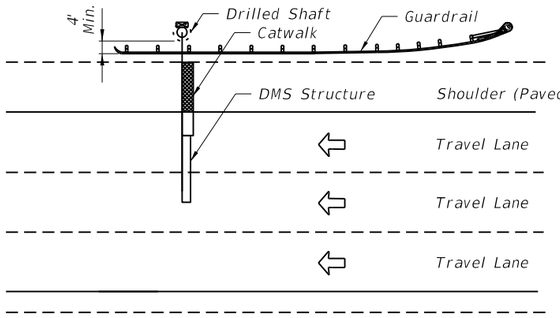
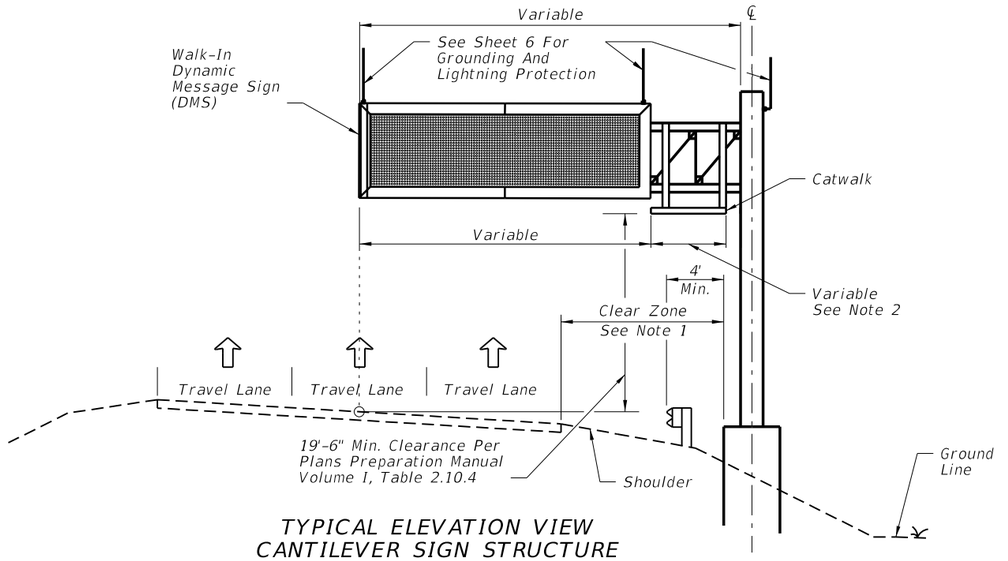
GENERAL NOTES:

1. If no guardrail or barrier wall exists, structure shall be outside the clear zone. Clear zone shall be measured to edge of the drilled shaft if drilled shaft is more than 4" above adjacent grade.
2. Extend Catwalk from DMS to outer edge of paved shoulder but not less than four feet in length.
3. Clear zone distance and setbacks from edge of travel lane shall be in accordance with Plans Preparation Manual Volume I, Chapters 2 and 4.

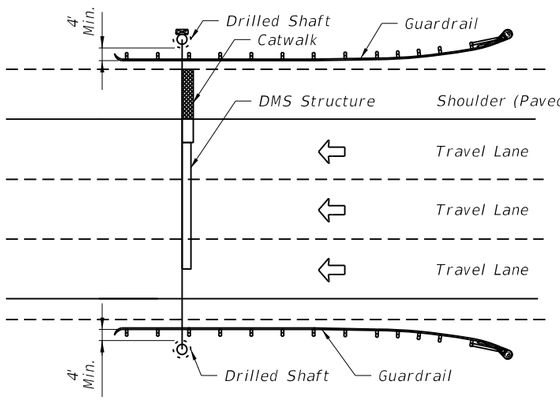


Note: Actual number and direction of travel lanes varies.

TYPICAL PLAN VIEW
DMS CANTILEVER SIGN STRUCTURE

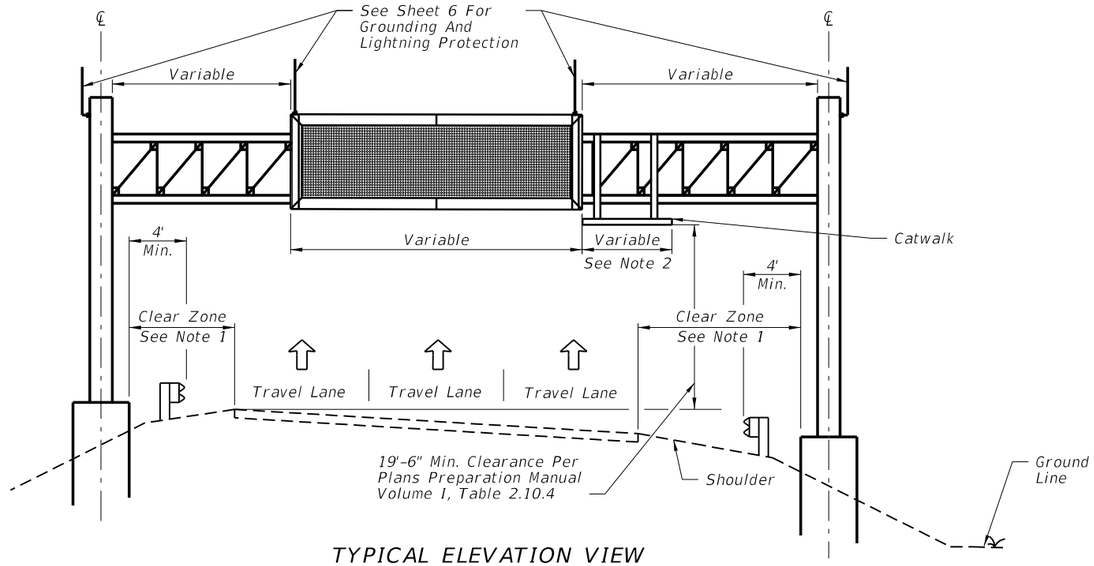


TYPICAL ELEVATION VIEW
CANTILEVER SIGN STRUCTURE



Note: Actual number and direction of travel lanes varies.

