

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Various Routes
D1 DYN MESS SIGN 2007-20
Cook & Lake Counties
Sheet 1 of 9
Contract Number 44953

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

VARIOUS ROUTES
D1 DYN MESS SIGN 2007-20
COOK & LAKE COUNTIES
C-60-027-06

INDEX OF SHEETS

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2	SUMMARY OF QUANTITIES
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9	DISTRICT 1 SHOULDER CLOSURES & PARTIAL RAMP CLOSURES

STANDARDS

702001-06
701101-01
701106-01
701401-03
701406-04
701411-03
701400-02

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 2/16 20 07
PASSED
Joe Hill
ENGINEER OF OPERATIONS
March 23, 2007
Eric E. Hamm
INTERIM ENGINEER OF DESIGN AND ENVIRONMENT
APPROVED March 23, 2007
Milton R. See, P.E.
DIRECTOR DIVISION OF HIGHWAYS

JOINT UTILITY LOCATING INFORMATION FOR
EXCAVATIONS PHONE: 800-892-0123

CONTRACT NO. 44953

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

*Various Routes
DI DYN MESS SIGN 2007-20
Cook & Lake Counties
Sheet 3 of 9
Contract Number 44953*

*District 1
Schedule of Locations*

Location No.:	1-01	State I.D. No.:	Stoney Island Avenue North of I-94.			
County:	Cook	Route:	M.P.:	0	Direction:	SB
Description of Work						
ARTERIAL DYNAMIC MESSAGE SIGN, TYPE 3						
		Unit	EACH	Quantity	1.00	
OVERHEAD SIGN STRUCTURE - CANTILEVER, TYPE III-C-A (3'-0"x7'-0")						
		Unit	FOOT	Quantity	25.00	
DRILLED SHAFT CONCRETE FOUNDATION						
		Unit	CU YD	Quantity	7.50	
This work shall be completed during District 1 non-peak day-time hours.						

Location No.:	1-02	State I.D. No.:	159th Street West of Dixie Highway.			
County:	Cook	Route:	M.P.:	0	Direction:	WB
Description of Work						
ARTERIAL DYNAMIC MESSAGE SIGN, TYPE 1						
		Unit	EACH	Quantity	1.00	
OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE I-C-A (2'-0"x4'-6")						
		Unit	FOOT	Quantity	25.00	
DRILLED SHAFT CONCRETE FOUNDATION						
		Unit	CU YD	Quantity	4.70	
This work shall be completed during District 1 non-peak day-time hours.						

Location No.:	1-03	State I.D. No.:	159th Street West of Crawford.			
County:	Cook	Route:	M.P.:	0	Direction:	EB
Description of Work						
ARTERIAL DYNAMIC MESSAGE SIGN, TYPE 3						
		Unit	EACH	Quantity	1.00	
OVERHEAD SIGN STRUCTURE - CANTILEVER, TYPE III-C-A (3'-0"x7'-0")						
		Unit	FOOT	Quantity	25.00	
DRILLED SHAFT CONCRETE FOUNDATION						
		Unit	CU YD	Quantity	7.50	
This work shall be completed during District 1 non-peak day-time hours.						

Location No.:	1-04	State I.D. No.:	U.S. Route 41			
County:	Lake	Route:	M.P.:	0	Direction:	SB
Description of Work						
ARTERIAL DYNAMIC MESSAGE SIGN, TYPE 3						
		Unit	EACH	Quantity	1.00	
This work shall be completed during District 1 non-peak day-time hours.						

Location No.:	1-05	State I.D. No.:	Mannheim Road South of I-190			
County:	Cook	Route:	M.P.:	0	Direction:	SB
Description of Work						
ARTERIAL DYNAMIC MESSAGE SIGN, TYPE 1						
		Unit	EACH	Quantity	1.00	
OVERHEAD SIGN STRUCTURE - CANTILEVER, TYPE III-C-A (3'-0"x7'-0")						
		Unit	FOOT	Quantity	35.00	
DRILLED SHAFT CONCRETE FOUNDATION						
		Unit	CU YD	Quantity	7.50	
This work shall be completed during District 1 non-peak day-time hours.						

Location No.:	1-06	State I.D. No.:	Mannheim Road South of ICRR Bridge.			
County:	Cook	Route:	M.P.:	0	Direction:	NB
Description of Work						
ARTERIAL DYNAMIC MESSAGE SIGN, TYPE 1						
		Unit	EACH	Quantity	1.00	
OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE I-C-A (2'-0" X 4'-6")						
		Unit	FOOT	Quantity	25.00	
DRILLED SHAFT CONCRETE FOUNDATION						
		Unit	CU YD	Quantity	4.70	
This work shall be completed during District 1 non-peak day-time hours.						

Location No.:	1-07	State I.D. No.:	Mannheim Road North of I-290.			
County:	Cook	Route:	M.P.:	0	Direction:	sB
Description of Work						
ARTERIAL DYNAMIC MESSAGE SIGN, TYPE 1						
		Unit	Each	Quantity	1.00	
OVERHEAD SIGN STRUCTURE - CANTILEVER, TYPE I-C-A (2'-0"x4'-6")						
		Unit	Foot	Quantity	25.00	
DRILLED SHAFT CONCRETE FOUNDATION						
		Unit	CU YD	Quantity	4.70	
This work shall be completed during District 1 non-peak day-time hours.						

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:
 Field Units
 $f_c = 3,500$ p.s.i.
 $f_y = 60,000$ p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.

All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.

The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to AASHTO M314 Gr. 55 with a minimum Charpy V-Notch (CVN) energy of 15 lb.-ft. at 10° F.

CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Bridge Seat Sealer in accordance with the Standard Specifications.

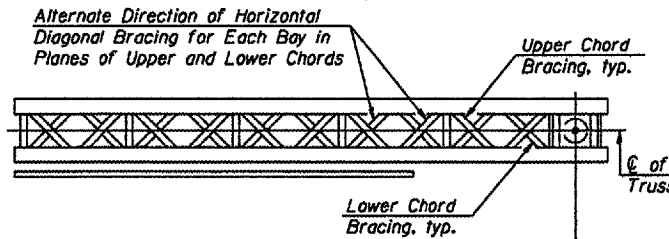
REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

Structure Number	Station	Design Truss Type	Cantilever Length (L)	Elev. A	Dim. D	D _s	Total Sign Area
SB STONEY ISLAND N/O I-94		III	25 Ft.	0 Ft.	11	4.62 Ft.	70 Sq. Ft.
WB 159TH W/O DIXIE HWY.		I	25 Ft.	0 Ft.	15	3.03 Ft.	41 Sq. Ft.
EB 159TH W/O CRAWFORD		III	25 Ft.	0 Ft.	15	4.62 Ft.	70 Sq. Ft.
SB MANNHEIM S/O I-190		III	35 Ft.	0 Ft.	23	4.62 Ft.	41 Sq. Ft.
NB MANNHEIM S/O ICRR BRIDGE		I	25 Ft.	0 Ft.	**	3.03 Ft.	41 Sq. Ft.
SB MANNHEIM N/O I-290		I	25 Ft.	0 Ft.	15	3.03 Ft.	41 Sq. Ft.

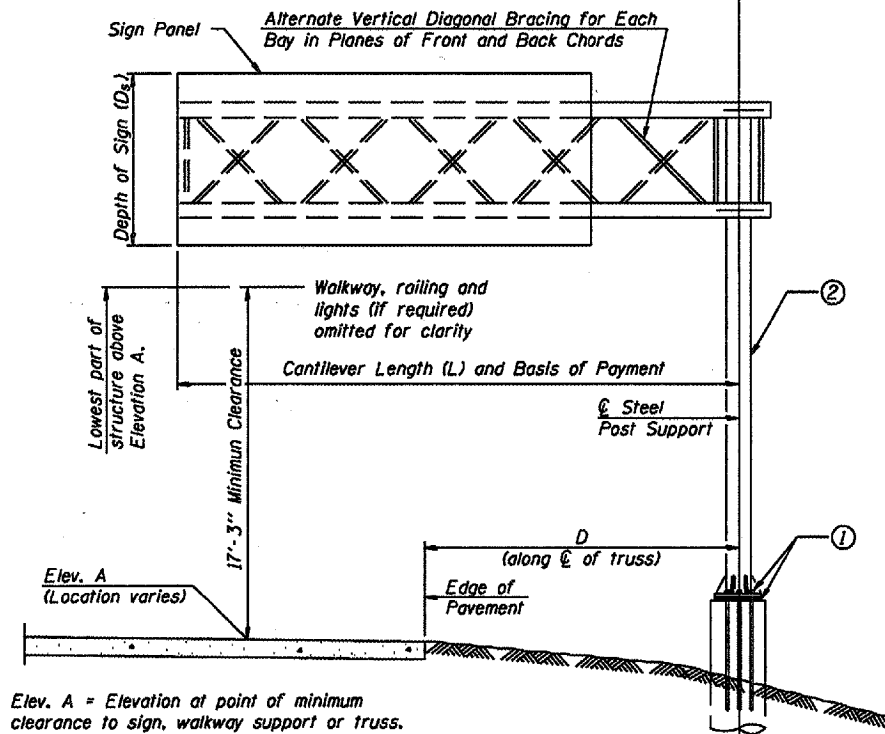
* RIGHT SIDE MOUNTED DMS

** CENTERED IN MEDIAN

Truss Type	Maximum Sign Area	Maximum Length
I-C-A	170 Sq. Ft.	25 Ft.
II-C-A	340 Sq. Ft.	30 Ft.
III-C-A	400 Sq. Ft.	40 Ft.



