 AMP MLO
PANEL MOUNTING – SURFACE

DESCRIPTION	CONNECTED LOAD KVA A	B	C	CIRCUIT BREAKER FRAME	TRIP	AIC	CKT NO.	A⌀ B⌀C⌀	CKT NO.	CIRCUIT BREAKER FRAME	TRIP	AIC	CONNECTED LOAD KVA A	B	C	DESCRIPTION
CONDENSING UNIT (SSAC–1)	1.1			100	20	10K	1		2	100	30	10K	1.5			HEATER (WH–1)
		1.1												1.5		
DUPLEX RECEPTACLES IN BASE			1.5	100	20	10K	5		6	100	15	10K			0.2	FAN COIL UNIT (SSAC–1)
SPARE				100	20	10K	7						0.2			
SPARE				100	20	10K	9		10	100	20	10K				SPARE
DUPLEX RECEPTACLE IN KIOSK			1.5	100	20	10K	11		12							SPACE
SUB–TOTAL	1.1	1.1	3.0					S/N GND					1.7	1.5	0.2	SUB–TOTAL

CONNECTED LOAD: 2.8 KVA A, 2.6 KVA B, 3.2 KVA C, 8.6 TOTAL
WINTER DEMAND LOAD: 1.1 KVA, 1.1 KVA, 0.5 KVA, 2.7 KVA



EMERGENCY POWER SINGLE LINE DIAGRAM

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DESIGNED J. KROLIK 4–96
DRAWN W. MASSEY 4–96
CHECKED D. GLEN 4–96
APPROVED R. GANERIWAL 4–96
UPDATED ____

REFERENCE DRAWINGS

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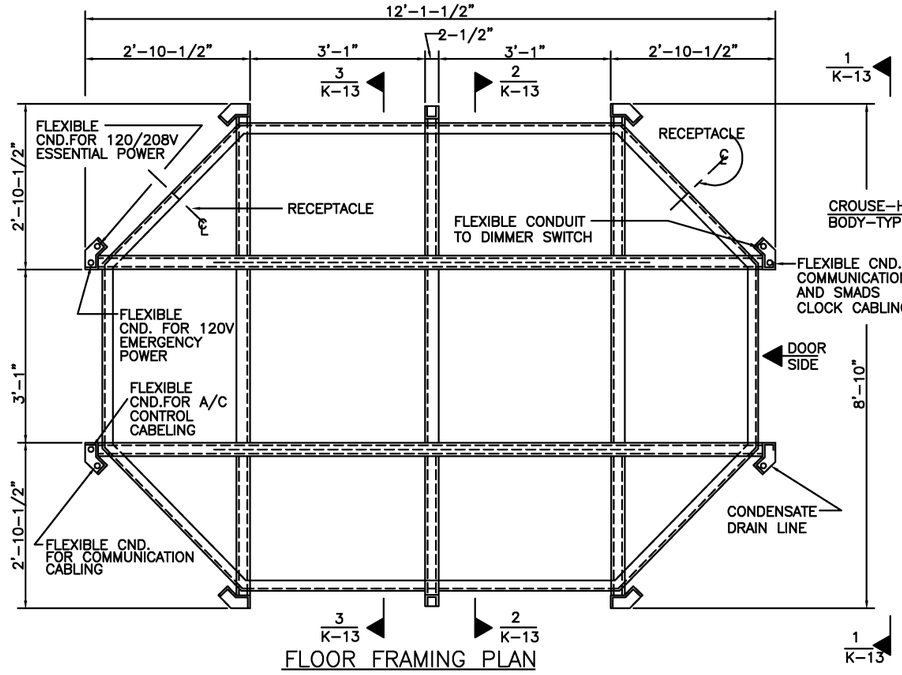
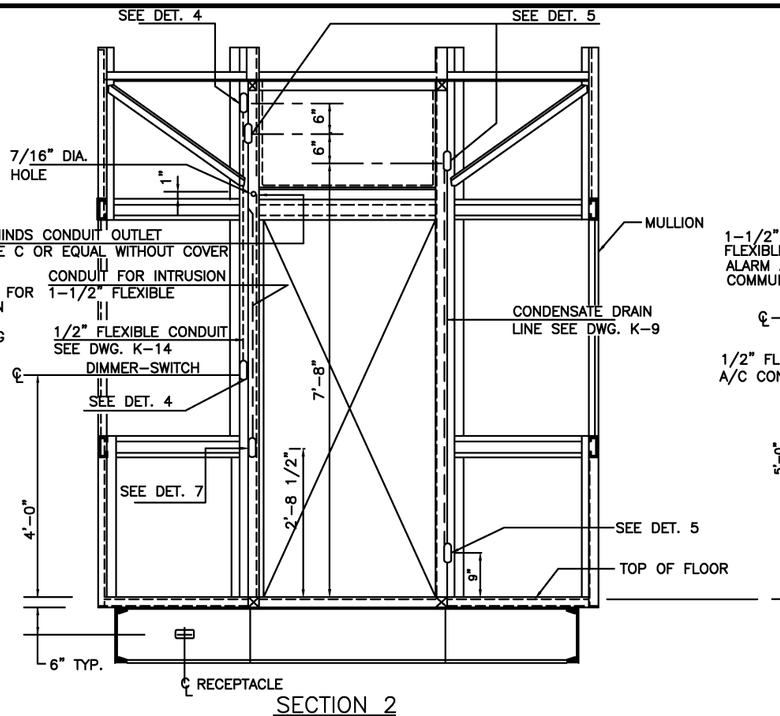
KIOSK
SINGLE LINE DIAGRAMS, PANELS & SECTION

SCALE: NONE

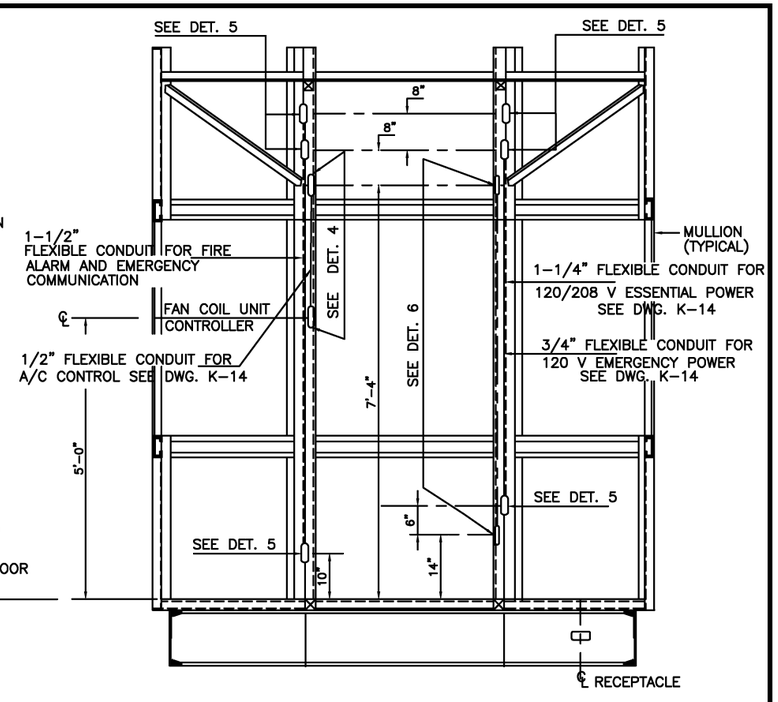
DRAWING NO.: ST–CM–K–012



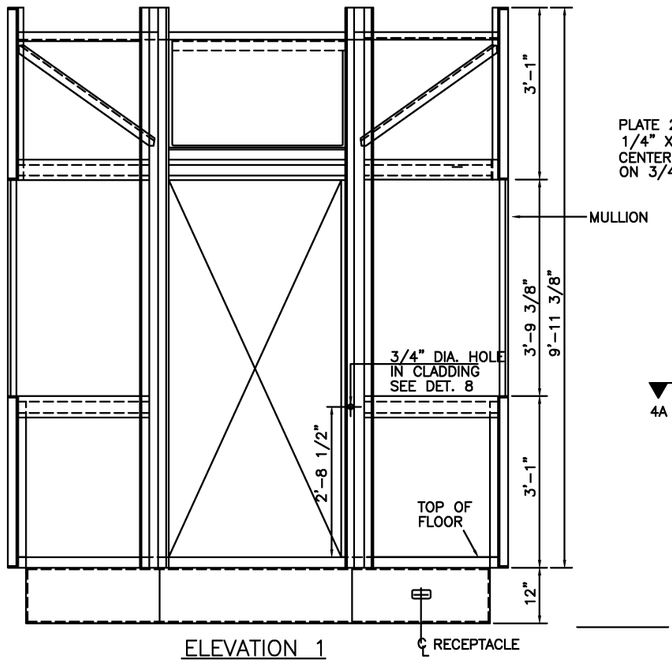
FLOOR FRAMING PLAN



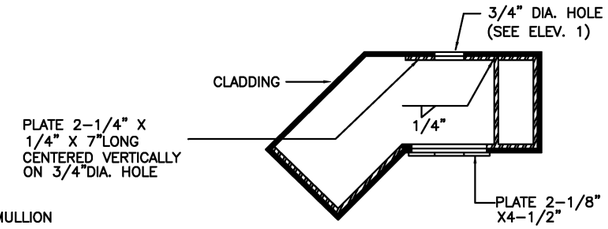
SECTION 2



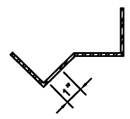
SECTION 3



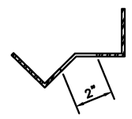
ELEVATION 1



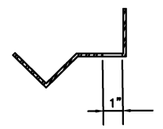
SECTION 8A



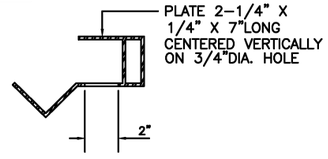
SECTION 4A



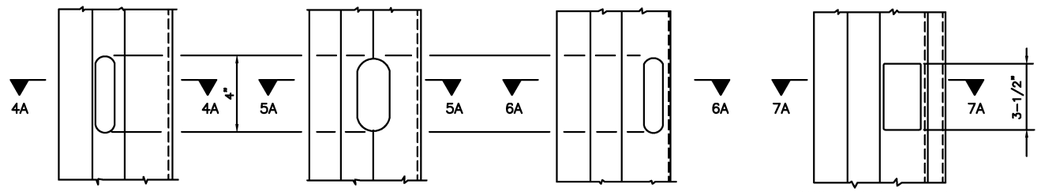
SECTION 5A



SECTION 6A



SECTION 7A

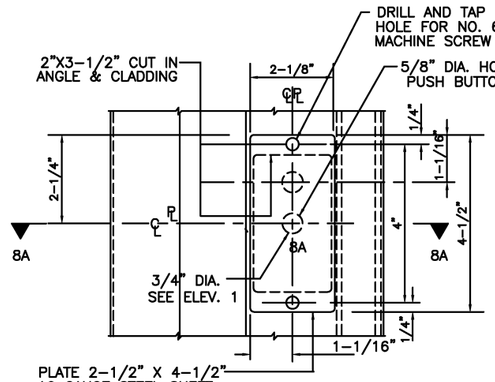


DETAIL 4 ELEVATION

DETAIL 5 ELEVATION

DETAIL 6 ELEVATION

DETAIL 7 ELEVATION



DETAIL 8 ELEVATION

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	J. KROLIK	4-96 DATE
DRAWN	W. MASSEY	4-96 DATE
CHECKED	D. GLEN	4-96 DATE
APPROVED	R. GANERIWAL	4-96 DATE
UPDATED		DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION
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WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT SYSTEM DEVELOPMENT
OFFICE OF SYSTEMS

