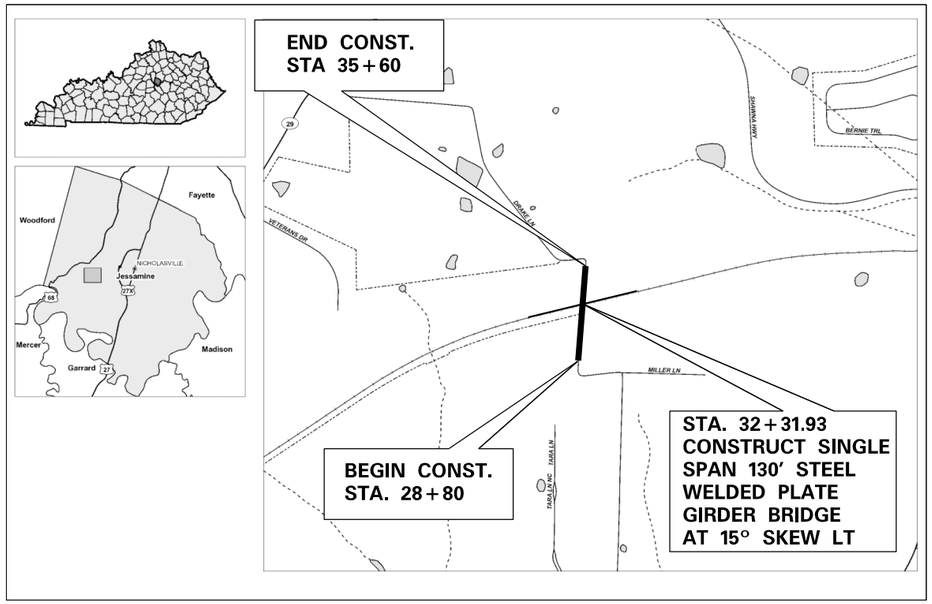
COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	R1

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

JESSAMINE COUNTY
DRAKE LANE OVER NS (CNO&TP) SYSTEM
STA. 32+31.93



LOCATION MAP
NOT TO SCALE

INDEX OF SHEETS

SPECIAL NOTES

TRAFFIC CONTROL ON BRIDGE REPAIR CONTRACTS
SEDIMENT PREVENTION AND EROSION CONTROL
CONTRACT COMPLETION DATE AND LIQUIDATED DAMAGES ON BRIDGE REPAIR CONTRACTS
TREE CLEARING RESTRICTIONS
CONCRETE SEALING
ADDITIONAL ENVIRONMENTAL COMMITMENTS
FOUNDATION PREPARATION

SPECIAL PROVISIONS

69 EMBANKMENT AT BRIDGE END BENT STRUCTURES

SPECIFICATIONS

Current Standard Specifications for Road and Bridge Construction

2017 AASHTO LRFD Bridge Design Specifications with Current Interims.

REVISION	DATE

STANDARD DRAWINGS

BHS-010	RAILING SYSTEM 40 INCH SINGLE SLOPE
BHS-013	THRIE-BEAM GUARDRAIL TRANSITION (TL-2)
BBP-002-04	BEARING DETAILS
BGX-006-10	STENCILS FOR STRUCTURES
BGX-025	CHAINLINK FENCE
BJE-001-13	NEOPRENE EXPANSION DAMS AND ARMORED EDGES
RBI-001-12	TYPICAL GUARDRAIL INSTALATIONS
RBM-020-09	DELINEATORS FOR CONCRETE BARRIERS
RBR-001-13	STEEL BEAM GUARDRAIL "W" BEAM
RBR-005-11	GUARDRAIL COMPONENTS
RBR-010-06	GUARDRAIL TERMINAL SECTIONS
RBR-015-06	STEEL GUARDRAIL POSTS
RBR-016-05	TIMBER GUARDRAIL POSTS
RBR-050-08	GUARDRAIL END TREATMENT TYPE 7
RBR-051-01	GUARDRAIL END TREATMENT TYPE 7 ALTERNATE ANCHOR
RBR-055-01	DELINEATORS FOR GUARDRAIL
RDB-280-06	CURB BOX INLET TYPE B DETAILS (DRAWINGS)
RDB-281-03	CURB BOX INLET TYPE B (STEEL DRAWINGS)
RDB-282-04	CURB BOX INLET TYPE B (TPO PHASE TABLES)
RDB-283-04	CURB BOX INLET TYPE B (DETAIL & BAR CHART FOR 8" LID)
RDB-400-05	BOX INLET RISER
RDB-410-06	BOX INLET PIPE CHAMBER
RDB-420-05	BOX INLET PIPE CHAMBER (ADDITIONAL STEEL)
RDD-021-07	FLUME INLET TYPE 2
RDD-040-05	CHANNEL LINING CLASS II AND III
RDH-020-03	SLOPED & FLARED HEADWALLS FOR 12" TO 27" PIPE
RDI-001-10	CULVERT, ENTRANCE, & STORM SEWER PIPE TYPES & COVER HEIGHTS
RDI-020-10	PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER PIPE
RDI-021-01	PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER REINFORCED CONCRETE PIPE
RDI-040-01	EROSION CONTROL BLANKET SLOPE INSTALLATION
RGX-001-07	TREATMENT OF EMBANKMENTS AT END BENTS
RGX-010-04	TYPICAL EMBANKMENT FOUNDATION BENCHES
RGX-105-09	TREATMENT OF EMBANKMENTS AT END BENTS-DETAILS
RDX-210-03	TEMPORARY SILT FENCE
RDX-230-01	SILT TRAP TYPE B
RDX-230-01	SILT TRAP TYPE C
RGX-001-06	MISCELLANEOUS STANDARDS
RGX-200-01	ONE POINT PROCTOR FAMILY OF CURVES
RPM-100-11	CURB AND GUTTER, CURBS AND VALLEY GUTTER
RPM-110-07	APPROACHES, ENTRANCES AND MAILBOX TURNOUT

DESIGN CRITERIA

CLASS OF HIGHWAY	RURAL LOCAL
TYPE OF TERRAIN	ROLLING
DESIGN SPEED	
REQUIRED NPSD	
REQUIRED PSD	
LEVEL OF SERVICE	
ADT PRESENT (2006)	76
ADT FUTURE ( )	
DHV	
D %	
T %	

GEOGRAPHIC COORDINATES

LATITUDE 37 DEGREES 52 MINUTES 24 SECONDS NORTH
LONGITUDE 84 DEGREES 38 MINUTES 11 SECONDS WEST

DESIGNED

% RESTRICTED SD
LEVEL OF SERVICE
MAX. DISTANCE W/O PASSING

BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

REV. NO.	SHEETS REVISED	DATE

TABLE OF REVISIONS

ROADWAY SHEETS R1–X16	STRUCTURE SHEETS S1–S14
STATE OF KENTUCKY ★ DARRELL ANDREW SMITH 30964 LICENSED PROFESSIONAL ENGINEER ★	STATE OF KENTUCKY ★ JOHN ROBERT CROSSLIN 22242 LICENSED PROFESSIONAL ENGINEER ★

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF

JESSAMINE

ITEM NO. 7-1144
DRAWING NO. 28500
PROJECT NUMBER:
LETTING DATE: MARCH 23, 2023

RECOMMENDED BY: _____ PROJECT MANAGER DATE:
PLAN APPROVED BY: _____ STATE HIGHWAY ENGINEER DATE:

EXISTING BRIDGE ID# 057R00605N

PREPARED BY AECOM

Smith, Darrell
Digitally signed by Smith, Darrell
DN: cn=Smith, Darrell, ou=USLVL1, email=darrell.smith@aecom.com
Date: 2023.01.30 10:12:54 -05'00'

1/27/2023

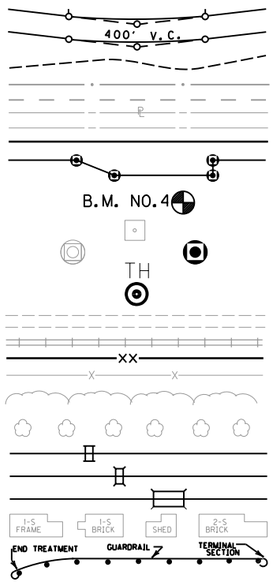
FILE NAME: ...\Drawing\057R00605N_R1.dgn
USER: darrell.smith
DATE PLOTTED: 1/27/2023 10:12:08 AM
E-SHEET NAME:
MicroStation v8.11.9.919

BRIDGING

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	R2

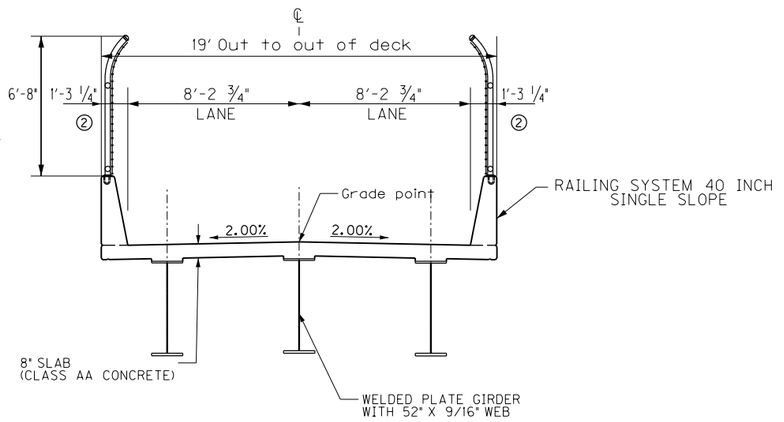
CONVENTIONAL SIGNS

SURVEY LINE
GRADE LINE
GROUND LINE
COUNTY LINE
CORPORATE LIMITS
EXIST. PROPERTY LINE
EXIST. RIGHT OF WAY & PROPERTY LINE
PROPOSED RIGHT OF WAY
RIGHT OF WAY MONUMENT
BENCH MARK
EXISTING R/W MARKER
RIGHT OF WAY MONUMENT EXISTING/PROPOSED
UTILITY TEST HOLE
EXISTING ROAD
RAILROAD
FENCE (CONTROLLED ACCESS)
FENCE (EXCEPT STONE AND HEDGE)
TREE LINE
TREES
PIPE CULVERT
CULVERT
BRIDGE
BUILDINGS
GUARDRAIL



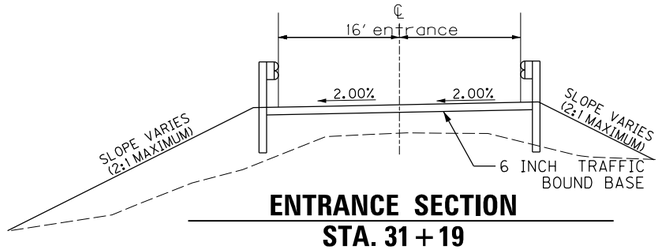
	EXISTING	PROPOSED
LIGHTING POLE		
POWER POLE		
JOINT POWER & TELEPHONE POLE		
TELEPHONE & TELEGRAPH POLE		
ANCHOR, POWER OR TELEPHONE		
STUB POWER		
STUB TELEPHONE		
WATER MAIN	WM	6" WM
GAS MAIN	GM	6" GM
TELEPHONE DUCT	T	T
ELECTRIC DUCT	E	E
DIRECT BURIAL TV CABLE	TV	TV
SANITARY SEWER (WITH MANHOLE)	SAN	SAN
STORM SEWER (WITH MANHOLE)	STORM	STORM
DIRECT BURIAL ELECTRIC CABLE	E	E
DIRECT BURIAL TELEPHONE CABLE	T	T
OVERHEAD WIRE		
TRAFFIC LIGHTS		
ELECTRIC MANHOLE	EMH	EMH
TELEPHONE MANHOLE	TMH	TMH

STONE FENCE
HEDGE FENCE
SWAMP OR MARSH
SPRINGS
SINKHOLE
QUARRY SITE
BLUE LINE STREAM
INTERMITTENT STREAM OR DITCH
LAKES OR PONDS
REGULATED FLOODWAY
NORTH POINT



130' Steel Plate Girder
HL93x125% ~ 16'-5-½" Roadway Width ~ 15° Skew Left

BRIDGE TYPICAL SECTION
STA. 31+65.89 TO 32+97.96



ENTRANCE SECTION
STA. 31+19

NOTES:
MATERIAL NEEDED FOR SHOULDERS OUTSIDE OF PAVED AREA WILL BE MEASURED AND PAID AS GRANULAR EMBANKMENT.
SLOPES SHALL BE CAPPED WITH A MINIMUM OF 6 INCHES OF TOPSOIL STRIPPED FROM THE PROJECT SITE DISTURB LIMITS. THIS APPLICATION SHALL BE INCIDENTAL TO THE PLACEMENT OF GRANULAR EMBANKMENT.

EMBANKMENT FOUNDATION BENCHING SHALL BE INCIDENTAL TO PLACEMENT OF GRANULAR EMBANKMENT.

NEW CONSTRUCTION GRADE, DRAIN & SURFACING - USING -

MAINLINE PAVEMENT

16.00" Base
- 8.00" DGA Base
- 4.00" CL2 Asph Base 1.00D PG64-22
- 4.00" CL2 Asph Base 1.00D PG64-22

1.25" Surface
- 1.25" CL2 Asph Surf 0.38D PG64-22

SHOULDERS

FULL DEPTH DGA

ENTRANCES

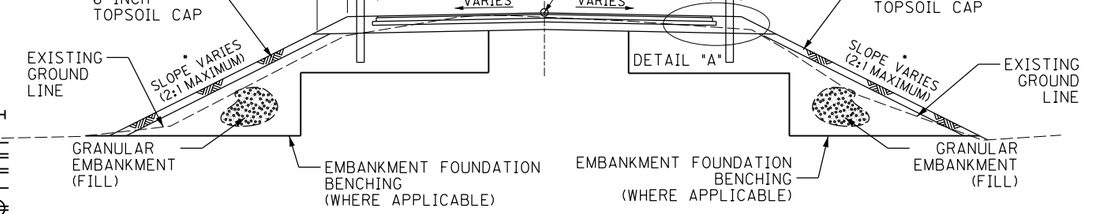
6" TRAFFIC BOUND BASE

NOTES:

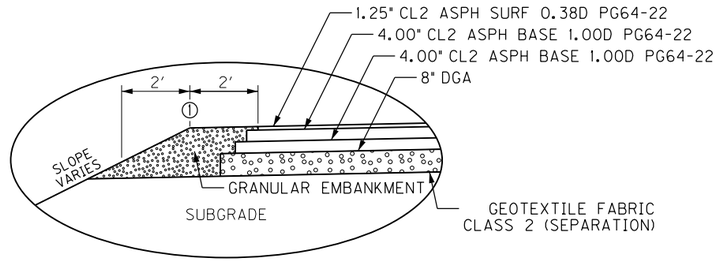
① ASPHALT SEAL REQUIRED FROM OUTSIDE EDGE OF PAVED SHOULDER TO A POINT 2' DOWN THE DITCH OR FILL SLOPE. TWO APPLICATIONS OF THE FOLLOWING:

ASPHALT SEAL COAT	2.40 LBS/SY
ASPHALT SEAL AGGREGATE	20 LBS/SY (SIZE NO. 8 OR 9M)

② LIMITS OF FENCE INSTALLATION SHALL BE REQUIRED FROM APPROXIMATE STA. 31+67 TO STA. 32+97 VERIFY ON SHEET S03 FOR MORE DETAIL LOCATION



NORMAL SECTION
STA. 28+80 TO STA. 31+65.89
STA. 32+97.96 TO STA. 35+60



DETAIL "A"
FULL-DEPTH MAINLINE & SHOULDER PAVEMENT RECONSTRUCTION
NOT TO SCALE

RIGHT OF WAY SUMMARY

PARCEL NO.	OWNER(S)	TOTAL AREA OF TRACT		PERMANENT R/W ACQUIRED		EASEMENTS		PORTION REMAINING		SEWER SYSTEM TYPE	SEWER SYSTEM AFFECTED BY PROJECT		BUILDINGS ACQUIRED NUMBER				SOURCE OF TITLE	REMARKS
		ACRES	SQ. FT.	ACRES	SQ. FT.	PERMANENT SQ. FT.	TEMPORARY SQ. FT.	ACRES	SQ. FT.		YES	NO	C	R	F	S		
P1	GABRIEL AND CHARISSA RIEBER	30.39						30.39				X					D 534 P 27	TOTAL AREA OF TRACT FROM PVA
P2	JOEL AND LAUREN RIEBER	10.02		0.02	794		1284	10.00				X					D 754 P 716	TOTAL AREA OF TRACT FROM PVA
P3	GREGORY S. HAZLETT AND NANCY H. HAZLETT	11.71		0.10	4475			11.61				X					D 754 P 708	TOTAL AREA OF TRACT FROM PVA
P4	NORFOLK SOUTHERN RAILWAY					11817	4711					X						
P5	COMMONWEALTH OF KENTUCKY	30.39		0.11	4834			30.28				X					D 563 P 53	TOTAL AREA OF TRACT FROM PVA
P6	WILLIAM DEAN SHERROW	5.70		0.12	5181			5.58				X					D 752 P 717	TOTAL AREA OF TRACT FROM PVA
P7	R.J. CORMAN REAL ESTATE, LLC	44.82		0.05	2351			44.77				X					D 563 P 55	TOTAL AREA OF TRACT FROM PVA

NTS

PREPARED BY AECOM

LEGEND, TYP. SECTIONS & RW SUMMARY
DRAKE LANE OVER
NS (CNO&TP) SYSTEM

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	R2A

GENERAL NOTES
DRAKE LANE OVER NS (CNO&TP) SYSTEM

GENERAL NOTES:

A. ALL CONSTRUCTION WORK PERFORMED ON, UNDER, OVER OR ADJACENT TO NORFOLK SOUTHERN PROPERTY MUST BE IN ACCORDANCE WITH THE NORFOLK SOUTHERN SPECIAL PROVISIONS FOR PROTECTION OF RAILWAY INTERESTS.

B. THE CONTRACTOR SHALL NOT, FOR ANY REASON, STORE CONSTRUCTION EQUIPMENT ON, OR STORE, OR DUMP WASTE CONSTRUCTION MATERIALS UPON THE RAILROAD'S RIGHT-OF-WAY IN ACCORDANCE WITH SECTION E.5.K.1 OF THE NS PUBLIC PROJECTS MANUAL.

C. THE CONTRACTOR SHALL CONDUCT HIS WORK SO AS TO PROTECT THE RAILROAD'S TRACK FACILITIES AND PROPERTY FROM DAMAGE. THE CONTRACTOR SHALL NOTIFY THE RAILROAD OF ANY WORK BY THE CONTRACTOR WITHIN 25 FEET OF THE RAILROAD'S RIGHT-OF-WAY FOR THE RAILROAD TO DETERMINE FLAGGING NEEDS.

D. IF ANY PORTION OF THE EXISTING RAILROAD STRUCTURE IS DAMAGED BY THE CONTRACTOR'S OPERATIONS DURING CONSTRUCTION, THE CONTRACTOR SHALL CEASE WORK, NOTIFY NS, AND PERFORM REPAIRS TO THE SATISFACTION OF NS AT THE CONTRACTOR'S SOLE EXPENSE.

E. THE CONTRACTOR SHALL COORDINATE HIS WORK ON OR ADJACENT TO RAILROAD RIGHT-OF-WAY WITH THE FOLLOWING REPRESENTATIVES OF THE RAILROAD:

MR. ELDRIDGE CHAMBERS, ENGINEER - PUBLIC IMPROVEMENTS
NORFOLK SOUTHERN RAILWAY COMPANY
1200 PEACHTREE STREET NE
ATLANTA, GA 30309
PHONE: (404) 529-1436
EMAIL: ELDRIDGE.CHAMBERS@NSCORP.COM

CONSTRUCTION

THE CONTRACTOR MUST ENSURE THAT PROPER EROSION CONTROL IS IMPLEMENTED ON AND ADJACENT TO RR RIGHT-OF-WAY DURING CONSTRUCTION. THE CONTRACTOR MUST PREVENT SILT AND DEBRIS ACCUMULATION IN THE RAILROAD ROADBED, DITCHES AND OTHER RAILROAD FACILITIES. THE CONTRACTOR MAY BE REQUIRED TO SUBMIT A DETAILED EROSION CONTROL PLAN FOR REVIEW AND ACCEPTANCE BY RR OR THEIR REPRESENTATIVE PRIOR TO PERFORMING ANY WORK.

CONTRACTOR ACCESS WILL BE LIMITED TO THE IMMEDIATE PROJECT AREA ONLY. THE RR RIGHT-OF-WAY OUTSIDE THE PROJECT AREA MAY NOT BE USED FOR CONTRACTOR ACCESS TO THE PROJECT SITE AND NO TEMPORARY AT-GRADE CROSSINGS WILL BE ALLOWED.