TYPICAL PLAN
 (Walkway not shown)



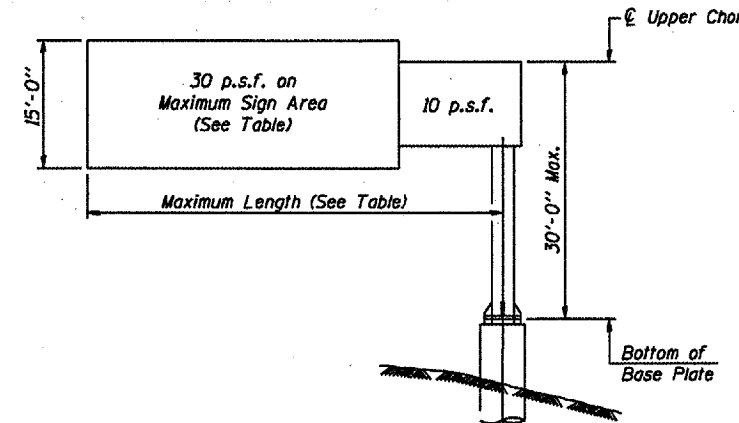
Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

TYPICAL ELEVATION
 Looking in Direction of Traffic

Sign support structures may be subject to damaging vibrations and oscillations when sign panels are not in place during erection or maintenance of the structure. To avoid these vibrations and oscillations, consideration should be given to attaching temporary blank sign panels to the structure.

Note:
 Trusses shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The contractor is responsible for maintaining the configuration and protection of the trusses.

NUMBER	REVISION	DATE



DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards. Installations not within dimensional limits shown require special analysis for all components.

- ① After adjustments to level truss and insure adequate vertical clearance, all top and leveling nuts shall be tightened against the base plate with a minimum torque of 200 lb.-ft. Stainless steel mesh shall then be placed around the perimeter of the base plate. Secure to base plate with stainless steel banding.
- ② SB MANNHEIM RD. S/O I-190 DMS WILL BE MOUNTED ON RIGHT SIDE OF STEEL POST SUPPORT.

* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.

TOTAL BILL OF MATERIAL

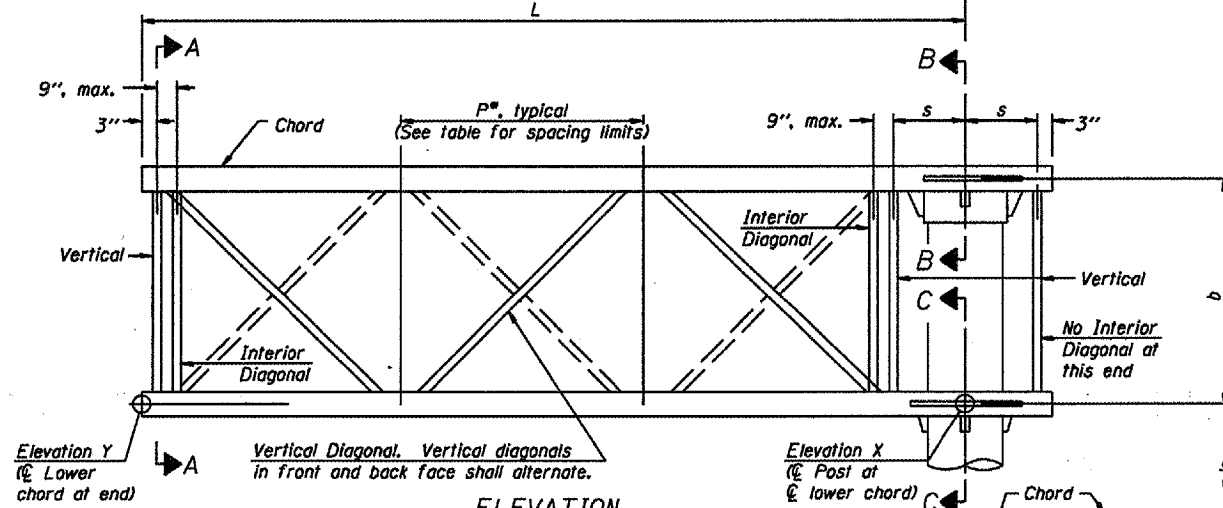
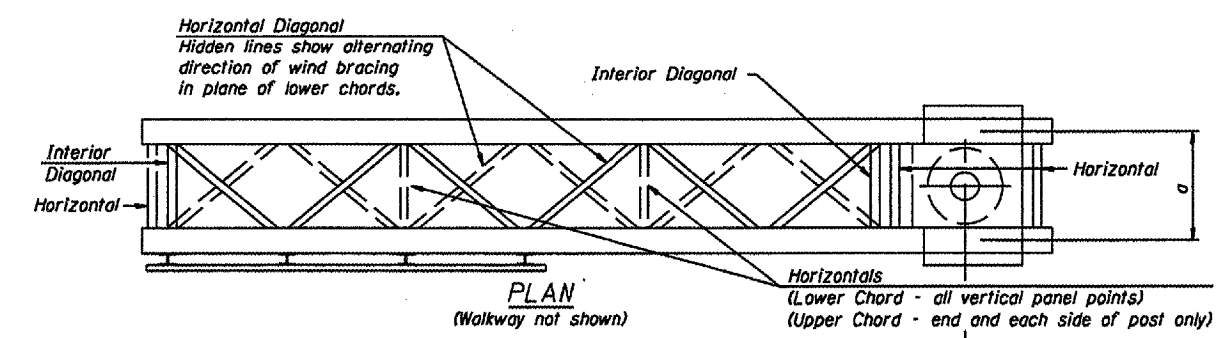
ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE I-C-A	Foot	75.0
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE II-C-A	Foot	
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE III-C-A	Foot	85.0
OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	Foot	
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	36.6

ILLINOIS DEPARTMENT OF TRANSPORTATION

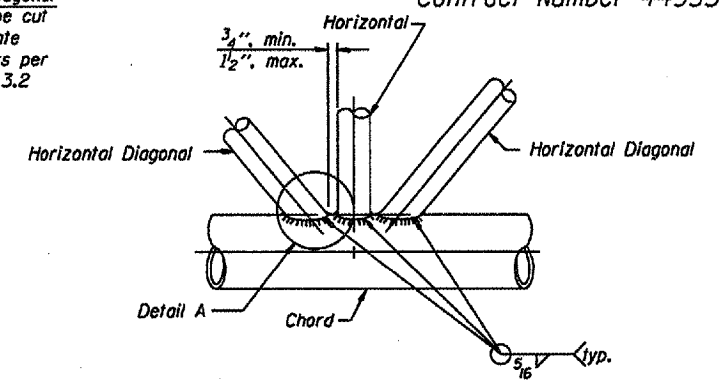
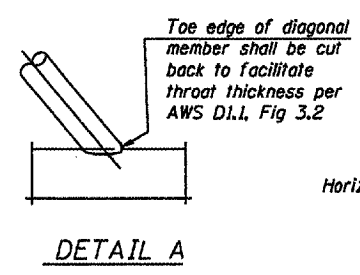
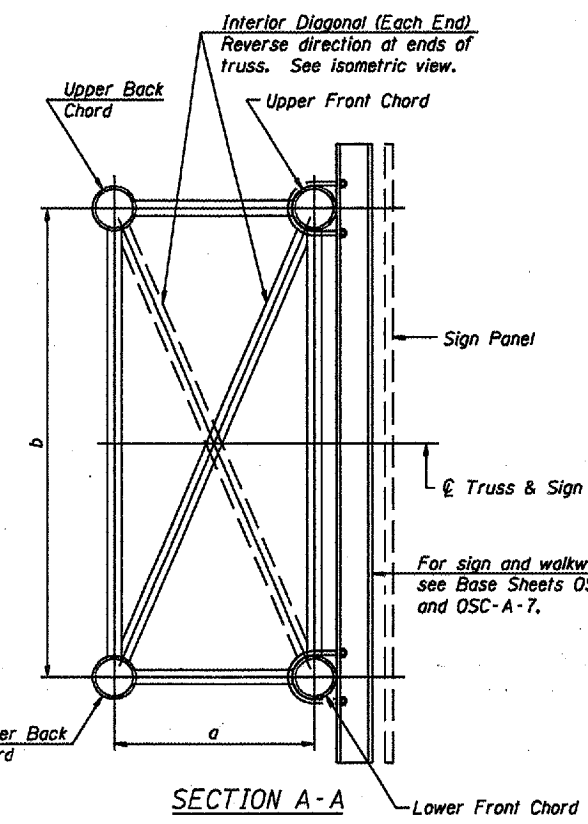
CANTILEVER SIGN STRUCTURES
 GENERAL PLAN & ELEVATION
 ALUMINUM TRUSS & STEEL POST