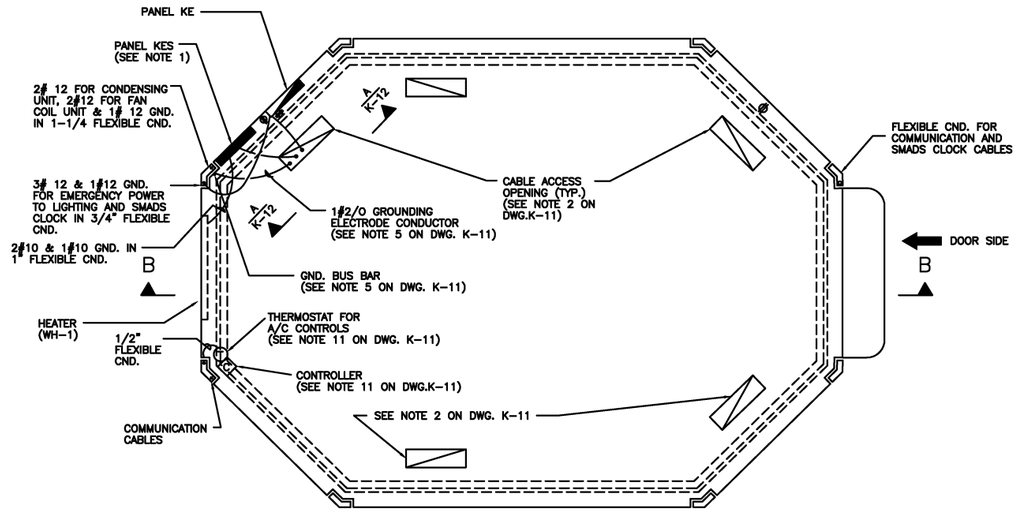
SUBMITTED DATE

APPROVED DIRECTOR May 3, 2001 DATE

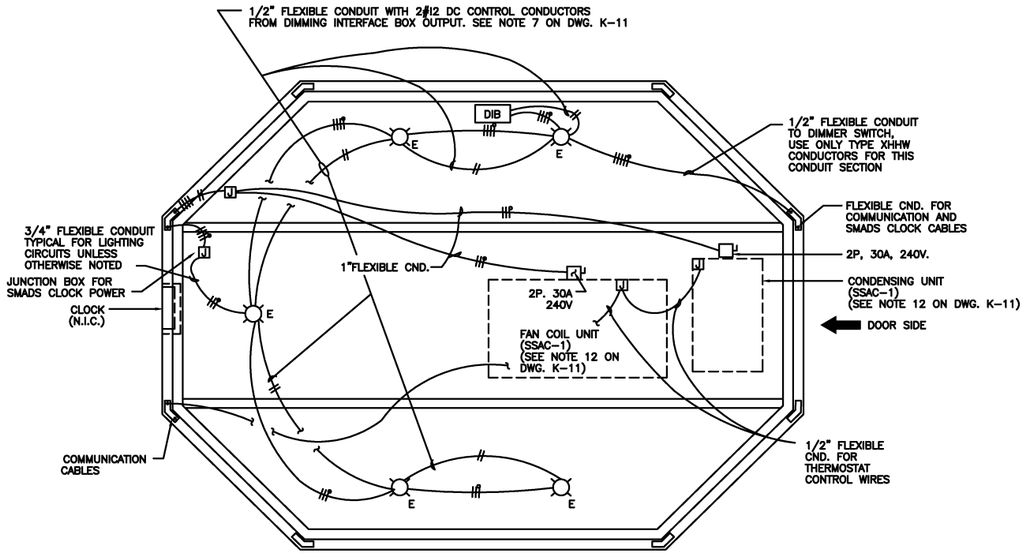
KIOSK
RACE WAY FOR COMMUNICATION AND POWER CABLES

SCALE: NONE

DRAWING NO.: ST-CM-K-013

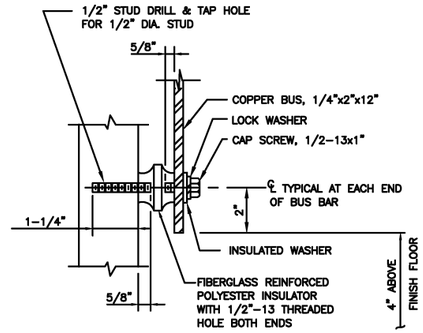


FLOOR PLAN



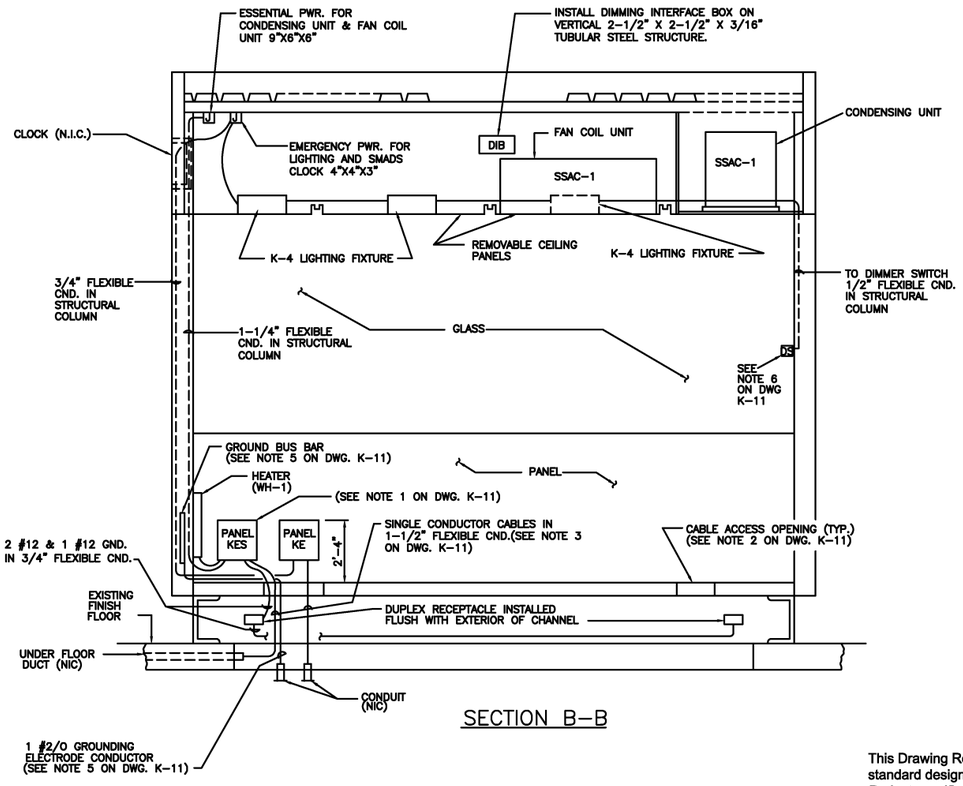
REFLECTED CEILING PLAN

(CEILING PANELS REMOVED)



DETAIL A

GROUND BUS BAR INSTALLATION



SECTION B-B

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy

DESIGNED	J. KROLIK	4-96 DATE
DRAWN	L. POWELL	4-96 DATE
CHECKED	D. GLEN	4-96 DATE
APPROVED	R. GANERIWAL	4-96 DATE
UPDATED		DATE

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KIOSK

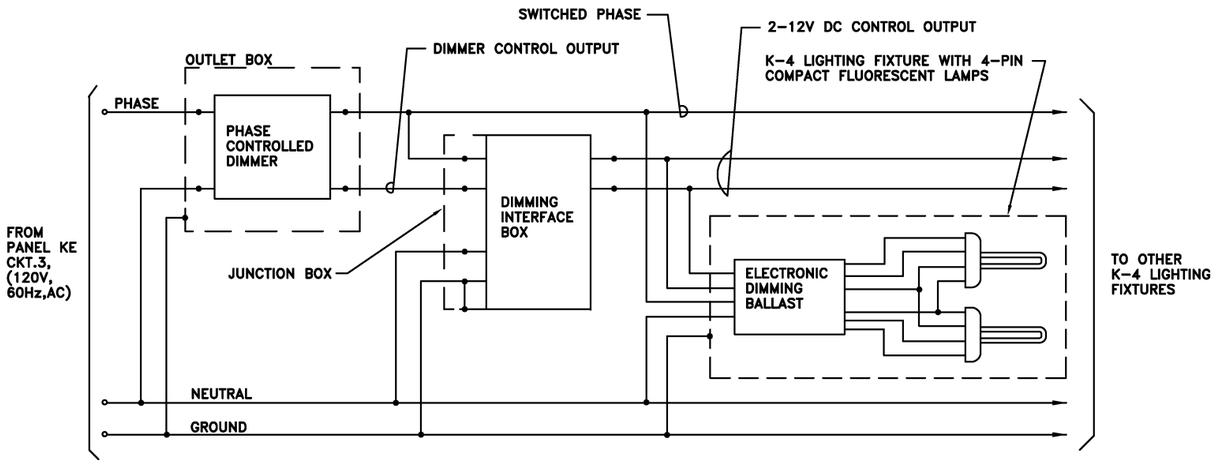
POWER & LIGHTING PLANS & SECTION

SCALE: NONE

DRAWING NO.: ST-CM-K-014

FEEDER AND GROUNDING ELECTRODE CONDUCTOR SCHEDULE

PASSENGER STATION NAME	ESSENTIAL FEEDER–RACEWAY & WIRE (120/208V,3ø,4W+G)									EMERGENCY FEEDER–RACEWAY & WIRE (120/208V,1ø,3W+G)									GROUNDING ELECTRODE CONDUCTOR (INSULATED)						
	RACEWAY NO.	RACEWAY SIZE	FROM	TO	FEEDER LENGTH	REF.DWG.NO.	WIRE QTY. & SIZE	PNL. & CKT.NO.	CB AMP.	RACEWAY NO.	RACEWAY SIZE	FROM	TO	FEEDER LENGTH	REF.DWG.NO.	WIRE QTY. & SIZE	PNL. & CKT.NO.	CB AMP.	CONDUIT NO.	CONDUIT SIZE	FROM	TO	CONDUCTOR LENGTH	REF.DWG.NO.	WIRE QTY. & SIZE
GALLERY PLACE–CHINATOWN (MCI CENTER ENTRANCE)	–	6 1/2"X 1 1/2" UFD	PANEL F IN ELECTRICAL RM. P2010 SEE NOTE 2	PANEL KES IN KIOSK	90' SEE NOTE 1	E102, E610, E900	4#8+1#10G	F–26, 28,30	30	P5	1"	PANEL EEAA IN ELECTRICAL RM. P2010 SEE NOTE 2	PANEL KE IN KIOSK	80' SEE NOTE 1	E102, E336, E610, E900	3#8+ 1#10G	EEAA 11,13	25	P23	1"	GROUND BUS BAR IN ELECTRICAL RM. P2010 SEE NOTE 2	GROUND BUS BAR IN KIOSK	80' SEE NOTE 1	E102, E336	1#2/0



KIOSK LIGHTING WIRING DIAGRAM

NOTES:

1. VERIFY LENGTH BASED ON ACTUAL CONDITIONS.
2. ELECTRICAL ROOM P2010 IS LOCATED IN SERVICE ROOM AREA ADJACENT TO KIOSK ON MEZZANINE/ PASSAGEWAY LEVEL P1 OF MCI CENTER ENTRANCE TO GALLERY PLACE–CHINATOWN STATION.

