Z:\JOPLIN MO\CITY OF JOPLIN\TRANSPORTATION\TIN CUP TRAIL BRIDGE\DRAWINGS\1 LOCATION MAP AND DRAWING INDEX.DWG

GENERAL NOTES:

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LINE AND GRADE STAKES.

ALL TRAFFICWAYS INCLUDING DRIVEWAYS, ALLEYWAYS, ETC., SHALL REMAIN ACCESSIBLE TO RESIDENTIAL AND EMERGENCY VEHICLES DURING PROJECT DURATION.

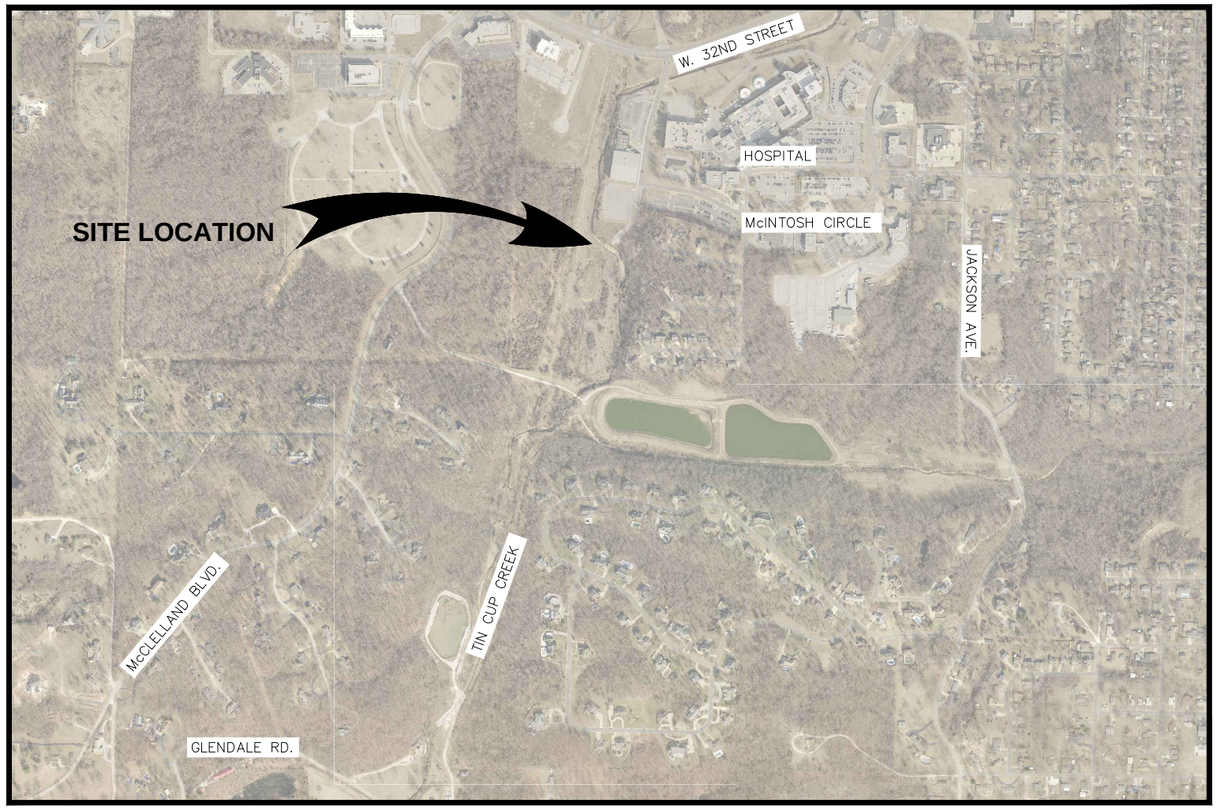
ALL CONSTRUCTION AND EXCAVATION ACTIVITIES SHALL BE CONFINED TO EASEMENTS, ROAD RIGHT-OF-WAY, AND/OR WORK AREA LIMITS AS SHOWN ON DRAWINGS.

UTILITIES ARE LOCATED ON DRAWINGS BASED UPON AVAILABLE INFORMATION. THE NUMBER AND LOCATION OF UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL CONTACT ALL UTILITIES AND MISSOURI DIG RITE PRIOR TO EXCAVATION, AND SHALL BE RESPONSIBLE FOR THE EXACT LOCATION AND PRESERVATION OF ALL BURIED UTILITY LINES.

ALL SURFACES (CONCRETE, ASPHALT, GRAVEL OR DIRT) AND THEIR APPURTENANCES (CURBS, CULVERTS, ETC.) DISTURBED DURING CONSTRUCTION SHALL BE REPLACED WITH LIKE MATERIALS PER SPECIFICATIONS AND STANDARD DETAILS.

TIN CUP TRAIL PEDESTRIAN BRIDGE PHASE 3

JOPLIN, MISSOURI



LOCATION MAP

N

N.T.S.

LEGEND	
DWG. NO.	NAME
1	LOCATION MAP AND DRAWING INDEX
2	QUANTITIES
3	PLAN & PROFILE
4	STREAM MODIFICATIONS
5	CROSS SECTIONS
6	CROSS SECTIONS
7	BRIDGE DECK DIMENSIONAL PLAN & ELEVATION
8	BRIDGE BRACING PLAN & CROSS MEMBER DETAIL
9	ABUTMENT PLAN
10	ABUTMENT ELEVATIONS
11	STRIP SEAL EXPANSION JOINT SYSTEM DETAILS AT ABUTMENTS
12	BRIDGE DIMNSIONAL ELEVATION
13	CABLE CLAMP PLAN & DETAILS
14	FOUNDATION ANCHOR STRUCTURAL DETAILS
15	FOUNDATION ANCHOR DETAILS
16	OPEN ROPE SPELTER SOCKET TO FOUNDATION ANCHOR CONNECTION
17	COLUMN DETAILS
18	BRIDGE APPROACH SLAB DECORATIVE FENCE
19	DECK DECORATIVE FENCE DETAIL
20	CONSTRUCTION DETAILS
SW-1	STORMWATER POLLUTION PREVENTION PLAN DETAILS

UTILITIES

WATER:	SEWER:	GAS:
MISSOURI AMERICAN WATER CO.	CITY OF JOPLIN	SPIRE
MATT BARNHART	DAN JOHNSON	KEN STEGALL
2650 E. 32ND ST.	602 SOUTH MAIN	520 E. 5TH ST.
JOPLIN MO 64801	JOPLIN MO 64801	JOPLIN MO 64801
417-626-4815	417-624-0820	314-341-0973

CIVIL ENGINEER: MICHAEL ATKINSON
LICENSE NO. E-2000149997

STATE OF MISSOURI
MICHAEL R. ATKINSON
NUMBER E-2000149997
1-5-24
REGISTERED PROFESSIONAL ENGINEER
Tin Cup Trail Bridge

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TIN CUP TRAIL PEDESTRIAN BRIDGE
LOCATION MAP AND DRAWING INDEX

DWG. NO. 1

TIN CUP TRAIL PEDESTRIAN BRIDGE - JOPLIN, MISSOURI

Z:\JOPLIN MO\CITY OF JOPLIN\TRANSPORTATION\TIN CUP TRAIL BRIDGE\DRAWINGS\2 QUANTITIES.DWG

CONSTRUCTION NOTES:

BORINGS:
THE LOCATIONS OF ALL SUBSURFACE BORINGS FOR THIS STRUCTURE ARE SHOWN ON THE PLAN SHEET AND INCLUDED IN THE SPECIFICATIONS. THE CITY DOES NOT REPRESENT OR WARRANT THAT ANY SUCH BORING DATA ACCURATELY DEPICTS THE CONDITIONS TO BE ENCOUNTERED IN CONSTRUCTING THIS PROJECT. A CONTRACTOR ASSUMES ALL RISKS IT MAY ENCOUNTER IN BASING ITS BID PRICES, TIME OR SCHEDULE OF PERFORMANCE ON THE BORING DATA DEPICTED HERE OR THOSE AVAILABLE FROM THE CITY, OR ON ANY OTHER DOCUMENTATION NOT EXPRESSLY WARRANTED, WHICH THE CONTRACTOR MAY OBTAIN FROM THE CITY.

DESIGN SPECIFICATIONS:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS PLUS INTERIM REVISIONS

DESIGN LOADING:
PEDESTRIAN = 100 LB/SF
PEDESTRIAN FENCE = HORIZONTAL UNIFORM LOAD = 50 LB/FT AND A CONCENTRATED LOAD OF 200 LBS. THE POSTS WILL REQUIRE BOTH LOADINGS APPLIED SIMULTANEOUSLY.
SUPERSTRUCTURE: SUSPENSION CABLE
ROCK ANCHOR = 158 KIPS
ALLOWABLE BOND STRESS (CHERT ROCK) = 30 PSI

DESIGN UNIT STRESSES:
CLASS B CONCRETE (SUBSTRUCTURE), f'c = 4,000 PSI WITH AIR
CLASS B CONCRETE (FOUNDATION ANCHOR), f'c = 4,000 PSI WITH AIR
CLASS B-2 CONCRETE (SUPERSTRUCTURE), f'c = 4000 PSI WITH AIR
REINFORCING STEEL (GRADE 60), fy = 60,000 PSI
STRUCTURAL STEEL (COLUMNS, BRACING, FENCE MOUNTING BRACKETS, FOUNDATION ANCHOR AND PERIMETER DECK CHANNEL), ASTM A709, GRADE 36
CABLES (SUSPENSION, HANGERS), 1X19 GRADE I CLASS A COATING INNER WIRES/CLASS C COATING OUTER WIRES ASTM A586-1
ROCK ANCHOR: (GROUT BONDED, MCP I-PTI CLASS II ANCHOR), GRADE 75 & GRADE 80 ALL-THREADED REBAR BY WILLIAMS FORM ENGINEERING CORPORATION (R61-18) OR APPROVED EQUAL

NEOPRENE PADS:
NON-LAMINATED 1/2" THICK 60 DUROMETER IN ACCORDANCE WITH MODOT SECTION 716.

JOINT FILLER:
ALL JOINT FILLER SHALL BE IN ACCORDANCE WITH MODOT SECTION 1057.

REINFORCING STEEL:
MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1-1/2" UNLESS OTHERWISE SHOWN.

COLUMNS:
THE ANCHOR BOLTS AT THE BASE COLUMN SHALL BE TIGHTENED UNTIL THE NUT TOUCHES THE BASE PLATE PLUS ½ TURN WHILE THE COLUMN IS HELD IN THE PLUMB POSITION. IT WILL BE NECESSARY TO HOLD THE COLUMNS IN THE PLUMB POSITION UNTIL THE MAIN SUSPENSION CABLES ARE INSTALLED AND THE STRUCTURAL STEEL IS IN PLACE.

DURING CONSTRUCTION AND LOADING OF THE DECK, IT WILL BE NECESSARY TO PERFORM PERIODIC ADJUSTMENTS TO THE OPEN BRIDGE SOCKET LOCATED AT THE END OF THE GUY ANCHORS TO MAINTAIN COLUMN PLUMB AND UNIFORMITY IN THE MAIN SUSPENSION CABLE. A TRANSIT OR SIMILAR DEVICE SHALL BE USED TO MEASURE THE DEGREE OF PLUMB. DURING CONSTRUCTION, THE MAXIMUM ALLOWABLE HORIZONTAL DISPLACEMENT MEASURED FROM PLUMB AT THE TOP OF THE COLUMN SHALL BE 6-INCHES IN EITHER DIRECTION. THE FINAL COLUMN DISPLACEMENT AT THE COMPLETION OF CONSTRUCTION SHALL BE LESS THAN 1-INCH.

FINISH:
DECK PERIMETER CHANNEL - GALVANIZED
DECK BRACING/BEAMS - GALVANIZED
CABLE CONNECTIONS/BRACKETS/LINKS/SPACERS - GALVANIZED
COLUMN TOWERS/BRACING - EXTERIOR STEEL FLUOROPOLYMER COATING - COLOR BLACK
PEDESTRIAN FENCE AND MOUNTING BRACKETS - FEDERAL STANDARD #17038, SYSTEM G IN ACCORDANCE WITH MODOT SECTION 1081

BOLLARD:
BOLLARDS SHALL BE A 30" TALL (MAXIMUM HEIGHT) LOW PROFILE COLLAPSIBLE BOLLARD MODEL SKU 290 AS MANUFACTURED BY MARKSTAAR OR AN APPROVED EQUAL.

QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	QUANTITIY	UNIT
201-99.01	CLEARING AND GRUBBING	1	LS
202-20.10	REMOVAL OF EXISTING IMPROVEMENTS	1	LS
203-55.00	EMBANKMENT IN PLACE	2225	CY
203-99.07	EXCAVATION TO WIDEN AND TRANSITION CREEK BANKS	2947	CY
207-20.00	LINEAR GRADING, CLASS II	4.7	STA
214-99.01	STACKED LIMESTONE LEDGE ROCK	110	SY
304-01.23	TYPE 1 AGGREGATE BASE (4" THICK)	228	SY
503-99.05	CONCRETE BRIDGE APPROACH SLAB (10" THICK)	84	SY
503-99.06	PEDESTRIAN HANDRAIL (APPROACH)	96	LF
608-99.05	CONCRETE TRAIL (6" THICK)	210	SY
608-99.06	CONCRETE PAD (6" THICK)	4.4	SY
611-40.10	FURNISHING AND PLACING TYPE 2 ROCK BLANKET	610	CY
618-10.00	MOBILIZATION	1	LS
620-61.51B	4 IN. YELLOW ACRYLIC COPOLYMER FAST DRY PAVEMENT MARKING PAINT	470	LF
627-40.00	CONTRACTOR FURNISHED SURVEYING AND STAKING	1	LS
703-99.01	SUSPENSION BRIDGE (FOUNDATION, UNCLASSIFIED EXCAVATION, ANCHORS, COLUMNS, CABLES, CONNECTIONS, DECK AND HANDRAIL, COMPLETE AND IN PLACE)	1	LS
903-12.20	BOLLARD	2	EA
	ALTERNATE BID FOR ASPHALT TRAIL		
401-99.05A	2" ASPHALT BP-2 (TRAIL)	210	SY
401-99.05B	4" BITUMINOUS BASE (TRAIL)	210	SY