SCALE: VERT. N.T.S.
 HORIZ. N.T.S.
 DATE: DATE-TIME

DRAWN BY: JSD
 DESIGNED BY: JSD
 CHECKED BY: JSD



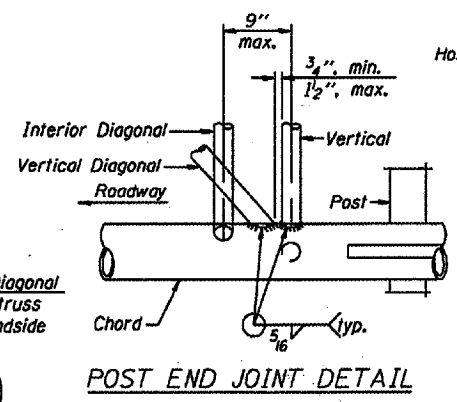
TYPICAL TRUSS UNIT
 For Section B-B and Section C-C, see Base Sheet OSC-A-3.



TRUSS INTERIOR JOINT DETAIL

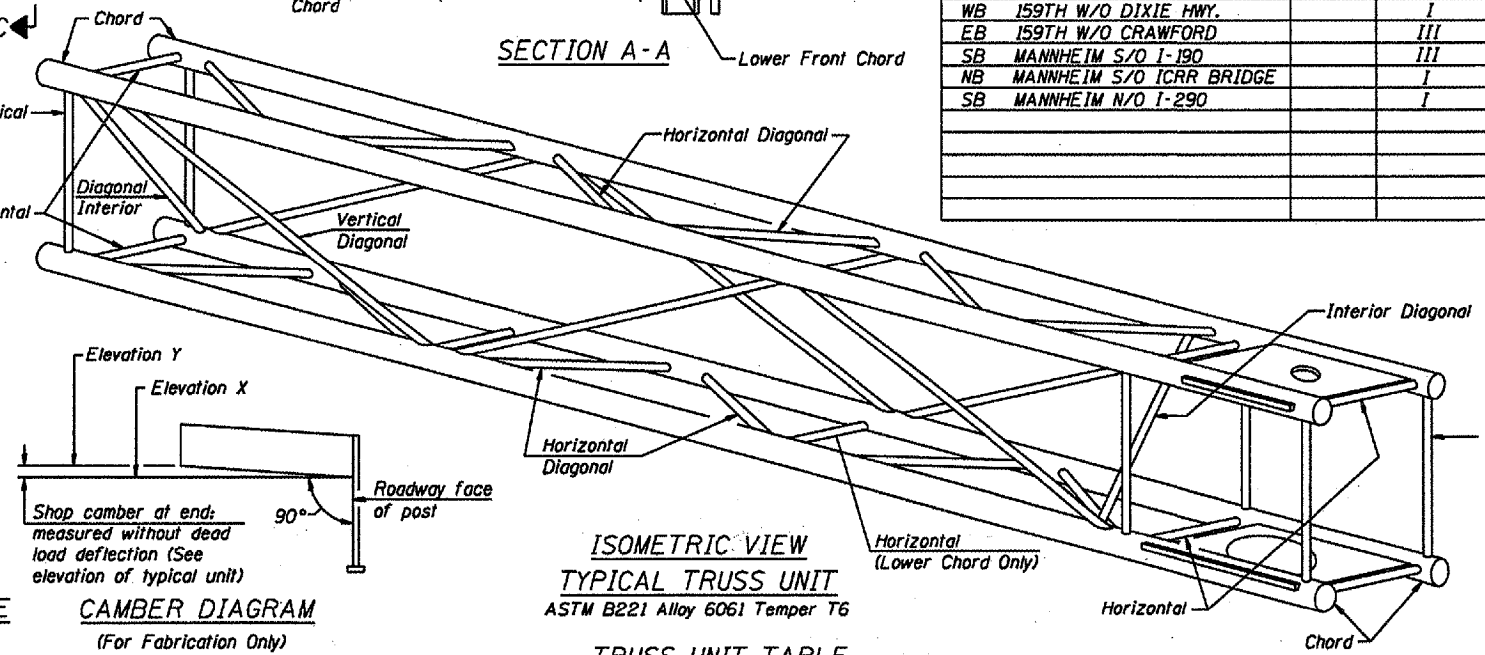
Structure Number	Station	Truss Type	Design Length (L)	Number of Panels Per Unit	Panel Length (P)*
SB STONEY ISLAND N/O I-94		III	25 Ft.	5	4.6 Ft.
WB 159TH W/O DIXIE HWY.		I	25 Ft.	6	3.9 Ft.
EB 159TH W/O CRAWFORD		III	25 Ft.	5	4.6 Ft.
SB MANNHEIM S/O I-190		III	35 Ft.	6	5.5 Ft.
NB MANNHEIM S/O ICRR BRIDGE		I	25 Ft.	6	3.9 Ft.
SB MANNHEIM N/O I-290		I	25 Ft.	6	3.9 Ft.

Note: There are twice as many horizontal diagonals as there are vertical diagonals.



SHOP CAMBER TABLE

Unit Length (L)	Shop Camber at End
15'	1 1/2"
16'-17'	1 3/4"
18'-20'	2"
21'-22'	2 1/4"
23'-25'	2 1/2"
26'-27'	2 3/4"
28'-30'	3"
31'-32'	3 1/4"
33'-35'	3 1/2"
36'-37'	4"
38'-40'	4 1/2"

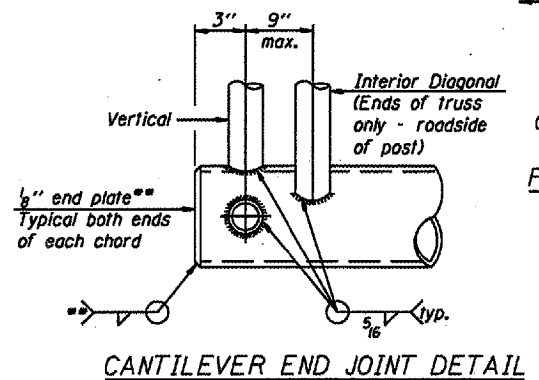


TYPICAL TRUSS UNIT
 ASTM B221 Alloy 6061 Temper T6

CAMBER DIAGRAM
 (For Fabrication Only)

Truss Type	Dimension "a"	Dimension "b"	Dimension "s"	Limits for Panel Spacing (P)*	Up. & Low. Chord		Verticals, Horizontals, Vertical, Horizontal, and Interior Diagonals	
					O.D.	Wall	O.D.	Wall
I-C-A	24"	54"	16"	36" min. to 48" max.	5"	5/16"	2 1/2"	5/16"
II-C-A	36"	66"	21"	42" min. to 54" max.	6 1/2"	5/16"	3 1/4"	5/16"
III-C-A (35' Max.)	36"	84"	21"	48" min. to 66" max.	7"	3/8"	3 1/2"	3/8"
III-C-A (>35' to 40')	36"	84"	21"	48" min. to 66" max.	8"	3/8"	3 1/2"	3/8"