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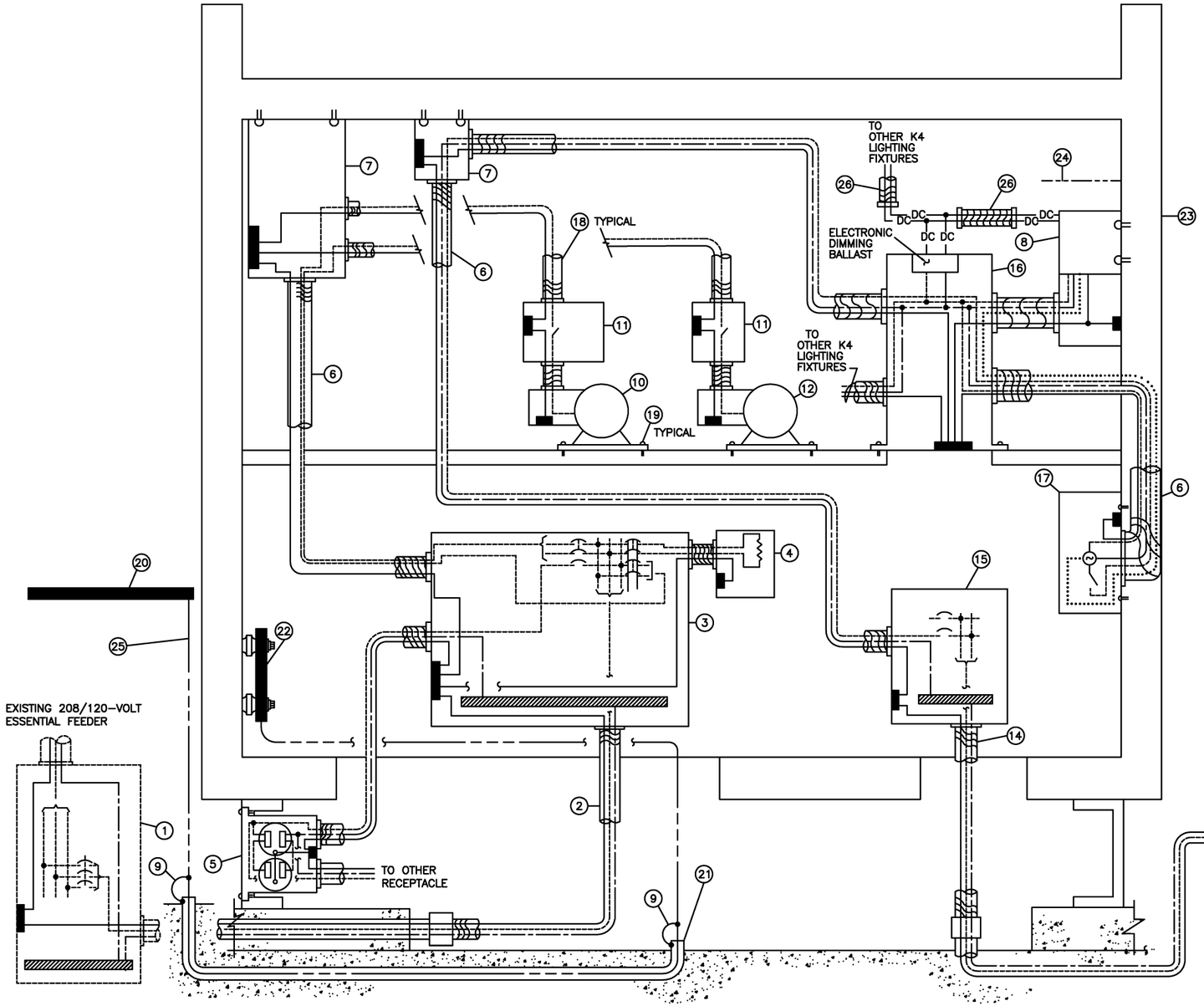
KIOSK
FEEDER SCHEDULES AND
WIRING DIAGRAM

SCALE NONE

DRAWING NO. ST–CM–K–016



SYMBOLS

- PHASE CONDUCTOR (S)
- NEUTRAL CONDUCTOR
- EQUIPMENT GROUNDING CONDUCTOR
- BONDING JUMPER
- GROUNDING ELECTRODE CONDUCTOR
- CONNECTION OF CONDUCTORS
- NEUTRAL BUS
- GROUND BUS/STUD
- DIMMER CONTROL AC OUTPUT

LEGEND

1. EXISTING 208/120–VOLT, 3–PHASE, 4–WIRE ESSENTIAL PANELBOARD
2. NEW ESSENTIAL FEEDER INSTALLED IN NEW LIQUID–TIGHT FLEXIBLE CONDUIT AND EXISTING UNDERFLOOR DUCT AS SHOWN
3. 120/208–VOLT, 3–PHASE, 4–WIRE ESSENTIAL PANEL NO. 'KES' MOUNTED DIRECTLY ON STEEL KIOSK PANEL WITH METALLIC FASTENERS
4. HEATER
5. DUPLEX RECEPTACLE
6. LIQUID–TIGHT FLEXIBLE CONDUIT INSTALLED IN STRUCTURAL COLUMN
7. JUNCTION BOX
8. DIMMING INTERFACE BOX
9. BOND EXISTING METALLIC CONDUIT TO GROUNDING CONDUCTOR
10. MOTOR FOR FAN COIL UNIT
11. 240–VOLT, 2–POLE DISCONNECT SWITCH
12. MOTOR FOR CONDENSING UNIT
13. EXISTING 208/120–VOLT, 3–PHASE, 4–WIRE EMERGENCY PANELBOARD
14. NEW EMERGENCY FEEDER INSTALLED IN NEW LIQUID–TIGHT FLEXIBLE CONDUIT AND EXISTING CONDUIT AS SHOWN
15. 120/208 VOLT, 1–PHASE, 3–WIRE EMERGENCY PANEL NO. 'KE' MOUNTED DIRECTLY ON STEEL KIOSK PANEL WITH METALLIC FASTENERS
16. TYPE K4 LIGHTING FIXTURE
17. DIMMER SWITCH
18. LIQUID–TIGHT FLEXIBLE CONDUIT
19. METALLIC FASTENER PROVIDING ELECTRICAL CONTINUITY BETWEEN EQUIPMENT METALLIC ENCLOSURE & KIOSK METALLIC STRUCTURE
20. EXISTING GROUND BUS FOR ONE–POINT GROUNDING OF COMMUNICATIONS EQUIPMENT IN KIOSK
21. NEW GROUNDING ELECTRODE CONDUCTOR IN EXISTING CONDUIT AS SHOWN TO LOCATION OF EXISTING 9KVA TRANSFORMER SUPPLYING PANEL EEAA
22. GROUND BUS (FOR INSTALLATION SEE DETAIL–A ON DWG. K–14)
23. KIOSK STRUCTURE
24. BARE #8 AWG MINIMUM BONDING JUMPER BETWEEN METALLIC DUCTS & PIPING OF MECHANICAL SYSTEMS & KIOSK METALLIC STRUCTURE.
25. LOCATE CONNECTION FOR ITEM (21) WITHIN 2" OF GROUND CONNECTION FOR EXISTING 9KVA TRANSFORMER SUPPLYING PANEL EEAA IN ELECTRICAL ROOM P2010 IN MCI CENTER ENTRANCE TO GALLERY PLACE–CHINATOWN STATION
26. LIQUID–TIGHT FLEXIBLE CONDUIT WITH INSULATED BUSHING AT EACH END FOR DC CONTROL CONDUCTORS FROM DIMMING INTERFACE BOX OUTPUT (2 TO 12V. DC)

NOTE:
ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH A MINIMUM OF TWO GROUND PATHS AS FOLLOWS:
1. GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.
2. CONNECTION TO GROUNDED METALLIC STRUCTURE USING METALLIC FASTENERS, METALLIC CONDUIT AND/OR BONDING JUMPER.

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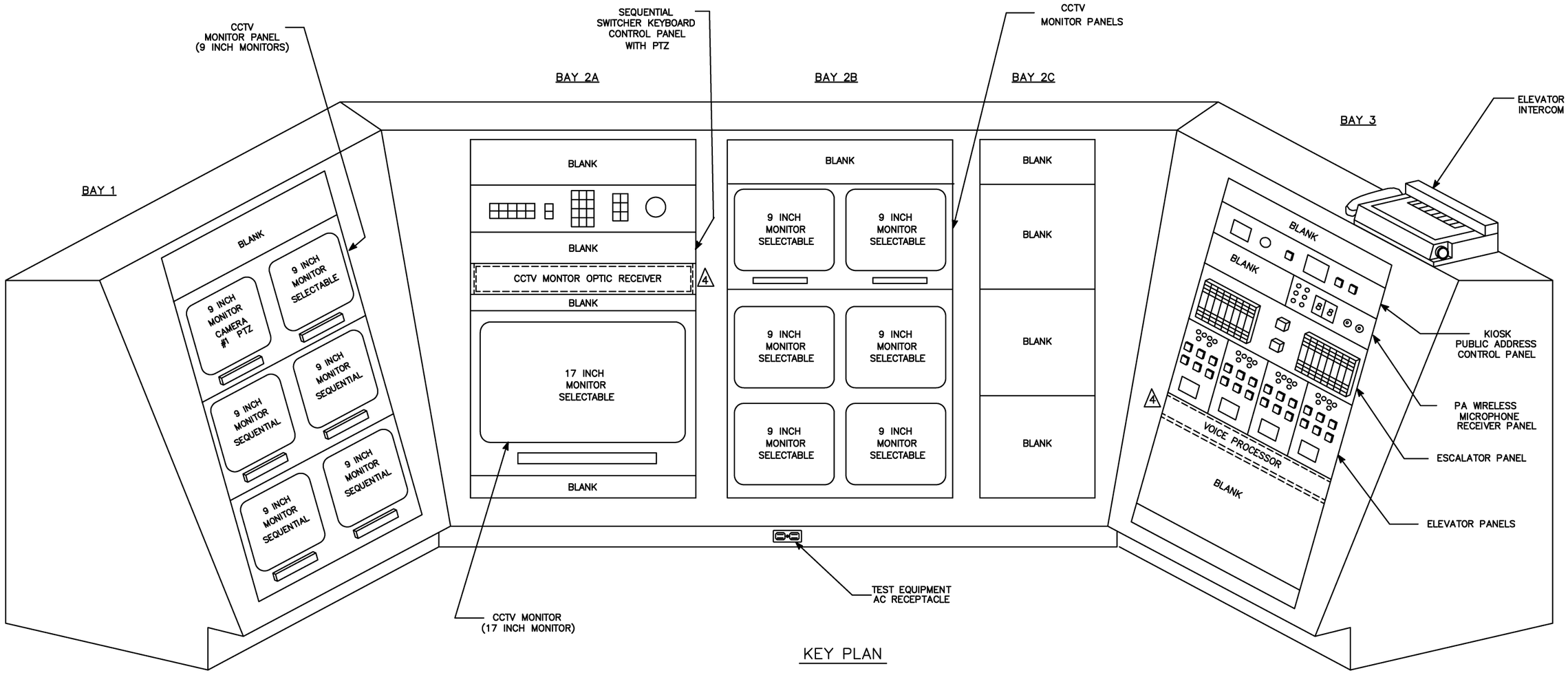
KIOSK
GROUNDING DIAGRAM

SCALE: NONE

DRAWING NO.: ST–CM–K–017

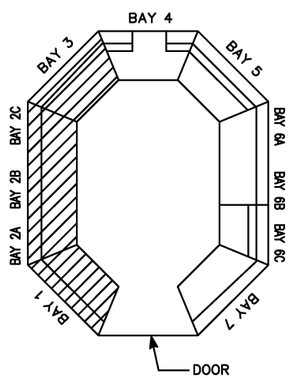


NOTES:

1. BLANK PANELS INDICATED SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
2. BLANK PANELS SHALL BE BRUSHED ALUMINUM THICKNESS SHALL BE 1/8 INCH.
3. BLANK PANELS MOUNTING CUT-OUTS SHALL BE IN ACCORDANCE WITH EIA STD RS-310C FOR RAILING MOUNTING.

△4 19-INCH RACK MOUNTED CONCEALED WITH BLANK COVER PLATE.

