000-20-63

SE REGION, MANITOWOC COUNTY, , DANE COUNTY

Jan 12, 2021

ORDER OF SHEETS

Section No. Typical Sections and Details Section No. Estimate of Quantities

Section No. Standard Detail Drawings Section No.

Section No.

TOTAL SHEETS =

STATE OF WISCONSIN **DEPARTMENT OF TRANSPORTATION**

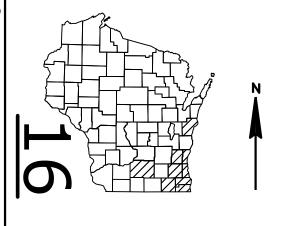
PLAN OF PROPOSED IMPROVEMENT

ANCILLARY STRUCT REHAB/REPLACE 2021 LOCATIONS ON STN PER ANNUAL PLAN

VARIOUS HIGHWAYS

STATEWIDE

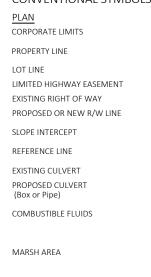
STATE PROJECT NUMBER 1000-20-63



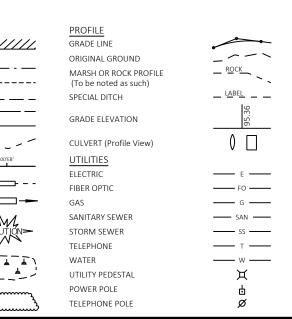
DESIGN DESIGNATION

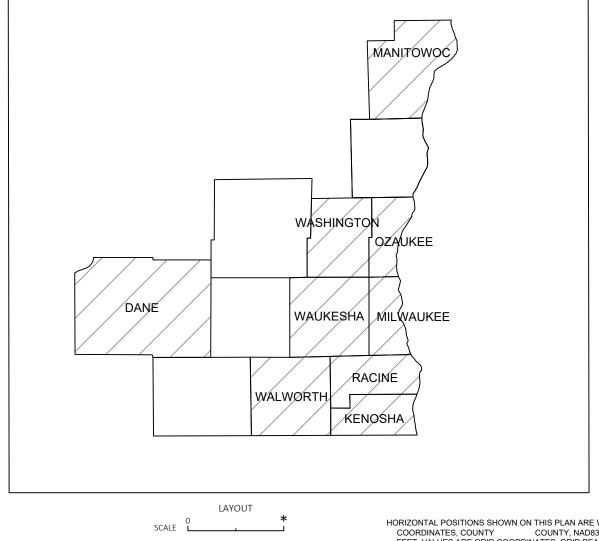
AADT = N/A A.A.D.T. = N/A D.H.V. = N/A D D = N/A = N/A DESIGN SPEED = N/A

CONVENTIONAL SYMBOLS



WOODED OR SHRUB AREA





HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATES, COUNTY COUNTY, NAD83 (YEAR), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION PREPARED BY Surveyor Designer Project Manage Regional Examiner PPROVED FOR THE DEPARTMENT DATE: 07-30-2020 Ε

FEDERAL PROJECT

PROJECT

CONTRACT

STATE PROJECT

\WKERTOVFILPI01\N3PUBLIC\PDS\C3D\10002033\SHEETSPLAN\010101-TI.DWG

7/27/2020 4:19 PM

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI

TIRSKY, ANDREA FAYE

2

2

HIGHWAY COMMISSIONER/ UTILITIES CONTACT LIST

(NOT ALL INCLUSIVE. CONTRACTOR RESPONSIBLE FOR ALL UTILITY COORDINATION AND LOCATING)

DANE COUNTY
GERALD MANDLI
2302 FISH HATCHERY RD
PO BOX 2495
MADISON, WI 53713-2495
609-266-4039
MANDLI@COUNTYOFDANE.COM

KENOSHA COUNTY
CLEMENT ABONGWA
19600 75TH ST, SUITE 122-1
PO BOX 609
BRISTOL, WI 53104-0609
262-857-1870
CLEMENT.ABONGWA@KENOSHACOUNTY.ORG

MANITOWOC COUNTY
MARC HOLSEN
3500 STATE RD 310
MANITOWOC, WI 54220
920-683-4353
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MILWAUKEE COUNTY
DONNA BROWN MARTIN
10320 W WATERTOWN PLANK RD
WAUWATOSA, WI 53226
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OZAUKEE COUNTY
JON EDGREN
410 S SPRING ST
PO BOX 994
PORT WASHINGTON, WI 53074-0994
262-284-8331
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RACINE COUNTY
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262-886-8440
DAVID.PROTT@RACINECOUNTY.COM

WALWORTH COUNTY
BARRY PIERCE
W4097 COUNTY RD NN
PO BOX 1001
ELKHORN, WI 53121-1001
262-741-3799
BPIERCE@CO.WALWORTH.WI.US

WASHINGTON COUNTY SCOTT SCHMIDT 900 LANG ST WEST BEND, WI 53090 262-335-6881 SCOTT.SCHMIDT@CO.WASHINGTON.WI.US

WAUKESHA COUNTY
ALLISON BUSSLER
1320 PEWAUKEE RD
WAUKESHA, WI 53188
262-548-7740
ABUSSLER@WAUKESHACOUNTY.GOV

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

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.

STATE AGENCIES

WISCONSIN DEPARTMENT OF TRANSPORTATION COMMUNICATION LINE
JEFF MADSON
STE. 300
433 W ST PAUL AVE
MILWAUKEE, WI 53203-3007
414-225-3723
JEFFREY.MADSON@DOT.WI.GOV

WISCONSIN DEPARTMENT OF TRANSPORTATION -WISCONSIN SIGNAL DERRIN WOLFORD 141 NW BARSTOW STREET WAUKESHA, WI 53188 262-521-4409 DERRIN.WOLFORD@DOT.WI.GOV

WISCONSIN DEPARTMENT OF TRANSPORTATION PROJECT MANAGER FRANK PRITZLAFF 141 NW BARSTOW STREET WAUKESHA, WI 53188-3789 262-548-5683 FRANK, PRITZLAFF@DOT.WI.GOV

WISCONSIN DEPARTMENT OF NATURAL RESOURCES DANE COUNTY
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3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
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ERIC.HEGGELUND@WISCONSIN.GOV

WISCONSIN DEPARTMENT OF NATURAL RESOURCES -MANITOWOC COUNTY MATT SCHAEVE 2984 SHAWANO AVE GREEN BAY, WI 54313 920-366-1544 MATTHEW.SCHAEVE@WISCONSIN.GOV

WISCONSIN DEPARTMENT OF NATURAL RESOURCES - WALWORTH & WAUKESHA COUNTY CRAIG WEBSTER
141 NW BARSTOW STREET
WAUKESHA, WI 53188-3789
262-574-2141
414-303-3011
CRAIG.WEBSTER@ WISCONSIN.GOV

WISCONSIN DEPARTMENT OF TRANSPORTATION -STREET LIGHTING ERIC PEREA 141 NW BARSTOW STREET WAUKESHA, WI 53188 262-574-5422

ERIC.PEREA@DOT.WI.GOV

WISCONSIN DEPARTMENT OF TRANSPORTATION COMMUNICATION TOWER
MIKE ADAMS
RM 501
P.O. BOX 7986
MADISON, WI 53707-7986
608-266-5004
MICHAEL.ADAMS@DOT.WI.GOV

WISCONSIN DEPARTMENT OF TRANSPORTATION UTILITY ENGINEER MICHAEL BIRSCHBACH 141 NW BARSTOW STREET WAUKESHA, WI 53188-3789 414-750-2532 MICHAEL.BIRSCHBACH@DOT.WI.GOV

WISCONSIN DEPARTMENT OF NATURAL RESOURCES -KENOSHA & RACINE COUNTY BENTON STELZEL 141 NW BARSTOW STREET WAUKESHA, WI 53188-3789 262-623-0194 BENTON.STELZEL@WISCONSIN.GOV

WISCONSIN DEPARTMENT OF NATURAL RESOURCES - MILWAUKEE, OZAUKEE, & WASHINGTON COUNTY KRISTINA BETZOLD 2300 N. MARTIN LUTHER KING JR. MILWAUKEE WI 53212 414-507-4946 KRISTINA.BETZOLD@WISCONSIN.GOV

PROJECT NO: 1000-20-63 HWY: VARIOUS COUNTY: VARIOUS UTILITY CONTACTS SHEET **E**

\\WKERTOVFILPIO1\\N3PUBLIC\PDS\C3D\10002033\\SHEETSPLAN\020101.GN.DWG PLOT DATE: 10/26/2020 12:34 PM PLOT BY: TIRSKY, ANDREA FAYE PLOT NAME: PLOT SCALE: 1 IN:100 FT
LAYOUT NAME - 02

WISDOT/CADDS SHEET 42

0052

0054

SPV.0060 Special 19. Signal Mounting Hardware

SPV.0060 Special 20. Adjust Signal

					1000-20-63
Line	Item	Item Description	Unit	Total	Qty
0002	509.1500	Concrete Surface Repair	SF	15.000	15.000
0004	517.0600	Painting Epoxy System (structure) 01. S-13-0213	LS	1.000	1.000
0006	619.1000	Mobilization	EACH	1.000	1.000
8000	637.2210	Signs Type II Reflective H	SF	124.000	124.000
0010	637.2230	Signs Type II Reflective F	SF	20.000	20.000
0012	638.3155	Removing Overhead Sign Supports Full Span (structure) 01. S-36-0023	EACH	1.000	1.000
0014	643.5000	Traffic Control	EACH	1.000	1.000
0016	SPV.0060	Special 01. Tension Anchor Rods	EACH	62.000	62.000
0018	SPV.0060	Special 02. Remove Debris	EACH	1.000	1.000
0020	SPV.0060	Special 03. Rodent Screen	EACH	4.000	4.000
0022	SPV.0060	Special 04. Lower Structure	EACH	1.000	1.000
0024	SPV.0060	Special 05. Reinstall Truss	EACH	3.000	3.000
0026	SPV.0060	Special 06. Tension Structural Bolts	EACH	54.000	54.000
0028	SPV.0060	Special 07. Replace Truss Member	EACH	1.000	1.000
0030	SPV.0060	Special 08. Vertical Sign Support	EACH	10.000	10.000
0032	SPV.0060	Special 09. Sign Panel Connector	EACH	19.000	19.000
0034	SPV.0060	Special 10. Adjust Sign	EACH	1.000	1.000
0036	SPV.0060	Special 11. ID Plaque	EACH	23.000	23.000
0038	SPV.0060	Special 12. Misc. Attachments	EACH	4.000	4.000
0040	SPV.0060	Special 13. Handhole Cover	EACH	1.000	1.000
0042	SPV.0060	Special 14. Conduit Plug	EACH	4.000	4.000
0044	SPV.0060	Special 15. Post/End Cap	EACH	3.000	3.000
0046	SPV.0060	Special 16. Catwalk Repair	EACH	1.000	1.000
0048	SPV.0060	Special 17. Dished Washer	EACH	11.000	11.000
0050	SPV.0060	Special 18. Replace Signal Shroud	EACH	6.000	6.000

48.000

14.000

48.000

14.000

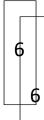
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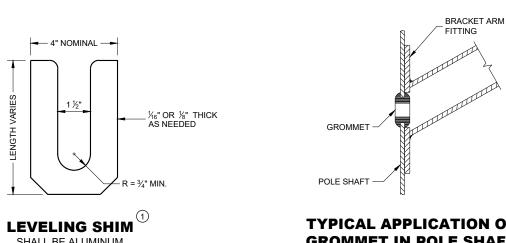
EACH



Standard Detail Drawing ListStandard Detail Drawing List

09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS					
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS					
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES					
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES					
15C02-08D	ON RAMP LANE CLOSURE					
15C02-08E	OFF RAMP LANE CLOSURE					
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES					
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC					
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS					
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION					
15D04-01	TRAFFIC CONTROL, RAMP CONSTRUCTION STAGING					
15D12-08A	TRAFFIC CONTROL, LANE CLOSURE					
15D14-04	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)					
15D15-05A	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE					
15D15-05B	TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE					
15D15-05C	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE					
15D15-05D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE					
15D15-05E	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE					
15D16-04	TRAFFIC CONTROL, EXIT RAMP CLOSURE					
15D20-05A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY					
15D20-05B	TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY					
15D20-05C	TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY					
15D21-06A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE					
15D21-06B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE					
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE					
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE					
15D22-04	TRAFFIC CONTROL, TWO LANE CLOSURE, NON-FREEWAY/EXPRESSWAY					
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH					
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY					





GUSSETS REQUIRED

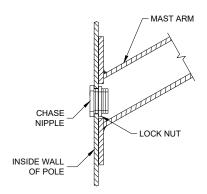
STAINLESS STEEL HARDWARE - BOLT LENGTH

FOR TROMBONE ARM CLAMPS SHALL BE 4 ½"
MIN. - 6" MAX.. BOLTS FOR LUMINAIRE ARM

CLAMPS SHALL BE 3 ½" IN LENGTH. THREAD

BOLTS ENTIRE LENGTH





TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GUSSETS REQUIRED

STAINLESS STEEL HARDWARE - BOLTS 3 5"

THREAD BOLTS ENTIRE LENGTH.

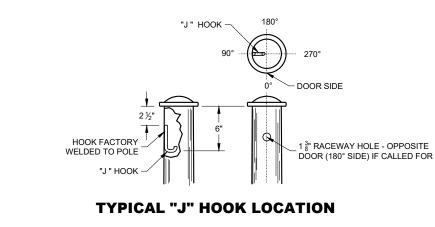
IN LENGTH, TWO WASHERS, LOCK WASHER AND NUT (4 SETS REQUIRED PER CLAMP)

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

- (1) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
- (2) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
- 3 BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER
- 4 LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE

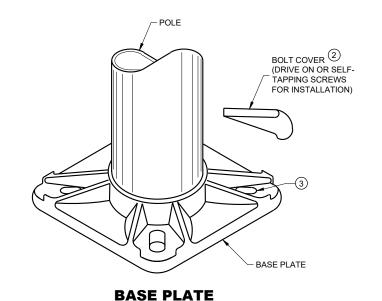
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

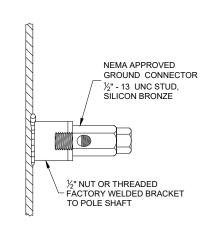


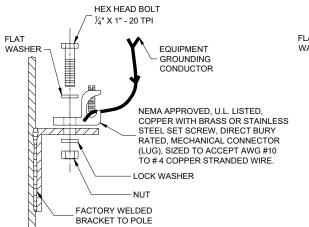
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP

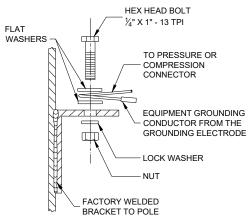
SHALL BE ALUMINUM

TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS









TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

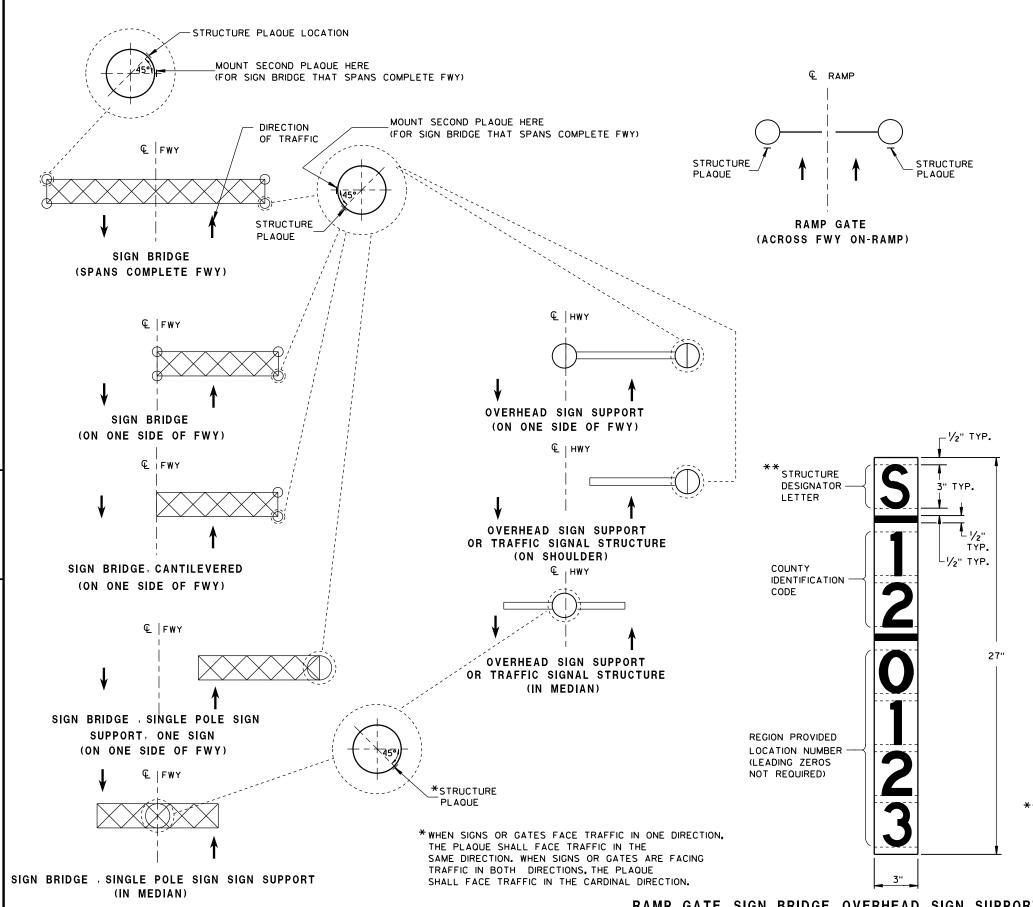
APPROVED November 2018 DATE

/S/ Ahmet Demirbilel STATE ELECTRICAL ENGINEER

AO 60



3.D.D. 12 A 4-3



6

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12

 \triangleright

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD

SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES

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.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

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

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

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

ALUMINUM SHAFTS - 3 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.

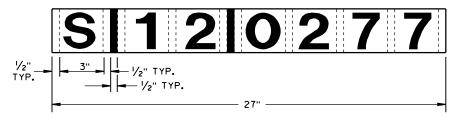
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

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

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

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

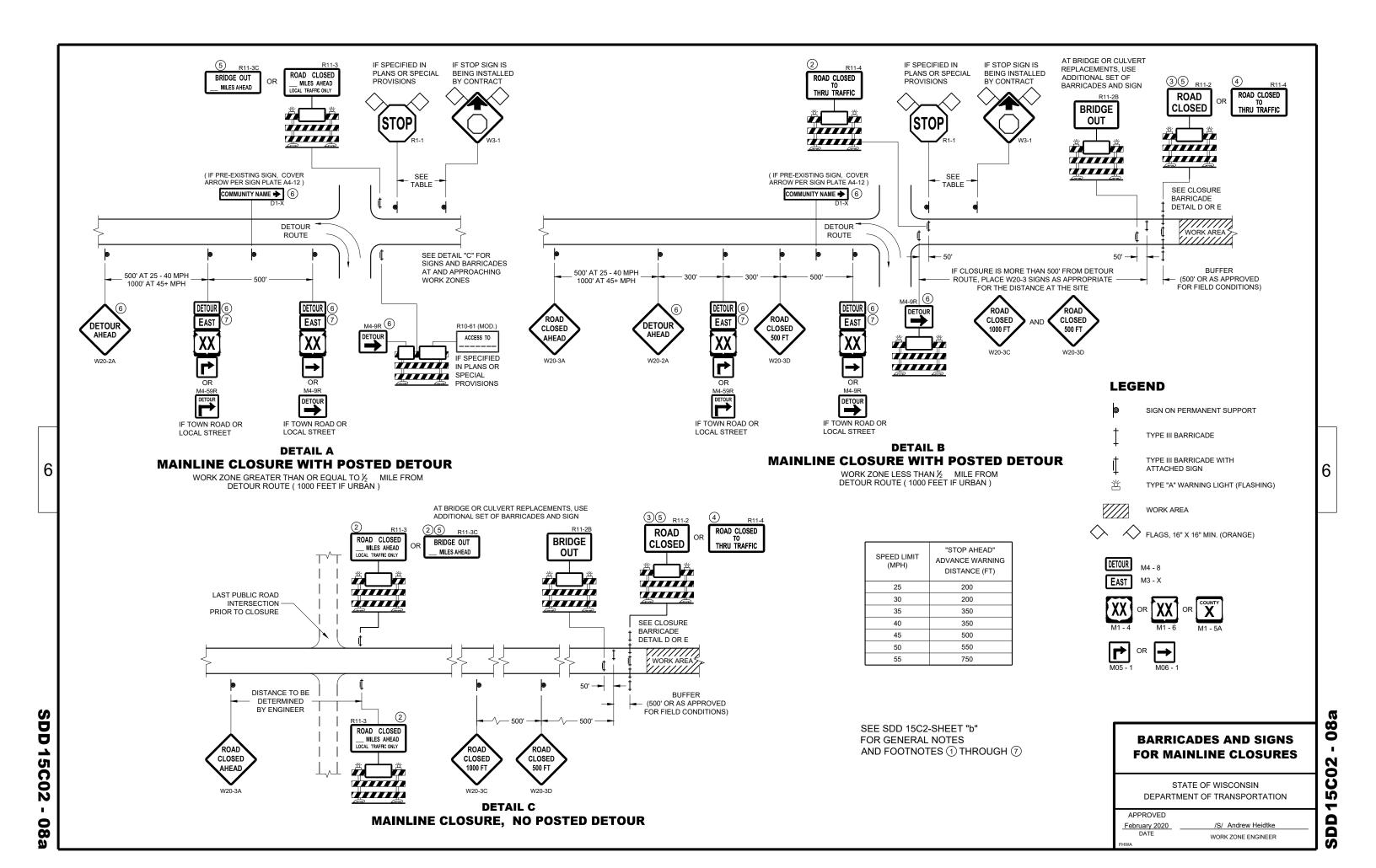
STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

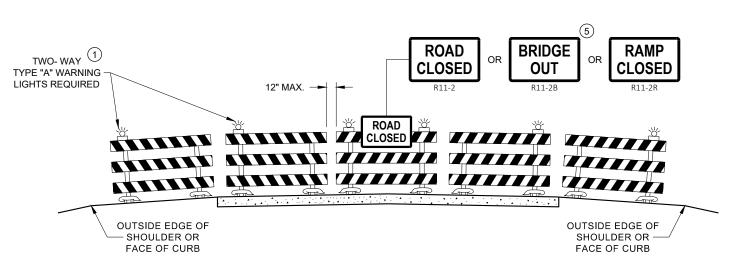
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

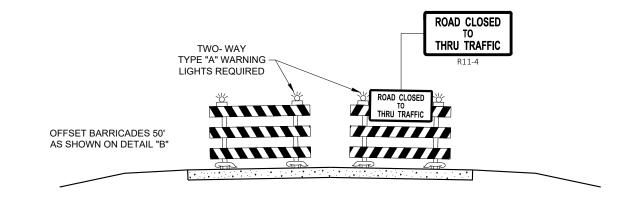
DATE STATE TRAFFIC ENGINEER OF DESIGN

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED





DETAIL D ROAD CLOSURE BARRICADE DETAIL APPROACH VIEW



DETAIL E LANE CLOSURE BARRICADE DETAIL **APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2. R11 - 3. M4 - 9. R11 - 4. AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11 - 2 SHALL BE 48" X 30"

R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"

M4 - 9 SHALL BE 30" X 24"

M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)

M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)

M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)

MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)

D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

R1 - 1 SHALL BE 36" X 36"

- TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT **SPACING**
- THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- (3) FOR ROAD CLOSURE <u>WITHOUT</u> LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- (4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- (5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- (6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS. PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE
- "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR **VARIOUS CLOSURES**

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

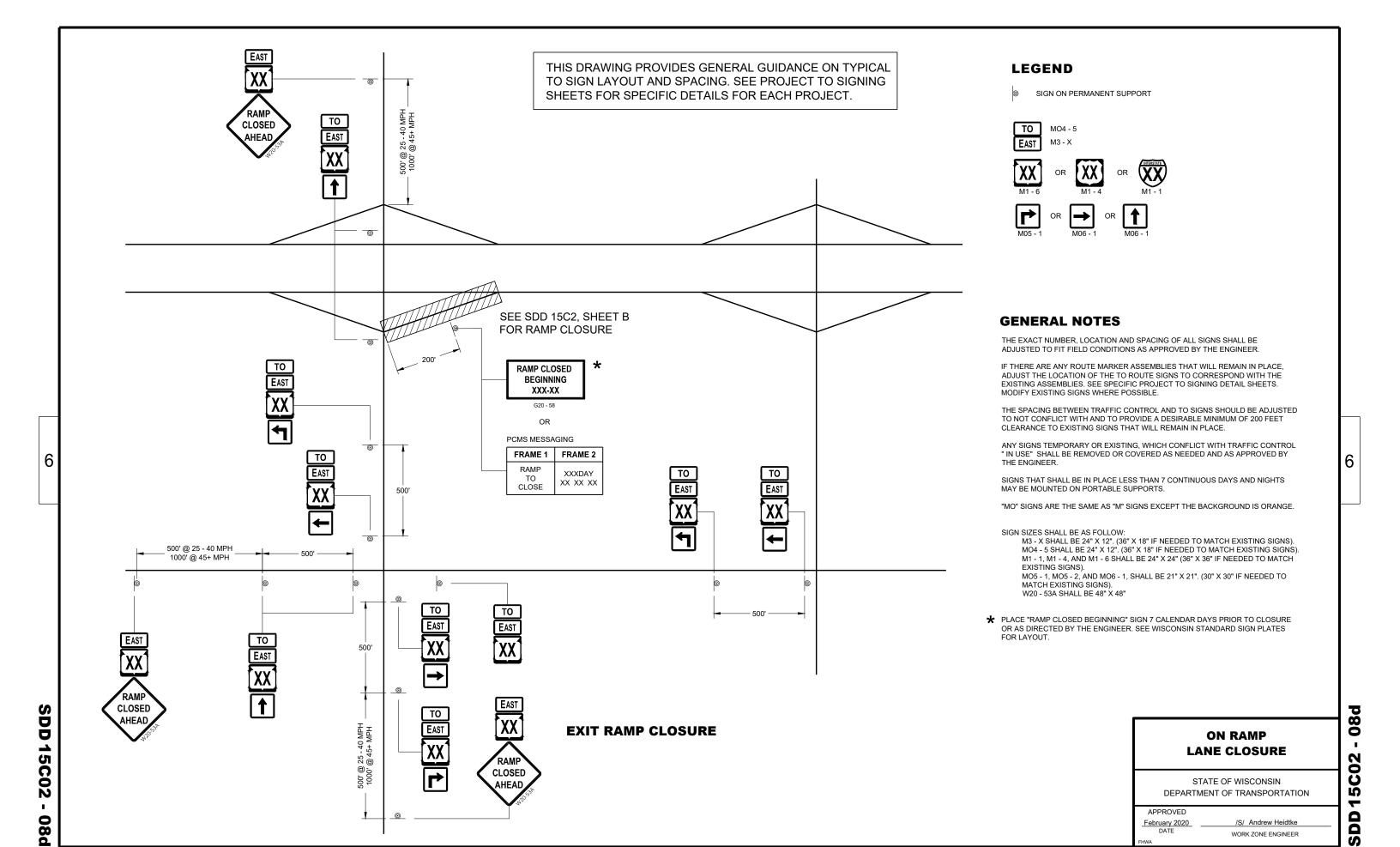
February 2020 DATE

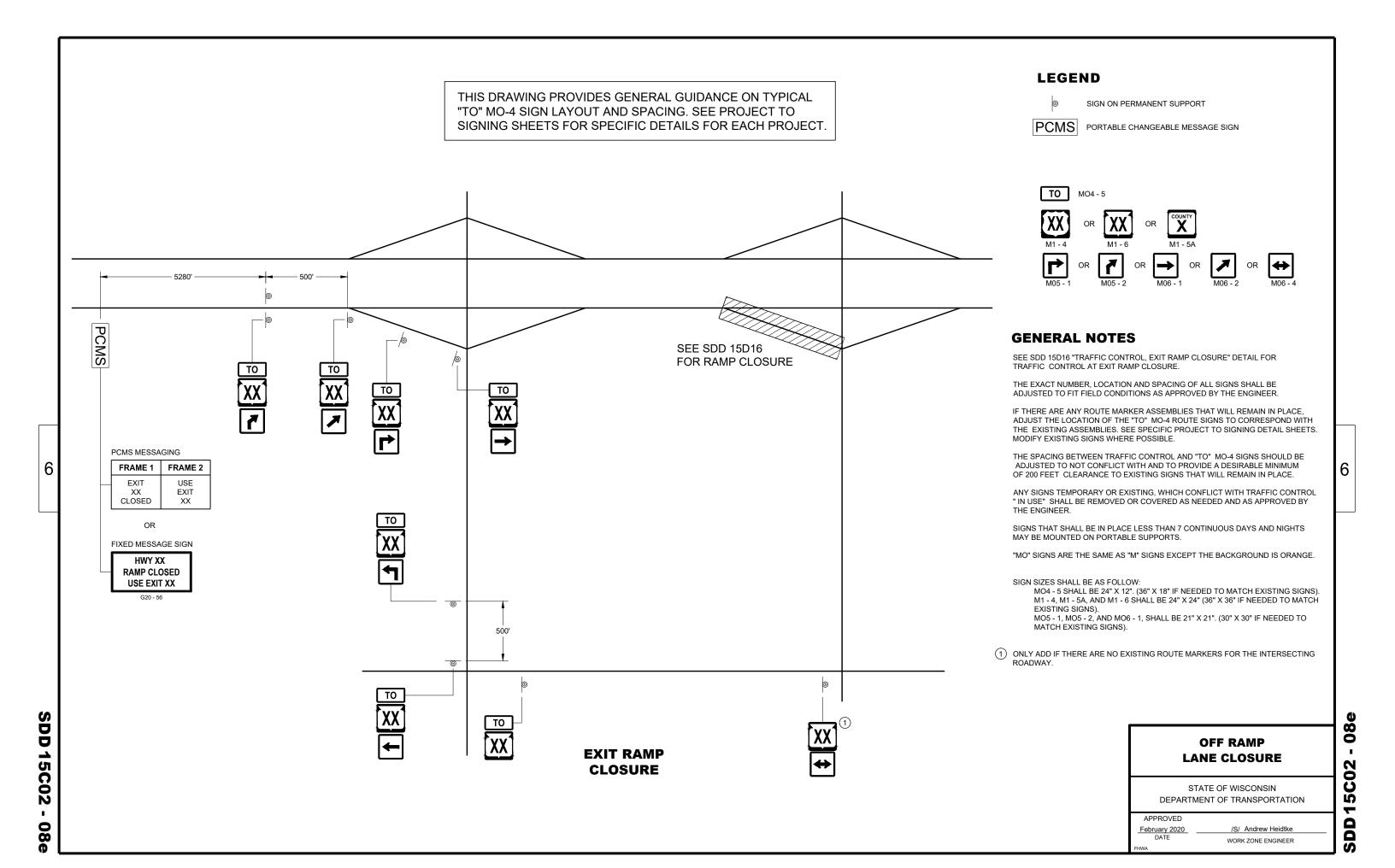
WORK ZONE ENGINEER

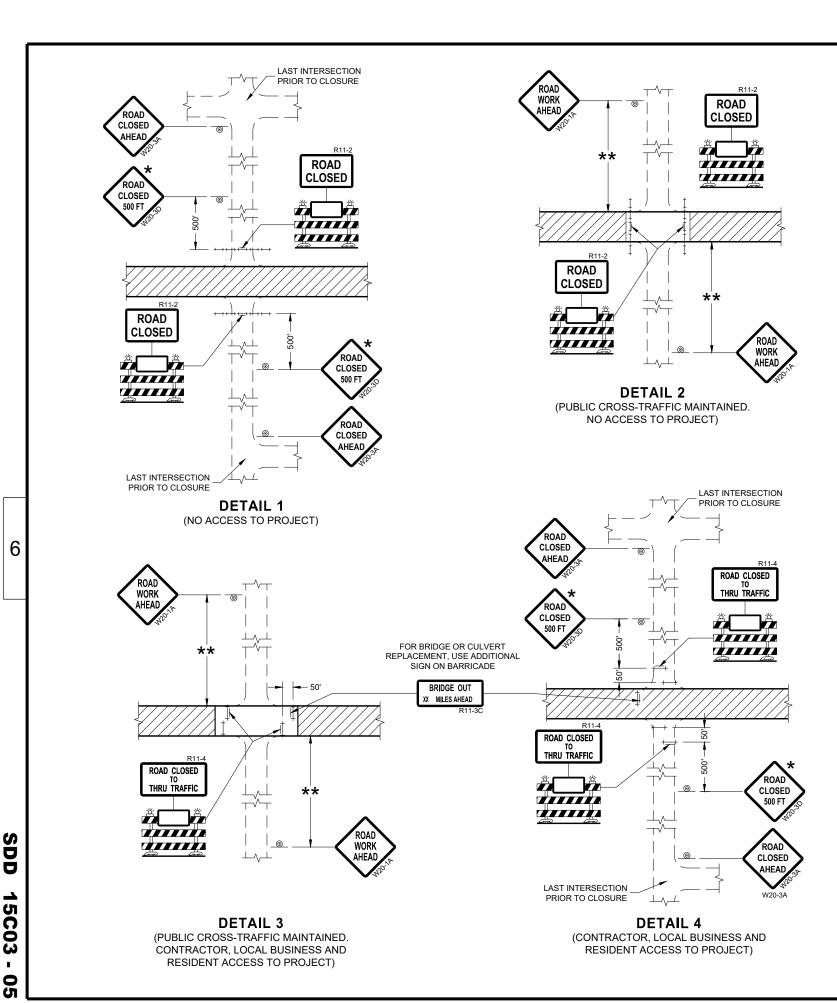
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GENERAL NOTES

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW: R11-2 SHALL BE 48" X 30". R11-4 AND R11-3 SHALL BE 60" X 30".

- ★ OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

SIGN ON PERMANENT SUPPORT

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

TYPE "A" WARNING LIGHT (FLASHING)

WORK AREA

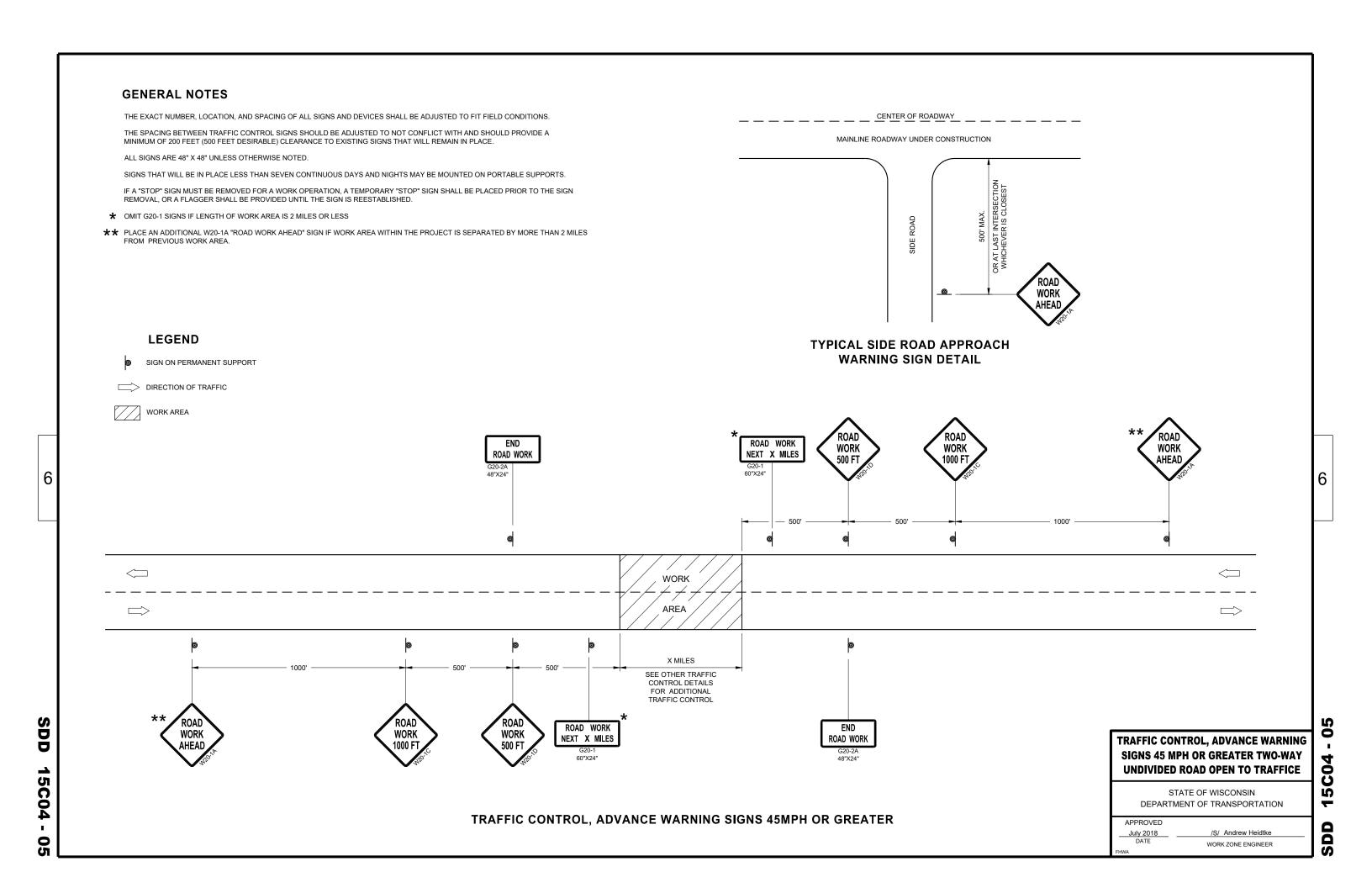
BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

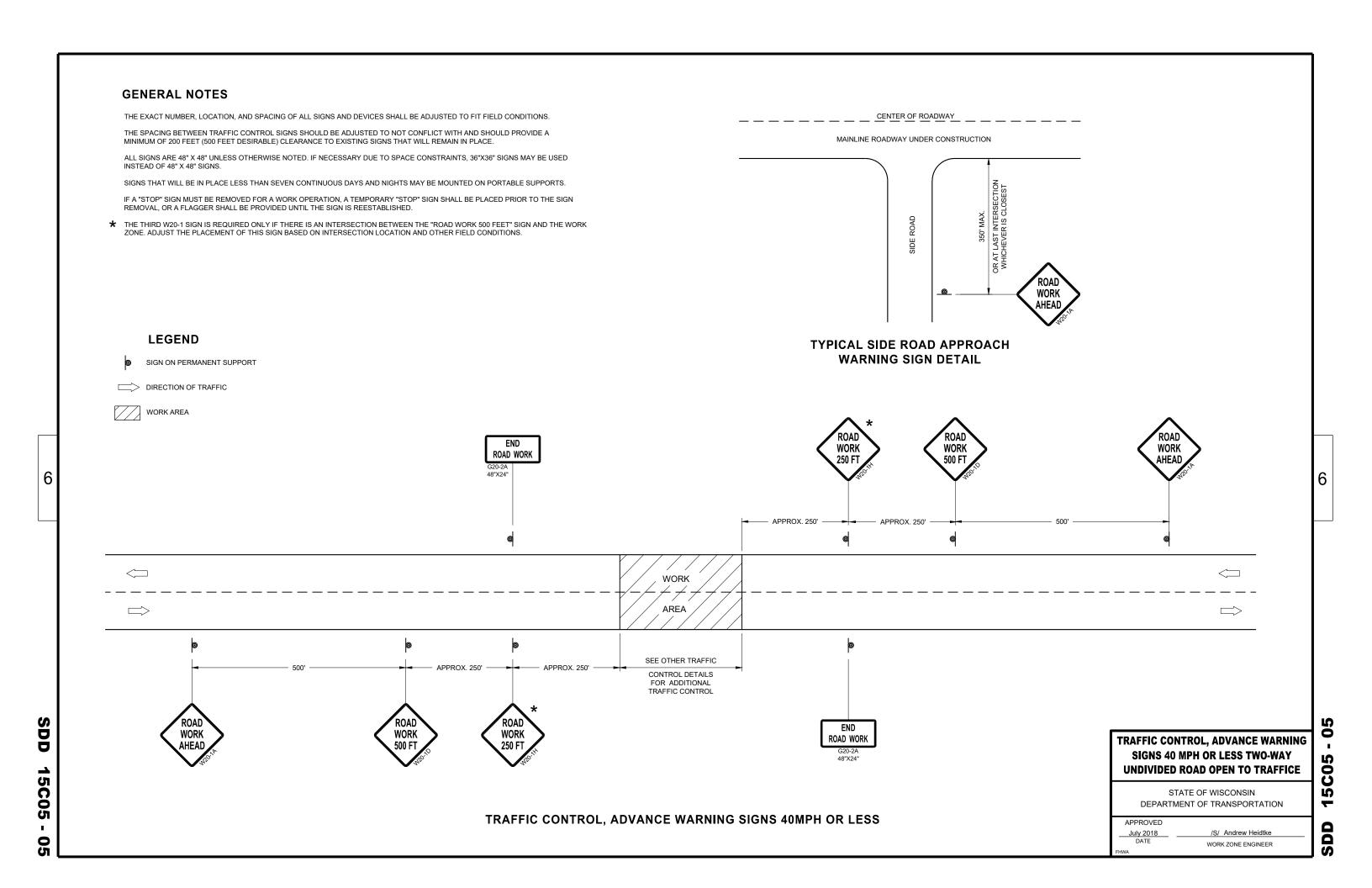
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

 APPROVED
 /S/ Andrew Heidtke

 July 2018
 /S/ Andrew Heidtke

 DATE
 WORK ZONE ENGINEER





LEGEND GENERAL NOTES

SIGN ON PORTABLE OR PERMANENT SUPPORT

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUELIF

WHEN A SIDE ROAD OR 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 APPROVED BY THE ENGINEER.

FLAGGING

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- (2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

ROAD

ŔUMBLĖ

STRIPS



RUMBLE

STRIPS

WORK

TEMPORARY PORTABLE RUMBLE

FLAGGER, EQUIPPED WITH STOP/SLOW

PADDLE FASTENED ON SUPPORT STAFF

STRIP ARRAY

WORK AREA

DIRECTION OF TRAFFIC

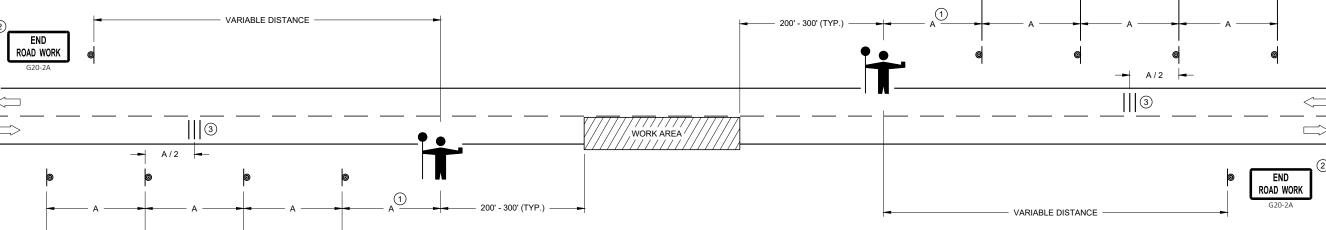
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



WO3-4

USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A"



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

2

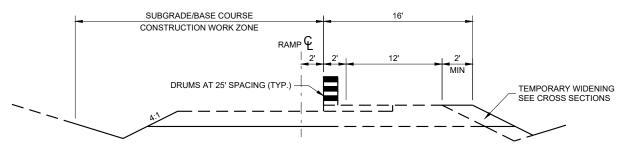
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WORK

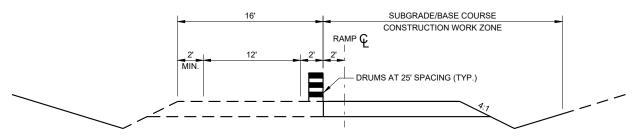
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED	
May 2019	/S/ Andrew Heidtke
DATE	WORK ZONE ENGINEER

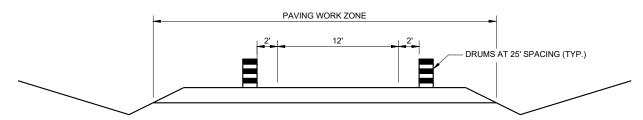
INITIAL RAMP - TYPICAL



STAGE I - CONSTRUCTION TO SUBGRADE, LEFT



STAGE II - CONSTRUCTION TO SUBGRADE, RIGHT



STAGE III - TRAFFIC ON BASE COURSE



GENERAL NOTES

WORK SHALL BE SCHEDULED FOR ALL STAGES TO MINIMIZE INCONVENIENCE TO THE TRAFFIC USING THE RAMP WHILE IT IS ONLY BASE COURSE.

IN STATE III, A MINIMUM 12' LANE WIDTH SHALL BE DELINEATED WITH DRUMS ALONG BOTH EDGES AT ALL TIMES UNTIL PAVED AND PAVEMENT MARKINGS ARE PLACED.

TRAFFIC CONTROL, RAMP CONSTRUCTION STAGING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 15D

SDD 15D04 -

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS

NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

February 2020 DATE

/S/ Andrew Heidtke

WORK ZONE ENGINEER

TYPE III BARRICADE WITH ATTACHED SIGN

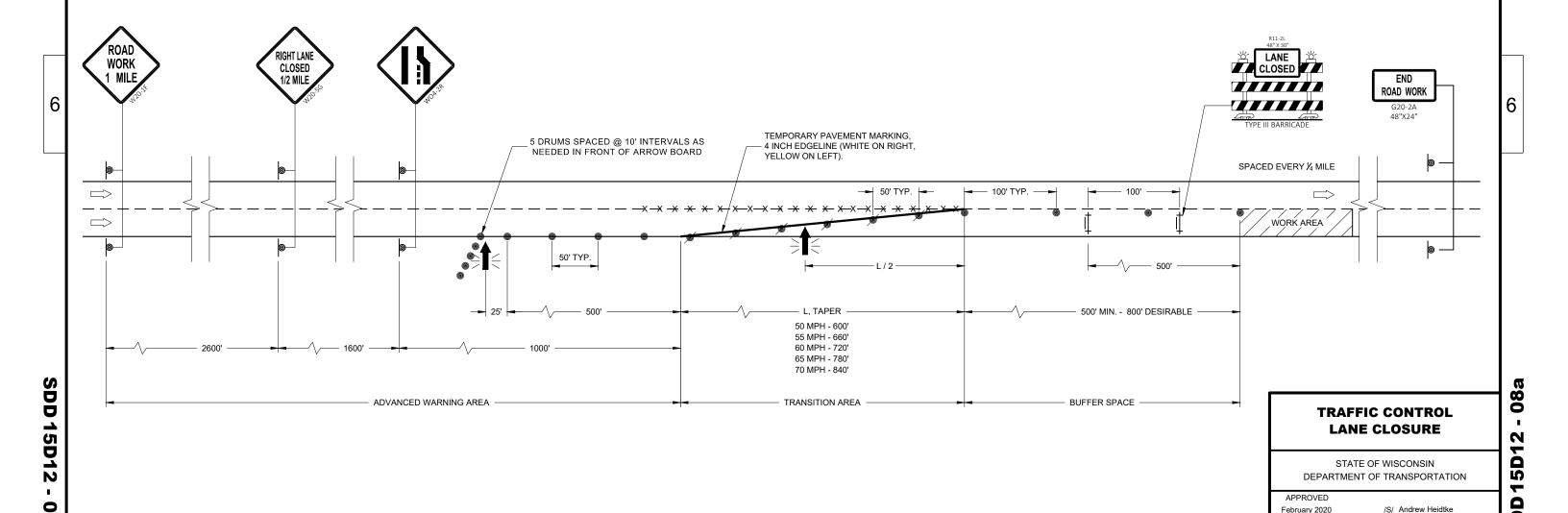
TYPE "A" WARNING LIGHT (FLASHING)

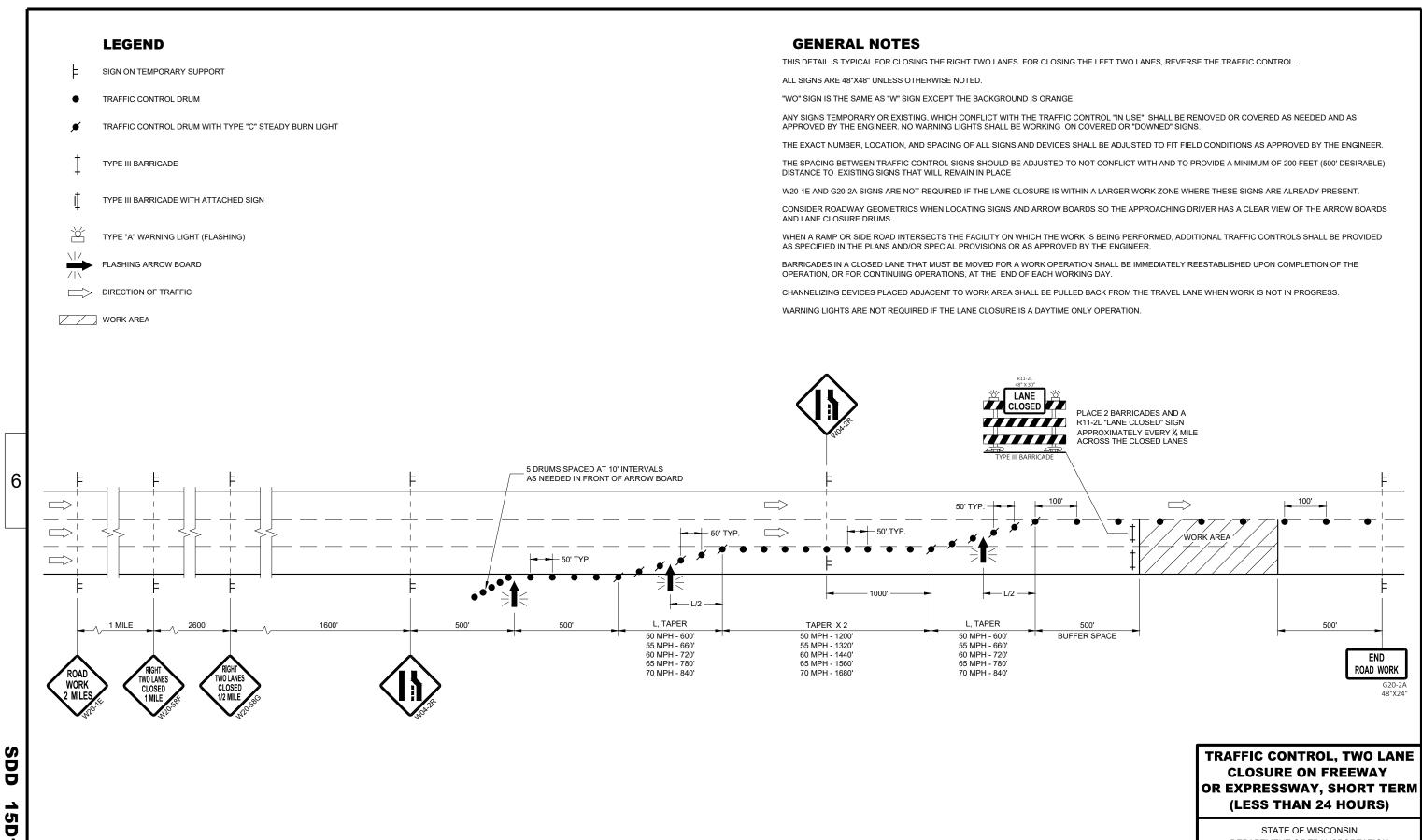
-X-X-X- REMOVING PAVEMENT MARKINGS

DIRECTION OF TRAFFIC

WORK AREA

FLASHING ARROW BOARD





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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

/S/ Andrew Heidtke

STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

APPROVED May 2020 DATE

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(PLACE 500' IN

ADVANCE OF GORE)

(PLACE 1000' IN

ADVANCE OF GORE

PARALLEL EXIT RAMP

LANE CLOSED

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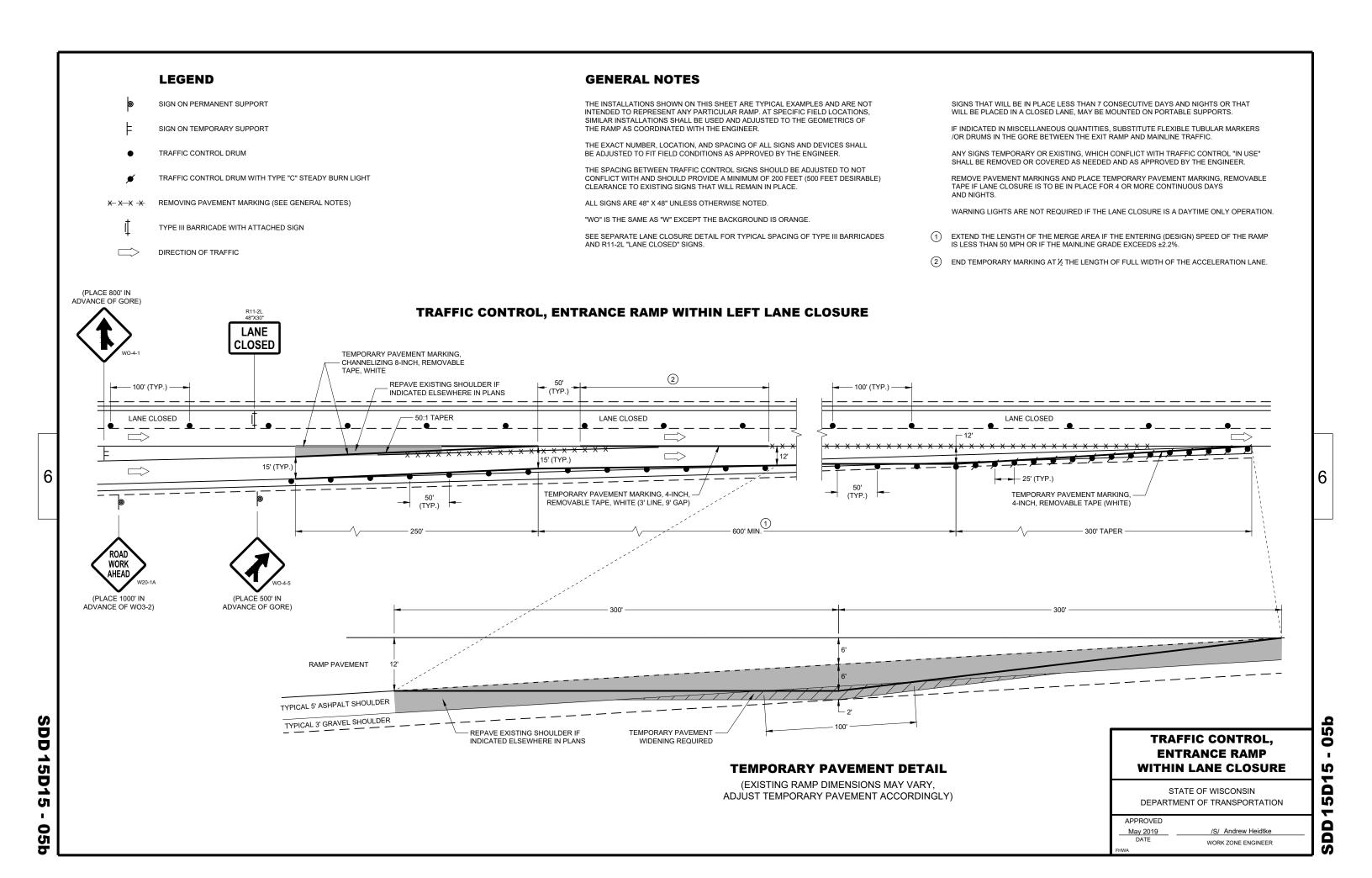
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED May 2019
DATE /S/ Andrew Heidtke WORK ZONE ENGINEER

100' (TYP.)

LANE CLOSED

SDD 15D15



(PLACE 500' IN

ADVANCE OF WO3-2)

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

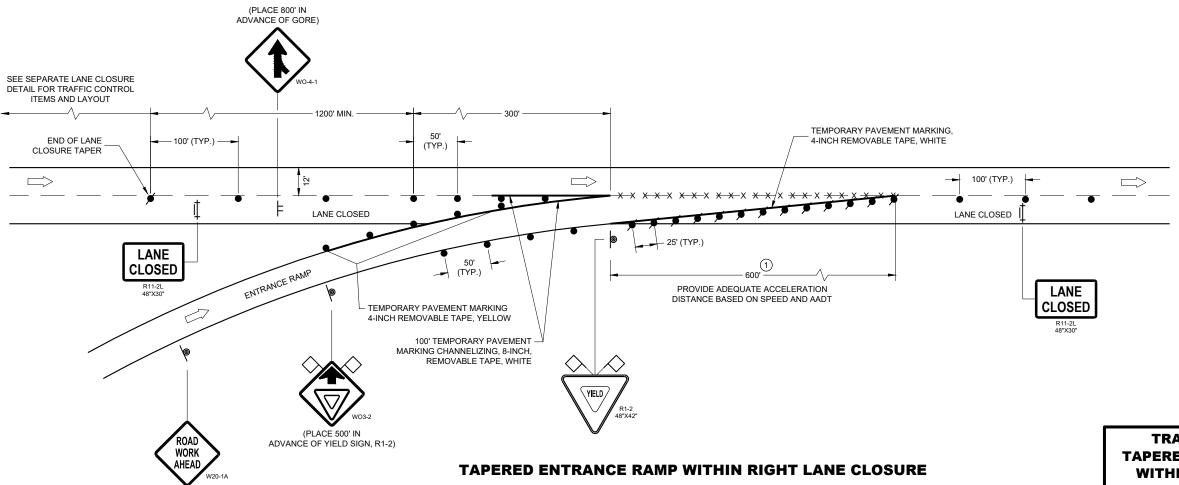
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

(1) CONSULT WITH REGIONAL WORK ZONE ENGINEER IF NEED TO REDUCE LENGTH EXISTS.