*P = $\frac{L-s-3"}{\# \text{ Panels}}$



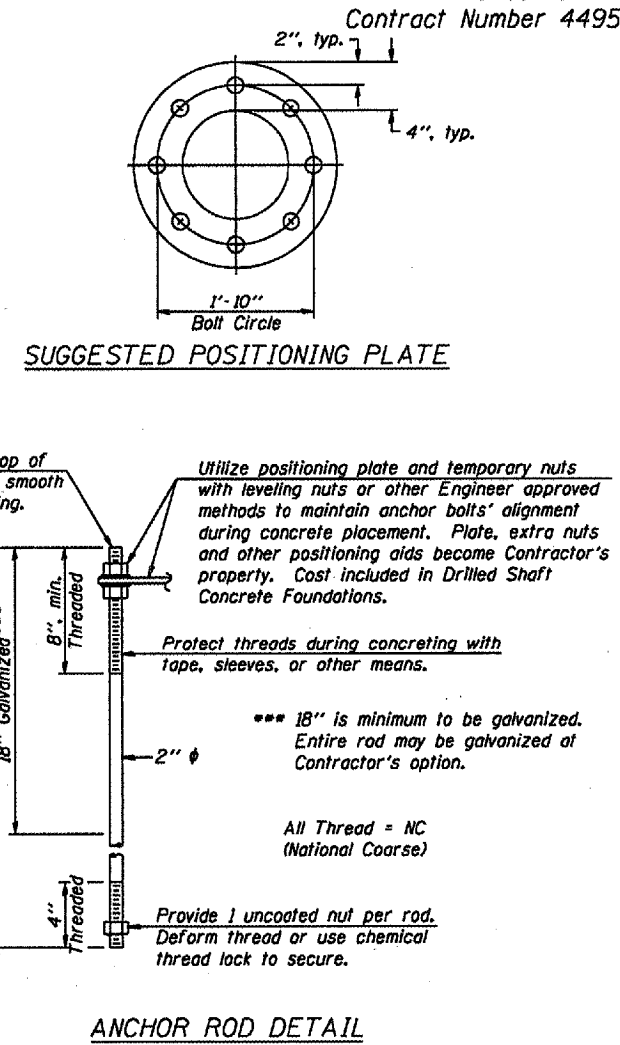
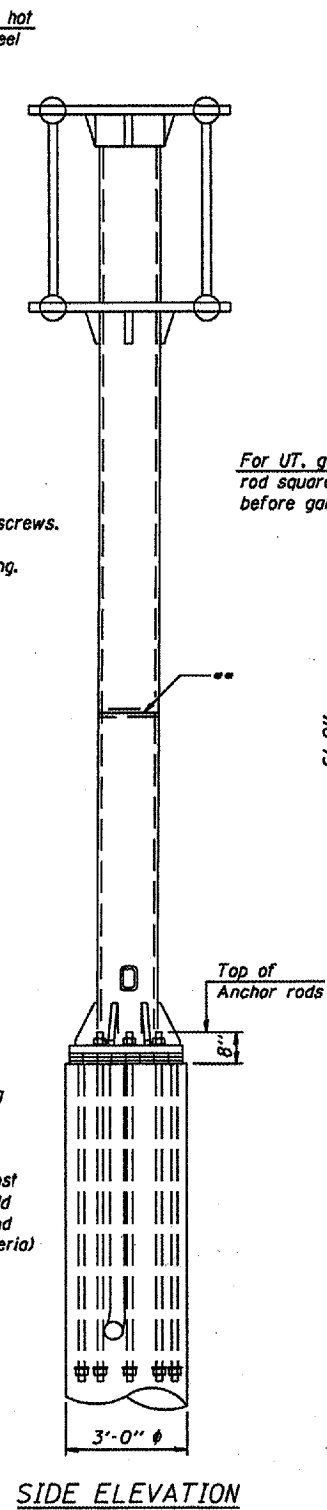
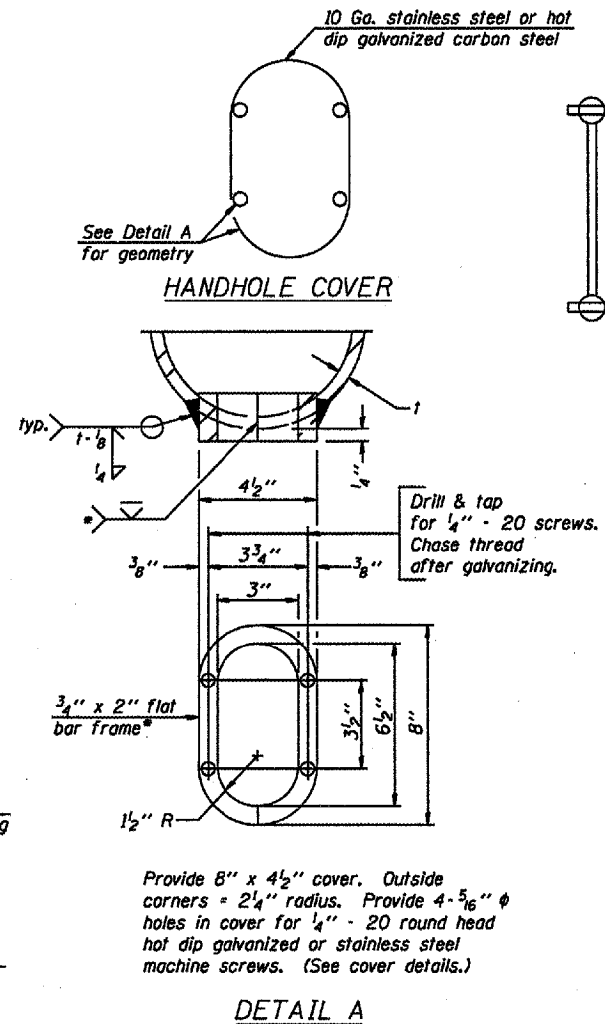
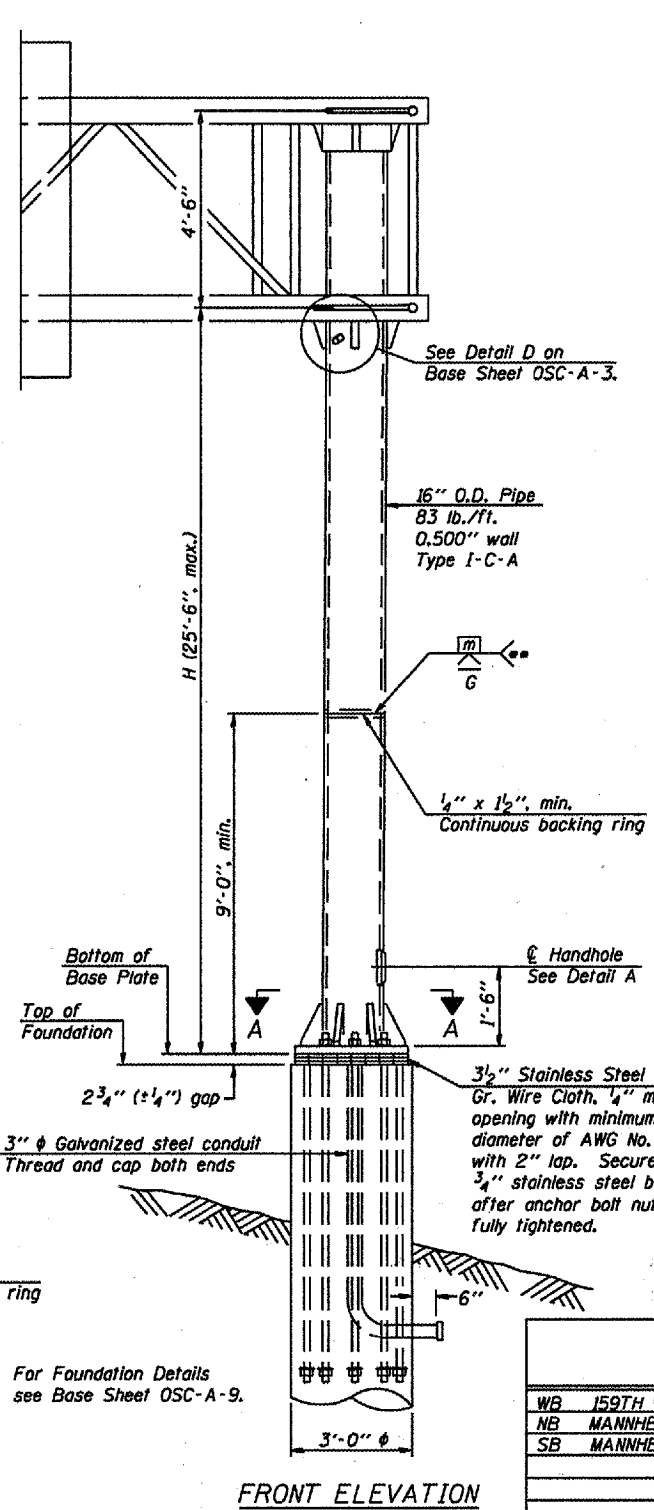
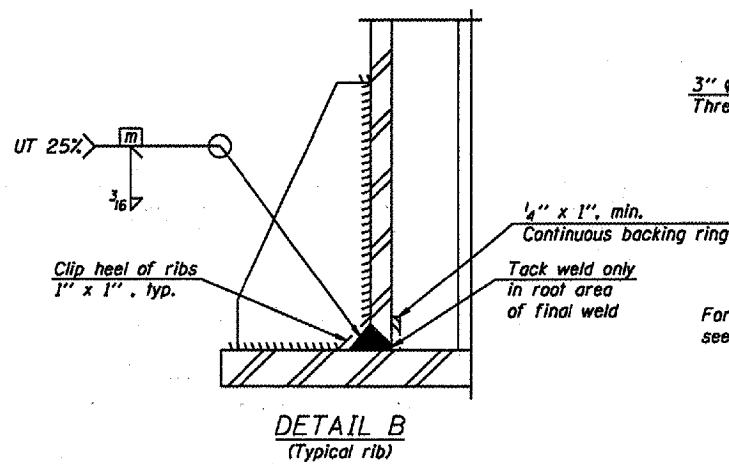
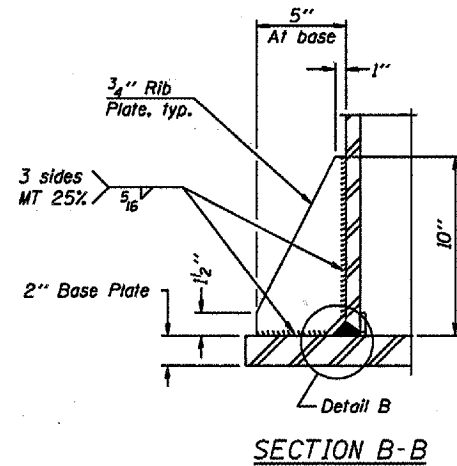
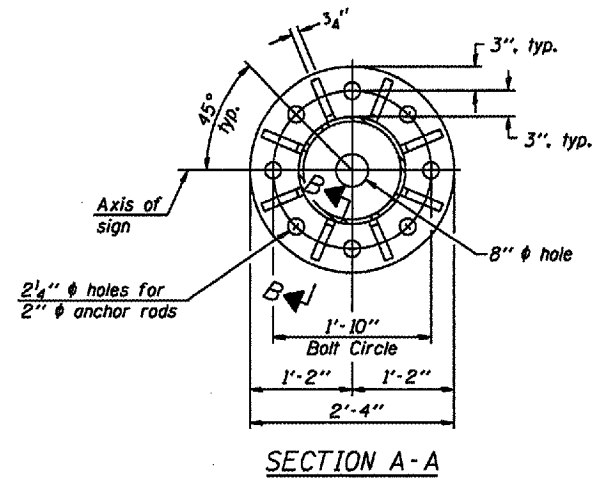
CANTILEVER END JOINT DETAIL
 ** Contractor may alternatively use standard aluminum drive-fit cap to close ends.