KEY PLAN



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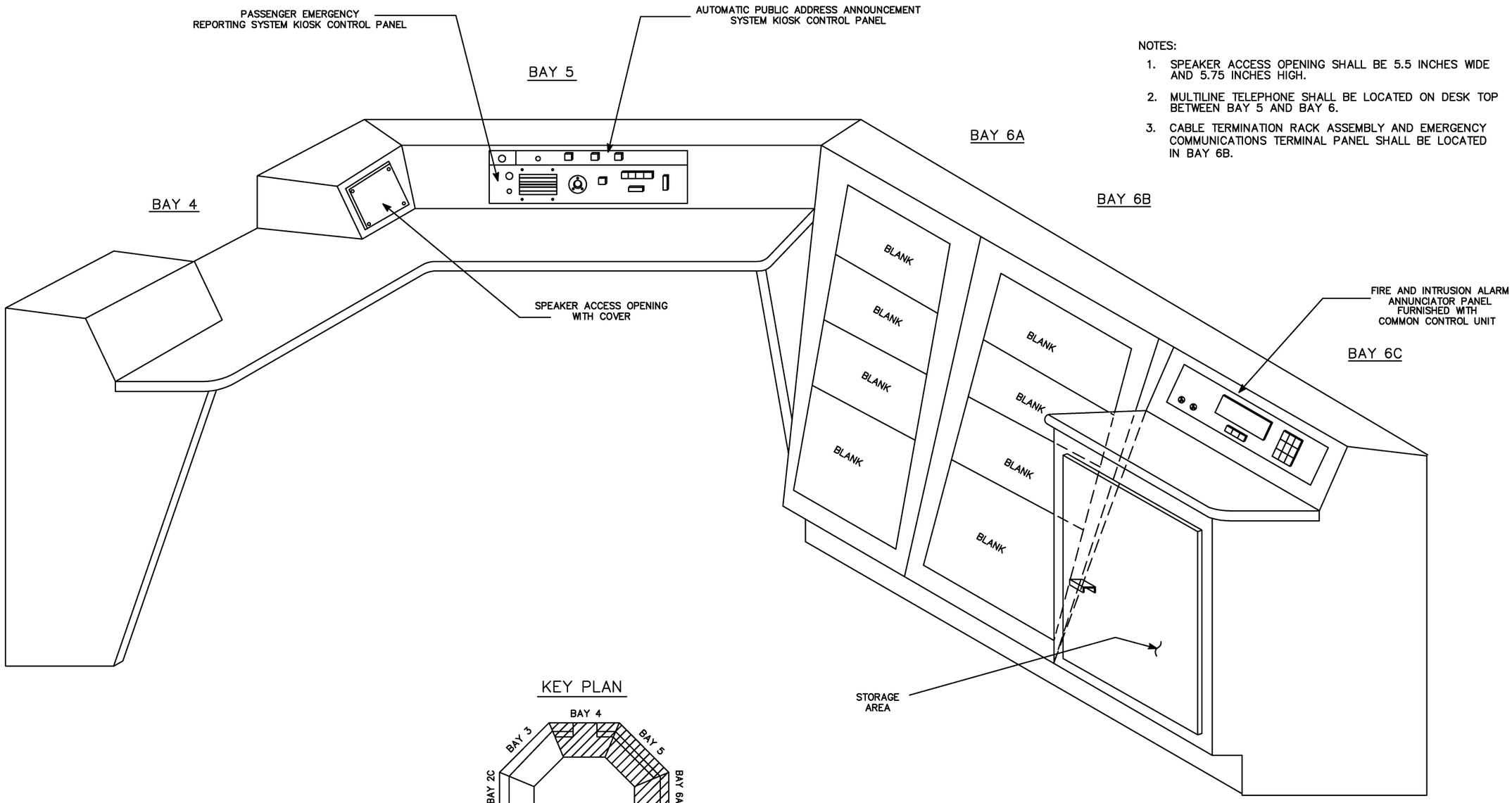
SUBMITTED _____ DATE

APPROVED _____ DIRECTOR May 3, 2001 DATE

KIOSK PANEL CONFIGURATION

SCALE: NONE

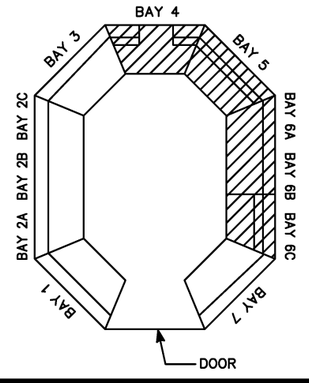
DRAWING NO.: ST-CM-KCS-001



NOTES:

1. SPEAKER ACCESS OPENING SHALL BE 5.5 INCHES WIDE AND 5.75 INCHES HIGH.
2. MULTILINE TELEPHONE SHALL BE LOCATED ON DESK TOP BETWEEN BAY 5 AND BAY 6.
3. CABLE TERMINATION RACK ASSEMBLY AND EMERGENCY COMMUNICATIONS TERMINAL PANEL SHALL BE LOCATED IN BAY 6B.

KEY PLAN



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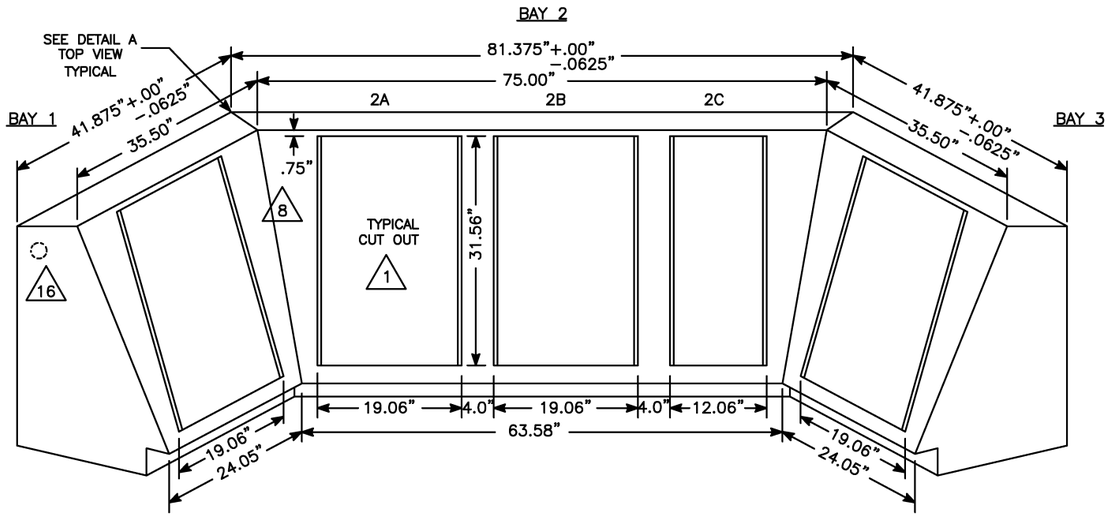
SUBMITTED _____ DATE

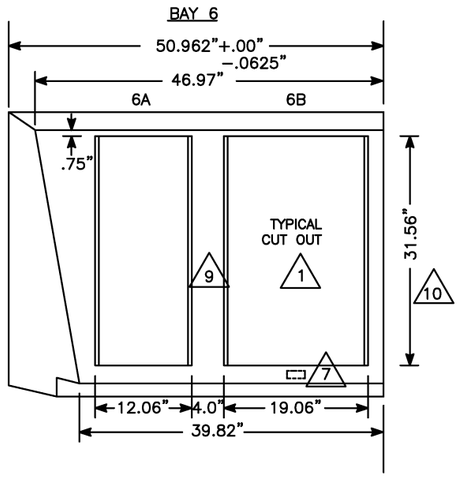
APPROVED _____ DIRECTOR May 3, 2001 DATE

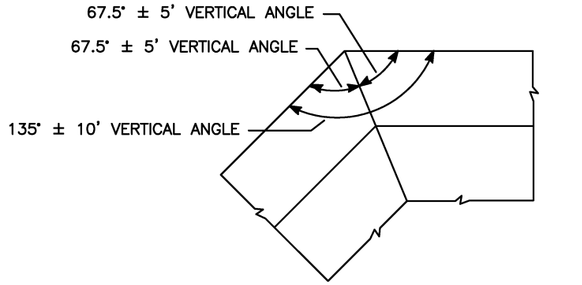
KIOSK PANEL CONFIGURATION

SCALE: NONE

DRAWING NO.: ST-CM-KCS-002

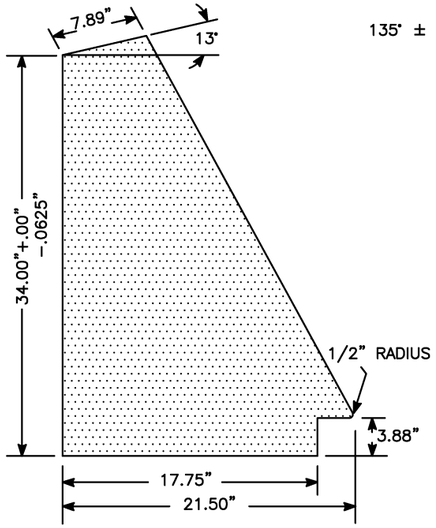






TYPICAL TOP VIEW OF BAY CORNERS

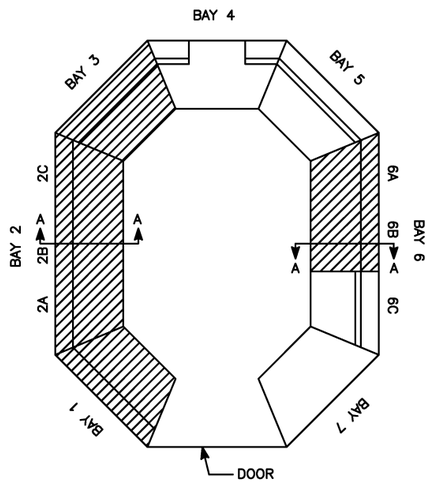
DETAIL A



CROSS SECTION A–A

TYPICAL BAY 1, BAY 2A, 2B, 2C,
BAY 3, BAY 6A AND 6B

This Drawing Reflects a WMATA standard design approach. Project specific drawings must be developed by the Contractor which reflect this Design Philosophy



KEY PLAN

NOTES:

1. EQUIPMENT CUT–OUT WITH RECESSED PANEL MOUNTING RAILS SHALL BE DIMENSIONED, DRILLED AND TAPPED IN ACCORDANCE WITH EIA STANDARD RS–310–C.
2. BAYS 1, 2A, 2B, 2C AND 3, AND BAY 6A AND 6B SHALL BE ONE PIECE SECTIONS.
3. UNLESS SPECIFIED, STANDARD LINEAR TOLERANCE SHALL BE ±0.03 INCHES.
4. UNLESS SPECIFIED, STANDARD ANGLE TOLERANCE SHALL BE ±30".
5. CONTRACTOR SHALL DESIGN APPROPRIATE INNER SUPPORT STRUCTURE OF CABINETS.
6. ALL SURFACE OF STRUCTURES SHALL BE TREATED AFTER WELDING WITH DUPONT CHROMOTIZED PRIME EU–9007 OR APPROVED EQUAL.
7. CONTRACTOR SHALL DETERMINE CUT–OUT DIMENSIONS FOR TEST EQUIPMENT DUPLEX RECEPTACLE.
8. CONTRACTOR SHALL DESIGN CABLE PASSAGEWAY BETWEEN BAY 1 AND BAY 3.
9. CONTRACTOR SHALL DESIGN CABLE PASSAGEWAY BETWEEN BAY 6A AND BAY 6B.
10. CONTRACTOR SHALL DESIGN CABLE PASSAGEWAY BETWEEN BAY 6B AND BAY 6C.
11. SPACE RESERVED FOR THE ELEVATOR PANEL AND CCTV KIOSK CONTROL PANEL SHALL BE 7.0 INCHES IN HEIGHT (4 RACK UNITS).
12. THE CONTRACTOR SHALL ADJUST THE DIMENSIONS SHOWN WITH THE ACTUAL KIOSK FABRICATION DETAILS.
13. BLANK PANELS INDICATED SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
14. BLANK PANELS SHALL BE BRUSHED ALUMINUM THICKNESS SHALL BE 1/8 INCH.
15. THE KIOSK CABLE TERMINATION RACK SHALL BE LOCATED BEHIND THE BLANK PANEL OF BAY 6B.
16. THE CONTRACTOR SHALL DETERMINE CUT–OUT DIMENSIONS AND LOCATION FOR CABLE PASSAGEWAY TO INTERPHONE SPEAKER IN THE KIOSK DOOR.