TYPICAL PLAN VIEW
SPAN SIGN STRUCTURE



TYPICAL ELEVATION VIEW
SPAN SIGN STRUCTURE

GENERAL LAYOUT

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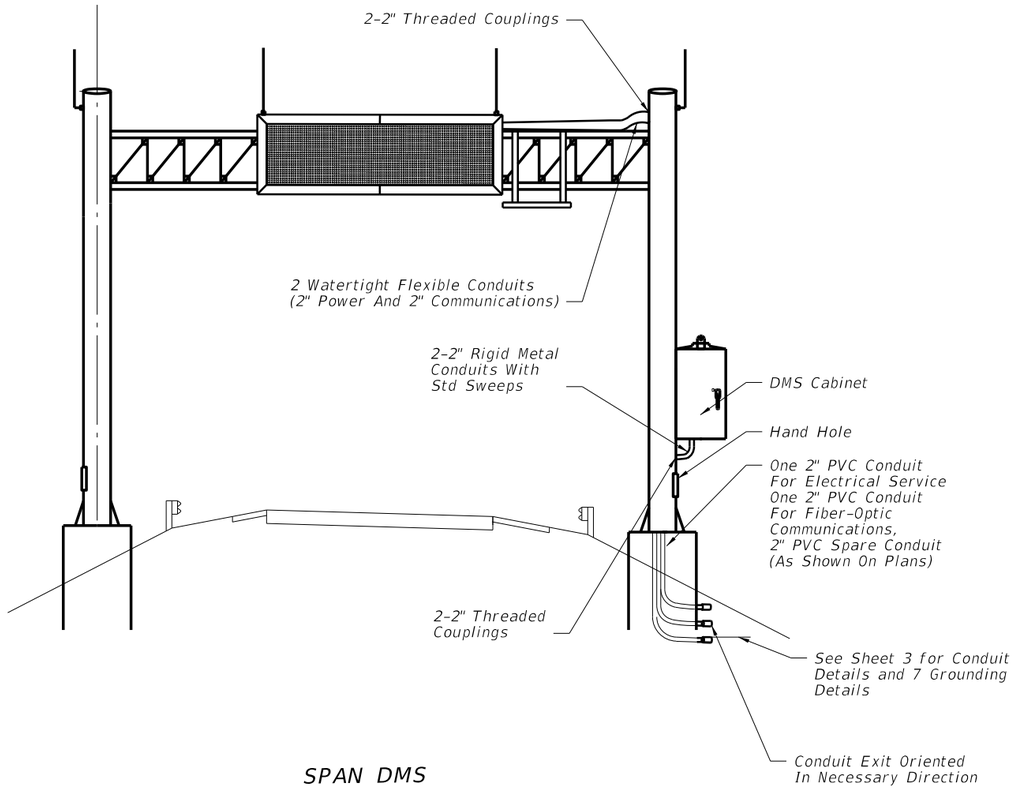
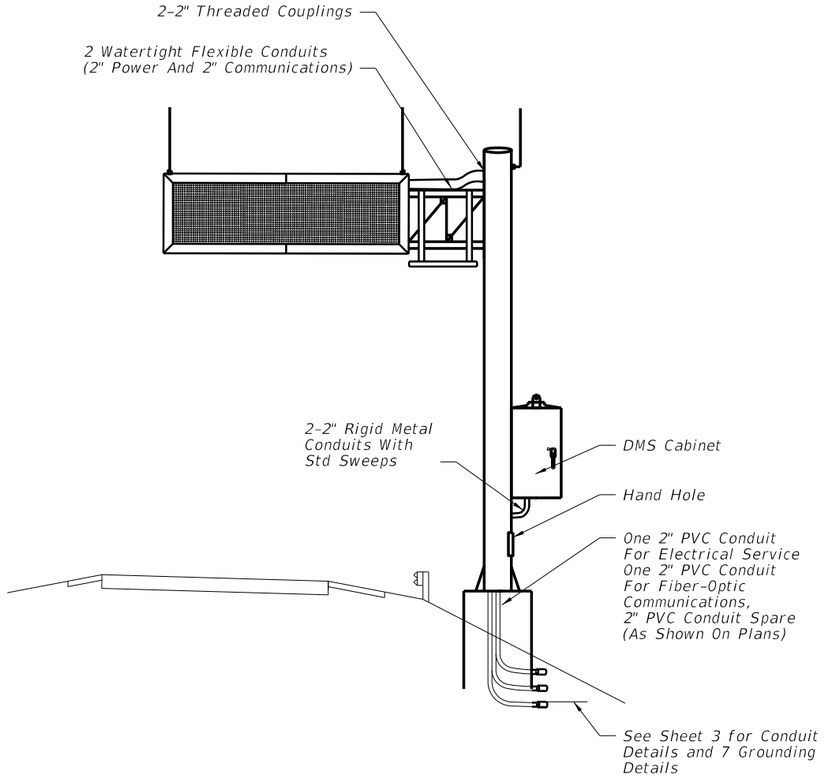
LAST REVISION	REVISION	DESCRIPTION:		FDOT DESIGN STANDARDS 2013	DYNAMIC MESSAGE SIGN WALK-IN	INDEX NO.	SHEET NO.
01/01/12						18300	1



SPAN DMS



CANTILEVER DMS

GENERAL NOTES:

1. Conductors for grounding shall be connected to steel framework that have been cleaned to base metal, by use of bonding plates having contact area of not less than 8 square inches or by welding or brazing. Drilling and tapping the steel structure to accept a threaded connector is also an acceptable method.
2. If steel framework is to be drilled and tapped to accept threaded connector, the threaded connector shall have at least 5 threads fully engaged and secured with a jam nut to the steel framework.
3. Bends in the conduit shall not be less than the minimum bending radius for the cable contained in the conduit.
4. Catwalk and handrail design and installation shall comply with AISC, AASHTO, and OSHA requirements as applicable.
5. All data, fiber-optic and power cable for the DMS shall be completely encased within the sign structure or in conduit.
6. Permanently stamp/mark foundation to conduit locations.
7. Transition conduit in foundation to underground conduit with appropriate reducer outside the limits of the foundation.