NUMBER	REVISION	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES
 TRUSS DETAILS
 ALUMINUM TRUSS & STEEL POST

SCALE: VERT. N.T.S.
 HORIZ. DATE-TIME
 DRAWN BY: JSM
 DESIGNED BY: JDD
 CHECKED BY: JDD



- * Bent bars may be butt welded top and bottom or bottom only. In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μ in or less.
- ** Butt welded joint in post is only allowed for post heights (H) over 20 ft. in length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Structure Number	Station	H
WB 159TH W/O DIXIE HWY.		17.5 Ft.
NB MANNHEIM S/O ICRR BRIDGE		17.5 Ft.
SB MANNHEIM N/O I-290		17.5 Ft.

Note: "H" based on 15'-0" or actual sign height, whichever is greater.

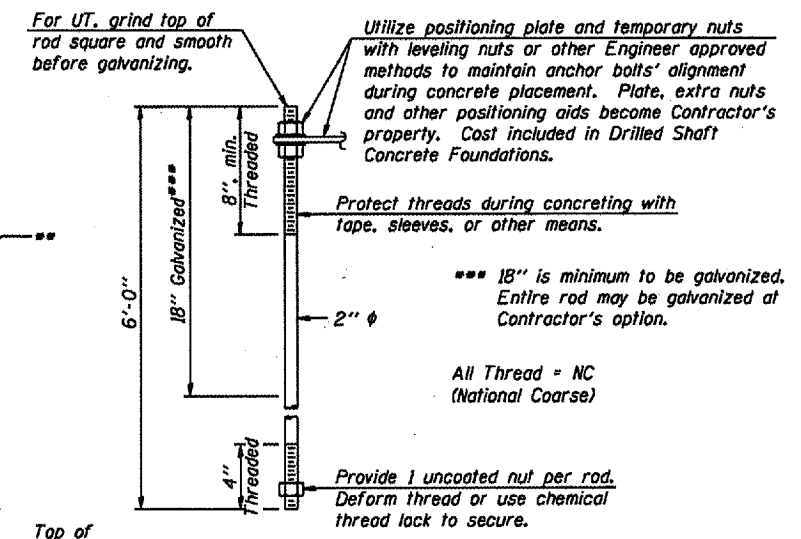
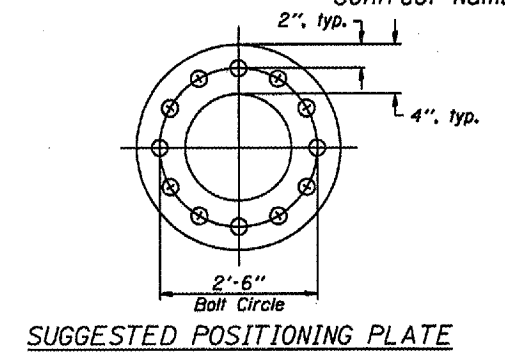
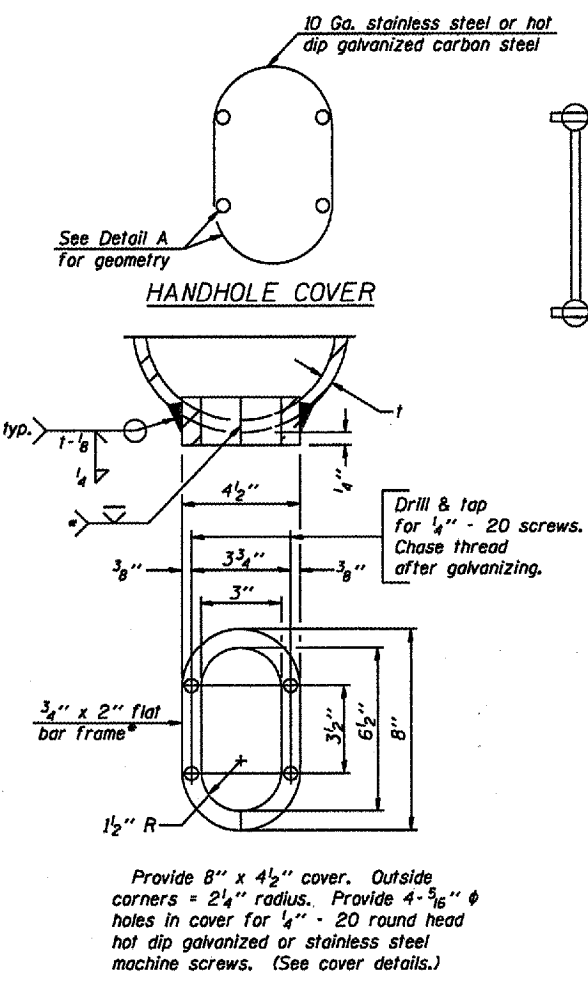
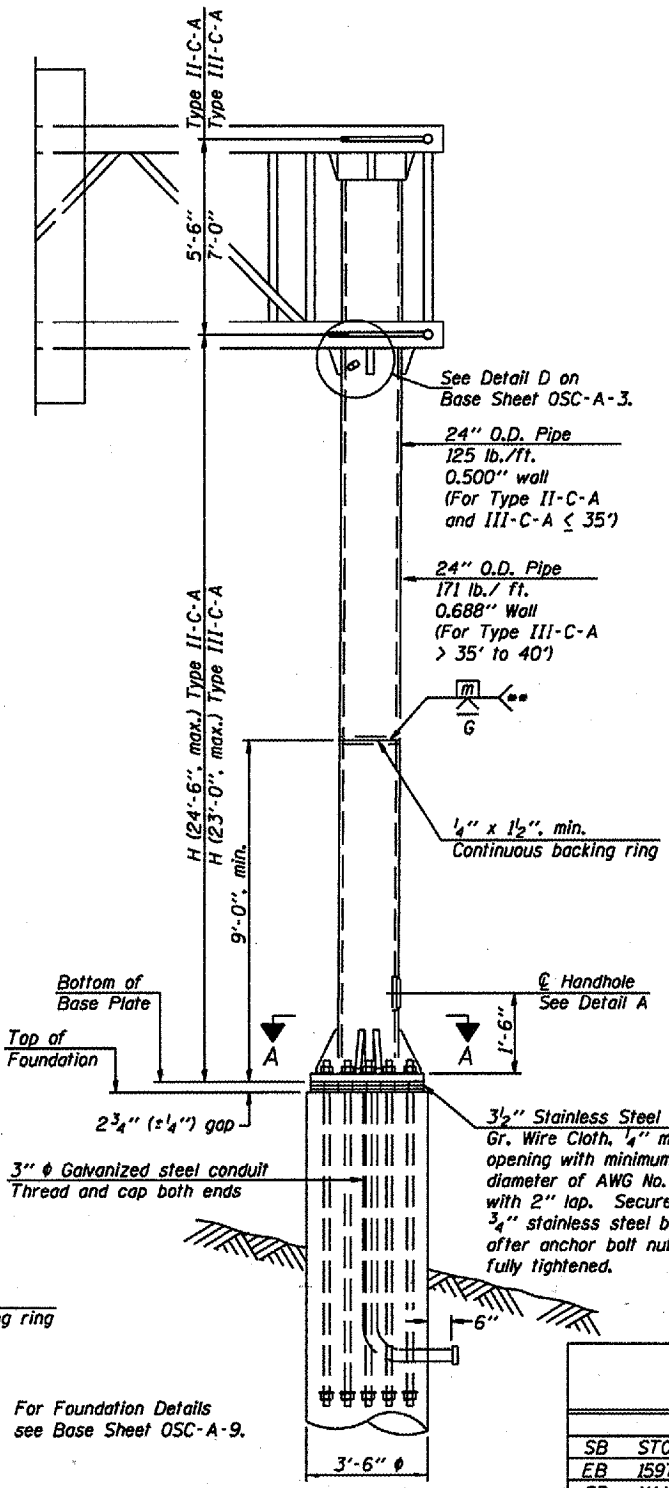
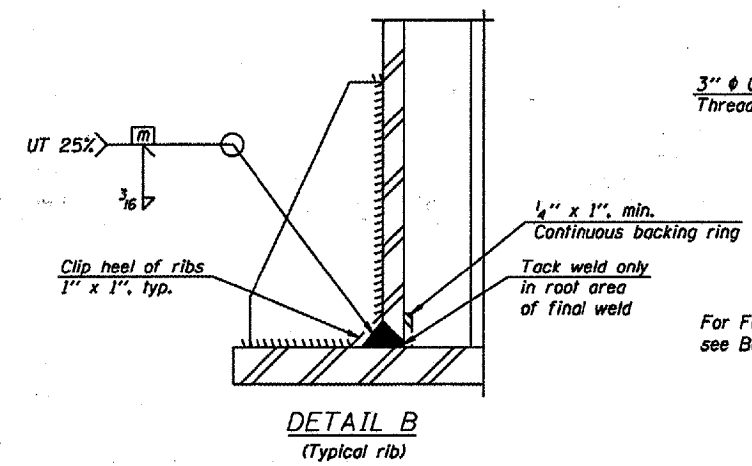
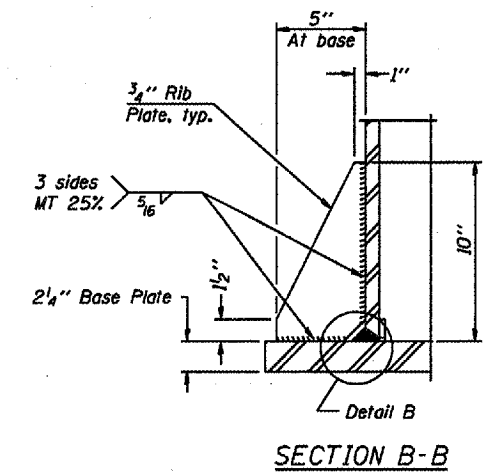
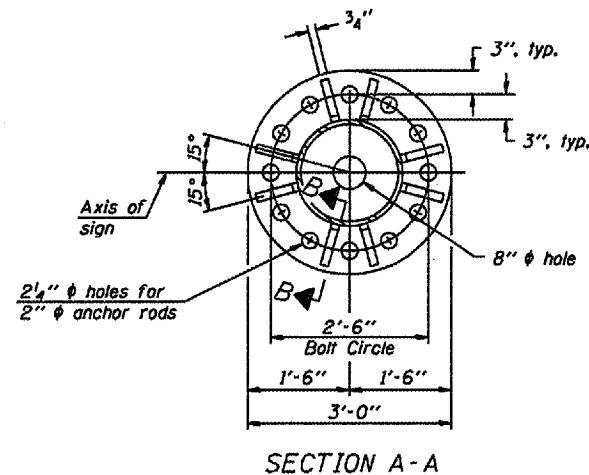
NUMBER	REVISION	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES
 TYPE I-C-A TRUSS SUPPORT POST
 ALUMINUM TRUSS & STEEL POST