DESIGNED JRR	6–00 DATE	
DRAWN JMR	6–00 DATE	
CHECKED	DATE	
APPROVED	DATE	
UPDATED	DATE	

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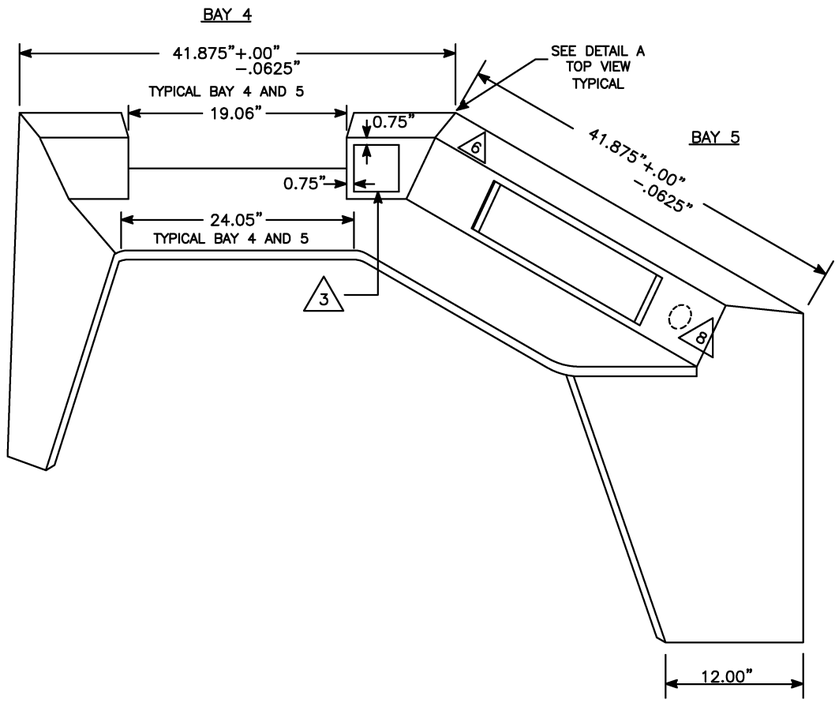
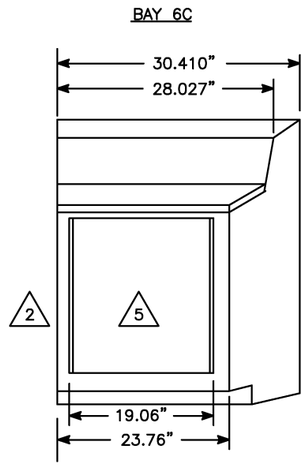
KIOSK CABINET DIMENSIONS

SCALE NONE

DRAWING NO. ST–CW–KCS–003

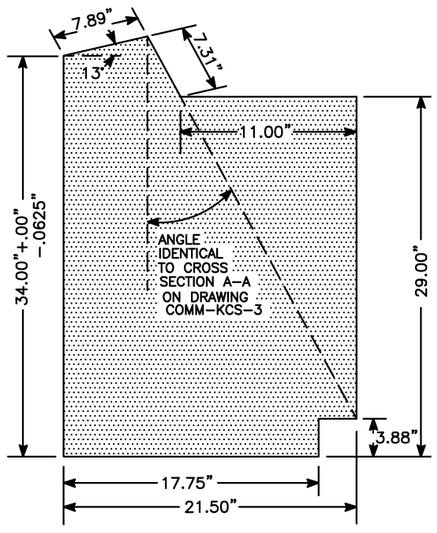
MXXXX–XXX



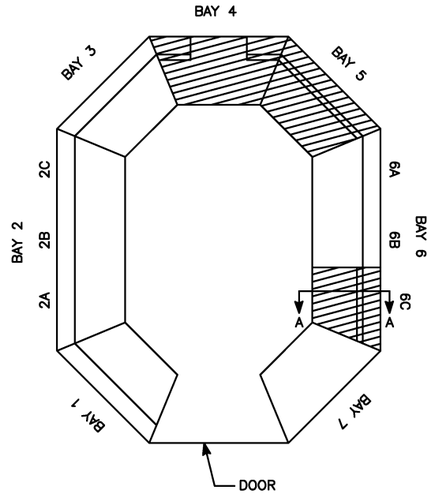


NOTES:

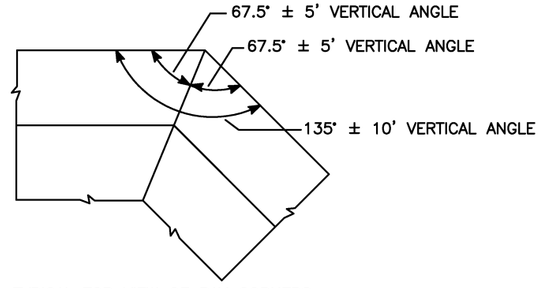
1. BAYS 4, 5 AND BAY 6C SHALL BE ONE PIECE.
2. CONTRACTOR SHALL DESIGN CABLE PASSAGEWAY BETWEEN BAY 6B AND BAY 6C.
3. SPEAKER ACCESS OPENING SHALL BE 5.5 INCHES WIDE AND 5.75 INCHES HIGH. COVER SHALL BE 6.5 INCHES WIDE AND 6.75 INCHES HIGH.
4. DOOR IN BAY 6C SHALL HAVE A CONTINUOUS PIANO HINGE AND A MAGNETIC CATCH.
5. STORAGE AREA SHALL CONTAIN A SHELF INSTALLED AT THE MIDPOINT HEIGHT. THE SHELF SHALL BE EQUAL IN AREA TO THE BOTTOM OF STORAGE AREA.
6. APPROXIMATE LOCATION OF MOUNTING BRACKET FOR GOOSENECK MICROPHONE OF KIOSK PUBLIC ADDRESS CONTROL PANEL.
7. FOR ADDITIONAL NOTES SEE DWG. COMM–KCS–3.
8. THE CONTRACTOR SHALL DETERMINE CUT–OUT DIMENSIONS AND LOCATION OF THE CABLE PASSAGEWAY TO THE MULTILINE TELEPHONE INSTRUMENT. A PROTECTIVE ASSEMBLY SHALL BE FURNISHED AND INSTALLED IN THE CUT–OUT TO PROTECT THE TELEPHONE CABLE.



CROSS SECTION A–A
(BAY 6C)



KEY PLAN



TYPICAL TOP VIEW OF BAY CORNERS

DETAIL A

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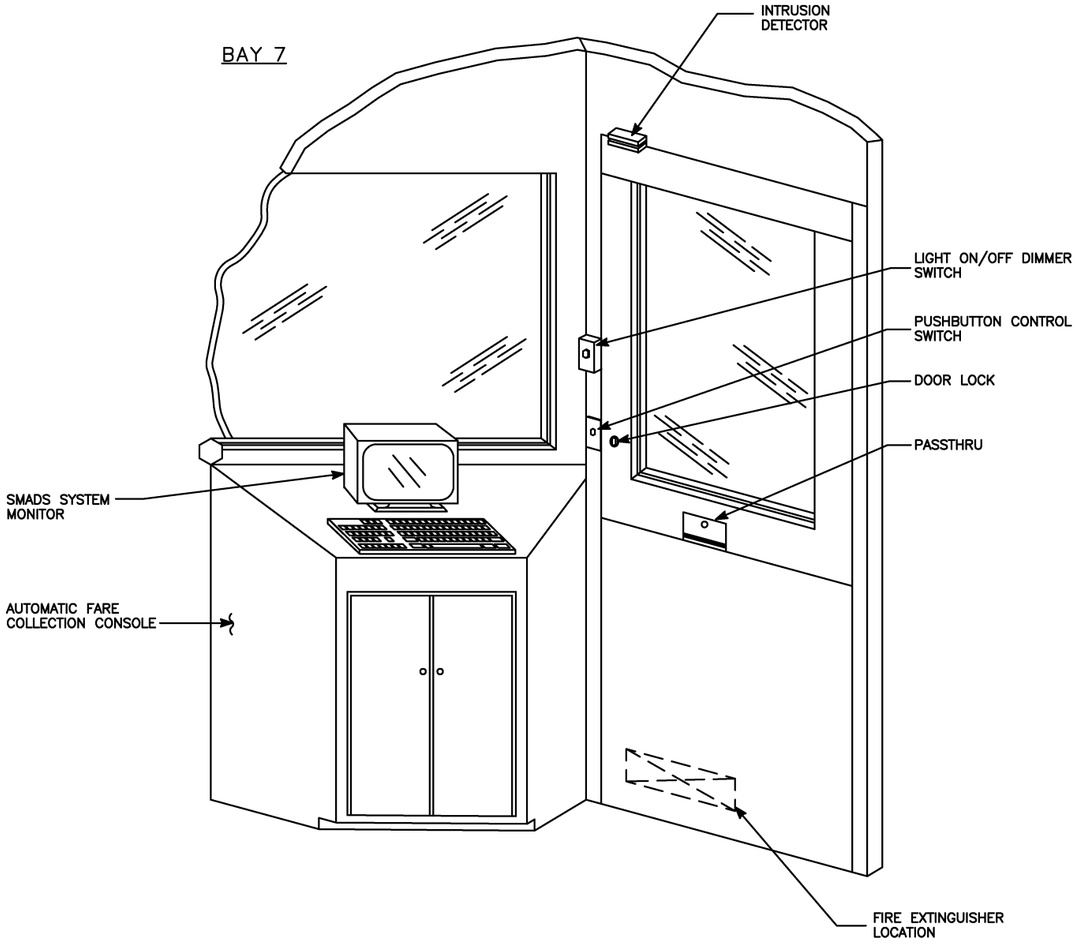
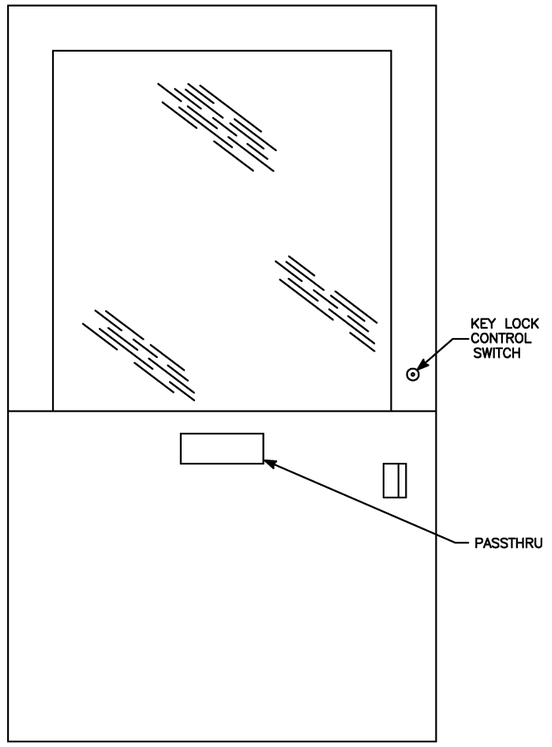
KIOSK CABINET DIMENSIONS