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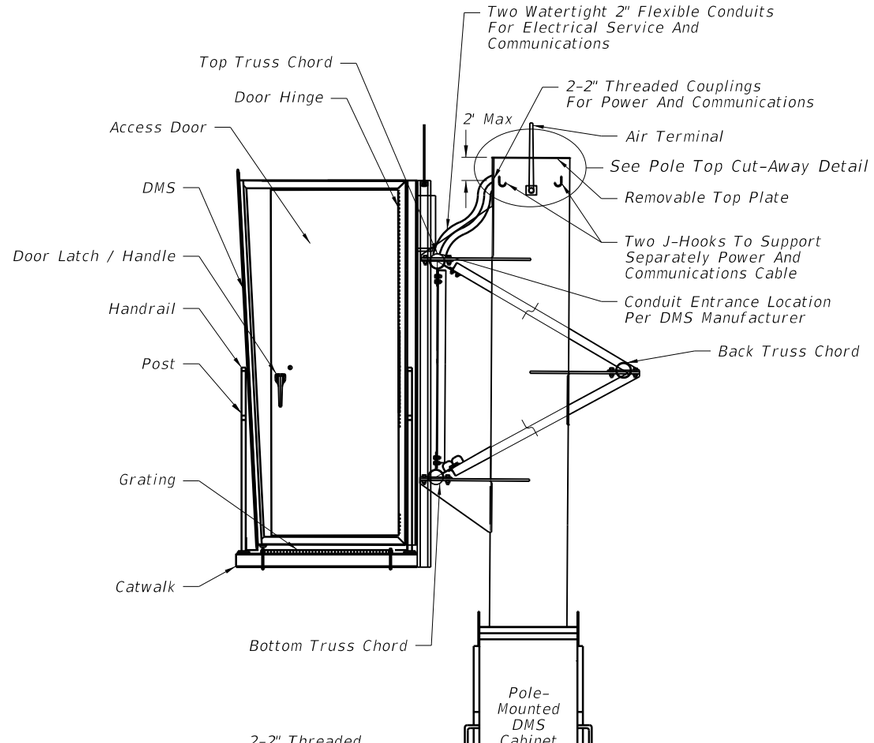
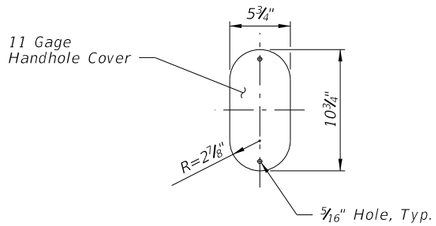
LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
01/01/10			FDOT DESIGN STANDARDS 2013	DYNAMIC MESSAGE SIGN WALK-IN	18300	2

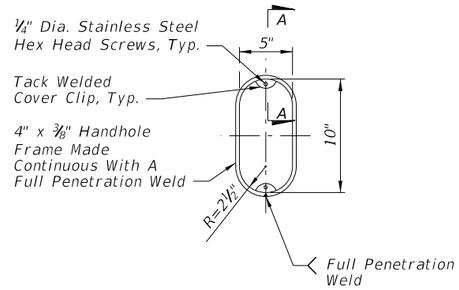
GENERAL NOTES:

1. DMS Cabinet may be pole or ground mounted depending on project requirements.
2. See sheet 7 for additional conduits for grounding. The number and placement of conduits are approximate.
3. Field adjust pole-mounted DMS cabinet height to achieve best access for maintenance personnel given site conditions as directed by the Engineer. Avoid conflicts with stiffeners, hand-hole and maintenance of anchor bolts.

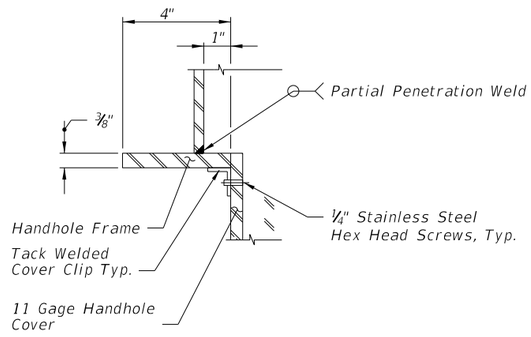




HANDHOLE COVER



HANDHOLE FRAME



SECTION A-A
(Thru Handhole)

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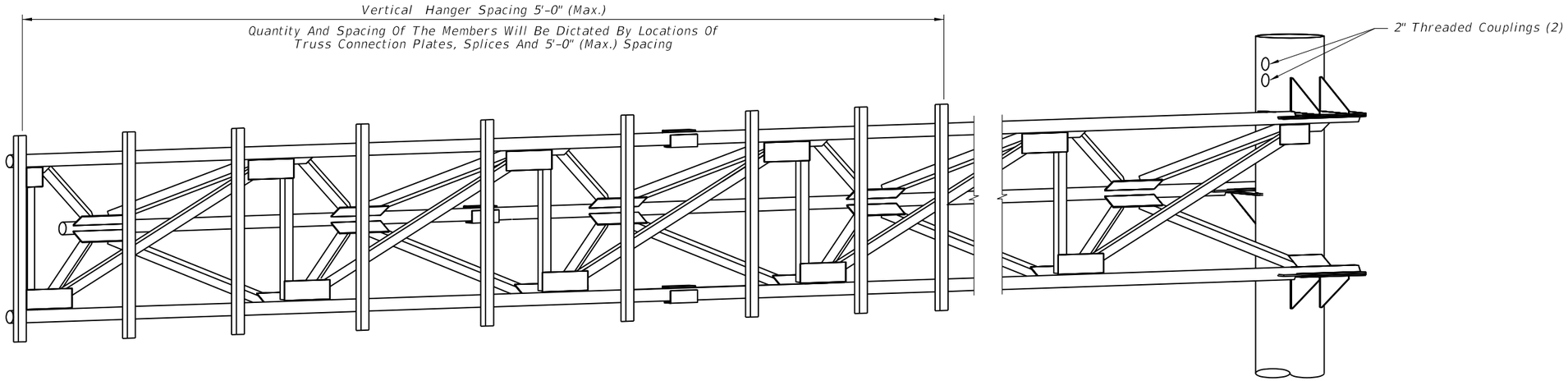
LAST REVISION	REVISION	DESCRIPTION:		FDOT DESIGN STANDARDS 2013	DYNAMIC MESSAGE SIGN WALK-IN	INDEX NO.	SHEET NO.
01/01/12						18300	3



HANGER LOCATION DETAIL

(Cantilever Sign Structure Shown, Span Sign Structure Similar)

GENERAL NOTES

1. Design Specifications: FDOT Structures Manual (current edition) and AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.
2. Design Wind Speed: 150 miles per hour. Maximum DMS weight for design: 4500 lb.
3. Shop drawings including the DMS connection are required and fabrication shall not begin until these shop drawings are approved.
4. Locate the sign laterally on the structure as shown in the plans. Vertically center the sign enclosure with the centerline of the truss.
5. Before erection, after both the delivery of the DMS and the steel truss, the contractor shall carefully measure the exact locations for field drilling the ½" bolt holes in the vertical hangers and horizontal mounting member attached to the sign enclosure. Field locate holes to allow vertical hanger placement as shown on the plans with no conflicts with gusset or splice plates.
6. All steel items shall be galvanized as follows:
   All nuts, bolts and washers ASTM F2329
   All other steel items ASTM A123
7. All bolt holes shall be equal to the bolt diameter plus 1/16", prior to galvanizing.
8. All bolts shall have single self-locking nuts, or locking nut system, installed in accordance with the manufacturer's recommendations.
9. Cost of the installation of the DMS on truss including the vertical hanger, associated members, and hardware shall be incidental to the cost of the sign structure.
10. Threaded couplings shall be located on sign side of column above the sign truss.