SCALE: VERT. N.T.S.
 HORIZ. N.T.S.
 DATE: DATE-TIME

DRAWN BY: ISN
 DESIGNED BY: JOD
 CHECKED BY: JAD



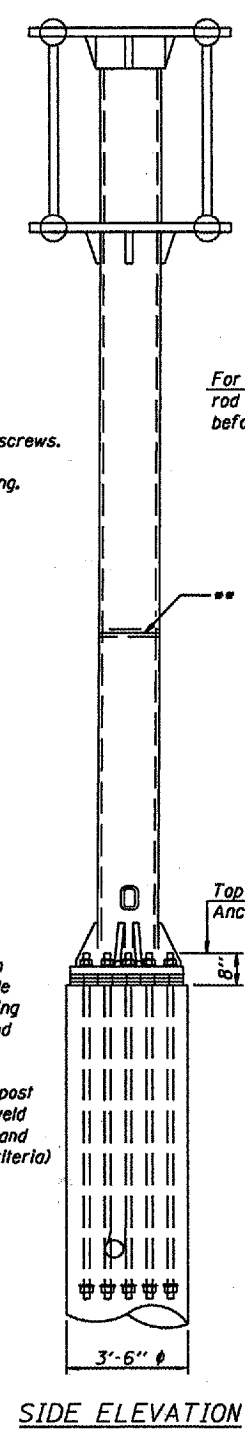
DETAIL A

- * Bent bars may be butt welded top and bottom or bottom only. In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.
- ** Butt welded joint in post is only allowed for post heights (H) over 20 ft. in length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Structure Number	Station	H
SB STONEY ISLAND N/O I-94		17.5 Ft.
EB 159TH W/O CRAWFORD		17.5 Ft.
SB MANNHEIM S/O I-190		17.5 Ft.

Note: "H" based on 15'-0" or actual sign height, whichever is greater.

