WKE

APR 2017

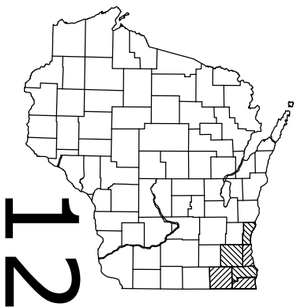
PROJECT ID: 1000-20-68

COUNTY: SOUTHEAST REGION WIDE

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
~~Section No.~~	~~4~~	~~Right of Way Plat~~
~~Section No.~~	~~5~~	~~Plan and Profile~~
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
~~Section No.~~	~~9~~	~~Computer Earthwork Data~~
~~Section No.~~	~~9~~	~~Cross Sections~~

TOTAL SHEETS = 186



12

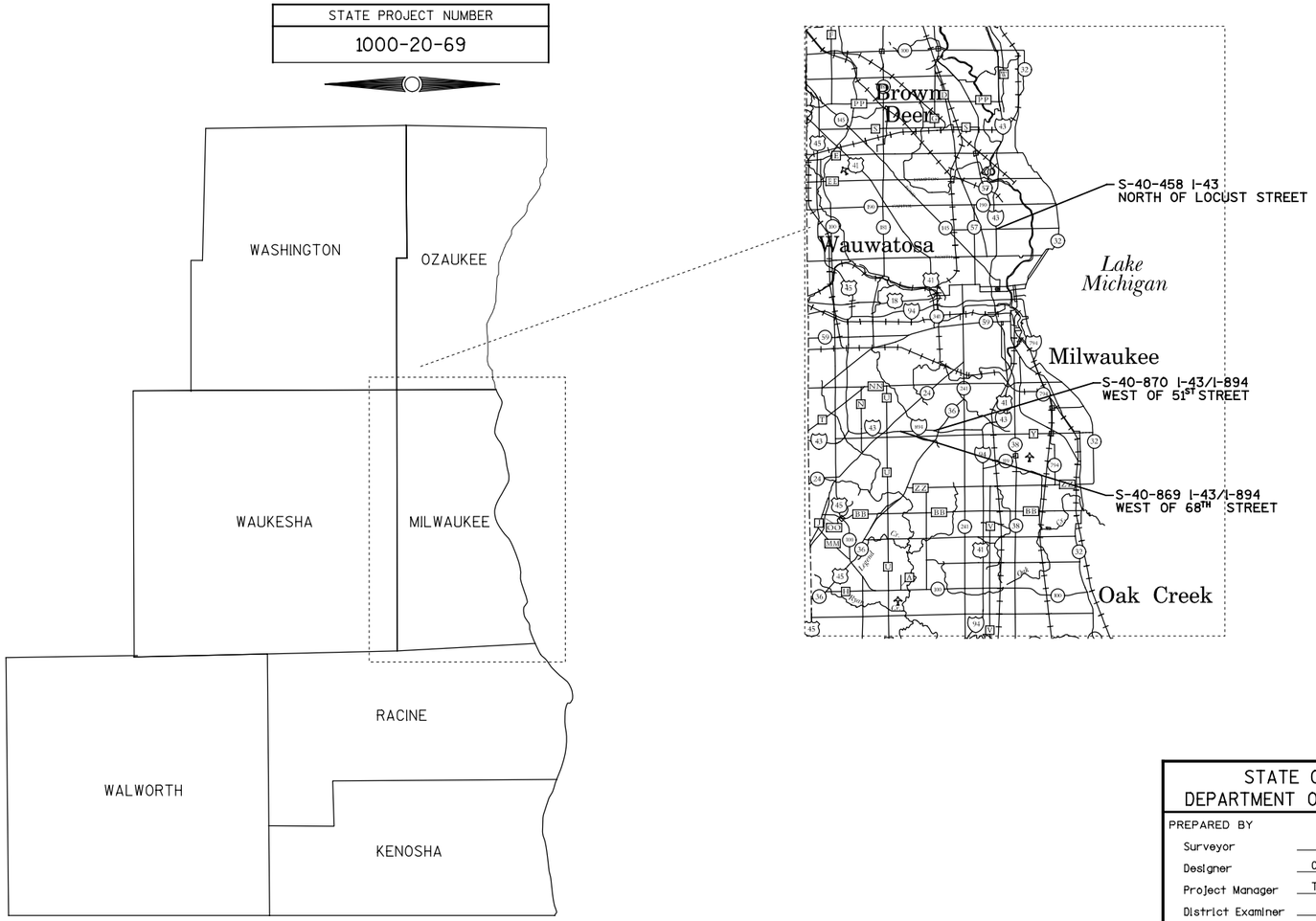
N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1000-20-69	WISC 2017161	1

SIGN BRIDGE REPAIR AND REPLACEMENT 2017
VARIOUS FREEWAYS, STATE HIGHWAYS, AND US HIGHWAYS
SOUTHEAST REGION WIDE

STATE PROJECT NUMBER
1000-20-69



LAYOUT
SCALE 0 0 MI.

TOTAL NET LENGTH OF CENTERLINE - SE REGION WIDE

DESIGN DESIGNATION N/A

A.D.T.	= N/A
A.D.T.	= N/A
D.H.V.	= N/A
D.	= N/A
T.	= N/A
DESIGN SPEED	= N/A
ESALS	= N/A

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE
- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES
- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
- Surveyor
- Designer: COLLINS ENGINEERS, INC.
- Project Manager: TOM HEYDEL
- District Examiner
- District Supervisor: ADRIAN LOPEZ
- C.O. Examiner

APPROVED FOR DISTRICT OFFICE
DATE: 11-28-16 Thomas A Heydel (Signature)

E

UTILITIES CONTACT LIST

MILWAUKEE COUNTY HIGHWAY DIVISION
ELECTRICAL SHOP
MR. STANLEY JACKSON
10320 W. WATERTOWN PLANK RD.
WAUWATOSA, WI. 53226
(414) 257-6593

WE ENERGIES (GAS)
MR. LATROY BRUMFIELD
333 EVERETT ST. -A299
MILWAUKEE, WI 53203
414-221-5617

WE ENERGIES-ELECTRIC
MR. LATROY BRUMFIELD
333 W EVERETT ST.-A299
MILWAUKEE, WI 53203
414-221-5617

WISCONSIN DEPARTMENT OF TRANSPORTATION
SE REGION LIGHTING ENGINEER
MR. ERIC PEREA
262-574-5422
ERIC.PEREA@DOT.WI.GOV

WISCONSIN DEPARTMENT OF TRANSPORTATION
TRAFFIC OPERATIONS CENTER
MR. JEFF MADISON
433 W ST PAUL AVE, STE 300
MILWAUKEE, WI 53203
414-255-3723
JEFFERY.MADISON@DOT.WI.GOV

DNR CONTACT LIST

MILWAUKEE AND RACINE COUNTY
MS. KRISTINA BETZOLD
2300 N. MARTIN LUTHER KING DR.
MILWAUKEE, WI 53212
(414) 263-8517

WASHINGTON COUNTY
MR. MIKE THOMPSON
2300 N. MARTIN LUTHER KING DR.
MILWAUKEE, WI 53212
(414) 263-8648

KENOSHA AND WAUKESHA COUNTY
MR. CRAIG WEBSTER
141 N W BARSTOW ST., RM. 180
WAUKESHA, WI 53187
(262) 574-2141

DESIGN CONTACT

COLLINS ENGINEERS, INC.
2033 W. HOWARD AVE
MILWAUKEE, WI 53221
ATTN: VERONICA CHAVEZ DE FERNANDEZ
(414) 282-6905

GENERAL NOTES

THE LOCATION OF EXISTING OR PROPOSED UTILITIES AS NOTED ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. UTILITY SERVICES ARE NOT SHOWN.

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

GENERAL NOTES AND UTILITY CONTACTS

PROJECT NO: 1000-20-69	HWY: VARIOUS	COUNTY: SOUTHEAST REGION WIDE		SHEET 2	E

SIGN BRIDGE LOCATIONS - KENOSHA COUNTY

STRUCTURE NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION
S-30-012	I-94	NB	AT EXIT TO WIS 165

SIGN BRIDGE LOCATIONS - OZAUKEE COUNTY

STRUCTURE NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION
S-45-206	WIS 33	EB	JUST WEST OF MARKET ST
S-45-207	WIS 33	WB	JUST EAST OF MARKET ST
S-45-214	WIS 33	WB	JUST EAST OF I-43 N EXIT RAMP
S-45-606	MARKET ST	SB	JUST NORTH OF WIS 33

SIGN BRIDGE LOCATIONS - RACINE COUNTY

STRUCTURE NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION
S-51-016	MILWAUKEE AVE	EB	0.61 M WEST OF WIS 83
S-51-233	WIS 32	WB	0.31 M EAST OF MAIN ST

SIGN BRIDGE LOCATIONS - WASHINGTON COUNTY

STRUCTURE NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION
S-66-004	US 41	NB	AT EXIT TO WIS 60
S-66-602	PARADISE DR	WB	0.1 MILE E OF US 45

SIGN BRIDGE LOCATIONS - WALWORTH COUNTY

STRUCTURE NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION
S-64-203	WIS 50	WB	JUST EAST OF US 12
S-64-204	WIS 50	EB	JUST EAST OF WIS 120
S-64-600	WIS 67	NB	JUST NORTH OF COURT ST

SIGN BRIDGE LOCATIONS - WAUKESHA COUNTY

STRUCTURE NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION
S-67-001	US 41	SB	JUST N OF WIS 100 (MAIN ST)
S-67-015	MOORLAND	SB	0.1M NORTH OF I-94
S-67-020	I-94	WB	AT EXIT TO COUNTY C
S-67-207	US 41	NB/SB	0.42 M SOUTH OF PILGRIM RD
S-67-256	WIS 164	SB	JUST NORTH OF WIS 190
S-67-257	WIS 190	EB	JUST WEST OF WIS 164
S-67-269	WIS 83	NB	0.1 M SOUTH OF RAMP TO WIS 16 E
S-67-275	I-43	EB	ON EXIT RAMP TO MOORLAND RD
S-67-281	I-94	WB	EXIT RAMP TO COUNTY Y
S-67-292	US 18	WB	JUST WEST OF RUF RD
S-67-298	US 18	WB	300 FEET EAST OF COUNTY Y
S-67-300	US 41	NB	ON WIS 100 (MAIN ST) BRIDGE
S-67-305	US 41	NB	0.2 M SOUTH OF MAIN ST
S-67-310	I-43	SB	AT EXIT RAMP TO MOORLAND RD
S-67-401	I-94	WB	0.25 M WEST OF BROOKFIELD RD
S-67-403	I-43	EB	JUST WEST OF BELOIT RD
S-67-600	LISBON RD	EB	JUST WEST OF 124TH ST
S-67-910	WIS 16/67	SB	0.25 M NORTH OF COUNTY Z
S-67-915	COUNTY Y (RACINE AVE)	SB	AT I-43
S-67-940	COUNTY JJ	EB	JUST WEST OF USH 18
S-67-941	CALHOUN RD	NB	JUST SOUTH OF BLUEMOUND RD
S-67-943	US 18	EB	JUST WEST OF MOORLAND RD
S-67-944	US 18	EB	JUST EAST OF EXECUTIVE DR

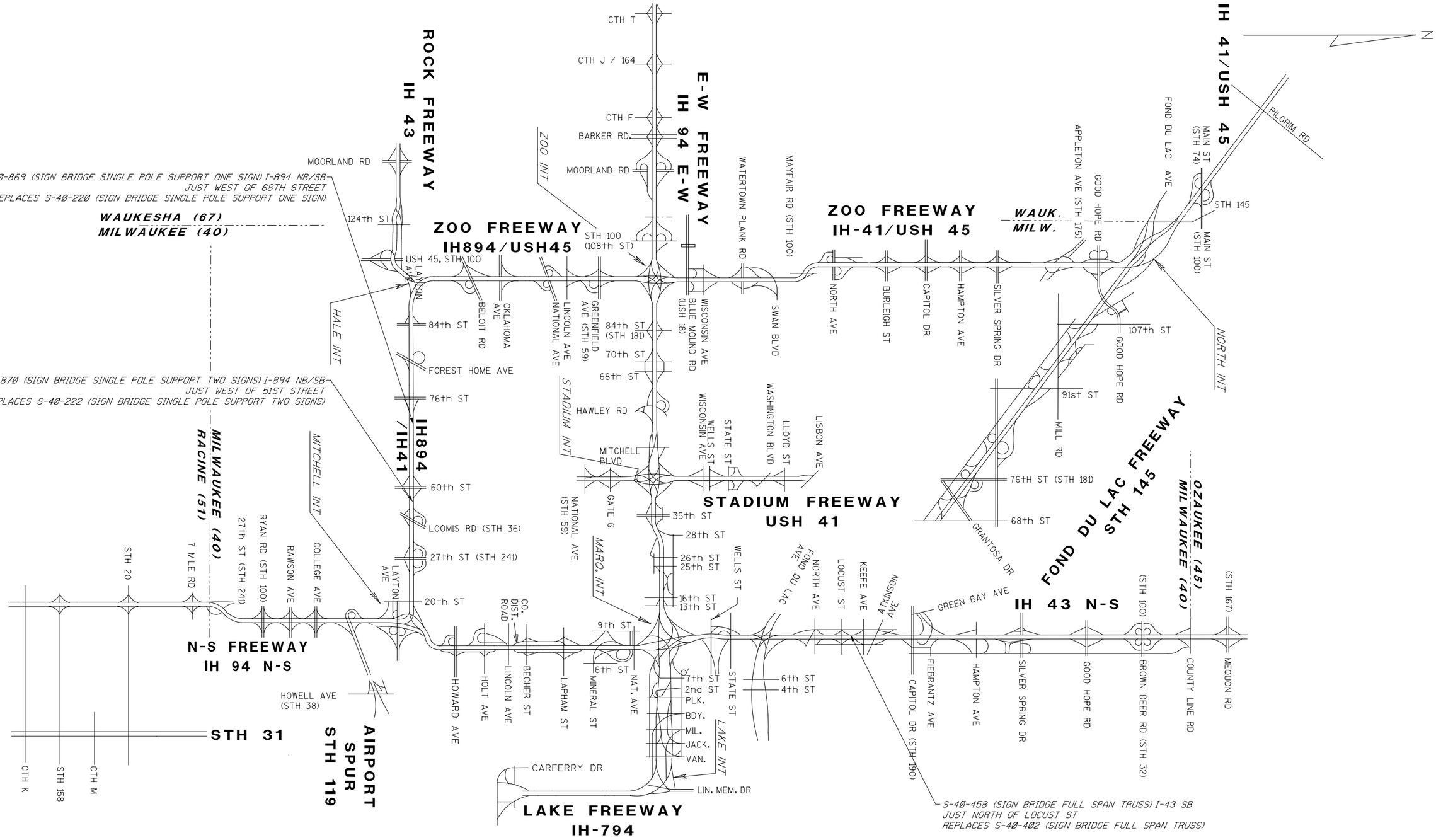
SIGN BRIDGE LOCATIONS - MILWAUKEE COUNTY

STRUCTURE NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION
S-40-001	I-94/43	NB/SB	AT RAMP FROM NATIONAL AVE
S-40-099	I-894/US 45	EB/SB	AT EXIT TO GREENFIELD AVE
S-40-151	I-94	EB	AT EXIT TO HAWLEY RD
S-40-212	I-94/43	NB	JUST SOUTH OF GREENFIELD AVE
S-40-215	I-894/US 45	SB	0.35 M SOUTH OF NATIONAL AVE
S-40-216	I-894/US 45	NB/SB	0.20 M SOUTH OF OAKLAHOMA AVE
S-40-217	I-894/US 45	NB/SB	0.1 M SOUTH OF HOWARD AVE
S-40-221	I-43/I-894	WB	JUST WEST OF 68TH ST.
S-40-224	I-43	NB/SB	0.08 M NORTH OF NORTH AVE
S-40-227	I-43	NB	0.25 M SOUTH OF CAPITOL DR
S-40-260	GOOD HOPE RD	WB	JUST EAST OF US 41
S-40-287	WIS 100	WB	JUST EAST OF WIS 241 (27TH ST)
S-40-288	STH 241 (27TH ST)	NB	JUST SOUTH OF WIS 100
S-40-400	US 45	SB	100' NORTH OF BURLEIGH RD
S-40-406	I-894/US 45	NB	0.25 M SOUTH OF NATIONAL AVE
S-40-407	WIS 100	NB	0.2 M SOUTH OF I-43

SIGN BRIDGE LOCATIONS - MILWAUKEE COUNTY (CONT.)

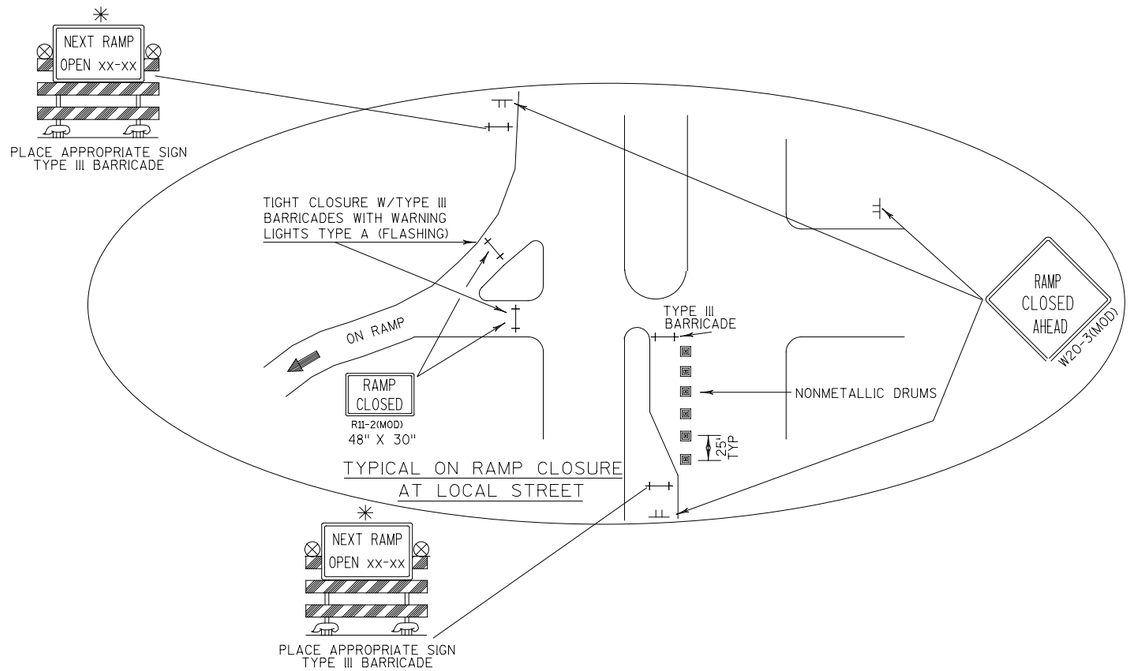
STRUCTURE NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION
S-40-424	I-43	SB	0.1 M NORTH OF NORTH AVE
S-40-427	AIRPORT SPUR	WB	0.25 M EAST OF HOWELL AVE
S-40-430	I-94	EB	1/8 M WEST OF 27TH ST
S-40-439	I-94	NB	ON LAYTON AVE BRIDGE
S-40-440	WIS 119	WB	AT ENTRANCE FROM HOWELL AVE
S-40-524	I-94/I-43	NB	AT EXIT TO MICHIGAN ST
S-40-525	I-94	EB	AT 25TH ST ENTRANCE RAMP
S-40-533	I-794	EB	PLANKINGTON EXIT RAMP AT 6TH St
S-40-534	I-794	WB	AT RAMP TO I-43 NB
S-40-535	I-794	WB	OVER 5TH ST
S-40-536	I-794	EB	AT EXIT TO PLANKINTON AVE
S-40-540	I-794	EB	OVER MILWAUKEE RIVER
S-40-542	I-94	WB	ON S-W MARQUETTE RAMP
S-40-552	I-94/I-43	NB	JUST SOUTH OF COLLEGE AVE
S-40-571	I-94	SB	AT LAYTON AVE ON C-D RAMP
S-40-572	I-94	SB	AT EXIT TO LAYTON AVE
S-40-575	I-94/I-43	WB	0.15 M EAST OF 6TH ST
S-40-576	I-94/I-43	WB	0.05 M EAST OF 6TH ST
S-40-600	PENNSYLVANIA AVE	NB	AT LAYTON AVE
S-40-700	I-94	WB	ON RAMP FROM ST. PAUL AVE
S-40-710	I-94	WB	ON EXIT RAMP TO 25TH ST
S-40-718	I-794	EB	JUST EAST OF 5TH ST
S-40-719	I-43	NB	OVER NATIONAL AVE
S-40-721	I-94/I-43	SB	JUST NORTH OF MENOMINEE RIVER
S-40-729	I-94	NB	ON RAMP FROM TORY HILL
S-40-772	I-94/I-43	NB/SB	0.5M N OF OAKLAHOMA AVE
S-40-774	I-43	NB	ON RAMP TO WIS 241 NB
S-40-826	I-94/I-43	EB	ON RAMP TO I-894 WB
S-40-827	I-94/I-43	EB	0.25 M NORTH OF LAYTON AVE
S-40-828	I-94/I-43	SB	0.25 M SOUTH OF HOWARD AVE
S-40-829	I-94/I-43	EB	AT RAMP FROM HOWARD AVE
S-40-838	WIS 119	EB	JUST EAST OF 13TH ST
S-40-839	WIS 119	EB	0.5 M WEST OF HOWELL AVE
S-40-840	WIS 119	EB	0.12 M WEST OF HOWELL AVE EXIT
S-40-841	WIS 119	WB	0.6 M EAST OF EXIT TO I-94
S-40-905	WIS 36	NB	400 FEET SOUTH OF LAYTON AVE
S-40-916	I-43	SB	ON EXIT TO WIS 100
S-40-917	US 41	SB	ENTRANCE RAMP FROM HAMPTON AVE

2



PROJECT NO: 1000-20-69	HWY: VARIOUS	COUNTY: MILWAUKEE	SIGN REPLACEMENT LOCATIONS	SHEET 4	E

2



TYPICAL ON RAMP CLOSURE
AT LOCAL STREET

TRAFFIC CONTROL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

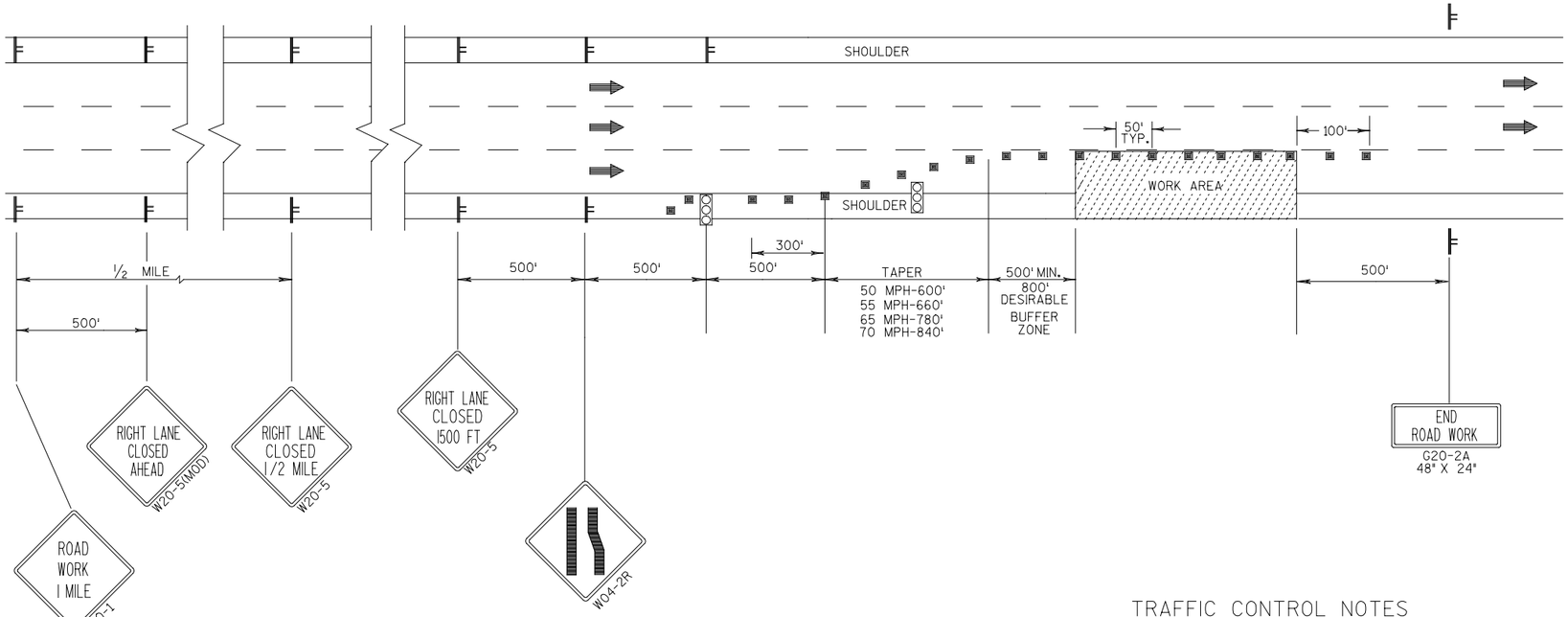
"WO" SIGNS ARE THE SAME AS "W" SIGNS
EXCEPT THE BACKGROUND IS ORANGE.

LEGEND

- ■ TRAFFIC CONTROL DEVICE
- ⊢ SIGN ON TEMPORARY SUPPORT FOR SHORT TERM 3 DAYS OR LESS
- ‡ TYPE III BARRICADE
- ⊗ WARNING LIGHT, TYPE A (FLASHING)

2

TYPICAL ONE-LANE CLOSURE (SHORT TERM-3 DAYS OR LESS)



LEGEND

- TRAFFIC CONTROL DEVICE
- SIGN ON FIXED SUPPORT
- SIGN ON TEMPORARY SUPPORT
- ARROW BOARD

TRAFFIC CONTROL NOTES

RIGHT LANE CLOSURE SHOWN, LEFT LANE CLOSURE SIMILAR.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

FOR NIGHTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN).

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS FLUORESCENT ORANGE.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

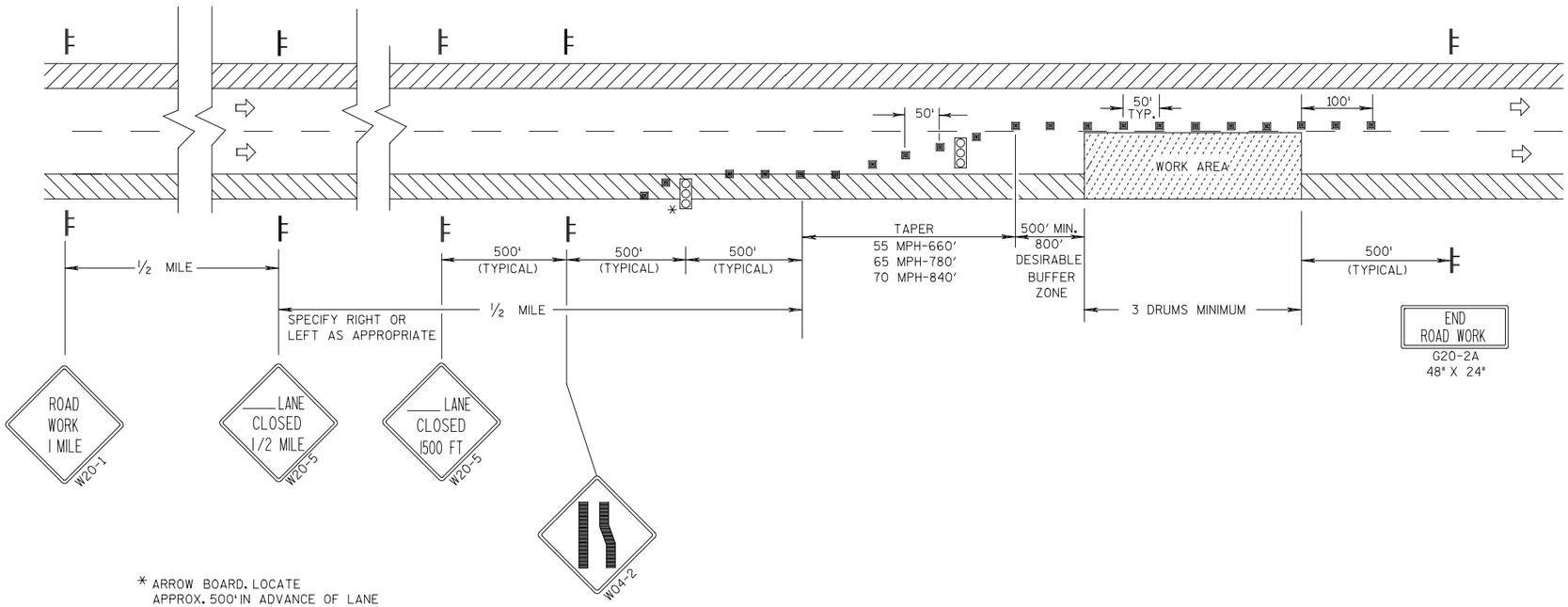
ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROWBOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500' IN FRONT OF DRUMS.

2

TYPICAL ONE-LANE CLOSURE (SHORT TERM - 3 DAYS OR LESS)



* ARROW BOARD. LOCATE APPROX. 500' IN ADVANCE OF LANE TAPER OR POSITION FOR OPTIMUM VISIBILITY.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DEVICE
- ARROW BOARD

SPECIAL APPLICATION NOTES

THE TAPER SHOULD EXTEND ACROSS THE SHOULDER, UNLESS DOING SO WOULD GREATLY CONFLICT WITH THE WORK OPERATION.

ALL LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

GENERAL NOTES FOR TRAFFIC CONTROL

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM TRAVEL LANE AND OFF OF SHOULDER WHEN WORK IS NOT IN PROGRESS.

DURING HOURS OF DARKNESS, TYPE "C" (STEADY BURN) LIGHTS SHALL BE PROVIDED ON ALL CHANNELIZING DEVICES IN TAPERS. BARRICADES SHIELDING AN ISOLATED HAZARD, SHALL BE EQUIPPED WITH TYPE "A" (LOW-INTENSITY FLASHING) LIGHTS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS FLUORESCENT ORANGE.

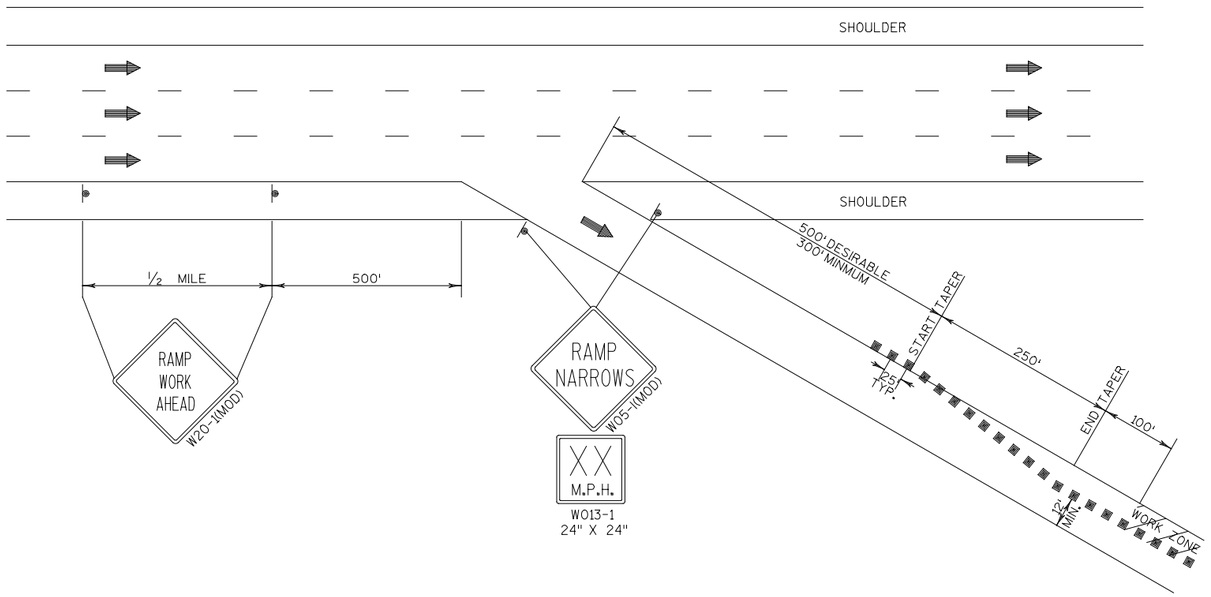
IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROWBOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500' IN FRONT OF DRUMS.

RIGHT LANE CLOSURE SHOWN, LEFT LANE CLOSURE SIMULAR.

2

TYPICAL PARTIAL EXIT RAMP CLOSURE (SHORT TERM-3 DAYS OR LESS)



LEGEND

- TRAFFIC CONTROL DEVICE
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT, TYPE A (FLASHING)

TRAFFIC CONTROL NOTES

LEFT SIDE CLOSURE SHOWN, RIGHT SIDE CLOSURE SIMILAR.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE "C" (STEADY BURN).

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS FLUORESCENT ORANGE.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

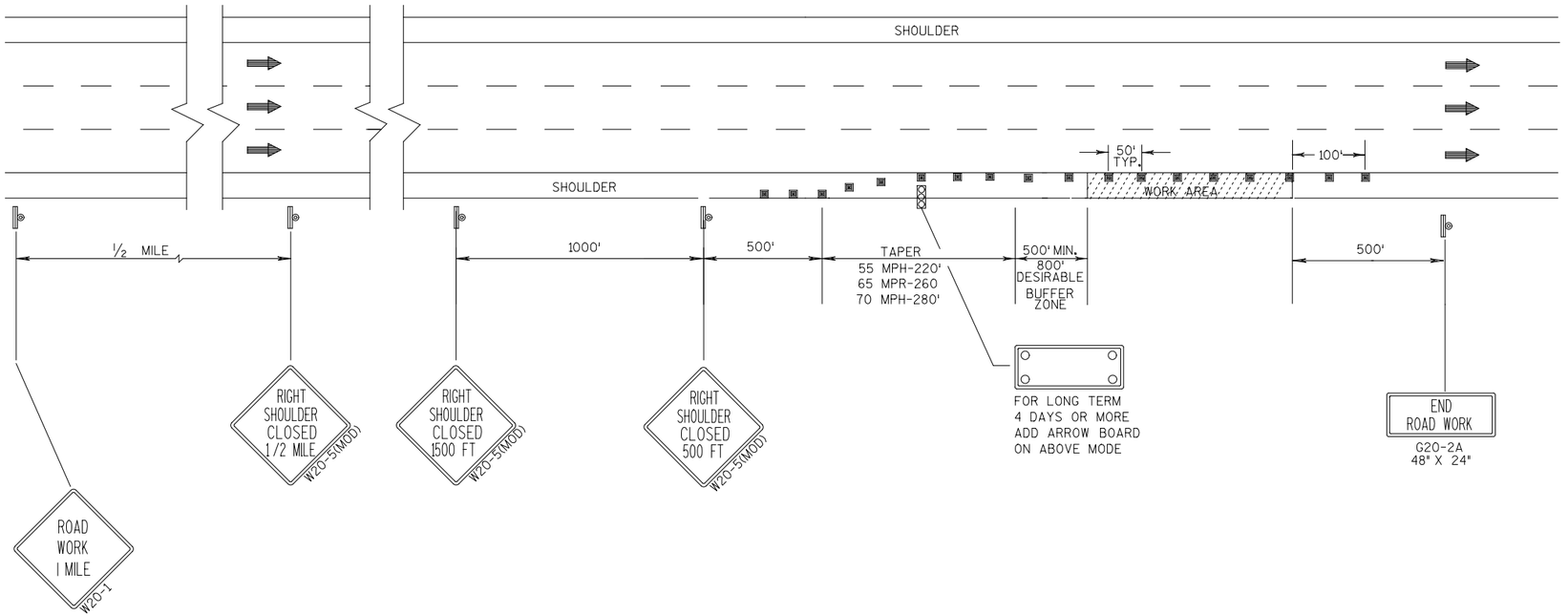
ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE ROADWAY IS RESTORED TO A SAFE OPERATING CONDITION.

SPEED RECOMMENDED BY W05-1(MOD) SIGN SHALL BE 5 M.P.H. BELOW ADVISORY EXIT RAMP SPEED OR AS DIRECTED BY THE ENGINEER.

SIGNING ON FREEWAY IN ADVANCE OF EXIT RAMP GORE SHALL BE LOCATED ON THE SAME SIDE OF THE FREEWAY AS THE EXIT RAMP.

2

TYPICAL SHOULDER CLOSURE (SHORT TERM-3 DAYS OR LESS OR 4 DAYS OR MORE)



LEGEND

- TRAFFIC CONTROL DEVICE
- SIGN ON TEMPORARY SUPPORT (FOR 3 DAYS OR LESS SHORT TERM)
- SIGN ON FIXED SUPPORT FOR 4 DAYS OR MORE (LONG TERM)
- ARROW BOARD

TRAFFIC CONTROL NOTES

RIGHT LANE CLOSURE SHOWN, LEFT LANE CLOSURE SIMILAR.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

FOR NIGHTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN).

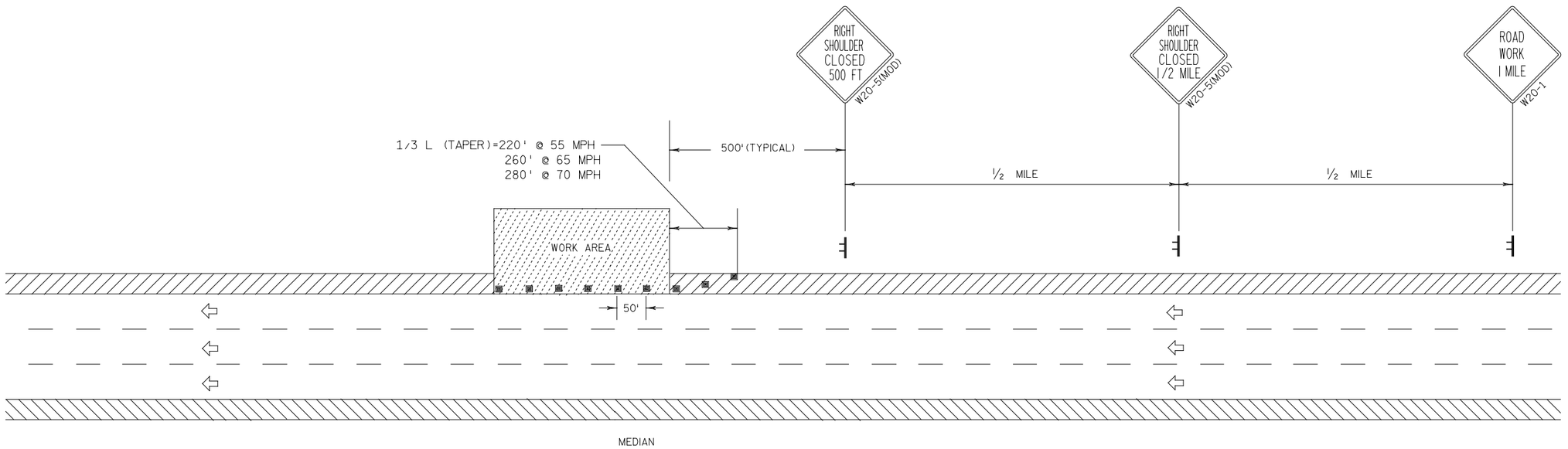
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS FLOURESCENT ORANGE.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

SHOULDER CLOSURE



LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DEVICE
- ARROW BOARD

SPECIAL APPLICATION NOTES

THE TAPER SHOULD EXTEND ACROSS THE SHOULDER, UNLESS DOING SO WOULD GREATLY CONFLICT WITH THE WORK OPERATION.

ALL LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

GENERAL NOTES FOR TRAFFIC CONTROL

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM TRAVEL LANE AND OFF OF SHOULDER WHEN WORK IS NOT IN PROGRESS.

DURING HOURS OF DARKNESS, TYPE "C" (STEADY BURN) LIGHTS SHALL BE PROVIDED ON ALL CHANNELIZING DEVICES IN TAPERS. BARRICADES SHIELDING AN ISOLATED HAZARD, SHALL BE EQUIPPED WITH TYPE "A" (LOW-INTENSITY FLASHING) LIGHTS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS FLUORESCENT ORANGE.

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROWBOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500' IN FRONT OF DRUMS.

STATE PROJECT NUMBER
1000-20-69

GENERAL TRAFFIC CONTROL NOTES

LEFT SHOULDER CLOSURE SHOWN, RIGHT SHOULDER CLOSURE SIMILAR.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER

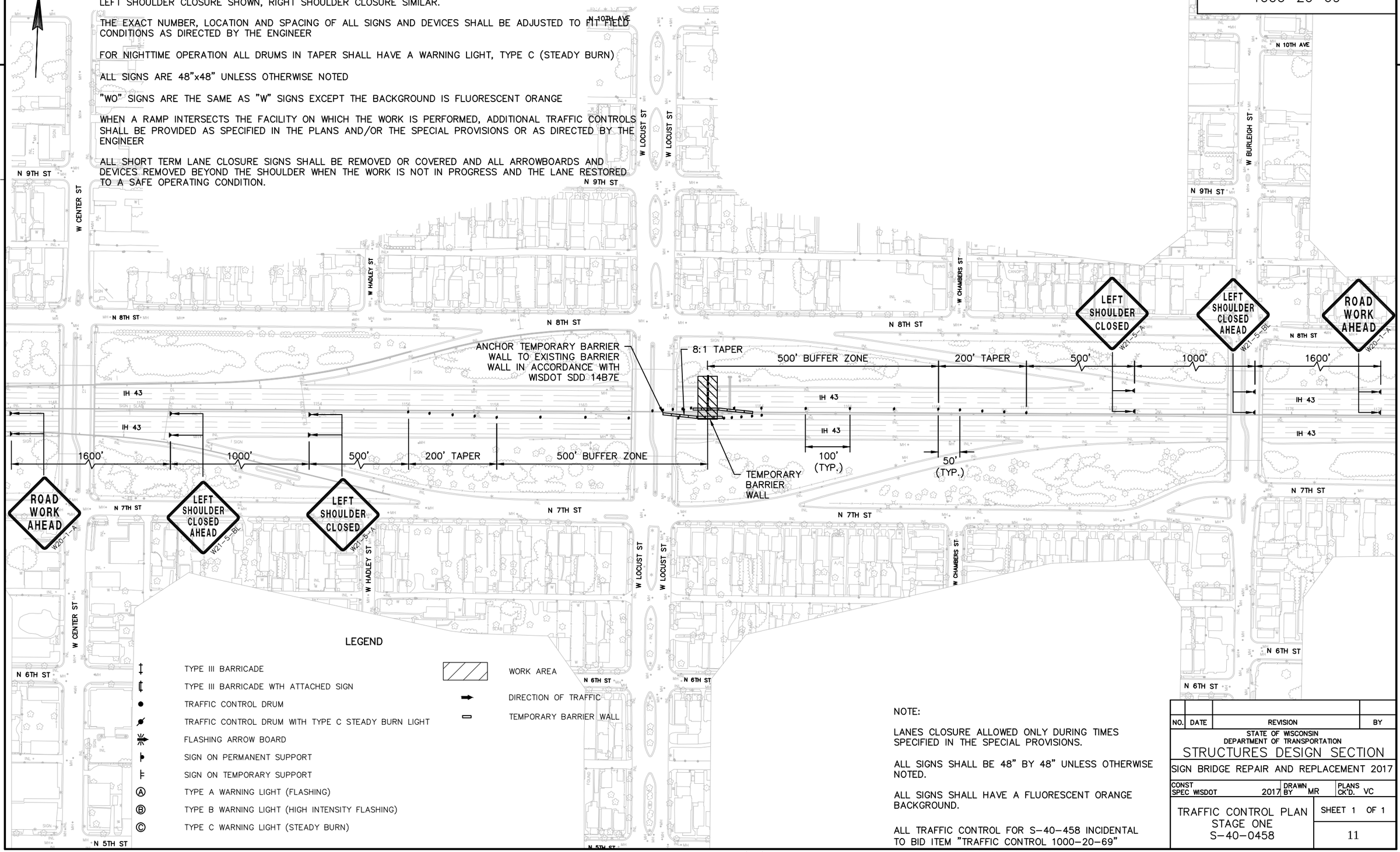
FOR NIGHTTIME OPERATION ALL DRUMS IN TAPER SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN)

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS FLUORESCENT ORANGE

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER

ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE RESTORED TO A SAFE OPERATING CONDITION.



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- WORK AREA
- DIRECTION OF TRAFFIC
- TEMPORARY BARRIER WALL

NOTE:

LANES CLOSURE ALLOWED ONLY DURING TIMES SPECIFIED IN THE SPECIAL PROVISIONS.

ALL SIGNS SHALL BE 48" BY 48" UNLESS OTHERWISE NOTED.

ALL SIGNS SHALL HAVE A FLUORESCENT ORANGE BACKGROUND.

ALL TRAFFIC CONTROL FOR S-40-458 INCIDENTAL TO BID ITEM "TRAFFIC CONTROL 1000-20-69"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

CONST SPEC WISDOT 2017	DRAWN BY MR	PLANS CK'D. VC

TRAFFIC CONTROL PLAN
STAGE ONE
S-40-0458

SHEET 1 OF 1

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FILE NAME : 2017 SE REGION REPAIR & REPLACEMENT PLANS\CAD\S-40-458\LOCATION EXHIBIT.DWG PLOT DATE : 11/25/2016 7:26 AM PLOT BY : MATT ROESCH PLOT NAME : S-40-458 PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET

STATE PROJECT NUMBER
1000-20-69

GENERAL TRAFFIC CONTROL NOTES

LEFT SHOULDER CLOSURE SHOWN, RIGHT SHOULDER CLOSURE SIMILAR.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER

FOR NIGHTTIME OPERATION ALL DRUMS IN TAPER SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN)

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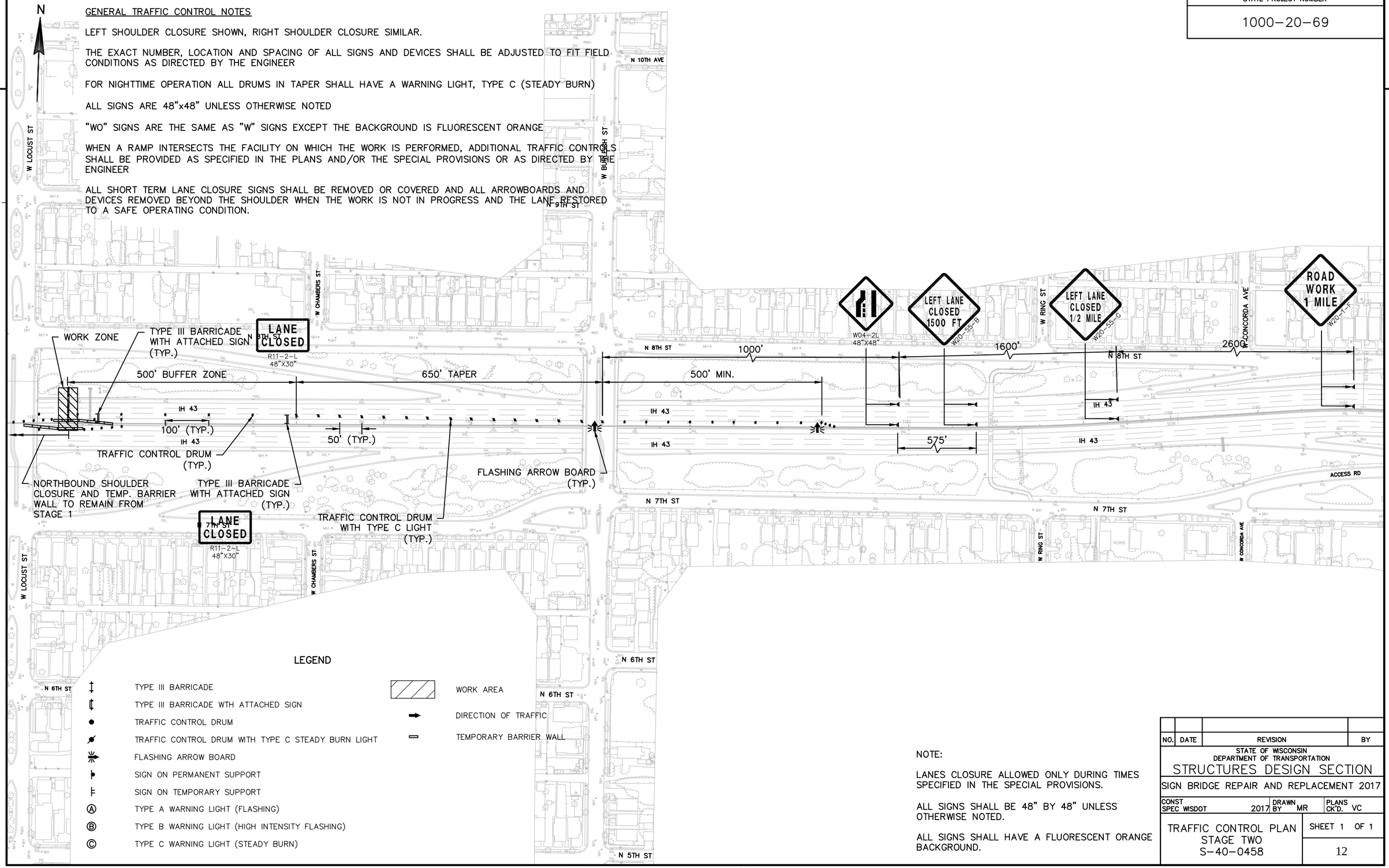

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STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

CONST SPEC WISDOT 2017	DRAWN BY MR	PLANS CK'D. VC

TRAFFIC CONTROL PLAN
STAGE TWO
S-40-0458

SHEET 1 OF 1

12

2

N

GENERAL TRAFFIC CONTROL NOTES

LEFT SHOULDER CLOSURE SHOWN, RIGHT SHOULDER CLOSURE SIMILAR.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER

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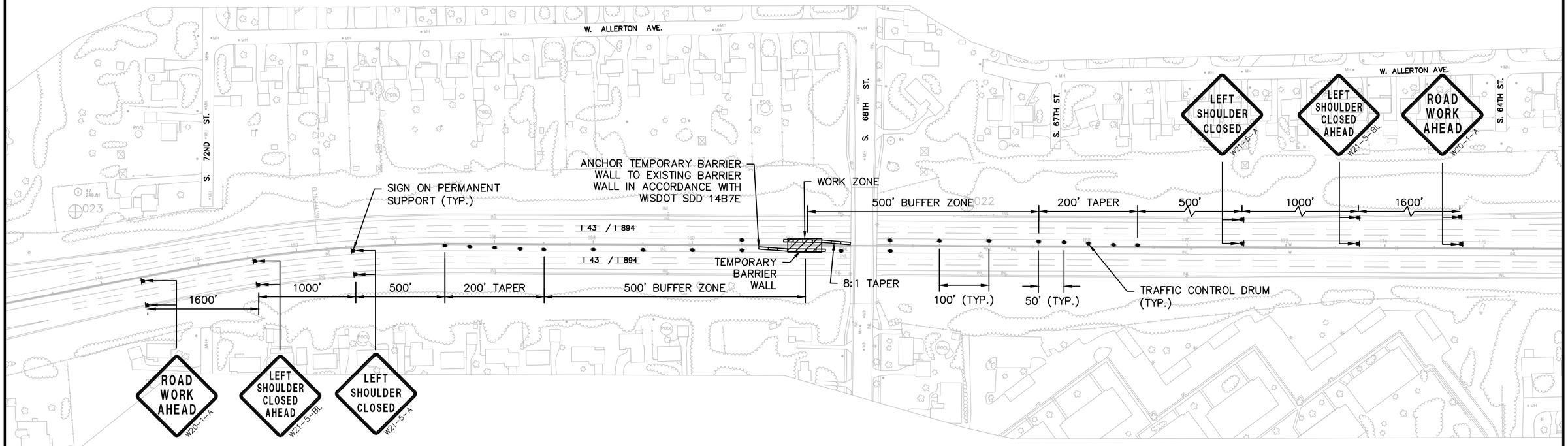
STATE PROJECT NUMBER
1000-20-69

2



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NOTE:

LANES CLOSURE ALLOWED ONLY DURING TIMES SPECIFIED IN THE SPECIAL PROVISIONS

ALL TRAFFIC CONTROL FOR S-40-869 INCIDENTAL TO BID ITEM "TRAFFIC CONTROL 1000-20-69"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

CONST SPEC WISDOT 2017	DRAWN BY MR	PLANS CK'D. VC

TRAFFIC CONTROL PLAN
STAGE 1
S-40-869

SHEET 1 OF 1

13

2

N

GENERAL TRAFFIC CONTROL NOTES

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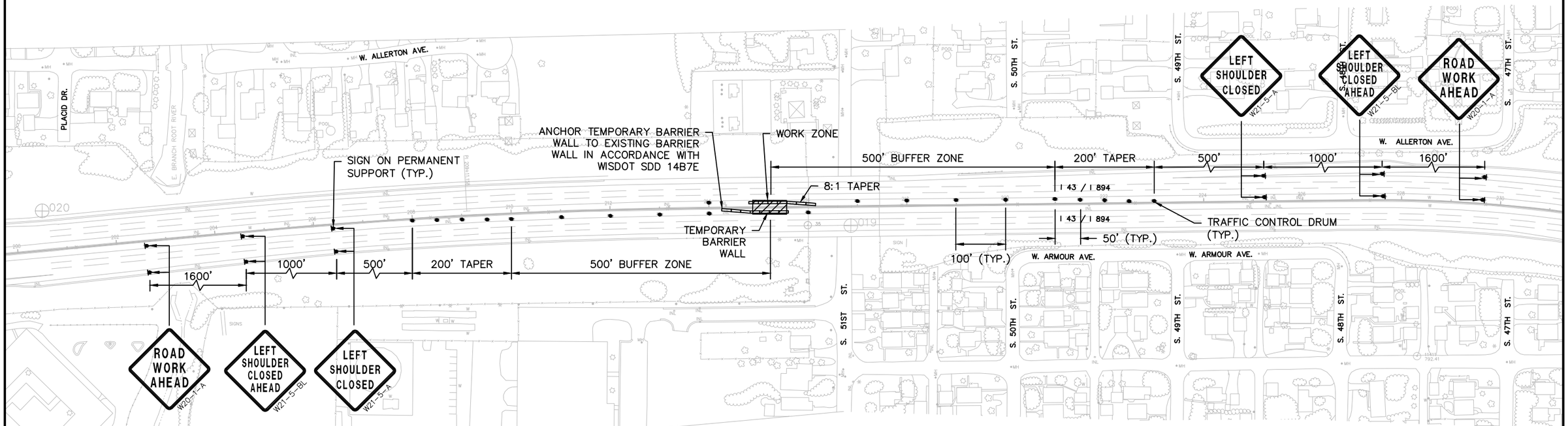
STATE PROJECT NUMBER
1000-20-69

2



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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

CONST SPEC WISDOT	2017	DRAWN BY	MR	PLANS CK'D.	VC

TRAFFIC CONTROL PLAN
STAGE 1
S-40-870

SHEET 1 OF 1

14

FILE NAME : 2017 SE REGION REPAIR & REPLACEMENT PLANS\CAD\S-40-869\LOCATION EXHIBIT.DWG PLOT DATE : 11/25/2016 7:27 AM PLOT BY : MATT ROESCH PLOT NAME : S-40-869 PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET

2

N

STATE PROJECT NUMBER

1000-20-69

2

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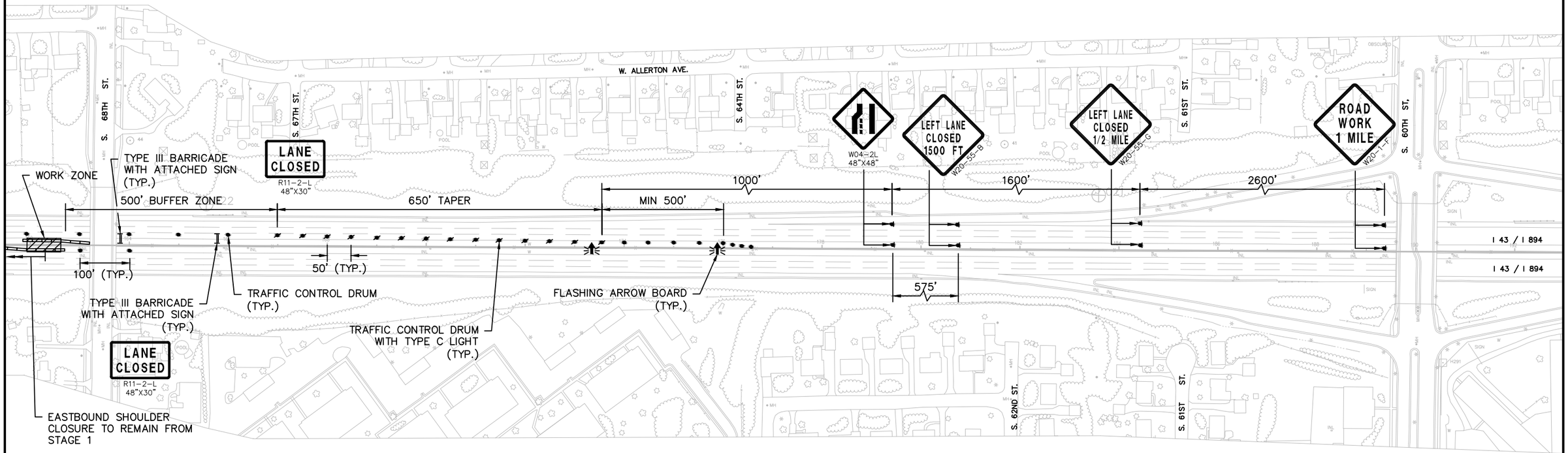

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SIGN BRIDGE REPAIR AND REPLACEMENT 2017

CONST SPEC WISDOT 2017	DRAWN BY MR	PLANS CK'D. VC

TRAFFIC CONTROL PLAN
STAGE 2
S-40-869

SHEET 1 OF 1

15

FILE NAME : 2017 SE REGION REPAIR & REPLACEMENT PLANS\CAD\S-40-869\LOCATION EXHIBIT.DWG

PLOT DATE : 11/25/2016 7:27 AM PLOT BY : MATT ROESCH PLOT NAME : S-40-869 PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET

STATE PROJECT NUMBER
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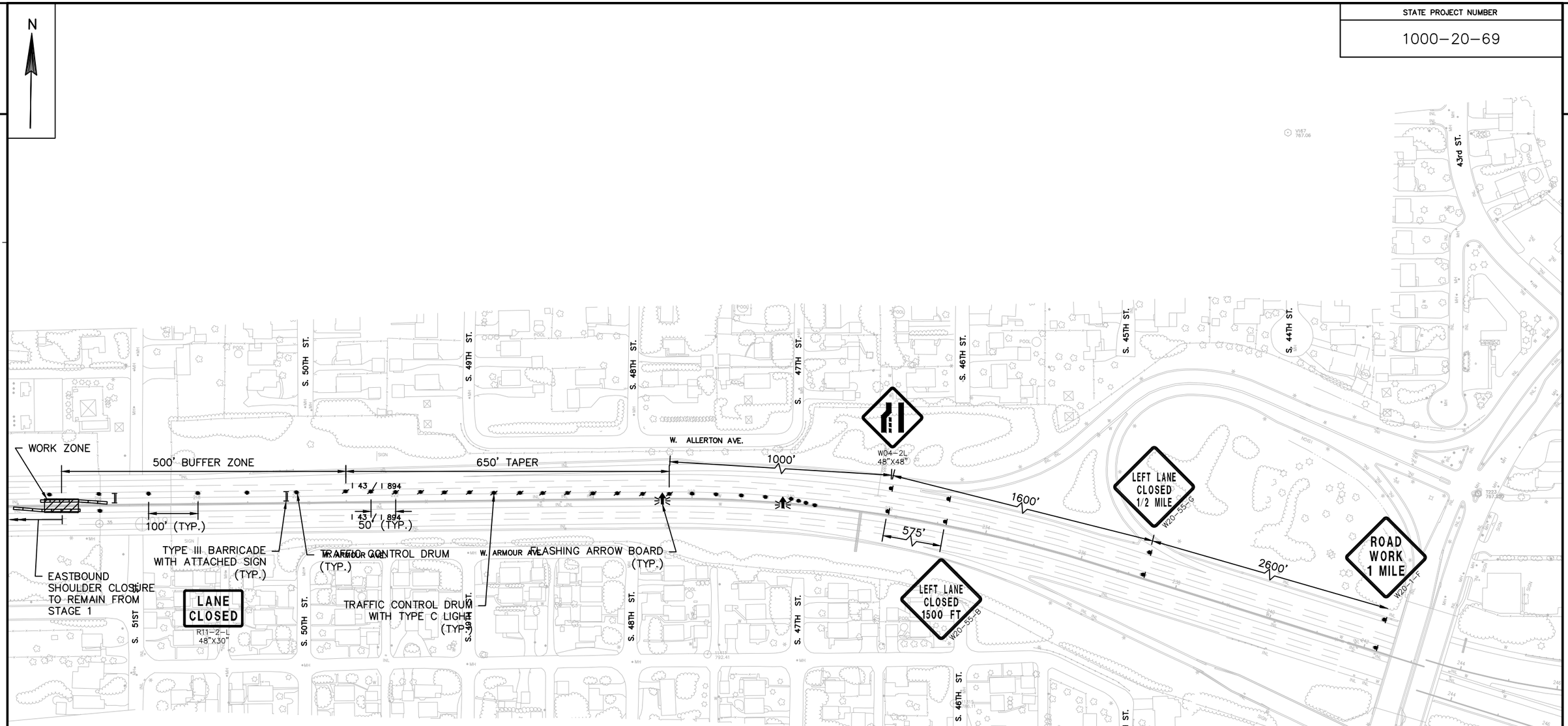

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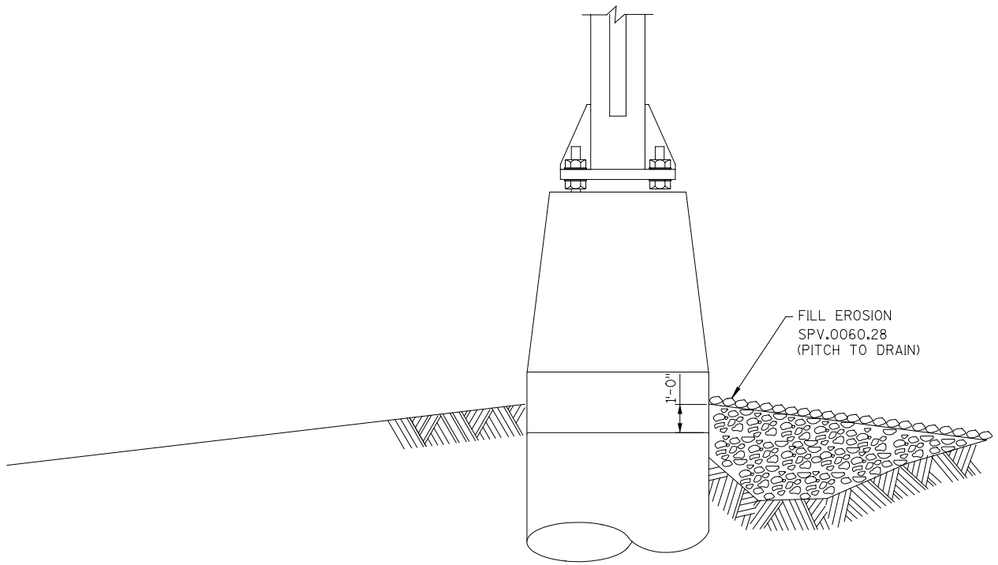
CONST SPEC WISDOT 2017	DRAWN BY MR	PLANS CK'D. VC

TRAFFIC CONTROL PLAN
STAGE 2
S-40-870

SHEET 1 OF 1

16

2



FILL EROSION

2

LEGEND

	EXISTING	PROPOSED
FTMS CONVENTIONAL SYMBOLS		
FTMS FIELD CABINET AND BASE	▶◀	
METER BREAKER PEDESTAL	☒	☒
STEEL PULL BOX	◑	
24X42-INCH NON-CONDUCTIVE PULL BOX		⊗
FTMS (ITS) CONDUIT	- -	- -
DYNAMIC MESSAGE SIGN AND SIGN BRIDGE		

FTMS STANDARD ABBREVIATIONS

CB — CONTROLLER CABINET
DMS — DYNAMIC MESSAGE SIGN
PB — PULL BOX
EX — EXISTING

FTMS GENERAL NOTES

1. THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORK SHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR TECHNICAL SPECIAL PROVISIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES OTHER THAN MINOR ADJUSTMENTS.
2. BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.
3. BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUITS, PULLBOXES, POLES, CABINET FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.
4. NO TREES (AND/OR SHRUBS) SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
5. AREAS WITHIN THE RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR FTMS CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, SEED, AND EROSION MAT, AND SHALL BE INCLUDED IN THE COST OF INSTALLING FTMS ITEMS. RESTORATION FOR AREAS DISTURBED FOR OTHER CONSTRUCTION OPERATIONS BUT ALSO CONTAINING FTMS CONSTRUCTION SHALL BE DONE ACCORDING TO REQUIREMENTS AND PAYMENT PROVISIONS FOR THE OTHER CONSTRUCTION OPERATIONS.
6. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
7. DUE TO RAMP, LANE, SHOULDER CLOSURE RESTRICTIONS, AND WORK UNDER OTHER CONTRACTS, SOME WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT.
8. THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING RAMP, LANE, SHOULDER, AND ROADWAY CLOSURES WITH OTHER CONTRACTS IN THE AREA.
9. THE CONTRACTOR SHALL CONTACT THE WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER AT (414) 227-2166 FIVE (5) WORKING DAYS PRIOR TO ENTERING ANY EXISTING WISDOT FTMS OR ITS CABINET.
10. ALL LOOP DETECTORS ARE STATIONED TO CENTER OF LEADING EDGE AS APPROACHED BY NORMAL VEHICLE PATH.
11. HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.
12. VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.

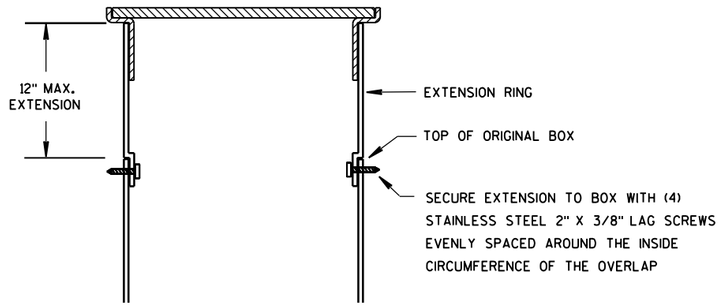
2

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

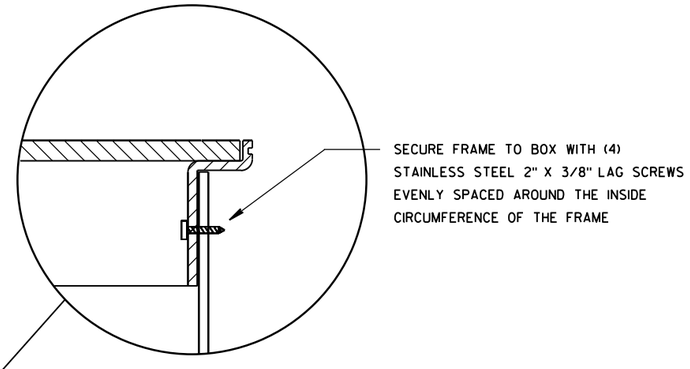
DIMENSION IN INCHES		NON-CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX DIAMETER ** (OUTSIDE)	B	25	25
BOX LENGTH	C	36	42
COVER	D	25 1/2	25 1/2
FRAME	E	27	27
FRAME	F	25 3/4	25 3/4
FRAME	G	22 1/2	22 1/2
WEIGHT IN POUNDS *			
COVER		50	50

* THE ACTUAL WEIGHT OF THE COVER MAY VARY NOT TO EXCEED 100 LBS.

** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE

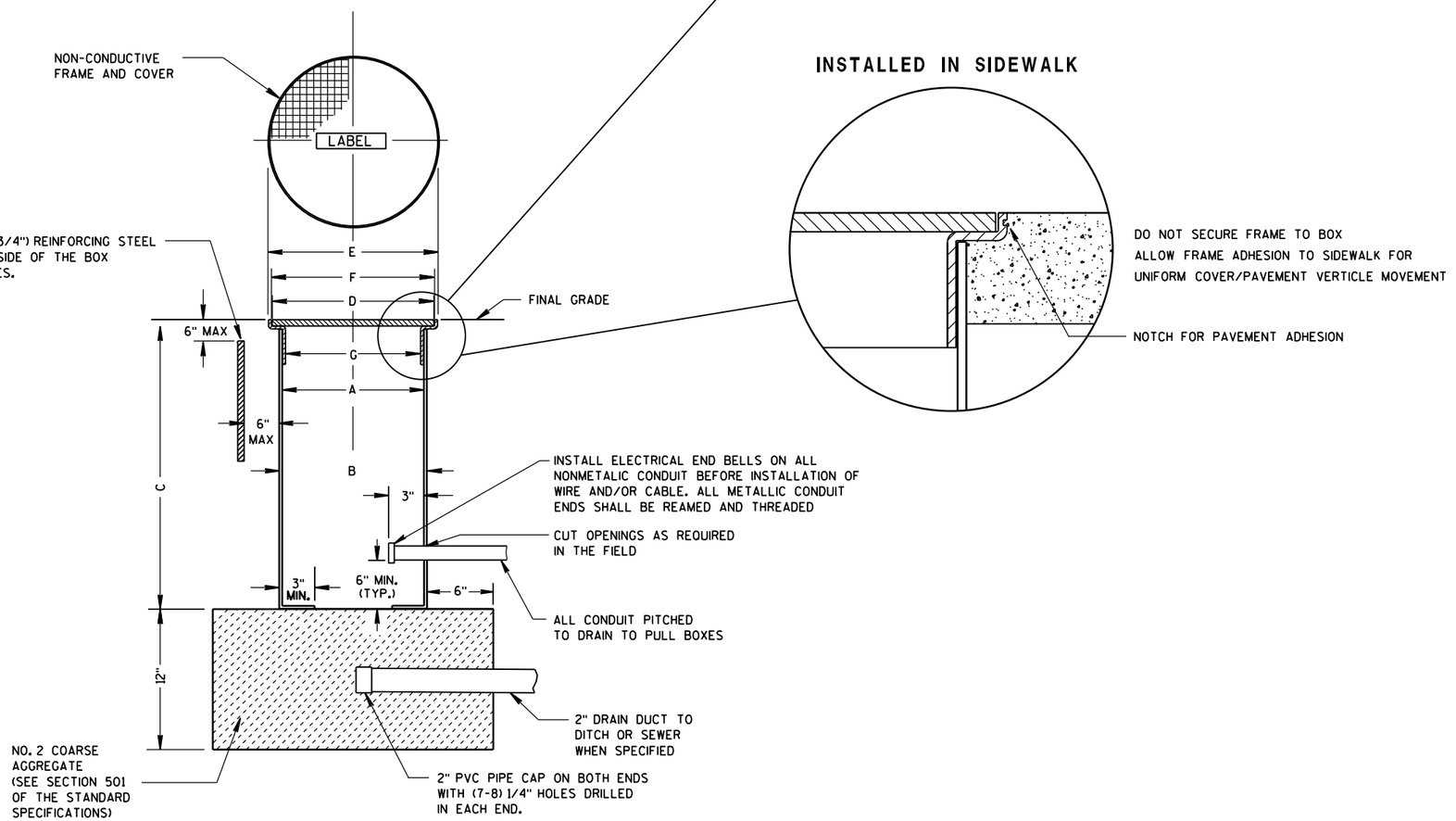


BOX EXTENSION



INSTALLED IN SOD OR CRUSHED AGGREGATE

INSTALLED IN SIDEWALK



NON-CONDUCTIVE PULL BOX

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DICONTINUITIES LESS THAN 1/4".

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL OR LIGHTING SYSTEMS. "WISDOT COMMUNICATIONS" FOR COMMUNICATIONS SYSTEMS.

STAGING NOTES:
NEW SIGN STRUCTURE S-40-458 MUST BE CONSTRUCTED AND NEW DMS-40-0002 MOUNTED, MADE OPERATIONAL, AND INTEGRATED INTO EXISTING WISDOT FTMS WITHIN (2) DAYS OF DISCONNECTION OF EXISTING DMS-40-0002.

EXPB01
(1) INSTALL PROPOSED CONDUIT INTO EXISTING PULL BOX

IN EXISTING CONDUIT
REMOVE EXISTING DMS CONTROL AND POWER CABLES.
INSTALL (4) NO. 2 AWG TRAFFIC SIGNAL WIRES AND
(1) DMS CONTROL CABLE.

EX-CB-DMS-40-0002
INSTALL NEW DMS-40-0002 COMMUNICATIONS CABLE SAME WAY EX-DMS-40-0002 WAS CONNECTED PRIOR TO BEGINNING DISCONNECTION WORK.

DO NOT DISTURB EXISTING CONDUIT NOR REMOVE EXISTING CABLES

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (4) NO. 2 AWG TRAFFIC SIGNAL WIRES AND
(1) DMS CONTROL CABLE

EXPB02

PB01

IN EXISTING CONDUIT
REMOVE EXISTING DMS CABLES

EX-DMS-40-0002 ON EX-S-40-402
(1) REMOVE EXISTING DMS AND STORE FOR SALVAGING OF USEFUL PARTS FROM SIGN BY THE DEPARTMENT

S-40-458
(1) INSTALL PROPOSED OVERHEAD DMS-40-0002 (S-F) ONTO NEW SIGN BRIDGE STRUCTURE S-40-458

130AB 132AB 134AB

LOCUST STREET LOCUST STREET

IH 43

PROJECT NO: 1000-20-69	HWY: IH 43	COUNTY: MILWAUKEE	FTMS PLAN SHEET (DMS-40-0002)	SHEET 20 E

FILE NAME : \\mlww400\ingrproj\66067\10002069_43_locust_dms\10002069_ftms.dgn PLOT DATE : 10/12/2016 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

GENERAL NOTES:

FREEWAY LIGHTING SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 652 TO 657 AND 659 EXCEPT:

1. DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THESE DRAWINGS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

2. LOCATIONS OF THE PVC CONDUITS ARE INDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. HOWEVER, INSTALLATION WILL REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. UNDER THE APPROVAL OF THE ENGINEER, APPROPRIATE ADJUSTMENT OF CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED TO ILLUSTRATE AS BUILT CONDITIONS.

3. THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

4. ALL OPEN AND UNTERMINATED CONDUITS SHALL BE CAPPED OR PLUGGED WITH ENGINEER APPROVED FITTINGS IMMEDIATLY AFTER INSTALLATION.

5. BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR IMMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

6. ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS.

7. PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT THAT CAN BE EASILY REMOVED. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

8. CONDUIT RUNS SHALL BE THE SAME SIZE PIPE FROM ONE END TO THE OTHER (FROM PULL BOX-TO-PULL BOX, JUNCTION BOX OR BASE-TO-BASE, ETC.) UNLESS OTHERWISE NOTED ON PLANS.

9. PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUITS.

10. CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS (PDF FORMAT) FOR ALL THE WORK BEING DONE.

11. CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION.

12. PITCH ALL CONDUITS TOWARD PULL BOXES. INSTALL A 2" DRAIN DUCT TO STORM SEWER OR DRAIN SUMP AS REQUIRED FOR DRAINAGE. THE 2" DRAIN DUCT OR SUMP IS INCIDENTAL TO THE PULL BOX BID ITEM AND IS NOT SHOWN.

13. THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE, IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

14. HAND DIGGING MAY BE REQUIRED FOR LOCATIONS ADJACENT TO EXISTING GAS AND POWER LINES. HAND EXCAVATION SHOULD BE ANTICIPATED & WILL BE CONSIDERED INCIDENTAL TO THE CONCRETE BASES BID ITEM. COORDINATE ALL WORK NEAR GAS LINE WITH WE ENERGIES.

15. UNDERGROUND WIRE & CONDUIT SHOWN ON REMOVAL PLANS FOR REMOVAL SHALL BE ABANDONED IN PLACE UNLESS DIRECTED BY THE ENGINEER. CONTRACTOR MAY CHOOSE TO REMOVE CONDUCTOR AT THEIR OWN EXPENSE.

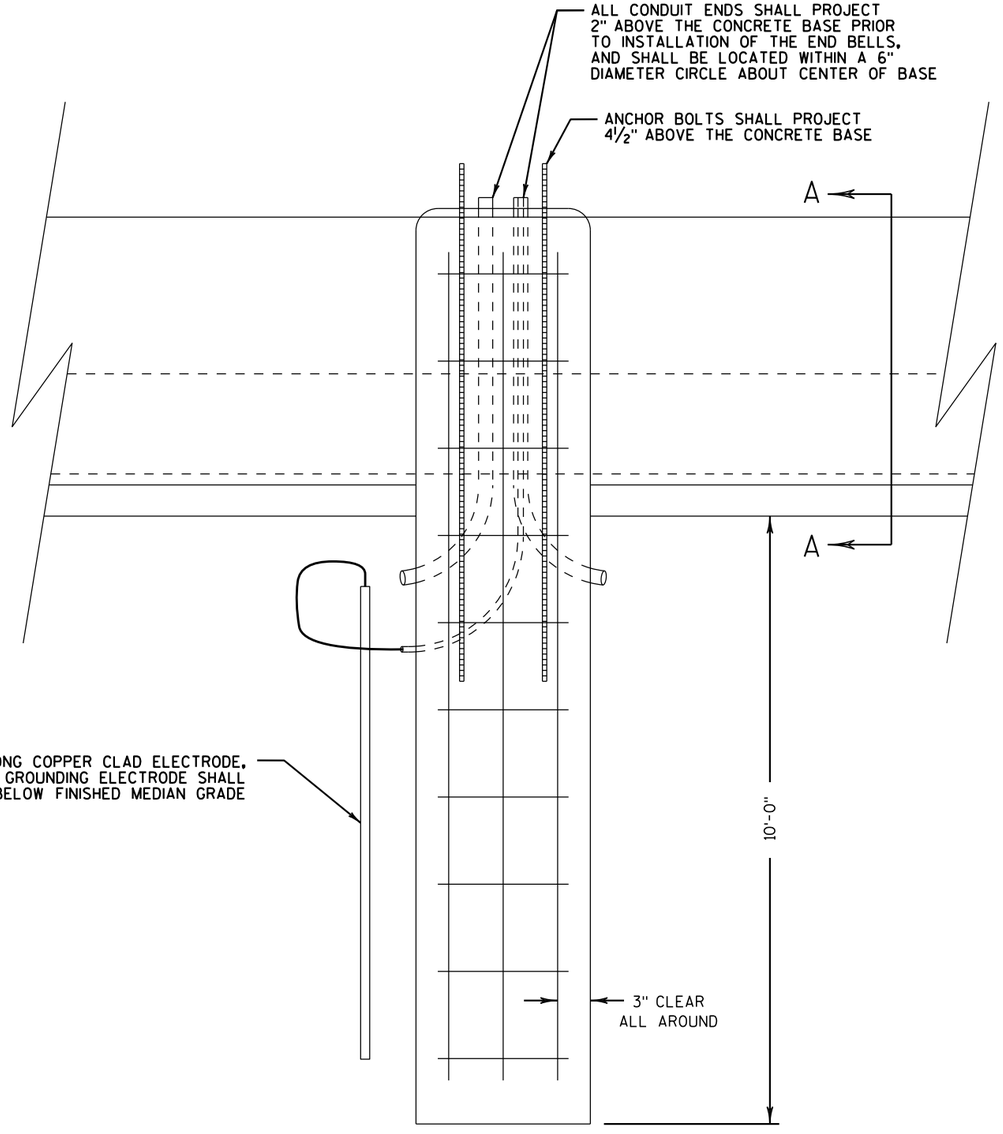
16. EXISTING CONDUIT AND CID NO LONGER BEING USED IS ABANDONED IN PLACE. THE CONTRACTOR MAY REMOVE ABANDONED WIRING A THE CONTRACTOR'S EXPENSE. ABANDONED PULL BOX REMOVAL IS INCIDENTAL TO THE ROAD CONSTRUCTION.

17. ALL UNDERGROUND WIRING AND CONDUIT FOR POLES BEING REMOVED IS ABANDONED IN PLACE UNLESS NOTED OTHERWISE. CONTRACTOR MAY SALVAGE ABANDONED WIRING AT HIS OWN EXPENSE.

18. PROVIDE REMOVABLE SEALANT SUCH AS DUCT SEAL IN THE CONDUITS AS THE CABINET, PULL BOXES, AND JUNCTION BOXES TO AVOID CONDENSATION CAUSED BY AIRFLOW THROUGH TEH CONDUIT DUE TO TEMPERATURE DIFFERENCE. THIS WORK SHALL BE INCIDENTAL TO THE ASSOCIATED CONDUIT PAY ITEM.

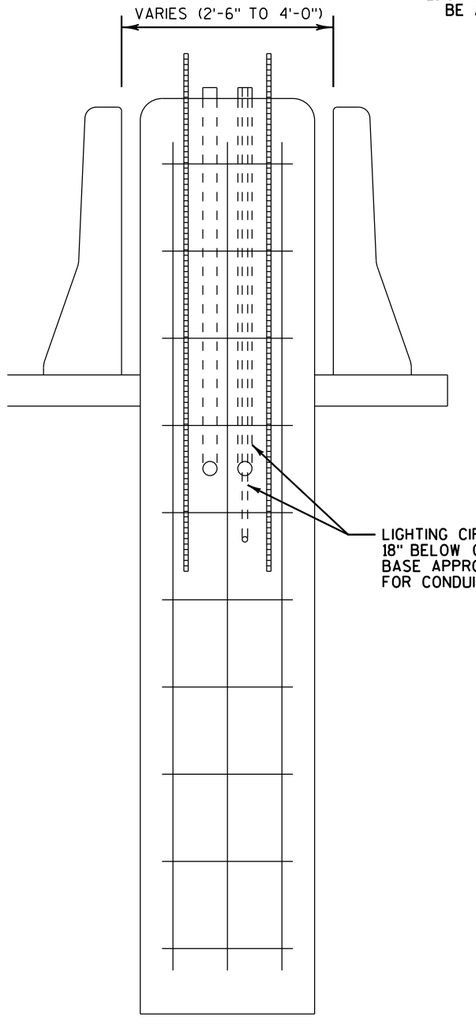
19. PROVIDE MINIMUM CABLE SLACK AS MENTIONED BELOW:

PULL BOXES:	10-FT
EMBEDDED JUCTION BOXES:	3-FT
DISTRIBUTION CENTER/LOAD CENTER:	10-FT
POLES:	5-FT IN AND 5-FT OUT



CONCRETE BASES, TYPE B

(1" ANCHOR RODS, 15" BOLT CIRCLE, 4½" PROJECTION)



DETAIL A

NOTES:

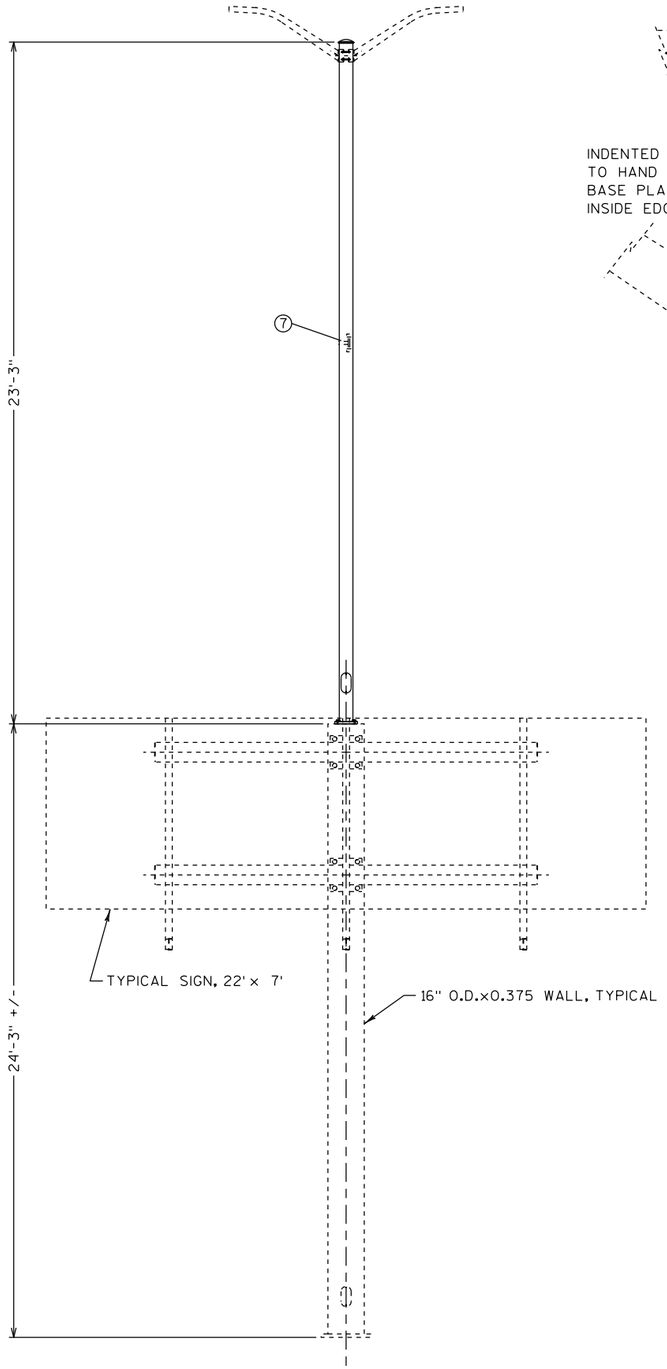
1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF SECTION 654 OF THE STANDARD SPECIFICATIONS
2. DETAILS OF COSNTRUCTION WITH THE EXCEPTIONS OF HEIGHT ABOVE GRADE AND CONDUIT SIZE SHALL BE AS DEFINED IN STANDARD DETAIL FOR TYPE 8 BASE

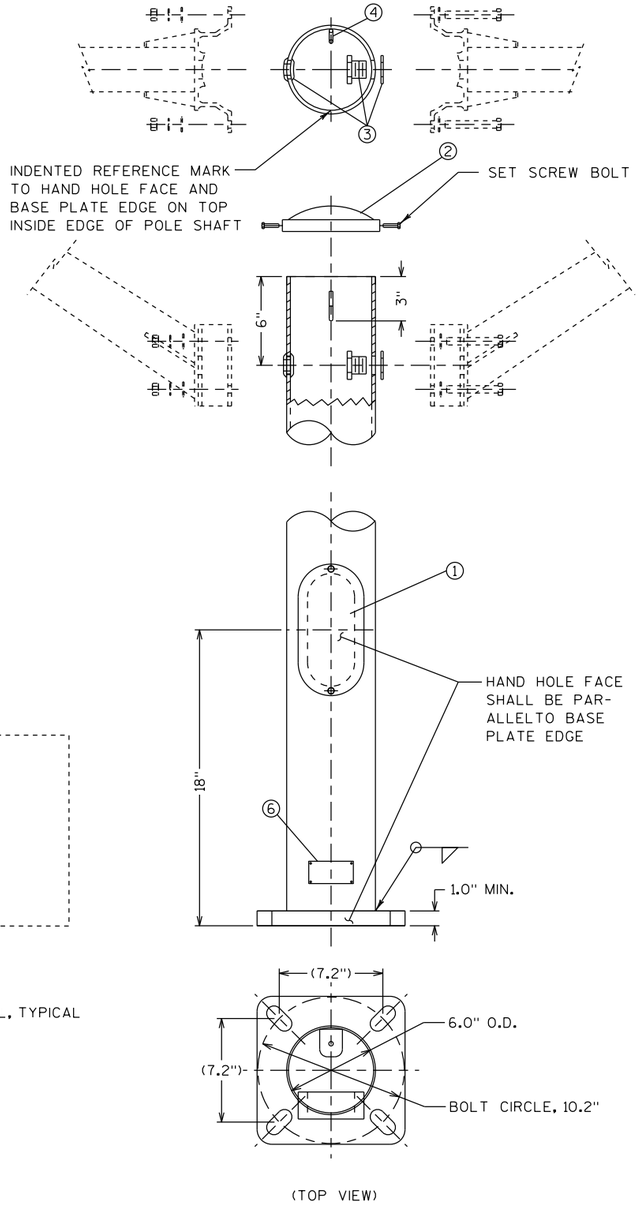
LIGHTING CIRCUIT CONDUITS SHALL EXIT BASE APPROXIMATELY 18" BELOW GRADE. GROUNDING ELECTRODE CONDUIT SHALL EXIT BASE APPROXIMATELY 24" BELOW GRADE. SEE ELECTRICAL PLAN FOR CONDUIT REQUIREMENTS.

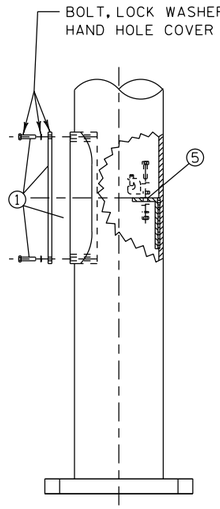
2

SHEET 1 OF 1

PROJECT NO: 1000-20-69	HWY: IH-43/IH-894	COUNTY: MILWAUKEE	LIGHTING PLAN - DETAIL	SHEET 22	E







GENERAL NOTES:

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS.

POLES SHALL BE CONSTRUCTED OF HIGH STRENGTH STEEL (48,000 psi MINIMUM YIELD STRENGTH), GALVANIZED PER ASTM A123. POLE WALL THICKNESS SHALL BE GREATER THAN OR EQUAL TO 0.188".

ALL THREADED FASTENER COMPONENTS SHALL BE STAINLESS STEEL. NUTS SHALL BE HEX NUTS. BOLTS SHALL BE HEX HEAD. ALL THREADED SURFACES SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO INSTALLATION.

COLLAR-MOUNT LUMINAIRE ARMS AND CLAMP ASSEMBLIES SHOWN FOR INFORMATION ONLY (PAID SEPARATELY). EXISTING SIGN BRIDGE STRUCTURE SHOWN FOR INFORMATION ONLY.

POLES SHALL BE MOUNTED TO THE SIGN BRIDGE STRUCTURE WITH GRADE 5, GALVANIZED, 1"-8 UNC x 2 ½" BOLTS.

① 4" x 6" HAND HOLE & COVER ASSEMBLY, SECURED BY TWO, ¼"-20 UNC x ¾" HEX HEAD BOLTS.

② POLE CAP, ALUMINUM, VENTILATED, SECURED WITH ONE OR MORE ¼"-20 UNC SET SCREW BOLTS.

③ 1 ⅜" FIELD DRILLED HOLE WITH 1" CHASE NIPPLE AND NUT (OR NEOPRENE GROMMET), PER EACH LUMINAIRE ARM.

④ FACTORY-WELDED "J" HOOK FOR POLE WIRE STRAIN RELIEF.

⑤ FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE. (LUG AND HARDWARE PAID UNDER SEPARATE ITEMS; SHOWN FOR INFORMATION ONLY.) PROVIDE HOLE IN BRACKET FOR ¼"-20 UNC BOLT.

⑥ MANUFACTURER'S PLATE SHOWING MANUFACTURER NAME AND DATE.

⑦ VIBRATION DAMPER

SIGN STRUCTURE LUMINAIRE EXTENSION FOR EXISTING SEQUENTIAL SIGN BRIDGES

(TYPICAL FOR ALL LOCATIONS)

2

LEGEND

C.I.D.

DISTRIBUTION CENTER

EXISTING TWIN ARM FREEWAY LIGHTING UNIT

N

SUBSTATION

FLAG

SIGN

EXISTING CABLE IN DUCT (C.I.D.) IN MEDIAN

S-40-222
2MV-A/B/BO

215+57
AB021

B-40-197

B-40-196

210

215

220

210+75
CB023

213+15
DB022

217+90
BB01

220+25
AB02

222+65
BB03

208+35
DB024

CB024

DB023

CB022

AB01

BB02

AB03

*2 C,D,N

*2 A,B,N

BB021

IH-43/IH-894

*2 A,B,N
*2 C,D,N

DISTRIBUTION CENTER
HL-40-BO
TO REMAIN

PB30

2-3" GATE

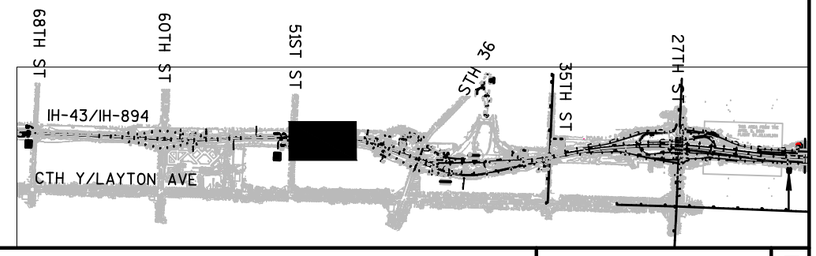
2½"

S. 51ST ST.

HL-40-BO	
A,C	RED
B,D	BLACK
N	WHITE
GND	GREEN OR BARE
A,B,C,D	30A
240/480VAC 3 WIRE GROUNDED NEUTRAL	

NOTE

1. EQUIPMENT SHOWN IN BOLD SHOULD BE REMOVED UNLESS NOTED OTHERWISE.



PROJECT NO: 1000-20-69	HWY: IH-43	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN HL-40-BO	SHEET 24	E

FILE NAME : N:\PDS\C3D\CAD\10002069\LTG\51STREM.DWG
LAYOUT NAME - ****
PLOT DATE : 11/22/2016 11:28 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

N

CABLE IN DUCT (C.I.D.)
3-2 AWG (C,D,N)
IN CONDUIT RIGID METALLIC 3-INCH
LAID IN MEDIAN WITHIN
WORK ZONE AREA

SUBSTATION

FLAG

B-40-197

B-40-196

210

215

220

208+35
DB024

210+75
CB023

213+15
DB022

217+90 TO REMAIN
BB01

220+25
AB02

222+65
BB03

CB024

DB023

CB022

AB01

BB02

AB03

IH-43/IH-894

ABANDONED SIGN
STRUCTURE BASE

*2 A,B,N

*2 A,B,N
*2 C,D,N

DISTRIBUTION
CENTER
HL-40-BO
TO REMAIN

PB30

2-3"
GATE

2 1/2"

S. 51ST ST.

SIGN

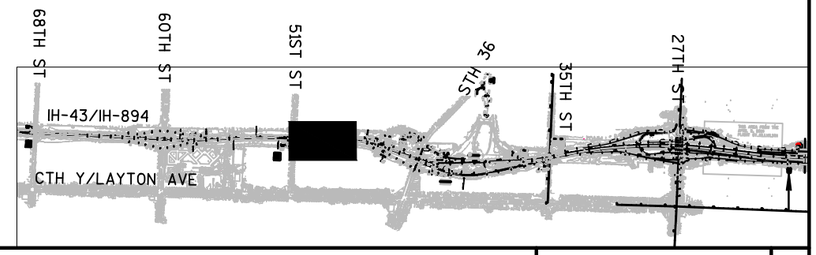
INL

W

HL-40-BO	
A,C	RED
B,D	BLACK
N	WHITE
GND	GREEN OR BARE
A,B,C,D	30A
240/480VAC 3 WIRE GROUNDED NEUTRAL	

LEGEND

- C.I.D.
- DISTRIBUTION CENTER
- EXISTING TWIN ARM FREEWAY LIGHTING UNIT



PROJECT NO: 1000-20-69	HWY: IH-43	COUNTY: MILWAUKEE	LIGHTING TEMPORARY PLAN HL-40-BO	SHEET 25	E

FILE NAME : N:\PDS\C3D\CAD\10002069\LTG\51STTEMP.DWG
LAYOUT NAME - ****
PLOT DATE : 11/22/2016 1:14 PM
PLOT BY : WAGNER, SCOTT H
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

N

CABLE IN DUCT (C.I.D.)
3-2 AWG
(C,D,N)
LAID IN MEDIAN

3-#2 AWG
C,D,N

215+40
AB021

215+40
BB021

#2 A,B,N

ABANDONED SIGN
STRUCTURE BASE

#2 A,B,N
#2 C,D,N

DISTRIBUTION
CENTER
HL-40-BO
TO REMAIN

PB30

2-3"
GATE

2½"

S. 51ST ST.

B-40-197

B-40-196

IH-43/IH-894

208+35
DB024

210

210+75
CB023

DB023

213+15
DB022

CB022

CB024

215

217+90
BB01

AB01

220

220+25
AB02

BB02

222+65
BB03

AB03

SUBSTATION

FLAG

SIGN

INL

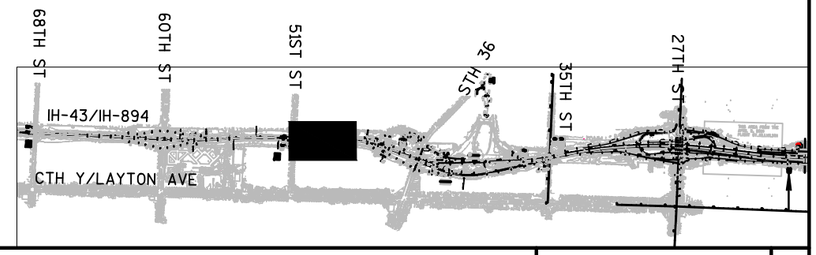
W

MH

LEGEND

- C.I.D.
- DISTRIBUTION CENTER
- TWIN ARM FREEWAY LIGHTING
- EXISTING TWIN ARM FREEWAY LIGHTING UNIT

HL-40-BO	
A,C	RED
B,D	BLACK
N	WHITE
GND	GREEN OR BARE
A,B,C,D	30A
240/480VAC 3 WIRE GROUNDED NEUTRAL	



PROJECT NO: 1000-20-69	HWY: IH-43	COUNTY: MILWAUKEE	LIGHTING PLAN HL-40-BO	SHEET 26	E

FILE NAME : N:\PDS\C3D\CAD\10002069\LTG\51STPERM.DWG
LAYOUT NAME - ****
PLOT DATE : 11/22/2016 2:18 PM
PLOT BY : WAGNER, SCOTT H
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

LEGEND

- C.I.D.
- DISTRIBUTION CENTER
- EXISTING TWIN ARM FREEWAY LIGHTING UNIT

N

DISTRIBUTION CENTER HL-40-AL TO REMAIN

FOUND 12' GATE

2½"

4"

PB20

3-#10 PCAL

2 UDL A/B/AL

B-40-194

B10

A10

S. 68TH ST.

IH-43/IH-894

155+05 DAL34

157+50 CAL33

159+90 DAL32

162+40 CAL31

164+43 AAL24

166+85 AAL22

169+30 BAL23

160

165

170

3" *4 A,B,N *2 C,D,N

*4 A,B,N

*2 C,D,N

CAL34

DAL33

CAL32 TO REMAIN

S-40-220 1MV-C/AL

S-40-221 1MV-B/AL

BAL22

3-2 AWG C.I.D.

AAL23

EXISTING CABLE IN DUCT (C.I.D.) IN MEDIAN

DAL31

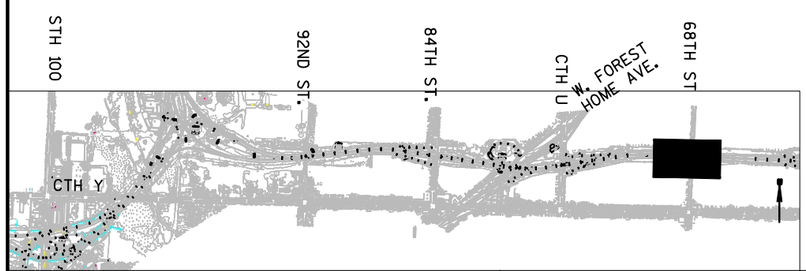
2 UDL C/D/AL

BAL21 TO REMAIN

NEW BASE STATE FURN. LIGHT POLE

PT 155+23.688

HL-40-AL	
A,C	RED
B,D	BLACK
N	WHITE
GND	GREEN OR BARE
A,B,C,D	30A
240/480VAC 3 WIRE GROUNDED NEUTRAL	



NOTE

1. EQUIPMENT SHOWN IN BOLD SHALL BE REMOVED UNLESS NOTED OTHERWISE.

2

2

N

DISTRIBUTION CENTER HL-40-AL TO REMAIN

12' GATE

FOUND

2 1/2"

4"

PB20

3-#10 PCAL

2 UDL A/B/AL

B-40-194

B10

A10

3" #4 A,B,N #2 C,D,N

#4 A,B,N

IH-43/IH-894

155+05 DAL34

157+50 CAL33

159+90 DAL32

160

164+43 AAL24

165

166+85 AAL22

169+30 BAL23

170

CAL34

DAL33

CAL32 TO REMAIN

BAL22

3-2 AWG C.I.D.

AAL23

S-40-221 IMV-B/AL

2 UDL C/D/AL

BAL21 TO REMAIN

S. 68TH ST.

NEW BASE STATE FURN. LIGHT POLE

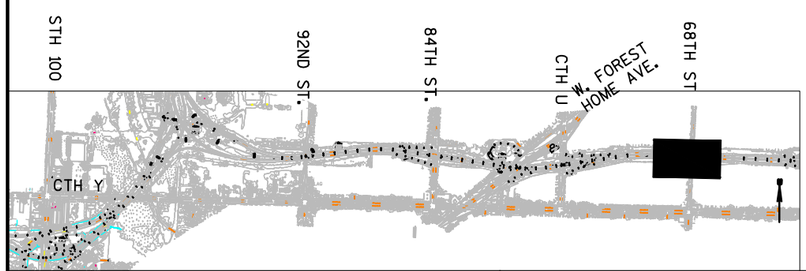
ABANDONED SIGN STRUCTURE BASE

CABLE IN DUCT (C.I.D.)
3-2 AWG
(C,D,N) IN CONDUIT
RIGID METALLIC 3-INCH
LAID IN MEDIAN
WITHIN WORK ZONE AREA

HL-40-AL	
A,C	RED
B,D	BLACK
N	WHITE
GND	GREEN OR BARE
A,B,C,D	30A
240/480VAC 3 WIRE GROUNDED NEUTRAL	

LEGEND

- C.I.D.
- DISTRIBUTION CENTER
- EXISTING TWIN ARM FREEWAY LIGHTING UNIT



PROJECT NO: 1000-20-69	HWY: IH-43	COUNTY: MILWAUKEE	LIGHTING TEMPORARY PLAN HL-40-AL	SHEET 28	E

FILE NAME : N:\PDS\C3D\CAD\10002069\LTG\68THTEMP.DWG
LAYOUT NAME - ****

PLOT DATE : 11/22/2016 12:47 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

CABLE IN DUCT (C.I.D.)
3-2 AWG (C,D,N)
LAID IN MEDIAN

DISTRIBUTION
CENTER
HL-40-AL
TO REMAIN

FOUND 12' GATE

2½"

3-#10
PCAL

4"

PB20

B-40-194

2 UDL
A/B/AL

SIGN

155+05
DAL34

157+50
CAL33

IH-43/IH-894

160

159+90
DAL32

162+10
CAL31

3"
#4 A,B,N
#2 C,D,N

B10

165

164+43
AAL24

166+85
AAL22

169+30
BAL23

170

3-4
C.

CAL34

DAL33

CAL32
TO REMAIN

DAL31

#4 A,B,N

A10

S-40-221
IMV-B/AL

BAL22

3-2 AWG
C.I.D.

AAL23

S. 68TH ST.

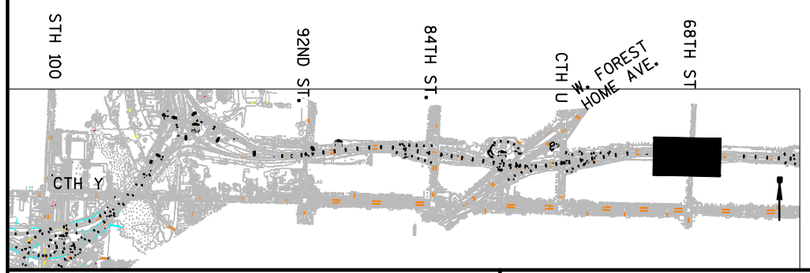
2 UDL
C/D/AL

BAL21
TO REMAIN

NEW BASE
STATE FURN.
LIGHT POLE

ABANDONED SIGN
STRUCTURE BASE

HL-40-AL	
A,C	RED
B,D	BLACK
N	WHITE
GND	GREEN OR BARE
A,B,C,D	30A
240/480VAC 3 WIRE GROUNDED NEUTRAL	



LEGEND

- C.I.D.
- DISTRIBUTION CENTER
- TWIN ARM FREEWAY LIGHTING
- EXISTING TWIN ARM FREEWAY LIGHTING UNIT

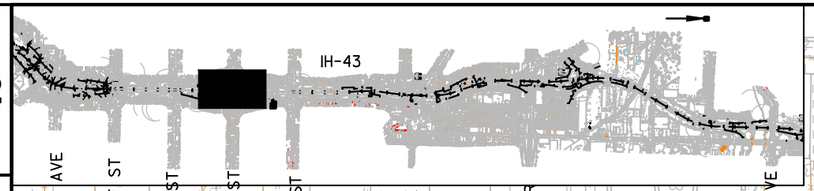
PROJECT NO: 1000-20-69	HWY: IH-43	COUNTY: MILWAUKEE	LIGHTING PLAN HL-40-AL	SHEET 29	E

FILE NAME : N:\PDS\C3D\CAD\10002069\LTG\68THPERM.DWG
LAYOUT NAME - ****

PLOT DATE : 11/22/2016 2:12 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

NOTE
1. EQUIPMENT SHOWN IN BOLD SHALL BE REMOVED UNLESS NOTED OTHERWISE.