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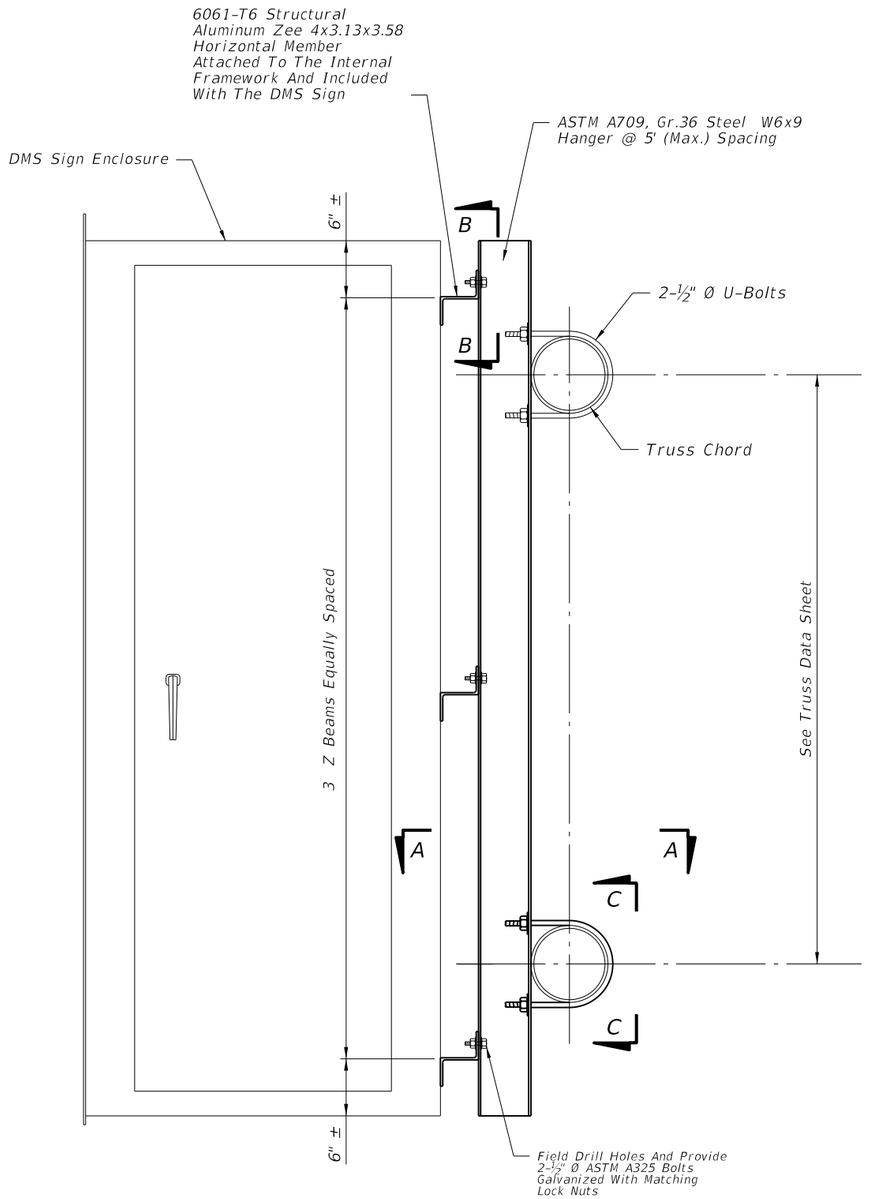
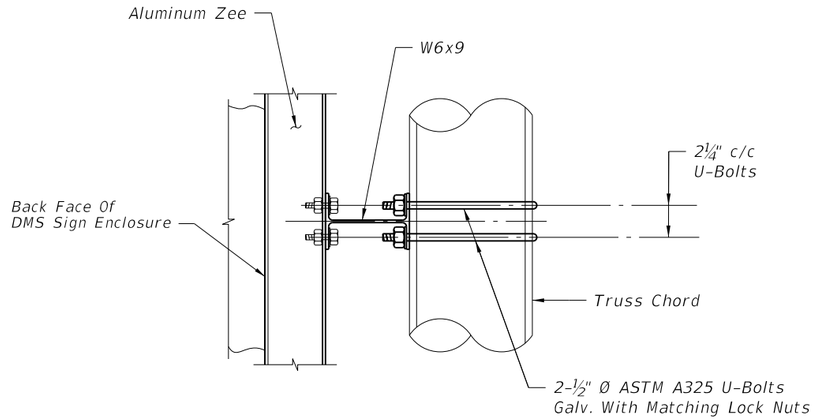
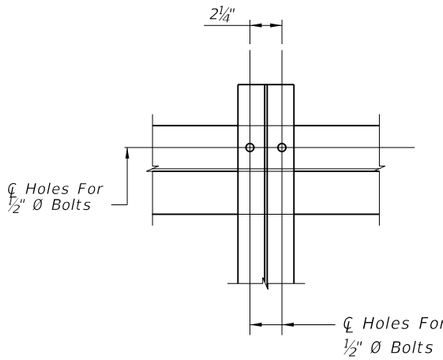
07/01/10						18300	4