SCALE NONE

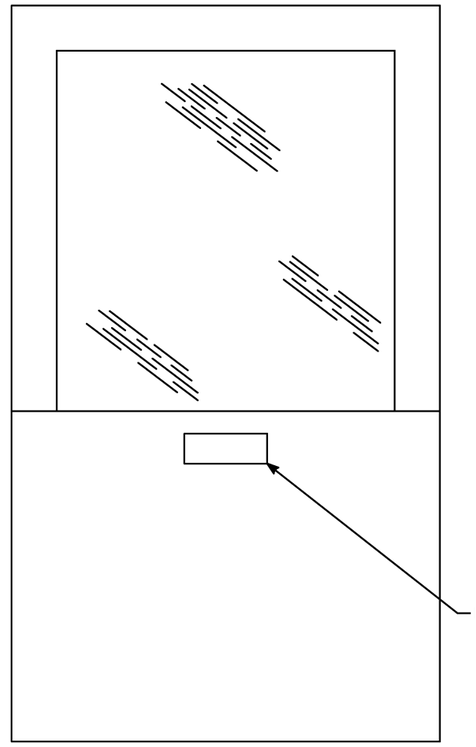
DRAWING NO. ST–CM–KCS–004

BAY 7

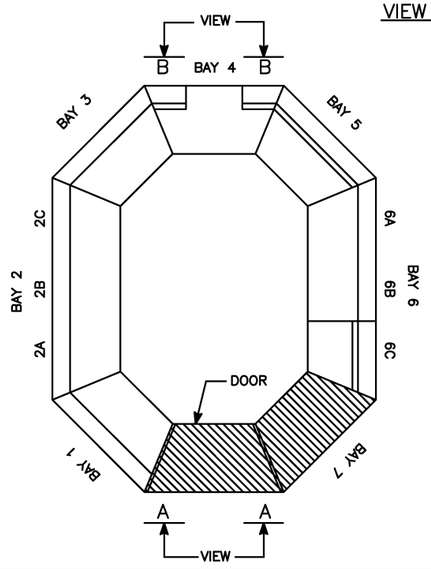




VIEW A–A



VIEW B–B



KEY PLAN

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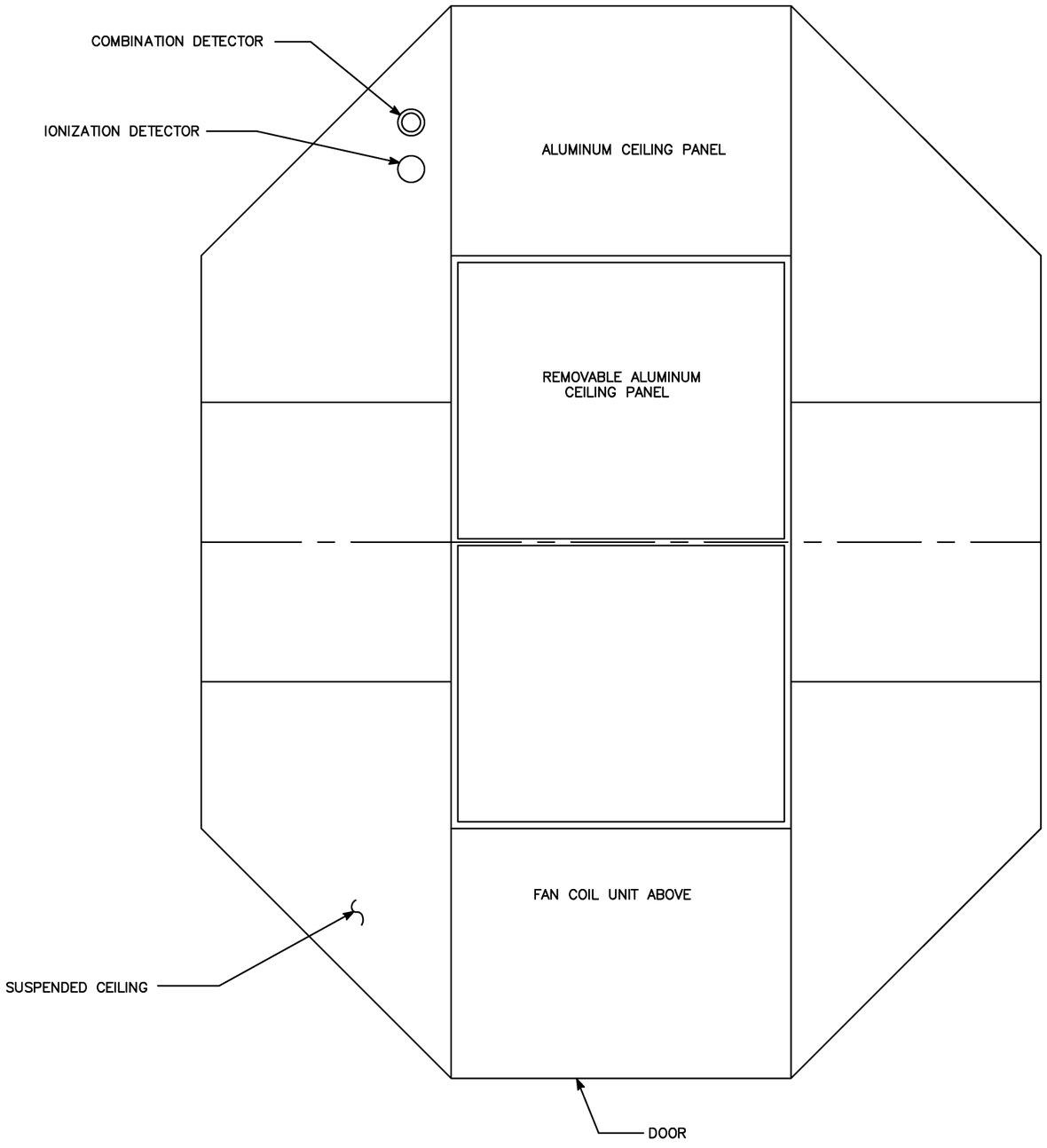
PASSENGER/ATTENDANT INTERPHONE SPEAKER LOCATIONS

SCALE NONE

DRAWING NO. ST-CM-KCS-005



NOTES:

1. BOTH THE IONIZATION AND COMBINATION DETECTOR ARE LOCATED ABOVE THE CEILING.

REFLECTED CEILING PLAN

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UPDATED		DATE

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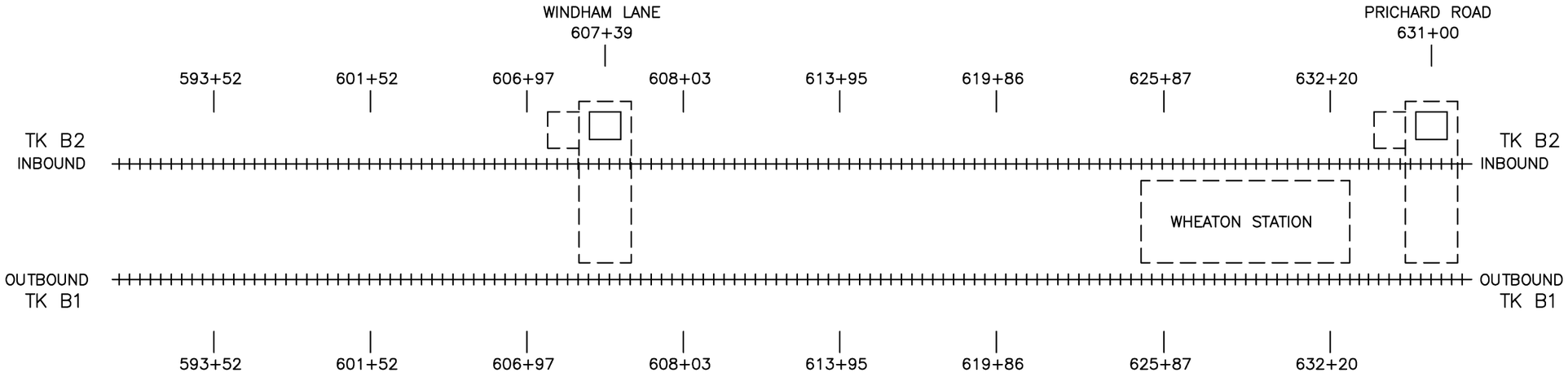
CEILING PLAN

SCALE NONE

DRAWING NO. ST-CM-KCS-006

MXXXX-XXX



TO FOREST GLEN STATION

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UPDATED DATE		

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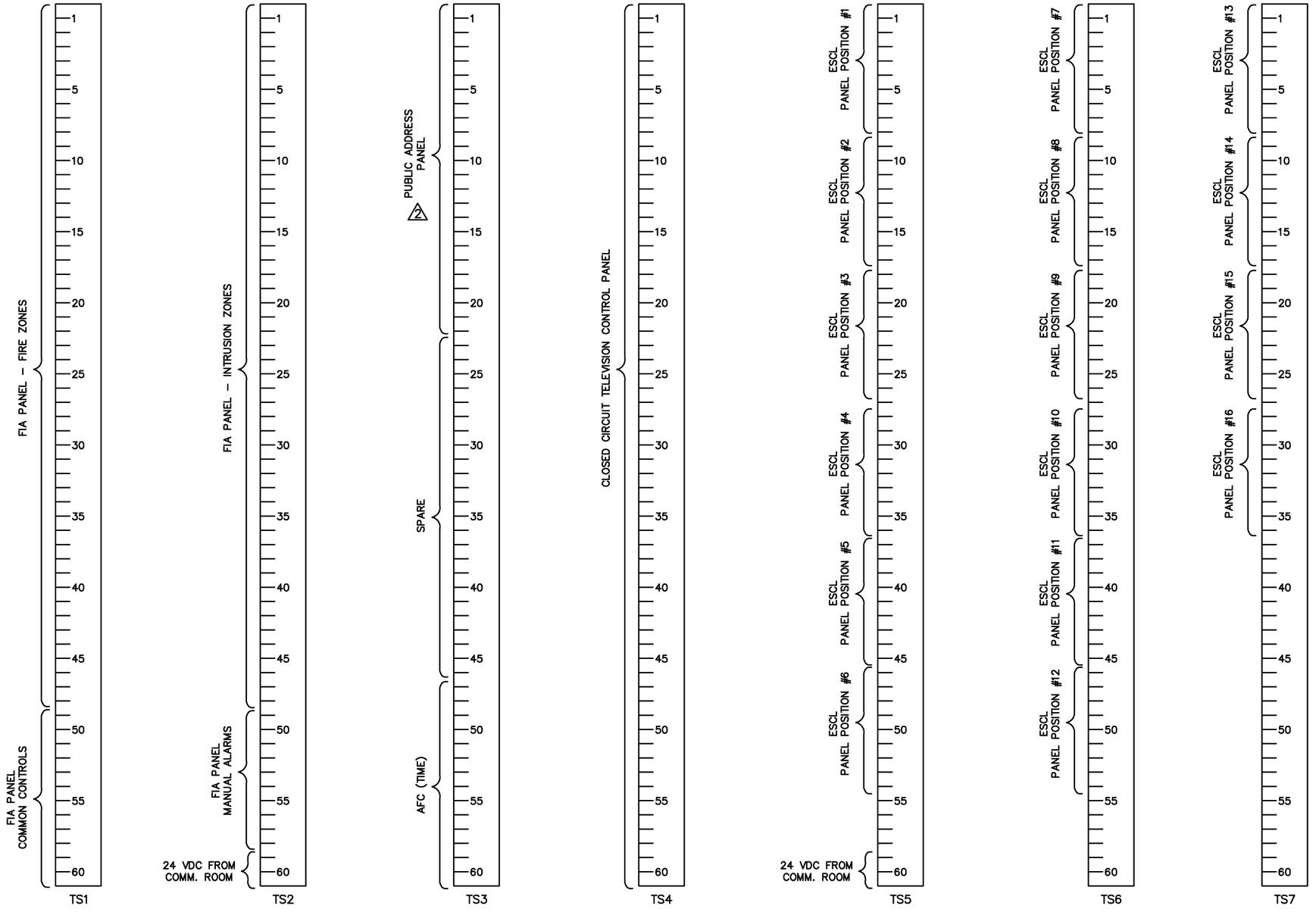
TYPICAL EXAMPLE OF KIOSK DATA FILES

SCALE: NONE

DRAWING NO.: ST-CM-KCS-017



NOTES:

1. DRAWING SHOWS GENERAL ASSIGNMENTS OF TERMINAL STRIPS. CONTRACTOR SHALL ASSIGN INDIVIDUAL TERMINALS WITHIN EACH GENERAL ASSIGNMENT.

2 TERMINALS ARE PROVIDED FOR WIRING OF INTERPHONE SPEAKERS TO PANEL.

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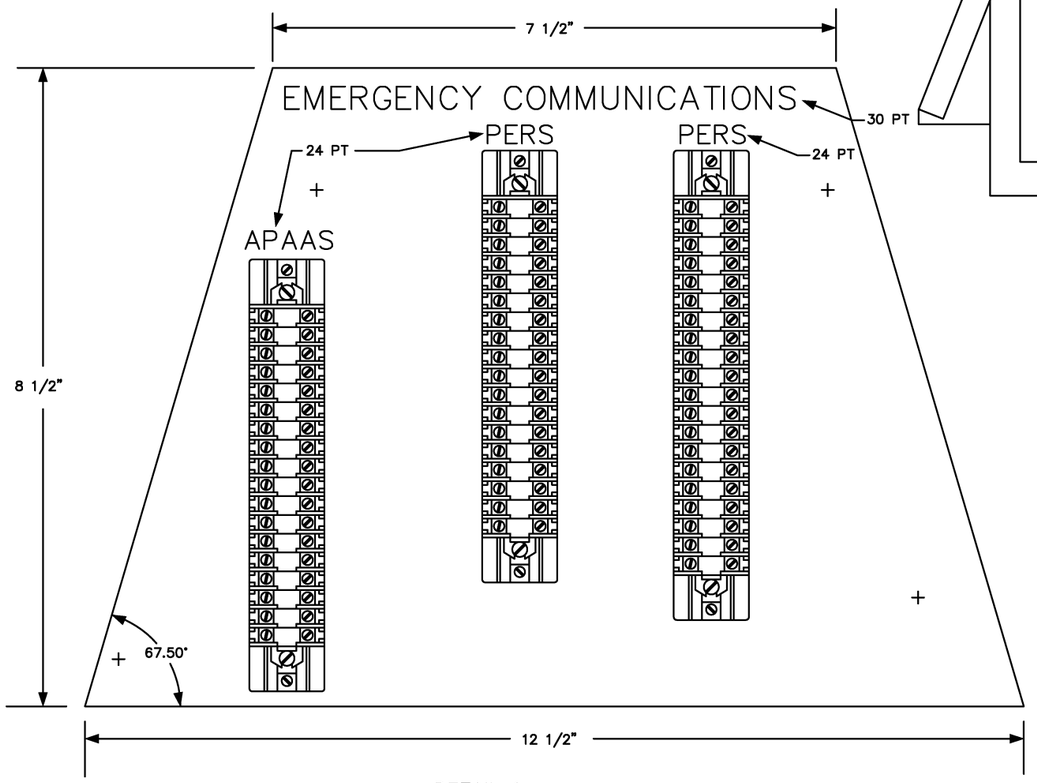
CABLE TERMINATION RACK ASSIGNMENTS