CONTRACTOR SHALL INSTALL A NON-WOVEN GEOTEXTILE FABRIC BALLAST PROTECTION SYSTEM TO PREVENT CONSTRUCTION/DEMOLITION DEBRIS AND FINES FROM FOULING THE BALLAST. THE GEOTEXTILE BALLAST PROTECTION SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR TO THE SATISFACTION OF RR CONSTRUCTION REPRESENTATIVE. FABRIC SHOULD EXTEND AT LEAST 25' PAST THE CONSTRUCTION LIMITS IN BOTH DIRECTIONS OF THE TRACK AND COVER ALL RAILROAD BALLAST STONE (ESTIMATED TO BE ABOUT 25' WIDE FOR A SINGLE TRACK - 10' EACH SIDE OF THE OUTSIDE RAIL AND 5' BETWEEN THE RAILS).

THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY NEEDED PROPERTY OWNER AGREEMENTS FOR WORK TO IMPROVE DRAKE LANE; SUCH AS BUT NOT LIMITED TO CURVE WIDENING OR FENCE REMOVAL, FOR THE DELIVERY OF EQUIPMENT AND/OR MATERIAL TO THE PROJECT SITE WHERE CONSTRUCTION WILL BE OUTSIDE OF EXISTING RIGHT OF WAY.

UTILITIES

ALL UTILITY INSTALLATIONS OR RELOCATIONS ON NORFOLK SOUTHERN RIGHT-OF WAY THAT ARE REQUIRED IN CONJUNCTION WITH THIS PROJECT CAN BE INSTALLED OR RELOCATED AS PART OF THE PROJECT PROVIDED THE CONSTRUCTION IS PERFORMED BY THE PROJECT CONTRACTOR OR PROJECT CONTRACTOR'S SUB-CONTRACTOR. HOWEVER, THE UTILITY MUST SUBMIT AN APPLICATION FOR THE INSTALLATION OR RELOCATION FOR APPROPRIATE HANDLING FOR LICENSE AGREEMENT AND APPLICABLE FEES.

FOR UTILITY APPLICATIONS GO TO: WWW.NSCORP.COM > REAL ESTATE > NS SERVICES > WIRE, PIPELINE, AND FIBER OPTICS PROJECTS.

NOTE: LICENSE AGREEMENT MUST BE EXECUTED PRIOR TO UTILITY BEING INSTALLED OR RELOCATED.

UNDERGROUND UTILITIES

"ONE CALL" SERVICES DO NOT LOCATE BURIED RAILROAD SIGNAL AND COMMUNICATIONS LINES. THE CONTRACTOR SHALL CONTACT THE RAILROAD'S REPRESENTATIVE TWO (2) DAYS IN ADVANCE OF THOSE PLACES WHERE EXCAVATION, PILE DRIVING, OR HEAVY LOADS MAY DAMAGE RAILROAD UNDERGROUND LINES ON RAILROAD PROPERTY. UPON REQUEST FROM THE CONTRACTOR OR AGENCY, RAILROAD SIGNAL FORCES WILL LOCATE AND PAINT MARK OR FLAG RAILROAD UNDERGROUND SIGNAL, COMMUNICATION, AND POWER LINES IN THE AREA TO BE DISTURBED FOR THE CONTRACTOR. THE CONTRACTOR SHALL AVOID EXCAVATION OR OTHER DISTURBANCE OF THESE LINES WHICH ARE CRITICAL TO THE SAFETY OF THE RAILROAD AND THE PUBLIC.

IF DISTURBANCE OR EXCAVATION IS REQUIRED NEAR A BURIED RAILROAD SIGNAL, COMMUNICATION, OR POWER LINE, THE LINE SHALL BE POTHOLED MANUALLY WITH CAREFUL HAND EXCAVATION BY THE CONTRACTOR AND PROTECTED BY THE CONTRACTOR DURING THE COURSE OF THE DISTURBANCE UNDER THE SUPERVISION AND DIRECTION OF A RAILROAD SIGNAL REPRESENTATIVE.

NTS

PREPARED BY
AECOM

GENERAL NOTES
DRAKE LANE OVER
NS (CNO&TP) SYSTEM

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	R3

CONSTRUCT 18" SS PIPE
LT 23.60' STA. 30+94.05 TO LT 7.85 STA. 31+41.33 (47 LF)

CONSTRUCT PIPE CULVERT HEADWALL-18 IN
LT 23.60' STA. 30+94.05 (1 EACH)~TG 923.04
SEE SHEET R7 FOR ADDITIONAL HEADWALL INFORMATION

CONSTRUCT CURB BOX INLET TYPE B (10' OPENING)
LT 7.85' STA. 31+41.33 (1 EACH)

DITCH CONSTRUCTION							
STA. TO STA.	LOCATION	SIZE/TYPE	CHANNEL LINING				FAB. GEOTE. CLASS 1
			TYPE	DEPTH	THICKNESS	QUANTITY	QUANTITY
30+21	LT	OUTLET	CL II	2.0'	1.25'	5 TONS	8 SQUARE YARDS
30+22	RT	INLET	CL II	2.0'	1.25'	5 TONS	8 SQUARE YARDS
30+94	LT	OUTLET	CL II	2.0'	1.25'	5 TONS	8 SQUARE YARDS
34+27	LT	OUTLET	CL II	2.0'	1.25'	5 TONS	8 SQUARE YARDS
34+35	RT	INLET	CL II	2.0'	1.25'	5 TONS	8 SQUARE YARDS

ALL MATERIAL THAT WAS PLACED OR HAD FALLEN INTO THE RAILROAD R/W SHALL BE REMOVED BY THE CONTRACTOR AT THE END OF THE PROJECT AND THE AREA SHALL BE RESTORED TO ITS PRECONSTRUCTION CONDITION.

REASONABLE MEANS OF INGRESS AND EGRESS SHALL BE MAINTAINED TO ALL PROPERTIES WITHIN THE PROJECT LIMITS. ACCESS TO FIRE HYDRANTS MUST ALSO BE MAINTAINED AT ALL TIMES.

EXISTING RIGHT OF WAY LINES AND PROPERTY CORNERS ARE BASED ON ASSUMPTIONS FROM AVAILABLE DEEDS, PVA AND KRS STATUTE 178.025 AND SHOULD BE FIELD VERIFIED.

CONSTRUCT FLUNE INLET TYPE 2
8.40' RT STA. 31.55 (1 EACH)
8.00' RT STA. 33+37 (1 EACH)
8.35' LT STA. 33+29 (1 EACH)

CONSTRUCT STANDARD HEADER CURB
9.00' LT STA. 32+95.50 TO
8.90' LT STA. 33+12.40 (17 LF)

9.21' RT STA. 33+00 TO
8.90' RT STA. 33+19 (19 LF)

9.17' RT STA. 31+52 TO
9.50' RT STA. 31+69 (17 LF)

REMOVE PIPE
RT/LT STA. 30+20 (25 LF)
RT/LT STA. 34+32 (20 LF)

℄ STA. 32+45.38 CONSTRUCT
SINGLE SPAN 130' STEEL
WELDED PLATE GIRDER
BRIDGE @ 15° SKEW

REMOVE STRUCTURE
℄ STA. 32+33.87 (1 LS)

GUARDRAIL STEEL "W" BEAM DRAKE LANE ℄								
SIDE	STA.	TO	STA.	SINGLE FACE-A	SINGLE FACE	BRIDGE END CONN THRIE-BEAM (TL-2)	TERMINAL SECT NO. 1	END TREATMENT TYPE 7
				(LF)	(LF)	(EACH)	(EACH)	(EACH)
LT	29+91	-	31+22	-	150	-	2	-
LT	31+53	-	31+63	-	62.5	1	1	-
RT	29+81	-	31+68	-	137.5	1	-	1
LT	32+95	-	34+59	-	112.5	1	-	1
RT	33+00	-	34+63	-	112.5	1	-	1

CONNECT TO RAILING SYSTEM 40 INCH SINGLE SLOPE

LT. STA. 29+72.74
CONST. 25' WIDE ENTRANCE
88 SQYD 6" TRAFFIC BOUND BASE

LT. STA. 31+18.83
CONST. 16' WIDE ENTRANCE
216 SQYD 6" TRAFFIC BOUND BASE

CONSTRUCT SNOW FENCE - 1857 LF
NOTE: ADDITIONAL QUANTITY OUTSIDE OF PROPOSED RIGHT OF WAY AND/OR EASEMENTS SHALL BE INCIDENTAL TO ITEM SNOW FENCE

PROPOSED CONSTRUCTION ALONG DRAKE LANE WILL NOT INCREASE THE VOLUME OF DRAINAGE RUNOFF NOR CHANGE THE DIRECTION OF FLOW. SCOPE OF DEMOLITION OF THE EXISTING STRUCTURE AND ANY GRADING AROUND REMOVED APPURTENCES WILL NOT DEVIATE ANY NEW DRAINAGE FLOW ONTO NORFOLK SOUTHERN RAILWAY RIGHT OF WAY.

0' 30' 60' 120'
SCALE: 1"=60'

PREPARED BY AECOM

PLAN
DRAKE LANE OVER
NS (CNO&TP) SYSTEM

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	R4

BRIDGE REMOVAL NOTE:
THE EXISTING 1-34.7 STEEL STRINGER SPAN & 5-TIMBER STRINGER SPANS SHALL BE REMOVED IN ACCORDANCE WITH THE CURRENT SPECIFICATIONS. ALL MATERIAL IN THE EXISTING BRIDGE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH THE CURRENT SPECIFICATIONS. LUMP SUM PAYMENT IN FULL SHALL INCLUDE THE COMPLETE REMOVAL OF THE BRIDGE, ABUTMENTS, PIERS AND APPURTENANCES.

NOTE: PROPOSED BRIDGE GRAPHICAL REPRESENTATION ONLY. FOR INFORMATIONAL PURPOSES ONLY. SEE STRUCTURE SHEETS FOR FURTHER INFORMATION.

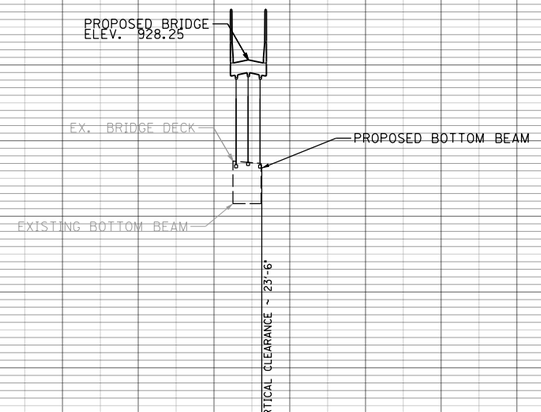
FILE NAME: C:\PW_WORKING\D0157090\057R00605N_R4.DGN
USER: biratu.dadi
DATE PLOTTED: October 11, 2021
E-SHEET NAME:
OpenRoads Designer v10.16.0.80

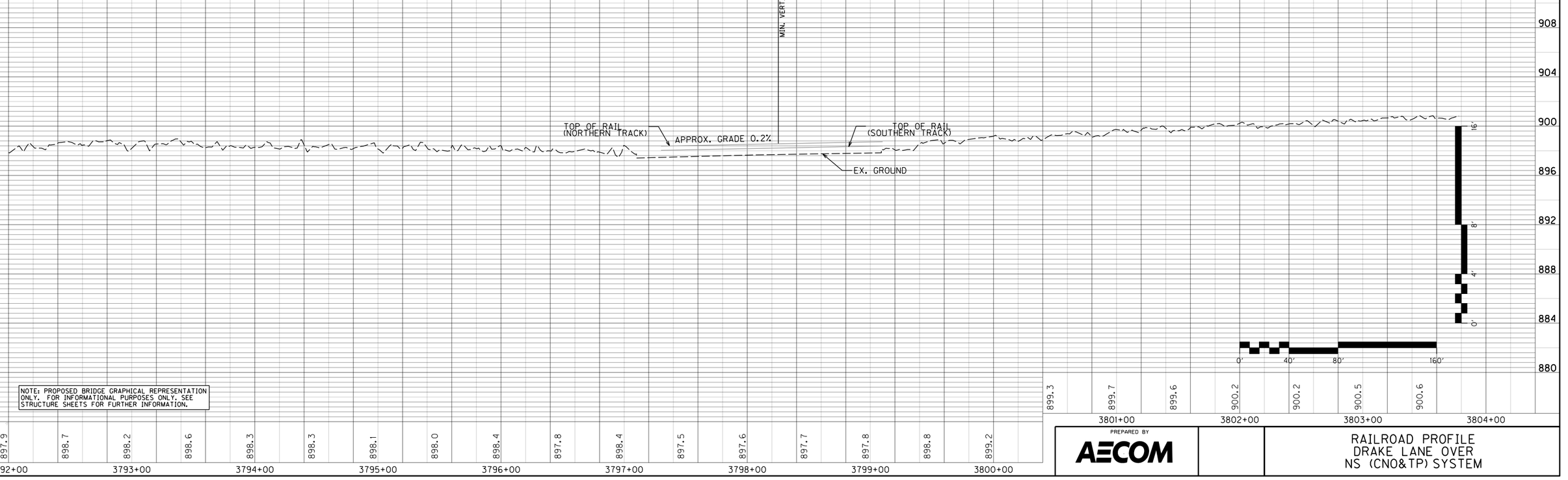
PREPARED BY
AECOM

PROFILE
DRAKE LANE OVER
NS (CNO&TP) SYSTEM

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	R5

THE ELEVATIONS OF THE EXISTING TOP-OF-RAIL PROFILE SHALL BE VERIFIED TO MATCH THE APPROVED FINAL PLANS BEFORE BEGINNING CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE NORFOLK SOUTHERN PUBLIC PROJECTS ENGINEER.





PREPARED BY

AECOM

RAILROAD PROFILE
DRAKE LANE OVER
NS (CNO&TP) SYSTEM

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	R6

Drake Lane
JESSAMINE COUNTY
Bridge ID # 057R00605N

Project Coordinates:
Coordinates for horizontal control were obtained by redundant GPS observations using Trimble R10 GNSS receivers on the NAD83 Kentucky State Plane Coordinate System, KY Single Zone, US Survey Feet utilizing the KYCORS RTN GPS Network on Janurary 28, 2019. Coordinates shown are State Plane Coordinates, US Survey Feet. No project datum factor was calculated or used for this project.

Basis of Elevations:
Elevations were established by redundant GPS observations using Trimble R10 GNSS receivers on the NAVD88 vertical datum, GEOID12B utilizing the KYCORS RTN Network on January 28,2019 based on the elevation of CP 101 = 937.21'.

CENTERLINE CONTROL POINTS

POINT	State Plane Coordinates		STATION
	NORTH (Y)	EAST (X)	
POB	3843079.953	5242628.331	28+31.96
PI	3843247.040	5242646.259	30+00.00
PI	3843342.967	5242655.967	30+96.42
PI	3843679.885	5242679.088	34+34.13
POE	3843966.416	5242700.646	37+21.47

PROPOSED CENTERLINE COORDINATE DATA NORFOLK SOUTHERN RR

POINT	State Plane Coordinates		STATION
	NORTH (Y)	EAST (X)	
POB	3843319.78	5242011.40	3791+44.89
POE	3843612.09	5243209.38	3803+78.02

COORDINATE CONTROL POINTS

POINT	DESCRIPTION	State Plane Coordinates			STATION	OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)		
CP 101	5/8" REBAR & CAP	3843974.65	5242717.98	937.21		
CP 102	5/8" REBAR & CAP	3843412.92	5242652.75	919.58	31+65.99	8.00
CP 103	5/8" REBAR & CAP	3843549.87	5242683.42	917.86	33+04.72	13.23

EXISTING RIGHT OF WAY LINES AND PROPERTY CORNERS ARE BASED ON ASSUMPTIONS FROM AVAILABLE DEEDS, PVA AND KRS STATUTE 178.025 AND SHOULD BE FIELD VERIFIED.

0' 30' 60' 120' SCALE: 1"=60'

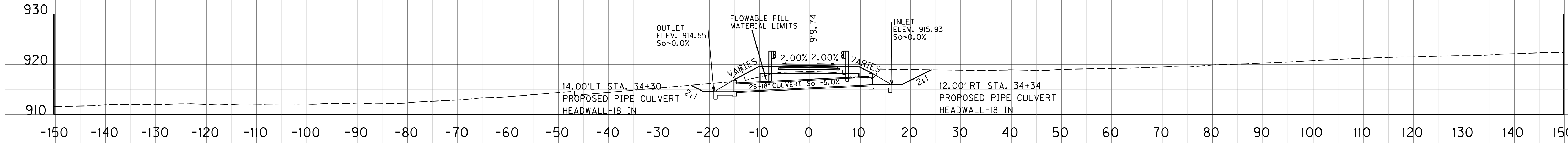
PREPARED BY AECOM

COORDINATE CONTROL SHEET
DRAKE LANE OVER
NS (CNO&TP) SYSTEM

FILE NAME: ...\Drawing\057R00605N_R6.dgn
USER: darrell.smith
DATE PLOTTED: 6/13/2022 11:45:33 AM
E-SHEET NAME:
OpenRoads Designer v10.13.2.7

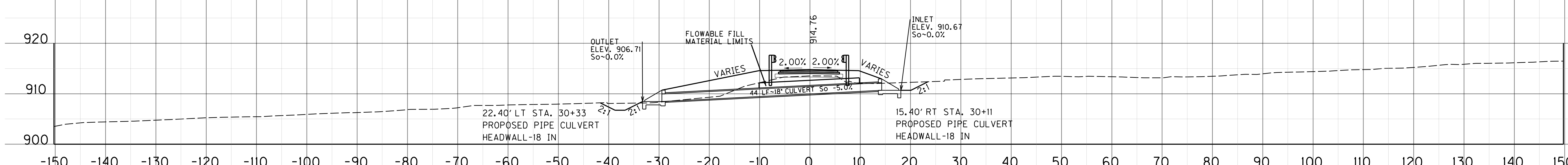
COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144.00	R7

CULVERT PIPE 18" (LINEAR FEET)	DESIGN PH LEVEL	MAXIMUM COVER HEIGHT (FT)	PIPE CULVERT HEADWALL-18 IN (EACH)	FABRIC-GEOTEXTILE CLASS 2 FOR PIPE (SQYD)
28	M	0.9	2	41
44	M	1.2	2	65



34+32 SKEW 8°40'

CONSTRUCT 28 LF ~ CULVERT PIPE - 18 IN
CONSTRUCT 2 ~ PIPE CULVERT HEADWALL-18 IN



30+22 SKEW 30°

CONSTRUCT 44 LF ~ CULVERT PIPE - 18 IN
CONSTRUCT 2 ~ PIPE CULVERT HEADWALL-18 IN

SCALE: 1"=10'

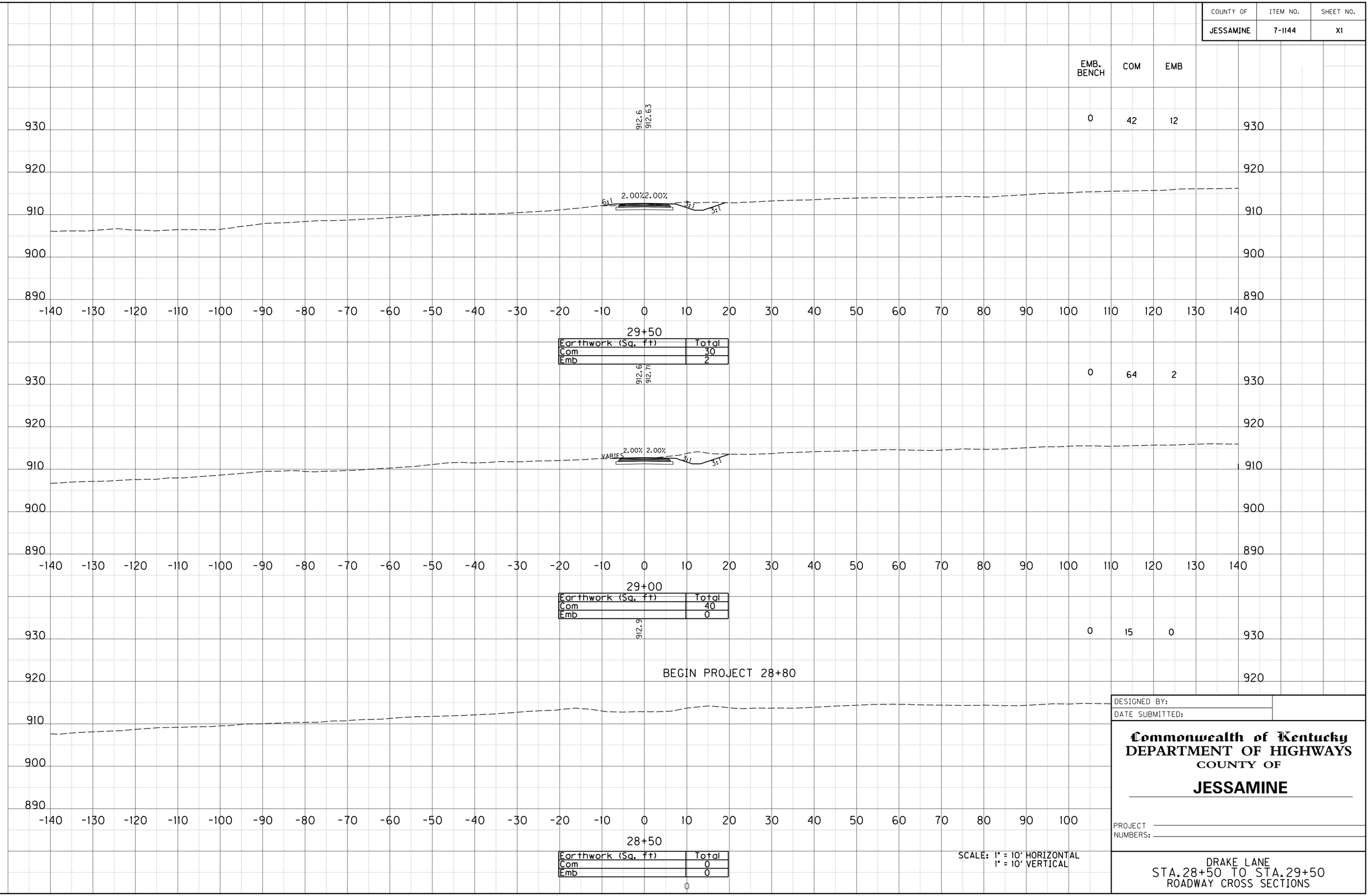
PREPARED BY AECOM

BRIDGING KENTUCKY

PIPE DRAINAGE SHEET
DRAKE LANE OVER
NS (CN & TP) SYSTEM

MicroStation v8.11.9.919
E-SHEET NAME:
USER: darrell.smith
DATE PLOTTED: June 13, 2022
FILE NAME: C:\PW_WORKING\D0157090\057R00605N_PD.DGN