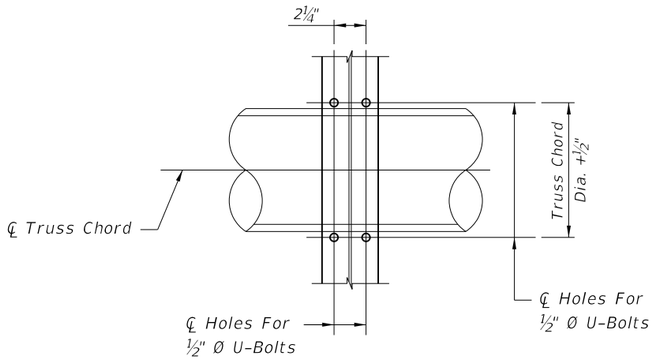
END VIEW



SECTION A-A



SECTION B-B



SECTION C-C

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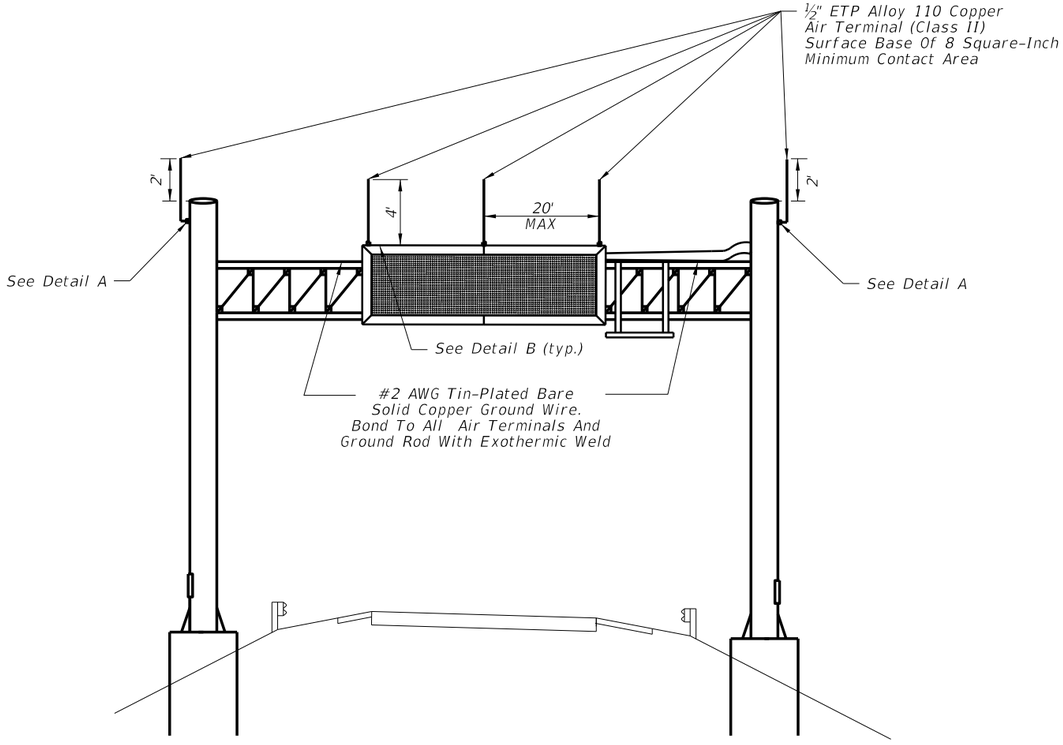
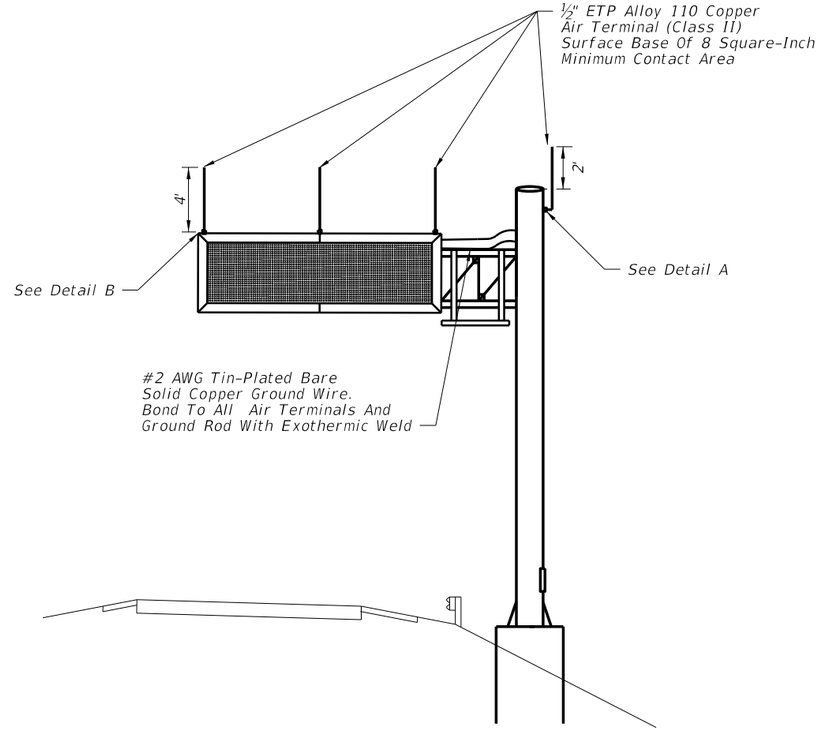
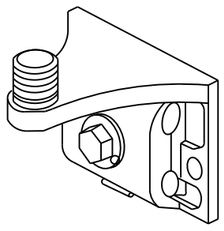


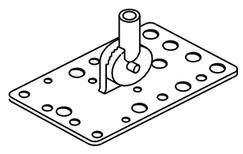
SPAN DMS



CANTILEVER DMS



DETAIL A



DETAIL B

GENERAL NOTES:

1. All grounding materials shall meet the requirements of Section A620 of the current Minimum Specifications For Traffic Control Signal Devices (MSTCSD), except as noted.
2. Exothermically weld all connections to ground rods.
3. The contractor may, upon approval of the Engineer, install a 30-foot sectional ground rod for instances when conditions will not allow for the installation of the 3 auxiliary ground rods.
4. Install marker tape directly above all grounding electrodes and conductors.
5. Copper flat surfaces shall be bolted, welded, or brazed securely to framework to maintain electrical continuity.
6. All air terminals must meet UL-96A.
7. Grounding system shall be placed within right of way.
8. See Sheet 7 for ground rod placement detail.
9. Lightning protection shall conform to NFPA 780. Spacing between air terminals shall not exceed 20 feet.