SCALE NONE

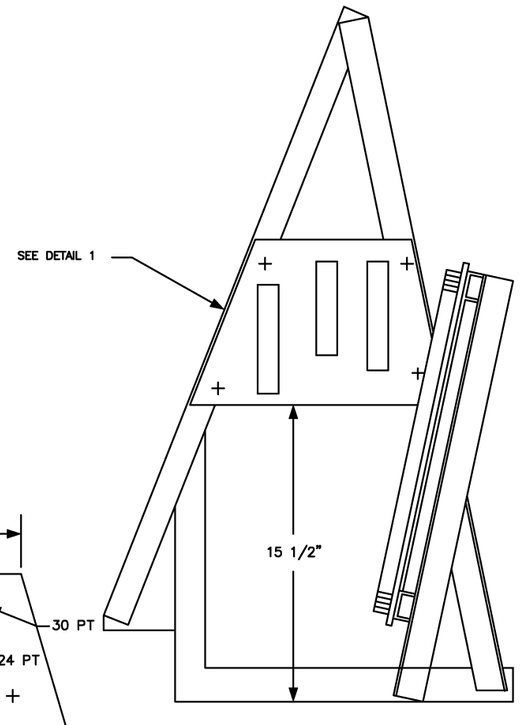
DRAWING NO. ST-CM-KCS-008

NOTES:

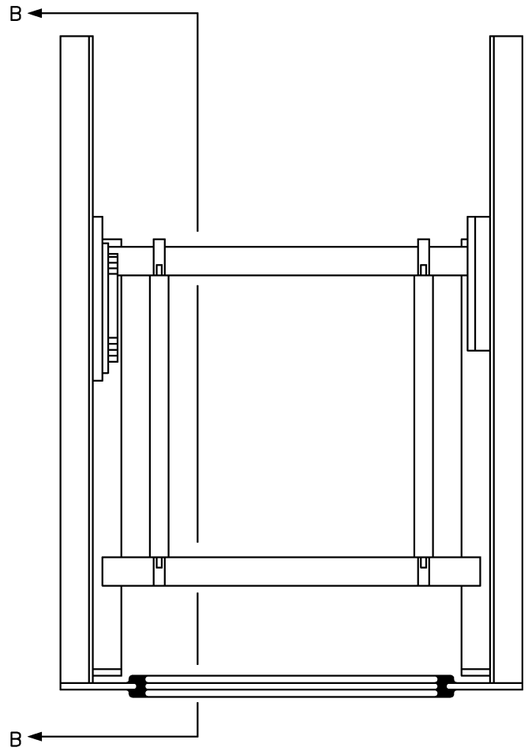
1. EMERGENCY COMMUNICATIONS KIOSK TERMINAL PANEL SHALL BE NO.16 GAUGE STEEL. MOUNTING OF TERMINAL BLOCKS TO THE EMERGENCY COMMUNICATIONS KIOSK TERMINAL PANEL SHALL BE PAN HEAD SCREW WITH NUT AND LOCK WASHER.
2. INSTALLATION OF THE EMERGENCY KIOSK TERMINAL PANEL SHALL REQUIRE FIELD DRILLING KIOSK STRUCTURE.
3. DIMENSION OF MOUNTING HOLE AND DETAIL OF INSTALLATION TO THE KIOSK STRUCTURE SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
4. MOUNTING HOLES SHALL BE DESIGNED SO THAT INSTALLATION OF THE PANEL SHALL NOT INTERFERE WITH KIOSK CABLE TERMINATION RACK.
5. LETTERING SHALL BE FUTURA DEMI BOLD SIZES AS INDICATED.
6. CABLE CLAMPS SHALL BE FURNISHED AND INSTALLED AS REQUIRED.
7. APAAS CABLE FROM THE COMMUNICATIONS EQUIPMENT ROOM SHALL HAVE ONLY INDIVIDUAL PAIR CONDUCTORS TERMINATED AT THE TERMINAL PANEL. SHIELDS SHALL NOT BE TERMINATED.
8. PERS CABLE FROM THE COMMUNICATIONS EQUIPMENT ROOM SHALL HAVE EACH INDIVIDUAL PAIR SHIELDS TERMINATED AT THE TERMINAL PANEL. TWO SHIELDS SHALL SHARE ONE TERMINAL. ALL SHIELDS SHALL BE CONTINUOUS FROM THE COMMUNICATIONS EQUIPMENT ROOM TO THE KIOSK CONTROL PANEL.



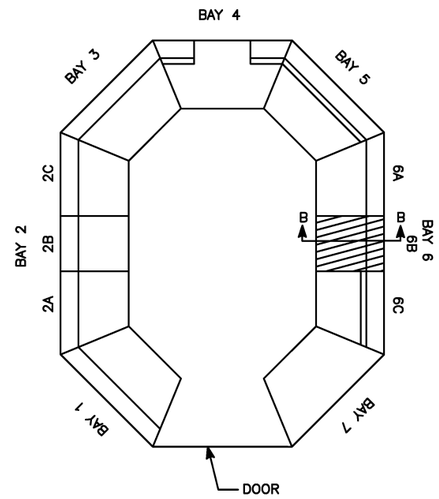
DETAIL 1



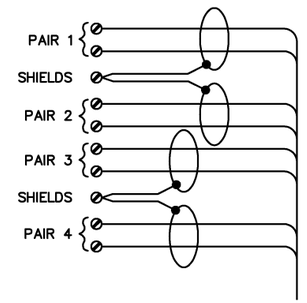
SECTION B–B



FRONT VIEW OF BAY 6B
STRUCTURAL SUPPORT



KEY PLAN



TYPICAL PERS CABLE
TERMINATION DETAIL

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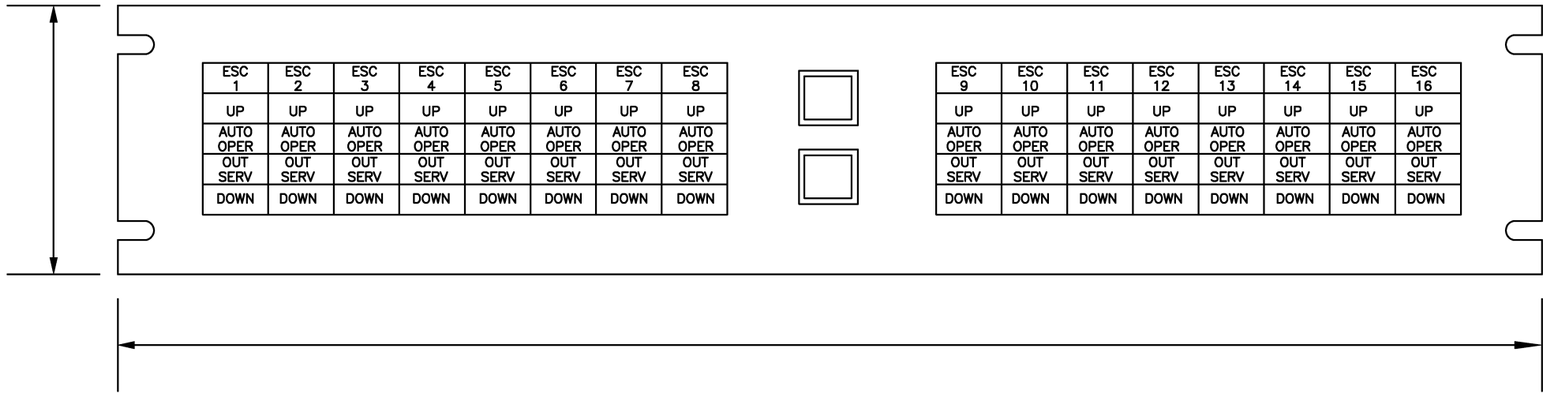
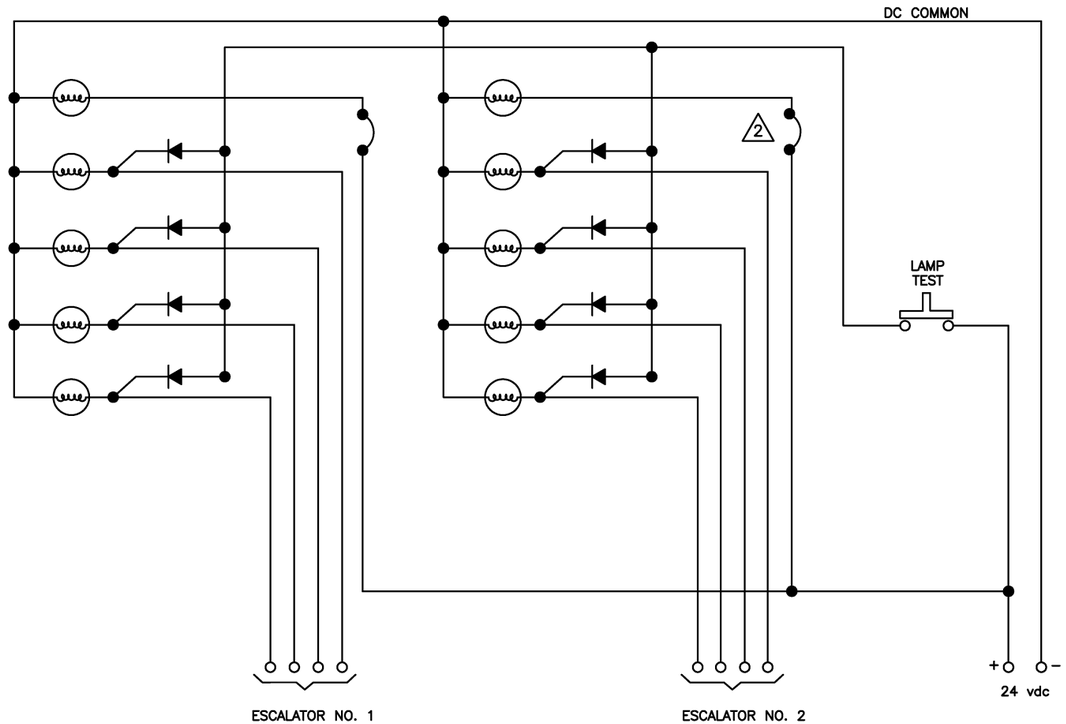
EMERGENCY COMMUNICATIONS TERMINAL PANEL

SCALE	DRAWING NO.
NONE	ST–CM–KCS–009



NOTES:

1. ALL ESCALATOR POSITIONS ASSOCIATED WITH THE PASSENGER STATION SHALL BE CONTINUOUSLY ILLUMINATED (ID INDICATOR.)
2. PROVISIONS FOR AN EXTERNAL STRAP FOR EACH ESCALATOR IDENTIFICATION INDICATOR SHALL BE PROVIDED ON BACK OF CHASSIS. POSITIONS NOT ASSOCIATED WITH THE PASSENGER STATION SHALL NOT BE STRAPPED.
3. THE CONTRACTOR SHALL COORDINATE WITH THE AUTHORITY FOR THE APPROPRIATE NUMBERING OF EACH ESCALATOR.
4. WIRING FOR ESCALATORS NO. 3 THRU NO. 16 ARE IDENTICAL TO THAT SHOWN FOR ESCALATOR NO. 1 & NO. 2.
5. ALL CONDUCTORS FROM PANELS SHALL TERMINATE IN PLUG ASSEMBLIES. PLUG ASSEMBLIES SHALL BE CONFIGURED SUCH THAT REVERSE CONNECTIONS ARE IMPOSSIBLE.
6. LETTERING SHALL BE FUTURA DEMI BOLD–12 POINT FOR DESIGNATION ON PUSHBUTTONS AND INDICATORS.
7. PANEL ELECTRONICS (AND CHASSIS) SHALL BE COMPLETELY ENCLOSED, PANEL MOUNTING CUT OUTS SHALL BE IN ACCORDANCE WITH EIA STD RS–310 C FOR RAILING MOUNTING.