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	X1



DESIGNED BY:

DATE SUBMITTED:

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF

JESSAMINE

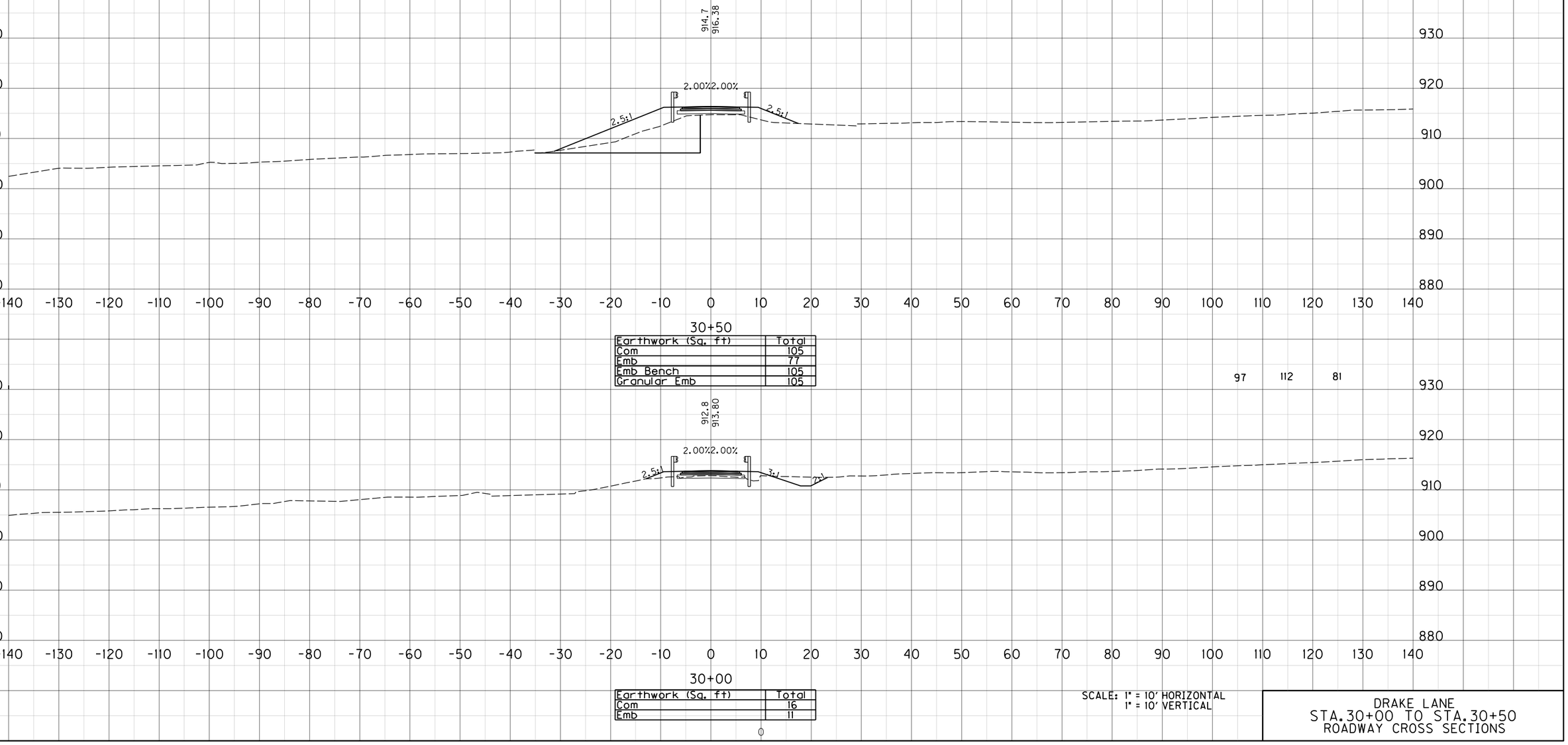
PROJECT NUMBERS:

SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

DRAKE LANE
STA.28+50 TO STA.29+50
ROADWAY CROSS SECTIONS

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	X2

GRAN EMB.	EMB. BENCH	COM	EMB
234	234	234	227



30+50

Earthwork (Sq. ft)	Total
Com	105
Emb	77
Emb Bench	105
Granular Emb	105

30+00

Earthwork (Sq. ft)	Total
Com	16
Emb	11

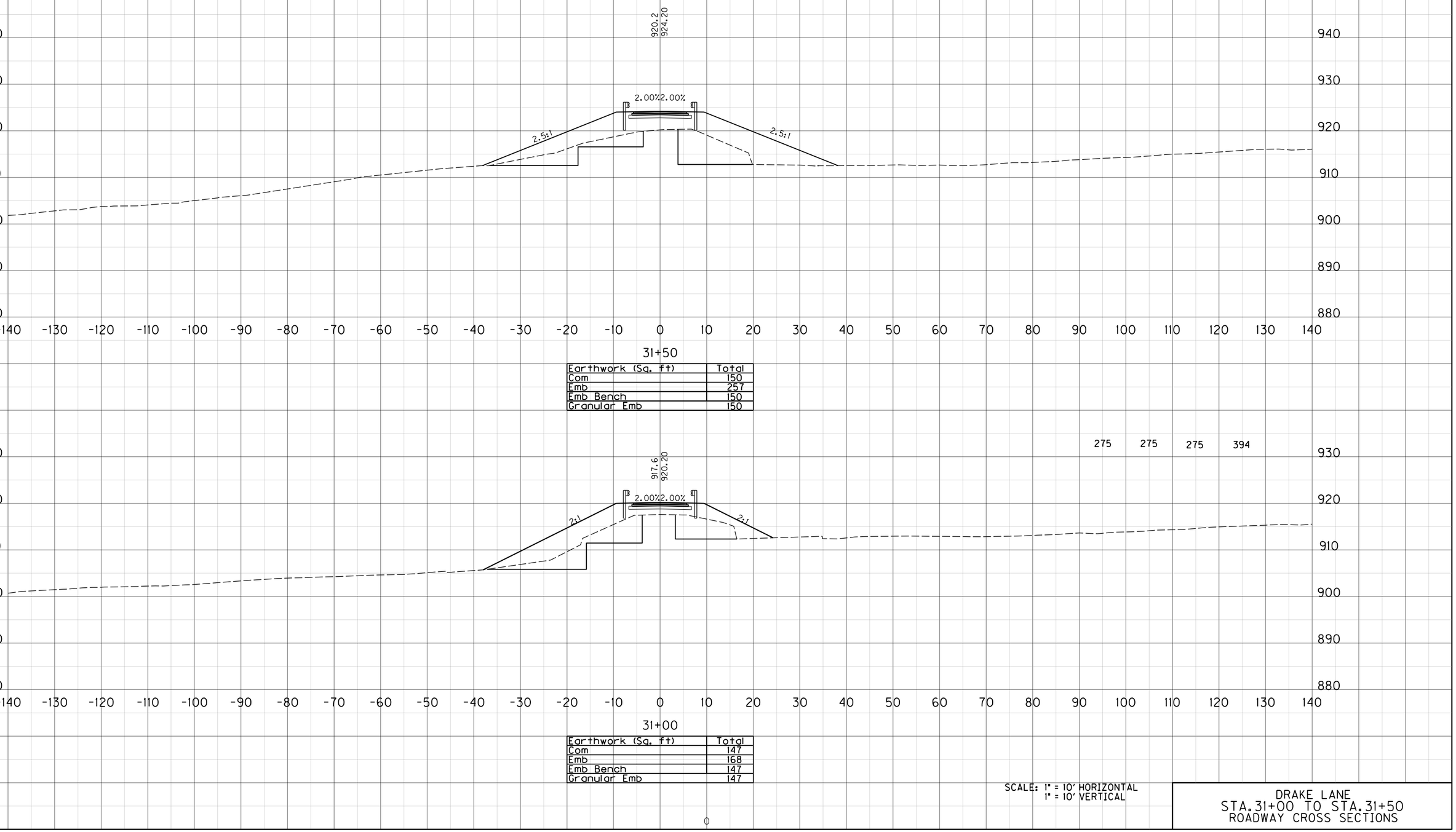
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

DRAKE LANE
STA.30+00 TO STA.30+50
ROADWAY CROSS SECTIONS

FILE NAME: C:\PW_WORKING\D0157090\05TR00605N_X1.DGN
USER: biratu.dadi
DATE PLOTTED: June 13, 2022
OpenRoads Designer v10.16.0.80E-SHEET NAME:

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	X3

GRAN EMB.	EMB. BENCH	COM	EMB
44	44	44	76



31+50

Earthwork (Sq. ft)	Total
Com	150
Emb	257
Emb Bench	150
Granular Emb	150

275	275	275	394

31+00

Earthwork (Sq. ft)	Total
Com	147
Emb	168
Emb Bench	147
Granular Emb	147

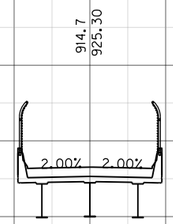
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

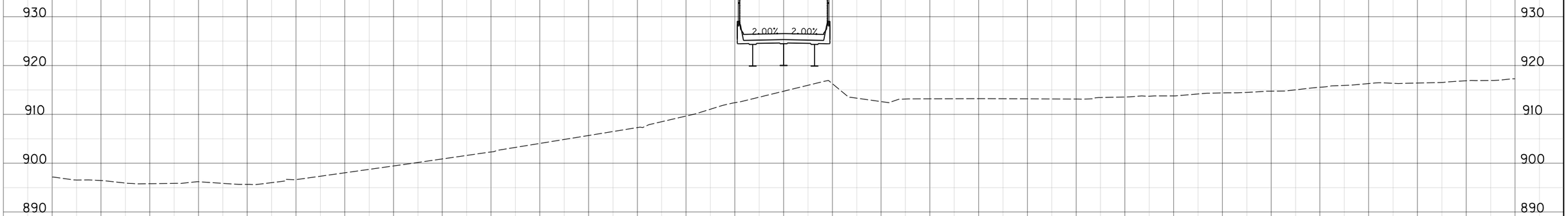
DRAKE LANE
STA. 31+00 TO STA. 31+50
ROADWAY CROSS SECTIONS

FILE NAME: C:\PW_WORKING\D0157090\05TR00605N_X1.DGN
USER: biratu.dadi
DATE PLOTTED: June 13, 2022
OpenRoads Designer v10.16.0.80E-SHEET NAME:

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	X4

EMB. BENCH	COM	EMB
0	0	0





31+66

Earthwork (Sq. ft)	Total
Com	0
Emb	0

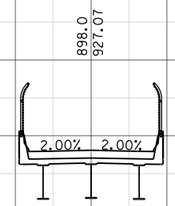
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

DRAKE LANE
STA. 31+80 SOUTH ABUTMENT
ROADWAY CROSS SECTIONS

FILE NAME: C:\PW_WORKING\D0157090\05TR00605N_X1.DGN
USER: biratu.dadi
DATE PLOTTED: June 13, 2022
SHEET NAME:
OpenRoads Designer v10.16.0.80E

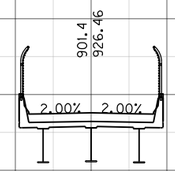
COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	X5

EMB. BENCH	COM	EMB
0	0	0



32+50

Earthwork (Sq. ft)	Total
Com	0
Emb	0



0 0 0

32+00

Earthwork (Sq. ft)	Total
Com	0
Emb	0

0

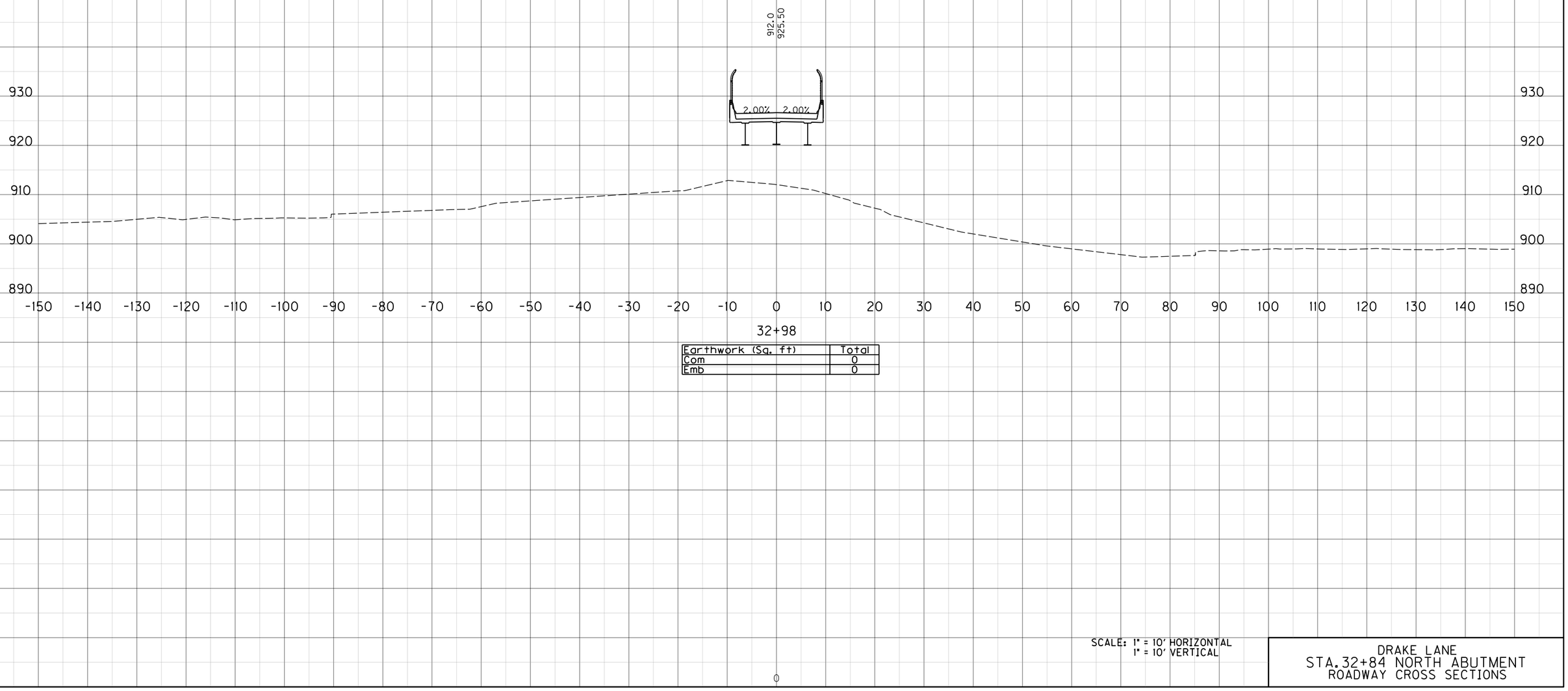
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

DRAKE LANE
STA. 32+00 TO STA. 32+50
ROADWAY CROSS SECTIONS

FILE NAME: C:\PW_WORKING\D0157090\05TR00605N_X1.DGN
USER: biratu.dadi
DATE PLOTTED: June 13, 2022
E-SHEET NAME:
OpenRoads Designer v10.16.0.80