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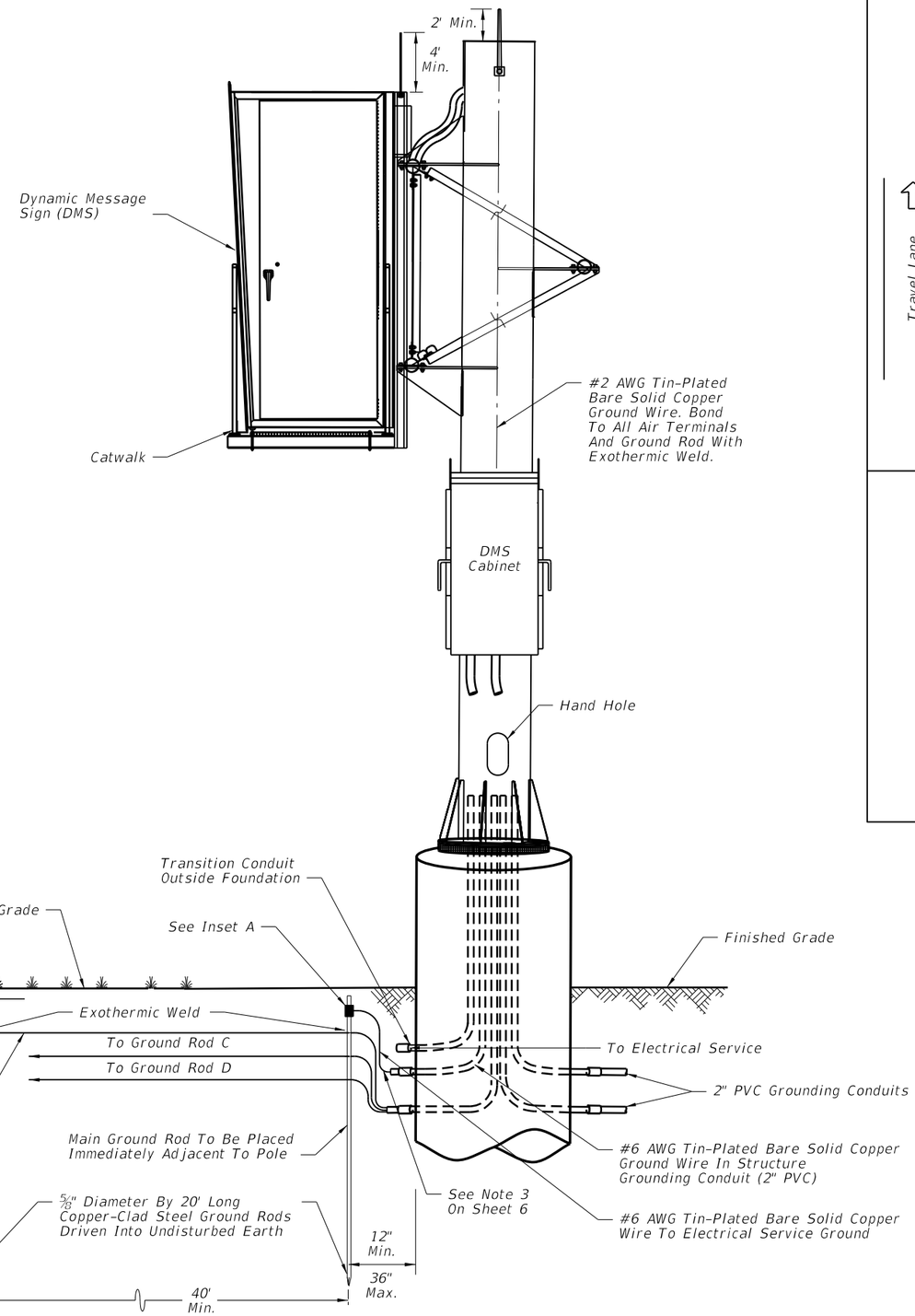
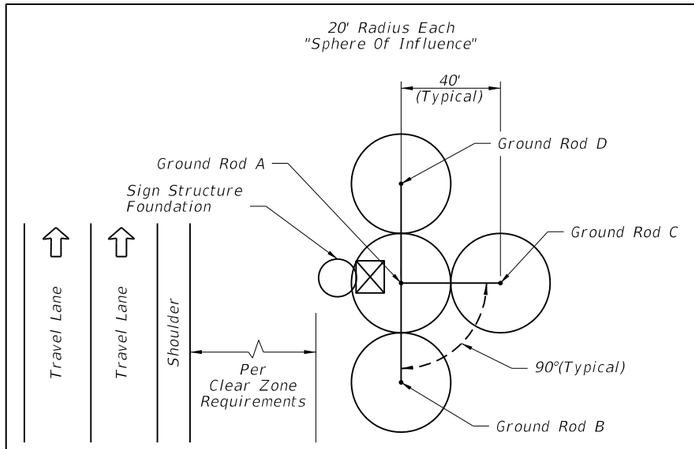
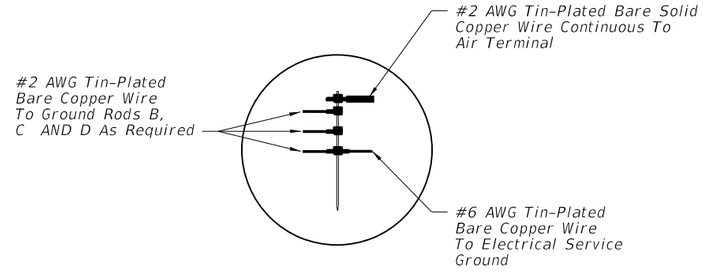




GROUND ROD PLACEMENT DETAIL (TYPICAL)



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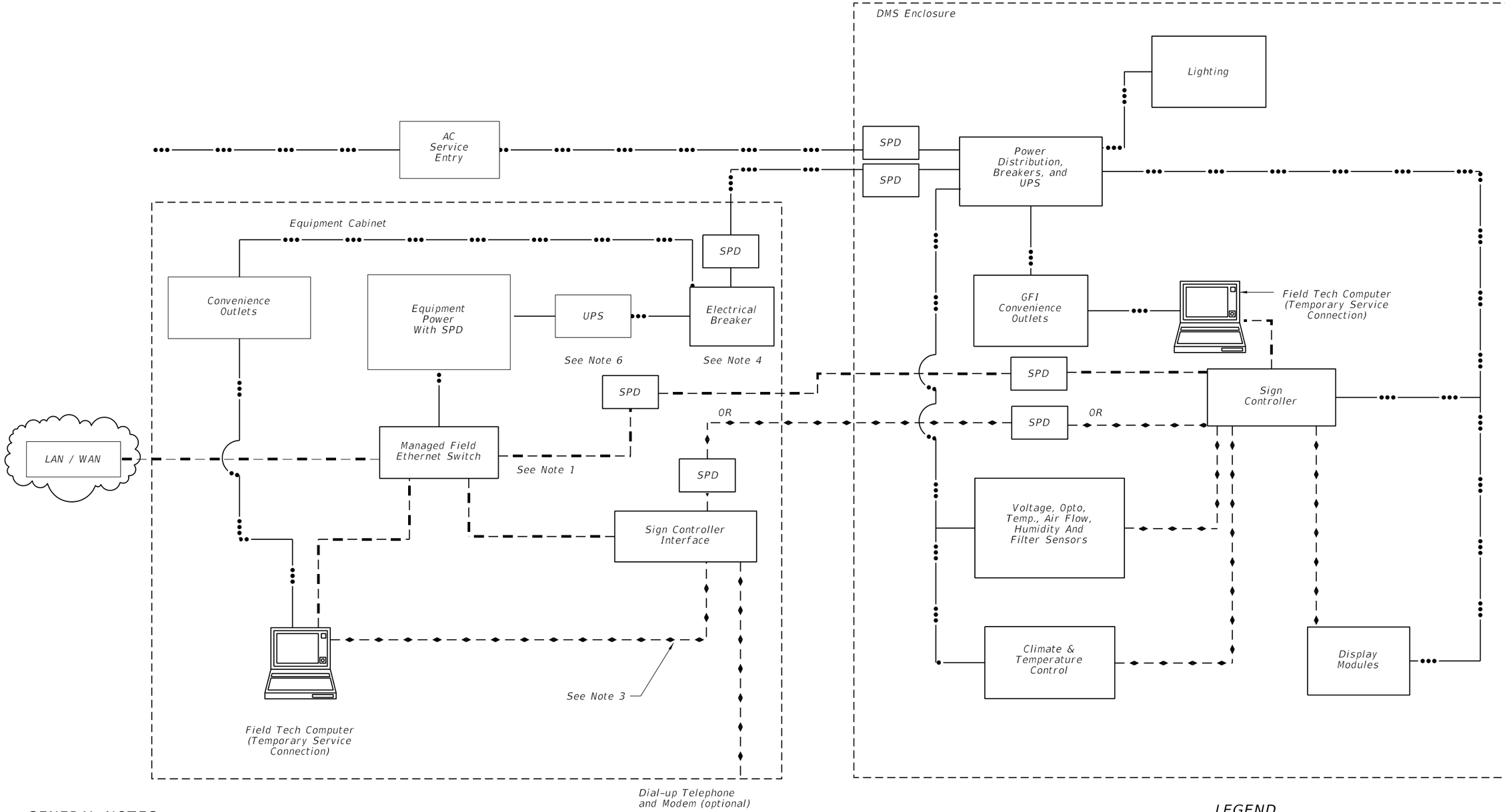