EXISTING SIGN STRUCTURE S-40-402 WITH NO LIGHTING TO BE REMOVED

#4-1-4 B,N,C
EXISTING CABLE IN DUCT (C.I.D.) IN MEDIAN

DISTRIBUTION CENTER HL-40-CB TO REMAIN

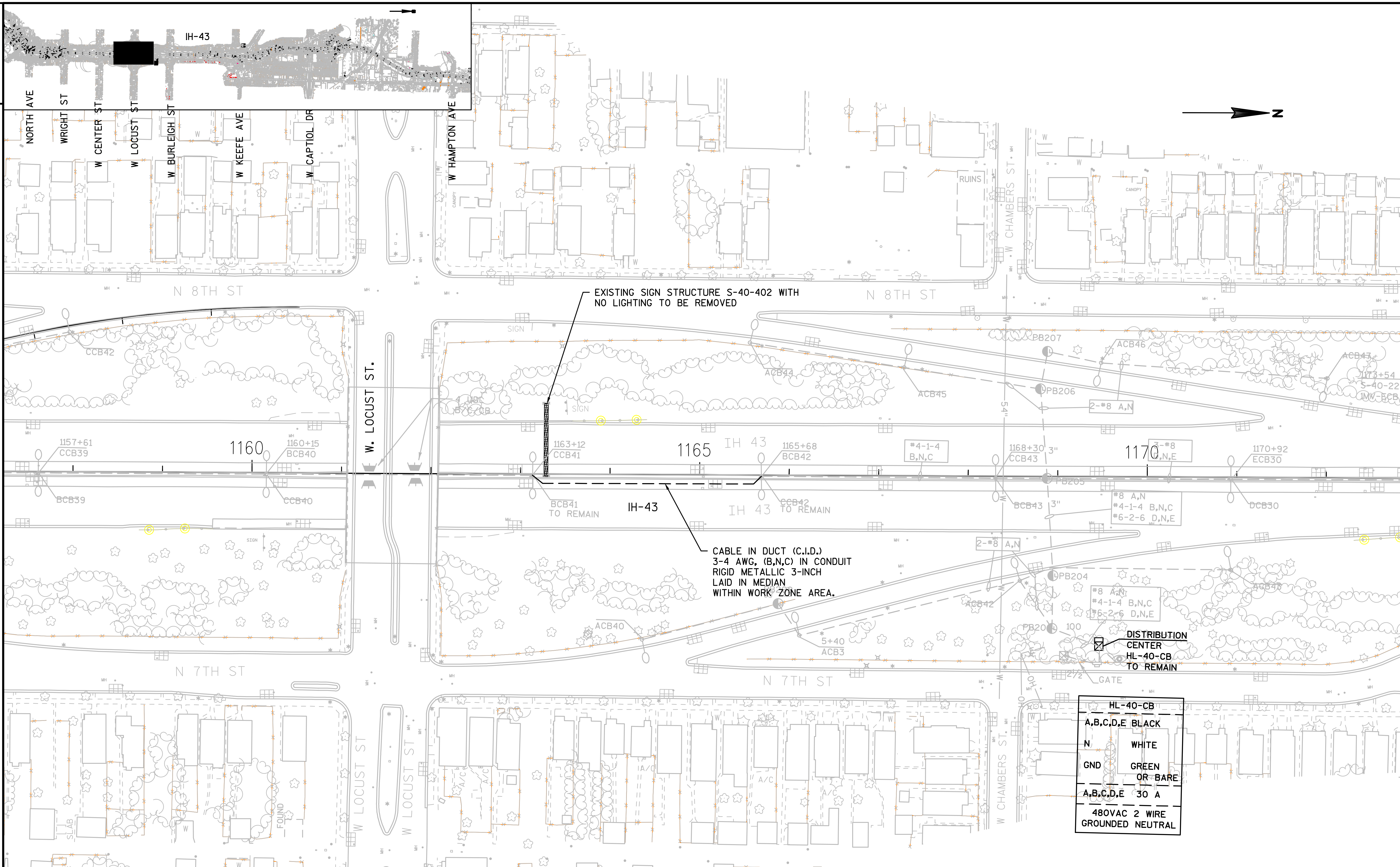
HL-40-CB
A,B,C,D,E BLACK
N WHITE
GND GREEN OR BARE
A,B,C,D,E 30 A
480VAC 2 WIRE GROUNDED NEUTRAL

LEGEND
C.I.D.
DISTRIBUTION CENTER
EXISTING TWIN ARM FREEWAY LIGHTING UNIT

PROJECT NO: 1000-20-69	HWY: IH-94	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN HL-40-CB	SHEET 30	E

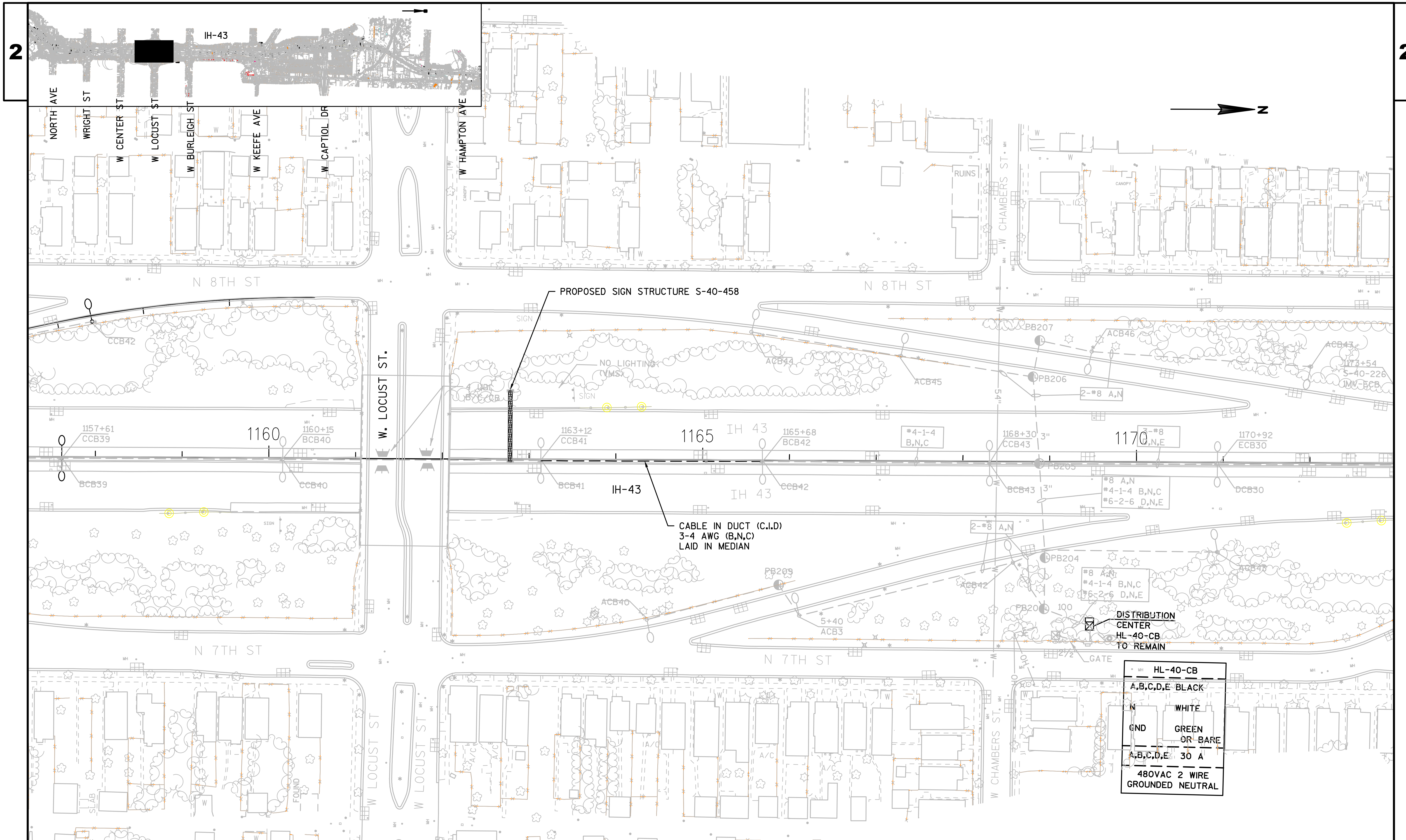
FILE NAME : N:\PDS\C3D\CAD\10002069\LTG\LOCUSTREM.DWG
LAYOUT NAME - ****
PLOT DATE : 11/22/2016 11:45 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2


IH-43
NORTH AVE
WRIGHT ST
W CENTER ST
W LOCUST ST
W BURLEIGH ST
W KEEFE AVE
W CAPTIOL DR
W HAMPTON AVE
N
N 8TH ST
N 7TH ST
W. LOCUST ST.
W CHAMBERS ST
IH 43
IH-43
1160
1165
1170
EXISTING SIGN STRUCTURE S-40-402 WITH NO LIGHTING TO BE REMOVED
CABLE IN DUCT (C.I.D.) 3-4 AWG, (B,N,C) IN CONDUIT RIGID METALLIC 3-INCH LAID IN MEDIAN WITHIN WORK ZONE AREA.
DISTRIBUTION CENTER HL-40-CB TO REMAIN
1157+61 CCB39
BCB39
1160+15 BCB40
CCB40
CCB42
1163+12 CCB41
BCB41 TO REMAIN
1165+68 BCB42
CCB42 TO REMAIN
1168+30 CCB43
BCB43
1170+92 ECB30
DCB30
ACB40
5+40 ACB3
ACB44
ACB45
ACB46
ACB47
1173+54 S-40-226
PB207
PB206
PB205
PB204
PB203
2-#8 A,N
#4-1-4 B,N,C
#8 A,N
#4-1-4 B,N,C
#6-2-6 D,N,E
RUINS
GATE
HL-40-CB
A,B,C,D,E BLACK
N WHITE
GND GREEN OR BARE
A,B,C,D,E 30 A
480VAC 2 WIRE GROUNDED NEUTRAL

2

PROJECT NO:1000-20-69	HWY:IH-94	COUNTY:MILWAUKEE	LIGHTING TEMPORARY PLAN HL-40-CB	SHEET 31	E



2
IH-43
NORTH AVE
WRIGHT ST
W CENTER ST
W LOCUST ST
W BURLEIGH ST
W KEEFE AVE
W CAPTIOL DR
W HAMPTON AVE
N
N 8TH ST
N 7TH ST
W. LOCUST ST.
W CHAMBERS ST.
PROPOSED SIGN STRUCTURE S-40-458
CABLE IN DUCT (C.I.D)
3-4 AWG (B,N,C)
LAID IN MEDIAN
IH 43
IH-43
1160
1165
1170
NO LIGHTING (VMS)
DISTRIBUTION CENTER
HL-40-CB
TO REMAIN
HL-40-CB
A,B,C,D,E BLACK
N WHITE
GND GREEN OR BARE
A,B,C,D,E 30 A
480VAC 2 WIRE
GROUNDED NEUTRAL

PROJECT NO:1000-20-69	HWY:IH-94	COUNTY:MILWAUKEE	LIGHITNG PLAN HL-40-CB	SHEET 32	E

FILE NAME : N:\PDS\C3D\CAD\10002069\LTG\LOCUSTPERM.DWG
LAYOUT NAME - ####
PLOT DATE : 11/22/2016 9:49 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

1000-20-69

Line	Item	Item Description	Unit	Total	Qty
0010	201.0110	Clearing	SY	30.000	30.000
0020	619.1000	Mobilization	EACH	1.000	1.000
0030	636.0100	Sign Supports Concrete Masonry	CY	59.000	59.000
0040	636.1000	Sign Supports Steel Reinforcement HS	LB	600.000	600.000
0050	636.1500	Sign Supports Steel Coated Reinforcement HS	LB	4,498.000	4,498.000
0060	637.1220	Signs Type I Reflective SH	SF	308.000	308.000
0070	638.2101	Moving Signs Type I	EACH	1.000	1.000
0080	638.2601	Removing Signs Type I	EACH	2.000	2.000
0090	641.0100	Sign Bridge Single Pole Sign Support One Sign (structure) 01. S-40-869	LS	1.000	1.000
0100	641.0600	Sign Bridge Single Pole Sign Support Two Signs (structure) 02. S-40-870	LS	1.000	1.000
0110	641.6600	Sign Bridge (structure) 03. S-40-458	LS	1.000	1.000
0120	643.0100	Traffic Control (project) 01. 1000-20-69	EACH	1.000	1.000
0130	650.6500	Construction Staking Structure Layout (structure) 01. S-40-458	LS	1.000	1.000
0140	650.6500	Construction Staking Structure Layout (structure) 02. S-40-869	LS	1.000	1.000
0150	650.6500	Construction Staking Structure Layout (structure) 03. S-40-870	LS	1.000	1.000
0160	652.0135	Conduit Rigid Metallic 3-Inch	LF	750.000	750.000
0170	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	180.000	180.000
0180	652.0700.S	Install Conduit into Existing Item	EACH	1.000	1.000
0190	655.0122	Cable In Duct 3-2 AWG	LF	2,040.000	2,040.000
0200	655.0124	Cable In Duct 3-4 AWG	LF	560.000	560.000
0210	655.0535	Electrical Wire Traffic Signals 2 AWG	LF	480.000	480.000
0220	655.0610	Electrical Wire Lighting 12 AWG	LF	690.000	690.000
0230	657.0375	Poles Type A	EACH	1.000	1.000
0240	657.0620	Luminaire Arms Single Member 6-Inch Clamp 4-FT	EACH	4.000	4.000
0250	659.1130	Luminaires Utility LED D	EACH	4.000	4.000
0260	670.0100	Field System Integrator	LS	1.000	1.000
0270	670.0200	ITS Documentation	LS	1.000	1.000
0280	674.0300	Remove Cable	LF	80.000	80.000
0290	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	200.000	200.000
0300	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	200.000	200.000
0310	SPV.0060	Special 02. Remove Grout Pad	EACH	4.000	4.000
0320	SPV.0060	Special 03. Replace Rodent Screen	EACH	5.000	5.000
0330	SPV.0060	Special 04. Tension Anchor Rods	EACH	58.000	58.000
0340	SPV.0060	Special 05. Repair Foundation	EACH	5.000	5.000
0350	SPV.0060	Special 06. Splice Connection Bolt Replacement	EACH	30.000	30.000
0360	SPV.0060	Special 07. Install New Post to Mastarm Connection	EACH	4.000	4.000

1000-20-69

Line	Item	Item Description	Unit	Total	Qty
		Bolt			
0370	SPV.0060	Special 08. Secure/Replace Chord Cap	EACH	2.000	2.000
0380	SPV.0060	Special 09. Replace Cantilever Truss Column Connection Bolt	EACH	3.000	3.000
0390	SPV.0060	Special 10. Install Type I Sign Support Bracket	EACH	8.000	8.000
0400	SPV.0060	Special 11. Replace Type I Sign Support Bracket	EACH	5.000	5.000
0410	SPV.0060	Special 12. Replace Sign Bridge ID Plaque	EACH	5.000	5.000
0420	SPV.0060	Special 13. Replace Post Clip	EACH	24.000	24.000
0430	SPV.0060	Special 14. Reattach Type-II Sign	EACH	1.000	1.000
0440	SPV.0060	Special 15. Replace Type II Sign Support Bracket	EACH	11.000	11.000
0450	SPV.0060	Special 16. Slotted Hole Repair on Sign Support Bracket	EACH	16.000	16.000
0460	SPV.0060	Special 17. Tighten/Replace Handhole Cover	EACH	3.000	3.000
0470	SPV.0060	Special 18. Secure Luminaire Cover	EACH	5.000	5.000
0480	SPV.0060	Special 19. Install Junction Box Cover	EACH	2.000	2.000
0490	SPV.0060	Special 20. Replace Conduit Plug	EACH	1.000	1.000
0500	SPV.0060	Special 21. Replace Safety Chain	EACH	2.000	2.000
0510	SPV.0060	Special 22. Align Handrail Locking Pin	EACH	4.000	4.000
0520	SPV.0060	Special 23. Install/Replace Handrail Locking Pin	EACH	8.000	8.000
0530	SPV.0060	Special 24. Remove Sign Catwalk	EACH	1.000	1.000
0540	SPV.0060	Special 25. Secure Spacer Block	EACH	1.000	1.000
0550	SPV.0060	Special 26. Remove Formwork to Grade	EACH	1.000	1.000
0560	SPV.0060	Special 27. Replace U-Bolts	EACH	56.000	56.000
0570	SPV.0060	Special 28. Fill Erosion	EACH	1.000	1.000
0580	SPV.0060	Special 29. Secure/Replace Vertical Post Cap	EACH	2.000	2.000
0590	SPV.0060	Special 30. Secure Anchor Connection Plate	EACH	1.000	1.000
0600	SPV.0060	Special 31. Replace Catwalk Grating	EACH	1.000	1.000
0610	SPV.0060	Special 32. Replace Signal Connection Assembly	EACH	2.000	2.000
0620	SPV.0060	Special 33. Repair Foundation Joint	EACH	2.000	2.000
0630	SPV.0060	Special 34. Remove Debris and Regrade	EACH	1.000	1.000
0640	SPV.0060	Special 35. Repair Anchor Rod Foundation Support	EACH	3.000	3.000
0650	SPV.0060	Special 36. Replace Type II Mounting System	EACH	3.000	3.000
0660	SPV.0060	Special 37. Lamp Disposal High Intensity Discharge	EACH	4.000	4.000
0670	SPV.0060	Special 38. Concrete Bases Type B	EACH	1.000	1.000
0680	SPV.0060	Special 39. Pull Box Non-Conductive 24x24-Inch	EACH	1.000	1.000
0690	SPV.0060	Special 40. Removing Overhead Freeway DMS	EACH	1.000	1.000
0700	SPV.0060	Special 41. Install Overhead Freeway DMS	EACH	1.000	1.000
0710	SPV.0090	Special 01. Replace Concrete Barrier	LF	6.000	6.000
0720	SPV.0090	Special 02. Install/Replace Catwalk Handrail	LF	18.000	18.000
0730	SPV.0090	Special 03. Conduit Flexible Metallic 3-Inch	LF	60.000	60.000

1000-20-69

Line	Item	Item Description	Unit	Total	Qty
0740	SPV.0090	Special 04. Barrier Removal and Retrofit	LF	306.000	306.000
0750	SPV.0105	Special 01. Removing Sign Bridge S-40-402	LS	1.000	1.000
0760	SPV.0105	Special 02. Removing Sign Bridge S-40-220	LS	1.000	1.000
0770	SPV.0105	Special 03. Removing Sign Bridge S-40-222	LS	1.000	1.000
0780	SPV.0165	Special 01. Replace Type II Sign to Vertical Upright	SF	16.000	16.000

CATEGORY 0030
LIGHTING REMOVAL ITEMS

SPV.0060.37 LAMP DISPOSAL HIGH INTENSITY DISCHARGE

SYSTEM	LOCATION	OFFSET	ITEM	SPV.0060.37 LAMP DISPOSAL HIGH INTENSITY DISCHARGE	COMMENTS
				EACH	
HL-40-AL	162+40	C/L	LIGHTING UNIT	2	MOUNTED ON SIGN STRUCTURE
HL-40-BO	215+57	C/L	LIGHTING UNIT	2	"
TOTAL (0030)				**4**	

CATEGORY 0030
TEMPORARY LIGHTING ITEMS

652.0135 CONDUIT RIGID METALLIC 3-INCH
655.0122 CABLE IN DUCT 3-2 AWG
655.0124 CABLE IN DUCT 3-4 AWG
SPV.0090.03 CONDUIT FLEXIBLE METALLIC 3-INCH

SYSTEM	NETWORK	LOCATION	OFFSET	652.0135 CONDUIT RIGID METALLIC 3-INCH	655.0122 CABLE IN DUCT 3-2 AWG	655.0124 CABLE IN DUCT 3-4 AWG	SPV.0090.03 CONDUIT FLEXIBLE METALLIC 3-INCH
				LF	LF	LF	LF
HL-40-AL	C/D/N/G	159+90 - 162+40	C/L	250	300	--	20
HL-40-BO	C/D/N/G	213+15 - 215+57	C/L	250	300	--	20
HL-40-CB	B/C/N/G	1163+12 - 1165+68	C/L	250	--	300	20
TOTAL (0030)				**750**	**600**	**300**	**60**

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CATEGORY 0030
LIGHTING BRANCH CIRCUIT CABLE IN DUCT - GROUNDED NEUTRAL SYSTEMS
240/480 VAC 3-WIRE

655.0122 CABLE IN DUCT 3-2 AWG
655.0124 CABLE IN DUCT 3-4 AWG

SYSTEM	NETWORK	LOCATION TO LOCATION	DISTANCE	655.0122 CABLE IN DUCT 3-2 AWG LF	655.0124 CABLE IN DUCT 3-4 AWG LF
HL-40-AL	C/D/N	HL-40-AL TO PB20 TO PB TO CAL31/DAL31	200	210	--
HL-40-AL	C/D/N	CAL31/DAL31 TO DAL32/CAL32	220	230	--
HL-40-BO	A/B/N	HL-40-BO TO PB30 TO PB TO PB TO ABO21/BBO21	250	260	--
HL-40-BO	A/B/N	ABO21/BBO21 TO DBO22/CBO22	220	230	--
HL-40-BO	C/D/N	HL-40-BO TO PB30 TO PB TO PB TO BBO1/ABO1	500	510	--
HL-40-CB	B/C/N	BCB42/CCB42 TO CCB41/BCB41	250	--	260
		TOTAL (0030)		**1,440**	**260**

CATEGORY 0030
LIGHTING UNIT QUANTITIES

655.0610 ELECTRICAL WIRE LIGHTING 12 AWG
657.0375 POLES TYPE A
657.0620 LUMINAIRE ARMS SINGLE MEMBER 6-INCH CLAMP 4-FOOT
659.1130 LUMINAIRES UTILITY LED D
SPV.0060.38 CONCRETE BASES TYPE B

SYSTEM	SEQUENCE I. D.	STATION	OFFSET	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	657.0375 POLES TYPE A EACH	657.0620 LUMINAIRE ARMS SINGLE MEMBER 6-INCH CLAMP 4-FOOT EACH	659.1130 LUMINAIRES UTILITY LED D EACH	SPV.0060.38 CONCRETE BASES TYPE B EACH	COMMENTS
HL-40-AL	CAL31/DAL31	162+10	C/L	345	--	2	2	--	MOUNTED ON SIGN STRUCTURE
HL-40-BO	AB021/BBO21	215+40	C/L	345	1	2	2	1	--
	TOTAL (0030)			**690**	**1**	**4**	**4**	**1**	

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PROJECT NO: 1000-20-69	HWY: IH 43/ IH 94	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET:	E

FTMS PULL BOXES, CONDUIT, AND CABLE

CATEGORY	LOCATION	ITEM ID	DISTANCE	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH	655.0535 ELECTRICAL WIRE TRAFFIC SIGNALS 2 AWG LF	674.0300 REMOVE CABLE LF	SPV.0060.39 PULL BOX NON-CONDUCTIVE 24 X 42- INCH EACH
0030	IH 43							
		EXPB01	--	--	1	--	--	--
		EX-CB-DMS-40-0002 - EXPB01	15	--	--	60	15	--
		PB01	--	--	--	--	--	1
		EXPB01 - PB01	75	150	--	300	--	--
		PB01 - S-40-458	15	30	--	120	--	--
		EXPB01 - EXPB02	50	--	--	--	50	--
		EXPB02 - EX-S-40-402	15	--	--	--	15	--
		TOTALS		180	1	480	80	1

DYNAMIC MESSAGE SIGN ITEMS

CATEGORY	ROADWAY	ITEM ID	SPV.0060.40 REMOVING OVERHEAD FREEWAY DMS EACH	SPV.0060.41 INSTALL OVERHEAD FREEWAY DMS EACH
0030	IH 43			
		EX-DMS-40-0002	1	--
		DMS-40-0002	--	1
		TOTALS	1	1

FTMS LUMP SUM ITEMS

CATEGORY	ROADWAY	LOCATION	670.0100 FIELD SYSTEM INTEGRATOR LS	670.0200 ITS DOCUMENTATION LS
0030	IH 43			
		PROJECT	1	1
		TOTALS	1	1

3

SIGN BRIDGE REMOVALS

LOCATION	SPV.0105.01 REMOVING SIGN BRIDGE S-40-402 LS	SPV.0105.02 REMOVING SIGN BRIDGE S-40-220 LS	SPV.0105.03 REMOVING SIGN BRIDGE S-40-222 LS
I-43 JUST N OF LOCUST ST	1		
I-894 JUST W OF 68TH ST		1	
I-894 JUST W OF 51ST ST			1
TOTAL	1	1	1

CATEGORY CODE 0020

SIGN BRIDGES

LOCATION	641.6600 SIGN BRIDGE S-40-458 LS	641.0100 SIGN BRIDGE S-40-869 LS	641.0600 SIGN BRIDGE S-40-870 LS
I-43 JUST N OF LOCUST ST	1		
I-894 JUST W OF 68TH ST		1	
I-894 JUST W OF 51ST ST			1
TOTAL	1	1	1

CATEGORY CODE 0020
(for information only)

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SIGNS

SIGN NO.	TYPE I SIGN SIZE FT X FT	TYPE I SIGN MESSAGE	TYPE II SIGN CODE	TYPE II SIGN SIZE IN X IN	TYPE II SIGN MESSAGE	637.1220 SIGNS TYPE I REFLECTIVE SH SF	638.2101 MOVING SIGNS TYPE I EACH	638.2601 REMOVING SIGNS TYPE I EACH	201.0110 CLEARING SY	REMARKS
S-40-869	19 x 7.5	60th St - 1/4 Loomis Rd - 11/4 27th St - 2 1/4				142.5		1		I-BEAMS INCIDENTAL
S-40-870	22 X 7.5	60th St - 1/4 76th St - 11/4 Forest Home Ave - 13/4				165		1		I-BEAMS INCIDENTAL
S-40-870	22 X 7.5	Loomis Rd - 1/4 27th St - 11/4 <I-94 Sym> - 11/2					1			I-BEAMS INCIDENTAL
S-40-458	25 X 9	<DMS>							30	I-BEAMS INCIDENTAL
					TOTAL	308	1	2	30	

CATEGORY CODE 0010

PROJECT NO: 1000-20-69	HWY: VARIOUS	COUNTY: SE REGION WIDE	MISCELLANEOUS QUANTITIES	SHEET 39	E

FOR INFORMATION ONLY

STRUCTURE NUMBER	ELEVATION VIEW SHEET NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION	REMOVE GROUT PAD	REPLACE RODENT SCREEN	TENSION ANCHOR RODS	REPAIR FOUNDATION	SPLICE CONNECTION BOLT REPLACEMENT	INSTALL NEW POST TO MAST ARM CONNECTION BOLT	SECURE/REPLACE CHORD CAP	REPLACE CANTILEVER TRUSS COLUMN CONNECTION BOLT	INSTALL TYPE I SIGN SUPPORT BRACKET	REPLACE TYPE I SIGN SUPPORT BRACKET	REPLACE SIGN BRIDGE ID PLAQUE	REPLACE POST CLIP	REATTACH TYPE-II SIGN	REPLACE TYPE-II SIGN TO VERTICAL UPRIGHT	REPLACE TYPE II SIGN SUPPORT BRACKET	SLOTTED HOLE REPAIR ON SIGN SUPPORT BRACKET	TIGHTEN/REPLACE HANDHOLE COVER	SECURE LUMINAIRE COVER	INSTALL JUNCTION BOX COVER	REPLACE CONDUIT PLUG	REPLACE SAFETY CHAIN	ALIGN HANDRAIL LOCKING PIN	INSTALL/REPLACE HANDRAIL LOCKING PIN
					SPV.0060.02	SPV.0060.03	SPV.0060.04	SPV.0060.05	SPV.0060.06	SPV.0060.07	SPV.0060.08	SPV.0060.09	SPV.0060.10	SPV.0060.11	SPV.0060.12	SPV.0060.13	SPV.0060.14	SPV.0165.01	SPV.0060.15	SPV.0060.16	SPV.0060.17	SPV.0060.18	SPV.0060.19	SPV.0060.20	SPV.0060.21	SPV.0060.22	SPV.0060.23
					EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
S-30-012	11 OF 100	I-94	NB	AT EXIT TO WIS 165					1																		
S-40-001	12 OF 100	I-94/43	NB/SB	AT RAMP FROM NATIONAL AVE																	1						
S-40-099	13 OF 100	I-894/US 45	EB/SB	AT EXIT TO GREENFIELD AVE																	1						
S-40-151	14 OF 100	I-94	EB	AT EXIT TO HAWLEY RD																		1					
S-40-212	15 OF 100	I-94/43	NB	JUST SOUTH OF GREENFIELD AVE																							
S-40-215	16 OF 100	I-894/US 45	SB	0.35 M SOUTH OF NATIONAL AVE																		1	1				
S-40-216	17 OF 100	I-894/US 45	NB/SB	0.20 M SOUTH OF OAKLAHOMA AVE																		2					
S-40-217	18 OF 100	I-894/US 45	NB/SB	0.1 M SOUTH OF HOWARD AVE																		1					
S-40-221	19 OF 100	I-43/I-894	WB	JUST WEST OF 68TH ST.																		1					
S-40-224	20 OF 100	I-43	NB/SB	0.08 M NORTH OF NORTH AVE				1																			
S-40-227	21 OF 100	I-43	NB	0.25 M SOUTH OF CAPITOL DR				1																			
S-40-260	22 OF 100	GOOD HOPE RD	WB	JUST EAST OF US 41				1																			
S-40-287	23 OF 100	WIS 100	WB	JUST EAST OF WIS 241 (27TH ST)						4																	
S-40-288	24 OF 100	STH 241 (27TH ST)	NB	JUST SOUTH OF WIS 100															1								
S-40-400	25 OF 100	US 45	SB	100' NORTH OF BURLEIGH RD					4																2		
S-40-406	26 OF 100	I-894/US 45	NB	0.25 M SOUTH OF NATIONAL AVE					4																	4	
S-40-407	27 OF 100	WIS 100	NB	0.2 M SOUTH OF I-43								1															
S-40-424	28 OF 100	I-43	SB	0.1 M NORTH OF NORTH AVE																							
S-40-427	29 OF 100	AIRPORT SPUR	WB	0.25 M EAST OF HOWELL AVE		1																					
S-40-430	30 OF 100	I-94	EB	1/8 M WEST OF 27TH ST			1														1						
S-40-439	31 OF 100	I-94	NB	ON LAYTON AVE BRIDGE											1												
S-40-440	32 OF 100	WIS 119	WB	AT ENTRANCE FROM HOWELL AVE					8																		8
S-40-524	33 OF 100	I-94/I-43	NB	AT EXIT TO MICHIGAN ST			1																				
S-40-525	34 OF 100	I-94	EB	AT 25TH ST ENTRANCE RAMP				1																			
S-40-533	35 OF 100	I-794	EB	PLANKINGTON EXIT RAMP AT 6TH ST			2																				
S-40-534	36 OF 100	I-794	WB	AT RAMP TO I-43 NB			2																				
S-40-535	37 OF 100	I-794	WB	OVER 5TH ST			2																				
S-40-536	38 OF 100	I-794	EB	AT EXIT TO PLANKINTON AVE			2																				
S-40-540	39 OF 100	I-794	EB	OVER MILWAUKEE RIVER			2																				
S-40-542	40 OF 100	I-94	WB	ON S-W MARQUETTE RAMP			1																				
S-40-552	41 OF 100	I-94/I-43	NB	JUST SOUTH OF COLLEGE AVE			1																				
S-40-571	42 OF 100	I-94	SB	AT LAYTON AVE ON C-D RAMP			1																				
S-40-572	43 OF 100	I-94	SB	AT EXIT TO LAYTON AVE			1																				
S-40-575	44 OF 100	I-94/I-43	WB	0.15 M EAST OF 6TH ST			1																				
S-40-576	45 OF 100	I-94/I-43	WB	0.05 M EAST OF 6TH ST			1																				
S-40-600	46 OF 100	PENNSYLVANIA AVE	NB	AT LAYTON AVE					1																		
S-40-700	47 OF 100	I-94	WB	ON RAMP FROM ST. PAUL AVE		1																					
S-40-710	48 OF 100	I-94	WB	ON EXIT RAMP TO 25TH ST																1							
S-40-718	49 OF 100	I-794	EB	JUST EAST OF 5TH ST			1																				
S-40-719	50 OF 100	I-43	NB	OVER NATIONAL AVE		1									1												
S-40-721	51 OF 100	I-94/I-43	SB	JUST NORTH OF MENOMINEE RIVER														16									
S-40-729	52 OF 100	I-94	NB	ON RAMP FROM TORY HILL													1										
S-40-772	53 OF 100	I-94/I-43	NB/SB	0.5M N OF OAKLAHOMA AVE			1																				
S-40-774	54 OF 100	I-43	NB	ON RAMP TO WIS 241 NB																							
S-40-826	55 OF 100	I-94/I-43	EB	ON RAMP TO I-894 WB			1																				

REFER TO SHEET 3.3 FOR A CONTINUATION OF REPAIRS FOR THESE SIGN BRIDGES

REFER TO SHEET 3.2 FOR A CONTINUATION OF REPAIRS FOR THESE SIGN BRIDGES

FOR INFORMATION ONLY

REFER TO SHEET 3.1 FOR A CONTINUATION OF REPAIRS FOR THESE SIGN BRIDGES

STRUCTURE NUMBER	ELEVATION VIEW SHEET NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION	REMOVE SIGN CATWALK	REPLACE CONCRETE BARRIER	SECURE SPACER BLOCK	INSTALL/REPLACE CATWALK HANDRAIL	REMOVE FORMWORK TO GRADE	REPLACE U-BOLTS	FILL EROSION	SECURE/REPLACE VERTICAL POST CAP	SECURE ANCHOR CONNECTION PLATE	REPLACE CATWALK GRATING	REPLACE SIGNAL CONNECTION ASSEMBLY	REPAIR FOUNDATION JOINT	REMOVE DEBRIS AND REGRADE	REPAIR ANCHOR ROD FOUNDATION SUPPORT	REPLACE TYPE II MOUNTING SYSTEM
					SPV.0060.24	SPV.0090.01	SPV.0060.25	SPV.0090.02	SPV.0060.26	SPV.0060.27	SPV.0060.28	SPV.0060.29	SPV.0060.30	SPV.0060.31	SPV.0060.32	SPV.0060.33	SPV.0060.34	SPV.0060.35	SPV.0060.36
					EACH	LF	EACH	LF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
S-30-012	11 OF 100	I-94	NB	AT EXIT TO WIS 165															
S-40-001	12 OF 100	I-94/43	NB/SB	AT RAMP FROM NATIONAL AVE														1	
S-40-099	13 OF 100	I-894/US 45	EB/SB	AT EXIT TO GREENFIELD AVE															
S-40-151	14 OF 100	I-94	EB	AT EXIT TO HAWLEY RD	1														
S-40-212	15 OF 100	I-94/43	NB	JUST SOUTH OF GREENFIELD AVE		6				8									
S-40-215	16 OF 100	I-894/US 45	SB	0.35 M SOUTH OF NATIONAL AVE						8									
S-40-216	17 OF 100	I-894/US 45	NB/SB	0.20 M SOUTH OF OAKLAHOMA AVE						8									
S-40-217	18 OF 100	I-894/US 45	NB/SB	0.1 M SOUTH OF HOWARD AVE						8									
S-40-221	19 OF 100	I-43/I-894	WB	JUST WEST OF 68TH ST.						8									
S-40-224	20 OF 100	I-43	NB/SB	0.08 M NORTH OF NORTH AVE						16									
S-40-227	21 OF 100	I-43	NB	0.25 M SOUTH OF CAPITOL DR															
S-40-260	22 OF 100	GOOD HOPE RD	WB	JUST EAST OF US 41														1	
S-40-287	23 OF 100	WIS 100	WB	JUST EAST OF WIS 241 (27TH ST)															
S-40-288	24 OF 100	STH 241 (27TH ST)	NB	JUST SOUTH OF WIS 100															
S-40-400	25 OF 100	US 45	SB	100' NORTH OF BURLEIGH RD															
S-40-406	26 OF 100	I-894/US 45	NB	0.25 M SOUTH OF NATIONAL AVE			1												
S-40-407	27 OF 100	WIS 100	NB	0.2 M SOUTH OF I-43															
S-40-424	28 OF 100	I-43	SB	0.1 M NORTH OF NORTH AVE										1					
S-40-427	29 OF 100	AIRPORT SPUR	WB	0.25 M EAST OF HOWELL AVE															
S-40-430	30 OF 100	I-94	EB	1/8 M WEST OF 27TH ST															
S-40-439	31 OF 100	I-94	NB	ON LAYTON AVE BRIDGE															
S-40-440	32 OF 100	WIS 119	WB	AT ENTRANCE FROM HOWELL AVE															
S-40-524	33 OF 100	I-94/I-43	NB	AT EXIT TO MICHIGAN ST															
S-40-525	34 OF 100	I-94	EB	AT 25TH ST ENTRANCE RAMP															
S-40-533	35 OF 100	I-794	EB	PLANKINGTON EXIT RAMP AT 6TH ST															
S-40-534	36 OF 100	I-794	WB	AT RAMP TO I-43 NB															
S-40-535	37 OF 100	I-794	WB	OVER 5TH ST															
S-40-536	38 OF 100	I-794	EB	AT EXIT TO PLANKINTON AVE															
S-40-540	39 OF 100	I-794	EB	OVER MILWAUKEE RIVER				18											
S-40-542	40 OF 100	I-94	WB	ON S-W MARQUETTE RAMP															
S-40-552	41 OF 100	I-94/I-43	NB	JUST SOUTH OF COLLEGE AVE															
S-40-571	42 OF 100	I-94	SB	AT LAYTON AVE ON C-D RAMP															
S-40-572	43 OF 100	I-94	SB	AT EXIT TO LAYTON AVE															
S-40-575	44 OF 100	I-94/I-43	WB	0.15 M EAST OF 6TH ST															
S-40-576	45 OF 100	I-94/I-43	WB	0.05 M EAST OF 6TH ST															
S-40-600	46 OF 100	PENNSYLVANIA AVE	NB	AT LAYTON AVE															
S-40-700	47 OF 100	I-94	WB	ON RAMP FROM ST. PAUL AVE															
S-40-710	48 OF 100	I-94	WB	ON EXIT RAMP TO 25TH ST															
S-40-718	49 OF 100	I-794	EB	JUST EAST OF 5TH ST															
S-40-719	50 OF 100	I-43	NB	OVER NATIONAL AVE															
S-40-721	51 OF 100	I-94/I-43	SB	JUST NORTH OF MENOMINEE RIVER															
S-40-729	52 OF 100	I-94	NB	ON RAMP FROM TORY HILL															
S-40-772	53 OF 100	I-94/I-43	NB/SB	0.5M N OF OAKLAHOMA AVE															
S-40-774	54 OF 100	I-43	NB	ON RAMP TO WIS 241 NB					1										
S-40-826	55 OF 100	I-94/I-43	EB	ON RAMP TO I-894 WB															

REFER TO SHEET 3.4 FOR A CONTINUATION OF REPAIRS FOR THESE SIGN BRIDGES

FOR INFORMATION ONLY

REFER TO SHEET 3.1 FOR A CONTINUATION OF REPAIRS FOR THESE SIGN BRIDGES

STRUCTURE NUMBER	ELEVATION VIEW SHEET NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION	REMOVE GROUT PAD	REPLACE RODENT SCREEN	TENSION ANCHOR RODS	REPAIR FOUNDATION	SPLICE CONNECTION BOLT REPLACEMENT	INSTALL NEW POST TO MAST ARM CONNECTION BOLT	SECURE/REPLACE CHORD CAP	REPLACE CANTILEVER TRUSS COLUMN CONNECTION BOLT	INSTALL TYPE I SIGN SUPPORT BRACKET	REPLACE TYPE I SIGN SUPPORT BRACKET	REPLACE SIGN BRIDGE ID PLAQUE	REPLACE POST CLIP	REATTACH TYPE-II SIGN	REPLACE TYPE-II SIGN TO VERTICAL UPRIGHT	REPLACE TYPE II SIGN SUPPORT BRACKET	SLOTTED HOLE REPAIR ON SIGN SUPPORT BRACKET	TIGHTEN/REPLACE HANDHOLE COVER	SECURE LUMINAIRE COVER	INSTALL JUNCTION BOX COVER	REPLACE CONDUIT PLUG	REPLACE SAFETY CHAIN	ALIGN HANDRAIL LOCKING PIN	INSTALL/REPLACE HANDRAIL LOCKING PIN
					SPV.0060.02	SPV.0060.03	SPV.0060.04	SPV.0060.05	SPV.0060.06	SPV.0060.07	SPV.0060.08	SPV.0060.09	SPV.0060.10	SPV.0060.11	SPV.0060.12	SPV.0060.13	SPV.0060.14	SPV.0165.01	SPV.0060.15	SPV.0060.16	SPV.0060.17	SPV.0060.18	SPV.0060.19	SPV.0060.20	SPV.0060.21	SPV.0060.22	SPV.0060.23
					EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
S-40-827	56 OF 100	I-94/I-43	EB	0.25 M NORTH OF LAYTON AVE			1																				
S-40-828	57 OF 100	I-94/I-43	SB	0.25 M SOUTH OF HOWARD AVE			1																				
S-40-829	58 OF 100	I-94/I-43	EB	AT RAMP FROM HOWARD AVE			1																				
S-40-838	59 OF 100	WIS 119	EB	JUST EAST OF 13TH ST			4																				
S-40-839	60 OF 100	WIS 119	EB	0.5 M WEST OF HOWELL AVE			4																				
S-40-840	61 OF 100	WIS 119	EB	0.12 M WEST OF HOWELL AVE EXIT			4																				
S-40-841	62 OF 100	WIS 119	WB	0.6 M EAST OF EXIT TO I-94																1							
S-40-905	63 OF 100	WIS 36	NB	400 FEET SOUTH OF LAYTON AVE			1												2								
S-40-916	64 OF 100	I-43	SB	ON EXIT TO WIS 100					1						1												
S-40-917	65 OF 100	US 41	SB	ENTRANCE RAMP FROM HAMPTON AVE																							
S-45-206	66 OF 100	WIS 33	EB	JUST WEST OF MARKET ST			2													1							
S-45-207	67 OF 100	WIS 33	WB	JUST EAST OF MARKET ST			2													1							
S-45-214	68 OF 100	WIS 33	WB	JUST EAST OF I-43 N EXIT RAMP			1													2							
S-45-602	69 OF 100	WIS 57	SB	JUST NORTH OF MEQUON RD											1												
S-45-606	70 OF 100	MARKET ST	SB	JUST NORTH OF WIS 33			2													2							
S-51-016	71 OF 100	MILWAUKEE AVE	EB	0.61 M WEST OF WIS 83			1																				
S-51-233	72 OF 100	WIS 32	WB	0.31 M EAST OF MAIN ST			2																				
S-64-203	73 OF 100	WIS 50	WB	JUST EAST OF US 12																							
S-64-204	74 OF 100	WIS 50	EB	JUST EAST OF WIS 120			1																				
S-64-600	75 OF 100	WIS 67	NB	JUST NORTH OF COURT ST																							
S-66-004	76 OF 100	US 41	NB	AT EXIT TO WIS 60												18											
S-66-602	77 OF 100	PARADISE DR	WB	0.1 MILE E OF US 45																							
S-67-001	78 OF 100	US 41	SB	JUST N OF WIS 100 (MAIN ST)		1																					
S-67-015	79 OF 100	MOORLAND	SB	0.3M NORTH OF I-94					2										6								
S-67-020	80 OF 100	I-94	WB	AT EXIT TO COUNTY C			1																				
S-67-207	81 OF 100	US 41	NB/SB	0.42 M SOUTH OF PILGRIM RD									8														
S-67-256	82 OF 100	WIS 164	SB	JUST NORTH OF WIS 190															1								
S-67-257	83 OF 100	WIS 190	EB	JUST WEST OF WIS 164															1								
S-67-269	84 OF 100	WIS 83	NB	0.1 M SOUTH OF RAMP TO WIS 16 E			1																				
S-67-275	85 OF 100	I-43	EB	ON EXIT RAMP TO MOORLAND RD					1																		
S-67-281	86 OF 100	I-94	WB	EXIT RAMP TO COUNTY Y					2							6				8							
S-67-292	87 OF 100	US 18	WB	JUST WEST OF RUF RD			1																				
S-67-298	88 OF 100	US 18	WB	300 FEET EAST OF COUNTY Y			1																				
S-67-300	89 OF 100	US 41	NB	ON WIS 100 (MAIN ST) BRIDGE																							
S-67-305	90 OF 100	US 41	NB	0.2 M SOUTH OF MAIN ST		1																					
S-67-310	91 OF 100	I-43	SB	AT EXIT RAMP TO MOORLAND RD								2												1			
S-67-401	92 OF 100	I-94	WB	0.25 M WEST OF BROOKFIELD RD	4			1																			
S-67-403	93 OF 100	I-43	EB	JUST WEST OF BELOIT RD					4																		
S-67-600	94 OF 100	LISBON RD	EB	JUST WEST OF 124TH ST			1																				
S-67-910	95 OF 100	WIS 16/67	SB	0.25 M NORTH OF COUNTY Z																							
S-67-915	96 OF 100	COUNTY Y (RACINE AVE)	SB	AT I-43										5													
S-67-940	97 OF 100	COUNTY JJ	EB	JUST WEST OF USH 18			2		2																		
S-67-941	98 OF 100	CALHOUN RD	NB	JUST SOUTH OF BLUEMOUND RD			2																				
S-67-943	99 OF 100	US 18	EB	JUST WEST OF MOORLAND RD			1				2																
S-67-944	100 OF 100	US 18	EB	JUST EAST OF EXECUTIVE DR											1												
TOTAL					4	5	58	5	30	4	2	3	8	5	5	24	1	16	11	16	3	5	2	1	2	4	8

REFER TO SHEET 3.4 FOR A CONTINUATION OF REPAIRS FOR THESE SIGN BRIDGES

FOR INFORMATION ONLY

REFER TO SHEET 3.2 FOR A CONTINUATION OF REPAIRS FOR THESE SIGN BRIDGES

REFER TO SHEET 3.3 FOR A CONTINUATION OF REPAIRS FOR THESE SIGN BRIDGES

STRUCTURE NUMBER	ELEVATION VIEW SHEET NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION	REMOVE SIGN CATWALK	REPLACE CONCRETE BARRIER	SECURE SPACER BLOCK	INSTALL/REPLACE CATWALK HANDRAIL	REMOVE FORMWORK TO GRADE	REPLACE U-BOLTS	FILL EROSION	SECURE/REPLACE VERTICAL POST CAP	SECURE ANCHOR CONNECTION PLATE	REPLACE CATWALK GRATING	REPLACE SIGNAL CONNECTION ASSEMBLY	REPAIR FOUNDATION JOINT	REMOVE DEBRIS AND REGRADE	REPAIR ANCHOR ROD FOUNDATION SUPPORT	REPLACE TYPE II MOUNTING SYSTEM
					SPV.0060.24	SPV.0090.01	SPV.0060.25	SPV.0090.02	SPV.0060.26	SPV.0060.27	SPV.0060.28	SPV.0060.29	SPV.0060.30	SPV.0060.31	SPV.0060.32	SPV.0060.33	SPV.0060.34	SPV.0060.35	SPV.0060.36
					EACH	LF	EACH	LF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
S-40-827	56 OF 100	I-94/I-43	EB	0.25 M NORTH OF LAYTON AVE															
S-40-828	57 OF 100	I-94/I-43	SB	0.25 M SOUTH OF HOWARD AVE															
S-40-829	58 OF 100	I-94/I-43	EB	AT RAMP FROM HOWARD AVE															
S-40-838	59 OF 100	WIS 119	EB	JUST EAST OF 13TH ST															
S-40-839	60 OF 100	WIS 119	EB	0.5 M WEST OF HOWELL AVE															
S-40-840	61 OF 100	WIS 119	EB	0.12 M WEST OF HOWELL AVE EXIT															
S-40-841	62 OF 100	WIS 119	WB	0.6 M EAST OF EXIT TO I-94															
S-40-905	63 OF 100	WIS 36	NB	400 FEET SOUTH OF LAYTON AVE															
S-40-916	64 OF 100	I-43	SB	ON EXIT TO WIS 100															
S-40-917	65 OF 100	US 41	SB	ENTRANCE RAMP FROM HAMPTON AVE											1				
S-45-206	66 OF 100	WIS 33	EB	JUST WEST OF MARKET ST															
S-45-207	67 OF 100	WIS 33	WB	JUST EAST OF MARKET ST															
S-45-214	68 OF 100	WIS 33	WB	JUST EAST OF I-43 N EXIT RAMP															
S-45-602	69 OF 100	WIS 57	SB	JUST NORTH OF MEQUON RD															
S-45-606	70 OF 100	MARKET ST	SB	JUST NORTH OF WIS 33															
S-51-016	71 OF 100	MILWAUKEE AVE	EB	0.61 M WEST OF WIS 83															
S-51-233	72 OF 100	WIS 32	WB	0.31 M EAST OF MAIN ST															
S-64-203	73 OF 100	WIS 50	WB	JUST EAST OF US 12															1
S-64-204	74 OF 100	WIS 50	EB	JUST EAST OF WIS 120															
S-64-600	75 OF 100	WIS 67	NB	JUST NORTH OF COURT ST											1				
S-66-004	76 OF 100	US 41	NB	AT EXIT TO WIS 60															
S-66-602	77 OF 100	PARADISE DR	WB	0.1 MILE E OF US 45															1
S-67-001	78 OF 100	US 41	SB	JUST N OF WIS 100 (MAIN ST)															
S-67-015	79 OF 100	MOORLAND	SB	0.1M NORTH OF I-94															
S-67-020	80 OF 100	I-94	WB	AT EXIT TO COUNTY C															
S-67-207	81 OF 100	US 41	NB/SB	0.42 M SOUTH OF PILGRIM RD															
S-67-256	82 OF 100	WIS 164	SB	JUST NORTH OF WIS 190															1
S-67-257	83 OF 100	WIS 190	EB	JUST WEST OF WIS 164															
S-67-269	84 OF 100	WIS 83	NB	0.1 M SOUTH OF RAMP TO WIS 16 E															
S-67-275	85 OF 100	I-43	EB	ON EXIT RAMP TO MOORLAND RD													1		
S-67-281	86 OF 100	I-94	WB	EXIT RAMP TO COUNTY Y															
S-67-292	87 OF 100	US 18	WB	JUST WEST OF RUF RD															
S-67-298	88 OF 100	US 18	WB	300 FEET EAST OF COUNTY Y															
S-67-300	89 OF 100	US 41	NB	ON WIS 100 (MAIN ST) BRIDGE									1					1	
S-67-305	90 OF 100	US 41	NB	0.2 M SOUTH OF MAIN ST							1								
S-67-310	91 OF 100	I-43	SB	AT EXIT RAMP TO MOORLAND RD															
S-67-401	92 OF 100	I-94	WB	0.25 M WEST OF BROOKFIELD RD												2			
S-67-403	93 OF 100	I-43	EB	JUST WEST OF BELOIT RD															
S-67-600	94 OF 100	LISBON RD	EB	JUST WEST OF 124TH ST															
S-67-910	95 OF 100	WIS 16/67	SB	0.25 M NORTH OF COUNTY Z								1							
S-67-915	96 OF 100	COUNTY Y (RACINE AVE)	SB	AT I-43															
S-67-940	97 OF 100	COUNTY JJ	EB	JUST WEST OF USH 18															
S-67-941	98 OF 100	CALHOUN RD	NB	JUST SOUTH OF BLUEMOUND RD															
S-67-943	99 OF 100	US 18	EB	JUST WEST OF MOORLAND RD								1							
S-67-944	100 OF 100	US 18	EB	JUST EAST OF EXECUTIVE DR															
TOTAL					1	6	1	18	1	26	1	2	1	1	2	2	1	3	3

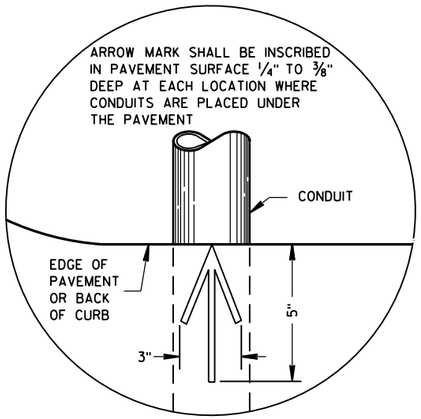
ROADWAY QUANTITIES*

STRUCTURE NUMBER	ELEVATION VIEW SHEET NUMBER	HIGHWAY	FILL EROSION
			SPV.0060.28
			EACH
S-67-401	97 OF 105	I-94	
TOTAL			1

* THE INFORMATION PROVIDED IN THIS TABLE IS FOR INFORMATION PURPOSES ONLY AND NOT TO BE COUNTED AS ADDITIONAL QUANTITIES TO THOSE LISTED ON THE ELEVATION VIEW SHEETS.

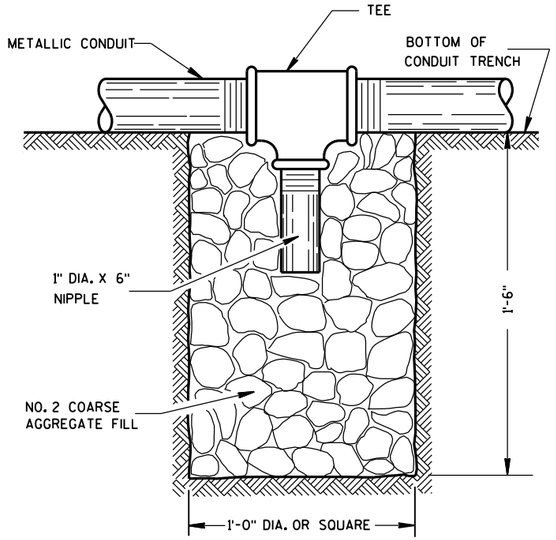
Standard Detail Drawing List

09B02-09	CONDUIT
09B04-11	PULL BOX
09E02-04	FREEWAY LIGHTING UNIT POLE WIRING
10A01-03	ELECTRICAL HANDHOLE WIRING
10A02-03	IDENTIFICATION PLAQUES LIGHT POLES
10A06-02	ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES GROUNDED NEUTRAL SYSTEMS
10A09-02	ELECTRICAL DETAILS STRUCTURE MOUNT LIGHT POLES GROUNDED NEUTRAL SYSTEMS
10A17-04B	POLES, TYPES A ALUMINUM 47'-6" SHAFT
10A18-05A	LUMINAIRE ARMS, SINGLE MEMBER 6-INCH CLAMP



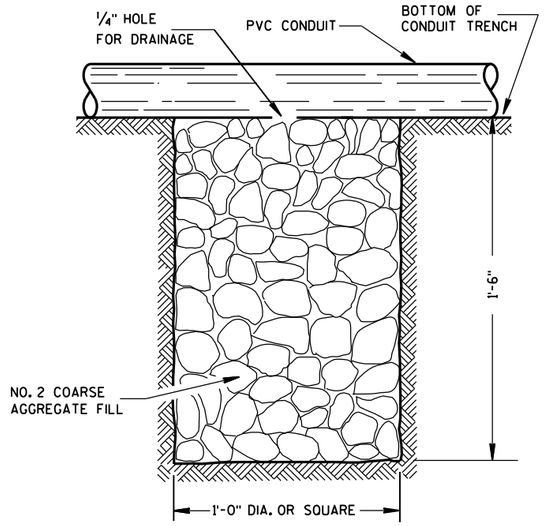
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

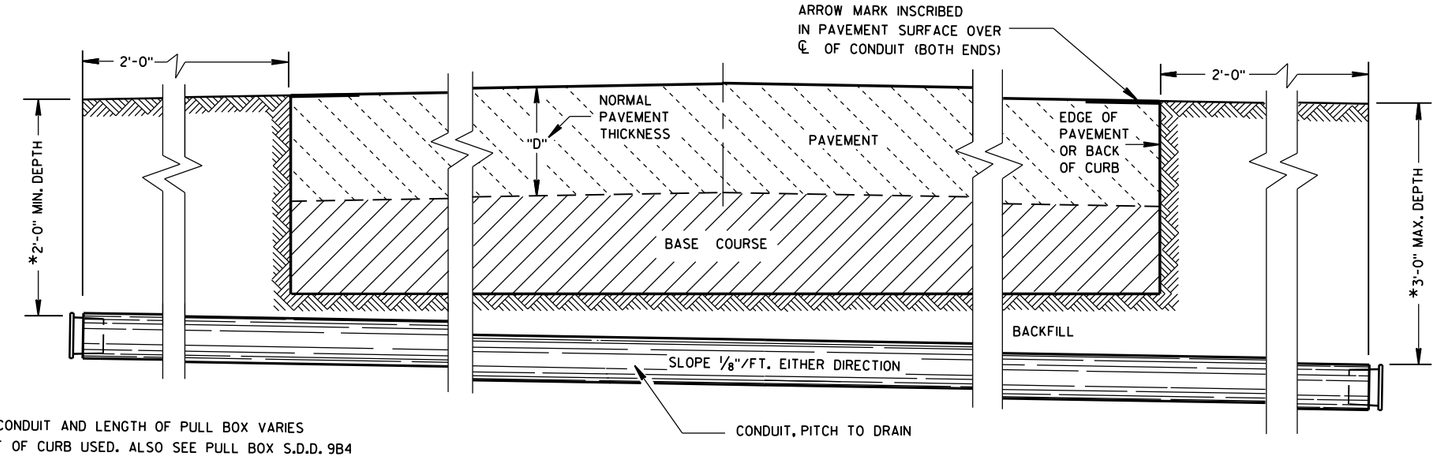
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

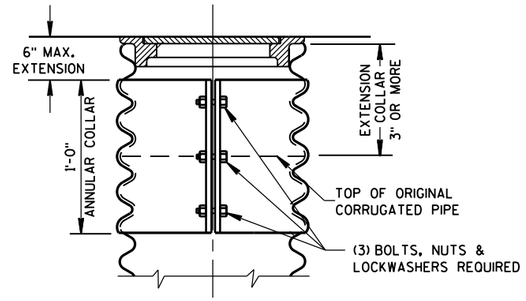
S.D.D. 9 B 2-9

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

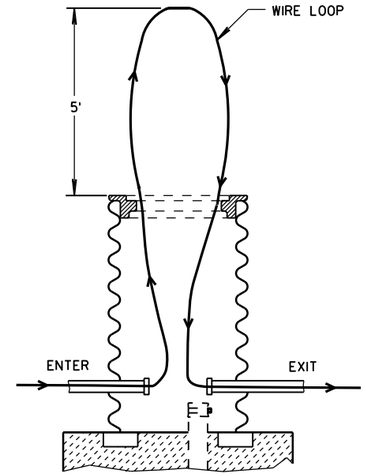
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

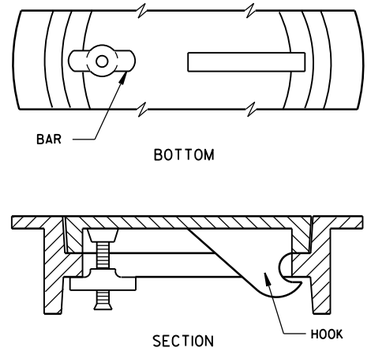
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

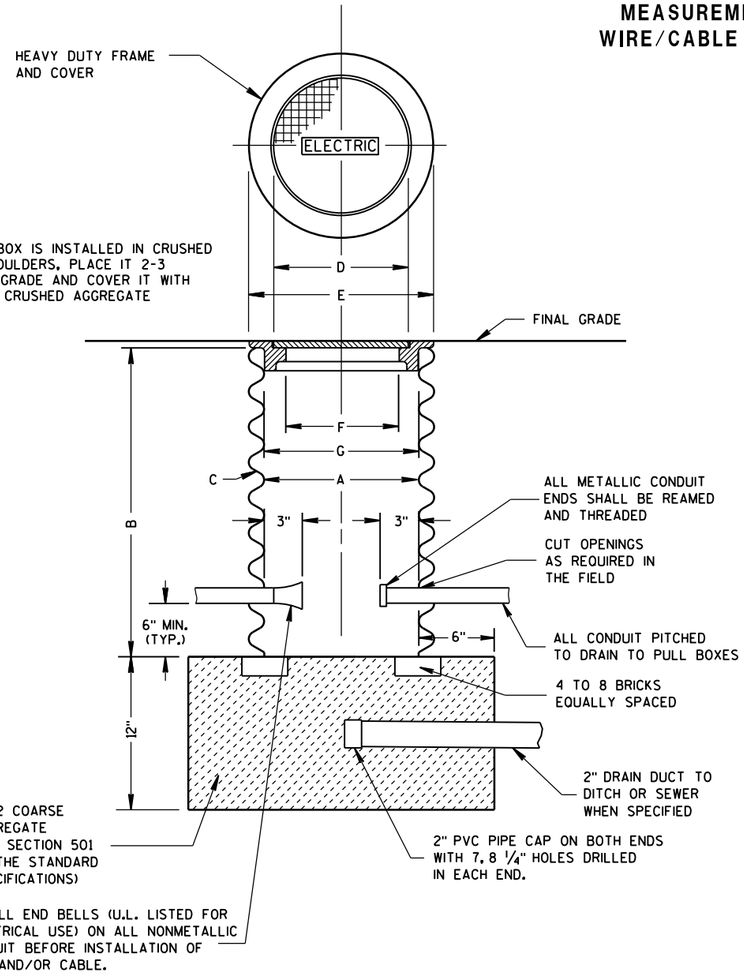


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



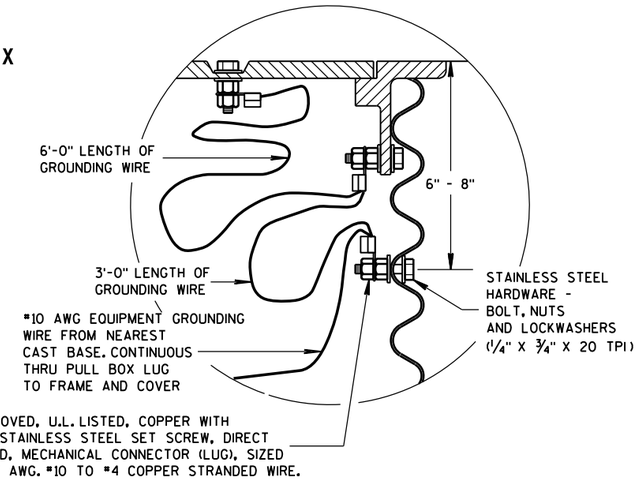
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

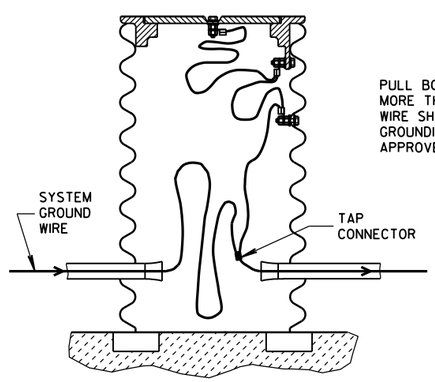
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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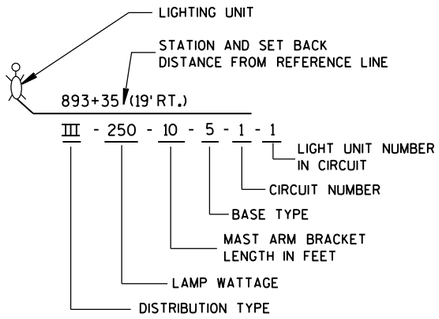
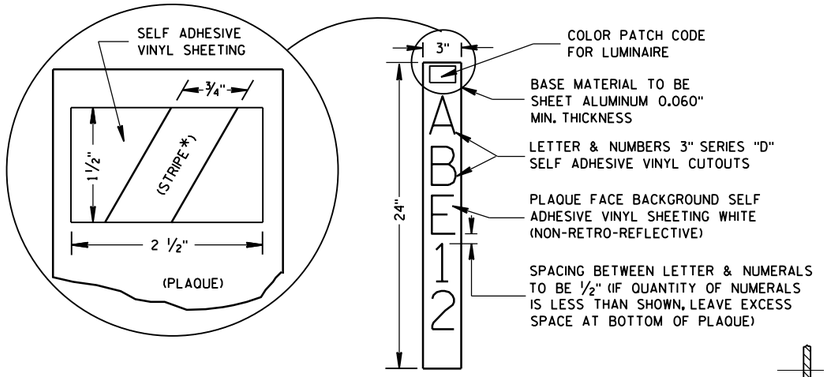


LIGHTING UNIT CODE
(TYPICAL)



COLOR PATCH CODE FOR LUMINAIRES

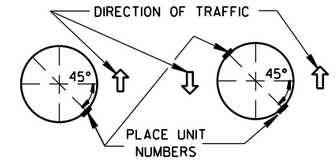
(HIGH PRESSURE SODIUM)

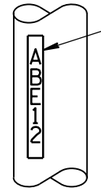
1000 WATT - NO PATCH
400 WATT - ORANGE
310 WATT - BLUE
250 WATT - ORANGE W/WHITE STRIPE*
200 WATT - RED
150 WATT - GREEN
100 WATT - BROWN

(MERCURY VAPOR)

400 WATT - (NO PATCH)
250 WATT - YELLOW

IDENTIFICATION PLAQUE





FASTEN TOP, CENTER AND BOTTOM OF PLAQUE WITH 3 ALUMINUM POP RIVETS (ALUM. POLES) OR STAINLESS STEEL POP RIVETS (STEEL POLES)

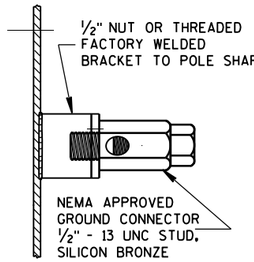
NOTES:

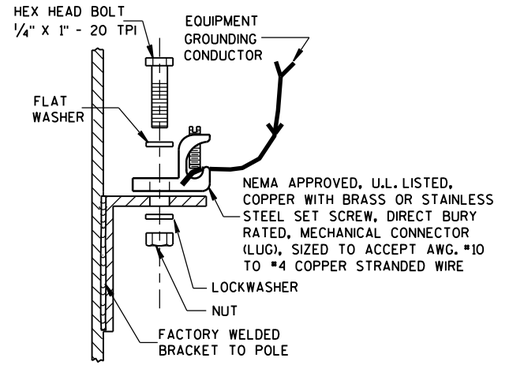
1) PLACE BOTTOM OF UNIT NUMBER PLAQUE 5'-0" ABOVE ELEVATION OF ADJACENT CURB OR SHOULDER.

2) UNIT NUMBERS: ONE REQUIRED FOR SINGLE ARM POLES TWO REQUIRED FOR MEDIAN MOUNT POLES.

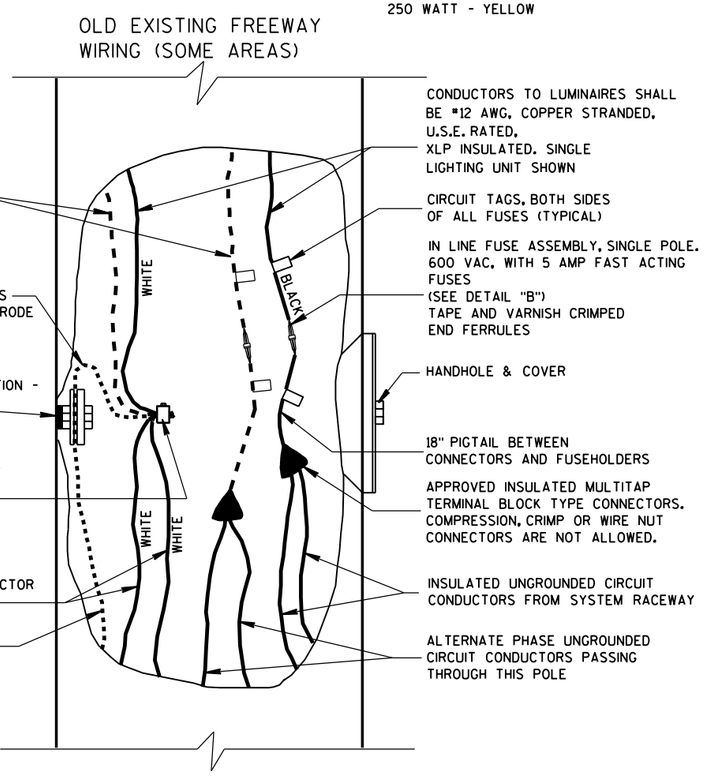
LIGHTING UNIT IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENT
(TYPICAL ALL LIGHTING UNITS)

FURNISH PLAQUE WHEN CALLED FOR BY SPECIAL PROVISIONS

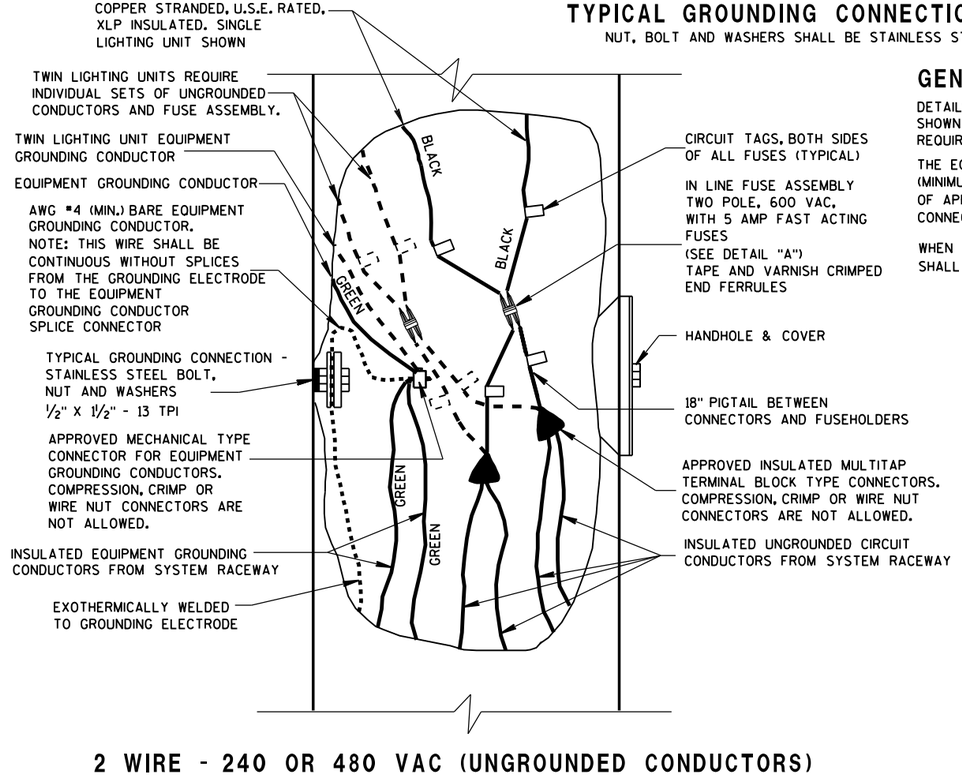




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



2 WIRE - 120, 240 OR 480 VAC TO GROUND



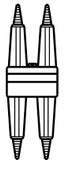
2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

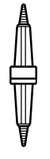
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT

FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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Sept. 2014 — DATE
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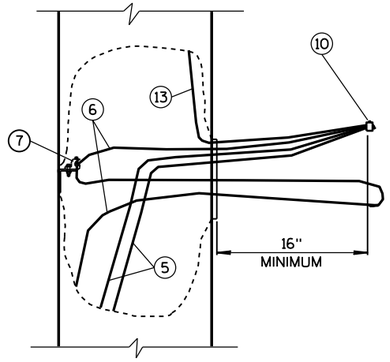
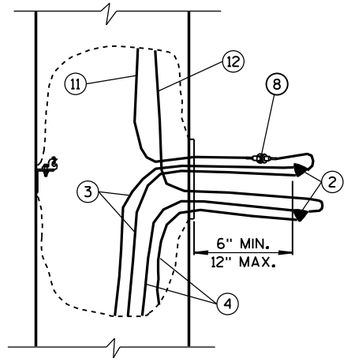
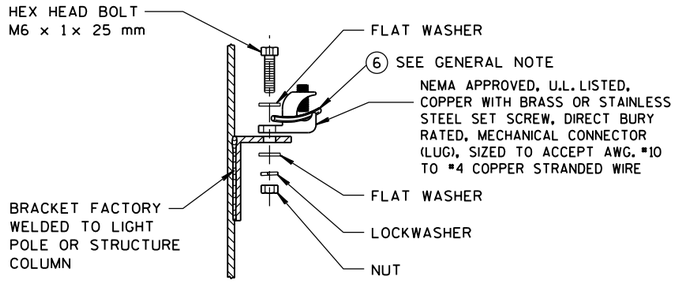


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



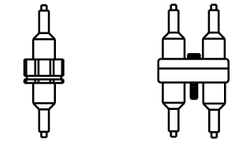
HANDHOLE GROUNDING LUG

(NUT, BOLT, WASHERS, AND LOCK WASHERS SHALL BE STAINLESS STEEL)

CONDUCTOR COLOR CODES

KEY	CONDUCTOR	COLOR
3	UNGROUNDED LINE WIRE	*
4	GROUNDED LINE WIRE	WHITE
5	SYSTEM GROUNDING LINE WIRE	GREEN
6	GROUNDING ELECTRODE CONDUCTOR	BARE
11	UNGROUNDED POLE WIRE	*
12	GROUNDED POLE WIRE	WHITE
13	EQUIPMENT GROUNDING POLE WIRE	GREEN

* FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING, USE BLACK FOR SINGLE LUMINAIRE POLES; BLACK AND RED FOR TWIN LUMINAIRE POLES.



1 POLE (1P) 2 POLE (2P)

FUSE ASSEMBLIES

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

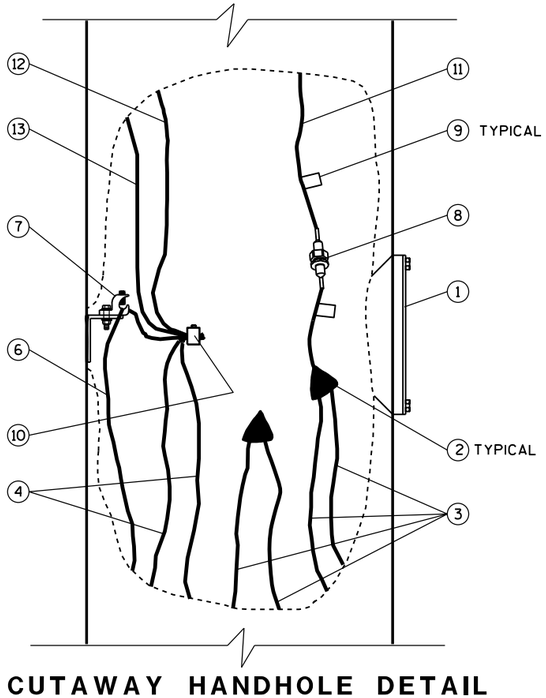
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

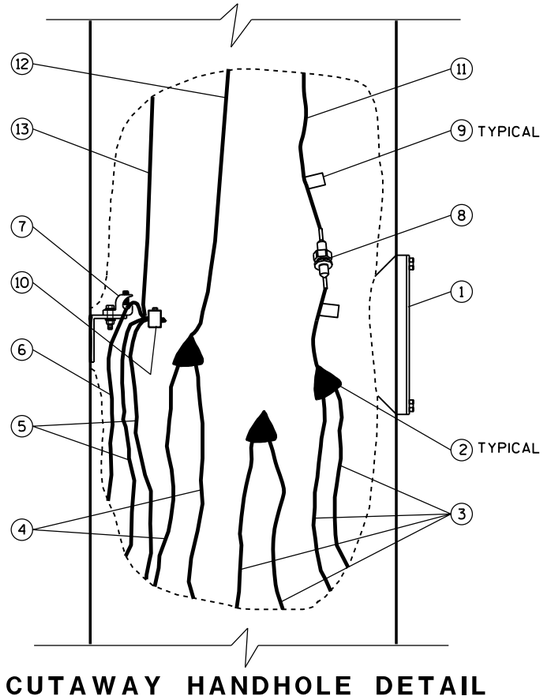
IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



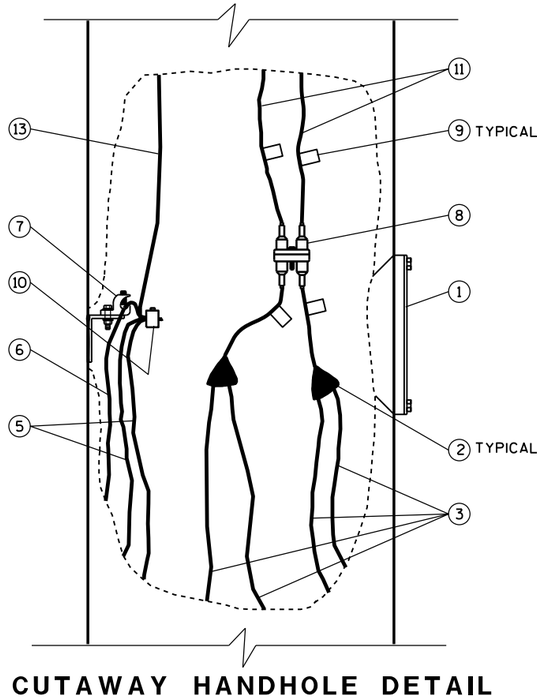
CUTAWAY HANDHOLE DETAIL

GROUNDED NEUTRAL SYSTEMS
1-Φ



CUTAWAY HANDHOLE DETAIL

ISOLATED NEUTRAL SYSTEMS
1-Φ SHOWN; 3-Φ WYE SIMILAR
(SEE GENERAL NOTE)



CUTAWAY HANDHOLE DETAIL

PHASE-TO-PHASE SYSTEMS
1-Φ SHOWN; 3-Φ DELTA SIMILAR
(SEE GENERAL NOTE)

NOTE: REQUIRED CONDUCTOR SLACK NOT SHOWN ON "CUTAWAY HAND HOLE" DETAILS FOR DRAWING CLARITY, SEE "TYPICAL CONDUCTOR SLACK AT HANDHOLES" ON THIS SHEET.

1. HANDHOLE AND COVER
2. INSULATED SPLICE
3. UNGROUNDED LINE WIRE
4. GROUNDED LINE WIRE
5. SYSTEM GROUNDING LINE WIRE
6. GROUNDING ELECTRODE CONDUCTOR
7. HANDHOLE GROUNDING LUG
8. FUSE ASSEMBLY, 1P OR 2P AS REQUIRED
9. CIRCUIT TAG (SEE GENERAL NOTE)
10. REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTOR (NOT INSULATED)
11. UNGROUNDED POLE WIRE
12. GROUNDED POLE WIRE
13. EQUIPMENT GROUNDING POLE WIRE

ELECTRICAL HANDHOLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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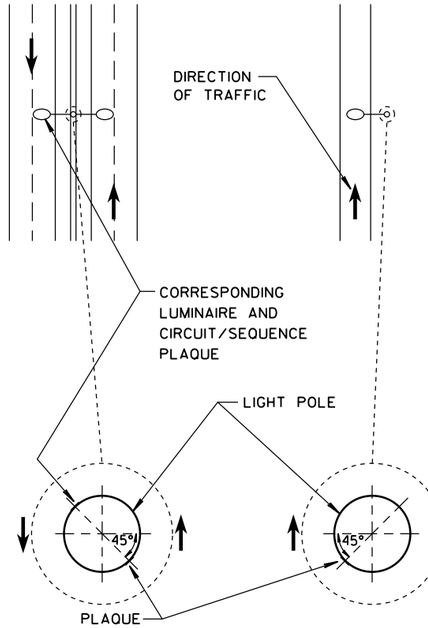


MEDIAN POLE SINGLE ARM POLE

LOCATION OF LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

WHERE SHOWN IN THE PLANS, REPLACEMENT PLAQUES WILL BE MEASURED AND PAID SEPARATELY.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETRORFLECTIVE

LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE

CHARACTERS - BLACK, SELF-ADHESIVE, SERIES "D", SIZE AS SHOWN

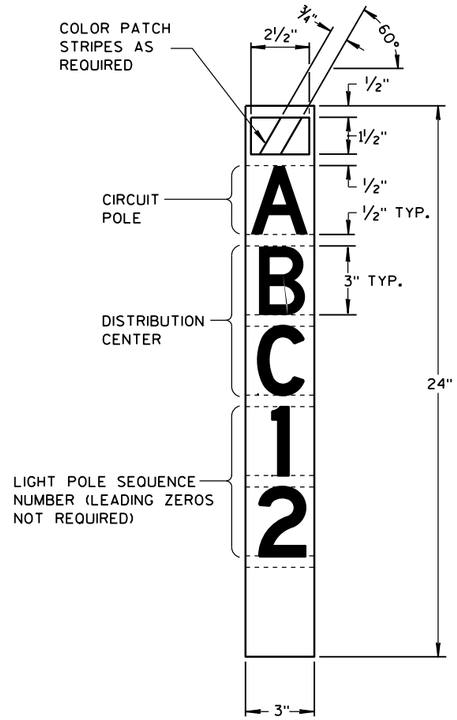
COLOR PATCHES - VARIOUS COLORS, SELF-ADHESIVE VINYL SHEETING

WITH THE APPROVAL OF THE ENGINEER, THE BASE MATERIAL MAY BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE SURFACE, IN CASES SUCH AS SMOOTH, CLEAN ALUMINUM POLES.

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.

COLOR PATCH CODE FOR HPS AND LED LUMINAIRES

HPS	LED	COLOR PATCH CODE
1000 WATT		NO PATCH
400 WATT	CATEGORY D	ORANGE
310 WATT		BLUE
250 WATT	CATEGORY C	ORANGE WITH WHITE STRIPE
200 WATT		RED
150 WATT	CATEGORY B	GREEN
100 WATT	CATEGORY A	BROWN
70 WATT	CATEGORY UDL	BROWN WITH WHITE STRIPE



LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

IDENTIFICATION PLAQUES LIGHT POLES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 — DATE
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GENERAL NOTES

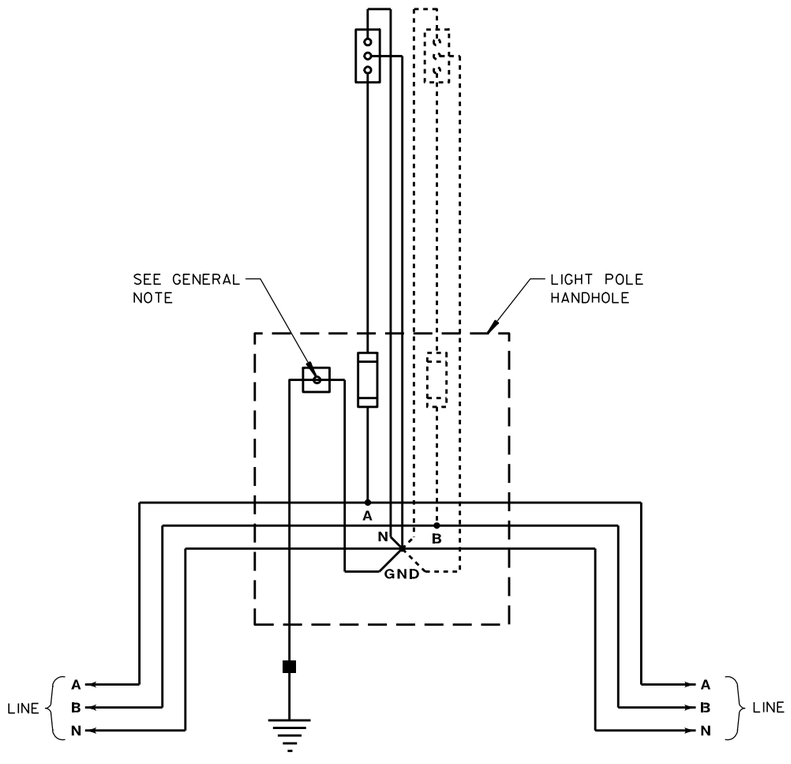
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.



TYPICAL WIRING DIAGRAM
GROUNDED NEUTRAL SYSTEM
1-ϕ 240/480VAC 3 WIRE OR 480VAC 2 WIRE

HANDHOLE FUSE SCHEDULES

LINE VOLTAGE ϕ-GROUND	BALLAST WATTAGE 70-200 W	250-400 W
120 VAC	5 A	10 A
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A

LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD

ELECTRICAL DETAILS
GROUND MOUNT LIGHT POLES
GROUNDED NEUTRAL SYSTEMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010 DATE
/S/ John Corbin STATE ELECTRICAL ENGI
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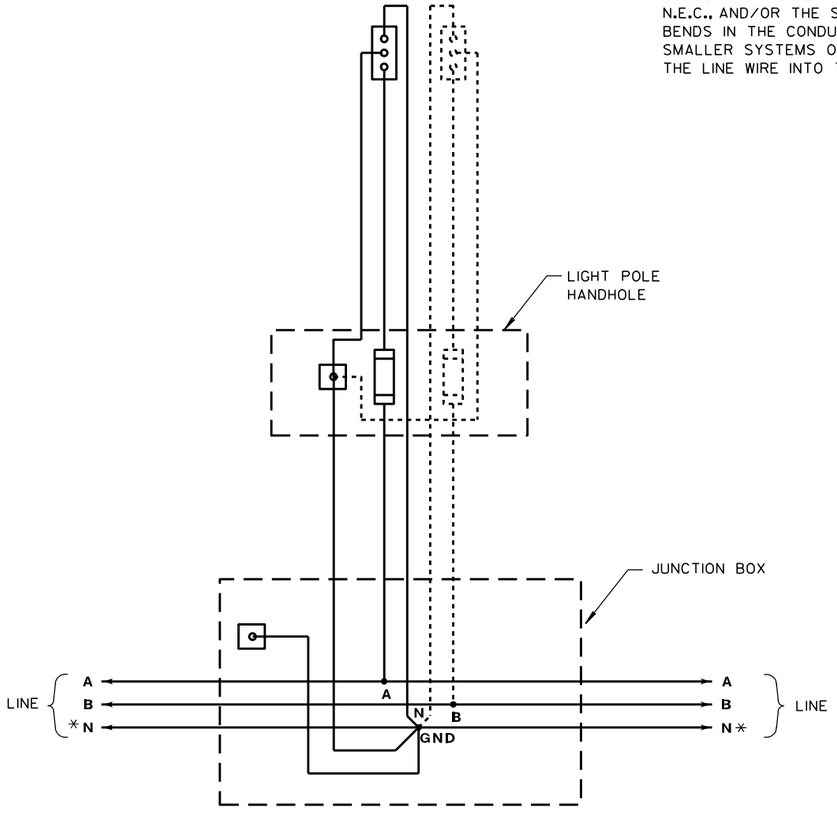
HANDHOLE FUSE SCHEDULES

LINE VOLTAGE ϕ-GROUND	BALLAST WATTAGE 70-200 W	250-400 W
120 VAC	5 A	10 A
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A



* INCREASE NEUTRAL BY ONE SIZE FOR LENGTH OF STRUCTURE

TYPICAL WIRING DIAGRAM
GROUNDED NEUTRAL SYSTEM
1-ϕ 240/480VAC OR 3 WIRE OR 480VAC 2 WIRE

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

WIRE SIZE FROM THE JUNCTION BOX TO THE POLE HANDHOLE SHALL EQUAL THE SIZE OF THE POLE WIRE.

THE INTENT OF JUNCTION BOX SPLICES AS SHOWN IN THIS DETAIL IS FOR LIGHTING SYSTEMS WITH HEAVY LINE WIRE TOO LARGE TO PULL THROUGH THE CONDUIT INTO THE POLE HANDHOLE. DUE TO CONDUIT FILL REQUIREMENTS OF N.E.C., AND/OR THE STIFFNESS OF THE WIRE COMPARED TO THE NUMBER OF BENDS IN THE CONDUIT. IN CASES WHERE LINE WIRE IS LIGHTER, SUCH AS SMALLER SYSTEMS OR TOWARD THE FURTHEST END OF A LARGER SYSTEM, PULL THE LINE WIRE INTO THE POLE HANDHOLE FOR SPLICING.

LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD

ELECTRICAL DETAILS
STRUCTURE MOUNT LIGHT POLES
GROUNDED NEUTRAL SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010 — DATE
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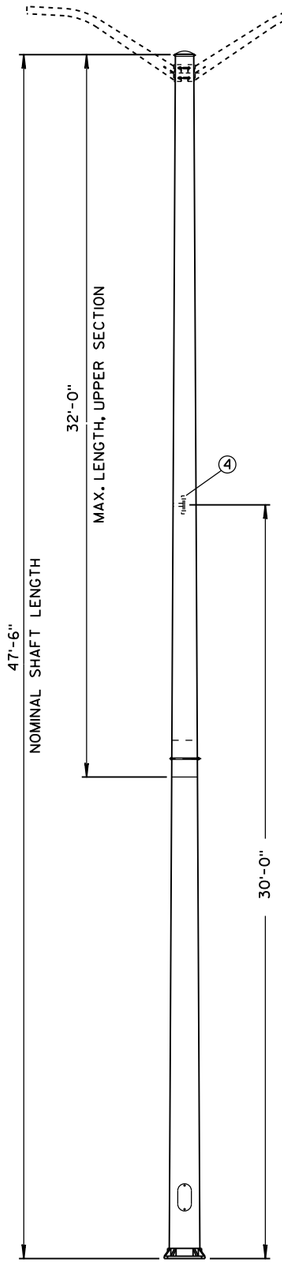
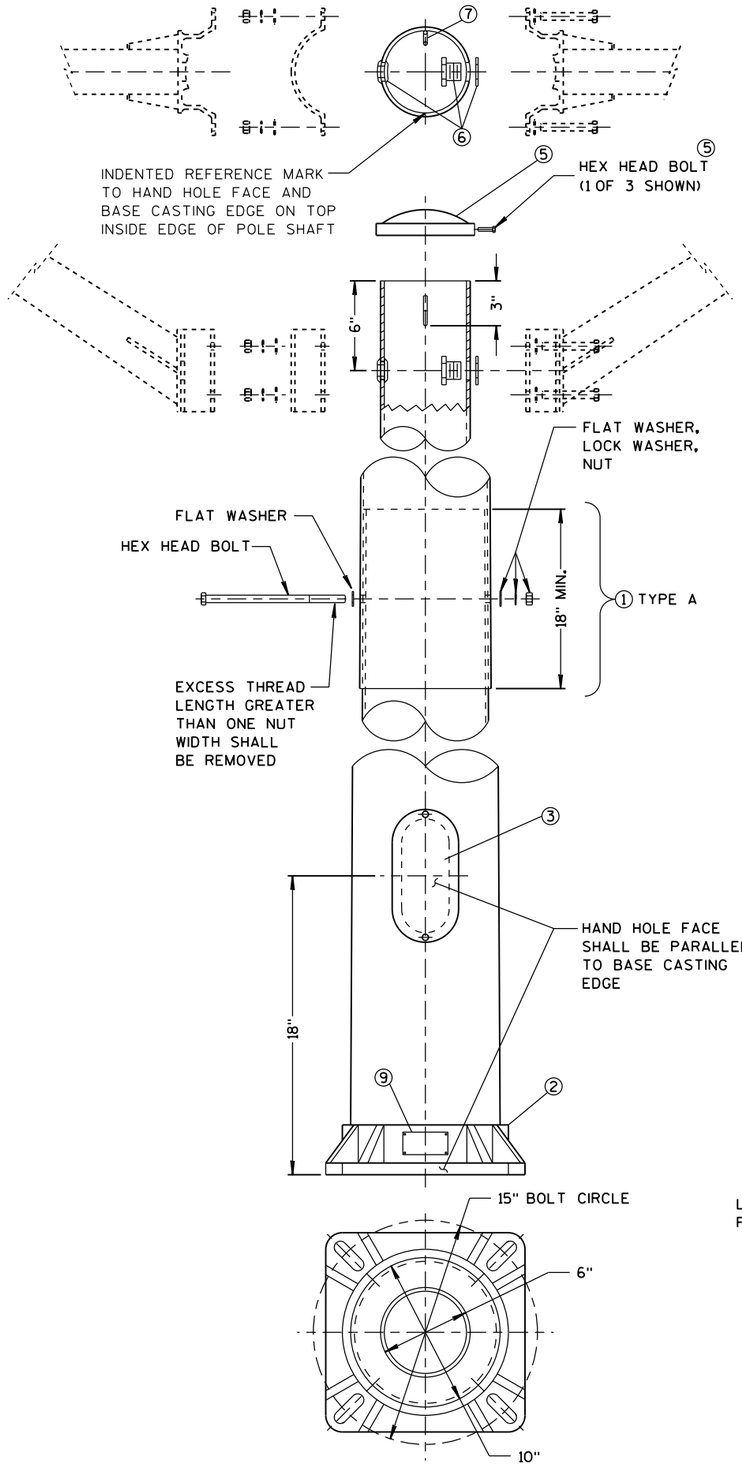
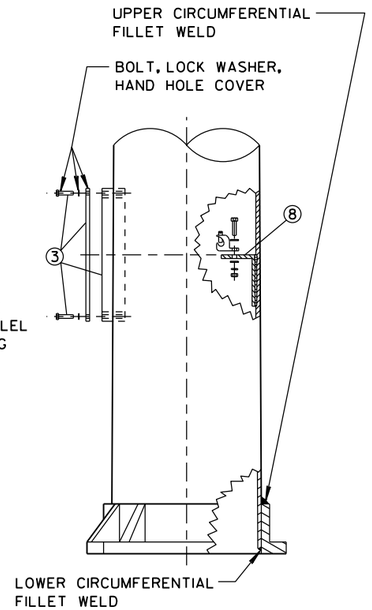
S.D.D. 10 A 9-2



POLE, TYPE A



(TOP VIEW)



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM. EXCEPT THAT BASE CASTINGS SHALL BE CONSTRUCTED OF 356-T6 ALUMINUM. THE SHAFT SHALL BE ROUND AND UNIFORMLY TAPERED FROM A 10" O.D. BUTT TO A 6" O.D. TOP.

HEAT TREATMENT OF WELDMENTS IN STRUCTURAL AREAS (e.g. BASE CASTING, HAND HOLE, BRACKET FOR GROUNDING LUG) REQUIRED.

ALL THREADED FASTENER COMPONENTS SHALL BE STAINLESS STEEL. NUTS SHALL BE HEX NUTS. BOLTS SHALL BE HEX HEAD. ALL THREADED SURFACES SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO INSTALLATION.

LUMINAIRE ARMS AND CLAMP ASSEMBLIES SHOWN FOR INFORMATION ONLY (PAID SEPARATELY).

LUMINAIRE LOADING FOR DESIGN CALCULATION SHALL BE 50 LBS. IN WEIGHT AND 1.5 SQ. FT. FOR E.P.A.

① OPTIONAL TELESCOPING FIELD JOINT SECURED BY A 5/8"-11 TPI THROUGH BOLT OR STUD.

THE OVERLAP OF THE UPPER AND LOWER SECTIONS SHALL BE NOT LESS THAN 18".

② SHOE BASE.

③ 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY SECURED BY TWO (2) 1/4" X 3/4" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

HANDHOLE SHALL BE 90 DEGREES FROM LUMINAIRE ARMS OF TWIN LUMINAIRE POLES; 180 DEGREES FROM LUMINAIRE ARM OF SINGLE LUMINAIRE POLES; 0 DEGREES FROM LUMINAIRE ARM FOR STRUCTURE MOUNTED POLES.

④ INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

⑤ FURNISH AND INSTALL CAST OR METALLIC (ALUMINUM ALLOY) POLE CAP. FASTEN CAP WITH THREE 1/4" X 3/4" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

⑥ 1 3/8" FIELD DRILLED HOLE WITH 1" CHASE NIPPLE AND NUT (OR NEOPRENE GROMMET), PER EACH REQUIRED LUMINAIRE ARM.

⑦ FACTORY-WELDED "J" HOOK FOR POLE WIRE STRAIN RELIEF.

⑧ FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE. (LUG AND HARDWARE PAID UNDER SEPARATE ITEMS; SHOWN FOR INFORMATION ONLY). PROVIDE HOLE IN BRACKET FOR 1/4" X 3/4" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

⑨ MANUFACTURER'S PLATE SHOWING WisDOT POLE TYPE, MANUFACTURER, AND DATE.

POLE TYPE (NOM. SHAFT LENGTH)	TYPICAL APPLICATION	ARM & LUMINAIRE LOADS (MAX.)	ADDITIONAL (MAX.) LOADS
TYPE A, (47'-6")	FREEWAY MEDIAN OR STRUCTURE MOUNT	SINGLE ARM, UP TO 10 FT., OR TWIN 4 FT. ARMS	UP TO 20 SQ. FT. OF TRAFFIC SIGNS, MOUNTED AS HIGH AS 15 FT. TO TOP OF SIGN

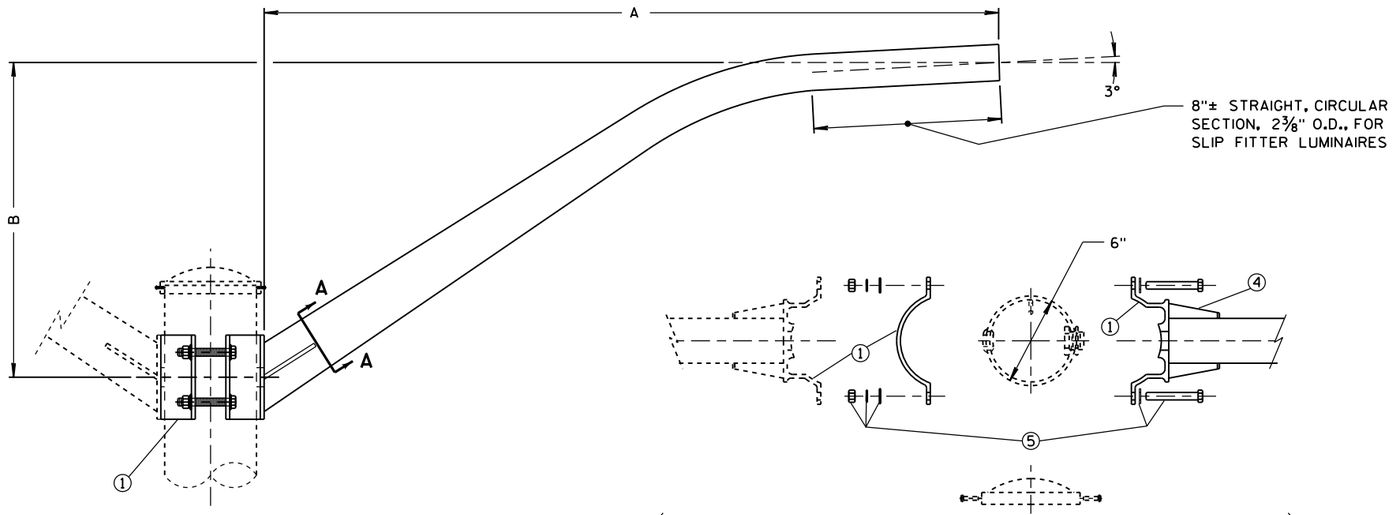
POLES, TYPE A
ALUMINUM 47'-6" SHAFT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

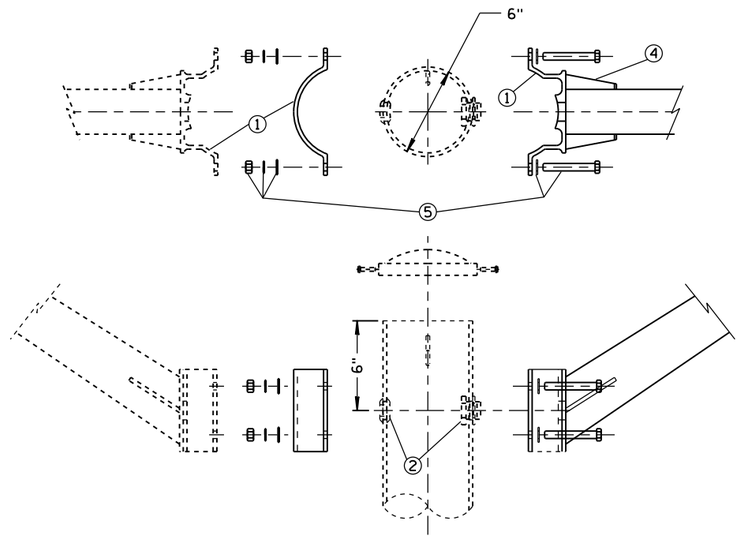
6

S.D.D. 10 A 17-4b



LUMINAIRE ARMS, SINGLE MEMBER, 6-INCH CLAMP - FOR POLES, TYPE 7, A OR E

VARIOUS LENGTHS (SEE TABLE)



CLAMP ASSEMBLY

SINGLE MEMBER CLAMP SHOWN

TYPE	DIM. A NOMINAL ARM LENGTH (FT)	DIM. B APPROX. RISE (FT)
SINGLE MEMBER	4.0	2.0
SINGLE MEMBER	8.0	3.0
SINGLE MEMBER	10.0	3.0
SINGLE MEMBER	15.0	3.0

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ARMS AND CLAMP EXTRUSIONS SHALL BE CONSTRUCTED OF NATURAL FINISH 6063-T6 ALUMINUM.

HEAT TREATMENT OF WELDS IN STRUCTURAL AREAS IS REQUIRED.

ALL THREADED FASTENER COMPONENTS SHALL BE STAINLESS STEEL. NUTS SHALL BE HEX NUTS. BOLTS SHALL BE HEX HEAD. ALL THREADED SURFACES SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO INSTALLATION.

LUMINAIRE LOADING FOR DESIGN CALCULATION SHALL BE 50 LBS. IN WEIGHT AND 1.5 SQ. FT. FOR E.P.A..

① CLAMPS SHALL BE EXTRUDED ALUMINUM.

② RACE WAY: 1 3/8" FIELD DRILLED HOLE WITH 1" CHASE NIPPLE AND NUT (OR NEOPRENE GROMMET) PER EACH REQUIRED LUMINAIRE ARM. PROVIDE 1 1/2" HOLE IN CLAMP EXTRUSION TO CONTINUE RACEWAY.

③ STIFFENER

④ GUSSETS REQUIRED.

⑤ CLAMP BOLT ASSEMBLY (BOLT - 1/2"-13 UNC, 2 EACH - FLAT WASHER, LOCK WASHER, NUT) - 4 EACH PER CLAMP.

LUMINAIRE ARMS, SINGLE MEMBER 6-INCH CLAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 10 A 18-5a

STATE PROJECT NUMBER

1000-20-69

TABLE OF ESTIMATED QUANTITES FOR FOUNDATIONS*

STRUCTURE NUMBER	ELEVATION VIEW SHEET NUMBER	HIGHWAY	REMOVE GROUT PAD	REPLACE RODENT SCREEN	TENSION ANCHOR RODS	REPAIR FOUNDATION	REPLACE CONCRETE BARRIER	REMOVE FORMWORK TO GRADE	REPAIR FOUNDATION JOINT	REMOVE DEBRIS AND REGRADE	REPAIR ANCHOR ROD FOUNDATION SUPPORT
			SPV.0060.02	SPV.0060.03	SPV.0060.04	SPV.0060.05	SPV.0090.01	SPV.0060.26	SPV.0060.33	SPV.0060.34	SPV.0060.35
			EACH	EACH	EACH	EACH	LF	EACH	EACH	EACH	EACH
S-40-001	12 OF 100	I-94/43									1
S-40-212	15 OF 100	I-94/43					6				
S-40-224	20 OF 100	I-43				1					
S-40-227	21 OF 100	I-43				1					
S-40-260	22 OF 100	GOOD HOPE RD				1					1
S-40-427	29 OF 100	AIRPORT SPUR		1							
S-40-430	30 OF 100	I-94			1						
S-40-524	33 OF 100	I-94/I-43			1						
S-40-525	34 OF 100	I-94				1					
S-40-533	35 OF 100	I-794			2						
S-40-534	36 OF 100	I-794			2						
S-40-535	37 OF 100	I-794			2						
S-40-536	38 OF 100	I-794			2						
S-40-540	39 OF 100	I-794			2						
S-40-542	40 OF 100	I-94			1						
S-40-552	41 OF 100	I-94/I-43			1						
S-40-571	42 OF 100	I-94			1						
S-40-572	43 OF 100	I-94			1						
S-40-575	44 OF 100	I-94/I-43			1						
S-40-576	45 OF 100	I-94/I-43			1						
S-40-700	47 OF 100	I-94		1							
S-40-718	49 OF 100	I-794			1						
S-40-719	50 OF 100	I-43		1							
S-40-772	53 OF 100	I-94/I-43			1						
S-40-774	54 OF 100	I-43						1			
S-40-826	55 OF 100	I-94/I-43			1						
S-40-827	56 OF 100	I-94/I-43			1						
S-40-828	57 OF 100	I-94/I-43			1						
S-40-829	58 OF 100	I-94/I-43			1						
S-40-838	59 OF 100	WIS 119			4						
S-40-839	60 OF 100	WIS 119			4						
S-40-840	61 OF 100	WIS 119			4						
S-40-905	63 OF 100	WIS 36			1						
S-45-206	66 OF 100	WIS 33			2						
S-45-207	67 OF 100	WIS 33			2						
S-45-214	68 OF 100	WIS 33			1						
S-45-606	70 OF 100	MARKET ST			2						
S-51-016	71 OF 100	MILWAUKEE AVE			1						
S-51-233	72 OF 100	WIS 32			2						
S-64-204	74 OF 100	WIS 50			1						
S-67-001	78 OF 100	US 41		1							
S-67-020	80 OF 100	I-94			1						
S-67-269	84 OF 100	WIS 83			1						
S-67-275	85 OF 100	I-43								1	
S-67-292	87 OF 100	US 18			1						
S-67-298	88 OF 100	US 18			1						
S-67-300	89 OF 100	US 41									1
S-67-305	90 OF 100	US 41		1							
S-67-401	92 OF 100	I-94	4			1			2		
S-67-600	94 OF 100	LISBON RD			1						
S-67-940	97 OF 100	COUNTY JJ			2						
S-67-941	98 OF 100	CALHOUN RD			2						
S-67-943	99 OF 100	US 18			1						
TOTAL			4	5	58	5	6	1	2	1	3

* THE INFORMATION PROVIDED IN THIS TABLE IS FOR INFORMATION PURPOSES ONLY AND NOT TO BE COUNTED AS ADDITIONAL QUANTITIES TO THOSE LISTED ON THE ELEVATION VIEW SHEETS.