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	X6

EMB. BENCH	COM	EMB
4	4	7



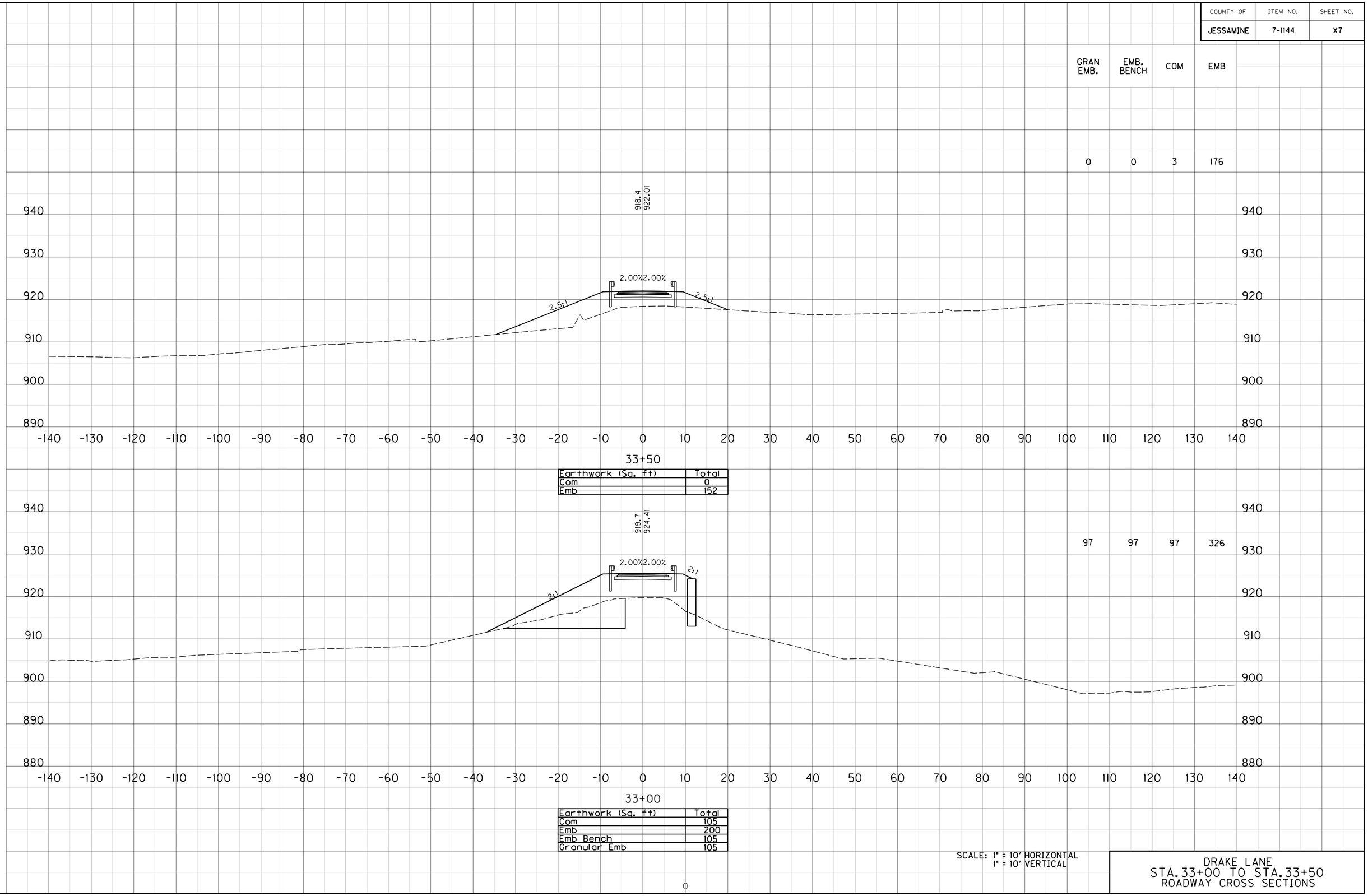
Earthwork (Sq. ft)	Total
Com	0
Emb	0

SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

DRAKE LANE
STA.32+84 NORTH ABUTMENT
ROADWAY CROSS SECTIONS

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	X7

GRAN EMB.	EMB. BENCH	COM	EMB
0	0	3	176



33+50

Earthwork (Sq. ft)	Total
Com	0
Emb	152

GRAN EMB.	EMB. BENCH	COM	EMB
97	97	97	326

33+00

Earthwork (Sq. ft)	Total
Com	105
Emb	200
Emb Bench	105
Granular Emb	105

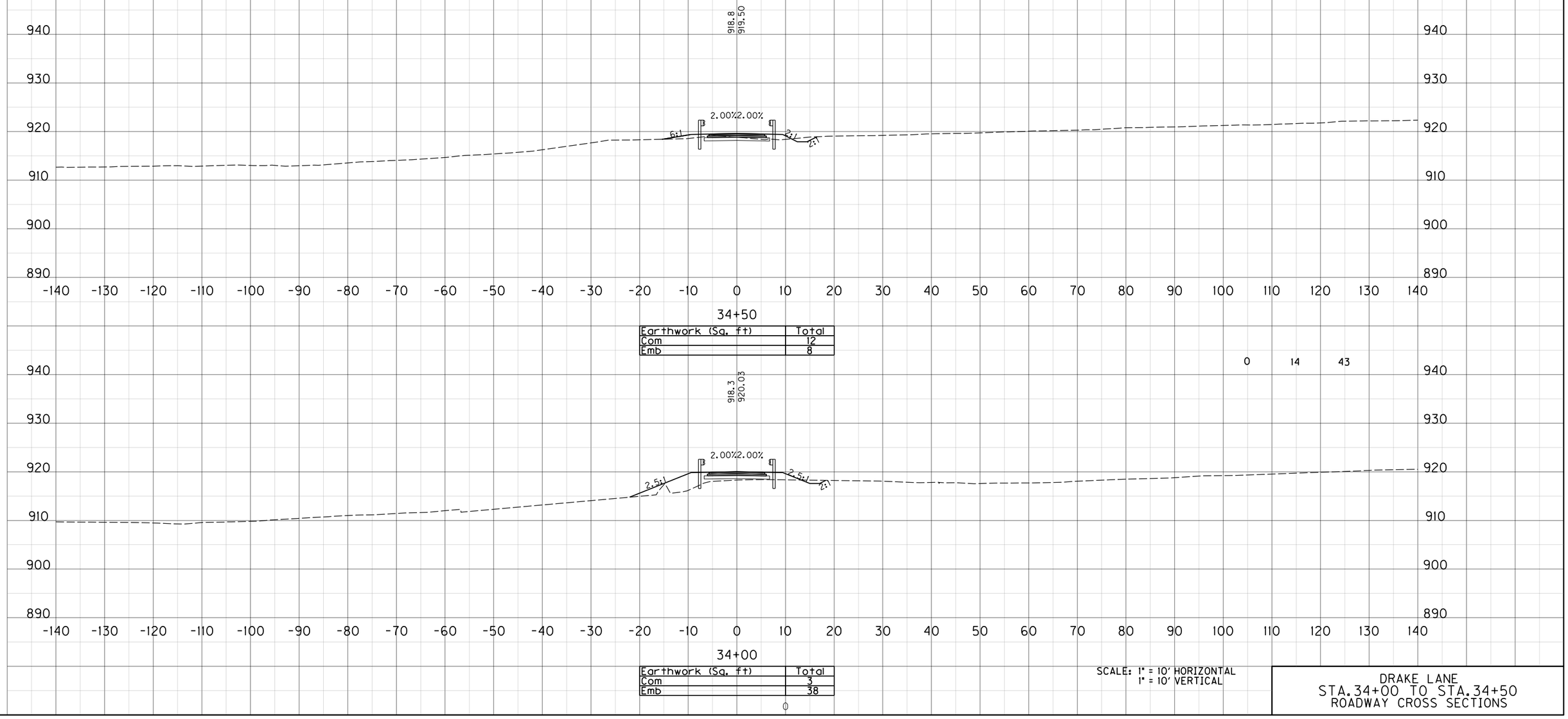
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

DRAKE LANE
STA.33+00 TO STA.33+50
ROADWAY CROSS SECTIONS

FILE NAME: C:\PW_WORKING\D0157090\05TR00605N_X1.DGN
USER: biratu.dadi
DATE PLOTTED: June 13, 2022
OpenRoads Designer v10.16.0.80E-SHEET NAME:

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	X8

EMB. BENCH	COM	EMB
0	36	9



SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

DRAKE LANE
STA.34+00 TO STA.34+50
ROADWAY CROSS SECTIONS

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	X9

057R00605N-DRAKE LN OVER NS

	GRAN EMB.	EMB. BENCH	COM	EMB
SUB TOTAL (CUYD)	751	751	999	1355
PROJECT TOTAL (CUYD)	•1362	751	999	1355

•611 CUYD OF GRANULAR EMBANKMENT ADDED FOR SHOULDERS OUTSIDE OF PAVED AREA

925.3

36+00

END OF PROJECT 35+60

922.6
922.84

0 6 0

VARIES 2.00% 2.00% 3:1 3:1

35+50

Earthwork (Sq. ft)	Total
Com	31
Emb	2

920.5
920.69

0 54 2

VARIES 2.00% 2.00% 3:1 3:1

35+00

Earthwork (Sq. ft)	Total
Com	27
Emb	1

0

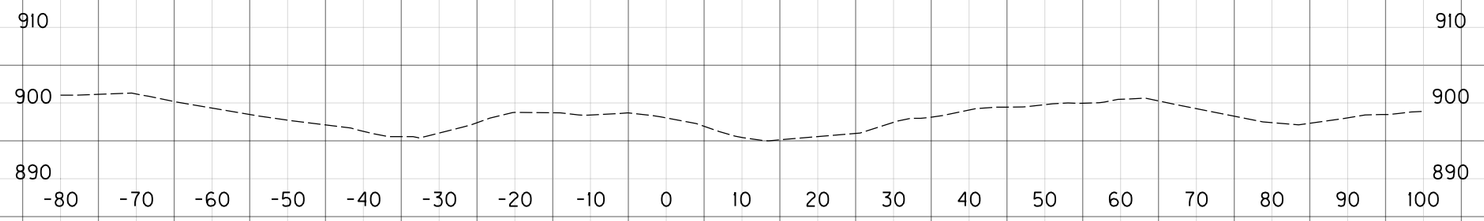
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

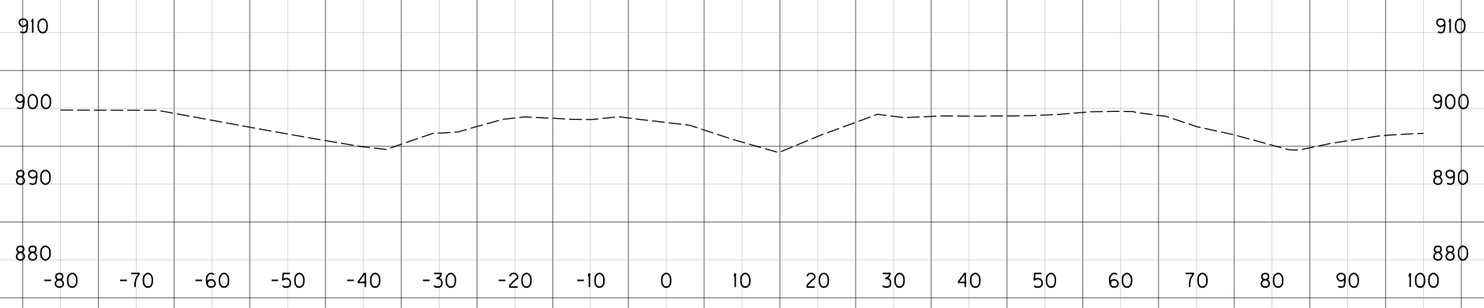
DRAKE LANE
STA.35+00 TO STA.36+00
ROADWAY CROSS SECTIONS

FILE NAME: C:\PW_WORKING\D0157090\057R00605N_X1.DGN
USER: biratu.dadi
DATE PLOTTED: June 13, 2022
SHEET NAME:
OpenRoads Designer v10.16.0.80E

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	X10

ROCK ROAD BED	REFILL	EMB. BENCH	GRAN. EMB.	COM	EMB	ROCK EXC	DT LT	DT RT





SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

DESIGNED BY:
DATE SUBMITTED:

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF

JESSAMINE

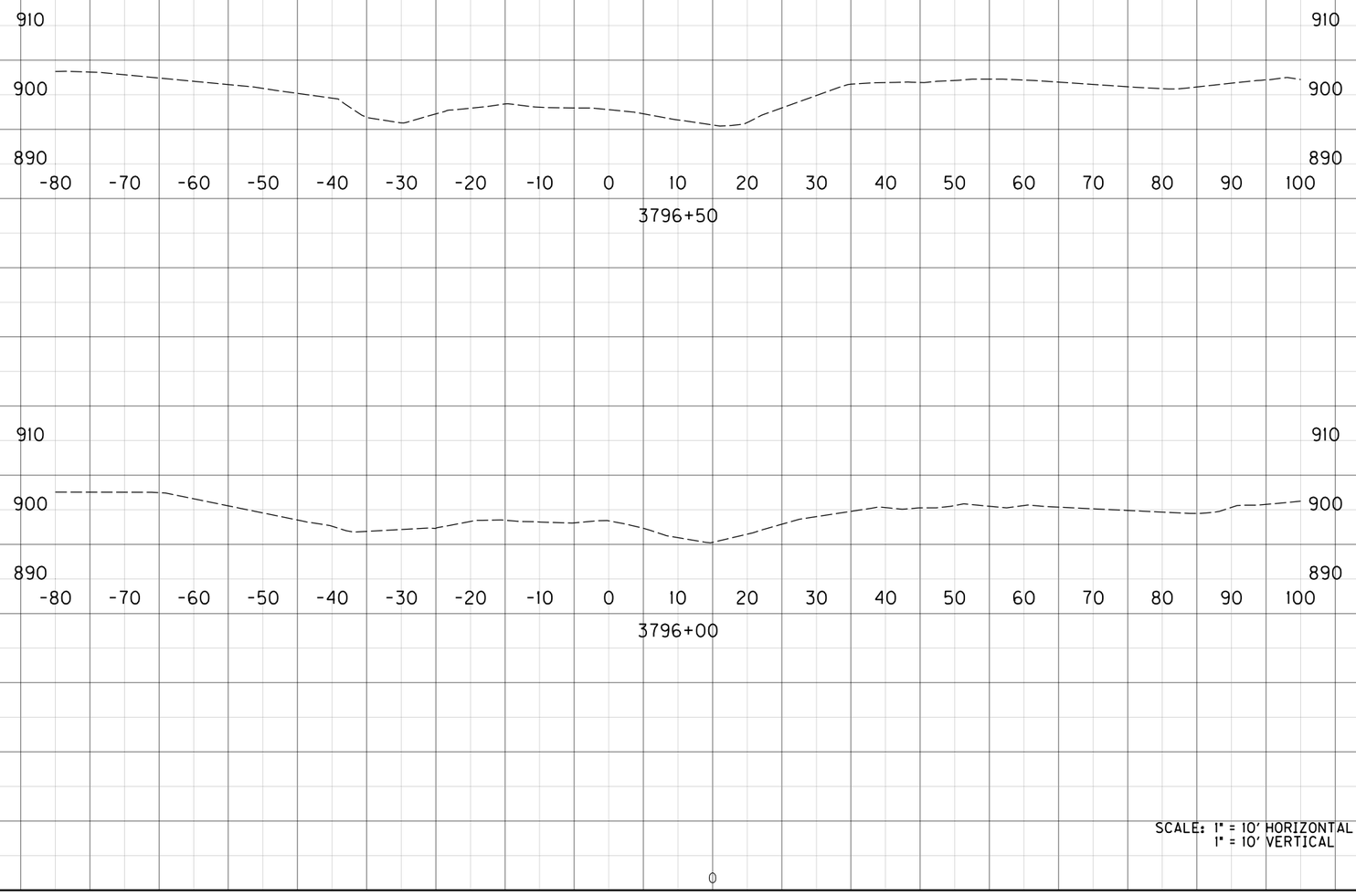
PROJECT NUMBERS:

DRAKE LANE
STA.3795+00 TO STA.3795+50
NS RAILWAY CROSS SECTIONS

FILE NAME: C:\PW_WORKING\D0157090\D57ROO605N_XRR.DGN
USER: mitchella2
DATE PLOTTED: June 13, 2022
E-SHEET NAME:
MicroStation v8.11.9.919

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	XII

ROCK ROAD BED	REFILL	EMB. BENCH	GRAN. EMB.	COM	EMB	ROCK EXC	DT LT	DT RT

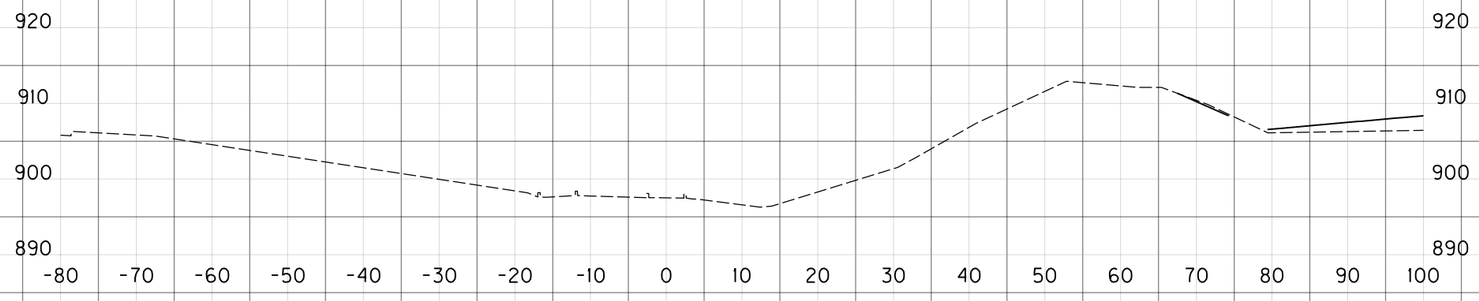


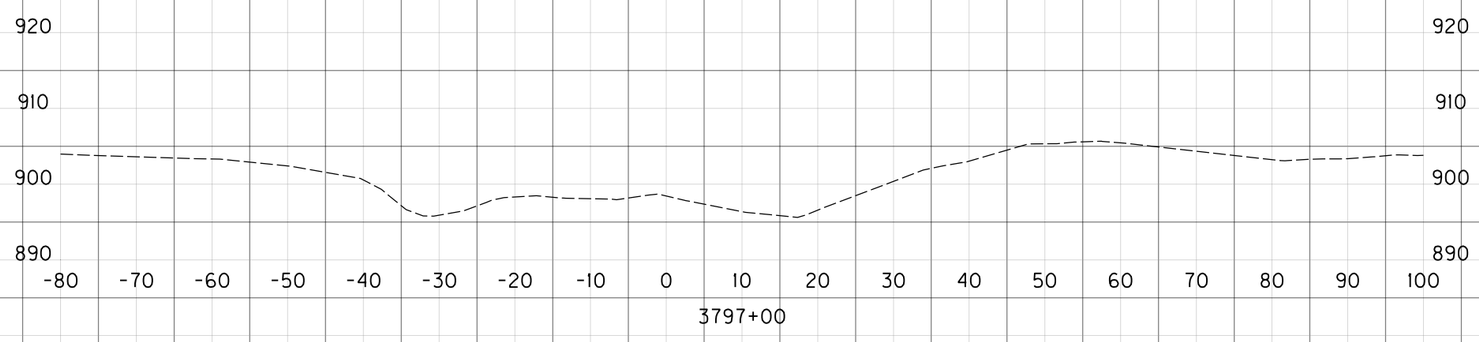
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

DRAKE LANE
STA.3796+00 TO STA.3796+50
NS RAILWAY CROSS SECTIONS

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	X12

ROCK ROAD BED	REFILL	EMB. BENCH	GRAN. EMB.	COM	EMB	ROCK EXC	DT LT	DT RT





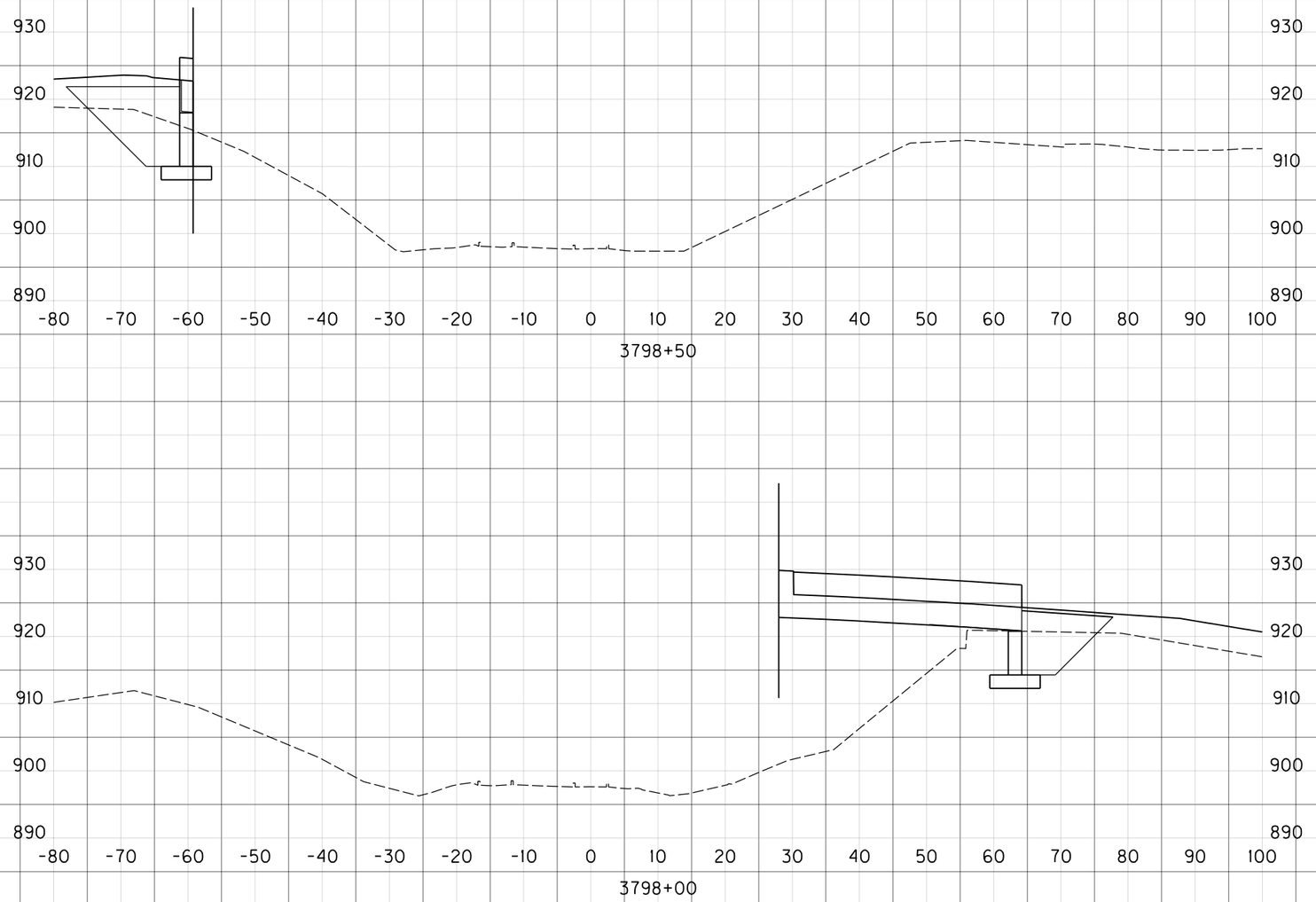
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

DRAKE LANE
STA.3797+00 TO STA.3797+50
NS RAILWAY CROSS SECTIONS

FILE NAME: C:\PW_WORKING\D0157090\05TR00605N_XRR.DGN
USER: mitchella2
DATE PLOTTED: June 13, 2022
E-SHEET NAME:
MicroStation v8.11.9.919

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	X13

ROCK ROAD BED	REFILL	EMB. BENCH	GRAN. EMB.	COM	EMB	ROCK EXC	DT LT	DT RT



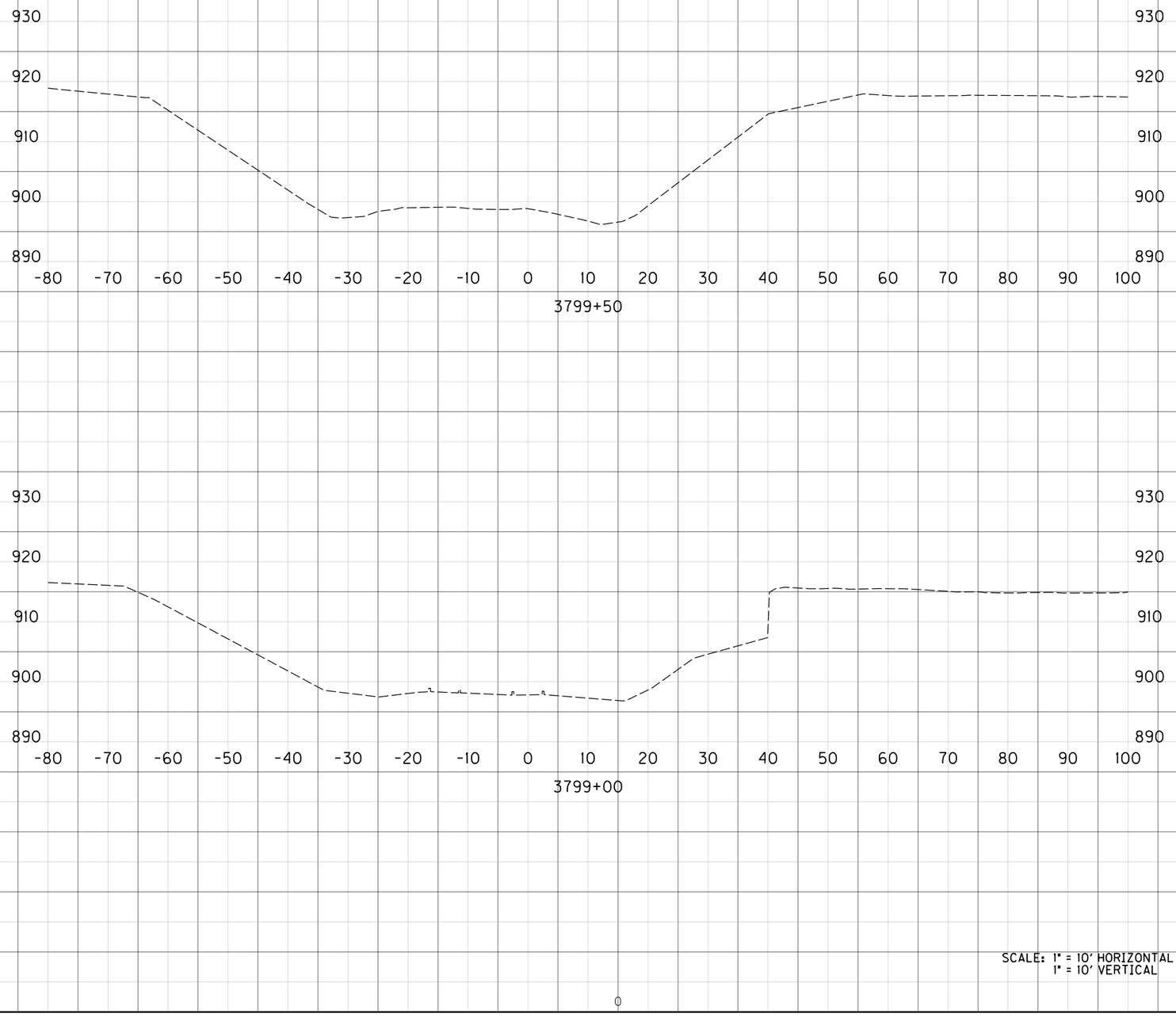
NOTE: PROPOSED BRIDGE GRAPHICAL REPRESENTATION ONLY. FOR INFORMATIONAL PURPOSES ONLY. SEE STRUCTURE SHEETS FOR FURTHER INFORMATION.

SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

DRAKE LANE
STA.3798+00 TO STA.3798+50
NS RAILWAY CROSS SECTIONS

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	X14

ROCK ROAD BED	REFILL	EMB. BENCH	GRAN. EMB.	COM	EMB	ROCK EXC	DT LT	DT RT

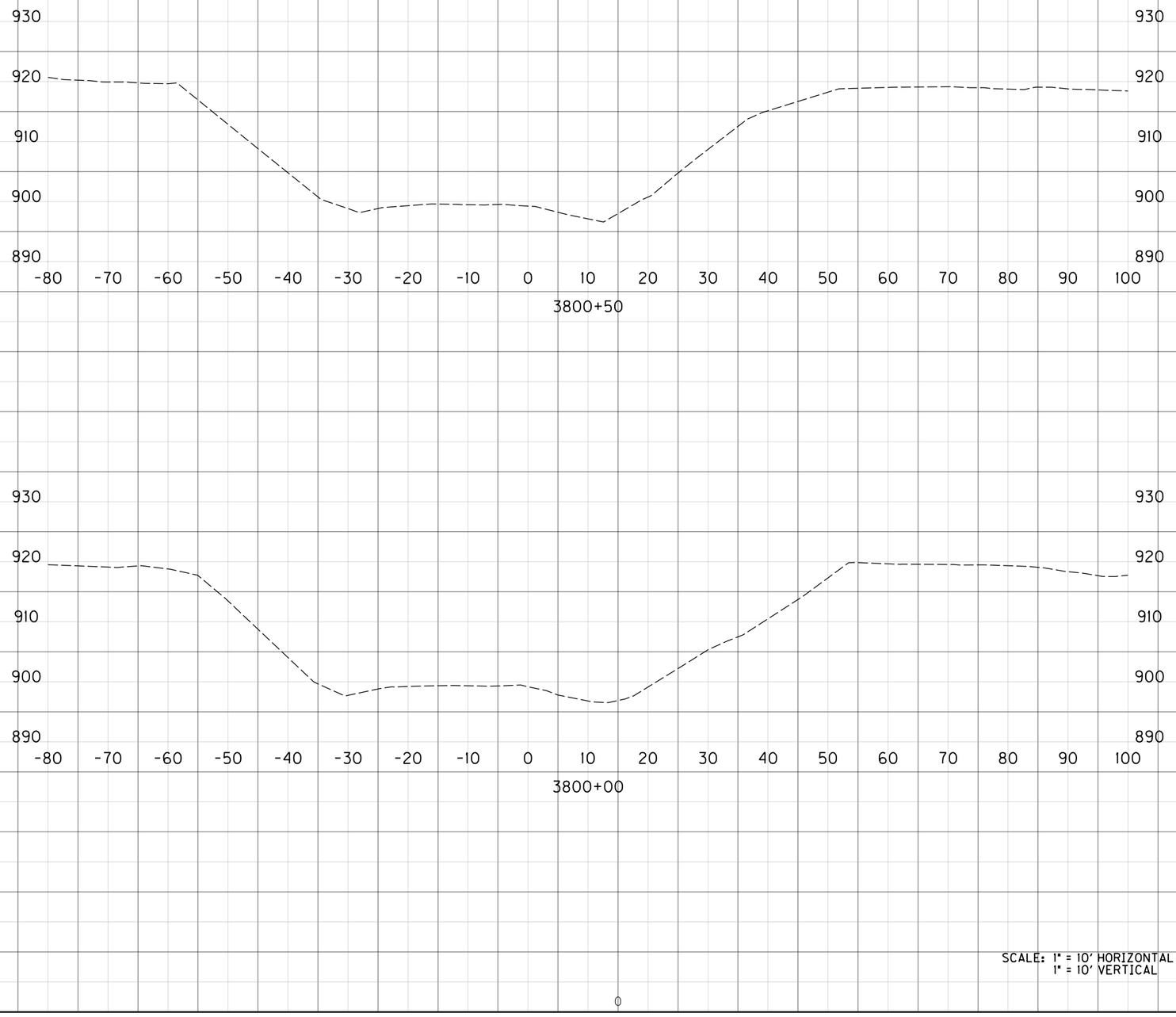


SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

DRAKE LANE
STA.3799+00 TO STA.3799+50
NS RAILWAY CROSS SECTIONS

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	X15

ROCK ROAD BED	REFILL	EMB. BENCH	GRAN. EMB.	COM	EMB	ROCK EXC	DT LT	DT RT



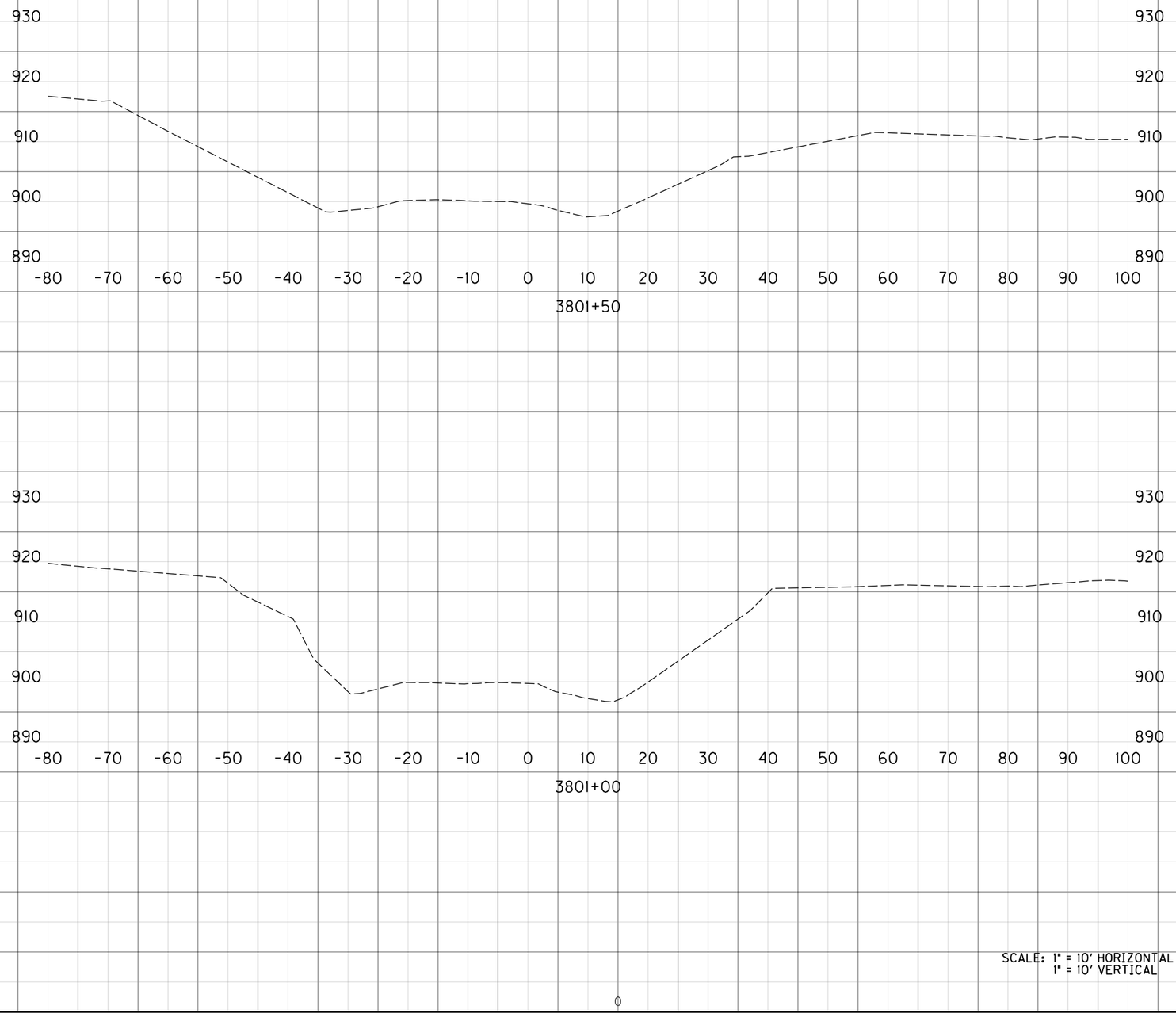
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

DRAKE LANE
STA.3800+00 TO STA.3800+50
NS RAILWAY CROSS SECTIONS

FILE NAME: C:\PW_WORKING\D0157090\05TR00605N_XRR.DGN
USER: mitchella2
DATE PLOTTED: June 13, 2022
E-SHEET NAME:
MicroStation v8.11.9.919

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-1144	X16

ROCK ROAD BED	REFILL	EMB. BENCH	GRAN. EMB.	COM	EMB	ROCK EXC	DT LT	DT RT



SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

DRAKE LANE
STA.3801+00 TO STA.3801+50
NS RAILWAY CROSS SECTIONS

FILE NAME: C:\PW_WORKING\D0157090\05TR00605N_XRR.DGN
USER: mitchella2
DATE PLOTTED: June 13, 2022
E-SHEET NAME:
MicroStation v8.11.9.919

General Notes

Specifications: References to the specifications are to the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction including any current supplemental specifications. All references to the AASHTO specifications are to the AASHTO LRFD Bridge Design Specifications, 8th edition with interims.

Design Load: This bridge is designed for KYHL-93 live load, (i.e. 1.25xAASHTO HL93 live load). This bridge is designed for a future wearing surface of 60 psf.

Design Method: Members are designed to be equivalent or greater than the load and resistance factor design method as specified in the current AASHTO Specifications.

Materials Design Specifications:

For Class "A" Reinforced Concrete	f'c = 3500 psi
For Class "AA" Reinforced Concrete	f'c = 4000 psi
For Steel Reinforcement	fy = 60000 psi
For Beam Steel	fy = 50000 psi

Material Specifications: AASHTO Specifications or ASTM, current edition, as designated below shall govern the materials furnished.

AASHTO M-31 Deformed and Plain Billet-Steel for Concrete Reinforcement, Grade 60

MATERIAL STEEL	A.S.T.M	AASHTO
High Strength Low Alloy Structural Steel	A709 GR 50W	M270 GR 50W
Shear Stud Connectors	UNS G 1018	M-169
Sheet lead and Pig Lead	B29-79	
High strength bolts, nuts, and washers	F3125 Grade A325	M-164 Type 3

All steel in girders shall meet the longitudinal Charpy V-Notch toughness test for fracture critical components Zone 2 in accordancewith the following:
M270 GR 50W (up to 2" thickness) of 25 ft-lbs at 40° F.
Sampling and testing procedures shall be in accordance with AASHTO T243 current edition, utilizing (H) frequency testing. When plate thickness exceeds 1½", frequency of testing shall be (P).

HIGH STRENGTH BOLT CONNECTIONS: Unless shown on the plans, all bolted connections shall be ASTM A328 ⅞" diameter high strength bolts, nuts, and washers. Open holes shall be 1" diameter. Type 3 bolts suitable for use with weathering steel shall be used as described in AASHTO M164. All high strength bolted field connections shall be installed using "direct tension connectors" (DTI's) in accordance with Standard Specifications and ASTM F959. All DTI's shall be mechanically zinc coated with baked epoxy applied over the zinc coating. Installation details of the DTI's shall be shown on the shop plans.

SLIP CRITICAL CONNECTIONS: Slip critical connections have been designed for Class B Surface conditions in accordance with Section 6.13 of the AASHTO LRFD Bridge Design Specifications 8th Edition.

SHEAR CONNECTORS: The minimum length of studs is 6". Provide the necessary length to penetrate at least 2" above bottom of slab.

Include all costs for shear connectors with the price of the steel beams. Including shear connectors, welding and welding material, and materials necessary to field weld or shop weld the shear connectors in place according to the plans and specifications.

If the Contractor wishes to use something other than the stud shear connectors shown on the plans, the proposed arrangement shall be submitted for approval with the shop plans

Studs shall be welded in accordance with AWS Specifications

MILL TEST REPORTS: Notarized mill test reports shall be furnished in triplicate to the Department, showing that all material used in the structural steel conform to the requirements of the specifications

PROHIBITED WELDING: No welding of any nature, other than indicated on the plans, is to be performed without the written consent of the designer, and then only in the manner and at the locations designated in the authorization

SLAB: Ensure the entire superstructure slab and diaphragms are poured continuously, out to out, before allowing any concrete to set.

Stay-In-Place Metal Forms: Stay-In-Place Metal Forms may be used on bridge decks under the following additional conditions:

The valleys of forms shall be filled with trimmed styrofoam to eliminate increased dead load from concrete.

Concrete: Class "AA" Concrete is to be used throughout the superstructure and in the portions of the substructure above the tops of caps. Class "A" concrete is to be used in the substructure below the caps.

Reinforcement: Dimensions shown from the face of concrete to bars are to center of bars unless otherwise shown. Spacing of bars is from center to center of bars. Any reinforcing bars designated by suffix "e" in the plans shall be epoxy coated in accordance with section 811.10 of the Standard Specifications. Any reinforcing bars designated by suffix "s" in a Bill of Reinforcement shall be considered a stirrup for purposes of bend diameters.

Beveled Edges: All exposed edges shall be beveled ¾", unless otherwise shown.

Completion of the Structure: The contractor is required to complete the structure in accordance with the plans and specifications. Material, labor, or construction operations not otherwise specified, are to be included in the bid item most appropriate to the work involved. This may include cofferdams, shoring, excavations, backfilling, removal of all or parts of existing structures, phase construction, incidental materials, labor, or anything else required to complete the structure.

Shop Drawings: The fabricator shall submit all required shop plans, by email to SHOP 057R00605N@docs.e-Builder.net, for review. These submissions shall depict the shop plans in .PDF format, as either 11"x17" or 22"x36" sheets. Designers will make review comments on these electronic submissions as needed and, if required, shall return them to the fabricator for corrections and resubmittal. Upon acceptable reconciliation of all comments, files shall be sent to the Bridge Program GEC Shop Plan Coordinator for distribution. Only plans submitted directly to the Shop Plan Coordinator will be distributed. Additionally, only plans electronically stamped "Distributed by The Bridge Program GEC" are to be used for fabrication. While this process does not require the submission of paper copies, the Engineer of Record reserves the right to require such copies on a case by case basis.
When any changes to the design plans are proposed, the shop drawings reflecting these changes shall be submitted through the process above.

Note: The designation in the email 057R00605N refers to the Bridge ID number which is located on the Title Sheet, RI of the Bridge Plans. Example: SHOP_057R00605N@docs.e-Builder.net

Utilities: The contractor shall be responsible for locating any and all existing utilities prior to excavation of material or installation of guardrail or other construction activities that may involve utilities (overhead or underground).

Verifying Field Conditions: The contractor shall field verify all dimensions before ordering material. New material that is unsuitable because of variations in the existing structure shall be replaced at the contractor's expense.

Dimensions: Dimensions are for a normal temperature of 60 degrees fahrenheit. Layout dimensions are horizontal dimensions.

Mastic Tape: Mastic Tape used to seal joints is to meet the requirements of ASTM C-877 Type I, II, or III. The joint is to be covered with 12" wide mastic tape. Prior to application, the joint surface shall be clean and free of dirt, debris, or deleterious material. Primer, if required by the tape manufacturer, shall be applied for a minimum width of 9" on each side of the joint.

Mastic Tape shall be either:

EZ-Wrap Rubber by Press-seal Casket Corporation,
Seal Wrap by Mar Mac Manufacturing Co. Inc.,
Cadilloc by The UP Rubber Co. Inc.
or approved equal.

Mastic Tape shall cover the joint continuously unless otherwise shown in the plans. Mastic Tape shall be spliced by taping a minimum of 6" and in accordance with the manufacturer's recommendations with the overlap running downhill.

The cost of labor, materials, and incidental items for furnishing and installing Mastic Tape shall be considered incidental to the unit price bid for concrete class 'AA' and no separate measurement of payment shall be made.

Concrete Sealer:
Apply concrete sealer in accordance with the Special Note Concrete Sealing.

CONSTRUCTION IDENTIFICATION: The names of the Prime Contractor and any Subcontractor shall be imprinted in the concrete with one inch letters at a location designated by the Engineer. The Contractor shall furnish all Plans, equipment, and labor necessary to do the work for which no direct payment will be made. See Standard Drawing BGX-006, c.e.

Temporary Supports: Temporary Supports or shoring will not be permitted under the beams when pouring the concrete deck slab or when taking "top of beam" elevations.

Armored Edge: Fabricate armored edge to match cross slope and parabolic crown at each end of bridge.

Foundation Preparation: Foundation Preparation shall be in accordance with Section 603 of the Specifications.

Foundation excavations should be properly braced/shored to provide adequate safety to persons working in or around excavations. Bracing should be performed in accordance with applicable federal, state and local guidelines.

Temporary shoring, sheeting,cofferdams, and/or dewatering methods may be required to facilitate foundation construction. It should be anticipated that groundwater will be encountered at foundation locations within the flood plain.

Temporary shoring, bracing, sheeting, cofferdams and dewatering shall be included in the Lump Sum Bid for Foundation Preparation.

Structural Granular Backfill: Materials for Structural Granular Backfill shall be in accordance with Section 805 of the Specifications.

Contrary to the Specifications, Structural Granular Backfill will not be measured for payment but shall be included in the Lump Sum Bid for Foundation Preparation.

Spread Footing: Based on a review of the existing subsurface conditions and anticipated structural loads, it is recommended that rock bearing foundation system consisting of spread footings be used for all bridge substructure elements. A presumptive bearing resistance of 20.0 ksf on unweathered bedrock is being recommended.

Excavation for footings at the structure locations should be level and free of loose, water softened material, etc. Additional rock excavation to achieve suitable bearing conditions may be required depending upon topography and bedrock weathering conditions.

Solid rock excavation will be required for installation of the substructure's spread footings. The contractor shall take care during blasting and other excavation methods to avoid over-breakage and damage to the bedrock beneath the footings.

Footing excavations in bedrock shall be cut neatly so that no forming or backfilling is necessary in the construction of the portions of the footings located in rock. Concrete shall be placed directly against the cut rock faces. Mass concrete should be placed in the excavation from the top of the footing to the bedrock surface where the footing does not extend to the bedrock surface.

Bearing elevation of footings may be adjusted at the discretion of the Engineer if competent, unweathered bedrock is found at a higher elevation than specified for the respective substructure element. The top of new spread footings should be fully embedded into unweathered bedrock. At a minimum, two-foot embedment into competent bedrock shall be maintained.

Prior to placement of any concrete or reinforcing steel in a foundation excavation, the excavation bottom should be clean and all soft, wet, or loose materials should be removed. In no case should concrete be placed upon compressible or water-softened materials. Any clay seams or suspect weak materials at or near the bearing elevation will need to be undercut and replaced with mass concrete.

Concrete placement for footings should be placed as soon as practical after completion of the footing excavation. If the bedrock becomes softened at bearing elevation, the softened material should be undercut to unweathered material prior to placement of reinforcing steel and concrete. Seasonal groundwater fluctuations may cause groundwater infiltration into the footing excavation, and a dewatering method may be necessary.

REVISION	DATE
DATE: 1/23/2023	CHECKED BY
DESIGNED BY: J. CROSSLIN	A. EDELEN
DETAILED BY: J. CROSSLIN	A. EDELEN

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
JESSAMINE

ROUTE	CROSSING
DRAKE LANE	NS (CNO & TP)

GENERAL NOTES 1

ITEM NUMBER	PREPARED BY	SHEET NO.
7-1144	AECOM	S01
		DRAWING NO. 28500

General Notes

IDENTIFICATION MARKING OF STEEL MEMBERS: Steel mill and fabricator identification markings for steel plates, shapes, or fabricated members shall be by metal tags, soapstone, or some other readily removable material, or shall be marked in an area of the completed member which will be encased or covered with concrete. Marking methods and locations are subject to approval of the Engineer.

Paint of wax based crayons shall not be used for marking.

HANDLING AND STORING OF STEEL MEMBERS: Steel members must not be gouged, dented, or allowed to rub against other members which would result in damage to the blast cleaned profile of the steel. The Contractor must repair any damage to the steel and/or prime coat as directed by the Engineer.

Members shall be stored in the fabrication shop or on the project site in such a manner as to be kept free and clean of all foreign substances such as grease, oil, mortar, concrete, chalk, crayon, paint, and dirt. All storage must be above ground and sloped to allow free drainage of melted snow, rainwater, and dew.

If stored for periods longer than three months, the members must be placed on metal supports. For periods of storage up to three months, members may be placed on clean, untreated, wood timbers. Plate girders shall be stored with the web in the upright position.

Treated lumber or timber shall not be allowed to come in contact with the steel members.

FINAL CLEANUP OF STRUCTURAL STEEL SURFACES: Upon completion of all concrete curing operations, the Contractor shall clean all steel surfaces to remove all grease, oil, concrete residue, dirt, and other foreign substances to the satisfaction of the engineer.

Cleaning may be high pressure water, hand wire brushing, or by brush-off blast cleaning in accordance with SSPC-SP7. If detergents and cleaners are used, the cleaning shall be followed by a clean water rinse to remove all residues. All grease and oil shall be removed prior to the clean water rinse by solvent cleaning.

The use of acid to remove stains is not permitted.

SPECIAL RAILROAD REQUIREMENTS FOR BRIDGE DEMOLITION: The contractor shall submit demolition plans, calculations and procedures prepared by a professional engineer registered in the state of Kentucky to the engineer and the railway for all demolition work above or adjacent to the tracks of the railway. The plan and procedure shall be in accordance with the NS "Public Projects Manual" for and shall indicate the method of protection for the track structure, the sequence of demolition, and the procedures and equipment to be used. No debris shall be allowed to intentionally fall to railway property.

During removal of the existing structure, the existing vertical clearances shall not be reduced. A temporary minimum horizontal clearance of 12'-0" as measured from the track centerline shall be maintained to any temporary false work, stockpiled materials, or other obstruction which will be left in place during train movements through the job site.

PAYMENT FOR STRUCTURAL STEEL: The lump sum bid for structural steel shall be full payment for all structural steel, bolts, washers, welding and welding materials, and all labor and materials necessary to erect the steel in accordance with the Plans and Specifications. The approximate weightof the structural steel shown in the estimate of quantities does not include overrun.

WELDING SPECIFICATIONS: All welding and welding materials shall conform to "Joint Specification ANSI/AASHTO/AWS D1.5 Bridge Welding Code". Modification and additions as stated on the plans and Special Provision 4 (08), shall supersede the joint specifications.

WELDING PROCEDURE: Qualification tests of all welding procedures shall be completed by the Contractor and approved by the Engineer prior to the final approval of the shop drawings and welding procedure and start of fabrication.

TEMPORARY BRIDGE FLOORING: The Contractor shall provide temporary bridge flooring or SIP forms during the construction of portions of spans which cross highways that are open to traffic and railways. Extend temporary flooring eight (8) feet beyond the outer rails of tracks for railways. The temporary flooring shall be installed as soon as practical after beams are set. The temporary flooring shall extend across the travel way, ramps and usable shoulders of highways. Consider all phases of furnishing and removing the flooring as incidental to the Contract. This item may be considered in addition to any requirement set forth in subsection 107.01.01 of the Standard Specifications.
The design load for temporary bridge flooring shall consist of the sum of dead load and vertical loads. Live loads shall be 50 psf for horizontal surfaces plus the weight of any dismantled material which is allowed to fall on the temporary flooring. The design of the temporary flooring shall be submitted with the falsework design and shall be subject to review by the Engineer.

CAMBER: Web plates shall be cut to provide for the camber of the girder
Provide for possible warpage due to extra heat in top flange by virtue of shear connectors. Girders which do not conform to plan camber and grade in the erected position, either an adjustment in depth of concrete haunch over the supporting members, or a reworking of the beam camber to meet plan camber and slab thickness will be required. If either type of adjustment is required it will be at no additional cost to the State. However in no case shall the shear connectors be allowed to penetrate the slab less than 2 inches.

AS-BUILT DRAWINGS
Norfolk Southern will be provided as-built drawings of the completed bridge showing the actual clearances as constructed. Depth, size, and location of all foundation components shall be shown on the drawings.

SPECIAL CONSTRUCTION NOTE
If the contractor has the need to remove any existing fencing or to widen any curves of Drake Lane to aid in the delivery of any construction materials or equipment, it shall be the sole responsibility of the contractor to acquire any needed agreements with any property owners.

REVISION	DATE

DATE: 1/23/2023	CHECKED BY
DESIGNED BY: J. CROSSLIN	A. EDELEN
DETAILED BY: J. CROSSLIN	A. EDELEN

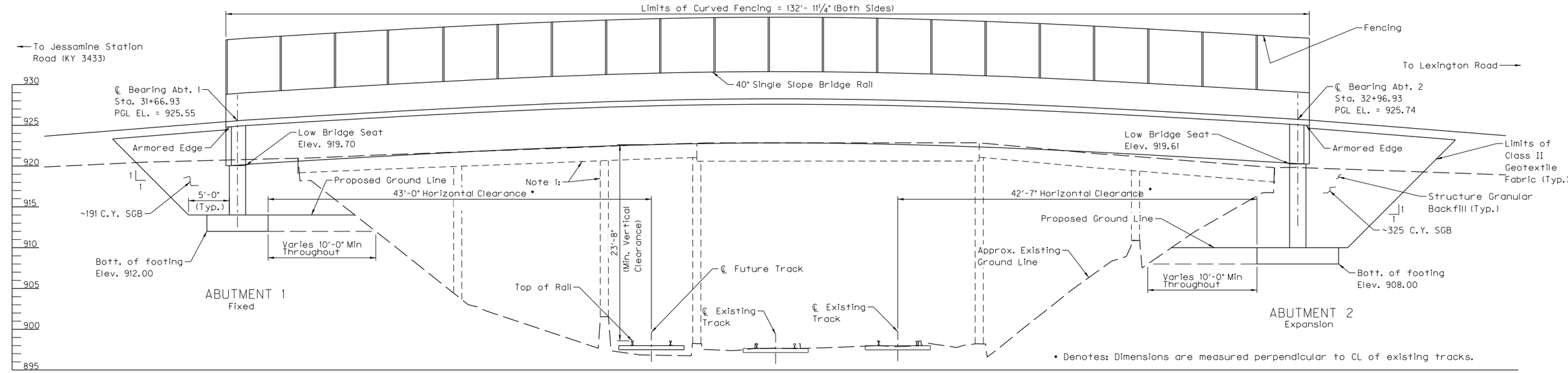
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
JESSAMINE

ROUTE	CROSSING
DRAKE LANE	NS (CNO & TP)

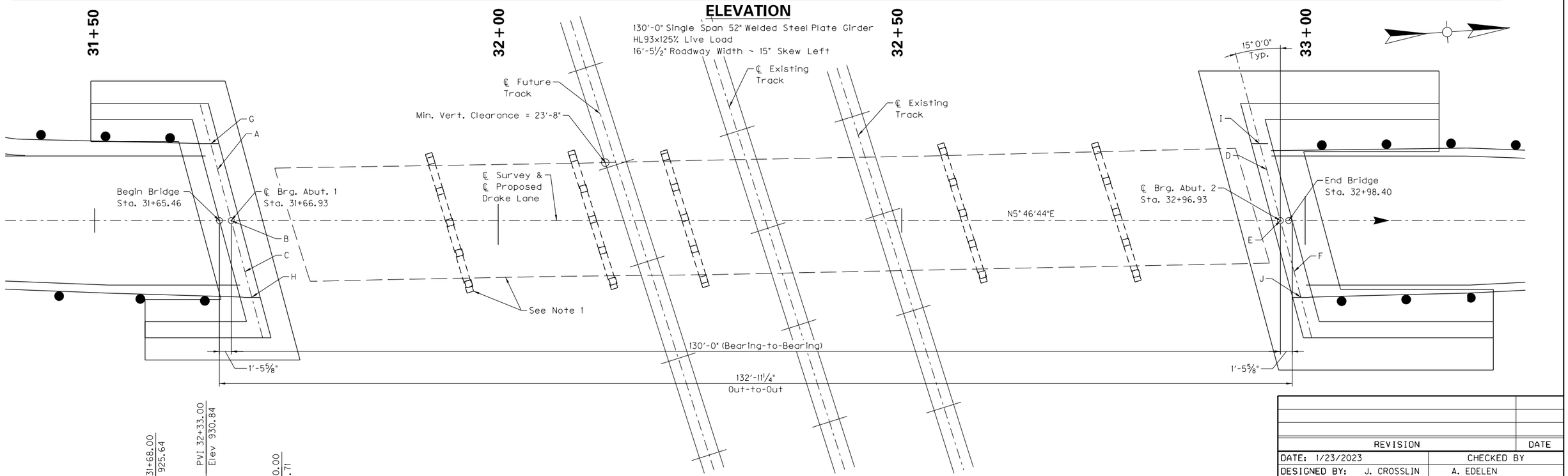
GENERAL NOTES 2

ITEM NUMBER	PREPARED BY		SHEET NO.
7-1144	AECOM		S02
			DRAWING NO. 28500

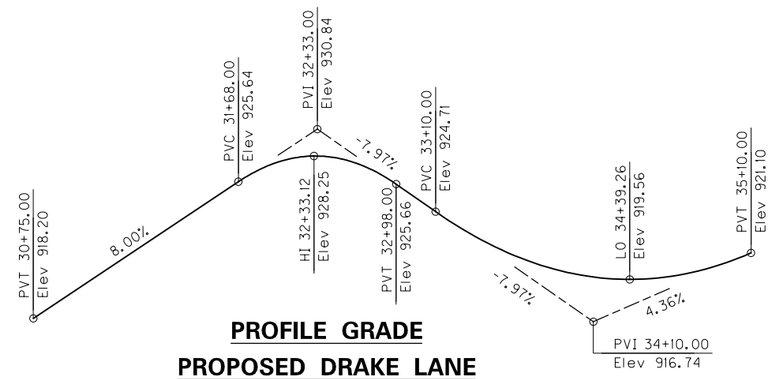


ELEVATION

130'-0" Single Span 52" Welded Steel Plate Girder
HL93x125% Live Load
16'-5½" Roadway Width ~ 15° Skew Left



PLAN



PROFILE GRADE
PROPOSED DRAKE LANE

Note 1: Existing bridge to be removed, to a level that is a minimum of 2ft below the proposed ground line in accordance with the Public Projects Manual. (Typ.)

ELEVATION TABLE

A	919.70
B	919.96
C	919.97
D	919.88
E	919.87
F	919.61
G	919.70
H	919.97
I	919.88
J	919.61

Note: Beam seat elevations A, B, C, D ,E, and F are given at the ℄ girder and the ℄ bearing

REVISION	DATE

DATE: 1/23/2023 — CHECKED BY
DESIGNED BY: J. CROSSLIN — A. EDELEN
DETAILED BY: J. CROSSLIN — A. EDELEN

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY: JESSAMINE
ROUTE: DRAKE LANE
CROSSING: NS (CNO & TP)

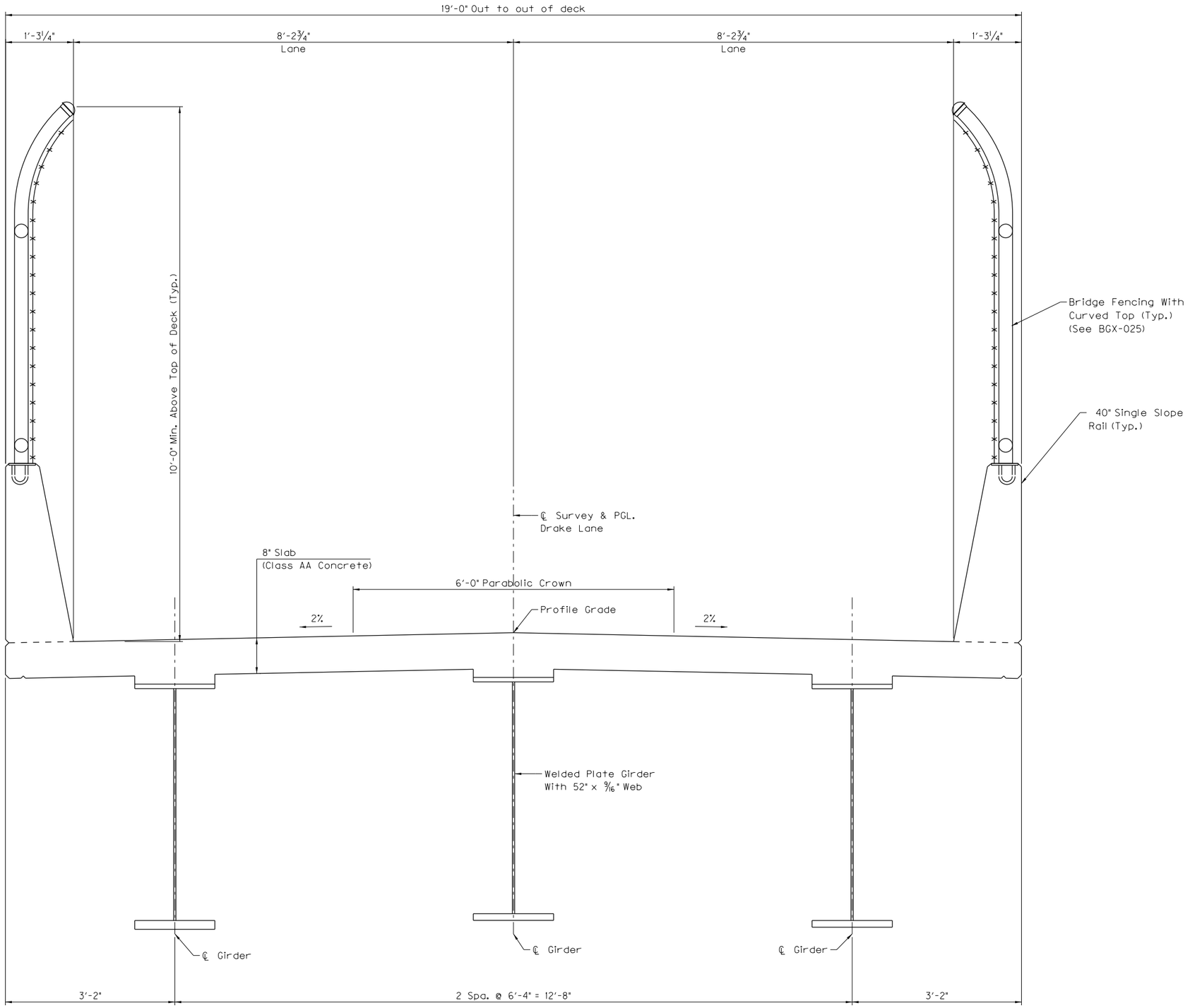
LAYOUT

ITEM NUMBER: 7-1144

PREPARED BY: AECOM

SHEET NO. S03
DRAWING NO. 28500

MicroStation v8.11.9.919 | E-SHEET NAME: | USER: CrosslinJ | DATE PLOTTED: 1/23/2023 7:39:52 AM | FILE NAME: c:\pw_working\d0157106\S03 Layout.dgn



TYPICAL SECTION

ITEM NUMBER
7–1144

REVISION	DATE

DATE: 1/23/2023	CHECKED BY
DESIGNED BY: J. CROSSLIN	A. EDELEN
DETAILED BY: J. CROSSLIN	A. EDELEN

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
JESSAMINE

ROUTE	CROSSING
DRAKE LANE	NS (CNO & TP)

TYPICAL SECTION

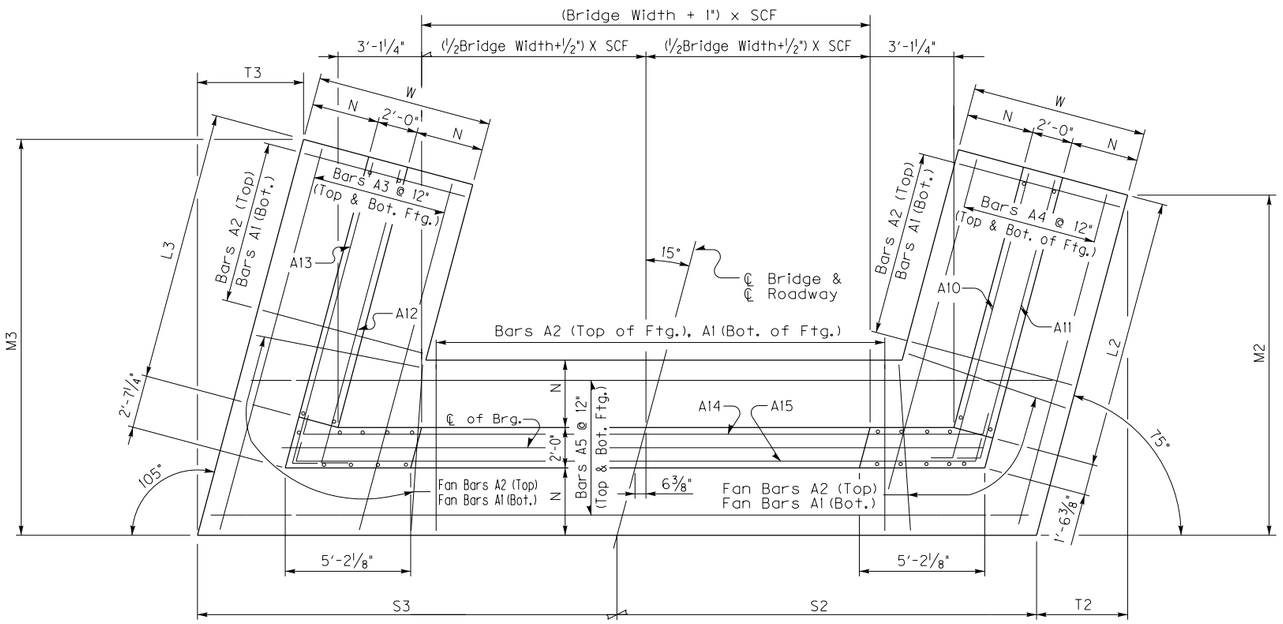
PREPARED BY
AECOM

SHEET NO. S04

DRAWING NO. 28500

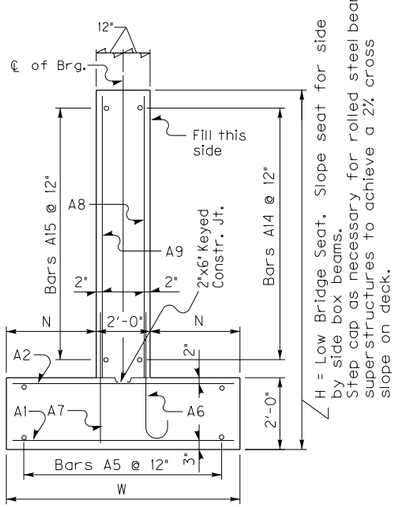
15° SKEW VARIABLE BRIDGE WIDTH 2:1 FILL SLOPES WINGS PARALLEL TO ROADWAY

ABUTMENT SKEW CORRECTION FACTOR (SCF) = 1.035



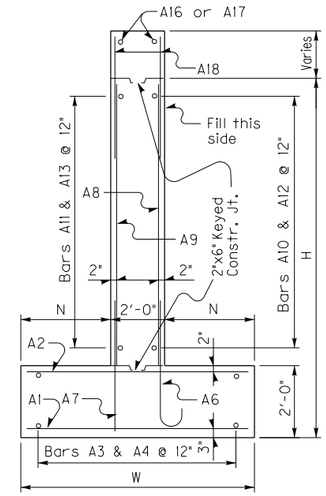
PLAN

(Left Skew as shown; right skew opp. hand)



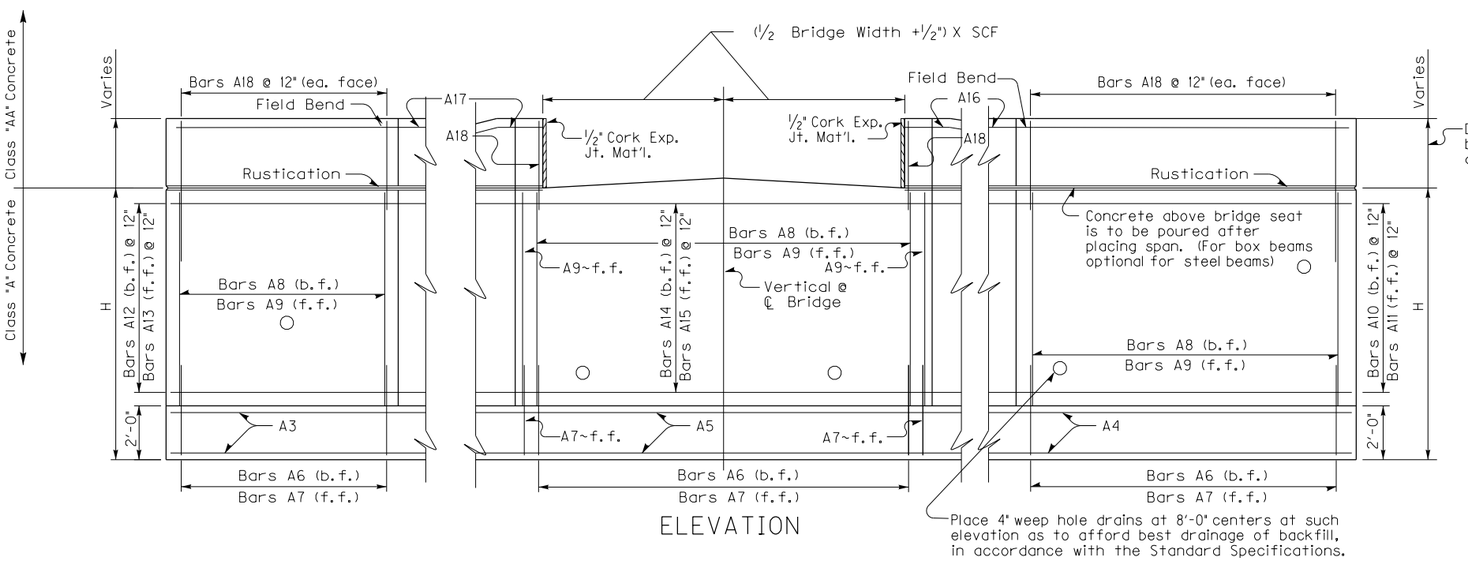
WALL SECTION

H = Low Bridge Seat. Slope seat for side by side box beams. Step cap as necessary for rolled steel beam superstructures to achieve a 2% cross slope on deck.

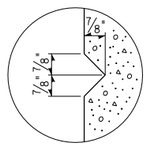


WING SECTION

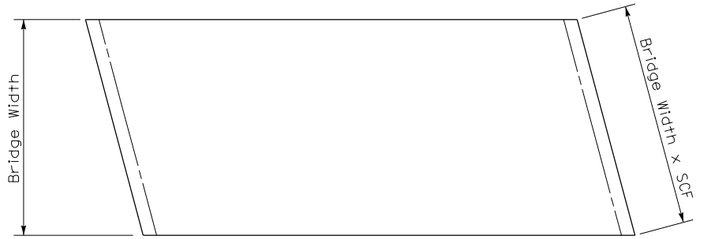
Note: Trim A16 & A17 bars if necessary
Trim A3 bars as necessary



ELEVATION



RUSTICATION GROOVE



PLAN OF SUPERSTRUCTURE SLAB

REVISION	DATE
DATE: 1/23/2023	CHECKED BY
DESIGNED BY: J. CROSSLIN	A. EDELEN
DETAILED BY: J. CROSSLIN	A. EDELEN

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY: JESSAMINE

ROUTE: DRAKE LANE | CROSSING: NS (CNO & TP)

ABUTMENT DETAILS

ITEM NUMBER	PREPARED BY	SHEET NO.
7-1144	AECOM	S05
		DRAWING NO. 28500

15° SKEW VARIABLE BRIDGE WIDTH 2:1 FILL SLOPES WINGS PARALLEL TO ROADWAY

Bill of Reinforcement

MARK	A1					A2					A3			A4			A5					
TYPE	Str.					Str.					Str.			Str.			Str.					
SIZE											#5			#5			#5					
H	No.	Size	Length ft.	Length in.	Spacing	No.	Size	Length ft.	Length in.	Spacing	No.	Length ft.	Length in.	No.	Length ft.	Length in.	No.	Length ft.	Length in.	+Lb =	Length ft.	Length in.
15-16	96+Nb=116	11	11	8	12	96+Nb=116	9	11	8	12	24	38	8	24	35	2	24	20	2	+Lb=	39	10
13-14	86+Nb=106	10	10	8	12	86+Nb=106	8	10	8	12	22	34	0	22	30	9	22	19	2	+Lb=	38	10
11-12	76+Nb=96	9	9	8	12	76+Nb=96	7	9	8	12	20	29	4	20	26	5	20	18	1	+Lb=	37	9
9-10	66+Nb=86	8	8	8	12	66+Nb=86	7	8	8	12	18	24	8	18	22	0	18	17	1	+Lb=	36	9
7-8	53+Nb=73	7	7	2	12	53+Nb=73	5	7	2	12	16	18	9	16	16	4	16	15	8	+Lb=	35	4
5-6	45+Nb=65	7	6	2	12	45+Nb=65	5	6	2	12	14	15	2	14	13	0	14	14	8	+Lb=	34	4

MARK	A6													A7					A8					A9			
TYPE	4													Str.					Str.					Str.			
SIZE																								#5			
H	No.	Size	Length ft.	Length in.	Spacing	A ft.	A in.	B ft.	B in.	C ft.	C in.	D ft.	D in.	No.	Size	Length ft.	Length in.	Spacing	No.	Size	Length ft.	Length in.	Spacing	No.	Length ft.	Length in.	Spacing
15-16	67+Nb=87	9	9	11	12	8	⅛	1	10	0	11¾	8	6	75+Nb=95	5	4	11	12	67+Nb=87	11	12	10	12	75+Nb=95	12	10	12
13-14	59+Nb=79	8	8	3	12	6	11	1	3	0	8	7	3	67+Nb=87	5	4	11	12	59+Nb=79	9	10	10	12	67+Nb=87	10	10	12
11-12	51+Nb=71	7	7	1	12	5	10½	1	2	0	7	6	2	59+Nb=79	5	4	11	12	51+Nb=71	7	8	10	12	59+Nb=79	8	10	12
9-10	43+Nb=63	6	6	1	12	5	1	1	0	0	6	5	4	51+Nb=71	5	4	11	12	43+Nb=63	7	6	10	12	51+Nb=71	6	10	12
7-8	33+Nb=53	5	5	7	12	4	8½	0	10	0	5	4	11	41+Nb=61	5	4	11	12	33+Nb=53	7	4	10	12	41+Nb=61	4	10	12
5-6	27+Nb=47	5	5	7	12	4	8½	0	10	0	5	4	11	35+Nb=55	5	4	11	12	27+Nb=47	5	2	10	12	35+Nb=55	2	10	12

MARK	A10			A11			A12			A13			A14						A15						A16			A17			A18		
TYPE	8			8			8			8			7						7						Str.			Str.			Str.		
SIZE	#5			#5			#5			#5			#5						#5						#5			#5			#5		
H	No.	Length ft.	Length in.	No.	Length ft.	Length in.	No.	Length ft.	Length in.	No.	Length ft.	Length in.	No.	Length ft.	Length in.	+Lb =	Length ft.	Length in.	No.	Length ft.	Length in.	+Lb =	Length ft.	Length in.	No.	Length ft.	Length in.	No.	Length ft.	Length in.	No.	Length ft.	Length in.
15-16	14	32	6	14	32	3	14	32	7	14	33	3	14	11	8	+Lb=	31	4	14	11	8	+Lb=	31	4	2	36	8	2	37	8	145	5	9
13-14	12	28	6	12	28	3	12	28	7	12	29	3	12	11	8	+Lb=	31	4	12	11	8	+Lb=	31	4	2	32	8	2	33	8	129	5	9
11-12	10	24	6	10	24	3	10	24	7	10	25	3	10	11	8	+Lb=	31	4	10	11	8	+Lb=	31	4	2	28	8	2	29	8	113	5	9
9-10	8	20	6	8	20	3	8	20	7	8	21	3	8	11	8	+Lb=	31	4	8	11	8	+Lb=	31	4	2	24	8	2	25	8	97	5	9
7-8	6	15	6	6	15	3	6	15	6	6	16	3	6	11	8	+Lb=	31	4	6	11	8	+Lb=	31	4	2	19	8	2	20	8	77	5	9
5-6	4	12	6	4	12	3	4	12	6	4	13	3	4	11	8	+Lb=	31	4	4	11	8	+Lb=	31	4	2	16	8	2	17	8	65	5	9

Table of Dimensions

H	W		N		M2		M3		T2		T3		L2	L3	S2					S3				
	Length ft.	Length in.	Length ft.	Length in.	Length ft.	Length in.	Length ft.	Length in.	Length ft.	Length in.	Length ft.	Length in.	Length ft.	Length ft.	Length ft.	Length in.	$+\frac{Lb}{2}=$	Length ft.	Length in.	Length ft.	Length in.	$+\frac{Lb}{2}=$	Length ft.	Length in.
15-16	12	0	5	0	34	2	37	9½	9	1⅞	10	1½	30	30	10	4¾	+0.5Lb=	20	2¾	10	4¾	+0.5Lb=	20	2¾
13-14	11	0	4	6	29	11⅛	33	3½	8	¼	8	11	26	26	9	10½	+0.5Lb=	19	8½	9	10½	+0.5Lb=	19	8½
11-12	10	0	4	0	25	8⅜	28	9⅝	6	10⅝	7	8⅝	22	22	9	4⅜	+0.5Lb=	19	2⅜	9	4⅜	+0.5Lb=	19	2⅜
9-10	9	0	3	6	21	5½	24	3¾	5	9	6	6⅛	18	18	8	10⅛	+0.5Lb=	18	8⅛	8	10⅛	+0.5Lb=	18	8⅛
7-8	7	6	2	9	16	⅞	18	6⅜	4	3¾	4	11⅝	13	13	8	¾	+0.5Lb=	17	10¾	8	¾	+0.5Lb=	17	10¾
5-6	6	6	2	3	12	9¾	15	⅛	3	5⅛	4	¼	10	10	7	6⅝	+0.5Lb=	17	4⅝	7	6⅝	+0.5Lb=	17	4⅝

Reinforcement Details

TYPE ④

TYPE ⑦

TYPE ⑧

TYPE ⑧

Quantities

H	Concrete* C.Y.	Reinforcement LBS.
5	26.58+(0.71xLb) =	2501+(52.8xLb) =
6	28.83+(0.78xLb)	2501+(52.8xLb)
7	39.9+(0.93xLb) =	3683+(68.7xLb) =
8	42.6+(1.01xLb) = 62.5	3683+(68.7xLb) = 5,034
9	62.86+(1.19xLb) =	5875+(91xLb) =
10	66.3+(1.27xLb) =	5875+(91xLb) =
11	85.77+(1.41xLb) =	8757+(120.4xLb) =
12	89.81+(1.49xLb) = 109.7	8757+(120.4xLb) = 11,125
13	112.24+(1.64xLb) =	12937+(161xLb) =
14	116.87+(1.71xLb) =	12937+(161xLb) =
15	142.27+(1.86xLb) =	17564+(198.6xLb) =
16	147.48+(1.93xLb) =	17564+(198.6xLb) =

*Concrete quantities computed using 21" beam depth on ½" pad & Variable Bridge Width

ABUTMENT SKEW CORRECTION FACTOR (SCF) = 1.035

NUMBER OF BARS TO ADD (Nb) = Bridge Width (feet) x SCF (round up to nearest whole number)

LENGTH OF ABUTMENT TO ADD (Lb) = Bridge Width (feet) x SCF (convert decimal to architectural)

NOTE: THE DESIGN HEIGHT TO BE USED FOR ABUTMENT 1 IS 7'-8'.
NOTE: THE DESIGN HEIGHT TO BE USED FOR ABUTMENT 2 IS 11'-12'.

PLAN OF SUPERSTRUCTURE SLAB

GENERAL NOTES

SPECIFICATIONS: Construct abutments according to the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction. Abutments are designed for side by side box beams as detailed in Standard Drawings BDP-001 through BDP-012, current edition. Dimensions may be adjusted to allow for any out to out bridge width. Abutments are also adequate for Std. Dwg. slabs or steel beam superstructures

FOUNDATION PRESSURE: Construct abutment footings on solid rock bearing material that can support a pressure of 20,000 psf as recommended by a geotechnical engineer

WING LENGTHS: Calculated assuming 21" superstructure depth and stream bank elevation at top of footing.

FOOTING ELEVATION: Construct bottom of footing below the anticipated scour elevation. (This typically entails embedding the footings 1'-0" to 2'-0" into rock and pouring concrete directly against cut rock faces. as recommended by geotechnical engineer.)

NOTE: Distances to bars shown are clear dimensions unless otherwise noted.

MATERIAL SPECIFICATIONS:
Concrete, Class "A" = 3500 psi
Steel Reinforcement = Grade 60

REVISION	DATE

DATE: 1/23/2023	CHECKED BY
DESIGNED BY: J. CROSSLIN	A. EDELEN
DETAILED BY: J. CROSSLIN	A. EDELEN

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
JESSAMINE

ROUTE
DRAKE LANE

CROSSING
NS (CNO & TP)

ABUTMENT DETAILS

ITEM NUMBER
7-1144

PREPARED BY
AECOM

SHEET NO.
S06

DRAWING NO.
28500

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USER: CrosslinJ
DATE PLOTTED: 1/23/20237:40:27 AM
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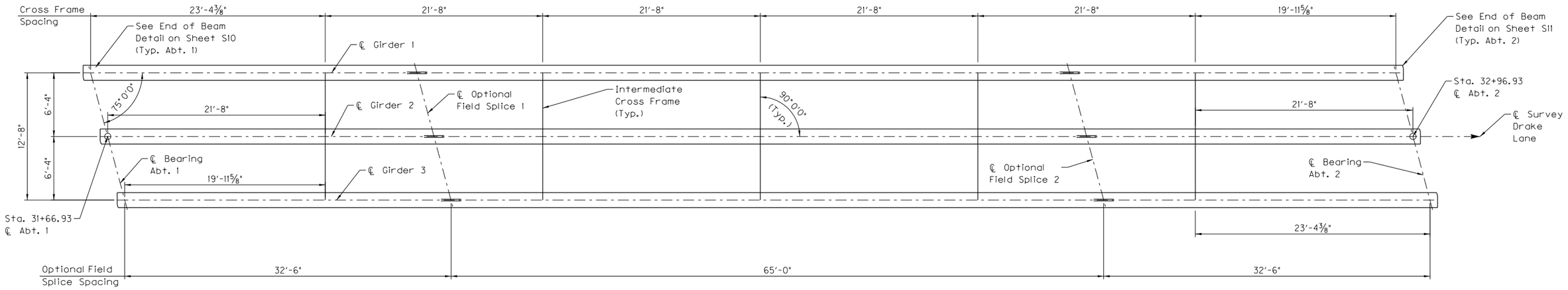
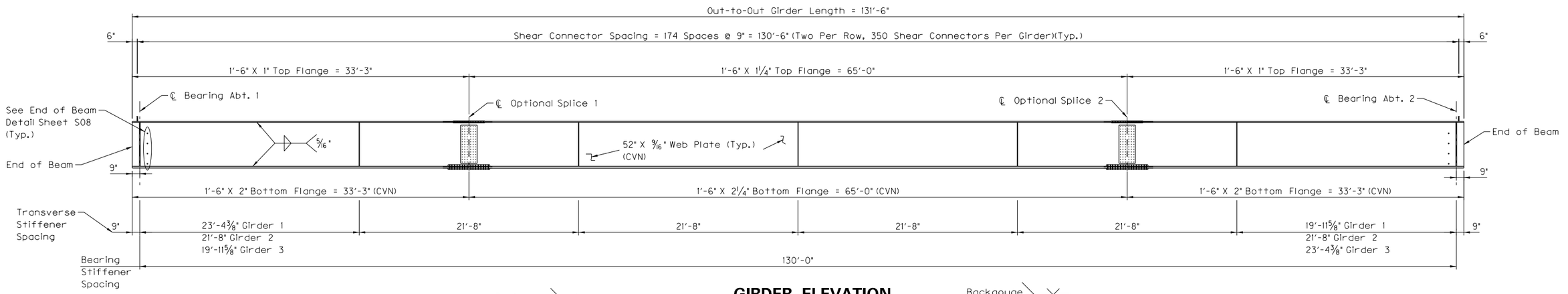


FRAMING PLAN



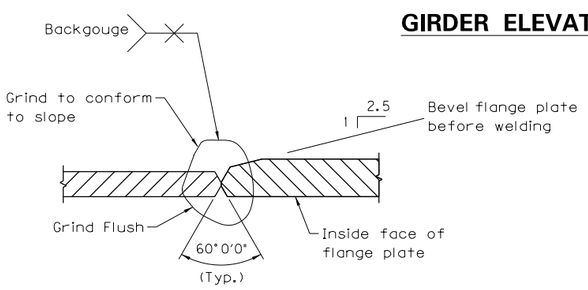
GIRDER ELEVATION

NOTES:

1) End of girders, and bearing stiffeners are to be vertical at full dead load at 60 degrees F. All intermediate cross-frame connection plates shall be normal to the flanges.
2) Charpy V-Notch Toughness Tests shall be performed on all Main Load Carrying Members subject to Tensile Stress indicated by CVN. See General Notes sheets.
3) All welded shop splices in flange plates shall be made prior to welding flange plates to web plates.
4) All grinding shall be parallel to the direction of stress.
5) Web splices shall be minimum of 1′-0" clear of shop splices, cross frame connections, and bearing stiffener plates.