NUMBER	REVISION	DATE



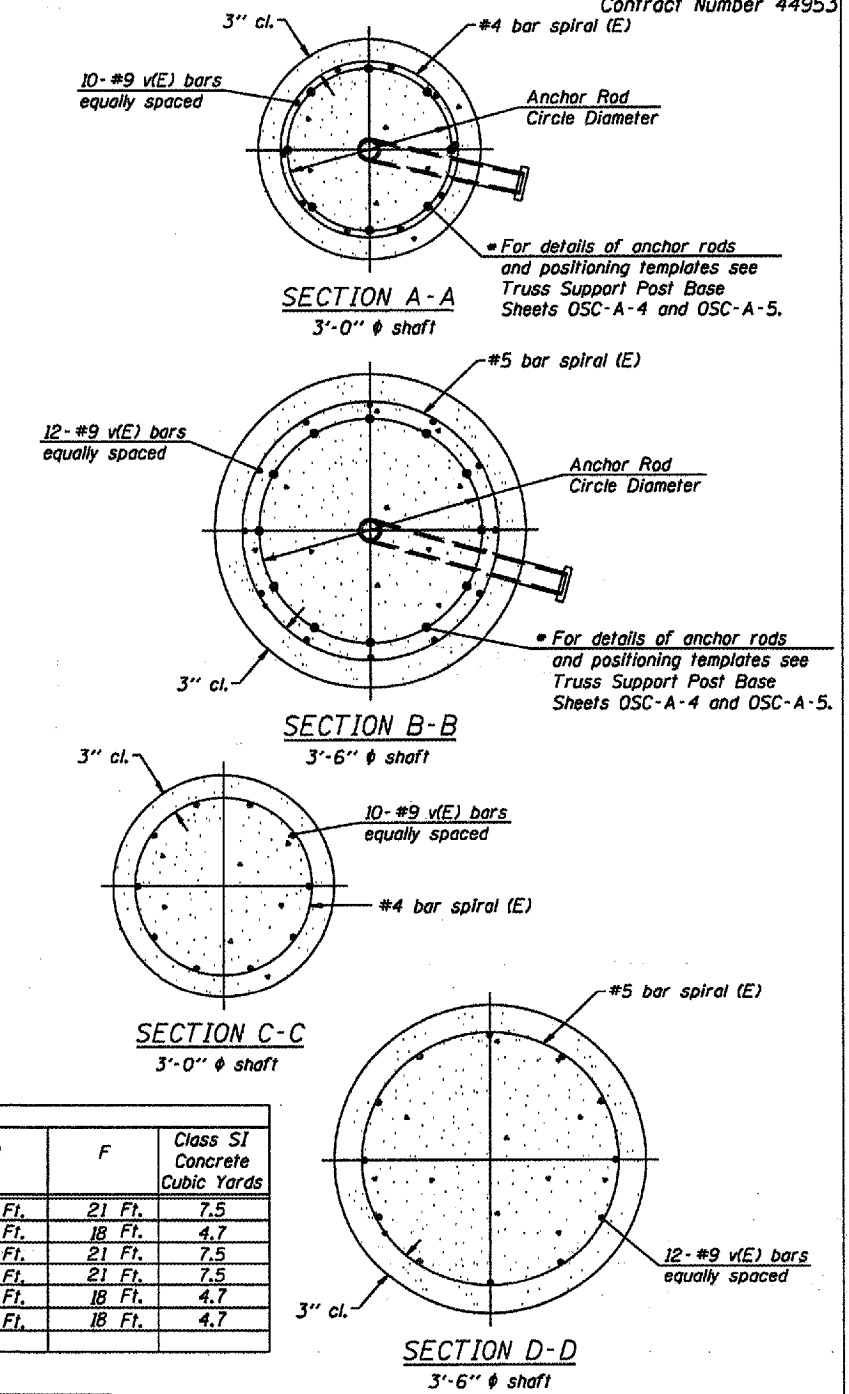
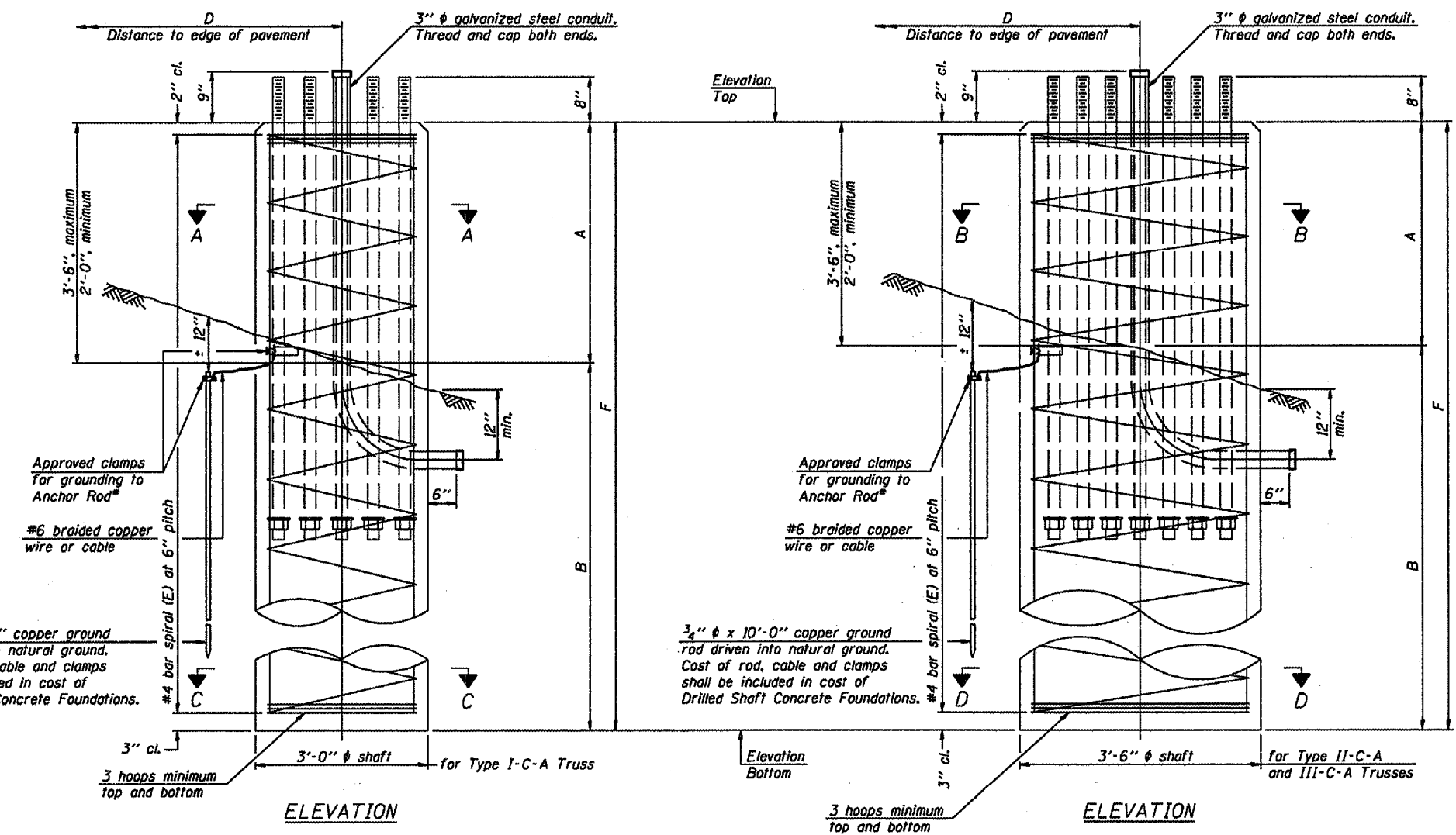
CANTILEVER SIGN STRUCTURES
 TYPE II-C-A & III-C-A TRUSS SUPPORT POST
 ALUMINUM TRUSS & STEEL POST

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. N.T.S.
 HORIZ. N.T.S.
 DATE: DATE-TIME

DRAWN BY: ISN
 DESIGNED BY: JDO
 CHECKED BY: JAD

* Grind anchor rod to bright finish at ground clamp location before installing clamp.



NOTES:
 The foundation dimensions shown in the Foundation Design Table are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Ou) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown in the Foundation Data Table will be the result of site specific designs.
 If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.
 No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.
 Concrete shall be placed monolithically, without construction joints.
 Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.
 A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in "Drilled Shaft Concrete Foundation".

Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	Ou	A	B	F	Class SI Concrete Cubic Yards
SB STONEY ISLAND N/O I-94		III	3.5 Ft.	2 Ft.	-19 Ft.		2 Ft.	19 Ft.	21 Ft.	7.5
WB 159TH W/O DIXIE HWY.		I	3.0 Ft.	2 Ft.	-16 Ft.		2 Ft.	16 Ft.	18 Ft.	4.7
EB 159TH W/O CRAWFORD		III	3.5 Ft.	2 Ft.	-19 Ft.		2 Ft.	19 Ft.	21 Ft.	7.5
SB MANNHEIM S/O I-190		III	3.5 Ft.	2 Ft.	-19 Ft.		2 Ft.	19 Ft.	21 Ft.	7.5
NB MANNHEIM S/O ICRR BRIDGE		I	3.0 Ft.	2 Ft.	-16 Ft.		2 Ft.	16 Ft.	18 Ft.	4.7
SB MANNHEIM N/O I-290		I	3.0 Ft.	2 Ft.	-16 Ft.		2 Ft.	16 Ft.	18 Ft.	4.7

Truss Type	Post Base Sheet	Maximum Cantilever Length (ft)	Maximum Total Sign Area (sq ft)	Shaft Diameter (in)	"B" Depth (ft)	Anchor Rods		Anchor Rod Circle Diameter (in)
						No.	Diameter (in)	
I-C-A	OSC-A-4	25	170	3.0	16.0	8	2	22
II-C-A	OSC-A-5	30	170	3.5	17.0	12	2	30
II-C-A	OSC-A-5	30	340	3.5	21.5	12	2	30
III-C-A	OSC-A-5	35	170	3.5	19.0	12	2	30
III-C-A	OSC-A-5	35	250	3.5	22.5	12	2	30
III-C-A	OSC-A-5	35	400	3.5	26.5	12	2	30
III-C-A	OSC-A-5	40	400	3.5	32.0	12	2	30

NUMBER	REVISION	DATE

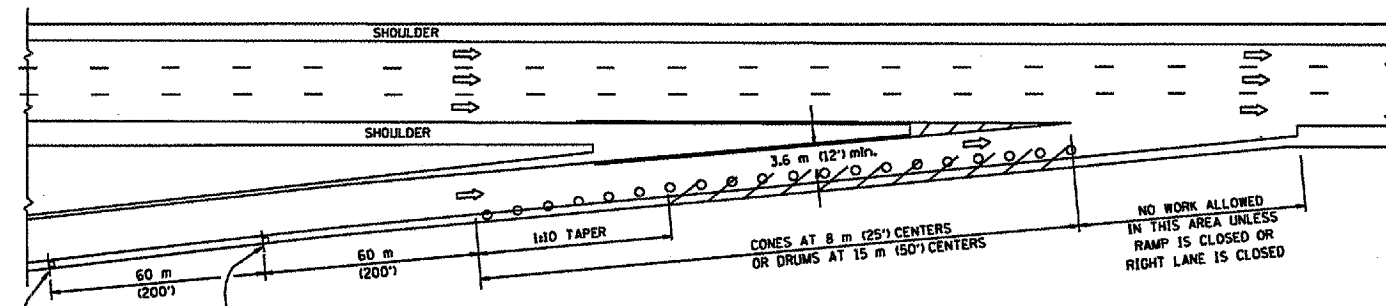
ILLINOIS DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES
 DRILLED SHAFT
 ALUMINUM TRUSS & STEEL POST