LIST OF REPAIR DRAWINGS

1. FOUNDATION DETAILS (1 OF 3)
2. FOUNDATION DETAILS (2 OF 3)
3. FOUNDATION DETAILS (3 OF 3)
4. TRUSS DETAILS (1 OF 2)
5. TRUSS DETAILS (2 OF 2)
6. SIGN PANEL DETAILS (1 OF 2)
7. SIGN PANEL DETAILS (2 OF 2)
8. CATWALK DETAILS (1 OF 2)
9. CATWALK DETAILS (2 OF 2)
10. ELECTRICAL DETAILS
11. S-30-012
12. S-40-001
13. S-40-099
14. S-40-151
15. S-40-212
16. S-40-215
17. S-40-216
18. S-40-217
19. S-40-221
20. S-40-224
21. S-40-227
22. S-40-260
23. S-40-287
24. S-40-288
25. S-40-400
26. S-40-406
27. S-40-407
28. S-40-424
29. S-40-427
30. S-40-430
31. S-40-439
32. S-40-440
33. S-40-524
34. S-40-525
35. S-40-533
36. S-40-534
37. S-40-535
38. S-40-536
39. S-40-540
40. S-40-542
41. S-40-552
42. S-40-571
43. S-40-572
44. S-40-575
45. S-40-576
46. S-40-600
47. S-40-700
48. S-40-710
49. S-40-718
50. S-40-719
51. S-40-721
52. S-40-729
53. S-40-772
54. S-40-774
55. S-40-826
56. S-40-827
57. S-40-828
58. S-40-829
59. S-40-838
60. S-40-839
61. S-40-840
62. S-40-841
63. S-40-905
64. S-40-916
65. S-40-917
66. S-45-206
67. S-45-207
68. S-45-214
69. S-45-602
70. S-45-606
71. S-51-016
72. S-51-233
73. S-64-203
74. S-64-204
75. S-64-600
76. S-66-004
77. S-66-602
78. S-67-001
79. S-67-015
80. S-67-020
81. S-67-207
82. S-67-256
83. S-67-257
84. S-67-269
85. S-67-275
86. S-67-281
87. S-67-292
88. S-67-298
89. S-67-300
90. S-67-305
91. S-67-310
92. S-67-401
93. S-67-403
94. S-67-600
95. S-67-910
96. S-67-915
97. S-67-940
98. S-67-941
99. S-67-943
100. S-67-944

01/30/2017

SE REGION CONTACT:
TOM HEYDEL (262) 548-6763

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
VERONICA CHAVEZ DE FERNANDEZ
(414) 282-6905

NO.	DATE	REVISION	BY

COLLINS ENGINEERS INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 01/31/17
CHIEF STRUCTURES DESIGN ENGINEER — DATE

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

SOUTHEAST REGION WIDE

COUNTY	TOWN/CITY/VILLAGE
SOUTHEAST REGION WIDE	VARIOUS

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
VC	PF	MR	RW

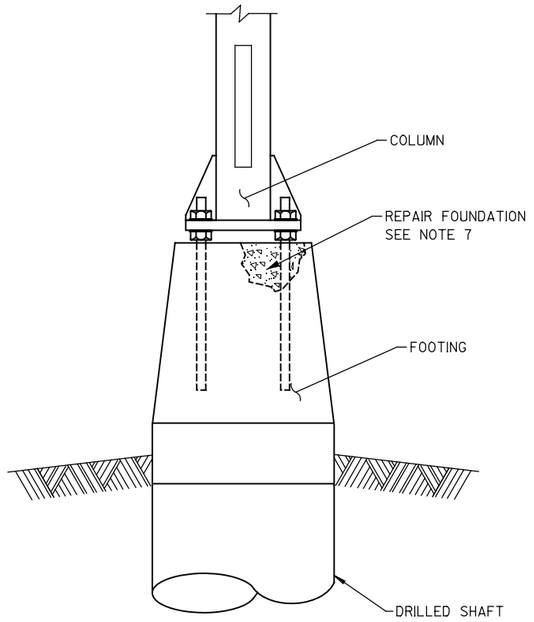
FOUNDATION DETAILS (1 OF 3)

SHEET 1 OF 100
55

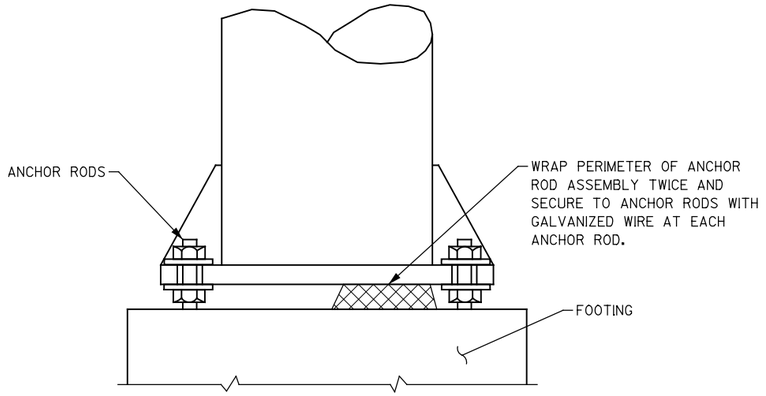
8

8

FILE NAME :108_02_found.dgn
PLOT DATE :1/24/2017 PLOT BY : Veronica Chavezv6 DRV :Pdf_bw_HSplt PEN :CEL.TEXTSUB.TBL

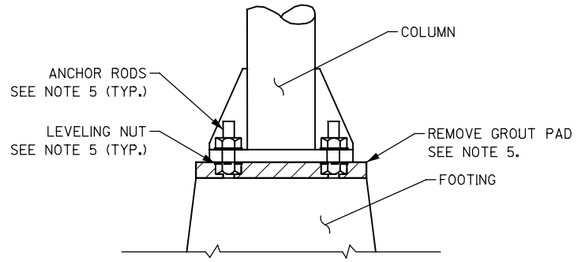


REPAIR FOUNDATION DETAIL

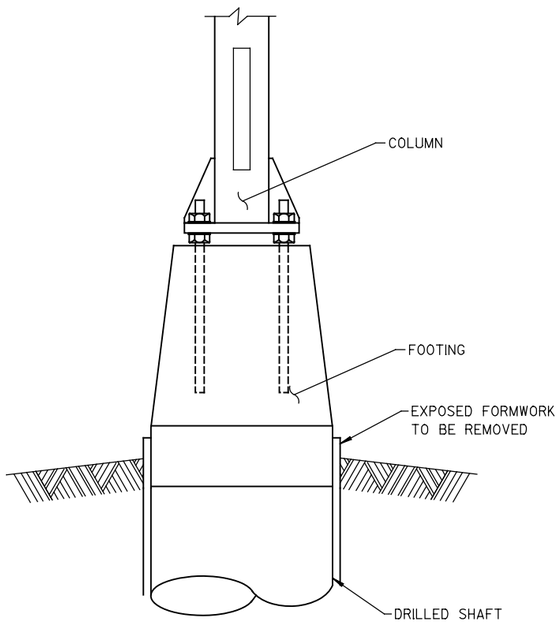


REPLACE RODENT SCREEN

REQUIRED ON ALL GROUT PAD REMOVALS



TENSION ANCHOR ROD/GROUT PAD DETAIL



FOUNDATION DETAIL

FOUNDATION NOTES:

1. CONCRETE - fc'= 3,500 P.S.I.
2. BAR STEEL REINF. - GRADE 60
   fy = 60,000 P.S.I.
3. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL REPAIRS.
4. THE CONTRACTOR SHALL FIELD VERIFY DIMENSION OF THE ITEM REQUIRED. DISCREPANCIES SHALL BE SUBMITTED TO THE ENGINEER FOR CLARIFICATION PRIOR TO BEGINNING WORK.
5. APPLY ZINC-RICH PAINT TO THE ANCHOR RODS, NUTS, WASHERS, AND LEVELING NUTS IN ACCORDANCE WITH SPECIFICATIONS AFTER REMOVING THE GROUT PAD OR TENSIONING THE ANCHOR ROD. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM, "REMOVE GROUT PAD" OR "TENSION ANCHOR RODS."
6. STEEL ANCHOR ROD NUTS AND WASHERS ASTM A563A HEAVY HEX NUTS AND ASTM F436 WASHERS.
7. THE TOP OF THE FOOTING SURFACE SHALL BE SMOOTHED AND SLOPED TO DRAIN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

FOUNDATION DETAILS (2 OF 3)

SHEET 2 OF 100
56

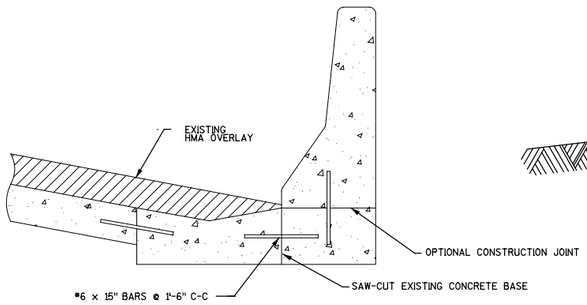
8

8

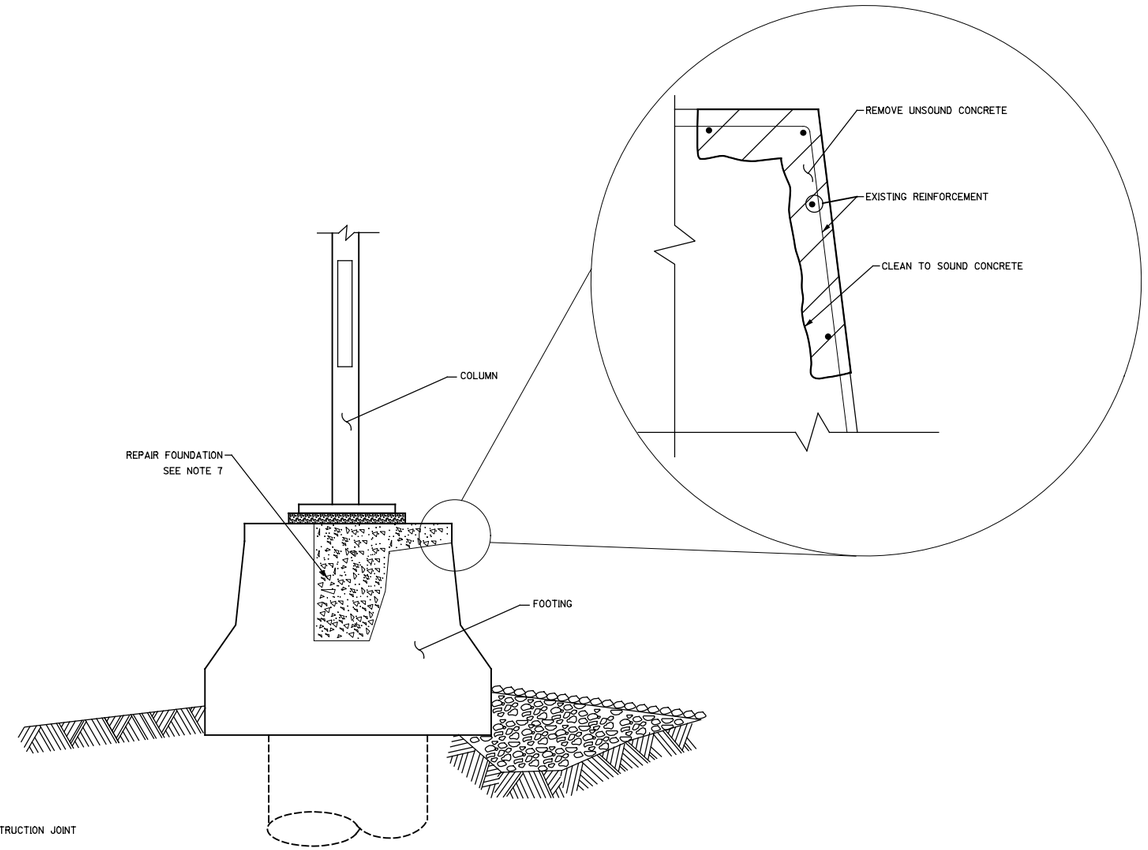
FILE NAME :\08_02_found.dgn
PLOT DATE :11/24/2017
PLOT BY : Veronica Chavez-Vil
DRV :Pdf_bw_HS.pit
PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1000-20-69



CONCRETE BARRIER DETAIL



FOUNDATION DETAIL

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

FOUNDATION DETAILS (3 OF 3)

SHEET 3 OF 100

57

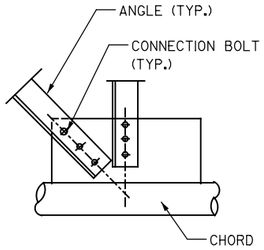
FILE NAME :08_02_founds.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1000-20-69

TABLE OF ESTIMATED QUANTITES FOR TRUSS*

STRUCTURE NUMBER	ELEVATION VIEW SHEET NUMBER	HIGHWAY	SPLICE CONNECTION BOLT REPLACEMENT	INSTALL NEW POST TO MAST ARM CONNECTION BOLT	SECURE/REPLACE CHORD CAP	REPLACE CANTILEVER TRUSS COLUMN CONNECTION BOLT	SECURE SPACER BLOCK	REPLACE U-BOLTS	SECURE/REPLACE VERTICAL POST CAP	SECURE ANCHOR CONNECTION PLATE
			SPV.0060.06	SPV.0060.07	SPV.0060.08	SPV.0060.09	SPV.0060.25	SPV.0060.27	SPV.0060.29	SPV.0060.30
			EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
S-30-012	11 OF 100	I-94	1							
S-40-212	15 OF 100	I-94/43						8		
S-40-215	16 OF 100	I-894/US 45						8		
S-40-216	17 OF 100	I-894/US 45						8		
S-40-217	18 OF 100	I-894/US 45						8		
S-40-221	19 OF 100	I-43/I-894						8		
S-40-224	20 OF 100	I-43						16		
S-40-287	23 OF 100	WIS 100		4						
S-40-400	25 OF 100	US 45	4							
S-40-406	26 OF 100	I-894/US 45	4				1			
S-40-407	27 OF 100	WIS 100				1				
S-40-440	32 OF 100	WIS 119	8							
S-40-600	46 OF 100	PENNSYLVANIA AVE	1							
S-40-916	64 OF 100	I-43	1							
S-67-015	79 OF 100	MOORLAND	2							
S-67-275	85 OF 100	I-43	1							
S-67-281	86 OF 100	I-94	2							
S-67-300	89 OF 100	US 41								1
S-67-310	91 OF 100	I-43				2				
S-67-403	93 OF 100	I-43	4							
S-67-910	95 OF 100	WIS 16/67							1	
S-67-940	97 OF 100	COUNTY JJ	2							
S-67-943	99 OF 100	US 18			2				1	
TOTAL			30	4	2	3	1	56	2	1

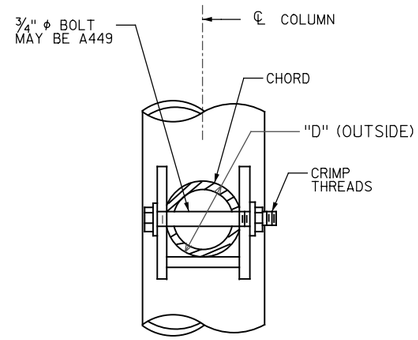
* THE INFORMATION PROVIDED IN THIS TABLE IS FOR INFORMATION PURPOSES ONLY AND NOT TO BE COUNTED AS ADDITIONAL QUANTITIES TO THOSE LISTED ON THE ELEVATION VIEW SHEETS.



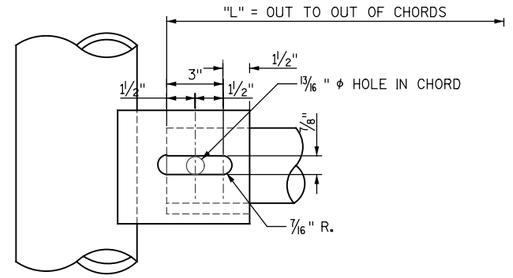
TRUSS GUSSET CONNECTION DETAIL

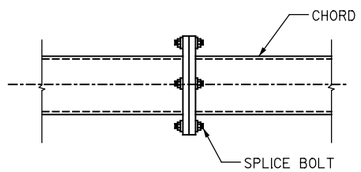
TRUSS NOTES:

1. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL REPAIRS.
2. THE CONTRACTOR SHALL FIELD VERIFY THE DIMENSIONS OF THE ITEM REQUIRED. DISCREPANCIES SHALL BE SUBMITTED TO THE ENGINEER FOR CLARIFICATION PRIOR TO BEGINNING WORK.
3. ALL STAINLESS STEEL BOLTS, LOCK WASHERS, AND NUTS SHALL CONFORM TO:
   -ANCHOR BOLTS/HEX BOLTS ASTM F593 ANY ALLOY GROUP 1, 2, OR 3
   -HEX NUTS ASTM F594
   -WASHERS ASTM A240
   ANY OF THE 300 SERIES WHICH HAVE A MINIMUM YIELD OF 40,000 PSI AND ELONGATION OF 15% FOR OVER 3/4" ϕ AND 12% FOR 3/4" ϕ AND SMALLER.
4. REPLACE MISSING BOLTS ON TOWER CAPS WITH A STAINLESS STEEL BOLT.
5. REMOVE AND CLEAN ALL NESTING DEBRIS AT ALL POST TO CHORD CONNECTIONS.

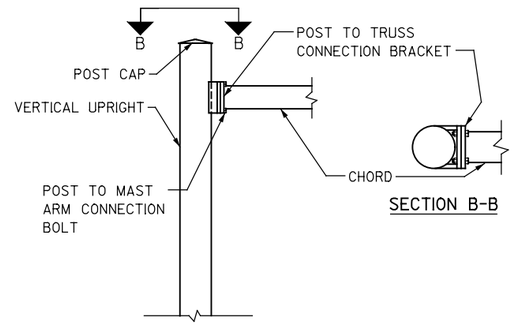


SADDLE POST TO TRUSS/CHORD DETAIL



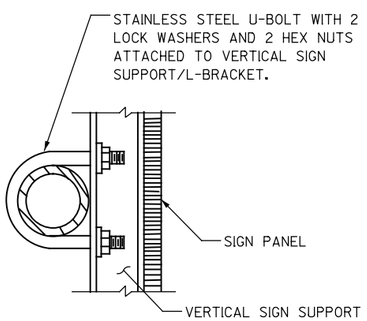


SPLICE CONNECTION BOLT DETAIL

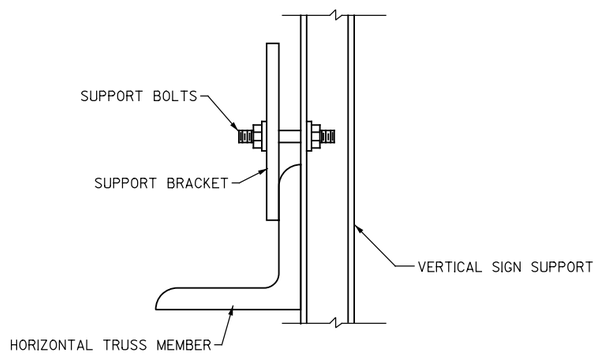


SECTION B-B

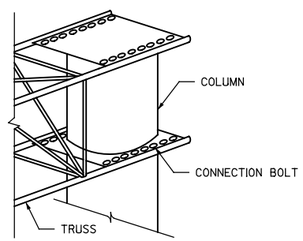
POST TO MAST ARM DETAIL



INSTALL U-BOLT & TIGHTEN LOOSE U-BOLT DETAIL



SIGN SUPPORT BRACKET DETAIL



REPLACE CANITLEVER TRUSS COLUMN CONNECTION BOLT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY	MR	PLANS CK'D.	VC

TRUSS DETAILS (1 OF 2)

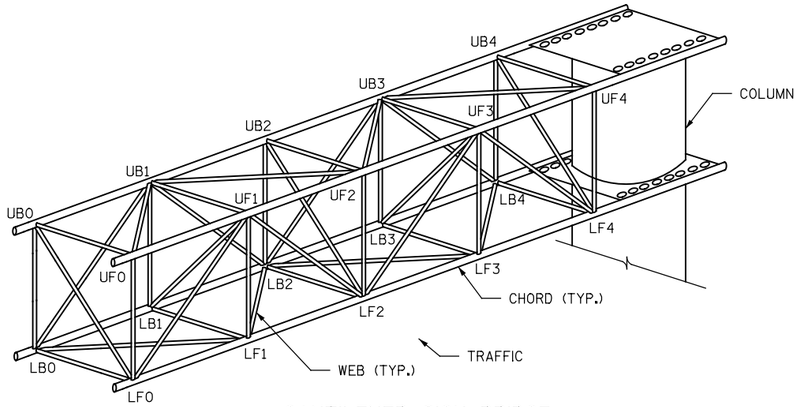
SHEET 4 OF 100
58

8

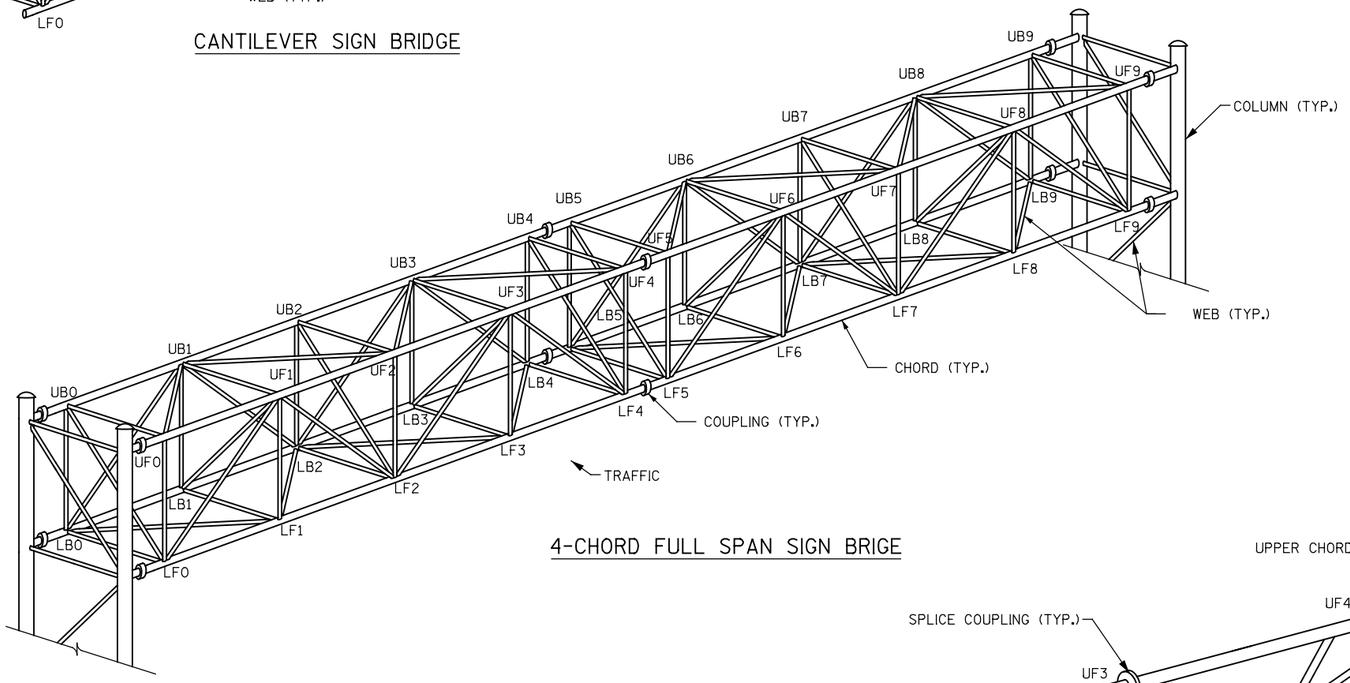
8

FILE NAME :108_03_truss.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez-VB
DRV :Pdf_bw_HS.pltPEN :CEL-TEXTSUB.TBL

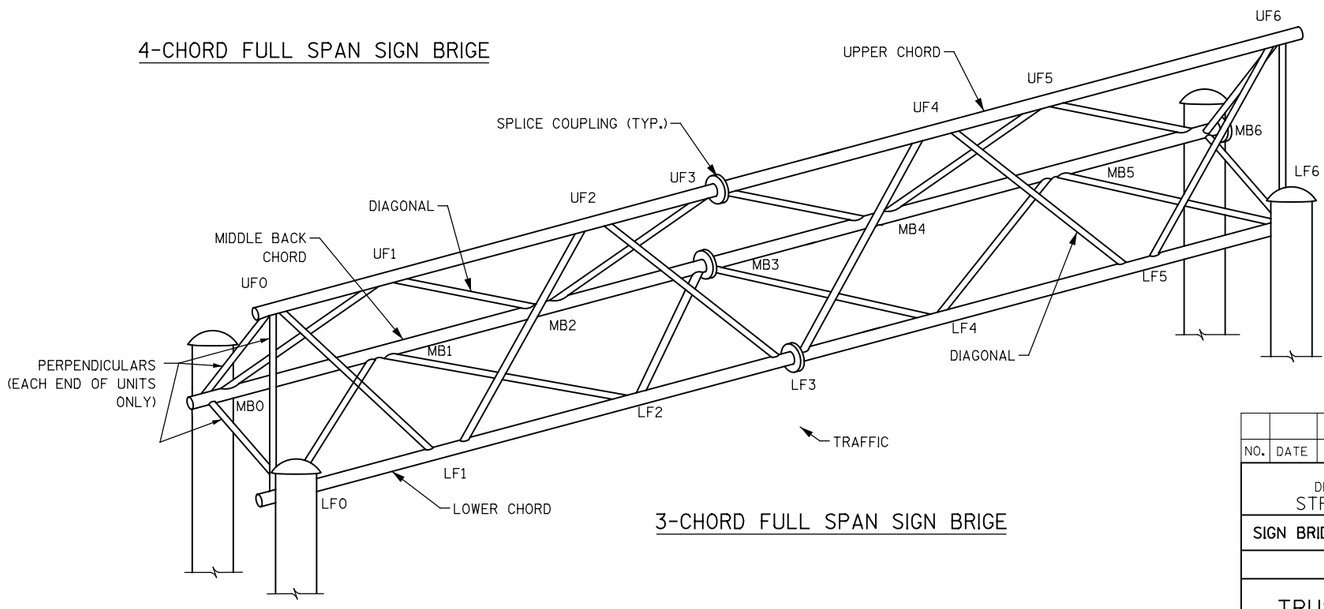
STATE PROJECT NUMBER
1000-20-69



CANTILEVER SIGN BRIDGE



4-CHORD FULL SPAN SIGN BRIGE



3-CHORD FULL SPAN SIGN BRIGE

TRUSS NOTES:

1. WHEN A FULL SPAN SIGN BRIDGE IS OVER BOTH DIRECTIONS AND SIGNS ARE ON STRUCTURE FOR BOTH DIRECTIONS, THEN NORTHBOUND AND EASTBOUND GOVERN THE NUMBERING SYSTEM.
2. THE CANTILEVER SIGN BRIDGE NUMBERING SYSTEM ALWAYS COUNTS UP FROM LEFT TO RIGHT REGARDLESS OF COLUMN LOCATION.
3. TYPICAL SIGN BRIDGE CONFIGURATION FOR INFORMATION ONLY.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY	MR	PLANS CK'D.	VC

TRUSS DETAILS
(2 OF 2)

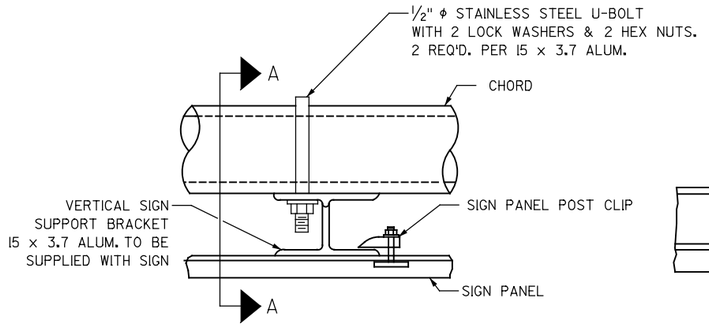
SHEET 5 OF 100
59

FILE NAME :08_03_truss.dgn
PLOT DATE :11/24/2017
PLOT BY : Veronica Chavez-B
DRV :Pdf_bw_HS.pit
PEN :CEL_TEXTSUB.TBL

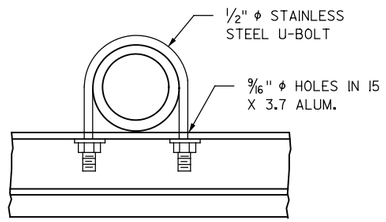
TABLE OF ESTIMATED QUANTITES FOR SIGNS*

STRUCTURE NUMBER	ELEVATION VIEW SHEET NUMBER	HIGHWAY	INSTALL TYPE I SIGN SUPPORT BRACKET	REPLACE TYPE I SIGN SUPPORT BRACKET	REPLACE SIGN BRIDGE ID PLAQUE	REPLACE POST CLIP	REATTACH TYPE-II SIGN	REPLACE TYPE-II SIGN TO VERTICAL UPRIGHT	REPLACE TYPE II SIGN SUPPORT BRACKET	SLOTTED HOLE REPAIR ON SIGN SUPPORT BRACKET	REPLACE SIGNAL CONNECTION ASSEMBLY	REPLACE TYPE II MOUNTING SYSTEM
			SPV.0060.10	SPV.0060.11	SPV.0060.12	SPV.0060.13	SPV.0060.14	SPV.0165.01	SPV.0060.15	SPV.0060.16	SPV.0060.32	SPV.0060.36
			EACH	EACH	EACH	EACH	EACH	SF	EACH	EACH	EACH	EACH
S-40-288	24 OF 100	STH 241 (27TH ST)							1			
S-40-439	31 OF 100	I-94			1							
S-40-710	48 OF 100	I-94								1		
S-40-719	50 OF 100	I-43			1							
S-40-721	51 OF 100	I-94/I-43						16				
S-40-729	52 OF 100	I-94					1					
S-40-841	62 OF 100	WIS 119								1		
S-40-905	63 OF 100	WIS 36							2			
S-40-916	64 OF 100	I-43			1							
S-40-917	65 OF 100	US 41									1	
S-45-206	66 OF 100	WIS 33								1		
S-45-207	67 OF 100	WIS 33								1		
S-45-214	68 OF 100	WIS 33								2		
S-45-602	69 OF 100	WIS 57			1							
S-45-606	70 OF 100	MARKET ST								2		
S-64-203	73 OF 100	WIS 50										1
S-64-600	75 OF 100	WIS 67									1	
S-66-004	76 OF 100	US 41				18						
S-66-602	77 OF 100	PARADISE DR										1
S-67-015	79 OF 100	MOORLAND							6			
S-67-207	81 OF 100	US 41	8									
S-67-256	82 OF 100	WIS 164							1			1
S-67-257	83 OF 100	WIS 190							1			
S-67-281	86 OF 100	I-94				6				8		
S-67-915	96 OF 100	COUNTY Y (RACINE AVE)		5								
S-67-944	100 OF 100	US 18			1							
TOTAL			8	5	5	24	1	16	11	16	2	3

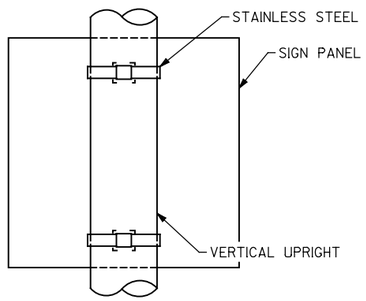
* THE INFORMATION PROVIDED IN THIS TABLE IS FOR INFORMATION PURPOSES ONLY AND NOT TO BE COUNTED AS ADDITIONAL QUANTITIES TO THOSE LISTED ON THE ELEVATION VIEW SHEETS.



TYPICAL SIGN PANEL CONNECTION (TYPE I SIGN)



SECTION A-A

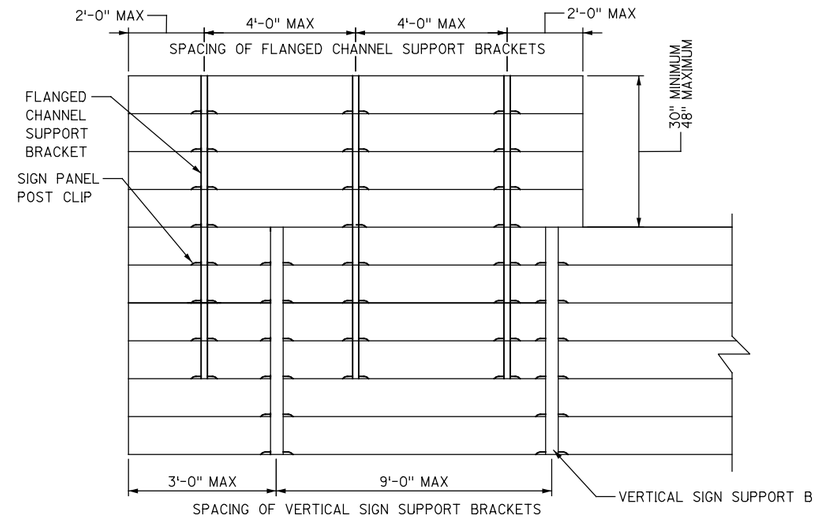


TYPE-II SIGN TO VERTICAL UPRIGHT DETAIL

REFER TO SIGN PLATE MANUAL FOR DETAILS
(SIGN BANDING DETAILS)

SIGN PANEL NOTES:

1. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL REPAIRS.
2. THE CONTRACTOR SHALL FIELD VERIFY THE DIMENSIONS OF THE ITEM REQUIRED. DISCREPANCIES SHALL BE SUBMITTED TO THE ENGINEER FOR CLARIFICATION PRIOR TO BEGINNING WORK.
3. ALL STAINLESS STEEL BOLTS, LOCK WASHERS, AND NUTS SHALL CONFORM TO:
   -HEX BOLTS ASTM F593 ANY ALLOY GROUP 1, 2, OR 3
   -HEX NUTS ASTM 594
   -WASHERS ASTM A240
   ANY OF THE 300 SERIES WHICH HAVE A MINIMUM YIELD OF 40,000 PSI AND ELONGATION OF 15% FOR OVER 3/4" ϕ AND 12% FOR 3/4" ϕ AND SMALLER.
4. ALL OVERHEAD SIGN SUPPORT MOUNTING BRACKETS THAT NEED TO BE COMPLETELY REPLACED SHALL BE PER WISDOT APPROVED PRODUCTS LIST.



FLANGED CHANNEL SUPPORT/VERTICAL SIGN SUPPORT BRACKET DETAILS

STATE PROJECT NUMBER

1000-20-69

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

SIGN PANEL DETAILS (1 OF 2)

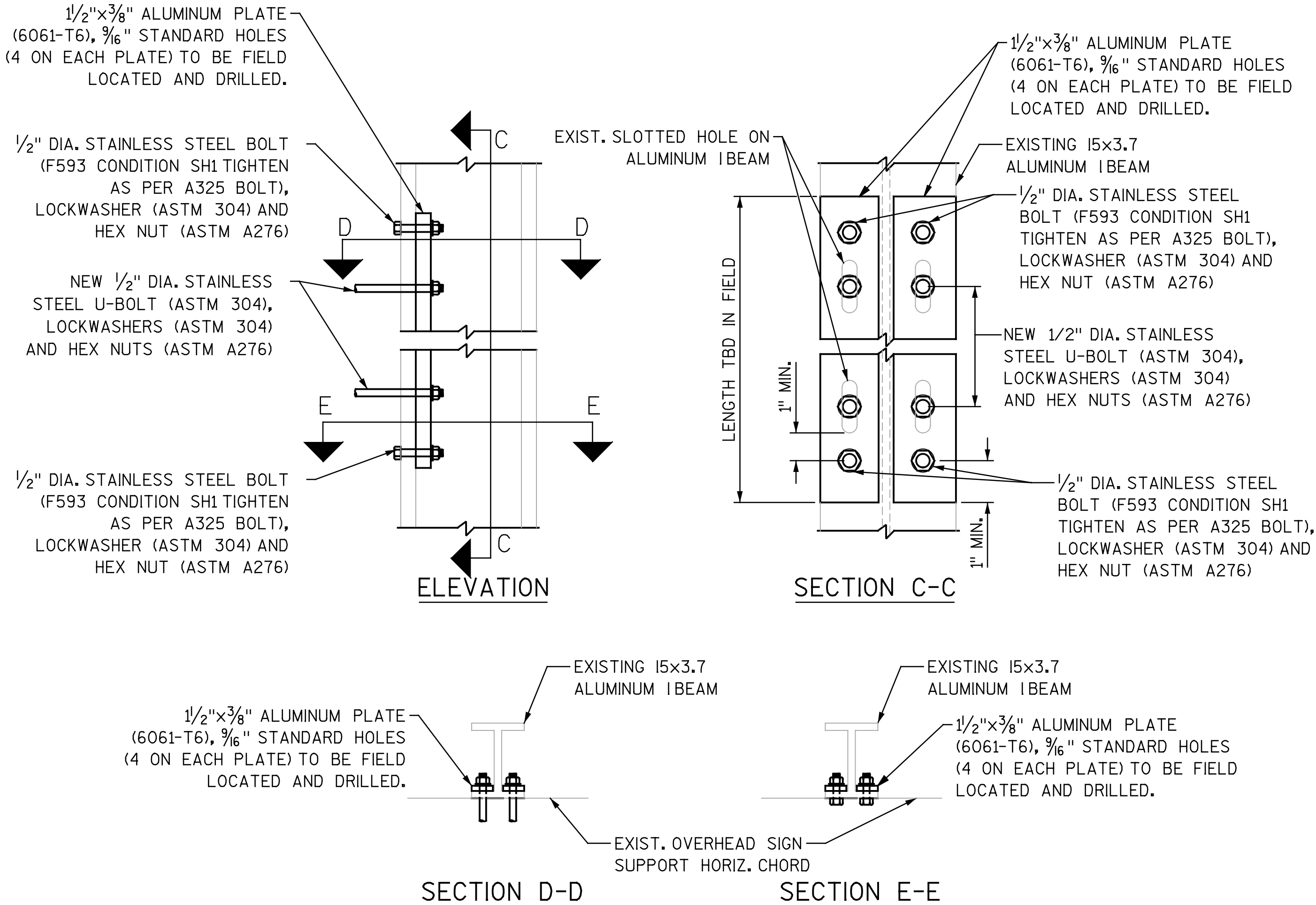
SHEET 6 OF 100

60

8

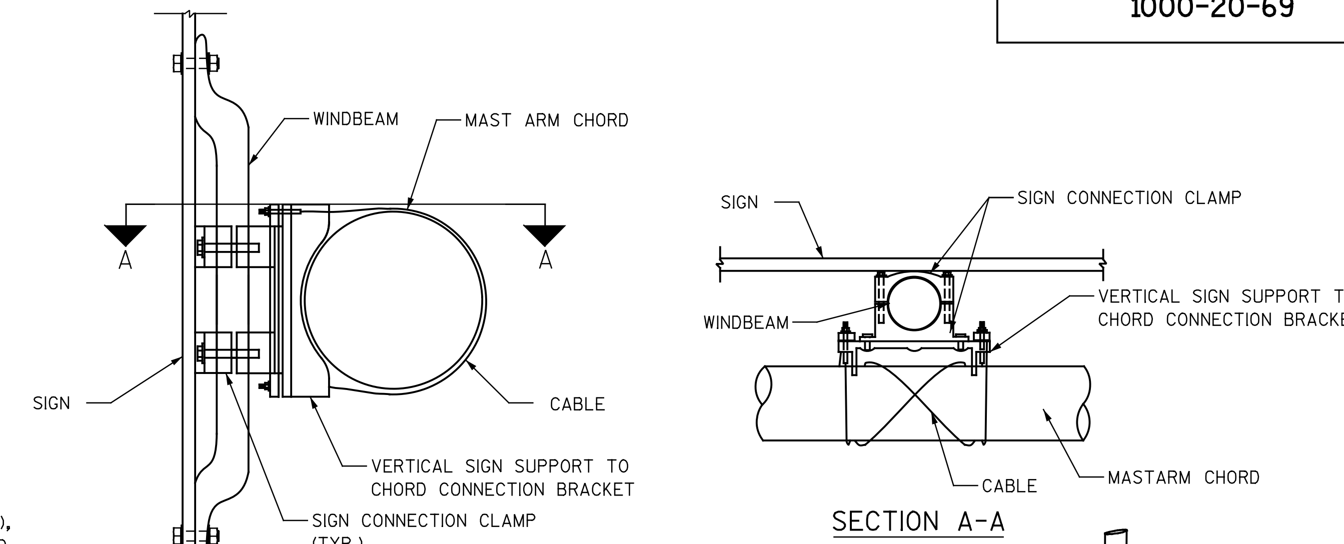
8

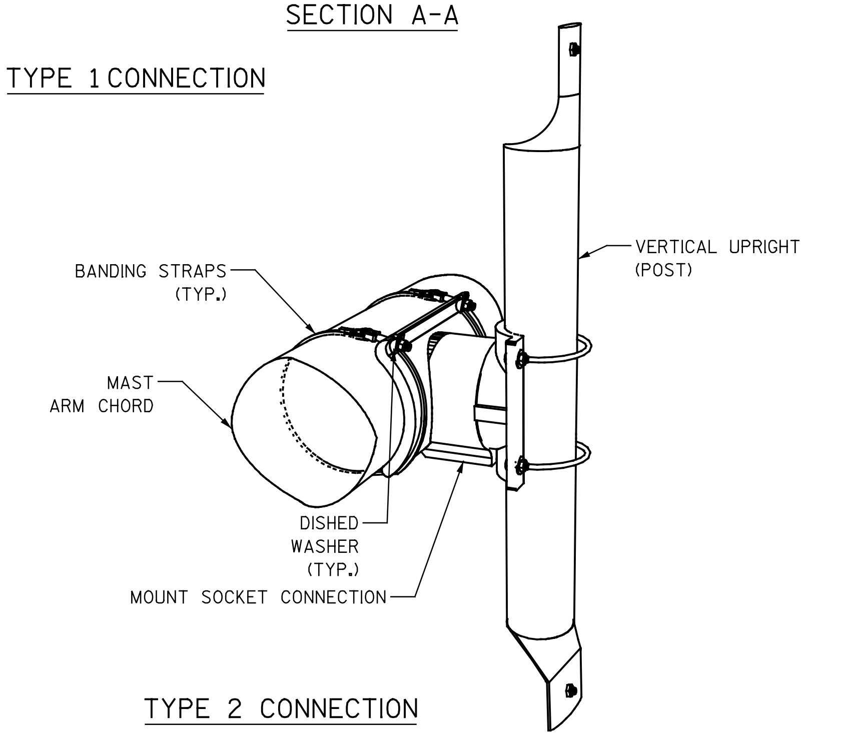
FILE NAME :\08_05_sign.dgn
PLOT DATE :1/24/2017 PLOT BY : Veronica Chavez\tt DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL



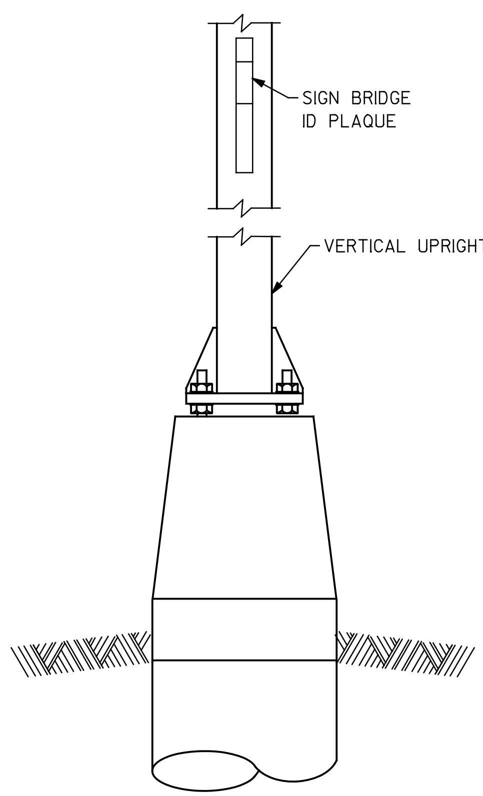
SLOTTED VERTICAL SIGN SUPPORT REPAIR DETAIL

EACH REPAIR INCLUDES ALL BOLT CONNECTIONS PER I-BEAM

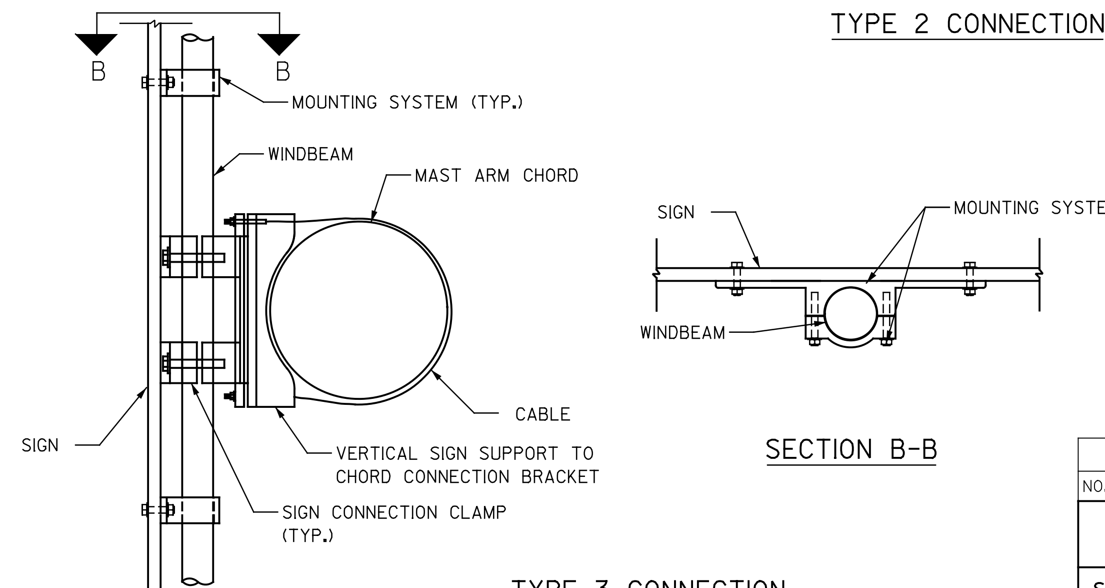




TYPE 2 CONNECTION



SIGN BRIDGE ID PLAQUE



SIGN PANEL CONNECTION DETAIL (TYPE II SIGN)

NOTE: SOME TYPE II SIGN PANELS MAY HAVE SIGN TYPE I CONNECTION. REFER TO SHEET "SIGN PANEL DETAILS (1 OF 2)".

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

SIGN PANEL DETAILS (2 OF 2)

SHEET 7 OF 100

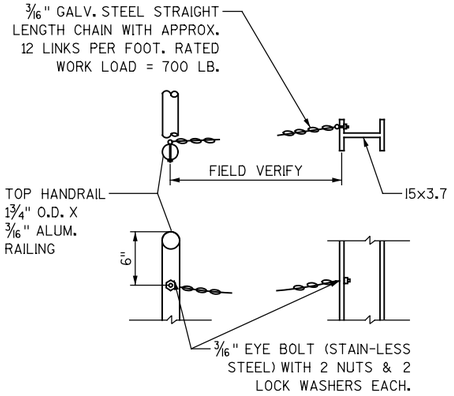
FILE NAME :08_05_.algn.dgn
PLOT DATE :11/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CEL.TEXTSUB.TBL

STATE PROJECT NUMBER
1000-20-69

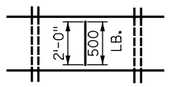
TABLE OF ESTIMATED QUANTITES FOR CATWALKS*

STRUCTURE NUMBER	ELEVATION VIEW SHEET NUMBER	HIGHWAY	REPLACE SAFETY CHAIN	ALIGN HANDRAIL LOCKING PIN	INSTALL/REPLACE HANDRAIL LOCKING PIN	REMOVE SIGN CATWALK	INSTALL/REPLACE CATWALK HANDRAIL	REPLACE CATWALK GRATING
			SPV.0060.21	SPV.0060.22	SPV.0060.23	SPV.0060.24	SPV.0090.02	SPV.0060.31
			EACH	EACH	EACH	EACH	LF	EACH
S-40-151	14 OF 100	I-94				1		
S-40-400	25 OF 100	US 45	2					
S-40-406	26 OF 100	I-894/US 45		4				
S-40-424	28 OF 100	I-43						1
S-40-440	32 OF 100	WIS 119			8			
S-40-540	39 OF 100	I-794					18	
TOTAL			2	4	8	1	18	1

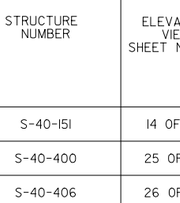
* THE INFORMATION PROVIDED IN THIS TABLE IS FOR INFORMATION PURPOSES ONLY AND NOT TO BE COUNTED AS ADDITIONAL QUANTITIES TO THOSE LISTED ON THE ELEVATION VIEW SHEETS.



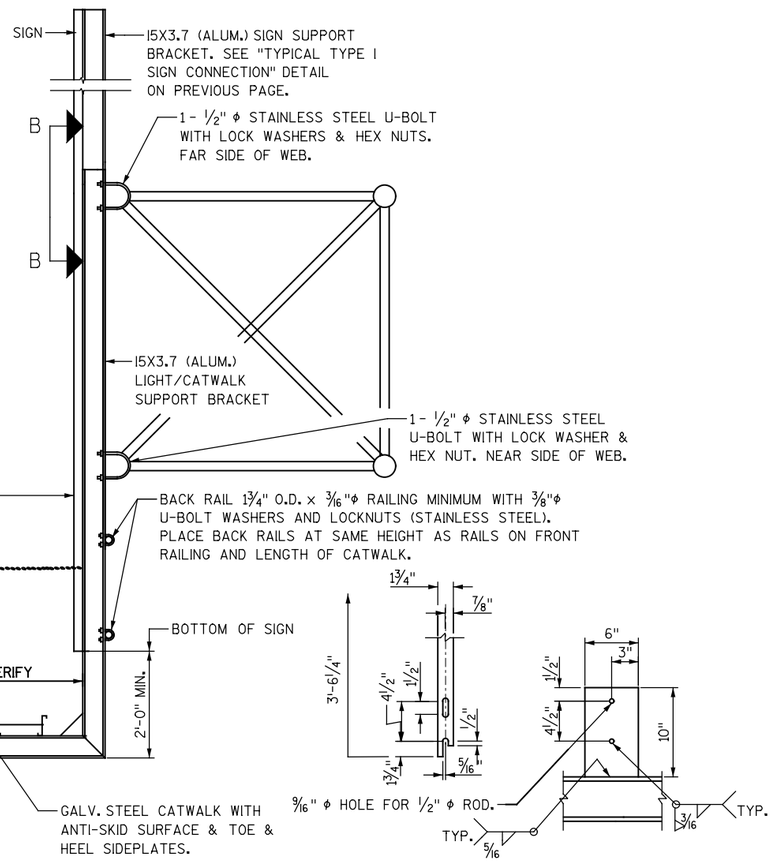
SAFETY CHAIN DETAIL



NOTE:
CATWALK SHALL MEET AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" 6TH EDITION. (500 LB. DISTRIBUTED OVER 2'-0" TRANSVERSELY WITH THE BASIC ALLOWABLE UNIT STRESS INCREASED 25%). MAX. SPAN IS 8'-0". CATWALK SHALL ALSO MEET THE MOST RECENT ISSUE OF OSHA STD'S FOR WALKING-WORKING SURFACES.

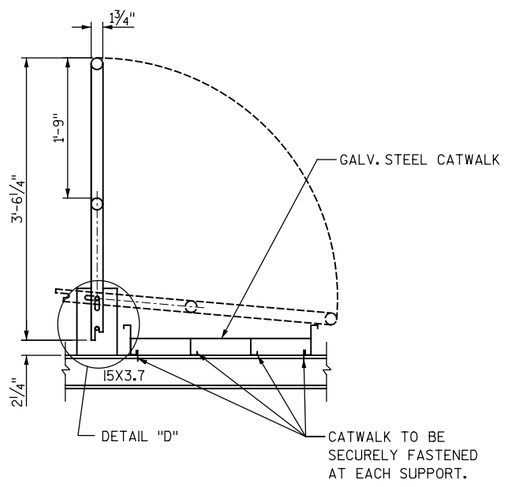


SECTION B-B



SECTION THRU WALKWAY

DETAIL "D"



RAIL POST DETAIL

CATWALK NOTES:

1. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL REPAIRS.
2. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE OF THE ITEM REQUIRED.
3. ALL STAINLESS STEEL BOLTS, LOCK WASHERS, AND NUTS SHALL CONFORM TO:
   -ANCHOR BOLTS/HEX BOLTS ASTM F593 ANY ALLOY GROUP 1,2,OR3
   -HEX NUTS ASTM F594
   -WASHERS ASTM A240
   ANY OF THE 300 SERIES WHICH HAVE A MINIMUM YIELD OF 40,000 PSI AND ELONGATION OF 15% FOR OVER 3/4" φ AND 12% FOR 3/4" φ AND SMALLER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY	MR	PLANS CK'D.	VC

CATWALK DETAILS (1 OF 2)

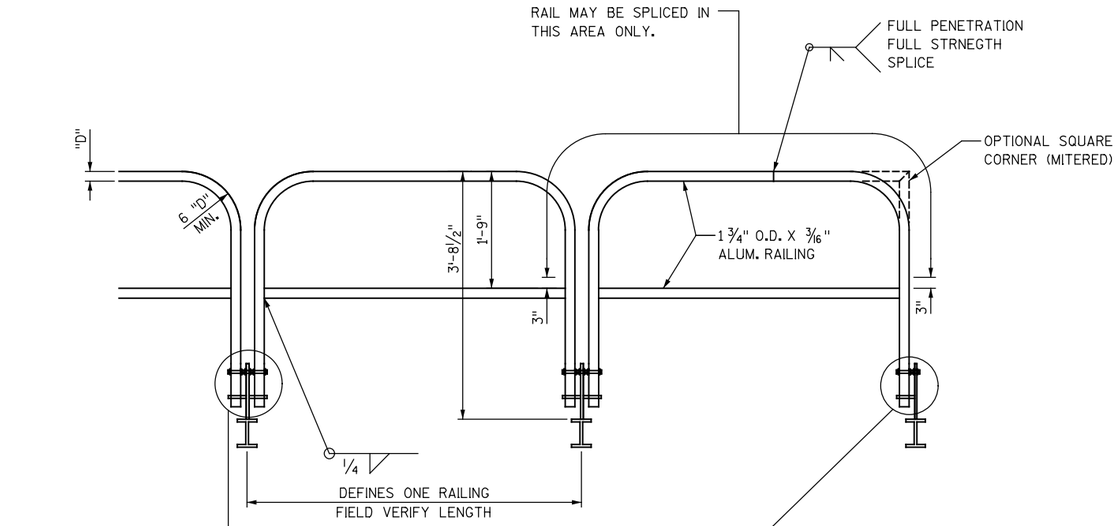
SHEET 8 OF 100
62

8

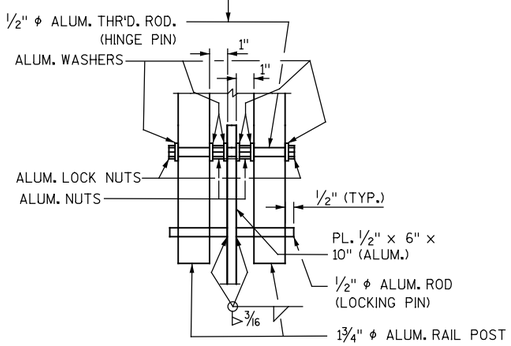
8

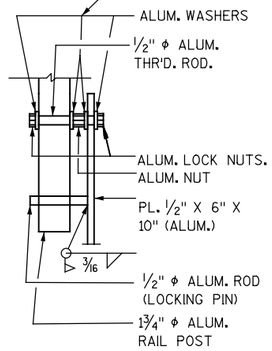
FILE NAME :08_07_catwalk.dgn
PLOT DATE :1/24/2017 PLOT BY : Veronica Chavez-vt DRV :Pdf_bw_HS.plt PEN :CEL_TEXTSUB.TBL

STATE PROJECT NUMBER
1000-20-69



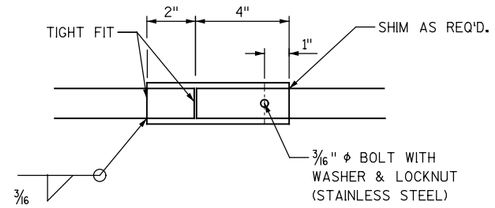
TYPICAL RAILING DETAILS





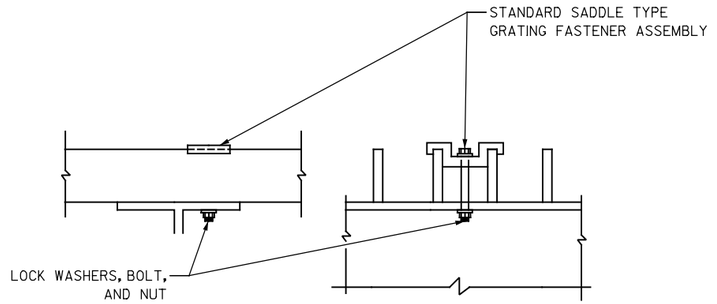
CATWALK NOTES:

1. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL REPAIRS.
2. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE OF THE ITEM REQUIRED.
3. ALL STAINLESS STEEL BOLTS, LOCK WASHERS, AND NUTS SHALL CONFORM TO:
   -ANCHOR BOLTS/HEX BOLTS ASTM F593 ANY ALLOY GROUP 1,2,OR3
   -HEX NUTS ASTM F594
   -WASHERS ASTM A240
   ANY OF THE 300 SERIES WHICH HAVE A MINIMUM YIELD OF 40,000 PSI AND ELONGATION OF 15% FOR OVER ¾" ϕ AND 12% FOR ¾" ϕ AND SMALLER.

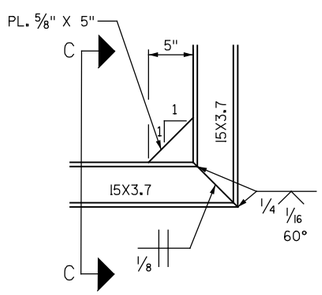


TYPICAL SECURE BACKRAIL SPLICE

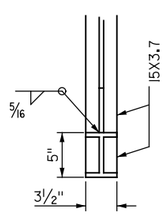
ONE SPLICE ALLOWED FOR LENGTHS OVER 30'-0"



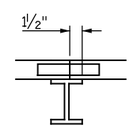
TYPICAL WALKWAY CONNECTION CLIP DETAIL



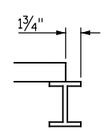
BRACKET DETAIL



SECTION C-C



CATWALK SPLICE LOCATION DETAIL



CATWALK TERMINATION DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY	MR	PLANS CK'D.	VC

CATWALK DETAILS (2 OF 2)

SHEET 9 OF 100
63

8

8

FILE NAME :08_07_catwalk.dgn
PLOT DATE :1/24/2007
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.pit
PEN :CEL.TEXTSUB.TBL

STATE PROJECT NUMBER
1000-20-69

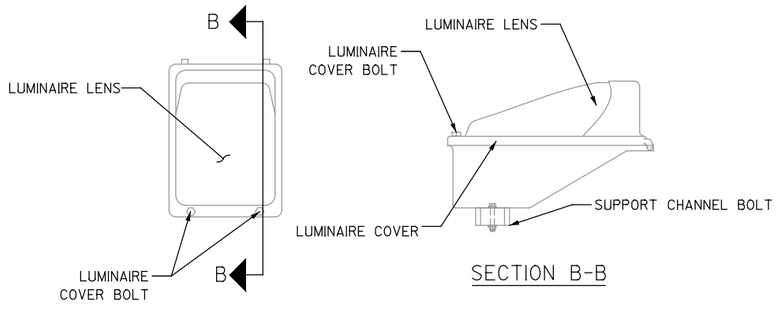
TABLE OF ESTIMATED QUANTITES FOR ELECTRICAL*

STRUCTURE NUMBER	ELEVATION VIEW SHEET NUMBER	HIGHWAY	TIGHTEN/REPLACE HANDHOLE COVER	SECURE LUMINAIRE COVER	INSTALL JUNCTION BOX COVER	REPLACE CONDUIT PLUG
			SPV.0060.17	SPV.0060.18	SPV.0060.19	SPV.0060.20
			EACH	EACH	EACH	EACH
S-40-001	12 OF 100	I-94/43	1			
S-40-099	13 OF 100	I-894/US 45	1			
S-40-151	14 OF 100	I-94			1	
S-40-215	16 OF 100	I-894/US 45		1	1	
S-40-216	17 OF 100	I-894/US 45		2		
S-40-217	18 OF 100	I-894/US 45		1		
S-40-221	19 OF 100	I-43/I-894		1		
S-40-430	30 OF 100	I-94	1			
S-67-310	91 OF 100	I-43				1
TOTAL			3	5	2	1

* THE INFORMATION PROVIDED IN THIS TABLE IS FOR INFORMATION PURPOSES ONLY AND NOT TO BE COUNTED AS ADDITIONAL QUANTITIES TO THOSE LISTED ON THE ELEVATION VIEW SHEETS.

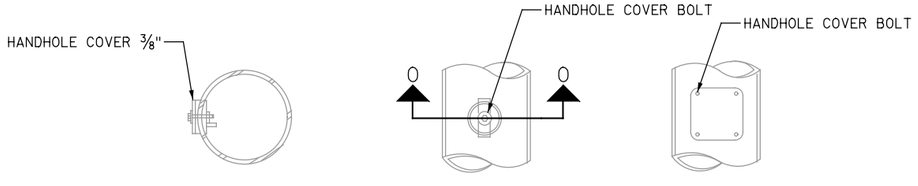
ELECTRICAL NOTES:

1. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL REPAIRS.
2. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE OF THE ITEM REQUIRED.
3. ALL STAINLESS STEEL BOLTS, LOCK WASHERS, AND NUTS SHALL CONFORM TO:
   -HEX BOLTS ASTM F593 ANY ALLOY GROUP 1, 2, OR 3
   -HEX NUTS ASTM F594
   -WASHERS ASTM A240
   ANY OF THE 300 SERIES WHICH HAVE A MINIMUM YIELD OF 40,000 PSI AND ELONGATION OF 15% FOR OVER 3/4" ϕ AND 12% FOR 3/4" ϕ AND SMALLER.
4. THE CONTRACTOR SHALL USE ANTI-SIEZE COMPOUND ON ELECTRICAL HANDHOLE COVER BOLTS, JUNCTION BOX BOLTS, LUMINAIRE COVER BOLTS, AND CONDUIT PLUGS PER SECTION 651.3.1 (5) OF THE WISDOT STANDARD SPECIFICATION.
5. CAP ALL EXPOSED WIRES AND CLOSE THE JUNCTION BOX.
6. REPLACE THE JUNCTION BOX BOLT WITH A STAINLESS STEEL BOLT.



SECTION B-B

TYPICAL LUMINAIRE DETAILS



SECTION O-O

HANDHOLE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

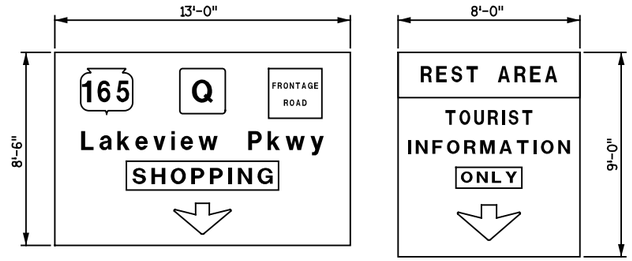
ELECTRICAL DETAILS

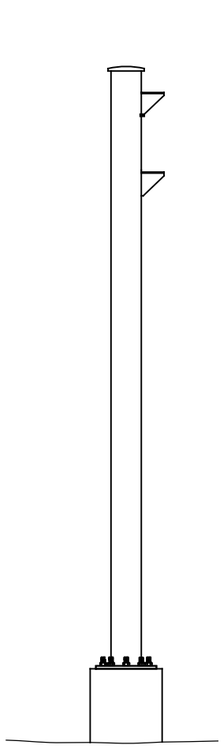
SHEET 10 OF 100
64

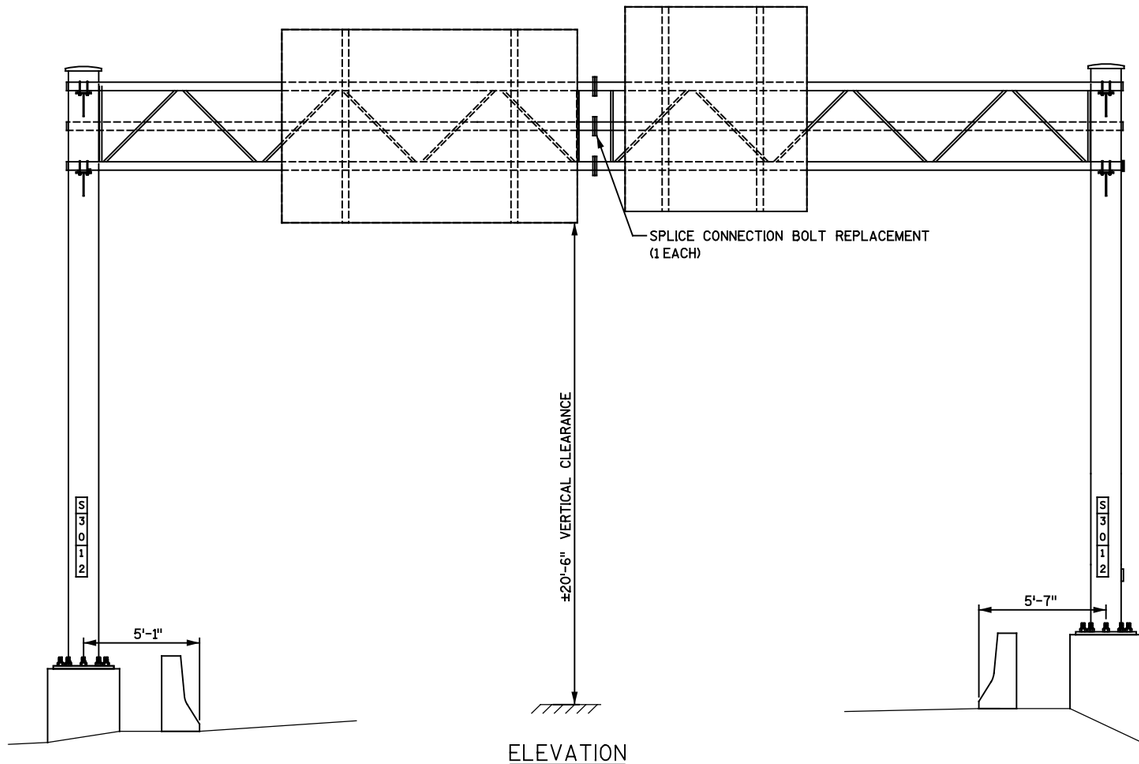
8

FILE NAME :108_09_elect.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez-B
DRV :Pdf_bw_HS.pit
PEN :CEL_TEXTSUB.TBL

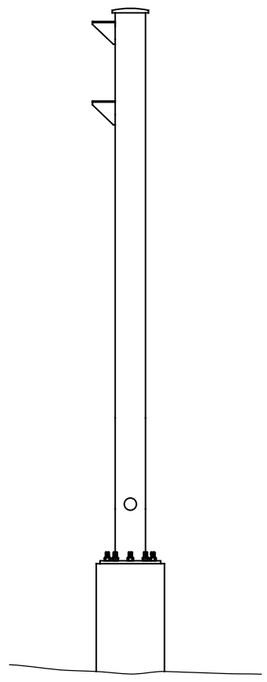
STATE PROJECT NUMBER
1000-20-69

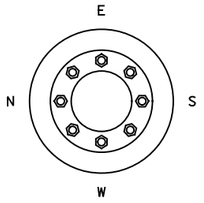




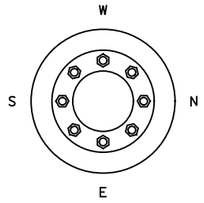


ELEVATION
LOOKING NORTH





WEST FOUNDATION DETAIL



EAST FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.06	SPLICE CONNECTION BOLT REPLACEMENT	1 EACH	SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-30-12

SHEET 11 OF 100
65

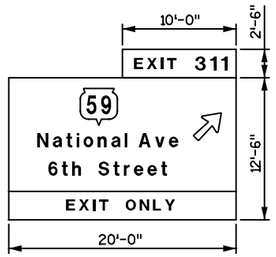
8

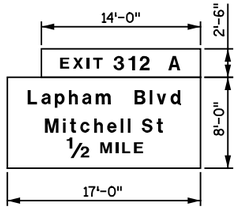
8

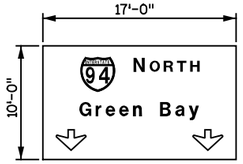
FILE NAME :S-30-0012.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.pit
PEN :CELTextSub.tbl

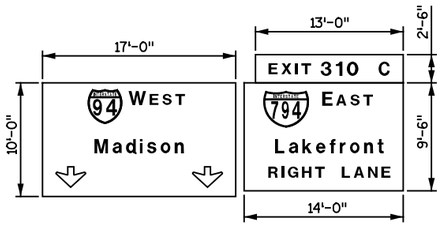
STATE PROJECT NUMBER

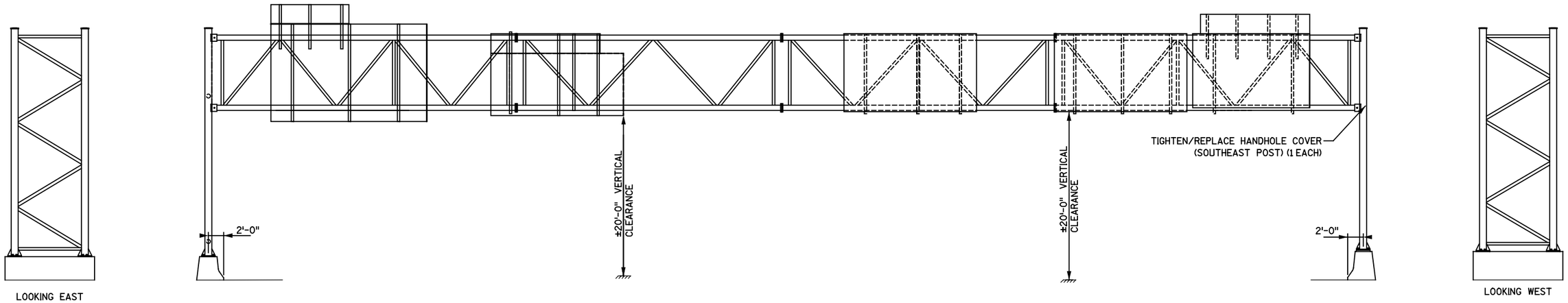
1000-20-69



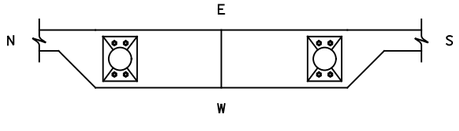




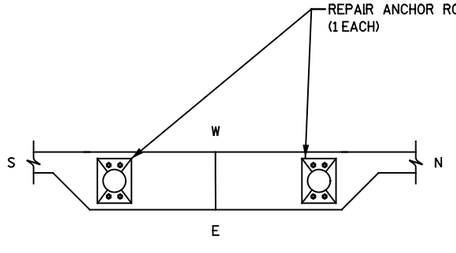




ELEVATION
LOOKING NORTH



WEST FOUNDATION DETAIL



EAST FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.17	TIGHTEN/REPLACE HANDHOLE COVER	1 EACH	SHEET 10
SPV.0060.35	REPAIR ANCHOR ROD FOUNDATION SUPPORT	1 EACH	SHEET 3

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-1

SHEET 12 OF 100
66

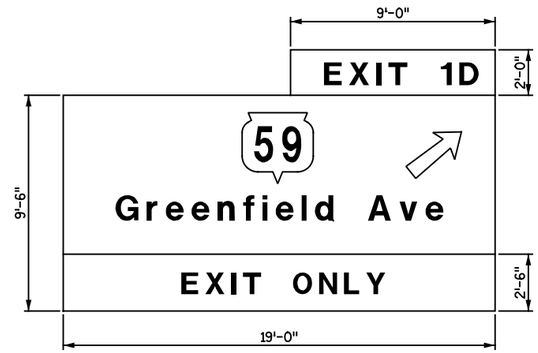
8

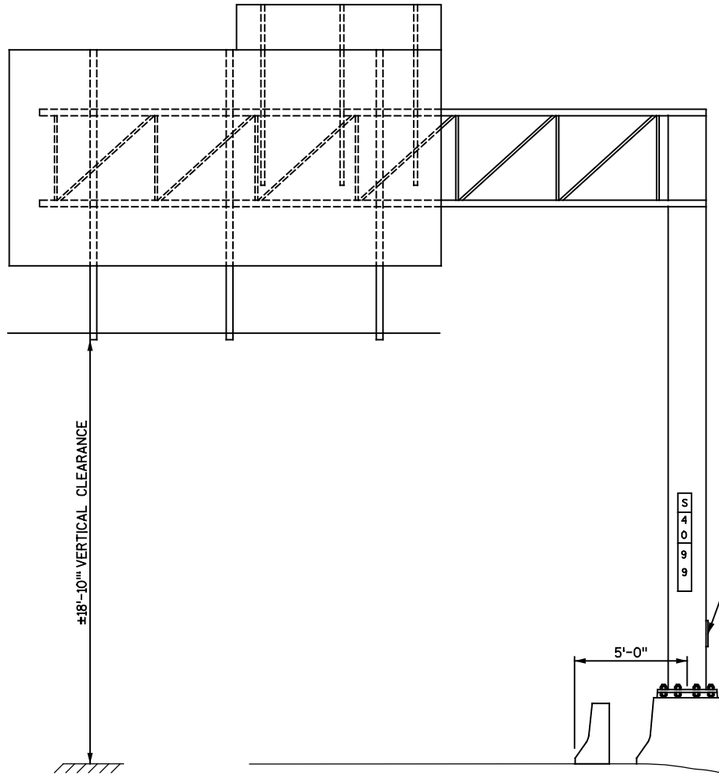
8

FILE NAME :S-40-0001.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavezv8i
DRV :Pdf_bw_HS.plt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER

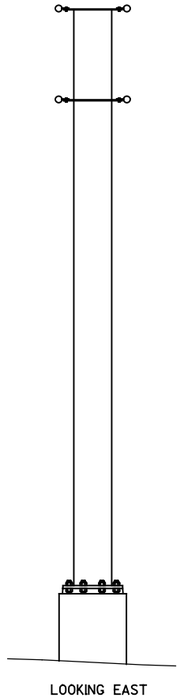
1000-20-69



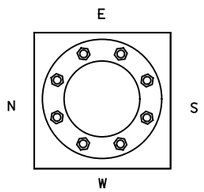


ELEVATION

LOOKING SOUTH



LOOKING EAST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.17	TIGHTEN/REPLACE HANDHOLE COVER	1 EACH	SHEET 10

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-99

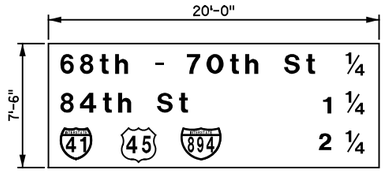
SHEET 13 OF 100
67

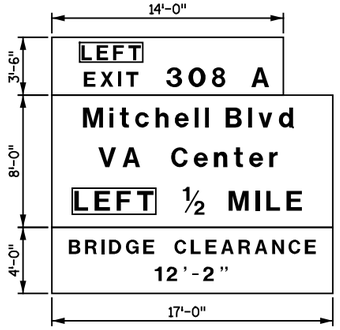
8

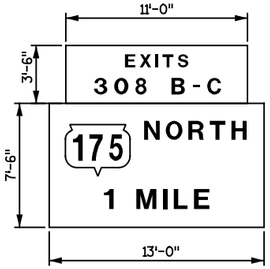
8

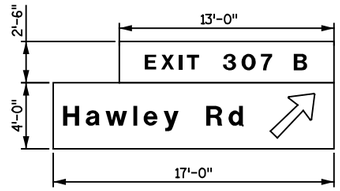
FILE NAME :S-40-0099.dgn
PLOT DATE :11/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.pit
PEN :CEL.TextSub.tbl

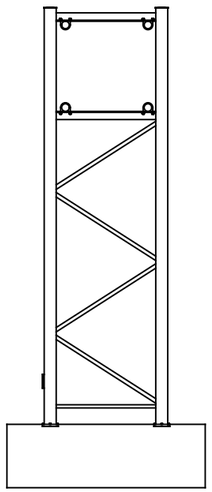
STATE PROJECT NUMBER
1000-20-69

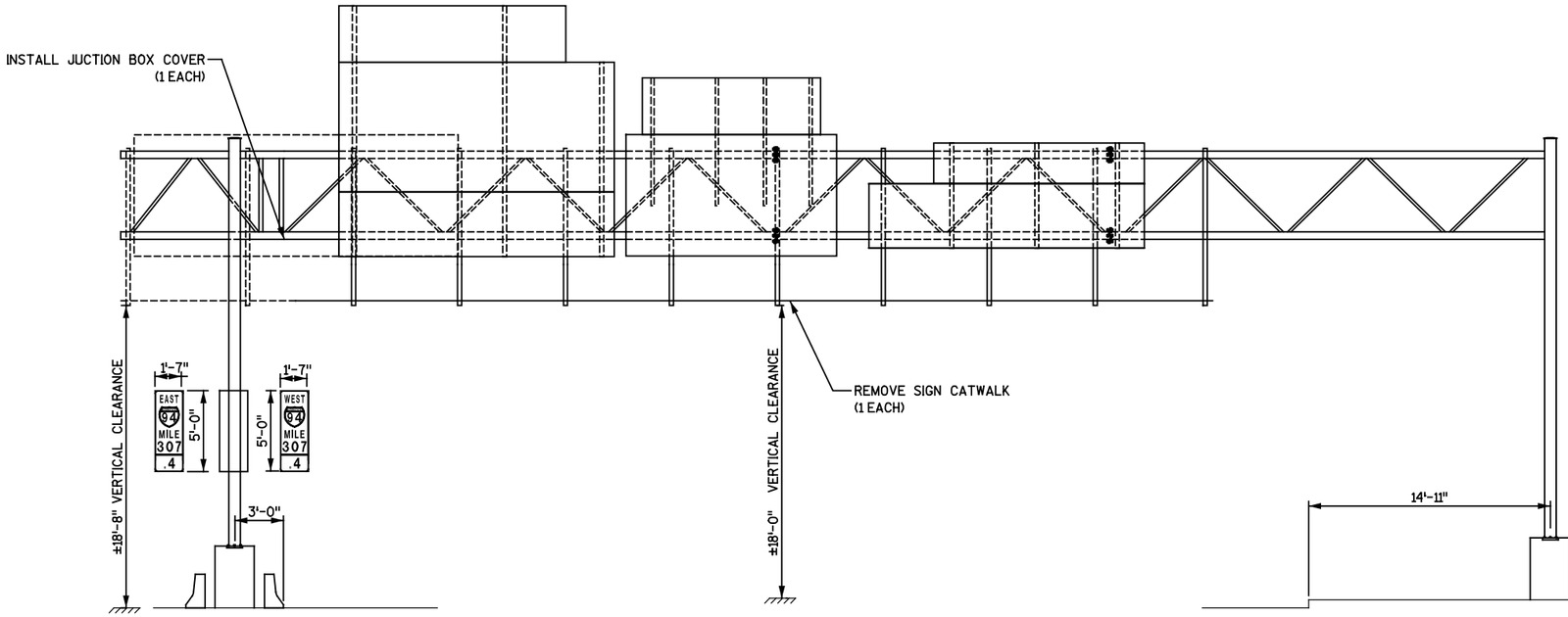


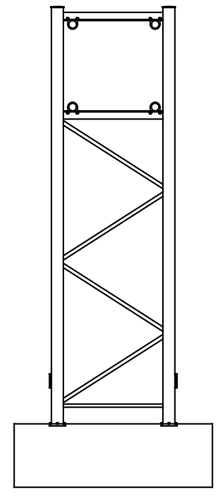






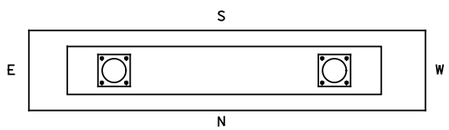




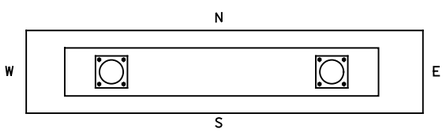


ELEVATION
LOOKING EAST

8



NORTH FOUNDATION DETAIL



SOUTH FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.19	INSTALL JUCTION BOX COVER	1 EACH	N/A
SPV.0060.24	REMOVE SIGN CATWALK	1 EACH	SHEET 8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

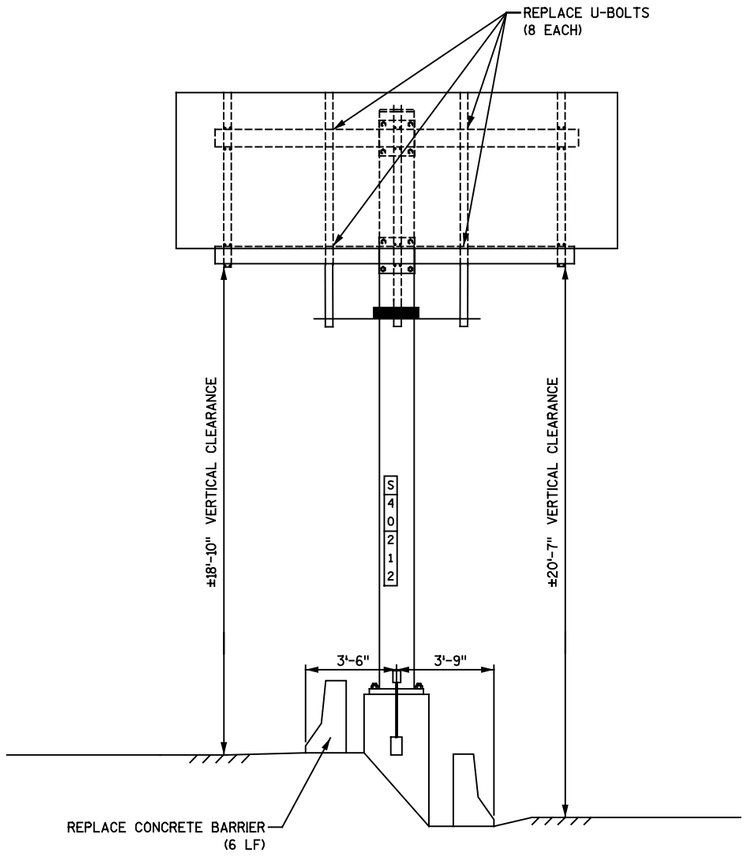
S-40-151

SHEET 14 OF 100
68

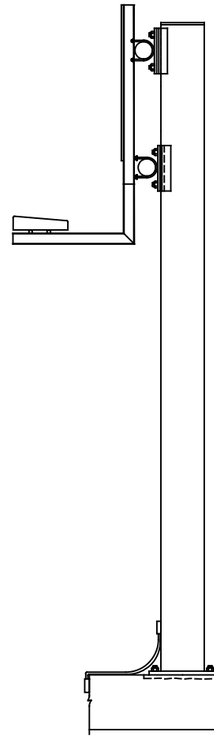
8

FILE NAME :S-40-0151.dgn
PLOT DATE :11/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CEL.TextSub.tbl

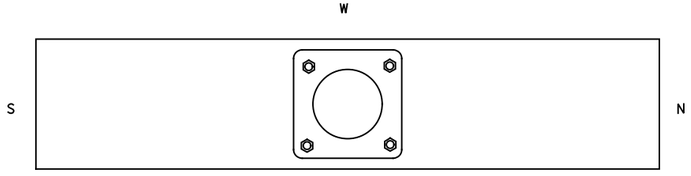
STATE PROJECT NUMBER
1000-20-69



ELEVATION
LOOKING NORTH



LOOKING WEST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0090.01	REPLACE CONCRETE BARRIER	6 LF	SHEET 3
SPV.0060.27	REPLACE U-BOLTS	8 EACH	SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-212

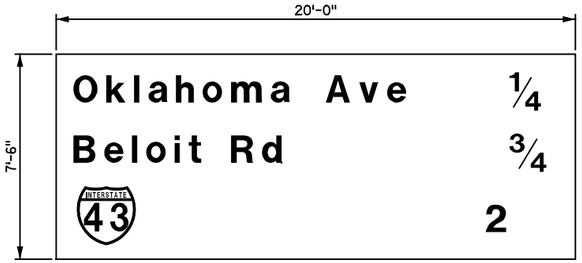
SHEET 15 OF 100
69

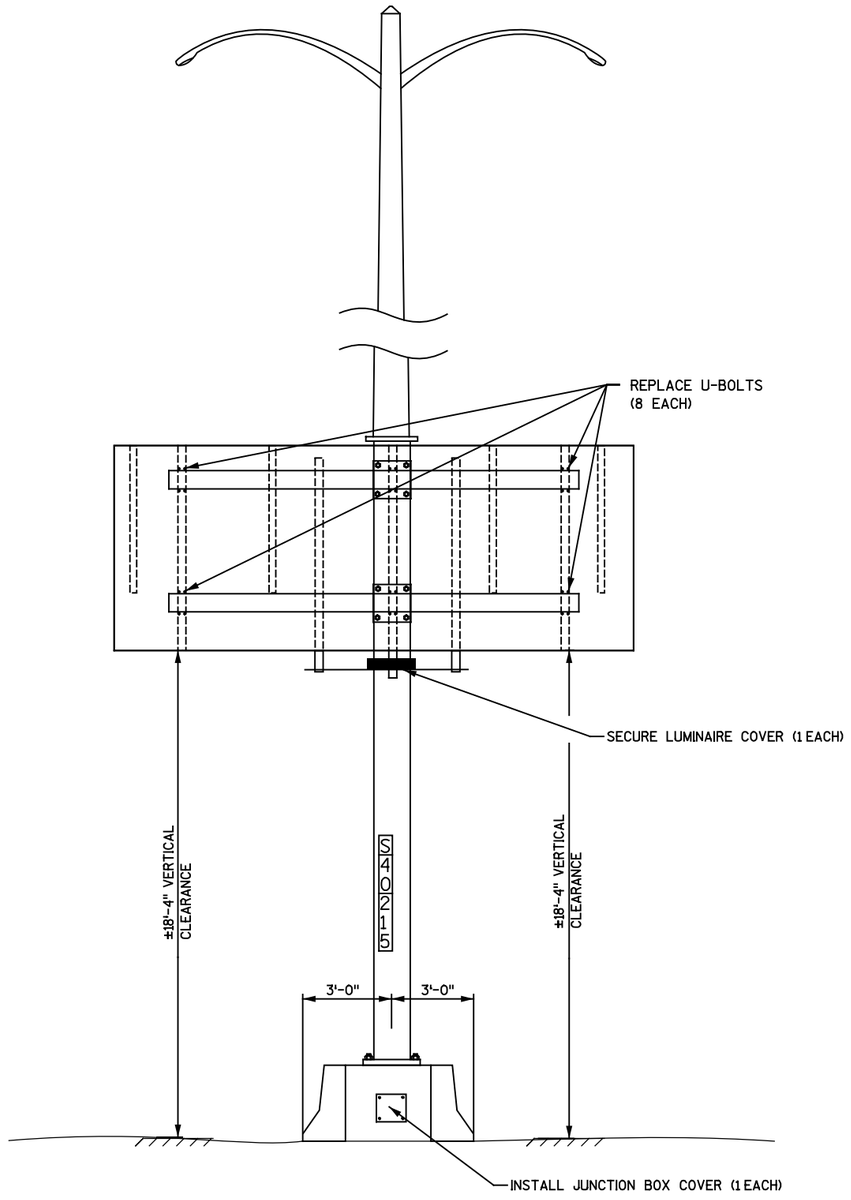
8

8

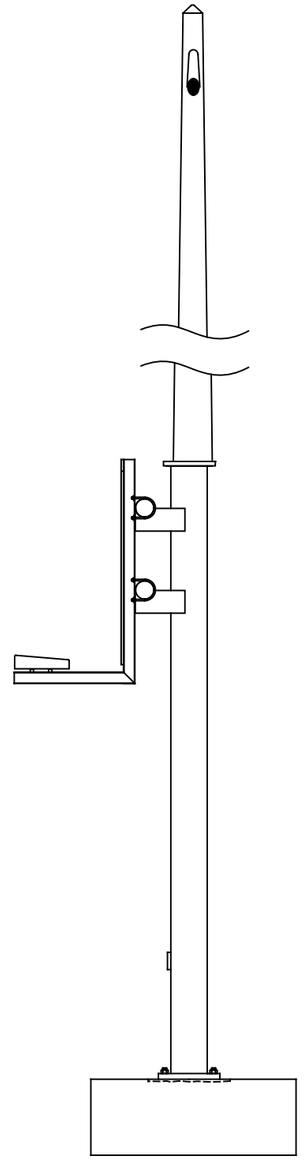
FILE NAME :S-40-0212.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER
1000-20-69

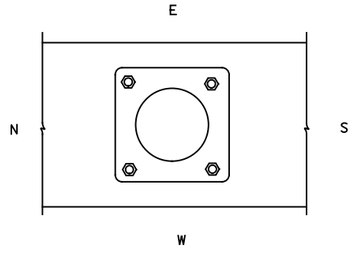




ELEVATION
LOOKING SOUTH



LOOKING EAST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.18	SECURE LUMINAIRE COVER	1 EACH	SHEET 10
SPV.0060.19	INSTALL JUNCTION BOX COVER	1 EACH	NA
SPV.0060.27	REPLACE U-BOLTS	8 EACH	SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-215

SHEET 16 OF 100
70

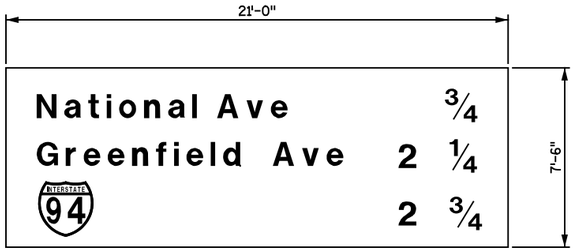
8

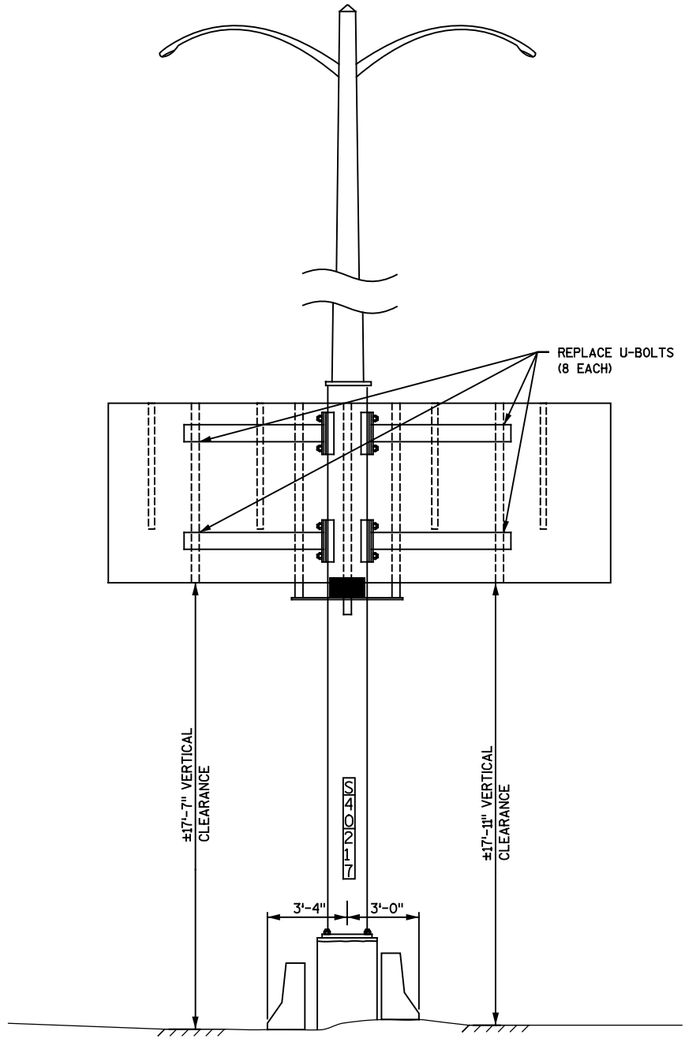
8

FILE NAME :S-40-0215.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez-tt
DRV :Pdf_bw_HSplt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER

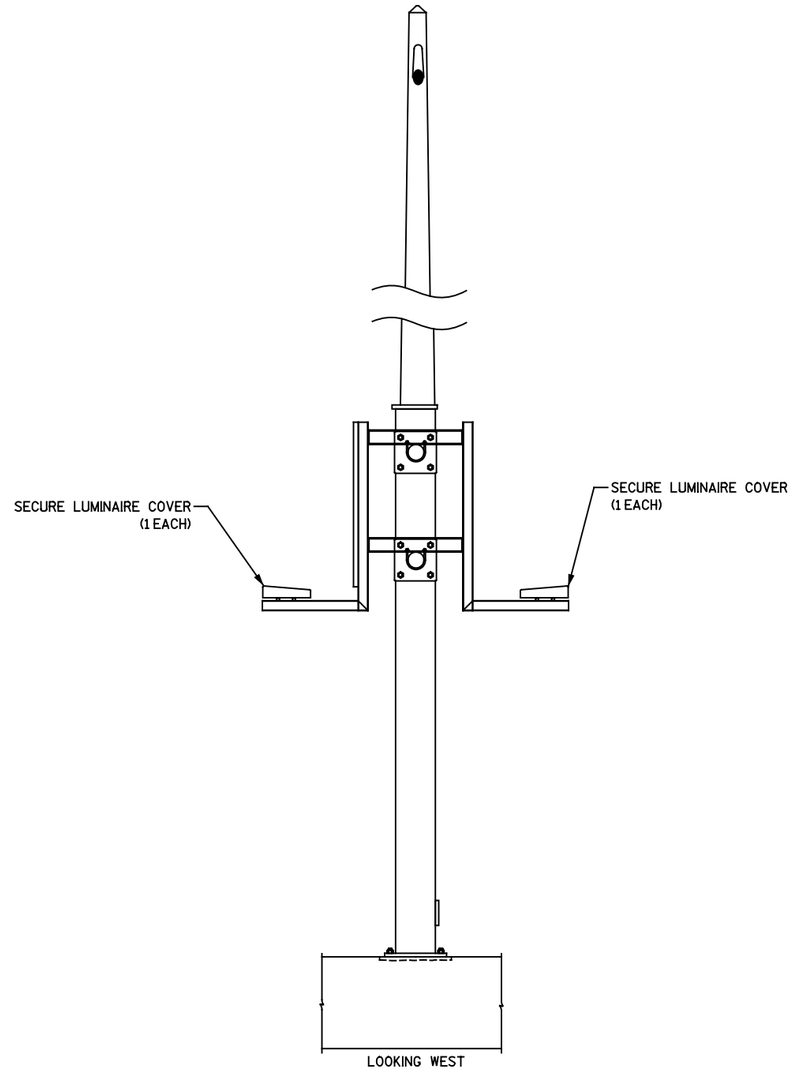
1000-20-69



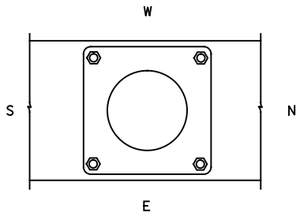


ELEVATION

LOOKING NORTH



LOOKING WEST



FOUNDATION DETAILS

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.18	SECURE LUMINAIRE COVER	2 EACH	SHEET 10
SPV.0060.27	REPLACE U-BOLTS	8 EACH	SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-216

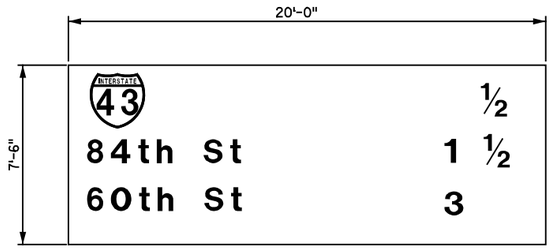
SHEET 17 OF 100
71

8

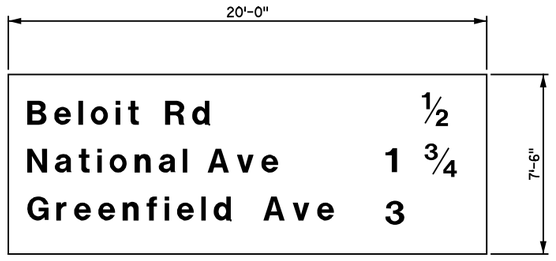
8

FILE NAME :S-40-0216.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HSplt
PEN :CELTextSub.tbl

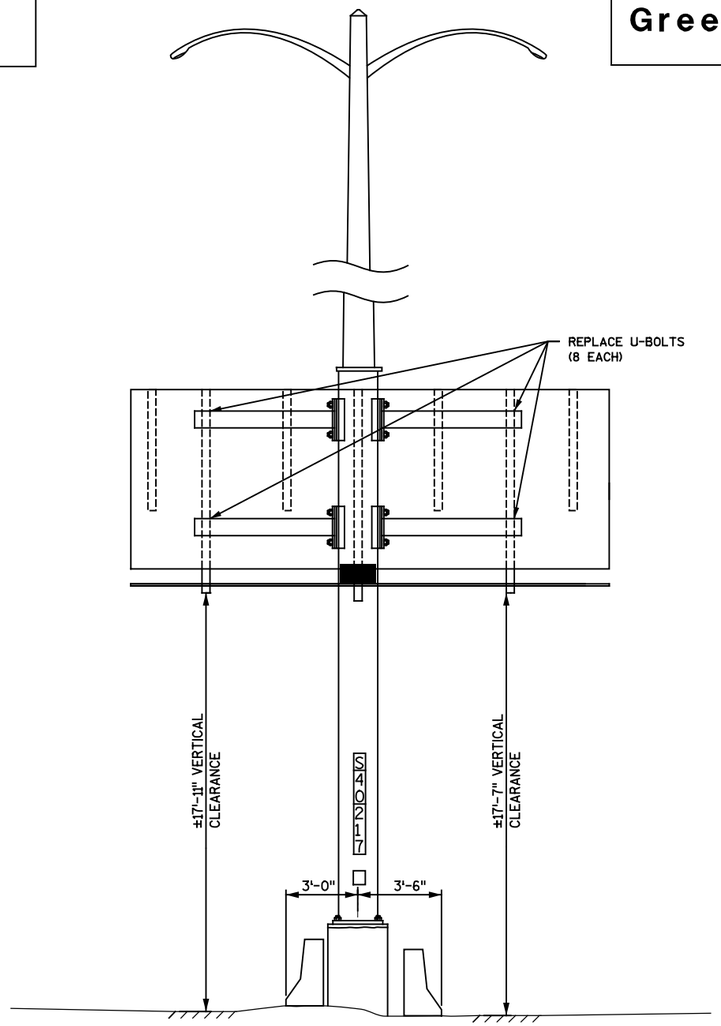
STATE PROJECT NUMBER
1000-20-69



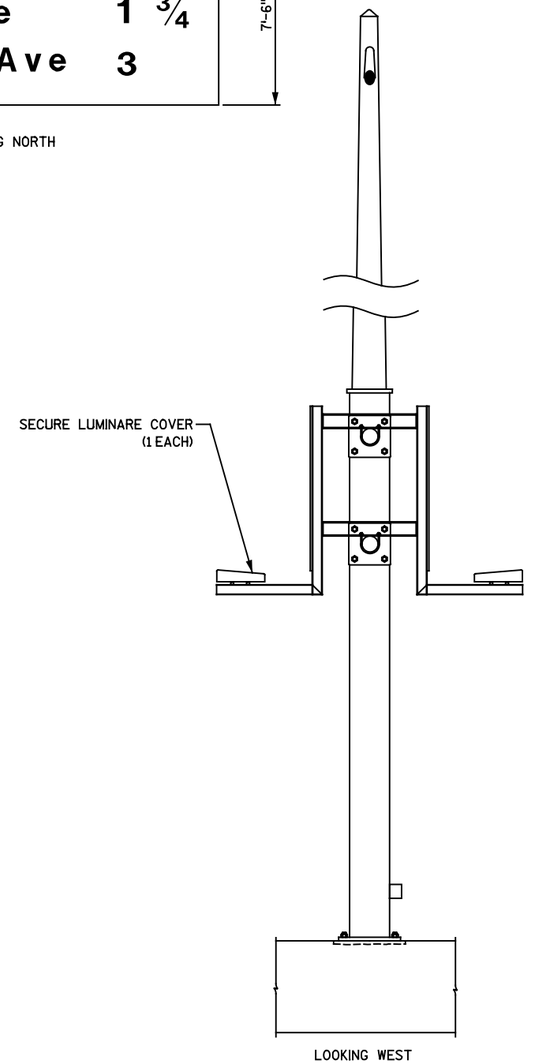
LOOKING SOUTH



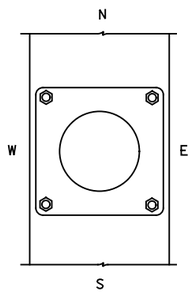
LOOKING NORTH



ELEVATION
LOOKING NORTH



LOOKING WEST



FOUNDATION DETAILS

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.18	SECURE LUMINAIRE COVER	1 EACH	SHEET 10
SPV.0060.27	REPLACE U-BOLTS	8 EACH	SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-217

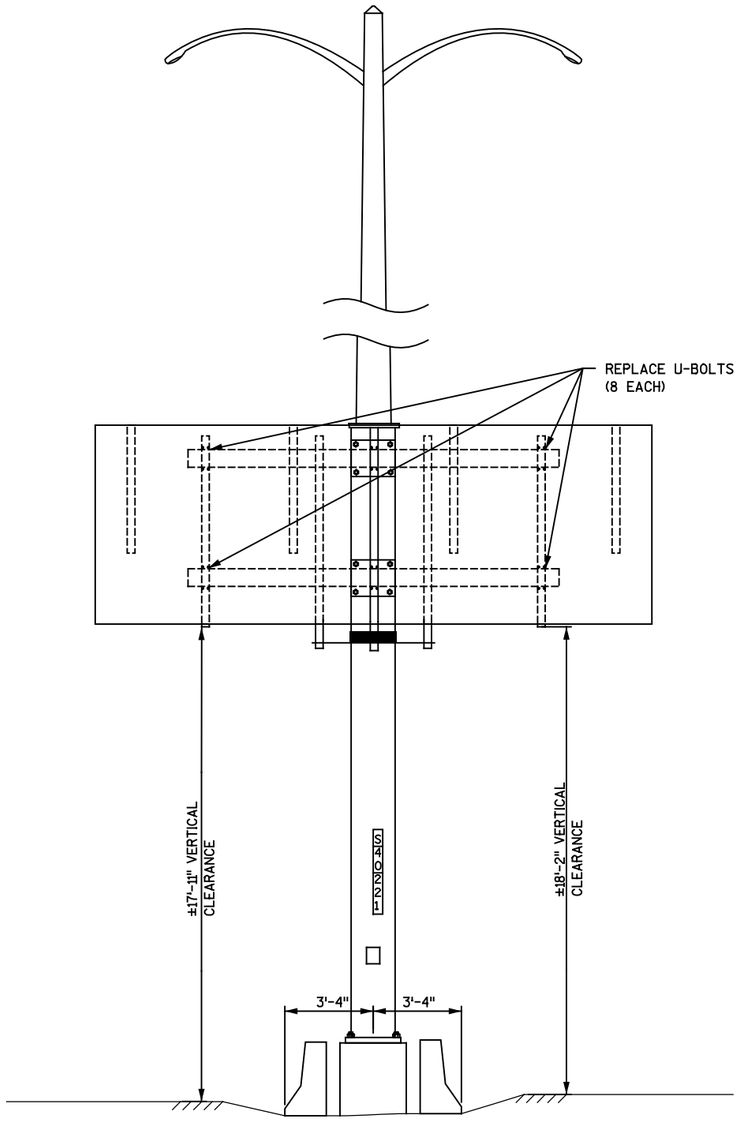
SHEET 18 OF 100
72

8

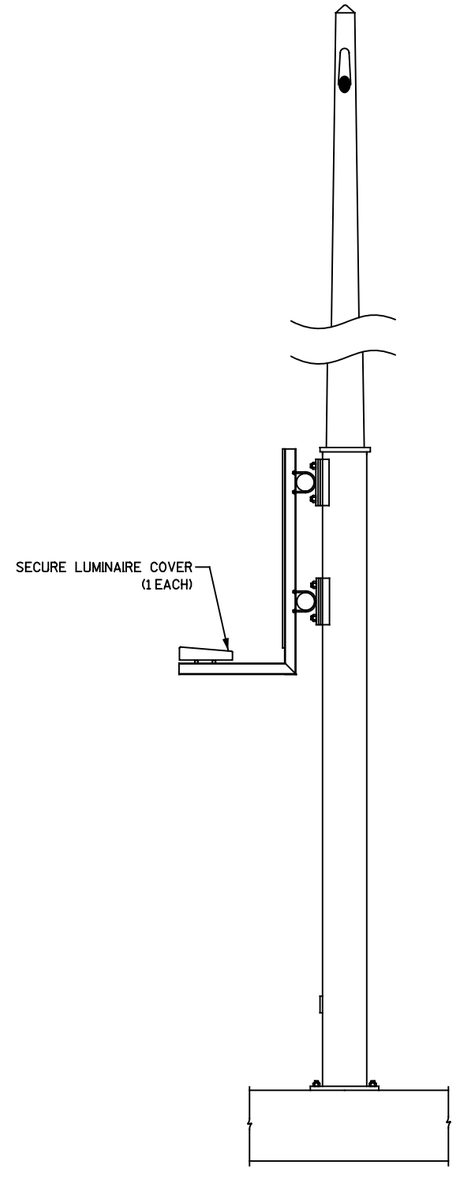
8

FILE NAME :S-40-0217.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez\tl
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

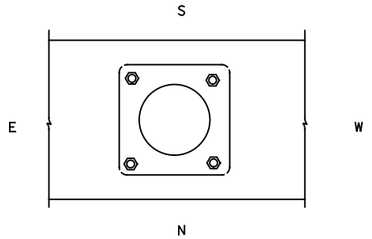
STATE PROJECT NUMBER
1000-20-69



ELEVATION
LOOKING WEST



LOOKING SOUTH



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.18	SECURE LUMINAIRE COVER	1 EACH	SHEET 10
SPV.0060.27	REPLACE U-BOLTS	8 EACH	SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-221

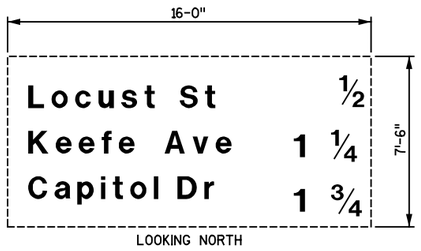
SHEET 19 OF 100
73

8

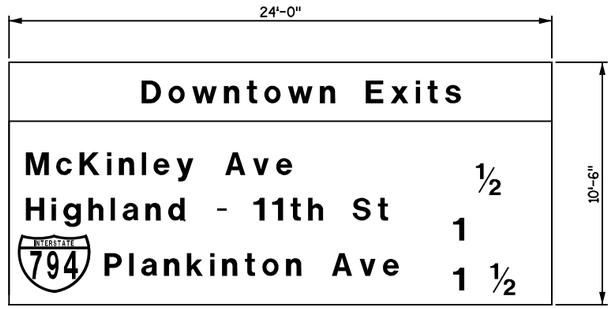
8

FILE NAME :S-40-0221.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HSplt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER
1000-20-69



LOOKING NORTH



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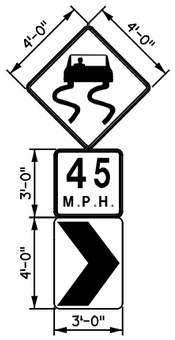
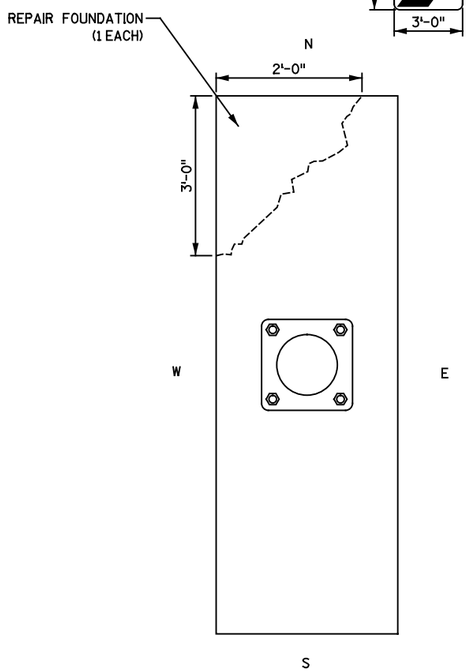
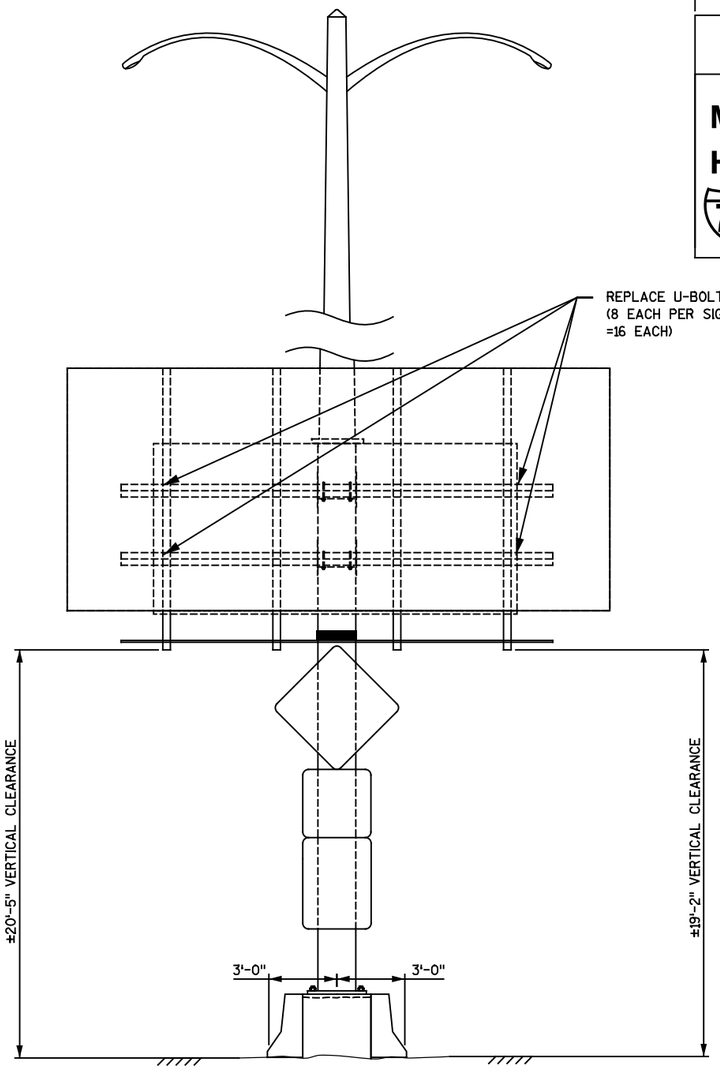


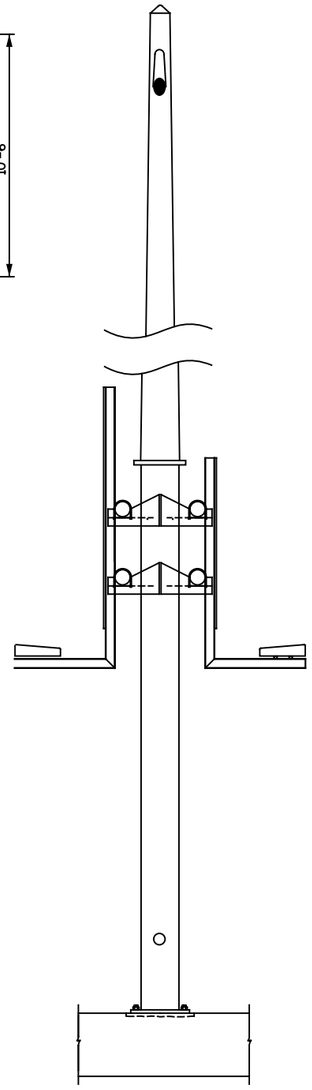


FOUNDATION DETAIL



ELEVATION

LOOKING SOUTH



LOOKING EAST

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.05	REPAIR FOUNDATION	1 EACH	SHEET 3
SPV.0060.27	REPLACE U-BOLTS	16 EACH	SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-224

SHEET 20 OF 100
74

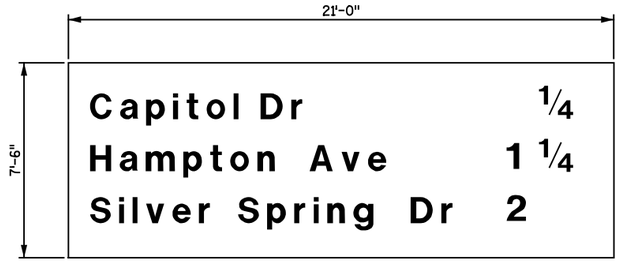
8

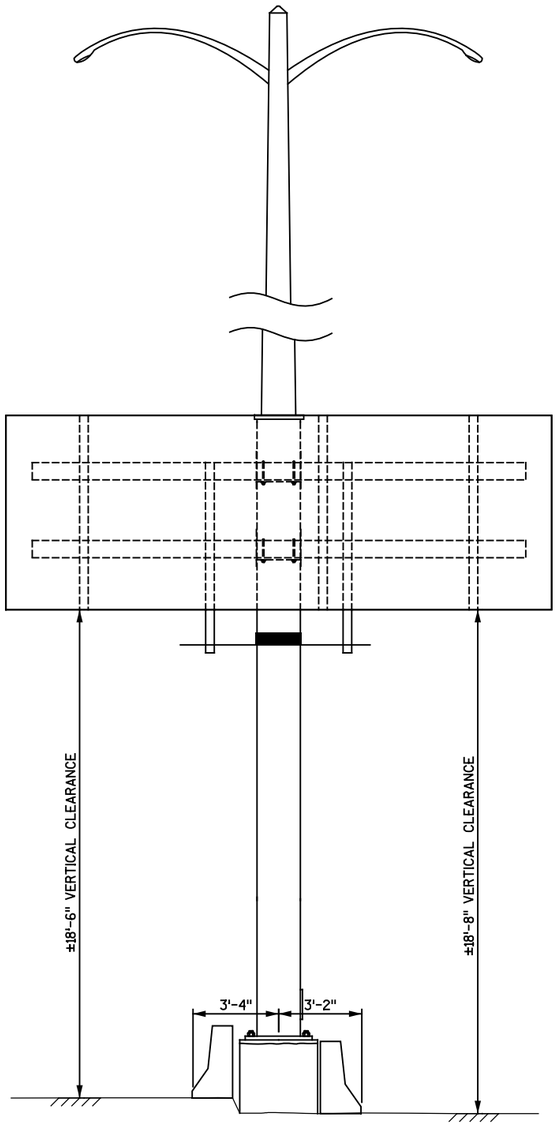
8

FILE NAME :S-40-0224.dgn
PLOT DATE :1/24/2017 PLOT BY : Veronica Chavez\tl DRV :Pdf_bw_HS.plt PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER

1000-20-69





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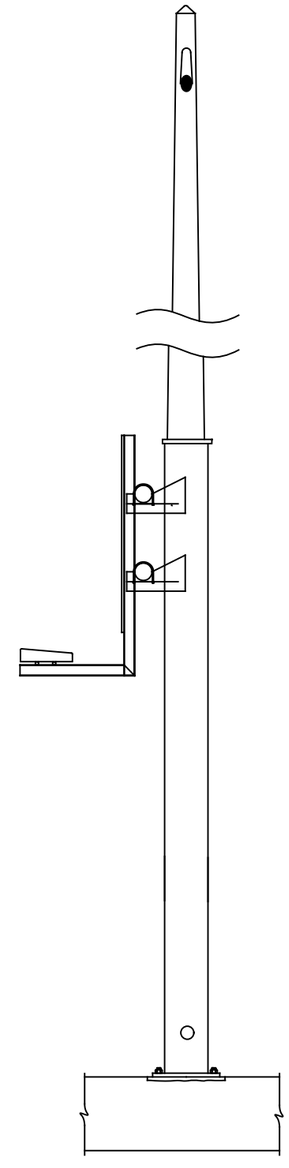
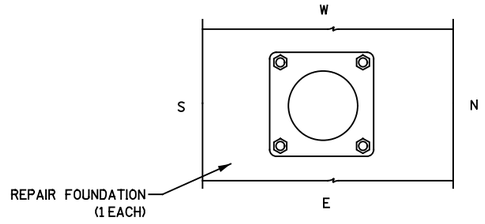
LOOKING NORTH



LOOKING WEST



FOUNDATION DETAILS

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.05	REPAIR FOUNDATION	1 EACH	SHEET 3

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-227

SHEET 21 OF 100

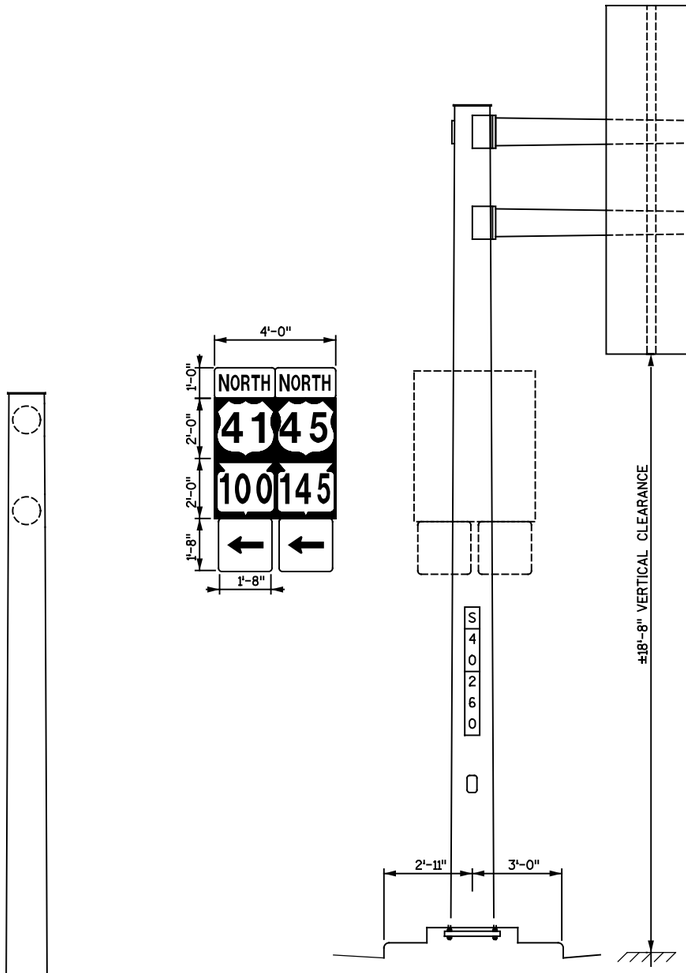
75

8

8

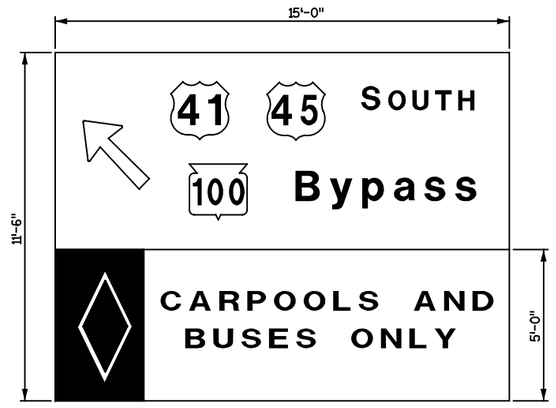
FILE NAME :S-40-0227.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez-Vil
DRV :Pdf_bw_HiSplt
PEN :CELTextSub.tbl

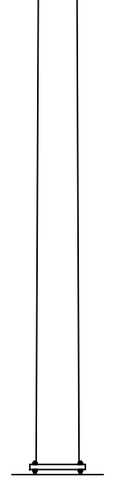
STATE PROJECT NUMBER
1000-20-69



ELEVATION

LOOKING WEST





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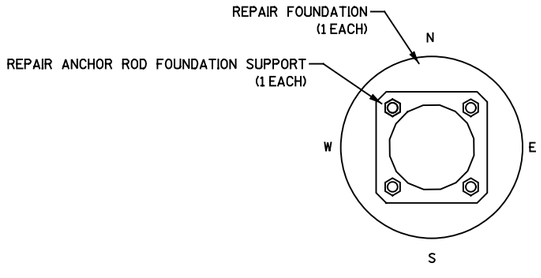


FOUNDATION DETAILS

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.05	REPAIR FOUNDATION	1 EACH	SHEET 3
SPV.0060.35	REPAIR ANCHOR ROD FOUNDATION SUPPORT	1 EACH	SHEET 3

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-260

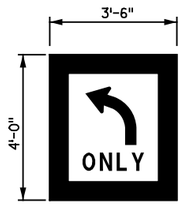
SHEET 22 OF 100
76

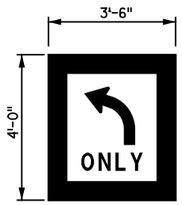
8

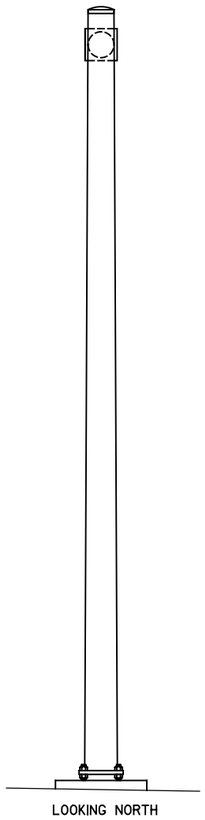
8

FILE NAME :S-40-0260.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez\tl
DRV :Pdf_bw_HiSplt
PEN :CELTextSub.tbl

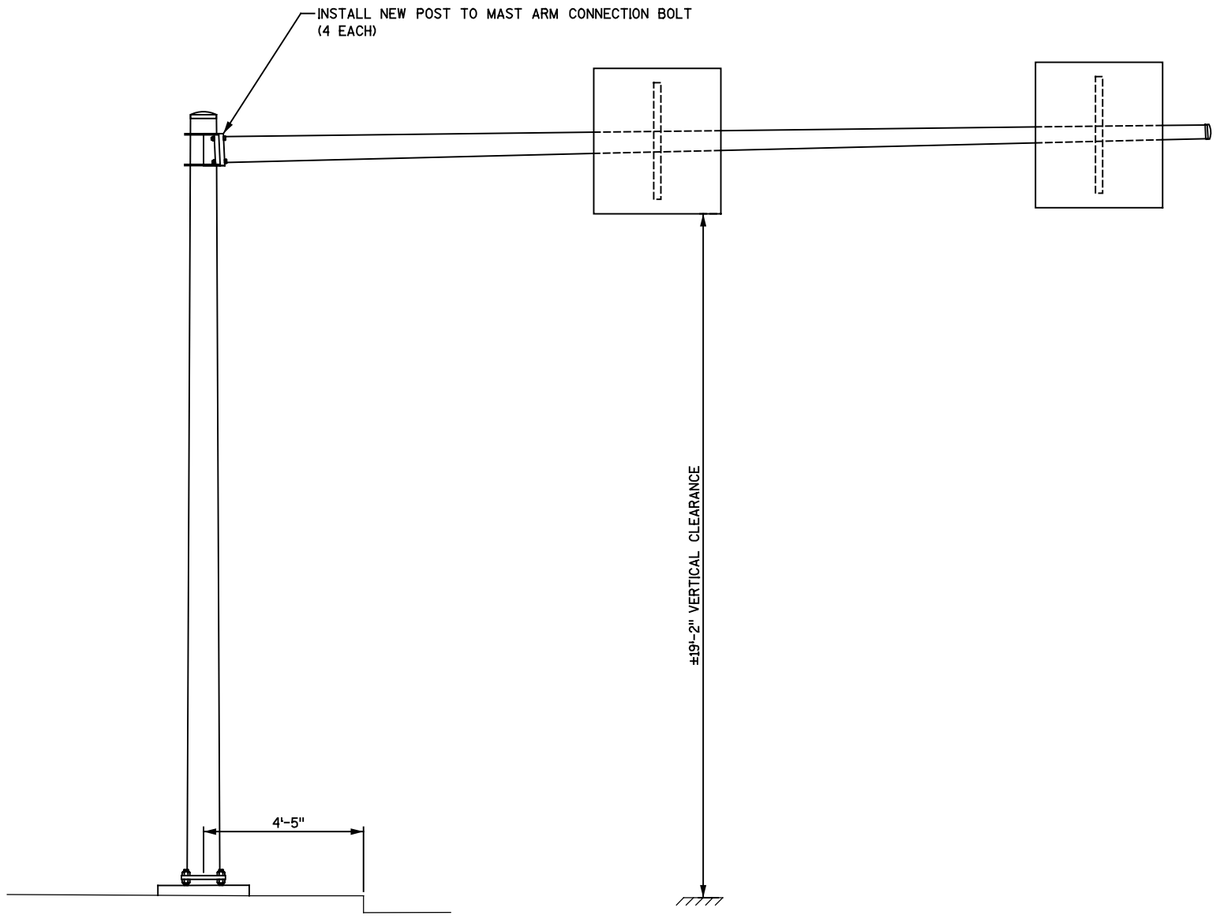
STATE PROJECT NUMBER
1000-20-69



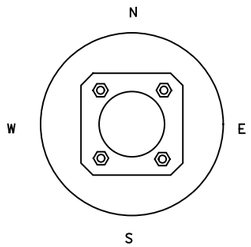




LOOKING NORTH



ELEVATION
LOOKING WEST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.07	INSTALL NEW POST TO MAST ARM CONNECTION BOLT	4 EACH	SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-287

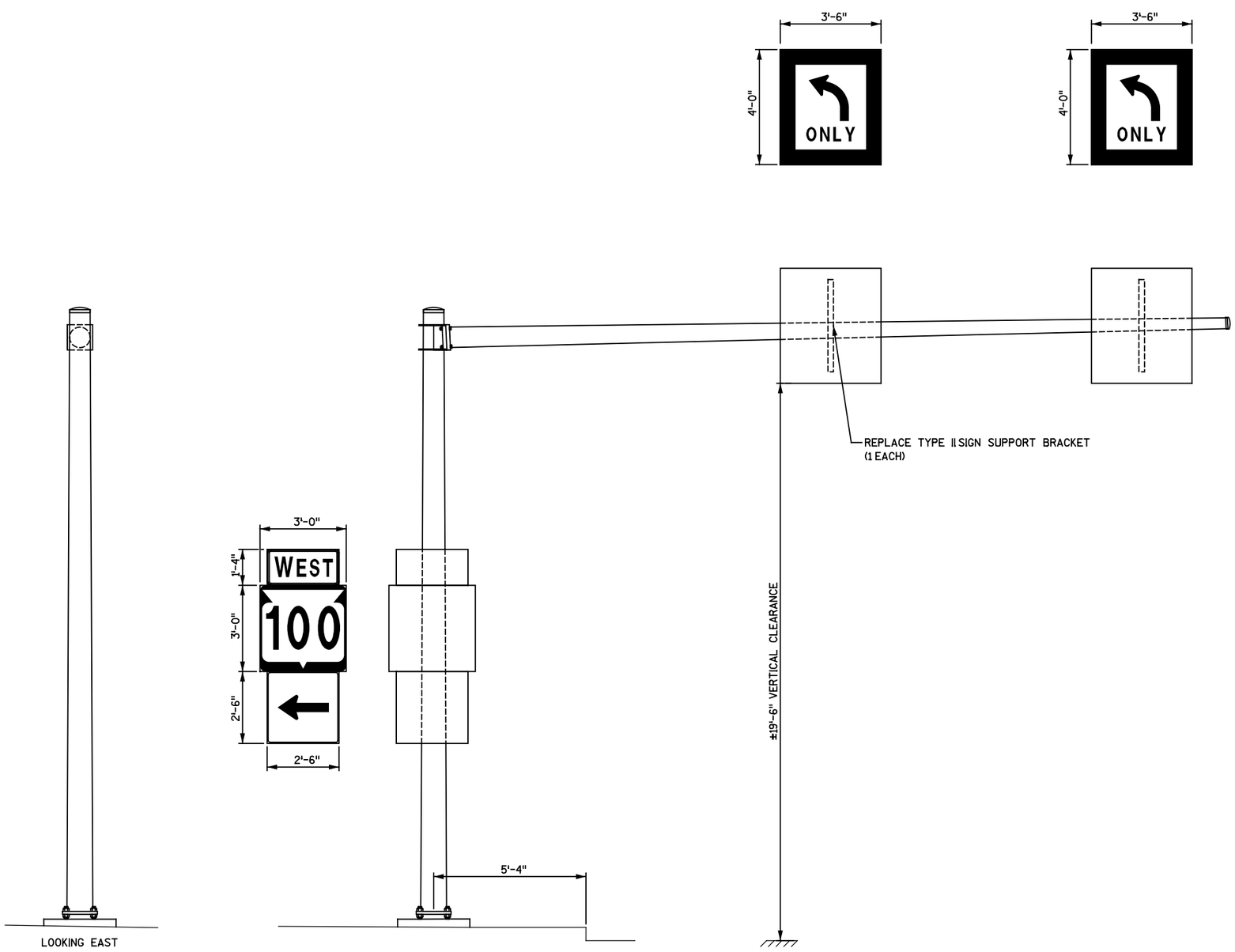
SHEET 23 OF 100
77

8

8

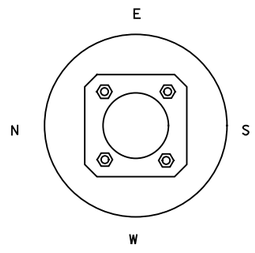
FILE NAME :S-40-0287.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69



LOOKING EAST

ELEVATION
LOOKING NORTH



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.15	REPLACE TYPE II SIGN SUPPORT BRACKET	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-288

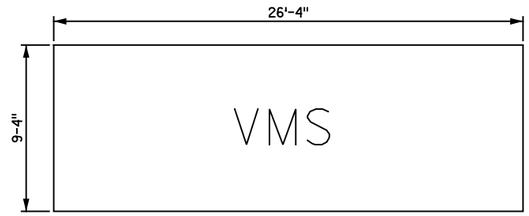
SHEET 24 OF 100
78

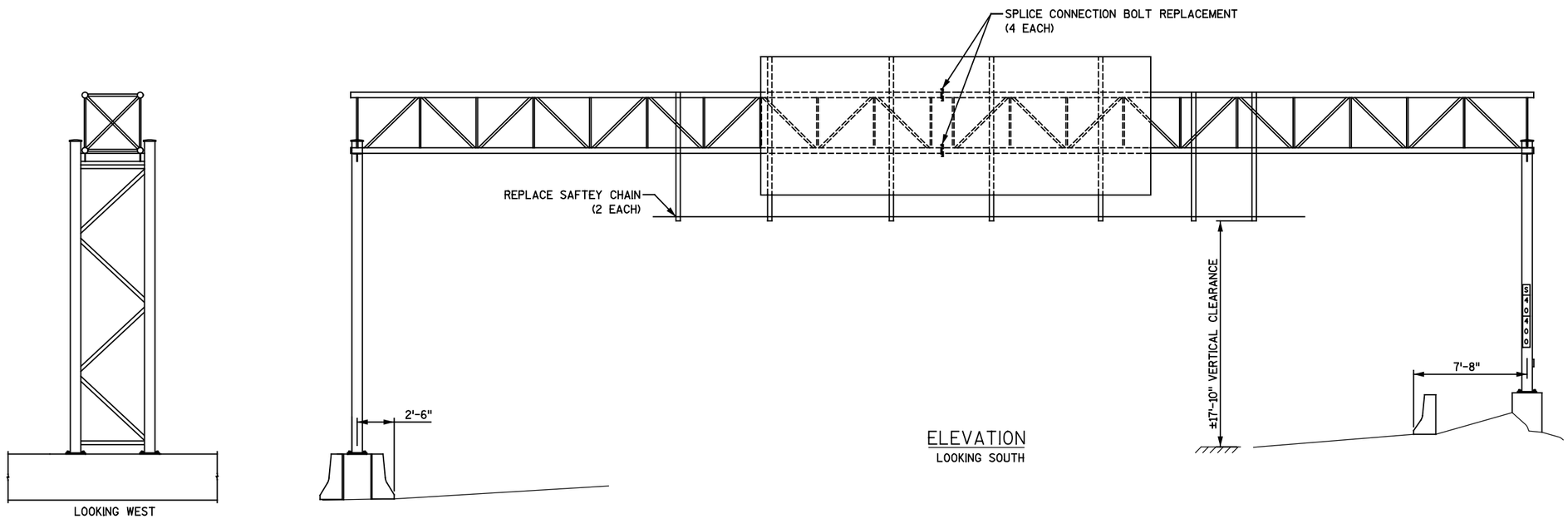
8

8

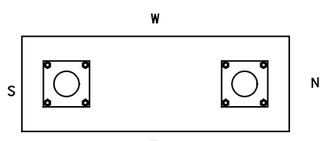
FILE NAME :S-40-0288.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HiSplt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER
1000-20-69

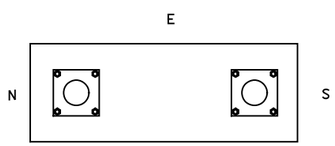




ELEVATION
LOOKING SOUTH



EAST FOUNDATION DETAIL



WEST FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.06	SPLICE CONNECTION BOLT REPLACEMENT	4 EACH	SHEET 4
SPV.0060.21	REPLACE SAFETY CHAIN	2 EACH	SHEET 8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-400

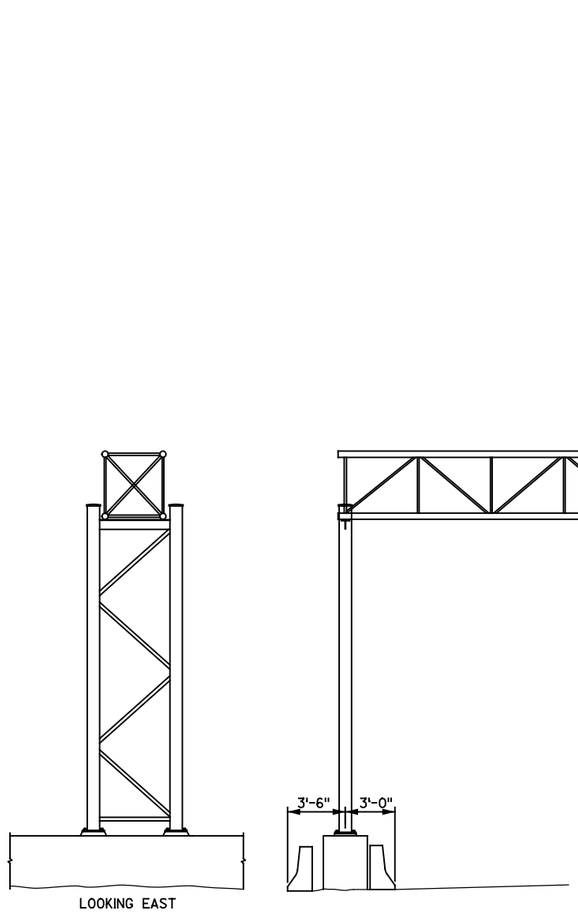
SHEET 25 OF 100
79

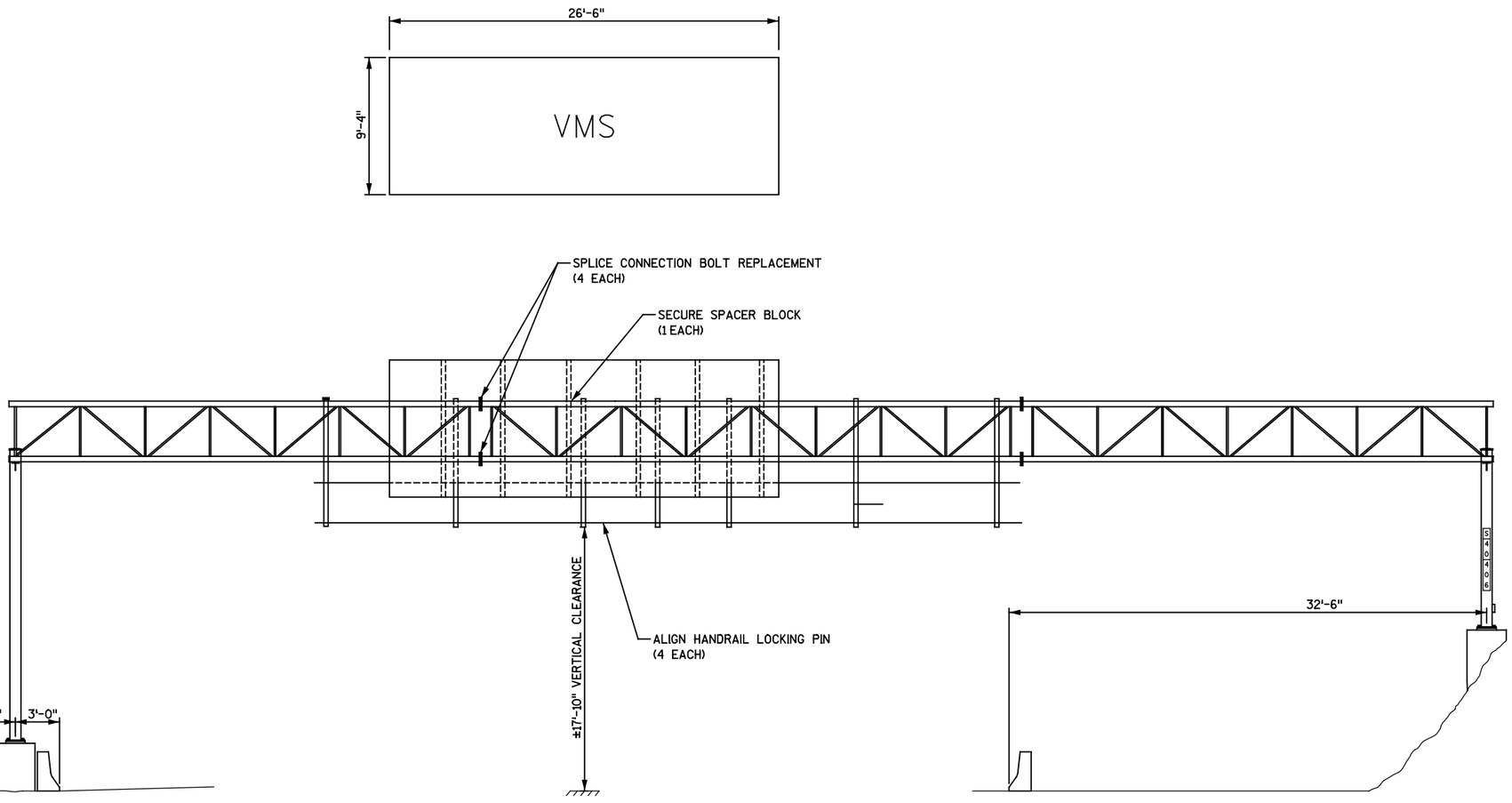
8

8

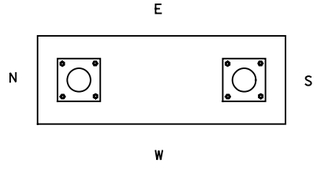
FILE NAME :S-40-0400.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HSplt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER
1000-20-69

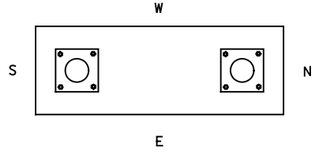




ELEVATION
LOOKING NORTH



WEST FOUNDATION DETAIL



EAST FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.06	SPLICE CONNECTION BOLT REPLACEMENT	4 EACH	SHEET 4
SPV.0060.22	ALIGN HANDRAIL LOCKING PIN	4 EACH	SHEET 9
SPV.0060.25	SECURE SPACER BLOCK	1 EACH	SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-406

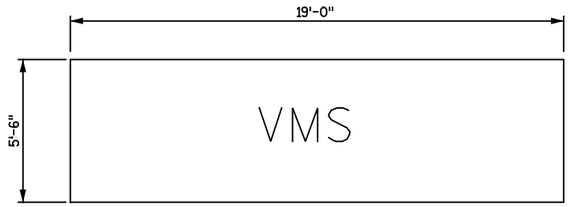
SHEET 26 OF 100
80

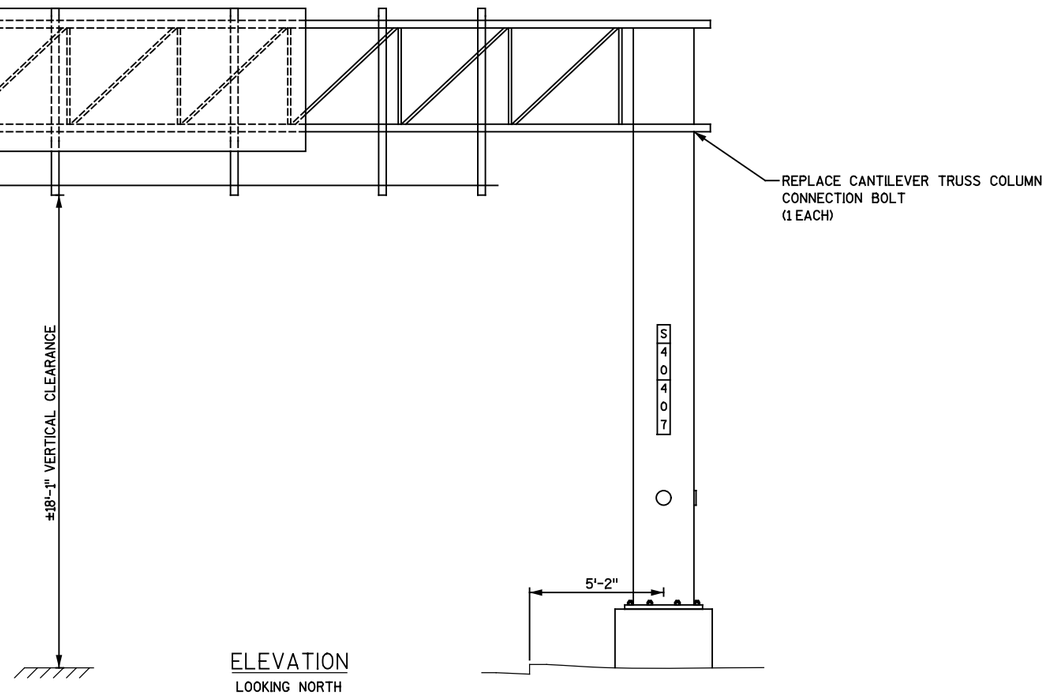
8

8

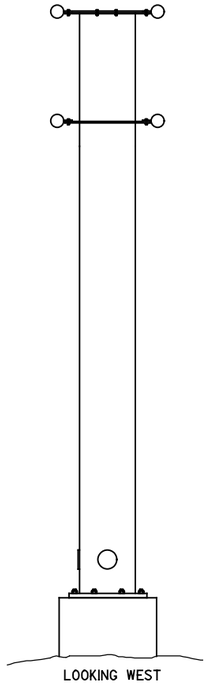
FILE NAME :S-40-0406.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER
1000-20-69

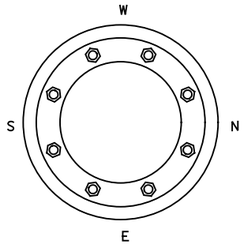




ELEVATION
LOOKING NORTH



LOOKING WEST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.09	REPLACE CANTILEVER TRUSS COLUMN CONNECTION BOLT	1 EACH	SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-407

SHEET 27 OF 100
81

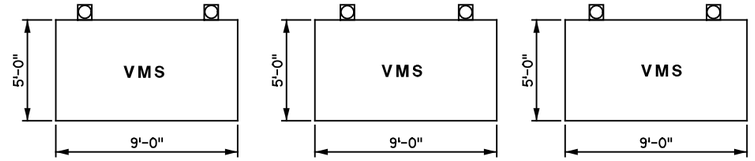
8

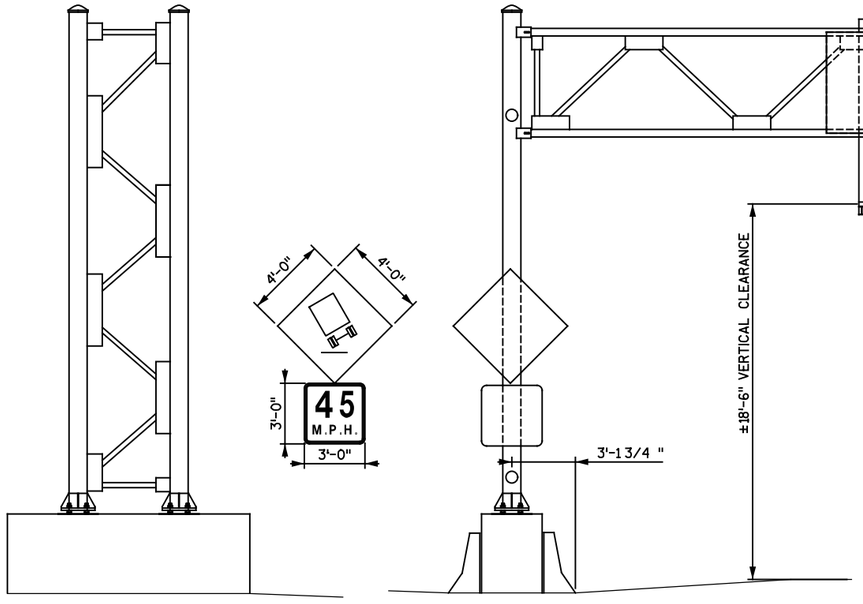
8

FILE NAME :S-40-0407.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER

1000-20-69





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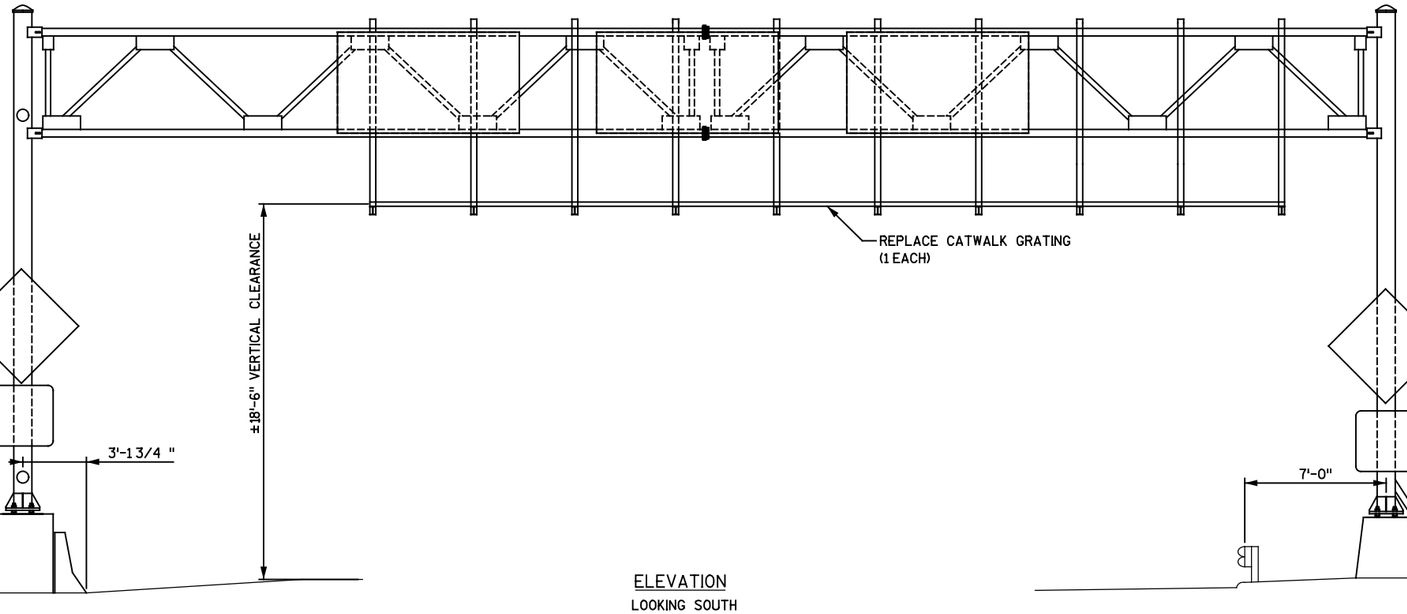
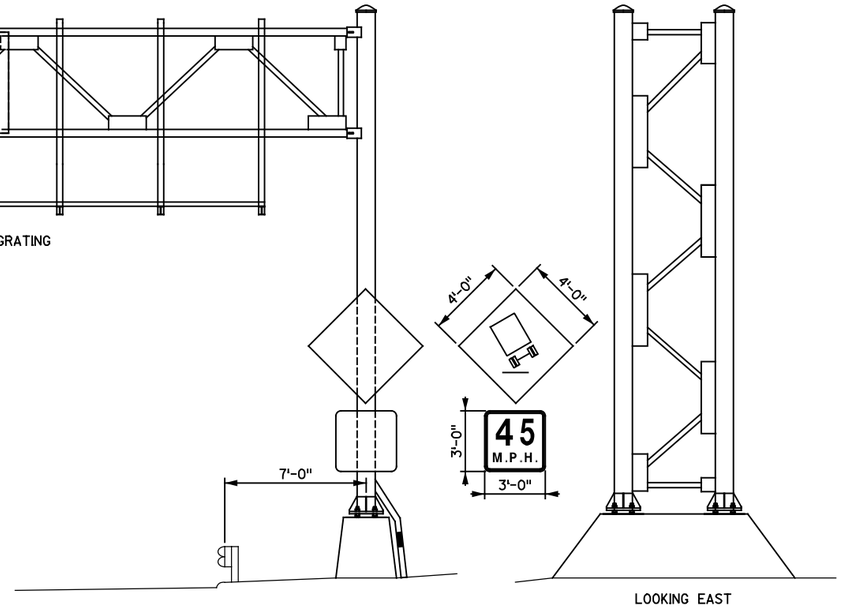


ELEVATION

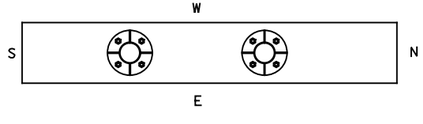
LOOKING SOUTH



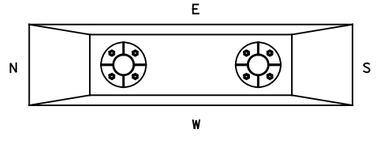
LOOKING EAST

8

8



EAST FOUNDATION DETAIL



WEST FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.31	REPLACE CATWALK GRATING	1 EACH	SHEET 8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

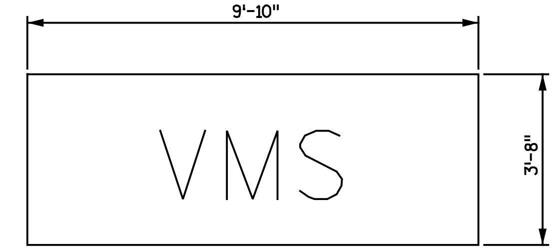
DRAWN BY MR | PLANS CK'D. VC

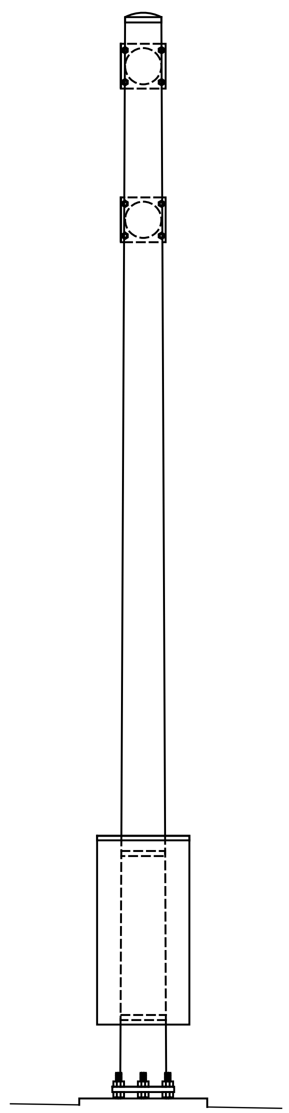
S-40-424

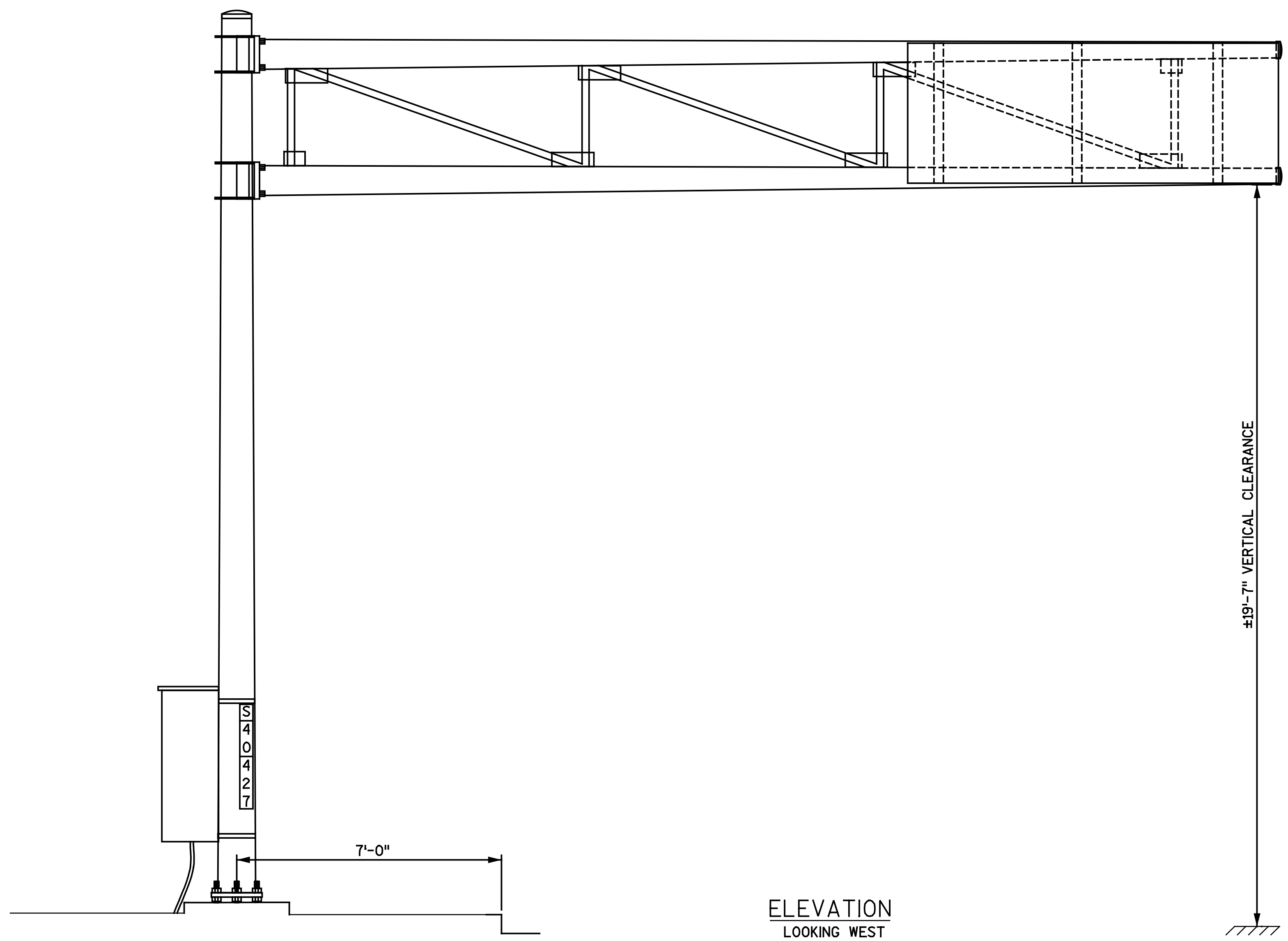
SHEET 28 OF 100
82

FILE NAME :S-40-0424.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavezv8i
DRV :Pdf_bw_HiSplt
PEN :CEL_TextSub.tbl

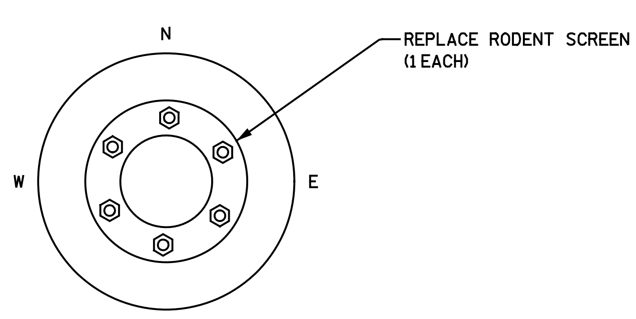
STATE PROJECT NUMBER
1000-20-69







ELEVATION
LOOKING WEST



FOUNDATION DETAILS

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.03	REPLACE RODENT SCREEN	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR PLANS CK'D. VC

S-40-427

SHEET 29 OF 100

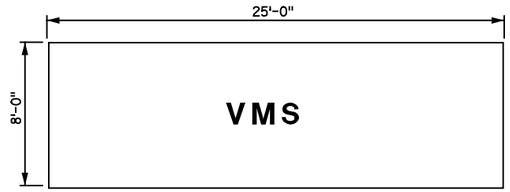
8

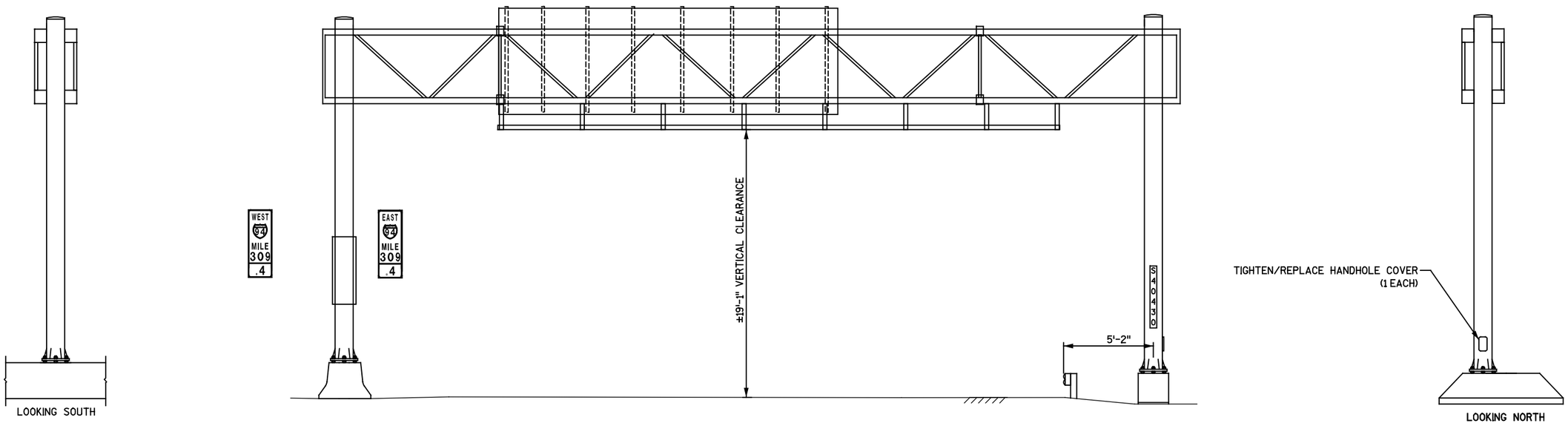
8

FILE NAME :S-40-0427.dgn
PLOT DATE :1/24/2017 PLOT BY : Veronica Chavezv8i DRV :Pdf_bw_HS.plt PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER

1000-20-69

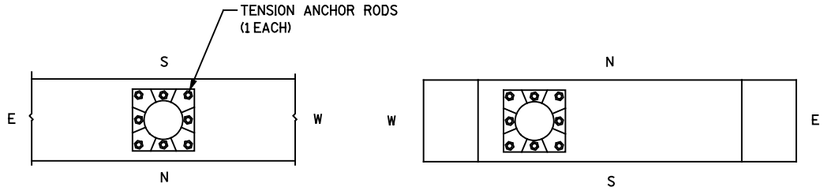




ELEVATION

LOOKING EAST

8



NORTH FOUNDATION DETAIL

SOUTH FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2
SPV.0060.17	TIGHTEN/REPLACE HANDHOLE COVER	1 EACH	SHEET 8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-430

SHEET 30 OF 100

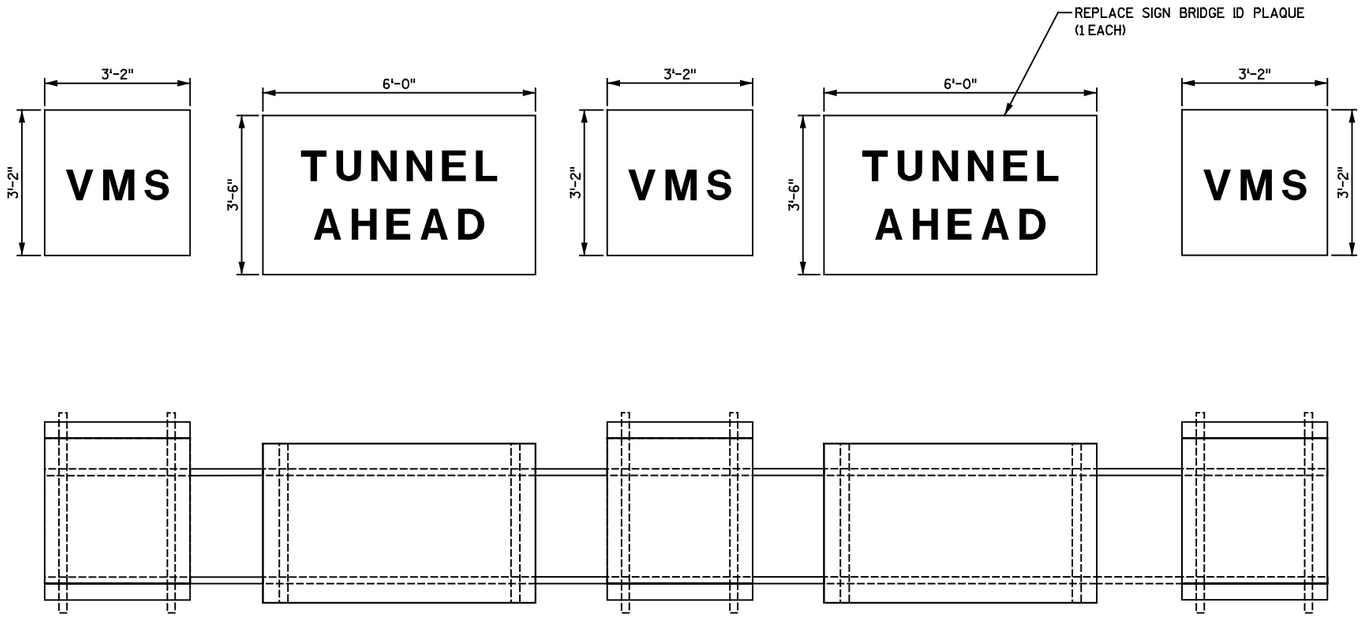
84

8

FILE NAME :S-40-0430.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez-tti
DRV :Pdf_bw_HiSplt
PEN :CEL_TextSub.tbl

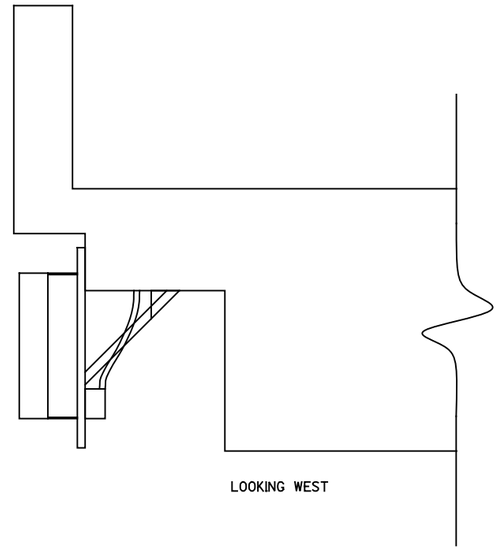
STATE PROJECT NUMBER

1000-20-69



ELEVATION

LOOKING NORTH



LOOKING WEST

8

8

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.12	REPLACE SIGN BRIDGE ID PLAQUE	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

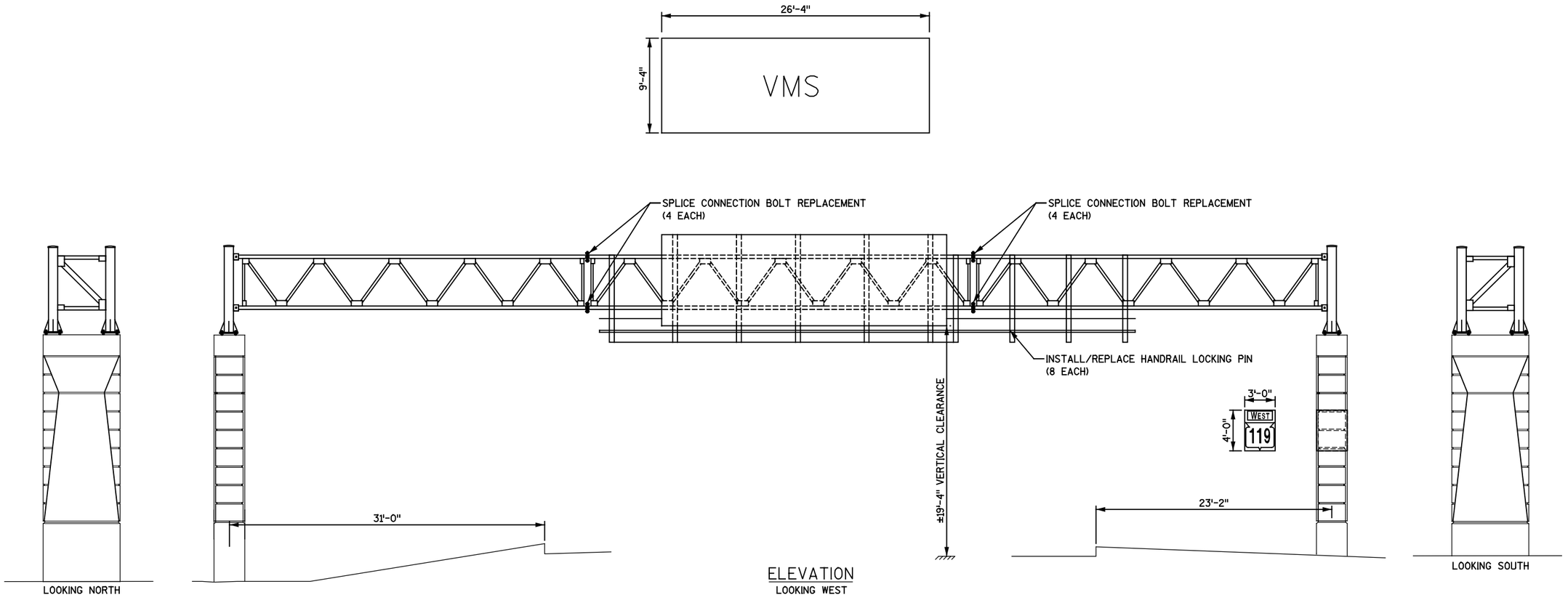
S-40-439

SHEET 31 OF 100

85

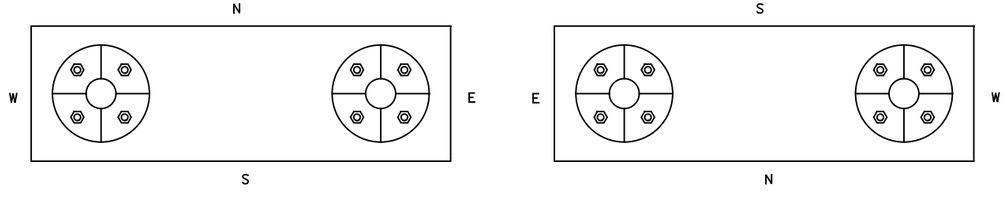
FILE NAME :S-40-0439.dgn
PLOT DATE :1/24/2017 PLOT BY : VeronicaChavez01 DRV :Pdf_bw_HSplt PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER
1000-20-69



ELEVATION
LOOKING WEST

8



SOUTH FOUNDATION DETAIL

NORTH FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.06	SPLICE CONNECTION BOLT REPLACEMENT	8 EACH	SHEET 4
SPV.0060.23	INSTALL/REPLACE HANDRAIL LOCKING PIN	8 EACH	SHEET 9

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

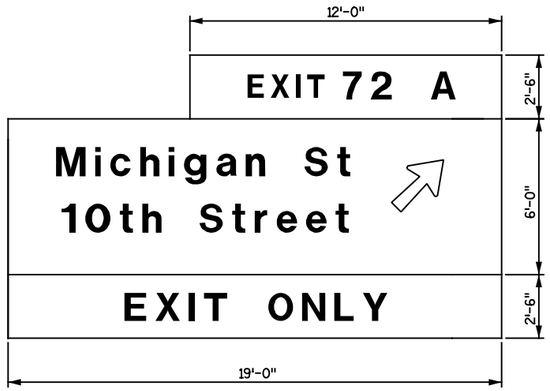
DRAWN BY MR | PLANS CK'D. VC

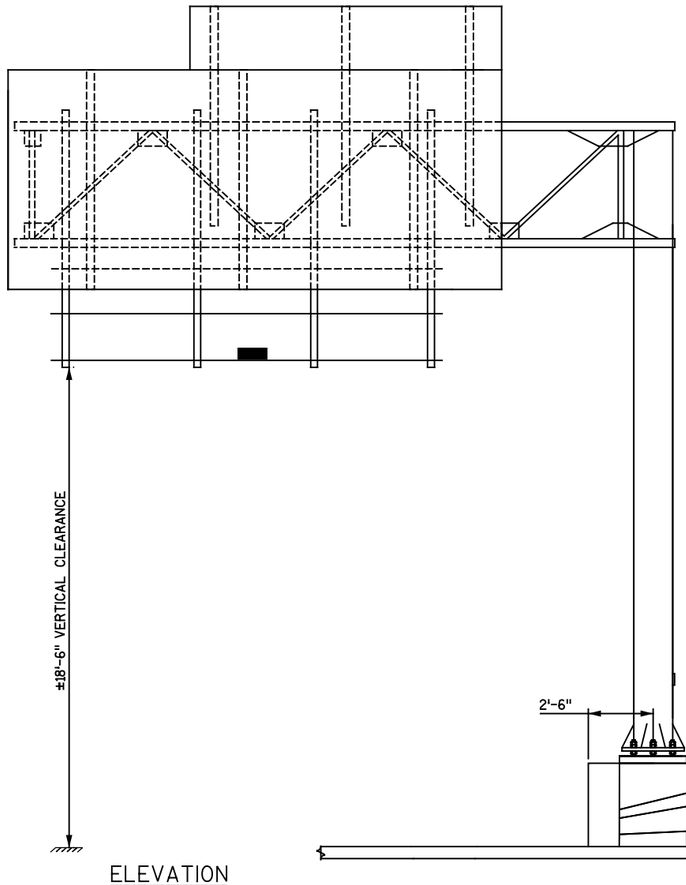
S-40-440

SHEET 32 OF 100
86

FILE NAME :S-40-0440.dgn
PLOT DATE :1/24/2017 PLOT BY : Veronica Chavez\tl DRV :Pdf_bw_HS.plt PEN :CEL_TextSub.tbl

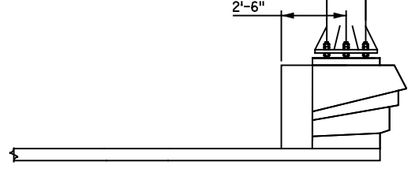
STATE PROJECT NUMBER
1000-20-69

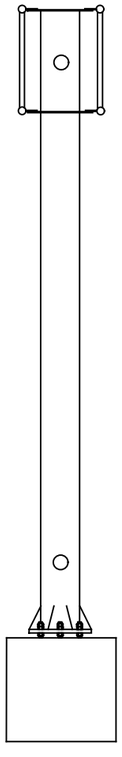




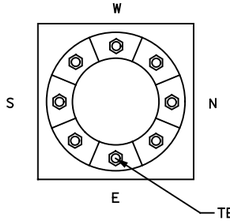
ELEVATION

LOOKING NORTH





LOOKING WEST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-524

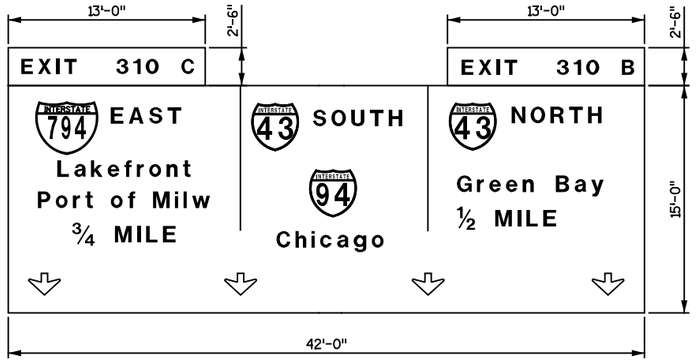
SHEET 33 OF 100
87

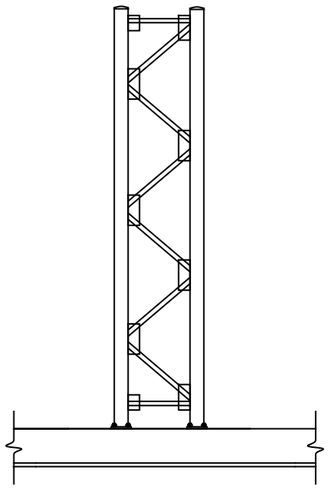
8

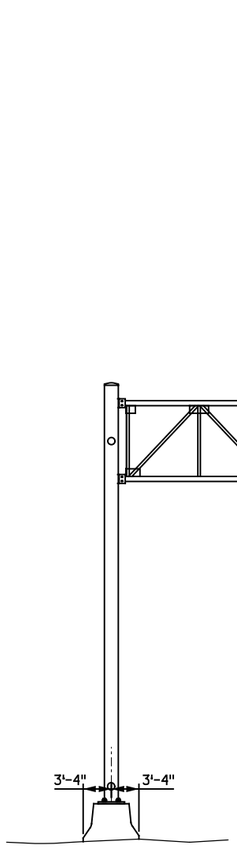
8

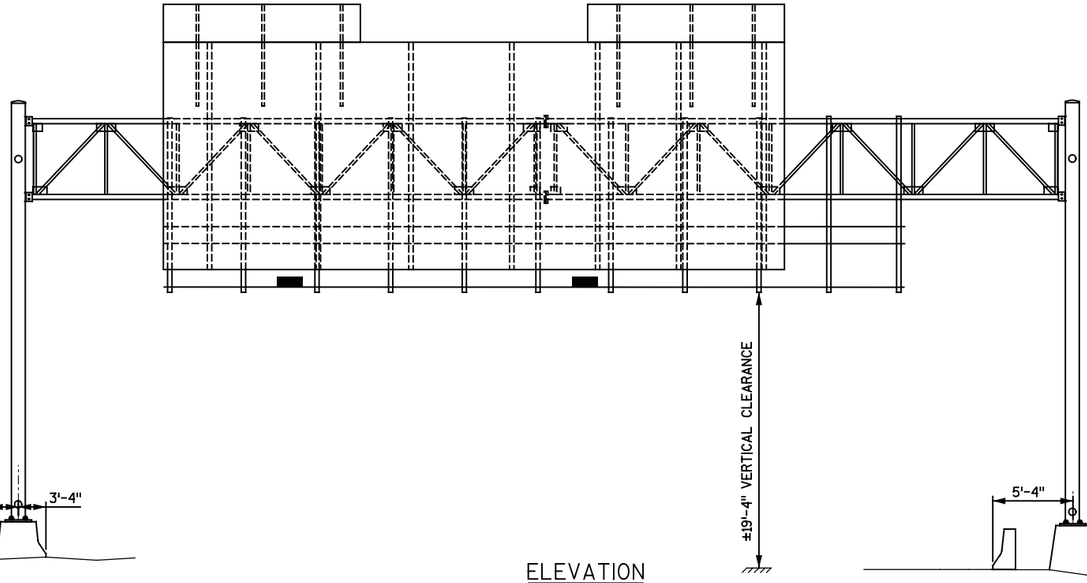
FILE NAME :S-40-0524.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER
1000-20-69

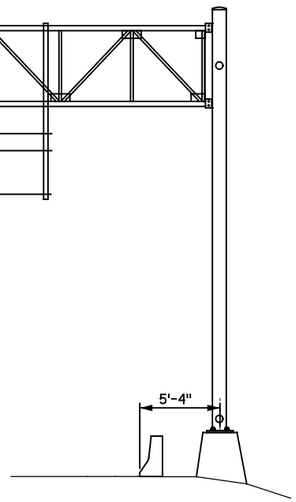


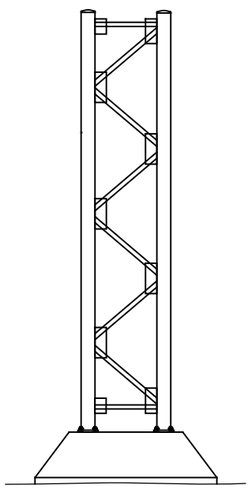


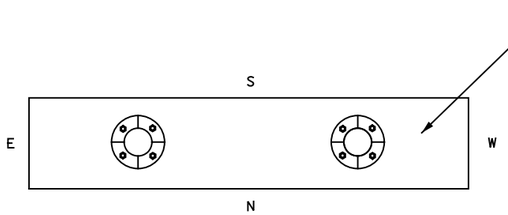




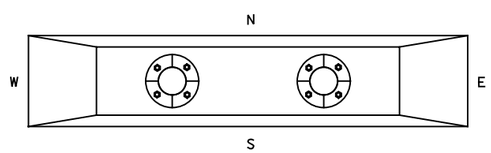
ELEVATION
LOOKING EAST







NORTH FOUNDATION DETAILS



SOUTH FOUNDATION DETAILS

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.05	REPAIR FOUNDATION	1 EACH	SHEET 3

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-525

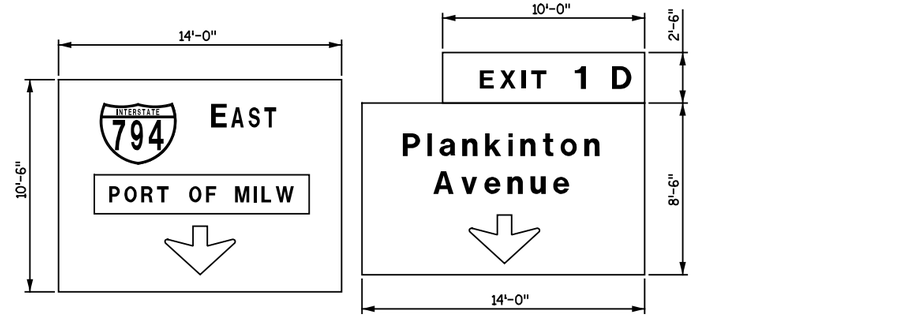
SHEET 34 OF 100
88

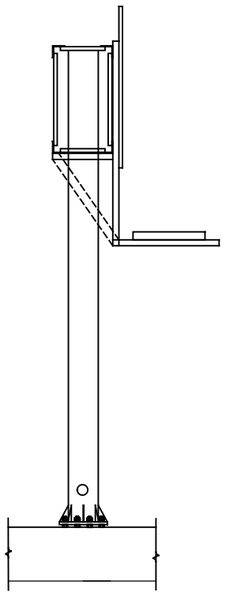
8

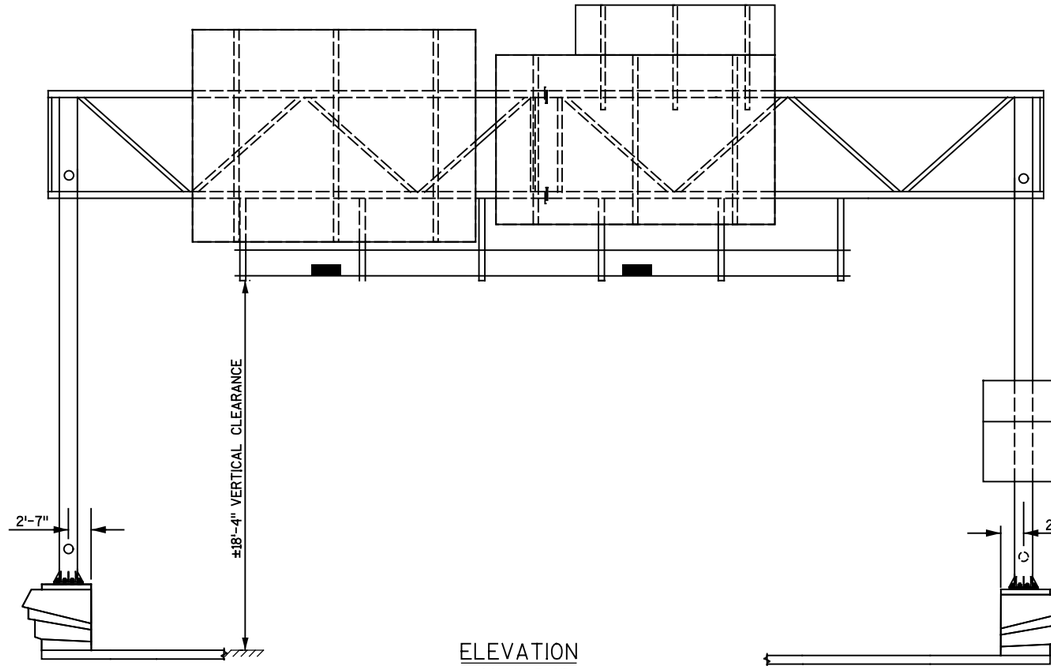
8

FILE NAME :S-40-0525.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez-vt
DRV :Pdf_bw_HS.plt
PEN :CEL.TextSub.tbl

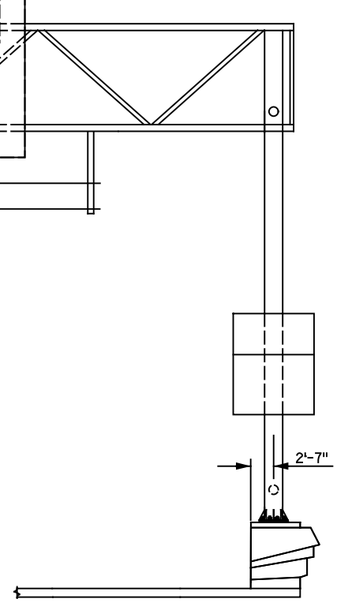
STATE PROJECT NUMBER
1000-20-69

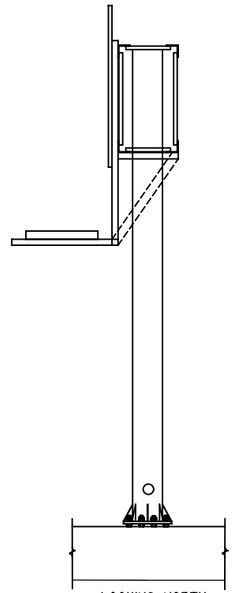


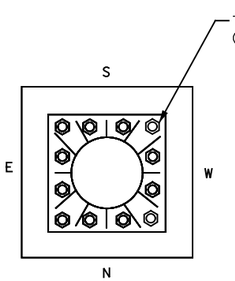




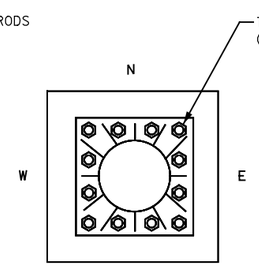
ELEVATION
LOOKING EAST







NORTH FOUNDATION DETAIL



SOUTH FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	2 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY	MR	PLANS CK'D.	VC

S-40-533

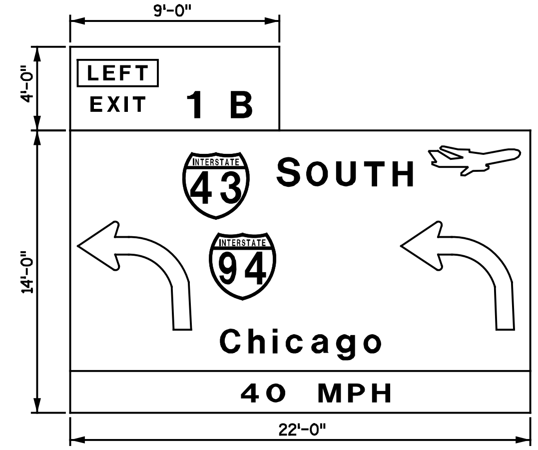
SHEET 35 OF 100
89

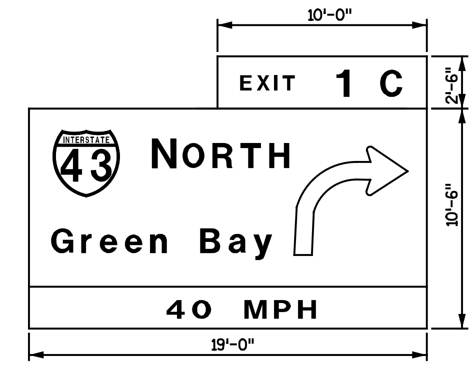
8

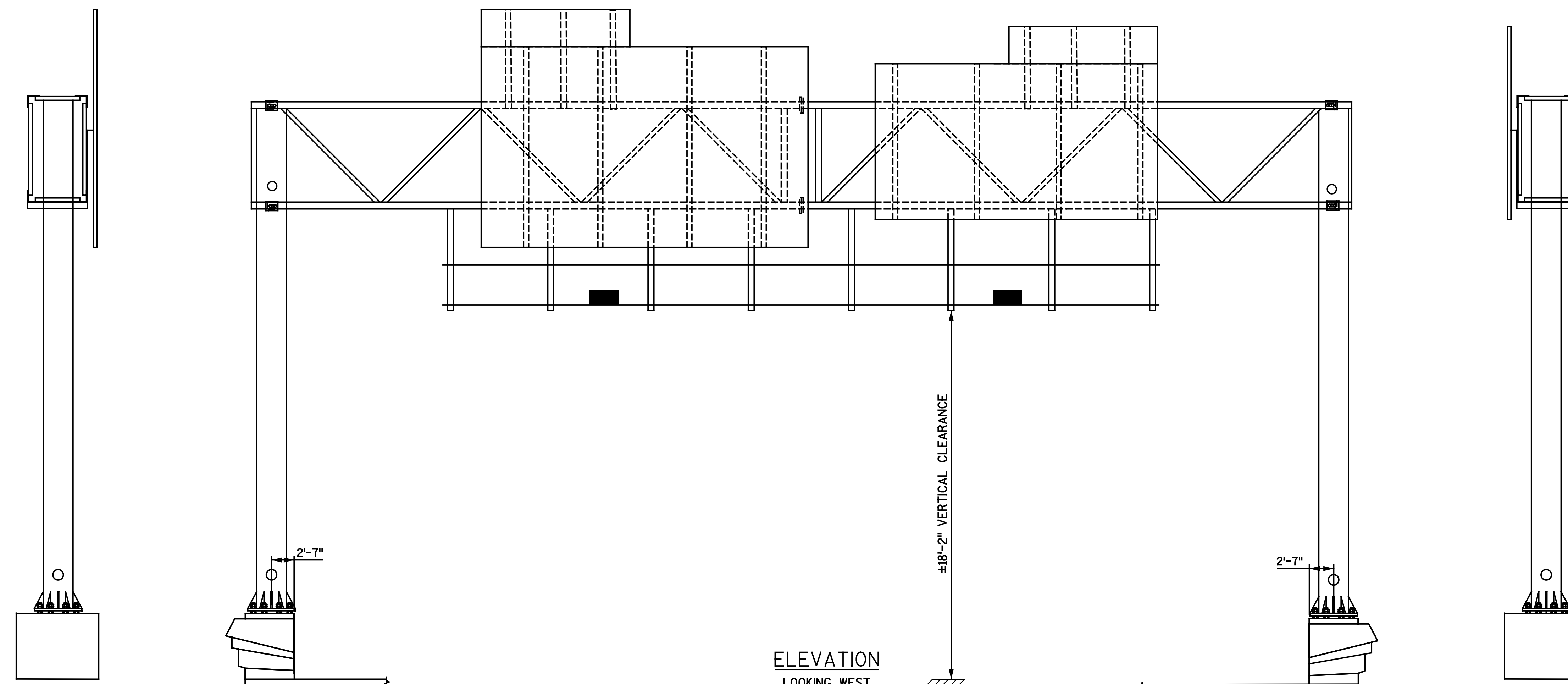
8

FILE NAME :S-40-0533.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavezvt6
DRV :Pdf_bw_HS.pit
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69





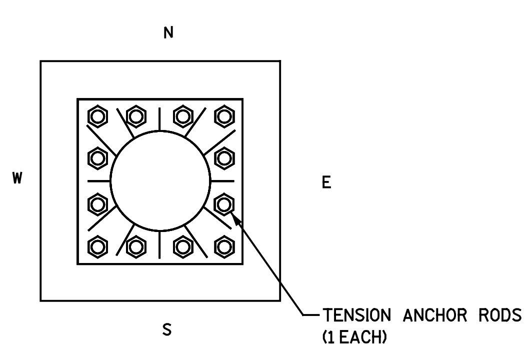


LOOKING NORTH

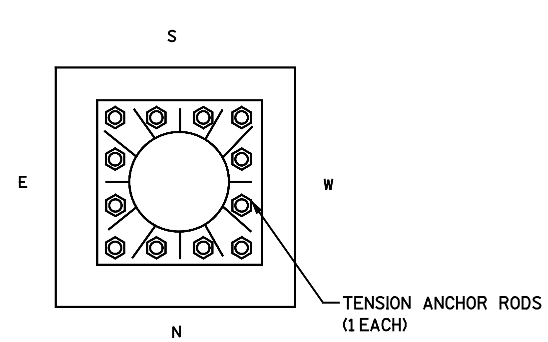
ELEVATION
LOOKING WEST

LOOKING SOUTH

8



SOUTH FOUNDATION DETAILS



NORTH FOUNDATION DETAILS

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	2 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

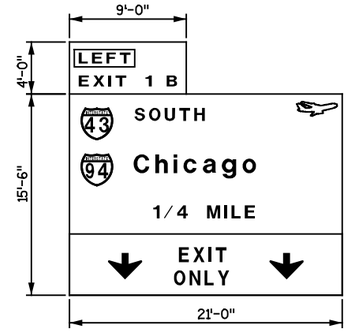
DRAWN BY MR | PLANS CK'D. VC

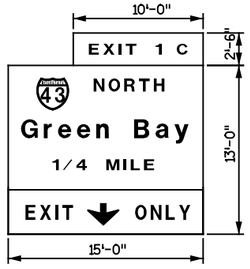
S-40-534

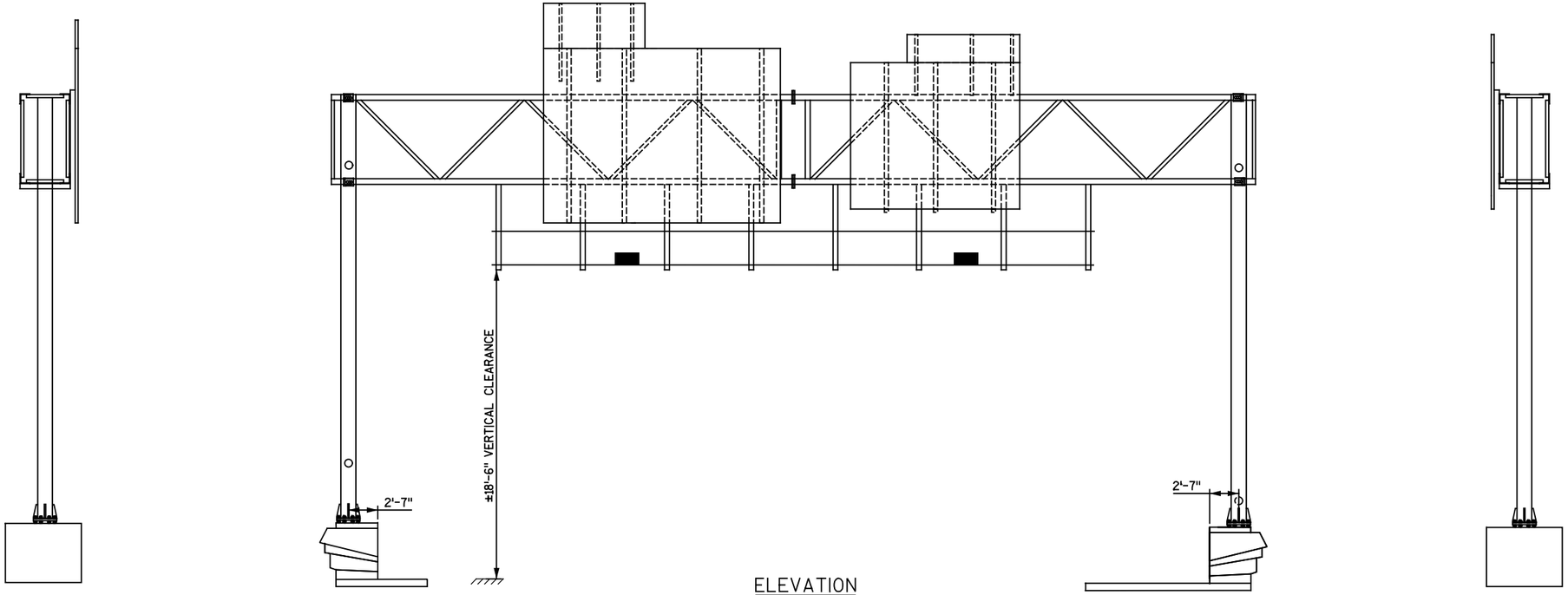
SHEET 36 OF 100

FILE NAME : S-40-0534.dgn
PLOT DATE : 11/24/2017
PLOT BY : Veronica Chavez
DRV : Pdf_bw_HS.plt
PEN : CEL_TextSub.tbl

STATE PROJECT NUMBER
1000-20-69





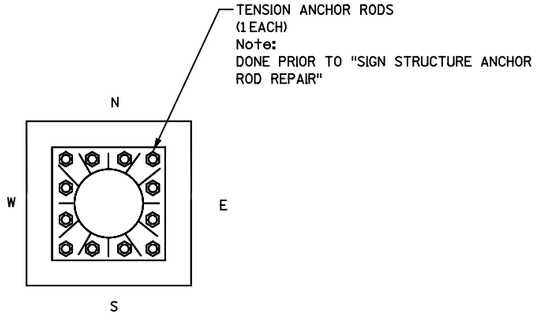


LOOKING NORTH

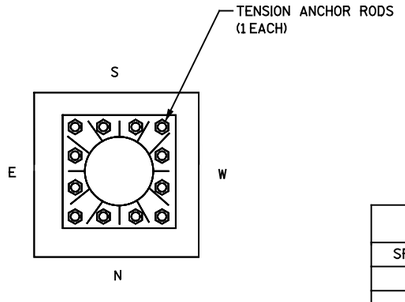
ELEVATION

LOOKING WEST

LOOKING SOUTH



SOUTH FOUNDATION DETAILS



NORTH FOUNDATION DETAILS

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	2 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-535

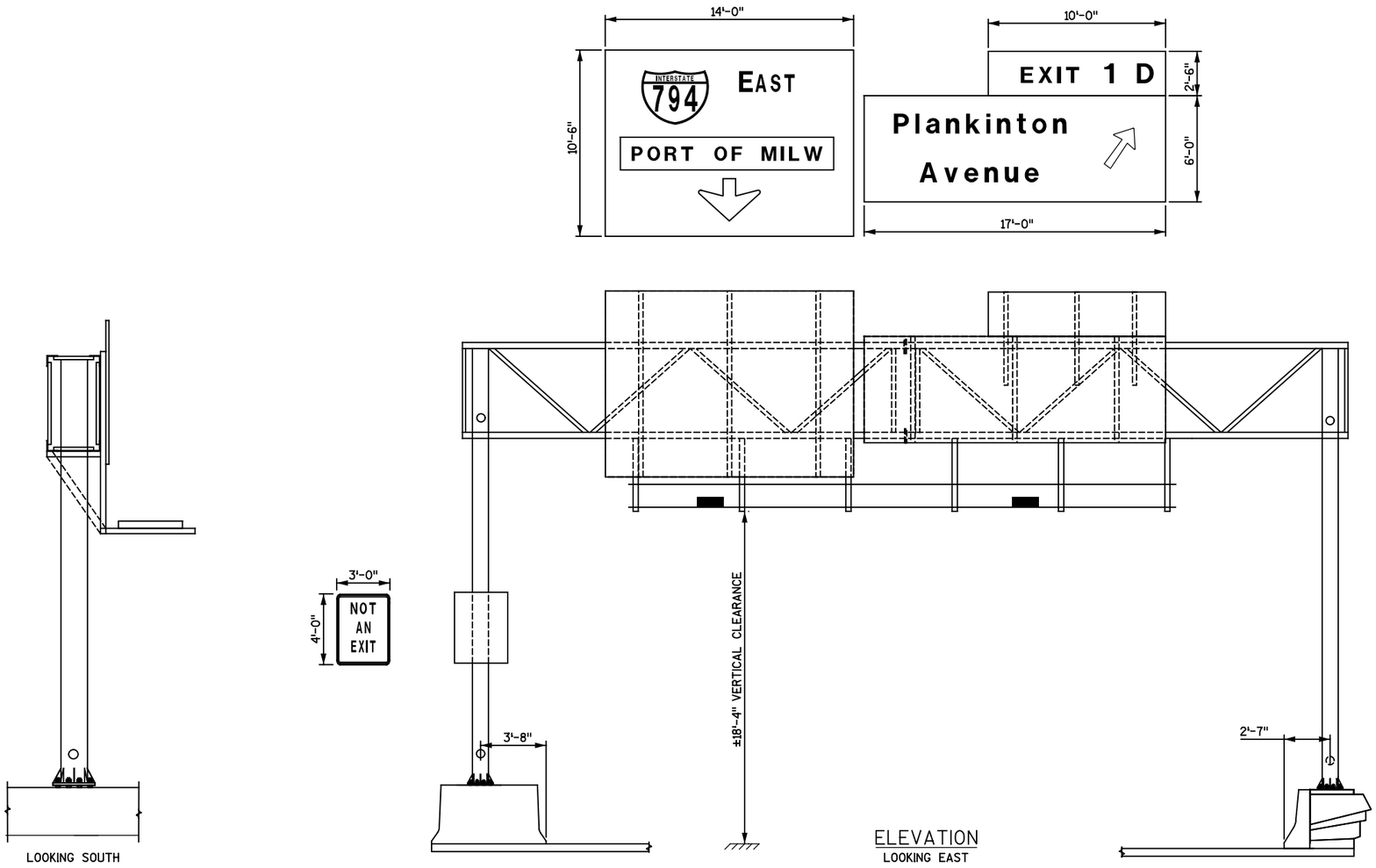
SHEET 37 OF 100
91

8

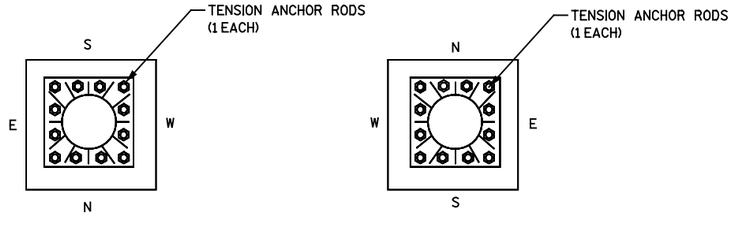
8

FILE NAME :S-40-0535.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69



ELEVATION
LOOKING EAST



NORTH FOUNDATION DETAILS

SOUTH FOUNDATION DETAILS

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	2 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-536

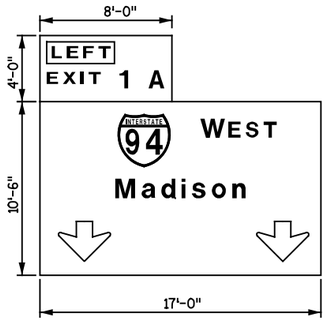
SHEET 38 OF 100
92

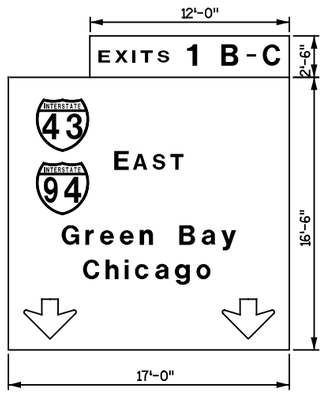
8

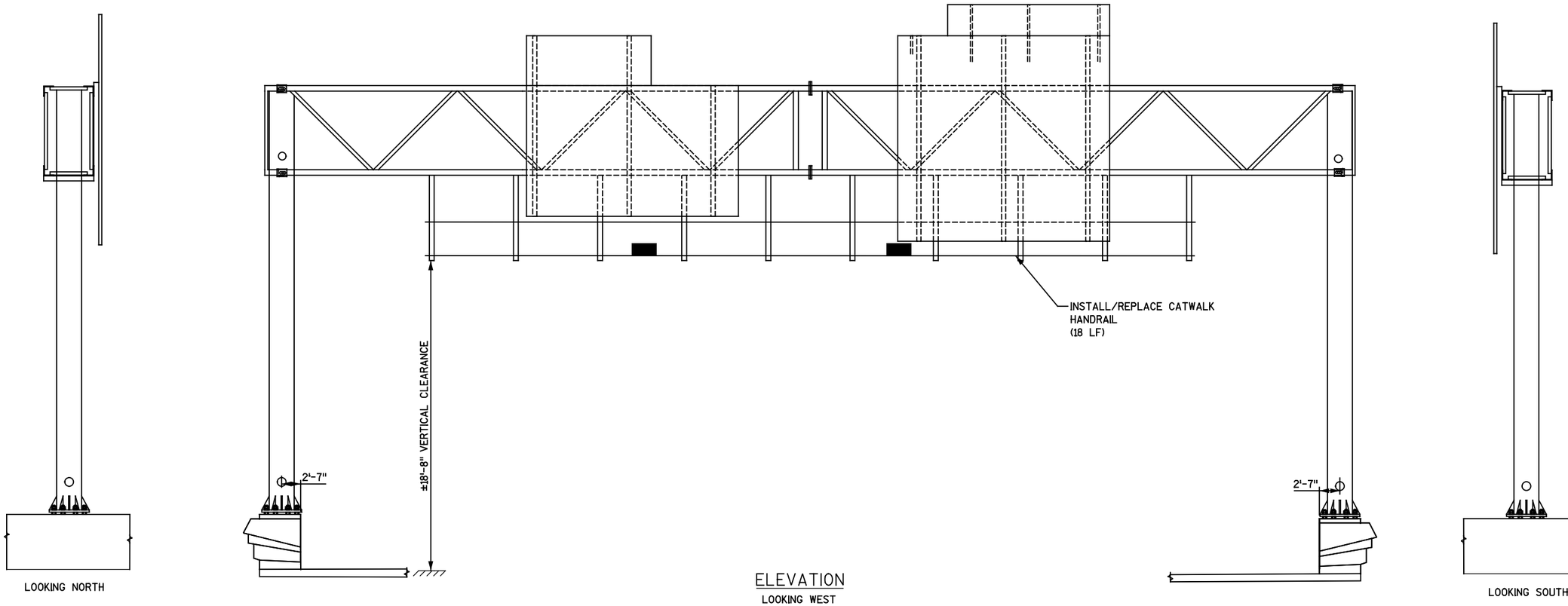
8

FILE NAME :S-40-0536.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.pit
PEN :CELTextSub.tbl

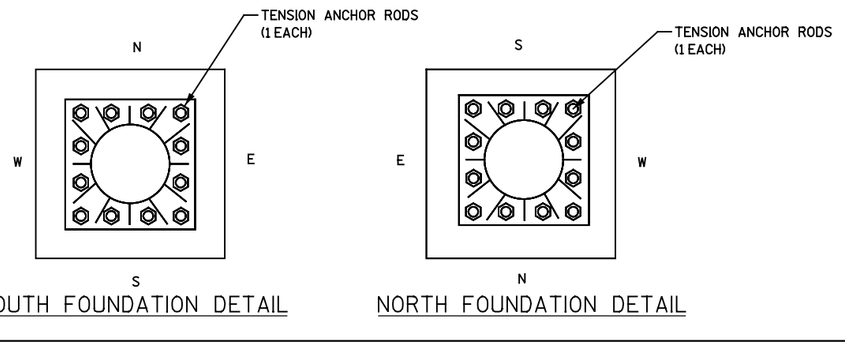
STATE PROJECT NUMBER
1000-20-69







ELEVATION
LOOKING WEST



SOUTH FOUNDATION DETAIL

NORTH FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	2 EACH	SHEET 2
SPV.0090.02	INSTALL/REPLACE CATWALK HANDRAIL	18 LF	SHEET 8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-540

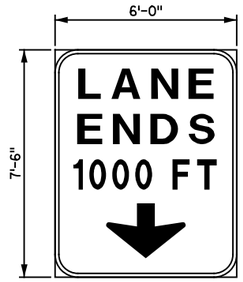
SHEET 39 OF 100
93

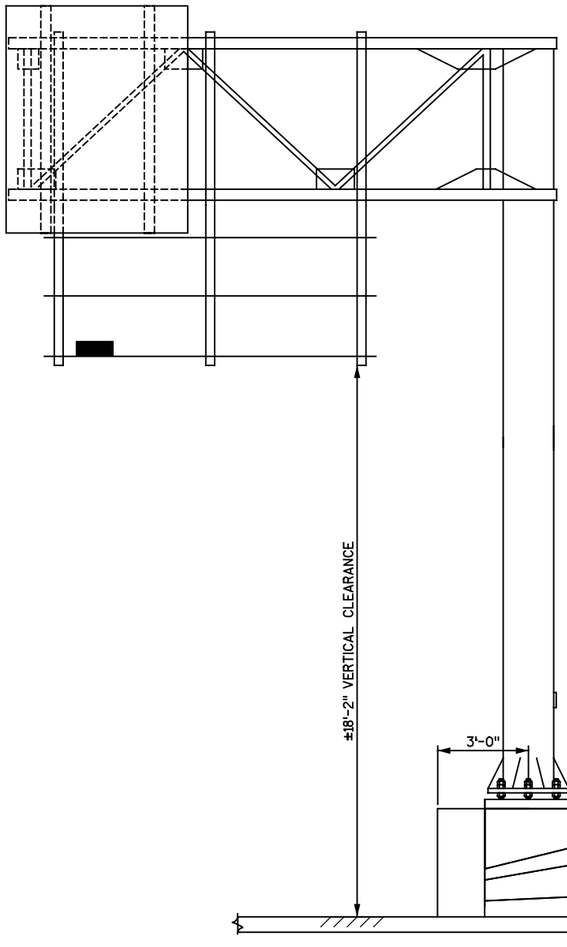
8

8

FILE NAME :S-40-0540.dgn
PLOT DATE :1/24/2017 PLOT BY : Veronica Chavezvtl DRV :Pdf_bw_HS.plt PEN :CEL_TextSub.tbl

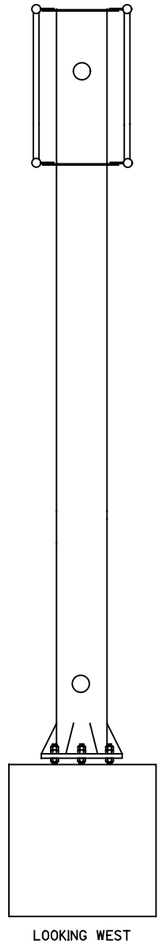
STATE PROJECT NUMBER
1000-20-69



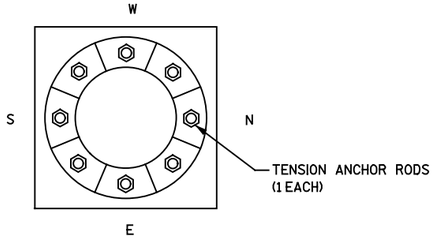


ELEVATION

LOOKING NORTH



LOOKING WEST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-542

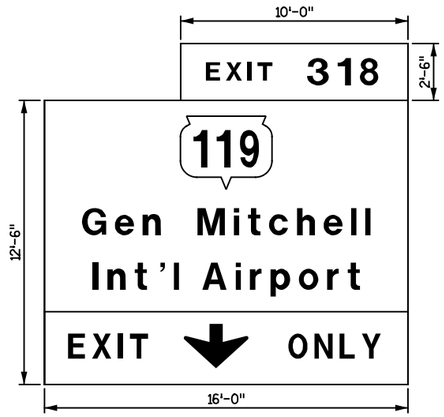
SHEET 40 OF 100
94

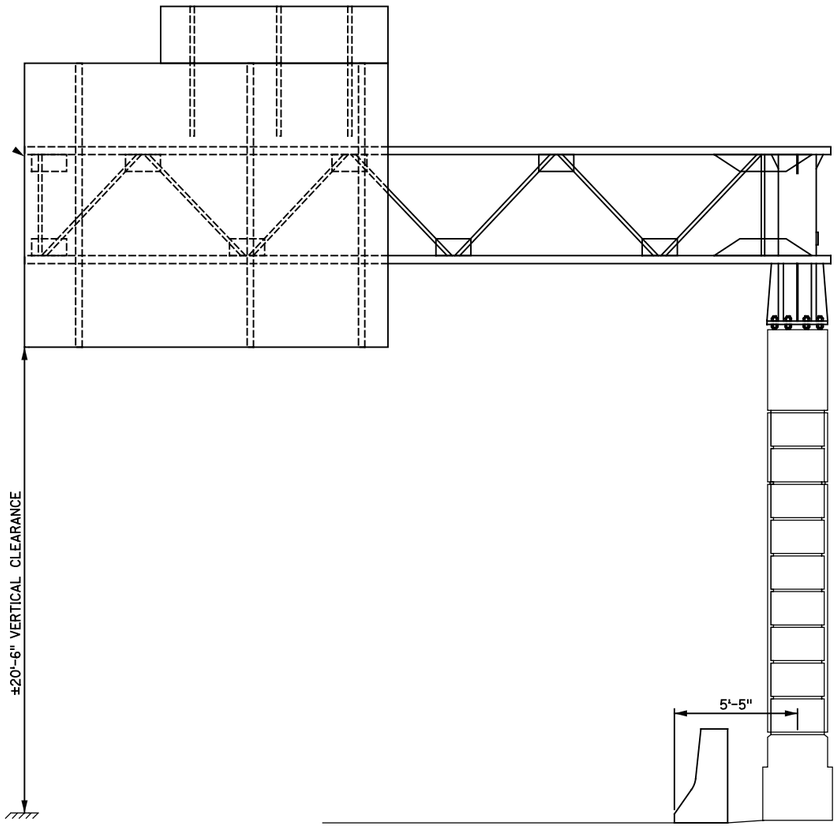
8

8

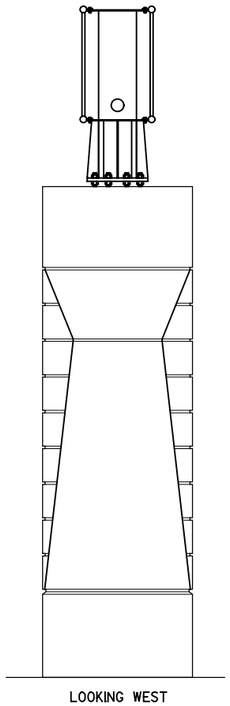
FILE NAME :S-40-0542.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HSplt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69

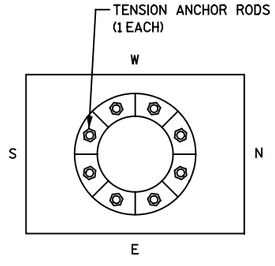




ELEVATION
LOOKING NORTH



LOOKING WEST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-552

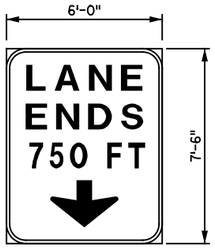
SHEET 41 OF 100
95

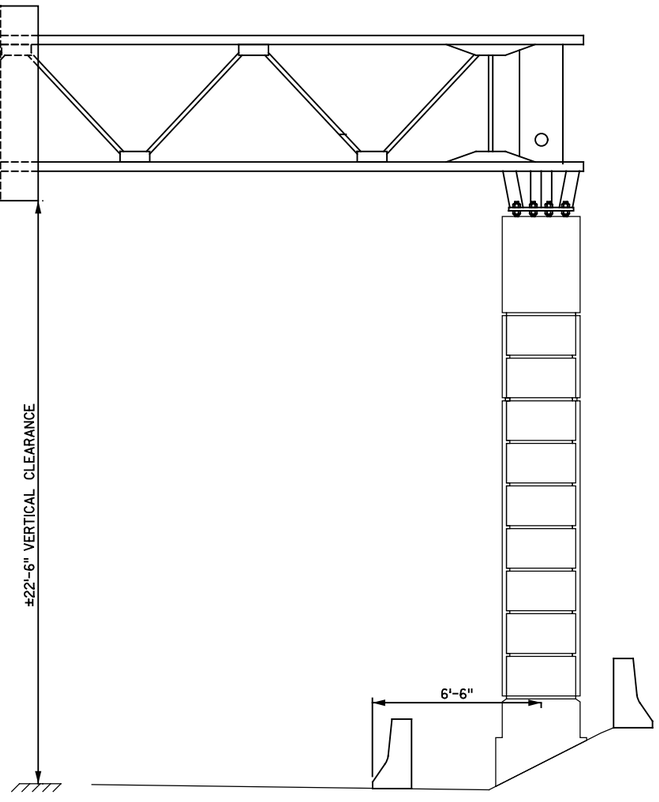
8

8

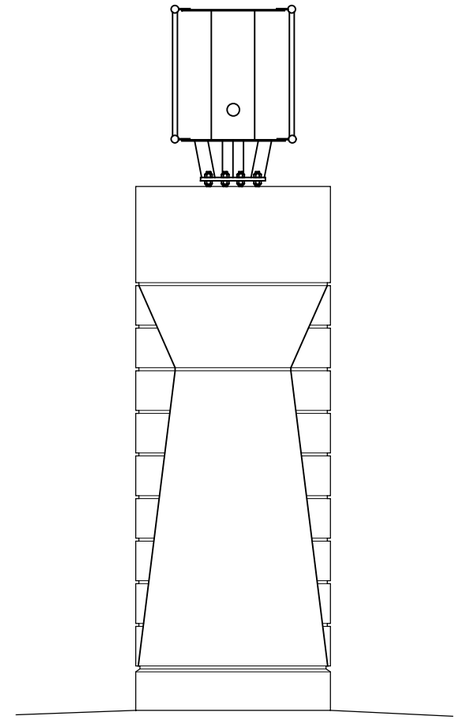
FILE NAME :S-40-0552.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HSplt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69

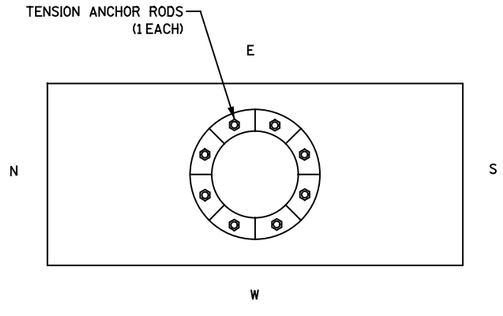




ELEVATION
LOOKING SOUTH



LOOKING EAST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-571

SHEET 42 OF 100
96

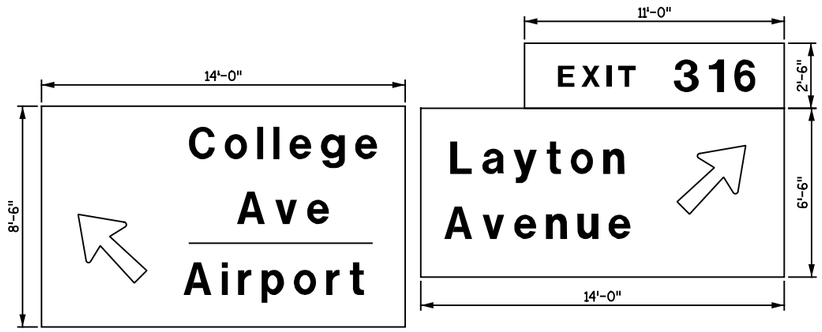
8

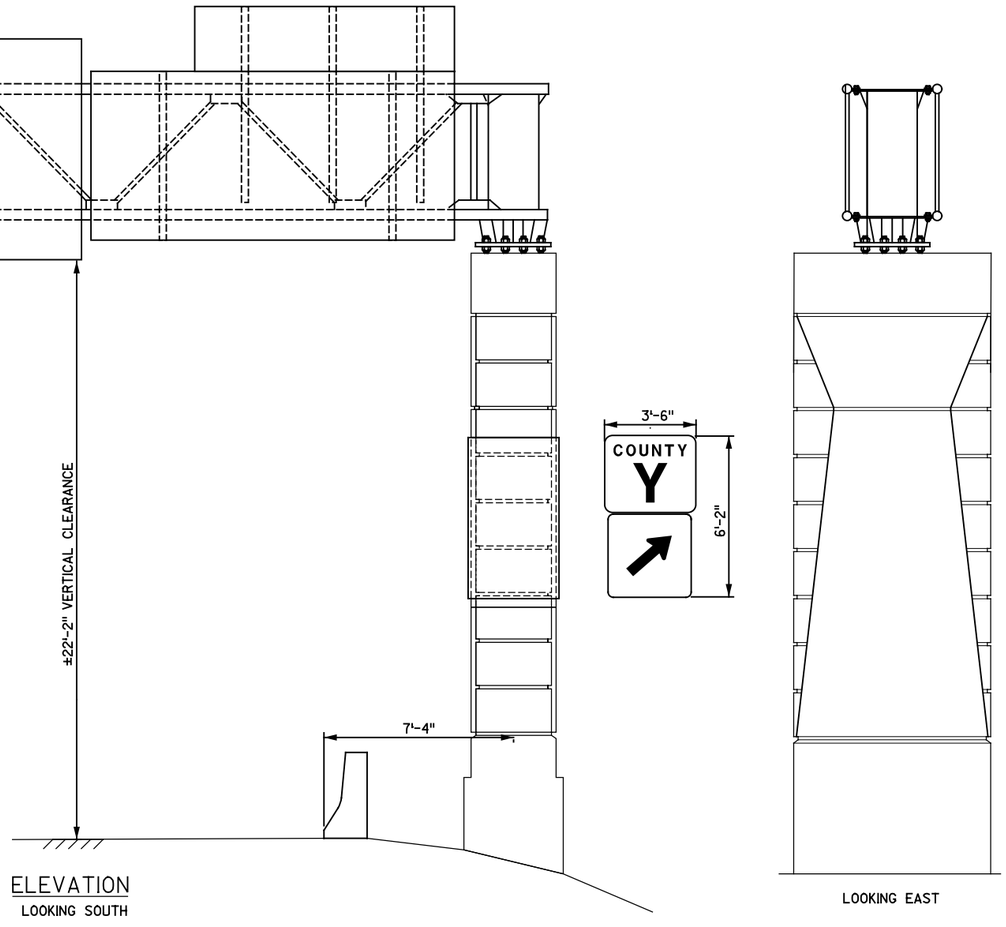
8

FILE NAME :S-40-0571.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER

1000-20-69

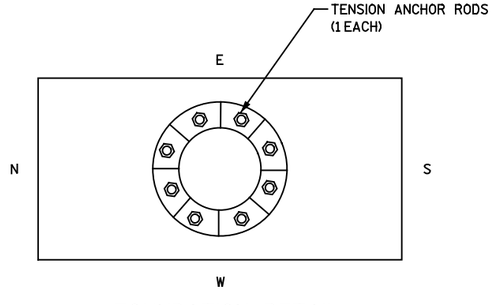




ELEVATION

LOOKING SOUTH

LOOKING EAST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-572

SHEET 43 OF 100

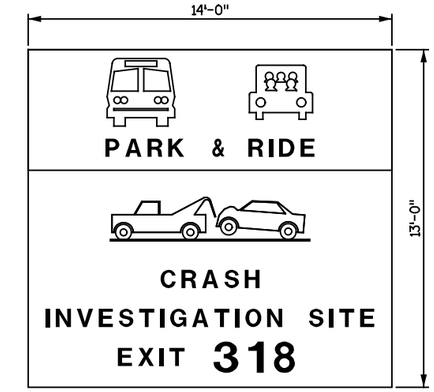
97

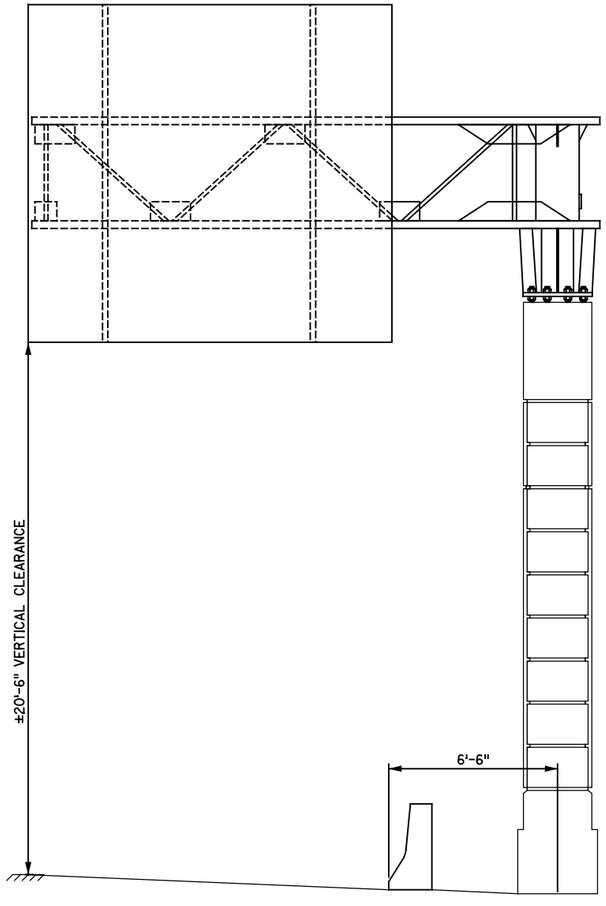
8

8

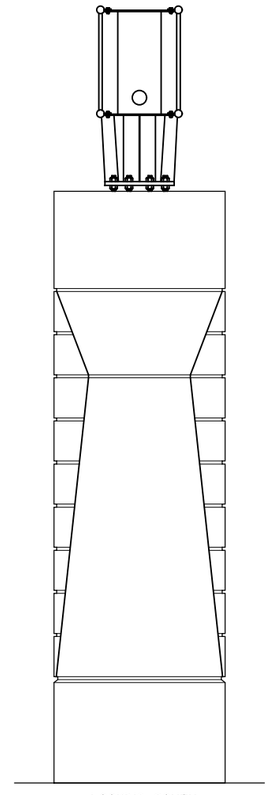
FILE NAME :S-40-0572.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER
1000-20-69