TYPICAL CIRCUIT WIRING 4

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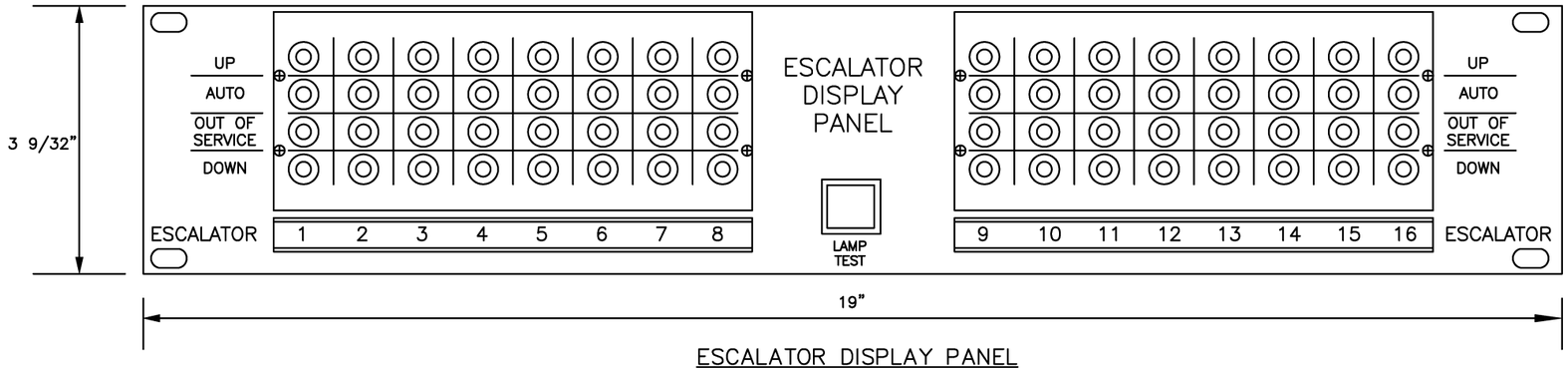
ESCALATOR STATUS DISPLAY PANEL

SCALE: NONE

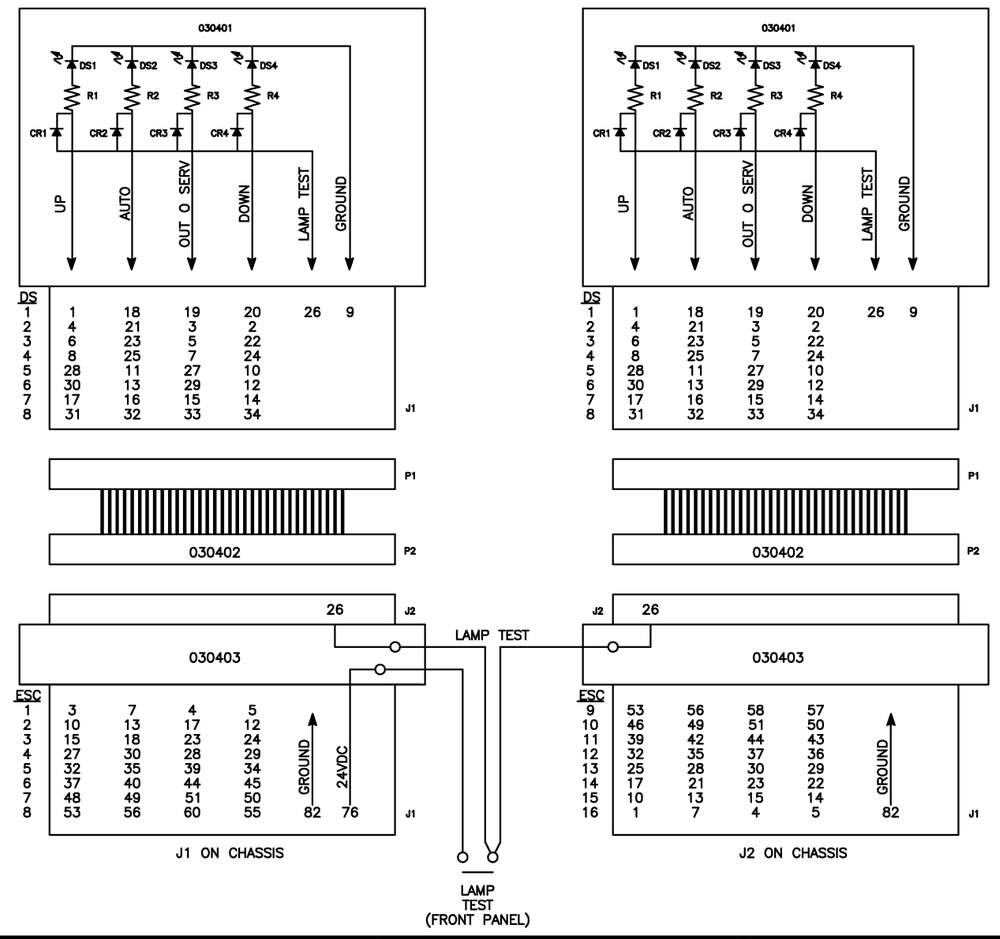
DRAWING NO.: ST–CM–KCS–010



ESCALATOR DISPLAY PANEL

NOTES:

1. THE CONTRACTOR SHALL COORDINATE WITH THE AUTHORITY FOR THE APPROPRIATE NUMBERING OF EACH ESCALATOR.
2. WIRING FOR ESCALATORS NO. 3 THRU NO. 16 ARE IDENTICAL TO THAT SHOWN FOR ESCALATOR NO. 1 & NO. 2.



ESCALATOR STATUS DISPLAY PANEL SCHEMATIC (2)

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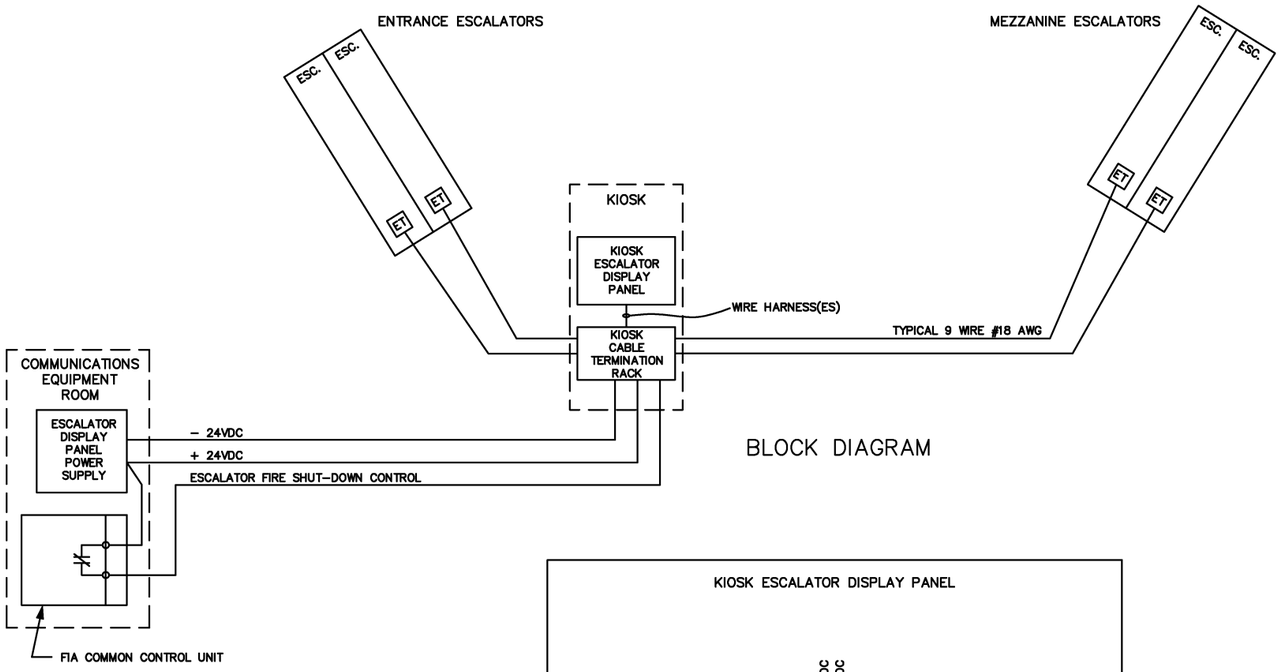
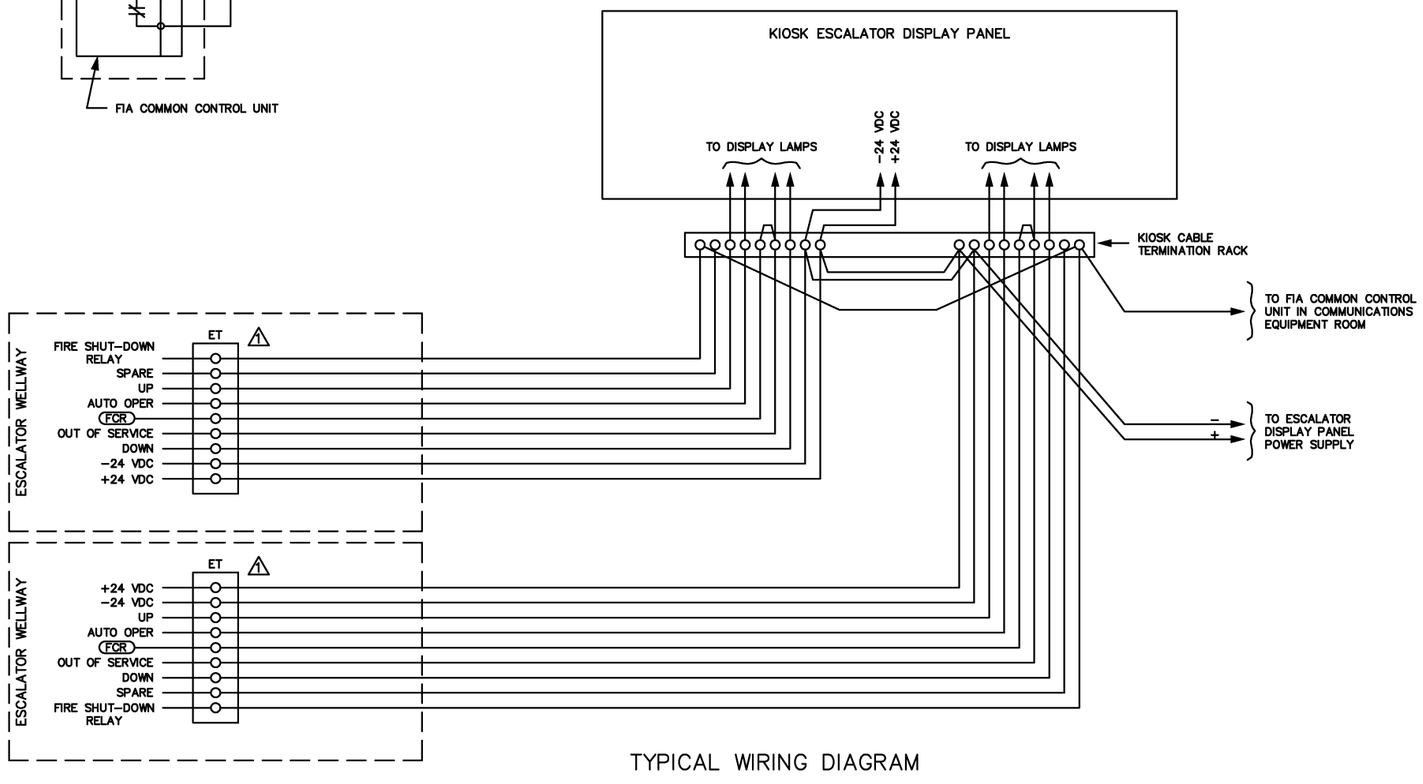
TYPICAL ESCALATOR DISPLAY PANEL

SCALE: NONE

DRAWING NO.: ST-CM-KCS-011



BLOCK DIAGRAM



TYPICAL WIRING DIAGRAM

NOTES:

1. CONTRACTOR SHALL COORDINATE WITH ESCALATOR CONTRACTOR FOR TERMINAL ASSIGNMENTS ON ESCALATOR TERMINAL STRIP (ET).
2. (FCR) INDICATES FAULT RELAY. "OUT OF SERVICE" INDICATOR WILL FLASH WHEN ANY SAFETY DEVICE IS ACTIVATED.
3. FIRE SHUT–DOWN SIGNAL SHALL BE TRANSMITTED TO ALL ESCALATORS UPON AN ALARM. LOGIC SHALL DETERMINE IF ESCALATOR IS IN AN INGRESS MODE AND STOP ESCALATOR IF REQUIRED.

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TYPICAL ESCALATOR WIRING DIAGRAM

SCALE NONE

DRAWING NO. ST–CM–KCS–012

MXXXX–XXX