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2019

DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

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TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE

(PLACE 500' IN

ADVANCE OF WO3-2)

TAPERED ENTRANCE RAMP

DEPARTMENT OF TRANSPORTATION APPROVED May 2019 DATE /S/ Andrew Heidtke WORK ZONE ENGINEER

TRAFFIC CONTROL,

WITHIN LANE CLOSURE

STATE OF WISCONSIN

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

▼ TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

X-X-X REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

TYPE III BARRICADE WITH ATTACHED SIGN

DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

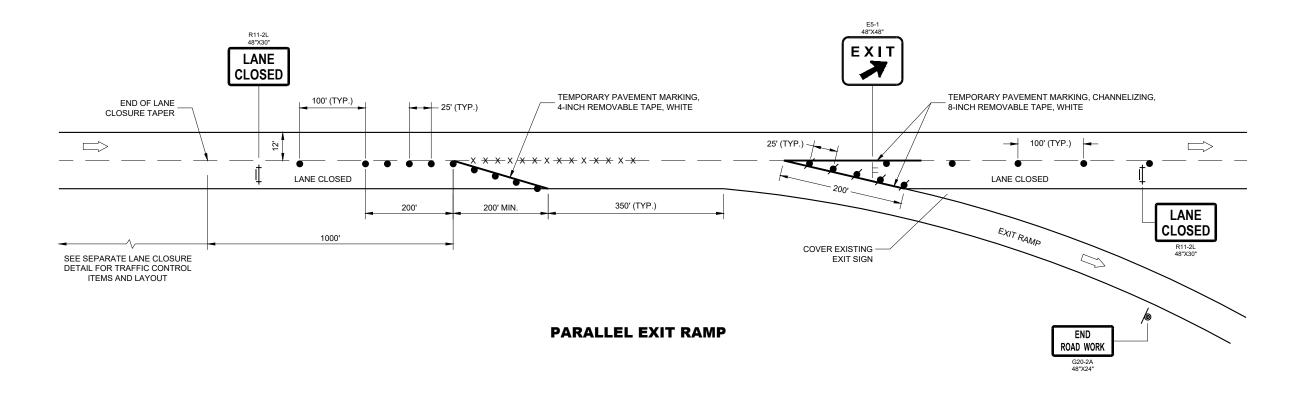
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NICELES.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.



TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2019

DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

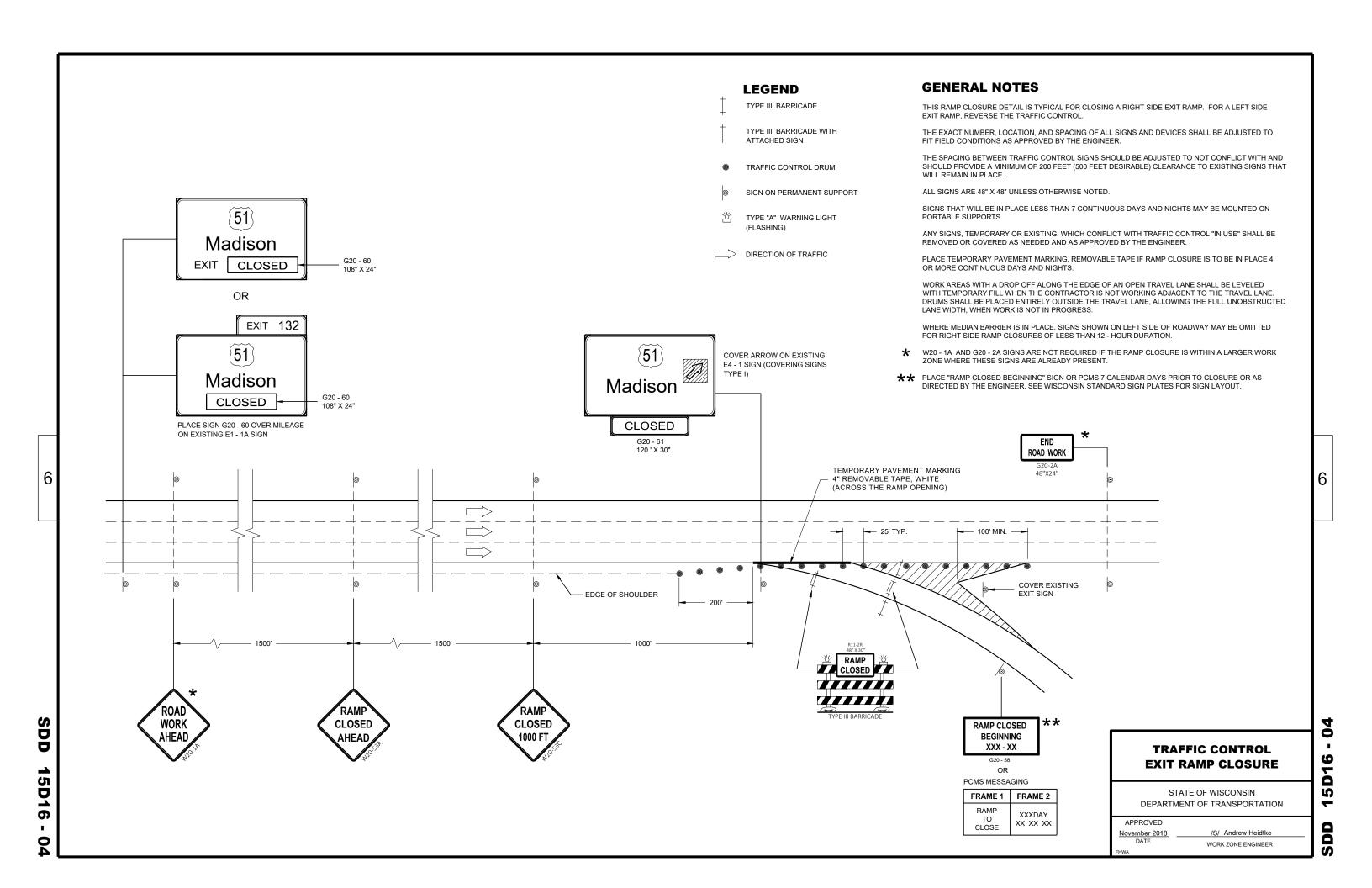
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SDD 15D15 - 05



SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

▼ TRAFFIC CONTROL DRUM WITH
TYPE "C" STEADY BURN LIGHT

TYPE III BARRICADE
WITH ATTACHED SIGN

TYPE "A" WARNING LIGHT (FLASHING)

FLASHING ARROW BOARD

DIRECTION OF TRAFFIC

CXX REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)

WORK AREA

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

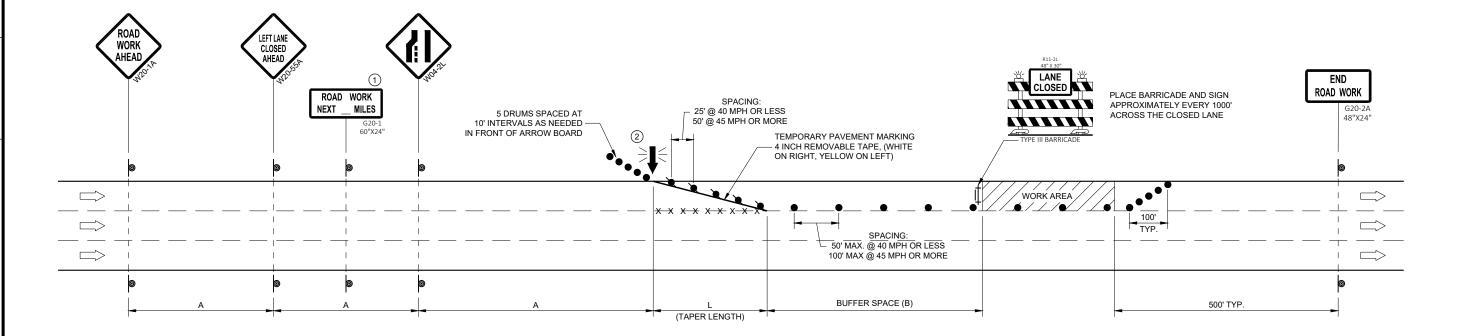
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

- (1) OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- (2) WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



POSTED SPEED LIMIT ADVANCE TAPER LENGTH | BUFFER PRIOR TO WORK WARNING SIGN (12 FT. LANE) SPACE STARTING (MPH) SPACING (A) FEET (L) FEET (B) FEET 25 200' 125' 55' 30 200' 180' 85' 35 350' 245' 120' 40 170' 350 320' 45 500' 540' 220'

TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2020

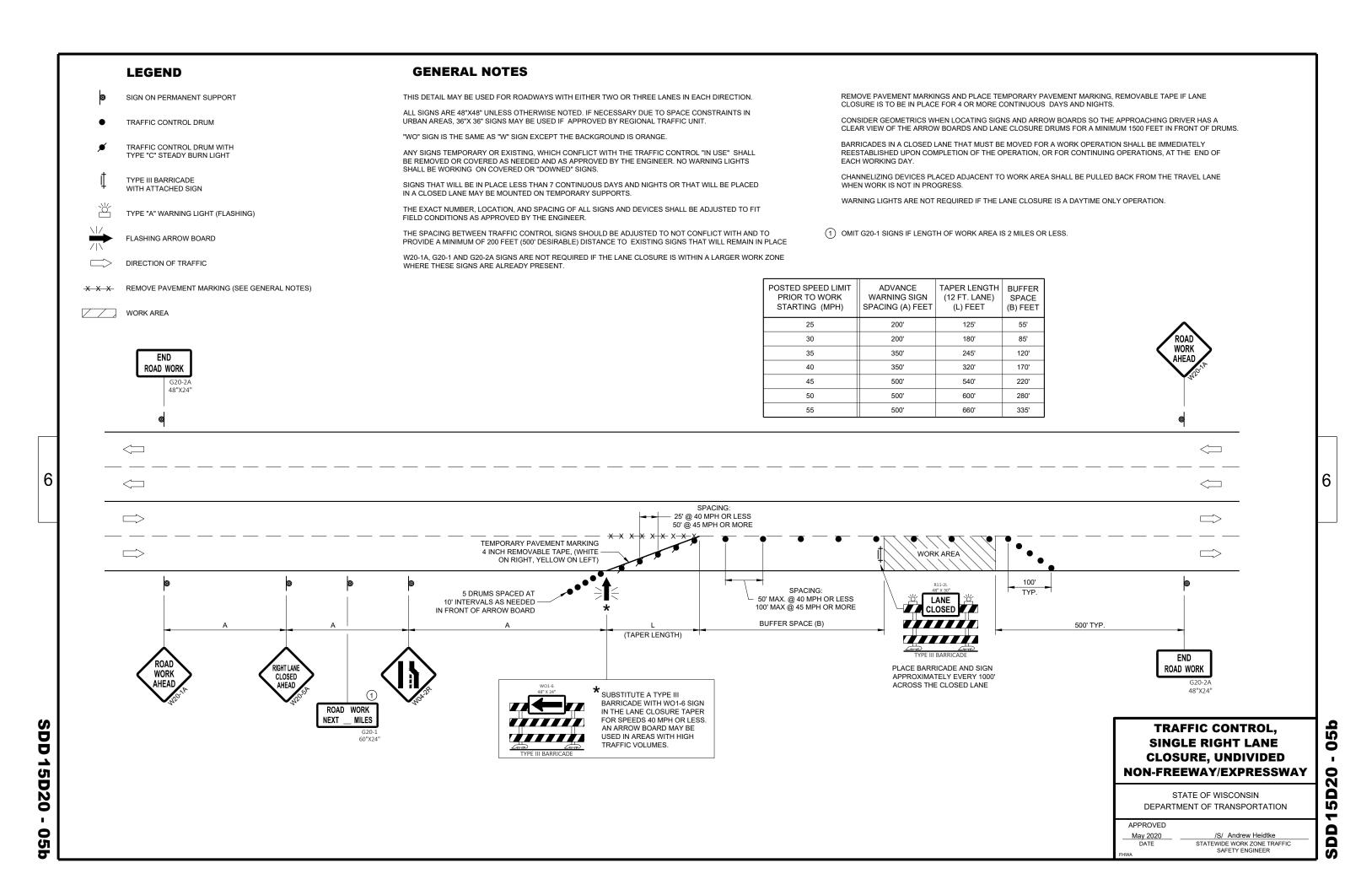
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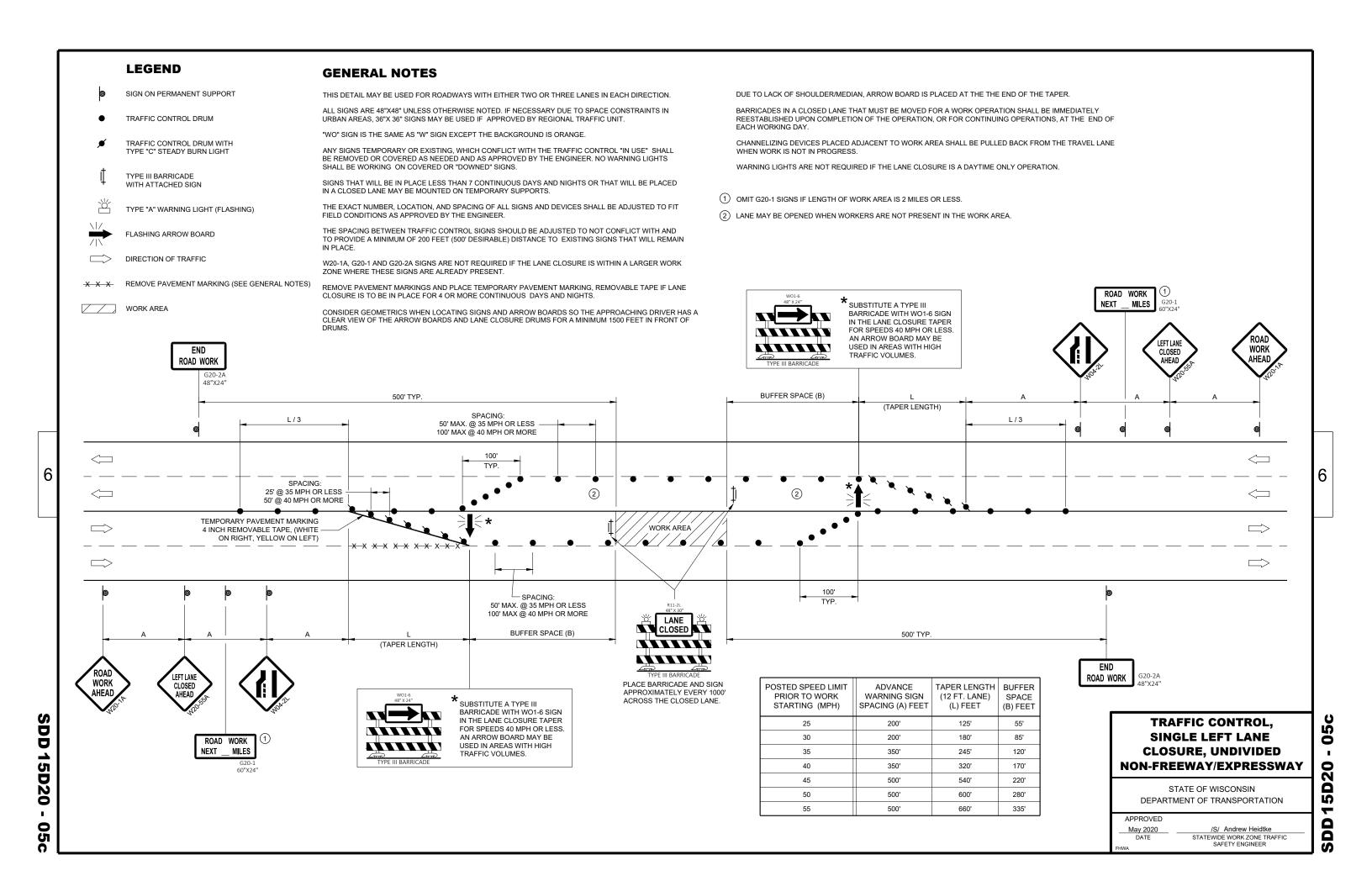
/S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

SDD 15D20 -

DD 15D20

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(WITH RIGHT TURN BAY OPEN)

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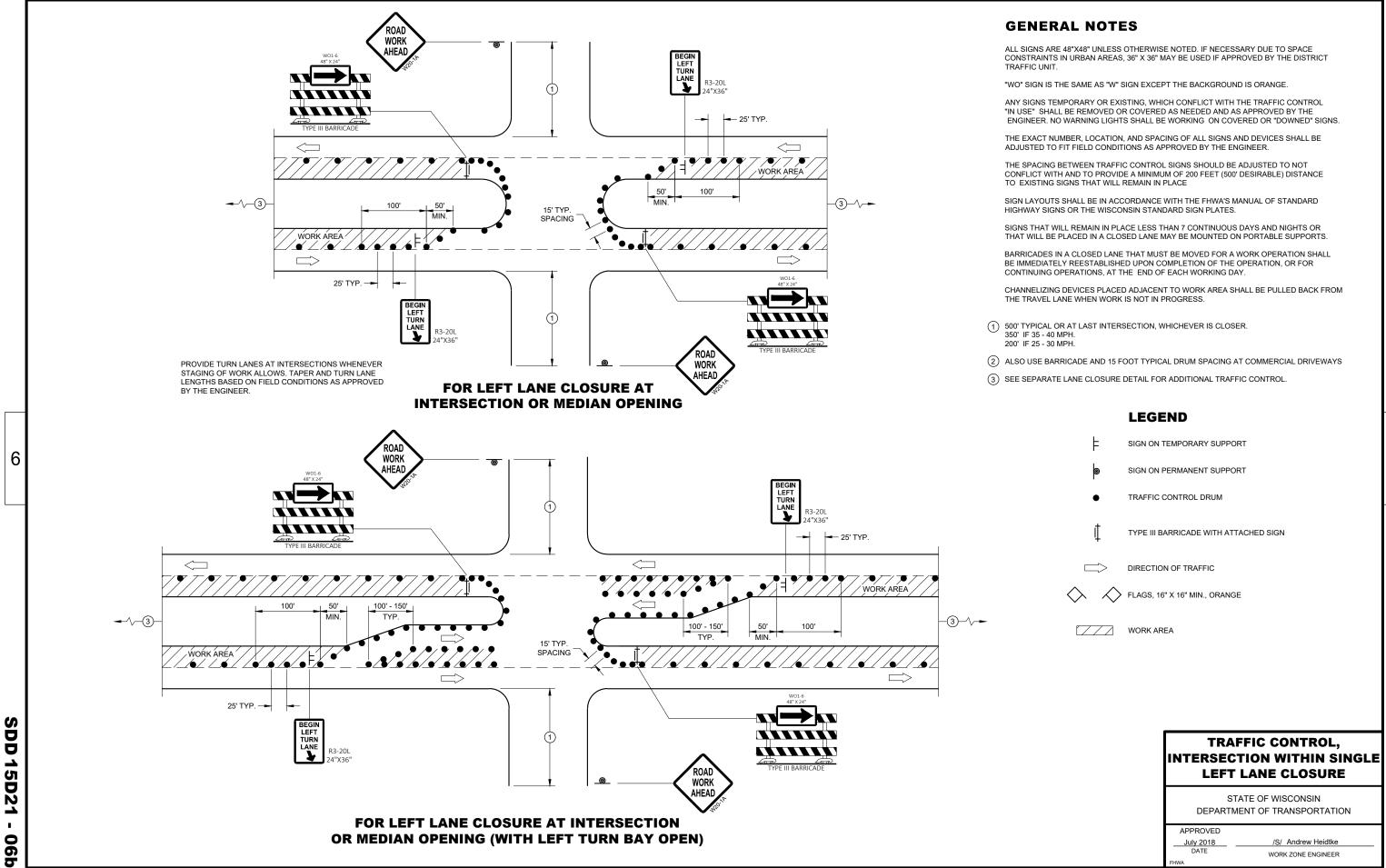
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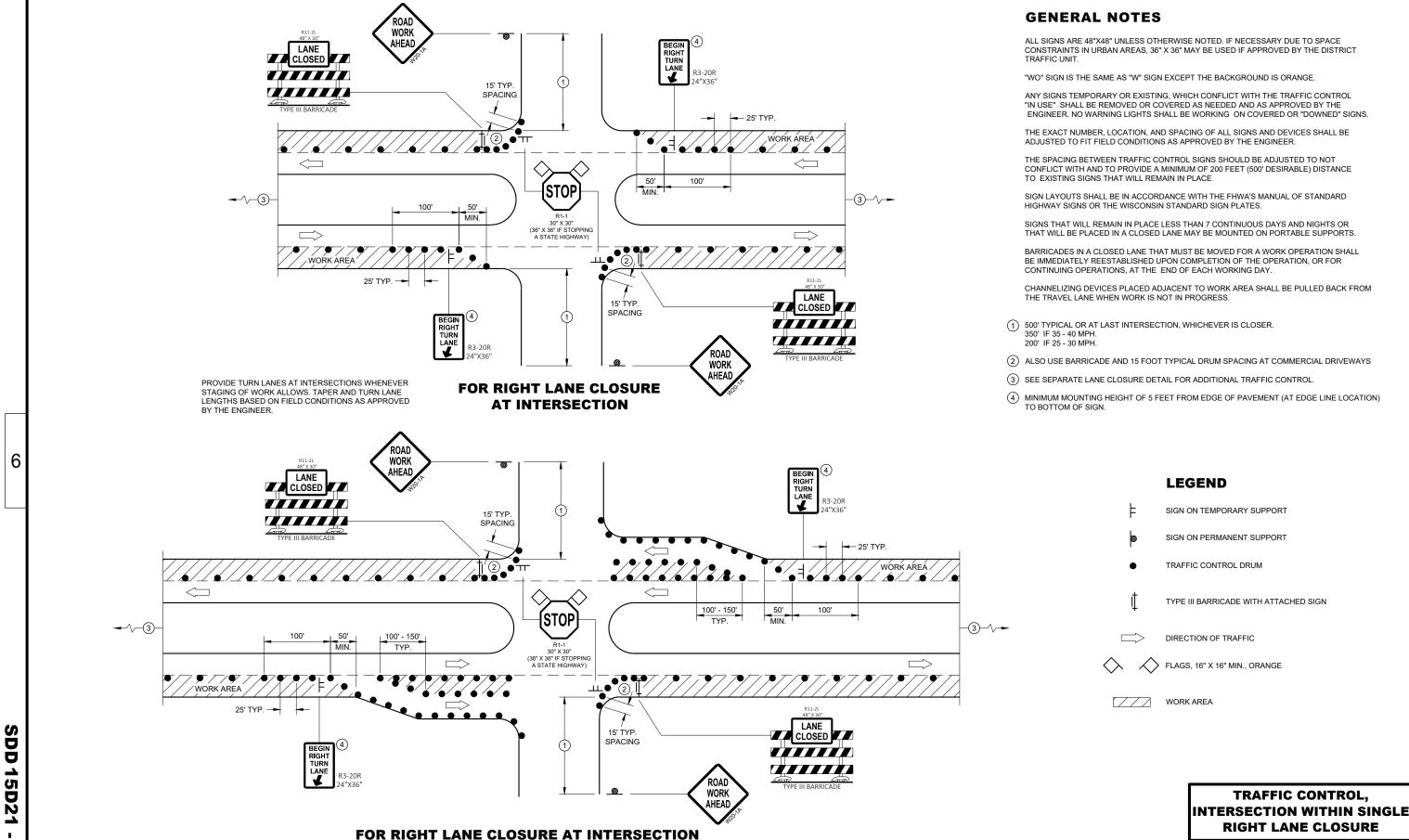
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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WORK ZONE ENGINEER



(WITH RIGHT TURN BAY OPEN)

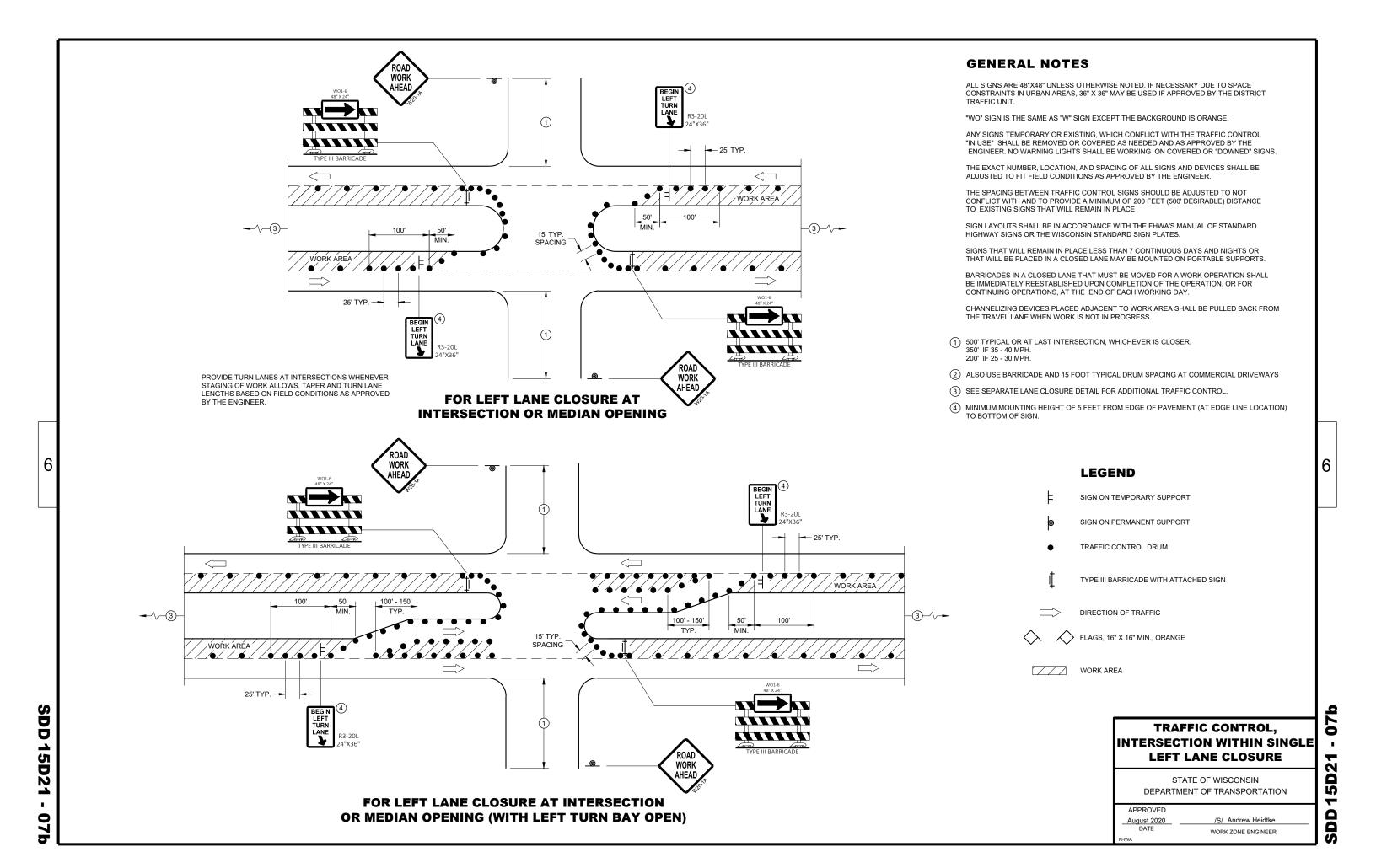
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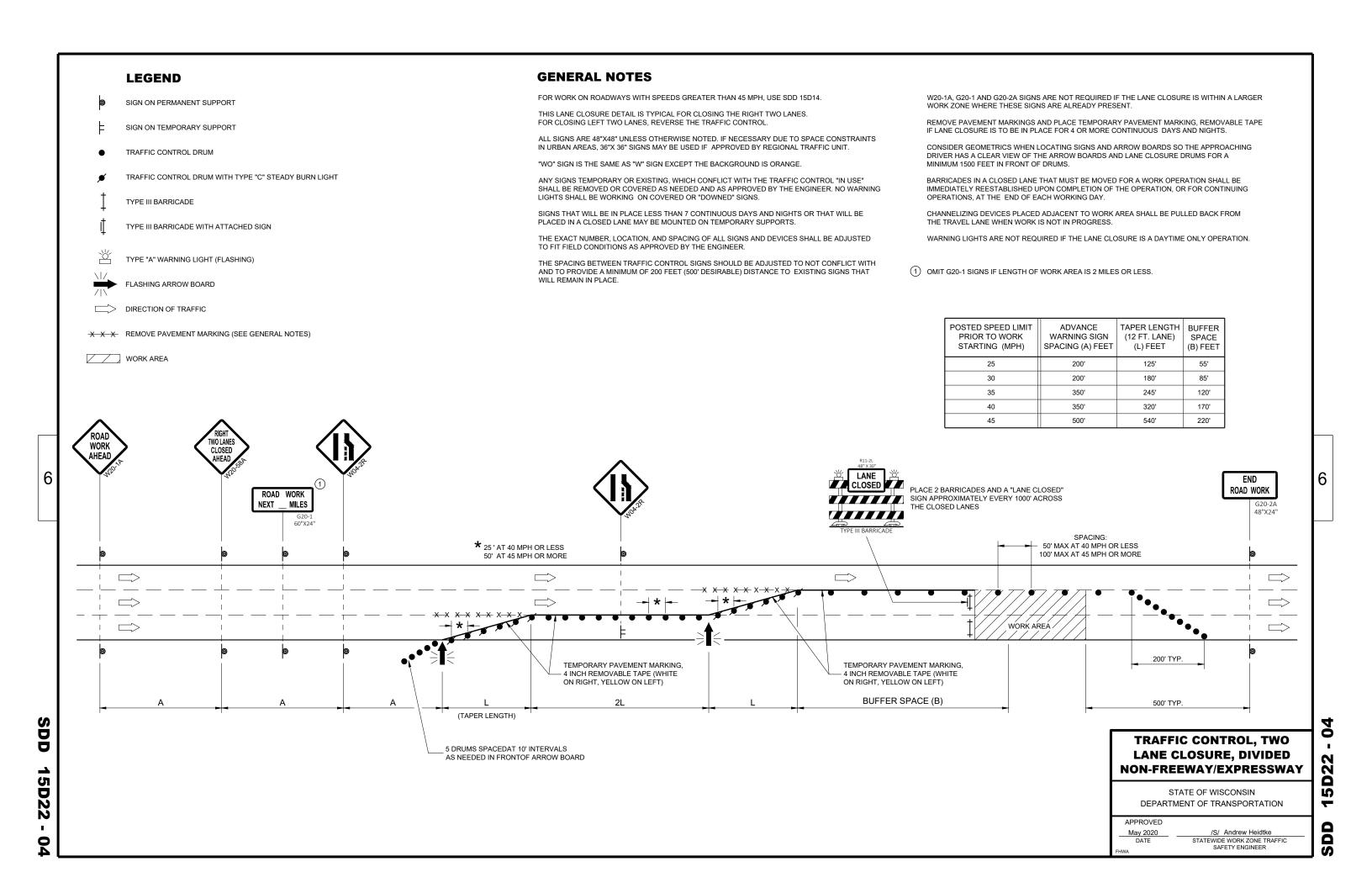
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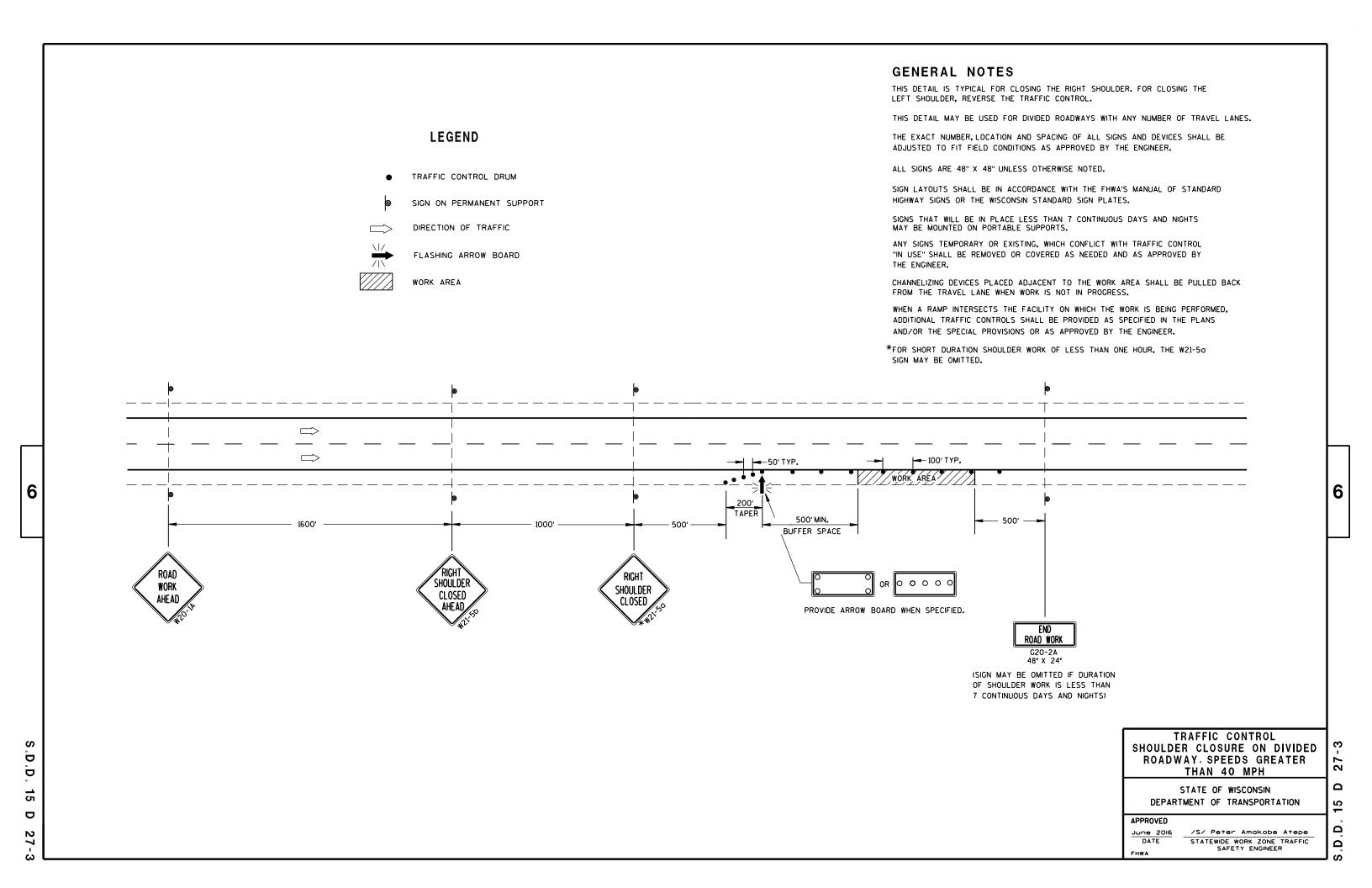
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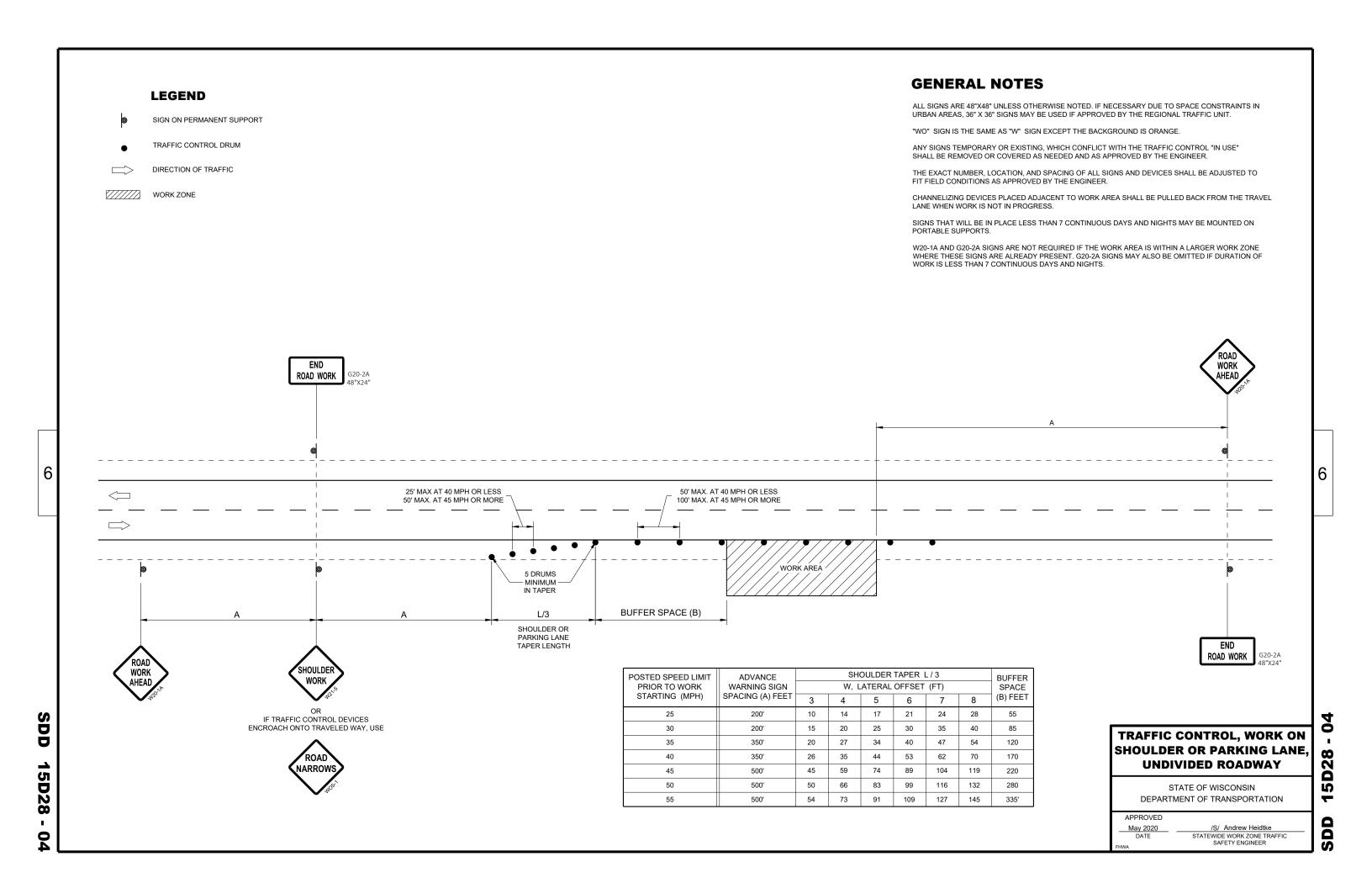
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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION









INSTALLATION WITHOUT SECONDARY SIGN

TYPE 1 SIGN INSTALLATION NOTES:

FOR A 2-POST INSTALLATION, "S" EQUALS 3L/5, BUT SHALL NOT BE LESS THAN 6'-0".

FOR A 3-POST INSTALLATION, "S" EQUALS 5L/7, BUT SHALL NOT BE LESS THAN 12'-O". THE SPACING BETWEEN ANY TWO POSTS SHALL NOT BE LESS THAN 6'-O".

⚠ UNLESS NOTED IN THE PLANS, THE SIGN OFFSET DISTANCE SHALL BE A MINIMUM OF 17'-6" FROM THE WHITE EDGE LINE, DESIRABLE 30'-0".

THE ± TOLERANCE SHOWN ON THIS SHEETS IS 3".

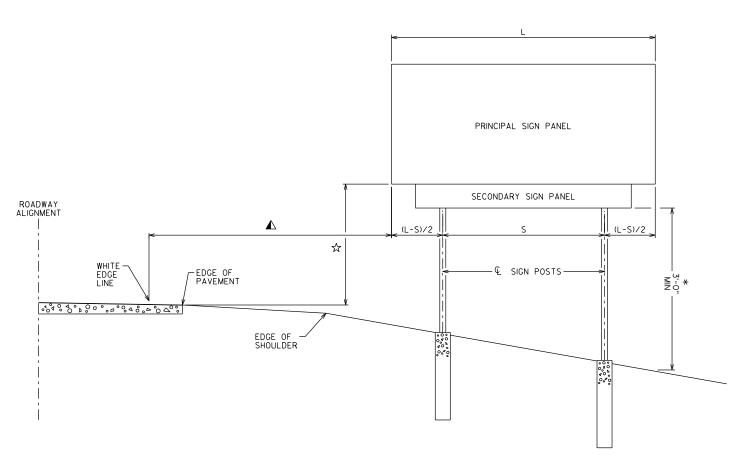
THE VERTICAL SIGN HEIGHT CLEARANCES SHOWN ON THIS SHEET ARE MEASURED FROM THE BOTTOM OF THE SIGN PANEL TO THE NEAR EDGE OF PAVEMENT.

- THE VERTICAL CLEARANCE SHALL BE 8'-3"± WHEN THE SECONDARY SIGN HEIGHT IS 3'-0" OR LESS.FOR SECONDARY SIGN HEIGHTS LARGER THAN 3'-0", THE VERTICAL CLEARANCE TO THE BOTTOM OF THE SECONDARY SIGN PANEL SHALL BE 5'-3"±.
- * THE VERTICAL SIGN GROUND CLEARANCE ON RIGHT END OF SIGN SHALL BE A MINIMUM OF 3'-O"±.

HWY:

POST LENGTHS SHOWN IN THE MISCELLANEOUS OUANTITIES ARE ESTIMATED LENGTHS. THE CONTRACTOR SHALL VERIFY POST LENGTHS AT THE TIME OF FINAL GRADING.

REFER TO THE TRAFFIC ENGINEERING OPERATIONS AND SAFETY MANUAL FOR FURTHER GUIDANCE ON MINIMUM VERTICAL CLEARANCE REQUIREMENTS.



INSTALLATION WITH SECONDARY SIGN

NO. DATE REVISION BY

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

DRAWN PLANS CK.D.

TYPICAL TYPE I SIGN SHEET A4-1.10

SIGN INSTALLATION

SHEET NO: E

PROJECT NO:

COUNTY:

l e

PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

PLOT DATE : 25-MAR 2020 11:01

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A41.DGN

SPACING OF FLANGED

30" Minimum

48" Maximum X X

CHANNEL STEEL POSTS

MAX

__ X

 \pm =2.00 lb/ft AND 4.00 lb/ft FLANGED CHANNEL. MIN. YIELD STRENGTH

= 60.000 PSI (GRADE 60) GALVANIZED

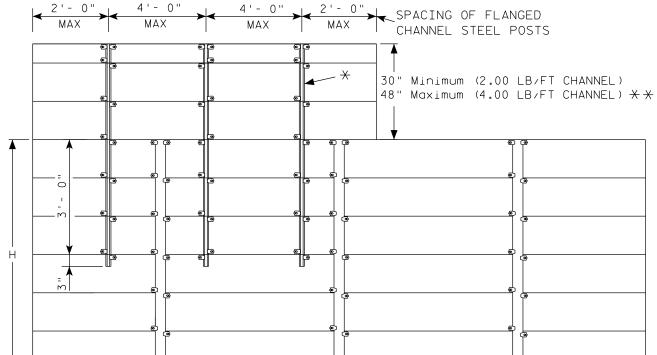
* * = FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES. ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

SIGN BRIDGE MOUNTED SIGN

 $MAX \times X \times X$

* * THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 15 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 15 FT, STRUCTURAL CALCULATIONS SHALL BE

PERFORMED.



FLANGE CHANNEL DETAILS NOT TO SCALE

1/₈ — 1 1/₄ → 1

 $1\frac{1}{2}$ 2.00 LB/FT CHANNEL $\frac{1}{8}$ \longrightarrow $1\frac{1}{2}$ \longrightarrow 4.00 LB/FT CHANNEL

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.

 $MAX \times X \times X$

- 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 Sian 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

 $MAX \times X \times X$

ForState Traffic Engineer

SHEET NO:

DATE 1/07/20

PLATE NO. <u>A4-6.12</u>

 $MAX \times X \times X$

SPACING OF ALUMINUM SIGN SUPPORTS

5" X 3.5" X 3.7 LBS./ft.

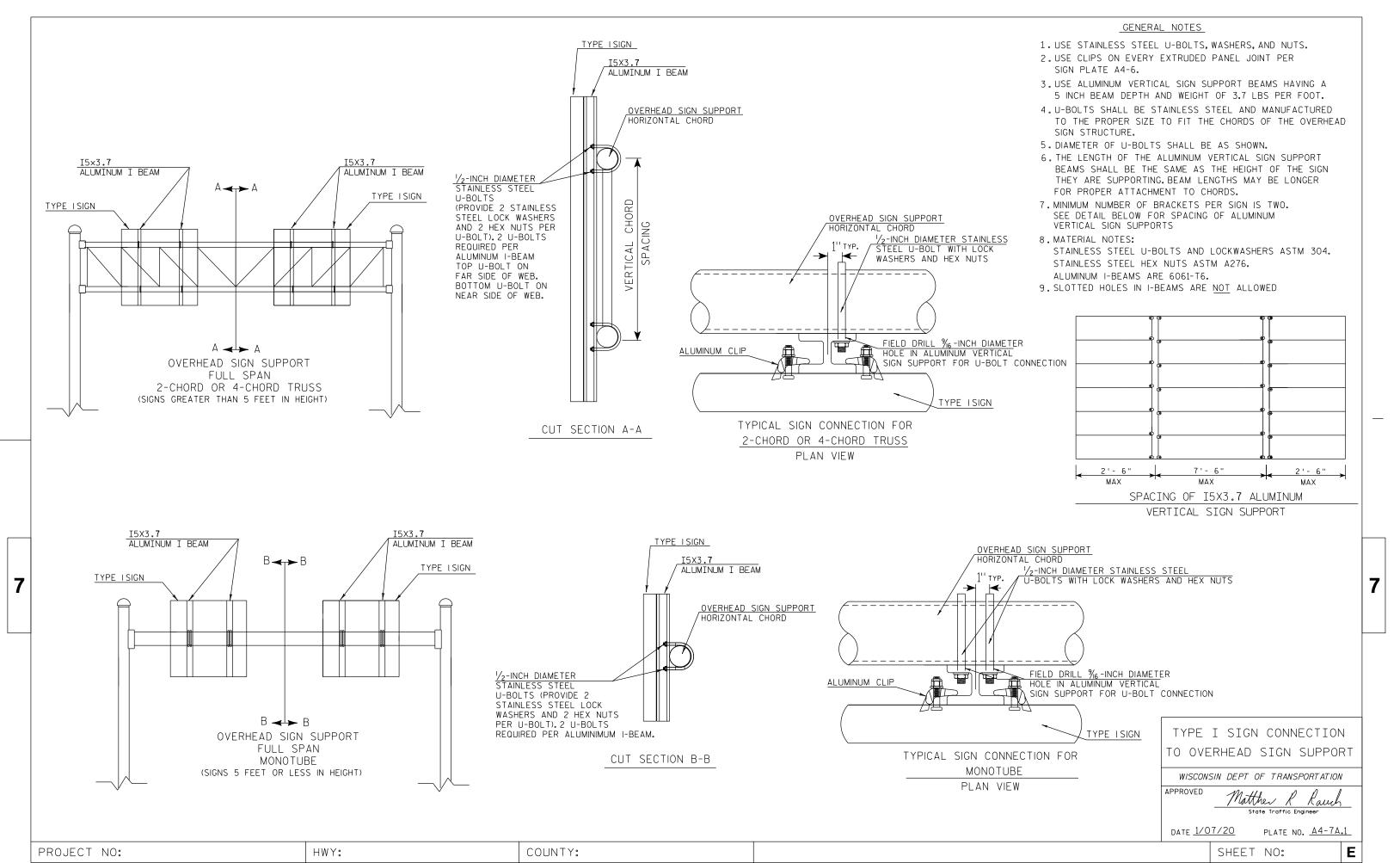
PROJECT NO: FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A46.DGN

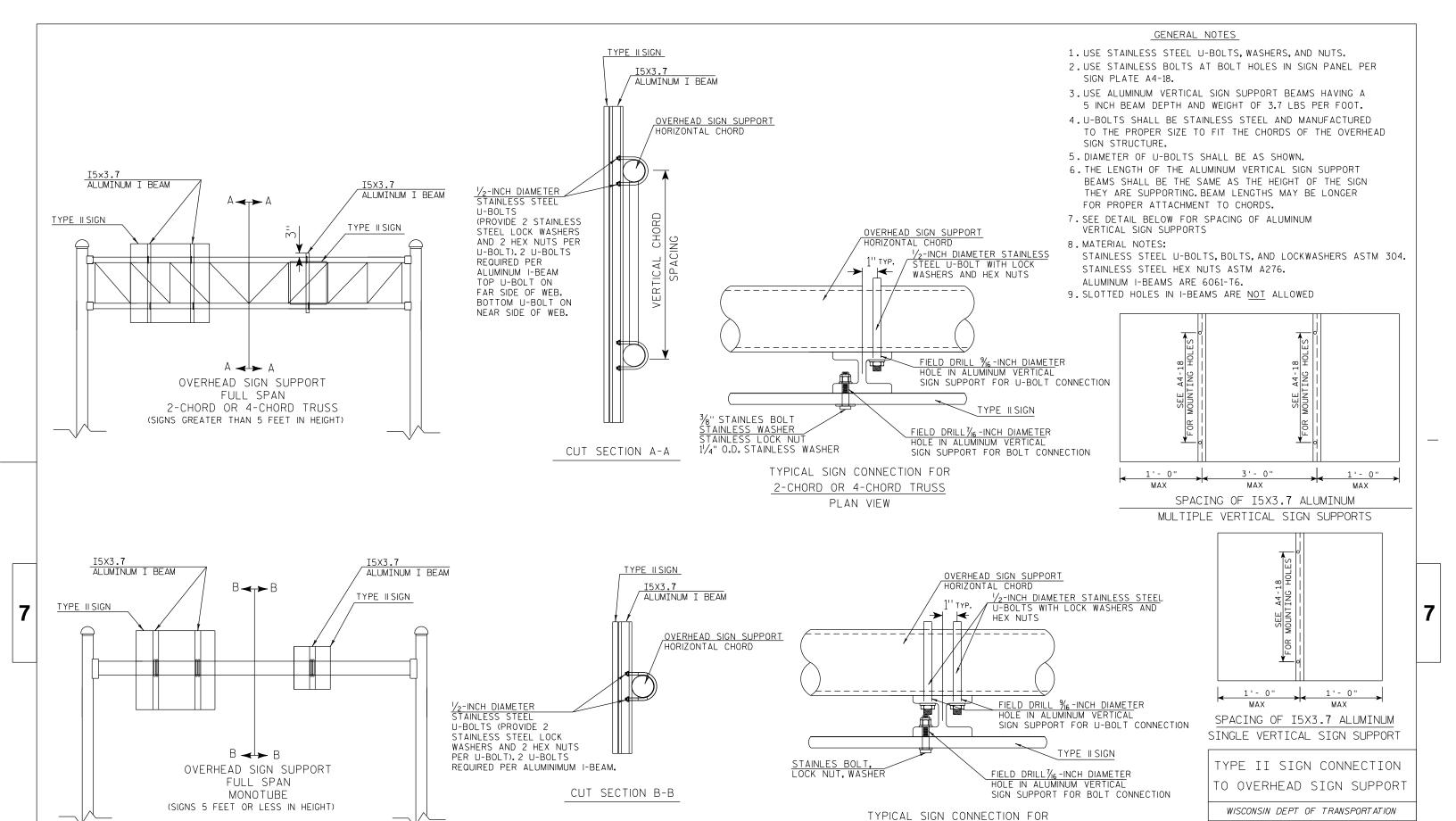
PLOT DATE: 7-Jan-2020

PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

Ε





Ε PROJECT NO: HWY: COUNTY: SHEET NO: PLOT SCALE: \$\$.....plotscale.....\$\$ WISDOT/CADDS SHEET 42 PLOT DATE: 7-Jan-2020 FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A47B.DGN PLOT BY : dotc4c PLOT NAME :

MONOTUBE PLAN VIEW

APPROVED

DATE 1/07/20

PLATE NO. <u>A4-7B.1</u>

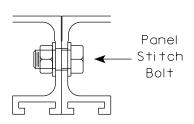
STITCH BOLT, WASHER & NUT

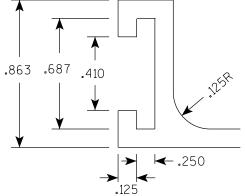
The hardware includes:

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

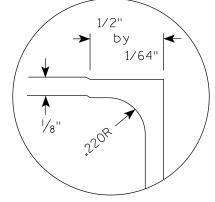




12" Extrusion Minimum Weight 2.5 lb./ft.

See Detail A

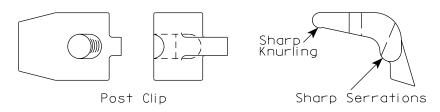
Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

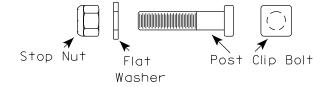


DETAIL A (EDGE WRAP JOINT)

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.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

ForState Traffic Engineer

DATE 1/07/20 PLATE NO. <u>A5-2.10</u>

SHEET NO:

PROJECT NO:

PLOT DATE: 7-Jan-2020

PLOT BY : dotc4c

Ε

S670949 WAUKESHA

USH 18 W

ID	COUNTY	HIGHWAY	LOCATION	STRUCTURE TYPE
S130129	DANE	I-39/90/94 EB	I-39/90/94 EB AT USH 151 NB EXIT	4 CHORD CANTILEVER TRUSS
S130213	DANE	USH 151 SB	USH 151 SB, 200 FT N OF USH 51	CANTILEVER MAST ARM
S300035	KENOSHA	IH 94 E	AT THE ILLINOIS STATE BORDER	4 CHORD FULL SPAN
S300401	KENOSHA	IH 41 N	JUST S OF CTH C	4 CHORD FULL SPAN
S360023	MANITOWOC	CUSTER ST	CUSTER ST JUST N OF USH 151	MONOTUBE FULL SPAN
S400018	MILWAUKEE	IH 41 S	½M N OF HALE INTERCHANGE	4 CHORD FULL SPAN
S400204	MILWAUKEE	IH 94 E	1/4M W OF 35TH ST	BUTTERFLY
S400269	MILWAUKEE	W HOWARD AVE	ON BRIDGE OVER STH 794	MONOTUBE FULL SPAN
S400331	MILWAUKEE	IH 7 94 W	1/2MILE S OF EXIT TO LINCOLN MEMORIAL DR.	4 CHORD FULL SPAN
S400338	MILWAUKEE	STH 175 N	1∕4M S OF STATE ST	4 CHORD FULL SPAN
S400558	MILWAUKEE	IH 41 N	AT RAMP TO 1-894 WB AT THE EXIT TO LAYTON AVE	4 CHORD FULL SPAN
S40056 7	MILWAUKEE	IH 41 S	¹∕₄M N OF COLLEGE AVE	4 CHORD FULL SPAN
S400 7 42	MILWAUKEE	IH 894 E	ENTRANCE RAMP FROM STH 241N	4 CHORD FULL SPAN
S400926	MILWAUKEE	CTH PP E	AT PORT WASHINGTON RD	2 CHORD FULL SPAN
S400982	MILWAUKEE	STH 100 W	JUST E OF 13TH ST	2 CHORD CANTILEVER TRUSS
S450201	OZAUKEE	STH 5 7 E	JUST W OF IH 43	2 CHORD FULL SPAN
S640201	WALWORTH	STH 50 E	√ ₂ M E OF IH 43	CANTILEVER MAST ARM
S660201	WASHINGTON	W PARADISE DR E	AT THE RAMP TO USH 45 N	CANTILEVER MAST ARM
S660202	WASHINGTON	W PARADISE DR W	AT RAMP TO USH 45 S	CANTILEVER MAST ARM
S6 7 0215	WAUKESHA	CTH T N	JUST N OF IH 94	CANTILEVER MAST ARM
S670216	WAUKESHA	CTH T S	JUST S OF IH 94	CANTILEVER MAST ARM
S670947	WAUKESHA	USH 18 E	AT RAB WITH STH 83	2 CHORD FULL SPAN
S6 7 0948	WAUKESHA	STH 83 S	AT RAB WITH USH 18	2 CHORD FULL SPAN

AT RAB WITH USH 83

2 CHORD FULL SPAN

STATE PROJECT NUMBER

1000-20-63

LIST OF DRAWINGS

LIST OF DRAWINGS		
1. 2021 STATEWIDE SIGNAL REPAIR 2. 2021 STATEWIDE SIGNAL REPAIR 3. FOUNDATION DETAILS 4. TRUSS DETAILS 5. SUPERSTRUCTURE DETAILS 6. SIGN PANEL DETAILS 7. ELECTRICAL DETAILS 8. CATWALK DETAILS 9. SIGNAL DETAILS 10. S-13-0129 11. S-13-0213 12. S-13-0534-0001 13. S-13-0975-0001 14. S-13-0975-0002 15. S-13-0975-0003 16. S-13-0975-0004 17. S-13-1348-0001 18. S-13-1348-0001 18. S-13-1348-0001 18. S-13-1348-0002 19. S-30-0035 20. S-30-0401 21. S-30-1173 22. S-30-1164 23. S-30-1174 25. S-36-0023 26. S-40-0018 27. S-40-0269 29. S-40-0331 30. S-40-0269 29. S-40-0331 30. S-40-0567 32. S-40-0742 33. S-40-0982 35. S-40-1217 36. S-40-1240 38. S-40-1274 41. S-40-1274 41. S-40-1275 42. S-40-1391 45. S-40-1395 47. S-40-1449 51. S-40-1469 52. S-40-1469 53. S-40-1469 54. S-40-1469 55. S-40-1469 56. S-40-1511 63. S-40-1515	66. 67. 69. 70. 71. 73. 74. 75. 80. 81. 82. 83. 84. 85. 90. 91. 92. 93. 94. 95.	S-40-1516 S-45-020 S-51-1141 S-51-1142 S-51-1143 S-51-1144 S-51-1145 S-51-1145 S-51-1149 S-64-020 S-66-020 S-66-020 S-66-020 S-66-1028 S-67-0215 S-67-0216 S-67-094 S-67-094 S-67-1120 S-67-1130 S-67-1132 S-67-1324 S-67-1361

STRUCTURE DESIGN CONTACTS:

STEVEN DOOCY (608) 261-6063 DOMINIQUE BECHLE (608) 261-8205

NO. DATE BUREAU OF SIRUCII

ANCILLARY STRUCT REHAB 2021

STATEWIDE SIGN AND SIGNAL REPAIRS VARIES CITY VARIES DESIGN SPEC. DESIGNED DESIGNED DRAWN BY SCL/SAD CK'D. SAD

> 2021 STATEWIDE SIGN REPAIR

SHEET 1 OF 97

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

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

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS AND AS-BUILT CONDITIONS, CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS FOR PROPOSED REPAIRS, PLANS AND SHOP DRAWINGS CAN BE FOUND IN THE HIGHWAY STRUCTURES INFORMATION SYSTEM (HSIS) DATABASE.