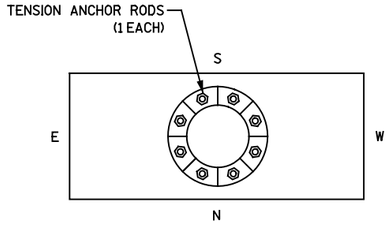




ELEVATION
LOOKING WEST



LOOKING SOUTH



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-575

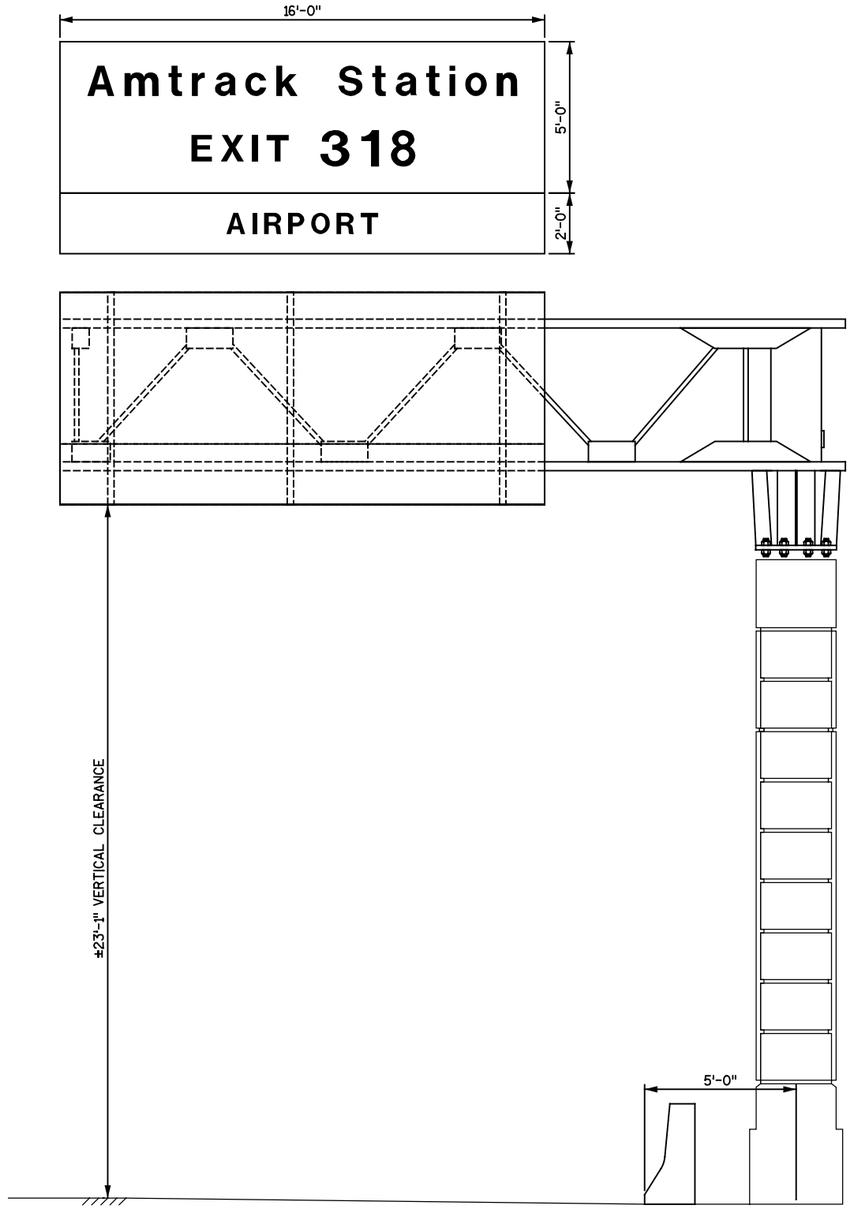
SHEET 44 OF 100
98

8

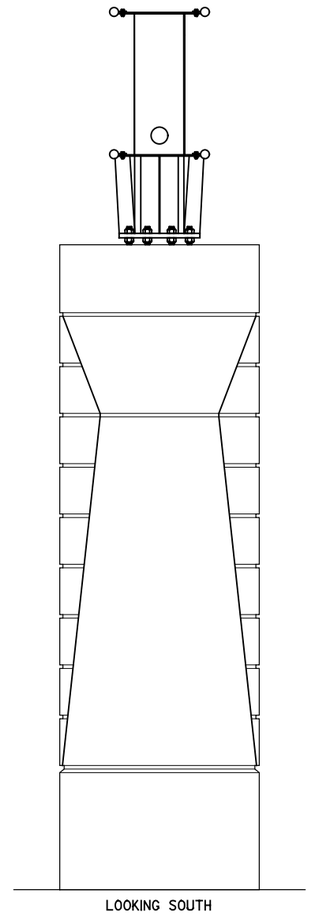
8

FILE NAME :S-40-0575.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez-Vil
DRV :Pdf_bw_HSplt
PEN :CELTextSub.tbl

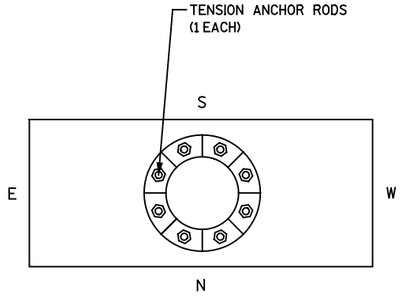
STATE PROJECT NUMBER
1000-20-69



ELEVATION
LOOKING WEST



LOOKING SOUTH



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY	MR	PLANS CK'D.	VC

S-40-576

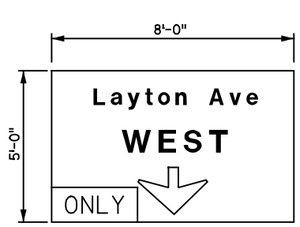
SHEET 45 OF 100
99

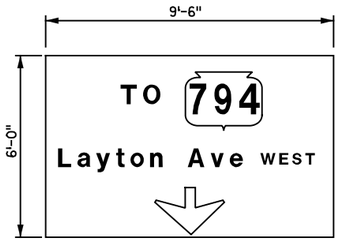
8

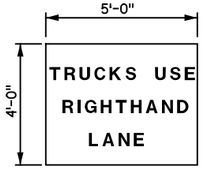
8

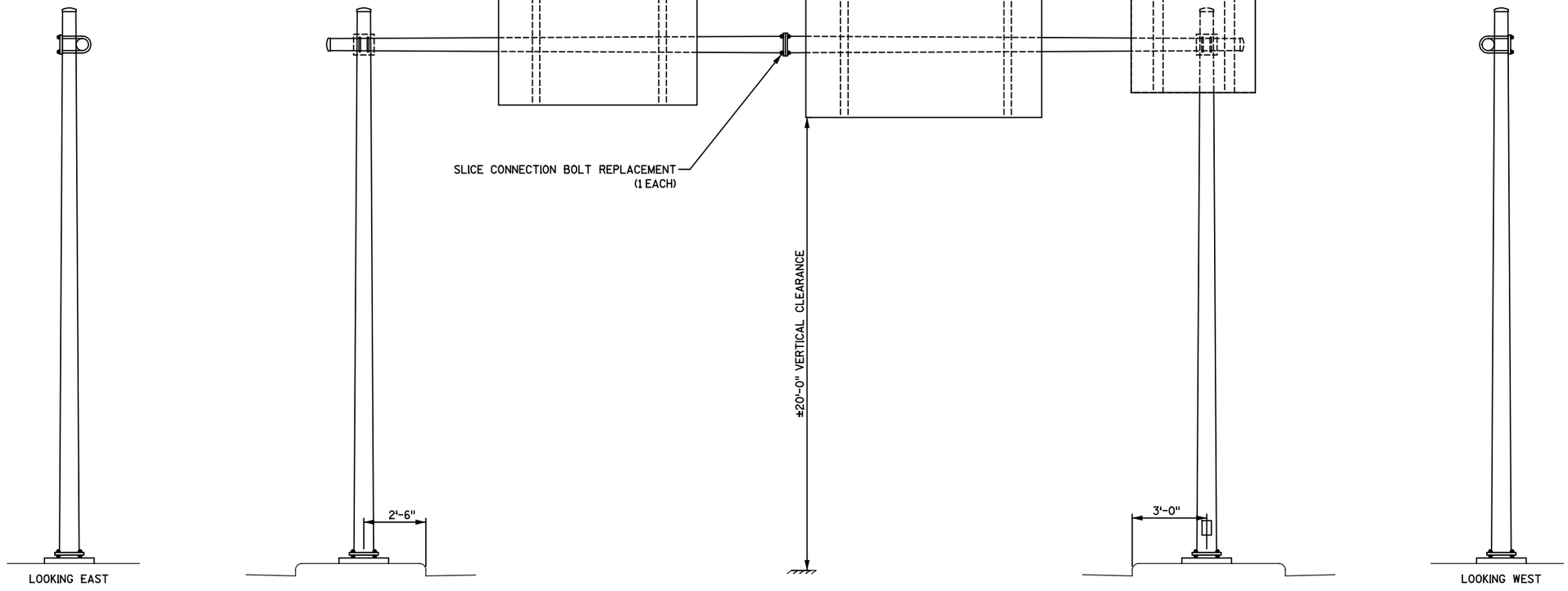
FILE NAME :S-40-0576.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69

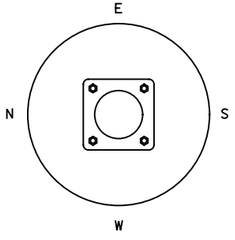




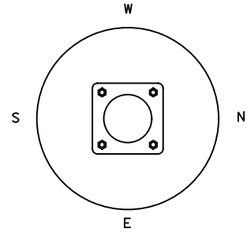




ELEVATION
LOOKING NORTH



WEST FOUNDATION DETAIL



EAST FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.06	SPLICE CONNECTION BOLT REPLACEMENT	1 EACH	SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-600

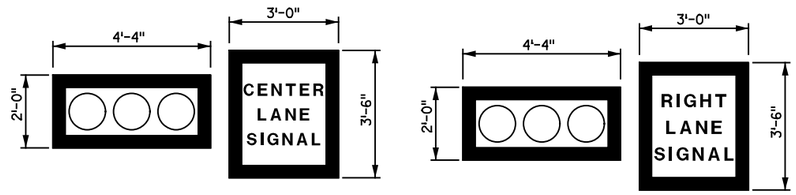
SHEET 46 OF 100
100

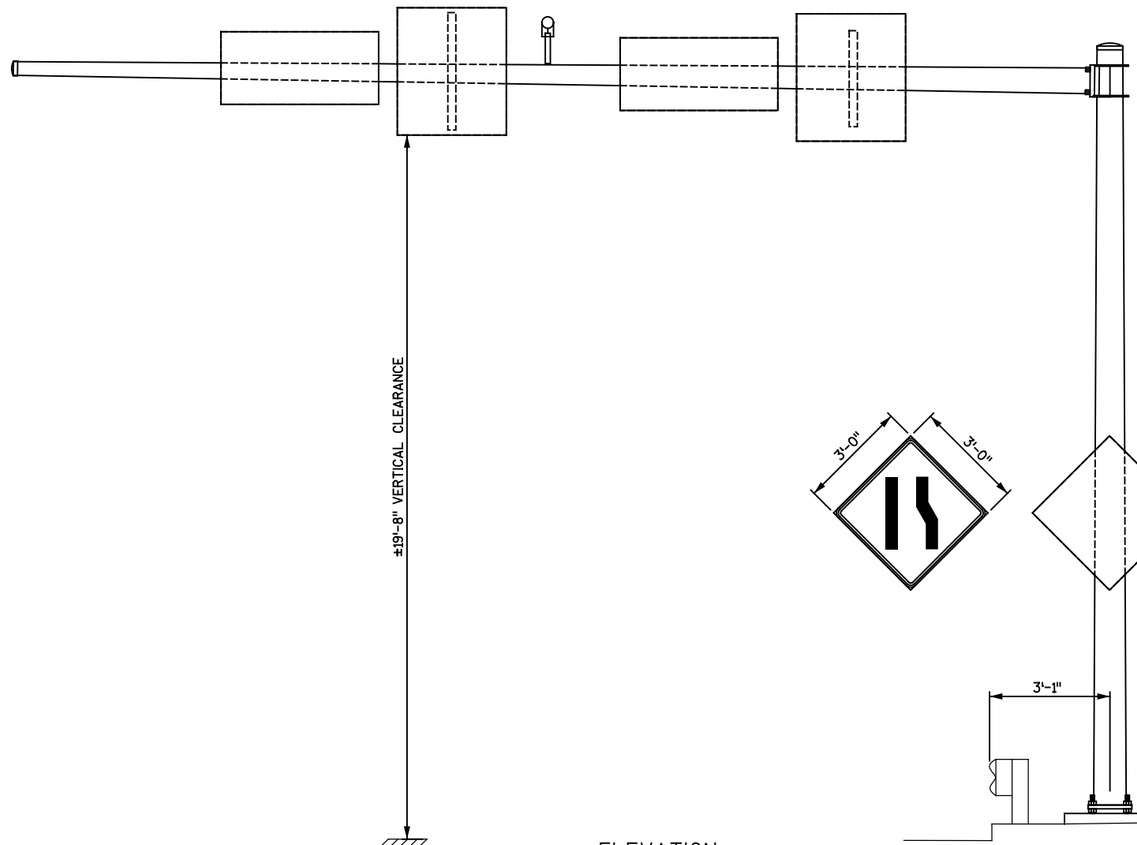
8

8

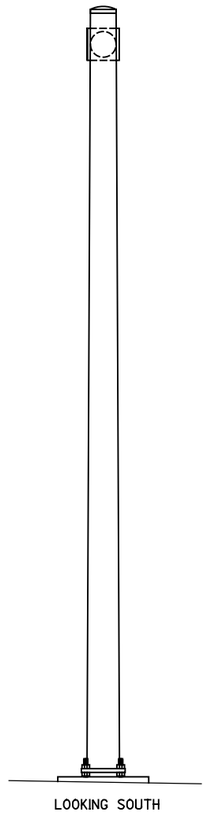
FILE NAME :S-40-0600.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez-tt
DRV :Pdf_bw_HiSplt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69

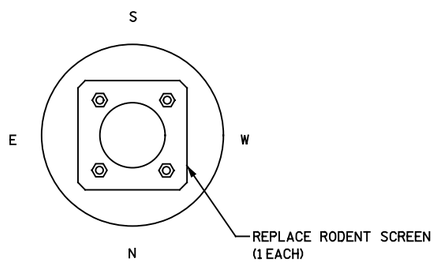




ELEVATION
LOOKING WEST



LOOKING SOUTH



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.03	REPLACE RODENT SCREEN	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-700

SHEET 47 OF 100
101

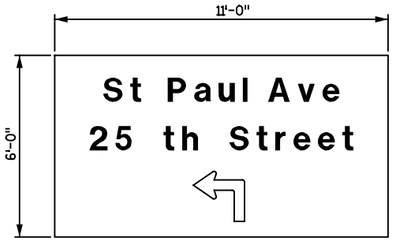
8

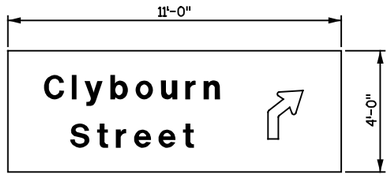
8

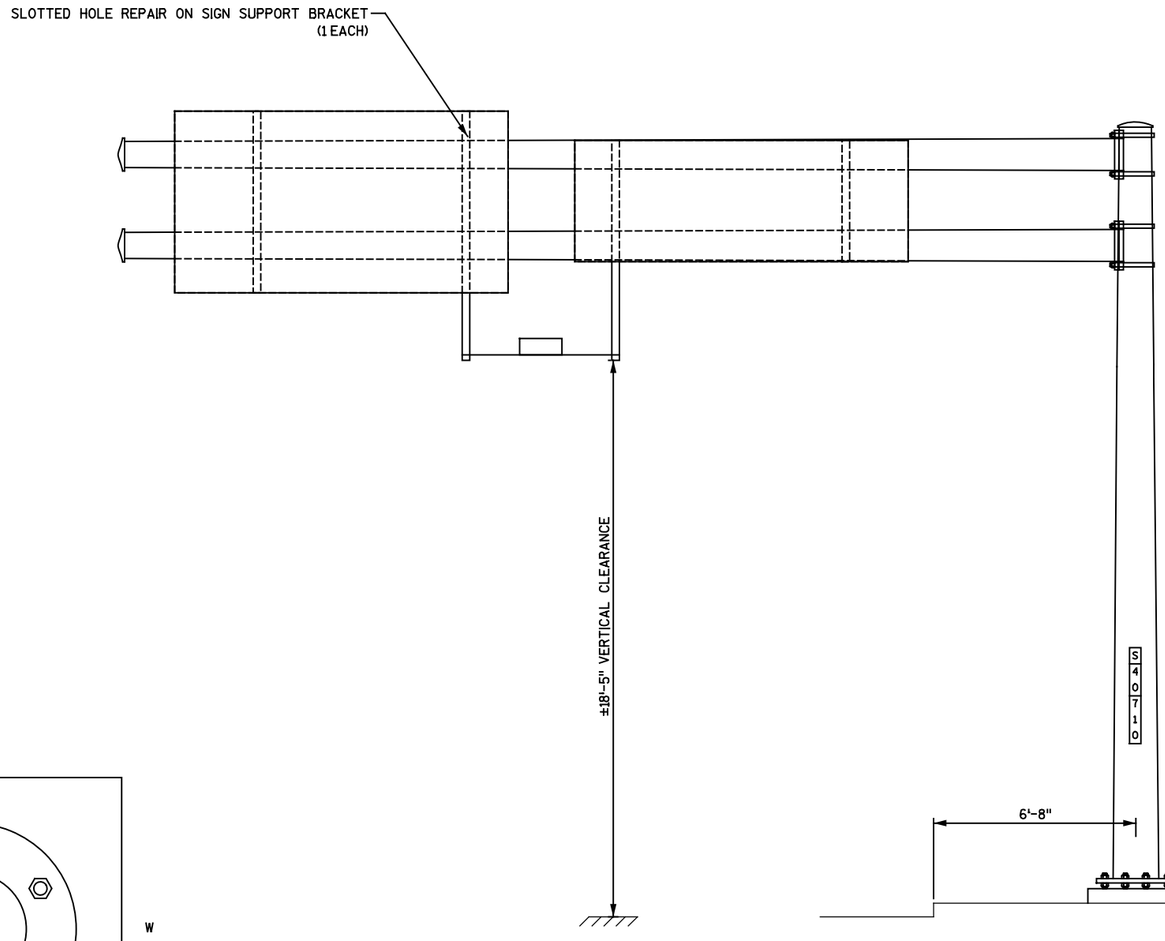
FILE NAME :S-40-0700.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez-tt
DRV :Pdf_bw_HSplt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER

1000-20-69

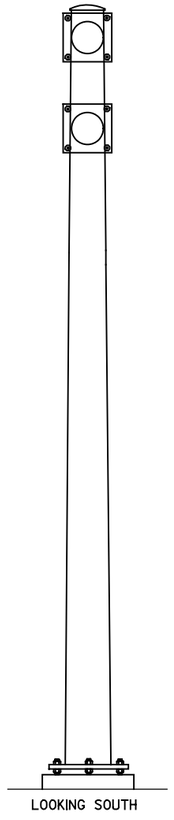


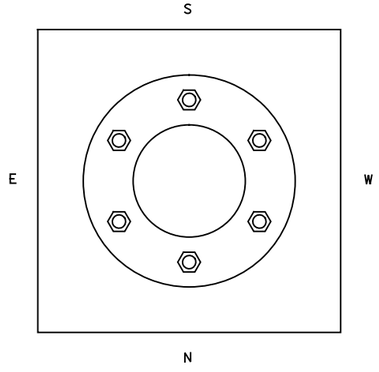




ELEVATION

LOOKING WEST





FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.16	SLOTTED HOLE REPAIR ON SIGN SUPPORT BRACKET	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-710

SHEET 48 OF 100

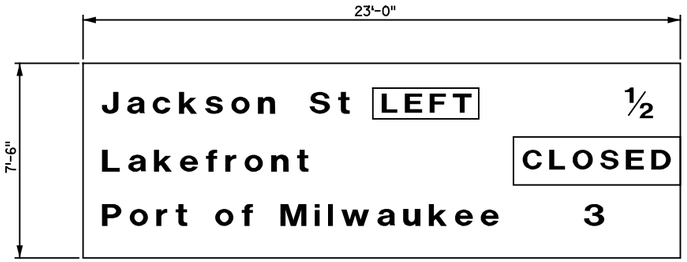
102

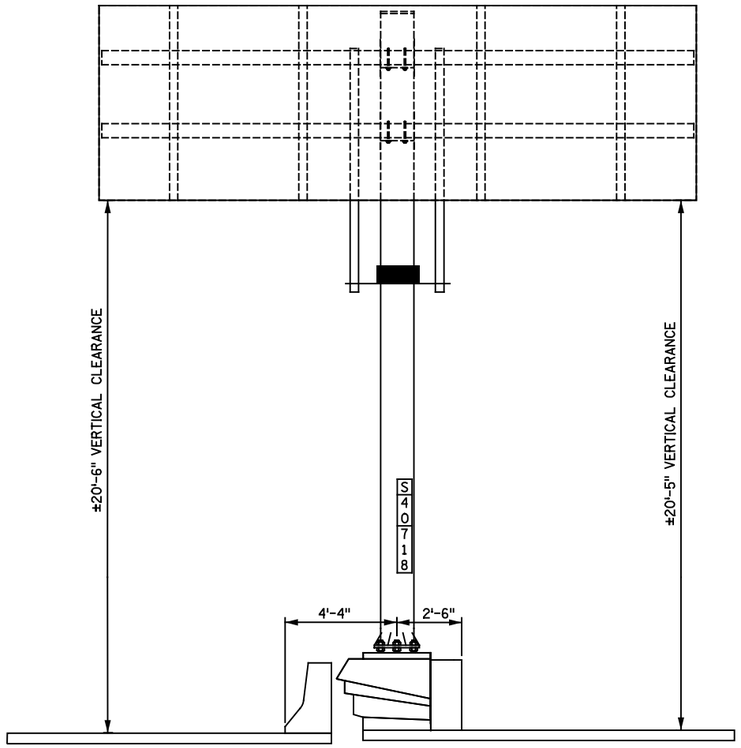
8

8

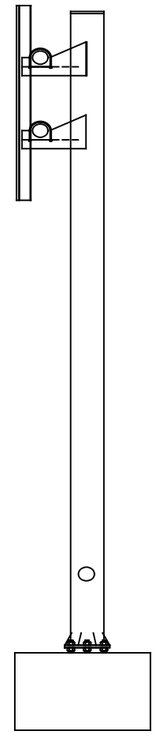
FILE NAME :S-40-0710.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez\tl
DRV :Pdf_bw_HiSplt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69

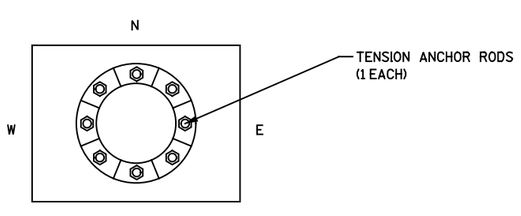




ELEVATION
LOOKING EAST



LOOKING NORTH



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-718

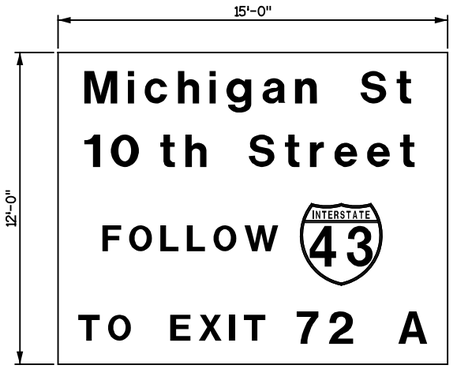
SHEET 49 OF 100
103

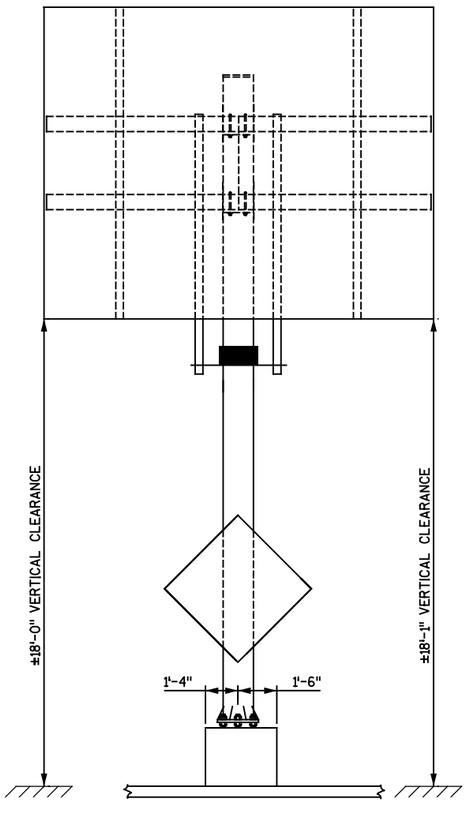
8

8

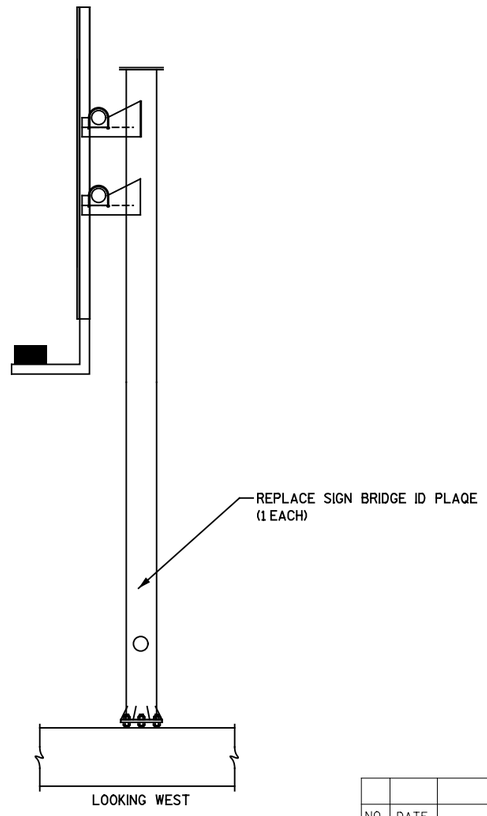
FILE NAME :S-40-0718.dgn
PLOT DATE :11/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER
1000-20-69

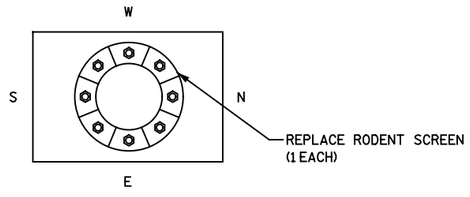




ELEVATION
LOOKING NORTH



LOOKING WEST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.03	REPLACE RODENT SCREEN	1 EACH	SHEET 2
SPV.0060.12	REPLACE SIGN BRIDGE ID PLAQUE	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-719

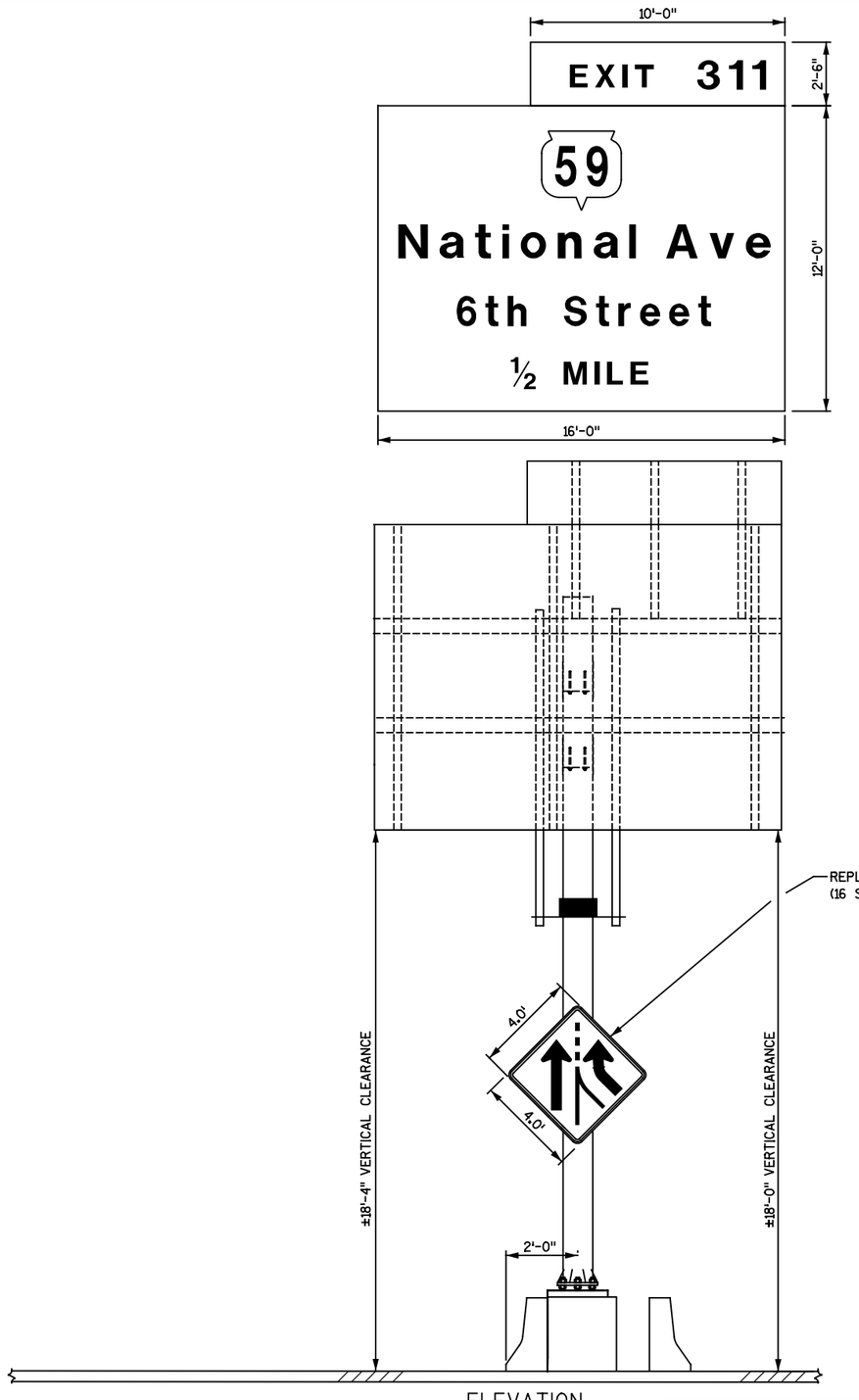
SHEET 50 OF 100
104

8

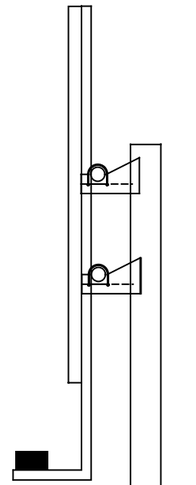
8

FILE NAME :S-40-0719.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

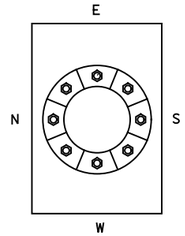
STATE PROJECT NUMBER
1000-20-69



ELEVATION
LOOKING SOUTH



LOOKING EAST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0165.01	REPLACE TYPE II SIGN TO VERTICAL UPRIGHT	16 SF	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-721

SHEET 51 OF 100
105

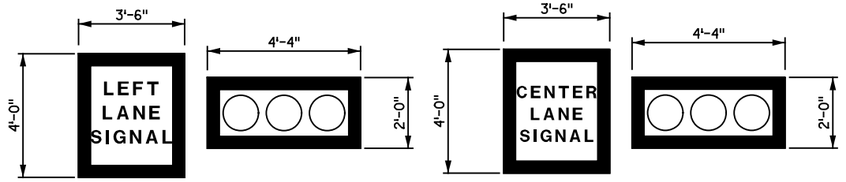
8

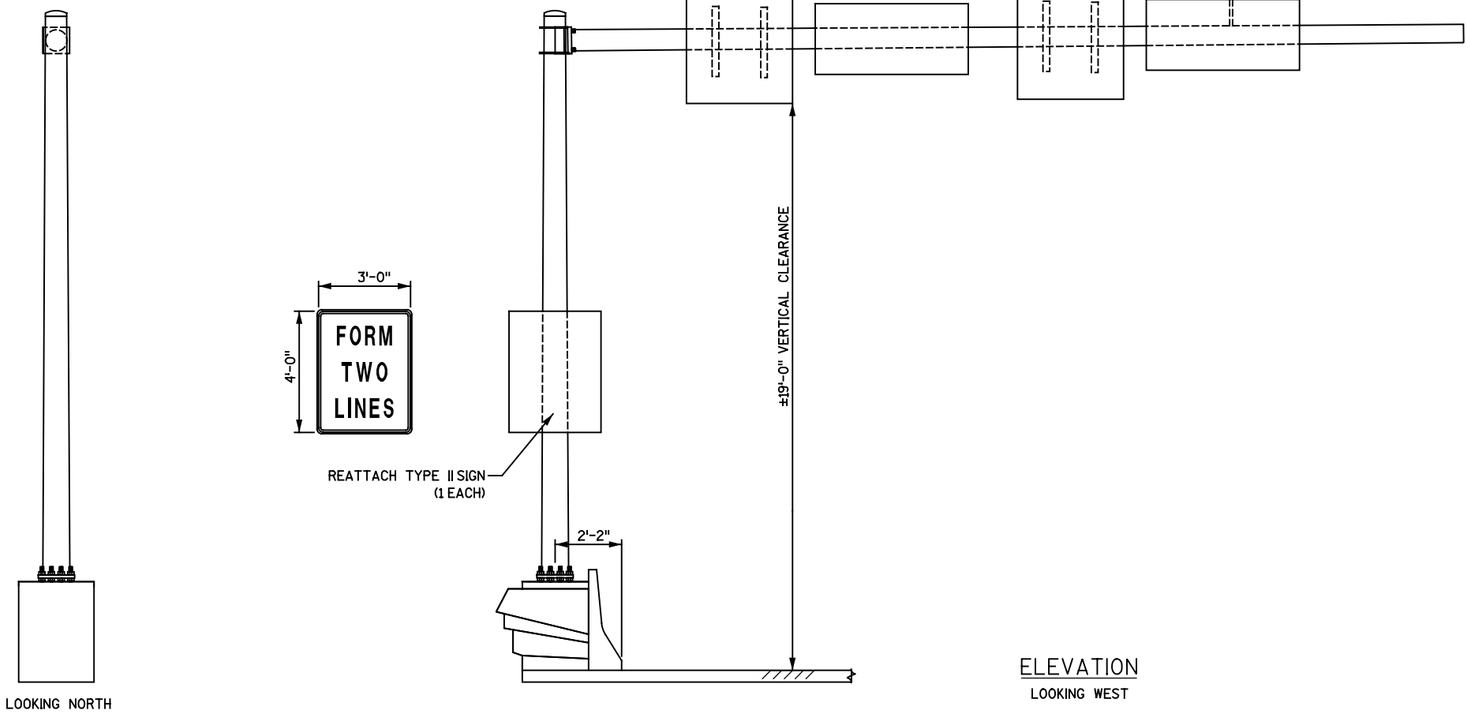
8

FILE NAME :S-40-0721.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER

1000-20-69

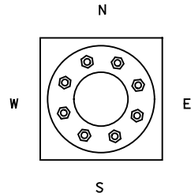




LOOKING NORTH

ELEVATION

LOOKING WEST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.14	REATTACH TYPE II SIGN	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-729

SHEET 52 OF 100

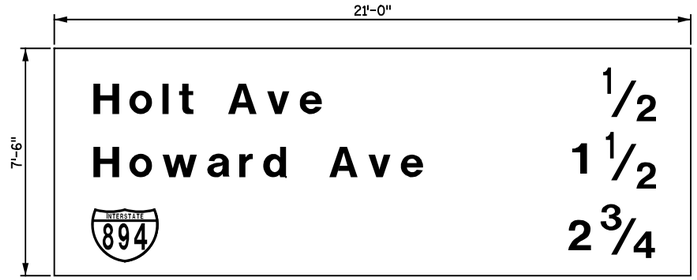
106

8

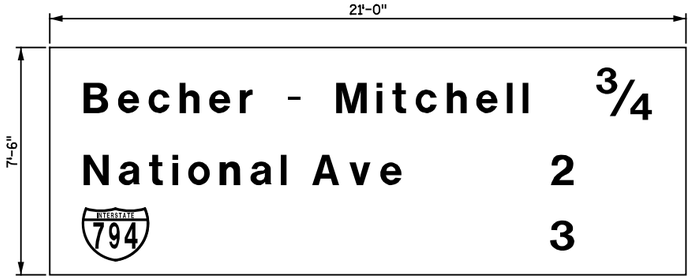
8

FILE NAME :S-40-0729.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

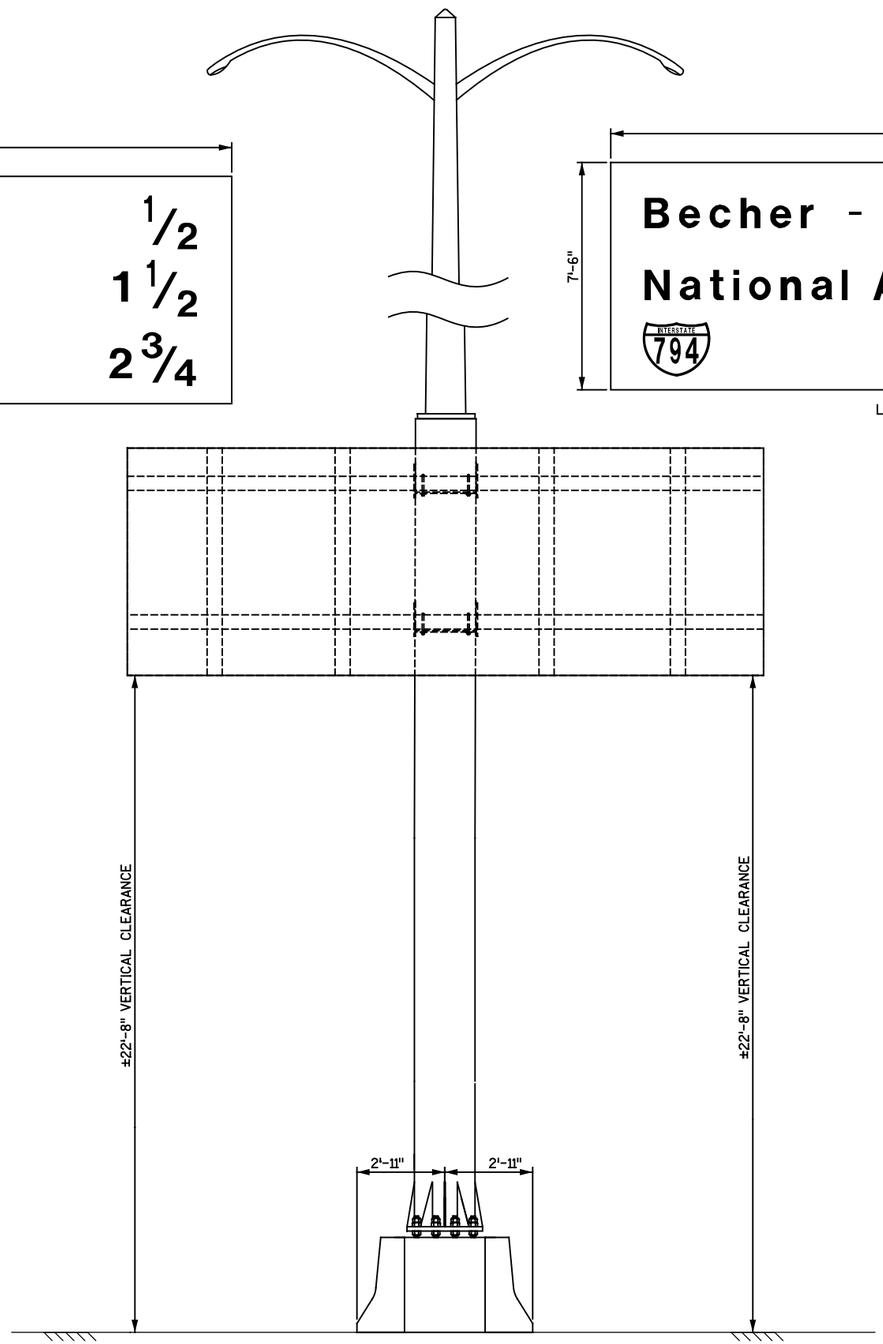
STATE PROJECT NUMBER
1000-20-69



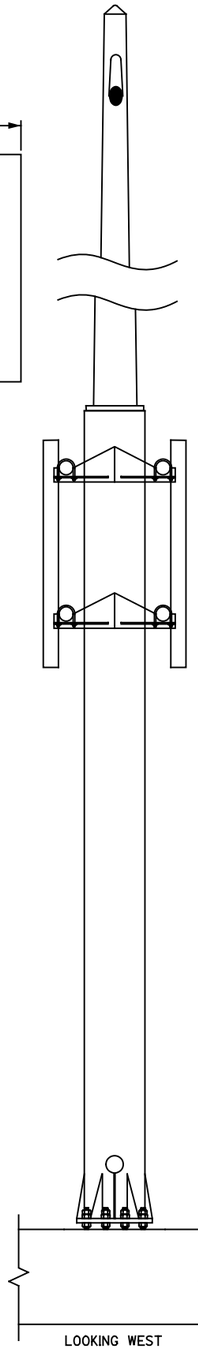
LOOKING SOUTH



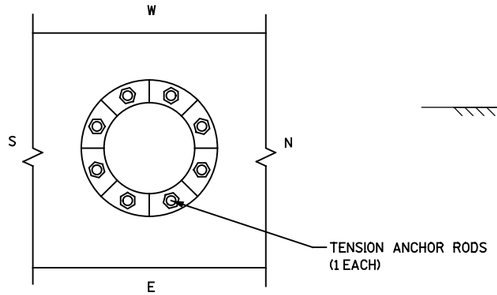
LOOKING NORTH



ELEVATION
LOOKING NORTH



LOOKING WEST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-772

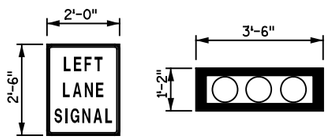
SHEET 53 OF 100
107

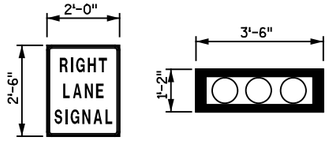
8

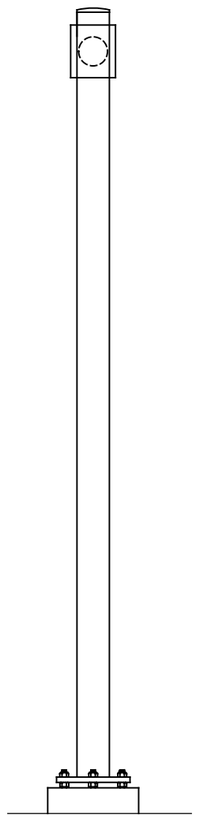
8

FILE NAME :S-40-0772.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CEL_TextSub.tbl

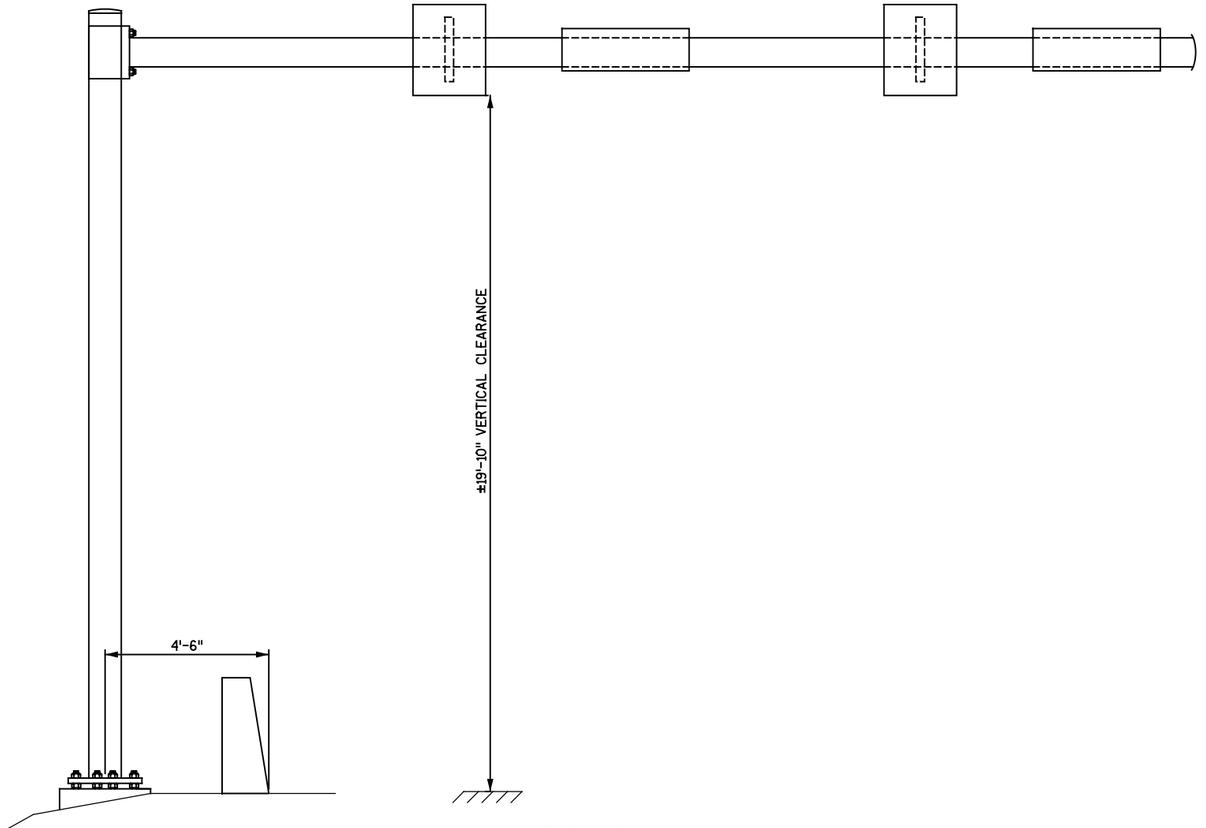
STATE PROJECT NUMBER
1000-20-69



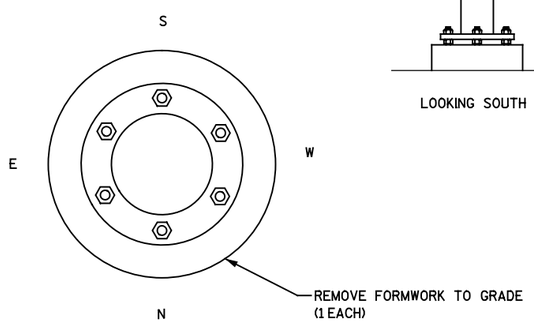




LOOKING SOUTH



ELEVATION
LOOKING EAST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.26	REMOVE FORMWORK TO GRADE	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

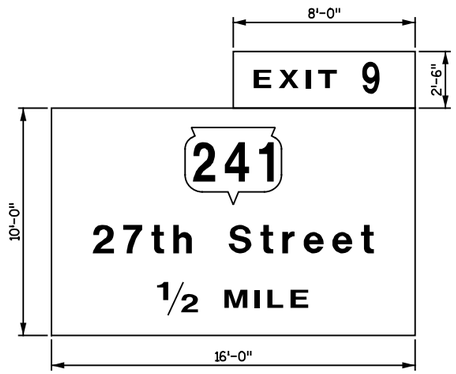
S-40-774

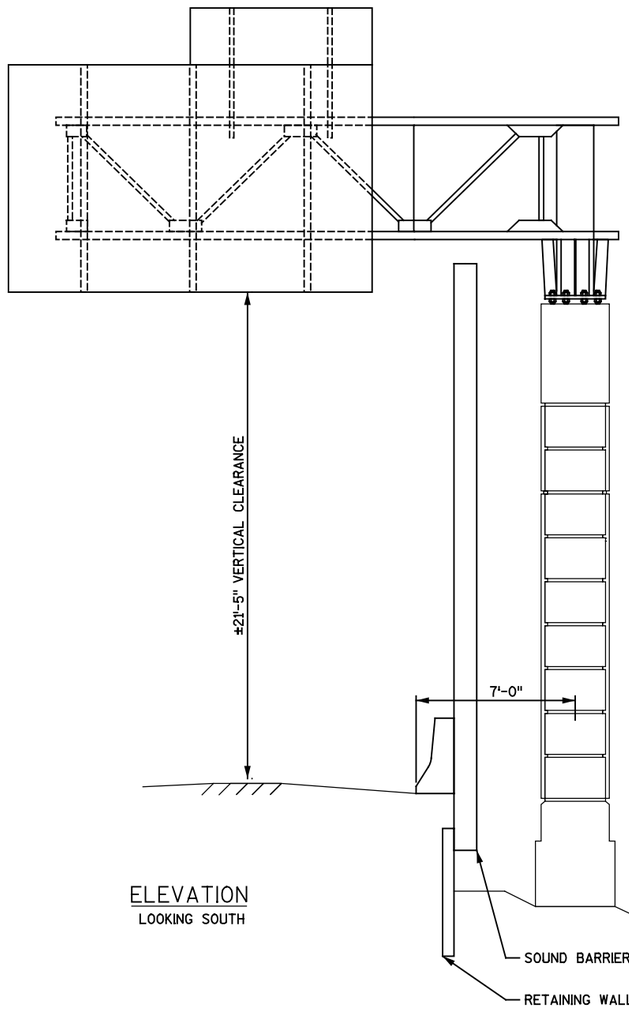
SHEET 54 OF 100
108

8

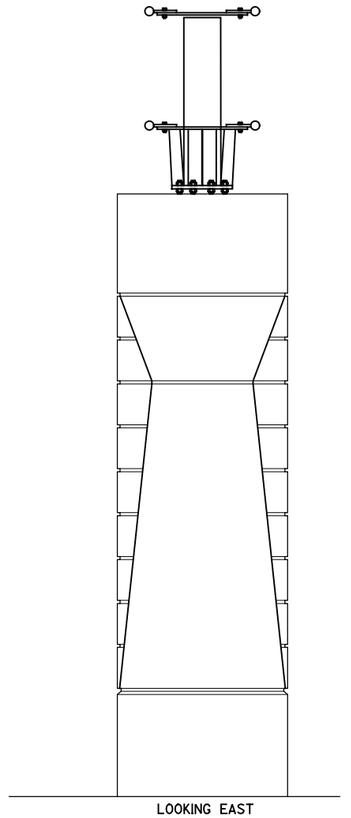
8

STATE PROJECT NUMBER
1000-20-69

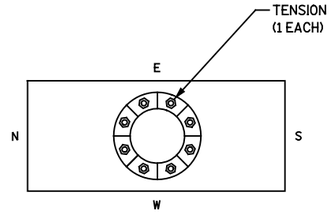




ELEVATION
LOOKING SOUTH



LOOKING EAST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

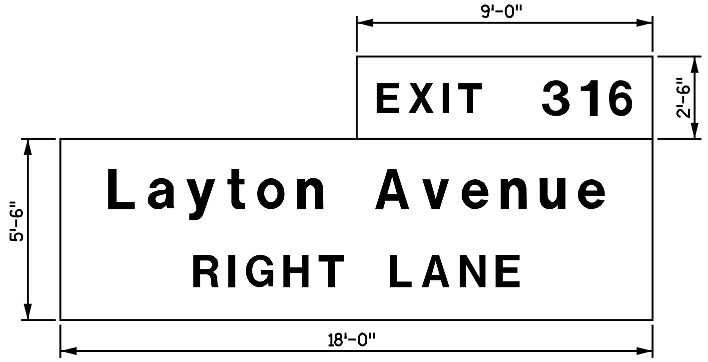
S-40-826

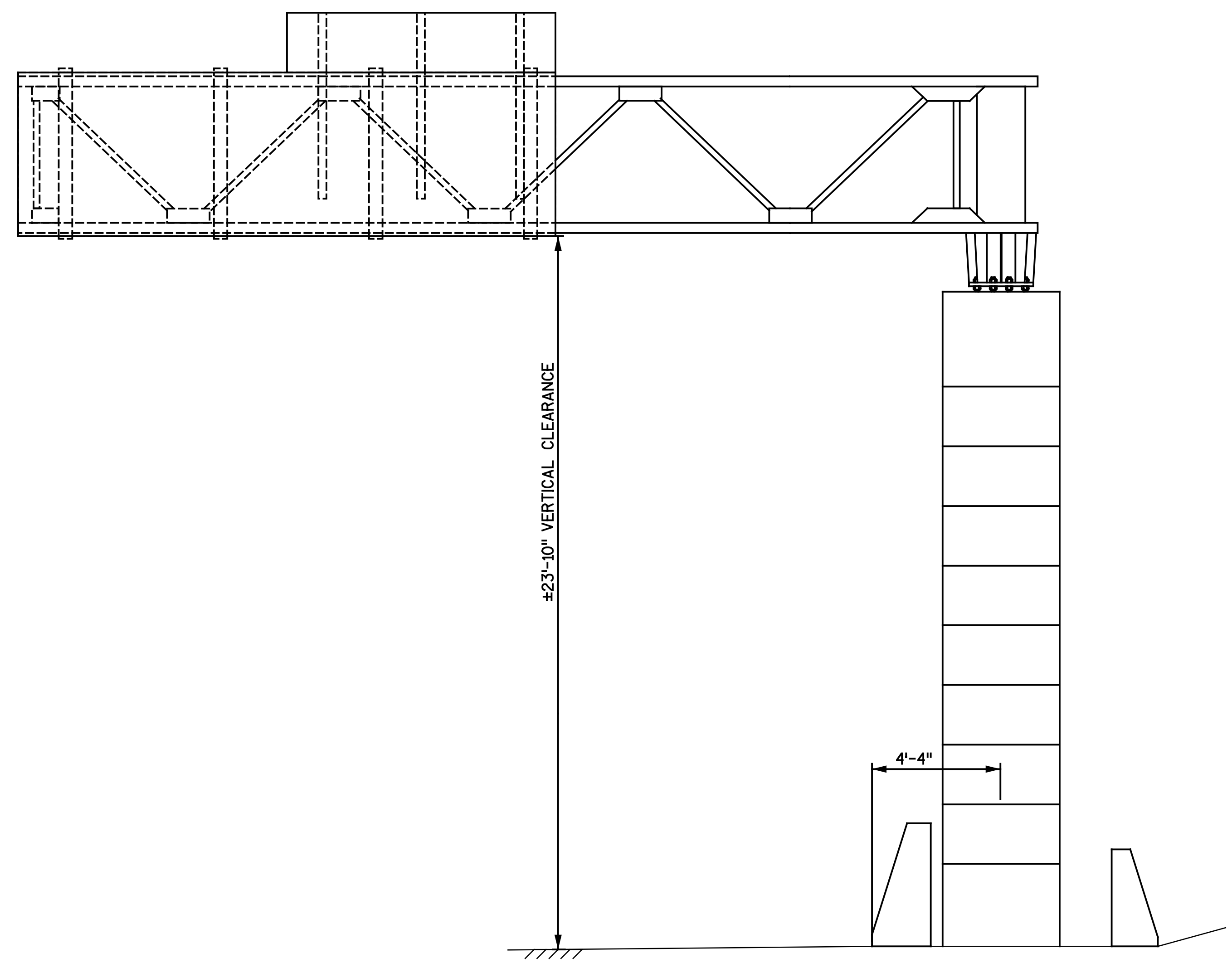
SHEET 55 OF 100
109

8

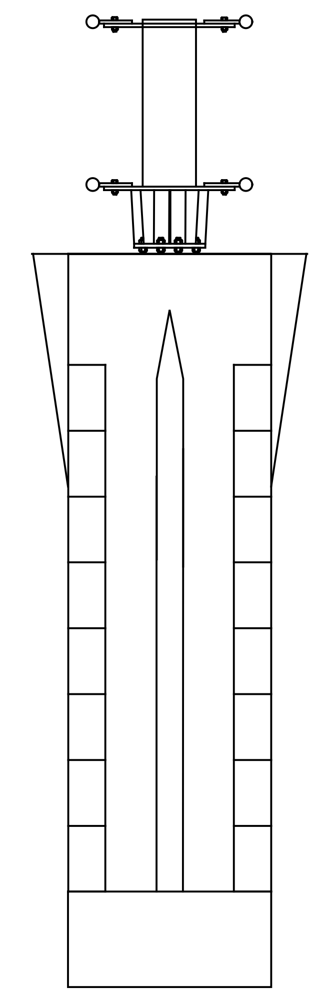
8

FILE NAME :S-40-0826.dgn
PLOT DATE :1/24/2017
PLOT BY : VeronicaChavez01
DRV :Pdf_bw_HiSplt
PEN :CELTextSub.tbl

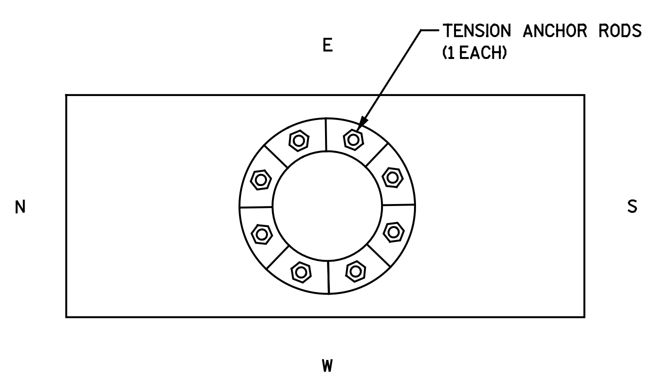




ELEVATION
LOOKING SOUTH



LOOKING EAST



FOUNDATION DETAIL

8

8

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

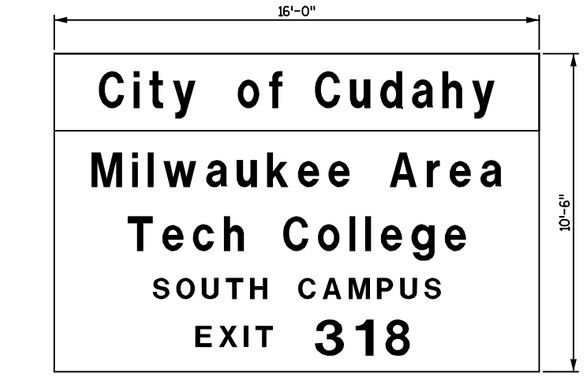
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

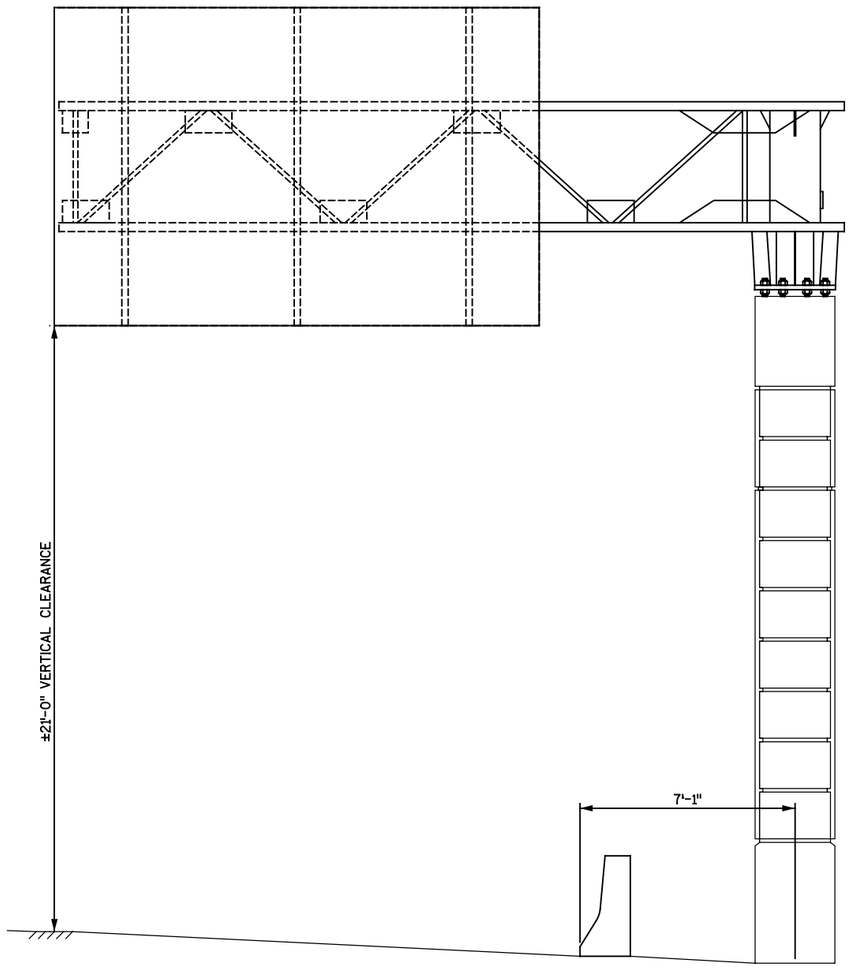
SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR PLANS CK'D. VC

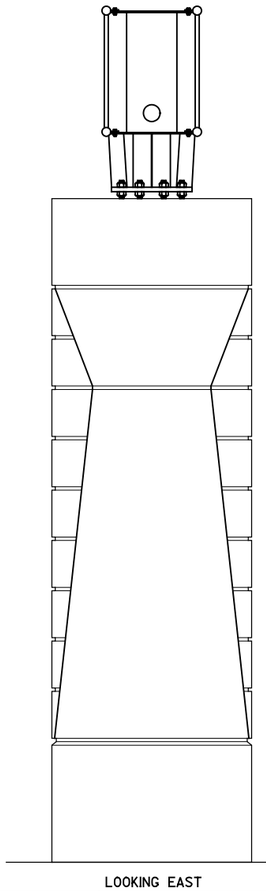
S-40-827

STATE PROJECT NUMBER
1000-20-69

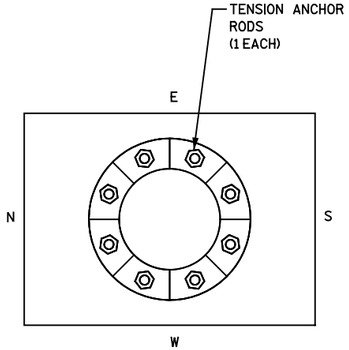




ELEVATION
LOOKING SOUTH



LOOKING EAST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-828

SHEET 57 OF 100
111

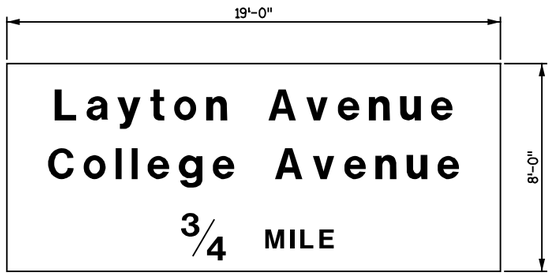
8

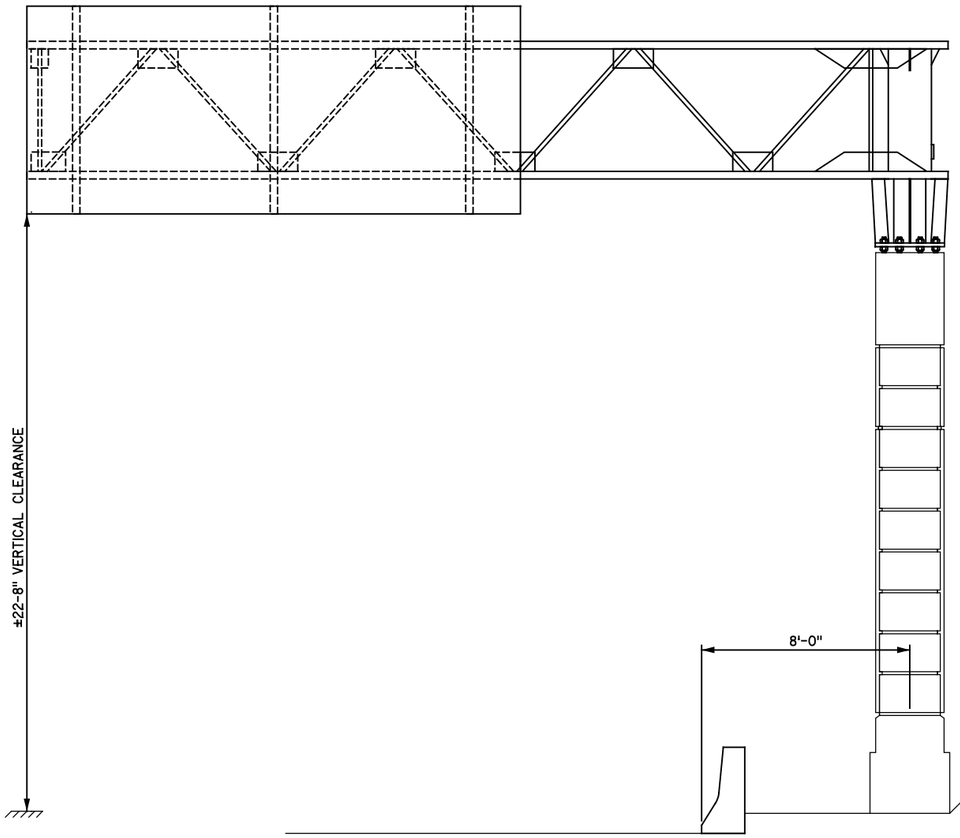
8

FILE NAME :S-40-0828.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

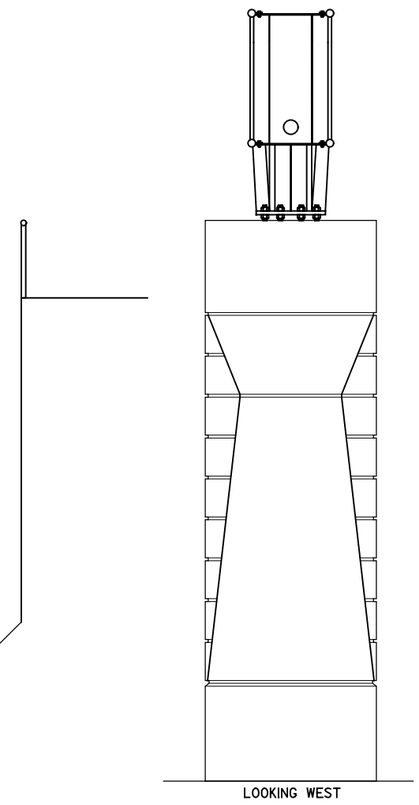
STATE PROJECT NUMBER

1000-20-69





ELEVATION
LOOKING NORTH



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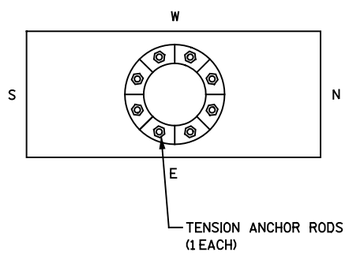


FOUNDATION DETAILS

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-829

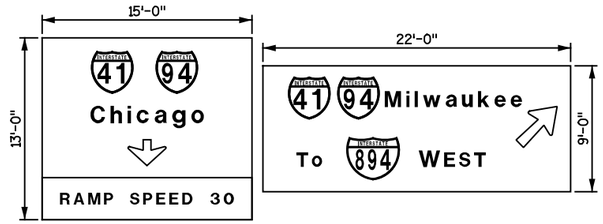
SHEET 58 OF 100
112

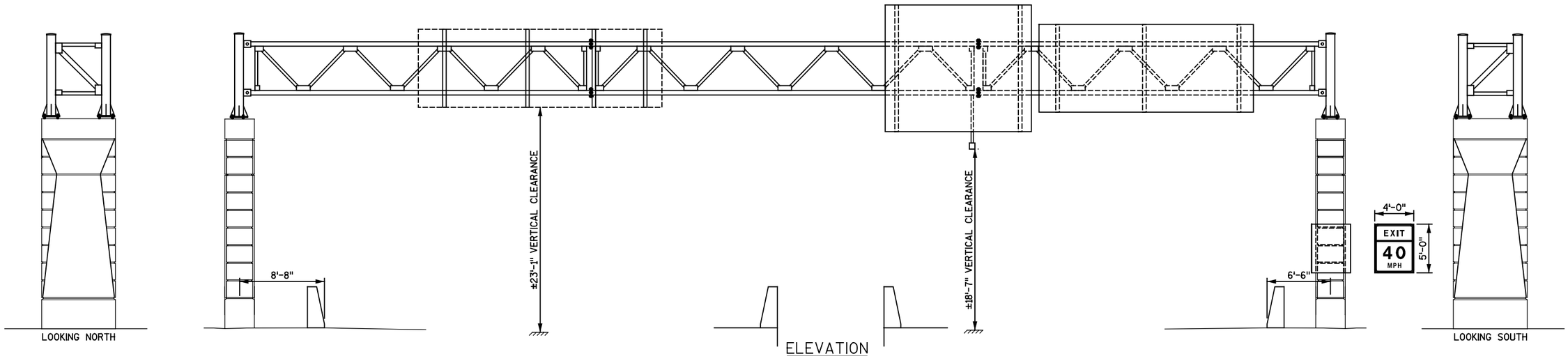
8

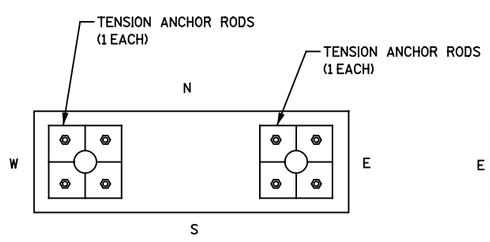
8

FILE NAME :S-40-0829.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HSplt
PEN :CEL_TextSub.tbl

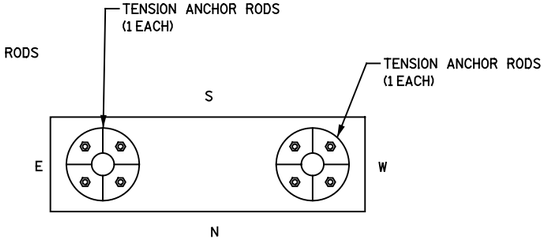
STATE PROJECT NUMBER
1000-20-69







SOUTH FOUNDATION DETAILS



NORTH FOUNDATION DETAILS

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	4 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-838

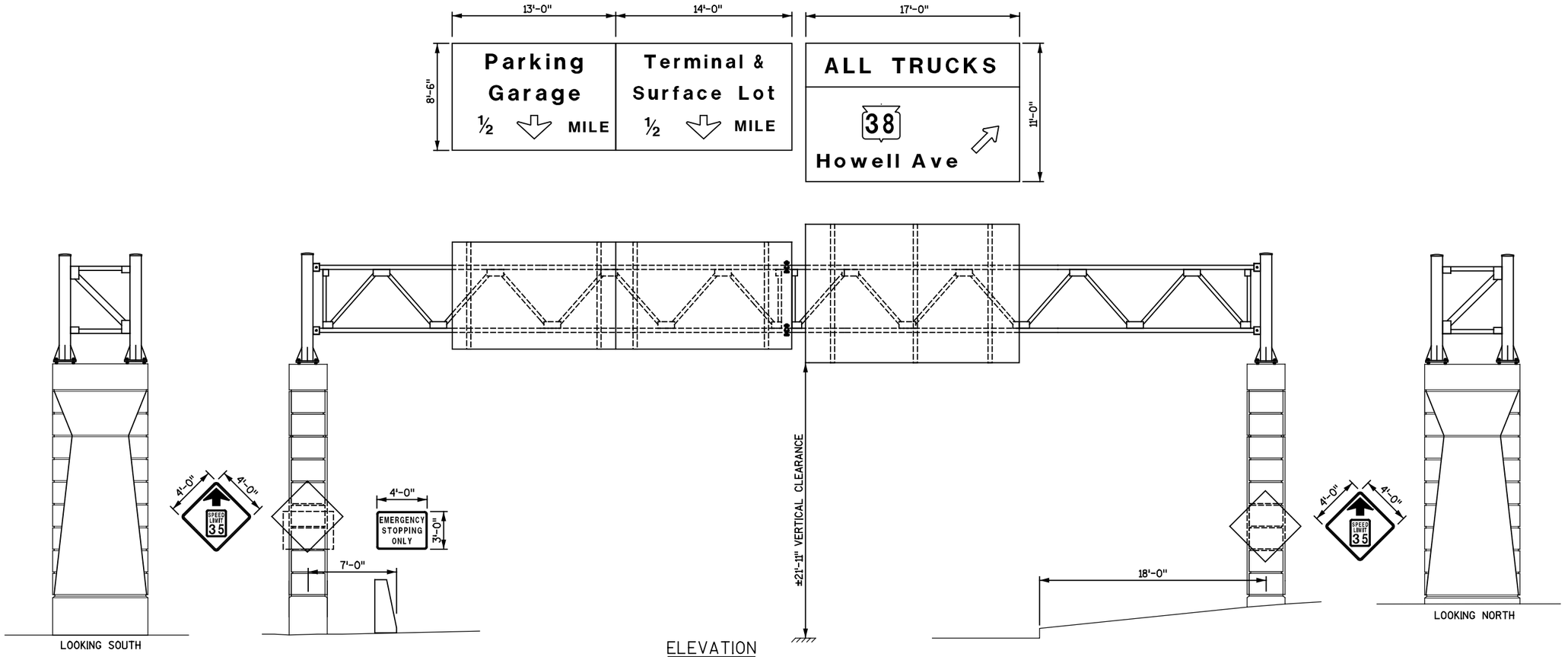
SHEET 59 OF 100
113

8

8

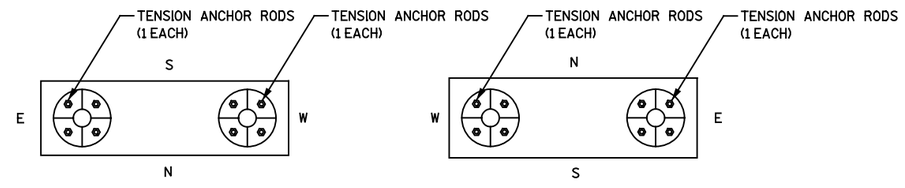
FILE NAME :S-40-0838.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER
1000-20-69



ELEVATION

LOOKING EAST



NORTH FOUNDATION DETAILS

SOUTH FOUNDATION DETAILS

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	4 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-839

SHEET 60 OF 100
114

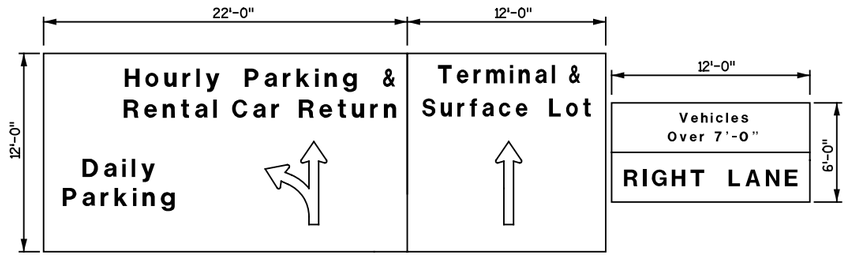
8

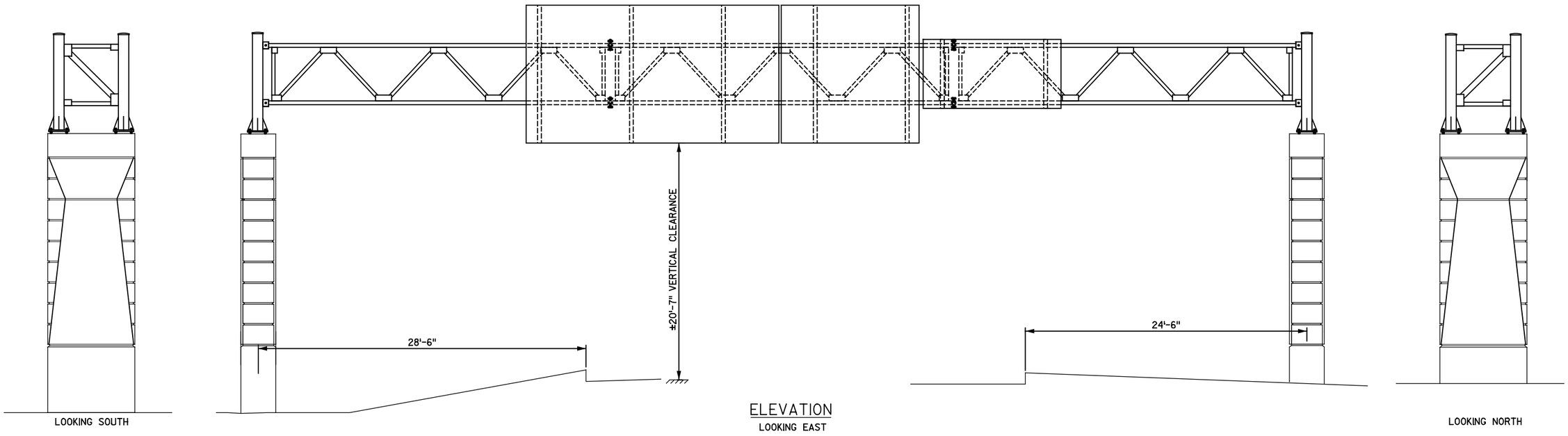
8

FILE NAME :S-40-0839.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER

1000-20-69

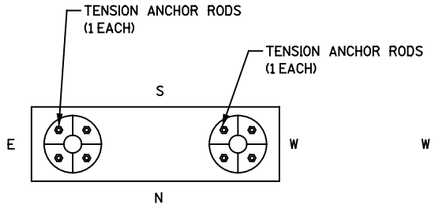




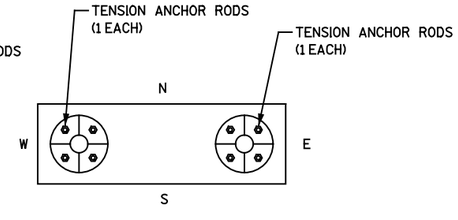
LOOKING SOUTH

ELEVATION
LOOKING EAST

LOOKING NORTH



NORTH FOUNDATION DETAIL



SOUTH FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	4 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-840

SHEET 61 OF 100

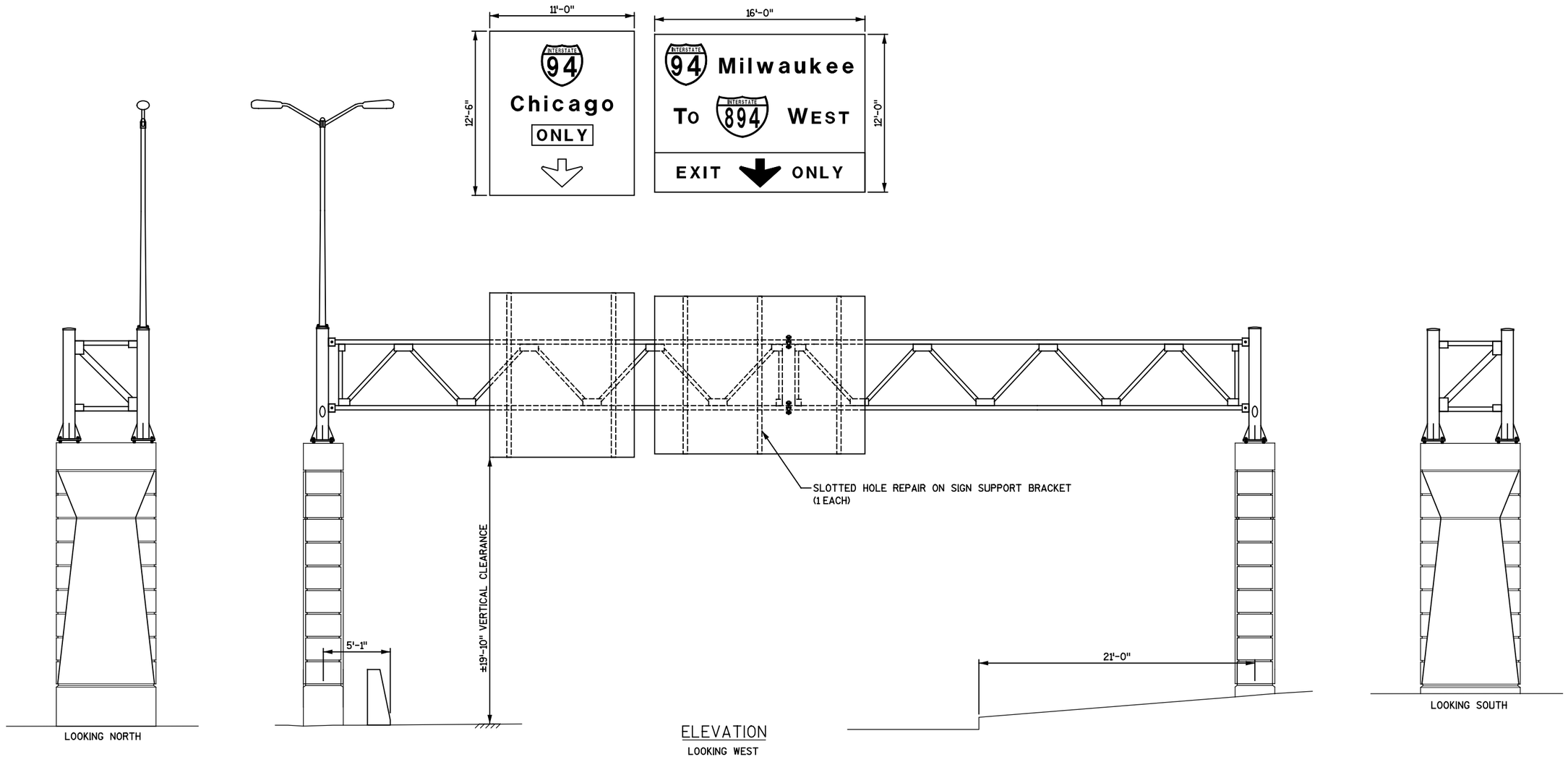
115

8

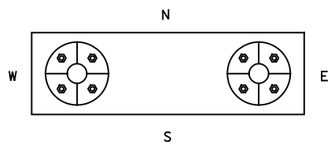
8

FILE NAME :S-40-0840.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HiSplt
PEN :CELTextSub.tbl

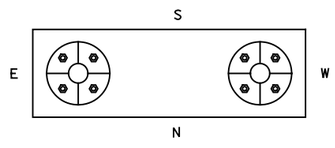
STATE PROJECT NUMBER
1000-20-69



ELEVATION
LOOKING WEST



SOUTH FOUNDATION DETAIL



NORTH FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.16	SLOTTED HOLE REPAIR ON SIGN SUPPORT BRACKET	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-841

SHEET 62 OF 100
116

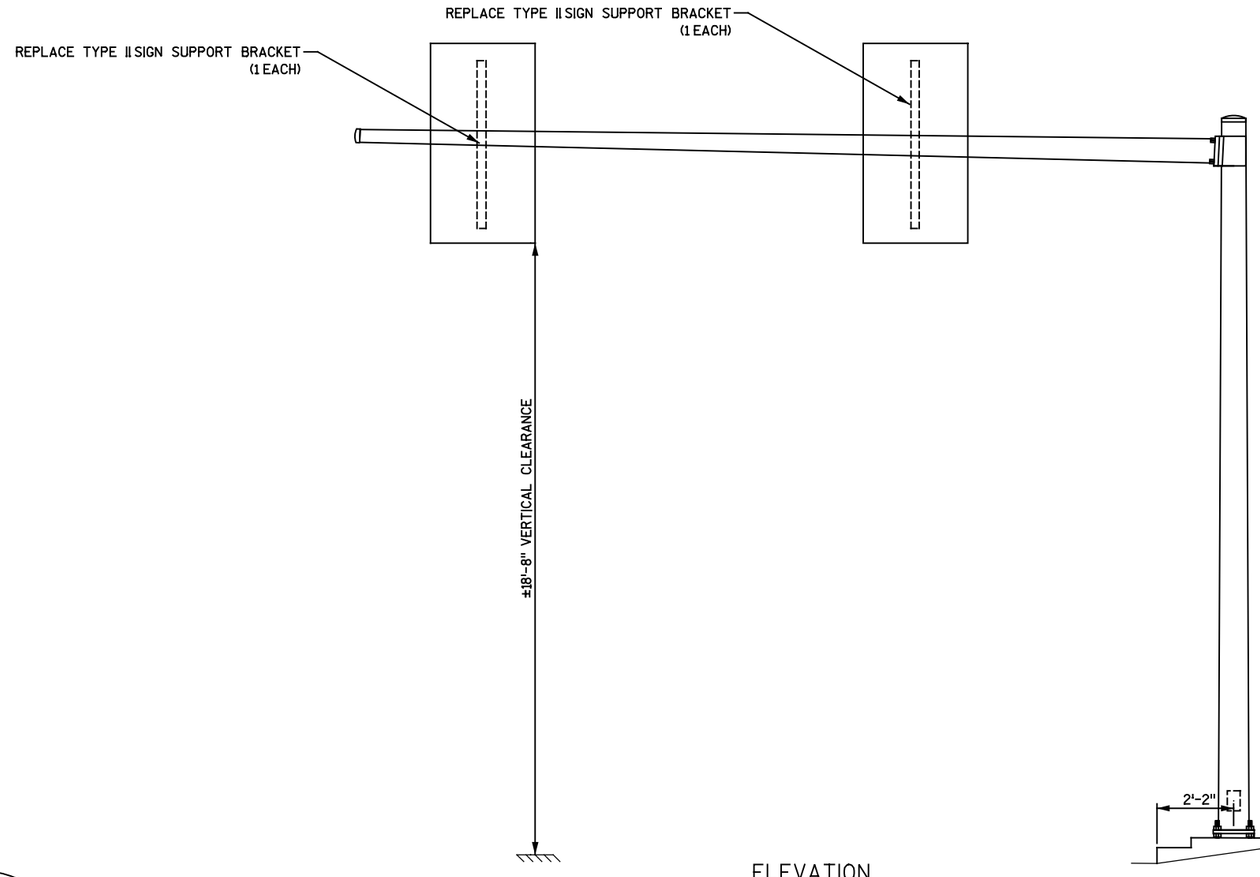
8

8

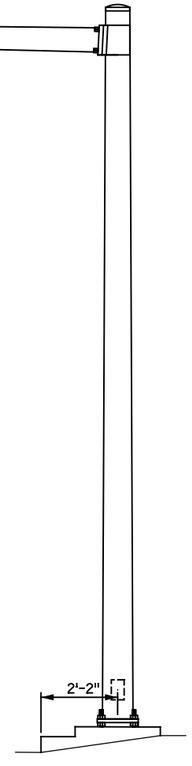
FILE NAME :S-40-0841.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez-vt6
DRV :Pdf_bw_HS.plt
PEN :CEL.TextSub.tbl

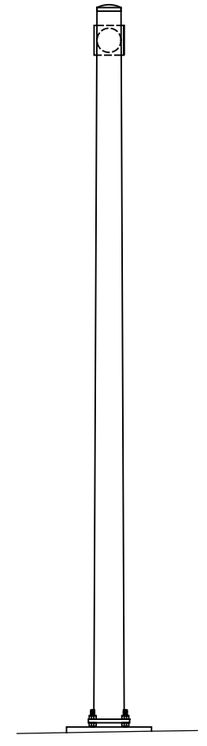
STATE PROJECT NUMBER

1000-20-69

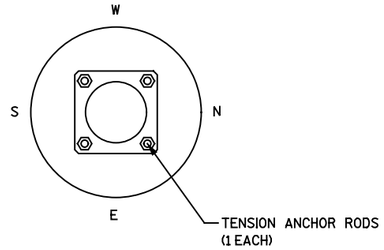


ELEVATION
LOOKING NORTH





LOOKING WEST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2
SPV.0060.15	REPLACE TYPE II SIGN SUPPORT BRACKET	2 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-905

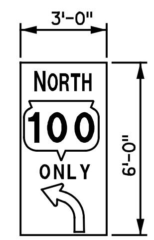
SHEET 63 OF 100
117

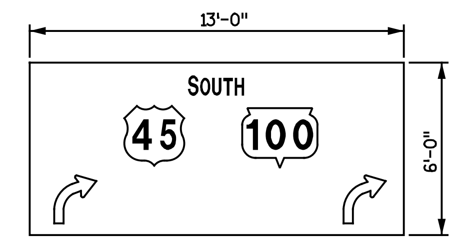
8

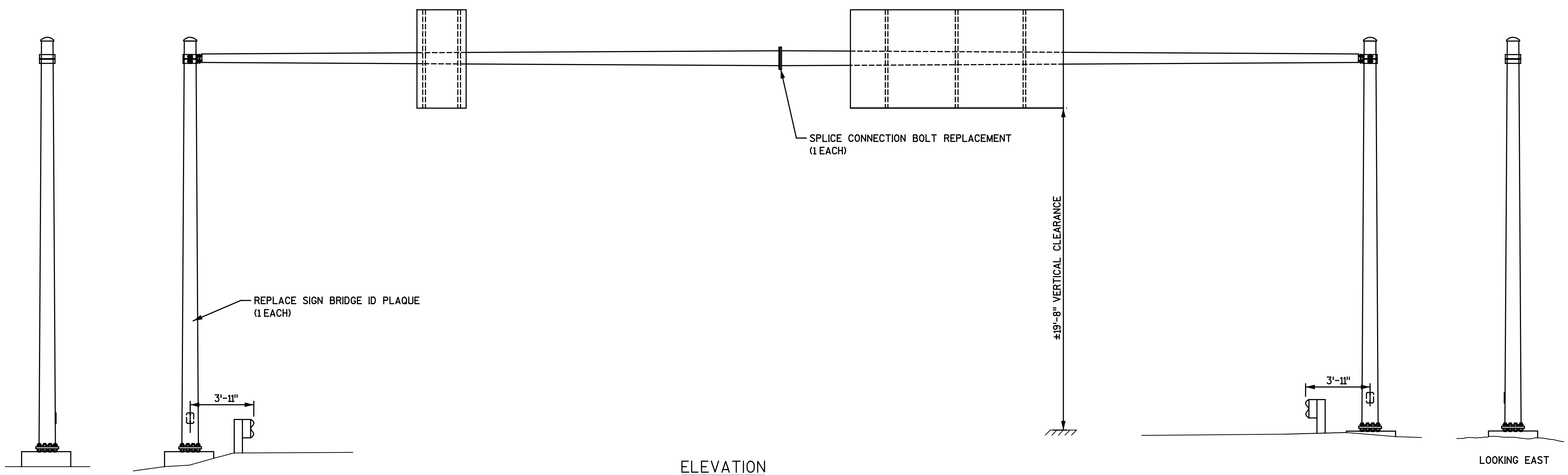
8

FILE NAME :S-40-0905.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez-tt
DRV :Pdf_bw_HSplt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER
1000-20-69

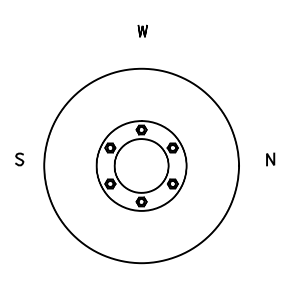




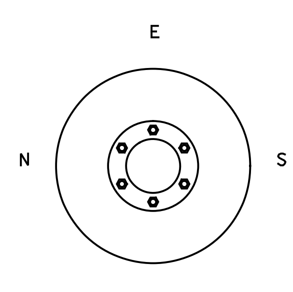


ELEVATION

LOOKING SOUTH



EAST FOUNDATION DETAIL



WEST FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.06	SPLICE CONNECTION BOLT REPLACEMENT	1 EACH	SHEET 4
SPV.0060.12	REPLACE SIGN BRIDGE ID PLAQUE	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-916

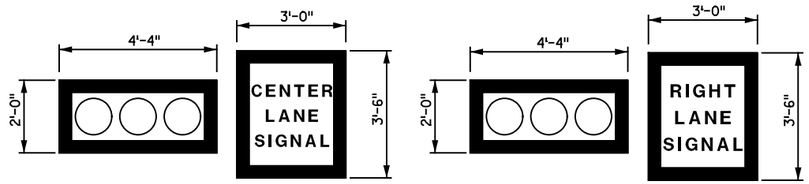
SHEET 64 OF 100

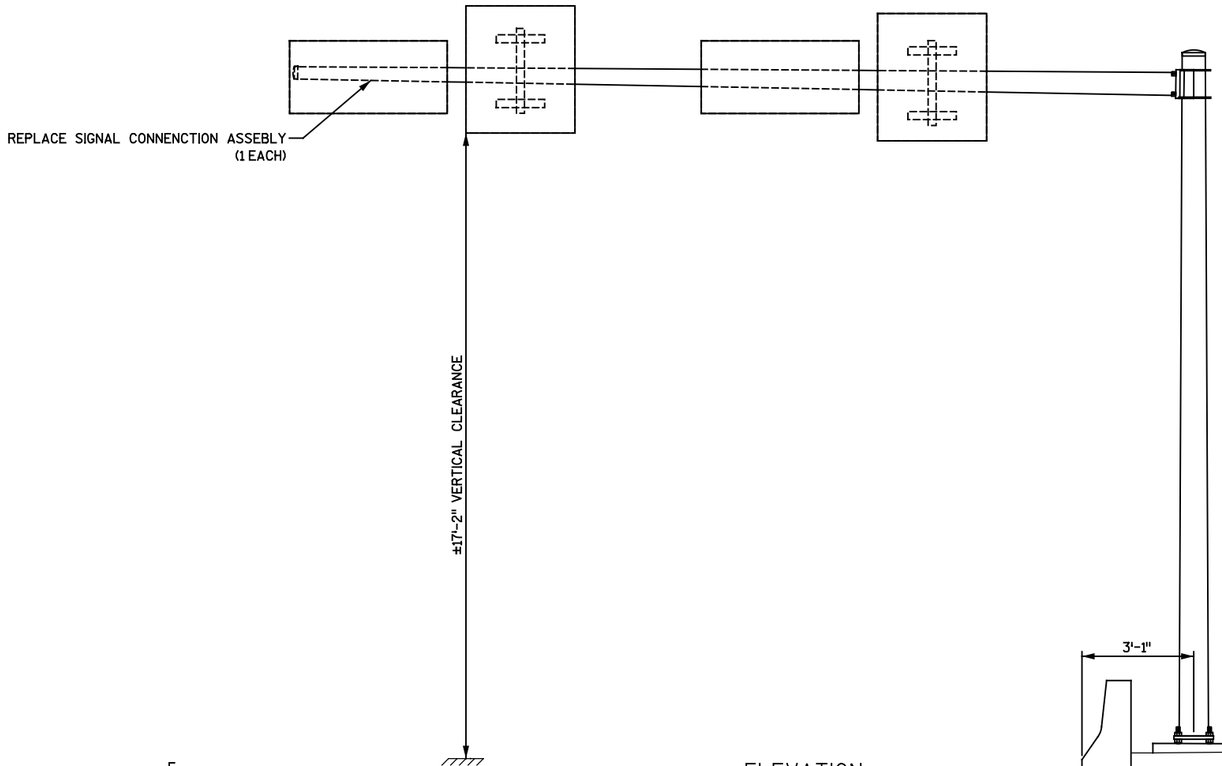
8

8

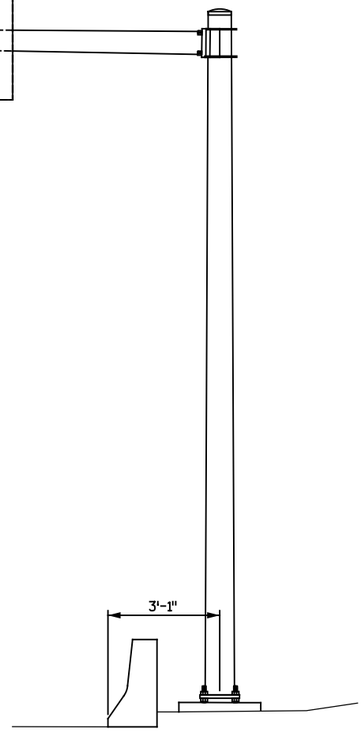
FILE NAME :S-40-0916.dgn
PLOT DATE :1/24/2017 PLOT BY : Veronica Chavezv8l DRV :Pdf_bw_HS.plt PEN :CEL_TextSub.tbl

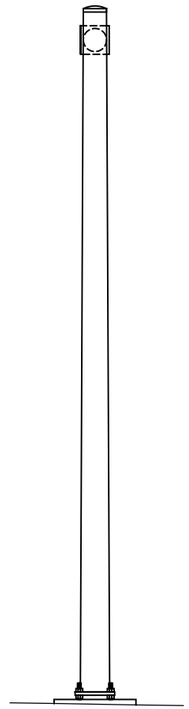
STATE PROJECT NUMBER
1000-20-69



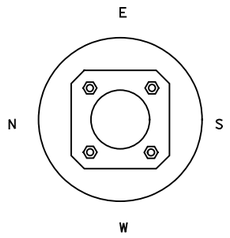


ELEVATION
LOOKING SOUTH





LOOKING EAST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.32	REPLACE SIGNAL CONNECTION ASSEMBLY	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-40-917

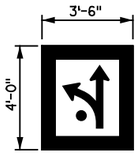
SHEET 65 OF 100
119

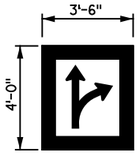
8

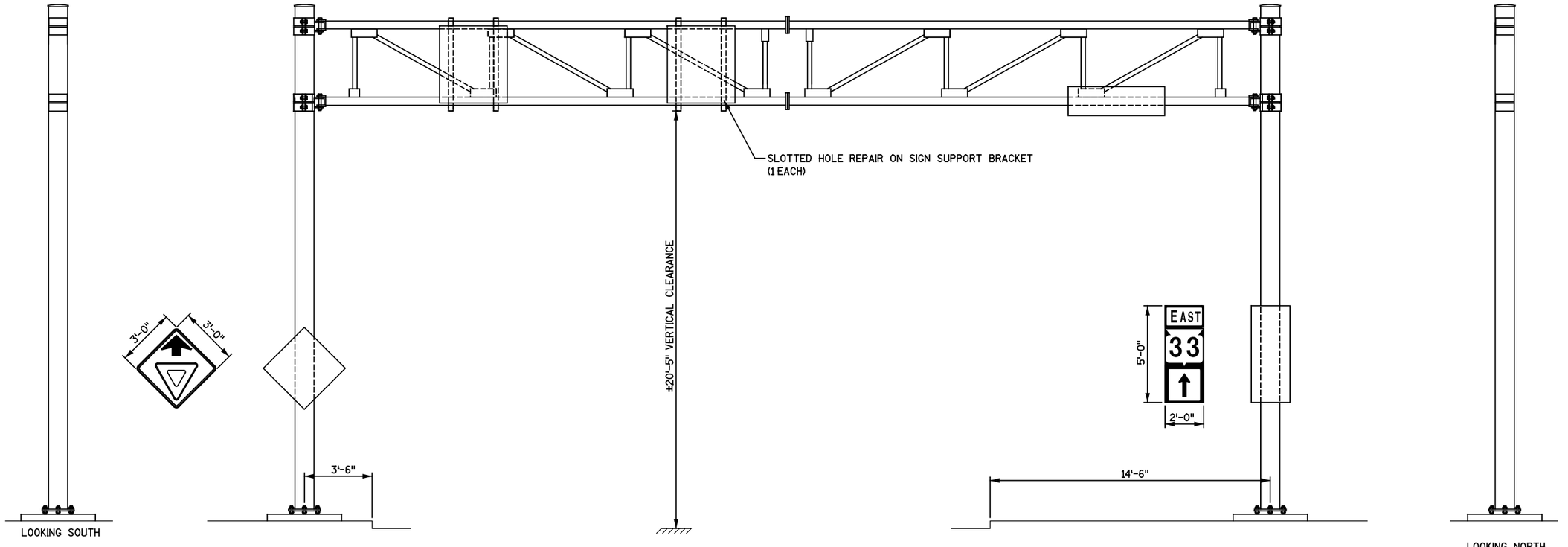
8

FILE NAME :S-40-0917.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CEL_TextSub.tbl

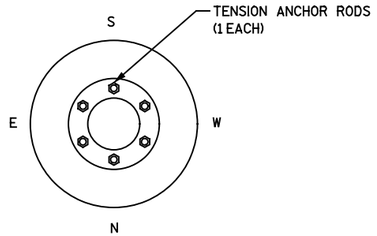
STATE PROJECT NUMBER
1000-20-69



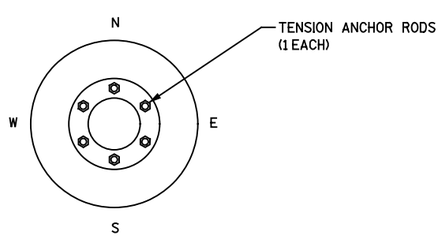




ELEVATION
LOOKING EAST



NORTH FOUNDATION DETAIL



SOUTH FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	2 EACH	SHEET 2
SPV.0060.16	SLOTTED HOLE REPAIR ON SIGN SUPPORT BRACKET	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-45-206

SHEET 66 OF 100
120

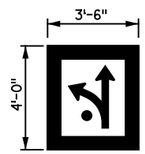
8

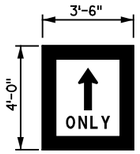
8

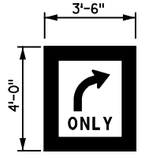
FILE NAME :S-45-0206.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez-tt
DRV :Pdf_bw_HiSpit
PEN :CELTextSub.tbl

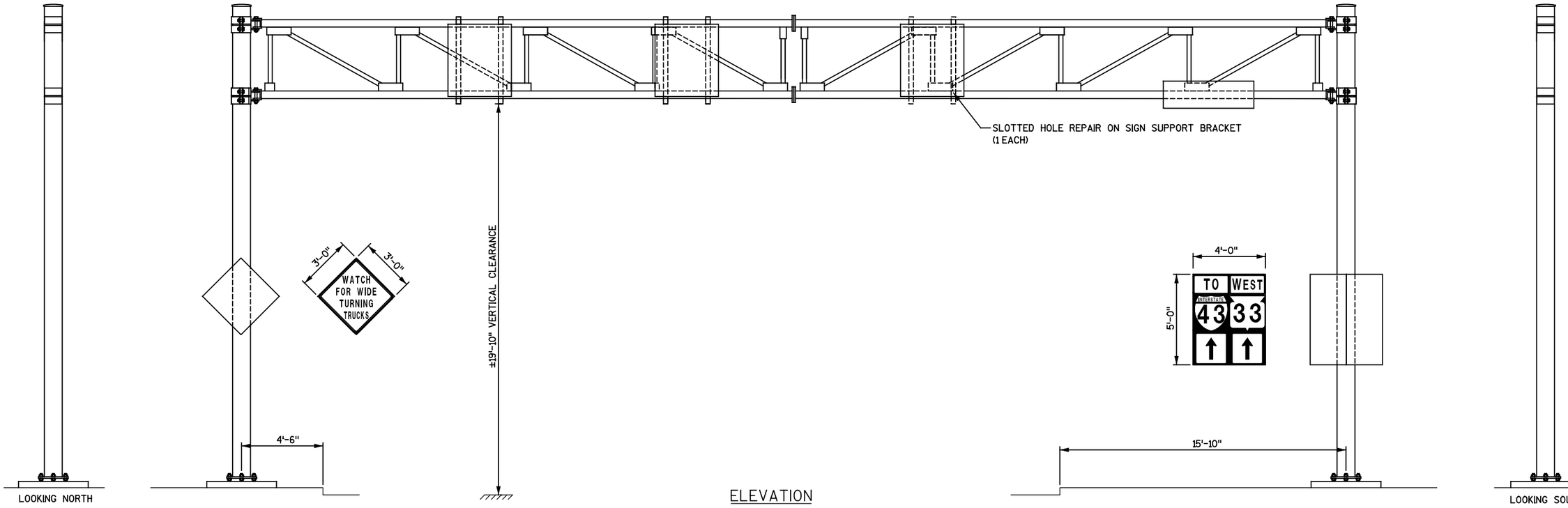
STATE PROJECT NUMBER

1000-20-69



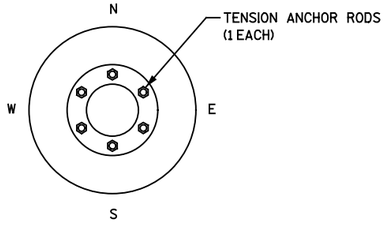




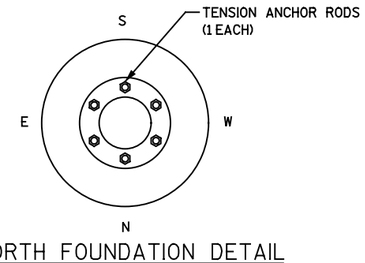


ELEVATION

LOOKING WEST



SOUTH FOUNDATION DETAIL



NORTH FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	2 EACH	SHEET 2
SPV.0060.16	SLOTTED HOLE REPAIR ON SIGN SUPPORT BRACKET	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-45-207

SHEET 67 OF 100

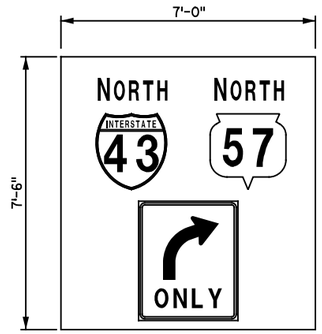
121

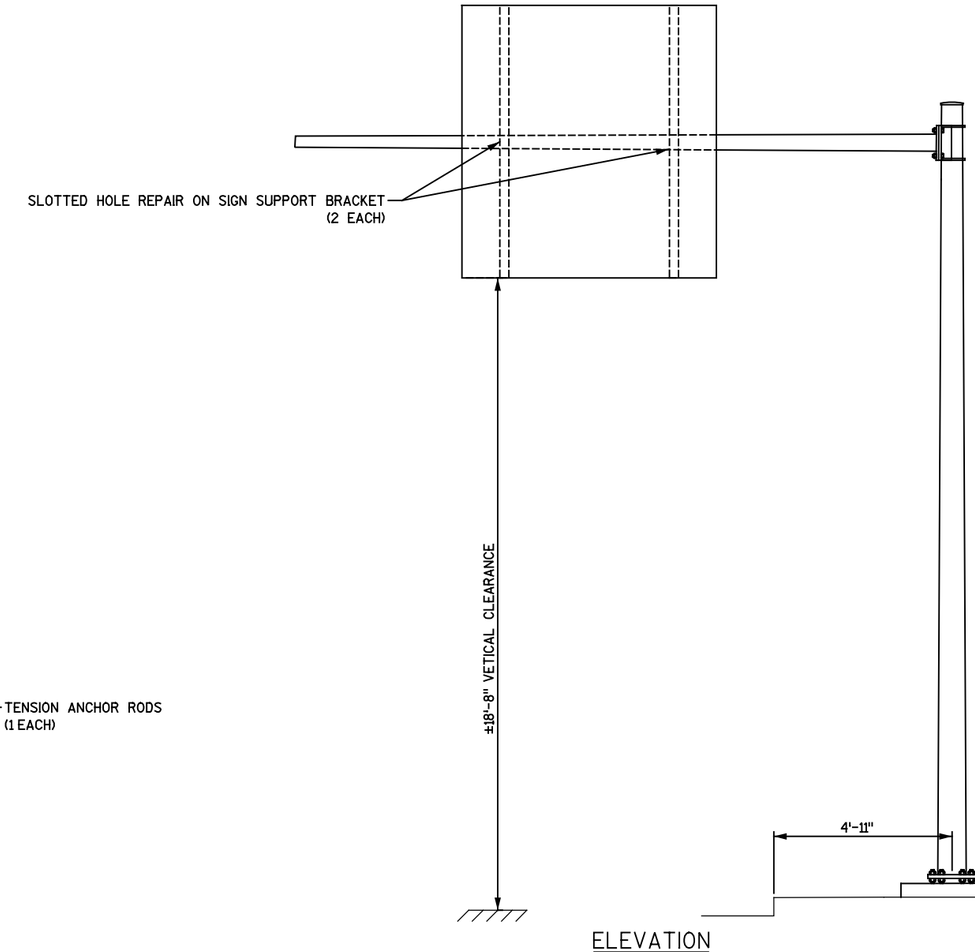
8

8

FILE NAME :S-45-0207.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HiSpit
PEN :CELTextSub.tbl