GENERAL NOTES:

1. Provide single ethernet connection from the managed field ethernet switch to either the sign controller interface in cabinet or sign controller in sign enclosure.
2. Locate cabinet as shown in plans.
3. Serial data link is for communications directly to the DMS controller.
4. Cabinet must include at least one breaker to control all cabinet power.
5. AC service entrance may be located in cabinet or sign housing.
6. UPS equipment location may vary. Diagram indicates functional requirements that uninterrupted power must be available in cabinet and sign housing.

LEGEND

Data

Ethernet

Power

SPD — Surge Protection Device

SIGN AND CABINET WIRING DIAGRAM

LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
07/01/10			FDOT DESIGN STANDARDS 2013	DYNAMIC MESSAGE SIGN WALK-IN	18300	8

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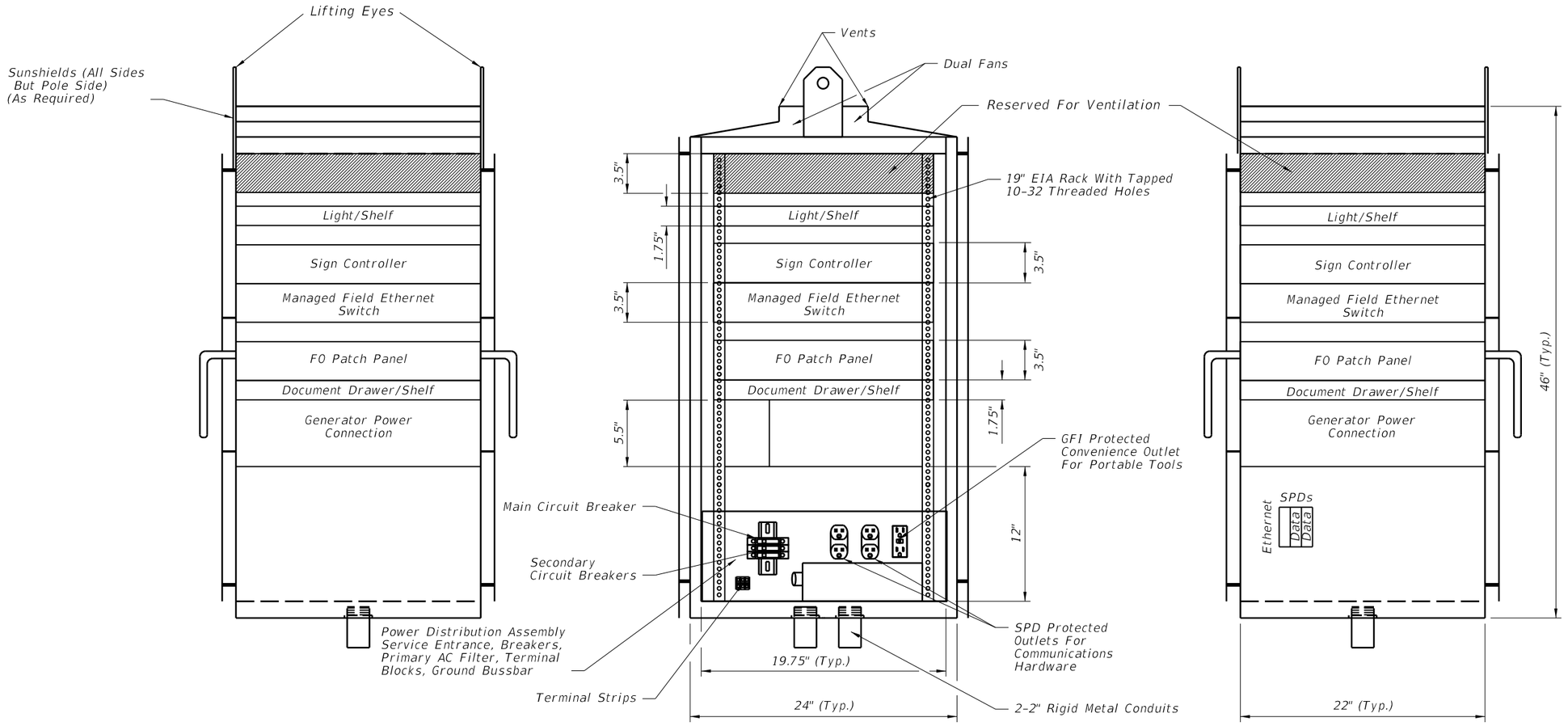

LEFT SIDE VIEW

FRONT VIEW
POLE MOUNTED DMS CABINET

RIGHT SIDE VIEW

GENERAL NOTES:

1. Cabinet layout is for pole or ground mounted installations.
2. All dimensions and equipment locations are approximate.
3. Conduit entrances are at bottom of cabinet.
4. Minimum number of duplex outlets is three, (2) SPD protected and (1) GFI protected.
5. Either an access controller or local access panel shall be provided to provide full access to DMS sign for control, programming and troubleshooting.
6. Load center shall be sized for connected equipment and convenience outlets with at least one main disconnect and three circuit breakers.
7. Batteries and UPS may be located in sign housing or cabinet.
8. Power Distribution Assembly component layout, orientation and location may vary.