ALL FIELD CONNECTIONS SHALL BE MADE WITH $\frac{3}{4}$ " DIAMETER A325 HIGH-TENSILE STRENGTH BOLTS UNLESS OTHERWISE SHOWN OR NOTED.

SIGNAL REPAIR LOCATIONS

D ID	COUNTY	HIGHWAY	LOCATION	STRUCTURE TYPE
S1305340001	DANE	COTTAGE GROVE RD EB	COTTAGE GROVE RD EB AT STH 51 RAMP	
	DANE			CANTILEVER MAST ARM CANTILEVER MAST ARM
S1309750001		STH 19 WB	STH 19 WB JUST WEST OF USH 51	
S1309750002	DANE	STH 19 WB	STH 19 WB JUST EAST OF USH 51 STH 19 EB JUST EAST OF USH 51	CANTILEVER MAST ARM
S1309 7 50003	DANE	STH 19 EB		CANTILEVER MAST ARM
S1309 7 50004	DANE	STH 19 WB	STH 19 WB JUST WEST OF USH 51	CANTILEVER MAST ARM
S1313480001	DANE	USH 51 NB	USH 51 NB AT 1-39 NB OFF RAMP	CANTILEVER MAST ARM
S1313480002 S301127	DANE KENOSHA	USH 51 SB STH 50 E	USH 51SB AT 139 NB RAMPS JUST E OF CTH P	CANTILEVER MAST ARM
S30112 7	KENOSHA	STH 30 E	JUST S OF 78TH ST	CANTILEVER MAST ARM CANTILEVER MAST ARM
S301164 S3011 7 3	KENOSHA	CTH O N	JUST N OF STH 50	CANTILEVER MAST ARM
S301174	KENOSHA	STH 50 E	JUST E OF CTH O (368TH AVE)	CANTILEVER MAST ARM
S401217	MILWAUKEE	STH 100 E	JUST E OF 107TH ST	CANTILEVER MAST ARM
S401220	MILWAUKEE	STH 100 E	JUST E OF 91ST ST	CANTILEVER MAST ARM
S401240	MILWAUKEE	51ST N	JUST N OF STH 100	CANTILEVER MAST ARM
S401241	MILWAUKEE	STH 100 E	JUST E OF 51ST ST	CANTILEVER MAST ARM
S401273	MILWAUKEE	STH 100 E	JUST S OF STH 190	CANTILEVER MAST ARM
S4012 7 4	MILWAUKEE	STH 190 W	JUST W OF STH 100	CANTILEVER MAST ARM
S401274	MILWAUKEE	STH 100 N	JUST N OF STH 190	CANTILEVER MAST ARM
S401386	MILWAUKEE	CTH EE W	JUST W OF STH 100	CANTILEVER MAST ARM
S401389	MILWAUKEE	STH 241N	IN MEDIAN JUST N OF HOWARD AVE	CANTILEVER MAST ARM
S401391	MILWAUKEE	HOWARD AVE E	JUST E OF STH 241	CANTILEVER MAST ARM
S401392	MILWAUKEE	STH 241 S	JUST S OF HOWARD AVE	CANTILEVER MAST ARM
S401395	MILWAUKEE	IH 41 N	ENTRANCE RAMP FROM BURLEIGH RD	CANTILEVER MAST ARM
S401429	MILWAUKEE	RAWSON AVE E	IN MEDIAN AT STH 38	CANTILEVER MAST ARM
S401438	MILWAUKEE	GRANGE AVE E	JUST E OF STH 38	CANTILEVER MAST ARM
S401442	MILWAUKEE	SUSAN DR E	JUST E OF STH 38	CANTILEVER MAST ARM
S401448	MILWAUKEE	STH 100 N	JUST N OF COLDSPRING RD	CANTILEVER MAST ARM
S401449	MILWAUKEE	W COLDSPRING RD E	JUST E OF STH 100	CANTILEVER MAST ARM
S401459	MILWAUKEE	THEODORE TRECKER WAY E	JUST E OF STH 100	CANTILEVER MAST ARM
S401460	MILWAUKEE	STH 100 S	JUST S OF THEODORE TRECKER WAY	CANTILEVER MAST ARM
S401461	MILWAUKEE	S 92ND ST N	JUST N OF STH 59	CANTILEVER MAST ARM
S401462	MILWAUKEE	STH 59 E	JUST E OF S 92ND ST	CANTILEVER MAST ARM
S401463	MILWAUKEE	S 92ND ST S	JUST S OF STH 59	CANTILEVER MAST ARM
S401464	MILWAUKEE	STH 59 W	JUST W OF S 92ND ST	CANTILEVER MAST ARM
S401465	MILWAUKEE	STH 59 W	JUST W OF STH 181	CANTILEVER MAST ARM
S401468	MILWAUKEE	STH 181 S	JUST S OF STH 59	CANTILEVER MAST ARM
S401469	MILWAUKEE	STH 181 S	JUST S OF STATE FAIR PARK GATE 4	CANTILEVER MAST ARM
S4014 7 3	MILWAUKEE	W SCHLINGER AVE E	JUST E OF STH 181	CANTILEVER MAST ARM
S401476	MILWAUKEE	LINCOLN AVE W	JUST W OF IH 894	CANTILEVER MAST ARM
\$401511	MILWAUKEE	USH 18 E	JUST E OF IH 41 N	CANTILEVER MAST ARM
\$401513	MILWAUKEE	IH 41 N	ENTRANCE RAMP FROM USH 18	CANTILEVER MAST ARM
\$401514	MILWAUKEE	USH 18 E	JUST E OF IH 41 S RAMPS	CANTILEVER MAST ARM
S401515	MILWAUKEE	IH 41 S	ENTRANCE RAMP FROM USH 18	CANTILEVER MAST ARM
S401516	MILWAUKEE	USH 18 W	JUST W OF IH 41 S RAMPS	CANTILEVER MAST ARM
S511141	RACINE	STH 32 N STH 32 S	JUST N OF STH 11	CANTILEVER MAST ARM
S511142	RACINE		JUST S OF STH 11 JUST S OF STH 20	CANTILEVER MAST ARM
S511143 S511144	RACINE RACINE	WISCONSIN ST S STH 20 W	JUST W OF CTH H	CANTILEVER MAST ARM CANTILEVER MAST ARM
S511145	RACINE	CTH H N	JUST W OF STH 20	CANTILEVER MAST ARM
S511146	RACINE	STH 20 E	JUST E OF WISCONSIN ST	CANTILEVER MAST ARM
S511149	RACINE	90TH ST N	JUST N OF STH 20	CANTILEVER MAST ARM
S661108	WASHINGTON	STH 167 E	JUST E OF EISENHOWER RD	CANTILEVER MAST ARM
S671101	WAUKESHA	STH 59 W	AT ARCADIAN AVE W AND STH 164	CANTILEVER MAST ARM
\$671120	WAUKESHA	CTH O S	AT IH 94 W RAMPS	CANTILEVER MAST ARM
S6 7 1124	WAUKESHA	STH 164 S	JUST S OF IH 94 W ON RAMP	CANTILEVER MAST ARM
S6 7 1141	WAUKESHA	STH 100 E	JUST E OF STANLEY DR	CANTILEVER MAST ARM
S6 7 1146	WAUKESHA	STH 100 W	JUST W OF STH 100	CANTILEVER MAST ARM
S6 7 1310	WAUKESHA	WALMART ENTRANCE S	JUST S OF STH 59	CANTILEVER MAST ARM
S671319	WAUKESHA	PILGRIM RD S	JUST S OF IH 41 RAMPS	CANTILEVER MAST ARM

SIGNAL REPAIR LOCATIONS (CONTINUED)

ID	COUNTY	HIGHWAY	LOCATION	STRUCTURE TYPE
S671323	WAUKESHA	PILGRIM RD S	JUST S OF IH 41N RAMPS	CANTILEVER MAST ARM
S6 7 1324	WAUKESHA	SUNSET DR E	JUST E OF STH 59	CANTILEVER MAST ARM
S6 7 1330	WAUKESHA	BROADWAY ST W	JUST W OF STH 164	CANTILEVER MAST ARM
S6 7 1334	WAUKESHA	STH 164 S	JUST SOUTH OF BROADWAY STREET	CANTILEVER MAST ARM
S6 7 1346	WAUKESHA	CTH O S	JUST S OF STH 59	CANTILEVER MAST ARM
S6 7 1352	WAUKESHA	SUNNYSLOPE RD S	JUST S OF STH 59	CANTILEVER MAST ARM
S671361	WAUKESHA	DISCOVERY DR S	JUST S OF USH 18	CANTILEVER MAST ARM

STATE PROJECT NUMBER

1000-20-63

NO. DATE REVISION BY STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

ANCILLARY STRUCT REHAB 2021

SCL PLANS SAD

2021 STATEWIDE SIGNAL REPAIR

SHEET 2

CONCRETE PAINTING EPOXY
SURFACE REPAIR SYSTEM (STRUCTURE)
(EA) (LS)

509.1500

15

STRUCTURE

S130213

S300035

S300401

\$400018 S400338

S401386 S401460 S401465 S401511 S401515

S450201 S671101 TOTAL

8

TABLE OF ESTIMATED QUANTITIES FOR FOUNDATIONS **

SPV.0060.01 | SPV.0060.02 | SPV.0060.03

DEBRIS (EA)

RODENT SCREEN (EA)

4

TENSION ANCHOR RODS (EA)

16

16

8

6

62

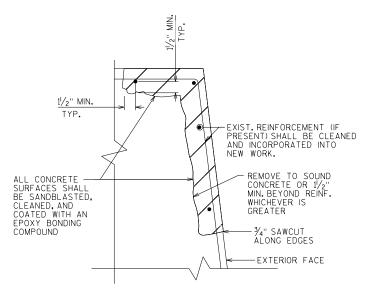
517.0600

THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL REPAIRS.

THE CONTRACTOR SHALL FIELD VERIFY DIMENSION OF THE ITEM REQUIRED. DISCREPANCIES SHALL BE SUBMITTED TO THE ENGINEER FOR CLARIFICATION PRIOR TO BEGINNING WORK.

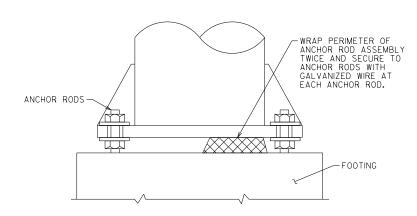
EXISTING GEOMETRY BASED OFF FIELD OBSERVATIONS AND INSPECTIONS. CONTRACTOR TO FIELD VERIFY PRIOR TO FABRICATION AND/OR ORDERING MATERIALS FOR ANCHOR BOLT REPAIR.

THE ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE COLD GALVANIZED WITH ZINC RICH PAINT IN ACCORDANCE TO THE SPECIFICATIONS.



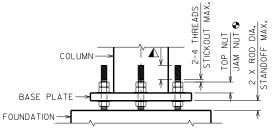
CONCRETE SURFACE REPAIR

TYPICAL DETAILS, ACTUAL LOCATIONS AS DIRECTED BY FIELD ENGINEER AND AS NOTED ON PLANS.



REPLACE RODENT SCREEN

REQUIRED ON ALL STRUCTURES WITH ELECTRICAL EQUIPMENT.

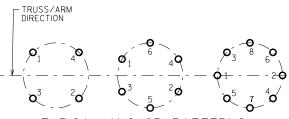


ANCHOR ROD TENSIONING DETAIL

◆ JAM NUT REQUIRED UNLESS EXISTING STICKOUT IS INADEQUATE TO MEET REQUIREMENTS SHOWN.

REMOVE AND DISPOSE OF EXISTING LOCK WASHERS (IF PRESENT) BEFORE RE-TENSIONING ANCHORS.

✓ USE A CUT OFF WHEEL TO REMOVE EXCESS ROD STICKOUT TO THE DIMENSION SHOWN. CUT ANCHOR SHOULD BE FLAT AND SMOOTH, THREADS SHOULD BE DEBURRED SO THE NUT CAN RUN SMOOTHLY ON AND OFF THE END OF THE ROD. APPLY GALVANIZING TO CUT ENDS OF RODS PER SPECIAL PROVISIONS.



TYPICAL ANCHOR PATTERNS

ROD #1LOCATED € OF STRUCTURE UNDER ARM/TRUSS



FOUNDATION

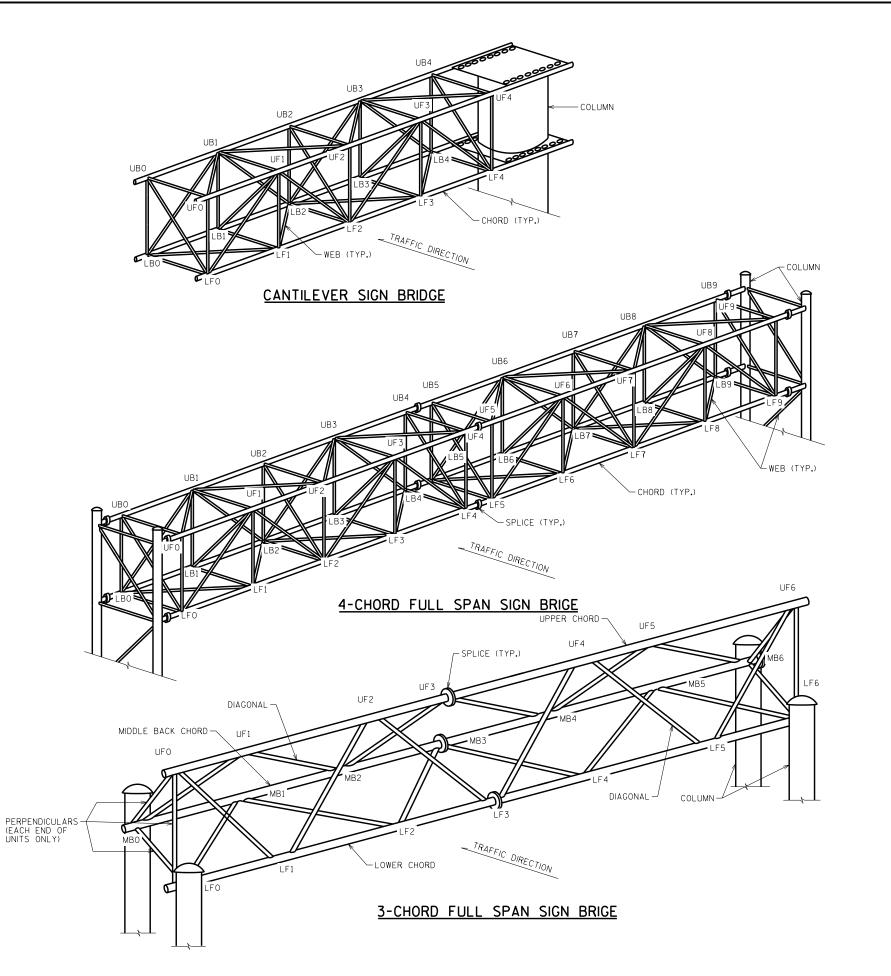
DETAILS

STATE PROJECT NUMBER

1000-20-63

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.



NO. DATE BY REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION ANCILLARY STRUCT REHAB 2021

SCL PLANS SAD

SHEET 4

TRUSS DETAILS

1000-20-63

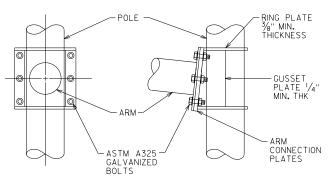
TABLE OF ESTIMATED QUANTITIES FOR STRUCTURAL CONNECTIONS **

**QUANTITIES LISTED IN THIS TABLE ARE FOR INFORMATION ONLY, AND ARE NOT TO BE COUNTED AS ADDITIONAL QUANTITIES TO THOSE LISTED ON THE STRUCTURE ELEVATION SHEETS.

	638.3155	SPV.0060.04	SPV.0060.05	SPV.0060.06	SPV.0060.07	SPV.0060.08	SPV.0060.09
STRUCTURE ID	REMOVING OVERHEAD SIGN SUPPORTS FULL SPAN (EA)	LOWER STRUCTURE (EA)	REINSTALL TRUSS (EA)	TENSION STRUCTURAL BOLTS (EA)	REPLACE TRUSS MEMBER (EA)	VERTICAL SIGN SUPPORT (EA)	SIGN PANEL CONNECTOR (EA)
S130129				3			
S130213						2	
S300035				12	1		2
S360023	1						
S400269		1				1	
S400331				4			
S400 7 42							17
S400926				12			
S400982				8			
S401465				1			
S401468				1			
S401469				6			
S4014 7 0				6			
S450201						4	
S640201				1			
S661108						1	
S6 7 0216						2	
S6 7 094 7			1				
S6 7 0948			1				
S6 7 0949			1				
TOTAL	1	1	3	54	1	10	19

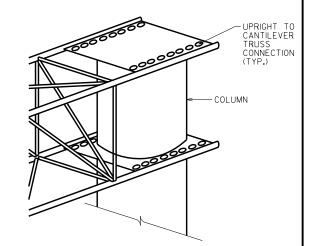
SUPERSTRUCTURE NOTES:

- 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 $\frac{y}{4}$ " ϕ AND 12% FOR $\frac{y}{4}$ " ϕ AND SMALLER.
- 4. REPLACE MISSING BOLTS ON TOWER CAPS WITH A STAINLESS STEEL BOLT.

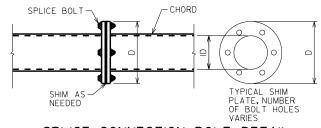


POST TO MAST ARM CONNECTION

6 BOLT ARRANGEMENT SHOWN OTHER BOLT ARRANGEMENTS SIMILAR

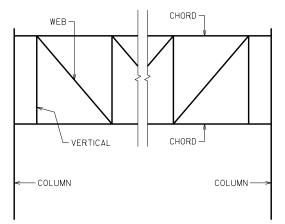


CANTIEVER SIGN BRIDGE POST TO TRUSS CONNECTION DETAIL

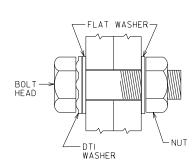


SPLICE CONNECTION BOLT DETAIL

IF CAP IS PRESENT PRIOR TO TENSIONING CONNECTION, SHIM USING 1/16TH GALVANIZED PLATES CUT TO MATCH OUTER DIAMETER OF SPLICE PLATES.



TWO CHORD TRUSS ORIENTATION



RECOMMENDED BOLT ASSEMBLY DETAIL

NO. DATE BY REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

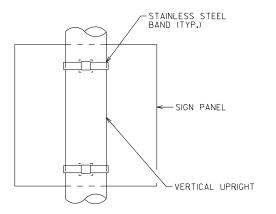
ANCILLARY STRUCT REHAB 2021

PLANS SAD SHEET 5

SUPERSTRUCTURE DETAILS

TABLE OF ESTIMATED QUANTITIES FOR SIGNS **

	637.2210	637.2230	SPV.0060.10	SPV.0060.11
STRUCTURE ID	SIGNS TYPE II REFLECTIVE H (SF)	SIGNS TYPE II REFLECTIVE F (SF)	ADJUST SIGN (EA)	ID PLAQUE (EA)
S130213				1
S1309 7 50001				1
S1309 7 50002				1
S1309 7 50003				1
S1309 7 50004				1
S1313480001				1
S1313480002				1
S30112 7				1
S400204		20		
S40056 7	20			
S4012 7 4			1	
S401395				1
S401429	6			
S401459				1
S401460				1
S401461				1
S401462				1
S401463				1
S401464				1
S401465				1
S401468				1
S401469				1
S4014 7 0				1
S4014 7 3				1
S640201	28			
S660201	28			
S660202	28			
S6 7 0215	14			
S6 7 0948				1
S6 7 1101				1
S6 7 1310				1
TOTAL	124	20	1	23



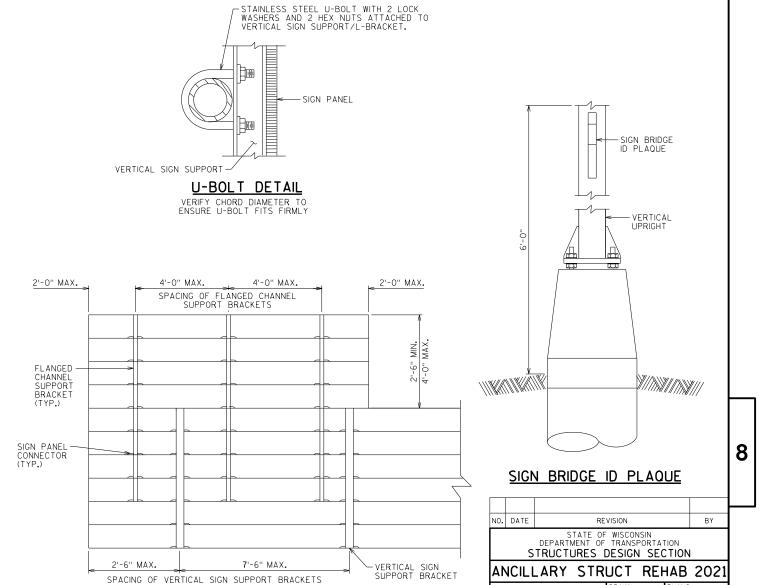
TYPE-II SIGN TO VERTICAL UPRIGHT DETAIL

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

STATE PROJECT NUMBER

1000-20-63

- **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, SHOP DRAWINGS CAN BE FOUND IN THE HIGHWAY STRUCTURE INFORMATION SYSTEM (HSIS)
- 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 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" DIA, AND 12% FOR 9/4" DIA, AND SMAILFR.



FLANGED CHANNEL SUPPORT/VERTICAL

SIGN SUPPORT BRACKET DETAILS

PLANS SAD

SHEET 6

SIGN PANEL

DETAILS

1000-20-63

TABLE OF ESTIMATED QUANTITIES FOR ELECTRICAL **

	SPV.0060.12	SPV.0060.13	SPV.0060.14	SPV.0060.15
STRUCTURE ID	MISC. ATTACHMENTS (EA)	HANDHOLE COVER (EA)	CONDUIT PLUG (EA)	POST /END CAP (EA)
S300035			2	
S400338			1	
S401220	1			
S401391	1			
S401442				1
S401465		1	1	
S401513	1			1
S511149				1
S6 7 1146	1			
TOTAL	4	1	4	3

**QUANTITIES LISTED IN THIS TABLE ARE FOR INFORMATION ONLY, AND ARE NOT TO BE COUNTED AS ADDITIONAL QUANTITIES TO THOSE LISTED ON THE STRUCTURE ELEVATION SHEETS.

ELECTRICAL NOTES:

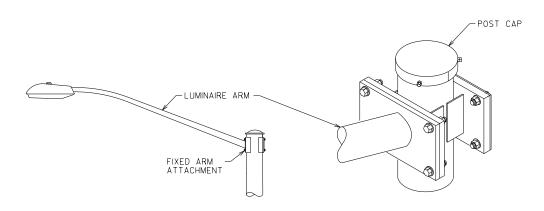
- 1. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL REPAIRS.
- 2. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE OF THE ITEM REQUIRED.
- 3. ALL STAINLESS STEEL BOLTS, LOCK WASHERS, AND NUTS SHALL CONFORM TO:

 -HEX BOLTS ASTM F593 ANY ALLOY GROUP 1, 2, OR 3

 -HEX NUTS ASTM F594

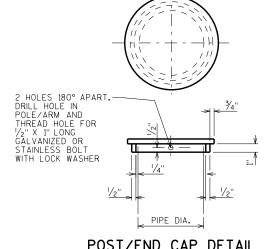
 -WASHERS ASTM A240

 ANY OF THE 300 SERIES WHICH HAVE A MINIMUM YIELD OF 40,000 PSI AND ELONGATION OF 15% FOR OVER 3/4" \$\phi\$ AND 12% FOR 3/4" \$\phi\$ AND SMAILER.
- 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.

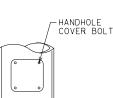


POST TO LUMINAIRE ARM CONNECTION

WIRING TO RUN INSIDE LUMINAIRE ARM



POST/END CAP DETAIL



NO. DATE BY REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION ANCILLARY STRUCT REHAB 2021 PLANS SAD

DRAWN BY SHEET 7 **ELECTRICAL** DETAILS

B₩ LUMINAIRE COVER BOLT LUMINAIRE LENS LUMINAIRE COVER SUPPORT CHANNEL/UNISTRUT -SUPPORT CHANNEL BOLT

TYPICAL LUMINAIRE DETAILS

SECTION B-B

CHORD OR TOWER

CONDUIT PLUG DETAIL

HANDHOLE COVER 3/8"

SECTION A-A

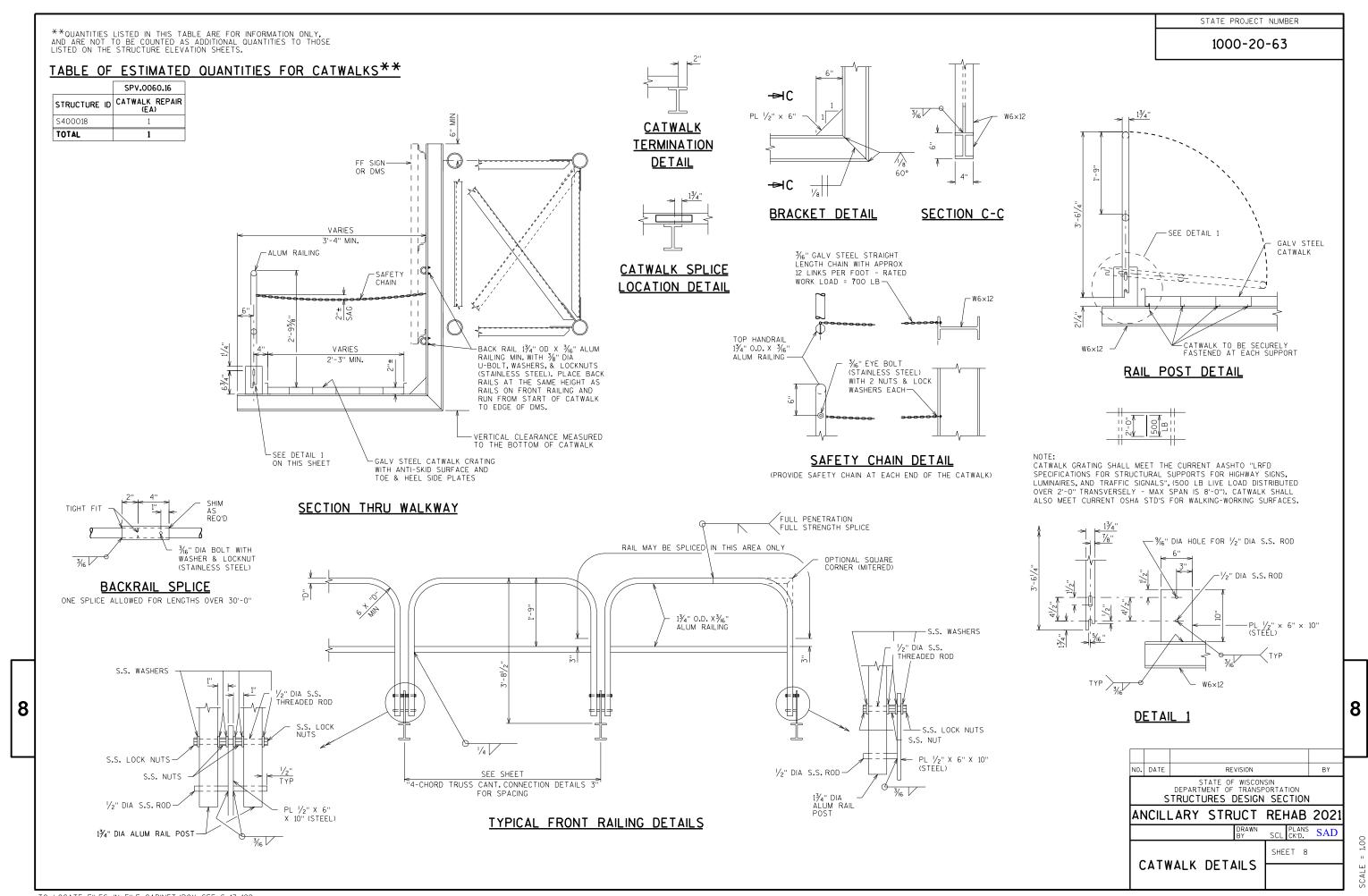
LOCKING PLATE

HANDHOLE DETAILS

-HANDHOLE COVER BOLT

B₩

LUMINAIRE COVER BOL



SPV.0060.18

REPLACE SIGNAL SHROUD (EA)

SPV.0060.17

DISHED WASHER

(EA)

STRUCTURE

ID

S401217 S401240 S401241 S4012**7**3 S4012**7**4 S4012**7**5 S401386 S401389 S401392 S401395 S401429

S401442

S401448 S401449

\$401459

S401460

S401461

S401462

\$401463 S401464 S401465

S401473

S401511

S401514

S401515 S401516 S511141

S511142 S511143

S511144 S511145

5511146

5511149 S6**7**1101 S671120 S671124

S1305340001 S1309**7**50001 S1309**7**50002 S1309**7**50003 S1309**7**50004 S1313480001 S1313480002 S300401 S301127 S301164 S3011**7**3 S3011**7**4

TABLE OF ESTIMATED QUANTITIES FOR SIGNALS **

SPV.0060.19

SIGNAL MOUNTING HARDWARE

(EA)

2

2

3

SPV.0060.20

ADJUST SIGNAL (EA)

2

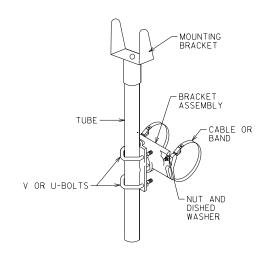
STATE PROJECT NUMBER

SIGNAL 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 ALL STAINLESS SIEEL BULIS, LOCK WASHELL.
 CONFORM TO:
 -ANCHOR BOLTS/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
 PSIAND ELONGATION OF 15% FOR OVER 3/4" DIA. AND 12% FOR 3/4" DIA.
 AND SMALLER.

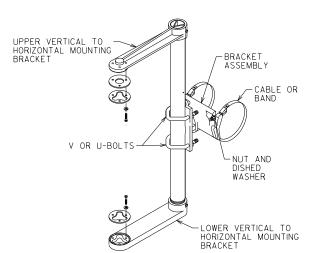
TABLE OF ESTIMATED QUANTITIES FOR SIGNALS (CONTINUED)

	SPV.0060.17	SPV.0060.18	SPV.0060.19	SPV.0060.20
STRUCTURE ID	DISHED WASHER (EA)	REPLACE SIGNAL SHROUD (EA)	SIGNAL MOUNTING HARDWARE (EA)	ADJUST SIGNAL (EA)
S6 7 1141				1
S6 7 1310			1	
S6 7 1319			1	
S6 7 1323			1	
S6 7 1324	1			1
S6 7 1330	1			
S6 7 1334			1	
S6 7 1346				1
S6 7 1352				1
S6 7 1361				1
TOTAL	11	6	48	14



CAMERA MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

BRACKET ASSEMBLY SHOWN AS EXAMPLE, NEW BRACKETS SHOULD CONFORM TO APL FOR SIGNAL MOUNTING HARDWARE



SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

BRACKET ASSEMBLY SHOWN AS EXAMPLE, NEW BRACKETS SHOULD CONFORM TO APL FOR SIGNAL MOUNTING HARDWARE

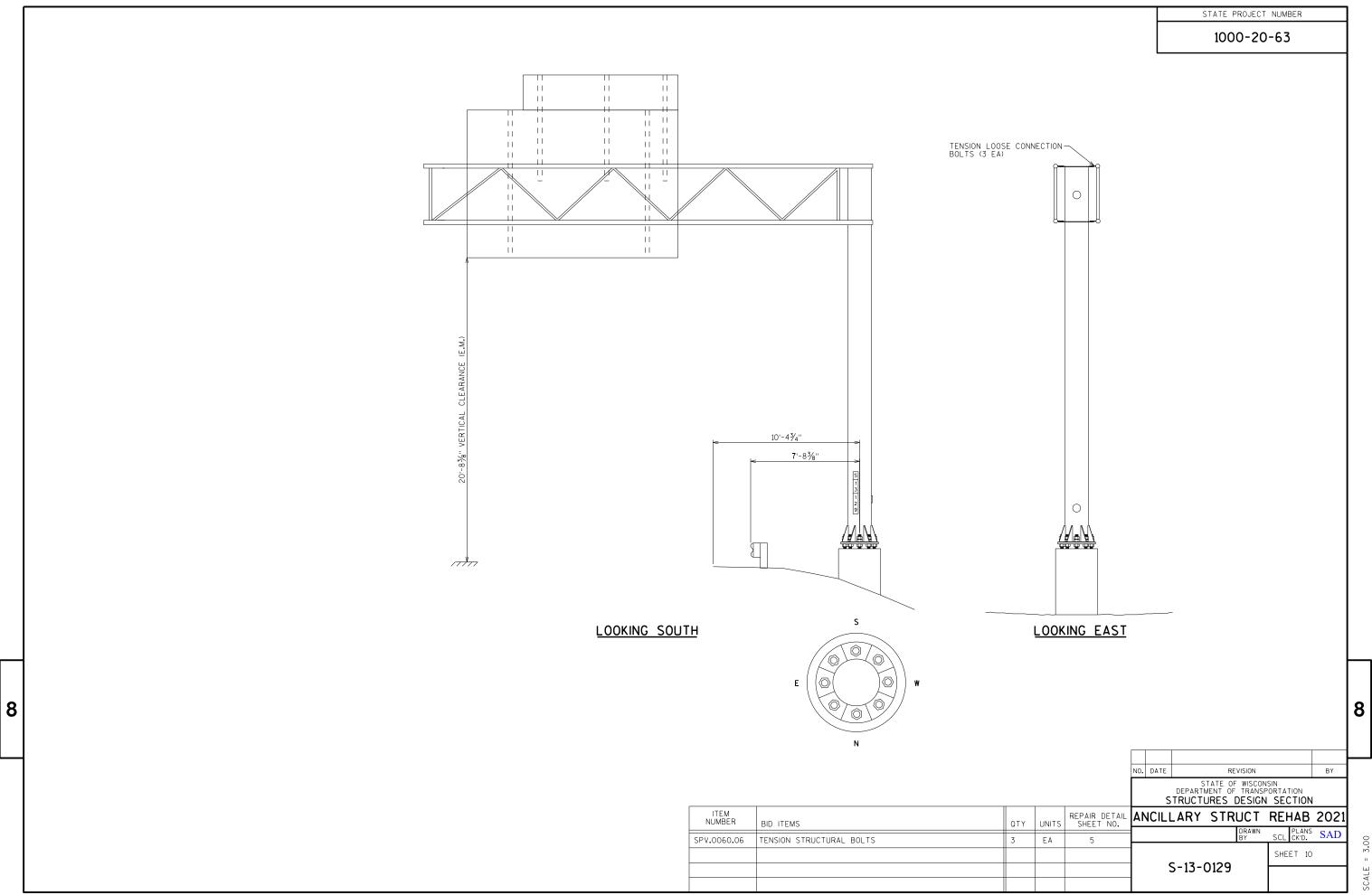
NO. DATE BY REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION ANCILLARY STRUCT REHAB 2021

DRAWN BY PLANS SAD

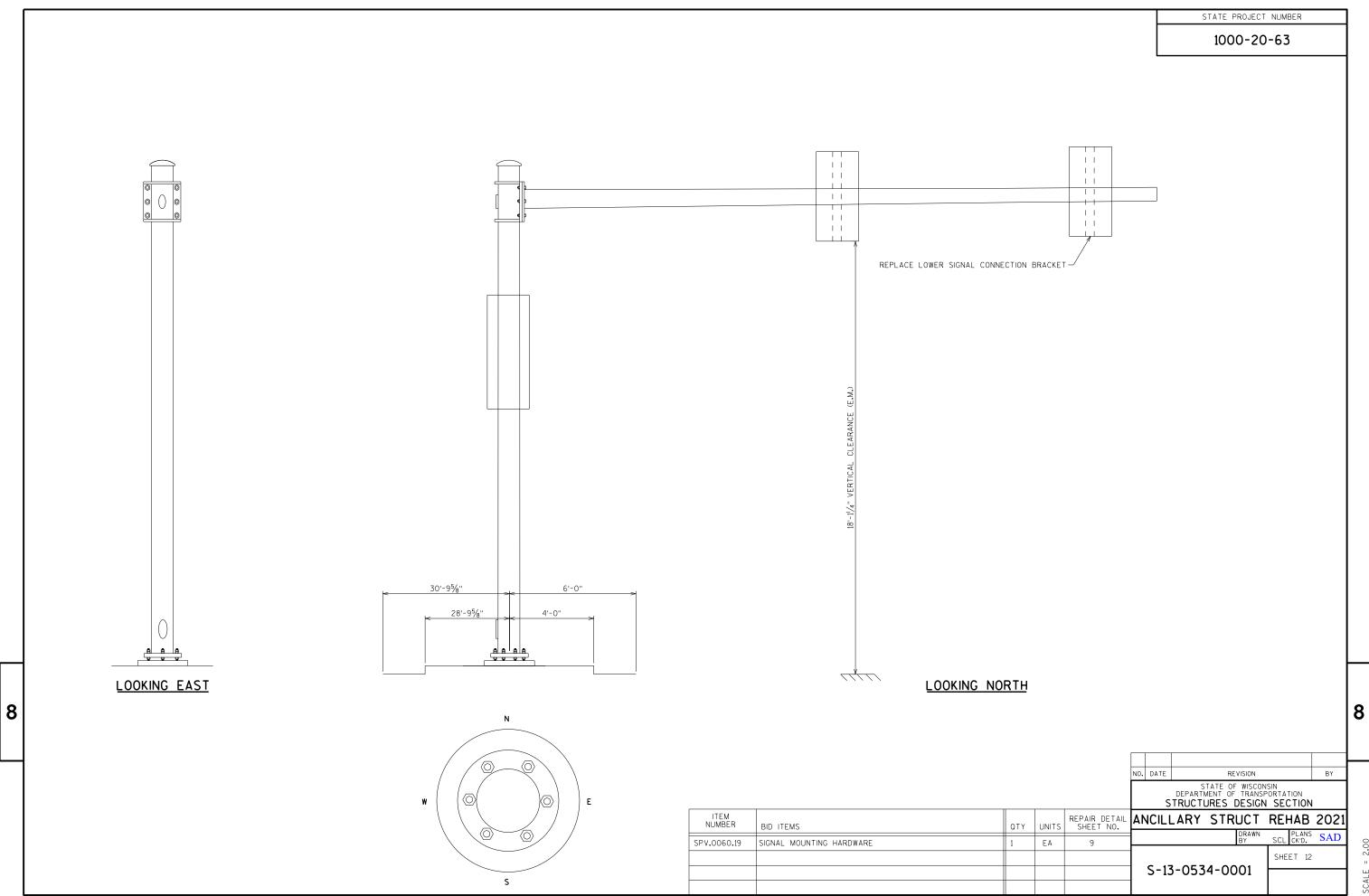
SHEET 9

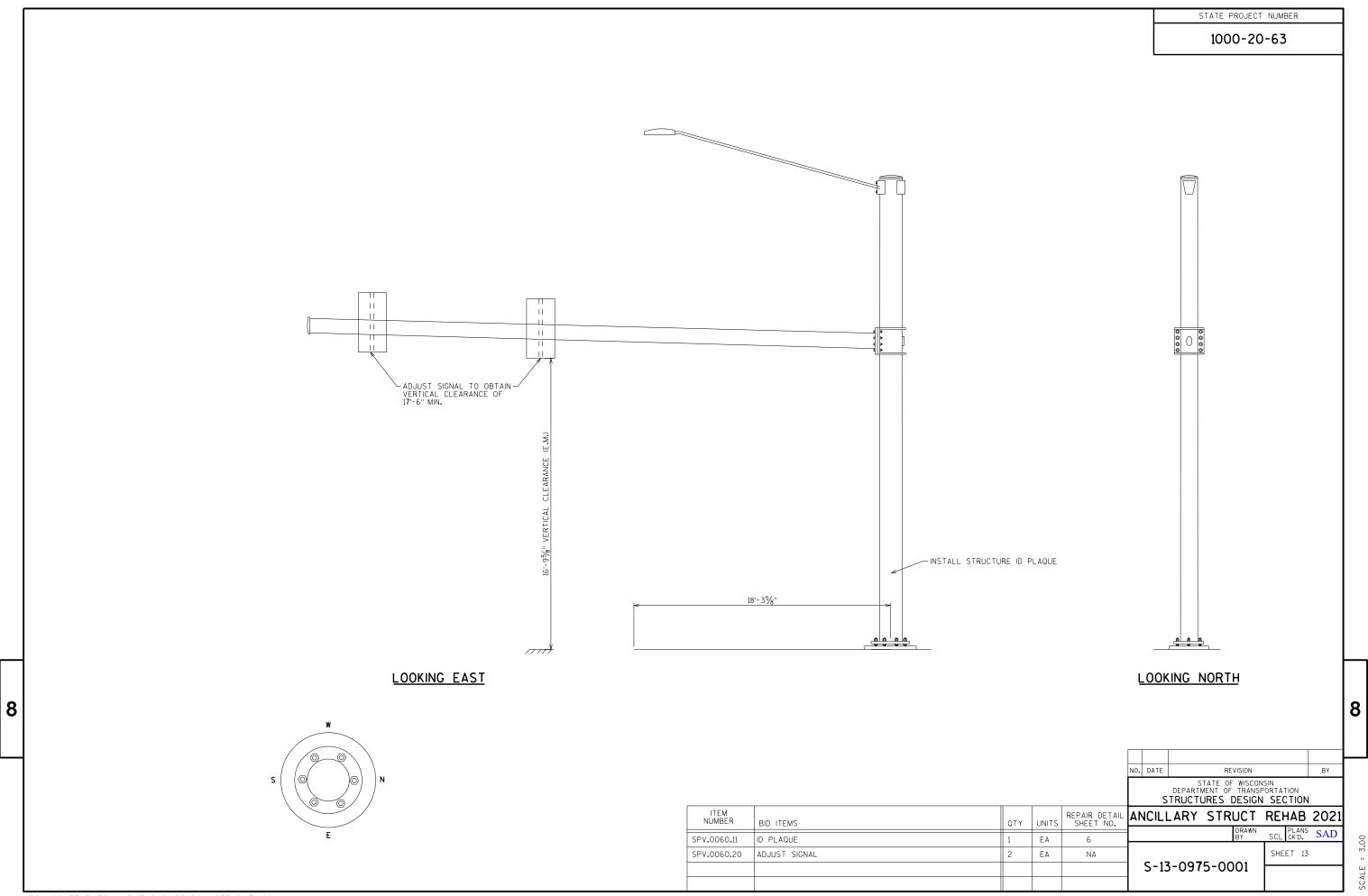
SIGNAL DETAILS

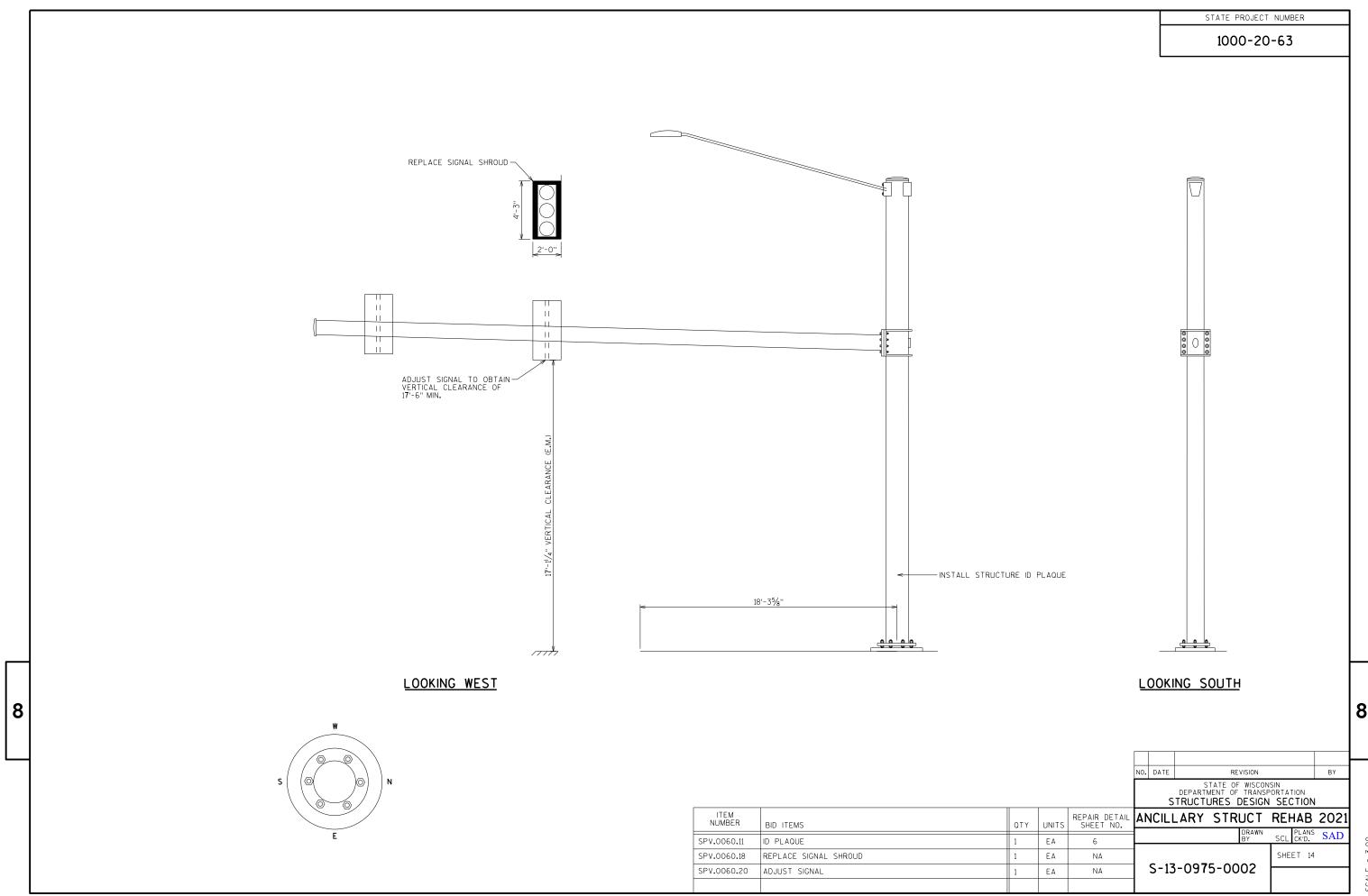
TO LOCATE FILES IN FILE CABINET/BOX SEE S-13-129

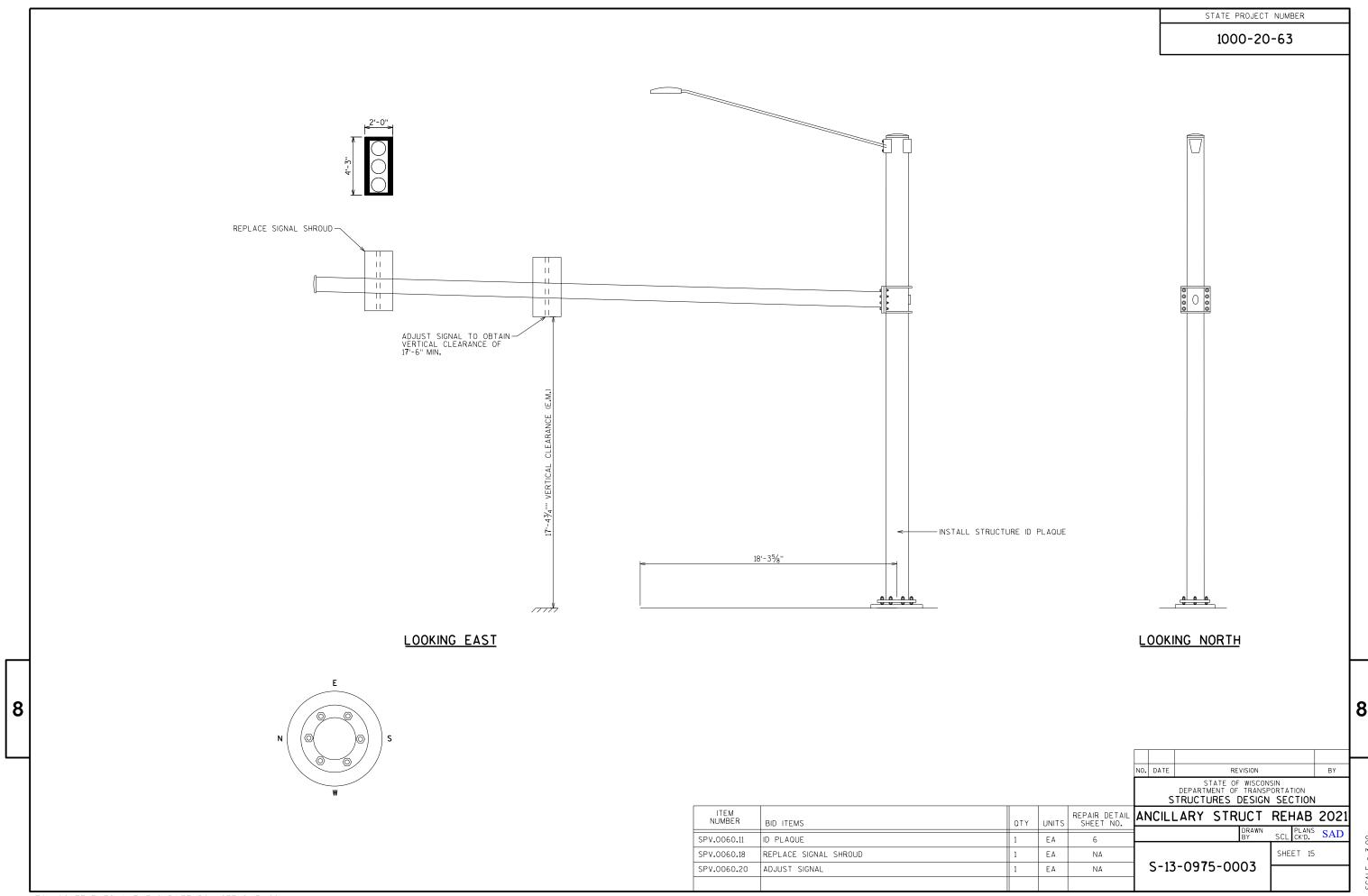


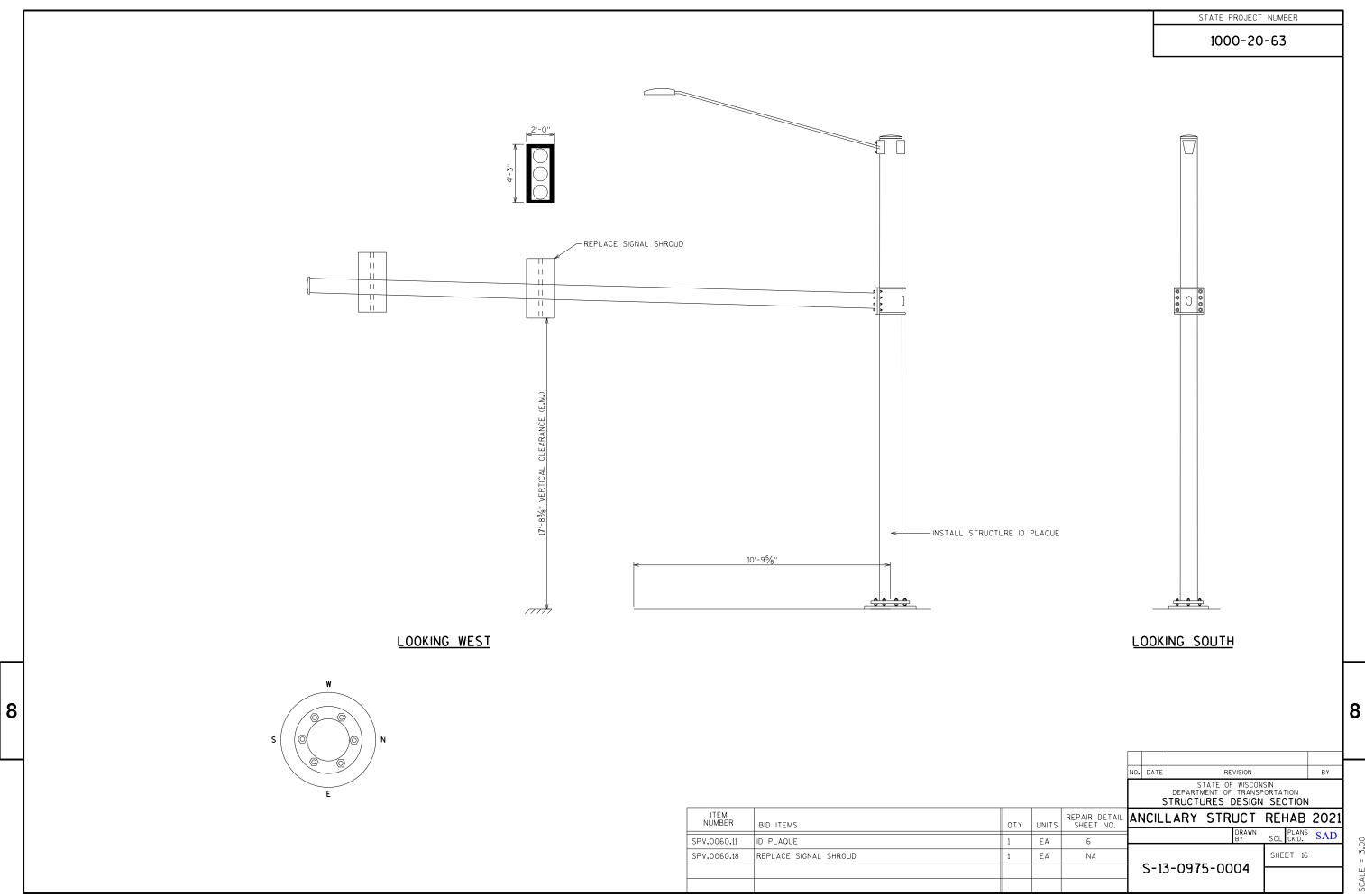
STATE PROJECT NUMBER 1000-20-63 — REPLACE TYPE-IISIGN CONNECTION — ASSEMBLY WITH I-BEAM AND U-BOLTS PER SIGN PLATE MANUAL A4-7B INSTALL STRUCTURE ID PLAQUE -CLEAN AND PAINT BASE PLATE AND -BOTTOM 8'-0" OF POLE WITH DARK GREEN RAL 6009 (80% - 90% GLOSS) 2'-0" 2'-0" REPAIR CONCRETE CURB-LOOKING SOUTHWEST LOOKING NORTHWEST 8 NO. DATE BY REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION ITEM NUMBER REPAIR DETAIL ANCILLARY STRUCT REHAB 2021 BID ITEMS QTY UNITS DRAWN BY SCL PLANS SAD 509.1500 CONCRETE SURFACE REPAIR SF SHEET 11 517.0600 PAINTING EPOXY SYSTEM (S-13-213) LS NΑ S-13-0213 SPV.0060.08 VERTICAL SIGN SUPPORT EΑ 6 SPV.0060.11 ID PLAQUE EΑ

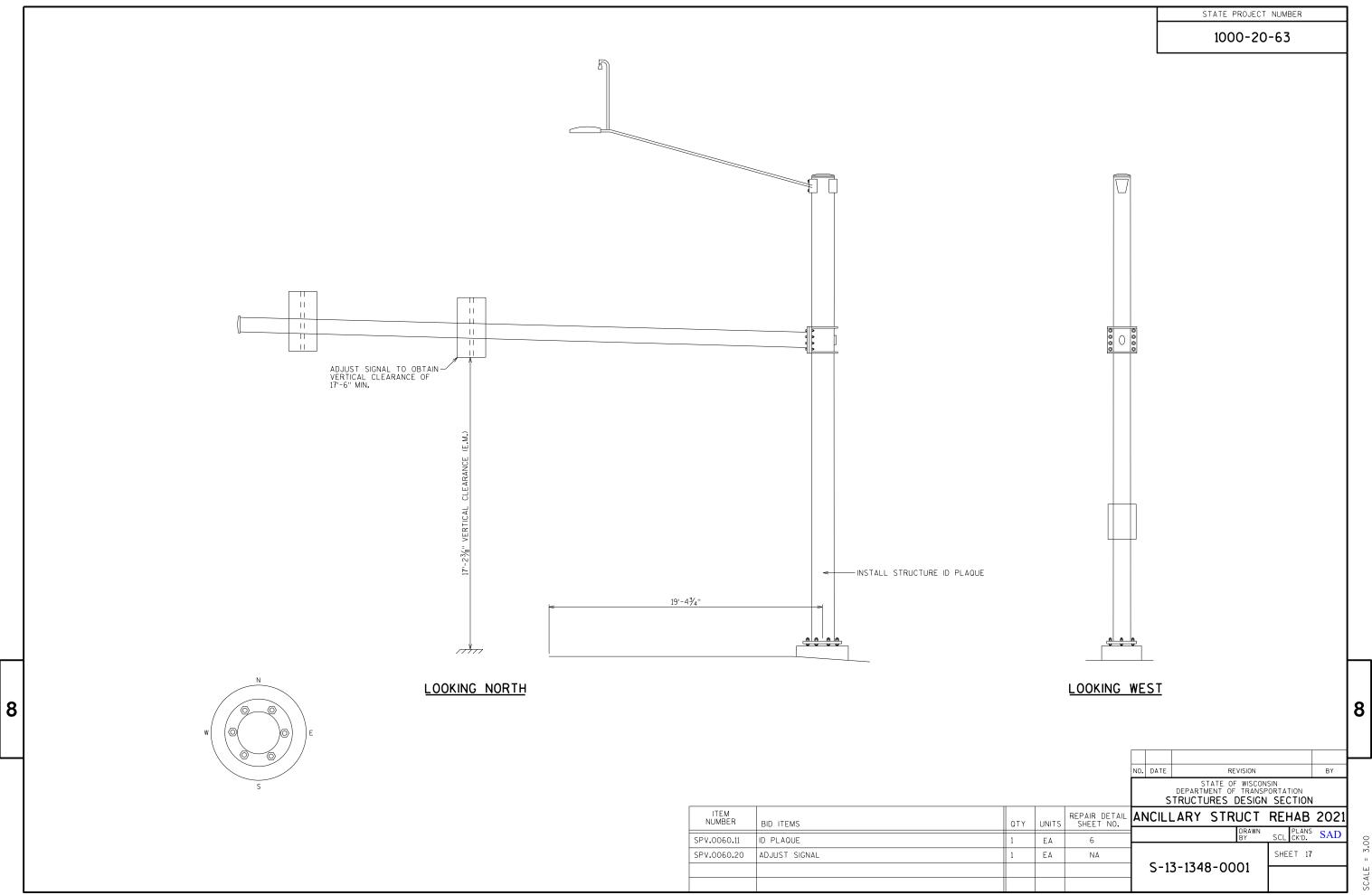


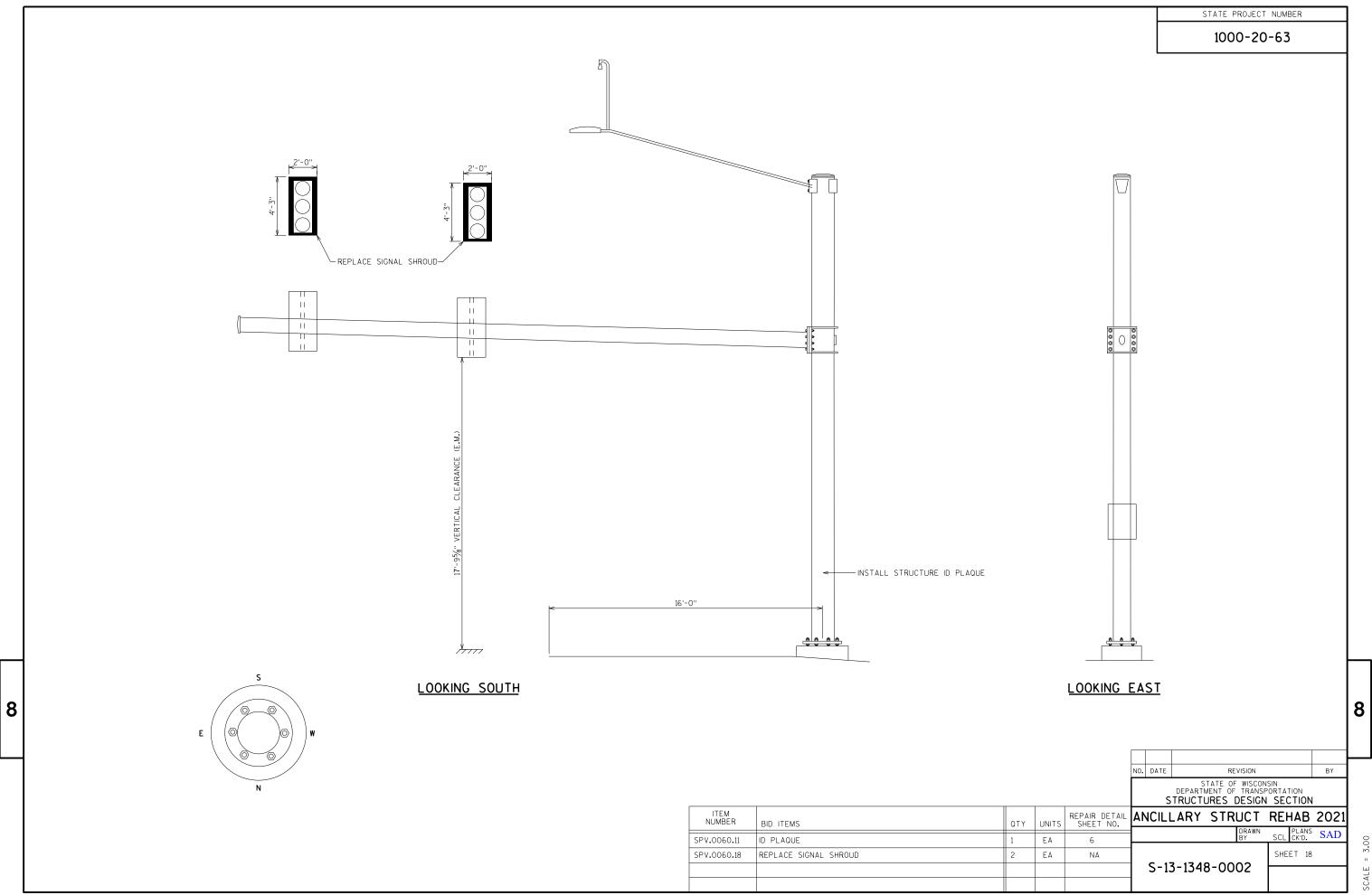






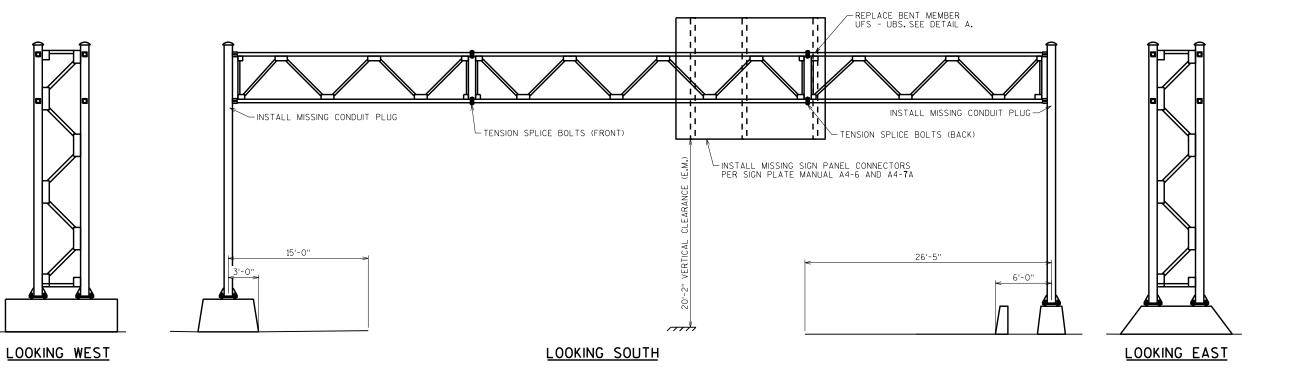


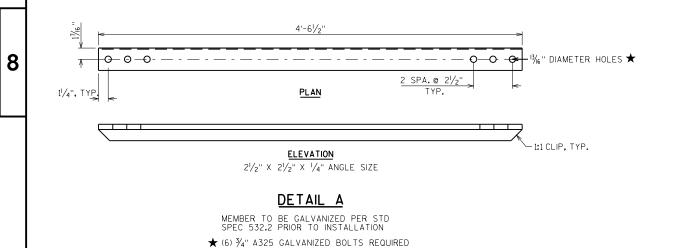




STATE PROJECT NUMBER

1000-20-63





ITEM NUMBER OTY UNITS REPAIR DETAIL SHEET NO. BID ITEMS SPV.0060.01 TENSION ANCHOR RODS EΑ SPV.0060.06 TENSION STRUCTURAL BOLTS 12 EΑ SPV.0060.07 REPLACE TRUSS MEMBER EΑ 4/5 SPV.0060.09 SIGN PANEL CONNECTOR EΑ SPV.0060.14 CONDUIT PLUG

2" DIAMETER ANCHOR RODS

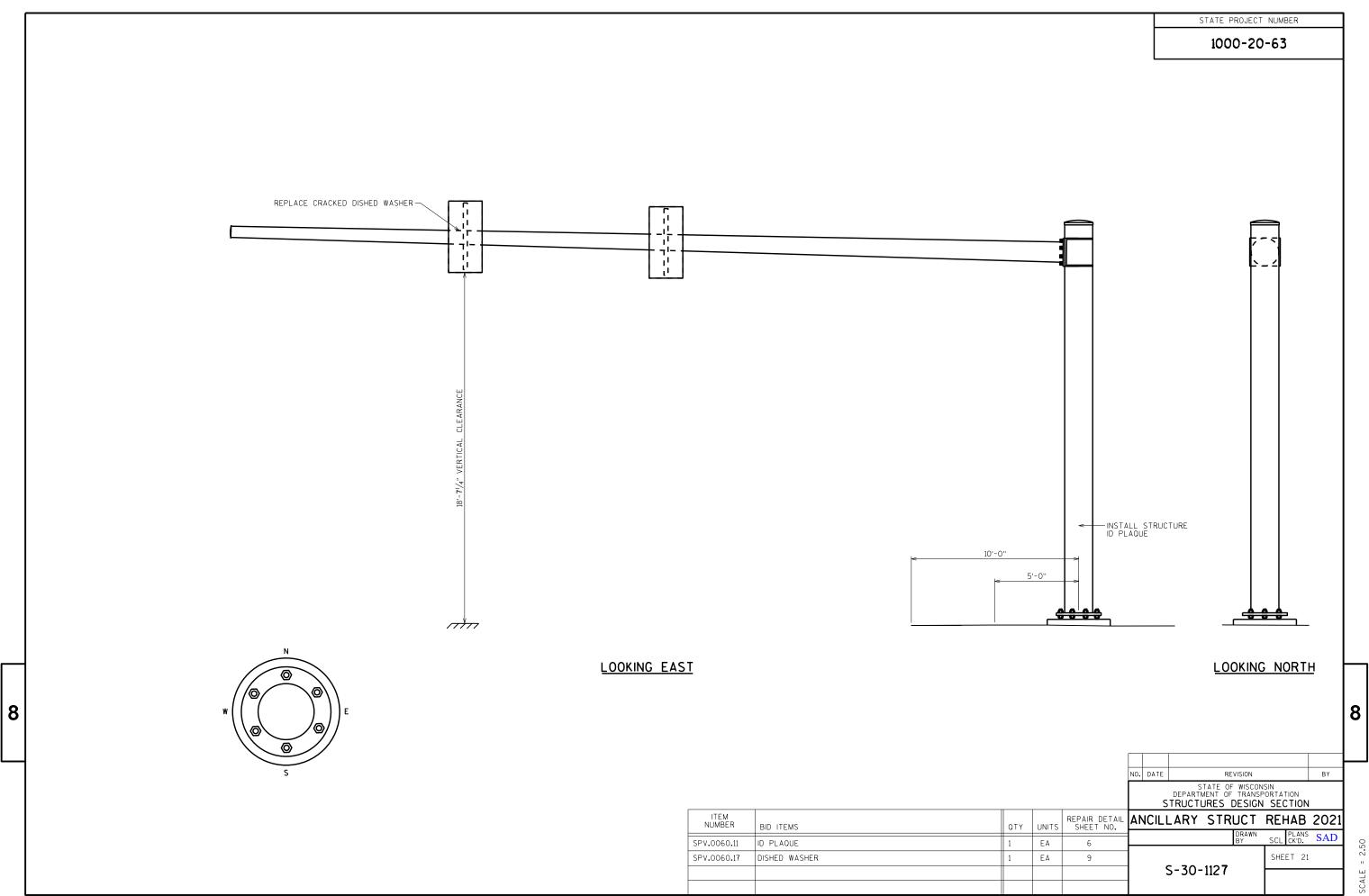
EΑ

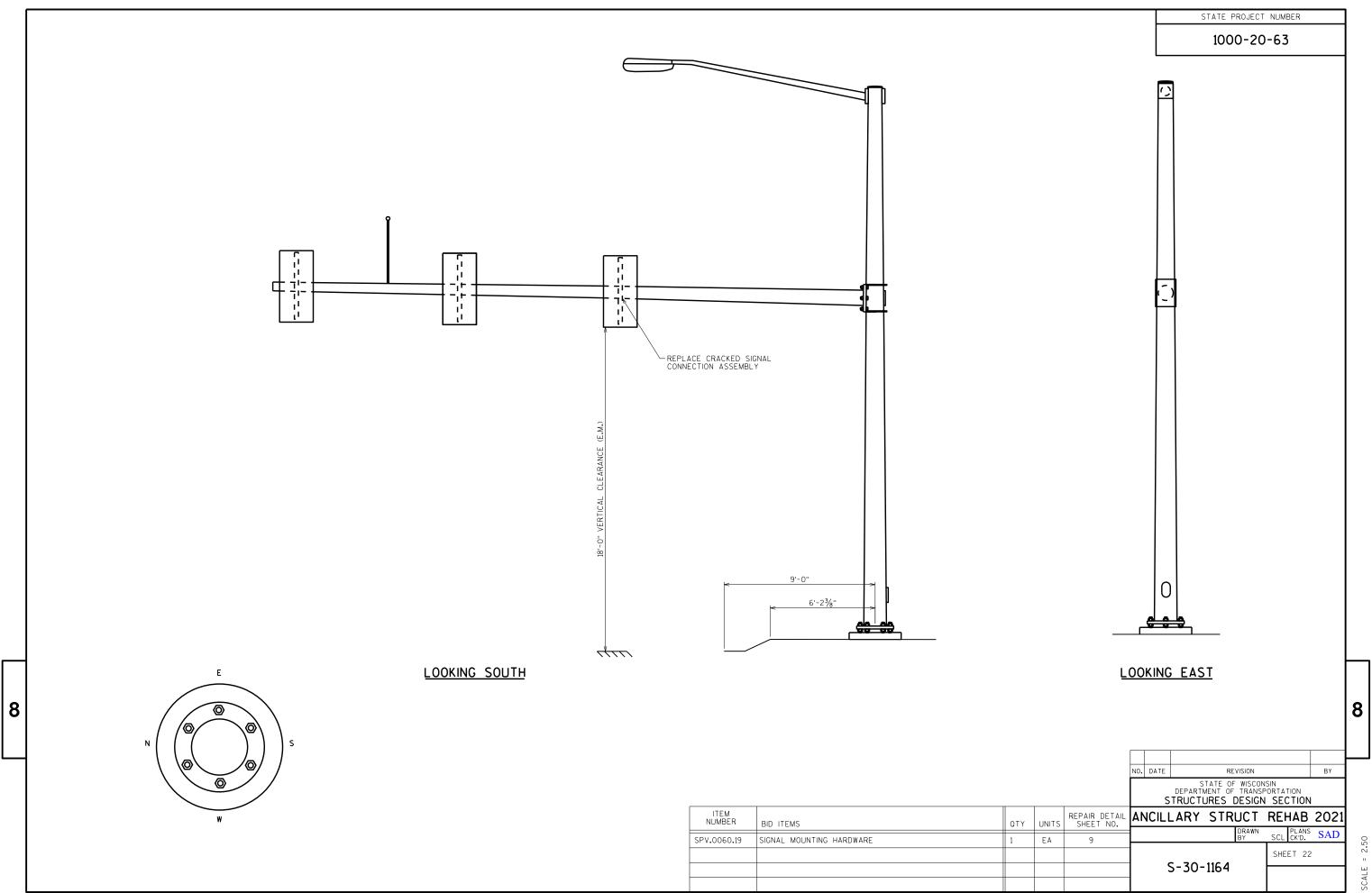
-INSTALL ANCHOR RODS-

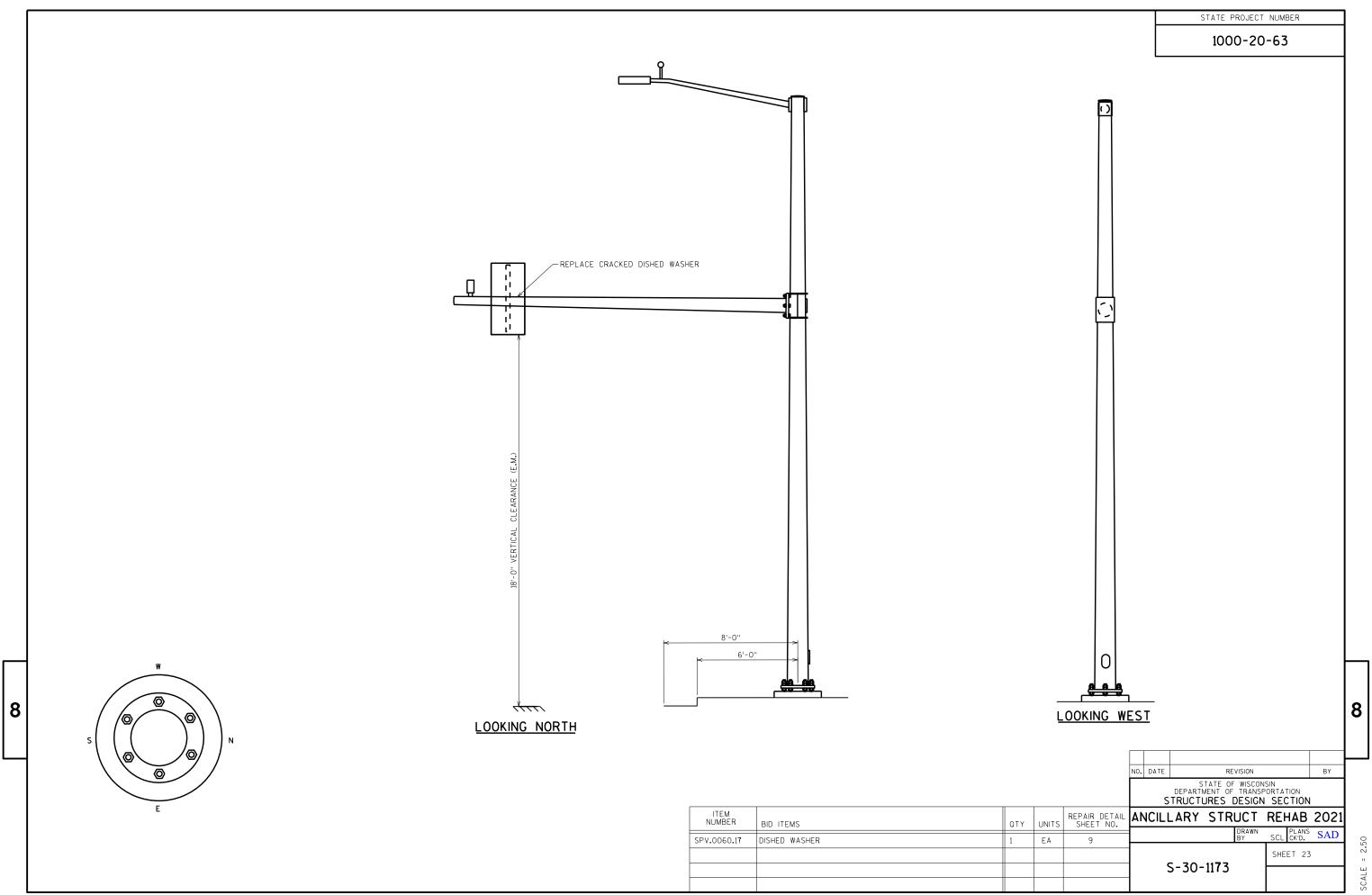
NO. DATE BY REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION ANCILLARY STRUCT REHAB 2021

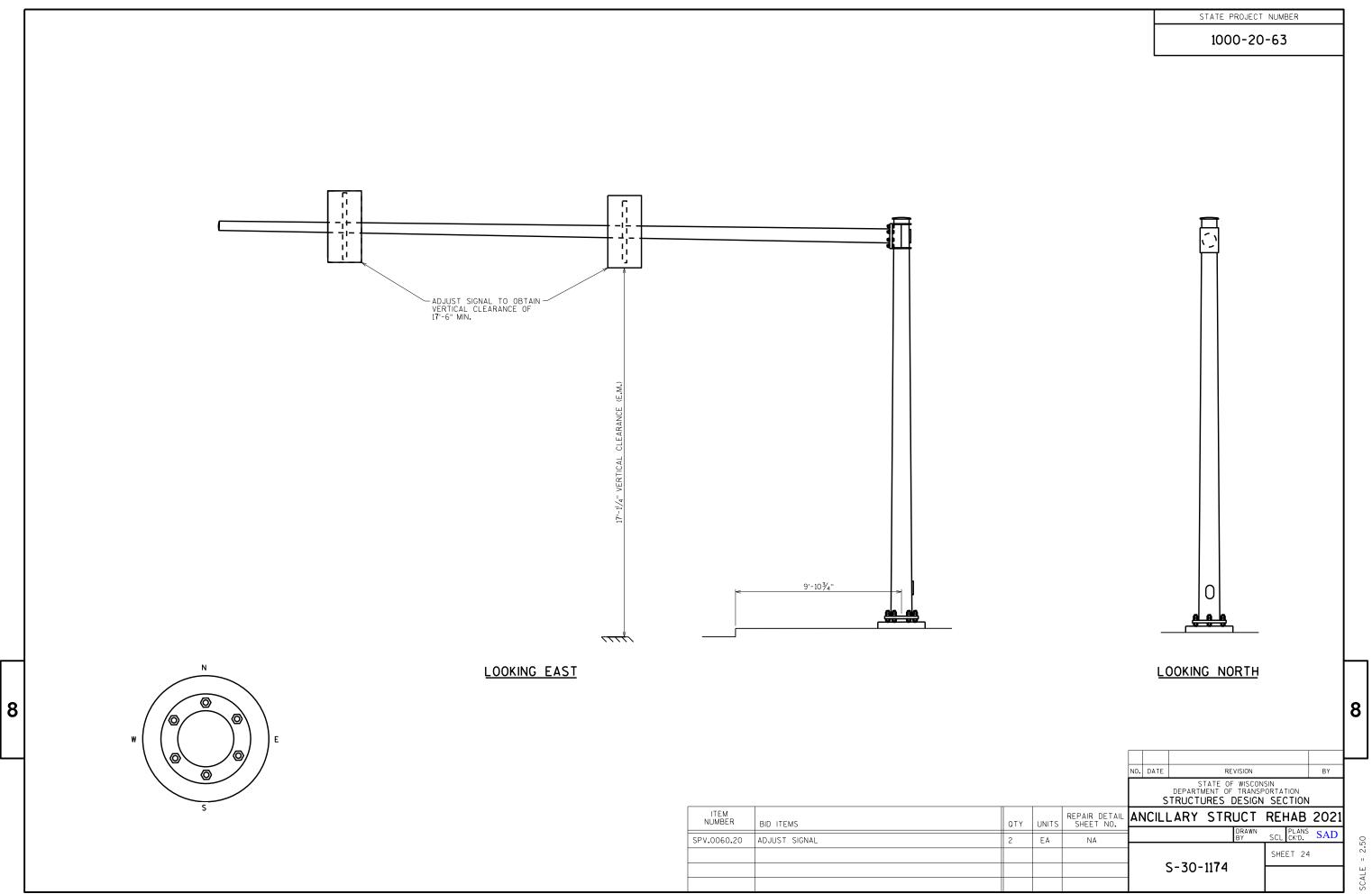
DRAWN BY SCL PLANS SAD SHEET 19 S-30-0035

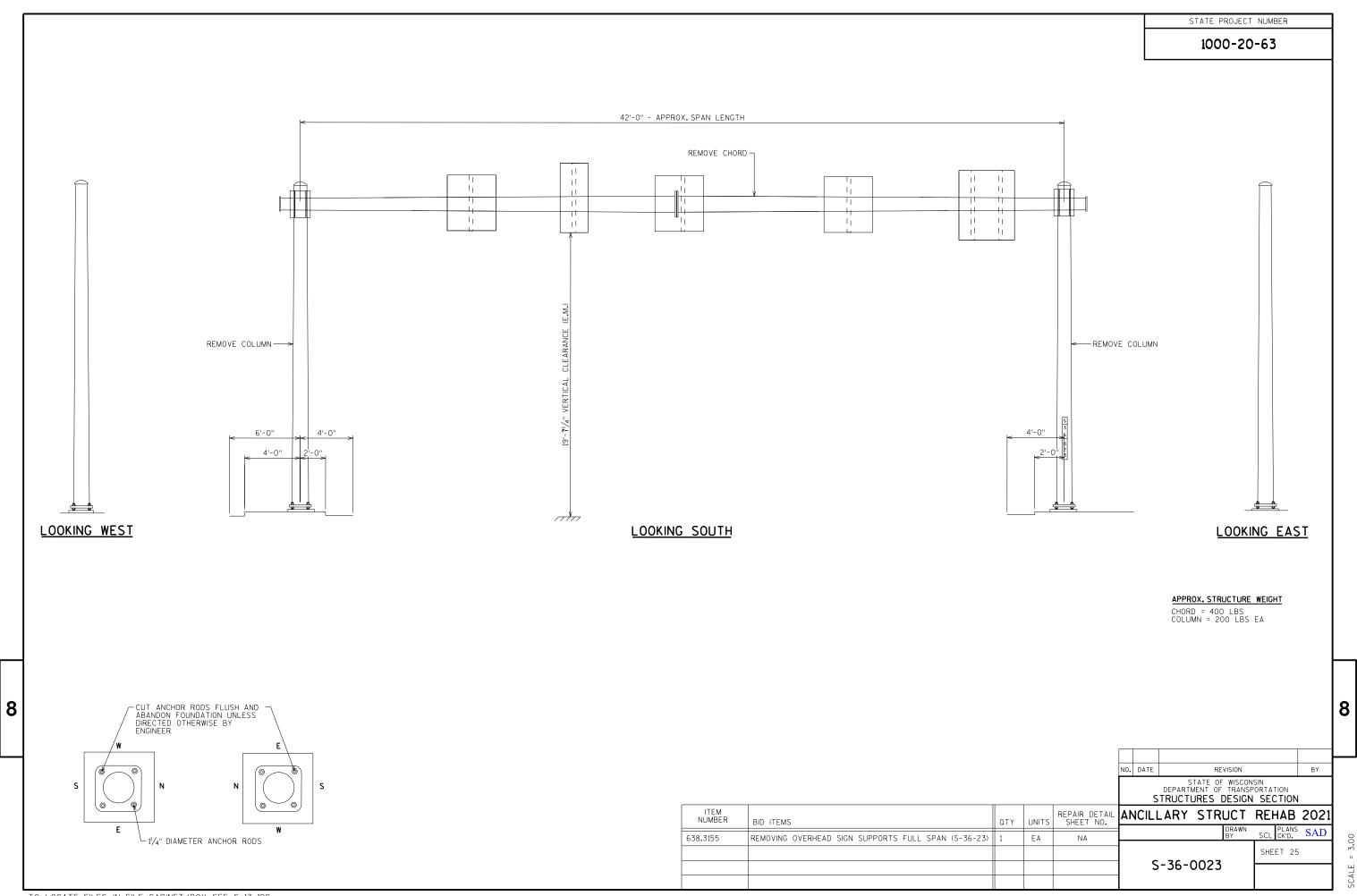
STATE PROJECT NUMBER 1000-20-63 REPLACE BROKEN BEVELLED WASHER LOOKING EAST LOOKING NORTH LOOKING WEST - TENSION ANCHOR RODS - TENSION ANCHOR RODS 8 21/4" DIAMETER ANCHOR RODS BY NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION OTY UNITS REPAIR DETAIL ANCILLARY STRUCT REHAB 2021 ITEM NUMBER BID ITEMS SCL PLANS SAD SPV.0060.01 TENSION ANCHOR RODS EΑ SHEET 20 SPV.0060.06 TENSION STRUCTURAL BOLT EΑ 5 S-30-0401

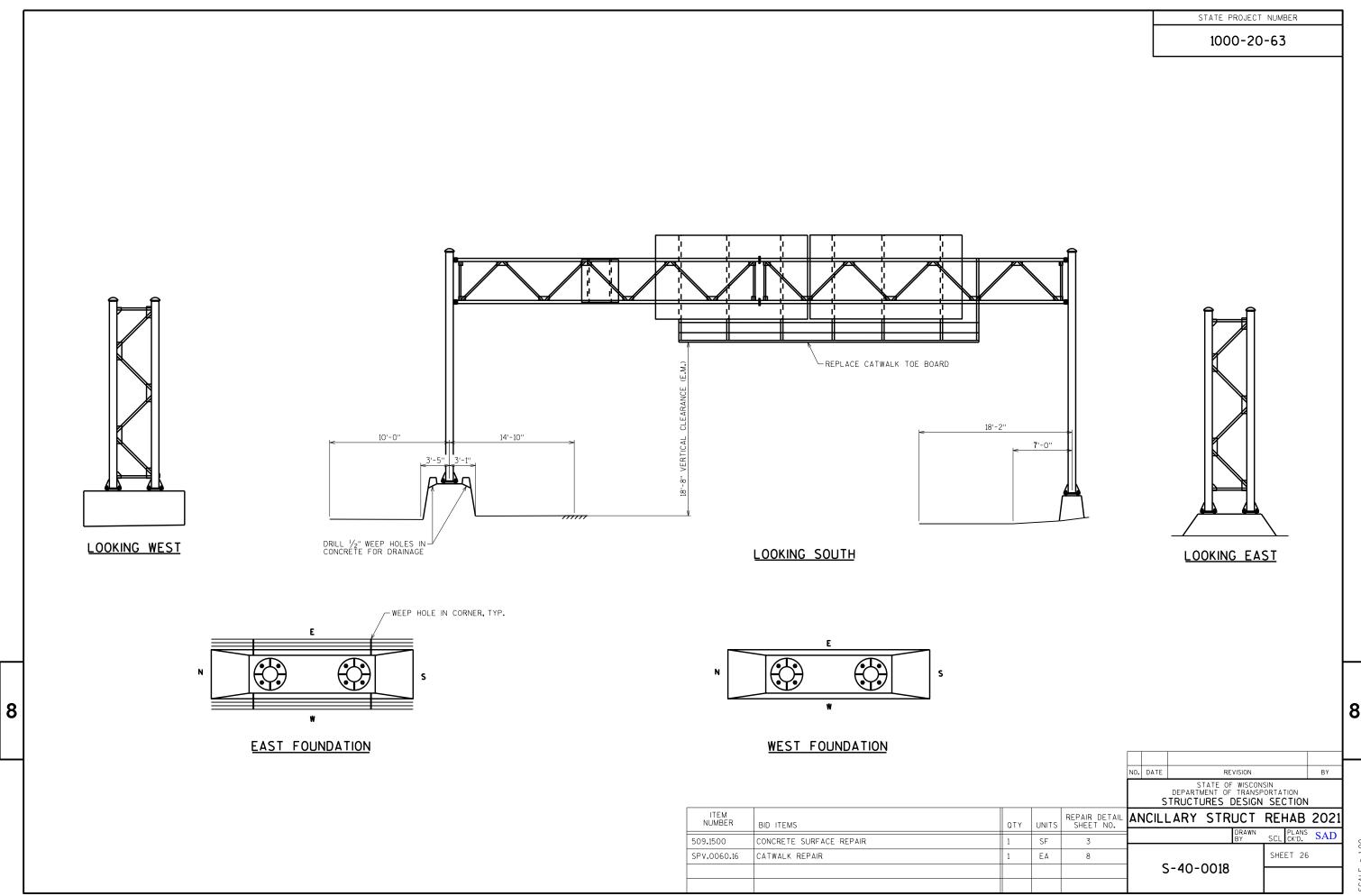


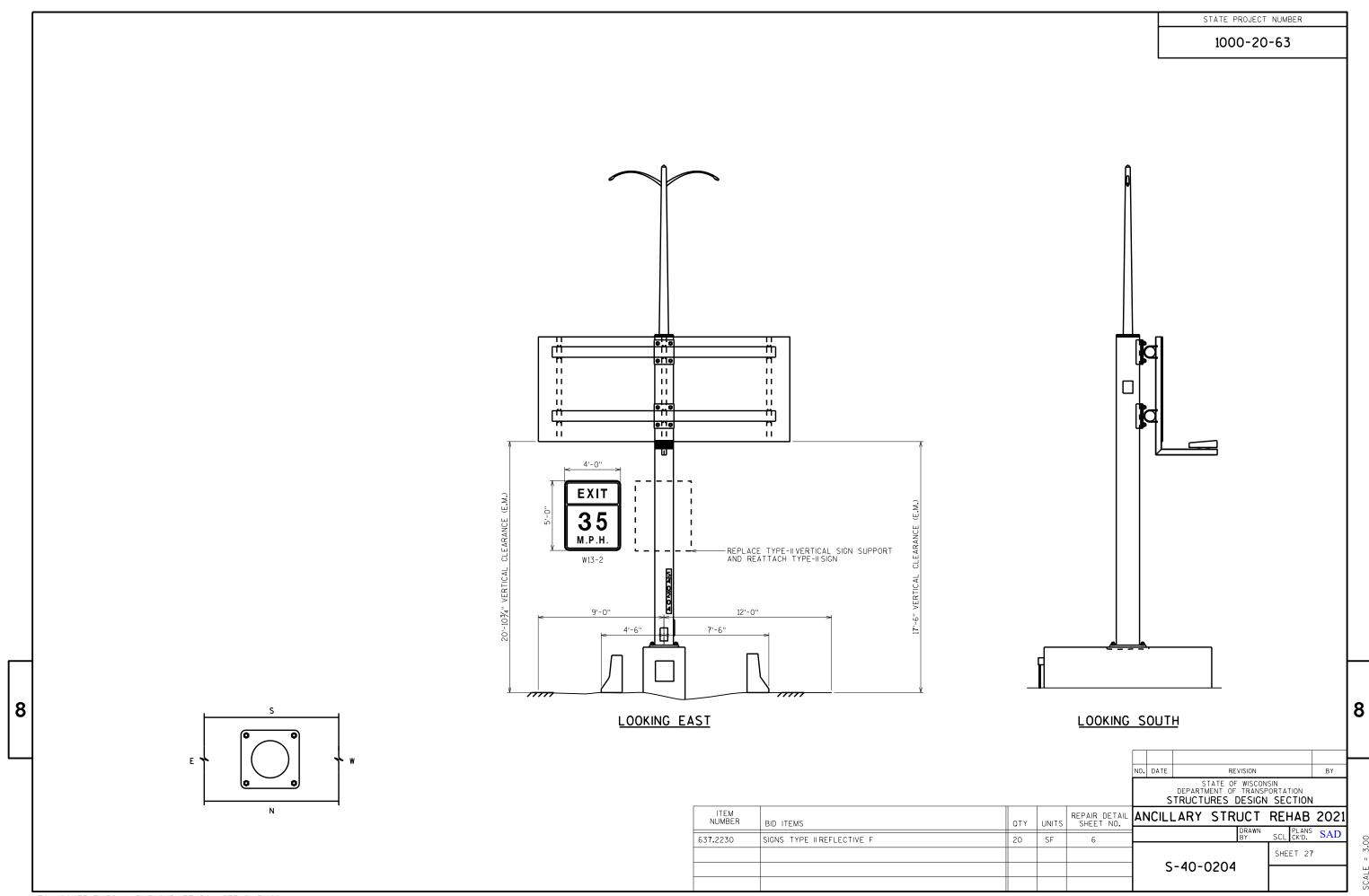




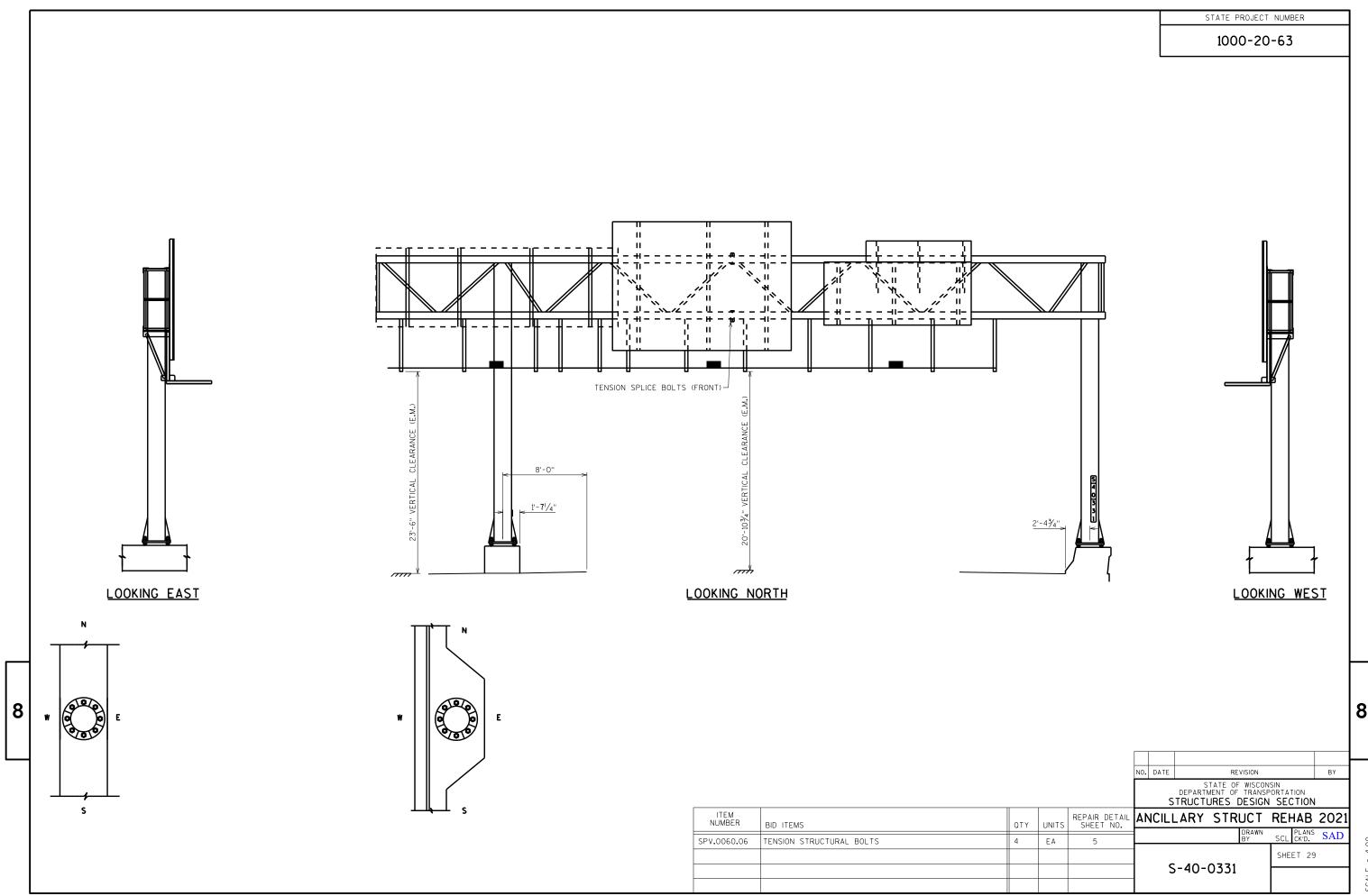


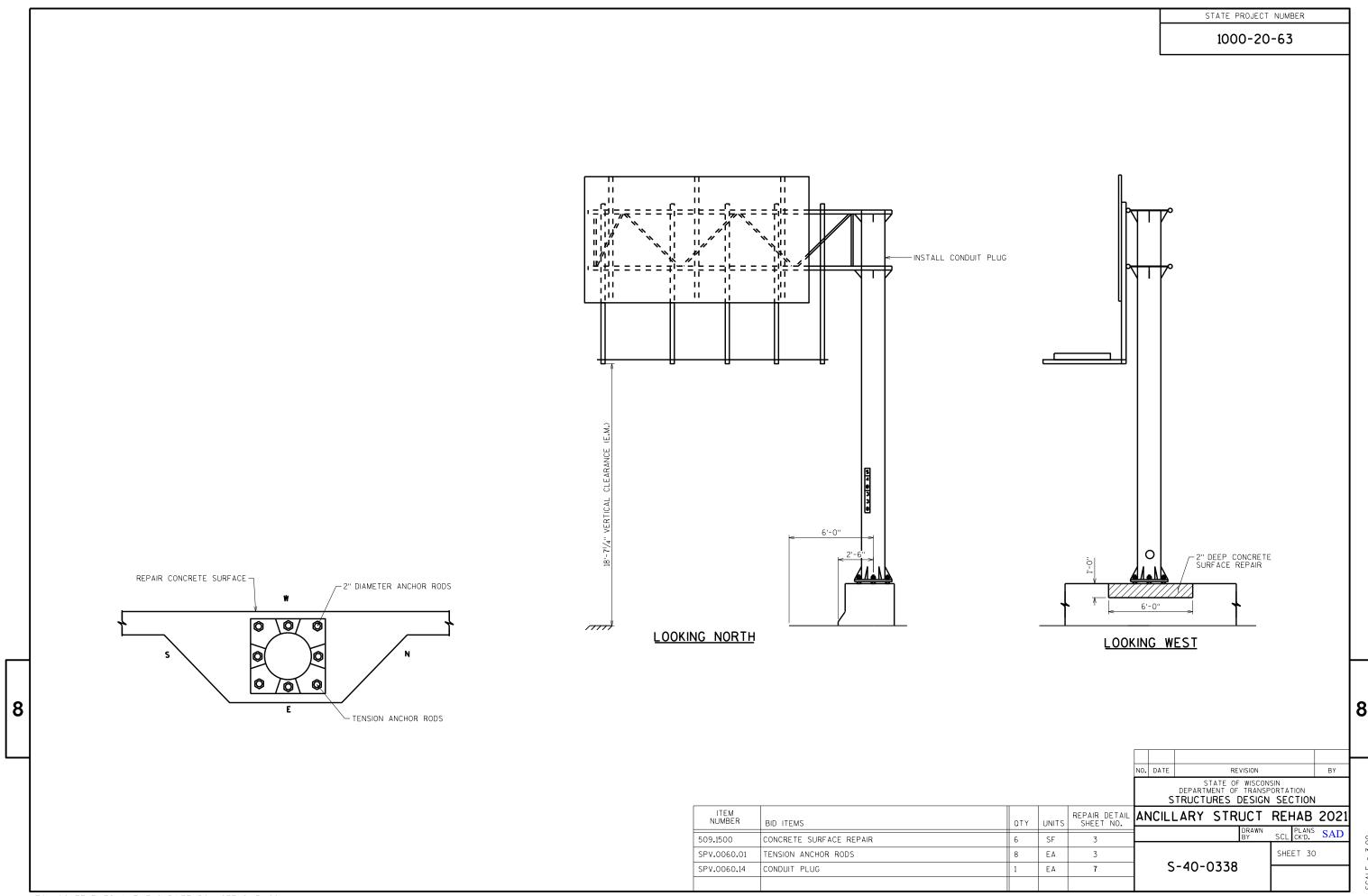


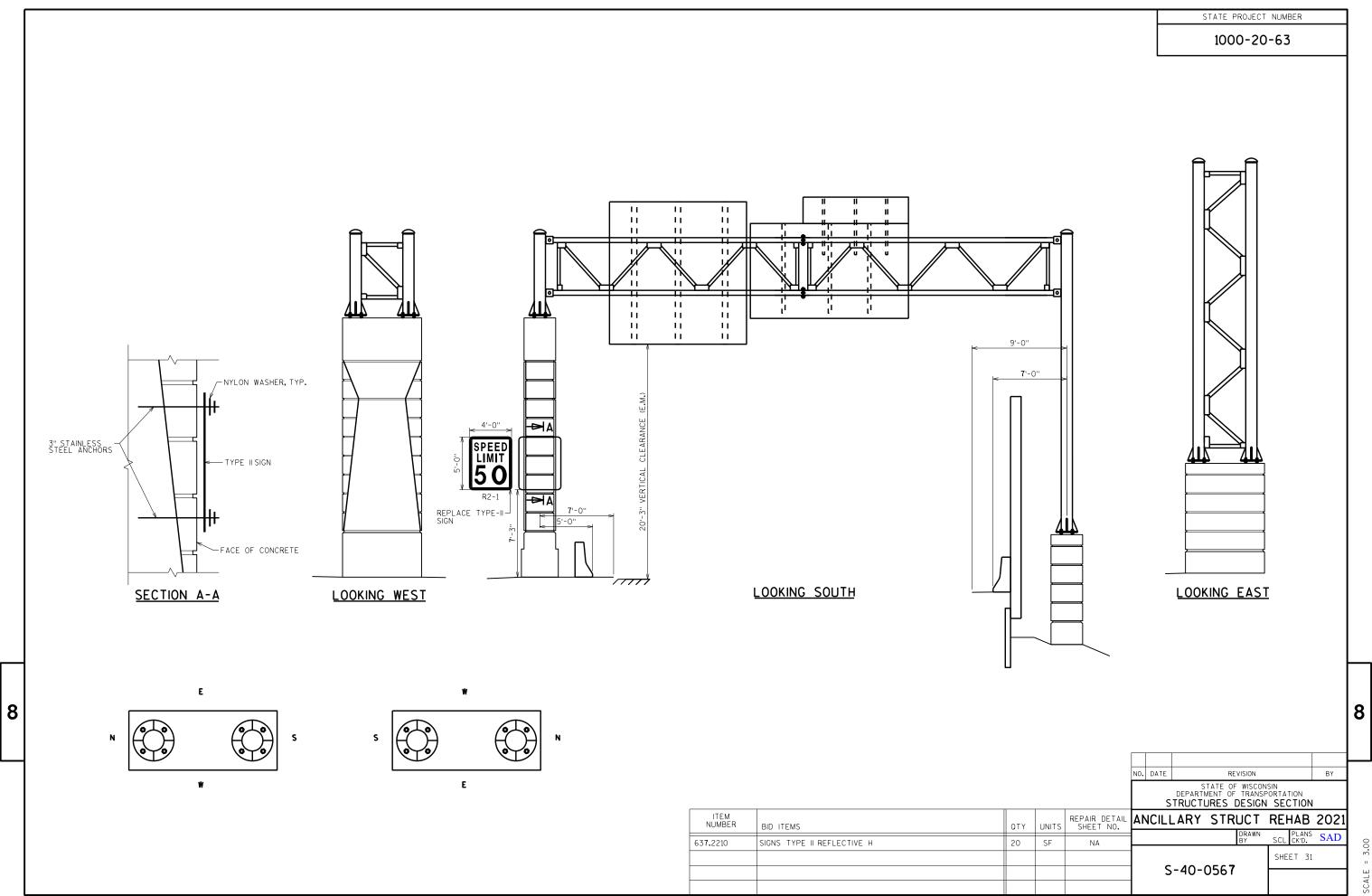


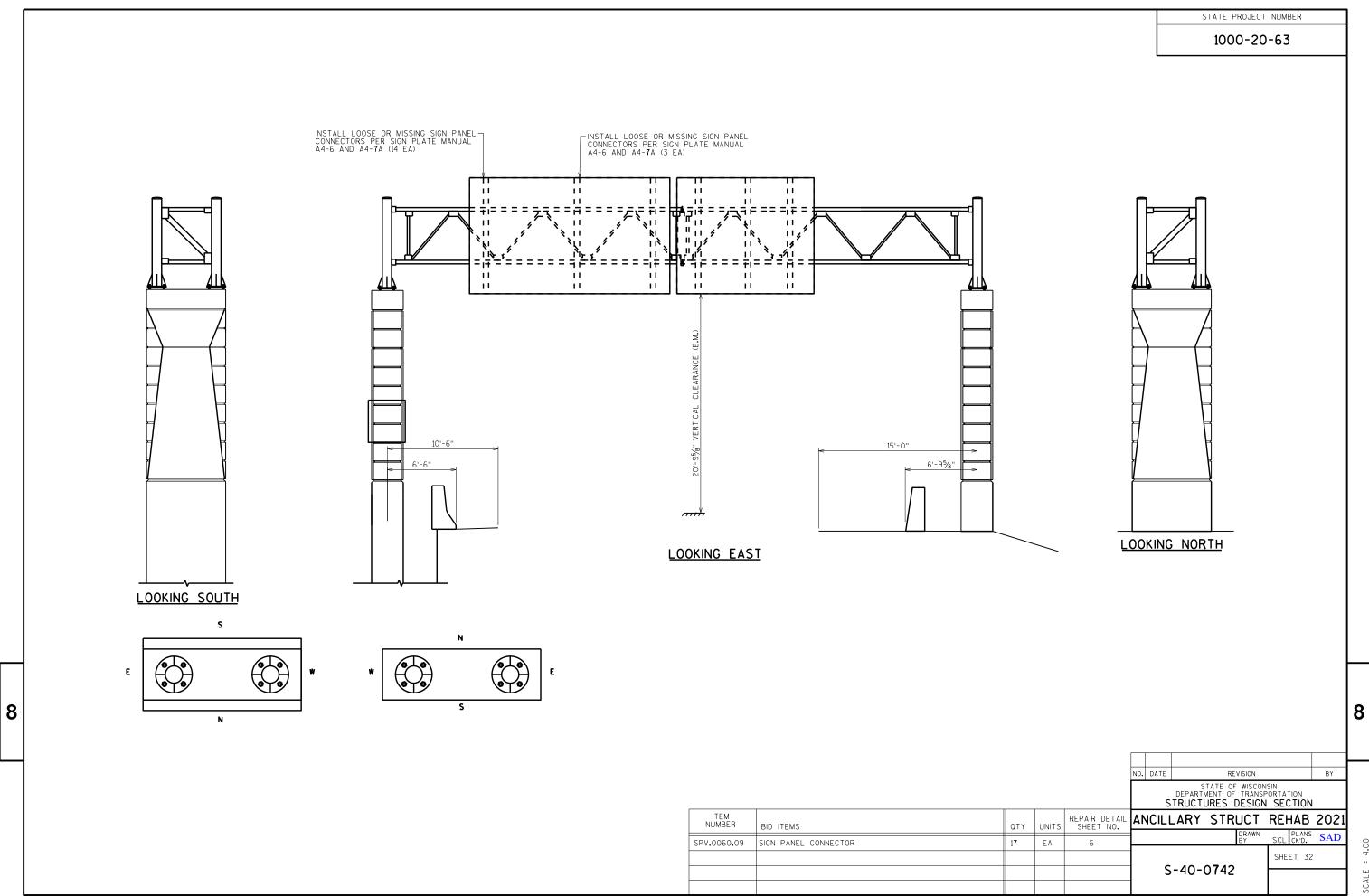


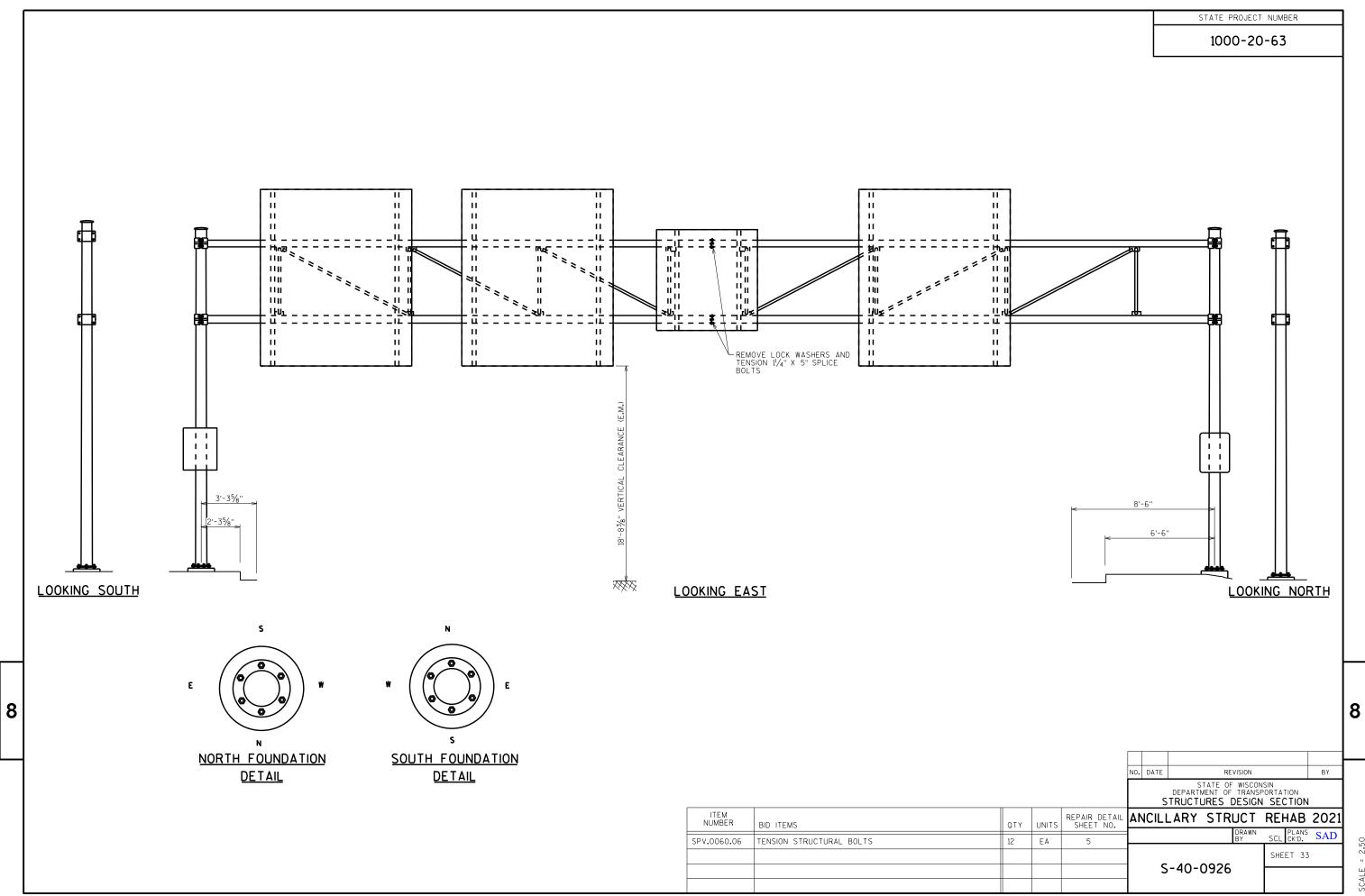
STATE PROJECT NUMBER 1000-20-63 ★ REMOVE CHORD AND COLUMNS AND RESET. 2/2" STANDOFF MAX.AT ANCHORS FROM TOP OF CONCRETE TO BOTTOM OF BASE PLATE.BEVELLED WASHERS ARE TO BE USED IF ANCHORS ARE NOT PLUMB. CENTER SIGN PANEL — ON CHORD ★ REMOVE CHORD TO LOWER COLUMNS. -RESET CHORD TO OBTAIN A VERTICAL CLEARANCE OF 18'-3" MIN. SEE SHOP DRAWINGS IN-HSIFOR DETAILS. յի կ -CHORD O.D. TAPERS 14.5" TO 8.07" INSTALL I-BEAM AND U-BOLT PER SIGN PLATE MANUAL A4-7B 18'-3" MIN.
PROPOSED VERTICAL CLEARANCE _LOWER STRUCTURE ★ ★ LOWER STRUCTURE -21/2" MAX. TYP. m LOOKING NORTH **LOOKING WEST** LOOKING SOUTH 2" DIAMETER ANCHOR RODS -8 8 → INSTALL BEVELLED WASHERS - AS NEEDED. TENSION ANCHOR RODS. BY NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION ITEM NUMBER REPAIR DETAIL SHEET NO. ANCILLARY STRUCT REHAB 2021 BID ITEMS QTY UNITS DRAWN BY SCL PLANS SAD SPV.0060.04 LOWER STRUCTURE EΑ SHEET 28 SPV.0060.08 VERTICAL SIGN SUPPORT 3 EΑ 6 S-40-0269

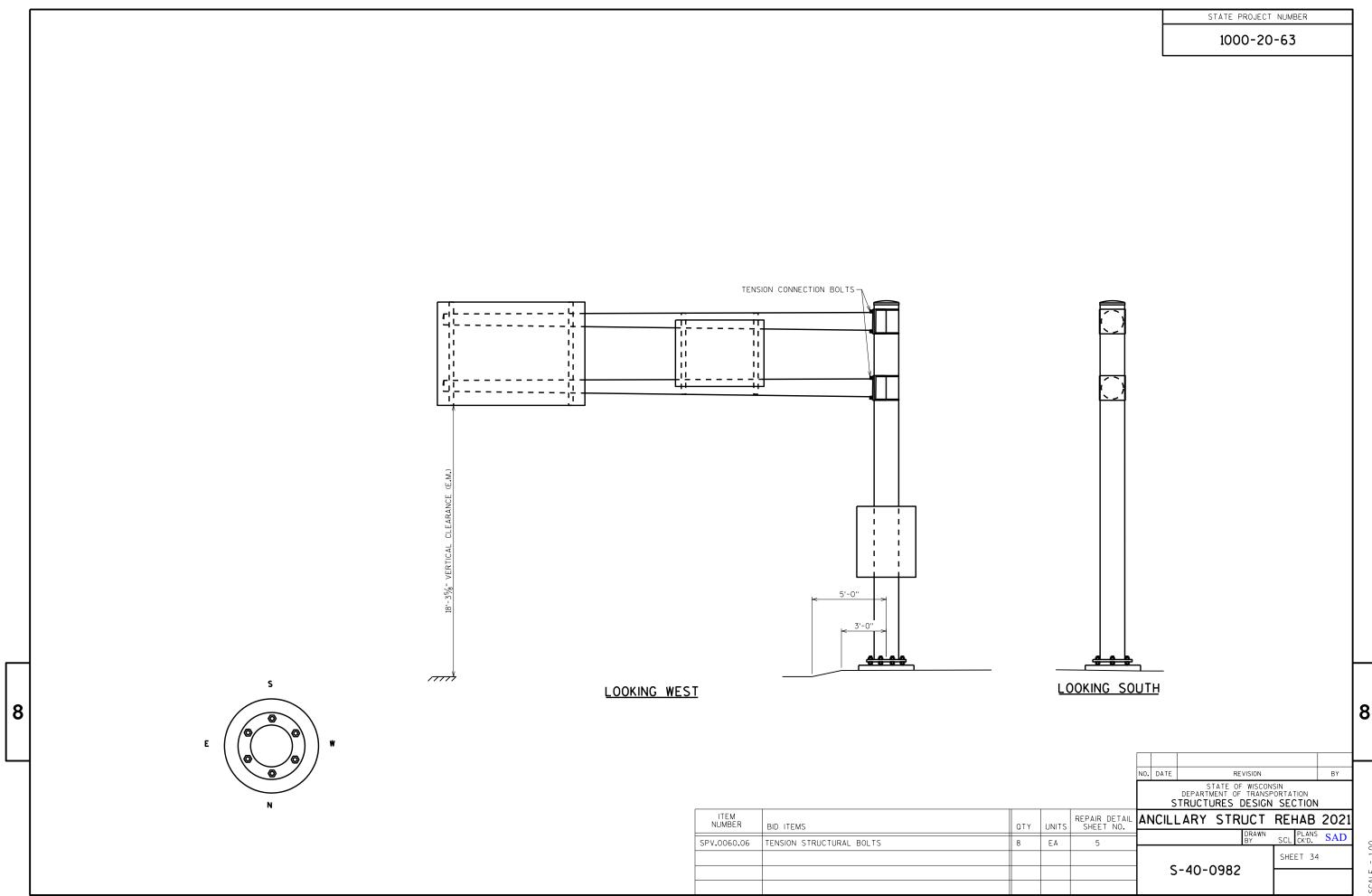


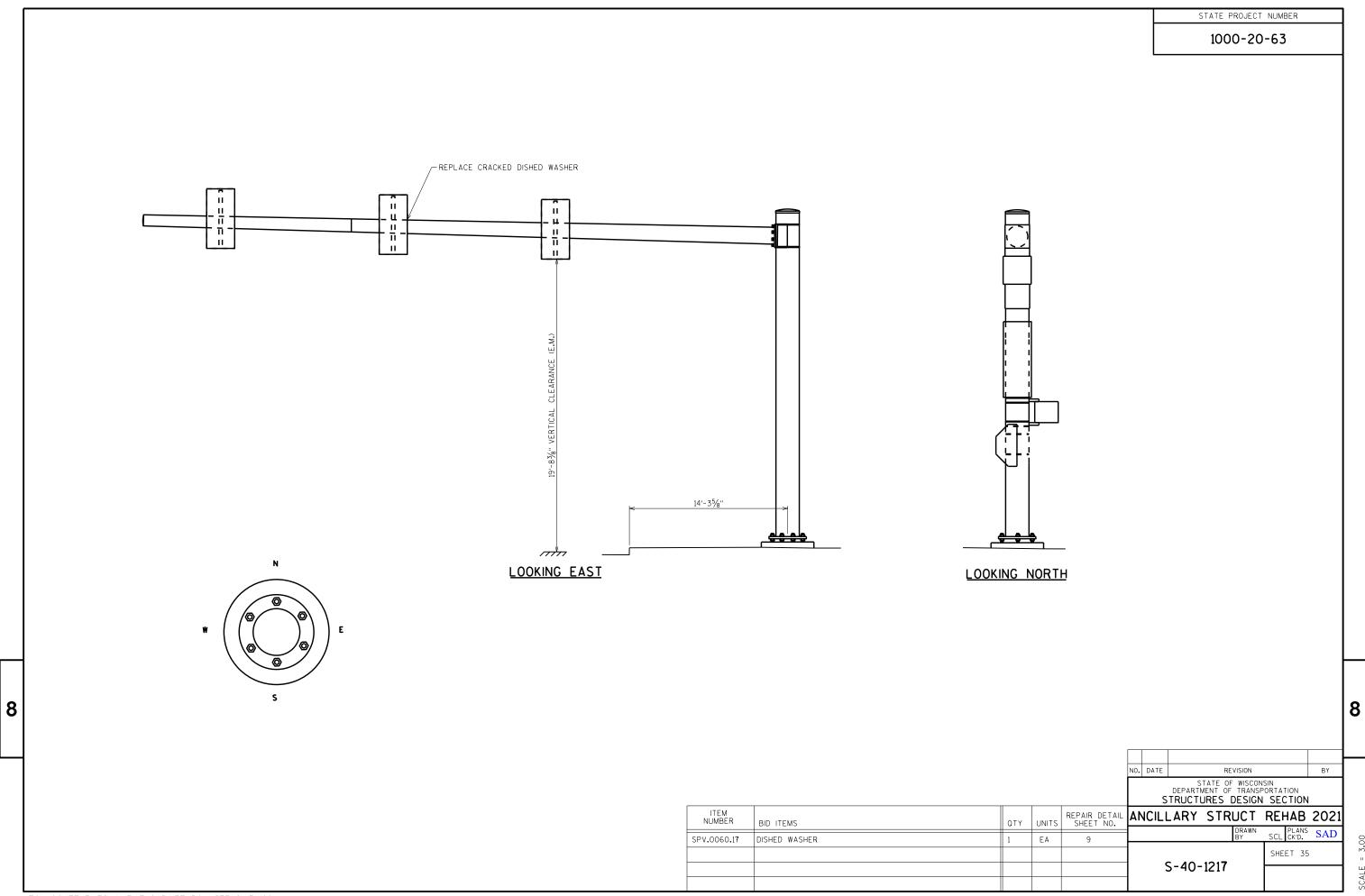


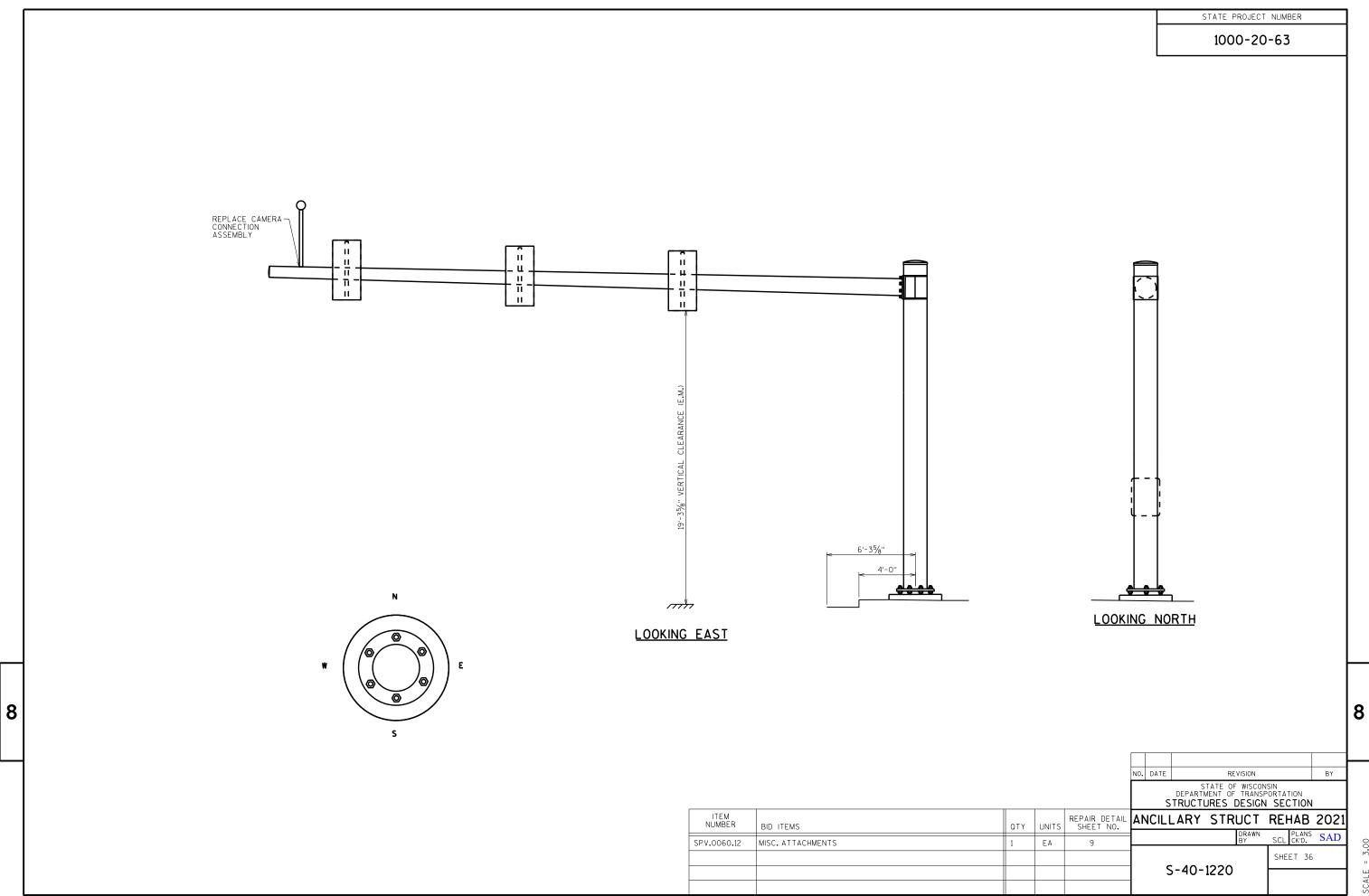


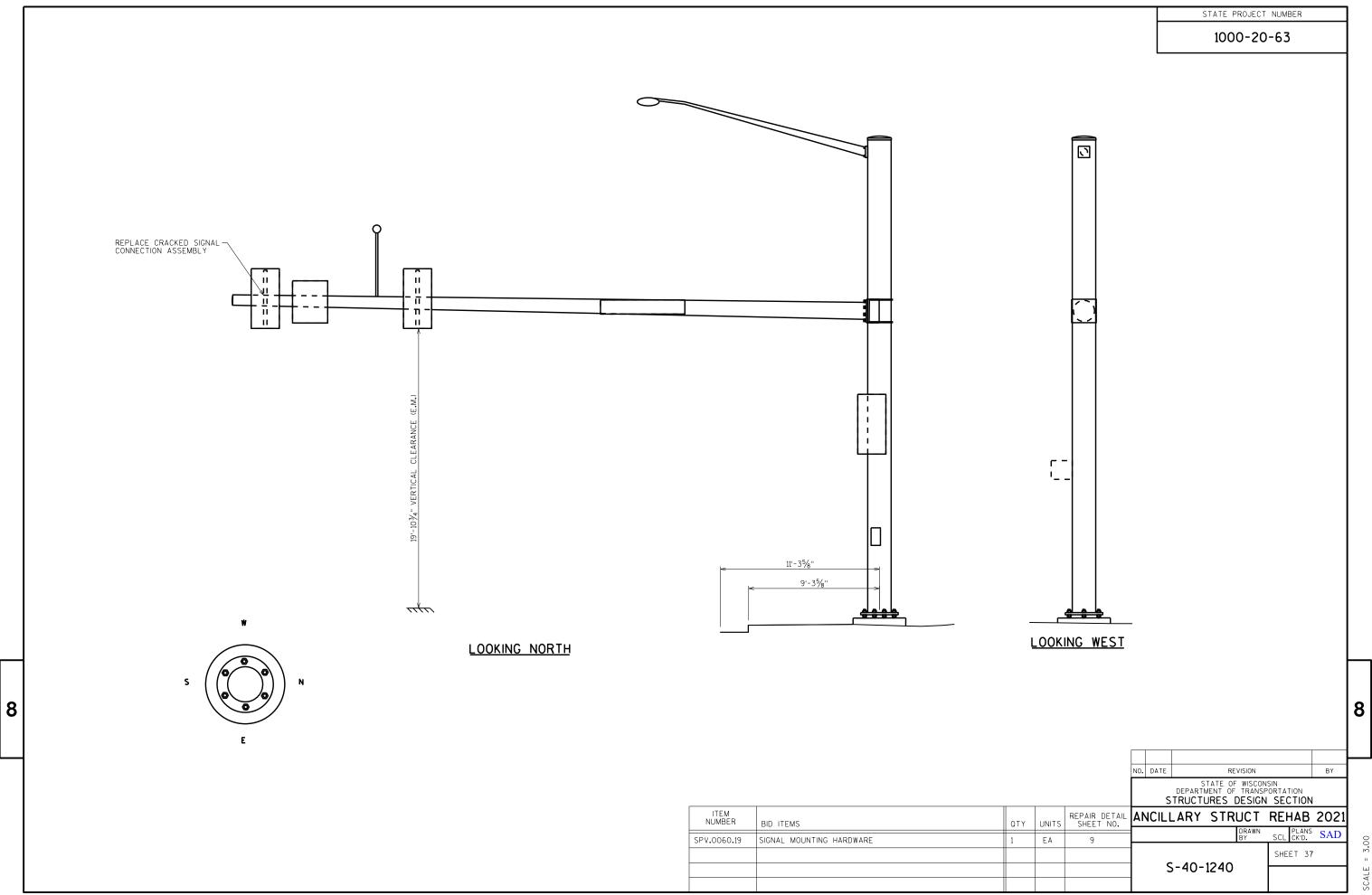


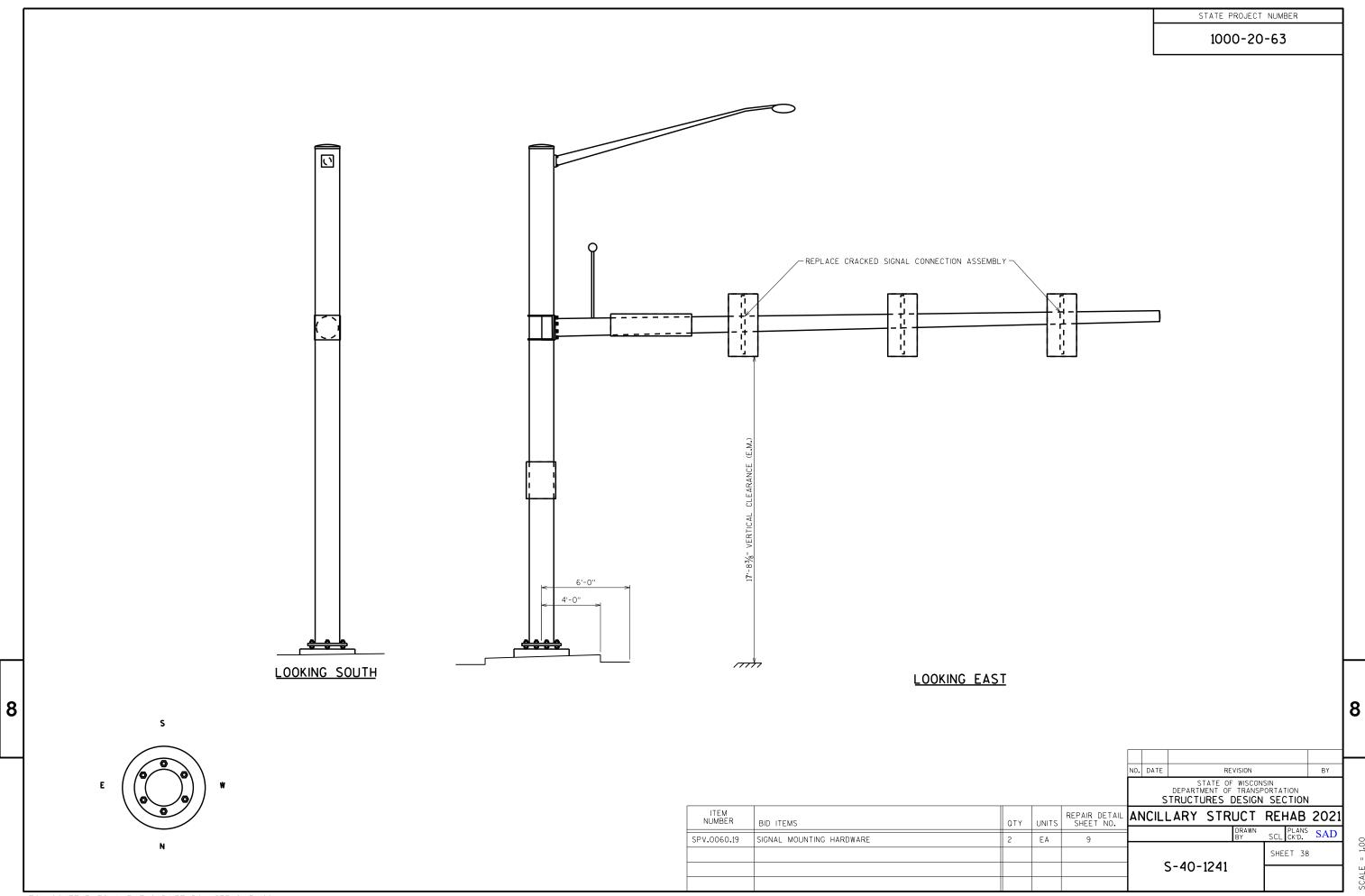


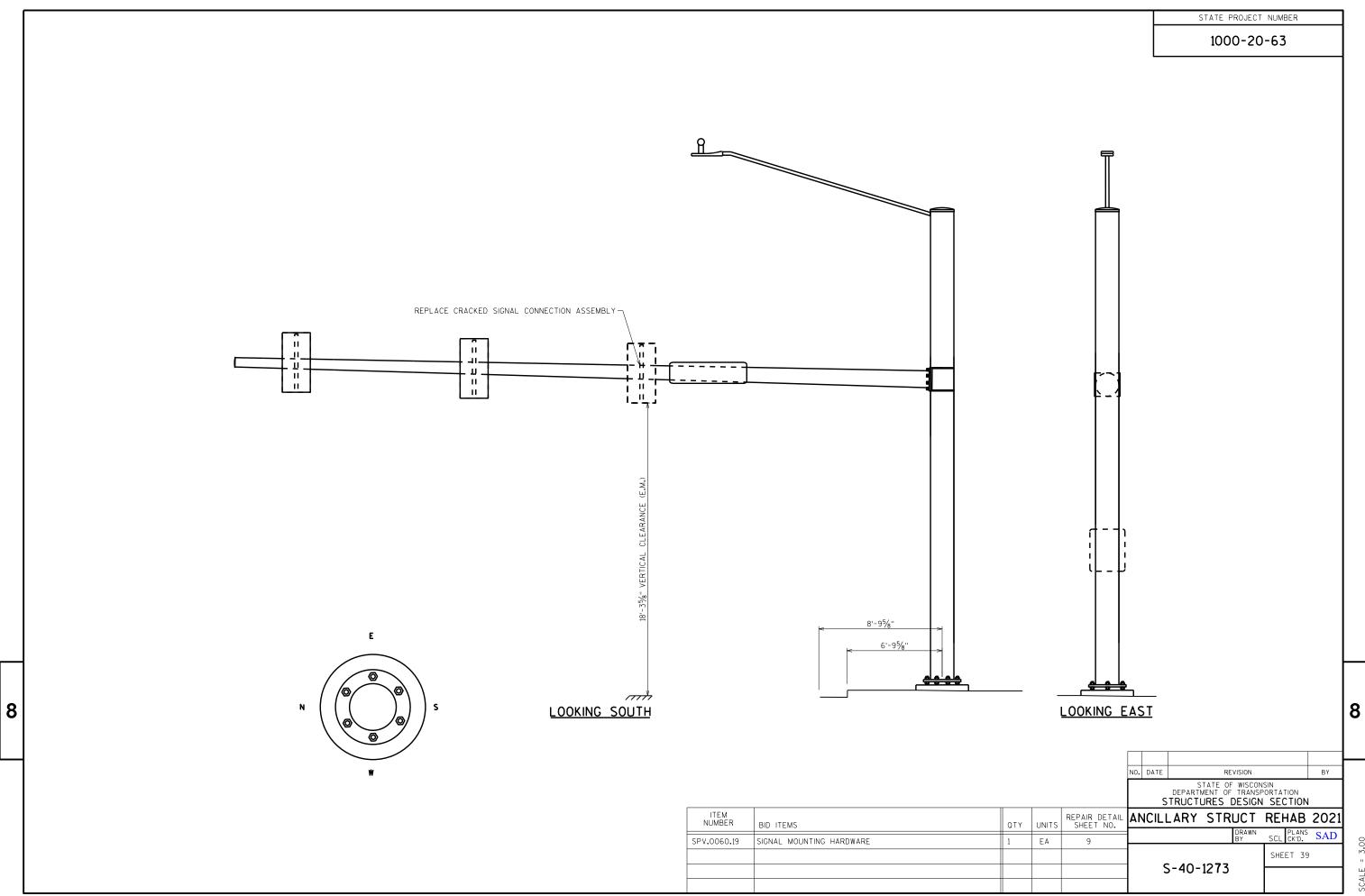


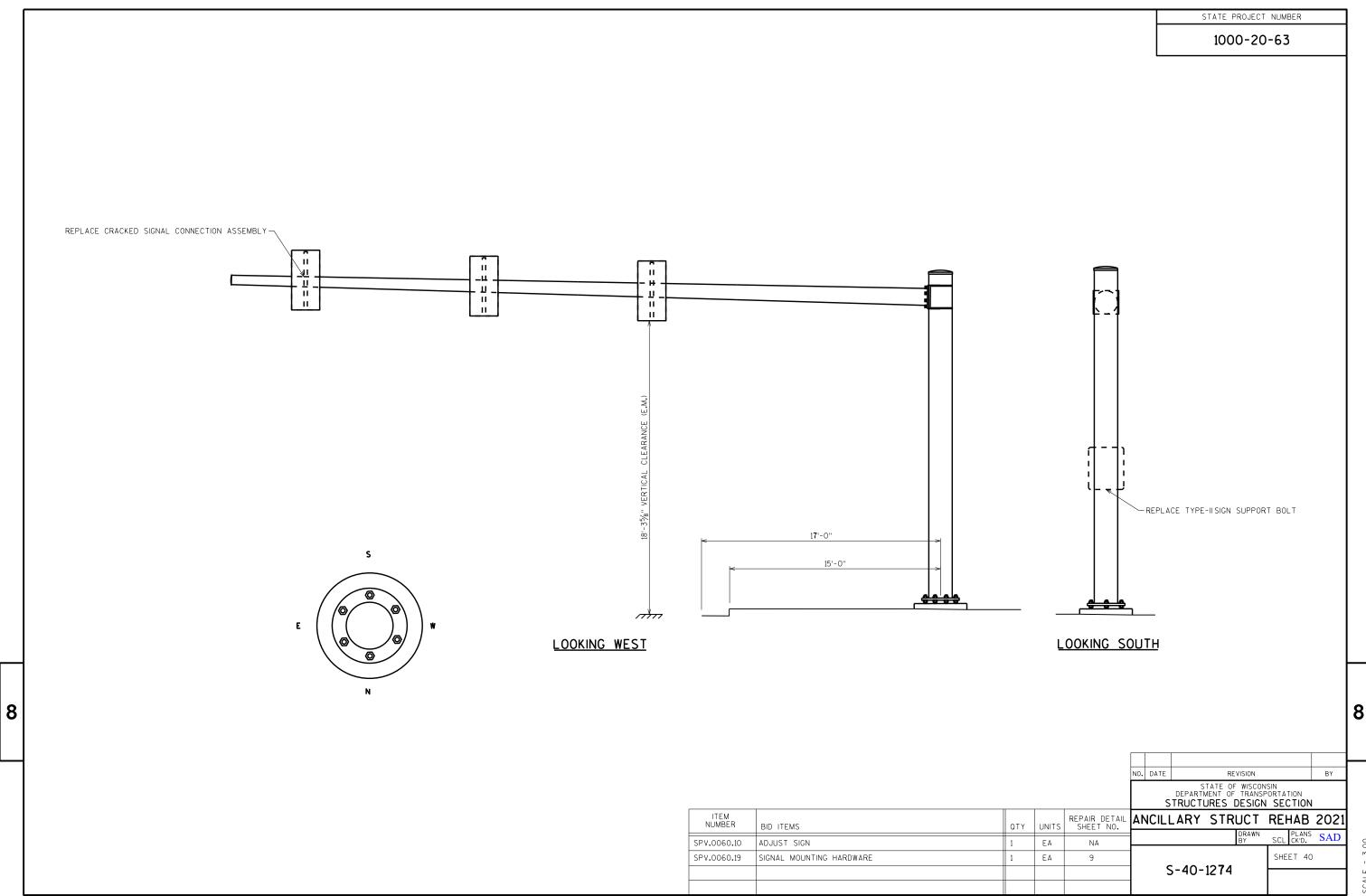


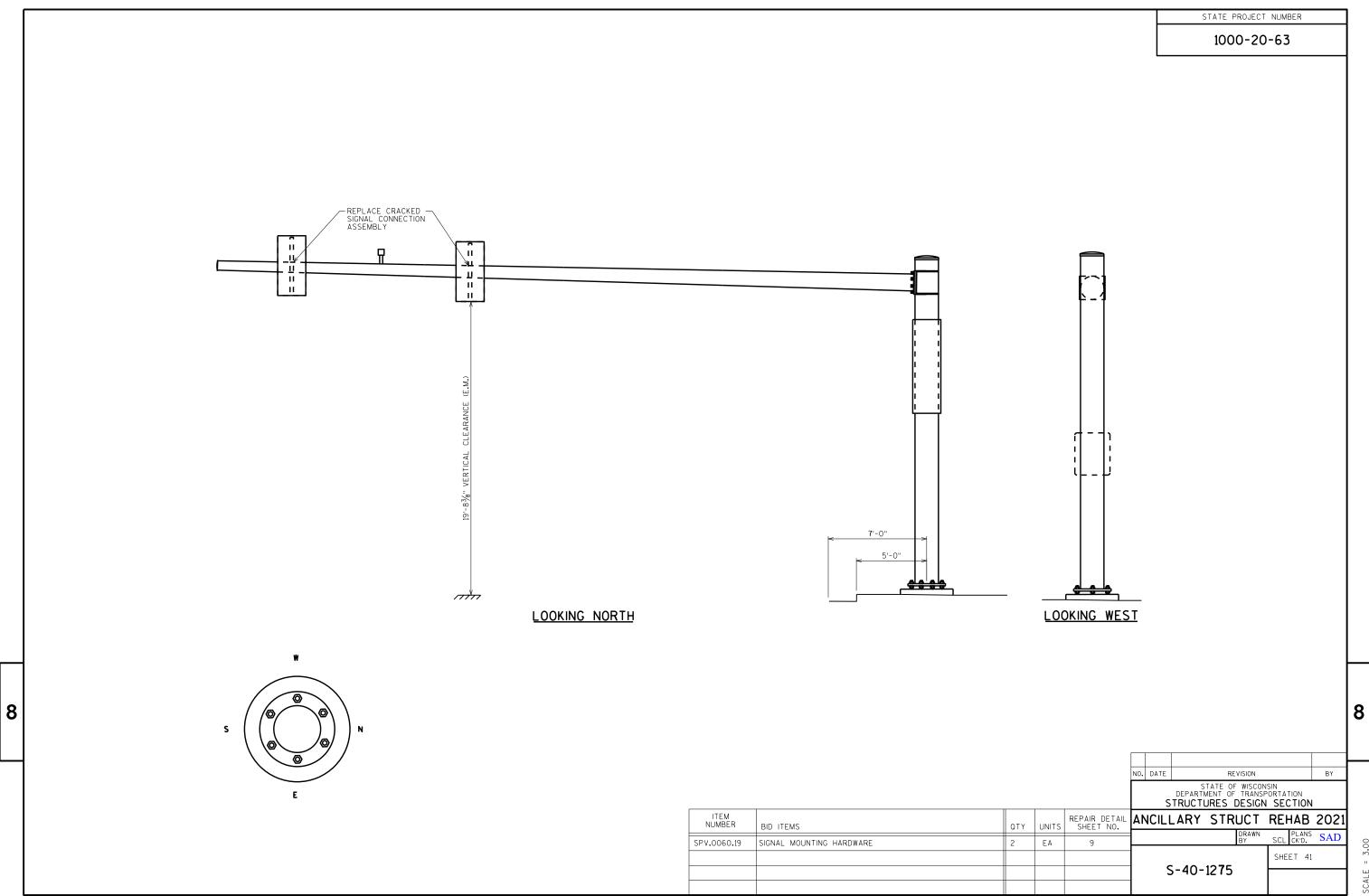


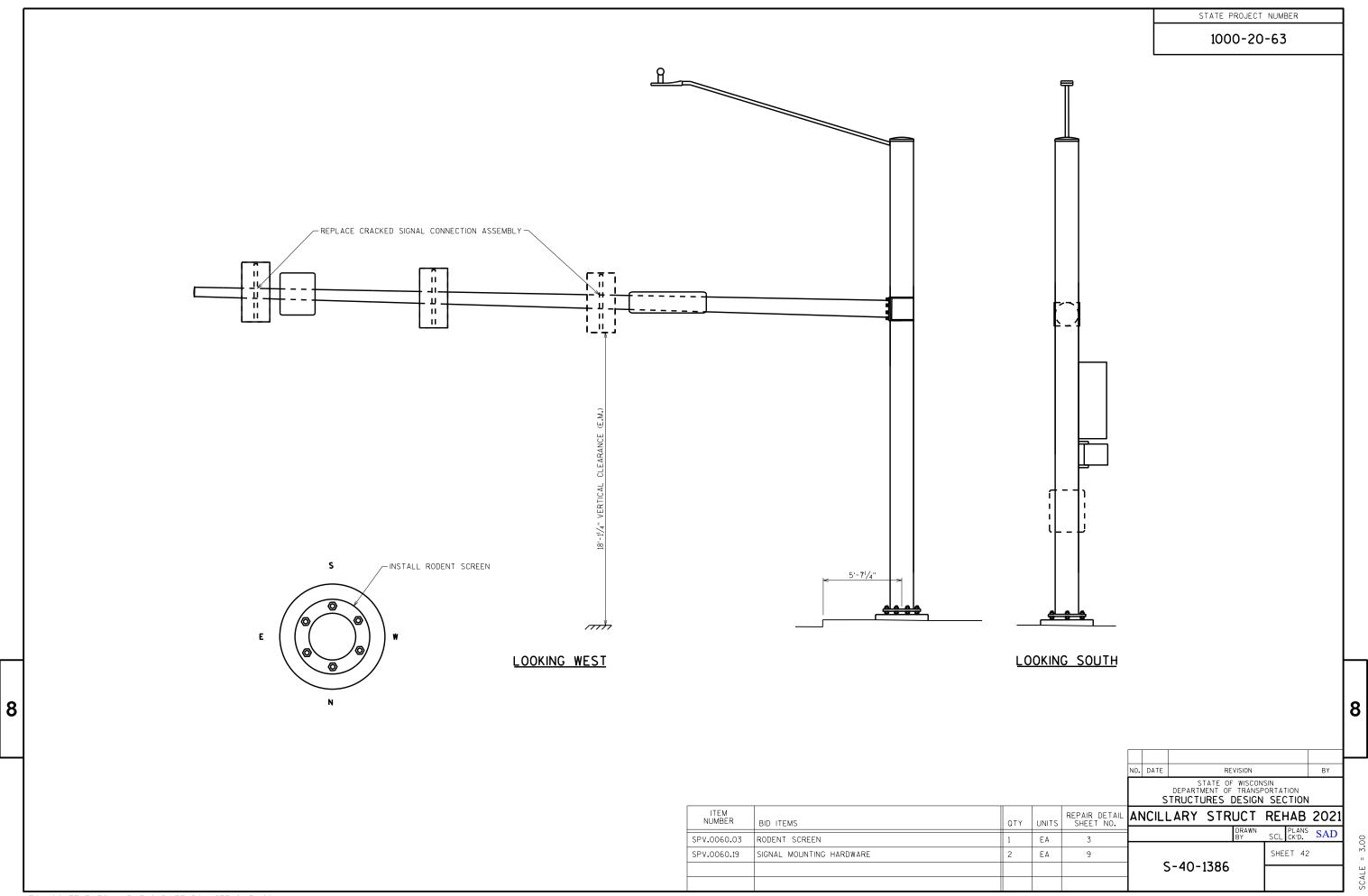




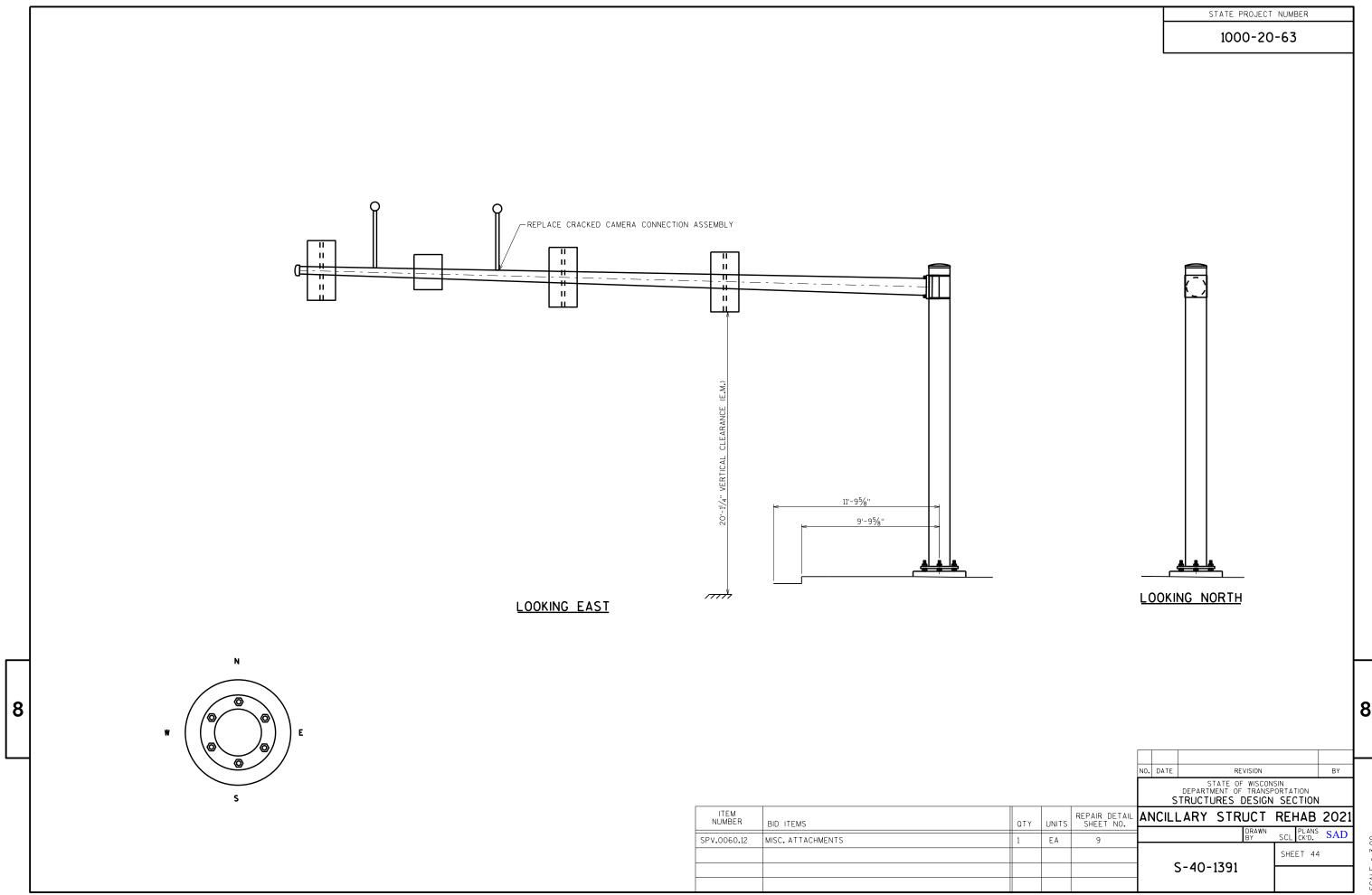


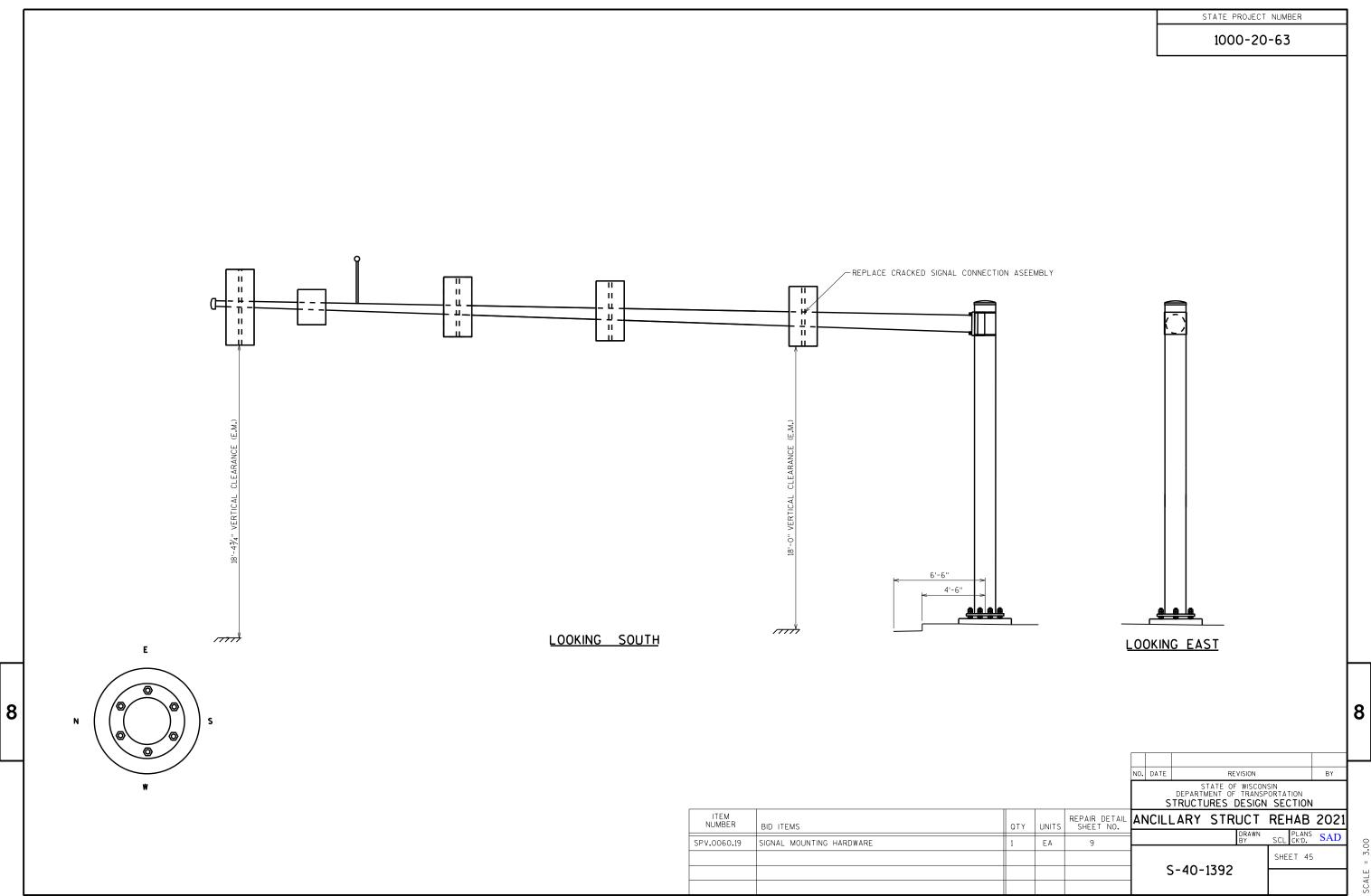




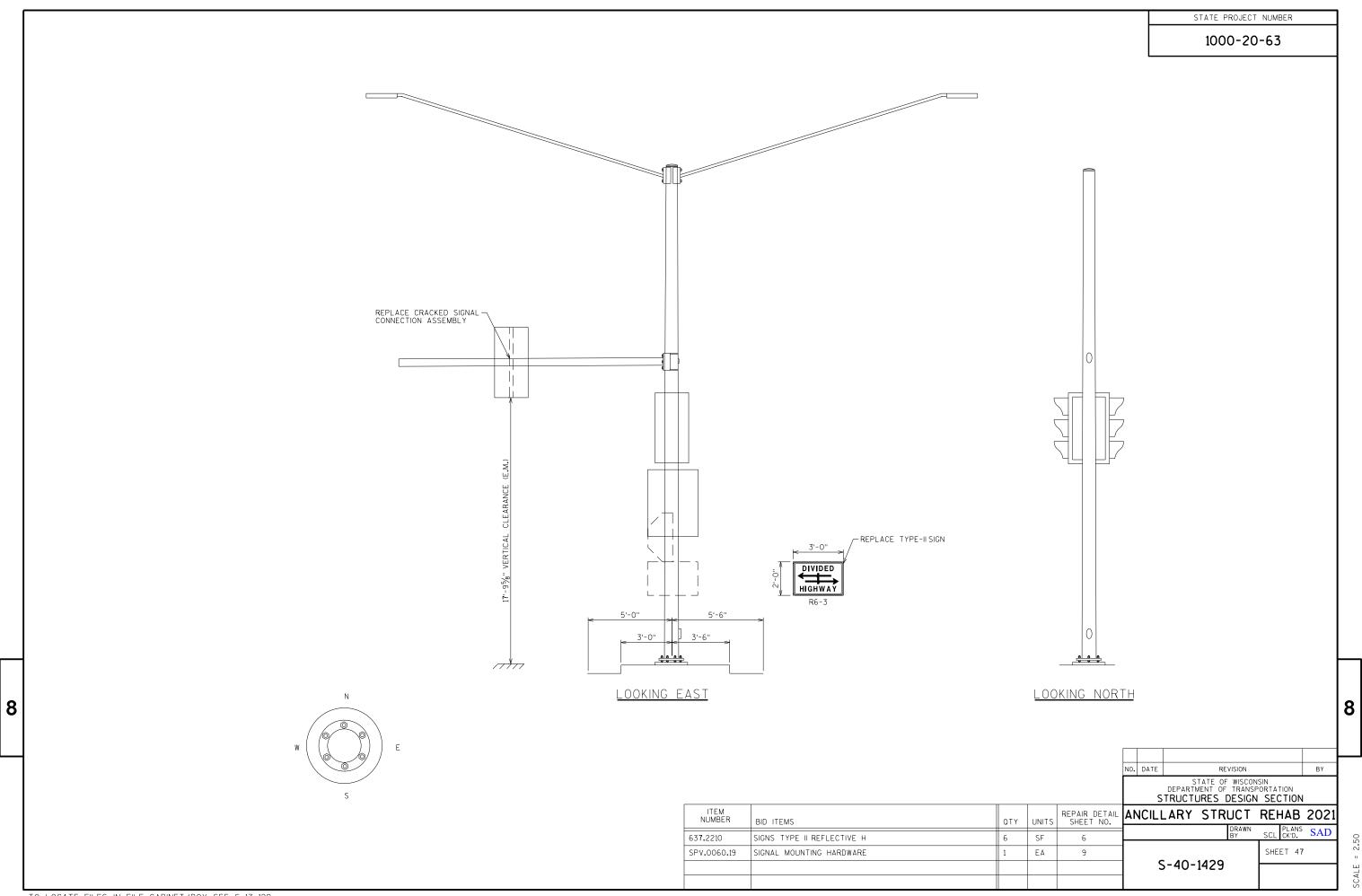


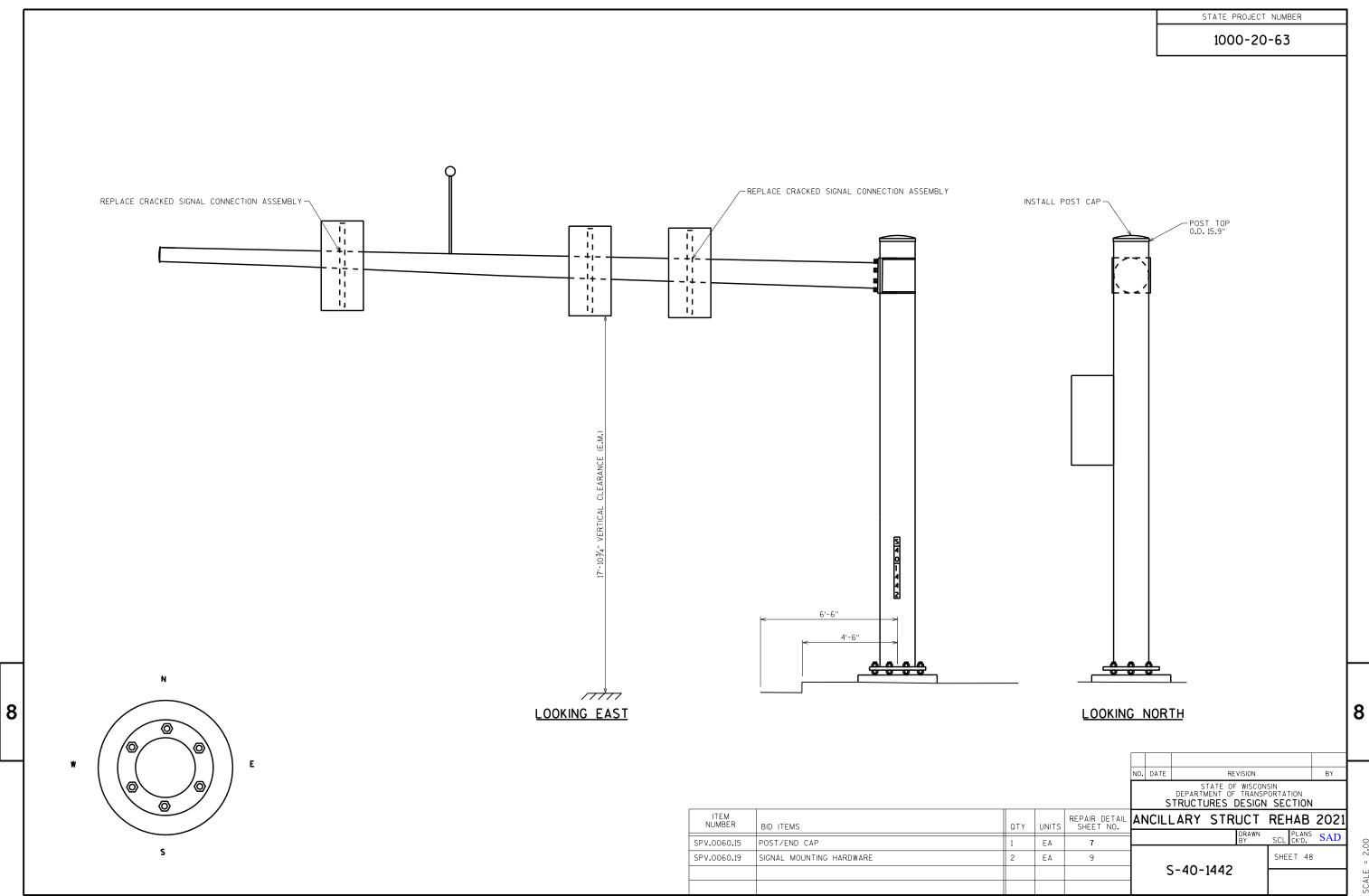
STATE PROJECT NUMBER 1000-20-63 REPLACE CRACKED LOWER VERTICAL— TO HORIZONTAL SIGNAL CONNECTION BRACKET 4'-11/4" m LOOKING WEST LOOKING NORTH 8 NO. DATE BY REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION OTY UNITS REPAIR DETAIL ANCILLARY STRUCT REHAB 2021 ITEM NUMBER BID ITEMS SCL PLANS SAD EΑ SPV.0060.19 SIGNAL MOUNTING HARDWARE SHEET 43 S-40-1389

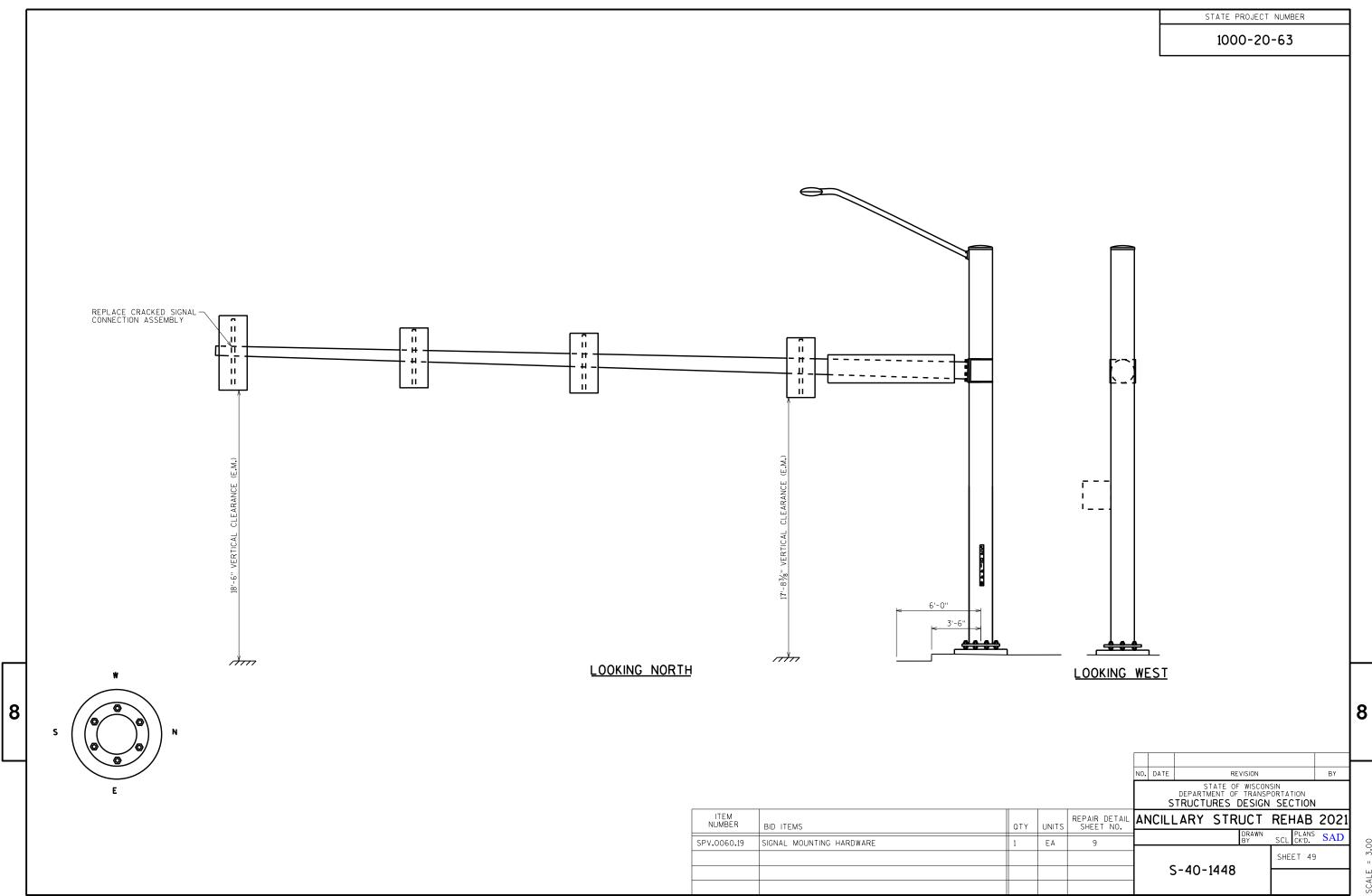


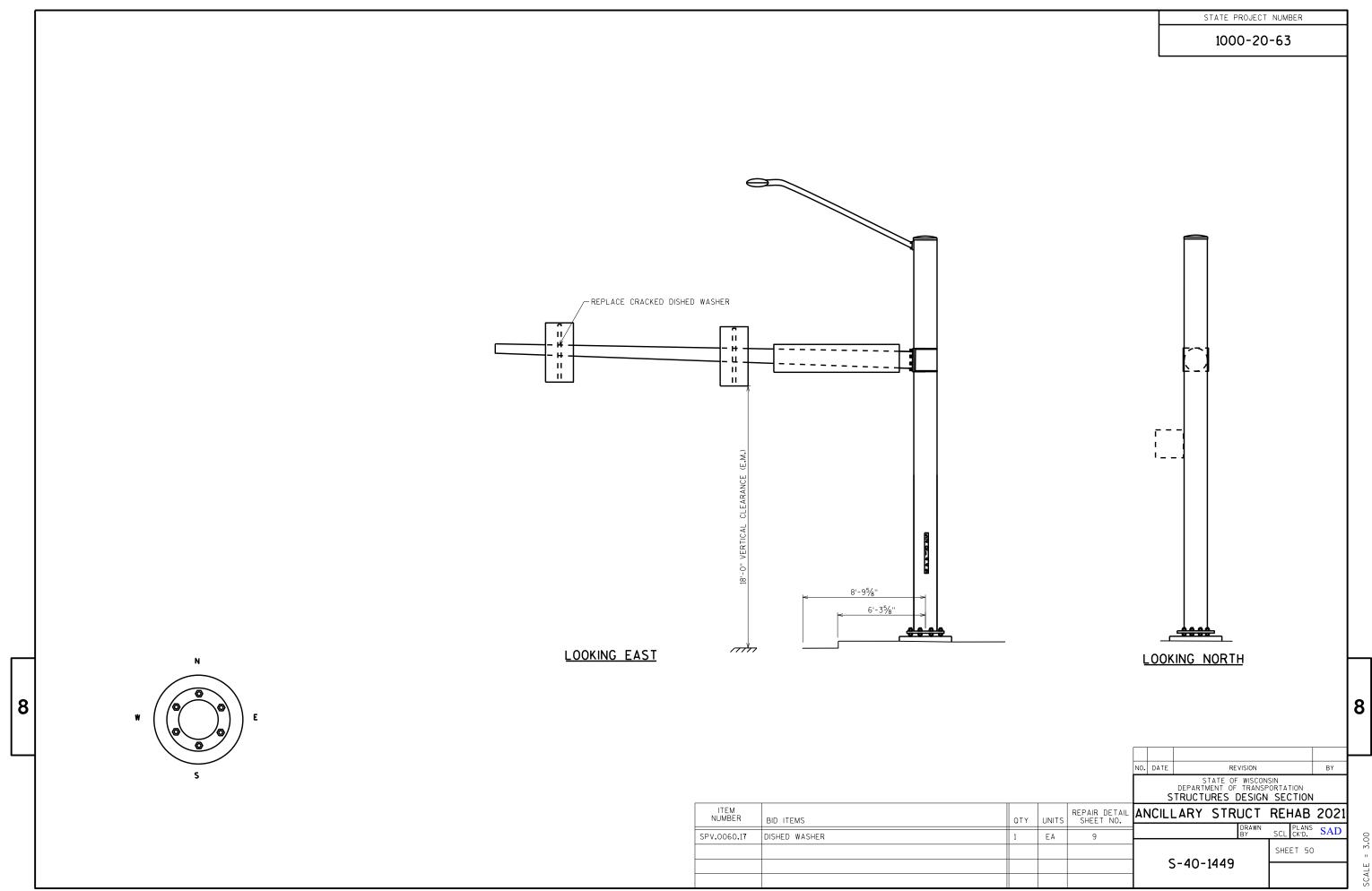


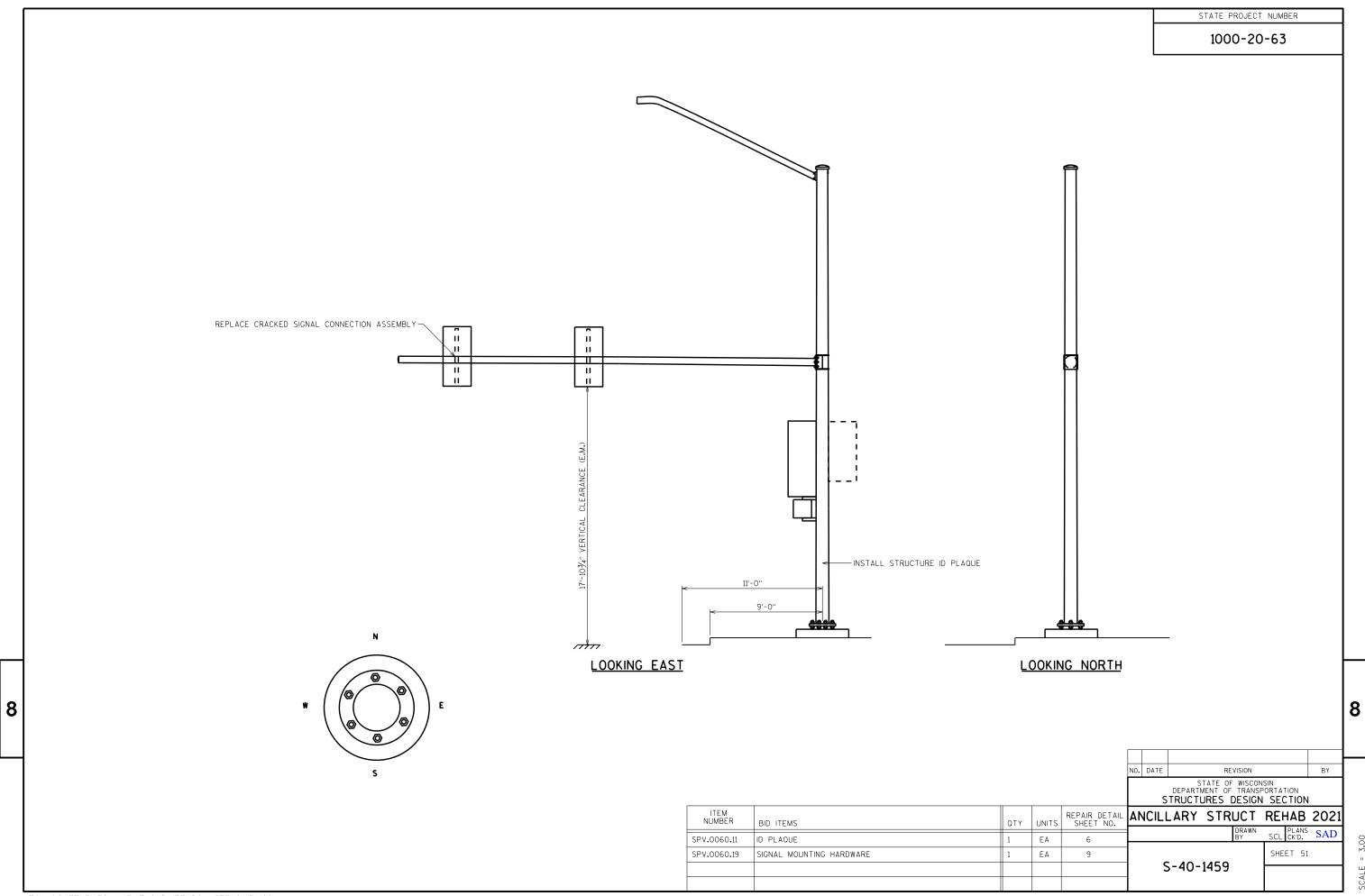
STATE PROJECT NUMBER 1000-20-63 REPLACE CRACKED SIGNAL CONNECTION ASSEMBLY F 11 1 1 11 1_---- INSTALL STRUCTURE ID PLAQUE 9'-0" LOOKING NORTH LOOKING WEST 8 NO. DATE BY REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION REPAIR DETAIL ANCILLARY STRUCT REHAB 2021 ITEM NUMBER BID ITEMS QTY UNITS SCL PLANS SAD SPV.0060.11 ID PLAQUE EΑ SHEET 46 SPV.0060.19 SIGNAL MOUNTING HARDWARE EΑ 9 S-40-1395

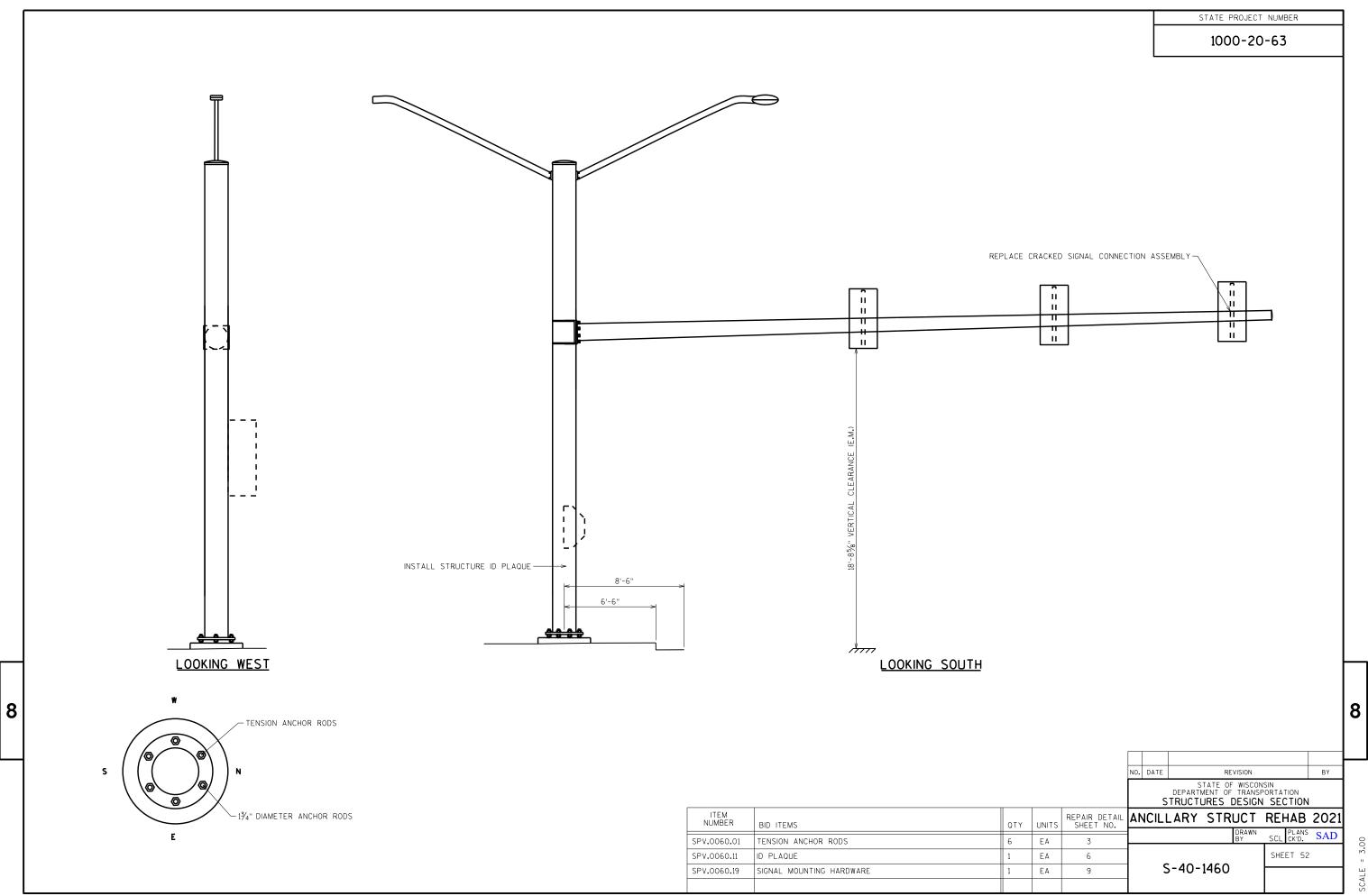


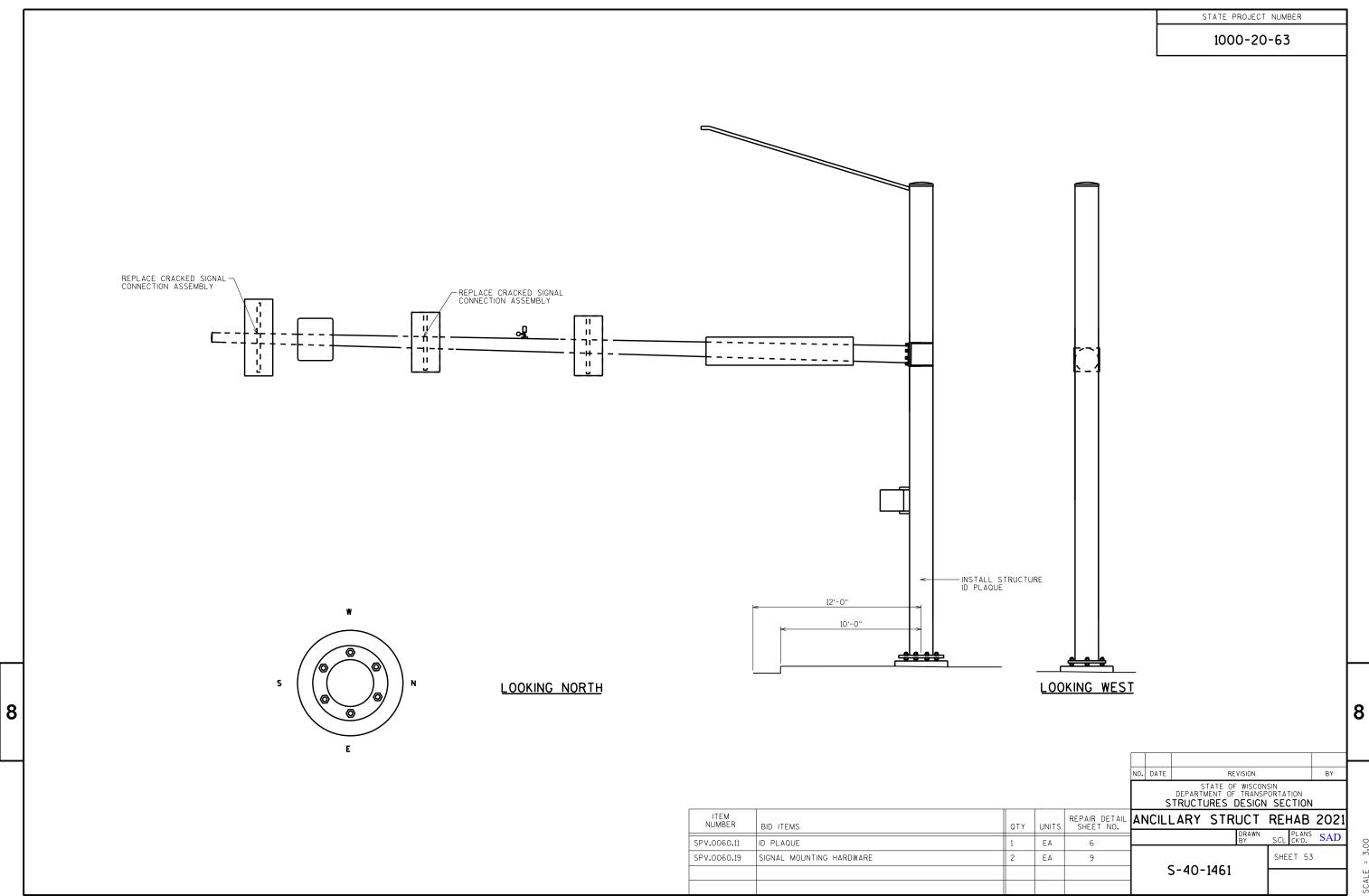


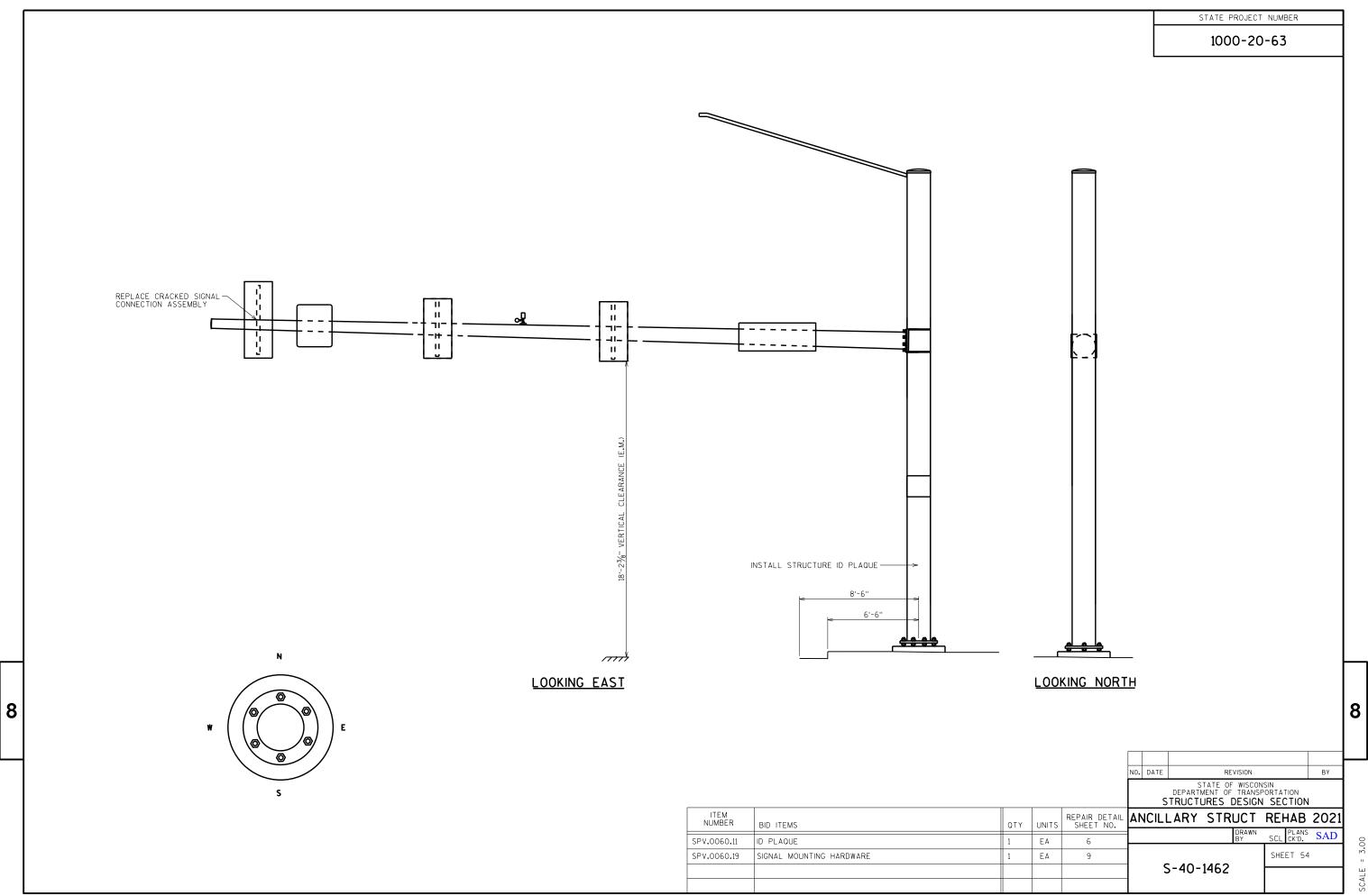


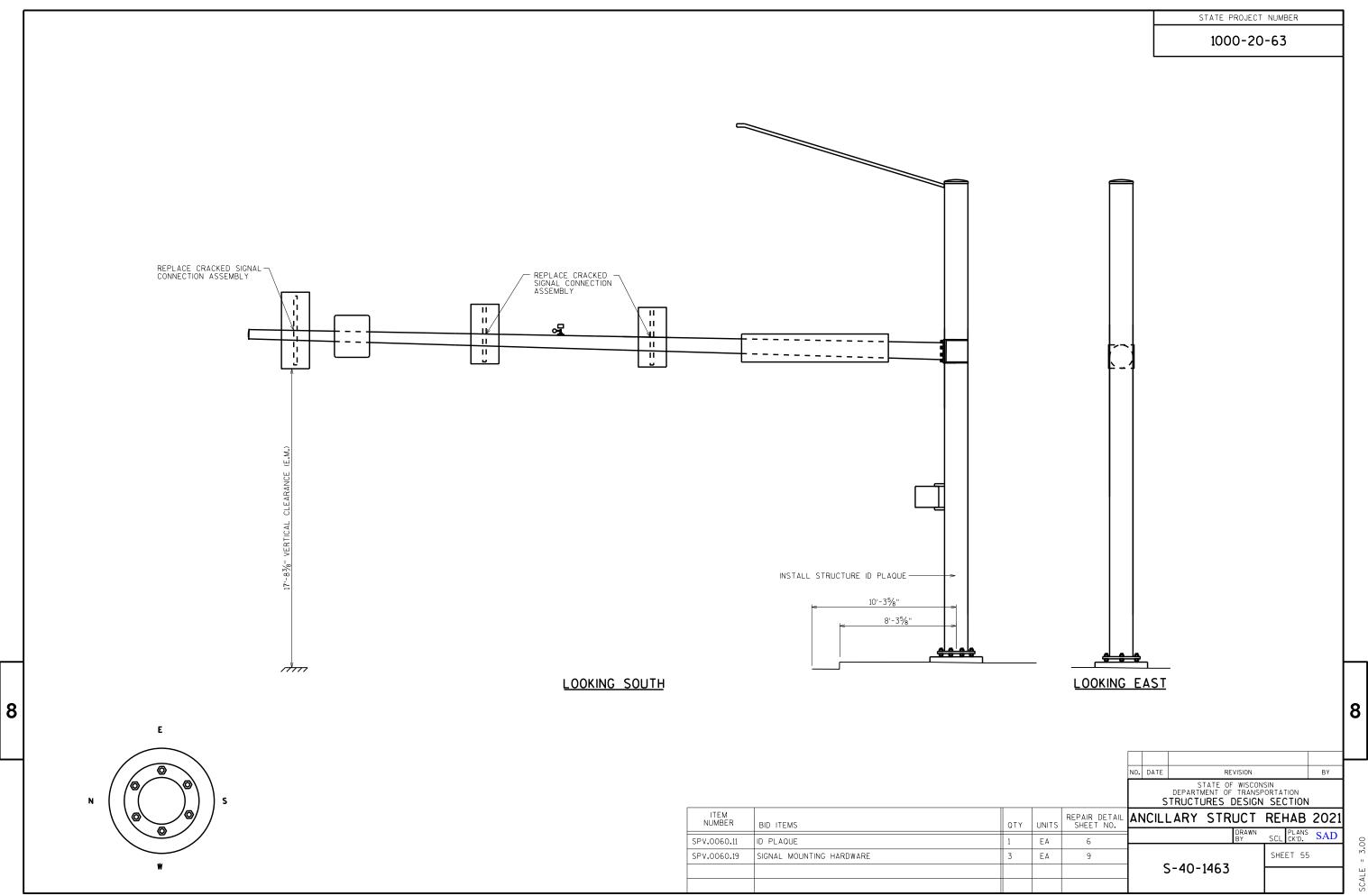


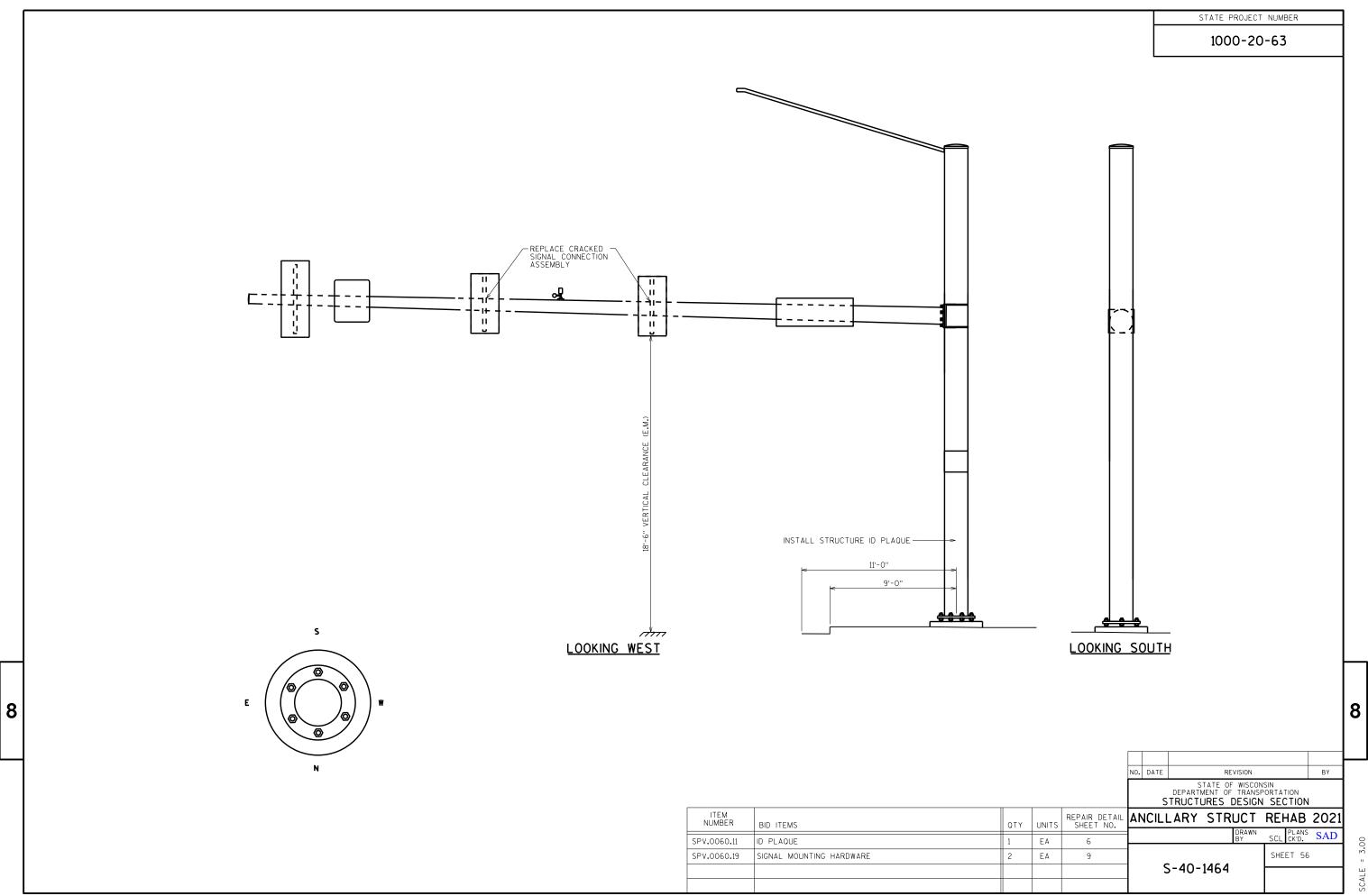


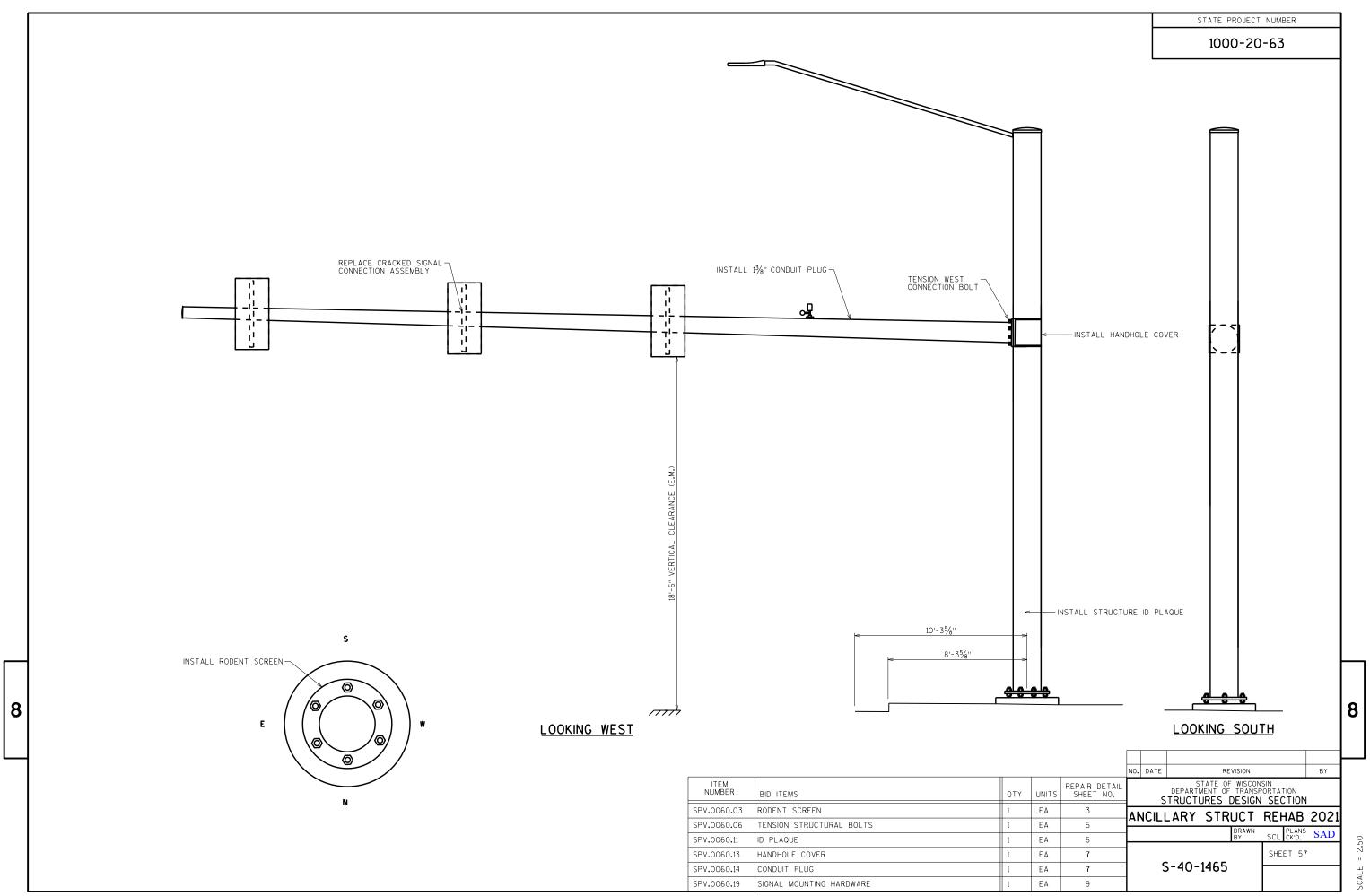


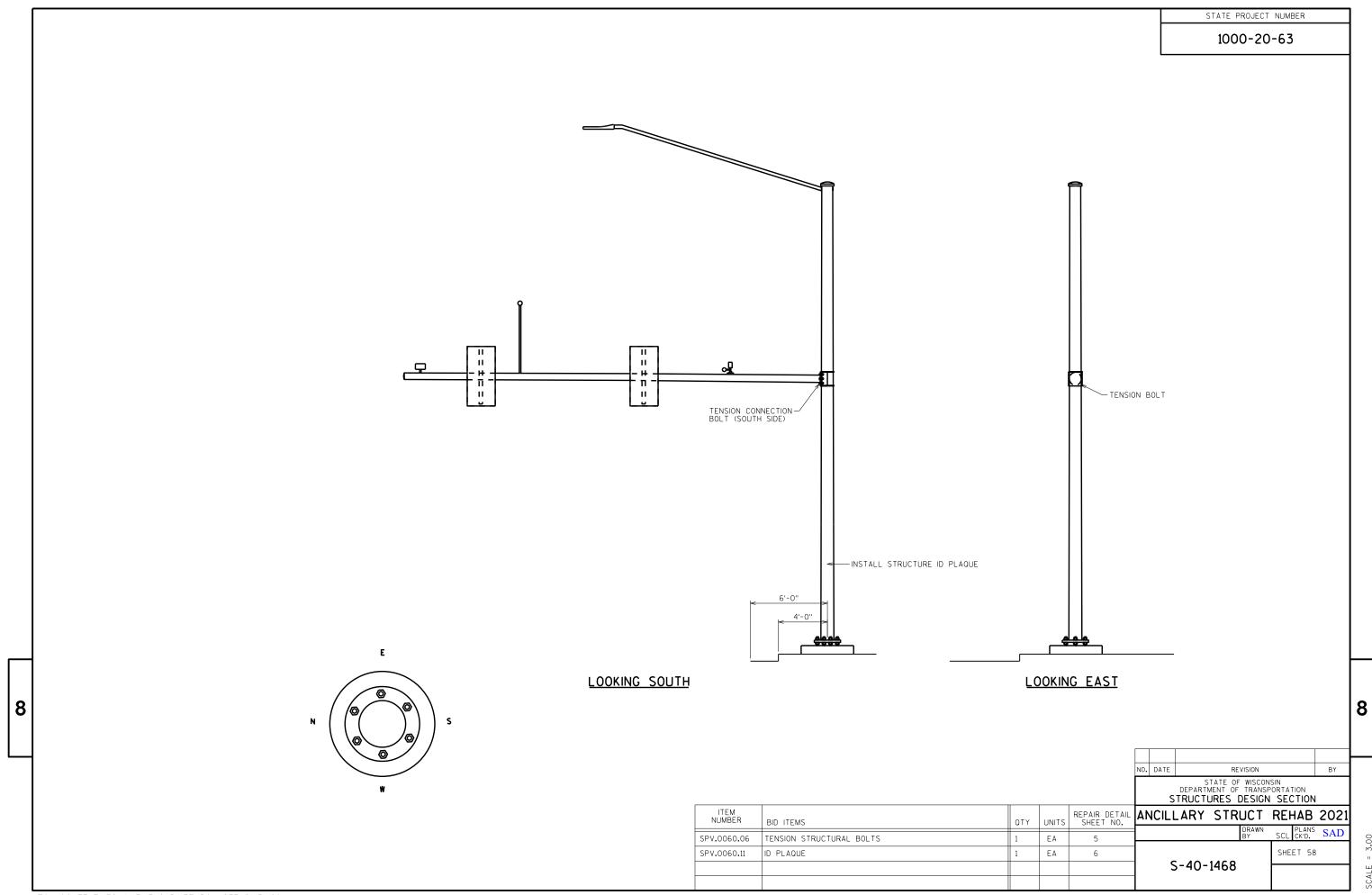


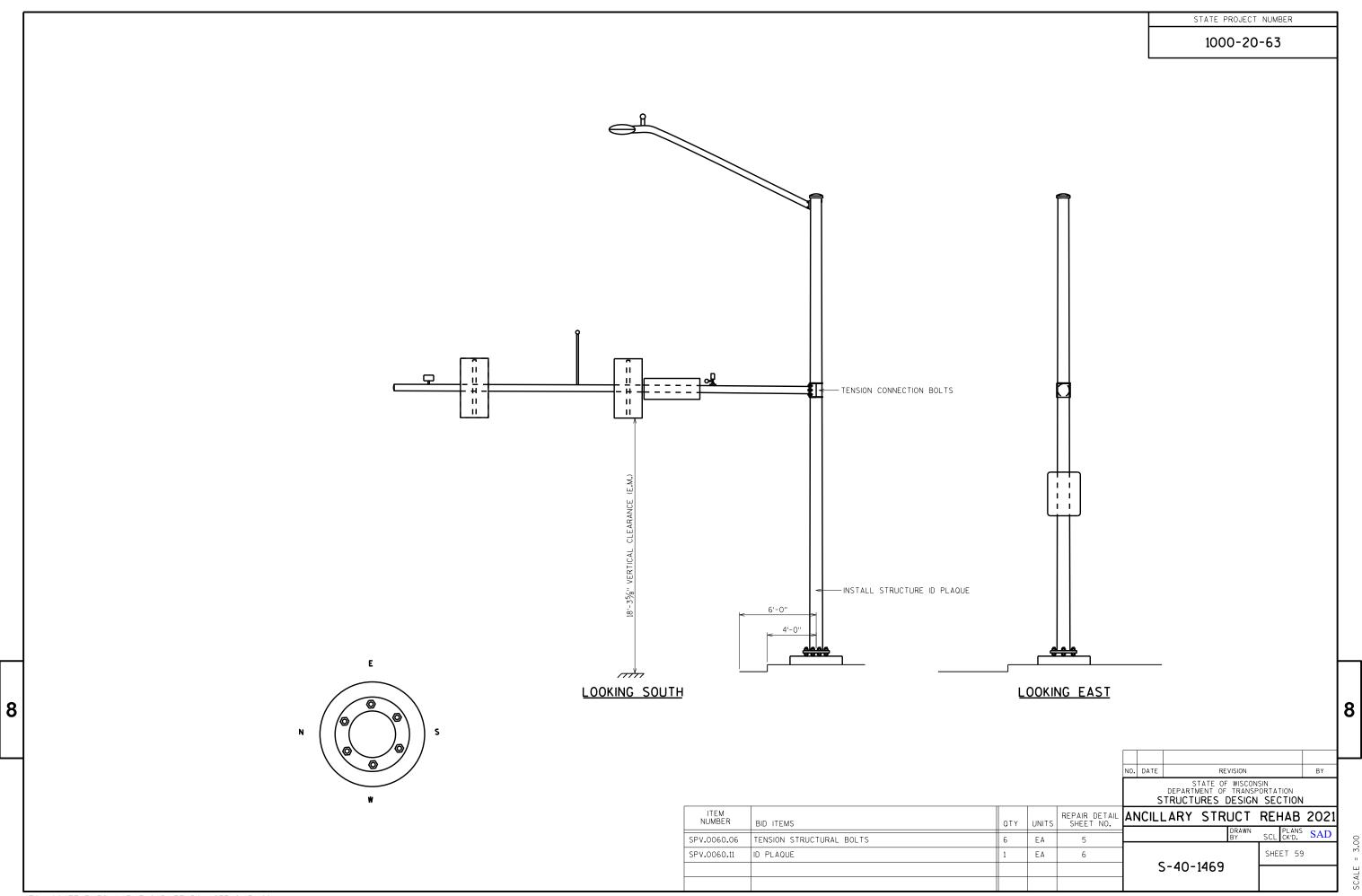


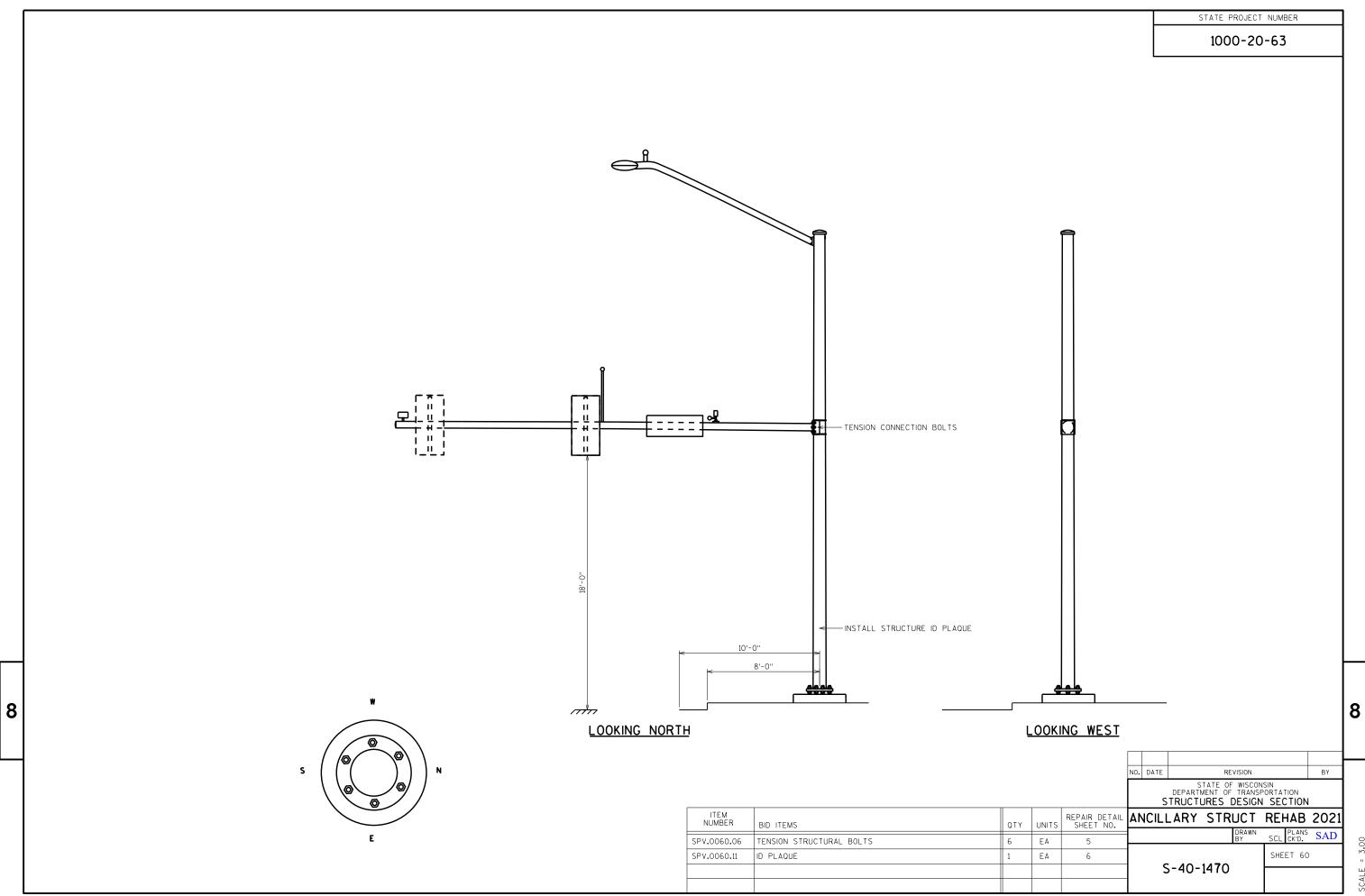


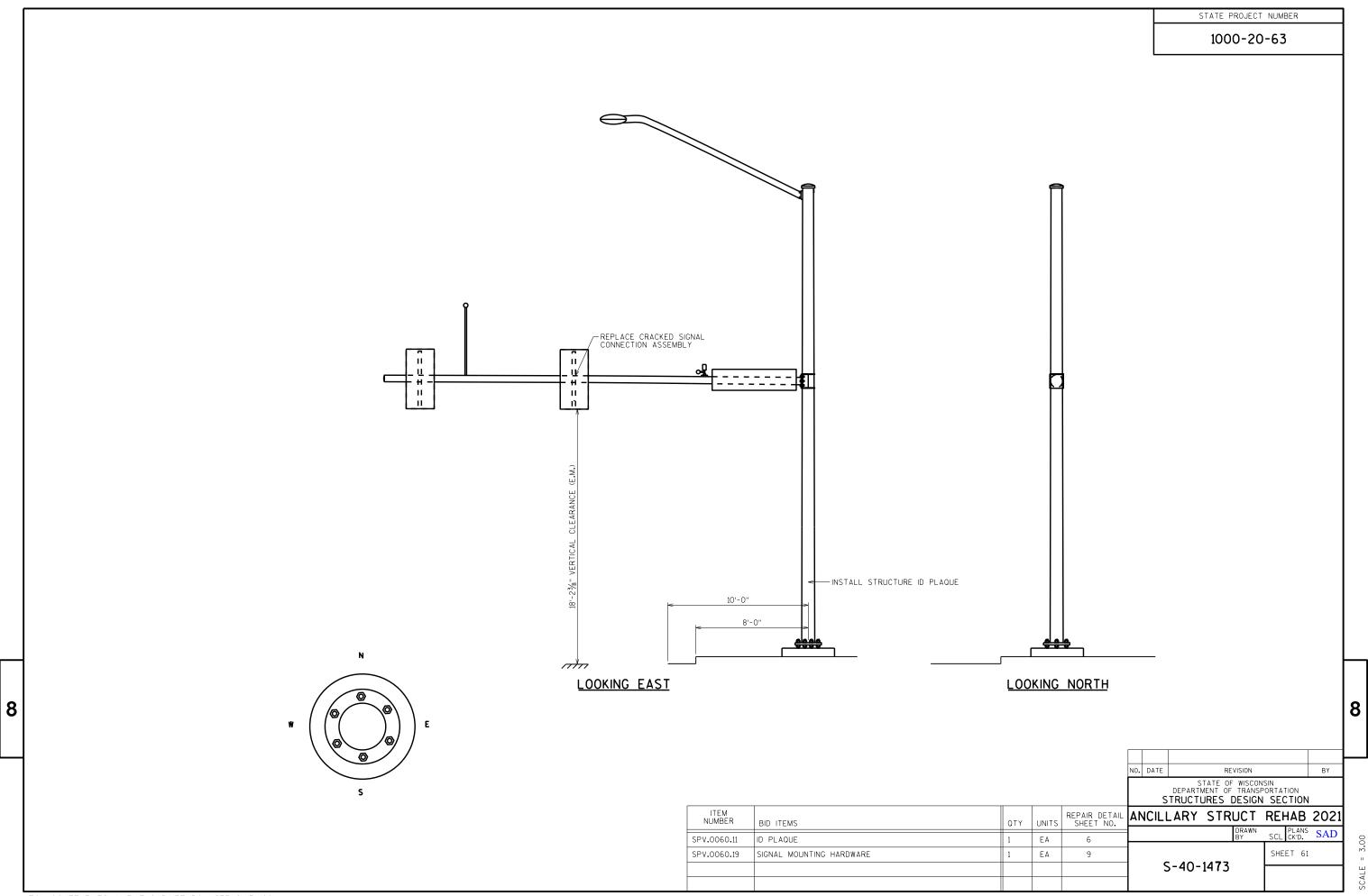




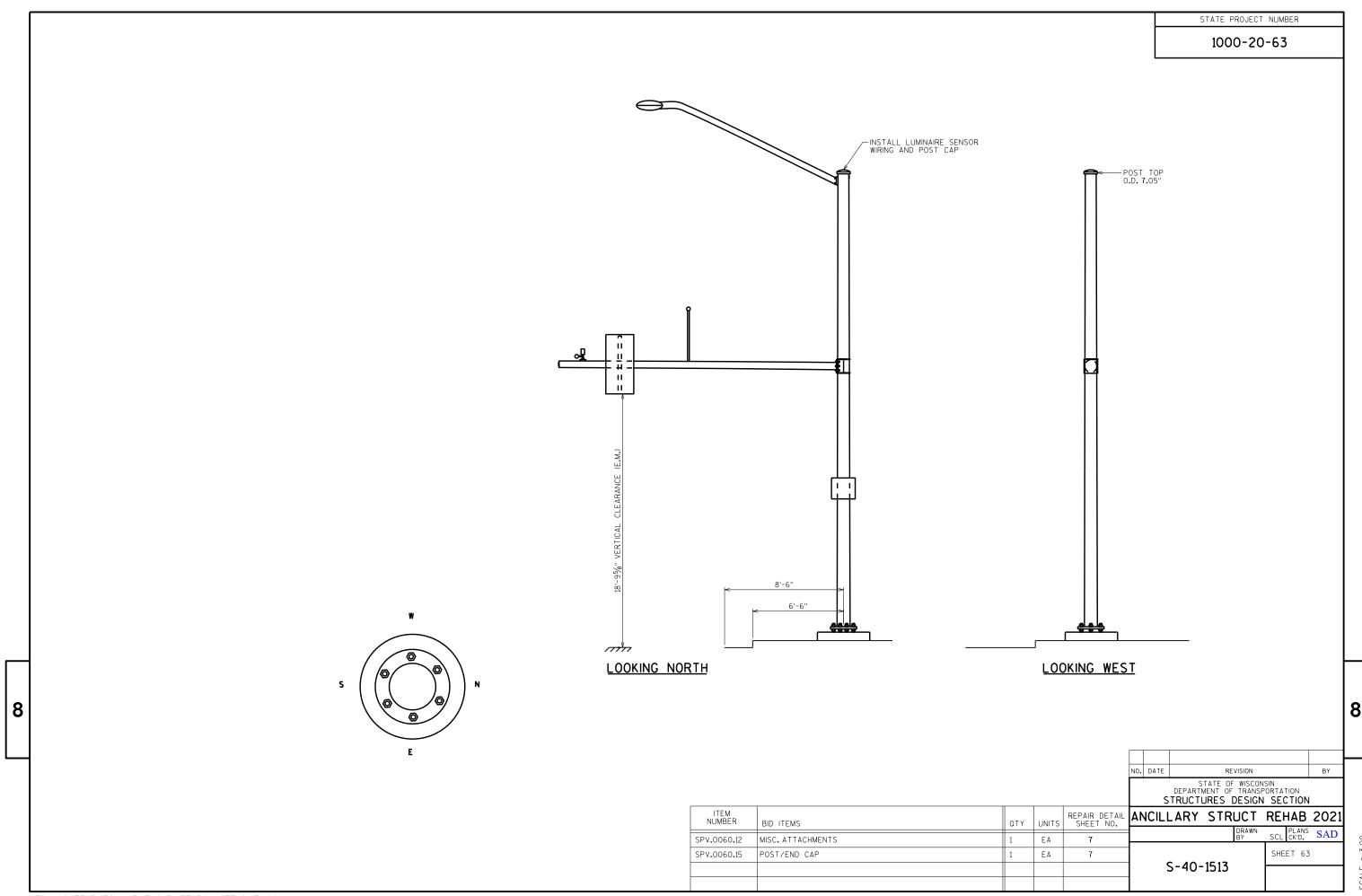


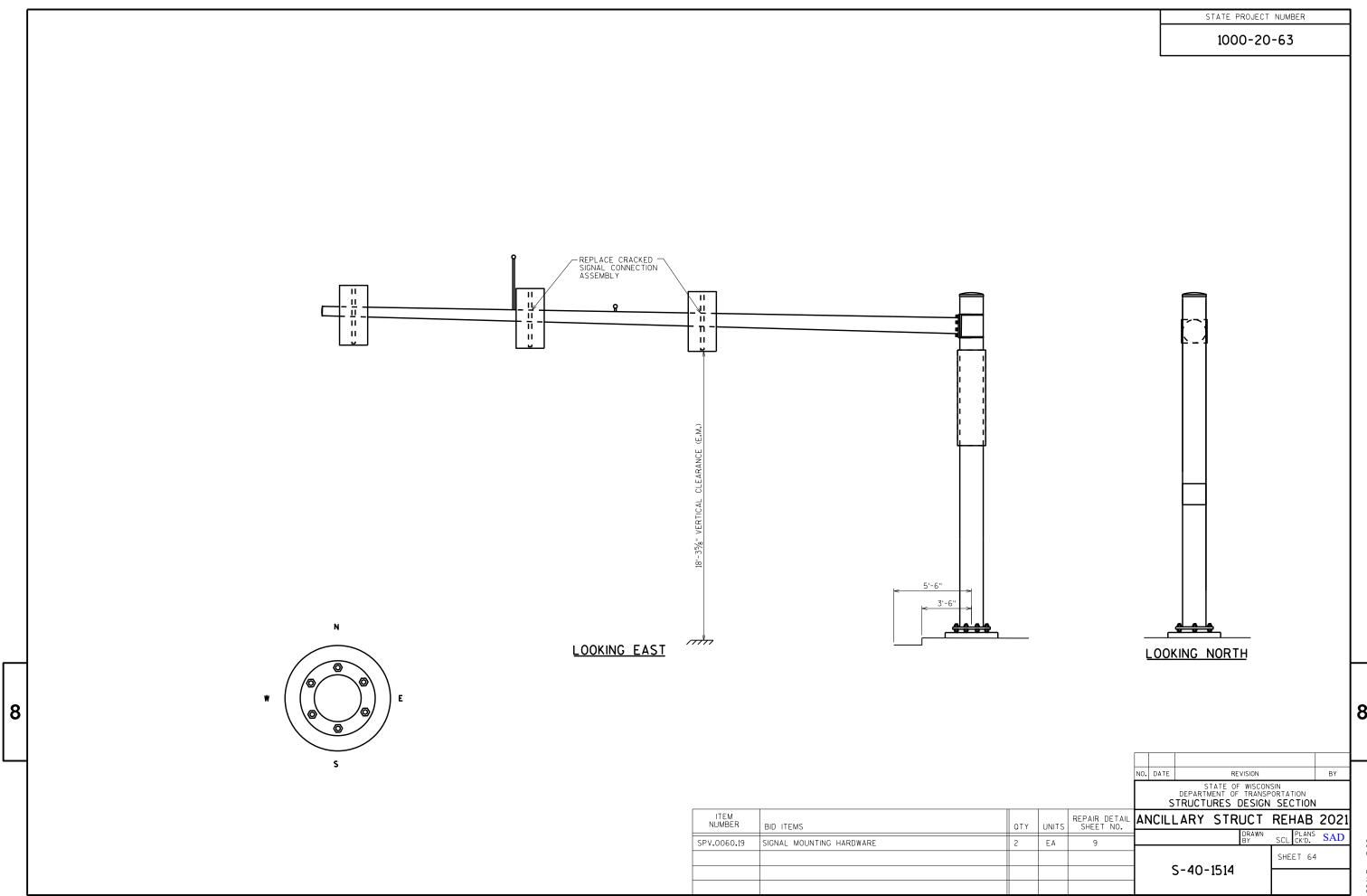


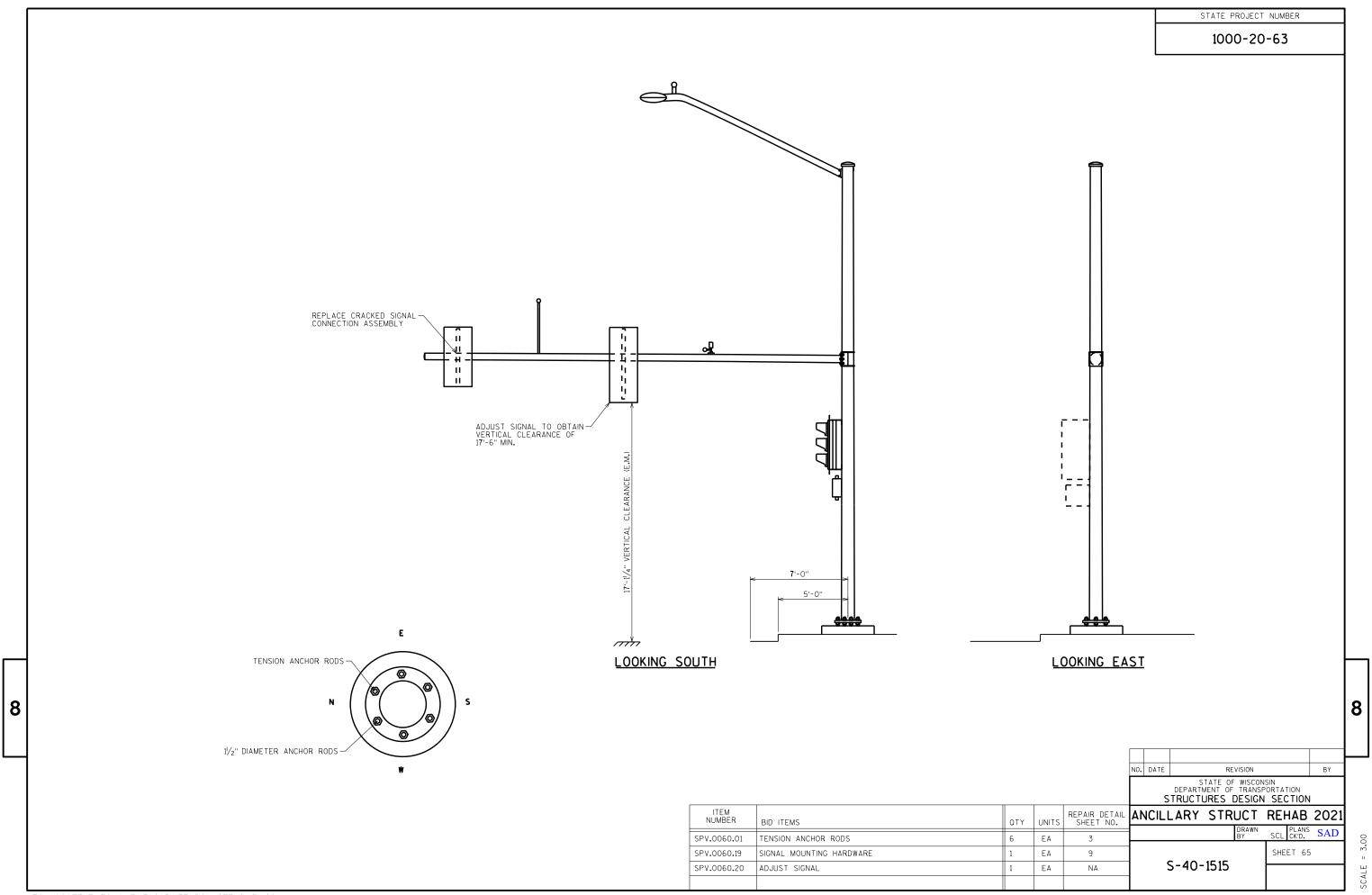


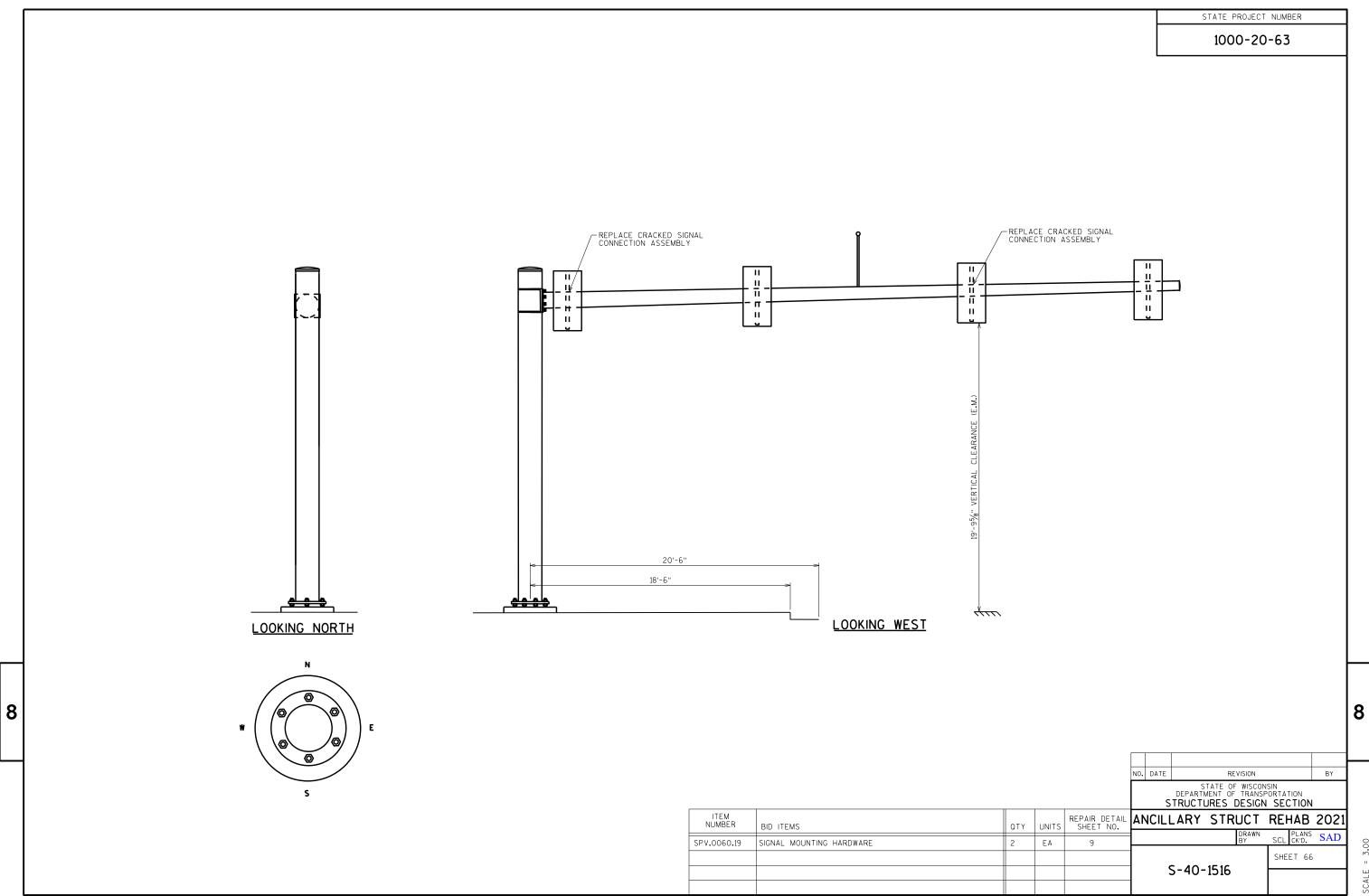


STATE PROJECT NUMBER 1000-20-63 REPLACE CRACKED SIGNAL TO CONNECTION ASSEMBLY 5'-6" 8 8 8 8 _&_&_&_ utu LOOKING NORTH LOOKING EAST TENSION ANCHOR RODS -8 1/2" DIAMETER ANCHOR RODS--INSTALL RODENT SCREEN NO. DATE BY REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION OTY UNITS REPAIR DETAIL ANCILLARY STRUCT REHAB 2021 ITEM NUMBER BID ITEMS DRAWN BY SCL PLANS SAD SPV.0060.01 TENSION ANCHOR RODS EΑ SHEET 62 SPV.0060.03 RODENT SCREEN EΑ 3 S-40-1511 SPV.0060.19 SIGNAL MOUNTING HARDWARE EΑ 9

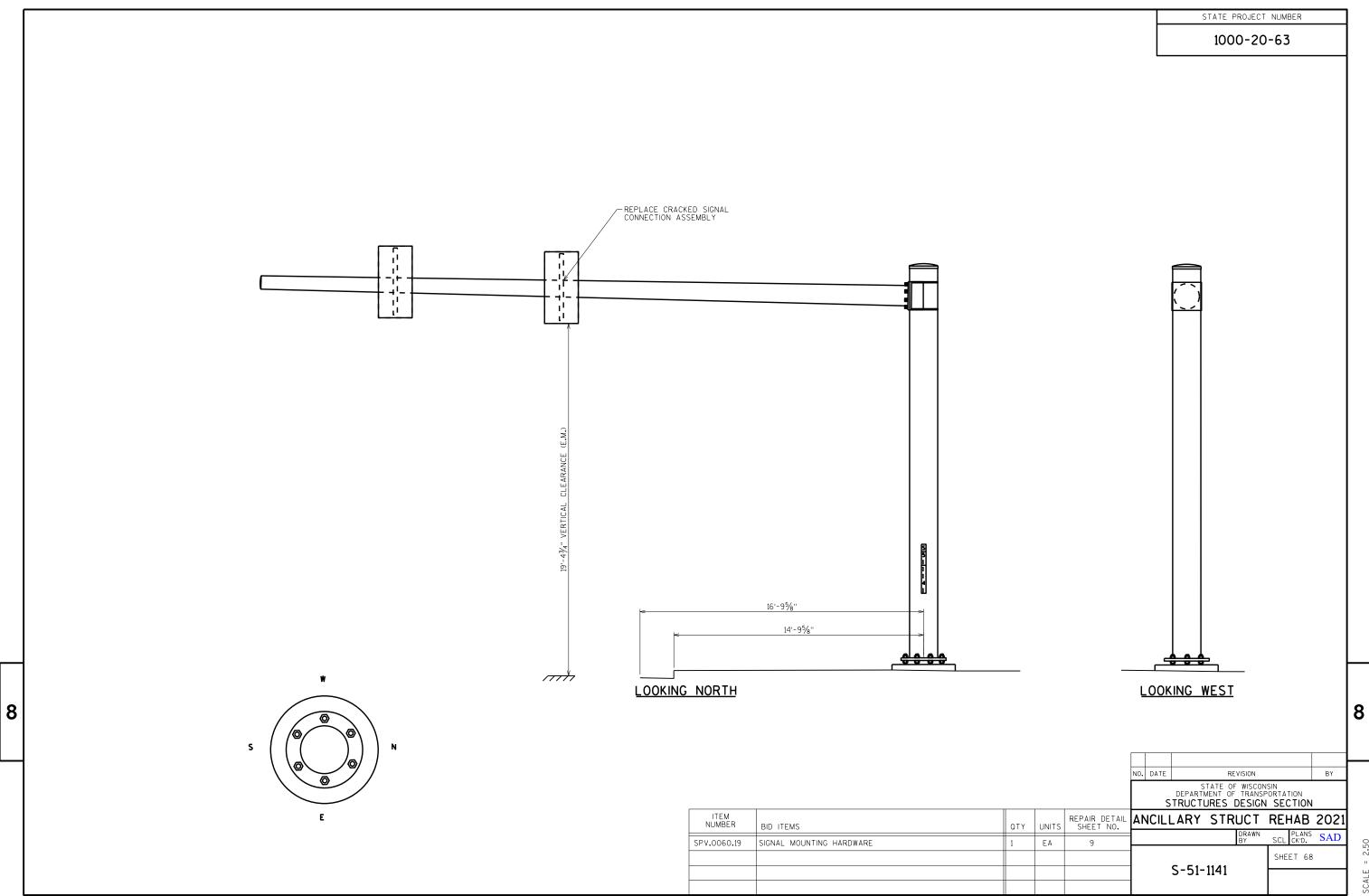


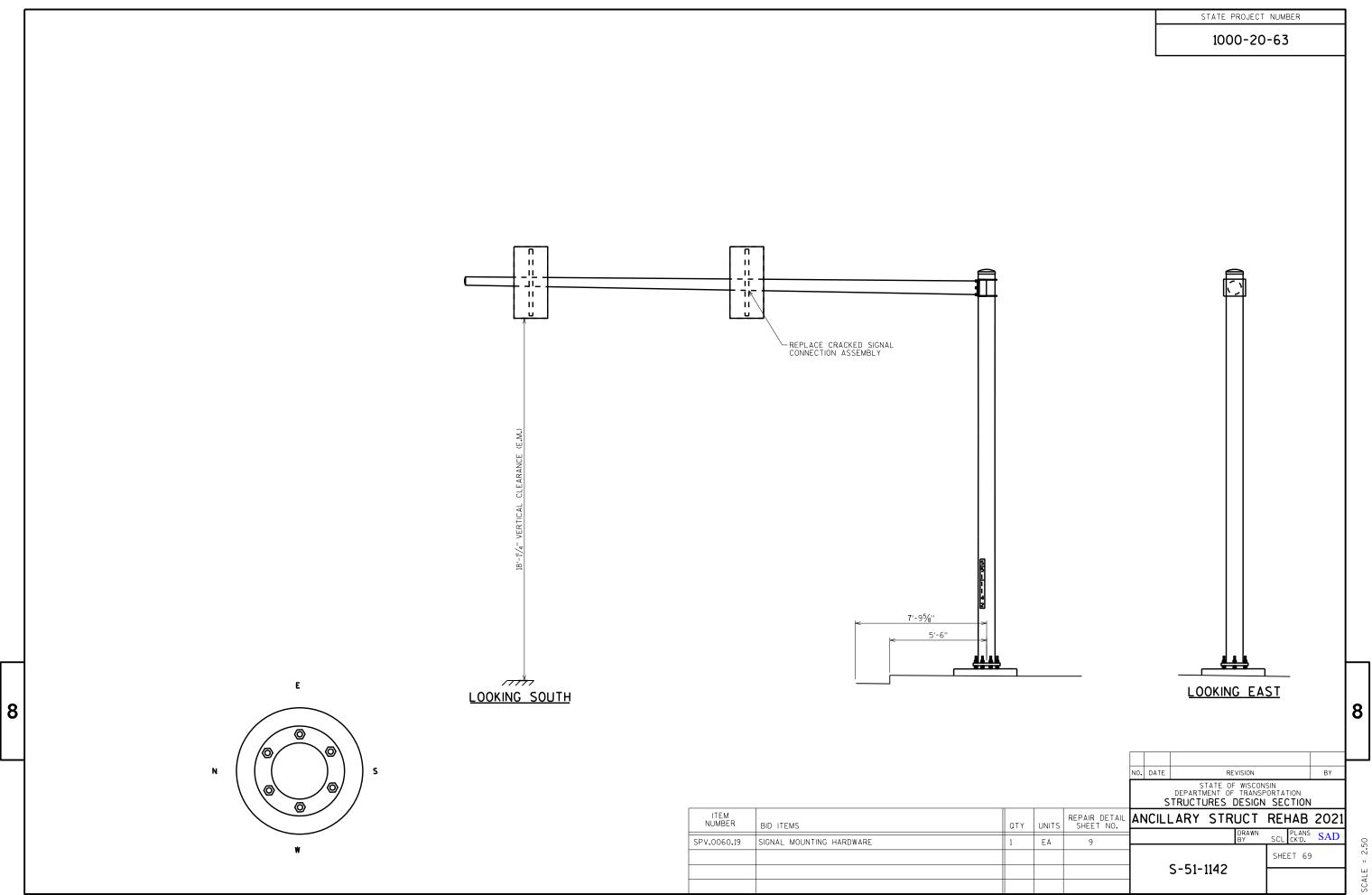


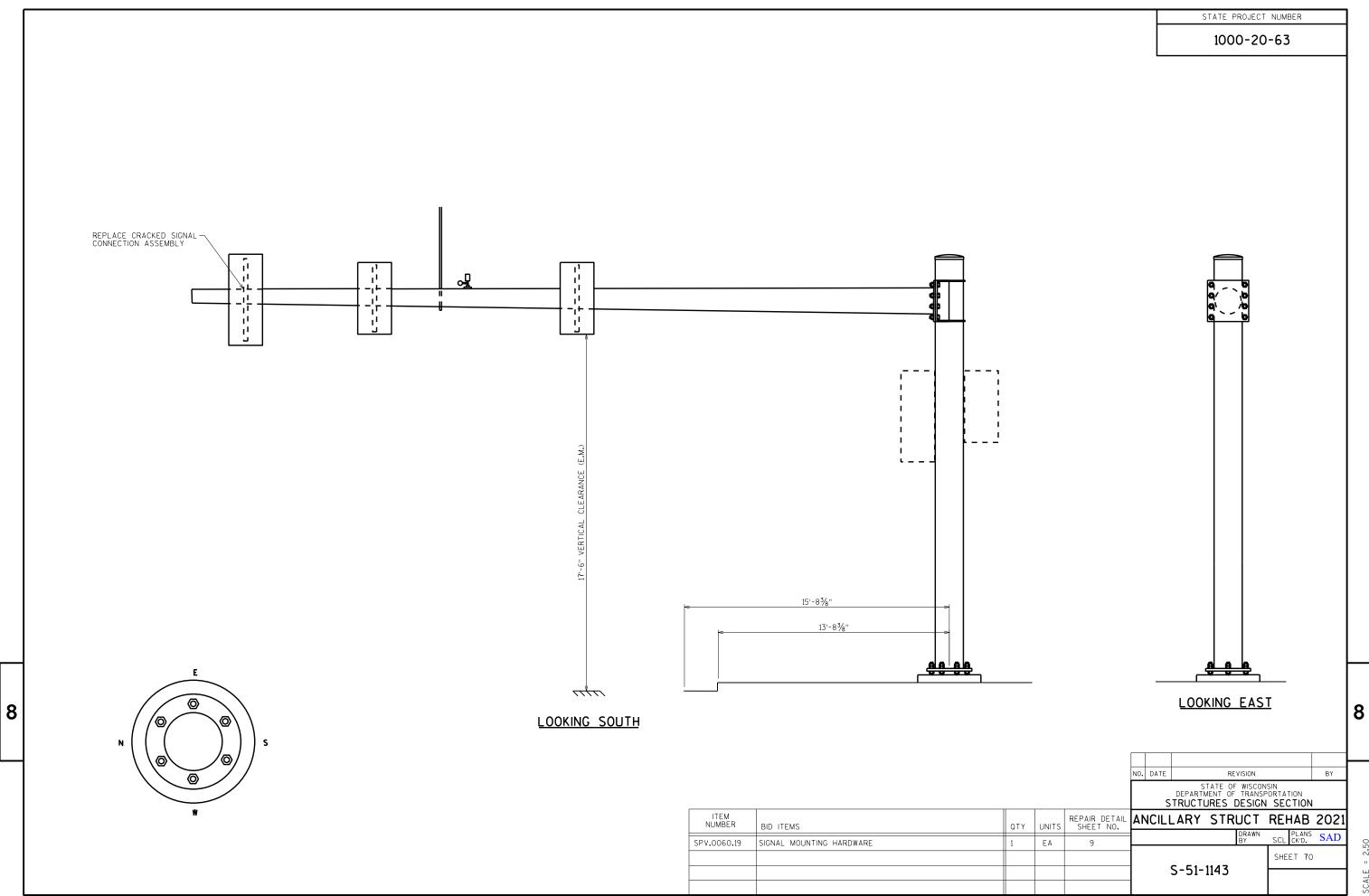


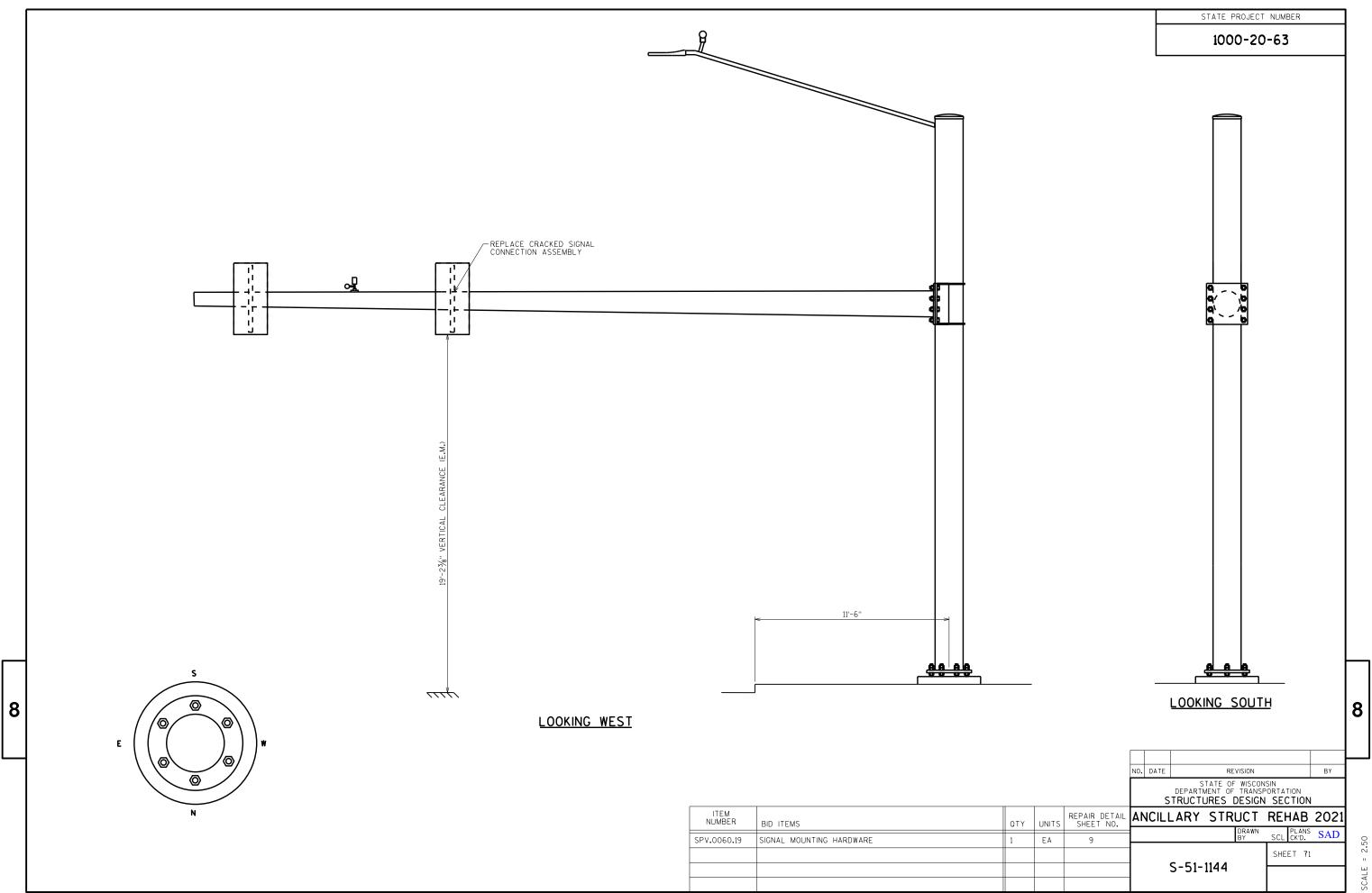


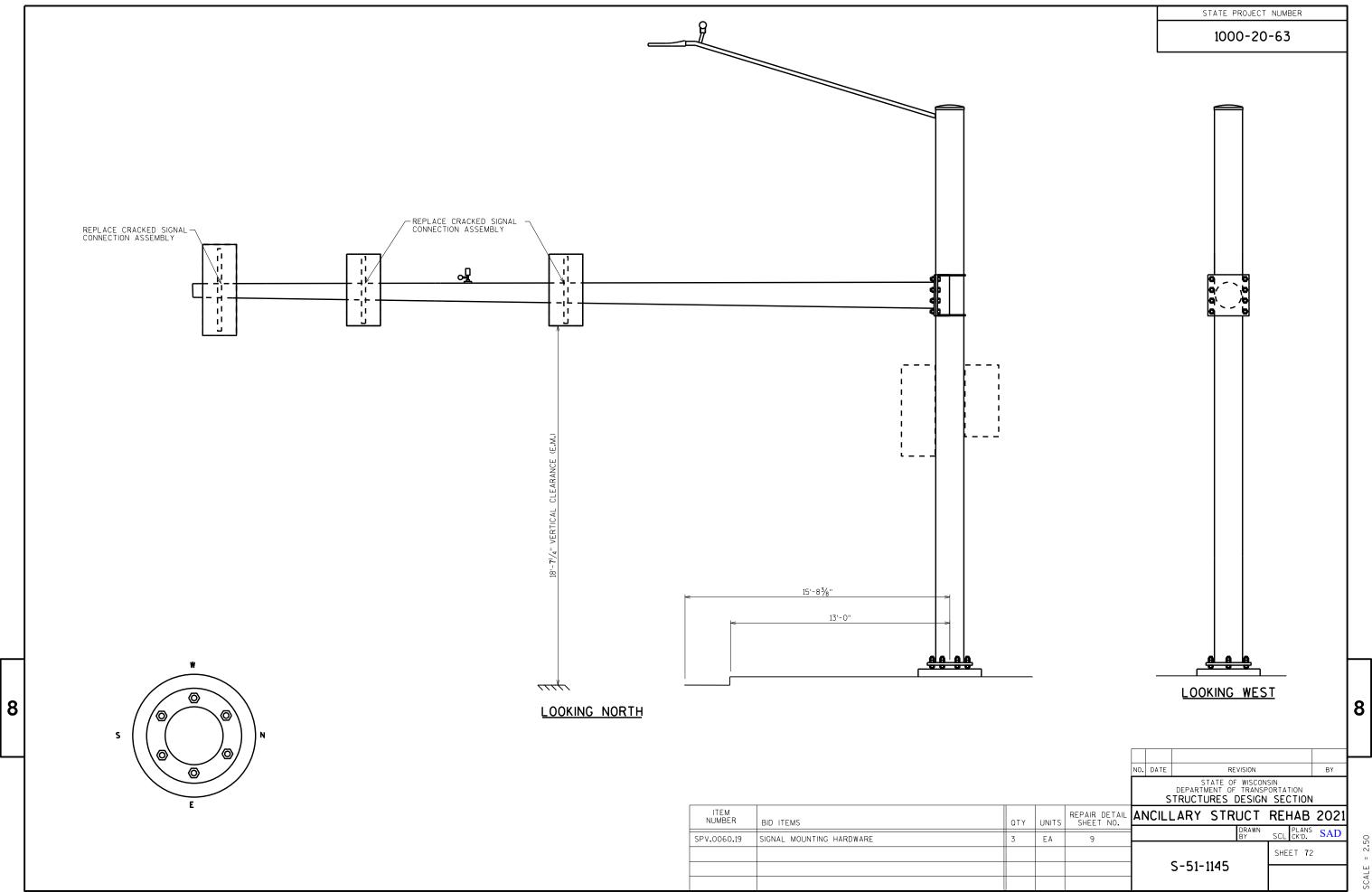
STATE PROJECT NUMBER 1000-20-63 NSTALL I-BEAMS AND U-BOLTS PER SIGN PLATE MANUAL A4-**7**B - INSTALL I-BEAMS AND U-BOLTS PER SIGN PLATE MANUAL A4-7B CHORD O.D. TAPERS - 8" TO 4.5", TYP. 8'-0" m LOOKING SOUTH LOOKING NORTH LOOKING EAST 8 NO. DATE BY REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION - CLEAR NESTING DEBRIS REPAIR DETAIL ANCILLARY STRUCT REHAB 2021 ITEM NUMBER BID ITEMS QTY UNITS SCL PLANS SAD REMOVE DEBRIS EΑ NA SPV.0060.02 SOUTH FOUNDATION NORTH FOUNDATION SHEET 67 SPV.0060.08 VERTICAL SIGN SUPPORT 4 EΑ 6 S-45-0201

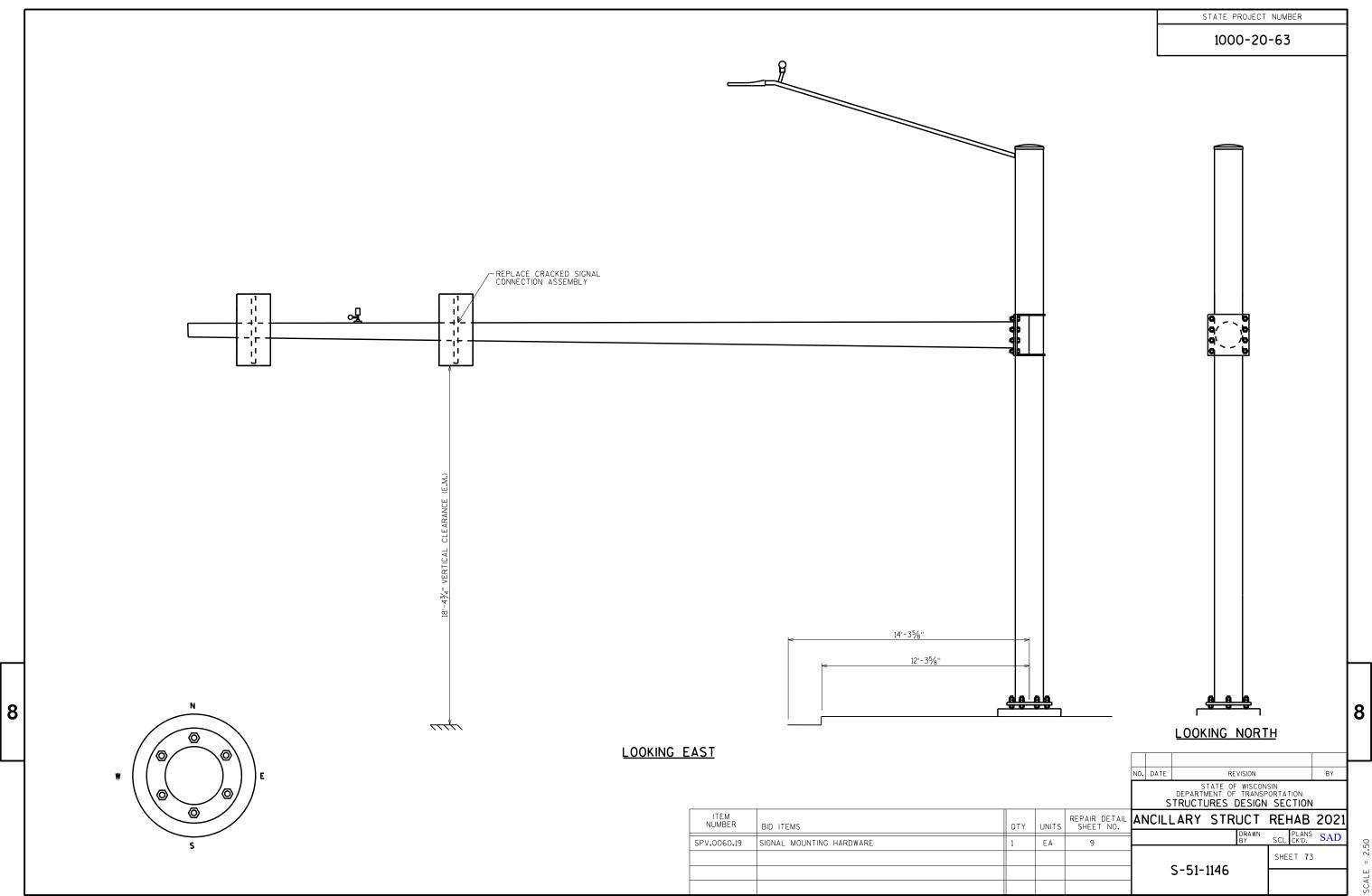


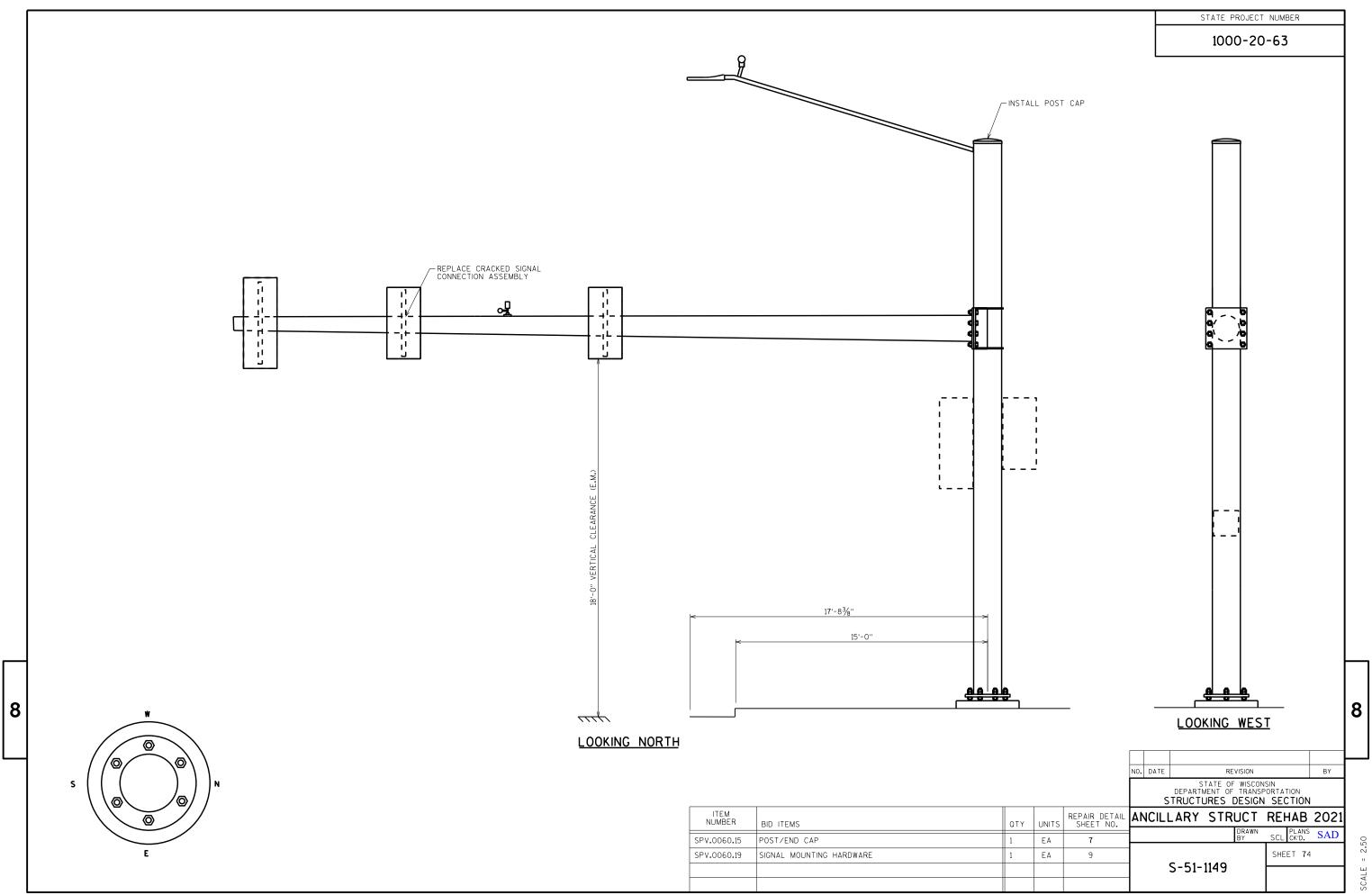


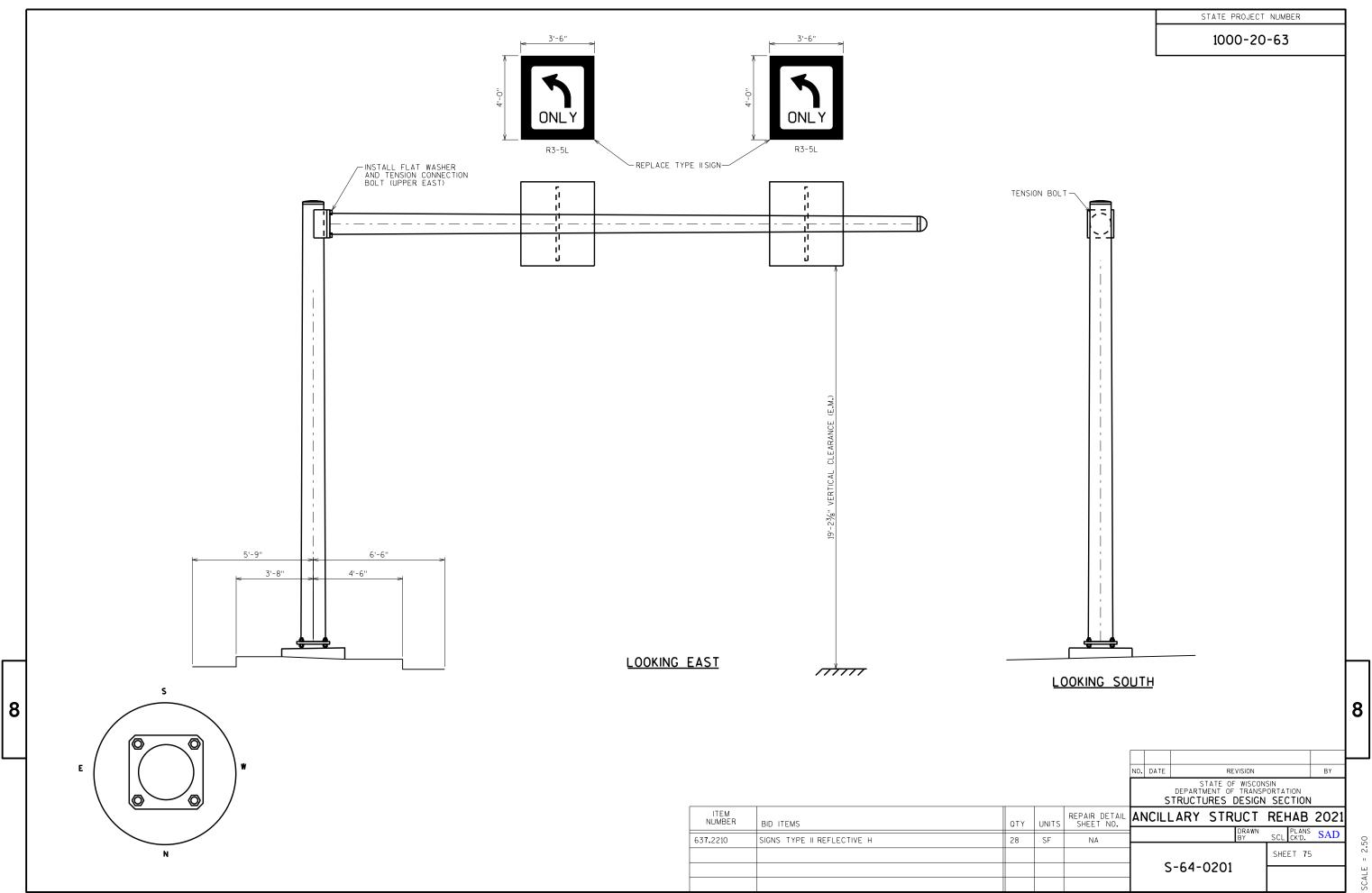


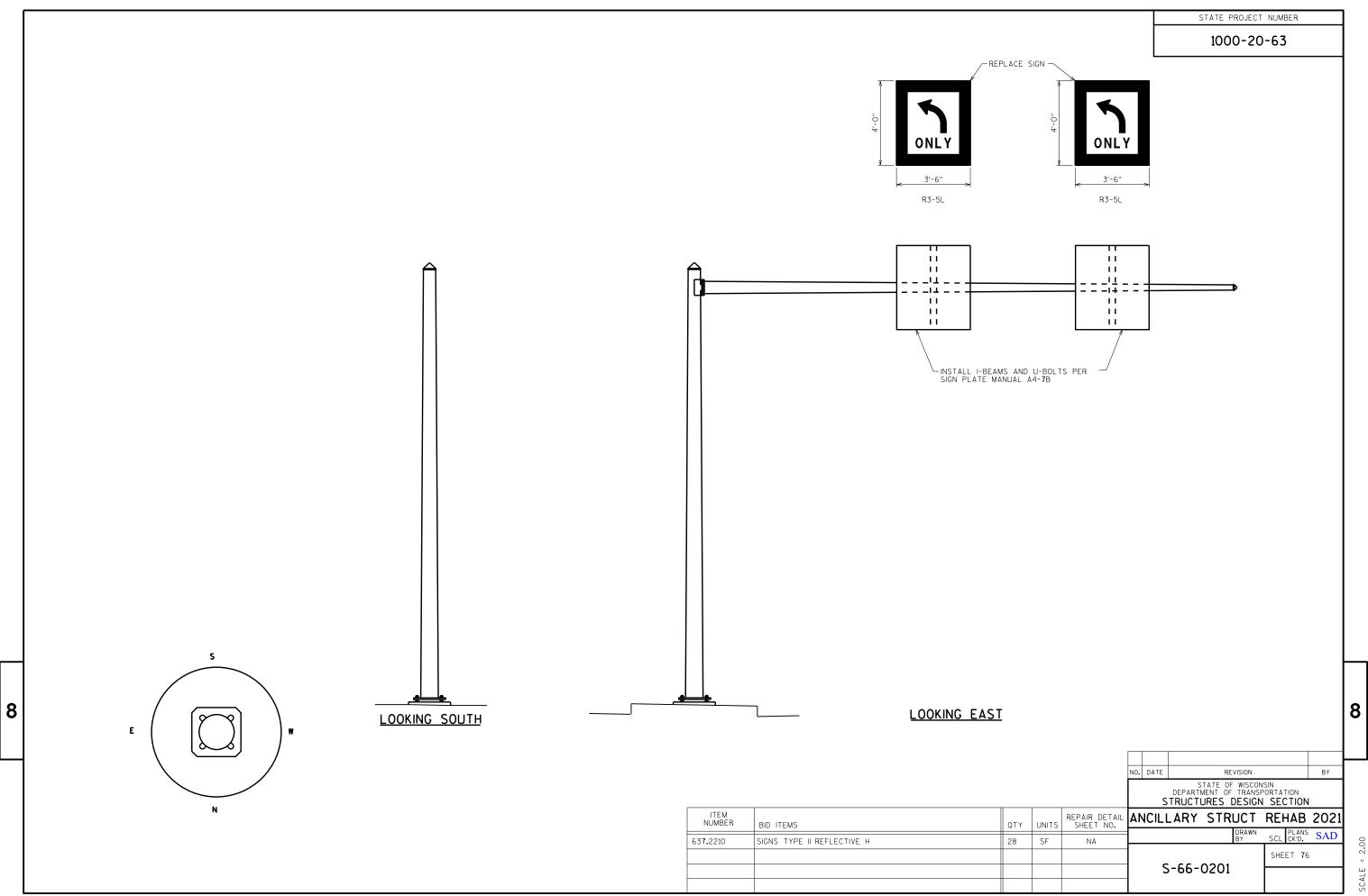


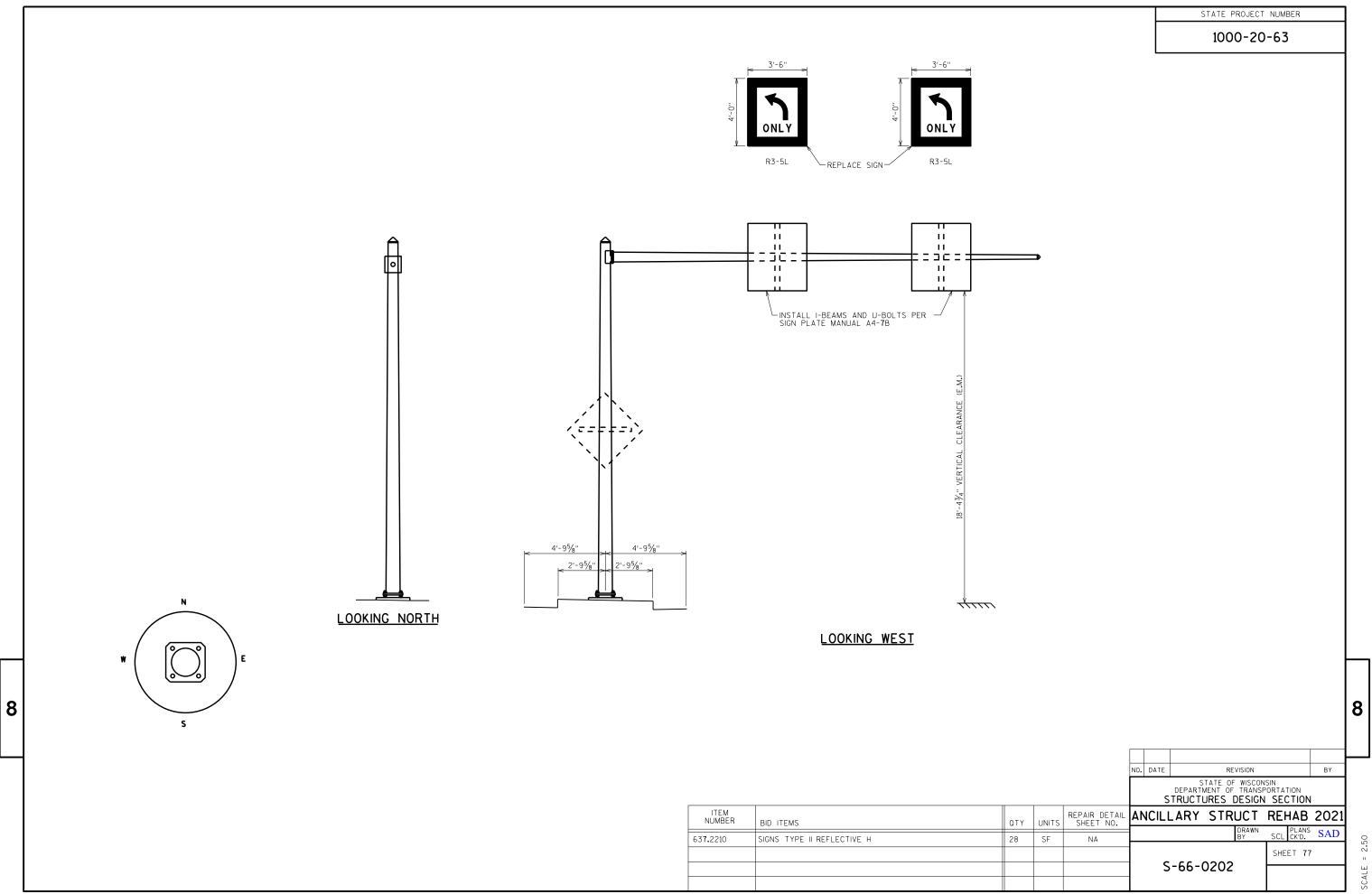


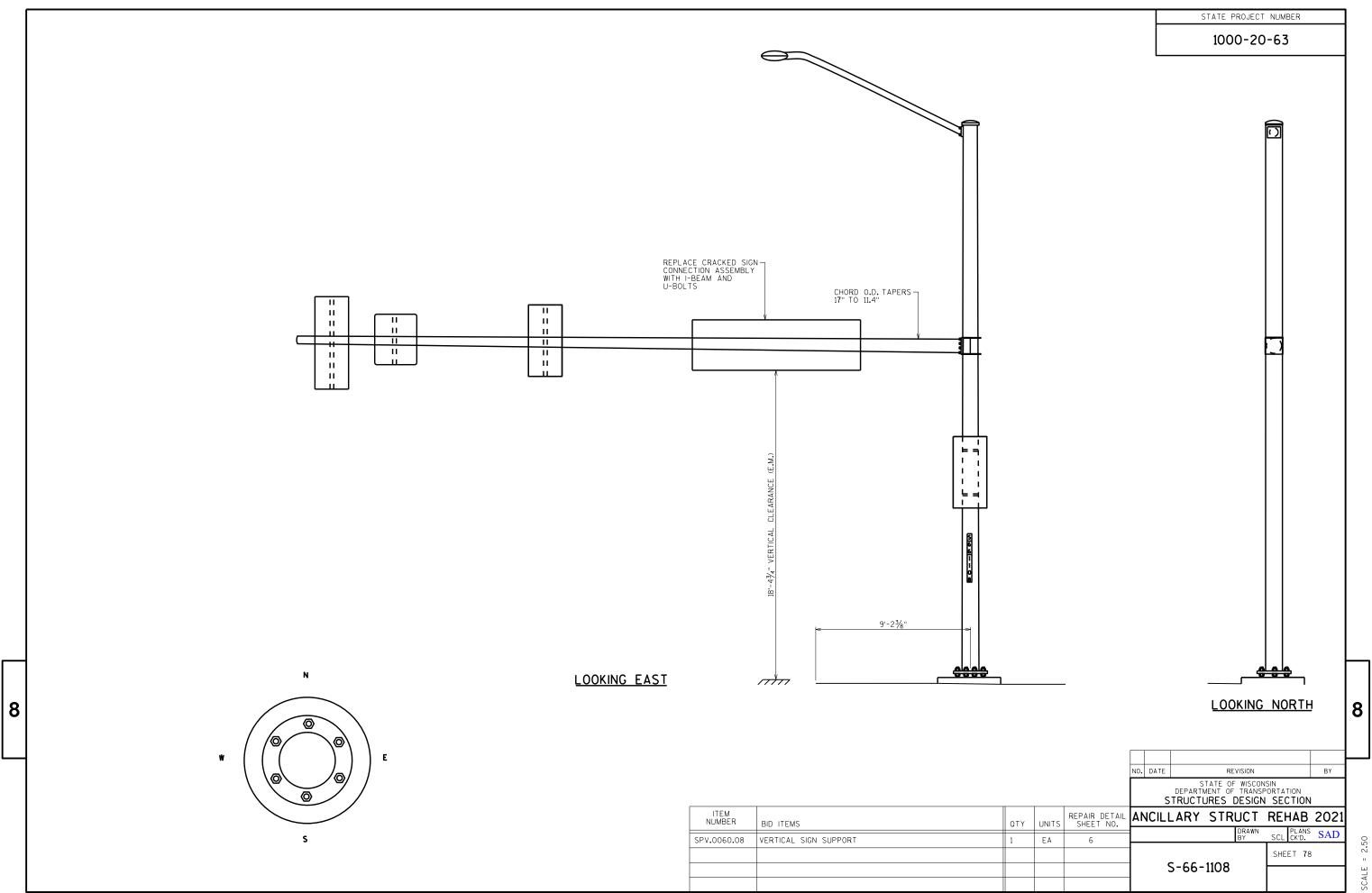


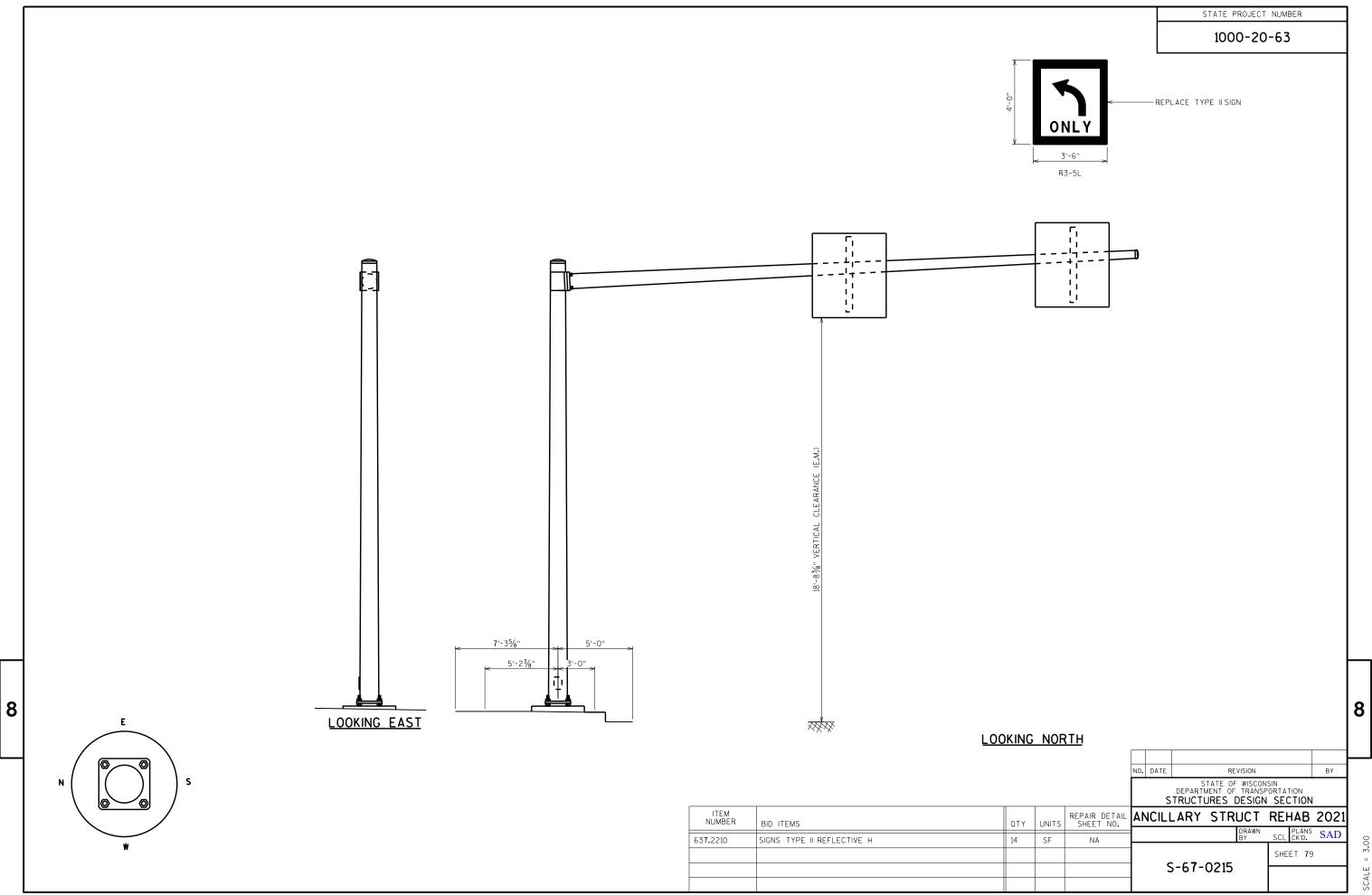


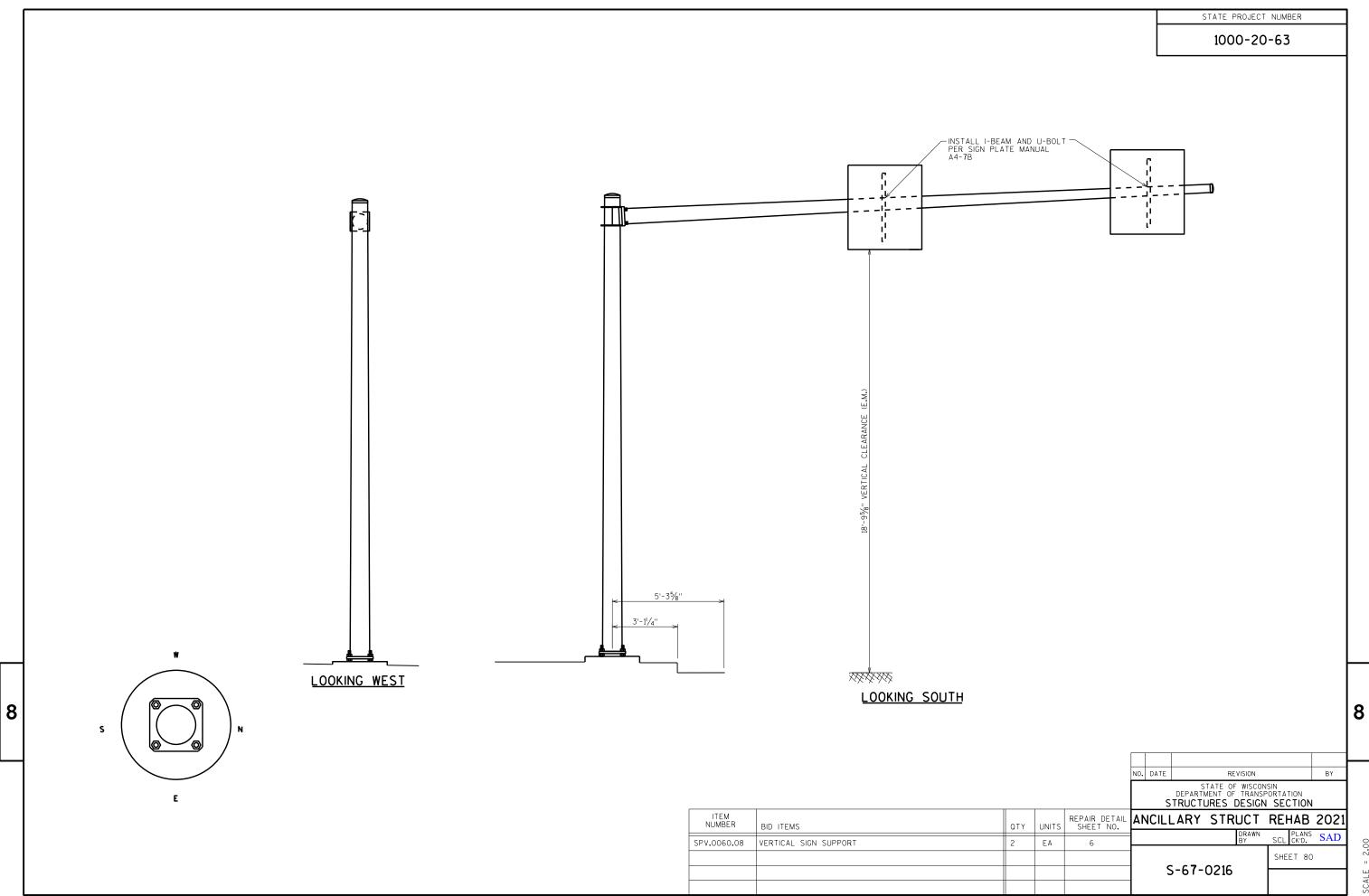


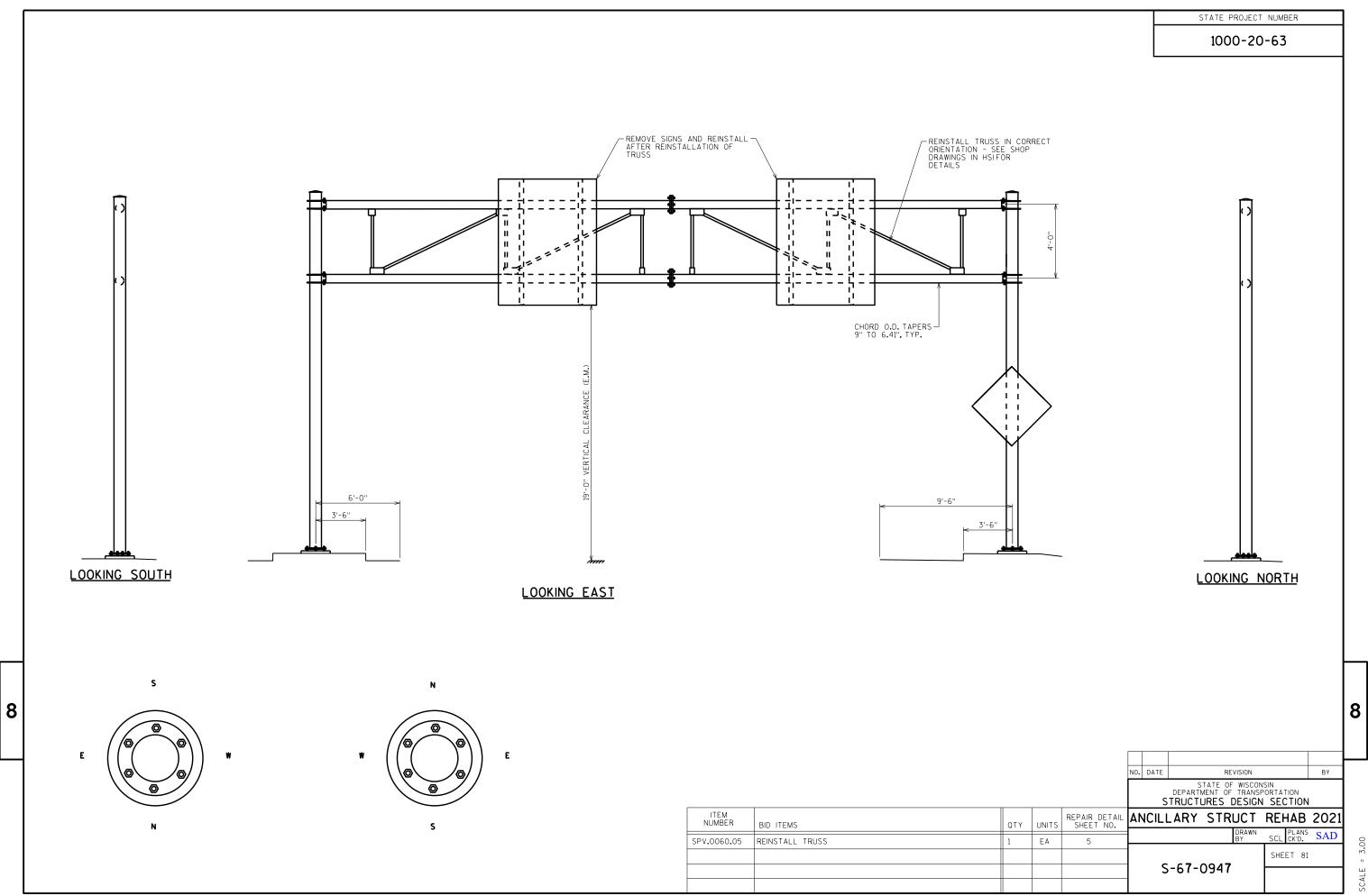


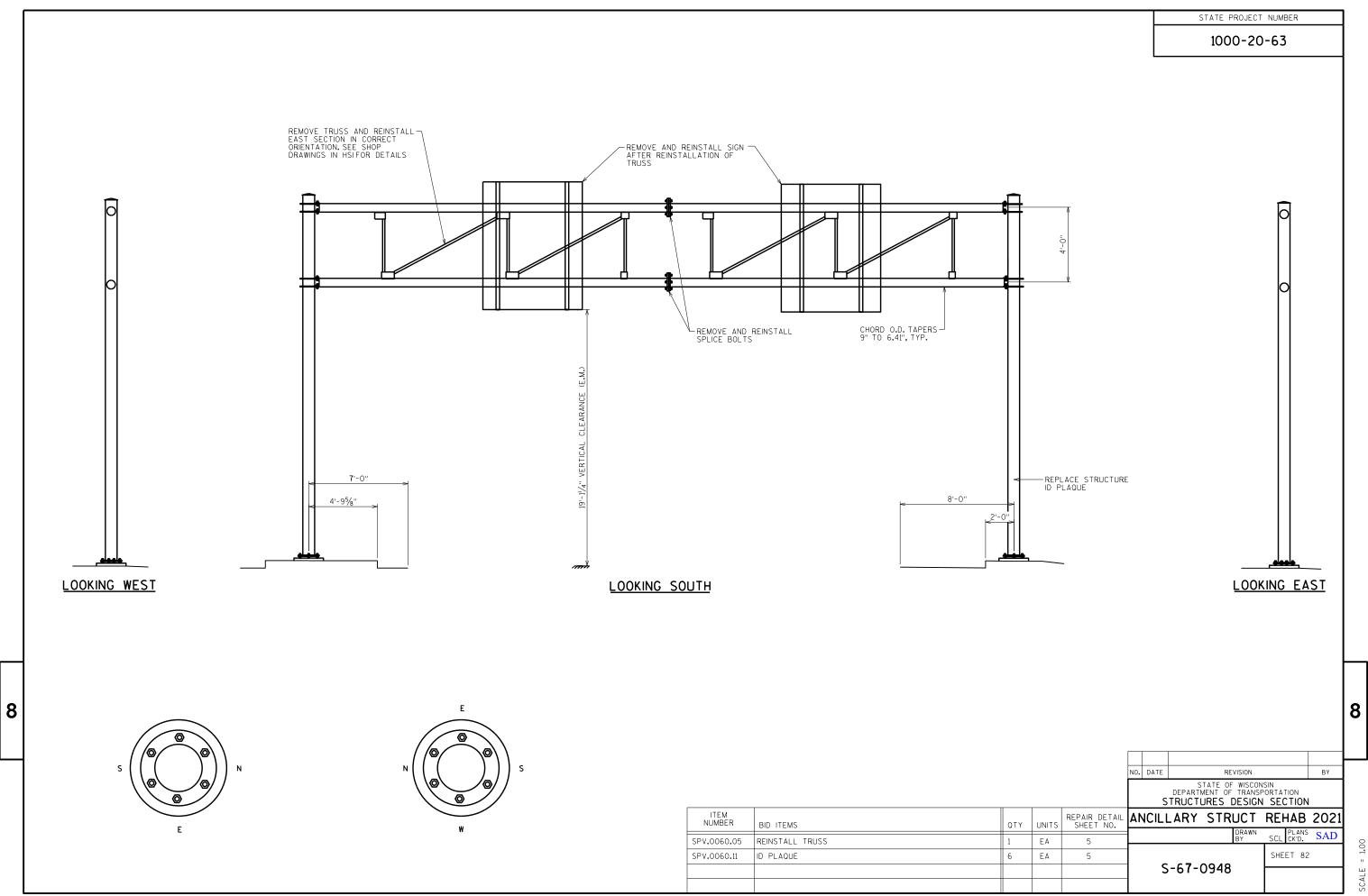


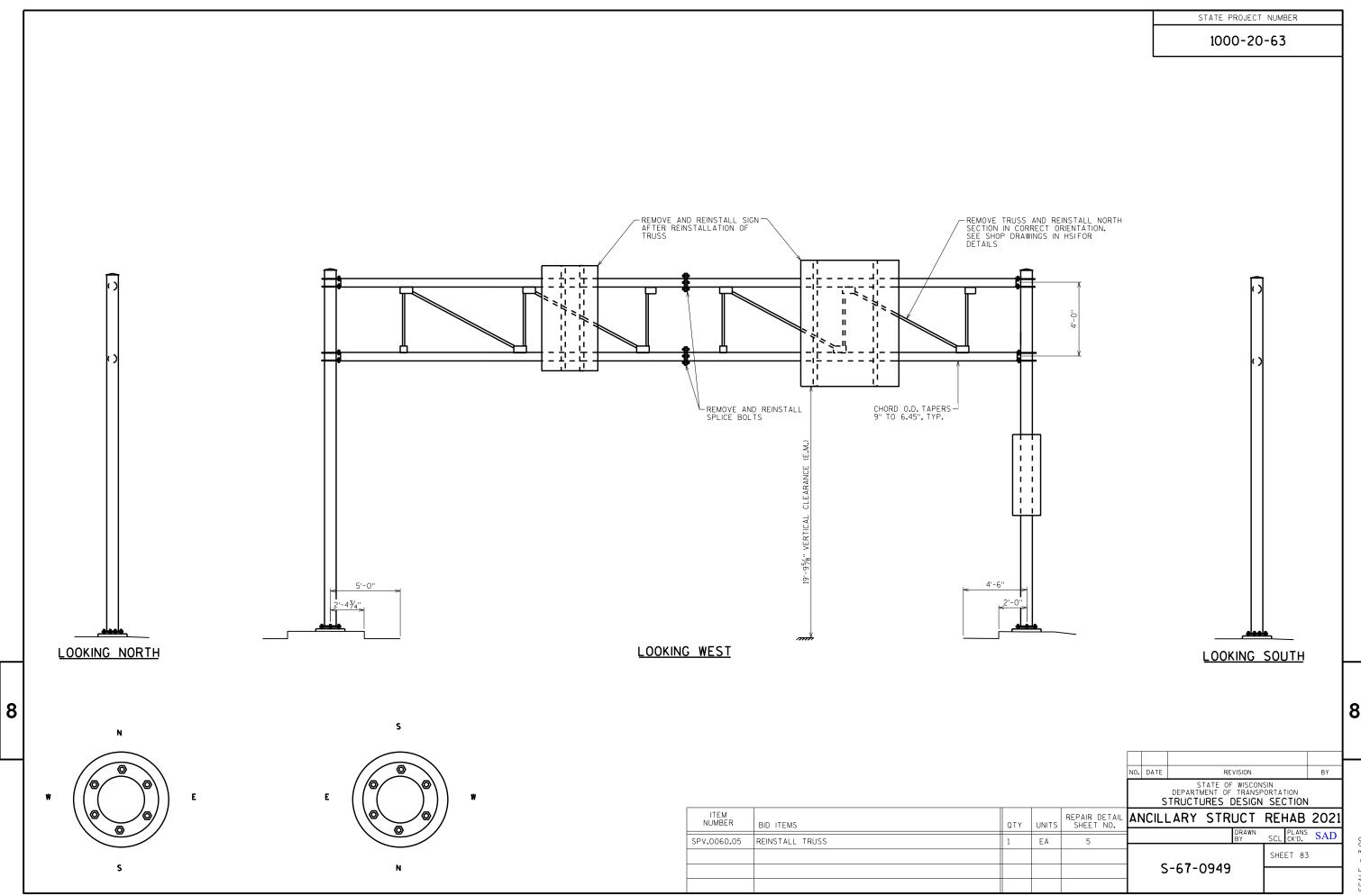


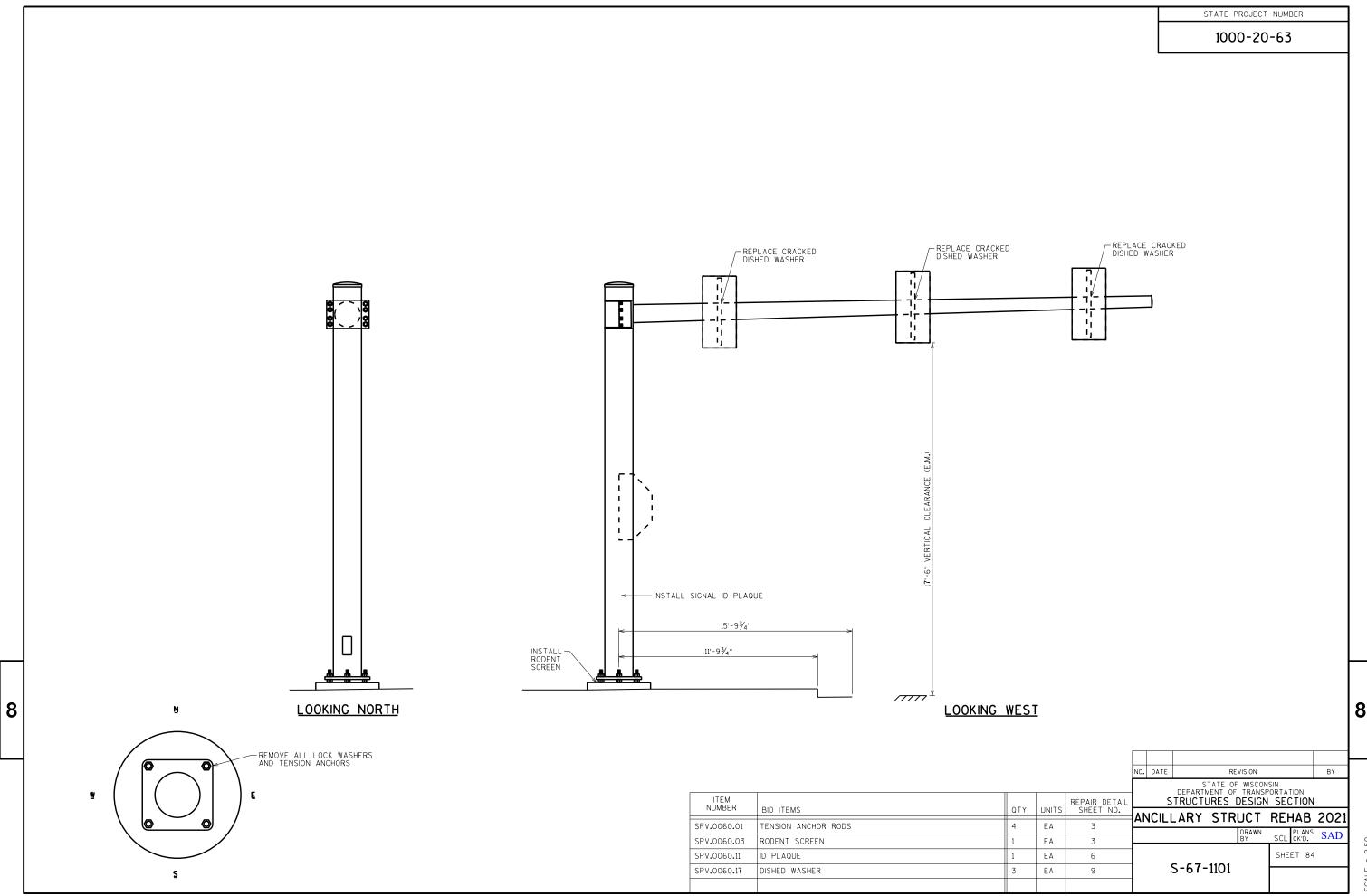


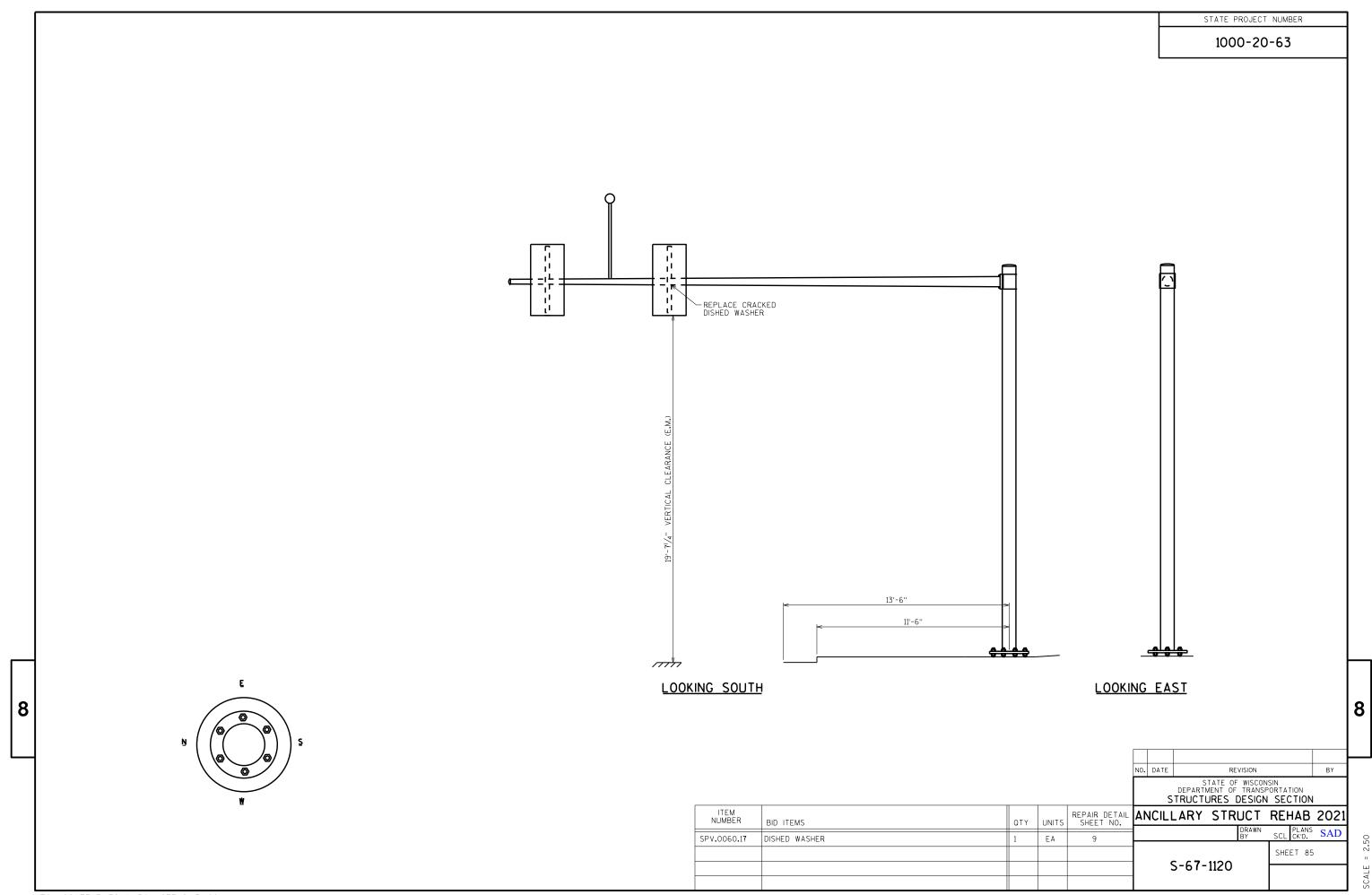


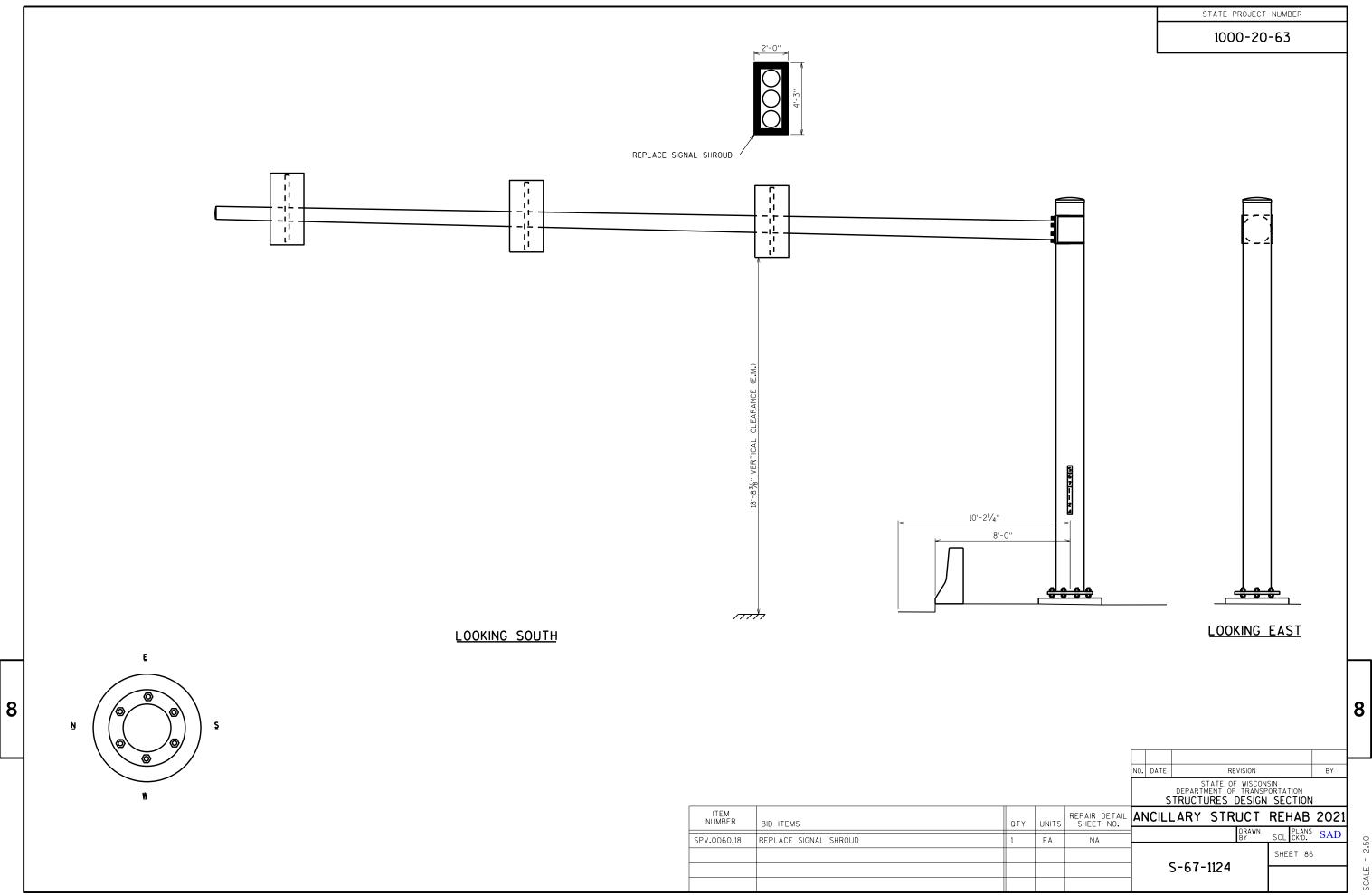


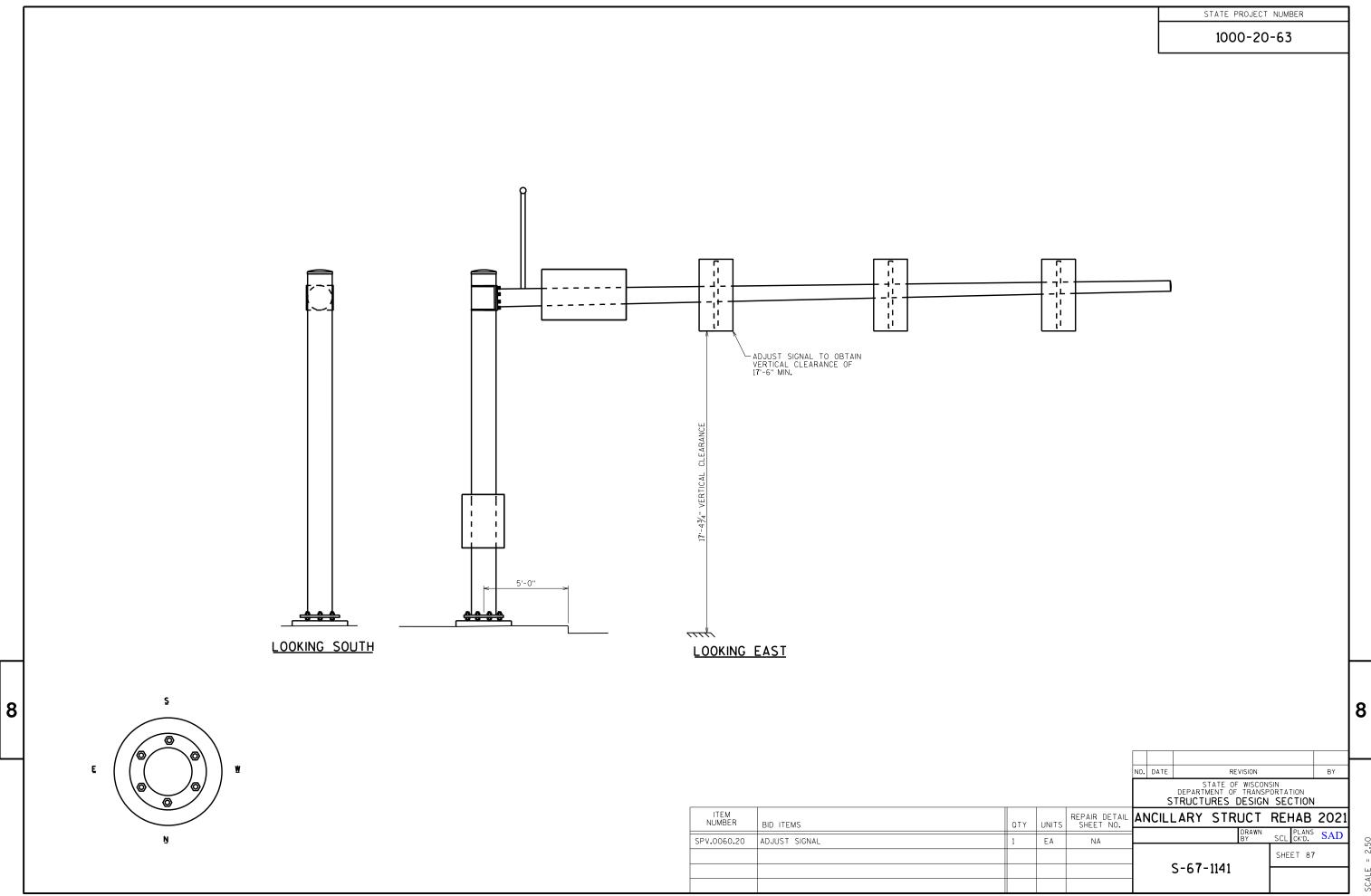


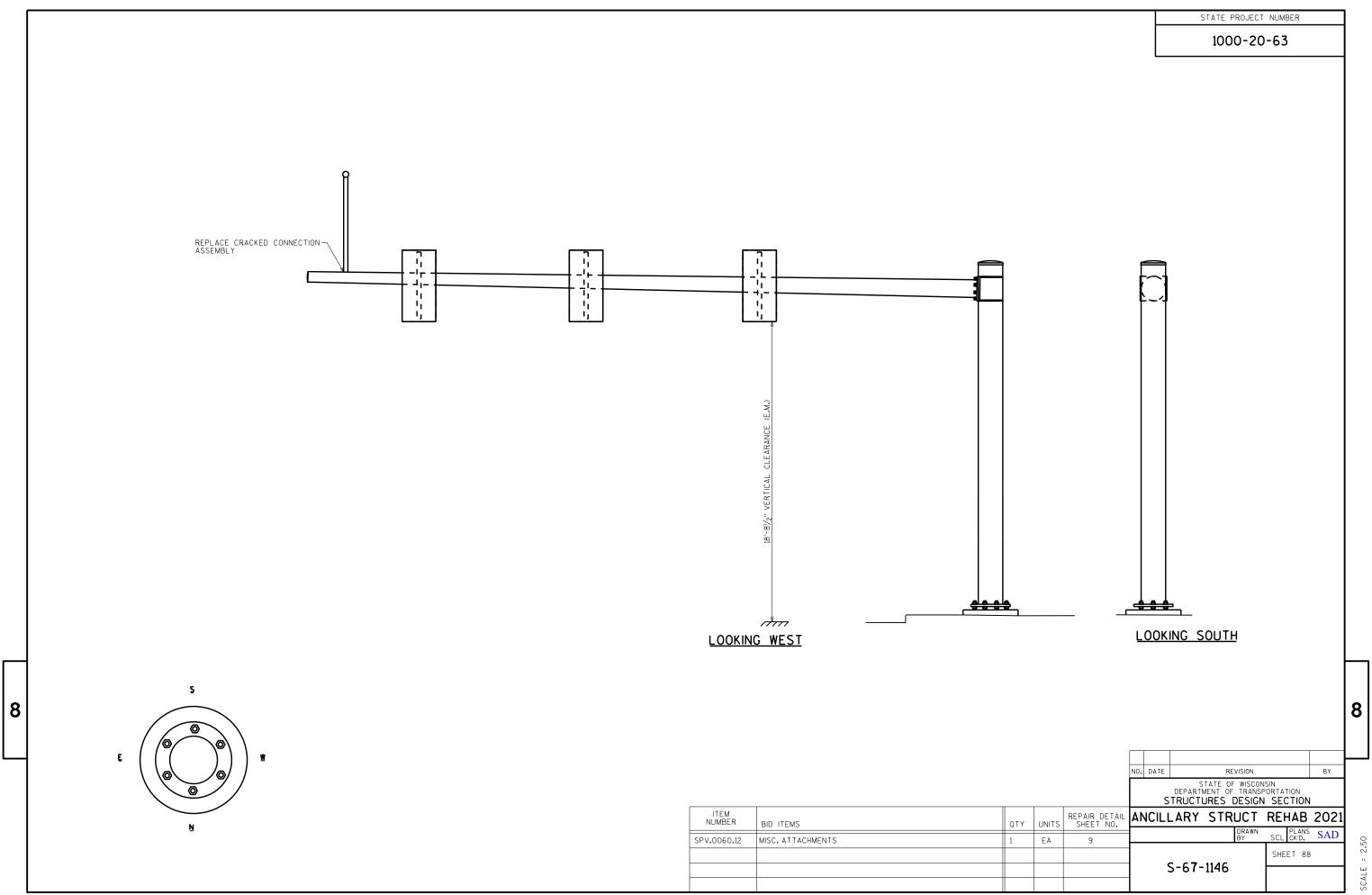


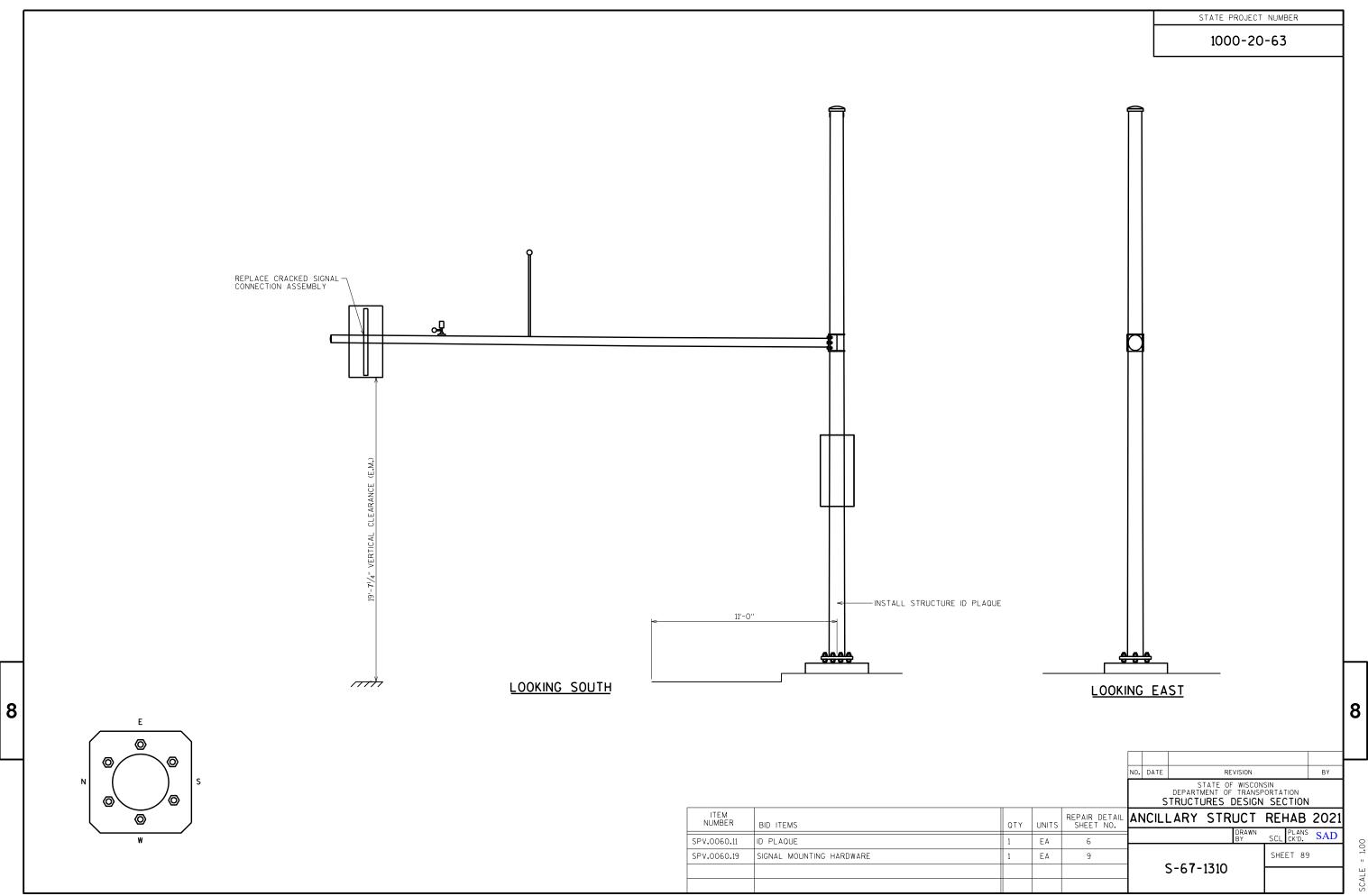


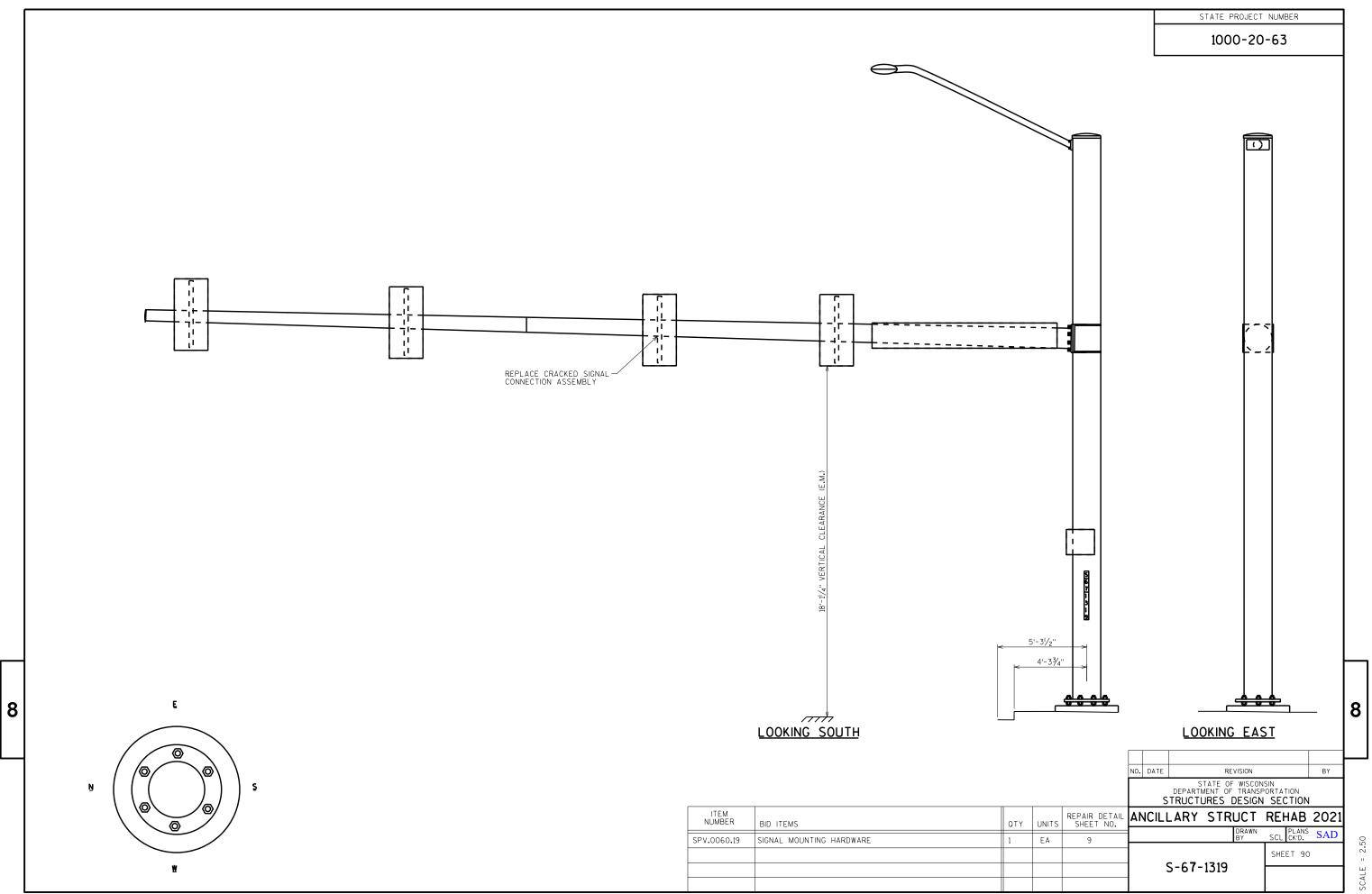


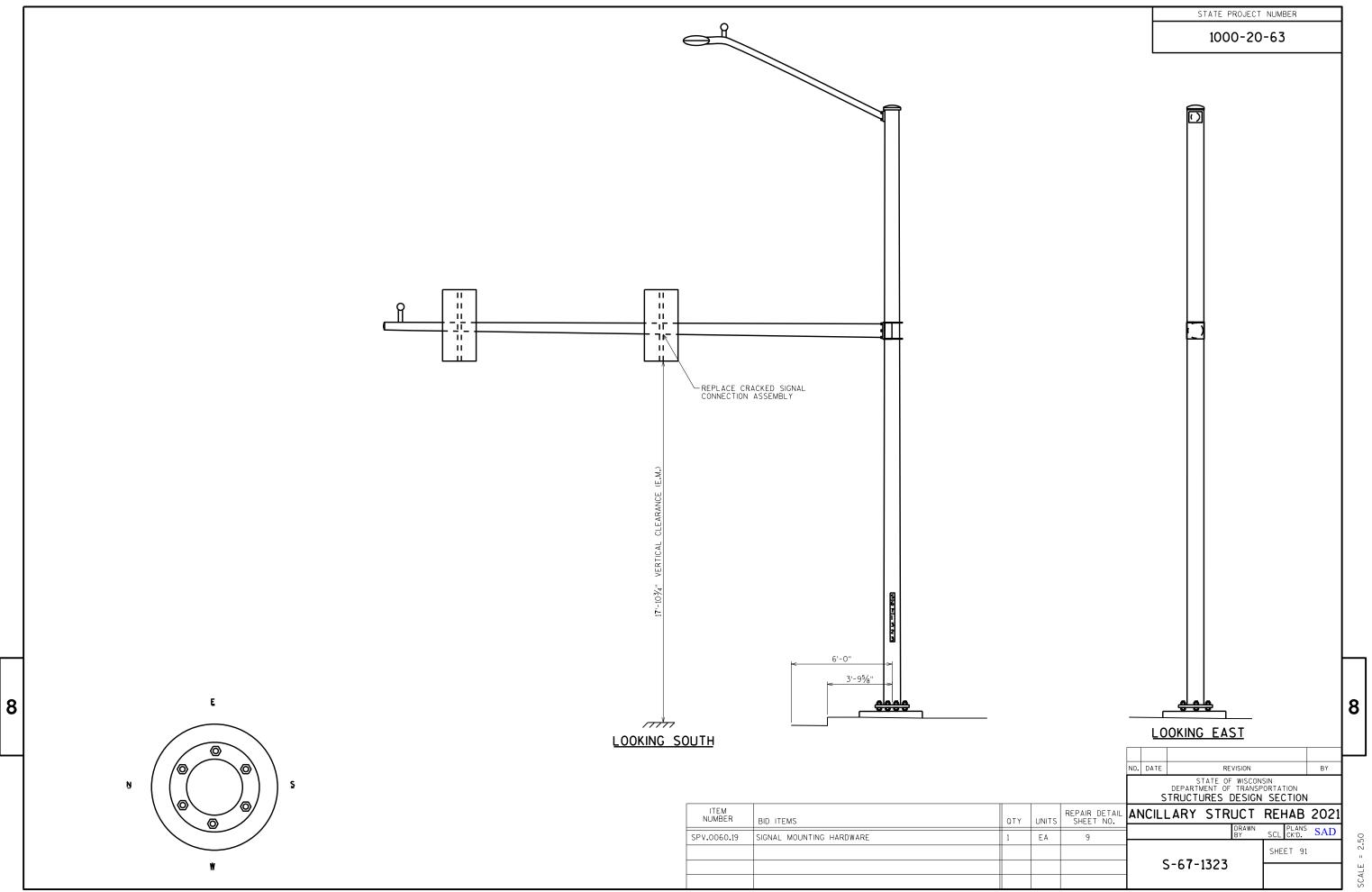


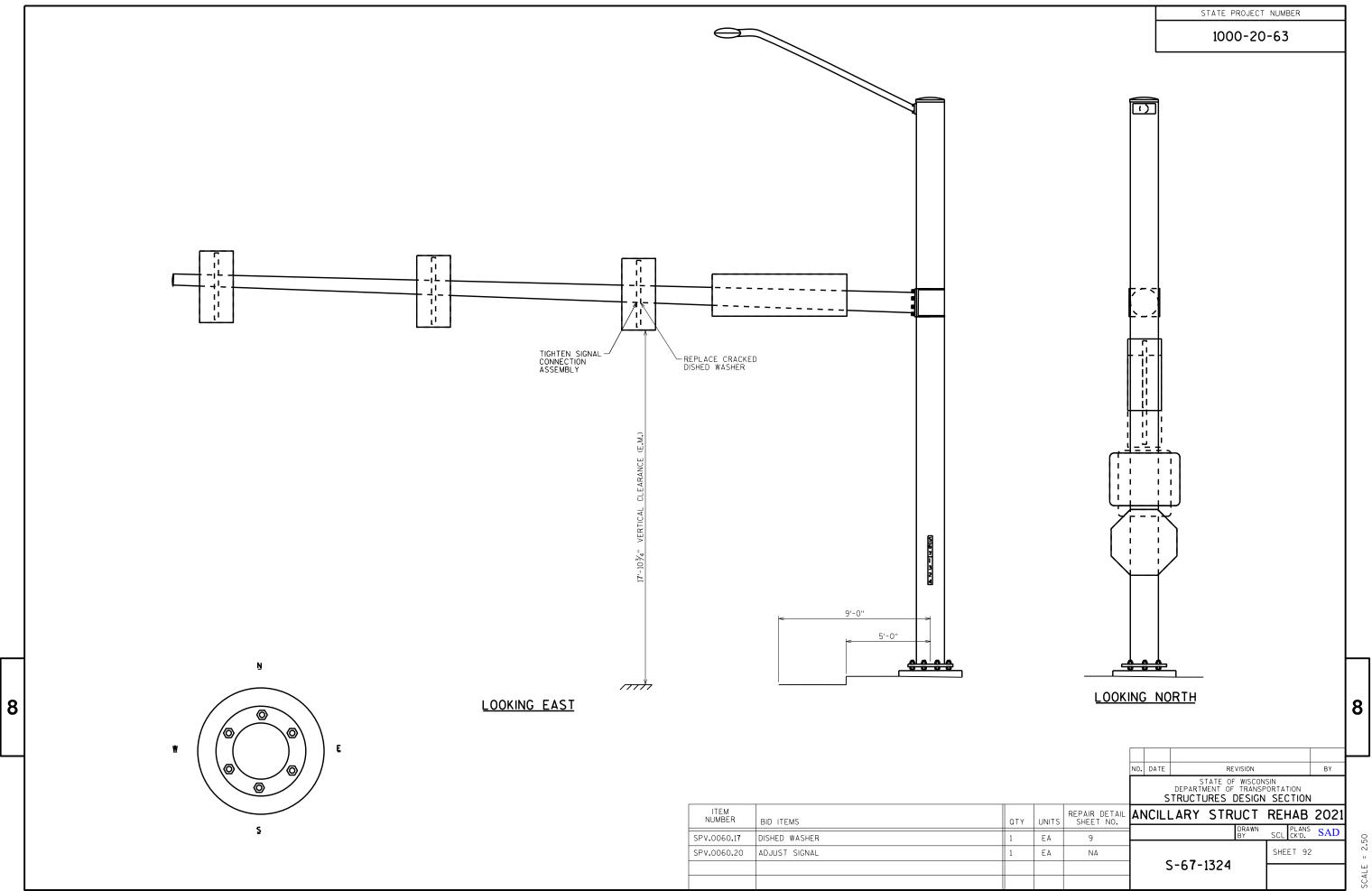


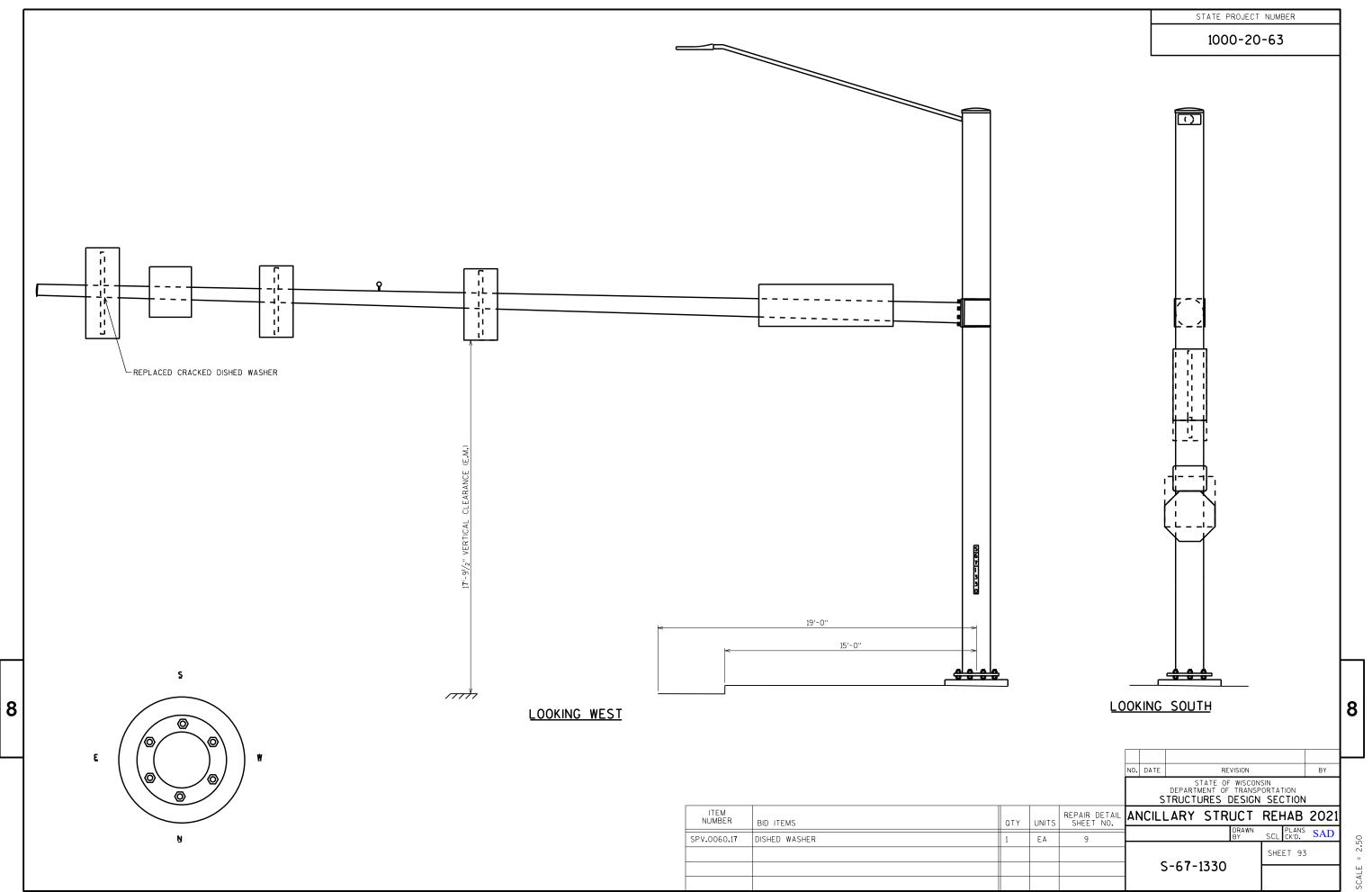


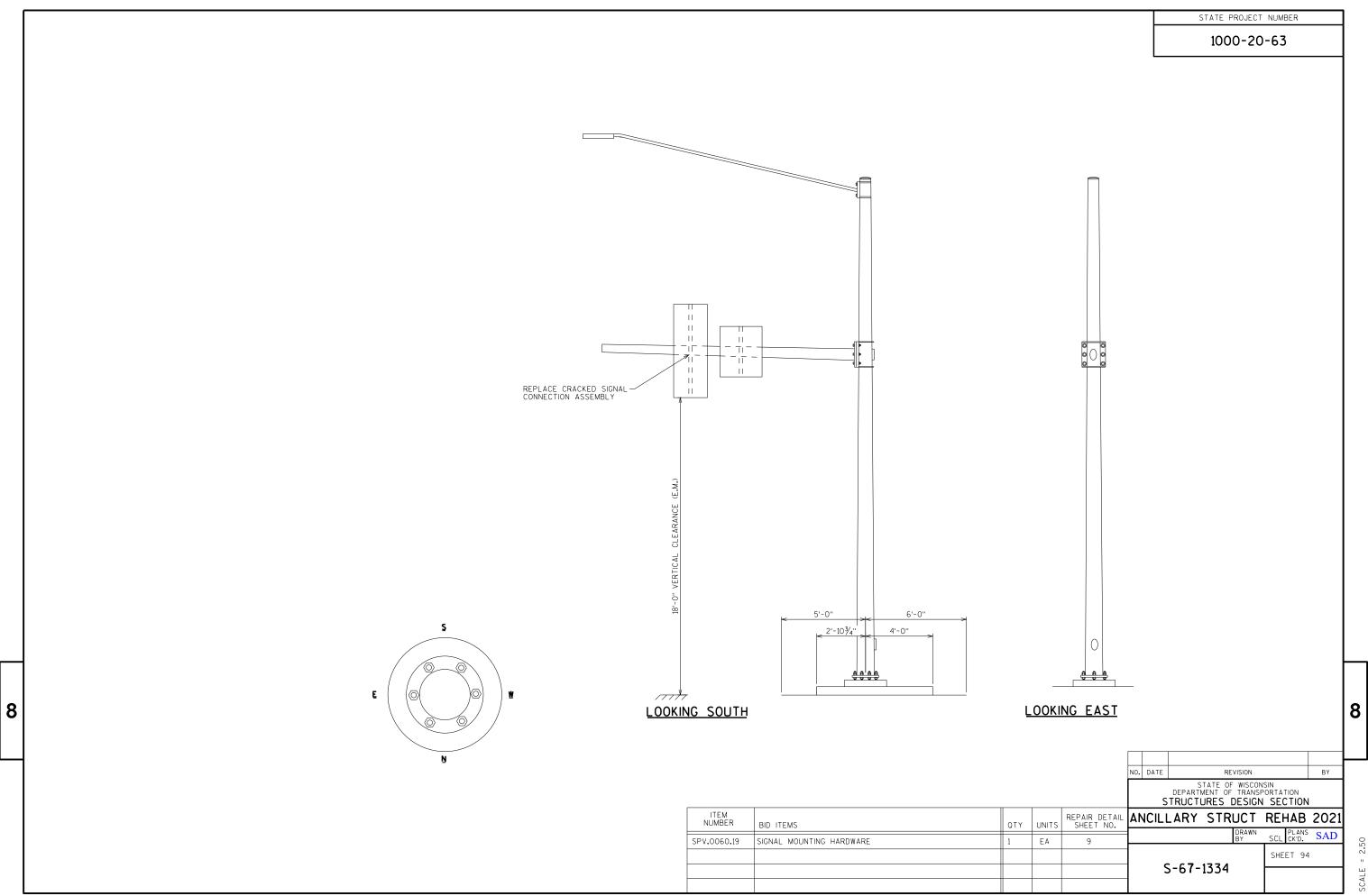


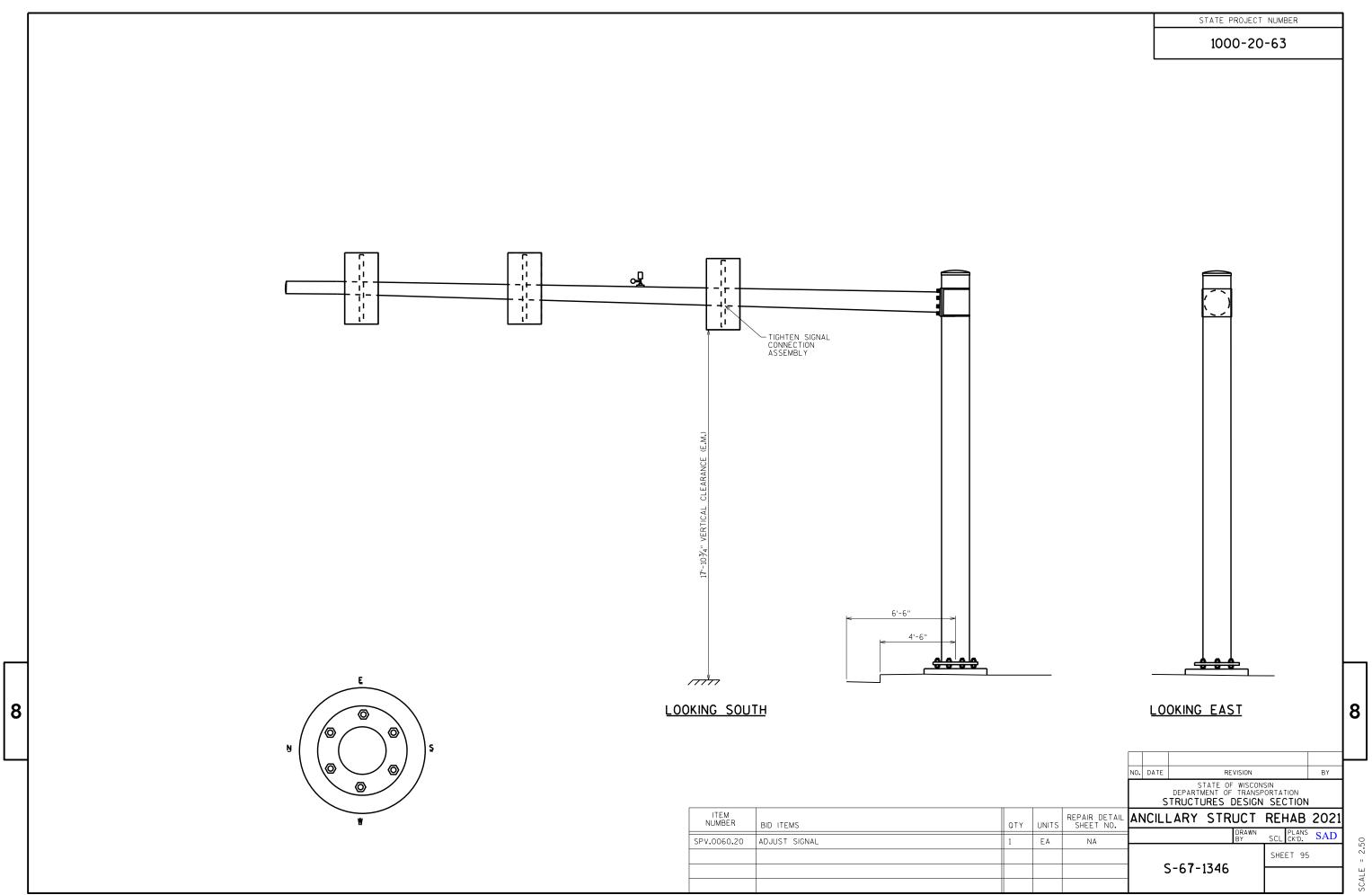


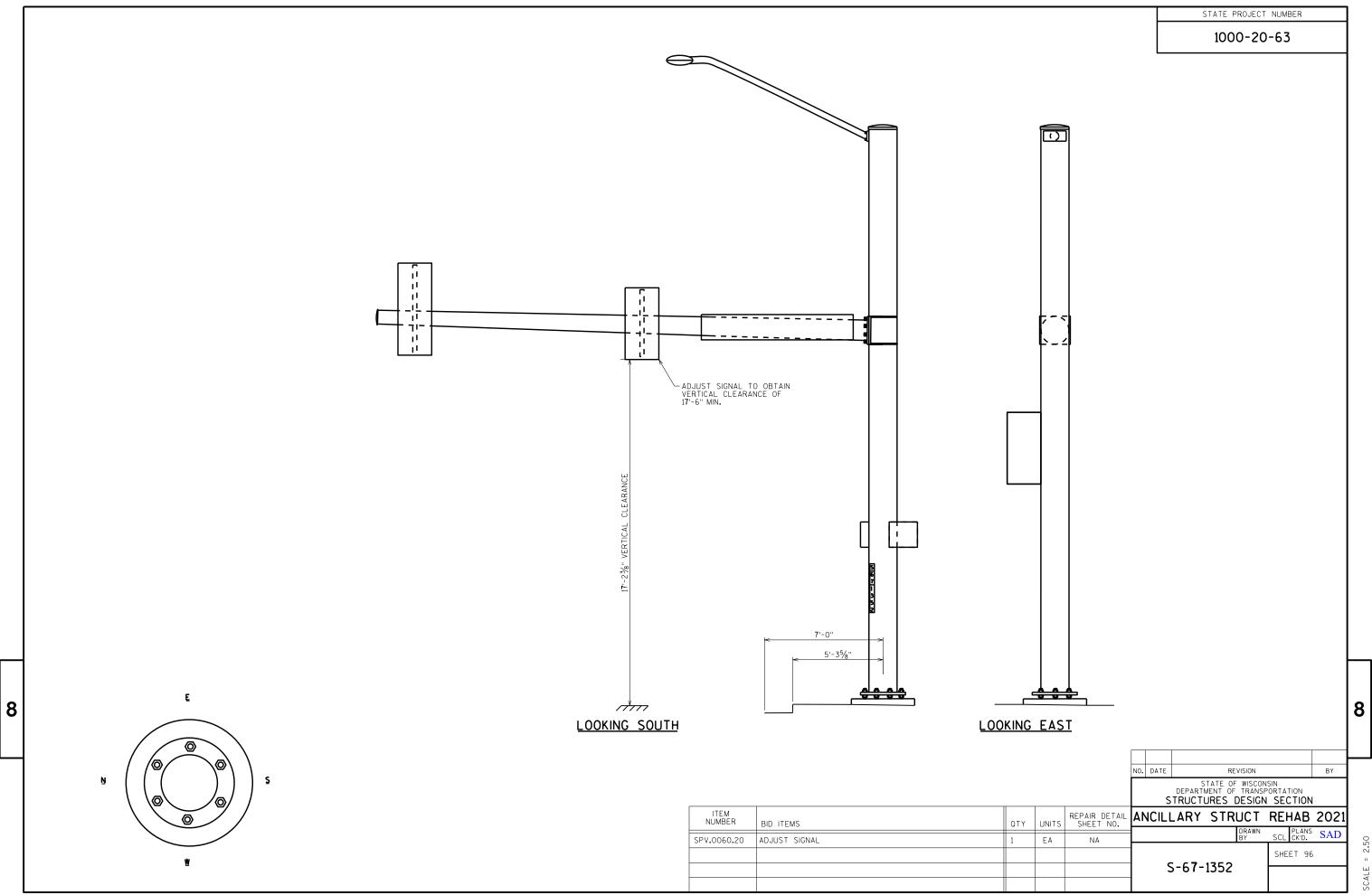


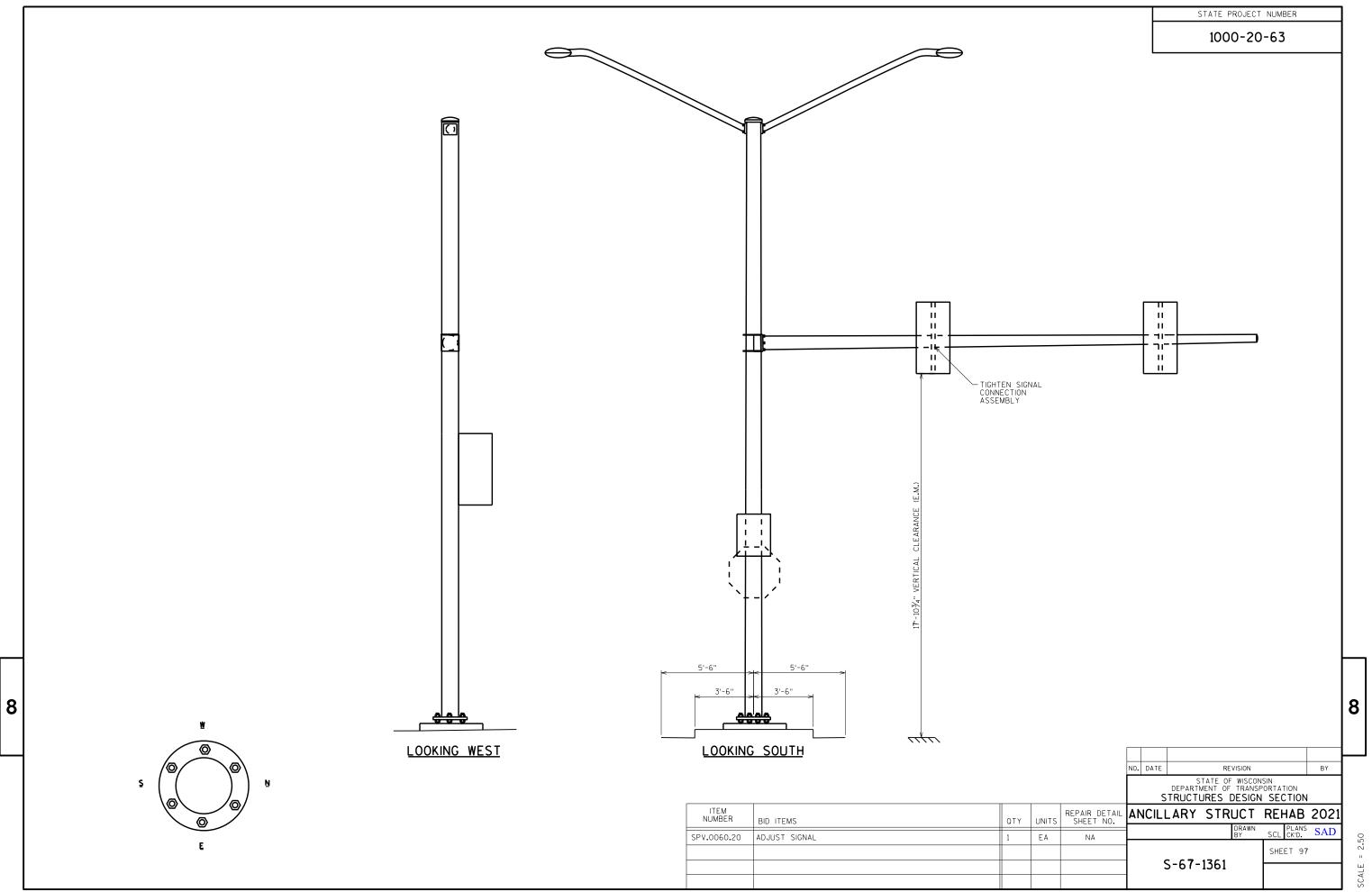














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