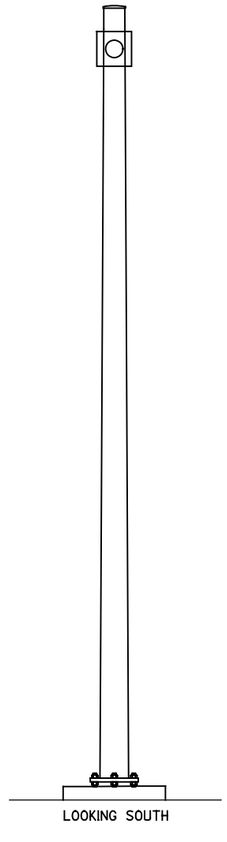
STATE PROJECT NUMBER
1000-20-69



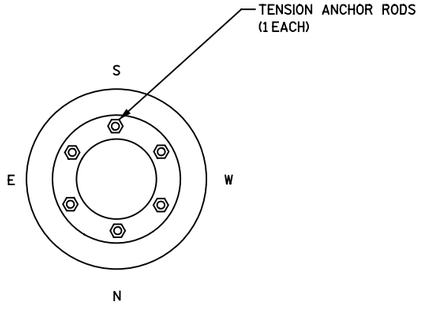


ELEVATION

LOOKING WEST



LOOKING SOUTH



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2
SPV.0060.16	SLOTTED HOLE REPAIR ON SIGN SUPPORT BRACKET	2 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-45-214

SHEET 68 OF 100

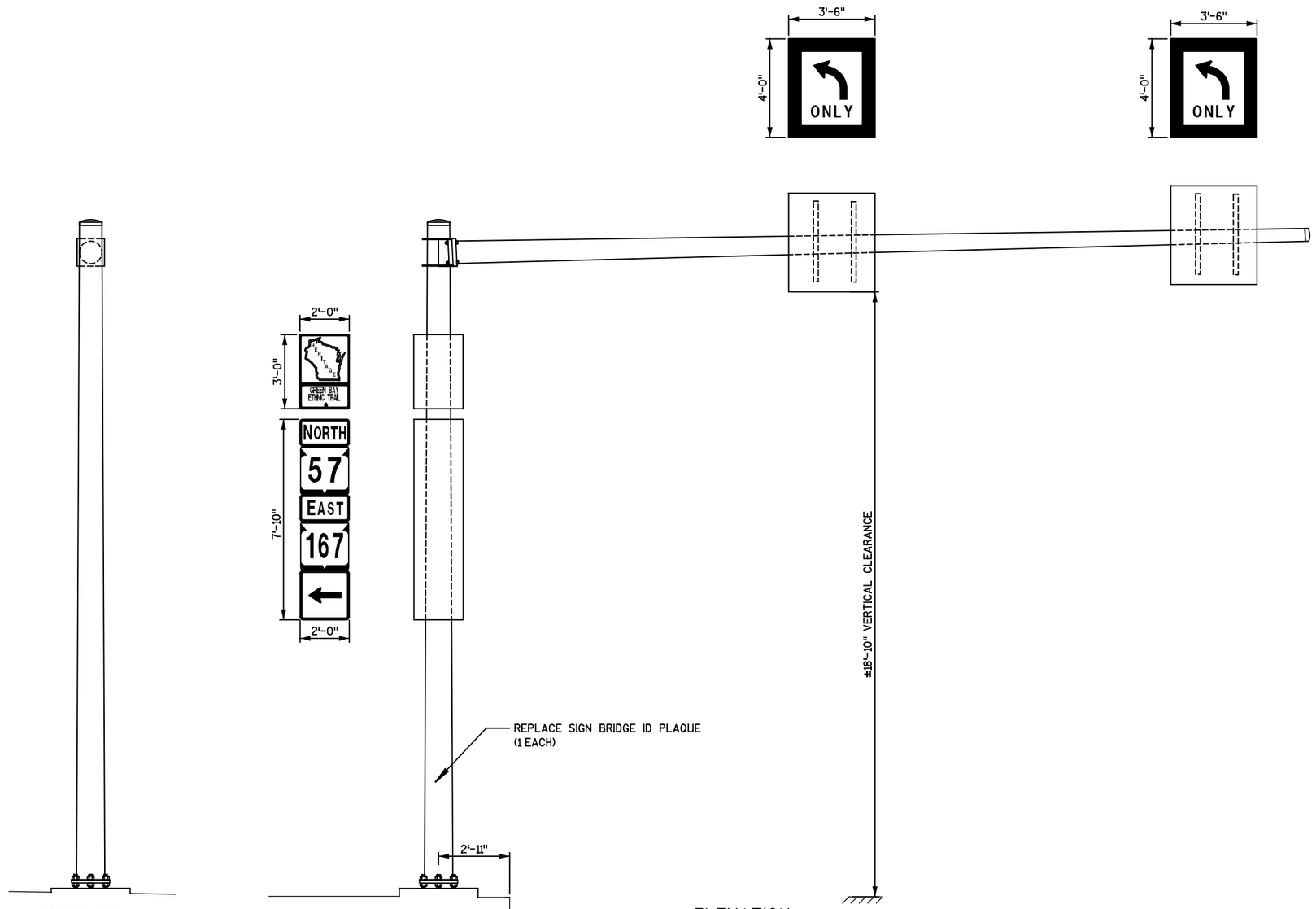
122

8

8

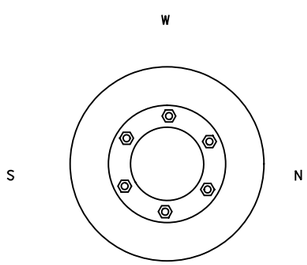
FILE NAME :S-45-0214.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez-tt
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69



LOOKING WEST

ELEVATION
LOOKING SOUTH



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.12	REPLACE SIGN BRIDGE ID PLAQUE	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-45-602

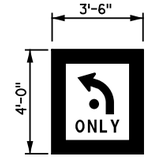
SHEET 69 OF 100
123

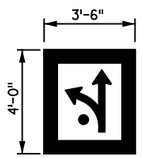
8

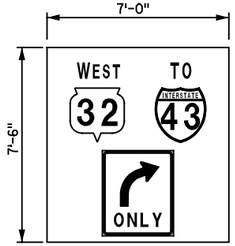
8

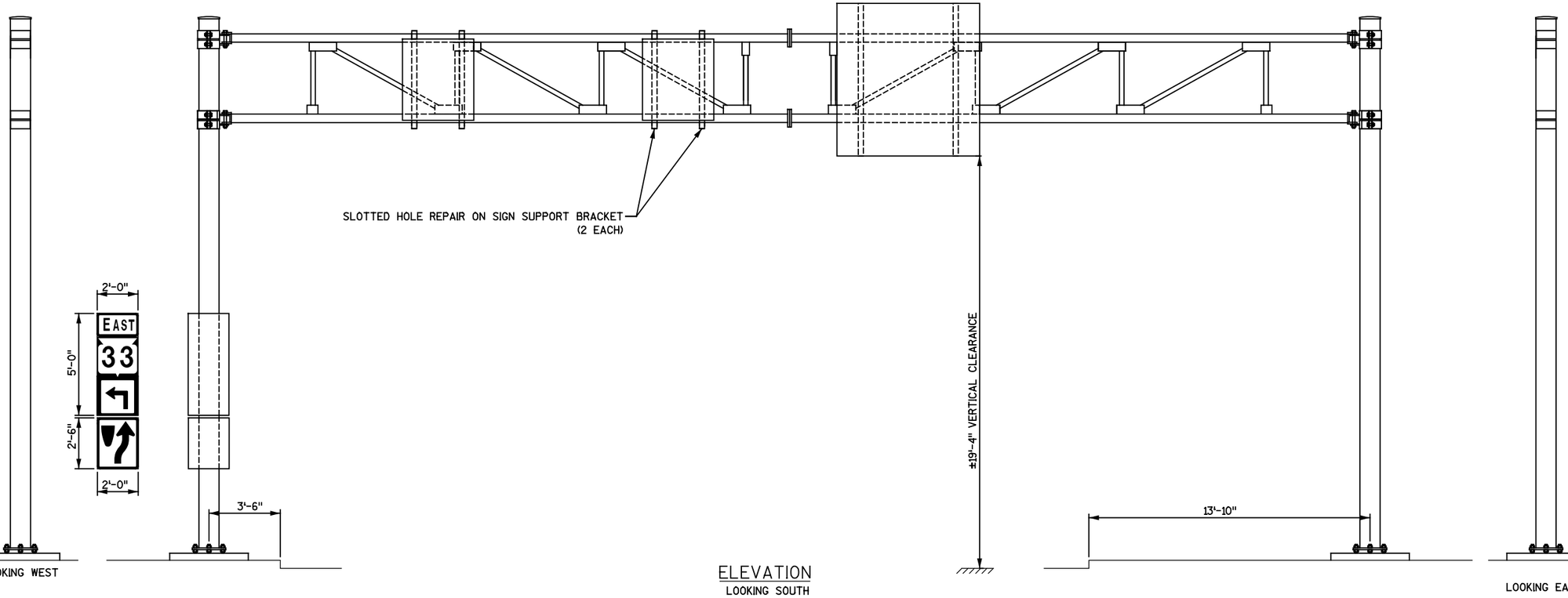
FILE NAME :S-45-0602.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez-Vil
DRV :Pdf_bw_HiSplt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69







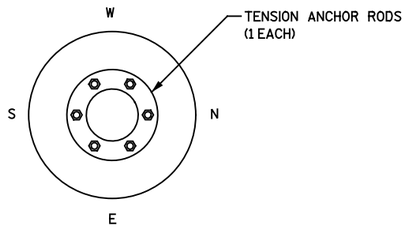


LOOKING WEST

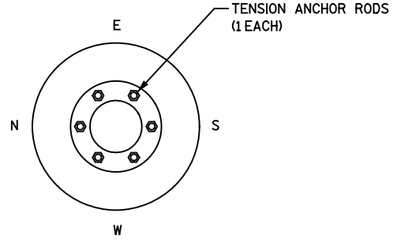
ELEVATION
LOOKING SOUTH

LOOKING EAST

8



EAST FOUNDATION DETAIL



WEST FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	2 EACH	SHEET 2
SPV.0060.16	SLOTTED HOLE REPAIR ON SIGN SUPPORT BRACKET	2 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-45-606

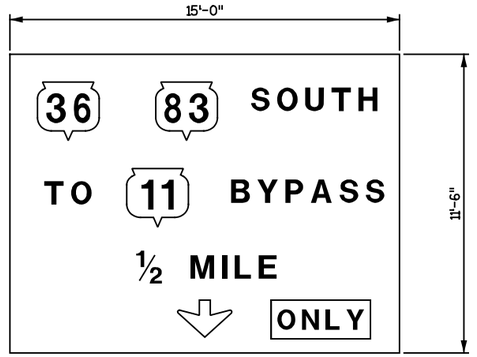
SHEET 70 OF 100
124

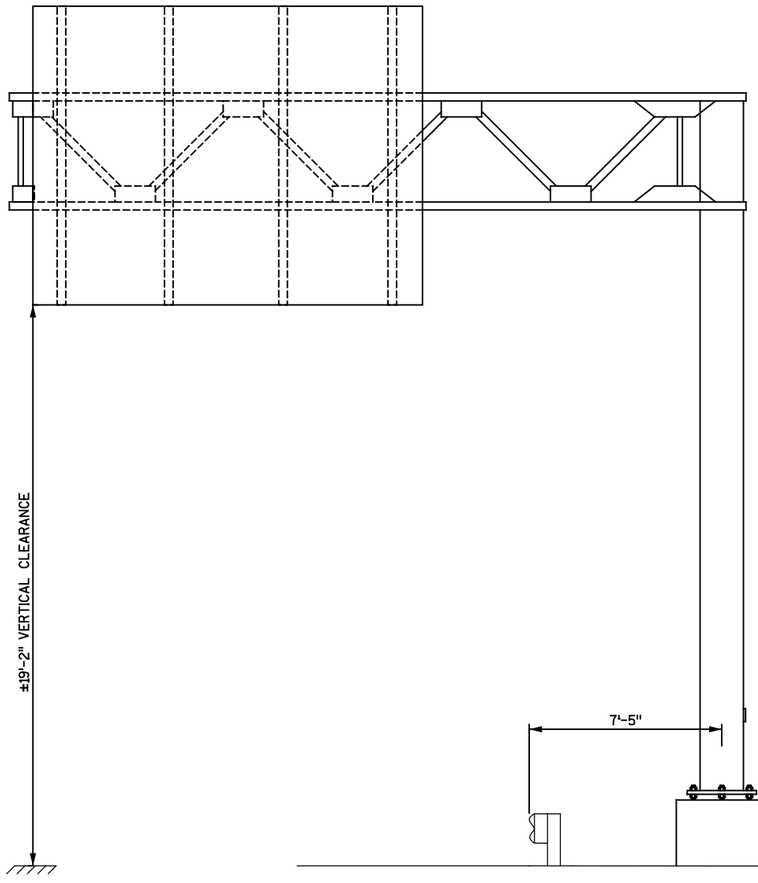
8

FILE NAME :S-45-0606.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HiSpit
PEN :CELTextSub.tbl

STATE PROJECT NUMBER

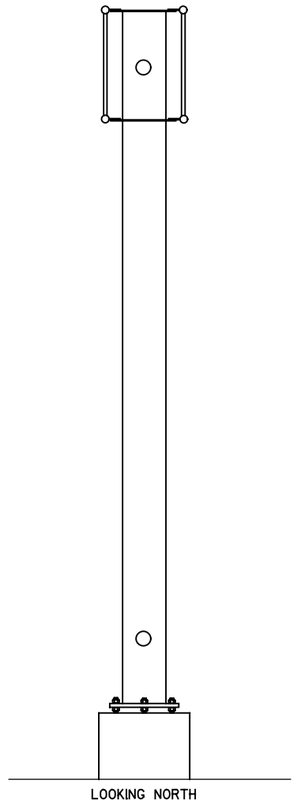
1000-20-69



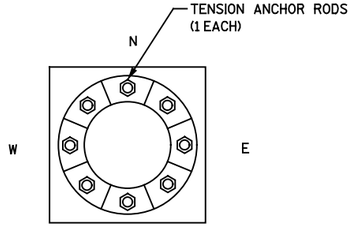


ELEVATION

LOOKING EAST



LOOKING NORTH



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-51-16

SHEET 71 OF 100

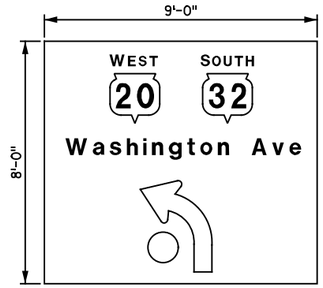
125

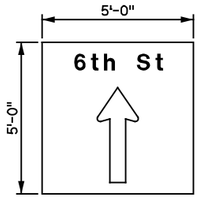
8

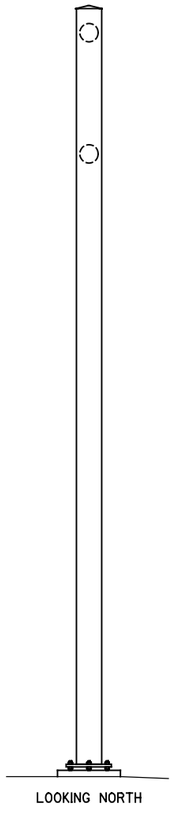
8

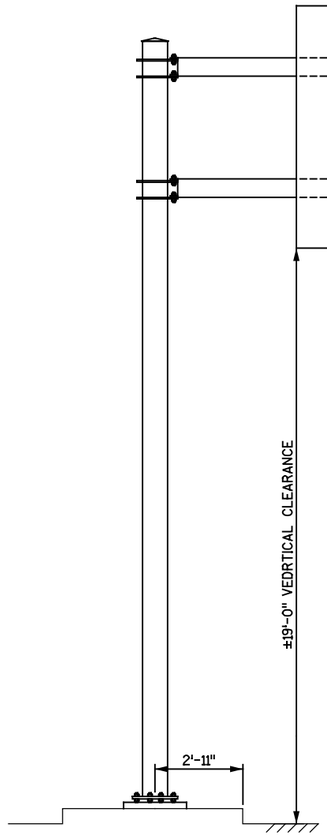
FILE NAME :S-51-0016.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez-vt
DRV :Pdf_bw_HSplt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER
1000-20-69

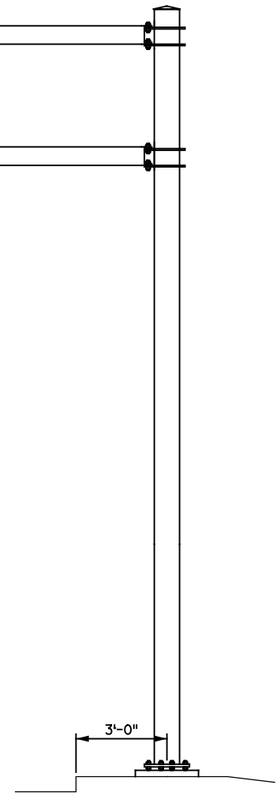


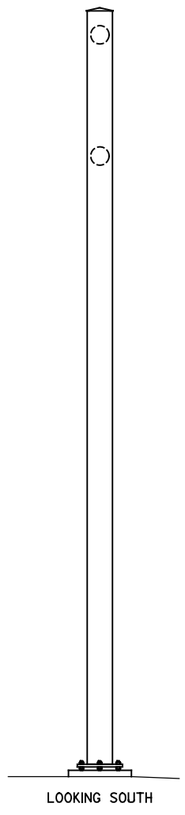


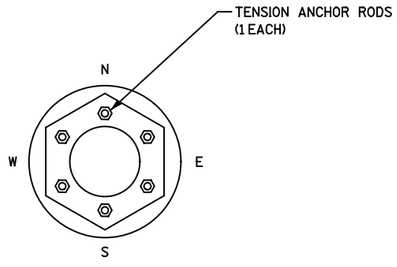




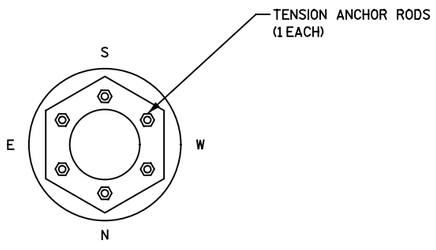
ELEVATION
LOOKING WEST







SOUTH FOUNDATION DETAIL



NORTH FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	2 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-51-233

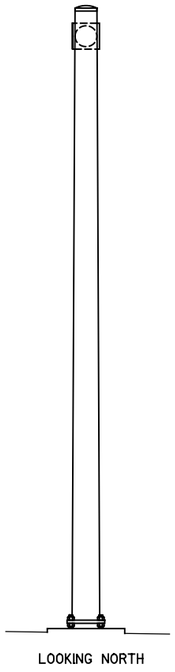
SHEET 72 OF 100
126

8

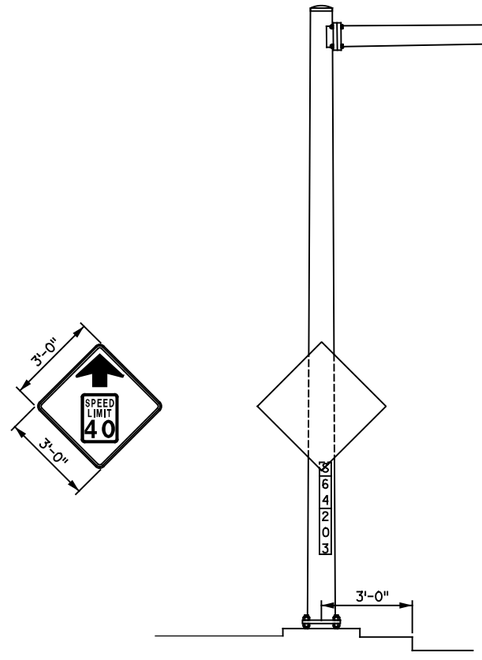
8

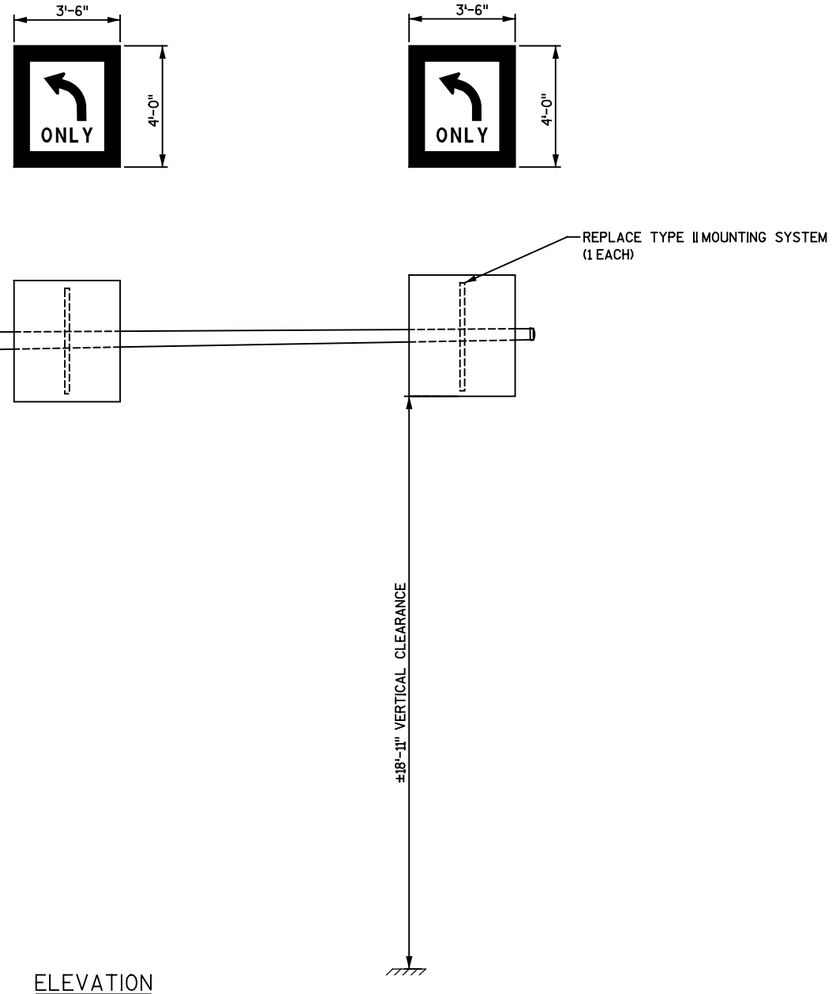
FILE NAME :S-51-0233.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69



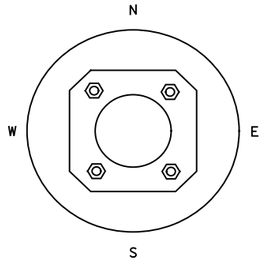
LOOKING NORTH





ELEVATION

LOOKING WEST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.36	REPALCE TYPE II MOUNTING SYSTEM	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-64-203

SHEET 73 OF 100

127

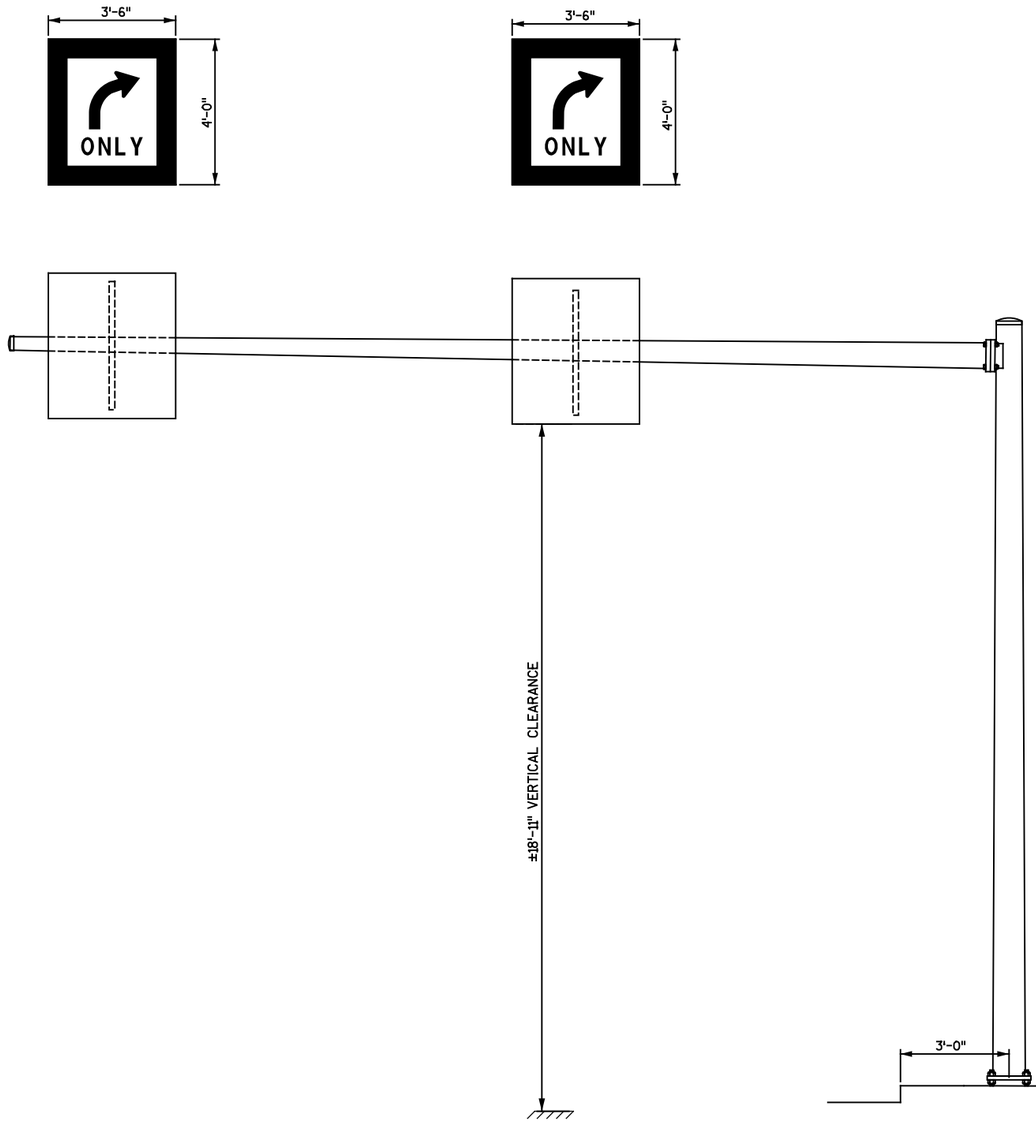
8

8

FILE NAME :S-64-0203.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.pit
PEN :CEL_TextSub.tbl

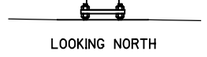
STATE PROJECT NUMBER

1000-20-69

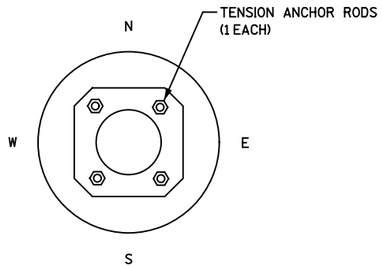


ELEVATION

LOOKING EAST



LOOKING NORTH



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-64-204

SHEET 74 OF 100

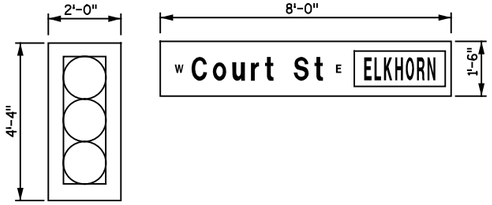
128

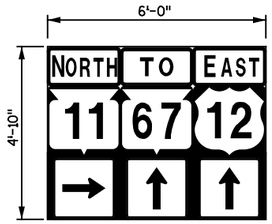
8

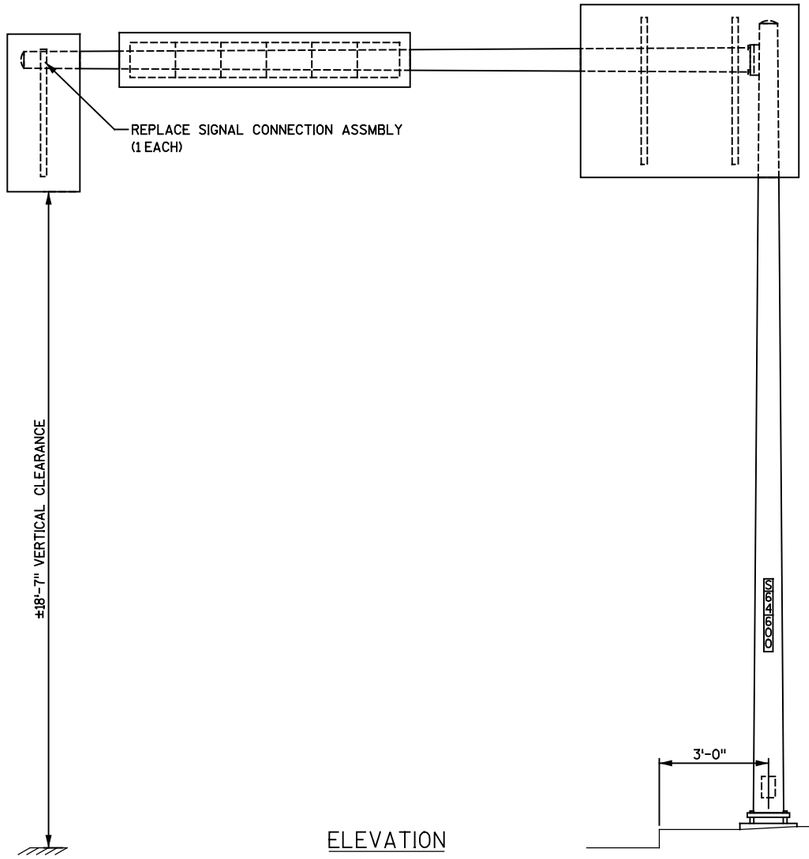
8

FILE NAME :S-64-0204.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CEL.TextSub.tbl

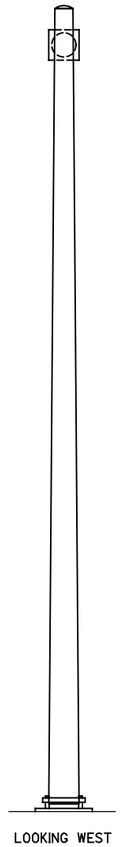
STATE PROJECT NUMBER
1000-20-69



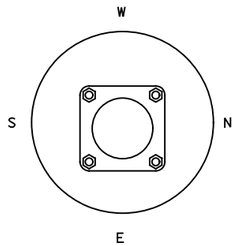




ELEVATION
LOOKING NORTH



LOOKING WEST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.32	REPLACE SIGNAL CONNECTION ASSEMBLY	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-64-600

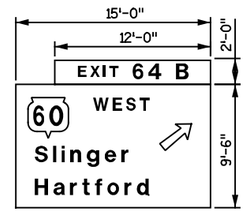
SHEET 75 OF 100
129

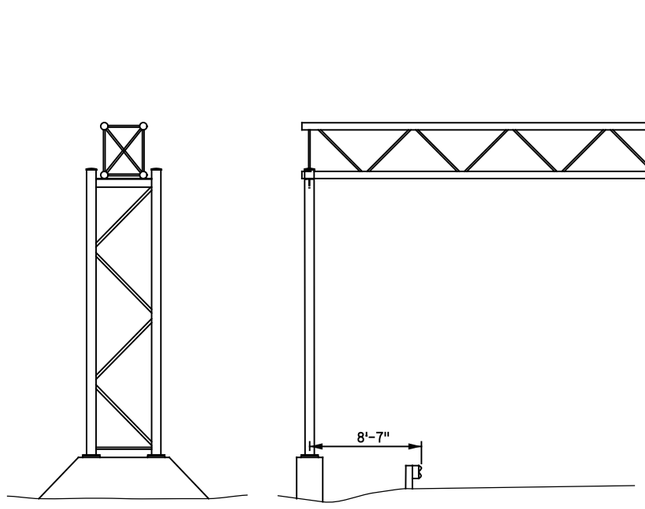
8

8

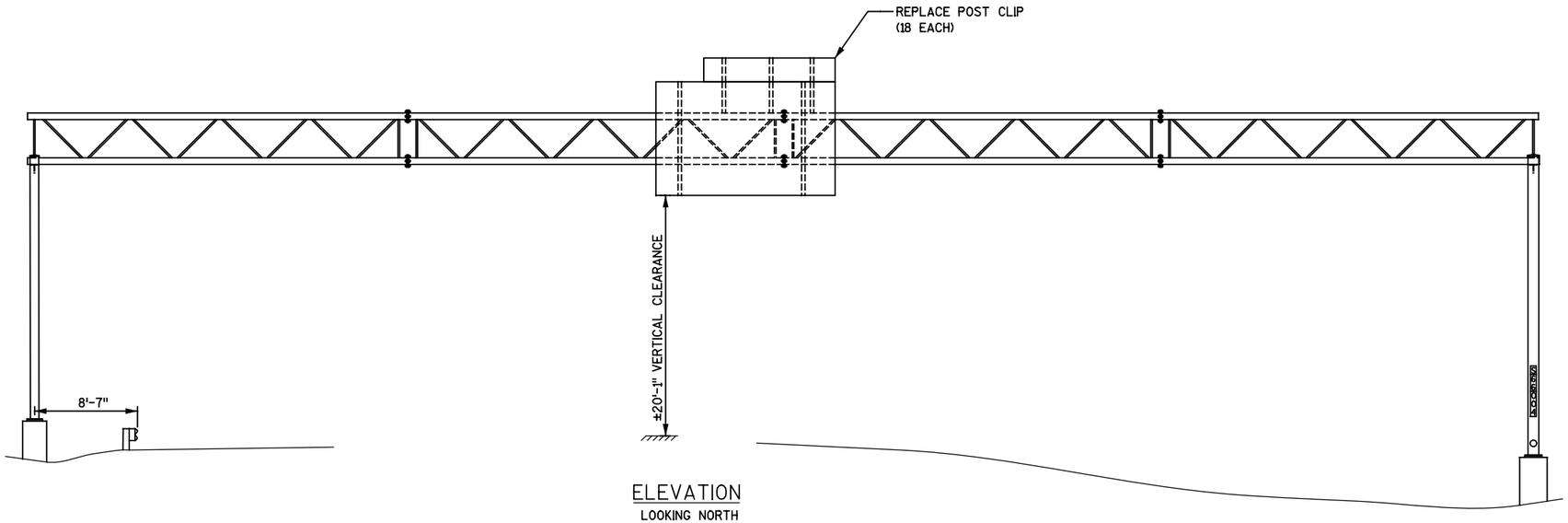
FILE NAME :S-64-0600.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavezvt6
DRV :Pdf_bw_HS.pit
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69

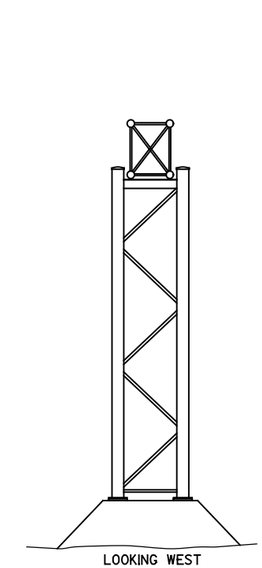




LOOKING EAST

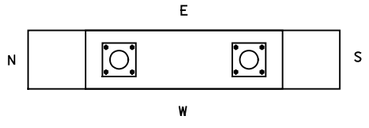


ELEVATION
LOOKING NORTH

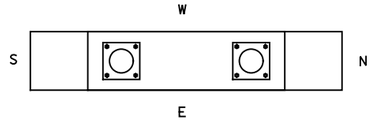


LOOKING WEST

8



WEST FOUNDATION DETAIL



EAST FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.13	REPLACE POST CLIP	18 EACH	SHEET 6

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

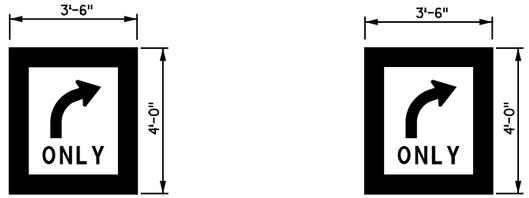
S-66-4

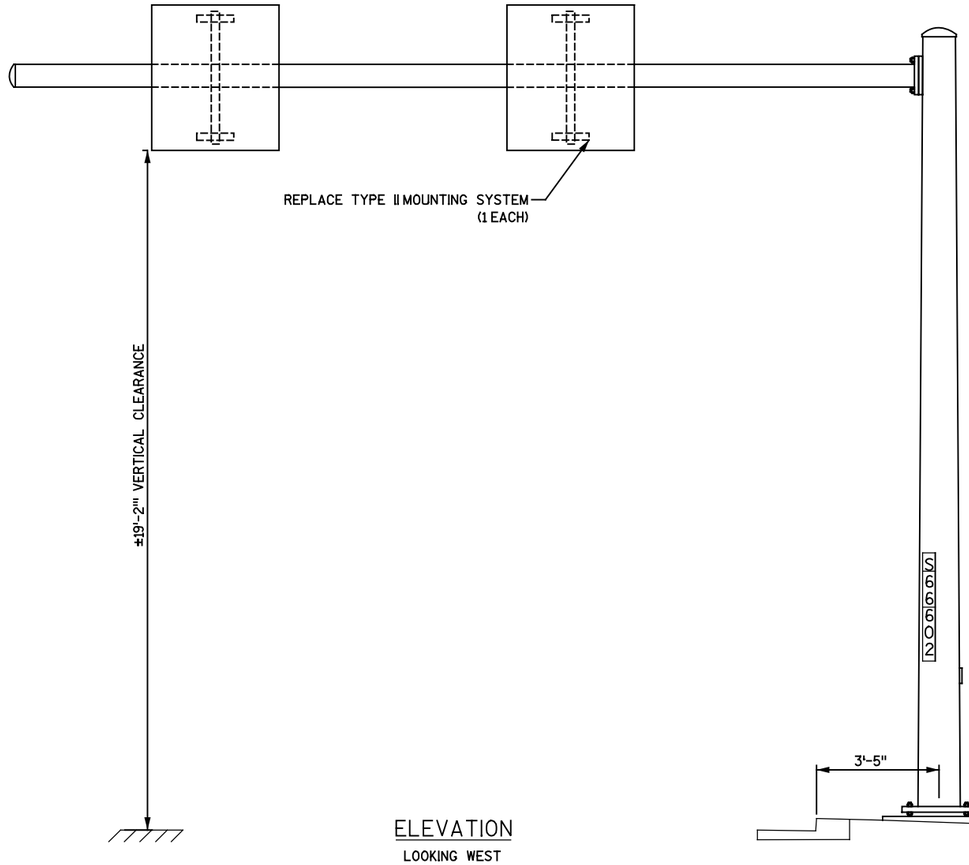
SHEET 76 OF 100
130

8

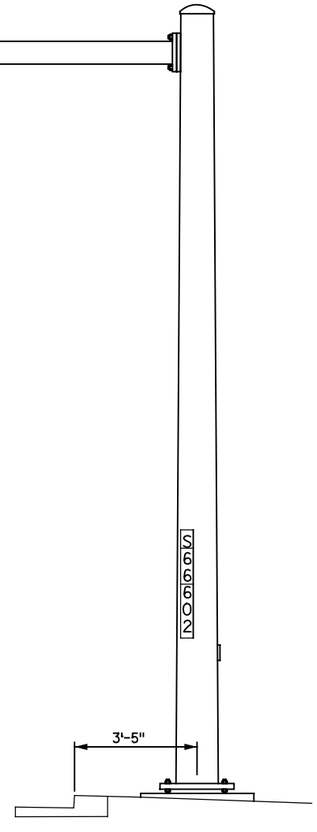
FILE NAME :S-66-0004.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HSplt
PEN :CELTextSub.tbl

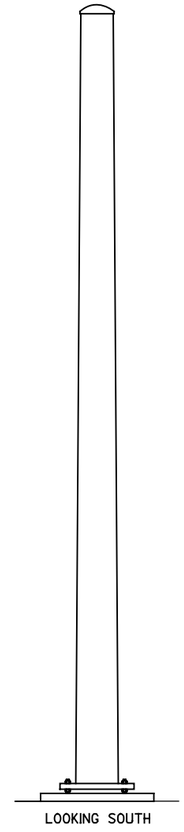
STATE PROJECT NUMBER
1000-20-69



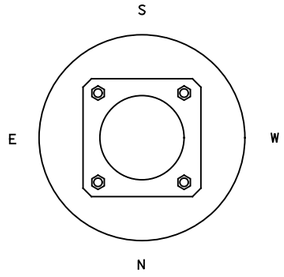


ELEVATION
LOOKING WEST





LOOKING SOUTH



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.36	REPLACE TYPE II MOUNTING SYSTEM	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-66-602

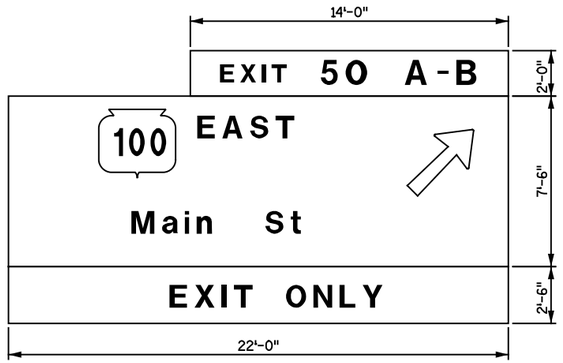
SHEET 77 OF 100
131

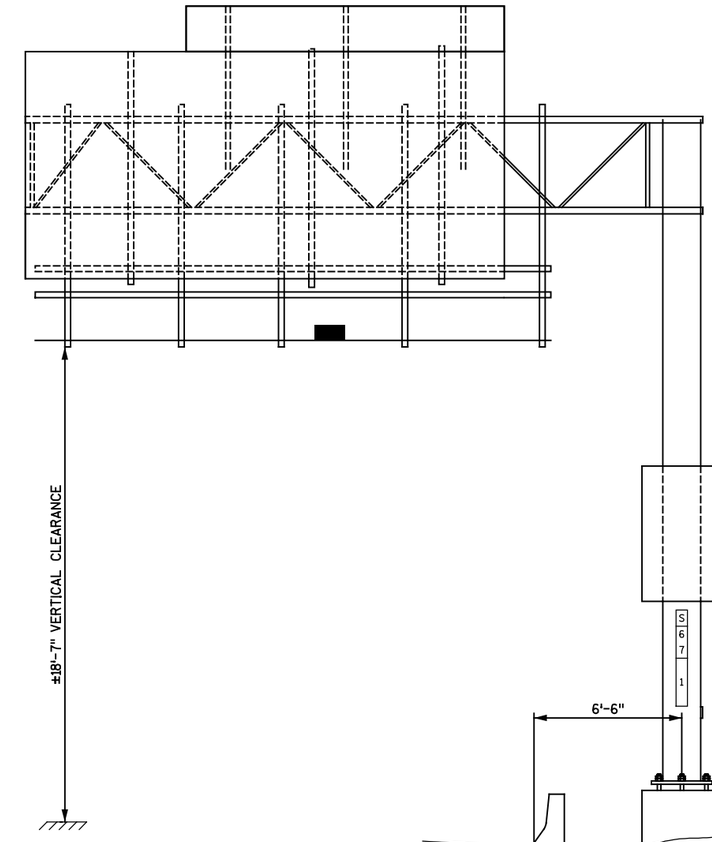
8

8

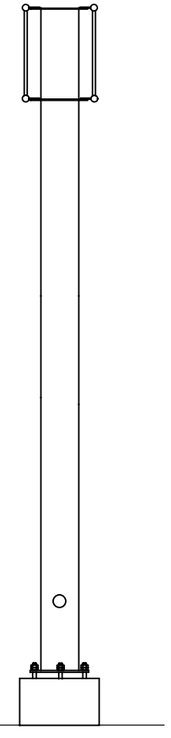
FILE NAME :S-66-0602.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69

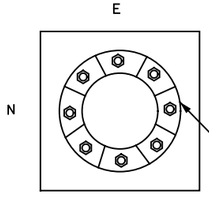




ELEVATION
LOOKING SOUTH



LOOKING EAST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.03	REPLACE RODENT SCREEN	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-1

SHEET 78 OF 100
132

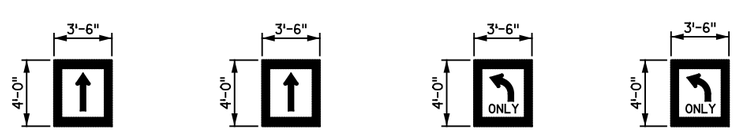
8

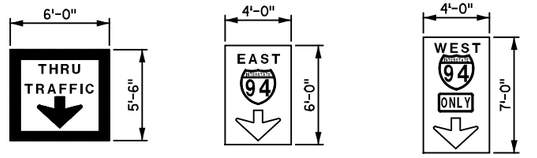
8

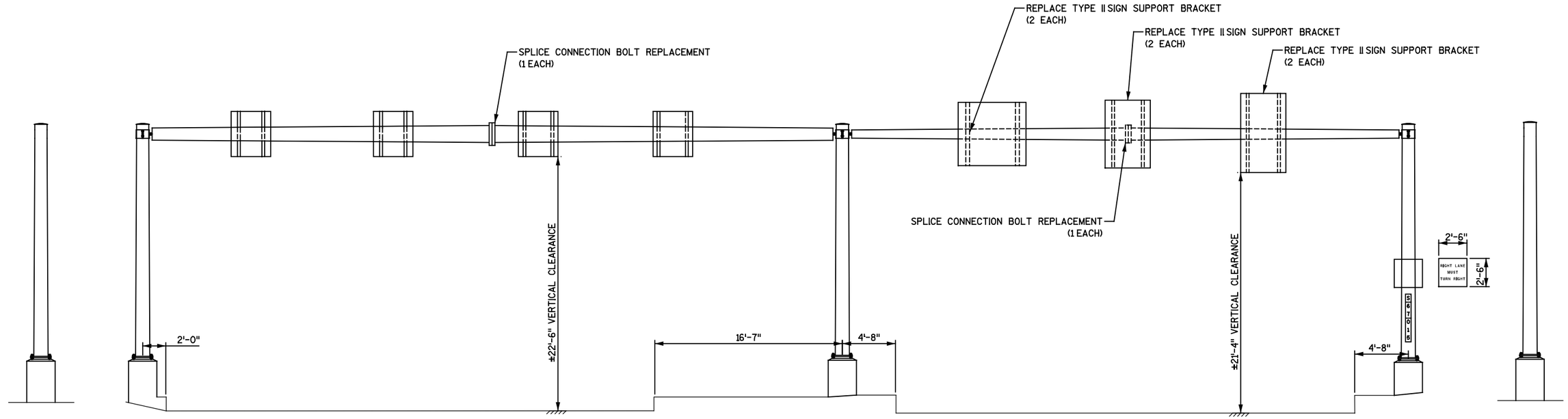
FILE NAME :S-67-0001.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HSplt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER

1000-20-69

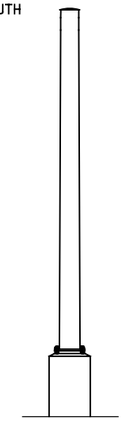




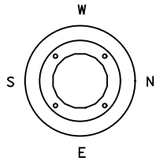


ELEVATION

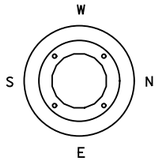
LOOKING SOUTH



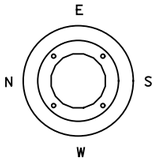
LOOKING WEST



EAST FOUNDATION DETAIL



MIDDLE FOUNDATION DETAIL



WEST FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.06	SPLICE CONNECTION BOLT REPLACEMENT	2 EACH	SHEET 4
SPV.0060.15	REPLACE TYPE II SIGN SUPPORT BRACKET	6 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-15

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133

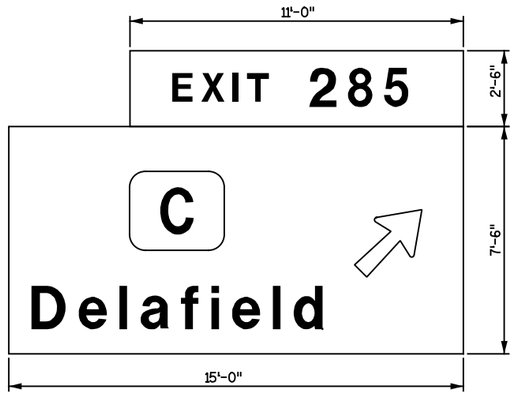
8

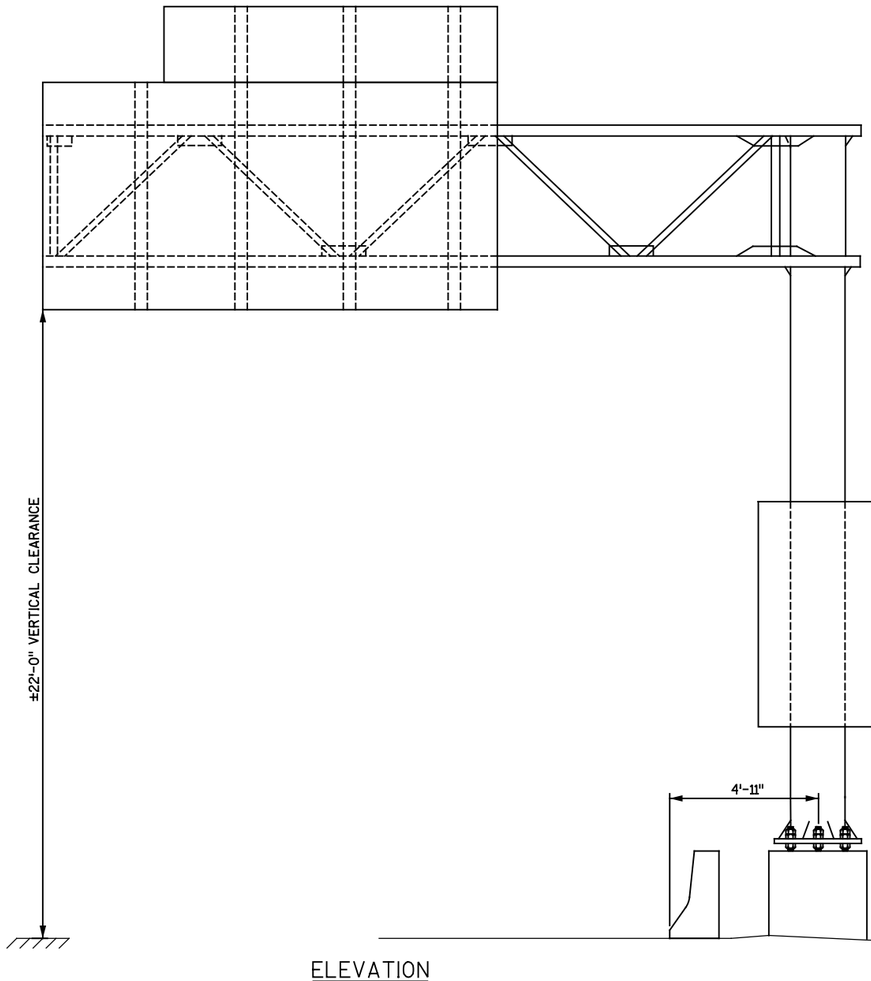
8

FILE NAME :S-67-0015.dgn
PLOT DATE :1/24/2017
PLOT BY : VeronicaChavez01
DRV :Pdf_bw_HiSplit
PEN :CELTextSub.tbl

STATE PROJECT NUMBER

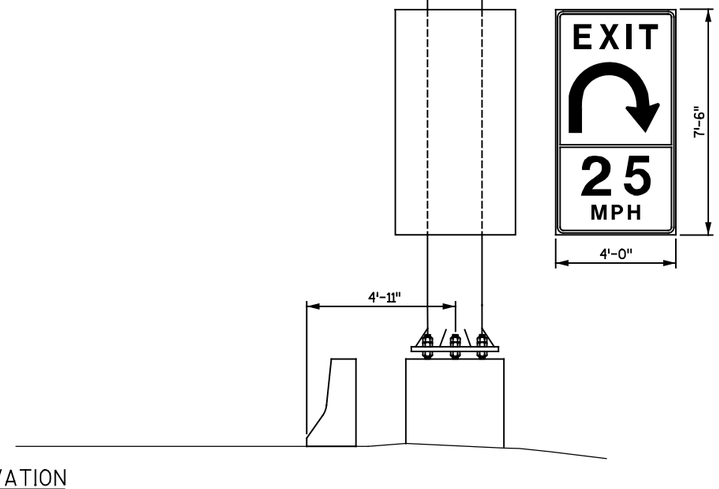
1000-20-69

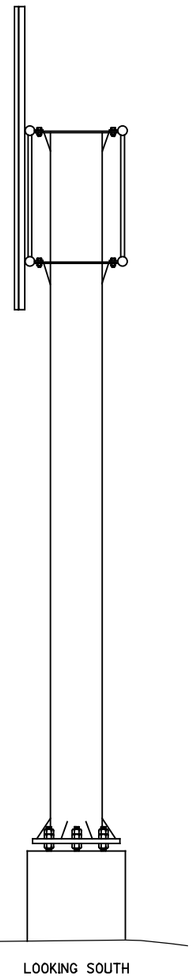




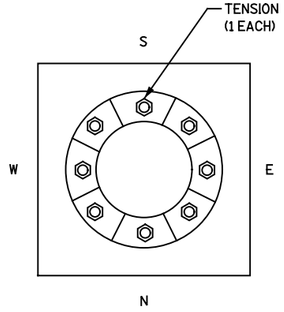
ELEVATION

LOOKING WEST





LOOKING SOUTH



FAOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

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SHEET 80 OF 100
134

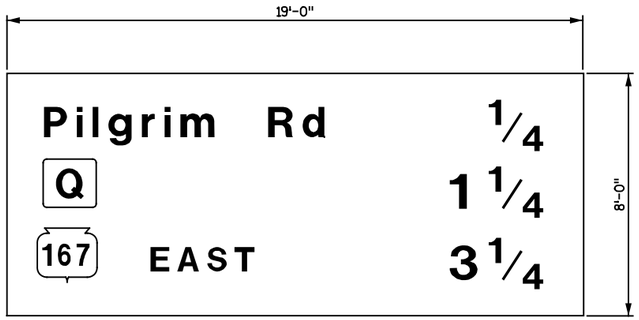
8

8

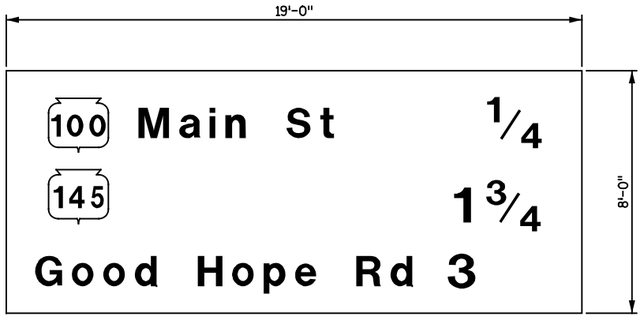
FILE NAME :S-67-0020.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HSplt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER

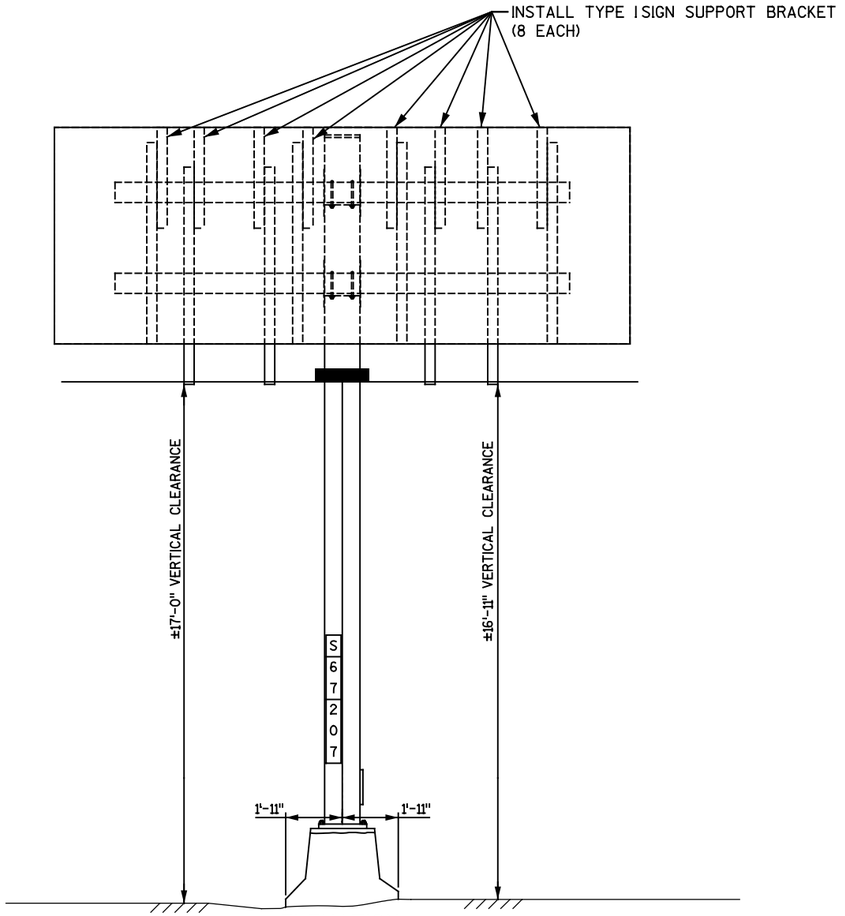
1000-20-69



LOOKING NORTH

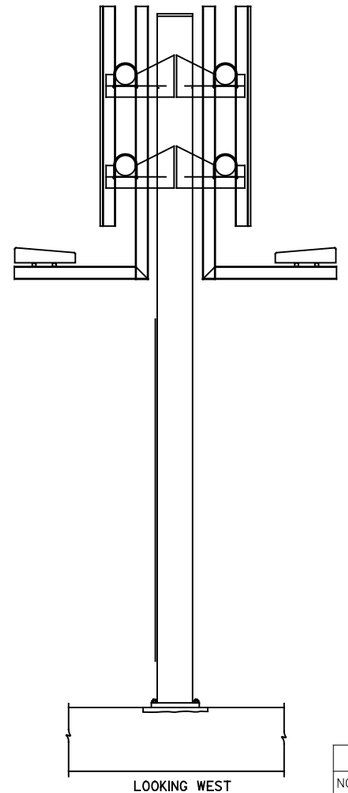


LOOKING SOUTH

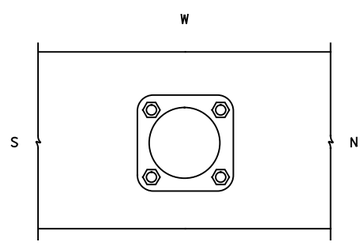


ELEVATION

LOOKING SOUTH



LOOKING WEST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.10	INSTALL TYPE I SIGN SUPPORT BRACKET	8 EACH	SHEET 6

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

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SHEET 81 OF 100

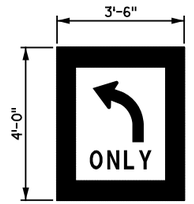
135

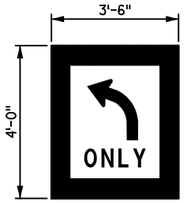
8

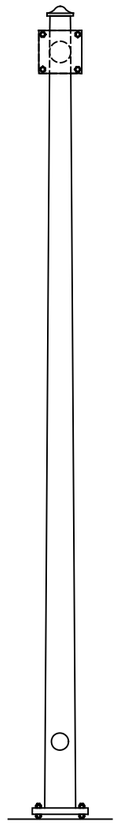
8

FILE NAME :S-67-0207.dgn
PLOT DATE :1/24/2007 PLOT BY : Veronica Chavez-vill DRV :Pdf_bw_HS.plt PEN :CELTextSub.tbl

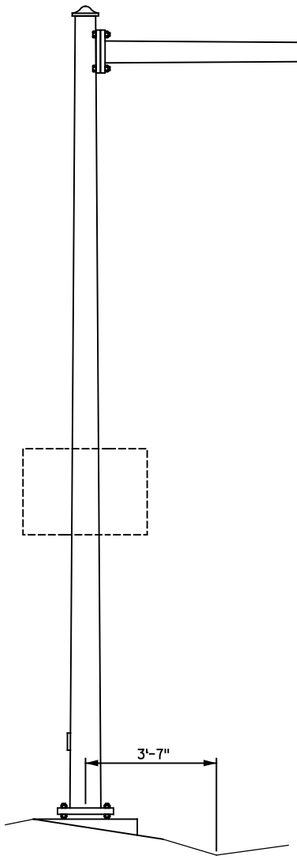
STATE PROJECT NUMBER
1000-20-69



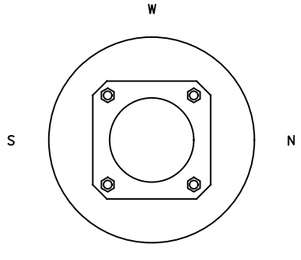




LOOKING WEST



ELEVATION
LOOKING SOUTH



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.15	REPLACE TYPE II SIGN SUPPORT BRACKET	1 EACH	SHEET 7
SPV.0060.36	REPLACE TYPE II MOUNTING SYSTEM	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-256

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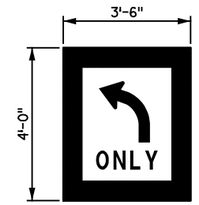
136

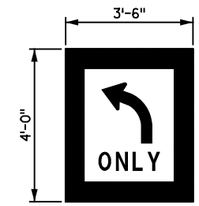
8

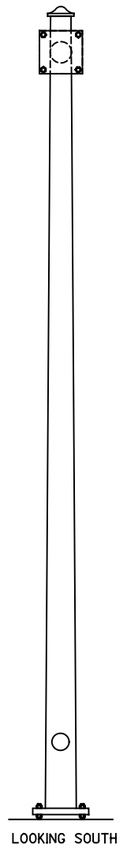
8

FILE NAME :S-67-0256.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CEL.TextSub.tbl

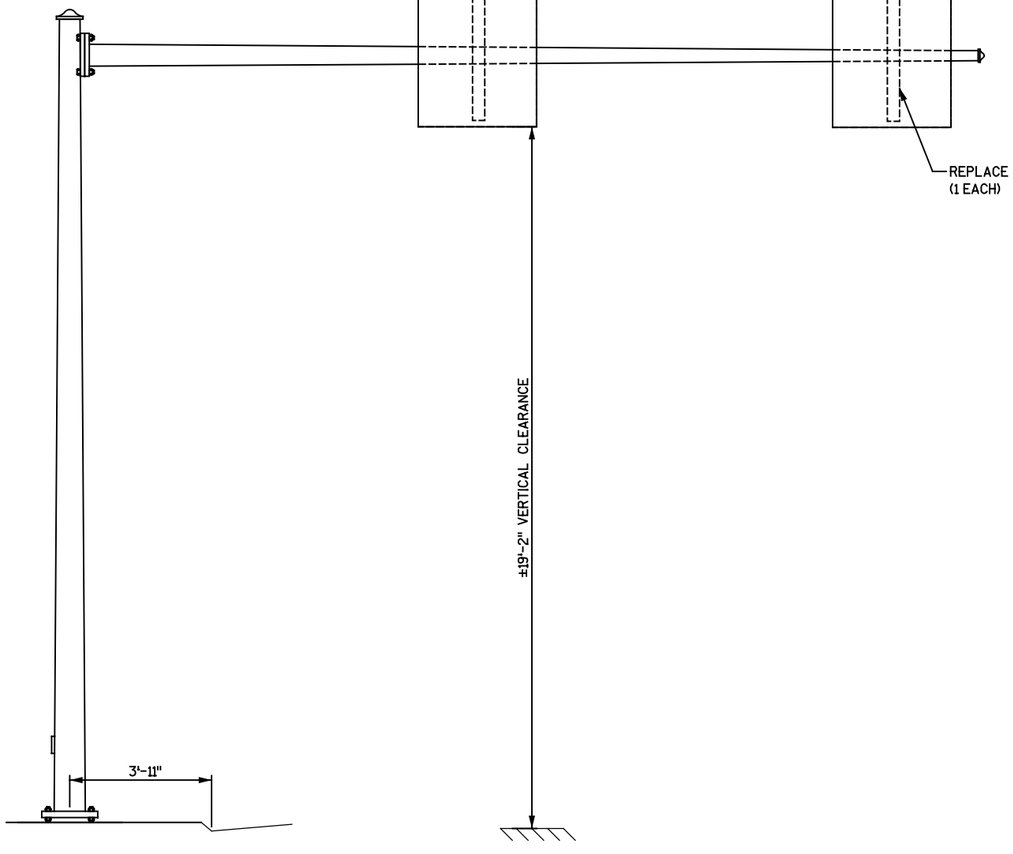
STATE PROJECT NUMBER
1000-20-69





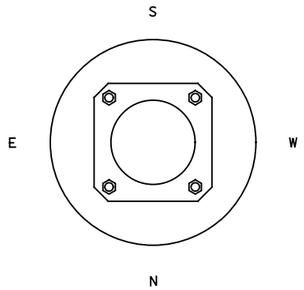


LOOKING SOUTH



ELEVATION

LOOKING EAST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.15	REPLACE TYPE II SIGN SUPPORT BRACKET	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

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SHEET 83 OF 100

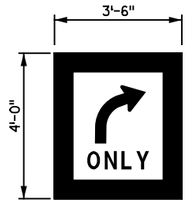
137

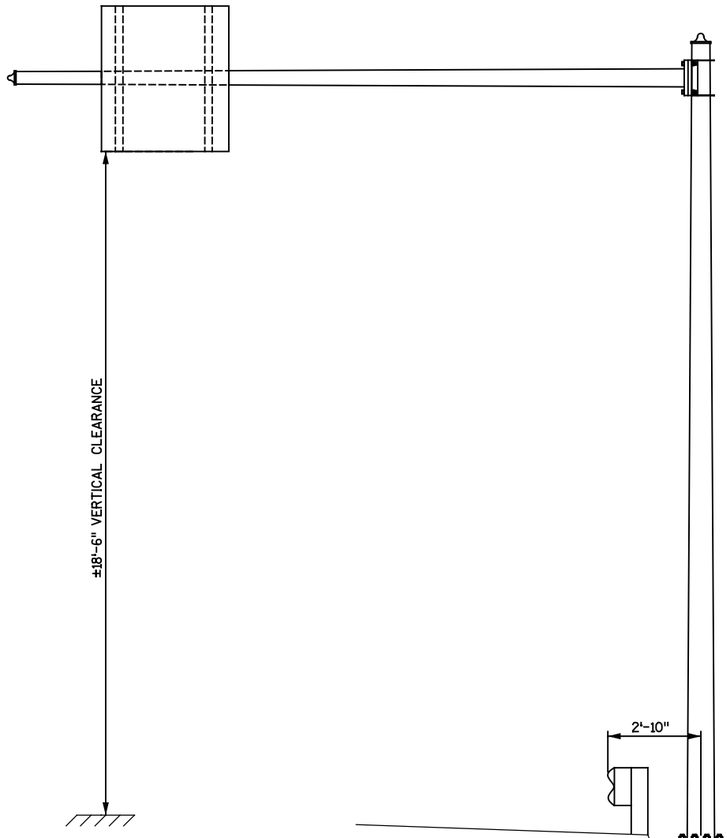
8

8

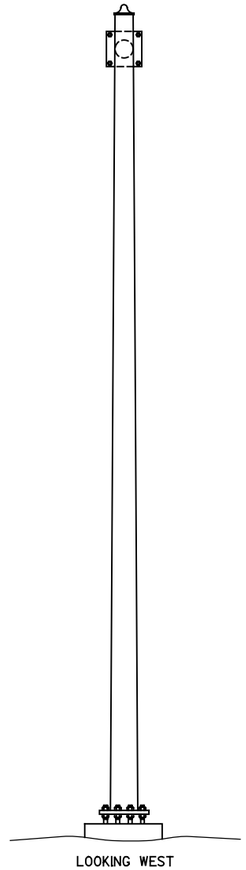
FILE NAME :S-67-0257.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HSplt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER
1000-20-69

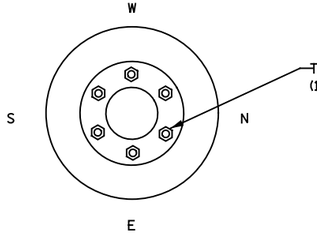




ELEVATION
LOOKING NORTH



LOOKING WEST



FOUNDATION DETAILS

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-269

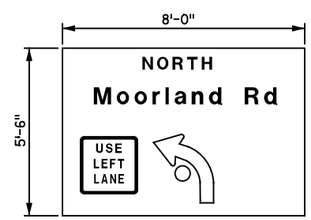
SHEET 84 OF 100
138

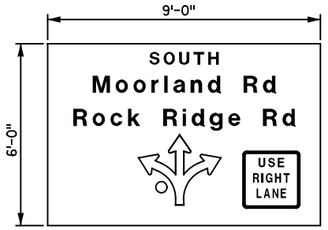
8

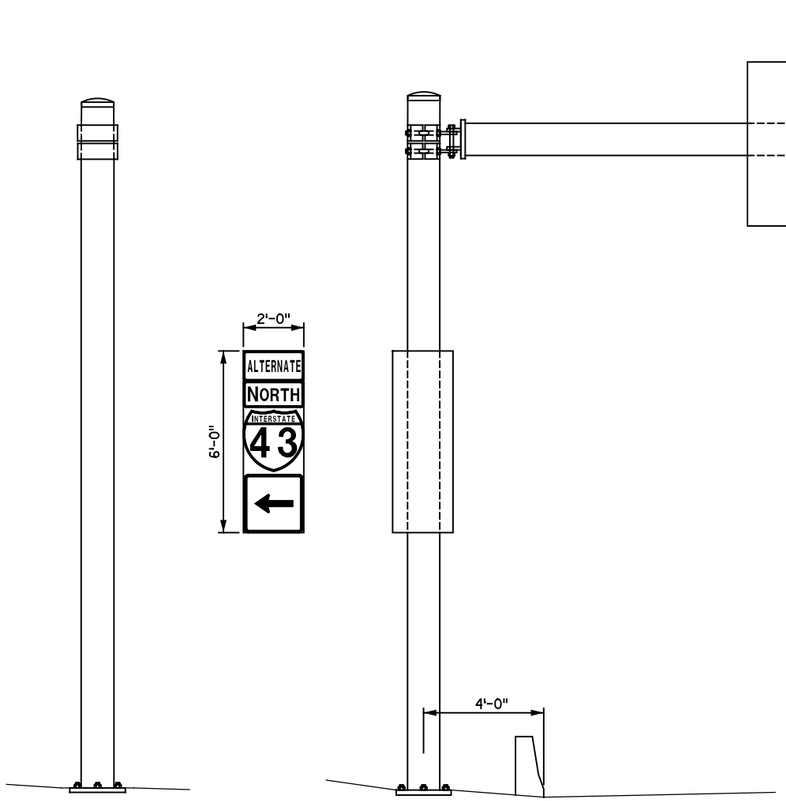
8

FILE NAME 1S-67-0269.dgn
PLOT DATE 1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HSplt
PEN :CEL_TextSub.tbl

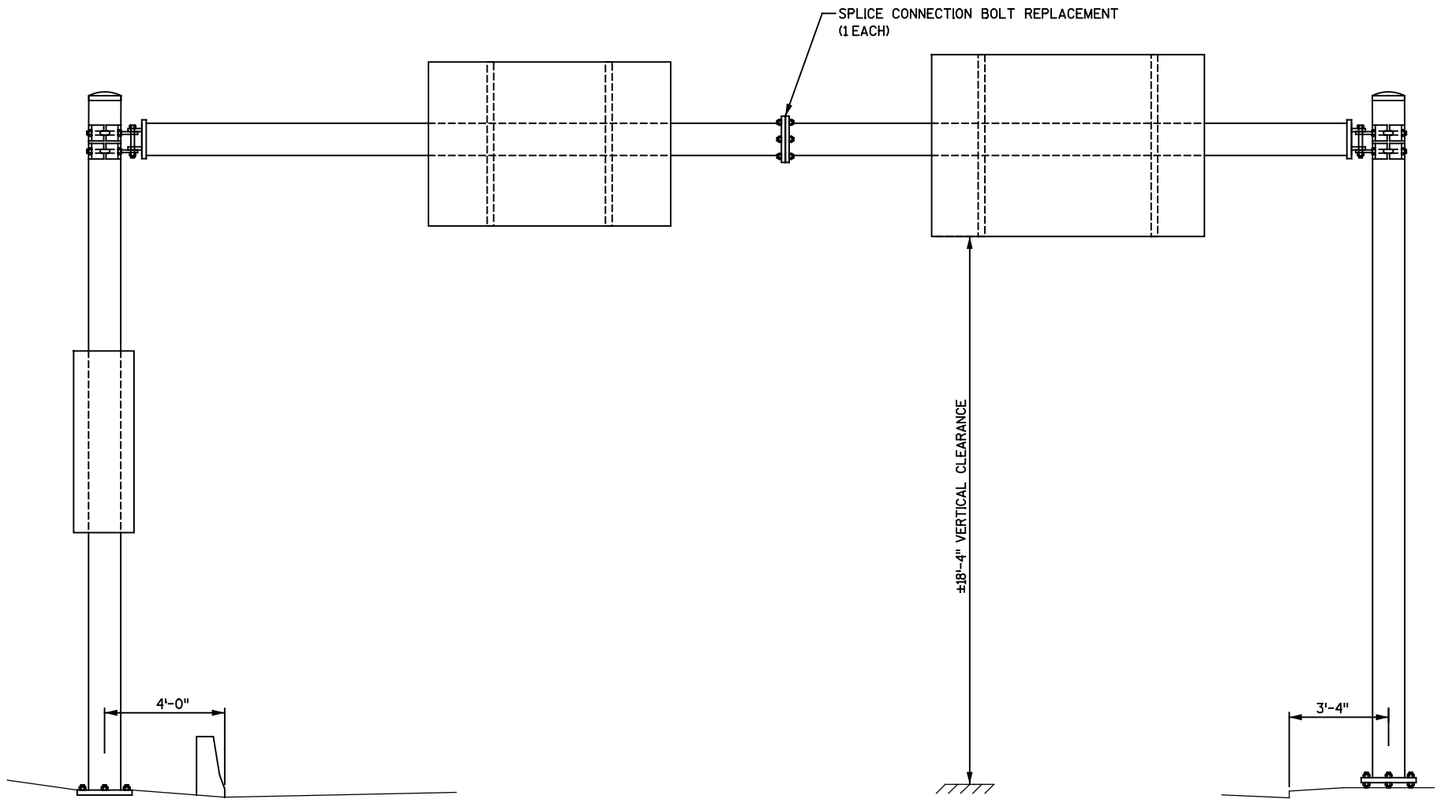
STATE PROJECT NUMBER
1000-20-69



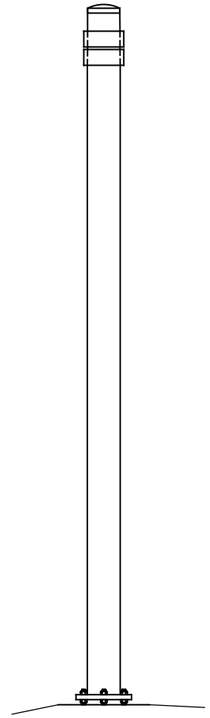




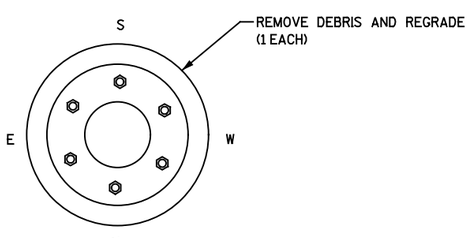
LOOKING SOUTH



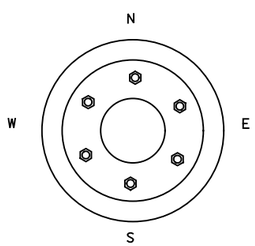
ELEVATION
LOOKING EAST



LOOKING NORTH



NORTH FOUNDATION DETAILS



SOUTH FOUNDATION DETAILS

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.06	SPLICE CONNECTION BOLT REPLACEMENT	1 EACH	SHEET 4
SPV.0060.34	REMOVE DEBRIS AND REGRADE	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-275

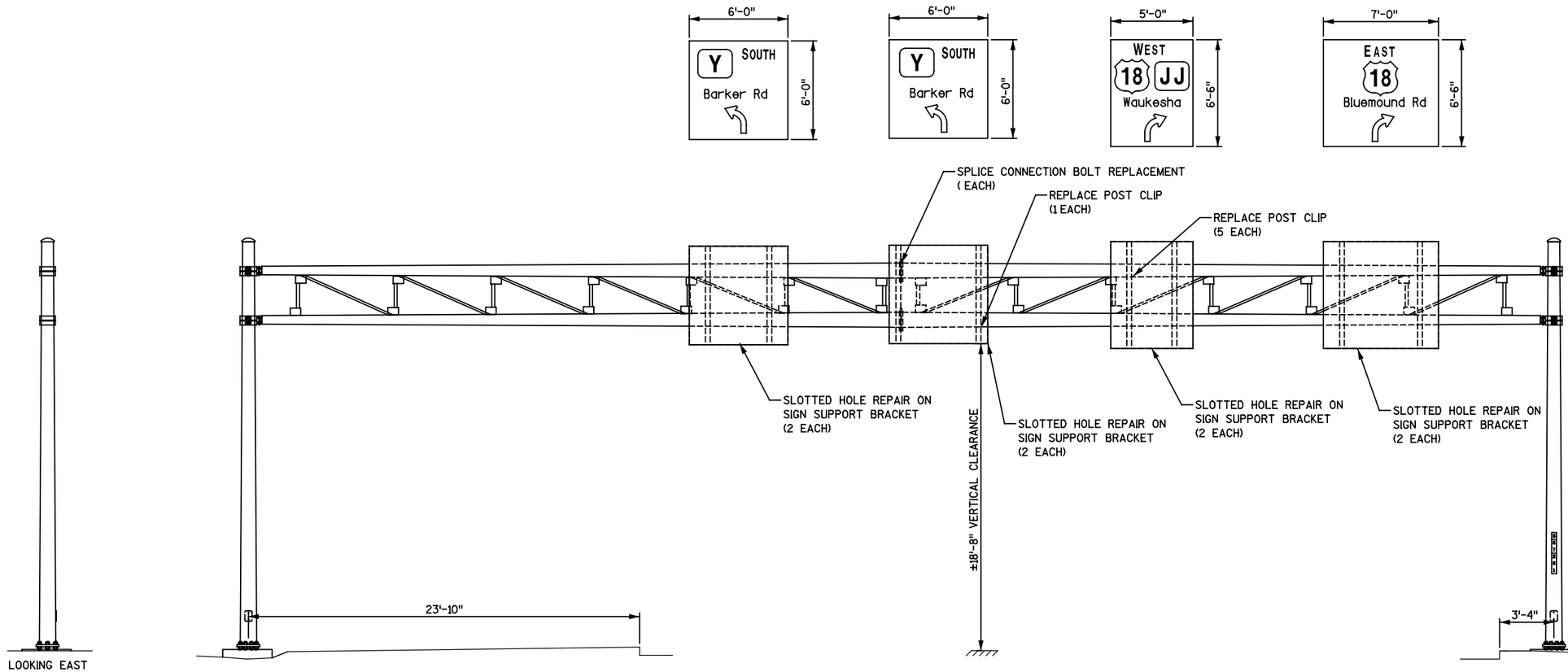
SHEET 85 OF 100
139

8

8

FILE NAME :S-67-0275.dgn
PLOT DATE :11/24/2017
PLOT BY : Veronica Chavez-Vil
DRV :Pdf_bw_HS.plt
PEN :CEL.TextSub.tbl

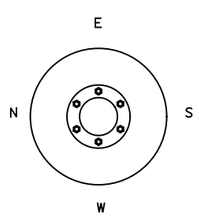
STATE PROJECT NUMBER
1000-20-69



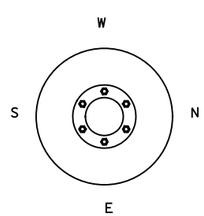
ELEVATION
LOOKING NORTH

8

8



WEST FOUNDATION DETAILS



EAST FOUNDATION DETAILS

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.06	SPLICE CONNECTION BOLT REPLACEMENT	2 EACH	SHEET 4
SPV.0060.13	REPLACE POST CLIP	6 EACH	SHEET 6
SPV.0060.16	SLOTTED HOLE REPAIR ON SIGN SUPPORT BRACKET	8 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

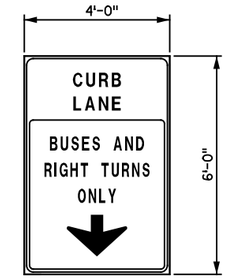
DRAWN BY MR | PLANS CK'D. VC

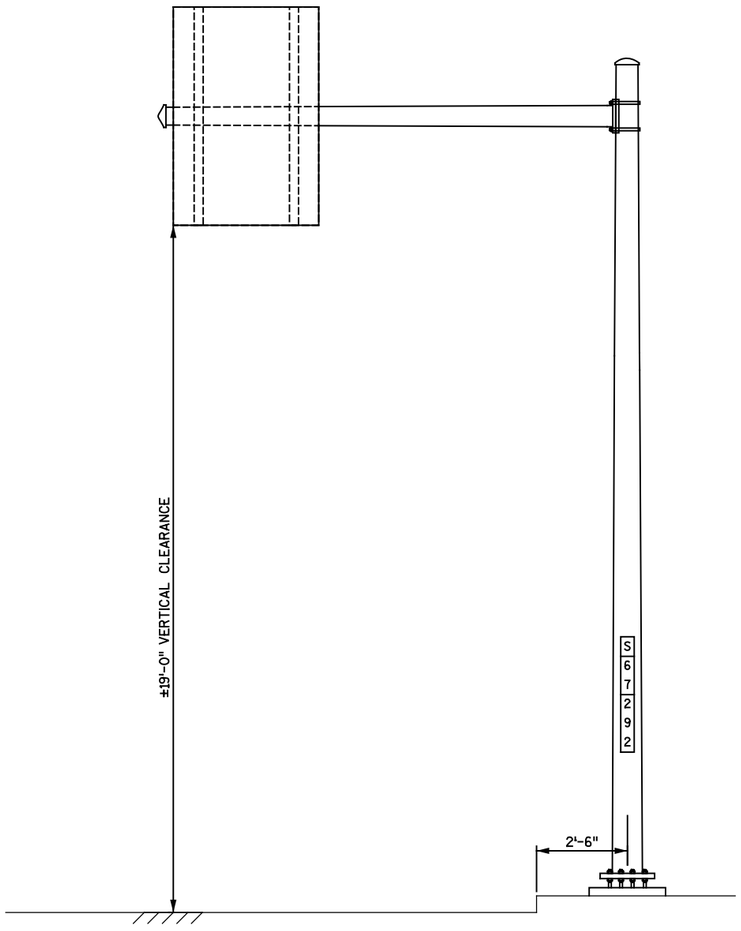
S-67-281

SHEET 86 OF 100
140

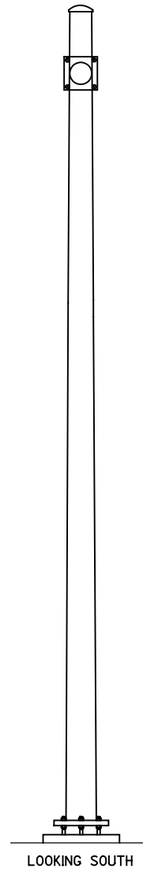
FILE NAME :S-67-0281.dgn
PLOT DATE :1/24/2017 PLOT BY : Veronica Chavez-vt6 DRV :Pdf_bw_HS.plt PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER
1000-20-69

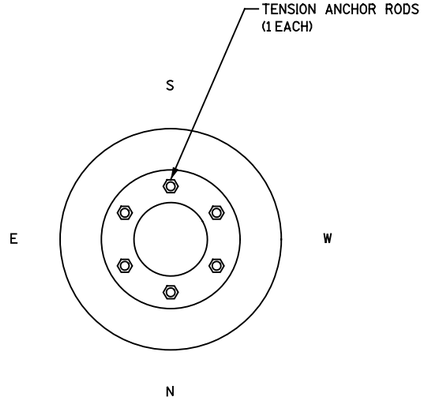




ELEVATION
LOOKING WEST



LOOKING SOUTH



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-292

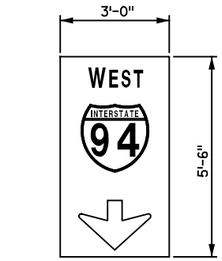
SHEET 87 OF 100
141

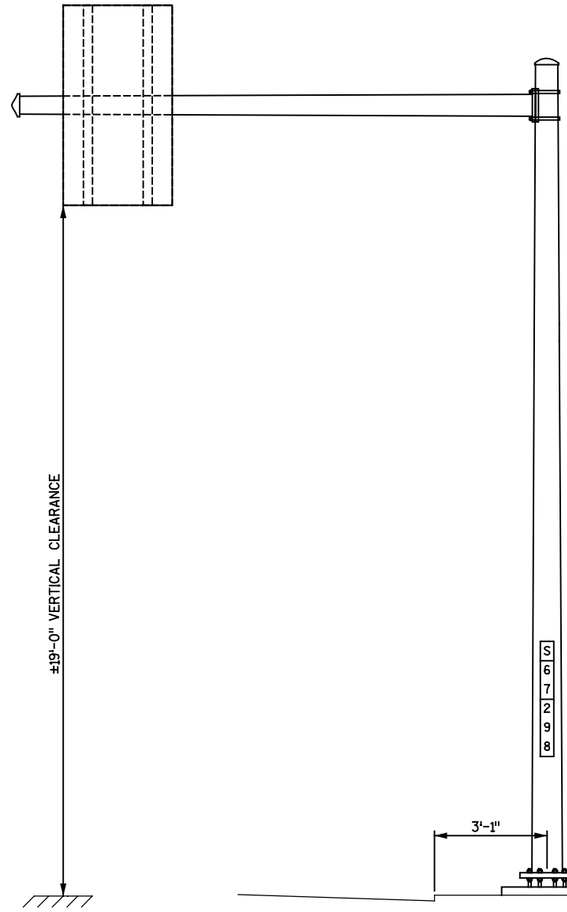
8

8

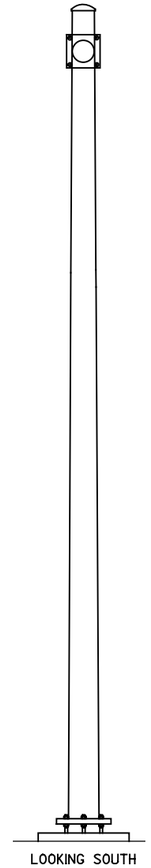
FILE NAME :S-67-0292.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69

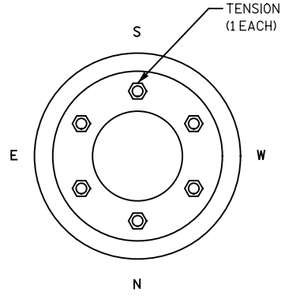




ELEVATION
LOOKING WEST



LOOKING SOUTH



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-298

SHEET 88 OF 100
142

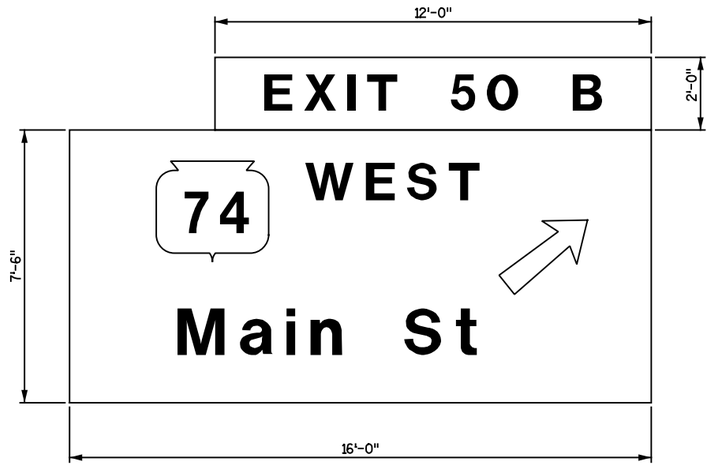
8

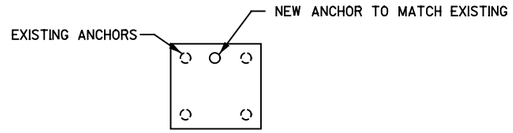
8

FILE NAME :S-67-0298.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez\tl
DRV :Pdf_bw_HS.pit
PEN :CELTextSub.tbl

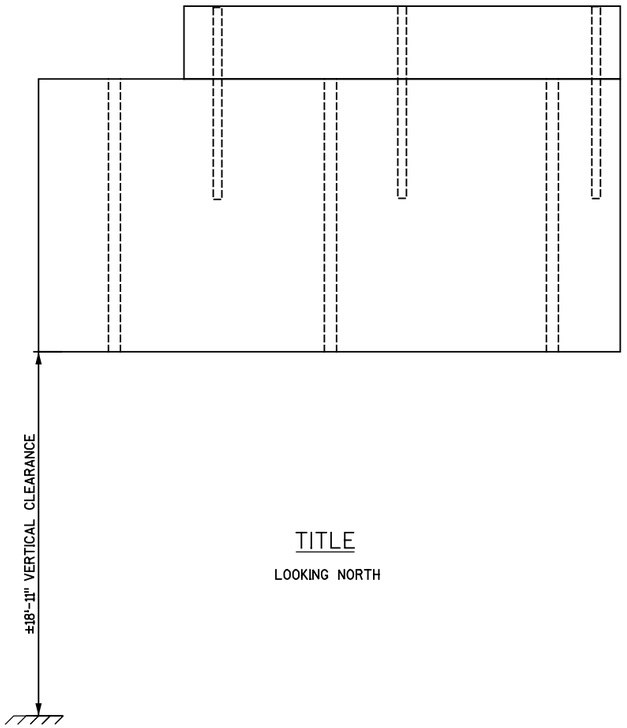
STATE PROJECT NUMBER

1000-20-69



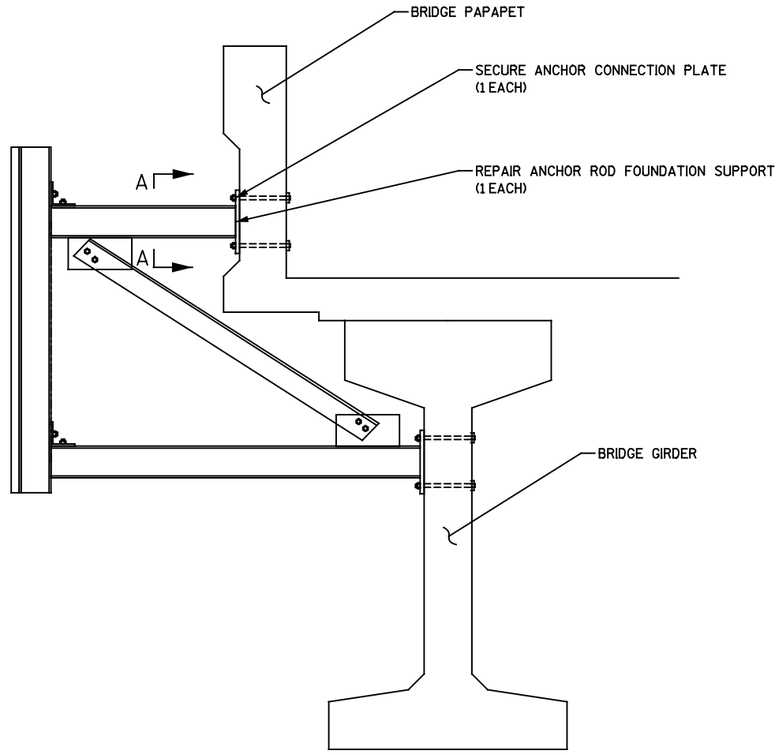


SECTION A-A



TITLE

LOOKING NORTH



LOOKING WEST

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.30	SECURE ANCHOR CONNECTION PLATE	1 EACH	SHEET 4
SPV.0060.35	REPAIR ANCHOR ROD FOUNDATION SUPPORT	1 EACH	SHEET 3

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-300

SHEET 89 OF 100

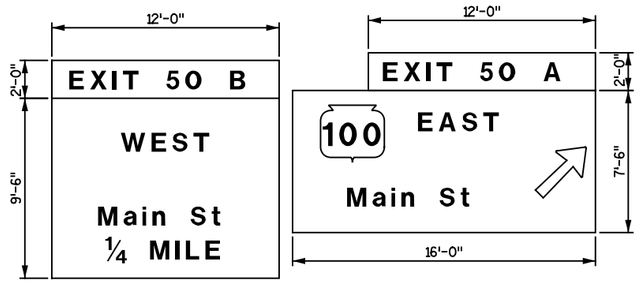
143

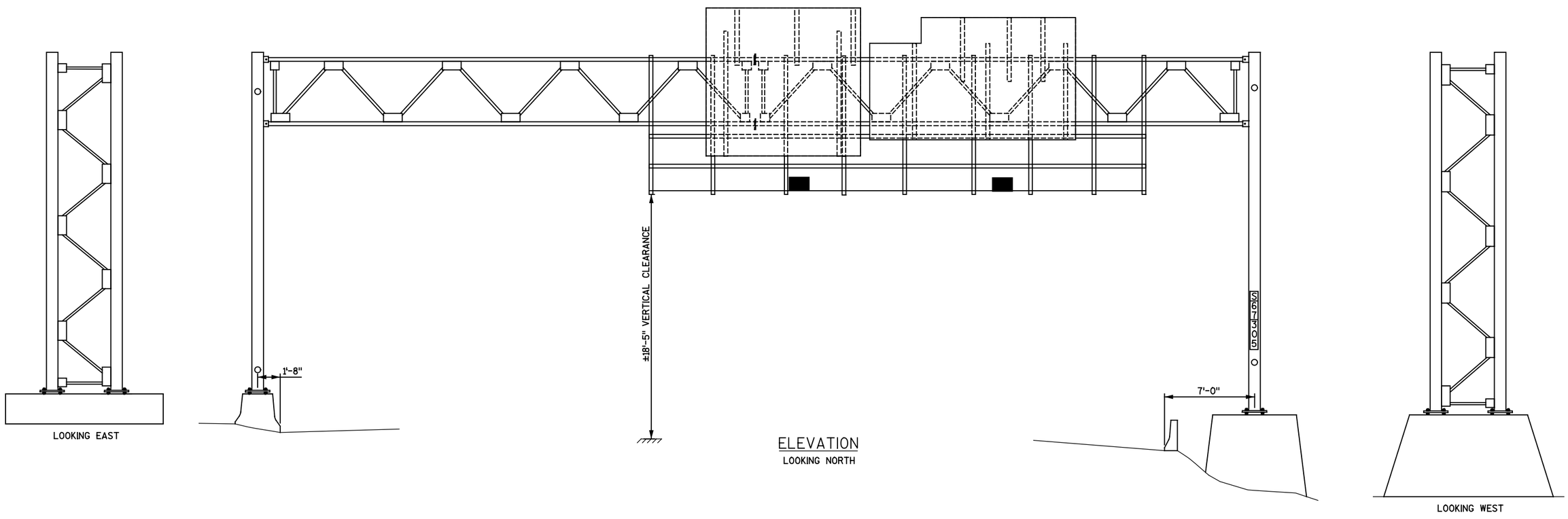
8

8

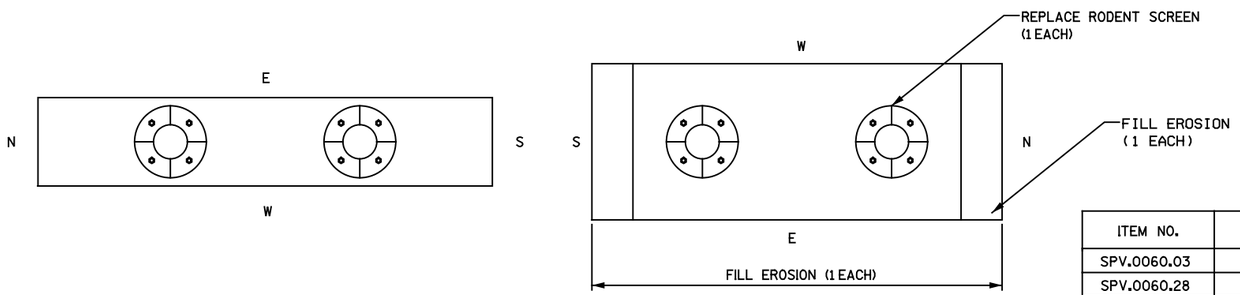
FILE NAME :S-67-0300.dgn
PLOT DATE :1/24/2017
PLOT BY : VeronLoa Chavez-tt
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69





ELEVATION
LOOKING NORTH



WEST FOUNDATION DETAIL

EAST FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.03	REPLACE RODENT SCREEN	1 EACH	SHEET 2
SPV.0060.28	FILL EROSION	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-305

SHEET 90 OF 100
144

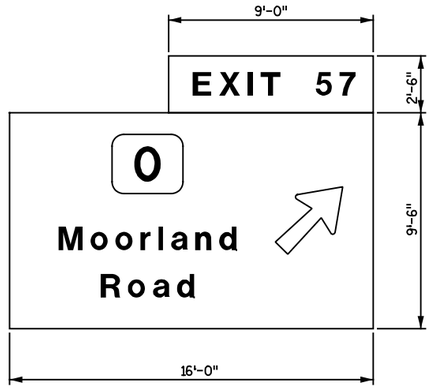
8

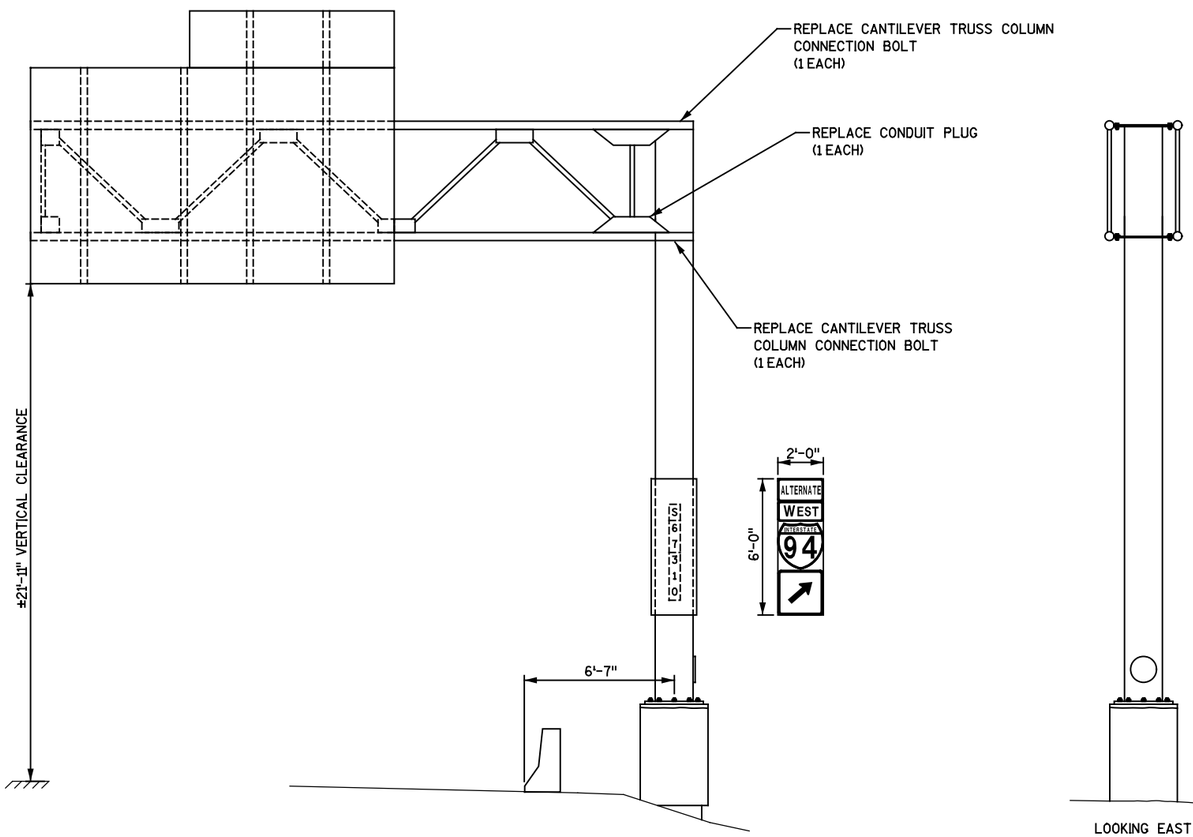
8

FILE NAME :S-67-0305.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CEL.TextSub.tbl

STATE PROJECT NUMBER

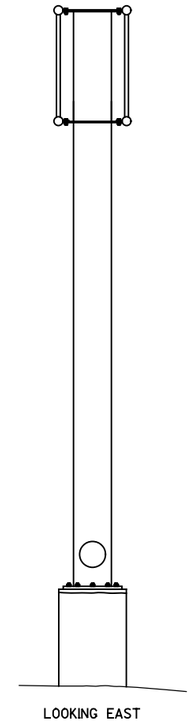
1000-20-69



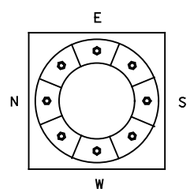


ELEVATION

LOOKING SOUTH



LOOKING EAST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.09	REPLACE CANTILEVER TRUSS COLUMN CONNECTION BOLT	2 EACH	SHEET 4
SPV.0060.20	REPLACE CONDUIT PLUG	1 EACH	N/A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-310

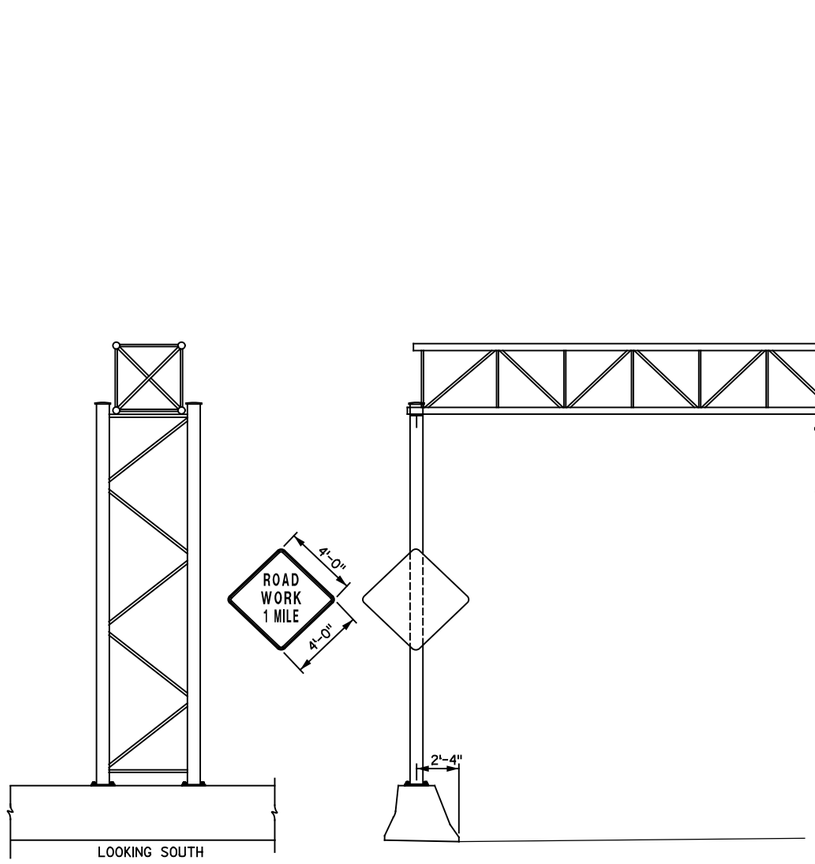
SHEET 91 OF 100
145

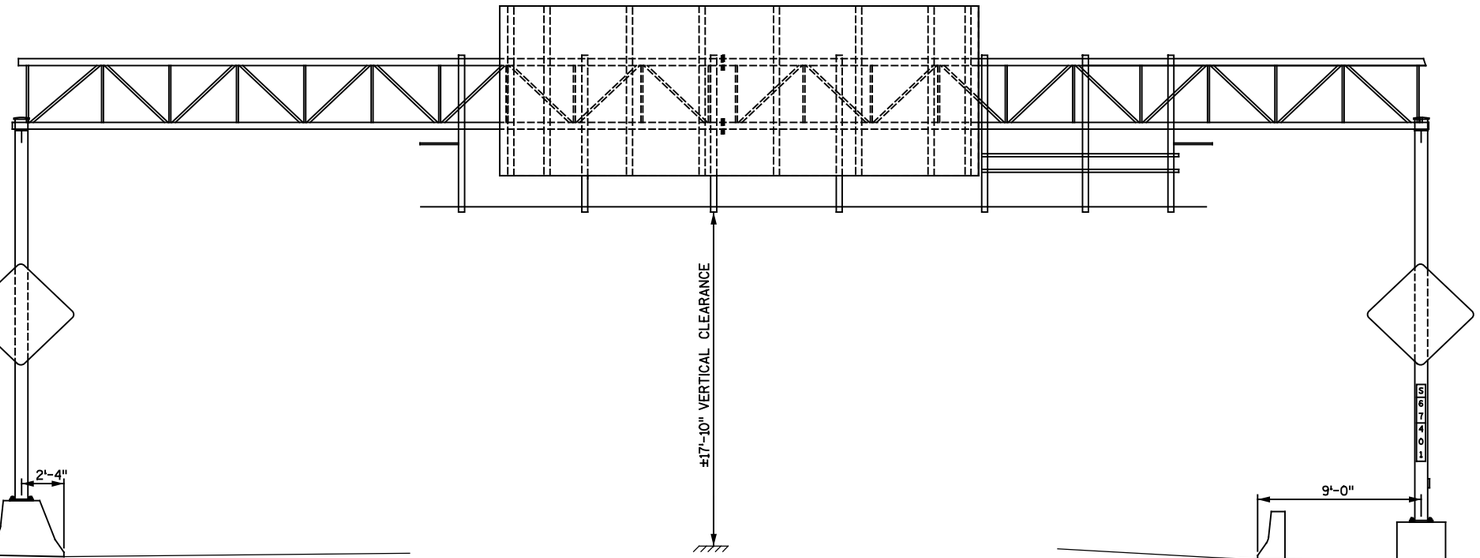
8

8

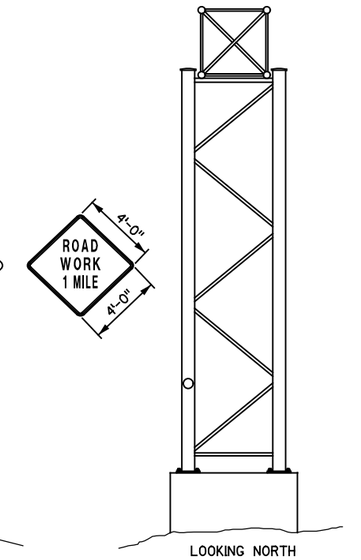
FILE NAME :S-67-0310.dgn
PLOT DATE :1/24/2017 PLOT BY : Veronica Chavez-tt ORV :Pdf_bw_HSplt PEN :CEL_TextSub.tbl

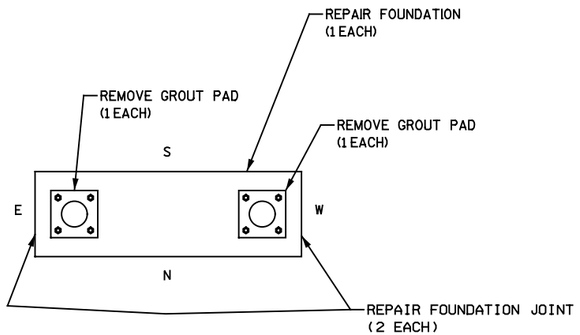
STATE PROJECT NUMBER
1000-20-69



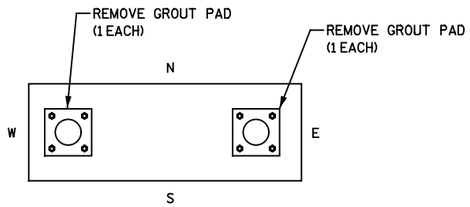


ELEVATION
LOOKING EAST





NORTH FOUNDATION DETAIL



SOUTH FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.02	REMOVE GROUT PAD	4 EACH	SHEET 2
SPV.0060.05	REPAIR FOUNDATION	1 EACH	SHEET 3
SPV.0060.33	REPAIR FOUNDATION JOINT	2 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-401