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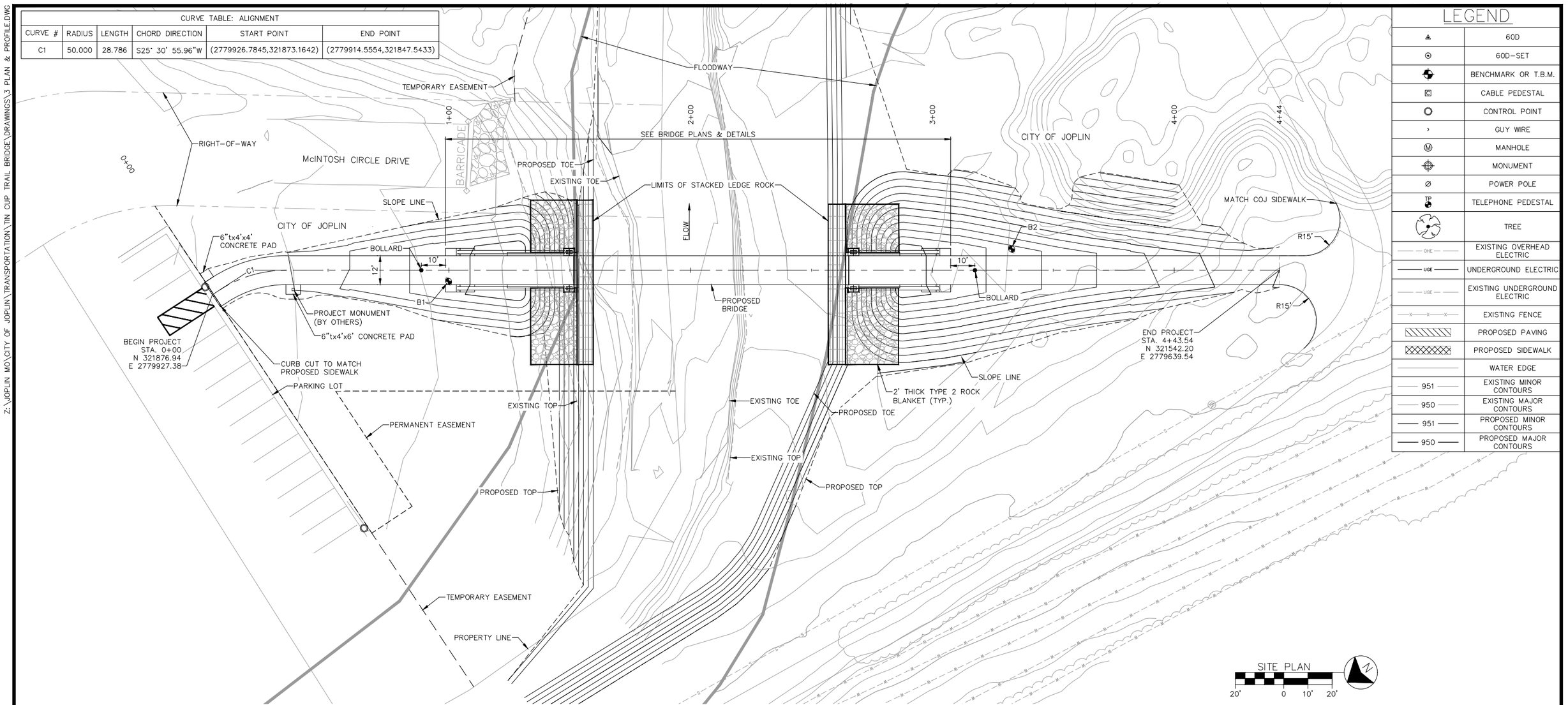
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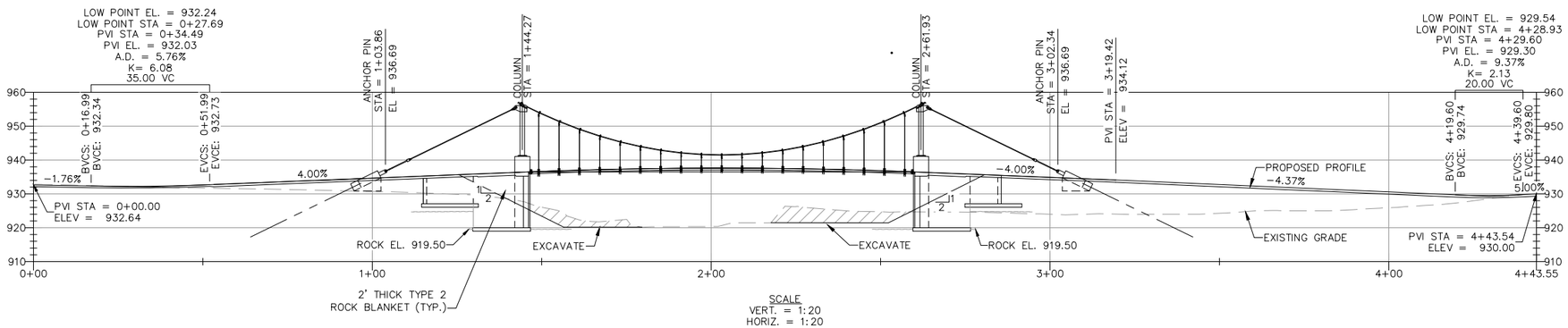
TIN CUP TRAIL PEDESTRIAN BRIDGE
QUANTITIES

DWG. NO.
2

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CURVE TABLE: ALIGNMENT					
CURVE #	RADIUS	LENGTH	CHORD DIRECTION	START POINT	END POINT
C1	50.000	28.786	S25° 30' 55.96"W	(2779926.7845,321873.1642)	(2779914.5554,321847.5433)





SCALE
VERT. = 1:20
HORIZ. = 1:20

LEGEND

	60D
	60D-SET
	BENCHMARK OR T.B.M.
C	CABLE PEDESTAL
	CONTROL POINT
	GUY WIRE
M	MANHOLE
	MONUMENT
	POWER POLE
TP	TELEPHONE PEDESTAL
	TREE
OHE	EXISTING OVERHEAD ELECTRIC
UGE	UNDERGROUND ELECTRIC
UGE	EXISTING UNDERGROUND ELECTRIC
X X X	EXISTING FENCE
	PROPOSED PAVING
	PROPOSED SIDEWALK
	WATER EDGE
951	EXISTING MINOR CONTOURS
950	EXISTING MAJOR CONTOURS
951	PROPOSED MINOR CONTOURS
950	PROPOSED MAJOR CONTOURS

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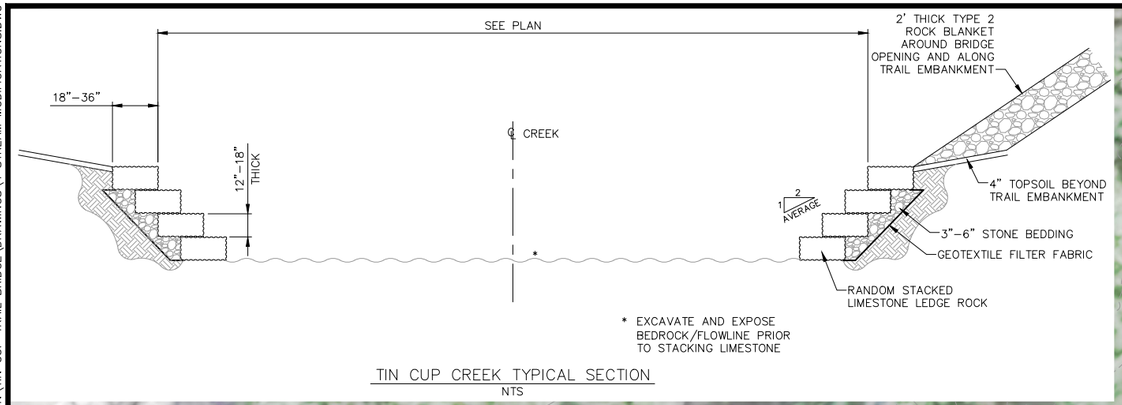
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TIN CUP TRAIL PEDESTRIAN BRIDGE
PLAN & PROFILE

DWG. NO. 3

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TIN CUP CREEK TYPICAL SECTION
NTS

TEMPORARY EASEMENT
LIMITS OF TYPE 2 ROCK BLANKET (2' THICK)
RIGHT-OF-WAY
EXISTING TOE
FLOW
PROPOSED BRIDGE
PERMANENT EASEMENT
EXISTING TOP
EXISTING TOE
EXISTING TOP
TEMPORARY EASEMENT
LIMITS OF TYPE 2 ROCK BLANKET (2' THICK)
PROPERTY LINE
TRANSITION & MATCH EXISTING RIP-RAP

STREAM MODIFICATIONS
20' 0 10' 20'

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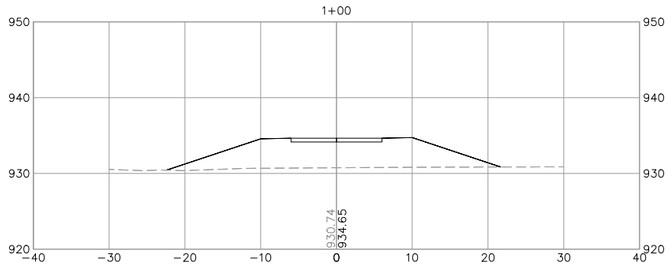
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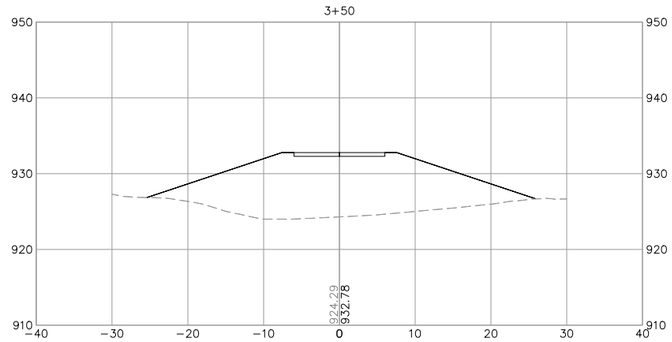
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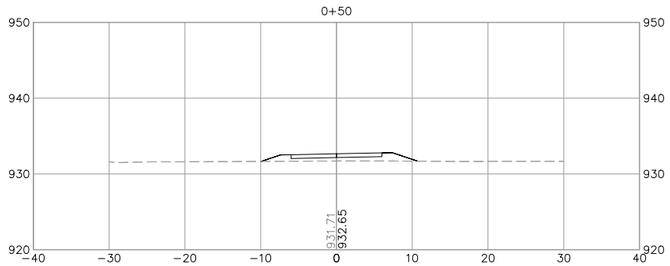
TIN CUP TRAIL PEDESTRIAN BRIDGE
STREAM MODIFICATIONS

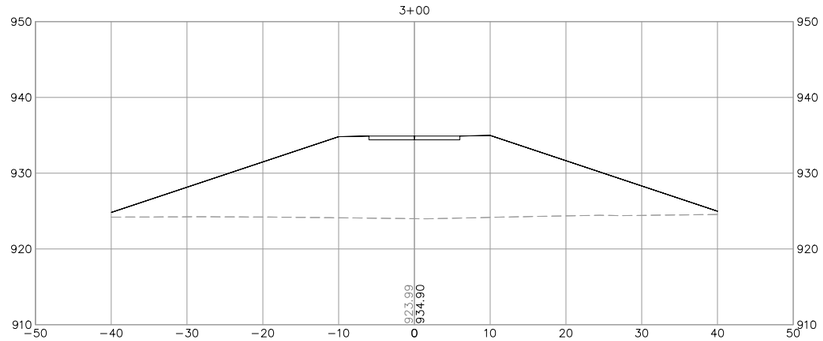
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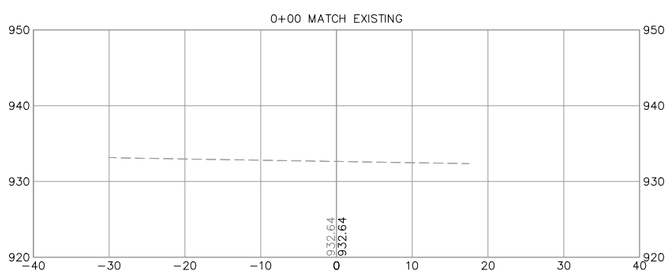
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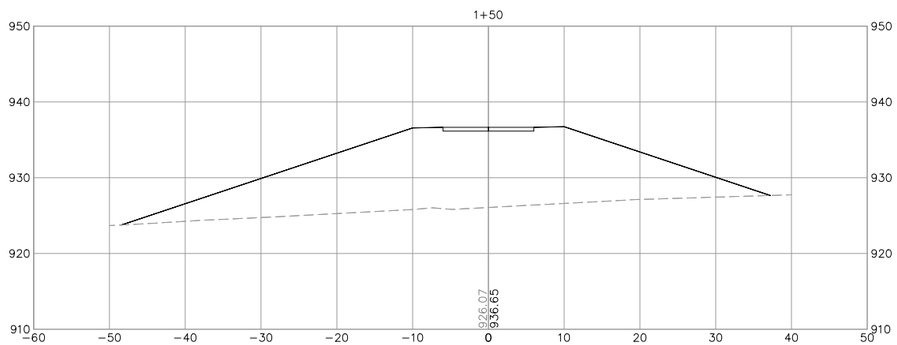












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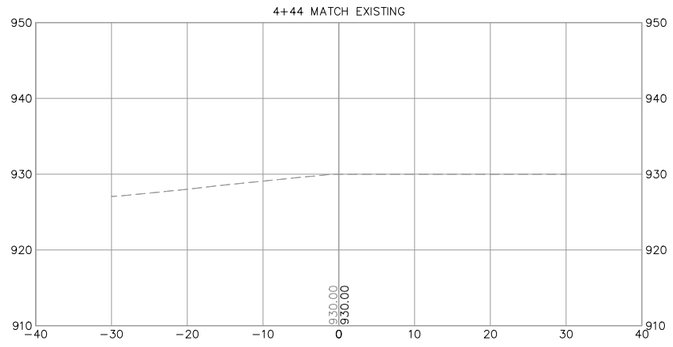
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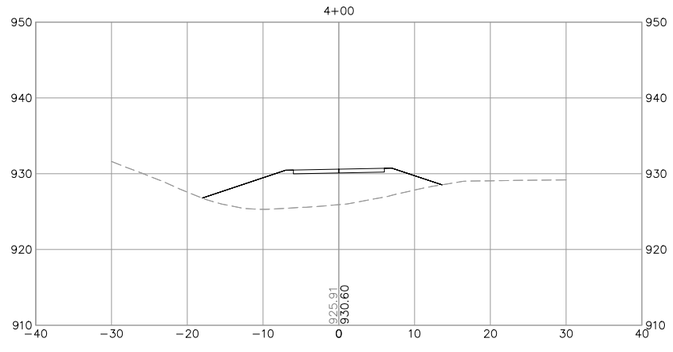
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TIN CUP TRAIL PEDESTRIAN BRIDGE
CROSS SECTIONS