CABINET LAYOUT 1

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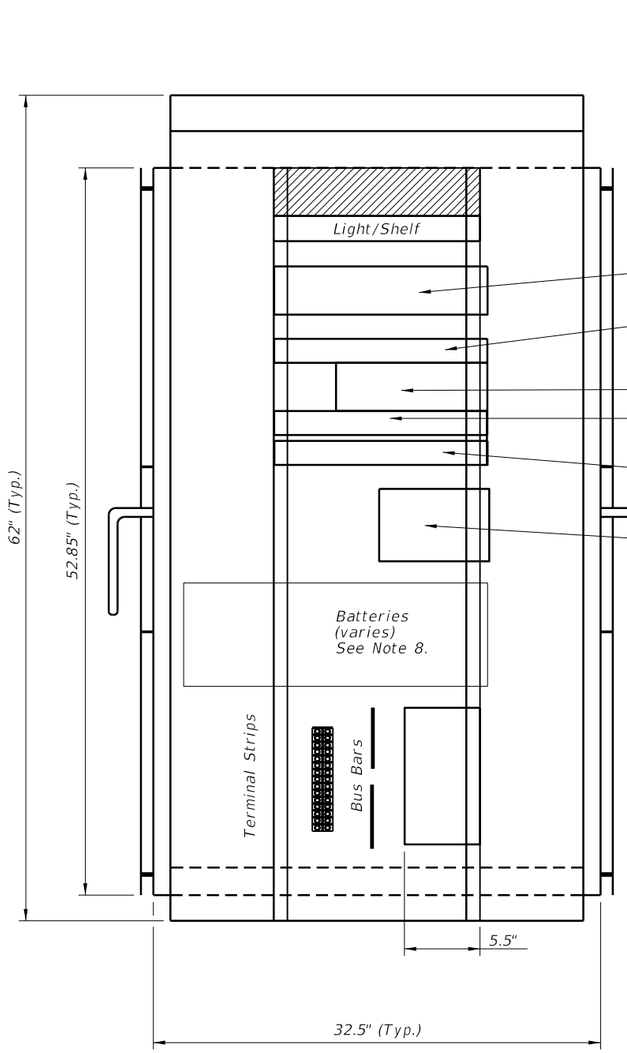
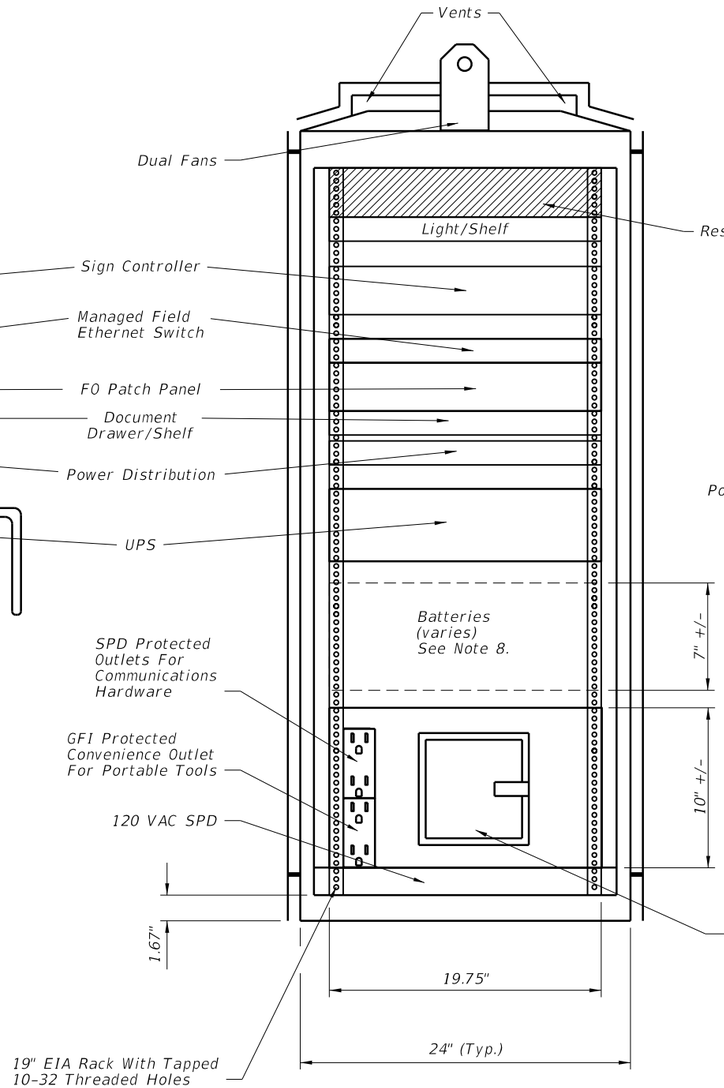
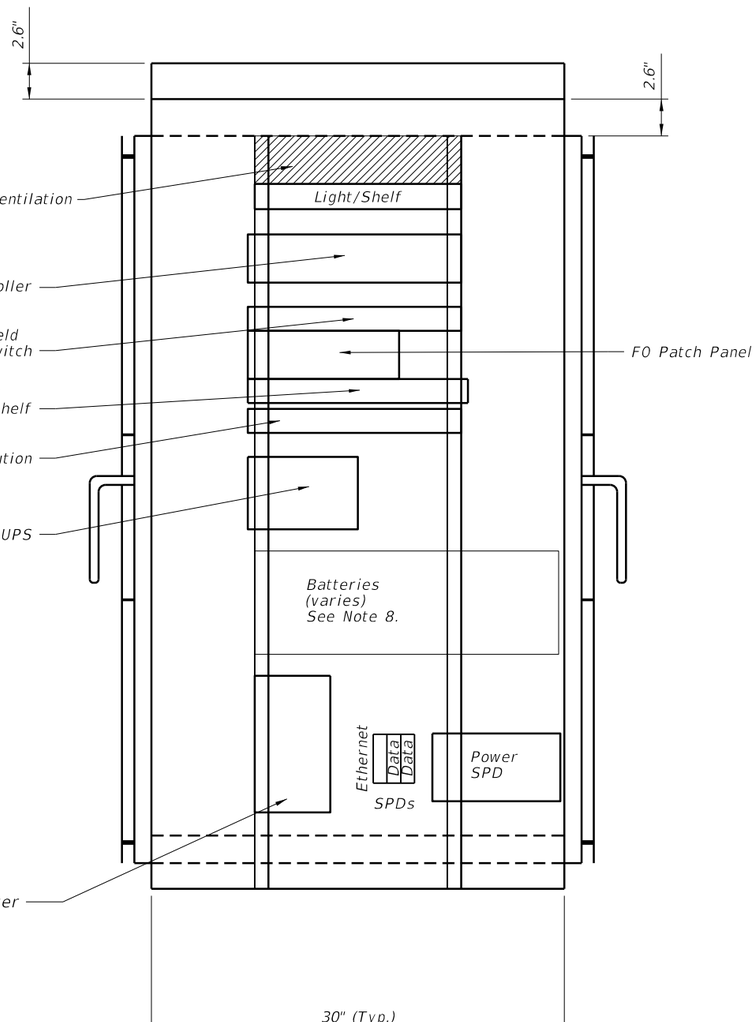


LEFT SIDE VIEW



FRONT VIEW
GROUND MOUNTED DMS CABINET



RIGHT SIDE VIEW

CABINET LAYOUT 2

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07/01/10			FDOT DESIGN STANDARDS 2013	DYNAMIC MESSAGE SIGN WALK-IN	18300	10