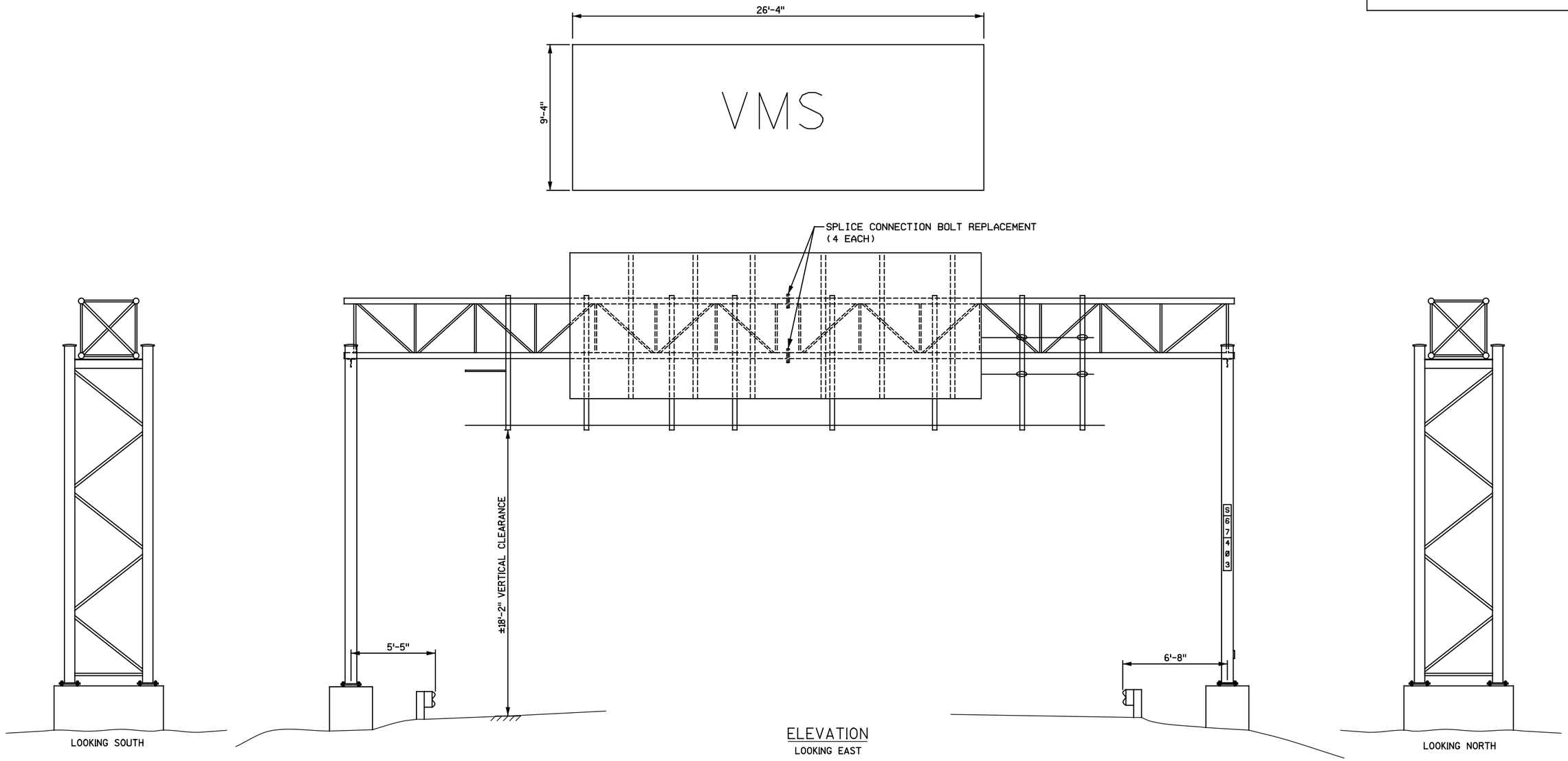
SHEET 92 OF 100
146

8

8

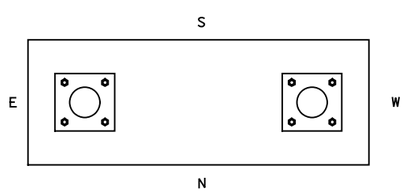
FILE NAME :S-67-0401.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CEL.TextSub.tbl

STATE PROJECT NUMBER
1000-20-69

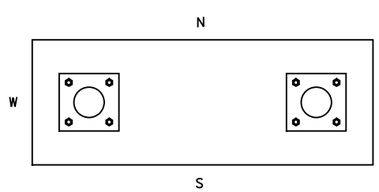


ELEVATION
LOOKING EAST

8



NORTH FOUNDATION DETAIL



SOUTH FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.06	SPLICE CONNECTION BOLT REPLACEMENT	4 EACH	SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

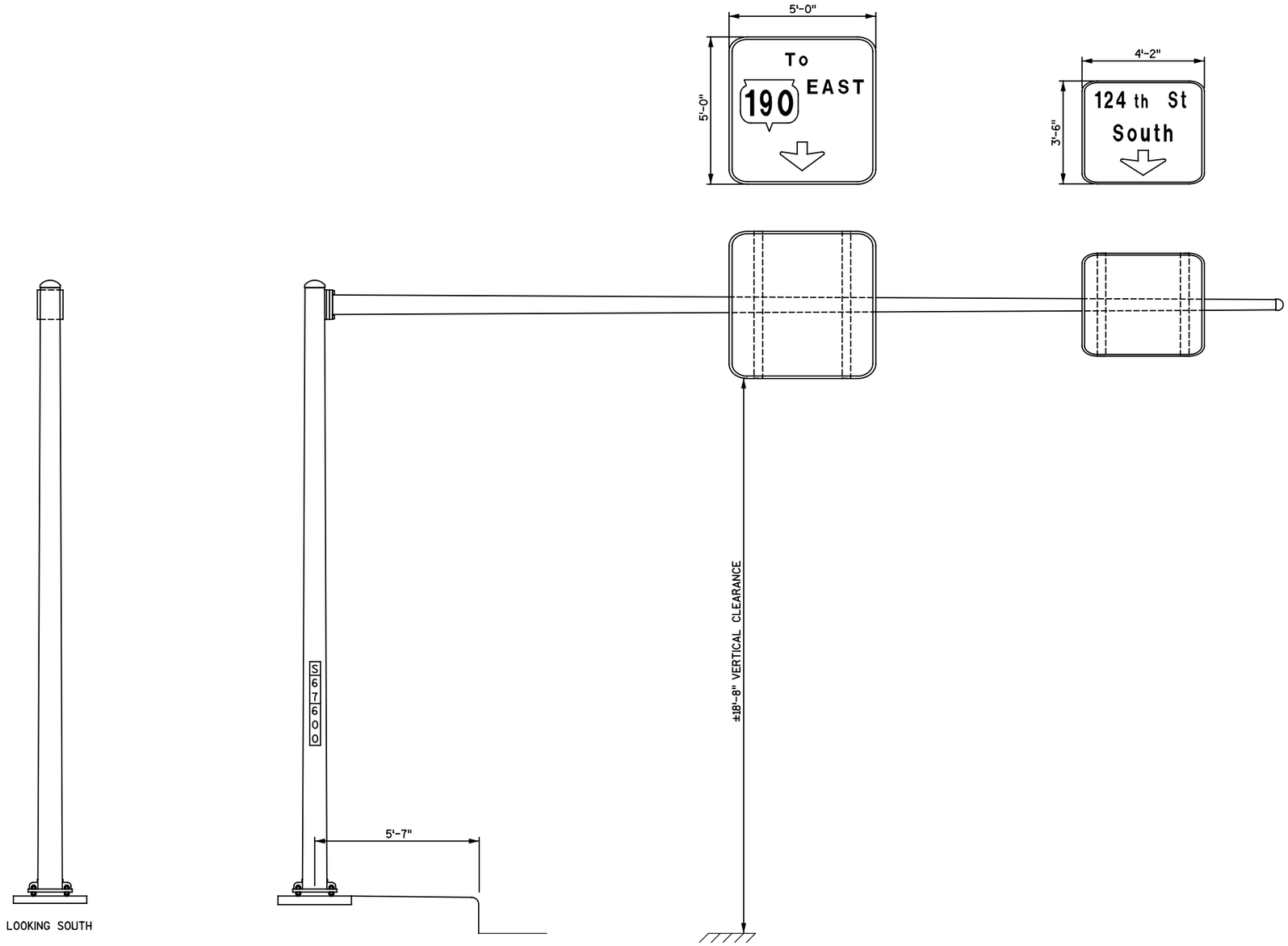
S-67-403

SHEET 93 OF 100
147

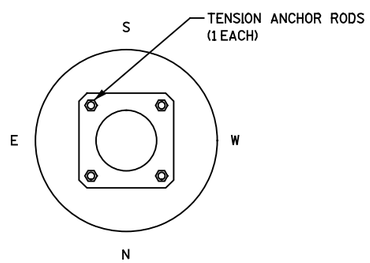
8

FILE NAME :S-67-0403.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HSplt
PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER
1000-20-69



ELEVATION
LOOKING EAST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-600

SHEET 94 OF 100
148

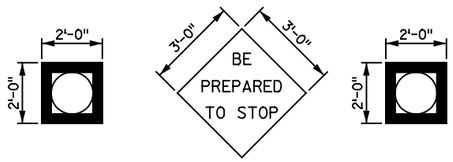
8

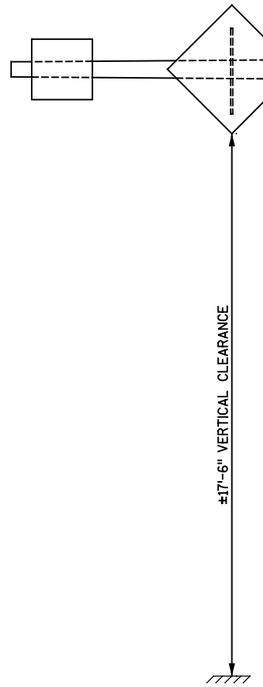
8

FILE NAME :S-67-0600.dgn
PLOT DATE :1/24/2017 PLOT BY : Veronica Chavez-Vil DRV :Pdf_bw_HiSplit PEN :CEL_TextSub.tbl

STATE PROJECT NUMBER

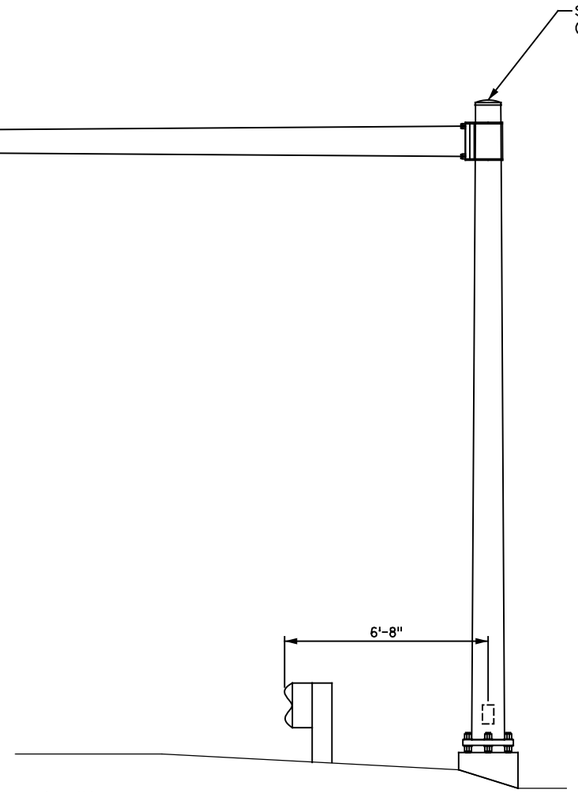
1000-20-69

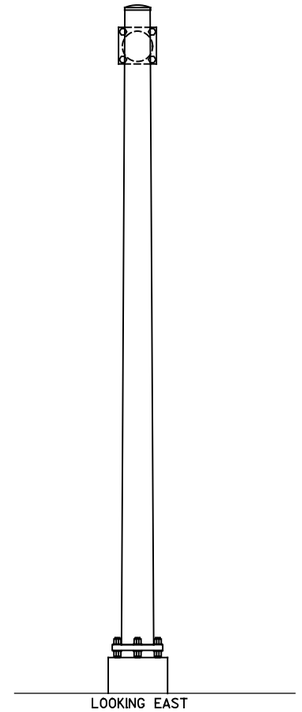




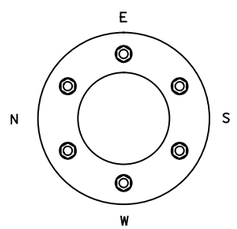
ELEVATION

LOOKING SOUTH





LOOKING EAST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.29	SECURE/REPLACE VERTICAL POST CAP	1 EACH	SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-910

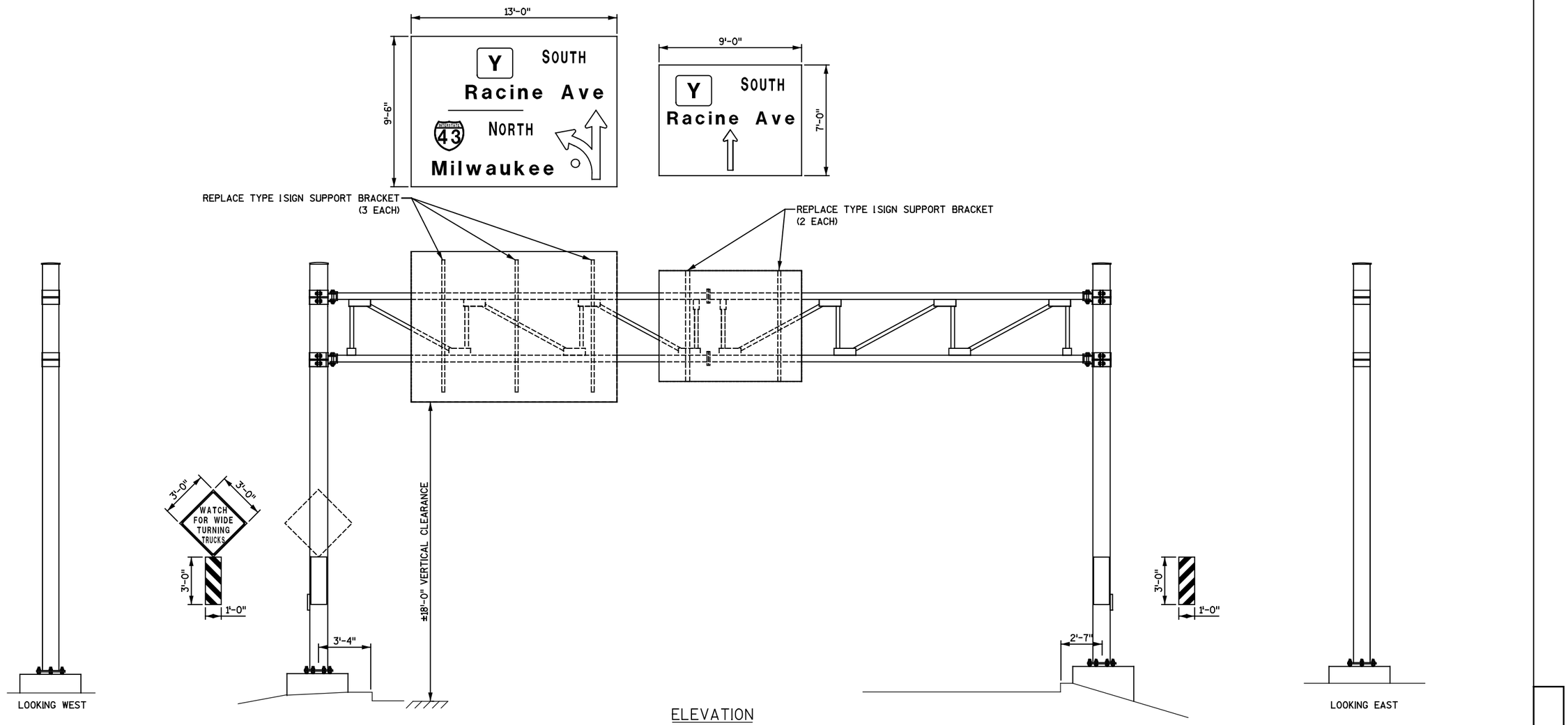
8

8

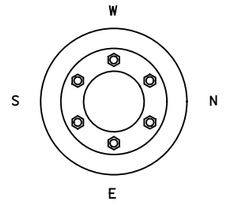
FILE NAME :S-67-0910.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER

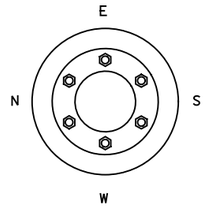
1000-20-69



ELEVATION
LOOKING SOUTH



EAST FOUNDATION DETAIL



WEST FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.11	REPLACE TYPE I SIGN SUPPORT BRACKET	5 EACH	SHEET 6

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-915

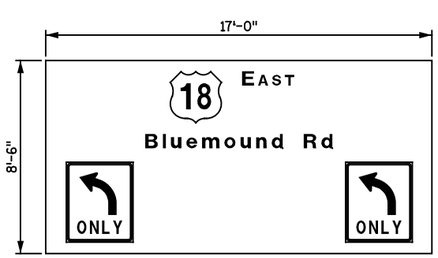
SHEET 96 OF 100
150

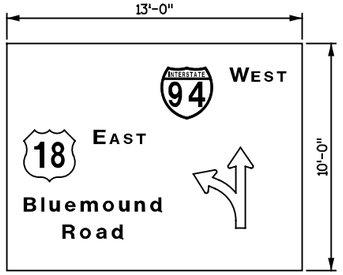
8

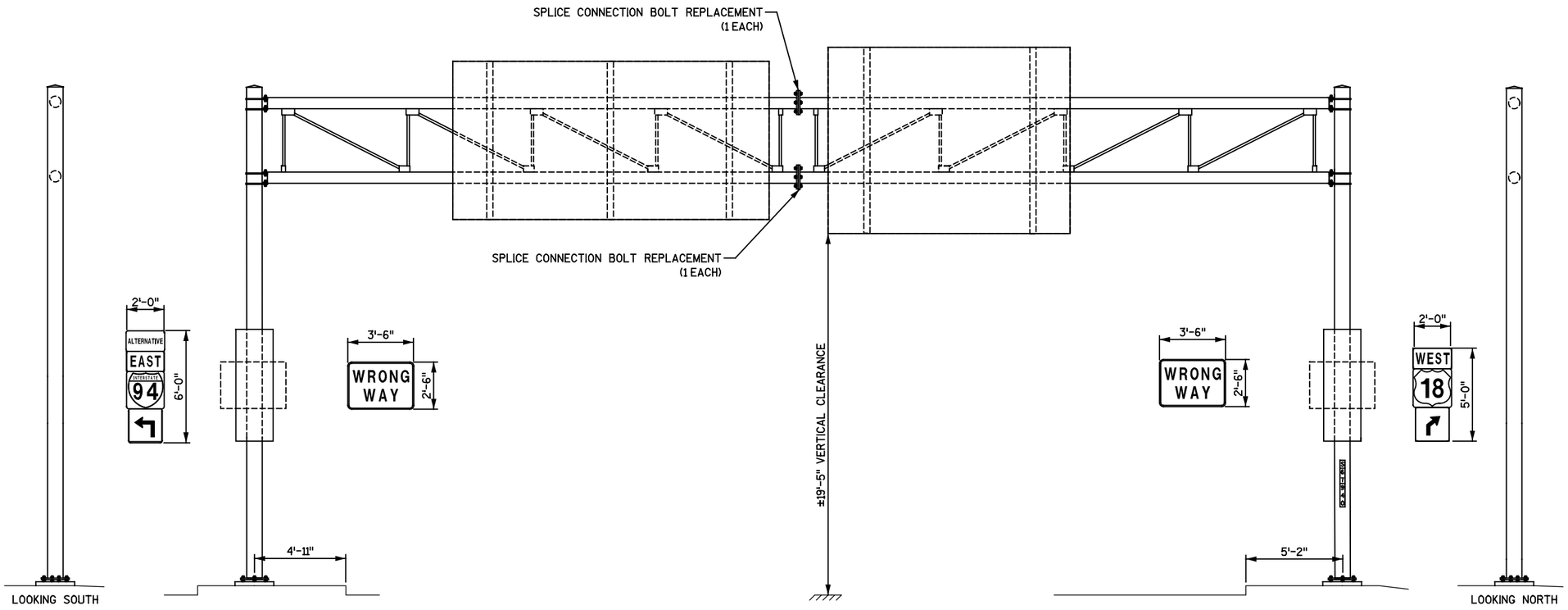
8

FILE NAME :S-67-0915.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HSplt
PEN :CELTextSub.tbl

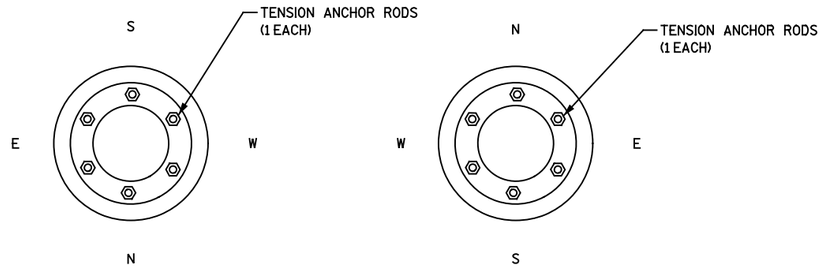
STATE PROJECT NUMBER
1000-20-69







ELEVATION
LOOKING EAST



NORTH FOUNDATION DETAIL

SOUTH FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	2 EACH	SHEET 2
SPV.0060.06	SPLICE CONNECTION BOLT REPLACEMENT	2 EACH	SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-940

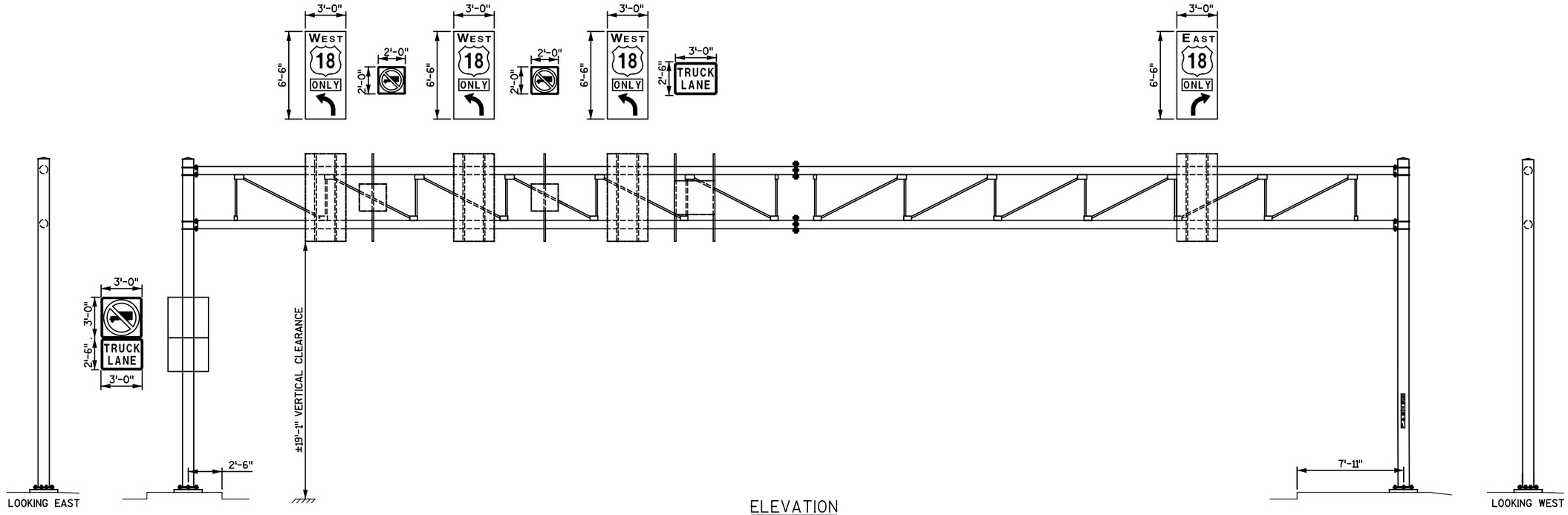
SHEET 97 OF 100
151

8

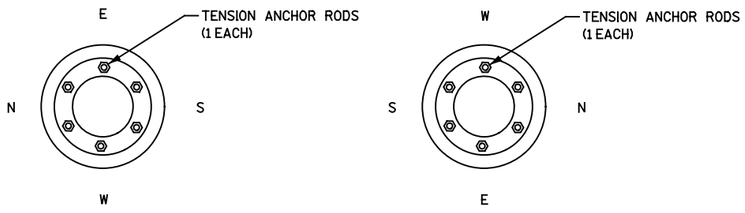
8

FILE NAME :S-67-0940.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez\tl
DRV :Pdf_bw_HiSplt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69



ELEVATION
LOOKING NORTH



WEST FOUNDATION DETAIL

EAST FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.06	TENSION ANCHOR RODS	2 EACH	SHEET 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-941

SHEET 98 OF 100
152

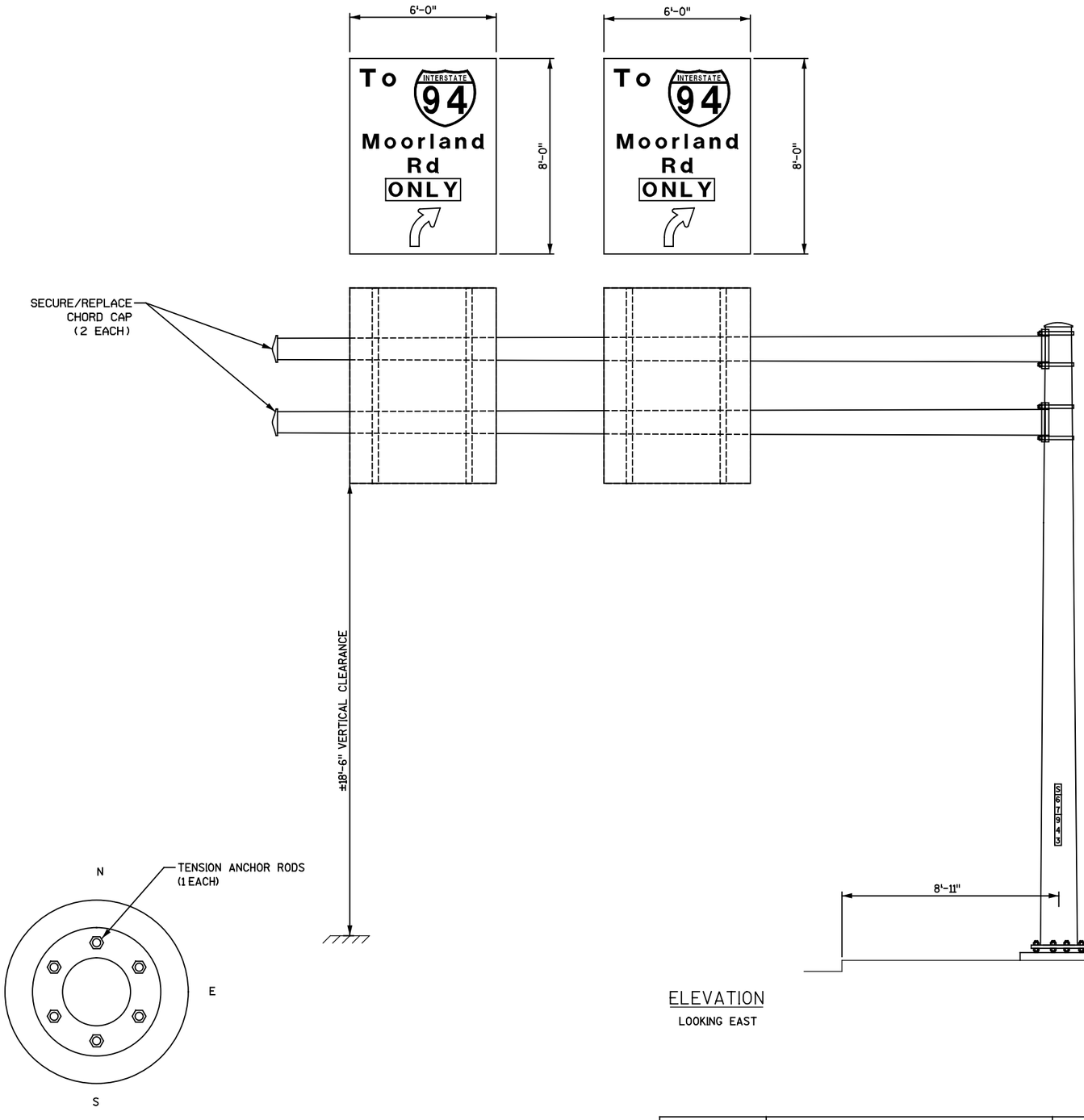
8

8

FILE NAME :S-67-0941.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez-Vil
DRV :Pdf_bw_HiSplt
PEN :CEL_TextSub.tbl

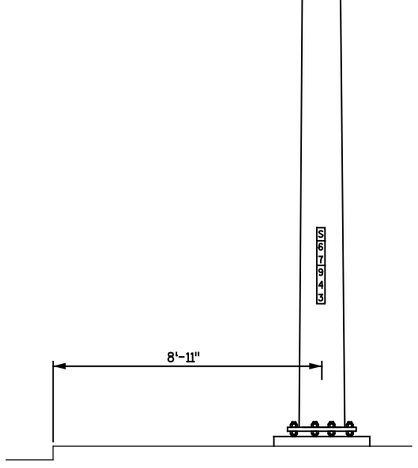
STATE PROJECT NUMBER

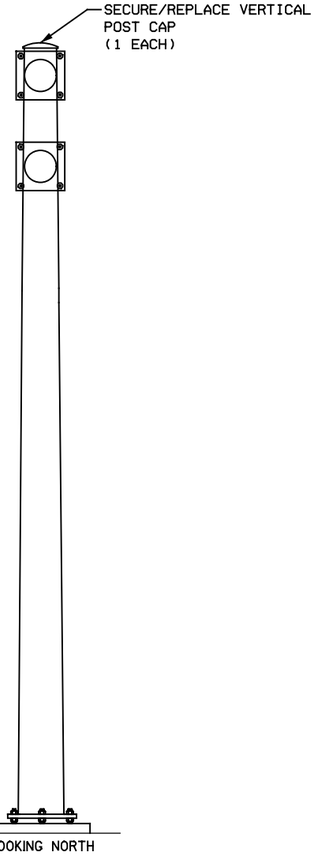
1000-20-69

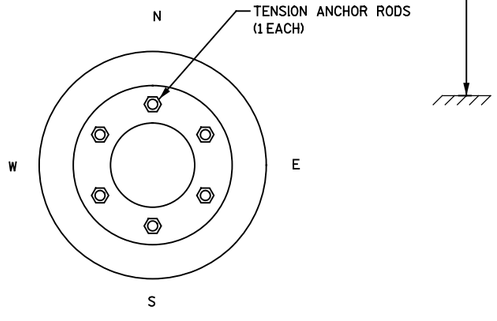


ELEVATION

LOOKING EAST







FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.04	TENSION ANCHOR RODS	1 EACH	SHEET 2
SPV.0060.08	SECURE/REPLACE CHORD CAP	2 EACH	SHEET 4
SPV.0060.29	SECURE/REPLACE VERTICAL POST CAP	1 EACH	SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

S-67-943

SHEET 99 OF 100

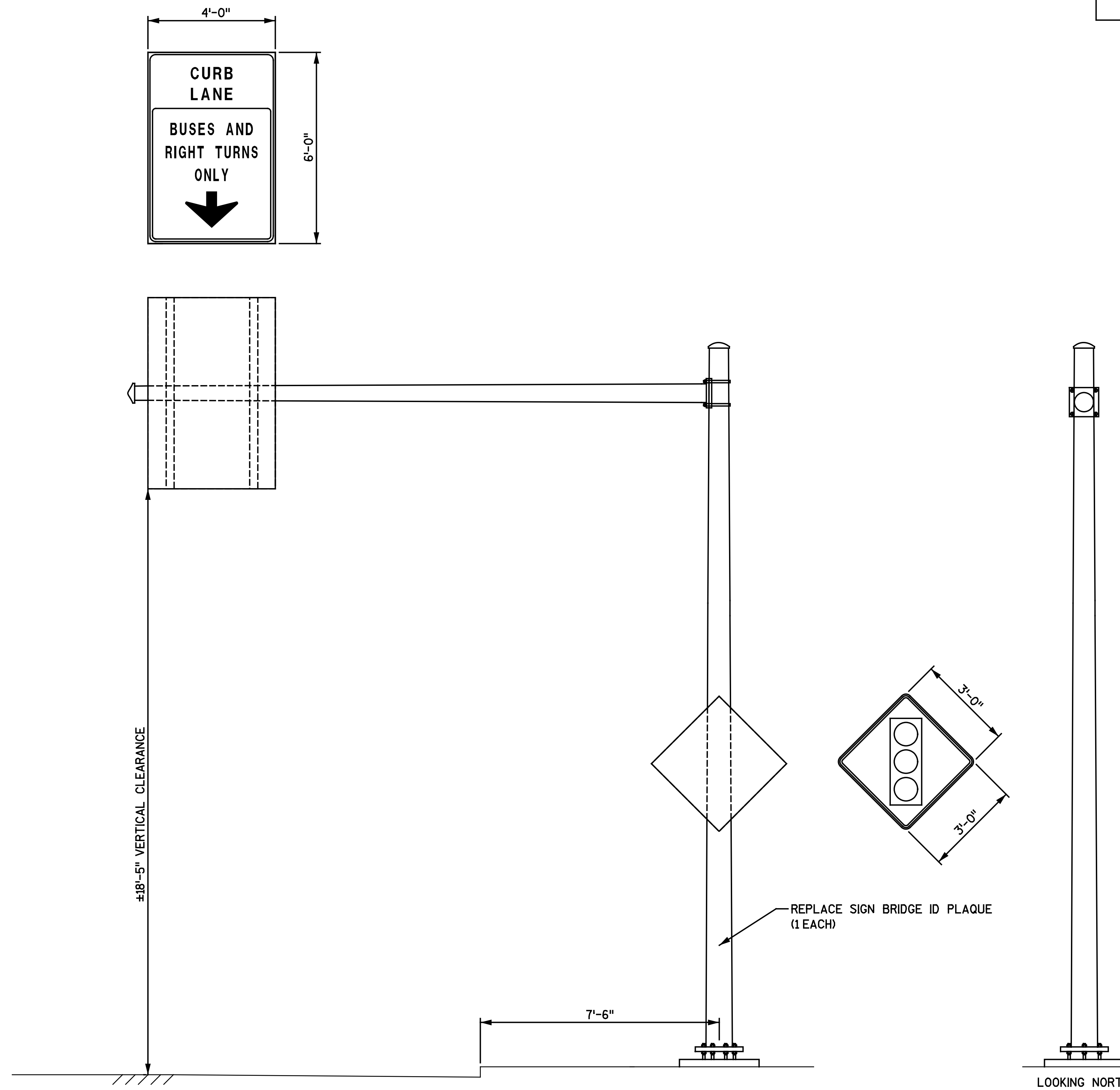
153

8

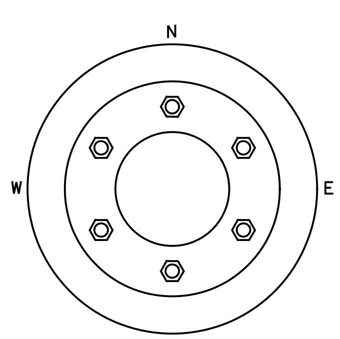
8

FILE NAME :S-67-0943.dgn
PLOT DATE :1/24/2017
PLOT BY : Veronica Chavez
DRV :Pdf_bw_HS.plt
PEN :CELTextSub.tbl

STATE PROJECT NUMBER
1000-20-69



ELEVATION
LOOKING EAST



FOUNDATION DETAIL

ITEM NO.	LIST OF REPAIRS	QUANTITY	REPAIR DETAIL SHEET NO.
SPV.0060.12	REPLACE SIGN BRIDGE ID PLAQUE	1 EACH	SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2017

DRAWN BY MR | PLANS CK'D. VC

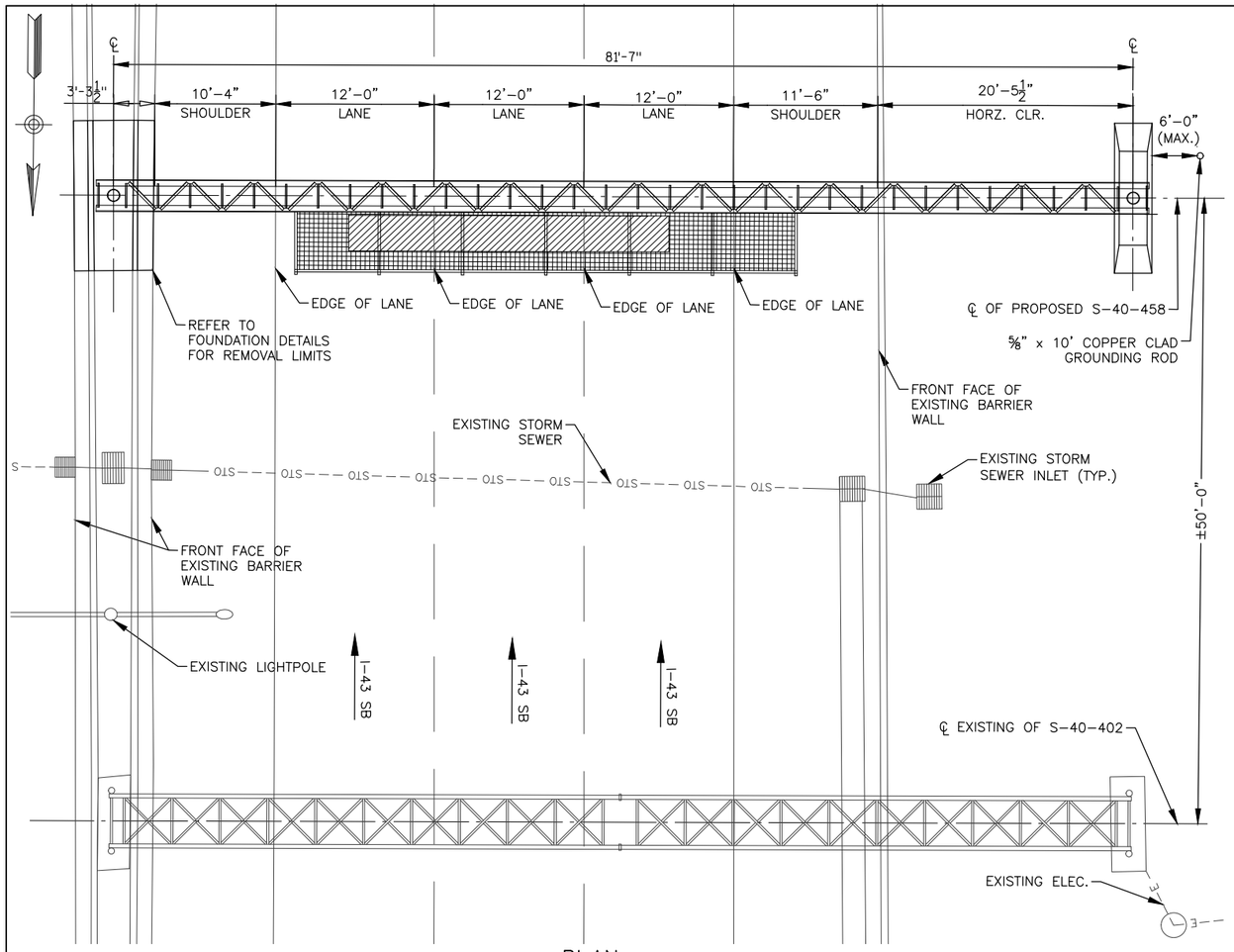
S-67-944

SHEET 100 OF 100

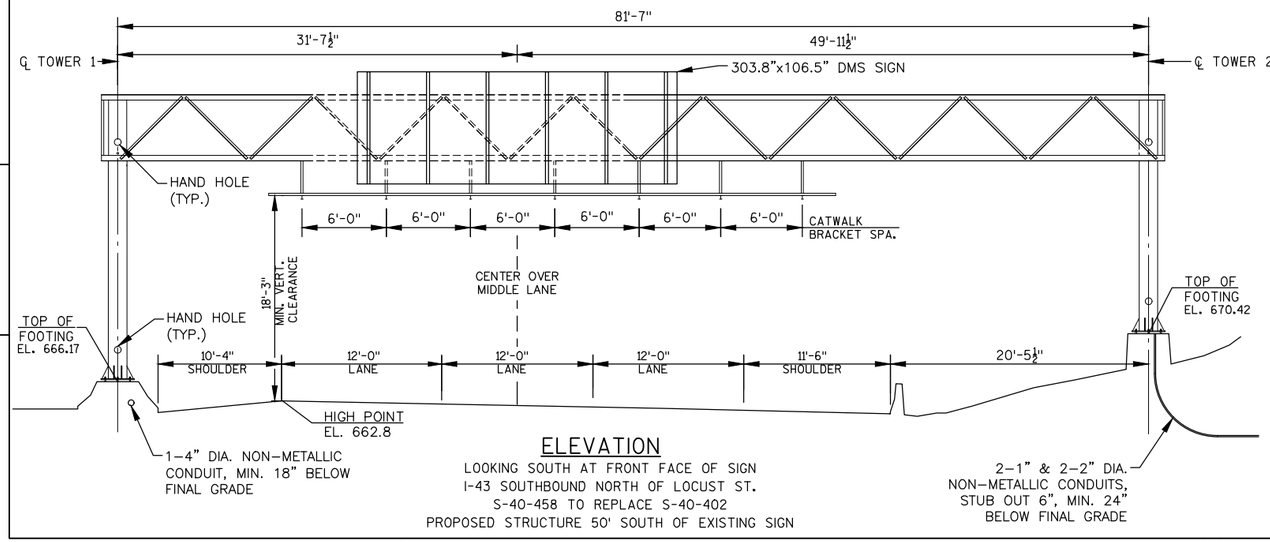
8

8

FILE NAME :S-67-0944.dgn
PLOT DATE :1/24/2017 PLOT BY : Veronica Chavezv8l DRV :Pdf_bw_HS.plt PEN :CEL_TextSub.tbl



PLAN



ELEVATION

LOOKING SOUTH AT FRONT FACE OF SIGN
I-43 SOUTHBOUND NORTH OF LOCUST ST.
S-40-458 TO REPLACE S-40-402
PROPOSED STRUCTURE 50' SOUTH OF EXISTING SIGN

LIST OF DRAWINGS

1. PLAN & ELEVATION
2. TOWER 1 FOUNDATION DETAILS
3. TOWER 2 FOUNDATION DETAILS
4. TRUSS DETAILS
5. SIGN PANEL MOUNTING DETAILS
6. POST CONNECTION AND BASEPLATE DETAILS
7. CATWALK DETAILS
8. HANDHOLE DETAILS

MATERIAL PROPERTIES:

CONCRETE: .....f'c = 3,500 psi
HIGH STRENGTH BAR
STEEL REINFORCEMENT: .....fy = 60,000 psi

STEEL COLUMN & CHORDS: .....fy = 42,000 psi
(INCLD. HANDHOLE) A.P.I. SPEC 5L GRADE X42
PLATES, BARS, STRUCTURAL
ANGLES & CHANNELS:.....fy = 36,000 psi
A.S.T.M. A709 GRADE 36
STEEL ANCHOR RODS: .....fy = 55,000 psi
ASTM F1554 GRADE 55.
HEAVY HEX NUTS
ASTM A563A
WASHERS
ASTM F436
HIGH STRENGTH BOLTS
ASTM A325
STRUCTURAL MEMBERS GALVANIZED
ASTM A123
HARDWARE GALVANIZED
ASTM A153 CLASS C

DEAD LOAD - WT. OF DMS SIGN, SUPPORTING STRUCTURE, CATWALK, AND RAILINGS.
LIVE LOAD - NONE.
ICE LOAD - 3 PSF TO 1 FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 M.P.H. (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.
FATIGUE CATEGORY I WITHOUT GALLOPING WIND EFFECTS.

ALL BOLTED CONNECTIONS SHALL BE MADE WITH ¾" DIAMETER A325 BOLTS, GALVANIZED ASTM A153, CLASS C, AND INSTALLED WITH DTI WASHERS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL ELEVATIONS ARE BASED ON NGVD 29 UNLESS OTHERWISE SHOWN OR NOTED.

THE SIGN BRIDGE WAS DESIGNED ACCORDING TO THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS.

ALL STRUCTURAL STEEL MEMBERS SHALL BE GALVANIZED.

CENTER DMS VERTICALLY ON TRUSS.

ALTERNATE DESIGNS ARE NOT ALLOWED.

THE LOCATION OF EXISTING OR PROPOSED UTILITIES AS NOTED ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. VERIFY UTILITY INTERFERENCES PRIOR TO CONSTRUCTION.

PROVIDE VENTILATING RODENT SCREENS AT ALL COLUMN BASES (NO GROUT) CONSIDERED INCIDENTAL TO BID ITEM "SIGN BRIDGE S-40-458".

PROVIDE A ¾" CHAMFER OR 1" RADIUS ON ALL EXPOSED CONCRETE EDGES.

PROVIDE HANDHOLES ON UPRIGHT.

THE UPPER 1'-6" OF ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE AASHTO SPECIFICATION AS STATED IN SECTION 641. OF THE WISDOT STANDARD SPECIFICATIONS.

PROVIDE AN IDENTIFICATION PLAQUE FOR THE SIGN BRIDGE IN ACCORDANCE WITH SDD STRUCTURE IDENTIFICATION PLAQUES, SIGN BRIDGES AND OVERHEAD SIGN SUPPORT. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN BRIDGE S-40-458"

SIGNS OR BLANKS SHALL BE INSTALLED ON THE TRUSS AT THE TIME OF ERECTION. SIGNS SHALL BE AS DESIGNATED IN PLANS. SIGN BLANKS AND MOUNTING HARDWARE SHALL BE INCIDENTAL TO "SIGN BRIDGE S-40-458"

INSTALL CONDUIT PLUGS ON ALL UNUSED CONDUIT HOLES, CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN BRIDGE S-40-458"

FOR JUNCTION BOXES, WIRING REQUIREMENTS, AND ELECTRIC SERVICE SEE FTMS PLANS.

WELD TEST AS PER AWS D1.1

DMS VERTICAL SUPPORTS LOCATIONS, AND SPACING TO BE DETERMINED BY SIGN MANUFACTURER AND ARE INCIDENTAL TO DMS SIGN.

CATWALK SUPPORTS MAYBE BE ADJUSTED TO ACCOMMODATE THE DMS VERTICAL SUPPORTS.

CATWALK SHALL BE INCIDENTAL TO BID ITEM "SIGN BRIDGE S-40-458"

SUBMIT SHOP DRAWINGS TO TOM HEYDEL, SE REGION WISDOT TRAFFIC OPS.

TYPE I SIGN DESIGN DATA

MAX DESIGN SIGN AREA (SQ. FT.)	MAX. DMS SIGN DEPTH	DMS WEIGHT	MOUNTING BEAMS MAX WEIGHT
224	8'-10"	2745 LB	300 LB

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	25
636.1000	SIGN SUPPORTS STEEL REINFORNCEMENT HS	LB	300
636.1500	SIGN SUPPORTS STEEL COATED REINFORNCEMENT HS	LB	2243
641.6600	SIGN BRIDGE S-40-458	LS	1
650.6500.01	CONSTRUCTION STAKING STRUCTURE LAYOUT S-40-458	LS	1
SPV.0090.04	BARRIER REMOVAL AND RETROFIT	LF	102

WISCONSIN
VERONICA CHAVEZ DE FERNANDEZ
E-42456
MILWAUKEE
WI
PROFESSIONAL ENGINEER
2/6/2017

STATE PROJECT NUMBER
1000-20-69

NO.	DATE	REVISION	BY

COLLINS ENGINEERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 02/08/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

I-43 SB AT EXIT TO LOCUST ST

S-40-458

COUNTY: MILWAUKEE
~~TOWN/CITY/VILLAGE~~: MILWAUKEE

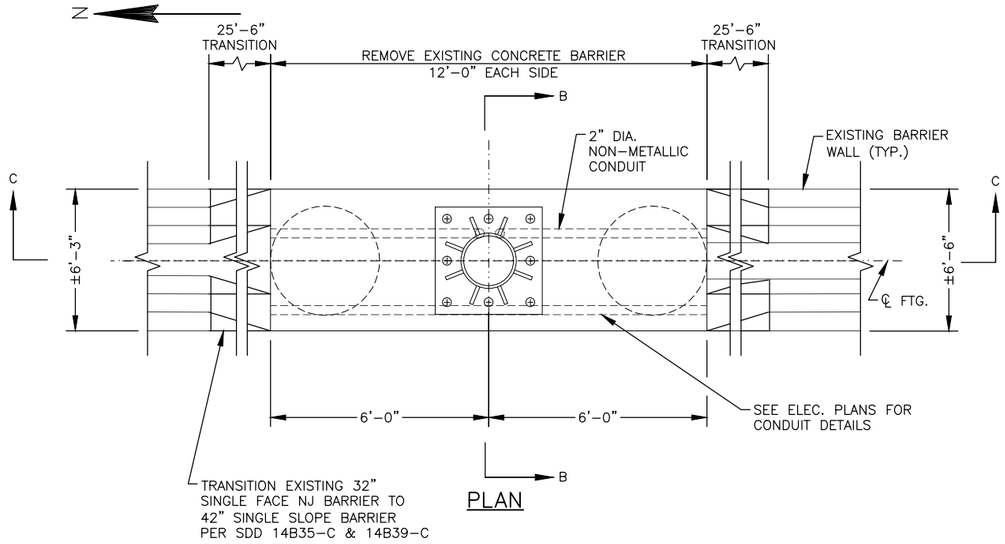
DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
VC	DG	MR	VC

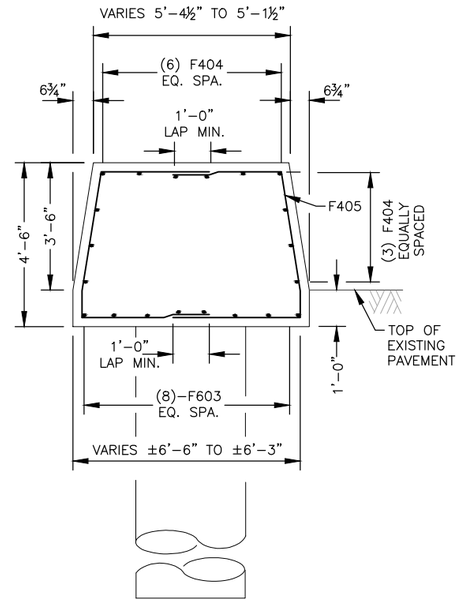
PLAN & ELEVATION

SHEET 1 OF 8

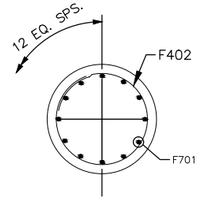
STATE PROJECT NUMBER
1000–20–69



PLAN



SECTION B–B



SECTION A–A

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

CONCRETE BARRIER TRANSITION DIMENSIONS SHALL BE ADJUSTED TO MATCH EXISTING TRAFFIC BARRIER.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS OTHERWISE NOTED.

TOP OF FOOTING SURFACE SHALL BE SMOOTH AND SLOPED TO DRAIN.

BOTTOM OF FOOTING TO BE EMBEDDED 1'–0" BELOW GRADE, UNLESS OTHERWISE NOTED.

ISOLATION JOINT, PREFORMED JOINT FILLER WITH NON–BITUMINOUS JOINT SEALER. THE PREFORMED JOINT FILLER AND NON–BITUMINOUS JOINTSEALER SHALL MEET THE REQUIREMENTS OF SECTION 502 OF THE STANDARD SPECIFICATIONS. INCIDENTAL TO "SIGN SUPPORTS CONCRETE MASONRY".

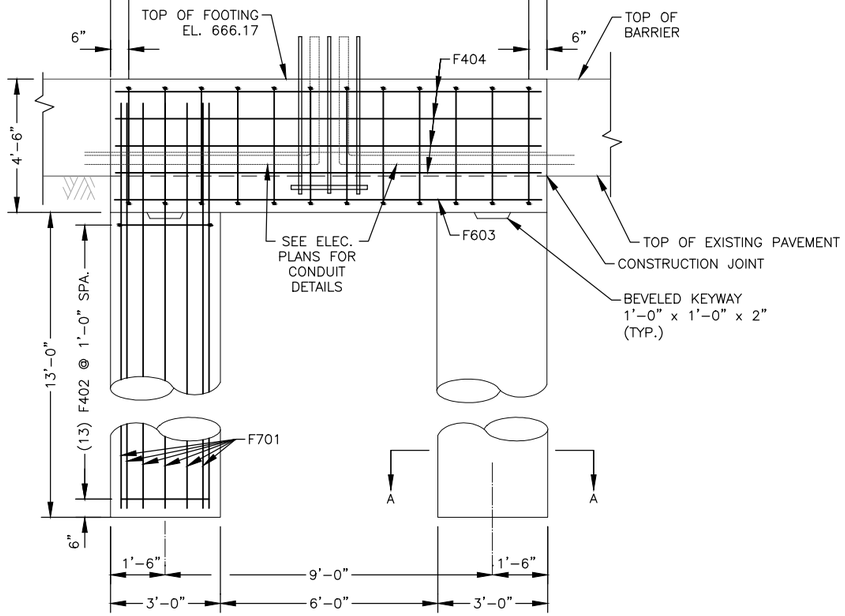
INSTALL CONDUIT IN FOOTING AND SWEEP CONDUIT PER LIGHTING PLANS. IF CONDUIT IS NOT IN USE, CAP BOTH ENDS OF CONDUIT. THE WORK SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".

TIE CAP BEAM REINFORCEMENT AFTER ANCHOR ROD ASSEMBLY IS SET.

FOUNDATION DATA

THE FOLLOWING SOIL PARAMETERS WERE USED FOR THE DESIGN OF THE FOUNDATION SYSTEM. IF VARIATIONS IN THE SOIL PARAMETERS ARE FOUND DURING CONSTRUCTION NOTIFY PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEM.

SOIL UNIT WEIGHT = 120 pcf
COHESION VALUE = 350 psf
FRICTION ANGLE = 20°

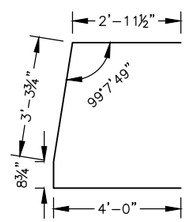


SECTION C–C

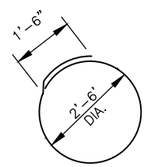
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
F701	▲	26	16'–6"			DRILLED SHAFT VERTICAL
F402		24	9'–4"	▲		DRILLED SHAFT HOOP
F603	▲	8	11'–6"			CAP BEAM LONGITUDINAL
F404	▲	12	11'–6"			CAP BEAM LONGITUDINAL
F405	▲	24	10'–10"	▲		CAP BEAM STIRRUP



F405



F402

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

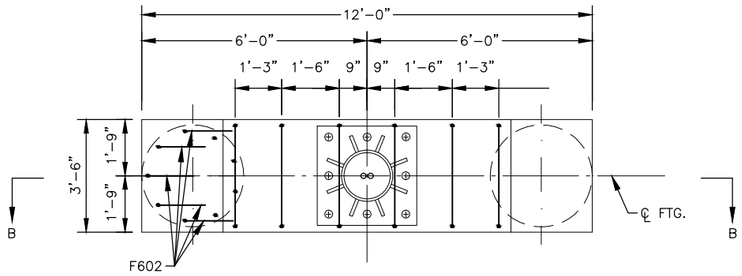
S–40–458

CONST SPEC WISDOT 2017 | DRAWN BY MR | PLANS CK'D. VC

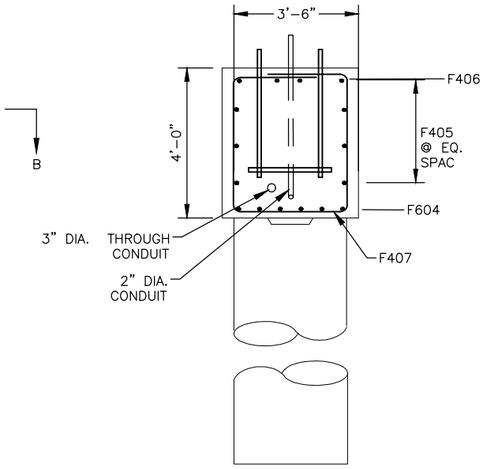
TOWER 1 FOUNDATION DETAILS

SHEET 2 OF 8

STATE PROJECT NUMBER
1000–20–69

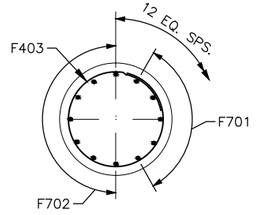


PLAN



END VIEW

TIE IN PLACE AFTER ANCHOR BOLT ASSEMBLY IS SET



SECTION A–A

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS OTHERWISE NOTED.

TOP OF FOOTING SURFACE SHALL BE SMOOTHED AND SLOPED TO DRAIN.

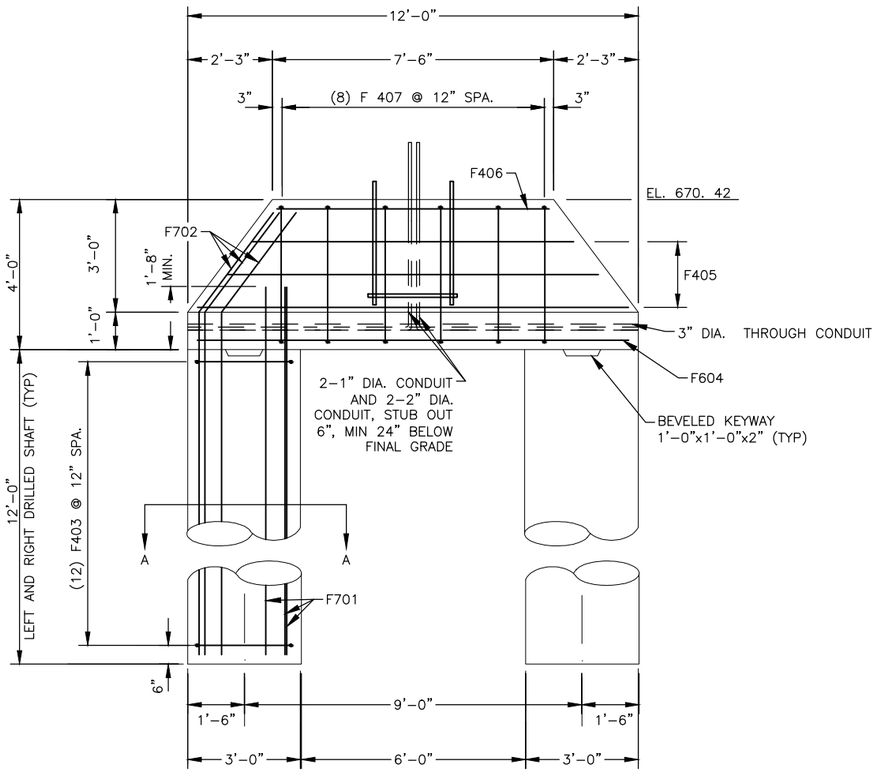
BOTTOM OF FOOTING TO BE EMBEDDED 1'–0" BELOW GRADE, UNLESS OTHERWISE NOTED.

INSTALL CONDUIT IN FOOTING AND SWEEP CONDUIT PER LIGHTING PLANS. IF CONDUIT IS NOT IN USE, CAP BOTH ENDS OF CONDUIT. THE WORK SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".

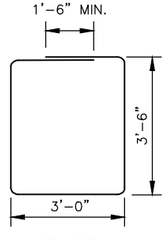
FOUNDATION DATA

THE FOLLOWING SOIL PARAMETERS WERE USED FOR THE DESIGN OF THE FOUNDATION SYSTEM. IF VARIATIONS IN THE SOIL PARAMETERS ARE FOUND DURING CONSTRUCTION NOTIFY PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEM.

SOIL UNIT WEIGHT = 120 pcf
COHESION VALUE = 350 psf
FRICTION ANGLE = 20°



SECTION B–B



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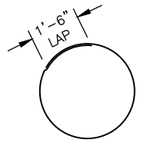
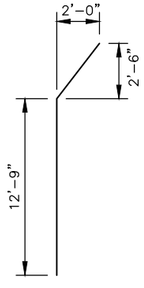


F403



F702

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
F701	▲	10	14'–0"			DRILLED SHAFT VERTICAL
F702	▲	14	16'–0"	▲		DRILLED SHAFT VERTICAL
F403		24	9'–4"	▲		DRILLED SHAFT HOOP
F604	▲	6	11'–6"			CAP BEAM LONGITUDINAL
F405	▲	6	10'–0"		▲	CAP BEAM LONGITUDINAL
F406	▲	4	7'–4"			CAP BEAM LONGITUDINAL
F407	▲	6	13'–7"	▲		CAP BEAM STIRRUP

BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
F405	2 SERIE OF 3	8'–8" TO 11'–4"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

S–40–458

CONST SPEC WISDOT 2016	DRAWN BY MR	PLANS CK'D. VC

TOWER 2 FOUNDATION DETAILS

SHEET 3 OF 8

STATE PROJECT NUMBER

1000-20-69

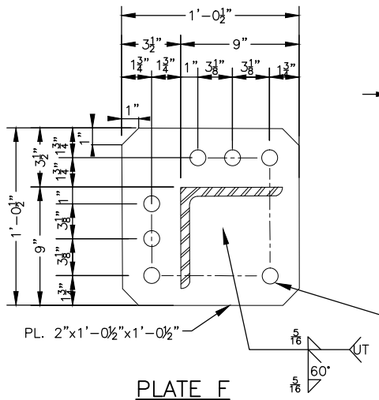
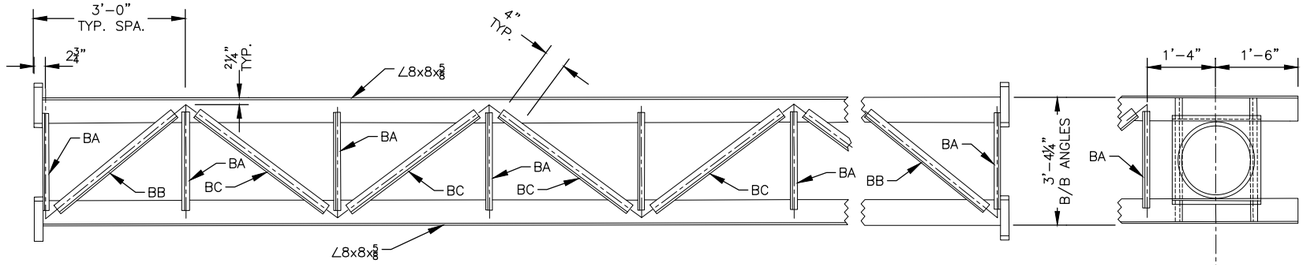


PLATE F

DRILL 1⅛" DIA. ASSEMBLED FOR 1" DIA H.S. BOLTS. 28-1" DIA.x5½" H.S. BOLTS W/1 WASHER REQ'D. PER TRUSS CONN.



TOP VIEW

NOTES:

TRUSS SECTIONS SHALL BE MADE IN MULTIPLES OF 6'-0", EXCEPT THAT THE BRACING PANEL NEAREST EACH POST MAY VARY TO MAKE UP THE NEEDED SECTION LENGTH. WELDED CHORD SPLICES ARE NOT PERMITTED.

UNLESS OTHERWISE SHOWN, ALL WELDS SHALL BE ¼" FILLET WELDS ALL AROUND.

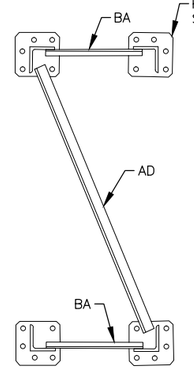
PROVIDE 2'-1/16" BRASS, STAINLESS STEEL OR GALVANIZED STEEL SHIMS AT EACH FLANGE TO BRING TRUSS INTO CORRECT CAMBER AND ALIGNMENT.

TRUSSES SHALL BE SHOP ASSEMBLED AND MATCH MARKED.

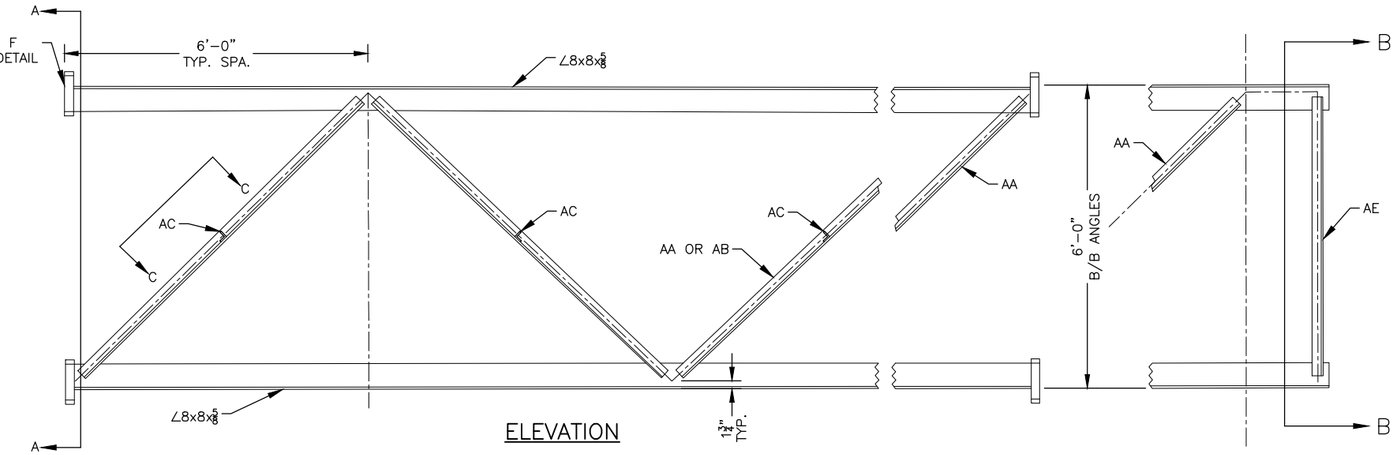
ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT.

SEE SHEET 5 FOR CAMBER DETAILS.

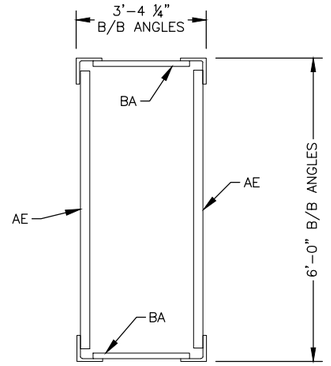
SEE SHEET 6 FOR POST CONNECTION DETAILS.



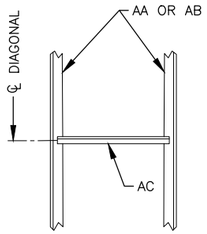
SECTION A-A



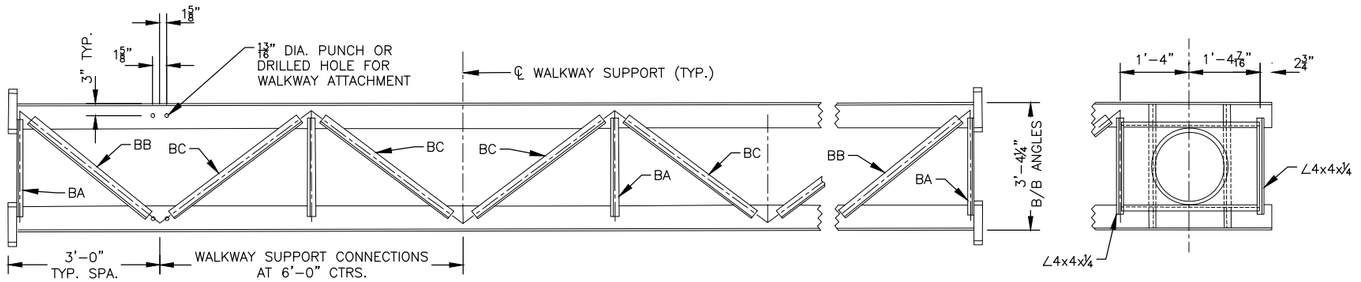
ELEVATION



SECTION B-B



SECTION C-C



BOTTOM VIEW

NOTE:
THE BOTTOM VIEW IS DETAILED TO PROVIDE FOR WALKWAY ATTACHMENT. WHERE THE WALKWAY IS OMITTED, PROVIDE STRUT BA AS INDICATED IN THE TOP VIEW.

TRUSS MEMBER SIZES		
MEMBER	SIZE	LENGTH
AA	∠3 x 2½ x 5/16	7'-5 1/8"
AB	∠3 x 2½ x 5/16	7'-6 5/8"
AC	∠1½ x 1½ x ¼	3'-0"
AD	∠3 x 2½ x 5/16	5'-10"
AE	∠3 x 2½ x 5/16	5'-4"
AF	C5x9	3'-3"
BA	∠1½ x 1½ x ¼	2'-6"
BB	∠3 x 2½ x 5/16	3'-4½"
BC	∠3 x 2½ x 5/16	3'-6"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

S-40-458

CONST SPEC WISDOT 2016	DRAWN BY MR	PLANS CK'D. VC

TRUSS DETAILS

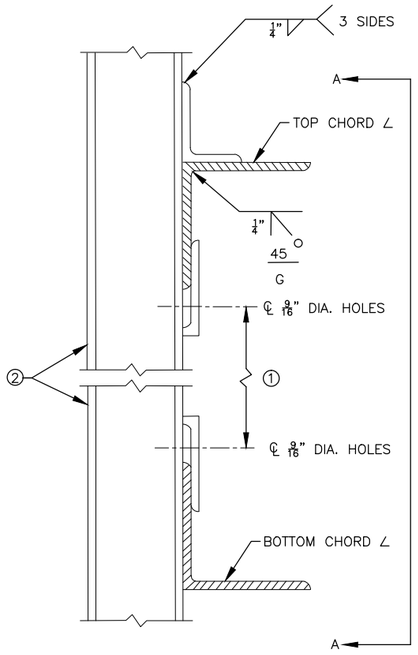
SHEET 4 OF 8

8

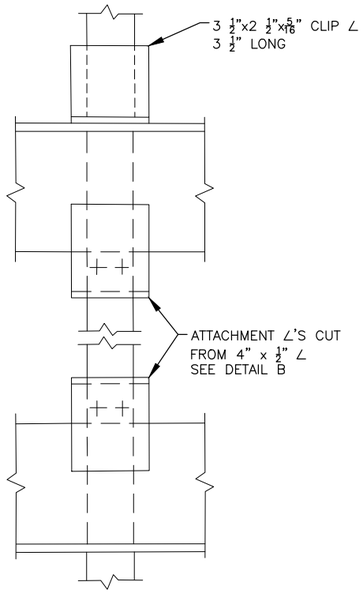
8

STATE PROJECT NUMBER

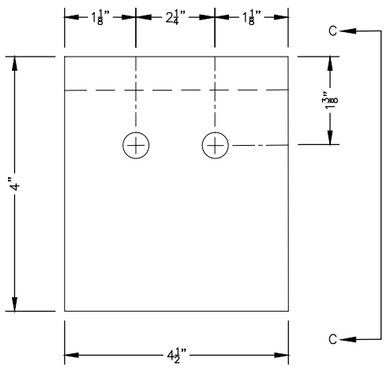
1000–20–69



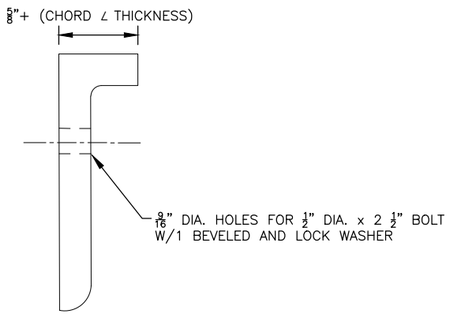
DETAIL A



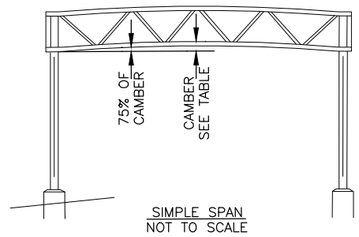
VIEW A–A



DETAIL B



VIEW C–C

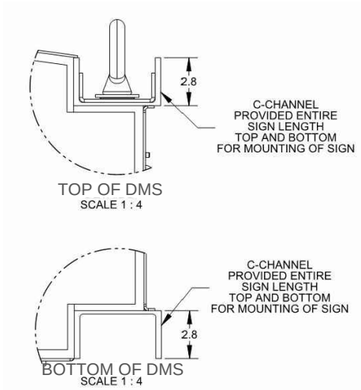


CAMBER DIAGRAM

CAMBER TABLE

	S–40–458
SPAN	81'–7"
CAMBER	1½"
DL DEFLECTION	¾"
RESIDUAL CAMBER	¾"

NOTE:
CAMBER AND DEFLECTIONS ARE SHOWN AT ℄ SPAN. THE DEFELCTIONS AND CAMBER AT THE QUARTER POINTS SHALL BE APPROXIMATELY 75% OF THESE VALUES.



STANDARD CONN. DETAILS

NOTES:

① (TRUSS DEPTH)–(TOP & BOTTOM CHORD ∠LEGS)–1¼"

② THE DMS HOUSING MOUNTING POSTS AND MOUNTING ANGLES SHALL BE SUPPLIED WITH THE SIGN BRIDGE AND SHALL BE INCIDENTAL TO THE BID ITEM "SIGN BRIDGE S–40–458"

PROVIDE STRUCTURAL ALUMINUM I–BEAMS, AND SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN BRIDGE S–40–458"

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION
S–40–458

CONST SPEC WISDOT	2016	DRAWN BY MR	PLANS CK'D. VC

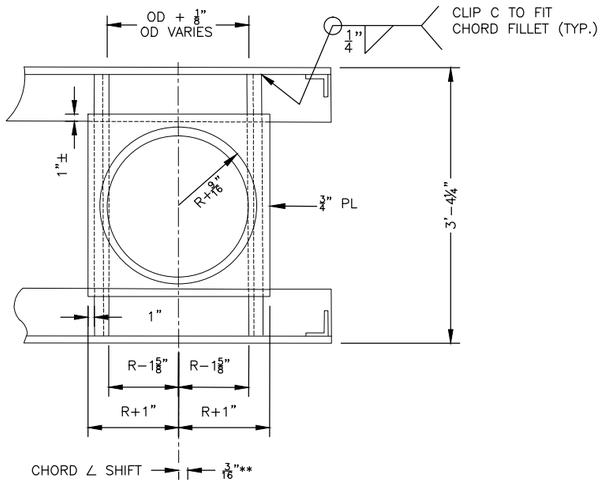
SIGN PANEL MOUNTING DETAILS

SHEET 5 OF 8

8

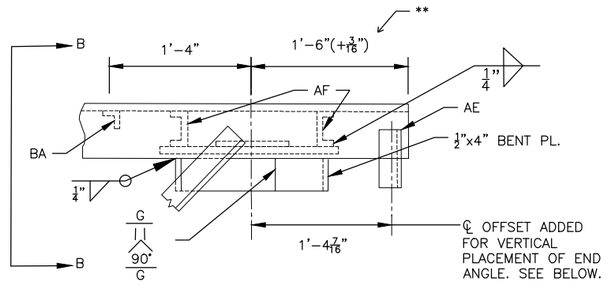
8

STATE PROJECT NUMBER
1000-20-69



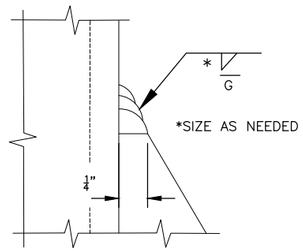
UPPER JUNCTION

** OR AS REQ'D BY CAMBER



TOP ELEVATION VIEW
OF POST TO TRUSS CONNECTION

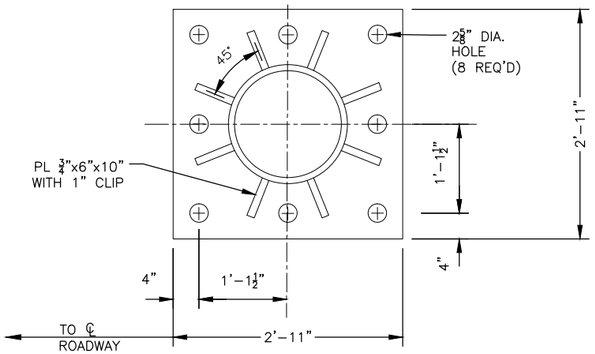
** OR AS REQ'D BY CAMBER



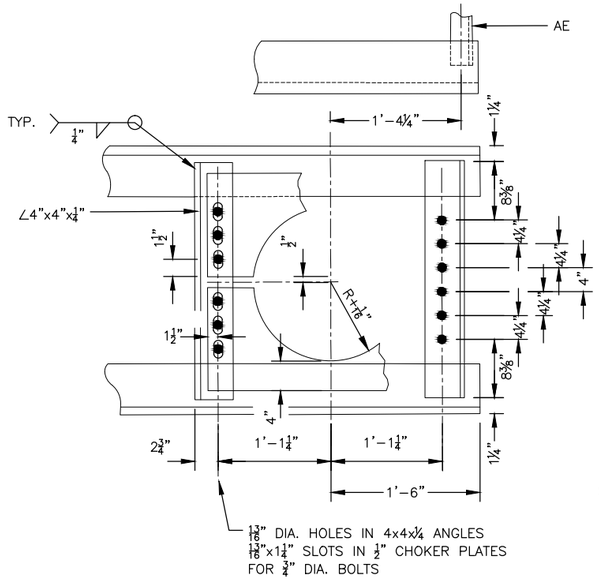
DETAIL "C"

POST SIZES

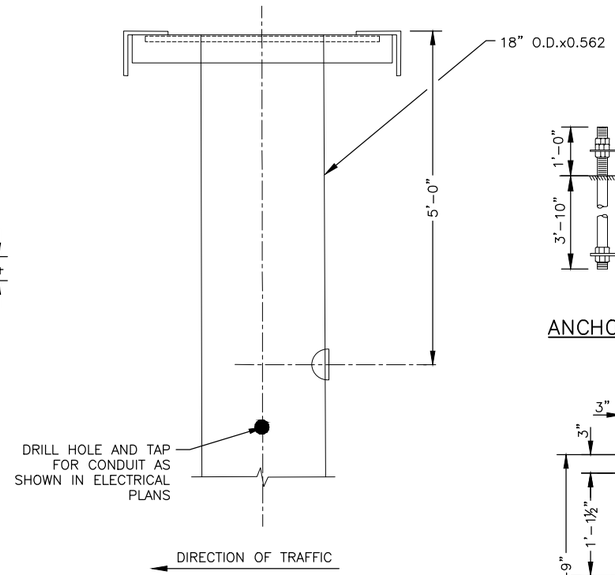
STRUCTURE	OUTSIDE DIA. X WALL THICKNESS
S-40-458	18 x 0.562



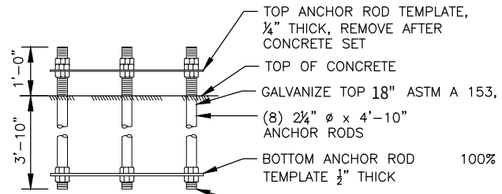
BASEPLATE PLAN



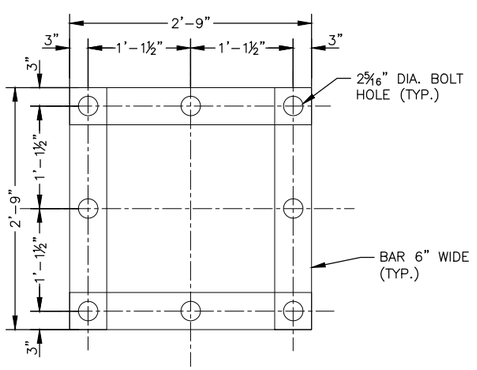
LOWER JUNCTION



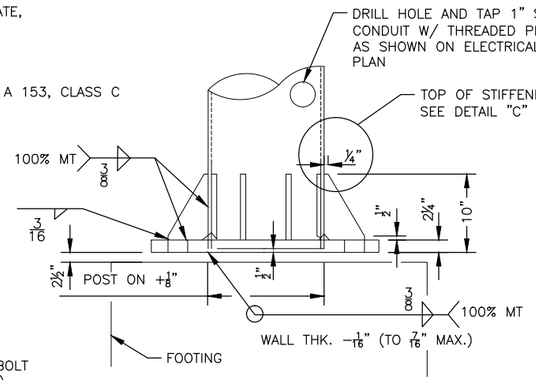
VIEW B-B



ANCHOR ROD DETAILS



ANCHOR ROD TEMPLATE PLAN



ELEVATION

NOTE:
CHOKER PLATES AND HANDHOLE COVERS SHALL BE GALVANIZED SEPARATELY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

S-40-458

CONST SPEC WISDOT 2016	DRAWN BY MR	PLANS CK'D. VC

POST CONNECTION AND BASEPLATE DETAILS

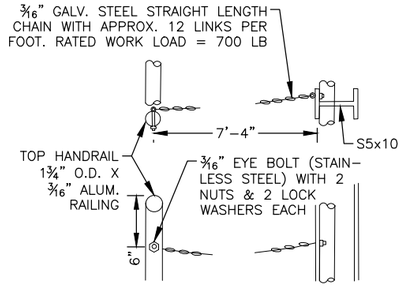
SHEET 6 OF 8

STATE PROJECT NUMBER

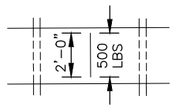
1000-20-69

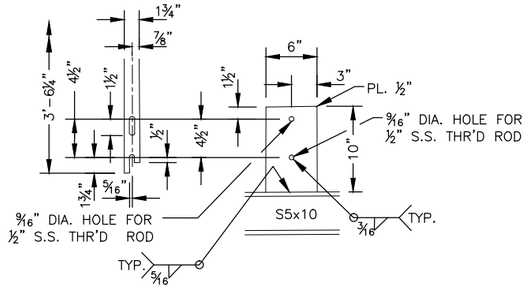
NOTE:

CATWALK SHALL MEET A.A.S.H.T.O. "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" 6TH EDITION. (500 LB. DISTRIBUTED OVER 2'-0" TRANSVERSELY; MAX. SPAN IS 8'-0" ON CENTER). CATWALK SHALL ALSO MEET THE MOST RECENT ISSUE OF O.S.H.A. STD'S FOR WALKING-WORKING SURFACES.



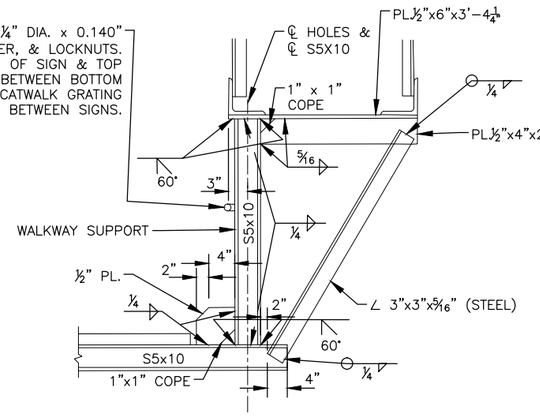
SAFTEY CHAIN DETAIL



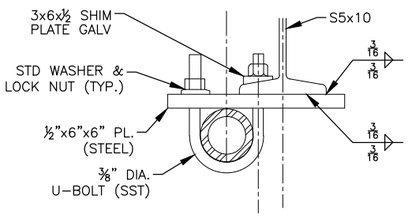


DETAIL "D"

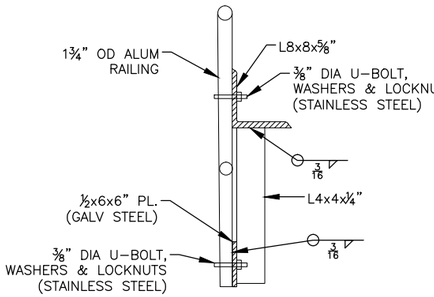
BACKRAIL-GALV. STEEL PIPE 1¼" DIA. x 0.140" WITH ⅜" DIA. U-BOLT, WASHER, & LOCKNUTS. PLACE MIDWAY BETWEEN BOTTOM OF SIGN & TOP OF CATWALK GRATING OR MIDWAY BETWEEN BOTTOM OF LOWER CHORD AND TOP OF CATWALK GRATING BETWEEN SIGNS.



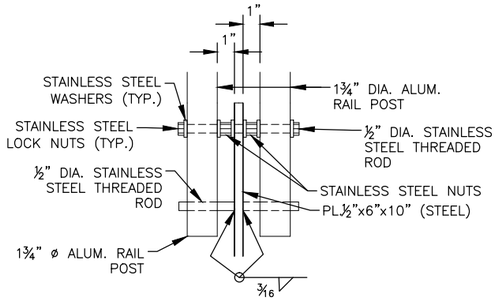
BRACKET DETAILS

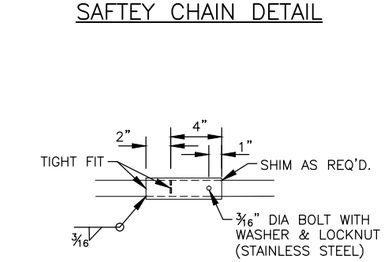


BACKRAIL PLAN VIEW



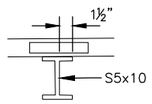
BACKRAIL ELEV. VIEW



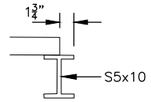


BACKRAIL SPLICE

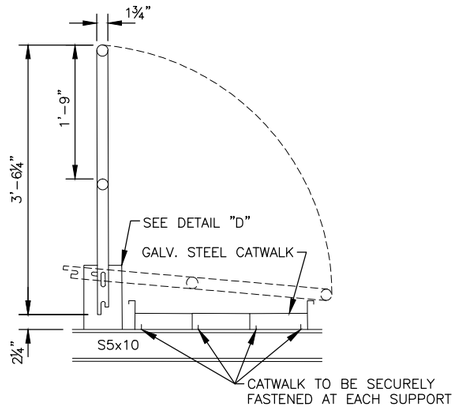
ONE SPLICE ALLOWED FOR LENGTHS OVER 30'-0"



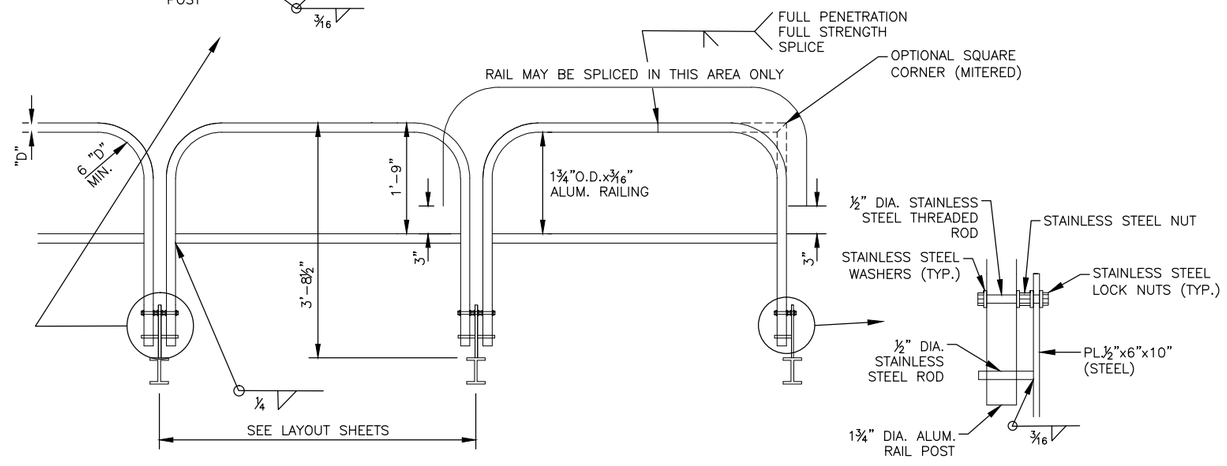
CATWALK SPLICE LOCATION DETAIL



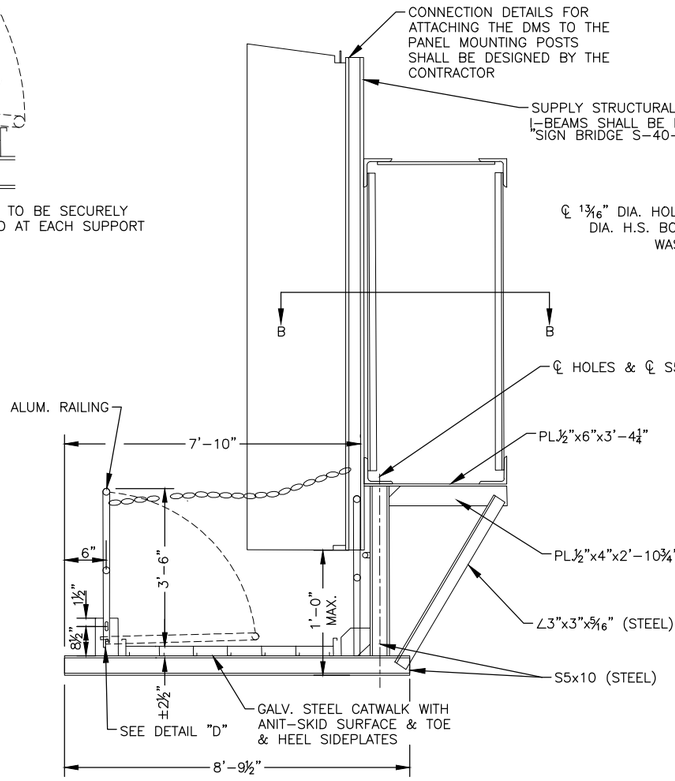
CATWALK TERMINATION DETAIL



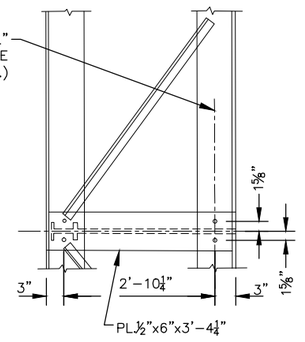
RAIL POST DETAIL



TYPICAL RAILING DETAILS



SECTION THRU WALKWAY



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

S-40-458

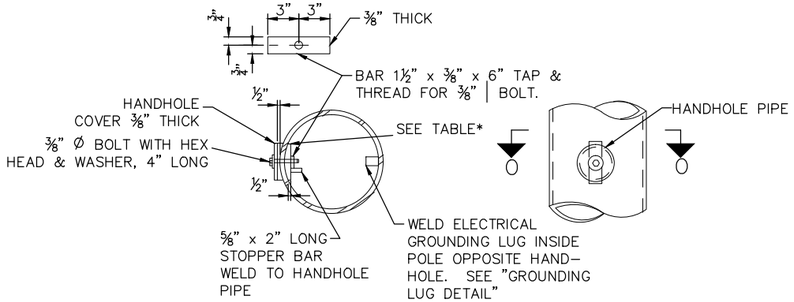
CONST SPEC WISDOT 2016	DRAWN BY MR	PLANS CK'D. VC

CATWALK DETAILS

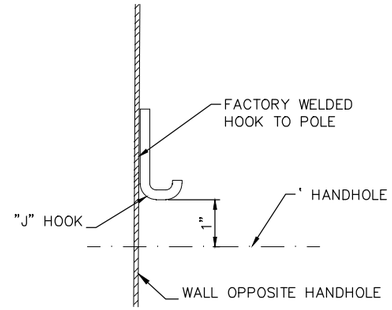
SHEET 7 OF 8

STATE PROJECT NUMBER

1000–20–69

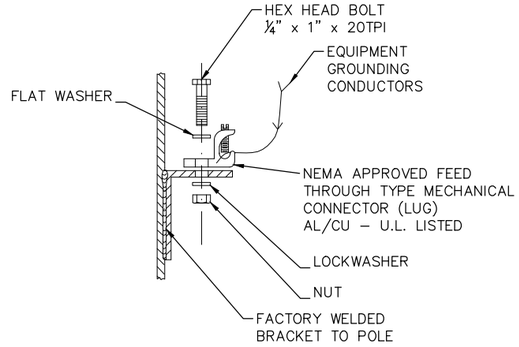


SECTION 0–0 HANDHOLE DETAILS



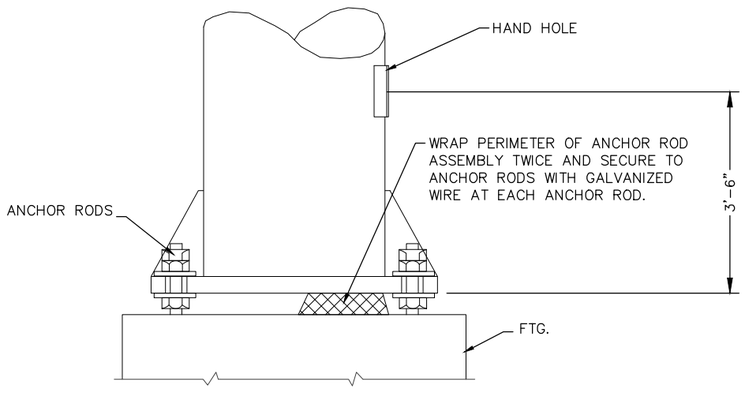
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



GROUNDING LUG DETAIL

NUT, BOLT, AND WASHERS SHALL BE STAINLESS STEEL.



RODENT SCREEN

HANDHOLE NOTES

HANDHOLES SHALL BE LOCATED IN ONE COLUMN OF THE SIGN BRIDGE STRUCTURE IF ELECTRICALLY OPERATED DEVICES ARE INSTALLED ON/IN THE STRUCTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE REGION TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMNS AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL DETAIL PLAN SHEETS.

*

COLUMN SIZE O.D. X THICKNESS	HANDHOLE PIPE O.D. X MIN. THK.
UP TO AND INCLD. 16" X .375"	5.562" X .500"
GREATER THAN 16" X .375" TO AND INCLD. 24" X .562"	6.625" X .562"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

S–40–458

CONST SPEC WISDOT 2016 | DRAWN BY MR | PLANS CK'D. VC

HANDHOLE DETAILS

SHEET 8 OF 8

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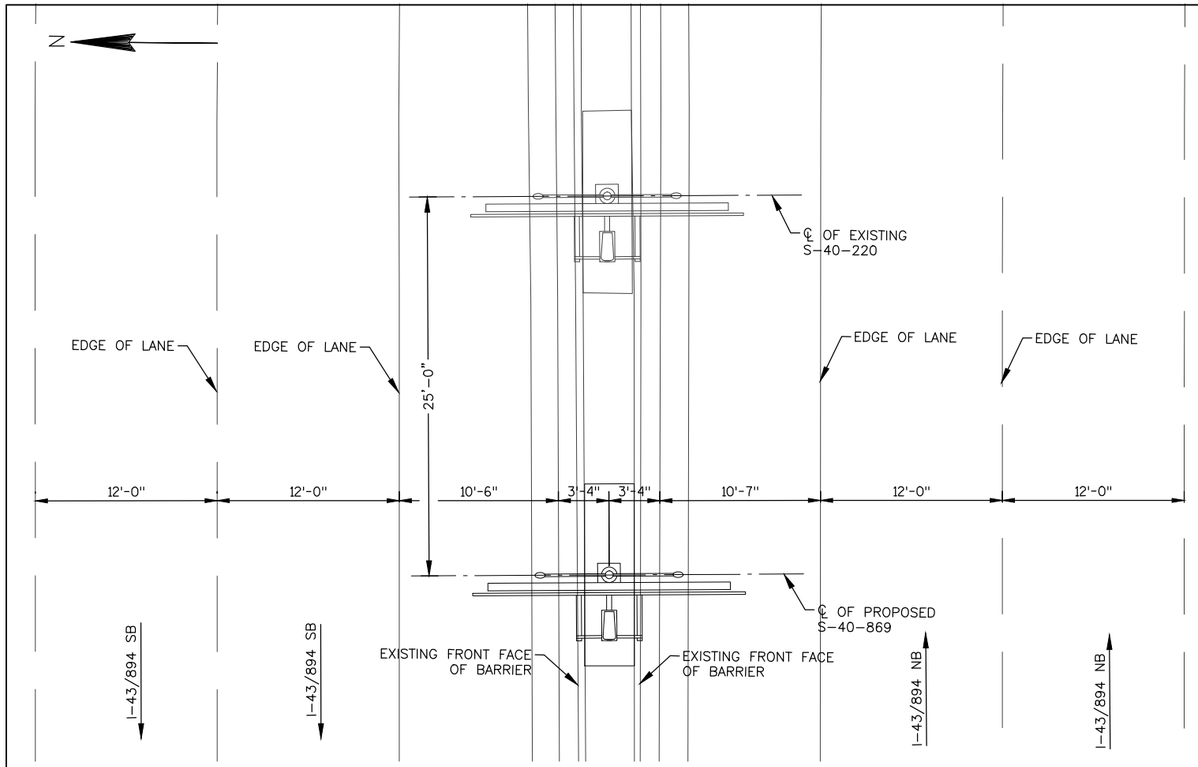
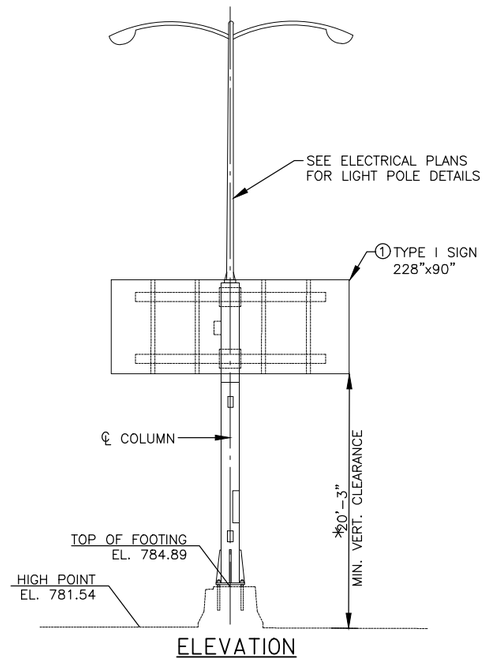
STATE PROJECT NUMBER

1000-20-69



PLAN



ELEVATION

LOOKING EAST AT FRONT FACE OF SIGN
I-43/894 MEDIAN WEST OF 68th STREET
S-40-869 TO REPLACE S-40-220

LIST OF DRAWINGS

1. PLAN & ELEVATION
2. FOUNDATION DETAILS
3. SIGN DETAILS
4. HANDHOLE DETAILS

ULTIMATE DESIGN STRESS:

CONCRETE: .....f'c = 3,500 psi
HIGH STRENGTH BAR
STEEL REINFORCEMENT: .....fy = 60,000 psi

STEEL COLUMN & CHORDS: .....fy = 42,000 psi
(INCLD. HANDHOLE) A.P.I. SPEC 5L GRADE X42
PLATES, BARS, STRUCTURAL ANGLES: .....fy = 36,000 psi
A.S.T.M. A709 GRADE 36
STEEL ANCHOR RODS: .....fy = 55,000 psi
ASTM F1554 GRADE 55
HEAVY HEX NUTS
ASTM A563A
HIGH STRENGTH BOLTS
ASTM A325
STRUCTURAL MEMBERS GALVANIZED
ASTM A123
HARDWARE GALVANIZED
A153 CLASS C

TRAFFIC LIGHTING UNIT:
ALUMINUM POLES .....6063-T6 ALLOY
SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE

DEAD LOAD - 3 PSF OF SIGN. WEIGHT OF SUPPORTING STRUCTURE, CATWALK, LIGHTS, AND RAILINGS.
LIVE LOAD - NONE.
ICE LOAD - 3 PSF TO 1 FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 M.P.H. (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.
FATIGUE CATEGORY I.

ALL BOLTED CONNECTIONS SHALL BE GALVANIZED ASTM A153, CLASS C, AND INSTALLED WITH DTI WASHERS.

TYPE I SIGN DESIGN DATA

MAX DESIGN SIGN AREA (SQ. FT.)	MAX. TYPE I SIGN DEPTH
198	9'-0"

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	16
636.1000	SIGN SUPPORTS STEEL REINFORNCEMENT HS	LB	150
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	1132
641.0100	SIGN BRIDGE SINGLE POLE SIGN SUPPORT ONE SIGN S-40-869	LS	1
650.6500.02	CONSTRUCTION STAKING STRUCTURE LAYOUT S-40-869	LS	1
SPV.0090.04	BARRIER REMOVAL AND RETROFIT	LF	102

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL ELEVATIONS ARE BASED ON NGVD 29 UNLESS OTHERWISE SHOWN OR NOTED.

THE SIGN BRIDGE WAS DESIGNED ACCORDING TO THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS.

ALL STRUCTURAL STEEL MEMBERS SHALL BE GALVANIZED.

CENTER SIGNS VERTICALLY ON CHORD/TRUSS.

CENTER SIGNS OVER RESPECTIVE LANE IF THEY HAVE A DOWN ARROW.

ALTERNATE DESIGNS ARE NOT ALLOWED.

THE LOCATION OF EXISTING OR PROPOSED UTILITIES AS NOTED ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. VERIFY UTILITY INTERFERENCES PRIOR TO CONSTRUCTION.

PROVIDE VENTILATING RODENT SCREENS AT ALL COLUMN BASES (NO GROUT) CONSIDERED INCIDENTAL TO BID ITEM "SIGN BRIDGE SINGLE POLE SUPPORT ONE SIGN S-40-869".

PROVIDE A ¾" CHAMFER OR 1" RADIUS ON ALL EXPOSED CONCRETE EDGES.

PROVIDE HANDHOLES ON UPRIGHT.

THE UPPER 12" OF ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE AASHTO SPECIFICATION AS STATED IN SECTION 641. OF THE WISDOT STANDARD SPECIFICATIONS.

PROVIDE AN IDENTIFICATION PLAQUE FOR THE SIGN BRIDGE IN ACCORDANCE WITH SDD STRUCTURE IDENTIFICATION PLAQUES, SIGN BRIDGES AND OVERHEAD SIGN SUPPORT. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN BRIDGE SINGLE POLE SUPPORT ONE SIGN S-40-869"

SIGNS OR BLANKS SHALL BE INSTALLED ON THE TRUSS AT THE TIME OF ERECTION. SIGNS SHALL BE AS DESIGNATED IN PLANS. SIGN BLANKS AND MOUNTING HARDWARE SHALL BE INCIDENTAL TO "SIGN BRIDGE SINGLE POLE SUPPORT ONE SIGN S-40-869"

INSTALL CONDUIT PLUGS IN ALL UNUSED CONDUIT HOLES, CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN BRIDGE SINGLE POLE SUPPORT ONE SIGN S-40-869"

LIGHT POLE AND LUMINARIES ARE CONSIDERED INCIDENTAL TO BID ITEM "SIGN BRIDGE SINGLE POLE SIGN SUPPORT ONE SIGN S-40-869"

NEW I-BEAMS ARE REQUIRED FOR SIGNS AND ARE INCIDENTAL TO "SIGN BRIDGE SINGLE POLE SUPPORT ONE SIGN S-40-869"

WELD TEST AS PER AWS D1.1

(XX) - REPRESENTS THE SIGN NO. REFER TO THE PERMANENT SIGNING SHEETS.

SUBMIT SHOP DRAWINGS TO TOM HEYDEL, SE REGION WISDOT TRAFFIC OPS.

*CLEARANCE FOR A 9' DEEP SIGN IS PROVIDED FOR FUTURE PROVISIONS.

WISCONSIN
VERONICA CHAVEZ DE FERNANDEZ
E-42456
MILWAUKEE
WI
PROFESSIONAL ENGINEER
2/6/2017

NO.	DATE	REVISION	BY

COLLINS ENGINEERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Diehn SDR 02/08/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

I-43/894 AT 68TH STREET

S-40-869

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
VC	DG	MR	VC

PLAN & ELEVATION

SHEET 1 OF 4

8

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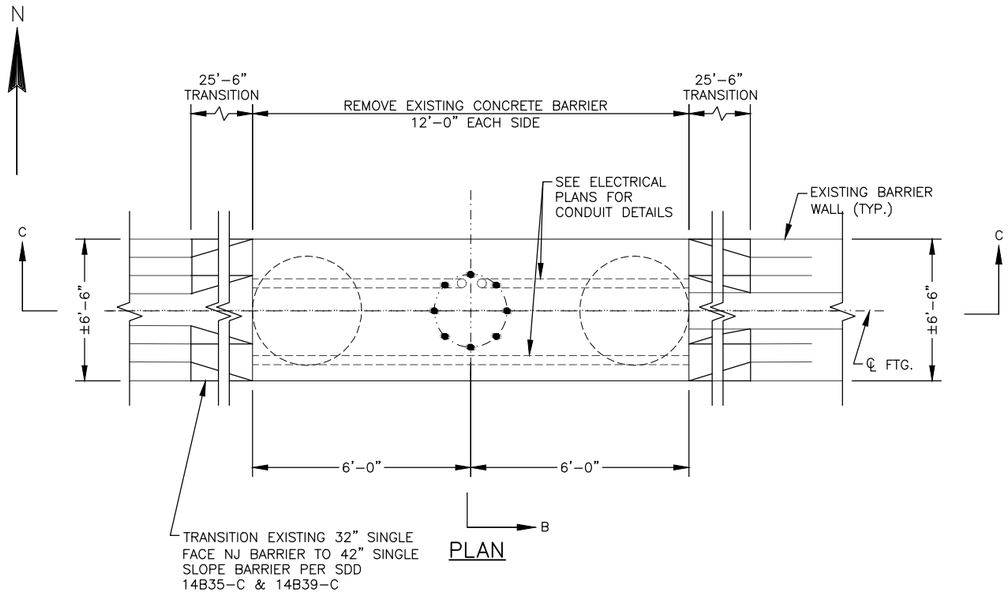
FILE NAME : G:\8730.85 – WisDOT Sign Replacement\CAD\Sheet Drawings\Sheet Drawing
PLOT DATE : 2/1/2017 2:40 PM
PLOT BY : MATT ROESCH
PLOT NAME : S-40-869
PLOT SCALE : 1 IN:10 FT
WISDOT/CA... SHEET

STATE PROJECT NUMBER

1000-20-69



PLAN

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
F701	▲	24	15'-6"			DRILLED SHAFT VERTICAL
F402		24	9'-4"	▲		DRILLED SHAFT HOOP
F503	▲	8	11'-6"			CAP BEAM LONGITUDINAL
F404	▲	12	11'-6"			CAP BEAM LONGITUDINAL
F405	▲	24	11'-5"	▲		CAP BEAM STIRRUP

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

CONCRETE BARRIER TRANSITION DIMENSIONS SHALL BE ADJUSTED TO MATCH EXISTING TRAFFIC BARRIER.

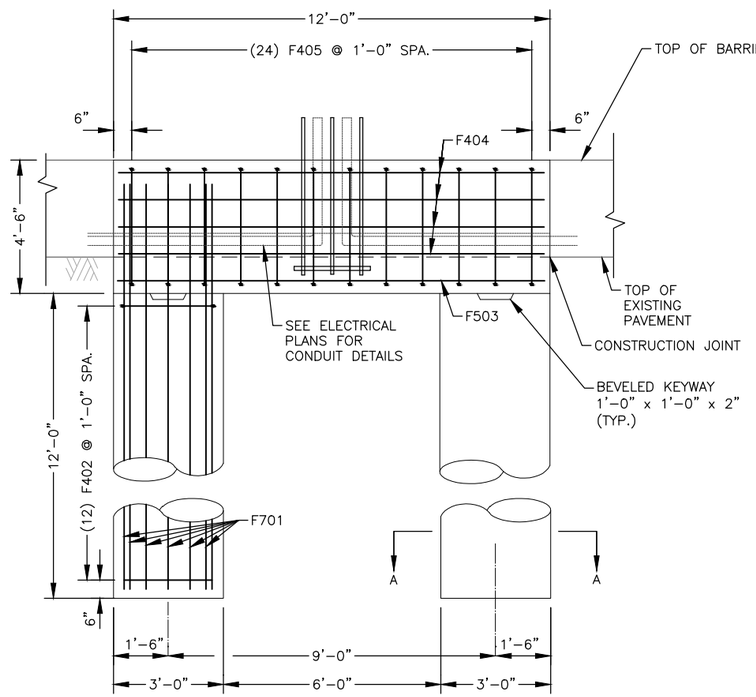
TOP OF FOOTING SURFACE SHALL BE SMOOTH AND SLOPED TO DRAIN.

BOTTOM OF FOOTING TO BE EMBEDDED 1'-0" BELOW GRADE, UNLESS OTHERWISE NOTED.

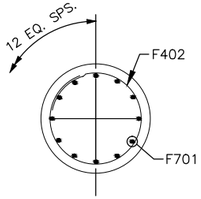
ISOLATION JOINT PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER. THE PREFORMED JOINT FILLER AND NON-BITUMINOUS JOINTSEALER SHALL MEET THE REQUIREMENTS OF SECTION 502 OF THE STANDARD SPECIFICATIONS. INCIDENTAL TO "SIGN SUPPORTS CONCRETE MASONRY".

BAR STEEL SHALL BE EMBEDDED 3" CLEAR UNLESS OTHERWISE NOTED.

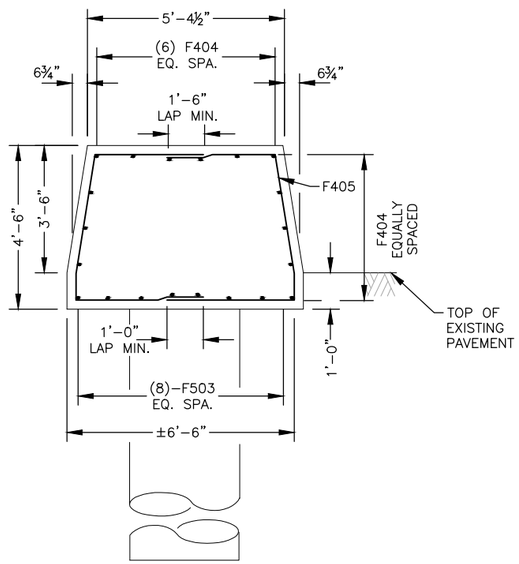
TIE CAP BEAM REBAR IN PLACE AFTER ANCHOR ROD ASSEMBLY IS SET.



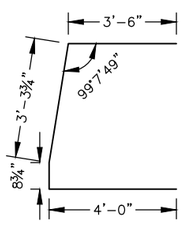
SECTION C-C



SECTION A-A



SECTION B-B



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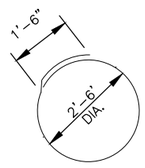


F402

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

S-40-869

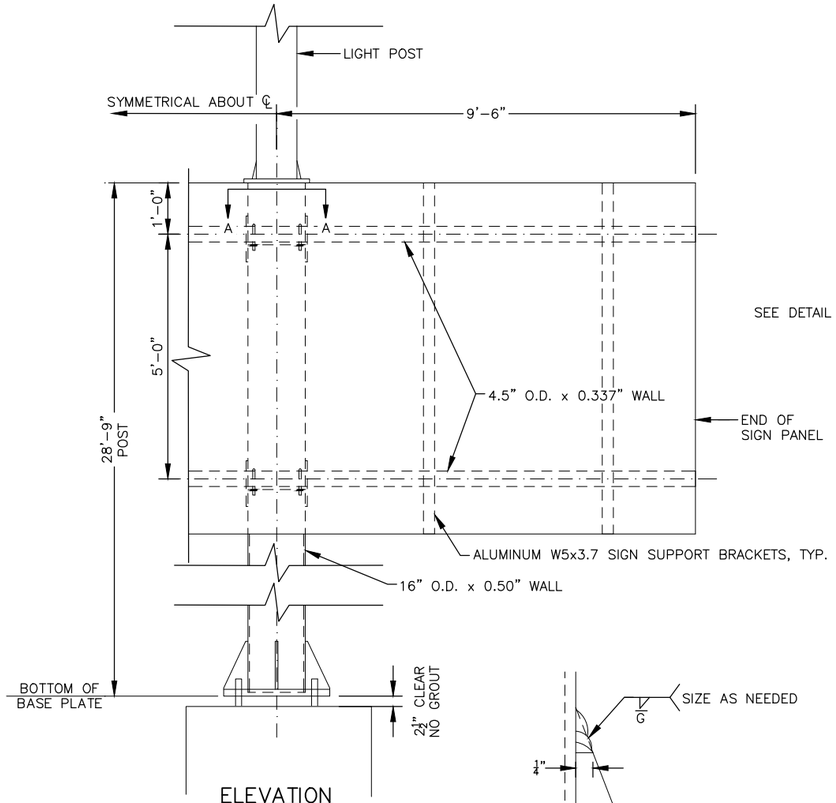
CONST SPEC WISDOT	2017	DRAWN BY	MR	PLANS CK'D.	VC

FOUNDATION DETAILS

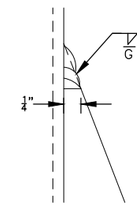
SHEET 2 OF 4

STATE PROJECT NUMBER

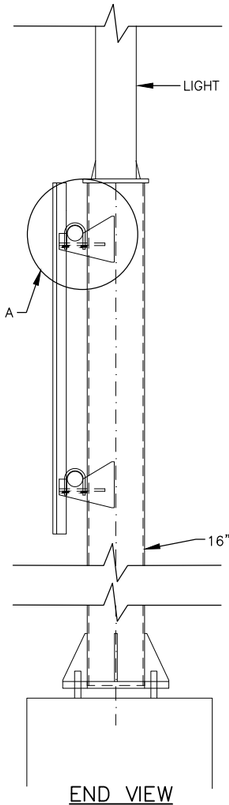
1000-20-69



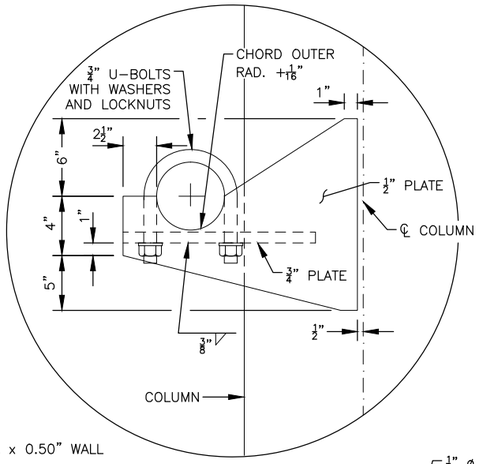
ELEVATION



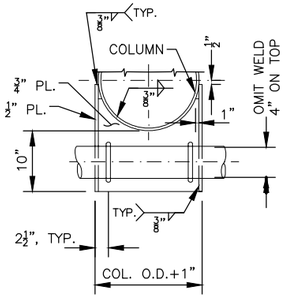
DETAIL B



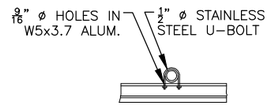
END VIEW



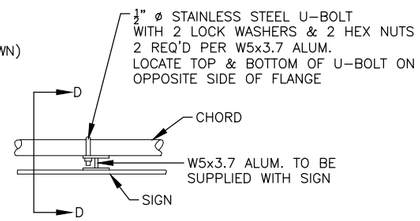
DETAIL A
(BRACKETS NOT SHOWN)



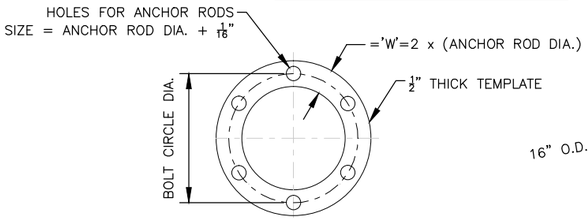
SECTION A-A



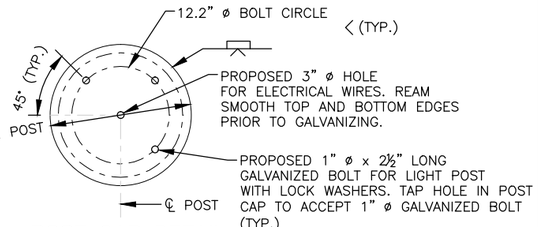
SECTION D-D



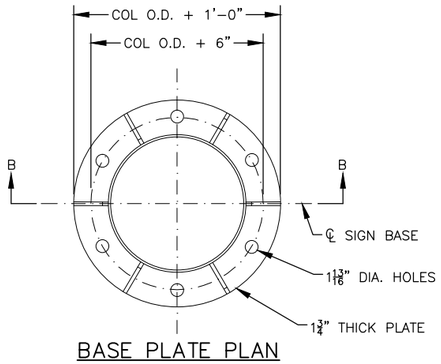
TYPICAL SIGN CONNECTION



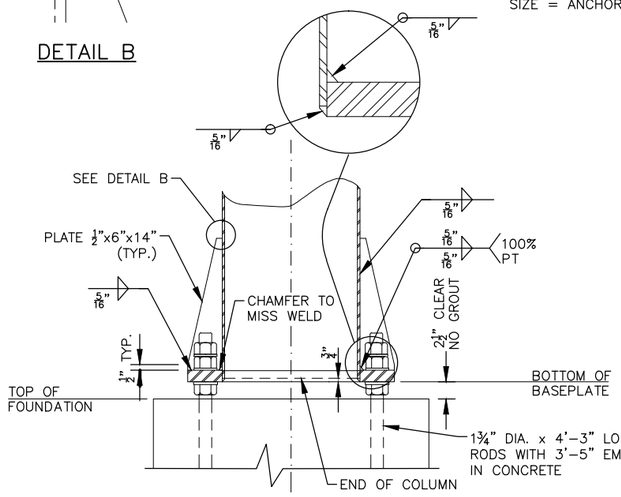
TOP VIEW OF TOP & BOTTOM TEMPLATES



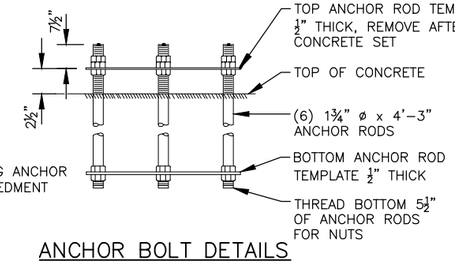
POST CAP DETAIL



BASE PLATE PLAN



SECTION B-B



ANCHOR BOLT DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURES DESIGN SECTION

S-40-869

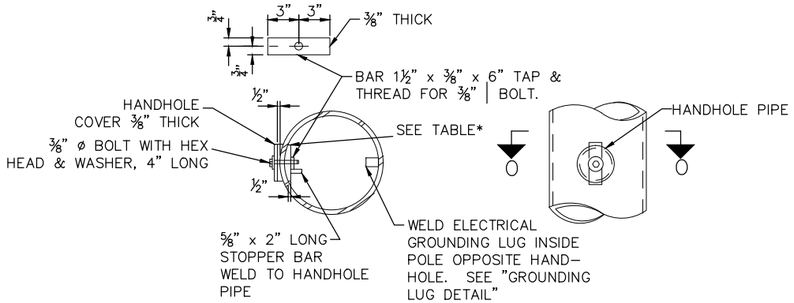
CONST SPEC WISDOT 2017	DRAWN BY	PLANS CK'D.

SIGN DETAILS

SHEET 3 OF 4

8

8



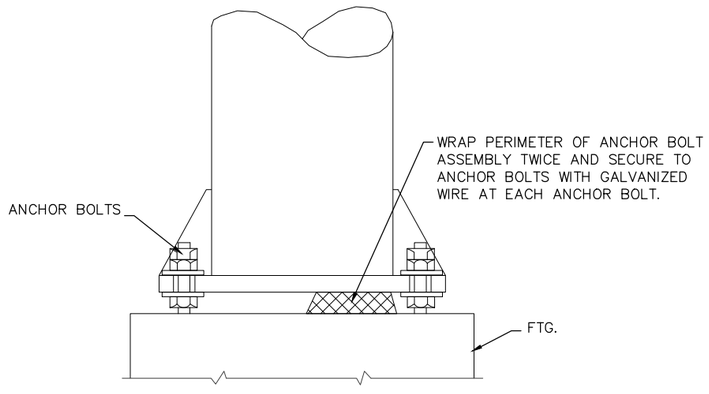
SECTION 0–0 HANDHOLE DETAILS

HANDHOLE NOTES

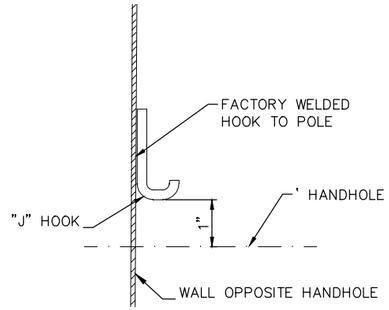
HANDHOLES SHALL BE LOCATED IN ONE COLUMN OF THE SIGN BRIDGE STRUCTURE IF ELECTRICALLY OPERATED DEVICES ARE INSTALLED ON/IN THE STRUCTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE REGION TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMNS AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL DETAIL PLAN SHEETS.

*

COLUMN SIZE O.D. X THICKNESS	HANDHOLE PIPE O.D. X MIN. THK.
UP TO AND INCLD. 16" X .375"	5.562" X .500"
GREATER THAN 16" X .375" TO AND INCLD. 24" X .562"	6.625" X .562"

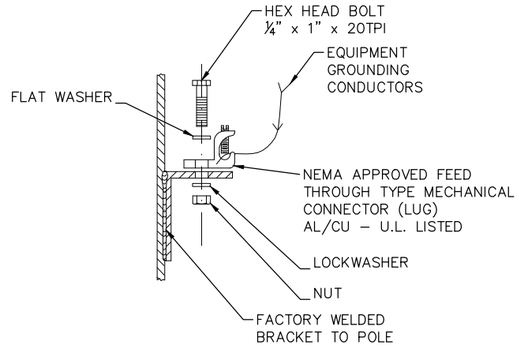


RODENT SCREEN



TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



GROUNDING LUG DETAIL

NUT, BOLT, AND WASHERS SHALL BE STAINLESS STEEL.

8

8

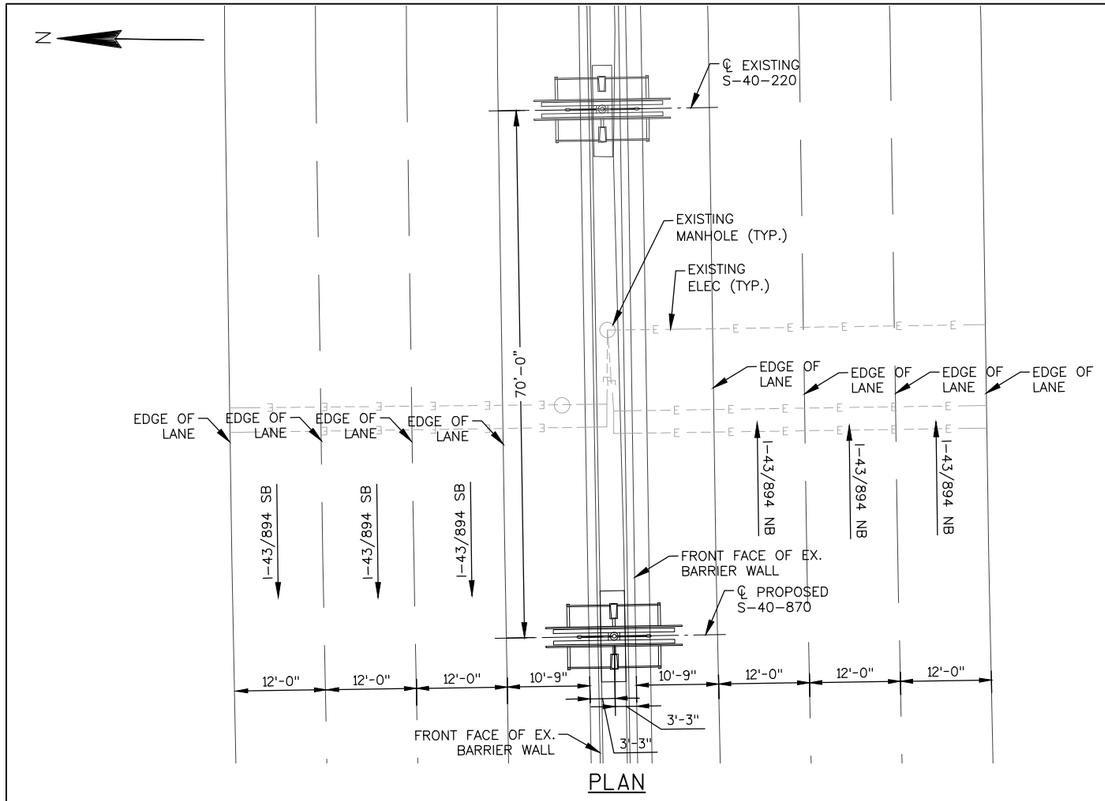
NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION
S–40–869

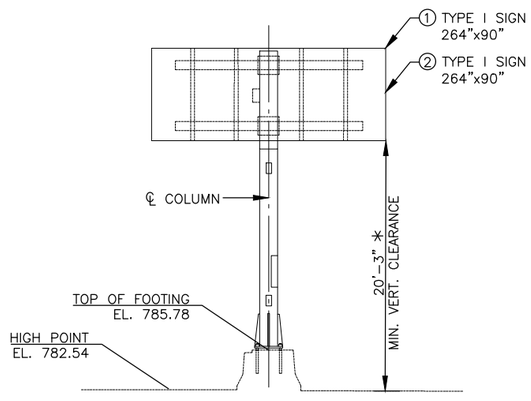
CONST SPEC WISDOT 2016 | DRAWN BY MR | PLANS CK'D. VC

HANDHOLE DETAILS

SHEET 4 OF 4



PLAN



ELEVATION

LOOKING EAST AT FRONT FACE OF SIGN
I-43/894 MEDIAN WEST OF 51st ST.
S-40-870 TO REPLACE S-40-222

LIST OF DRAWINGS

1. PLAN & ELEVATION
2. FOUNDATION DETAILS
3. SIGN DETAILS
4. HANDHOLE DETAILS

ULTIMATE DESIGN STRESS:

CONCRETE: .....f'c = 3,500 psi
HIGH STRENGTH BAR
STEEL REINFORCEMENT: .....fy = 60,000 psi

STEEL COLUMN & CHORDS: .....fy = 42,000 psi
(INCLD. HANDHOLE) A.P.I. SPEC 5L GRADE X42
PLATES, BARS, STRUCTURAL ANGLES: .....fy = 36,000 psi
A.S.T.M. A709 GRADE 36
STEEL ANCHOR RODS: .....fy = 55,000 psi
ASTM F1554 GRADE 55
HEAVY HEX NUTS
ASTM A563A
WASHERS
ASTM F436
HIGH STRENGTH BOLTS
ASTM A325
STRUCTURAL MEMBERS GALVANIZED
ASTM A123
HARDWARE GALVANIZED
ASTM A153 CLASS C

DESIGN DATA:

DEAD LOAD - 3 PSF OF SIGN. WEIGHT OF SUPPORTING STRUCTURE, CATWALK, LIGHTS, AND RAILINGS.
LIVE LOAD - NONE.
ICE LOAD - 3 PSF TO 1 FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 M.P.H. (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.
FATIGUE CATEGORY I.

ALL BOLTED CONNECTIONS SHALL BE GALVANIZED ASTM A153, CLASS C, AND INSTALLED WITH DTI WASHERS.

TYPE I SIGN DESIGN DATA

MAX DESIGN SIGN AREA (SQ. FT.)	MAX. TYPE I SIGN DEPTH
198	9'-0"

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	18
636.1000	SIGN SUPPORTS STEEL REINFORNCEMENT HS	LB	150
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	1123
641.0600	SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS S-40-870	LS	1
650.6500.03	CONSTRUCTION STAKING STRUCTURE LAYOUT S-40-870	LS	1
SPV.0090.04	BARRIER REMOVAL AND RETROFIT	LF	102

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL ELEVATIONS ARE BASED ON NGVD 29 UNLESS OTHERWISE SHOWN OR NOTED.

THE SIGN BRIDGE WAS DESIGNED ACCORDING TO THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS.

ALL STRUCTURAL STEEL MEMBERS SHALL BE GALVANIZED.

CENTER SIGNS VERTICALLY ON CHORD/TRUSS.

CENTER SIGNS OVER RESPECTIVE LANE IF THEY HAVE A DOWN ARROW.

ALTERNATE DESIGNS ARE NOT ALLOWED.

THE LOCATION OF EXISTING OR PROPOSED UTILITIES AS NOTED ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. VERIFY UTILITY INTERFERENCES PRIOR TO CONSTRUCTION.

PROVIDE VENTILATING RODENT SCREENS AT ALL COLUMN BASES (NO GROUT) CONSIDERED INCIDENTAL TO BID ITEM "SIGN BRIDGE SINGLE POLE SUPPORT TWO SIGNS S-40-870".

PROVIDE A ¾" CHAMFER OR 1" RADIUS ON ALL EXPOSED CONCRETE EDGES.

PROVIDE HANDHOLES ON UPRIGHT.

THE UPPER 12" OF ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE AASHTO SPECIFICATION AS STATED IN SECTION 641. OF THE WISDOT STANDARD SPECIFICATIONS.

PROVIDE AN IDENTIFICATION PLAQUE FOR THE SIGN BRIDGE IN ACCORDANCE WITH SDD STRUCTURE IDENTIFICATION PLAQUES, SIGN BRIDGES AND OVERHEAD SIGN SUPPORT. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN BRIDGE SINGLE POLE SUPPORT TWO SIGNS S-40-870"

SIGNS OR BLANKS SHALL BE INSTALLED ON THE TRUSS AT THE TIME OF ERECTION. SIGNS SHALL BE AS DESIGNATED IN PLANS. SIGN BLANKS AND MOUNTING HARDWARE SHALL BE INCIDENTAL TO "SIGN BRIDGE SINGLE POLE SUPPORT TWO SIGNS S-40-870"

INSTALL CONDUIT PLUGS IN ALL UNUSED CONDUIT HOLES, CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN BRIDGE SINGLE POLE SUPPORT TWO SIGNS S-40-870"

NEW I-BEAMS ARE REQUIRED FOR SIGNS AND ARE INCIDENTAL TO "SIGN BRIDGE SINGLE POLE SUPPORT TWO SIGNS S-40-870"

WELD TEST AS PER AWS D1.1

(XX) - REPRESENTS THE SIGN NO. REFER TO THE PERMANENT SIGNING SHEETS.

SUBMIT SHOP DRAWINGS TO TOM HEYDEL, SE REGION WISDOT TRAFFIC OPS.

*CLEARANCE FOR A 9' DEEP SIGN IS PROVIDED FOR FUTURE PROVISIONS.

WISCONSIN
VERONICA CHAVEZ DE FERNANDEZ
E-42456
MILWAUKEE
WI
PROFESSIONAL ENGINEER

2/6/2017

STATE PROJECT NUMBER

1000-20-69

NO.	DATE	REVISION	BY

COLLINS ENGINEERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 02/08/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

I-43/894 AT 51ST STREET

S-40-870

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	VC	DESIGN CK'D.	DG	DRAWN BY	MR	PLANS CK'D.	VC

PLAN & ELEVATION

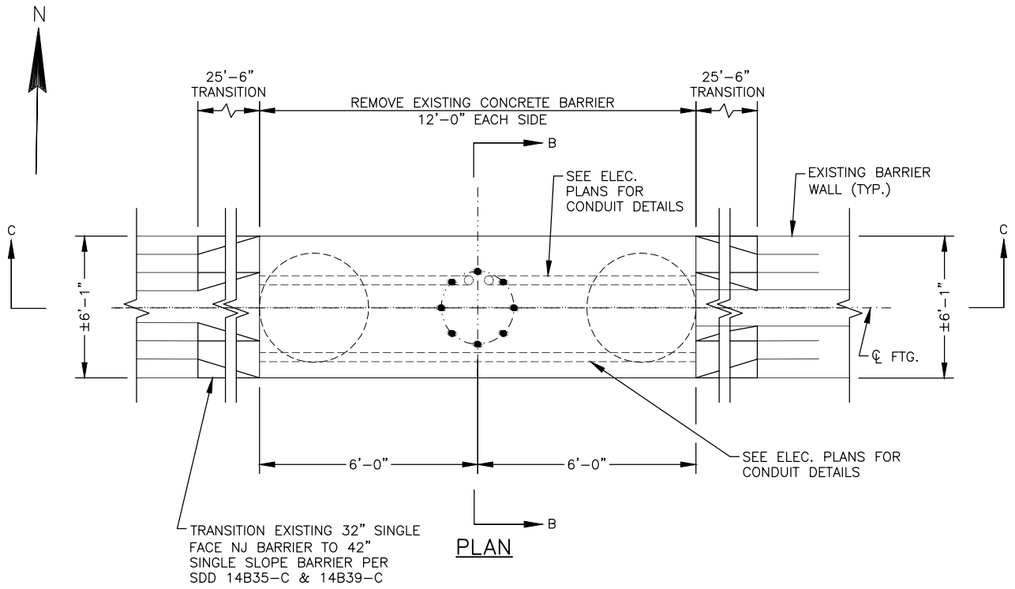
SHEET 1 OF 4

8

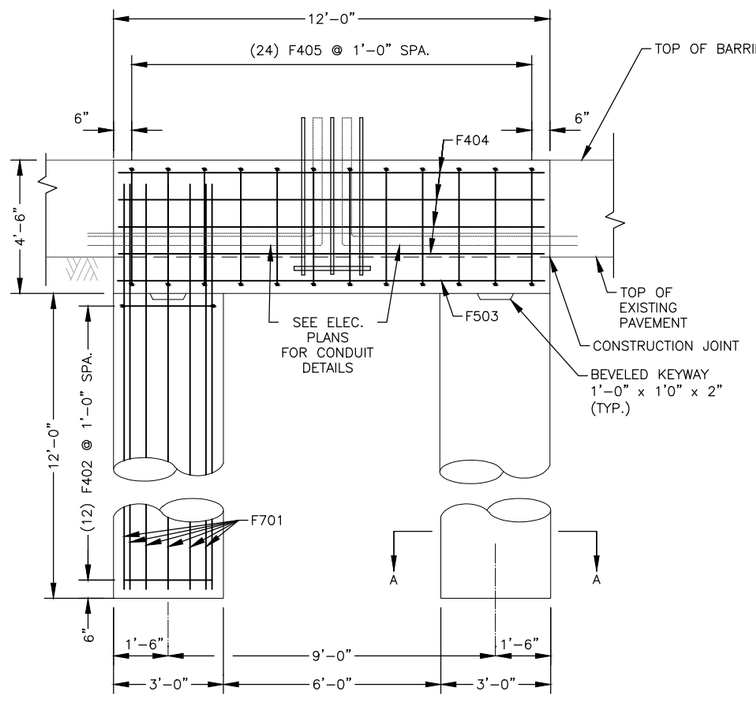
8

STATE PROJECT NUMBER

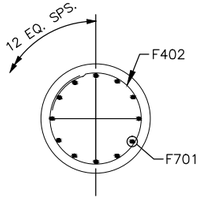
1000–20–69



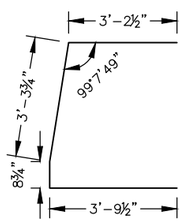
PLAN



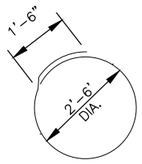
SECTION C–C



SECTION A–A



F405



F402

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
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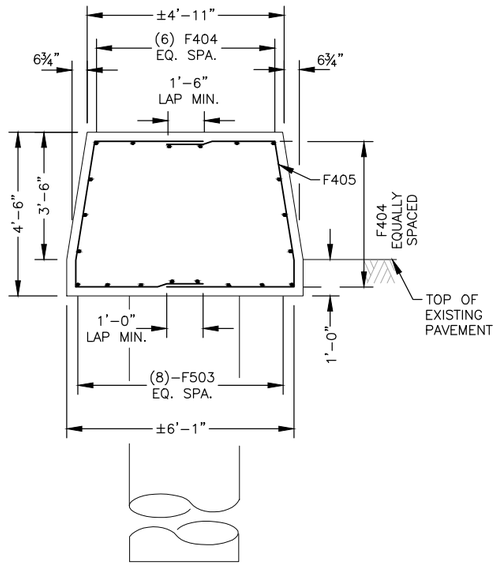
F404	▲	12	11'–6"			CAP BEAM LONGITUDINAL
F405	▲	24	10'–10½"	▲		CAP BEAM STIRRUP



SECTION B–B

GENERAL NOTES

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TOP OF FOOTING SURFACE SHALL BE SMOOTH AND SLOPED TO DRAIN.

BOTTOM OF FOOTING TO BE EMBEDDED 1'–0" BELOW GRADE, UNLESS OTHERWISE NOTED.

ISOLATION JOINT PREFORMED JOINT FILLER WITH NON–BITUMINOUS JOINT SEALER. THE PREFORMED JOINT FILLER AND NON–BITUMINOUS JOINTSEALER SHALL MEET THE REQUIREMENTS OF SECTION 502 OF THE STANDARD SPECIFICATIONS. INCIDENTAL TO "SIGN SUPPORTS CONCRETE MASONRY".

BAR STEEL SHALL BE EMBEDDED 3" CLEAR UNLESS OTHERWISE NOTED.

TIE CAP BEAM REINFORCEMENT AFTER ANCHOR ROD ASSEMBLY IS SET.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

S–40–870

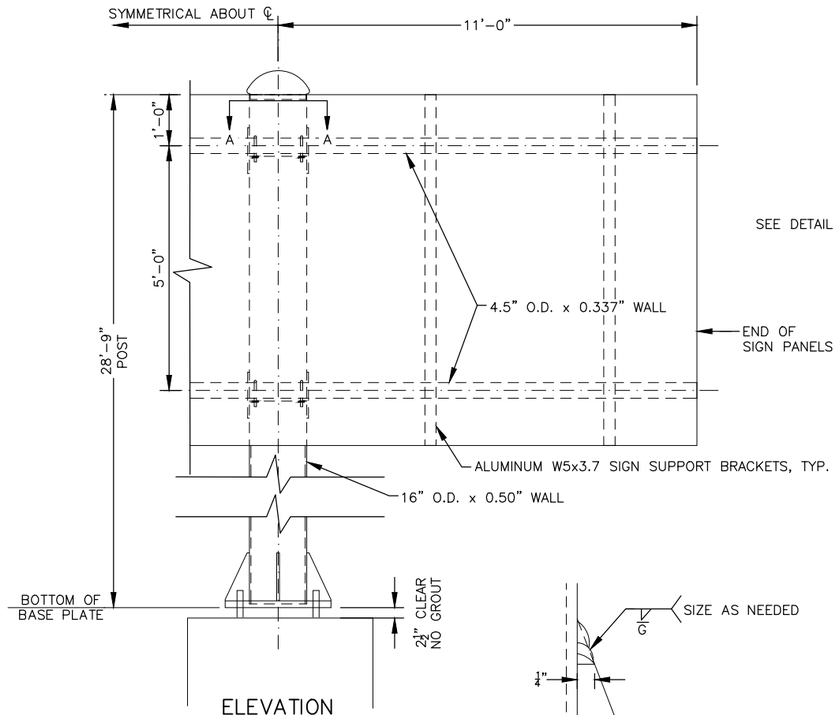
CONST SPEC WISDOT	2017	DRAWN BY MR	PLANS CK'D. VC

FOUNDATION DETAILS

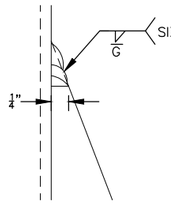
SHEET 2 OF 4

STATE PROJECT NUMBER

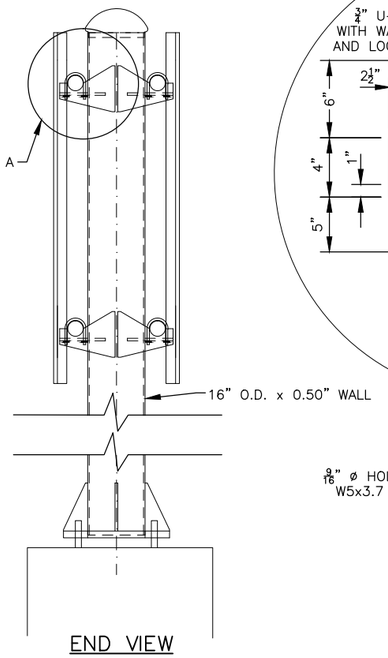
1000-20-69



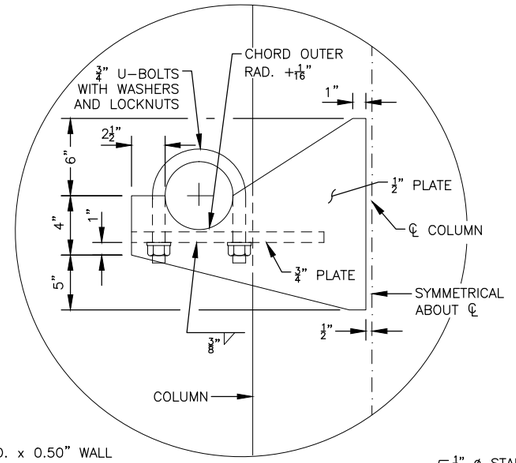
ELEVATION



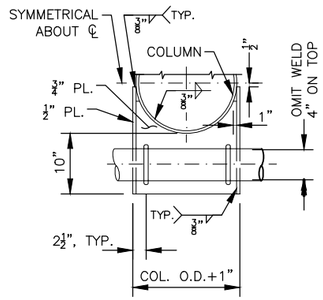
DETAIL B



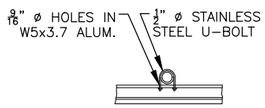
END VIEW



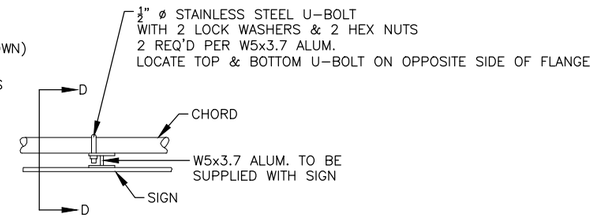
DETAIL A
(BRACKETS NOT SHOWN)



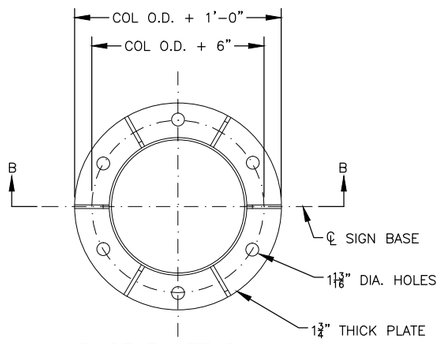
SECTION A-A



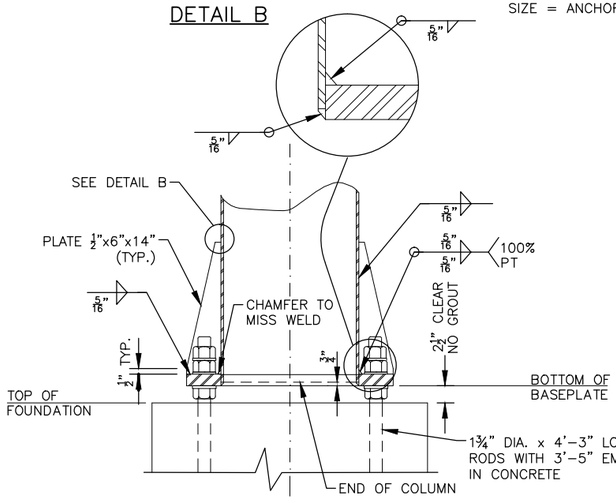
SECTION D-D



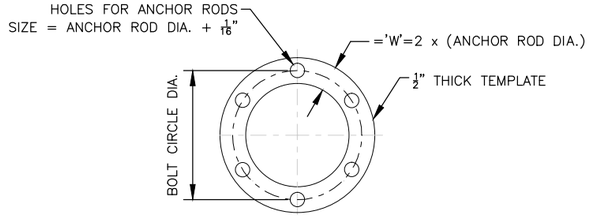
TYPICAL SIGN CONNECTION



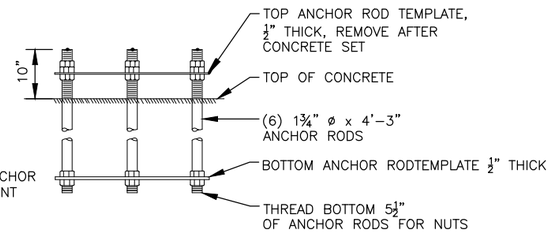
BASE PLATE PLAN



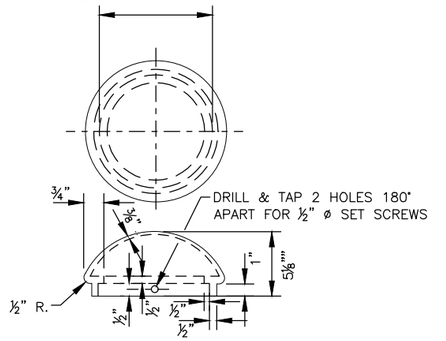
SECTION B-B



TOP VIEW OF TOP & BOTTOM TEMPLATES



ANCHOR BOLT DETAILS



TOWER CAP DETAIL

8

8

NO.	DATE	REVISION	BY

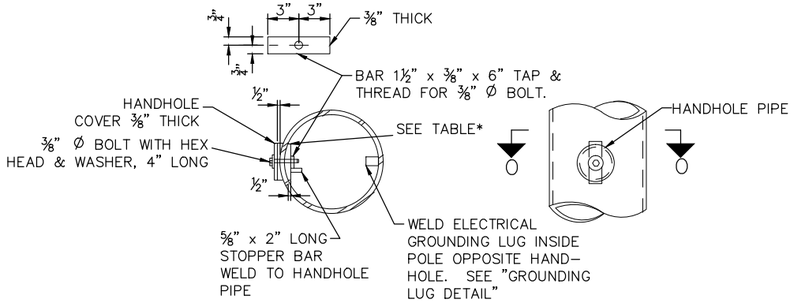
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

S-40-870

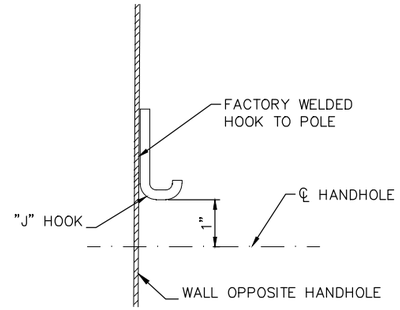
CONST SPEC WISDOT	2017	DRAWN BY MR	PLANS CK'D. VC

SIGN DETAILS

SHEET 3 OF 4

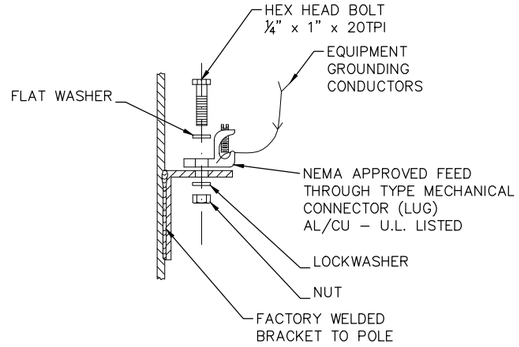


SECTION 0-0 HANDHOLE DETAILS



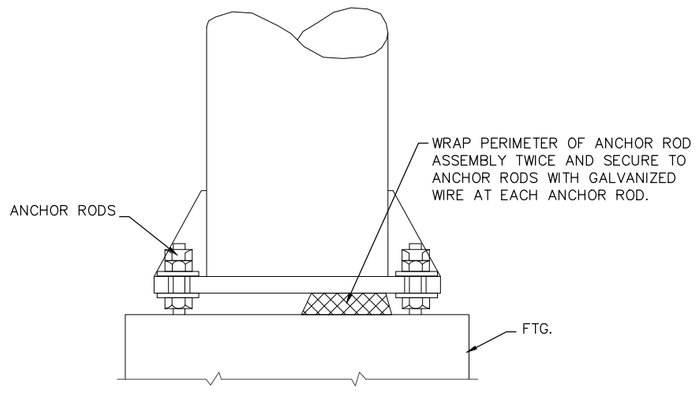
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



GROUNDING LUG DETAIL

NUT, BOLT, AND WASHERS SHALL BE STAINLESS STEEL.



RODENT SCREEN

HANDHOLE NOTES

HANDHOLES SHALL BE LOCATED IN ONE COLUMN OF THE SIGN BRIDGE STRUCTURE IF ELECTRICALLY OPERATED DEVICES ARE INSTALLED ON/IN THE STRUCTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE REGION TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMNS AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL DETAIL PLAN SHEETS.

*

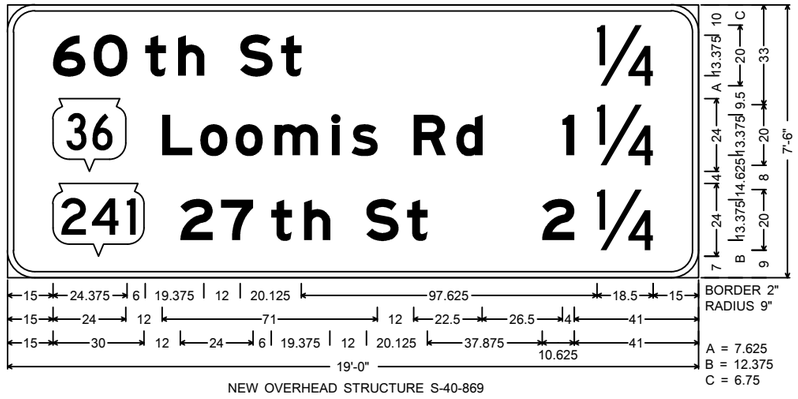
COLUMN SIZE O.D. X THICKNESS	HANDHOLE PIPE O.D. X MIN. THK.
UP TO AND INCLD. 16" X .375"	5.562" X .500"
GREATER THAN 16" X .375" TO AND INCLD. 24" X .562"	6.625" X .562"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION
S-40-870

CONST SPEC WISDOT 2017 | DRAWN BY MR | PLANS CK'D. VC

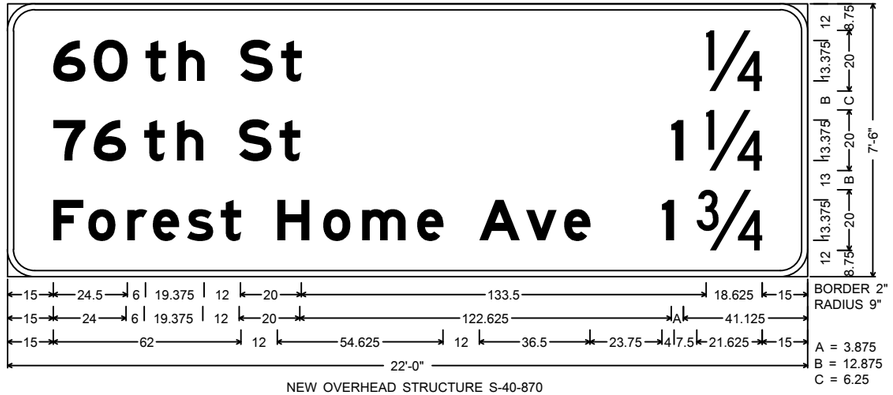
HANDHOLE DETAILS | SHEET 4 OF 4



NEW OVERHEAD STRUCTURE S-40-869

BORDER 2"
RADIUS 9"

A = 7.625
B = 12.375
C = 6.75



NEW OVERHEAD STRUCTURE S-40-870

BORDER 2"
RADIUS 9"

A = 3.875
B = 12.875
C = 6.25

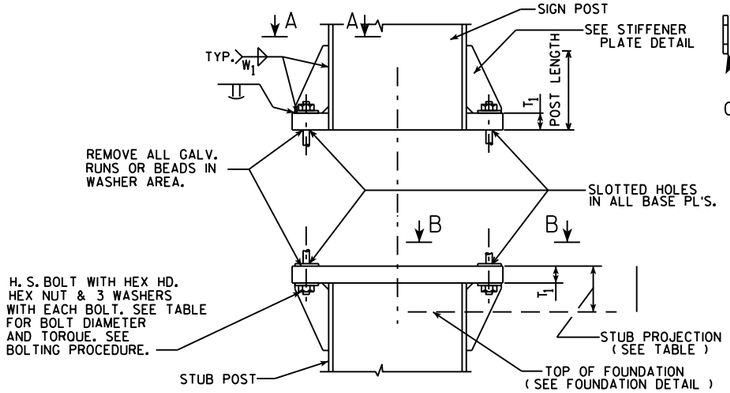
GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE "TYPE SH REFLECTIVE SHEETING".
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E MODIFIED". ALL CAP WORDS ARE "SERIES E".
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE "SERIES E" PER PLATES A11-7 AND A11-10.

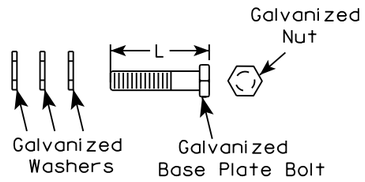
7

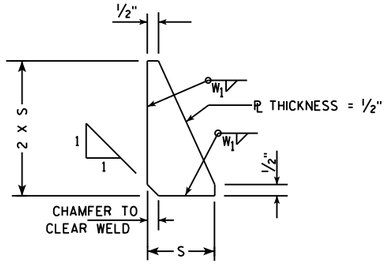
PROJECT NO: 1000-20-69	HWY: 41/43/894	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I SIGNS	SHEET 171	E

FILE NAME : N:\PDS\C3D\CAD\10002069\SIGN\070101_MS.DWG
LAYOUT NAME - 070101_MS_PG1
PLOT DATE : 9/12/2016 10:50 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME :
WISDOT/CADDS SHEET



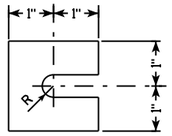
SIGN POST AND STUB POST ELEVATION





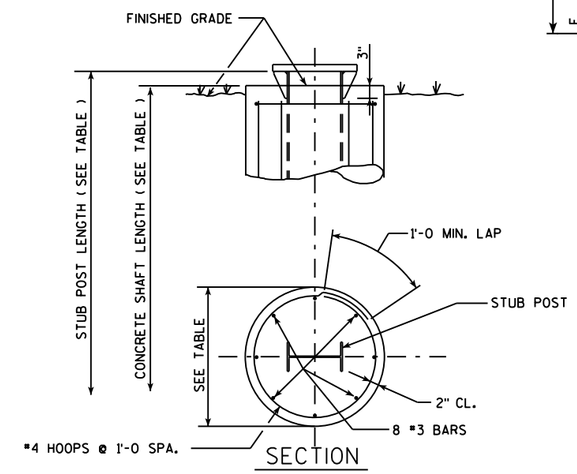
STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)

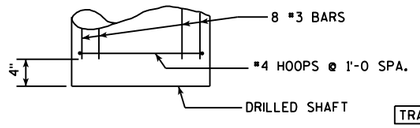


FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

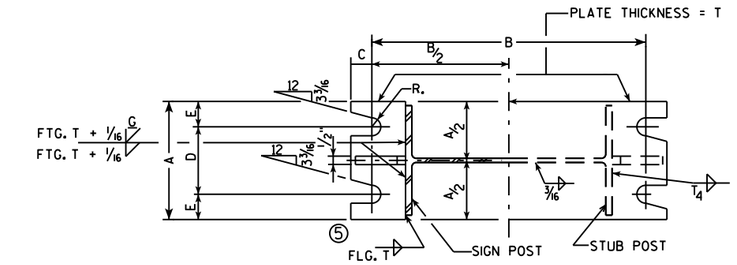
SHIM DETAIL



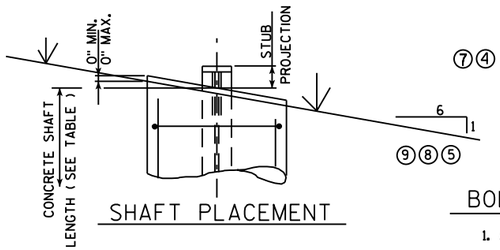
SECTION



FOUNDATION DETAIL



SECTION A-A SECTION B-B



SHAFT PLACEMENT

DESIGN DATA

WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

GROUP LOADS	PERCENT OF ALLOWABLE STRESS	
1. DEAD	100	
2. DEAD & WIND	140	
3. DEAD, ICE & ½ WIND[4]	140	[4]25 P.S.F. MIN.

ALLOWABLE SOIL PRESSURE = 1½T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

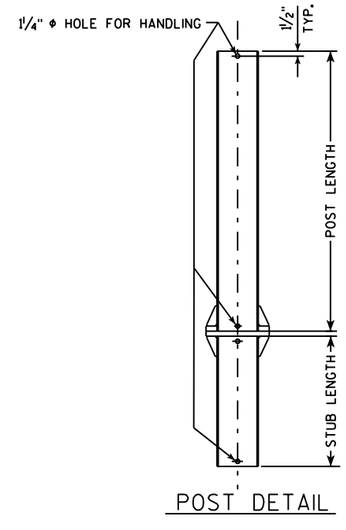
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH ASTM A123. (9)
THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
FURNISH STEEL BOLTS, NUTS, AND WASHERS IN ACCORDANCE WITH SECTION 635 OF THE STANDARD SPECIFICATIONS.

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.



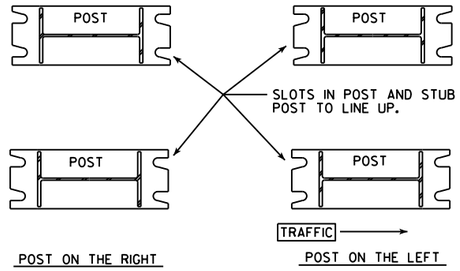
POST DETAIL

QUANTITIES FOR 1 FOOTING		
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
E	1.0	62

(7)

REINF.	TYPE	#3	#4
	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
	E	8 @ 7'-11	9 @ 6'-3

(7)



POST SLOT ORIENTATION (7)

				BASE CONNECTION DATA TABLE										FOUNDATION DATA				(2)
L	X	TYPE	DIMENSION / POST SIZE	BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	K
3 ¾	(4)	A	W10"X12.0 #/FT.	¾" ϕ @ 75#-FT.	5¼"	1'-0⅜"	⅞"	3½"	⅞"	1"	3/16"	5/16"	13/32"	2⅛"	3'-6	3"	2'-0 ϕ	5'-0	76.0# (4)
4 ¾	(4)	B	W12"X16.0 #/FT.	⅞" ϕ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1¼"	¼"	5/16"	13/32"	3"	5'-6	3"	2'-0 ϕ	7'-0	146.5# (4)
5		C	W12"X19.0 #/FT.	⅞" ϕ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	5/16"	5/16"	13/32"	3"	6'-0	3"	2'-0 ϕ	7'-6	182.1#
5		D	W12"X22.0 #/FT.	⅞" ϕ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	⅜"	5/16"	13/32"	3"	6'-6	3"	2'-0 ϕ	8'-0	210.5#
5	(3)	E	W12"X26.0 #/FT.	1" ϕ @ 90#-FT.	7"	1'-4¼"	1¼"	4"	1½"	1½"	⅜"	5/16"	11/32"	3"	7'-0	3"	2'-0 ϕ	8'-6	293.0# (3)

(1) (6) (1)

STRUCTURAL CARBON STEEL PAY WTS. (1 POST) = K+ (POST LENGTH X POST WT.)
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/12/15 PLATE NO. A3-1.16

(10)	1-21-14	LUBRICATION OF BASE BOLTS
(9)	4-26-11	REMOVE NON-GALVANIZED
(8)	10-30-96	NOT GALVANIZED/GALVANIZED
(7)	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
(6)	8-24-87	BASE CONN. WELD
(5)	10-13-81	BASE CONN. WELD & FUSE PL WASHERS
(4)	10-19-79	POST A & B, A572 GR. 50, & K
(2)	11-28-78	"K" (3) 4-23-79 TYPE "E"
(1)	5-4-78	T_1 , T_2 & W_1
NO.	DATE	REVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2011	JPH	

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

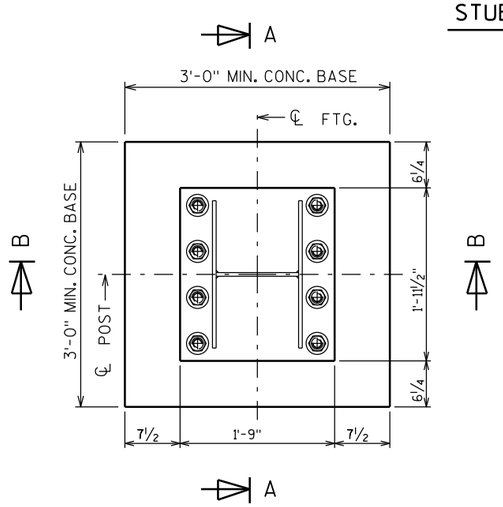
SHEET

172

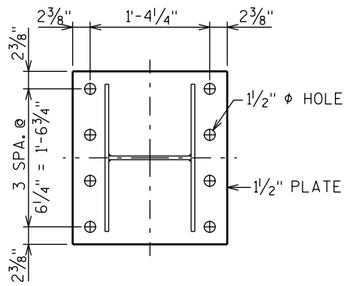
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31.DGN PLOT DATE : 01-DEC-2015 18:20 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000

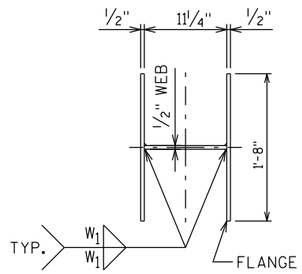
STUB AND MASONRY ANCHOR DETAILS



STUB SECTION



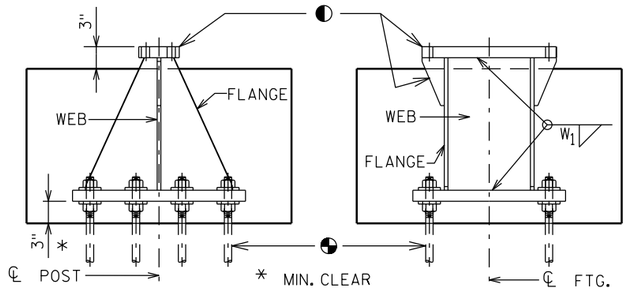
BASE PLATE



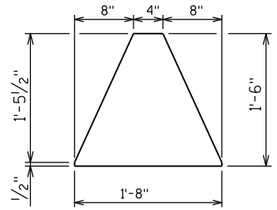
STUB

◐ SEE PLATE NO. A3-1 FOR DETAILS

◒ MASONRY ANCHORS TYPE S 1¼-INCHES (ADHESIVE). ALLOWABLE PULL OUT CAPACITY 14,995 KIPS. EMBED 1'-3" IN ROCK.



SECTION A SECTION B



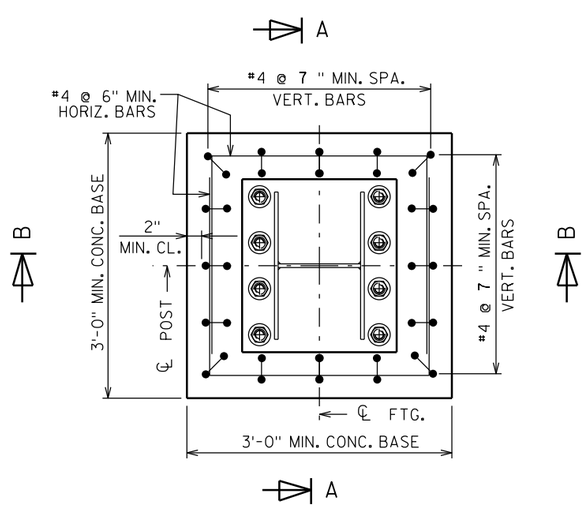
FLANGE

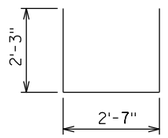
GENERAL NOTES

1. Quantities per Base:
   - REINFORCING BAR STEEL = 62 LBS
   - CONCRETE = 0.6 C.Y.
   - STEEL WEIGHT = 335 LBS
2. All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
3. If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS

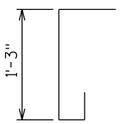
CONCRETE BASE SECTION





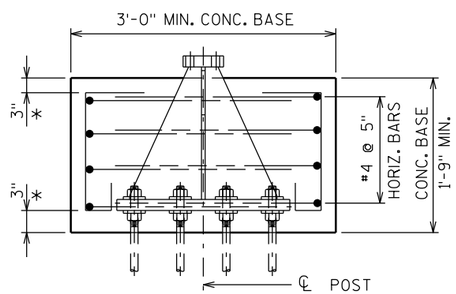
HORIZONTAL BAR

8 BARS @ 6'-11" LENGTH



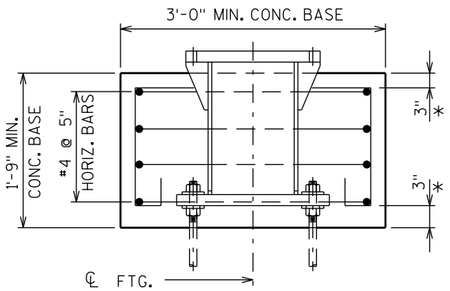
VERTICAL BARS

16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A

* MIN. CLEAR



SECTION B

ALTERNATE BREAK-AWAY BASE ON ROCK
A3-1M

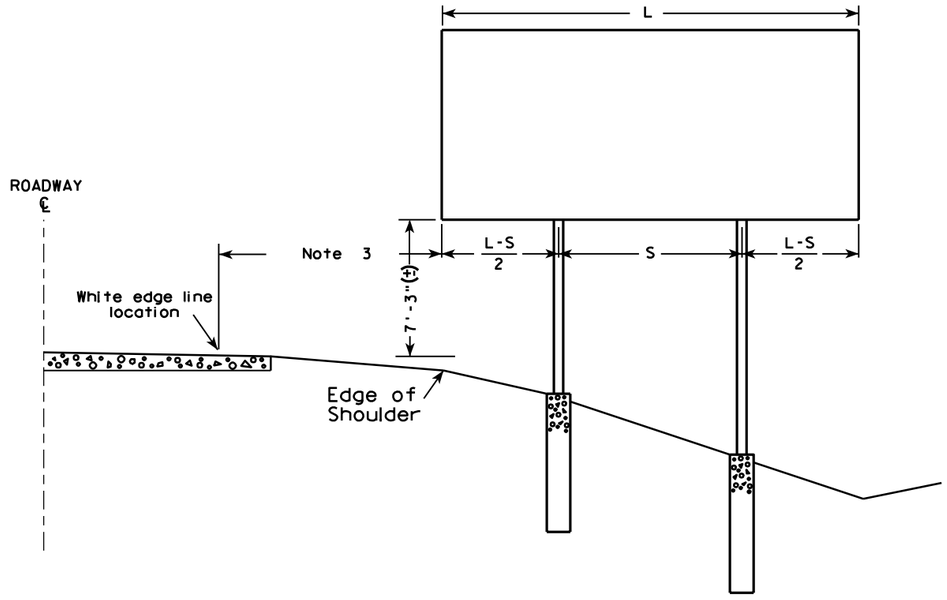
WISCONSIN DEPT OF TRANSPORTATION

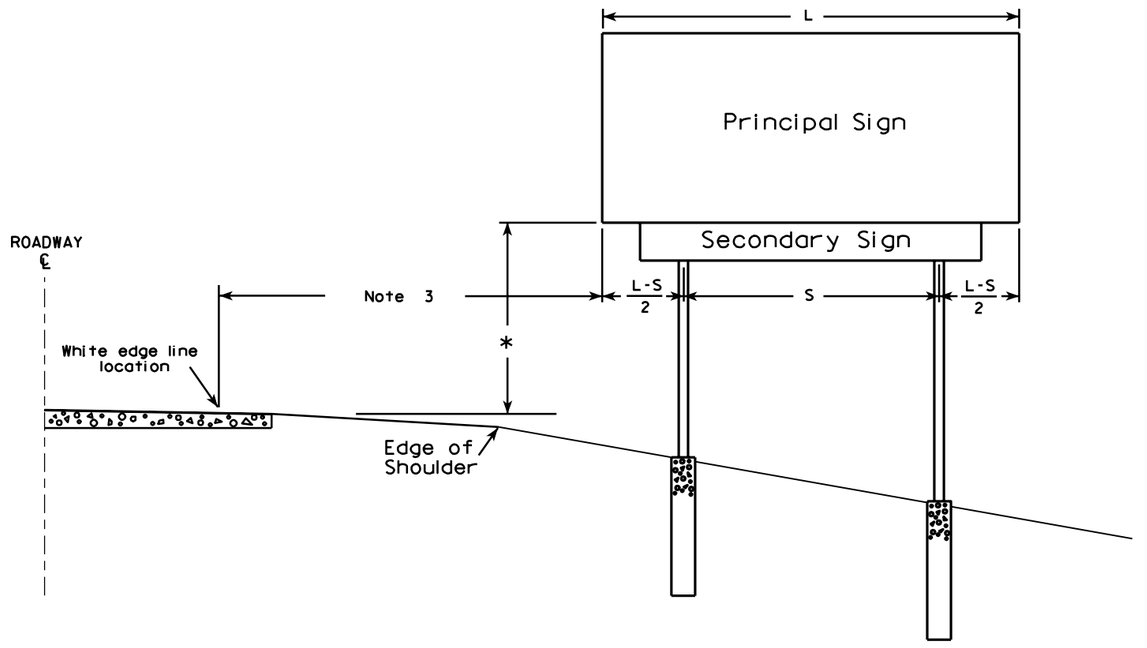
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 2/06/2014 PLATE A3-1M.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31M.DGN PLOT DATE : 10-MAR-2014 15:16 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.556674:1.000000 WISDOT/CADDS SHEET 42





GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

7

7

TYPICAL INSTALLATION
OF TYPE I SIGNS

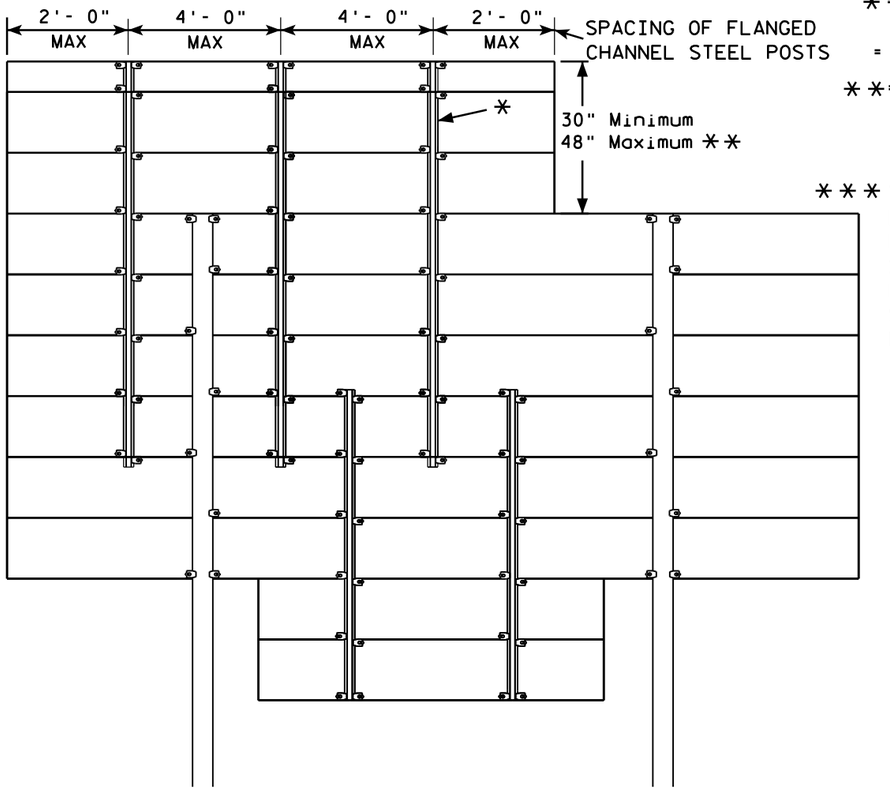
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9

PROJECT NO:				SHEET NO: 174	E

GROUND MOUNTED SIGN

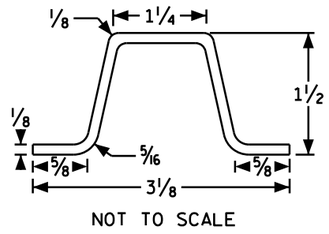


*=2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

**=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

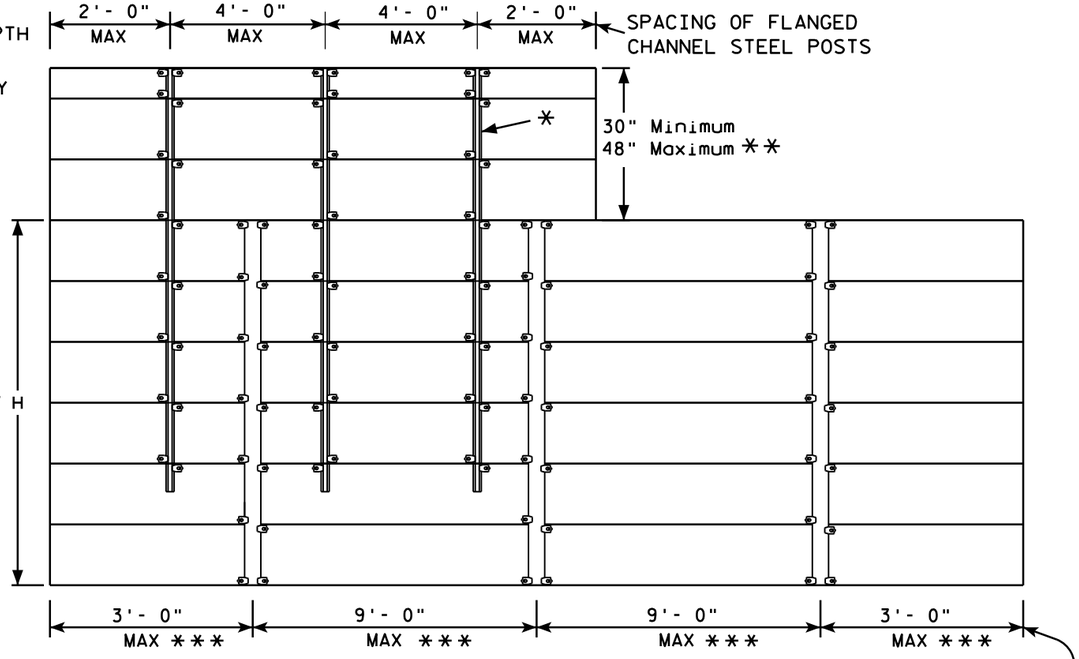
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

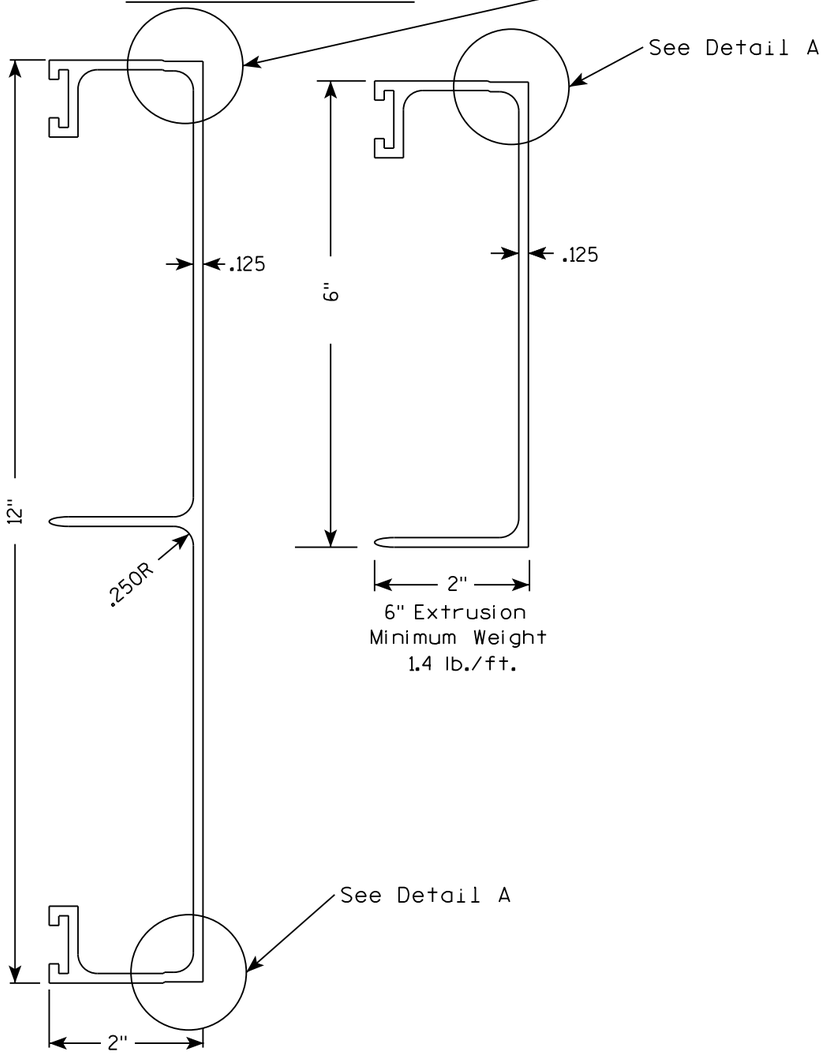
WISCONSIN DEPT OF TRANSPORTATION

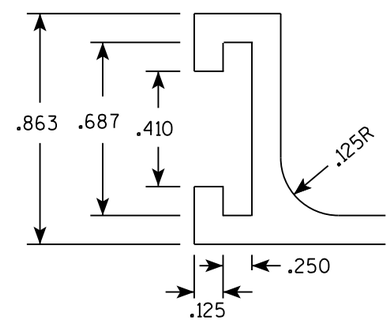
APPROVED Matthew R Rauch
for State Traffic Engineer

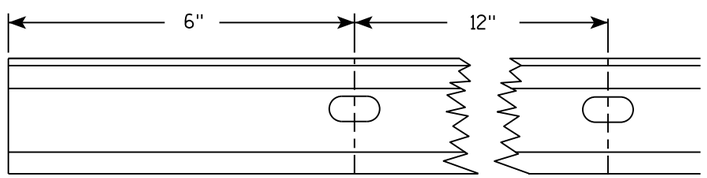
DATE 12/05/13 PLAT 175 A4-6.12

PROJECT NO:				SHEET NO:	E

Extruded Shape







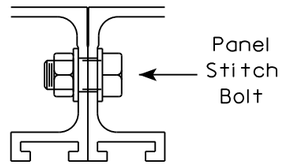
Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

Hardware

STITCH BOLT, WASHER & NUT

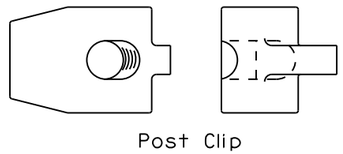
The hardware includes:

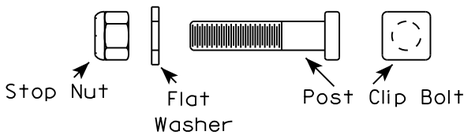
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

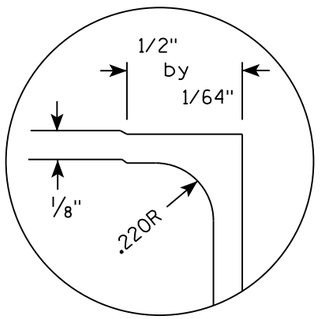
Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.
4. Edge wrapping of sign sheeting required on all extrusions joints shown in Detail A.



DETAIL A (EDGE WRAP JOINT)

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/30/16 PLATE NO. A5-2.10

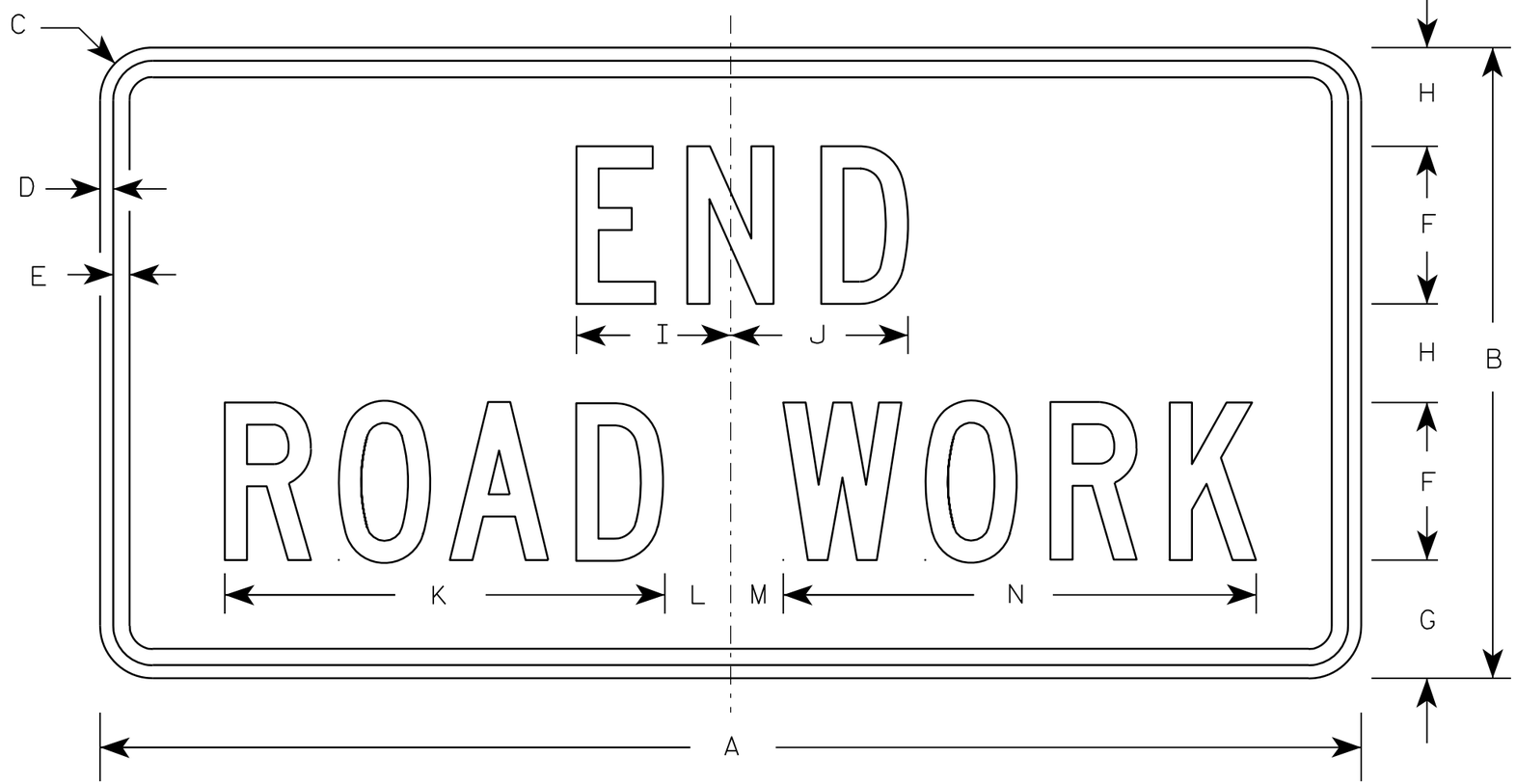
PROJECT NO:				SHEET NO: 176	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A52.DGN PLOT DATE : 30-NOV-2016 12:05 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 42

7

7



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

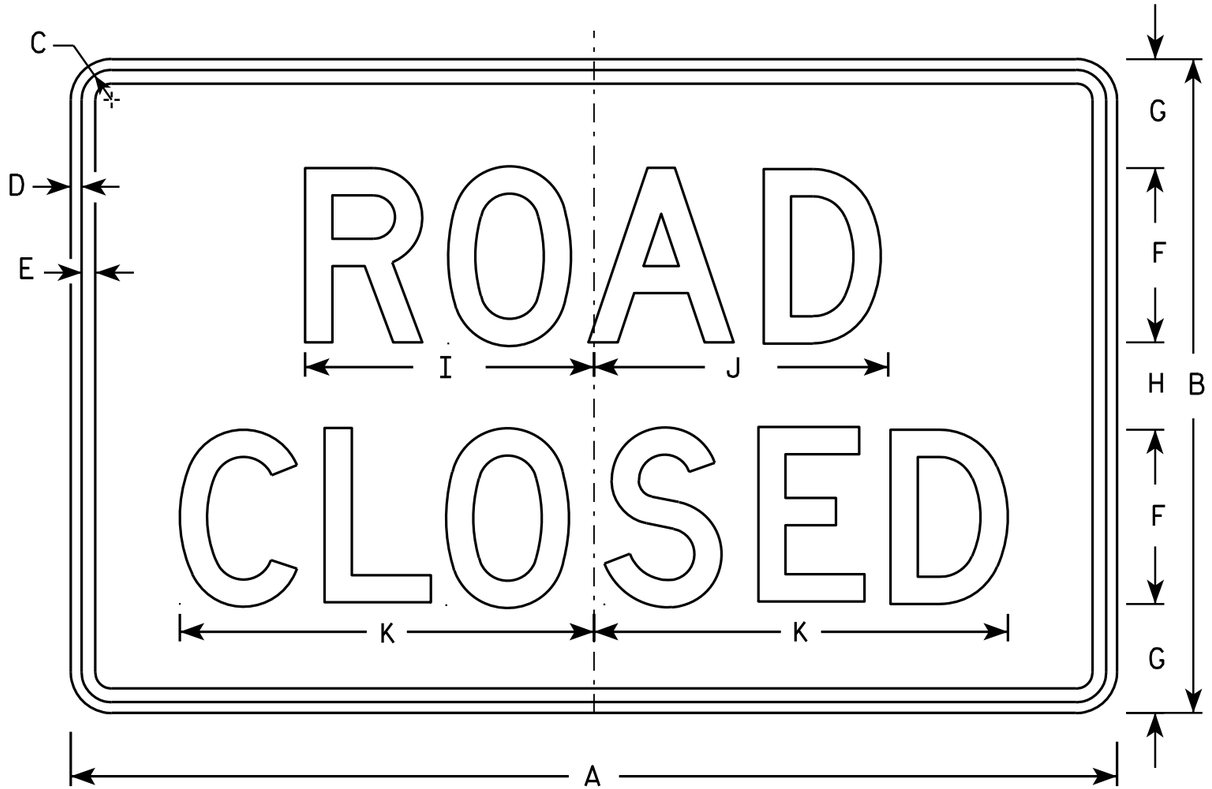
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 177	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\G202A.DGN PLOT DATE : 30-SEP-2009 09:31 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 5.561773:1.000000

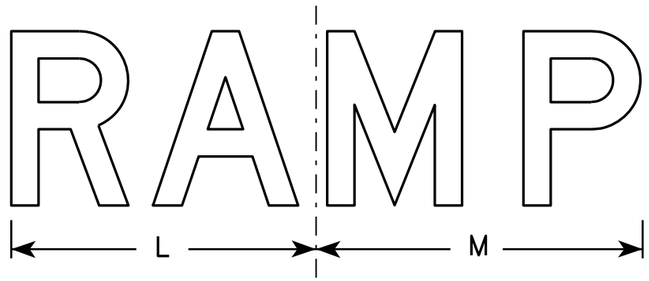
7



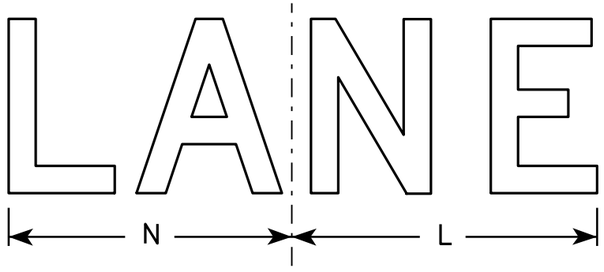
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

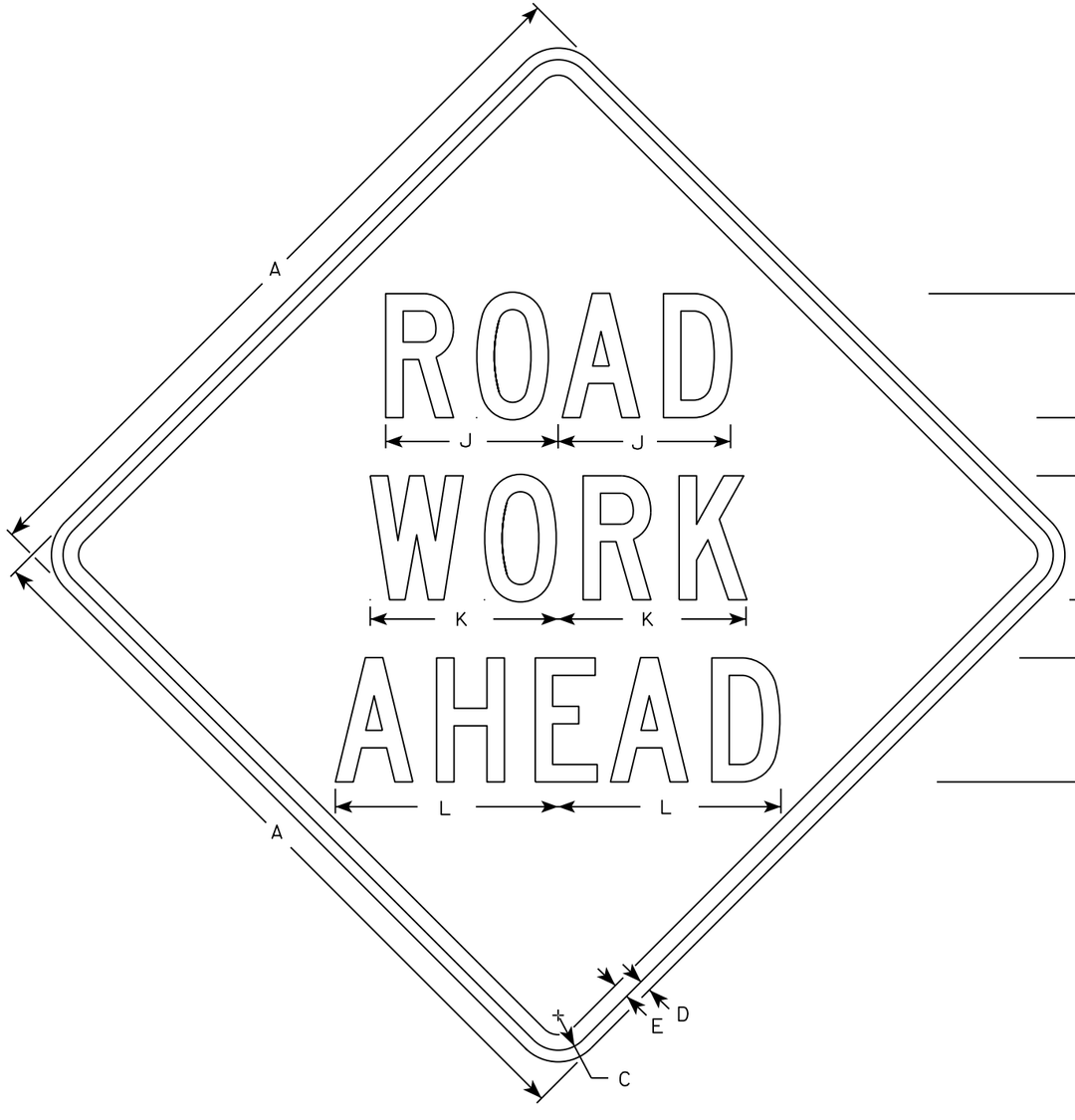
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

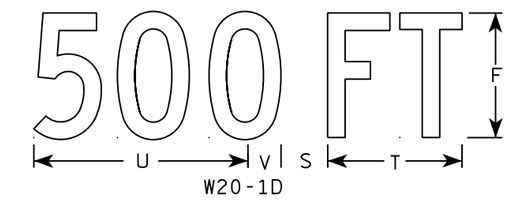
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 178 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112.DGN PLOT DATE : 01-APR-2011 14:25 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.952219:1.000000

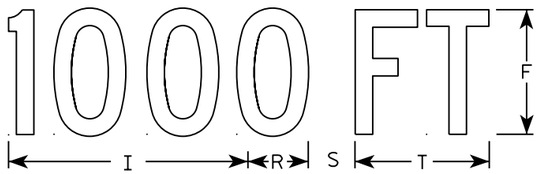
WISDOT/CADDS SHEET 42



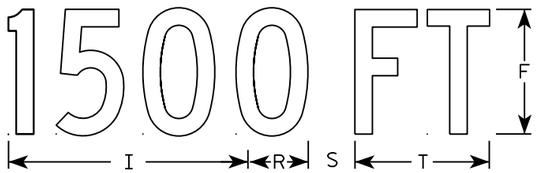
W20-1A



W20-1D

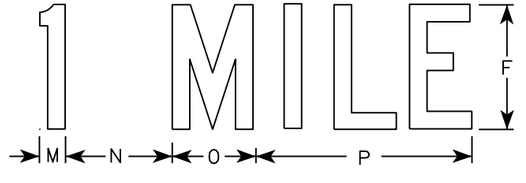


W20-1C

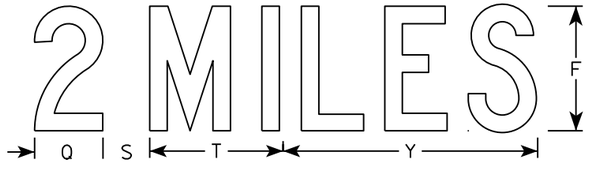


W20-1B

W20-1G



W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

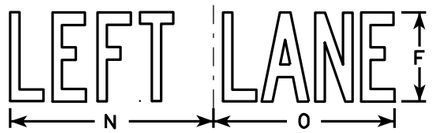
DATE 5/07/15 PLATE NO. W20-1.10

PROJECT NO:

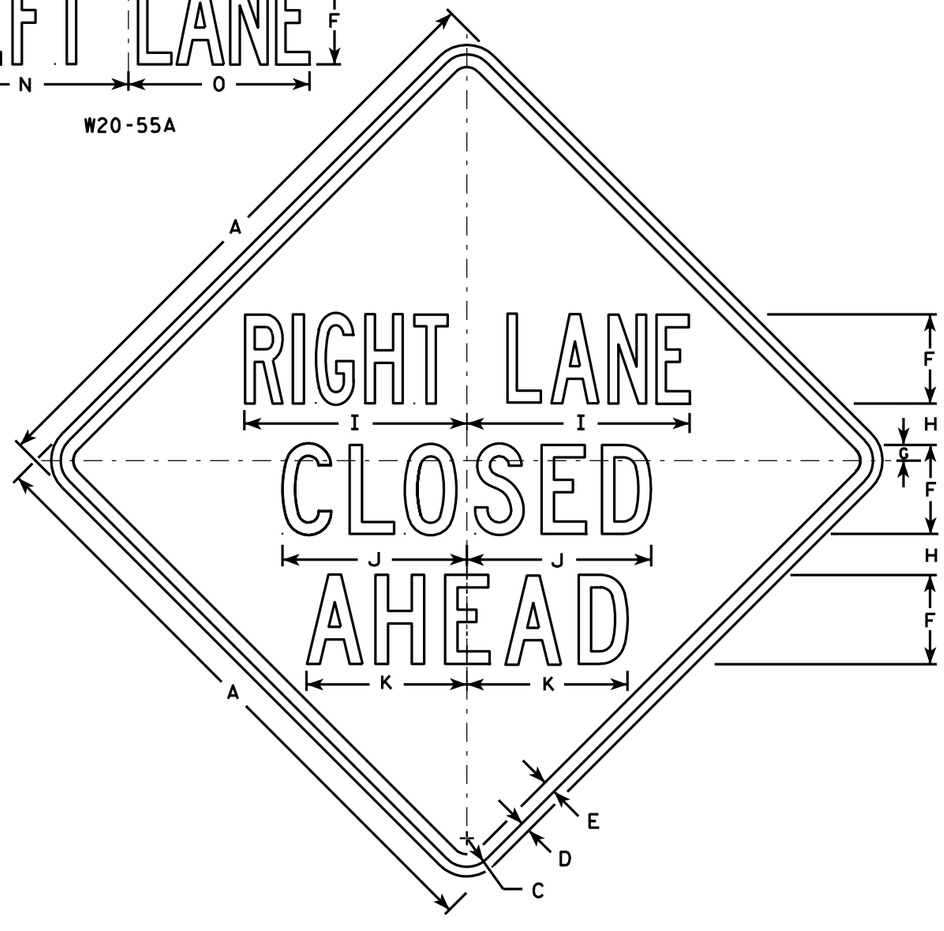
SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$

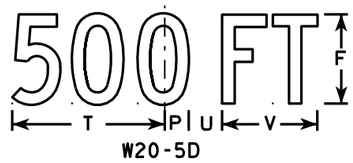
W20-56A



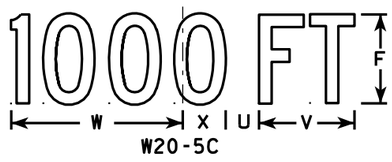
W20-55A



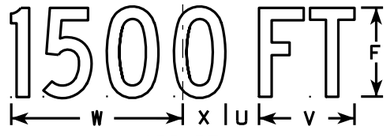
W20-5A



W20-5D



W20-5C



W20-5B

W20-5G

W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

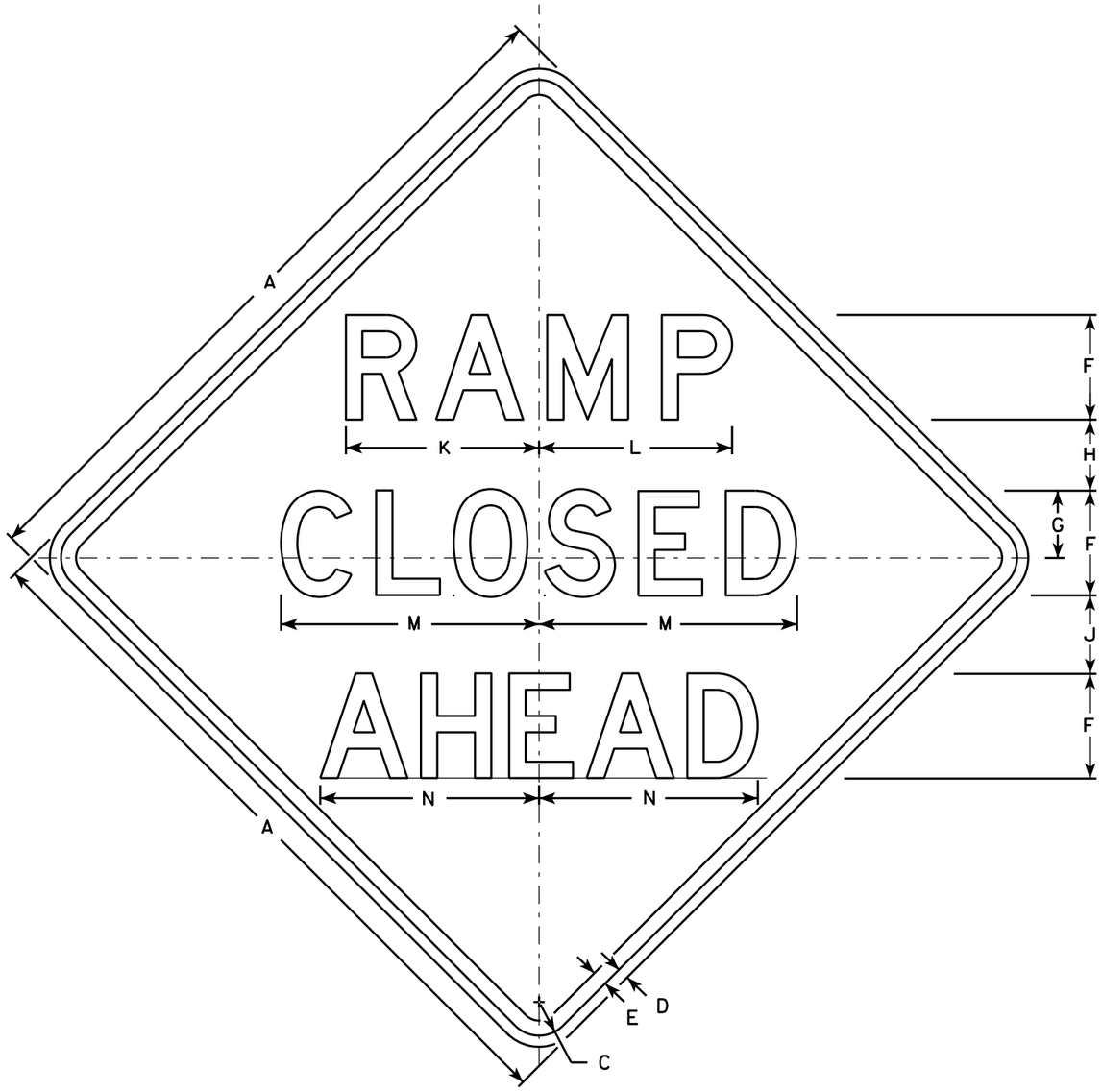
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

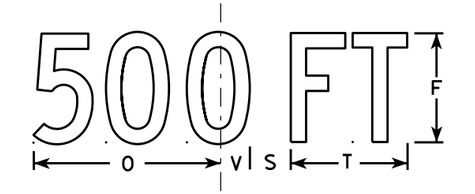
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 180 | E

7

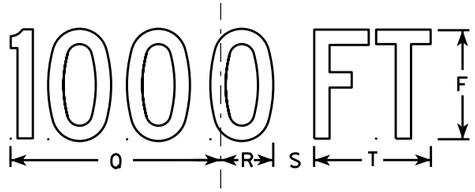
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42



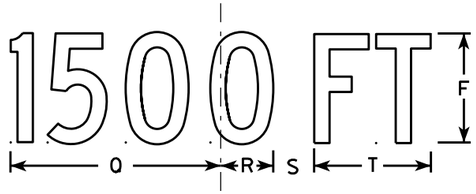
W20-53A



W20-53D

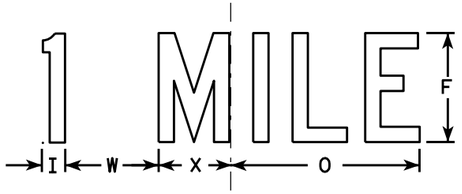


W20-53C



W20-53B

W20-53G



W20-53F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	9 1/4	9 1/4	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-53A,B,C,D,F,G

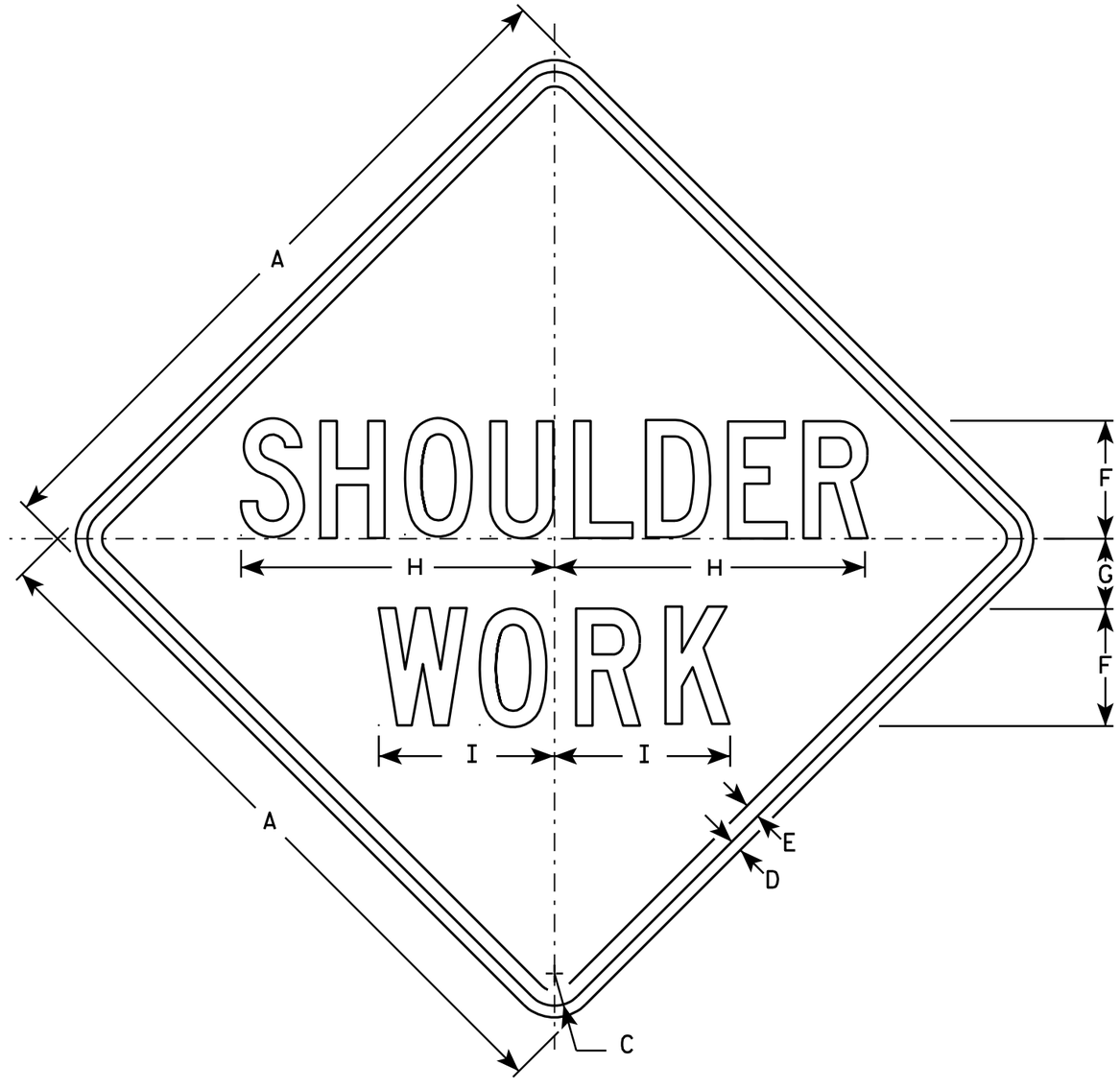
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/27/15 PLATE NO. W20-53.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W2053.DGN PLOT DATE : 27-MAY-2015 19:40 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.729210:1.000000
WISDOT/CADDS SHEET 42



W21-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4	2 1/2	10 3/4	6																		4.0
2S	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3 1/2	16	9																		9.0
4	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0
5	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0

STANDARD SIGN
W21-5

WISCONSIN DEPT OF TRANSPORTATION

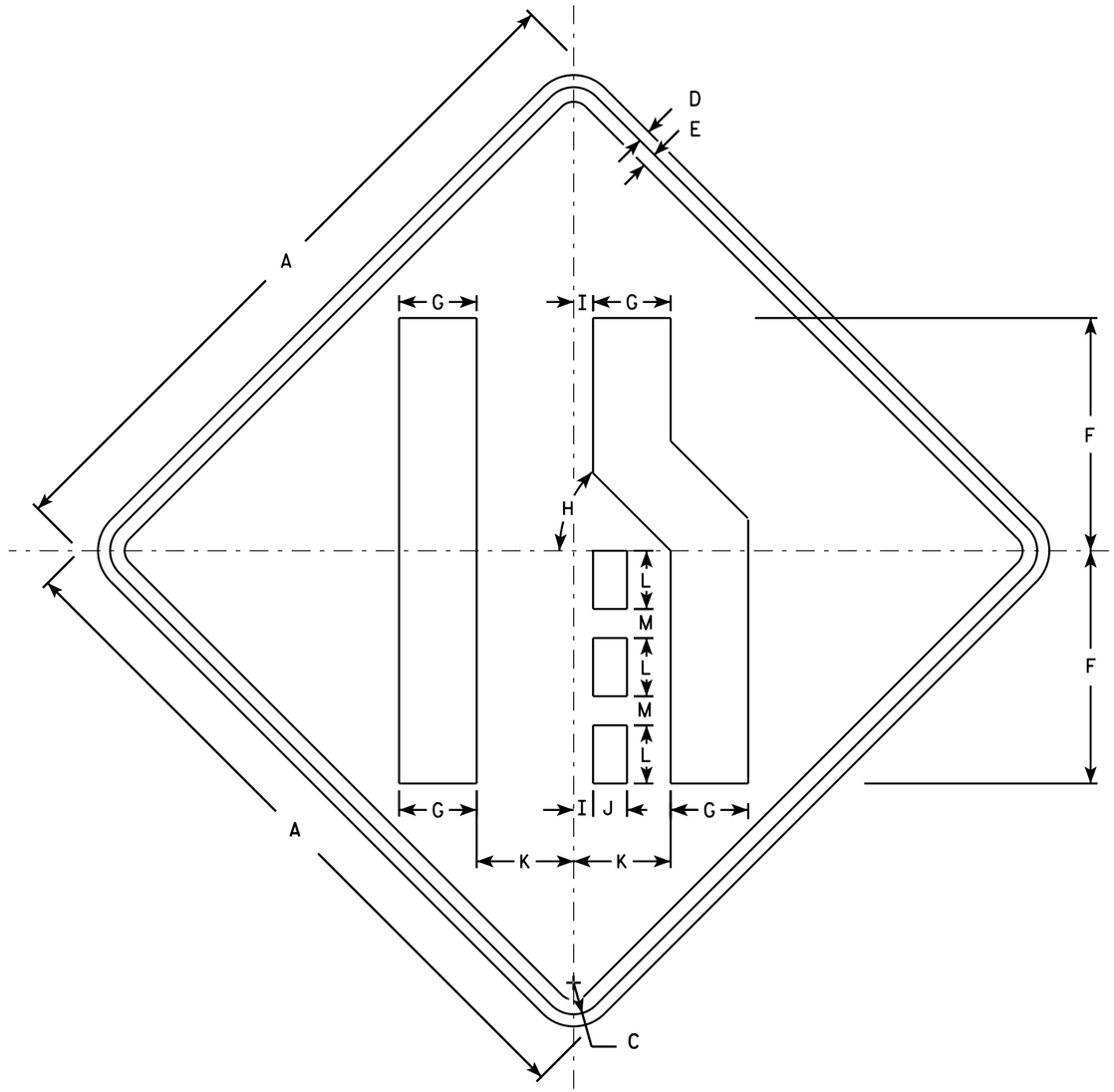
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 182 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W215.DGN PLOT DATE : 21-MAR-2011 08:01 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.207338:1.000000
WISDOT/CADDS SHEET 42



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

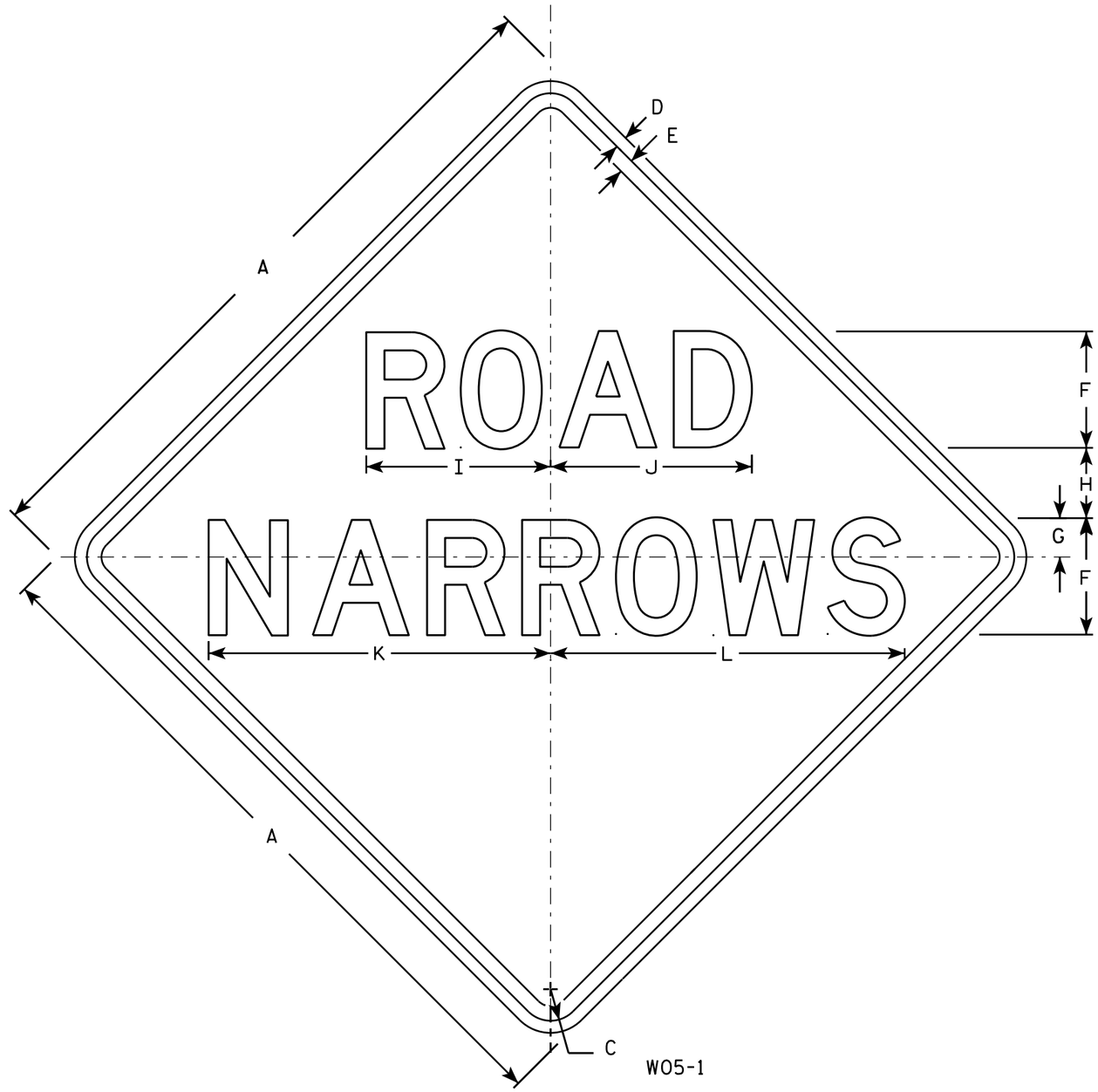
STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 183 W04-2.1

PROJECT NO: | SHEET NO: E



W05-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	2	3 1/2	9 1/2	10 3/8	17 5/8	18 1/4															9.0
2S	48		2 1/4	3/4	1	8	3	4	12 3/4	13 3/4	23 1/2	24 3/8															16.0
2M	48		2 1/4	3/4	1	8	3	4	12 3/4	13 3/4	23 1/2	24 3/8															16.0
3	48		2 1/4	3/4	1	8	3	4	12 3/4	13 3/4	23 1/2	24 3/8															16.0
4	48		2 1/4	3/4	1	8	3	4	12 3/4	13 3/4	23 1/2	24 3/8															16.0
5	48		2 1/4	3/4	1	8	3	4	12 3/4	13 3/4	23 1/2	24 3/8															16.0

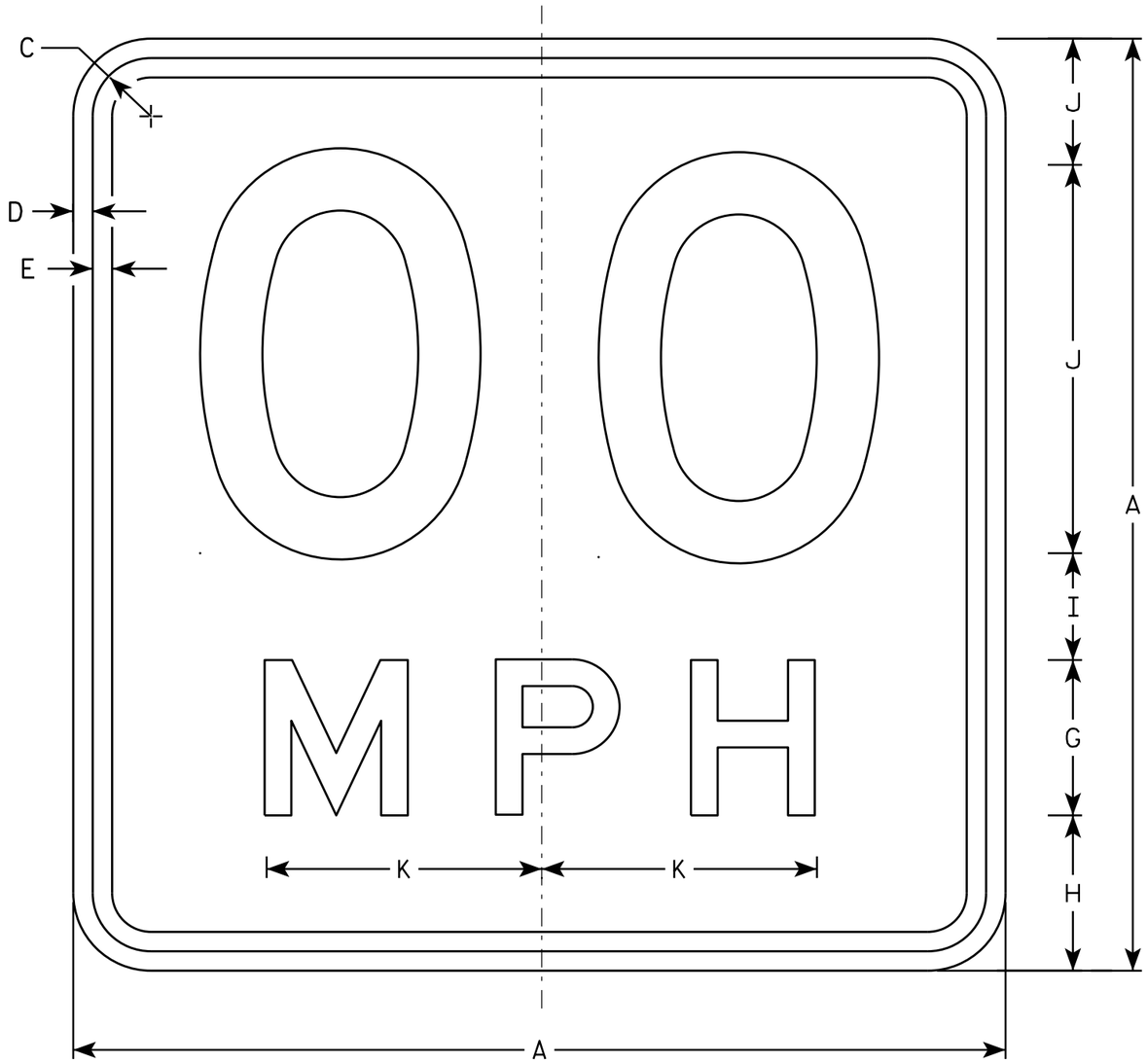
STANDARD SIGN
W05-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE NO. W05-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W013-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/13 PLATE 185 W013-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

Wisconsin Department of Transportation

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through innovation and exceptional service.

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