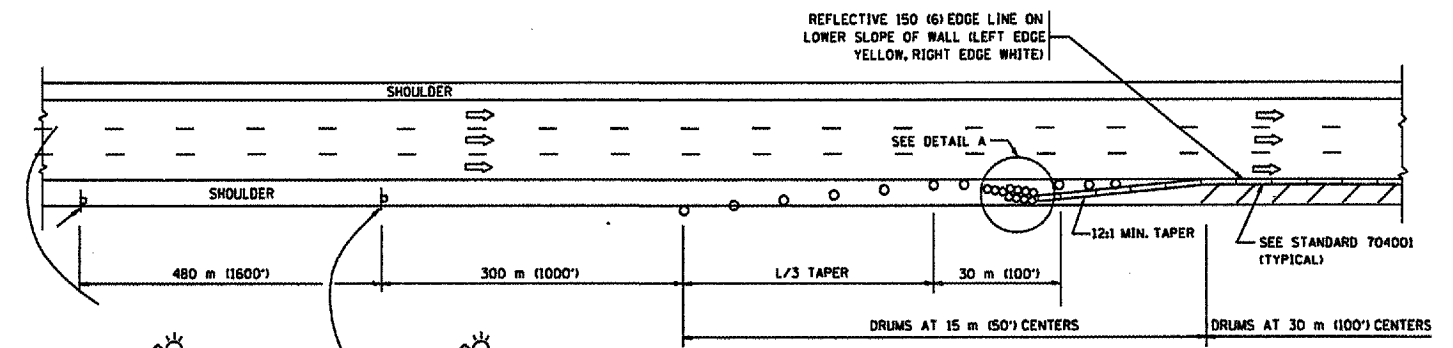
SCALE: VERT. N.T.S.
 HORIZ. N.T.S.
 DATE: *DATE-TIME*
 DRAWN BY: ISN
 DESIGNED BY: JDO
 CHECKED BY: JBD

PARTIAL RAMP CLOSURE DETAILS

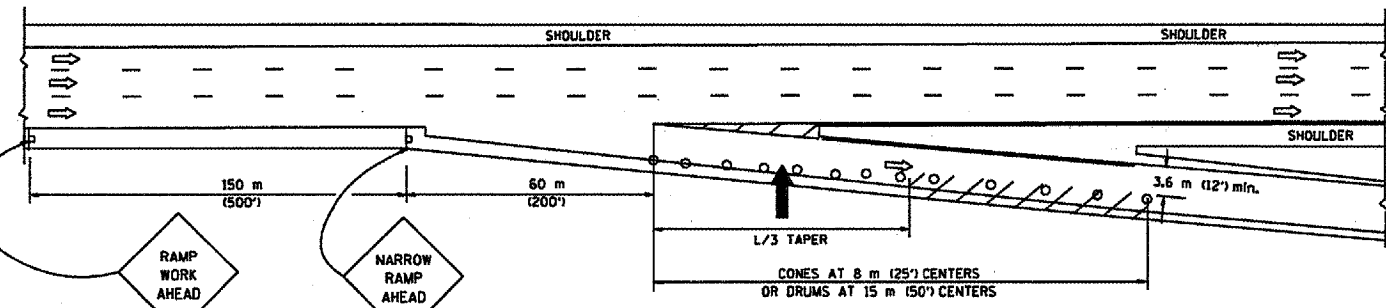
SHOULDER CLOSURE DETAILS



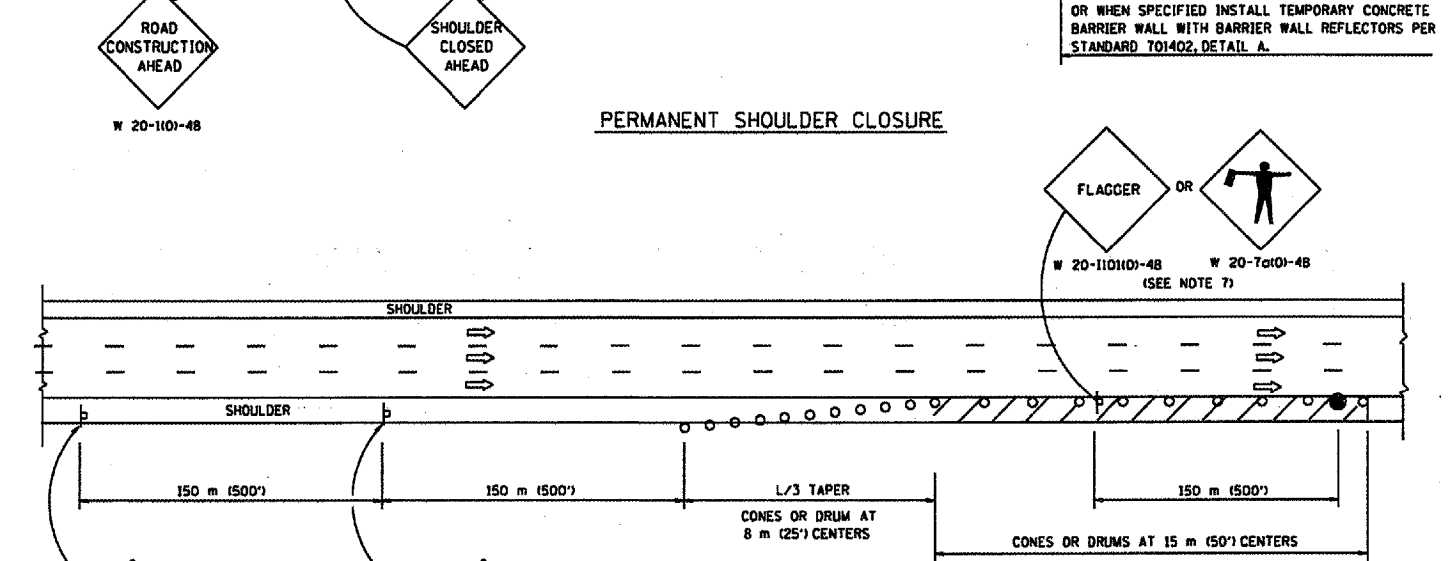
TYPICAL ENTRANCE RAMP



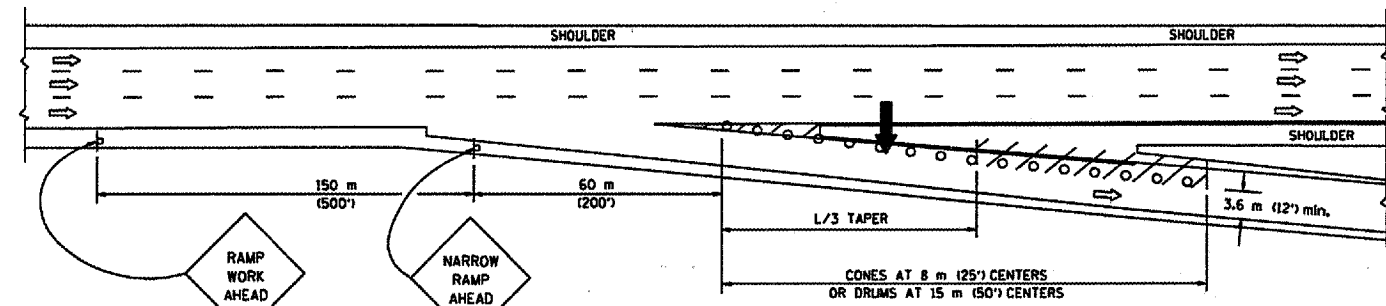
PERMANENT SHOULDER CLOSURE



TYPICAL EXIT RAMP



DAYTIME SHOULDER CLOSURE



TYPICAL EXIT RAMP

SYMBOLS

- ARROWBOARD
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
- CONES - 700 (28) IN HEIGHT

GENERAL NOTES

1. THE "L" DISTANCE EQUALS:
 SPEED LIMIT FORMULAS
 80 km/h (45 mph) METRIC ENGLISH
 OR GREATER: $L=0.65(W/S)$ $L=W(S)$
 W = WIDTH OF OFFSET IN METERS (FEET)
 S = NORMAL POSTED SPEED KM/H (MPH)
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS OUTSIDE THE CLEAR ZONE OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE "TRAFFIC BARRIER TERMINAL, TYPE III, TEMPORARY" DEVICE TO MEET NCHRP350 FOR POSTED SPEED.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
 - a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
 - b. THE WORK ACTIVITY REQUIRES FREQUENT ENCROACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 30 m (100') TO 60 m (200') IN ADVANCE OF THE WORKERS.

ARRAY DESIGN PER MANUFACTURER TO BE NCHRP 350 COMPLIANT FOR POSTED SPEED.

DETAIL "A"
 IMPACT ATTENUATOR, TEMPORARY
 (SEE NOTE 5)

REVISIONS	
NAME	DATE
DWS	11/96
JAF	12/02
NCHRP 350	04/03

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
 ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAILS
 FOR FREEWAY
 SHOULDER CLOSURES
 PARTIAL RAMP CLOSURES

SCALE: NONE
 DATE: **DATE**
 DRAWN BY: DWS
 DESIGNED BY: DWS
 CHECKED BY: