GENERAL NOTES

1. THE DESIGN/UPRIGHT POST HEIGHT IS FROM THE CENTER OF THE TRUSS/ARM TO THE BOTTOM OF THE BASE PLATE. THE GAP BETWEEN THE BOTTOM OF THE BASE PLATE AND THE TOP OF FOUNDATION IS NOT CONSIDERED IN THE HEIGHT CALCULATIONS. THIS REQUIRED GAP BETWEEN BASE AND FOUNDATION IS NOTED AS "BOLT DIAMETER PLUS 1" MAX" ON ALL DESIGN AND ERECTION DRAWINGS. NOTE THE AASHTO MAXIMUM LIMIT IS (2) BOLT DIAMETERS.
2. ANCHOR BOLTS – ROD = ASTM F1554, GRADE 55, S1
   – WASHERS = ASTM F436
   – NUTS = ASTM A563, GR DH OR A194, GR 2H
3. PIPE – STEEL = ALL PIPE SHALL MEET THE FOLLOWING SPECIFICATIONS WHICH COMPLY TO THE PROPERTIES OF 52 KSI MINIMUM YIELD, 60 KSI MINIMUM ULTIMATE TENSILE, MINIMUM ELONGATION EQUAL TO 20% IN 2 INCHES, AND YIELD STRENGTH NOT TO EXCEED 82 KSI WITHOUT APPROVAL OF THE ENGINEER; ASTM A500 GR B &/or C ASTM A53 GR A &/or B, ASTM A252 GR 2, or 3, & API 5L X42 through X80
   – ALUMINUM = 6061, T6
4. PLATE – STEEL, 3/16" OR GREATER = ASTM A709, GR 50
   – STEEL, 1/8" OR LESS = ASTM A1011, TYPE 1 MINIMUM
   – STEEL, GAUGE = ASTM A1011, TYPE 1 MINIMUM
5. BAR – STEEL = ASTM A36 MINIMUM
6. WIDE FLANGE – STEEL = ASTM A992
7. CHANNEL – STEEL = ASTM A36 MINIMUM
8. ANGLE – STEEL = ASTM A36 MINIMUM
   – ALUMINUM = 6061, T6
9. REBAR – STEEL = ASTM A706, GR 60 (RUNGS)
10. GRATING – STEEL, GRIP STRUT OR EQUAL = ASTM A1011, TYPE 1 MINIMUM
11. HARDWARE – BOLTS, PRIMARY = ASTM F3125 GR A325 (UN)
    – BOLTS, SECONDARY = ASTM A307
    – U-BOLTS = MEET OR EXCEED ASTM A307
    – WASHERS, FLAT = ASTM F436 (UN)
    – WASHERS, LOCK = ANSI B18.21.1 (UN)
    – WASHERS, DTI = F959 FOR A325 BOLTS, F2437 FOR A449 BOLTS (2)
    – NUTS – ASTM A563, GR DH OR A194, GR 2H
12. GALVANIZING – STRUCTURAL = ASTM A123
    – HARDWARE = ASTM A153
    – ANCHOR ROD – GALV FULL LENGTH (UNO) = ASTM A153
13. POLE CAPS – ALUMINUM ALLOY SAND CASTING = 356-F
14. SADDLE SHIMS – ALUMINUM = 356-T6
15. WELDING – AWS SPEC D1.1, LATEST REV
16. ALL PIPE SIZES ARE OUTSIDE DIAMETER
17. ALL WELDS TO BE 3/16 FILLET UNLESS NOTED
18. WELDS INSPECTION NOTES ARE AS FOLLOWS:
    18.1 ALL WELDS SHALL BE VISUALLY INSPECTED (VT)
    18.2 FULL PENETRATION WELDS AT SHOP SPLICES WILL BE 100% (UT) TESTED FOR MATERIAL GREATER THAN OR EQUAL TO 0.25" AND (MT) LESS THAN 0.25"
    18.3 FULL PENETRATION WELDS AT BASE PLATES AND MAST ARMS END PLATES WITH 6" DIAMETER AND GREATER ARMS REQUIRE (UT) INSPECTION. IF THE SPECIFICATIONS CALLS FOR FATIGUE DESIGN MUST BE (UT) AFTER GALVANIZE FOR TOE CRACKS
    18.4 PARTIAL PENETRATION GROOVE AND FILLET WELDS AT TUBE TO BASE PLATE CONNECTIONS REQUIRE A RANDOM SAMPLE OF 25% OF THE STRUCTURES WITH (MT) OF FULL LENGTH OF WELD. (EX: JOB OF 2 DOUBLE-POLED UPRIGHTS WOULD CONSIST OF ONE POST OF ONE UPRIGHT WHEREAS ONE POST UPRIGHT WOULD REQUIRE FULL LENGTH OF WELD TESTED)

FOUNDATION NOTES

1. CONCRETE TO BE CLASS "3000" AND f'c=3000 PSI
2. REINFORCING TO BE ASTM – A706, GRADE 60, DEFORMED, Fy = 60 KSI, fs = 24 KSI
3. REINFORCING TO BE TIED SUFFICIENTLY TO RETAIN ITS PROPER SHAPE DURING PLACEMENT.
4. REINFORCING TO BE HOOKED OR BENT PER ACI CODE.
5. CONTRACTOR TO PROVIDE CONDUIT IN FOOTING AS NECESSARY FOR ELECTRICAL SERVICE.
6. SEE STRUCTURE ERECTION DRAWINGS FOR FOOTING ELEVATIONS & ANCHOR BOLT MARKS, QUANTITIES, & SPACING. ALL ANCHOR BOLTS ARE TO BE SET USING SUPPLIED ANCHOR TEMPLATES AND SOLE PLATES.
7. CONTRACTOR SHALL BACK FILL AS NECESSARY TO COVER FOUNDATION.
8. ALL BACK FILL MUST ACHIEVE 95% COMPACTION.
9. CONSTRUCTIONS JOINT ARE ALLOWED WITH FOLLOWING REQUIREMENTS, UNLESS NOTED ON FOUNDATIONS DRAWINGS
   9.1 FOR CYLINDRICAL FOOTINGS, C.J. MUST BE LOCATED AT A MINIMUM OF 4'-3 FROM THE TOP OF THE FOOTING TO ENSURE ANCHORS ARE LOCATED IN FINAL POUR. IF A GRADE BEAM IS USED, ALL BEAMS GREATER THAN THE MINIMUM CAN BE LOCATED AT BEAM TO CYLINDER JOINT UNLESS OTHERWISE NOTED ON THE FOUNDATION DRAWINGS.
   9.2 FOR SPREAD FOOTINGS, C.J. MUST BE LOCATED AT A MINIMUM OF 4'-3 FOR THE TOP OF FOOTING FOR ALL PEDESTALS GREATER THAN 4'-0. JOINTS ARE ALLOWED AT THE PEDESTAL TO PAD LOCATION.
   9.3 ALL CONSTRUCTION JOINT SURFACES MUST BE ROUGH AND CLEAR OF ANY LOOSE OR FOREIGN MATERIAL. PRIOR TO THE PLACEMENT OF FRESH CONCRETE, JOINT SURFACES MUST BE THOROUGHLY WETTED. (USE A BONDING AGENT IF REQ'D BY SPECIFICATIONS)
10. IT IS THE CONTRACTORS RESPONSIBILITY TO INSTALL FOUNDATIONS IN ACCORDANCE WITH SPECIFICATION AND PROPER CONSTRUCTION METHODS.
11. ON CYLINDRICAL FOOTING WHERE A SONOTUBE IS EITHER NOT AVAILABLE OR FEASIBLE, THE TOP PORTION OF THE CYLINDER CAN BE FORMED AS A SQUARE EQUAL TO THE DESIGNED CYLINDER DIAMETER. THE SQUARE FORM MUST START AT LEAST 6 INCHES BELOW GROUND ON THE LOWEST SIDE OF THE FOUNDATION.
12. ON CYLINDRICAL FOOTING WHERE A GRADE BEAM IS USED, THE STIRRUPS USED IN THE BEAM MAY BE SHIFTED TO CLEAR OTHER CYLINDRICAL REINFORCEMENT AND/OR ANCHOR BOLTS AS NECESSARY. NOTE: BE SURE TO MAINTAIN THE 12" MAXIMUM SPACING ON THE STIRRUPS BETWEEN THE (2) CYLINDERS AS SHOWN ON THE DRAWINGS.

INFRASTRUCTURE CONSULTING & ENGINEERING

SHOP DRAWING REVIEW

REVIEW IS FOR GENERAL COMPLIANCE WITH CONTRACT DOCUMENTS. NO RESPONSIBILITY IS ASSUMED FOR CORRECTNESS OF DIMENSIONS OR DETAILS.

APPROVED	[X]
APPROVED AS NOTED	[ ]
REVISE AND RESUBMIT	[ ]
REJECTED	[ ]

BY: JPF DATE: 8/25/25

ALL GROUPS

AASHTO 6th Edition Spec's

SEALED BY:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER DAVID A LALLONE No. 38665

Aug 20 2025

NO:	REVISIONS	DATE	MADE	CHECKED
2	ADDING DTI SPEC FOR A449 BOLTS	8/20/25	---	JSD

walpar
A valmont COMPANY
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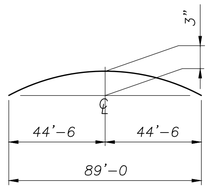
2

STATE: South Carolina
FED PROJ: Carolina Crossroads Phase 1 & 2
ST PROJ: P039718
COUNTY: Lexington & Richland
ROUTE: I-26 & I-126

SUBJECT: GENERAL NOTES FOR PROJECT
WALPAR STANDARD DESIGN
FOR: Archer-United Joint Venture

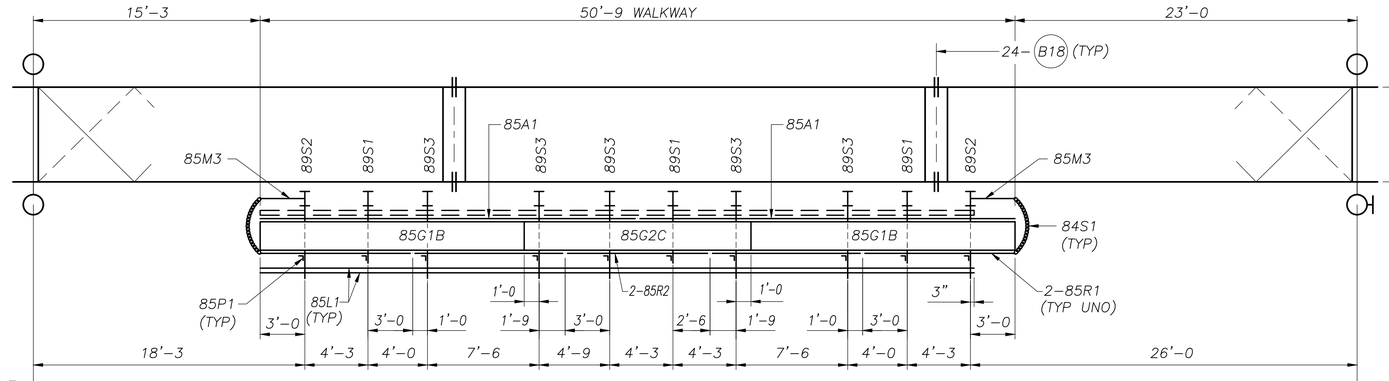
DRAWN BY: IWL DATE: 7/19/23
CHECKED BY: DAL DATE: 8/21/23
DWG NO: C3546-G1

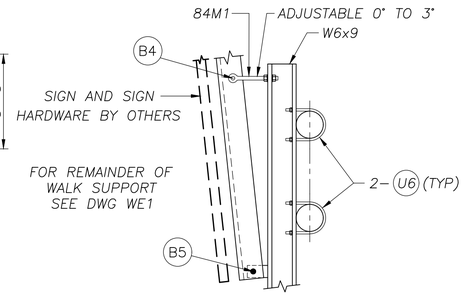
NAME: E:\acad\Djobs\SC\3546\3546-G1.dwg DATE: AUG 20, 2025 TIME: 9:44 AM jd706288



CAMBER DIAGRAM

(PERMANENT CAMBER = 1¾")

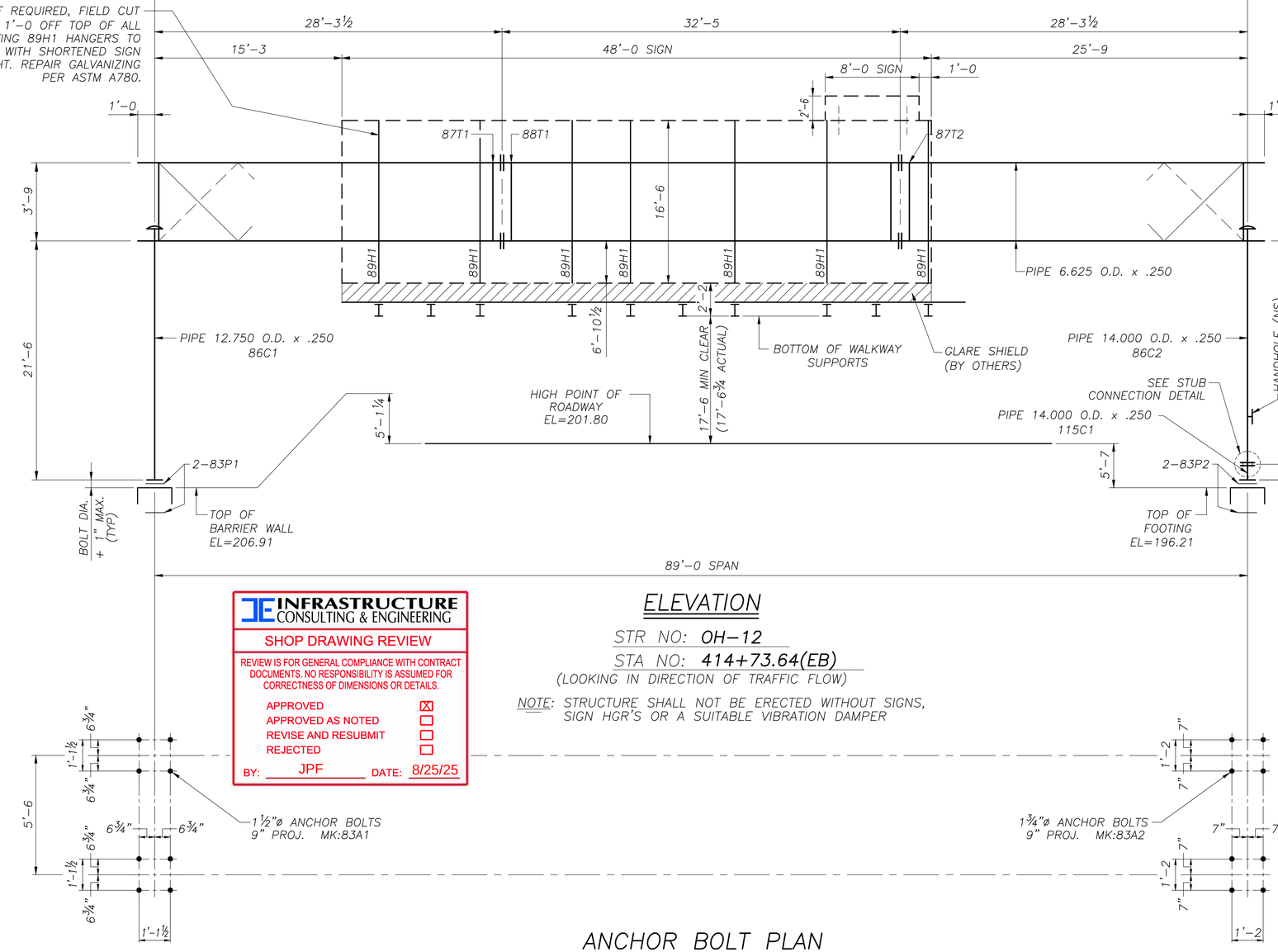


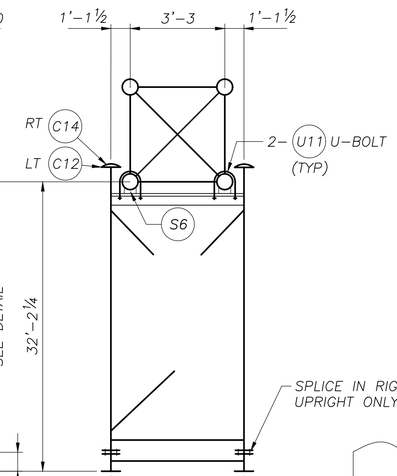


TYP SECTION THRU SIGN SUPPORT & SIGN HANGER

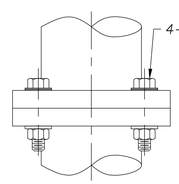
NOTE: EXIT PANELS & SUPPORTS BY OTHERS

IF REQUIRED, FIELD CUT 1'-0 OFF TOP OF ALL EXISTING 89H1 HANGERS TO ALIGN WITH SHORTENED SIGN HEIGHT. REPAIR GALVANIZING PER ASTM A780.

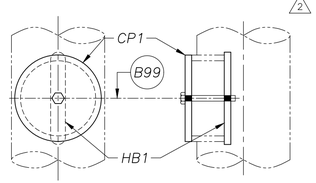




TYPICAL UPRIGHT

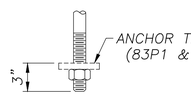


STUB CONNECTION DETAIL



HANDHOLE DETAIL

PRE ASSEMBLE CP1 TO HB1 WITH B99 BOLT. DISTURB THREADS SO HB1 CAN NOT BE REMOVED. INSTALL COVER ASSEMBLY INTO HANDHOLE OPENING AND TIGHTEN BOLT TO SECURE.



ANCHOR DETAIL

(TYPICAL)

SHIPPING LIST		C3546-E13
QTY	MARK	DESCRIPTION
8	83A1	ANCHOR BOLTS
8	83A2	ANCHOR BOLTS
4	83P1	ANCHOR TEMPLATES
4	83P2	ANCHOR TEMPLATES
1	87T1	BOX TRUSS 4.3' x 4.8' x 29.4'
1	88T1	BOX TRUSS 4.3' x 4.8' x 32.5'
1	87T2	BOX TRUSS 4.3' x 4.8' x 29.4'
1	86C1	UPRIGHT 7' x 1.5' x 21.6'
1	86C2	UPRIGHT 7.1' x 1.6' x 31.3'
3	89S1	WALK SUPPORT
2	85M3	SAFETY CHAIN SUPPORT
2	84S1	SAFETY CHAIN
10	84P1	HINGE PIN ASSEMBLIES
20	85M1	CLAMP PLATES
4	85M2	SPLICE PLATES
10	85P1	HANDRAIL POSTS
8	85R1	HANDRAILS
2	85R2	HANDRAILS
2	85A1	SAFETY ANGLES
2	85G1B	GRATING
1	85G2C	GRATING
2	89S2	SIGN/WALK/LIGHT SUPPORTS
5	89S3	SIGN/WALK/LIGHT SUPPORT
7	89H1	SIGN HANGERS (ANGLE ARM)
7	84M1	EYEBOLT ASSEMBLIES
4	85L1	LIGHT SUPPORTS
1	CP1	COVER PLATE ASSEMBLY
1	HB1	HANDHOLE BAR
54	B1	3/8" x 1 1/4" BOLT w/HN/LW (A307 GALV)
20	B3	1 3/8" OD x 14 GA WASHER (A307 GALV)
7	B4	3/4" x 2 1/2" HHB w/HN/FW/LW (A325 GALV)
7	B5	3/4" x 2" HHB w/HN/LW (A325 GALV)
10	B6	1/2" x 1 1/2" HHB w/HN/LW (A325 GALV)
48	B18	1" x 3 3/4" HHB w/HN/FW/DTI (A325 GALV)
1	B99	1/4" x 4" HHB (A307 GALV)
2	C12	POLE CAPS #291 w/ (2) 1/2" SET SCRS(S.S.)
2	C14	POLE CAPS #283 w/ (2) 1/2" SET SCRS(S.S.)
4	S6	SADDLE SHIMS #360
20	U1	5/16" U-Bolts w/(2 ea) HN/LW (ZINC PL)
40	U6	1/2" U-Bolts w/(2 ea) HN/LW/FW (GALV)
8	U11	5/8" U-Bolts w/(2 ea) HN/LW/FW (GALV)
1	115C1	UPRIGHT STUB 7.1' x 1.6' x 1.0'
8	B119	1 3/4" x 6 1/2" HHB w/(1)HN/(2)FW/(1)DTI (A449 GALV) 2

PREVIOUSLY SHIPPED

INFRASTRUCTURE CONSULTING & ENGINEERING

SHOP DRAWING REVIEW

REVIEW IS FOR GENERAL COMPLIANCE WITH CONTRACT DOCUMENTS. NO RESPONSIBILITY IS ASSUMED FOR CORRECTNESS OF DIMENSIONS OR DETAILS.

APPROVED	☒
APPROVED AS NOTED	☐
REVISE AND RESUBMIT	☐
REJECTED	☐

BY: JPF DATE: 8/25/25

ELEVATION

STR NO: OH-12

STA NO: 414+73.64(EB)

(LOOKING IN DIRECTION OF TRAFFIC FLOW)

NOTE: STRUCTURE SHALL NOT BE ERECTED WITHOUT SIGNS, SIGN HGR'S OR A SUITABLE VIBRATION DAMPER

ANCHOR BOLT PLAN

NOTE:

SEE GENERAL NOTES DRAWING FOR MATERIAL SPECIFICATIONS, FOUNDATION AND STANDARD NOTES

DESIGN DWGS: D15, D17-D20 DESIGN NO: BT7 AASHTO 6th Edition Spec's

OH-12

SEALED BY:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER DAVID A LALLONE No. 38665

Aug 20 2025

NO:	REVISIONS	DATE	MADE	CHECKED
2	REVISED BOLT SPEC TO MATCH DESIGN	8/20/25	---	JSD

WP walpar A valmont COMPANY

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2

STATE:	South Carolina
FED PROJ:	Carolina Crossroads Phase 1 & 2
ST PROJ:	P039718
COUNTY:	Lexington & Richland
ROUTE:	I-26 & I-126

SUBJECT: OVERHEAD BOX TRUSS STRUCTURE ERECTION DRAWING

FOR: Archer-United Joint Venture

DRAWN BY: DLK DATE: 10/3/23

CHECKED BY: DLJ DATE: 10/16/23

DWG NO: C3546-E13

BT-E

NAME: E:\acad\JobsNProg\3546\3546-E13.dwg DATE: AUG 20, 2025 TIME: 9:43 AM jd706288