DWG. NO.
5

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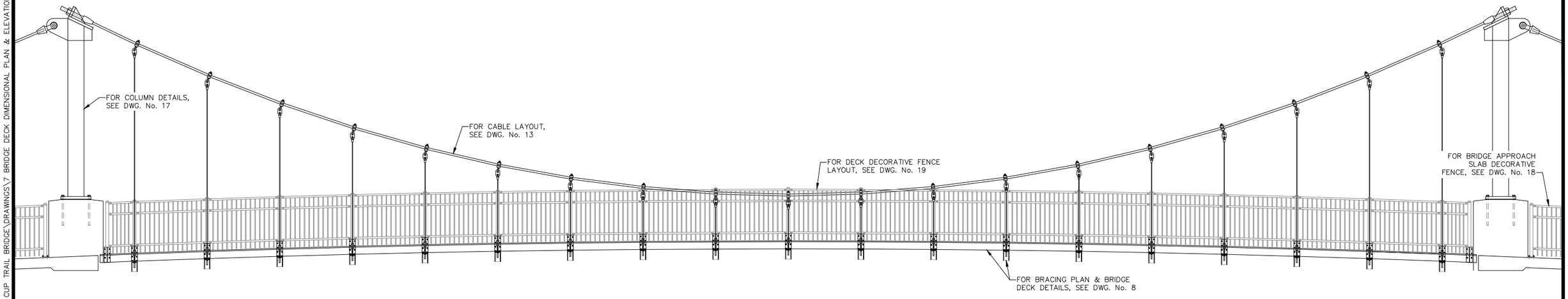
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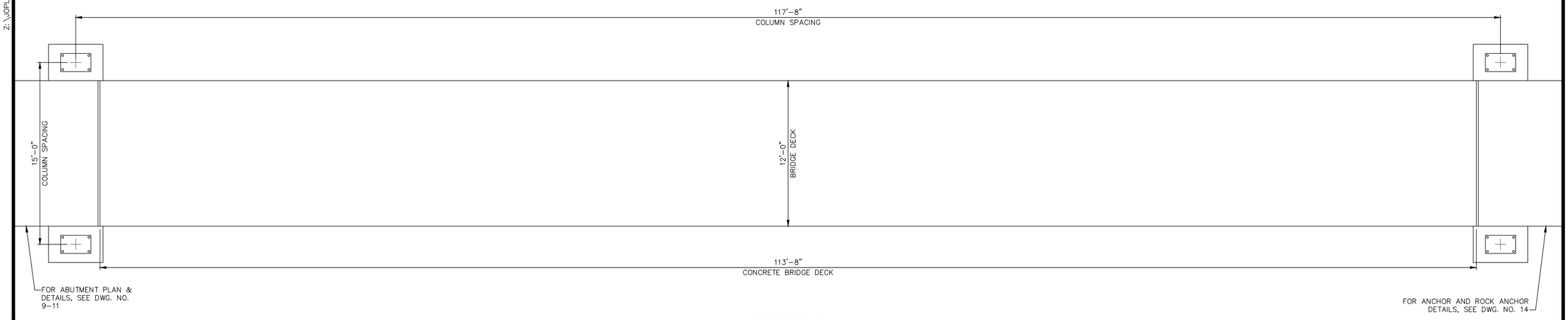
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CROSS SECTIONS

DWG. NO.
6

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BRIDGE ELEVATION



BRIDGE PLAN

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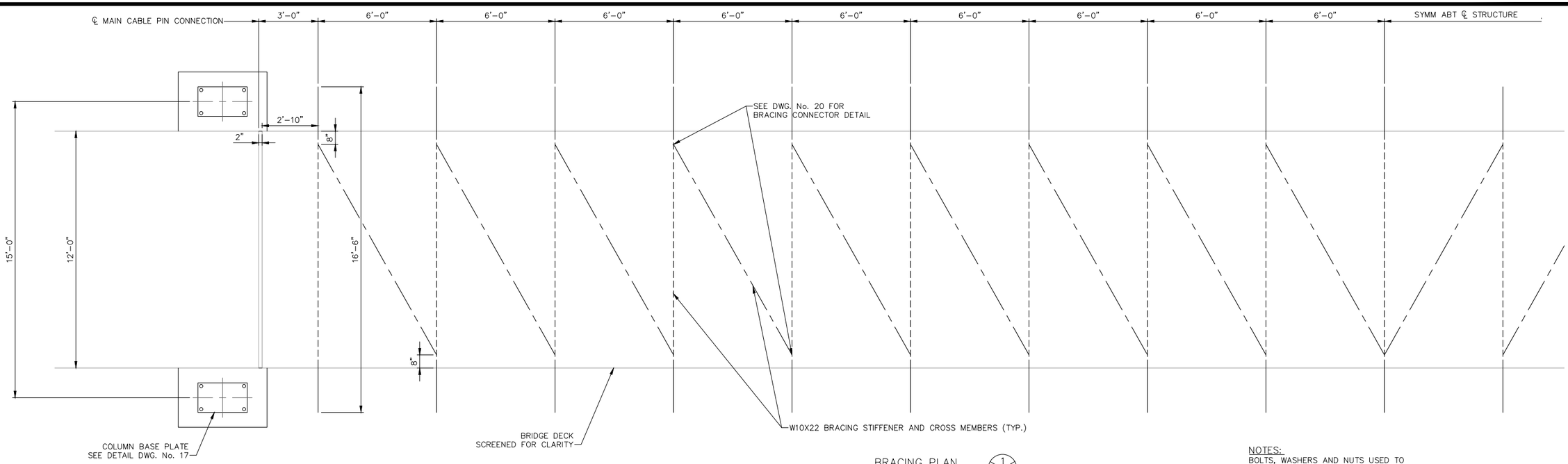
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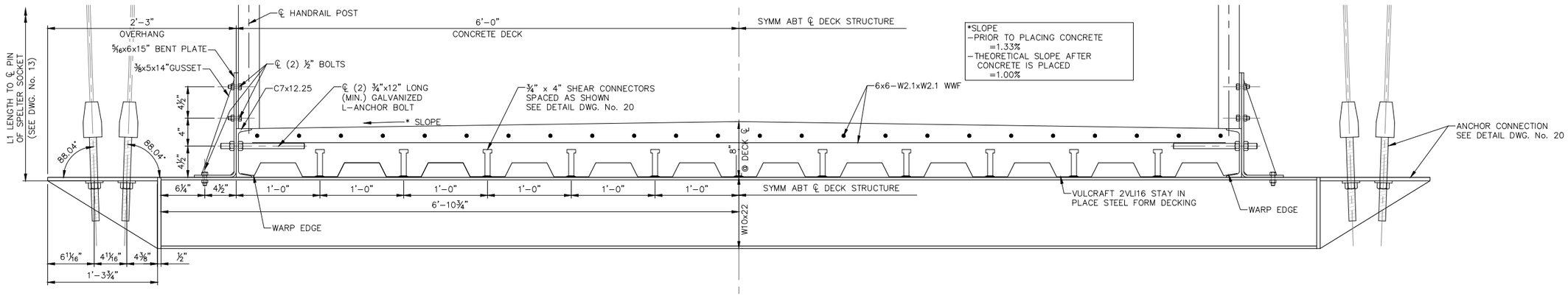
TIN CUP TRAIL PEDESTRIAN BRIDGE
BRIDGE DECK DIMENSIONAL PLAN & ELEVATION

DWG. NO. 7



BRACING PLAN (1/8)

NOTES:
BOLTS, WASHERS AND NUTS USED TO FASTEN BRACING, EDGE CHANNEL, CROSS MEMBER, HANDRAIL AND BRACKETS SHALL BE ASTM A307.



CROSS MEMBER DETAIL (1/8)

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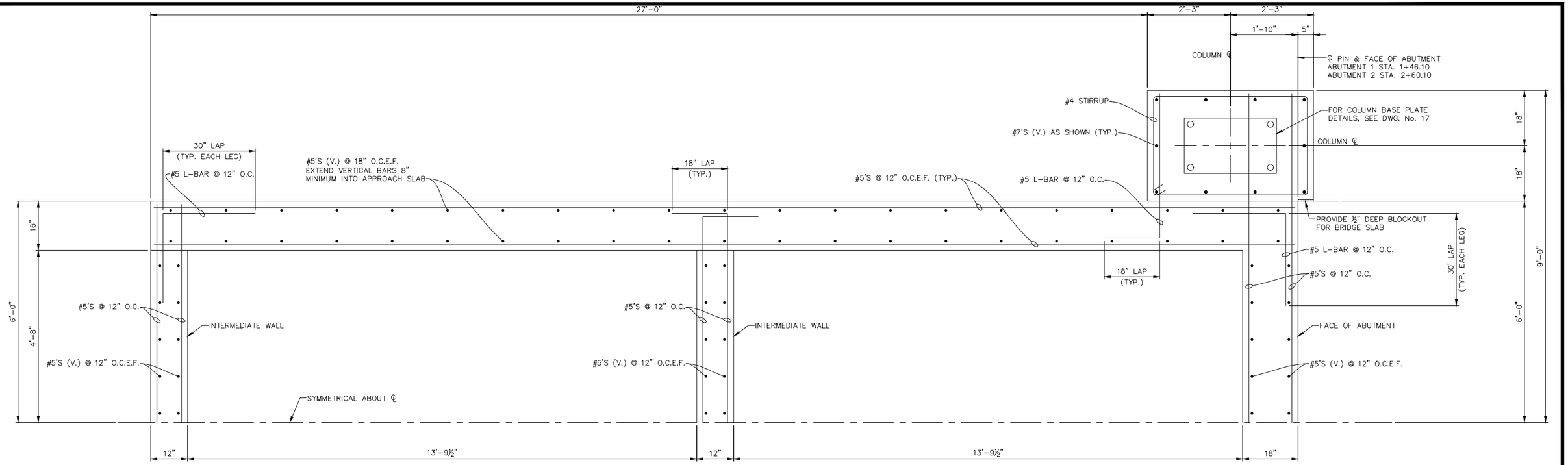
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TIN CUP TRAIL PEDESTRIAN BRIDGE
BRIDGE BRACING PLAN & CROSS MEMBER DETAIL

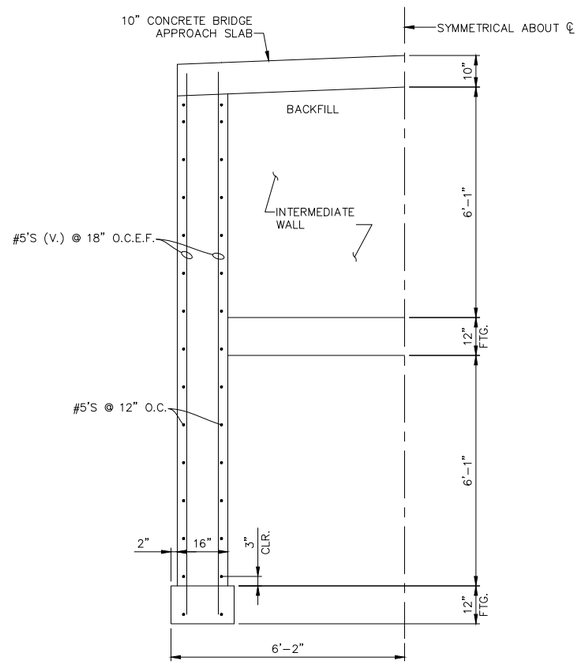
DWG. NO. 8

Z:\JOPLIN MO\CITY OF JOPLIN\TRANSPORTATION\TIN CUP TRAIL BRIDGE\DRAWINGS\8 BRIDGE BRACING PLAN & CROSS MEMBER DETAIL.DWG

Z:\JOPLIN MO\CITY OF JOPLIN\TRANSPORTATION\TIN CUP TRAIL BRIDGE\DRAWINGS\9 ABUTMENT PLAN.DWG



ABUTMENT HALF PLAN



ELEVATION VIEW ABUTMENT @ INTERMEDIATE WALL

CIVIL ENGINEER: MICHAEL ATKINSON
LICENSE NO. E-2000149997

STATE OF MISSOURI
MICHAEL R. ATKINSON
NUMBER
E-2000149997
REGISTERED PROFESSIONAL ENGINEER

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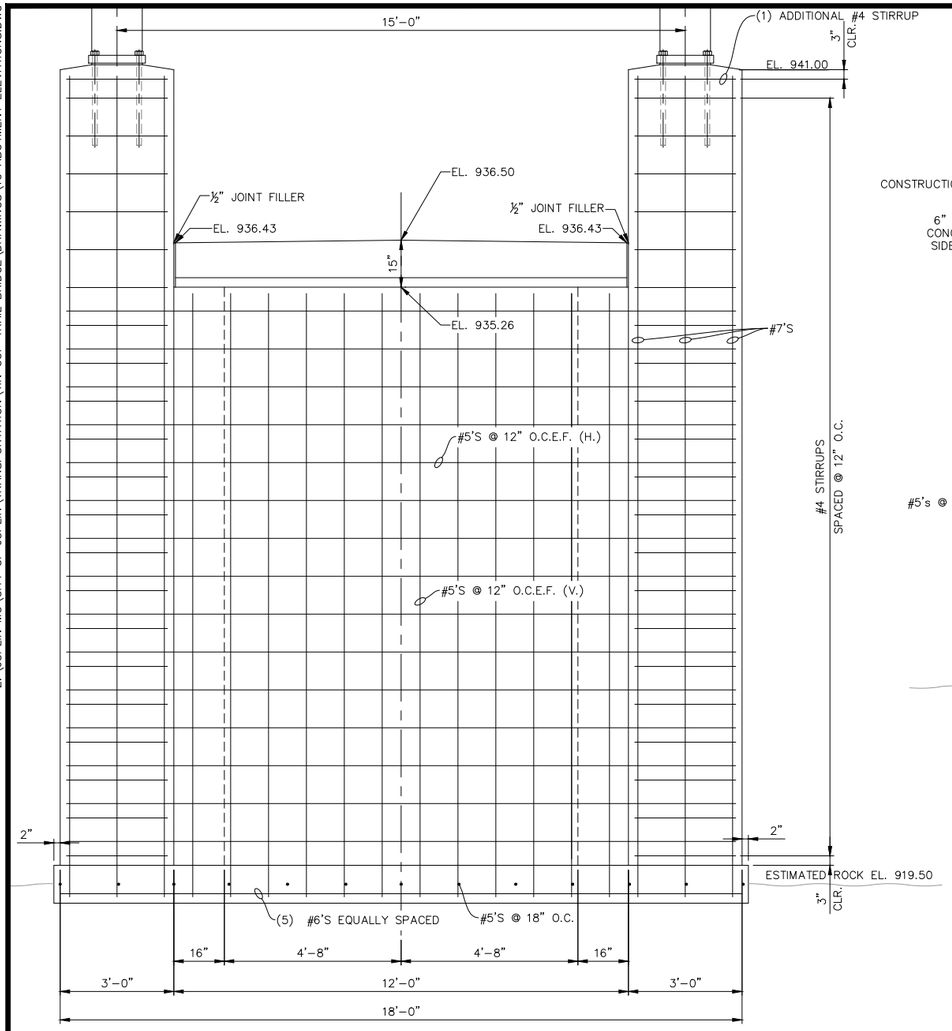
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TIN CUP TRAIL PEDESTRIAN BRIDGE

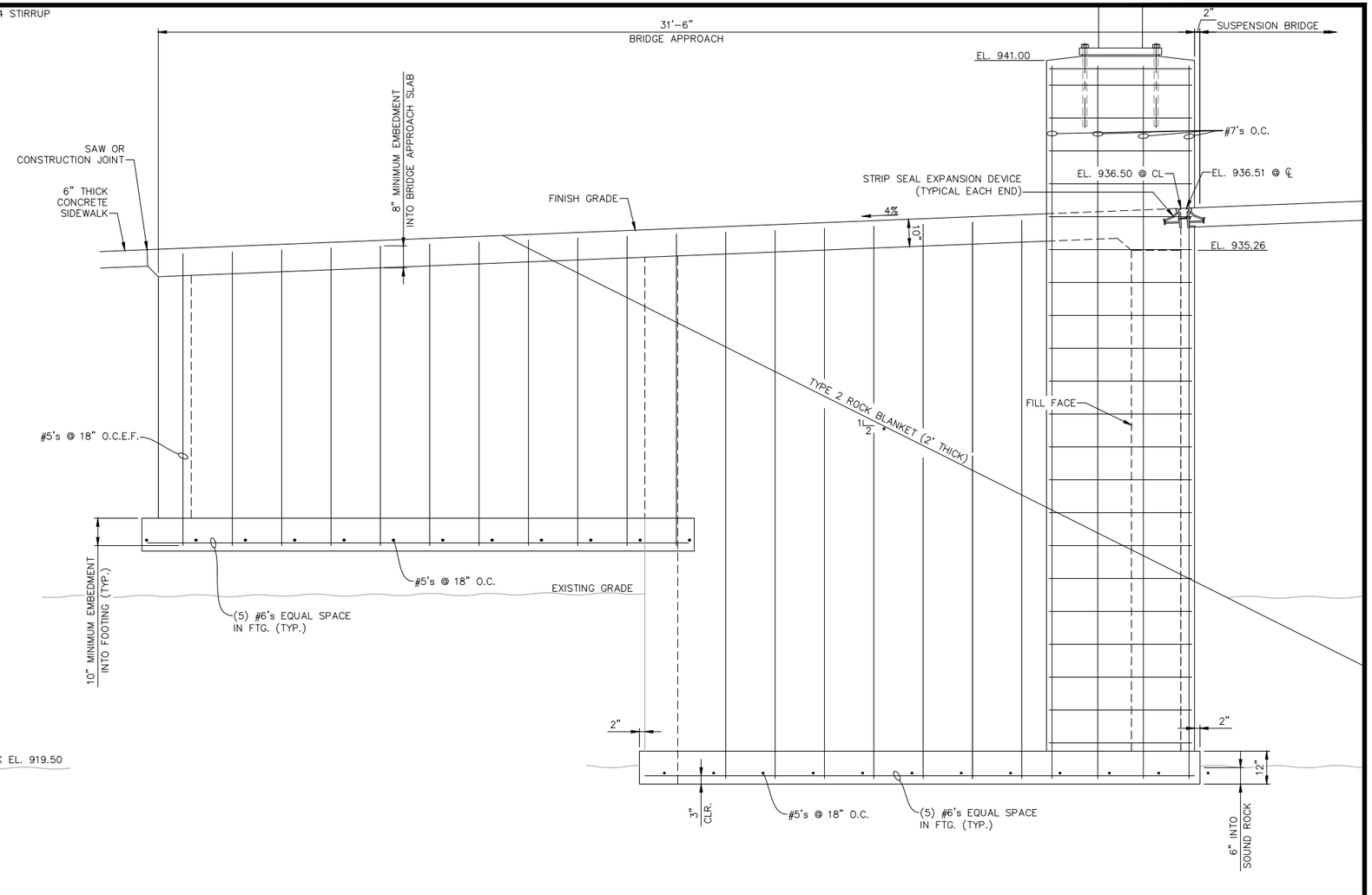
ABUTMENT PLAN

DWG. NO.
9

Z:\JOPLIN MO\CITY OF JOPLIN\TRANSPORTATION\TIN CUP TRAIL BRIDGE\DRAWINGS\10 ABUTMENT ELEVATIONS.DWG



FRONT ELEVATION VIEW OF ABUTMENT
NTS



ELEVATION VIEW ALONG WINGWALL
NTS

* HEIGHT OF INTERIOR FILL SHALL MATCH SLOPE AND ELEVATION OF EXTERIOR FILL ± 1'

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LICENSE NO. E-2000149997

STATE OF MISSOURI
MICHAEL R. ATKINSON
NUMBER E-2000149997
1-5-24
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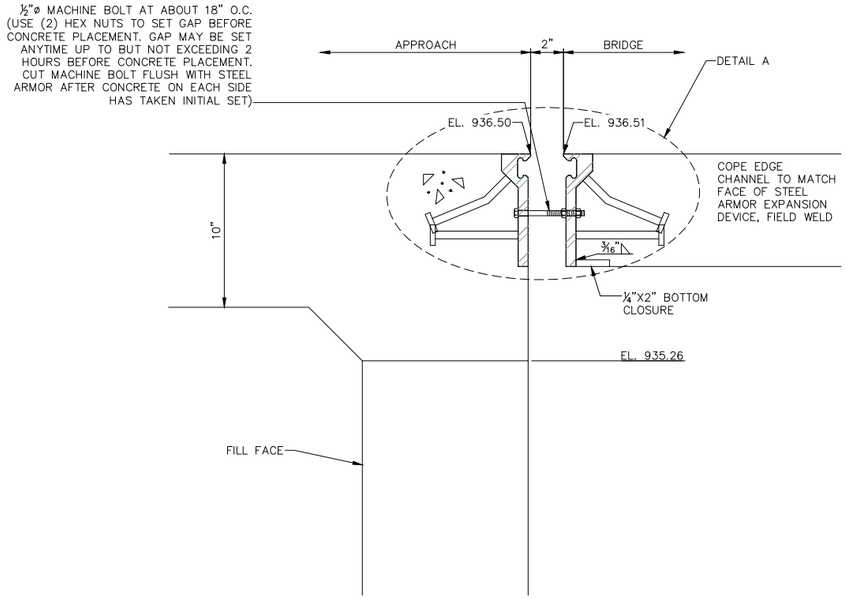
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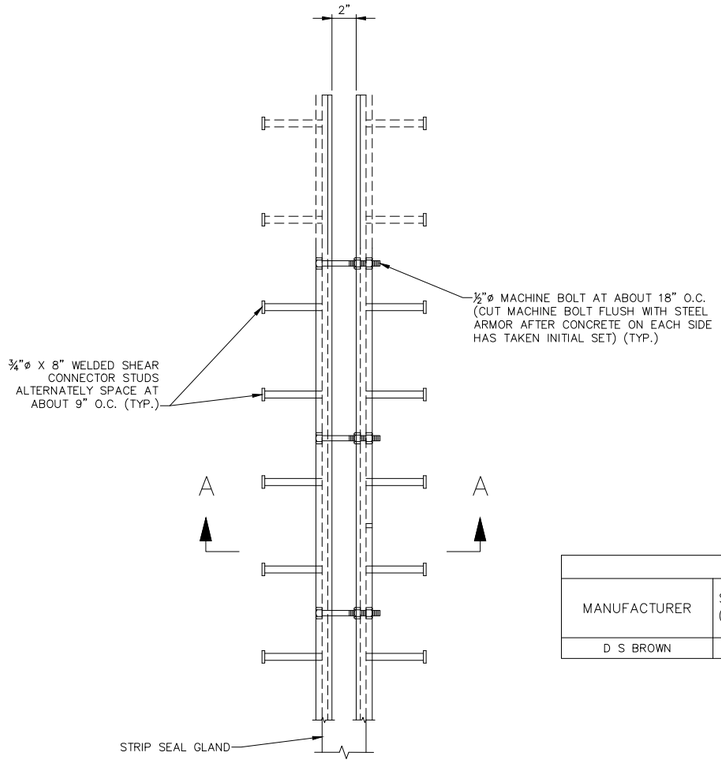
TIN CUP TRAIL PEDESTRIAN BRIDGE
ABUTMENT ELEVATIONS

DWG. NO. 10

Z:\JOPLIN MO\CITY OF JOPLIN\TRANSPORTATION\TIN CUP TRAIL BRIDGE\DRAWINGS\11 STRIP SEAL EXPANSION JOINT SYSTEM DETAILS AT ABUTMENTS.DWG



SECTION A–A



PART PLAN

GENERAL NOTES:

EXPANSION JOINT SYSTEM SHALL BE FABRICATED IN ONE SECTION. A COMPLETE JOINT PENETRATION GROOVE WELDED SPLICE SHALL BE REQUIRED. WELDS SHALL BE GROUND FLUSH TO PROVIDE A SMOOTH SURFACE. THE EXPANSION JOINT SYSTEM SHALL BE FABRICATED AND INSTALLED TO THE CROWN AND GRADE OF THE ROADWAY.

THE STRIP SEAL GLAND SHALL BE INSTALLED IN JOINTS IN ONE CONTINUOUS PIECE WITHOUT FIELD SPLICES. FACTORY SPLICING WILL BE PERMITTED FOR JOINTS IN EXCESS OF 53 FEET.

STRUCTURAL STEEL FOR THE EXPANSION JOINT SYSTEM SHALL BE ASTM A709 GRADE 36 EXCEPT THE STEEL ARMOR MAY BE ASTM A709 GRADE 50W. ANCHORS FOR THE EXPANSION JOINT SYSTEM SHALL BE IN ACCORDANCE WITH SEC 1037. STRIP SEAL EXPANSION JOINT SYSTEM SHALL BE IN ACCORDANCE WITH SEC 717.

STRUCTURAL STEEL FOR THE EXPANSION JOINT SYSTEM SHALL BE COATED WITH A MINIMUM OF TWO COATS OF INORGANIC ZINC PRIMER TO PROVIDE A TOTAL DRY FILM THICKNESS OF 4 MILS MINIMUM, 6 MILS MAXIMUM, OR GALVANIZED IN ACCORDANCE WITH ASTM A123. ANCHORS NEED NOT BE PROTECTED FROM OVERSPRAY.

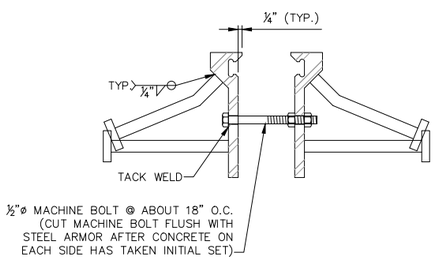
LONGITUDINAL REINFORCING STEEL SHALL BE PLACED SO THAT ENDS SHALL BE 1" FROM THE VERTICAL LEG OF THE STEEL ARMOR AT THE EXPANSION JOINT SYSTEM.

CONCRETE SHALL BE FORCED UNDER AND AROUND STEEL ARMOR AND ANCHORS. PROPER CONSOLIDATION OF THE CONCRETE SHALL BE ACHIEVED BY LOCALIZED INTERNAL VIBRATION.

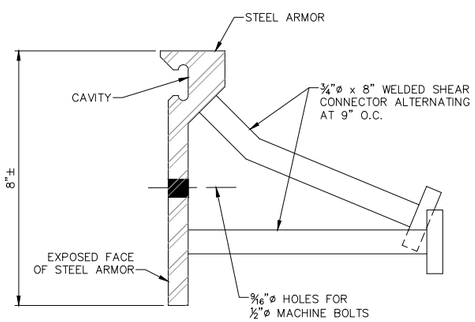
THE INSTALLATION TEMPERATURE SHALL BE TAKEN AS THE ACTUAL AIR TEMPERATURE AVERAGED OVER THE 24–HOUR PERIOD IMMEDIATELY PRECEDING INSTALLATION.

STEEL ARMOR MAY ALSO BE REFERRED TO AS EXTRUSION OR RAIL.

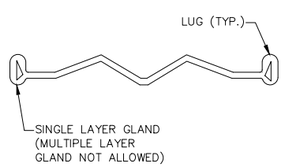
EXPANSION TABLE								
MANUFACTURER	STRIP SEAL SYSTEM (DESIGNATED NAME)	MOVEMENT PARALLEL TO ROADWAY	ALLOWED INSTALLATION GAP NORMAL TO JOINT AT ROADWAY SURFACE @ AIR/SURFACE TEMPERATURE					
			@ 40°F	@ 50°F	@ 60°F	@ 70°F	@ 80°F	@ 90°F
D S BROWN	STRIP SEAL L2-4000	1/2"	2-3/16"	2-1/16"	2"	1-15/16"	1-13/16"	1-11/16"



DETAIL A



DETAIL OF JOINT ARMOR



DETAIL OF GLAND

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MICHAEL RAY ATKINSON
NUMBER E-2000149997
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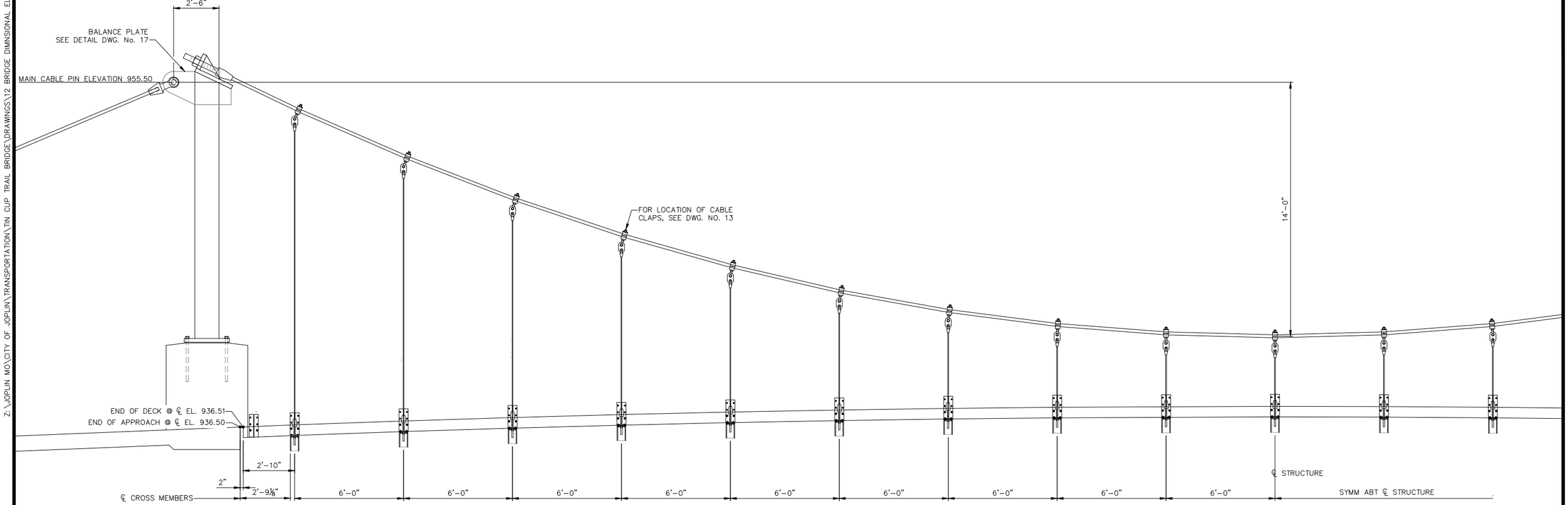
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DWG. NO. 11

Z:\JOPLIN MO\CITY OF JOPLIN\TRANSPORTATION\TIN CUP TRAIL BRIDGE\DRAWINGS\12 BRIDGE DIMNSIONAL ELEVATION.DWG



BRIDGE ELEVATION
NTS

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LICENSE NO. E-2000149997

STATE OF MISSOURI
MICHAEL R. ATKINSON
NUMBER
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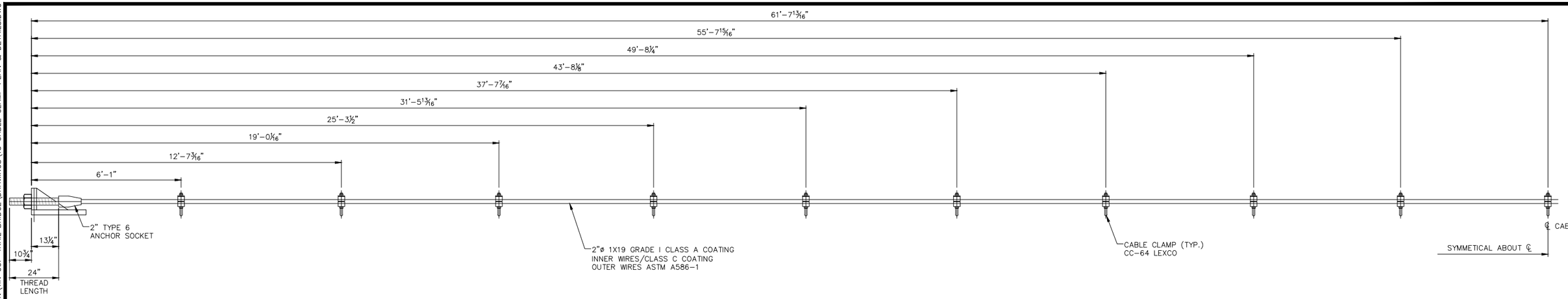
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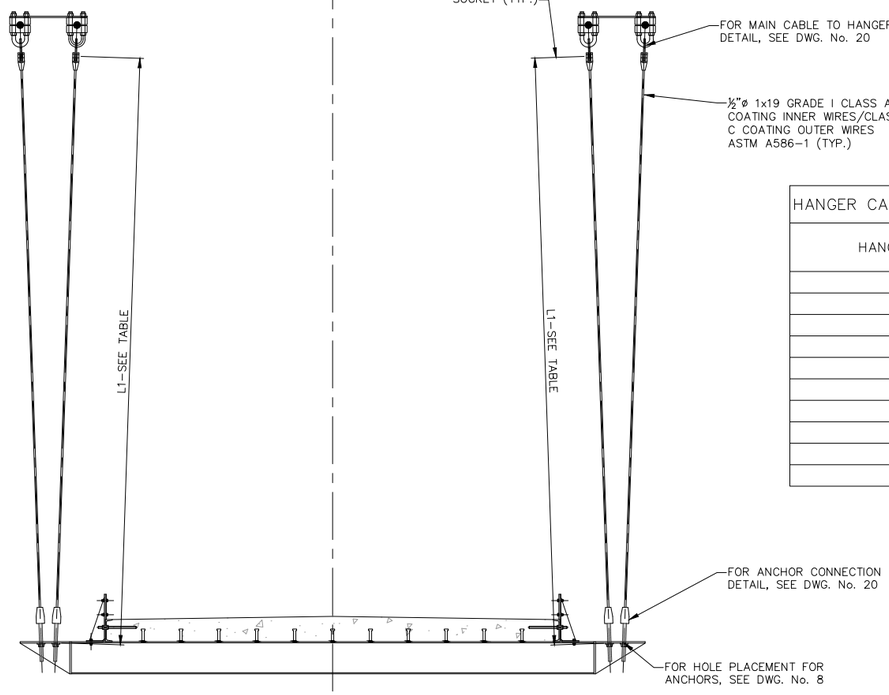
TIN CUP TRAIL PEDESTRIAN BRIDGE
BRIDGE DIMNSIONAL ELEVATION

DWG. NO.
12

Z:\JOPLIN MO\CITY OF JOPLIN\TRANSPORTATION\TIN CUP TRAIL BRIDGE\DRAWINGS\13 CABLE CLAMP PLAN & DETAILS.DWG



CABLE CLAMP LAYOUT ON MAIN CABLE
NTS



HANGER CABLE ASSEMBLY DETAIL
NTS

HANGER CABLE ASSEMBLY THEORETICAL LENGTHS	
HANGER NOS.	L1 – MAIN CABLE UPPER PIN TO LOWER NUT
1,19	17'-2 3/8"
2,18	14'-4 3/8"
3,17	11'-10 1/4"
4,16	9'-8 3/16"
5,15	7'-10 5/8"
6,14	6'-4 1/16"
7,13	5'-2 1/16"
8,12	4'-4 1/16"
9,11	3'-10 3/16"
10	3'-8"

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LICENSE NO. E-2000149997

STATE OF MISSOURI
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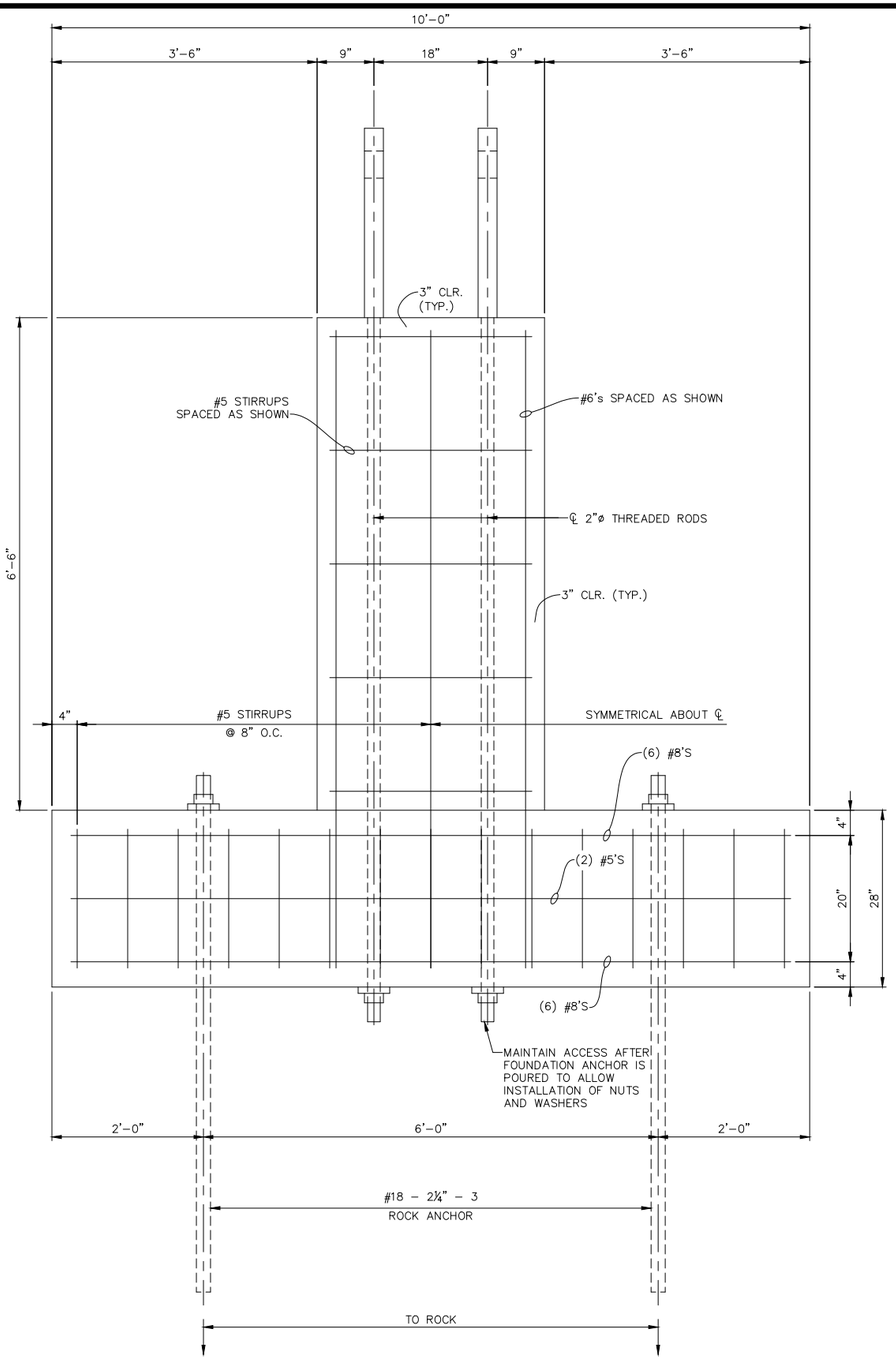
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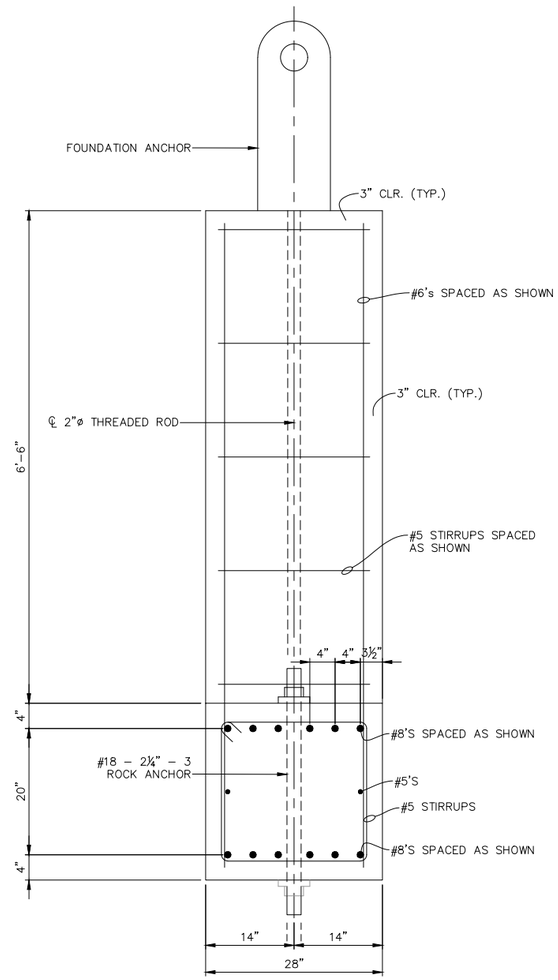
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TIN CUP TRAIL PEDESTRIAN BRIDGE
CABLE CLAMP PLAN & DETAILS

DWG. NO. 13



FOUNDATION ANCHOR ELEVATION
NTS



FOUNDATION ANCHOR STRUCTURAL DETAIL
NTS

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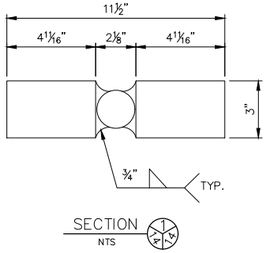
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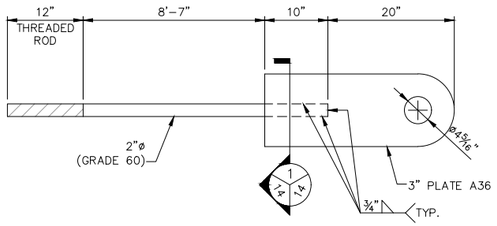
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FOUNDATION ANCHOR STRUCTURAL DETAILS

DWG. NO.
14

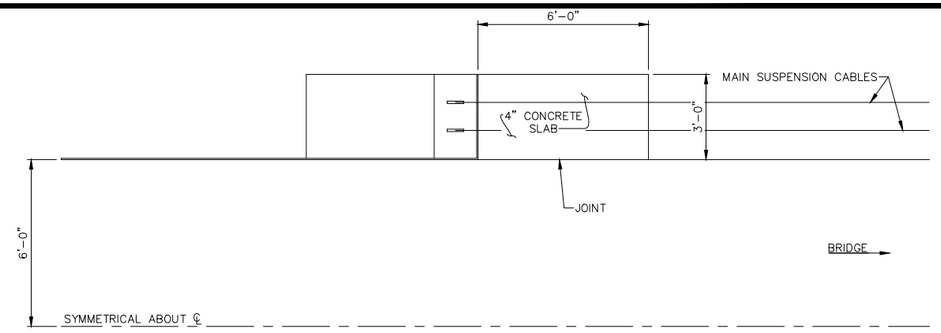
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Z:\JOPLIN MO\CITY OF JOPLIN\TRANSPORTATION\TIN CUP TRAIL BRIDGE\DRAWINGS\15 FOUNDATION ANCHOR DETAILS.DWG

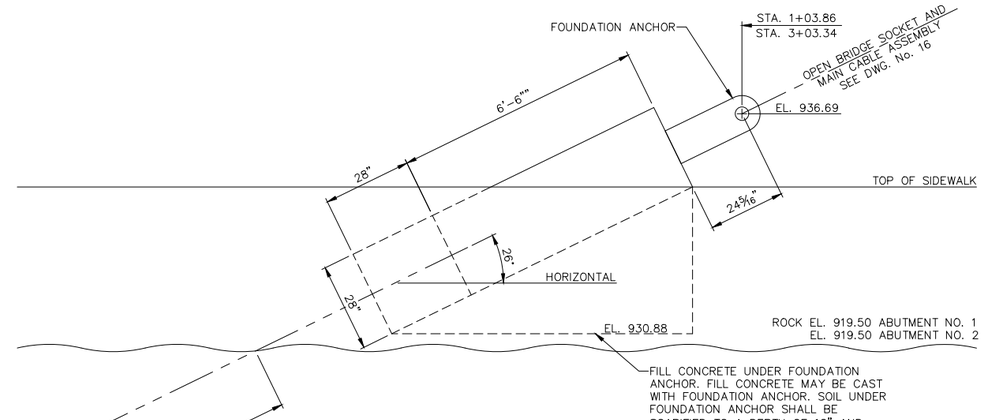




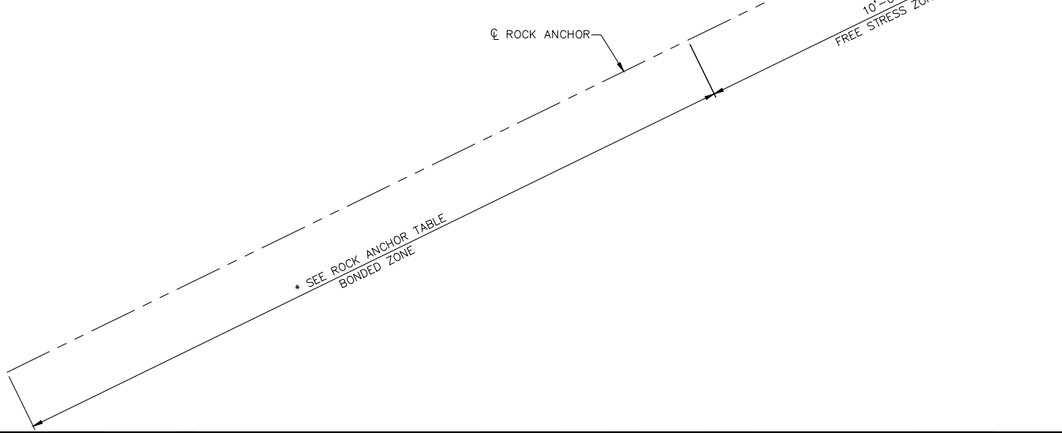
FOUNDATION ANCHOR DETAIL
NTS



PIN ANCHOR LOCATION
NTS



FOUNDATION ANCHOR LAYOUT DETAIL
NTS



Rock Anchor Table	
Hole Diameter (In)	Bonded Zone Length (ft)
5	28
6	24
7	20
8	18
9	16
10	14
11	13
12	12

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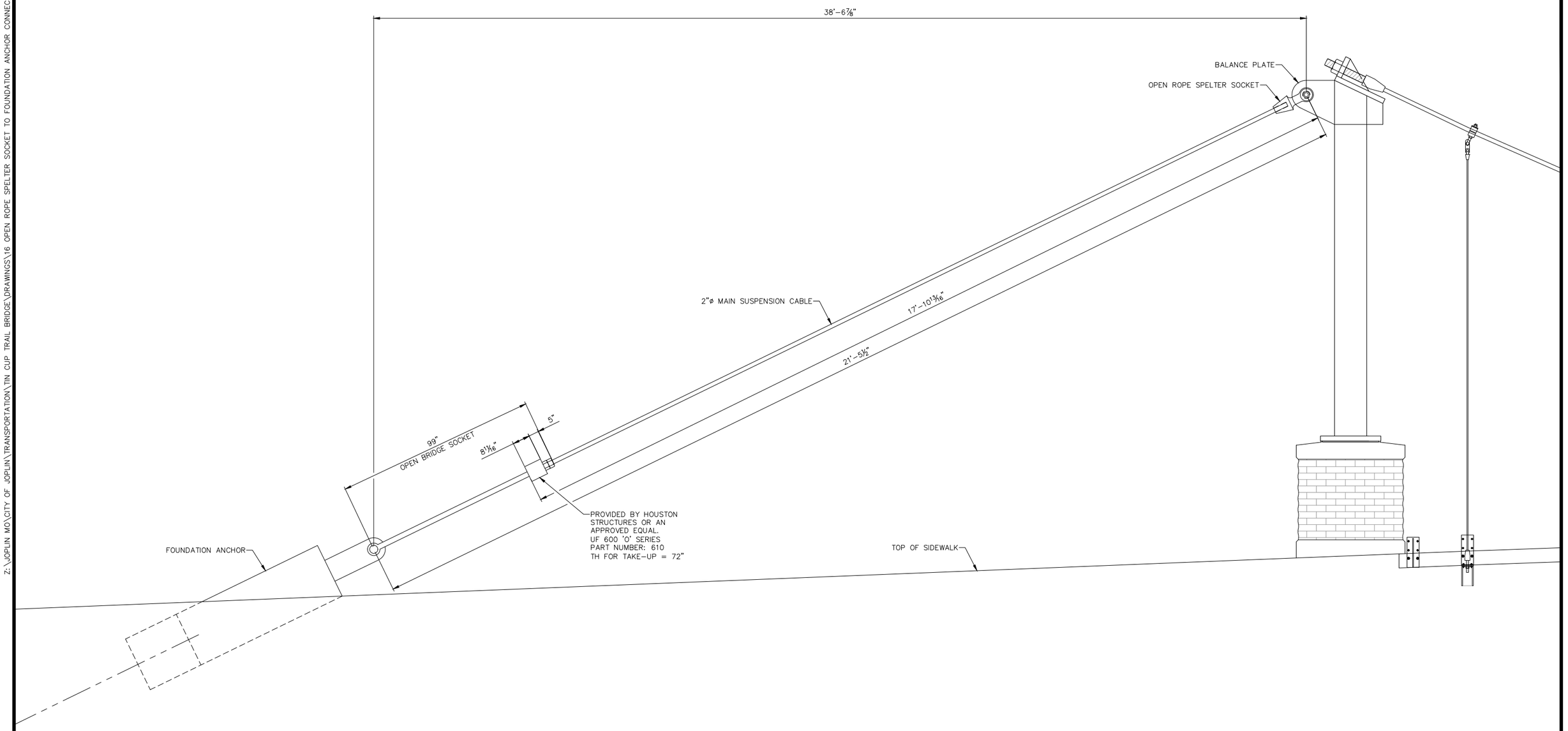
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TIN CUP TRAIL PEDESTRIAN BRIDGE
FOUNDATION ANCHOR DETAILS

DWG. NO.
15

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OPEN ROPE SPELTER TO FOUNDATION ANCHOR CONNECTION
NTS

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MICHAEL R. ATKINSON
NUMBER E-2000149997
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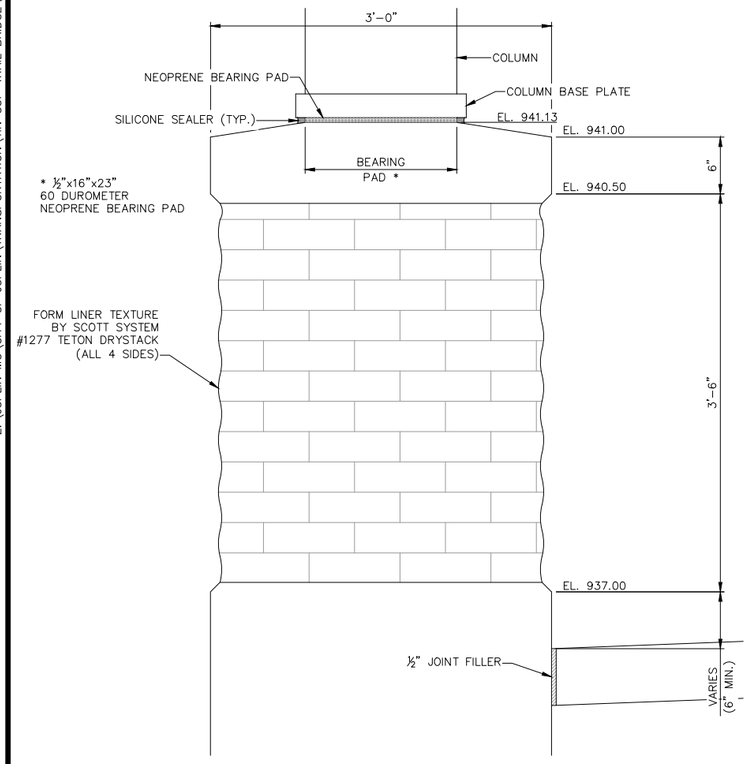
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TIN CUP TRAIL PEDESTRIAN BRIDGE
OPEN ROPE SPELTER SOCKET TO FOUNDATION ANCHOR CONNECTION

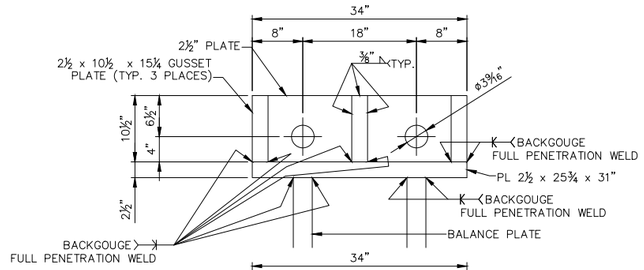
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FORM LINER ON COLUMN DETAIL
NTS

NOTES:
BOLTS, WASHERS AND NUTS USED TO FASTEN BRACING TOGETHER SHALL BE ASTM A325.



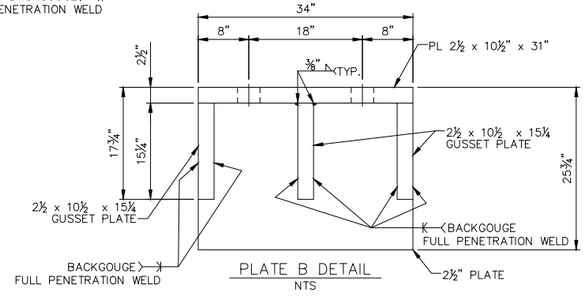
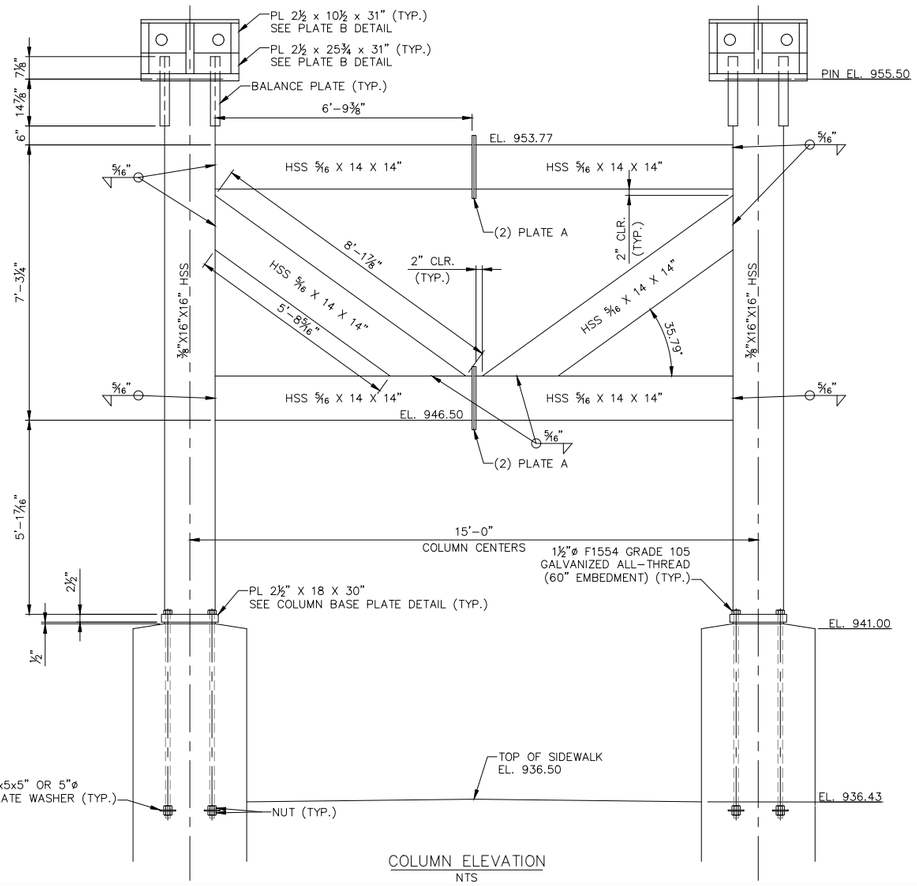


PLATE B DETAIL
NTS



COLUMN ELEVATION
NTS

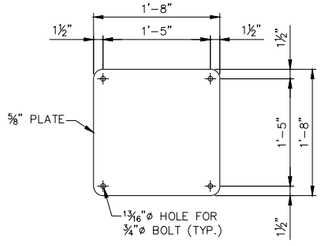
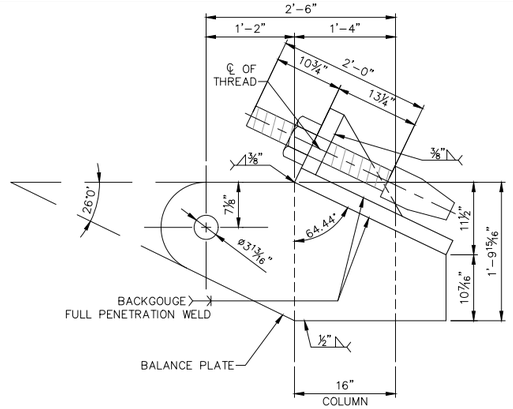
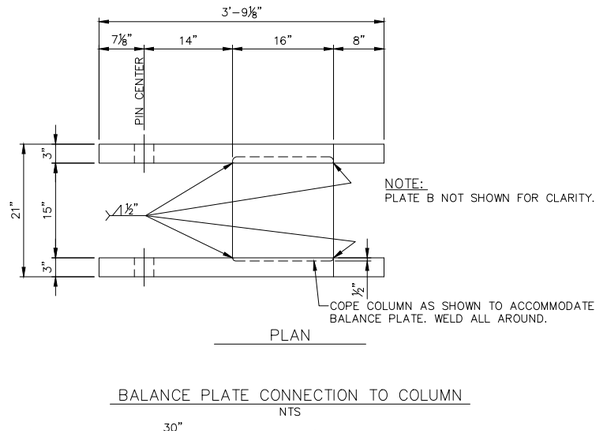


PLATE A DETAIL
NTS



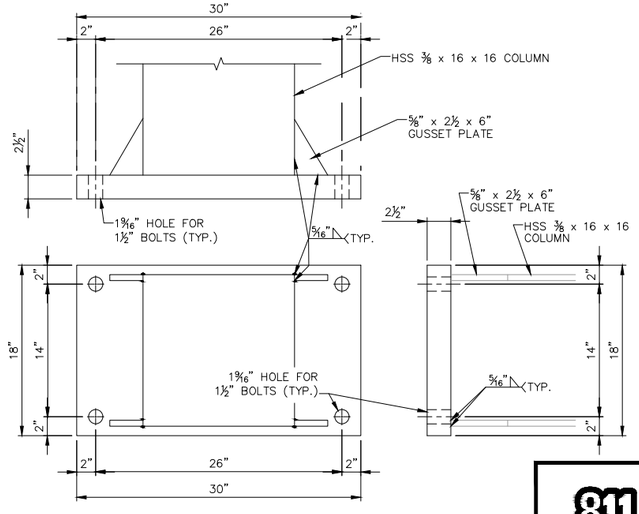
ELEVATION



NOTE:
PLATE B NOT SHOWN FOR CLARITY.

PLAN

BALANCE PLATE CONNECTION TO COLUMN
NTS



NOTE:
FOR COLUMN BASE PLATE ORIENTATION, SEE DWG. No. 9

COLUMN BASE PLATE
NTS

CIVIL ENGINEER: MICHAEL ATKINSON
LICENSE NO. E-2000149997

STATE OF MISSOURI
MICHAEL ATKINSON
NUMBER E-2000149997
11-5-24
REGISTERED PROFESSIONAL ENGINEER
Tin Cup Trail Bridge

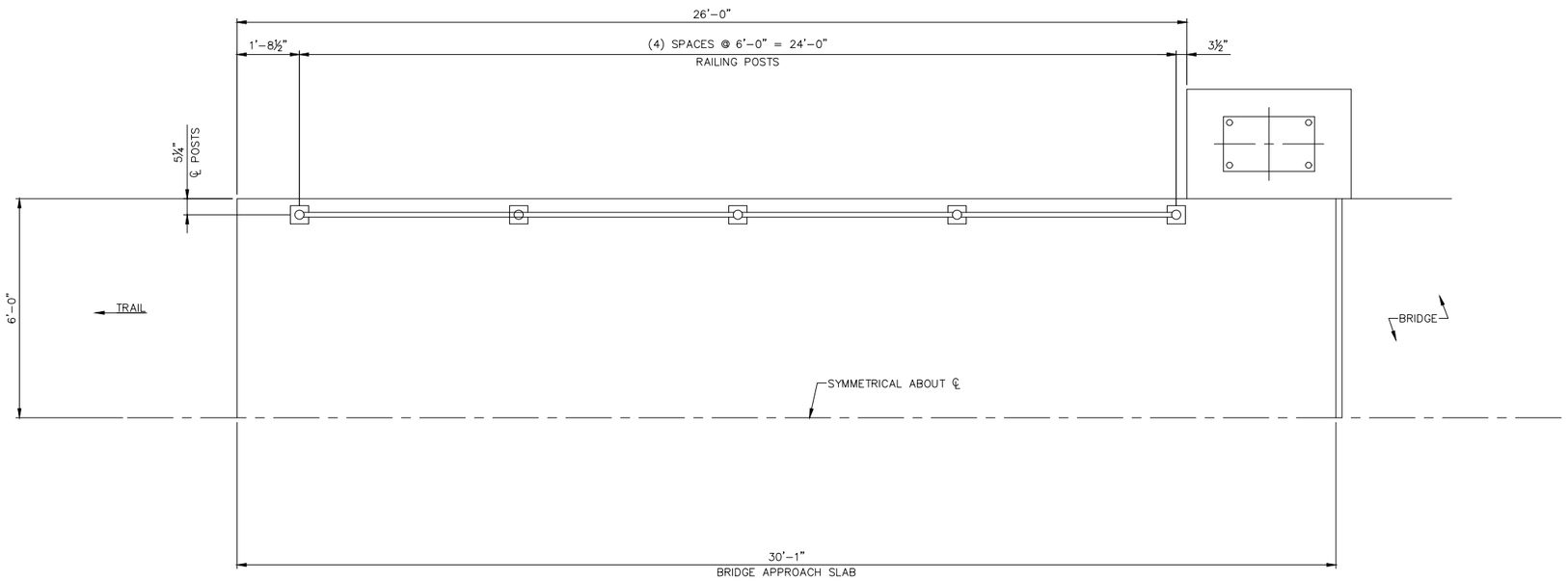
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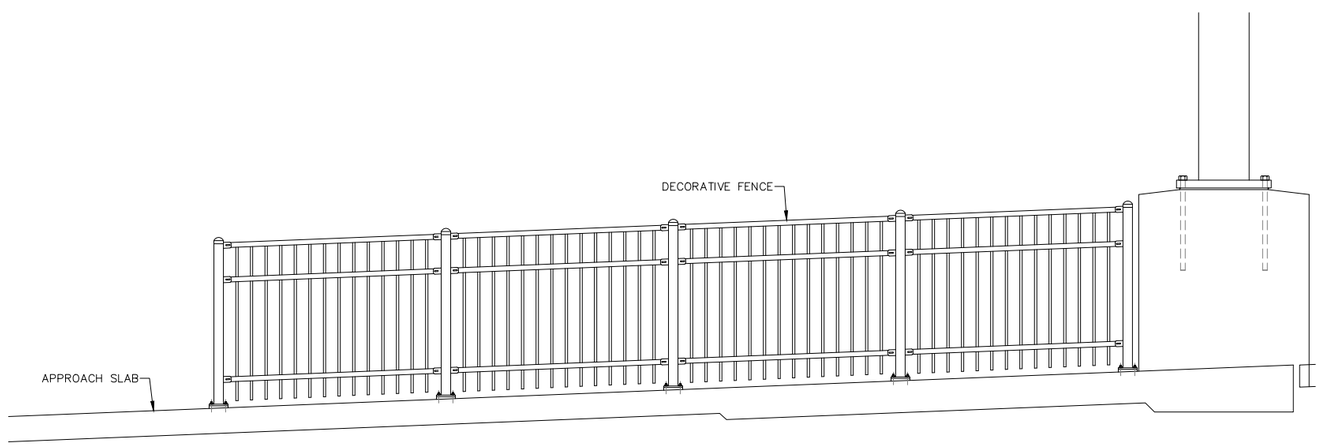
REV DATE:	REVISION:	DWN BY:	AWW
		CKD BY:	MRA
		APD BY:	MRA
		DATE:	01/05/2024

TIN CUP TRAIL PEDESTRIAN BRIDGE
COLUMN DETAILS

DWG. NO. 17



BRIDGE APPROACH SLAB DECORATIVE FENCE LAYOUT
NTS



BRIDGE APPROACH SLAB DECORATIVE FENCE ELEVATION
NTS

CIVIL ENGINEER: MICHAEL ATKINSON
LICENSE NO. E-2000149997

STATE OF MISSOURI
MICHAEL R. ATKINSON
NUMBER
E-2000149997
REGISTERED PROFESSIONAL ENGINEER
1-5-24
Tin Cup Trail Bridge

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CERTIFICATE OF AUTHORITY
MISSOURI NO. 000427

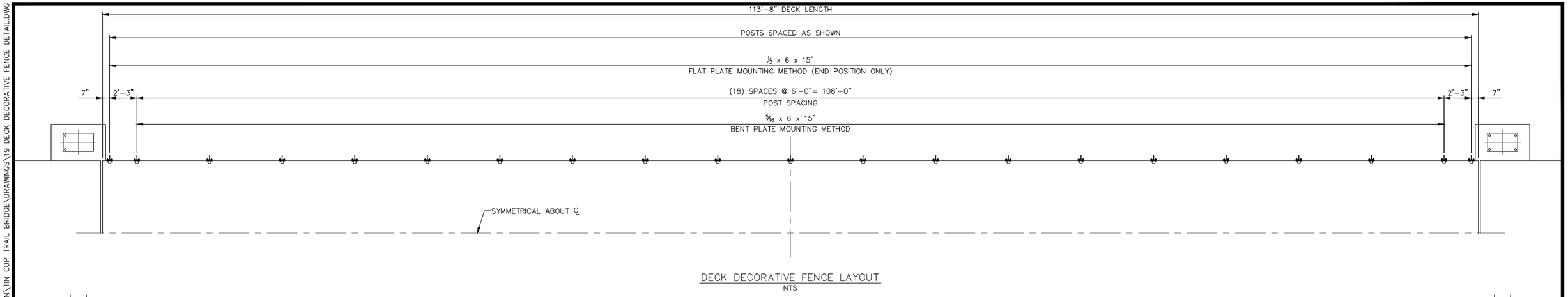
REV DATE:	REVISION:	DWN BY:	AWW
		CKD BY:	MRA
		APD BY:	MRA
		DATE:	01/05/2024

TIN CUP TRAIL PEDESTRIAN BRIDGE
BRIDGE APPROACH SLAB DECORATIVE FENCE

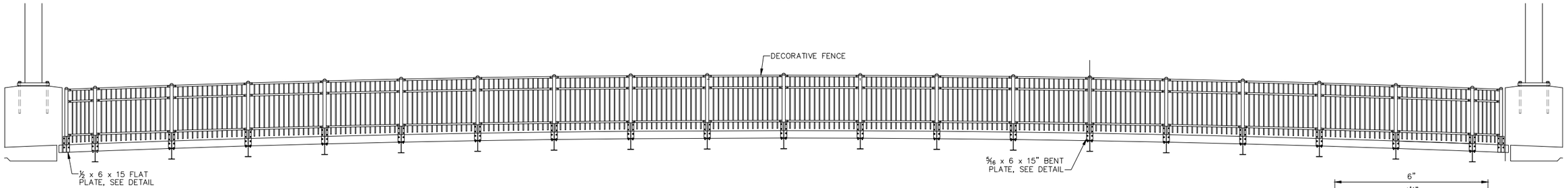
DWG. NO.
18

Z:\JOPLIN MO\CITY OF JOPLIN\TRANSPORTATION\TIN CUP TRAIL BRIDGE\DRAWINGS\18 BRIDGE APPROACH SLAB DECORATIVE FENCE.DWG

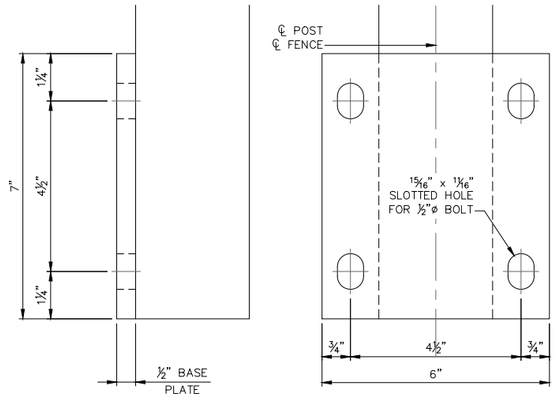
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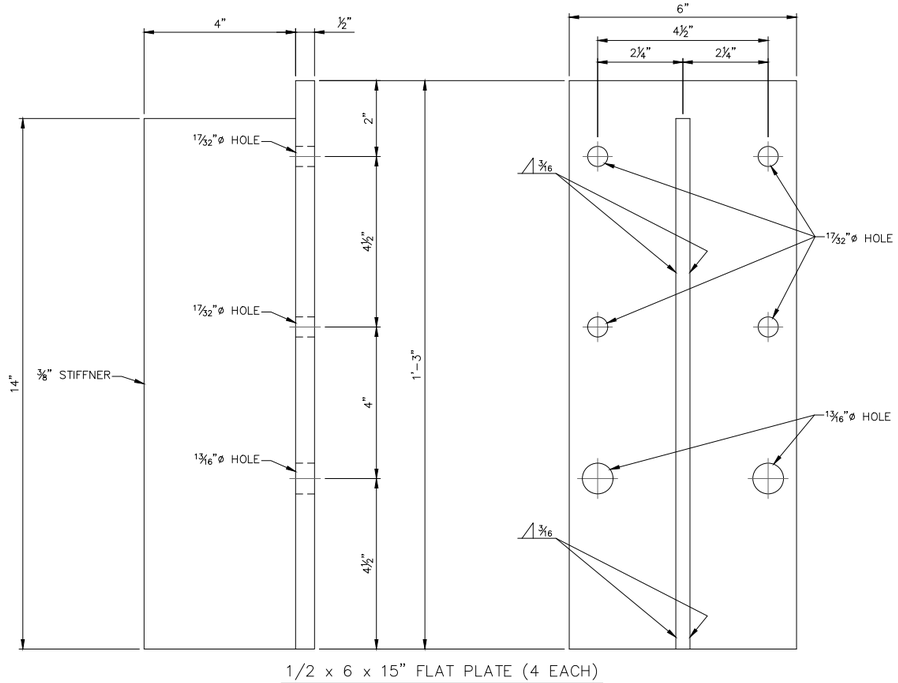
DECK DECORATIVE FENCE LAYOUT
NTS



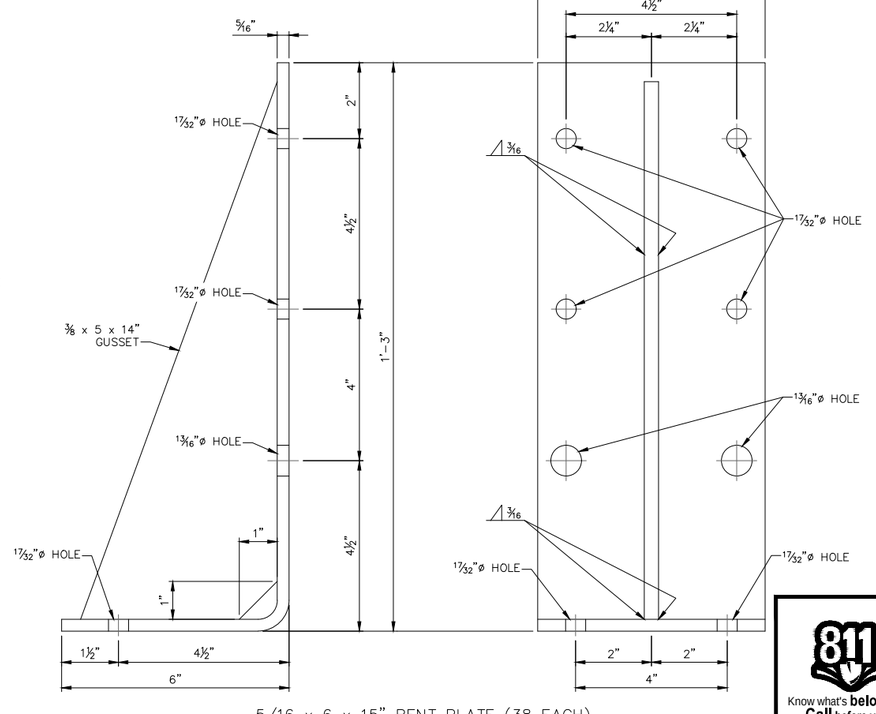
DECK DECORATIVE FENCE ELEVATION
NTS



POST BASE PLATE
NTS



1/2 x 6 x 15" FLAT PLATE (4 EACH)
NTS



5/16 x 6 x 15" BENT PLATE (38 EACH)
NTS

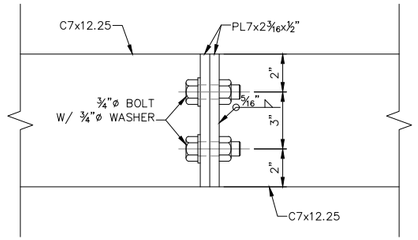
CIVIL ENGINEER: MICHAEL ATKINSON
LICENSE NO. E-2000149997

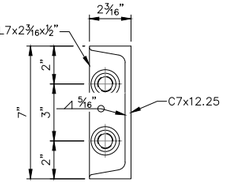
STATE OF MISSOURI
MICHAEL WILLIAM ATKINSON
NUMBER E-2000149997
REGISTERED PROFESSIONAL ENGINEER

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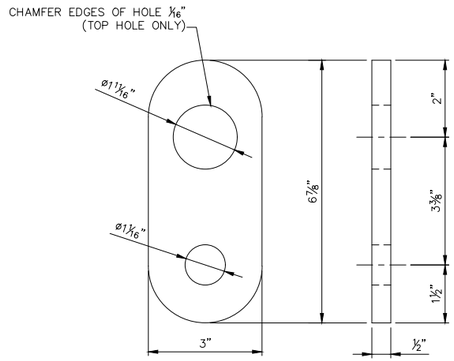
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Z:\JOPLIN MO\CITY OF JOPLIN\TRANSPORTATION\TIN CUP TRAIL BRIDGE\DRAWINGS\20 CONSTRUCTION DETAILS.DWG

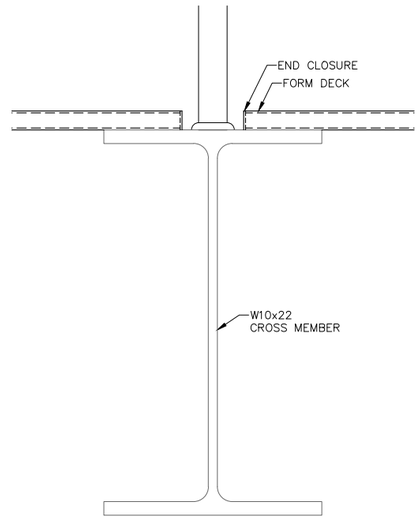




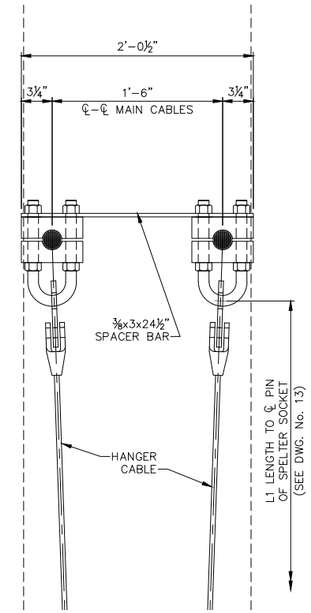
CHANNEL SPLICE CONNECTION DETAIL
NTS



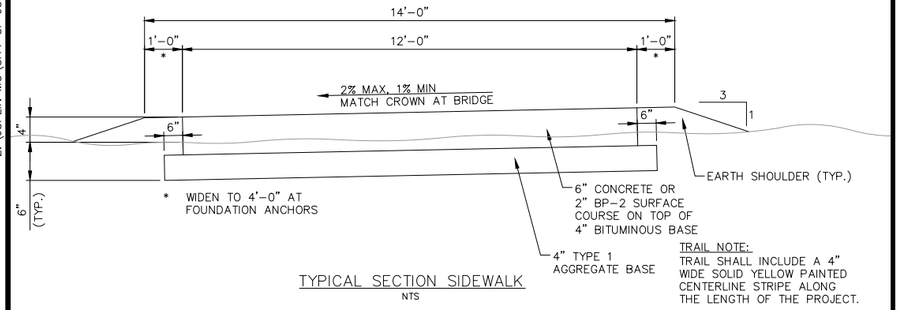
CLAMP LINK DETAIL
NTS



CROSS SECTION THRU W10x22
SHOWING FORM DECK LIMITS
NTS

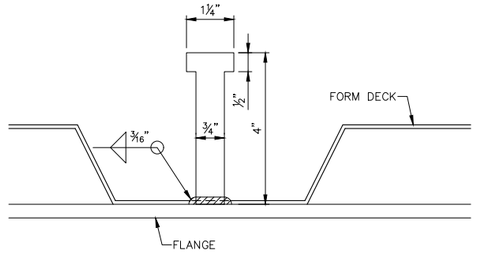


MAIN CABLE TO HANGER DETAIL
NTS

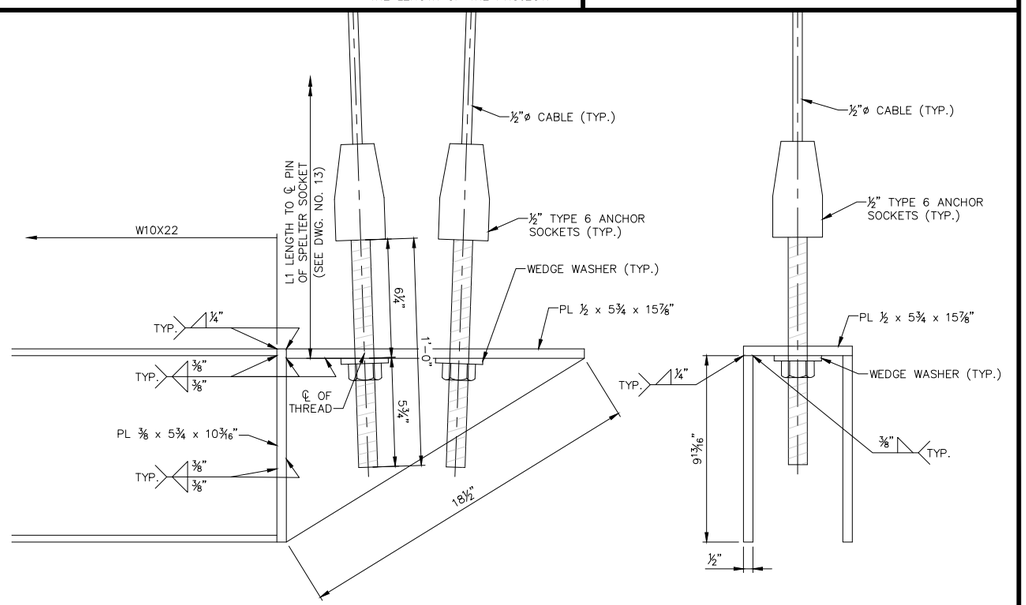


TRAIL NOTE:
TRAIL SHALL INCLUDE A 4" WIDE SOLID YELLOW PAINTED CENTERLINE STRIPE ALONG THE LENGTH OF THE PROJECT.

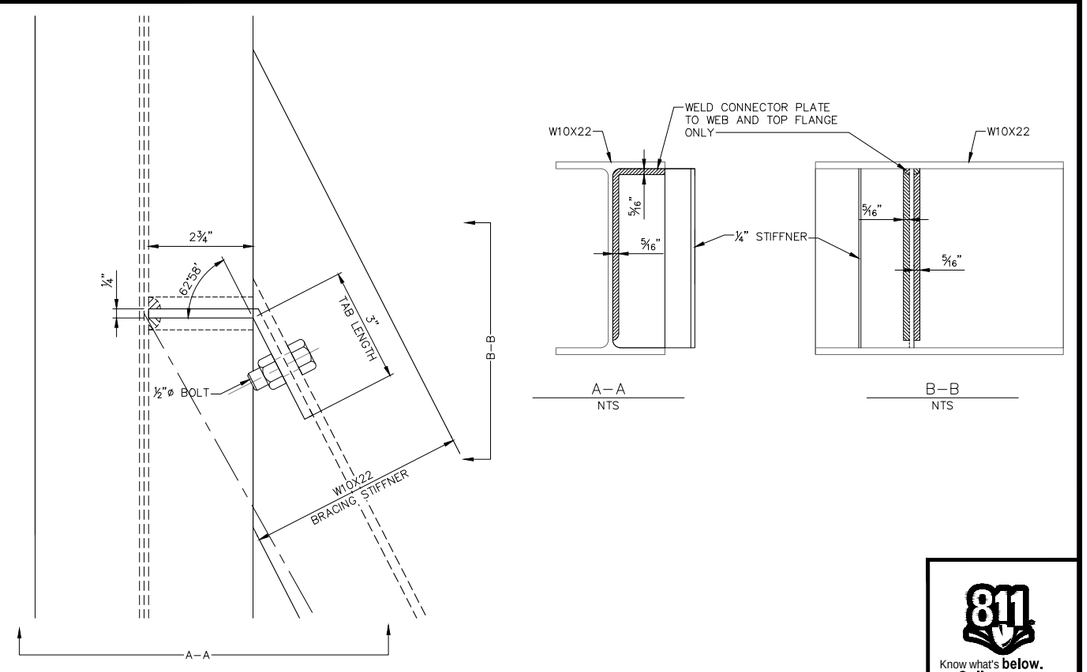
TYPICAL SECTION SIDEWALK
NTS



WELDED SHEAR CONNECTOR DETAIL
NTS



HANGER CONNECTION DETAIL
NTS



A-A
NTS

B-B
NTS

BRACING CONNECTOR PLATE DETAILS
NTS

CIVIL ENGINEER: MICHAEL ATKINSON
LICENSE NO. E-2000149997

STATE OF MISSOURI
MICHAEL R. ATKINSON
NUMBER
E-2000149997
REGISTERED PROFESSIONAL ENGINEER

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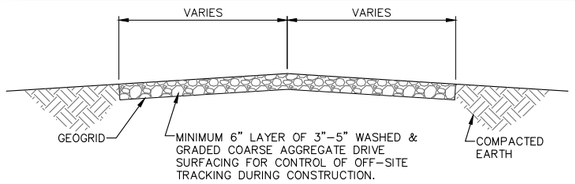
REV DATE:	REVISION:

DWN BY:	AWW
CKD BY:	MRA
APD BY:	MRA
DATE:	01/05/2024

TIN CUP TRAIL PEDESTRIAN BRIDGE
CONSTRUCTION DETAILS

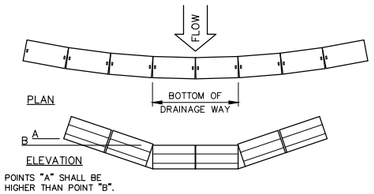
DWG. NO.
20

Z:\JOPLIN_MO\CITY OF JOPLIN\TRANSPORTATION\TIN CUP TRAIL BRIDGE\DRAWINGS\SW-1 STORMWATER POLLUTION PREVENTION PLAN DETAILS.DWG



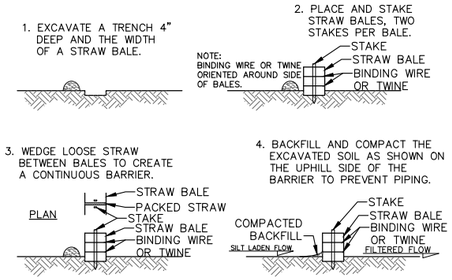
TYPICAL SECTION THRU CONSTRUCTION ENTRANCE
N.T.S.

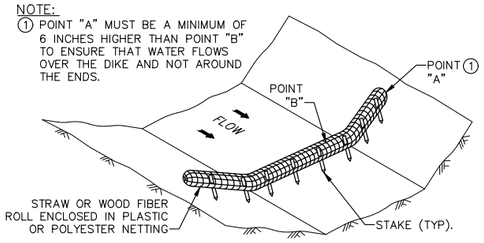
NOTES:
1. WHEN NECESSARY, EQUIPMENT/VEHICLES SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WITH DRAINAGE FLOWING AWAY FROM BOTH THE PUBLIC STREET OR ROAD AND THE STABILIZED ENTRANCE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
2. THE SITE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PAVED SURFACES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS MAY REQUIRE. ALL SEDIMENT SPILLED, DROPPED, WASHED AWAY OR TRACKED ONTO PAVED SURFACES MUST BE REMOVED AS SOON AS POSSIBLE.



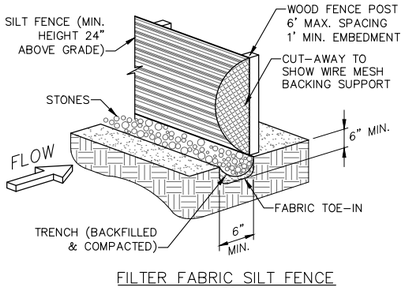
STRAW BALE BARRIER
N.T.S.

NOTES:
1. STRAW BALE BARRIER SHALL BE ENHANCED WITH FILTER FABRIC SILT FENCE IF SITE CONDITIONS INDICATE THE NEED FOR ADDITIONAL FILTRATION OF RUNOFF.
2. INSPECTION SHALL BE MADE AT LEAST WEEKLY, BEFORE A KNOWN MAJOR STORM EVENT, AND AFTER EACH 0.5" RAINFALL EVENT. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
3. ACCUMULATED SILT SHALL BE REMOVED FROM THE UPPER SIDE OF STRAW BALE WHEN IT REACHES ONE THIRD THE HEIGHT OF THE BALES. THE SILT SHALL BE DISPOSED ON SITE (OR AT AN APPROVED SITE) AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.



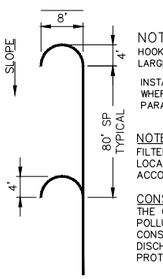


COMPOST FILTER SOCK DITCH CHECK
N.T.S.



FILTER FABRIC SILT FENCE
N.T.S.

NOTES:
1. SILT FENCE SHALL BE SECURELY FASTENED TO EACH WOOD SUPPORT POST OR TO WOVEN WIRE. THERE SHALL BE A 6 INCH DOUBLE OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
2. INSPECTION SHALL BE MADE AT LEAST WEEKLY, BEFORE A KNOWN MAJOR STORM EVENT, AND AFTER EACH 0.5" RAINFALL EVENT. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
3. ACCUMULATED SILT SHALL BE REMOVED FROM THE UPPER SIDE OF SILT FENCE WHEN IT REACHES A DEPTH OF 8 INCHES. THE SILT SHALL BE DISPOSED ON SITE (OR AT AN APPROVED SITE) AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
4. FILTER FABRIC SILT FENCE SHALL BE ENHANCED WITH STRAW BALES IF SITE CONDITIONS INDICATE THE NEED FOR ADDITIONAL FILTRATION OF RUNOFF.



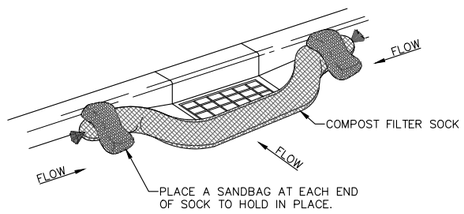
NOTE:
HOOKS SHOWN LARGER FOR CLARITY

INSTALL AS NEEDED ON SLOPES WHERE SILT FENCE IS INSTALLED PARALLEL TO SLOPE.

NOTE:
FILTER FABRIC SILT FENCE/HOOKS AND STRAW BALE BARRIER LOCATIONS ARE APPROXIMATE. PLACEMENT MAY NEED ADJUSTED ACCORDING TO SITE SPECIFIC TERRAIN CONDITIONS.

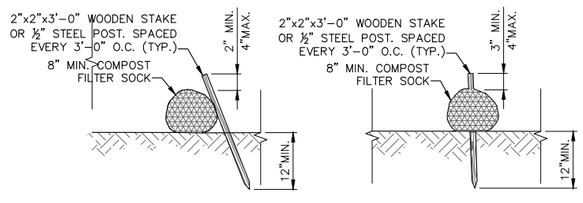
CONSTRUCTION NOTE:
THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL EROSION OR POLLUTION CONTROL DEVICES AS REQUIRED DURING THE CONSTRUCTION PHASE IN ORDER TO COMPLY WITH STORM WATER DISCHARGE REGULATIONS OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AND ALL OTHER AGENCIES HAVING JURISDICTION.

FILTER FABRIC SILT FENCE HOOK DETAIL
N.T.S.



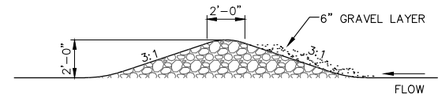
COMPOST FILTER SOCK INLET PROTECTION

NOTES:
1. ANCHORING STAKES SHALL BE SIZED, SPACED, AND BE OF A MATERIAL THAT EFFECTIVELY SECURES THE FILTER SOCK. STAKE SPACING SHALL BE A MAXIMUM OF THREE FEET.
2. OVERLAP ENDS OF SOCK PER MANUFACTURERS RECOMMENDATIONS. (1' MIN. 3' MAX.)
3. USE 8" TO 12" DIA. SOCK ON CURBSIDE IN TRAFFIC AREAS.
4. USE 12" – 18" DIA. SOCK IN NON–TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.
5. SOCK SHALL BE PHOTODEGRADABLE AND SHALL BE FILLED WITH COARSE COMPOST.

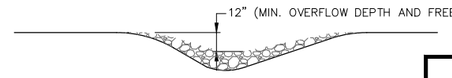


COMPOST FILTER SOCK

COMPOST FILTER SOCK: SLOPE, SOCK SPACING, AND SOCK DIAMETER		
SLOPE	SPACING (ft)	SOCK DIAMETER (inches)
<50:1	250	8
50:1 – 10:1	125	12
10:1 – 5:1	100	12
3:1 – 2:1	50	18
> 2:1	25	18



CROSS SECTION OF ROCK DAM SEDIMENT BASIN
N.T.S.



CROSS SECTION OF DITCH AT ROCK DAM
N.T.S.

CIVIL ENGINEER: MICHAEL ATKINSON
LICENSE NO. E–2000149997

STATE OF MISSOURI
MICHAEL RYAN ATKINSON
NUMBER E-2000149997
REGISTERED PROFESSIONAL ENGINEER
1-5-23
Tin Cup Trail Bridge

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REV DATE:	REVISION:		
		DWN BY:	AWW
		CKD BY:	MRA
		APD BY:	MRA
		DATE:	2023

TIN CUP TRAIL PEDESTRIAN BRIDGE 2023
STORMWATER POLLUTION PREVENTION PLAN DETAILS

DWG. NO. SW-1