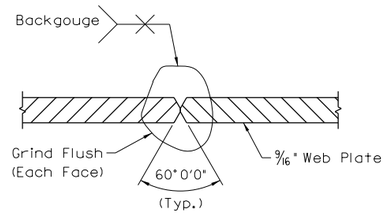
APPROXIMATE WEIGHTS

Approximate weight of girder steel only = 116,452 lbs.
Approximate weight of all structural steel = 129,656 lbs.
Approximate total number of shear connectors = 1,050



FLANGE WELD SPLICE

(Shop Flange Splice)
AWS Prequalified, full penetration, fully automatic, sumberged arc groove weld



WEB WELD SPLICE

(Shop Web Splice)
AWS Prequalified, full penetration, fully automatic, sumberged arc groove weld

ITEM NUMBER
7-1144

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DETAILED BY: J. CROSSLIN	A. EDELEN

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY: JESSAMINE

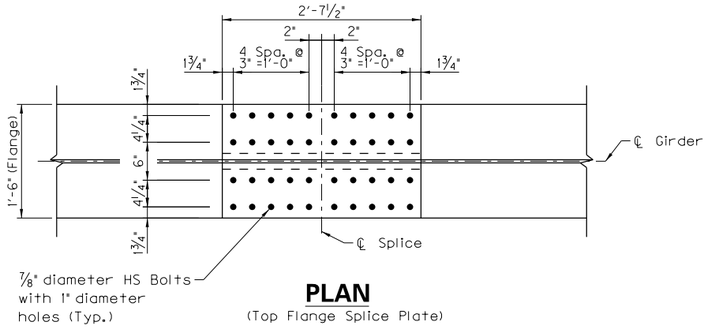
ROUTE	CROSSING
DRAKE LANE	NS (CNO & TP)

FRAMING PLAN AND GIRDER ELEVATION

PREPARED BY: AECOM

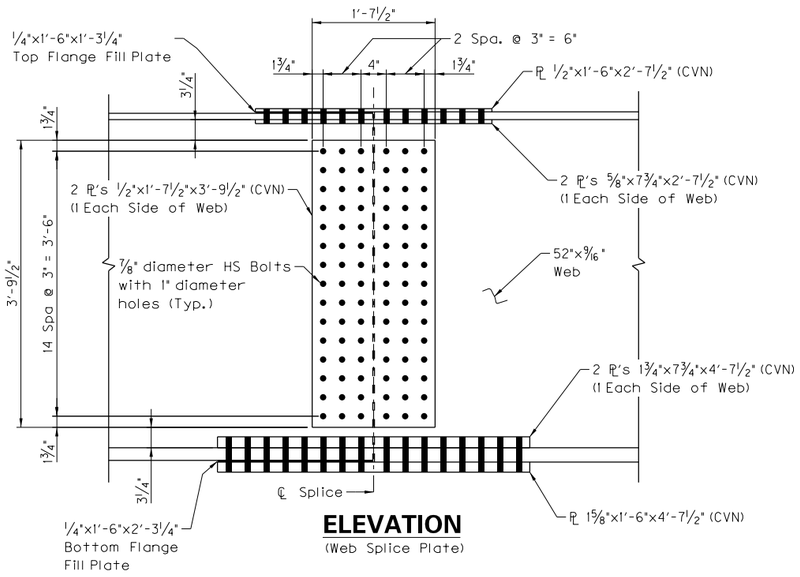
SHEET NO. S07

DRAWING NO. 28500



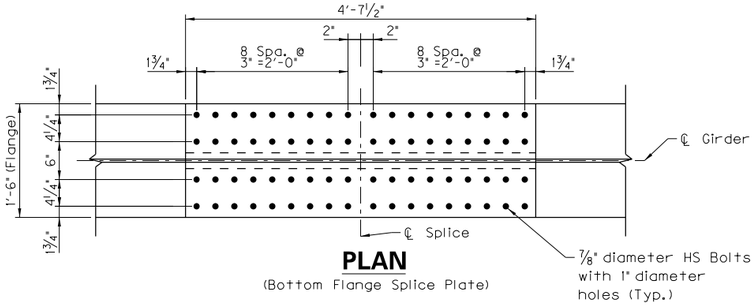
PLAN

(Top Flange Splice Plate)



ELEVATION

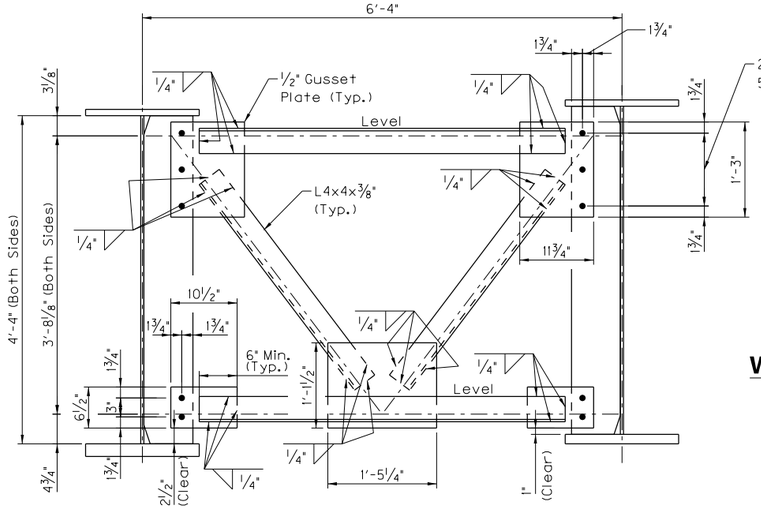
(Web Splice Plate)



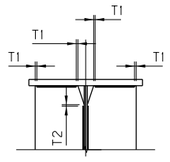
PLAN

(Bottom Flange Splice Plate)

OPTIONAL SPLICES 1 AND 2 GIRDERS 1, 2, AND 3



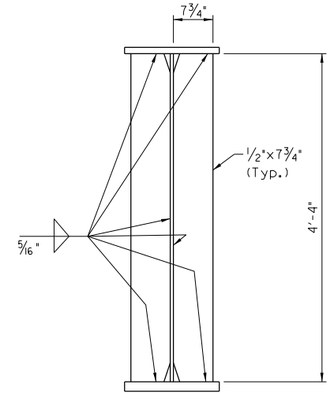
TYPICAL CROSS FRAME DETAIL



T1 DENOTES: ¼" ± ⅛"
T2 DENOTES: ½" ± ¼"

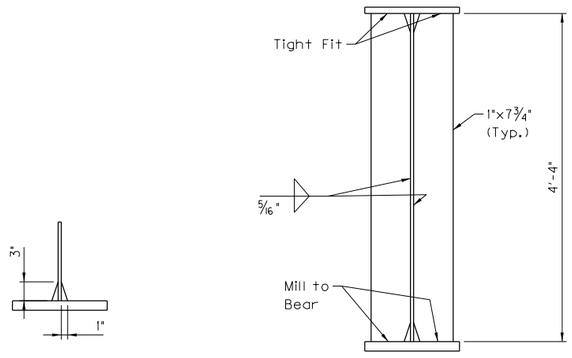
WELD TERMINATION DETAIL

All stiffener plate welds to be terminated as shown



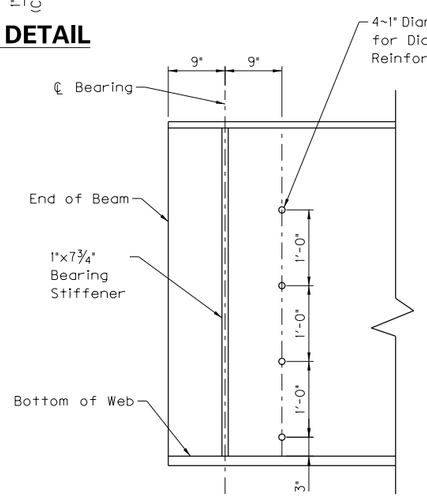
INTERMEDIATE STIFFENER AT CROSS FRAMES

Intermediate stiffener only on interior side of Girders 1 and 3

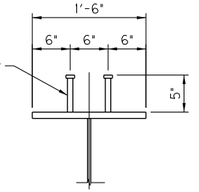


BEARING STIFFENER DETAIL

TYPICAL CLIP DETAIL



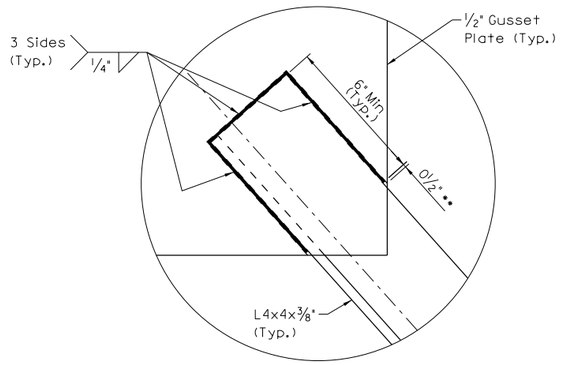
END OF BEAM DETAIL



SHEAR CONNECTOR DETAIL

Use ⅞" diameter granular or solid flux filled headed studs. Automatically end weld. (See Girder Elevation for spacing).

Do not install shear studs on flange splice plates.



TYPICAL CROSS FRAME WELD DETAIL

(Unless noted otherwise)
•• Terminate welds ½" (±¼") short of edge

GENERAL NOTES:
1) All shop splices in flange or web plates shall be made prior to welding flange plates to web plates.
2) All grinding shall be parallel to the direction of stress.
3) Web splices shall be a minimum of 1'-0" clear of shop flange splices, cross frame connections, and bearing stiffener plates.
4) All bolts shall be ⅞" diameter ASTM F3125 Grade A325 high strength bolts in 1" diameter holes.
5) Contact surface of bolted parts shall be Class B.
6) Exclude bolt threads from shear planes.
7) Oversized or slotted holes shall not be permitted.

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DETAILED BY: J. CROSSLIN	A. EDELEN

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
JESSAMINE

ROUTE	CROSSING
DRAKE LANE	NS (CNO & TP)

STEEL DETAILS

ITEM NUMBER	PREPARED BY		SHEET NO.
7-1144	AECOM		S08
			DRAWING NO. 28500

FILE NAME: c:\pw_working\d0157106\S08_steel_details.dgn
USER: CrosslinJ
DATE PLOTTED: 1/23/2023 7:41:00 AM
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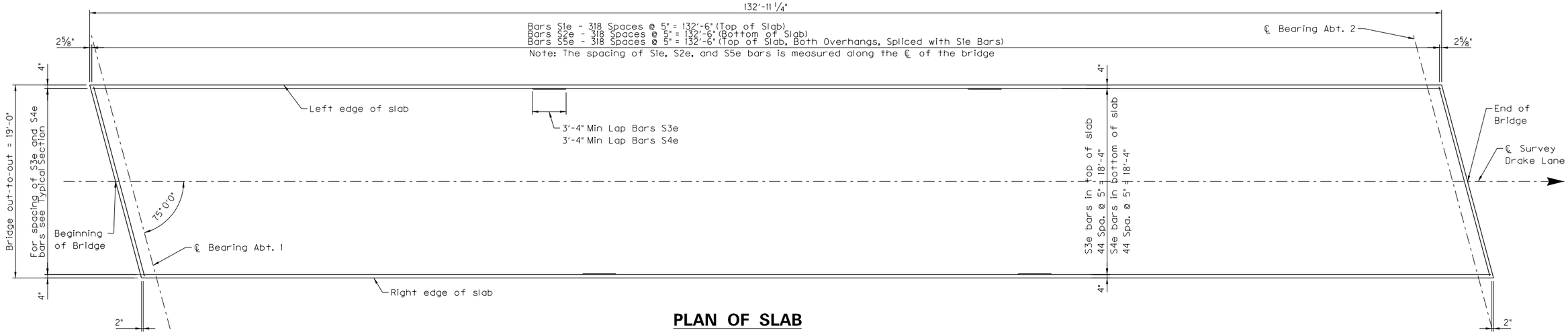
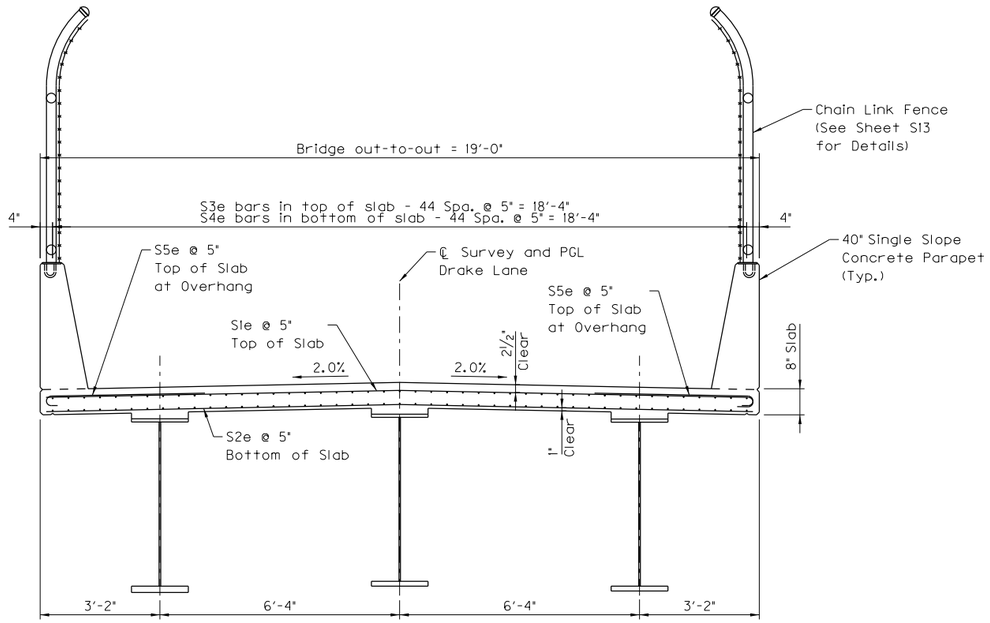


PLAN OF SLAB



TYPICAL SECTION

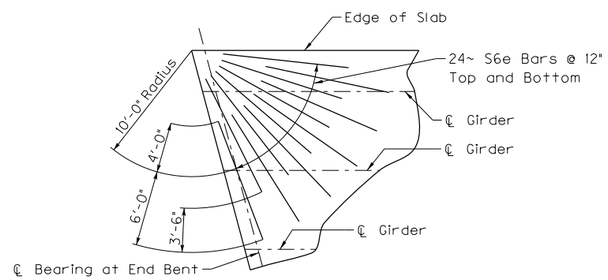
	Girder 1		Girder 2		Girder 3	
Point	Total Camber	Steel Dead Load Deflection	Total Camber	Steel Dead Load Deflection	Total Camber	Steel Dead Load Deflection
1.0	0.000	0.000	0.000	0.000	0.000	0.000
1.1	12.898	0.489	12.944	0.491	12.956	0.493
1.2	23.161	0.918	23.209	0.921	23.226	0.926
1.3	30.601	1.252	30.636	1.253	30.646	1.257
1.4	35.113	1.464	35.146	1.466	35.158	1.471
1.5	36.627	1.536	36.651	1.538	36.658	1.541
1.6	35.131	1.466	35.147	1.466	35.151	1.469
1.7	30.654	1.260	30.661	1.259	30.659	1.260
1.8	23.226	0.926	23.236	0.927	23.237	0.929
1.9	12.948	0.491	12.952	0.491	12.947	0.491
2.0	0.000	0.000	0.000	0.000	0.000	0.000

CAMBER TABLE

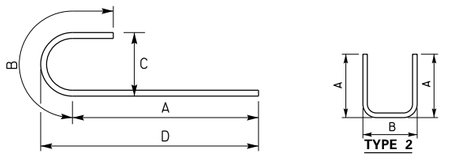
(Values in inches)

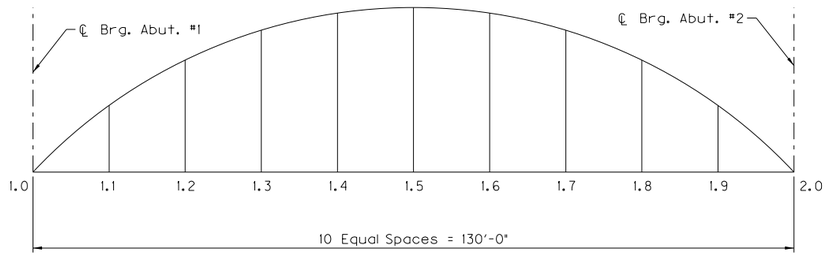
BILL OF REINFORCEMENT SLAB AND DIAPHRAGM

Mark	Type	NUMBER REQD.	SIZE	Length ft	Length in	LOCATION	a ft	a in	b ft	b in	c ft	c in	d ft	d in
S1e	Str.	319	5	19	3.5	Top Slab Transverse								
S2e	Str.	319	5	19	3.5	Bottom Slab Transverse								
S3e	Str.	135	5	46	5.125	Top Slab Longitudinal								
S4e	Str.	135	5	46	5.125	Bottom Slab Longitudinal								
S5e	4	638	4	4	5.25	Top Slab Transverse	3	11.25	0	6	0	4	4	2.25
S6e	Str.	48	6	10	0	Corner Reinforcing								
D1e	2	32	5	11	7	Diaphragm	4	9	2	1				
D2e	Str.	16	8	3	0	Abt. 1 Diaphragm/Stem								
D3e	Str.	16	6	19	3.5	Diaphragm								



TYPICAL CORNER REINFORCING DETAIL





CAMBER DIAGRAM

NOTE: Total camber includes steel, non-composite, composite dead load and vertical curve corrections.
Note: Steel to be fabricated for Dead Load Fit.

REVISION	DATE

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DESIGNED BY:	J. CROSSLIN	A. EDELEN	
DETAILED BY:	J. CROSSLIN	A. EDELEN	

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY: JESSAMINE

ROUTE: DRAKE LANE

CROSSING: NS (CNO & TP)

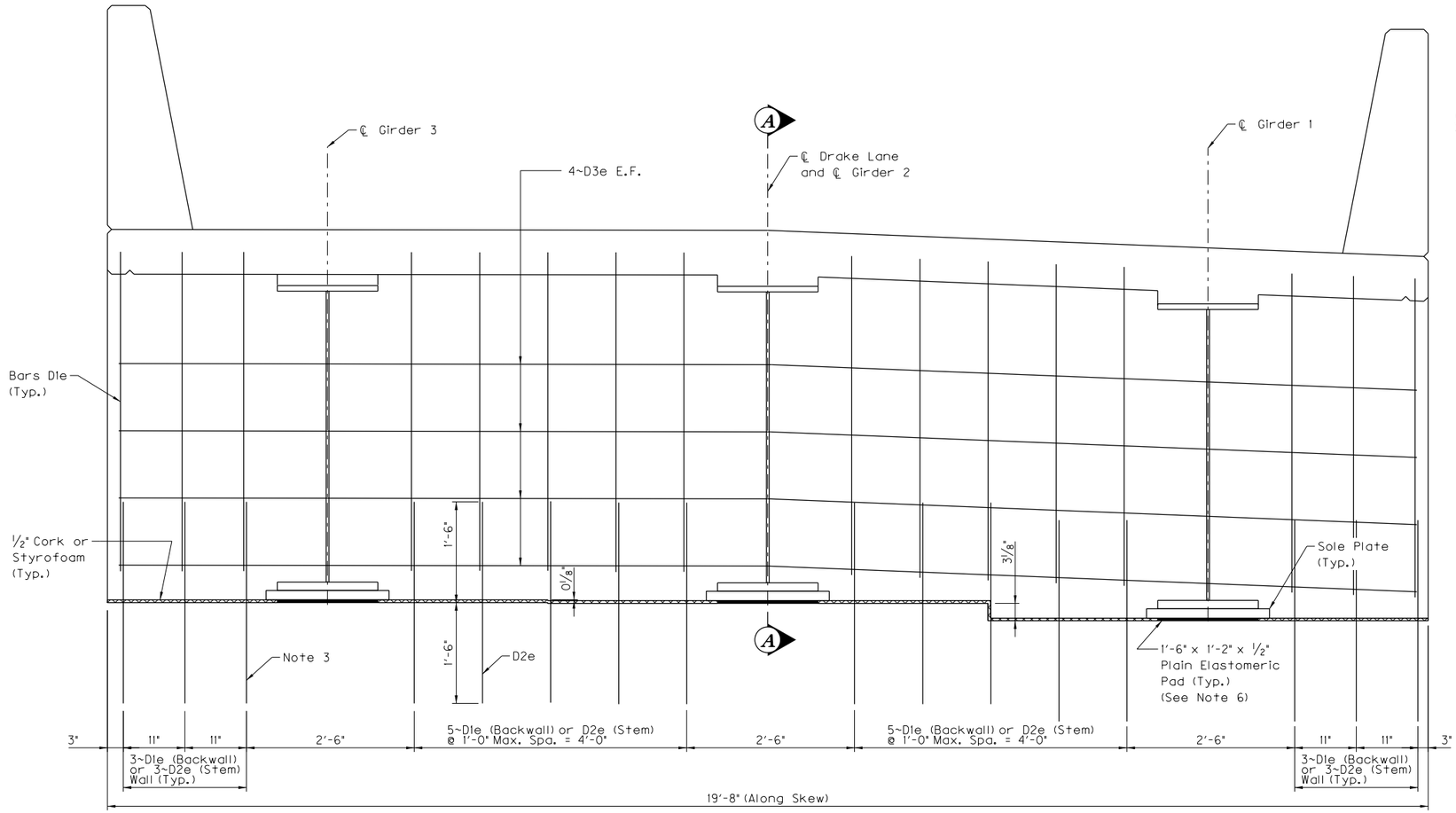
SLAB DETAILS

ITEM NUMBER: 7-1144

PREPARED BY: AECOM

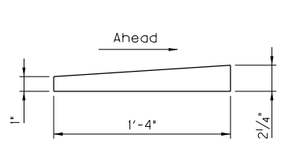
SHEET NO. S09

DRAWING NO. 28500

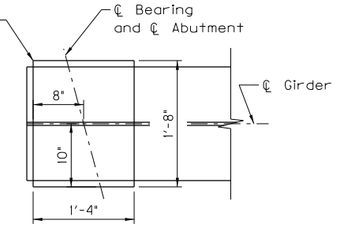


ABUTMENT 1 DIAPHRAGM

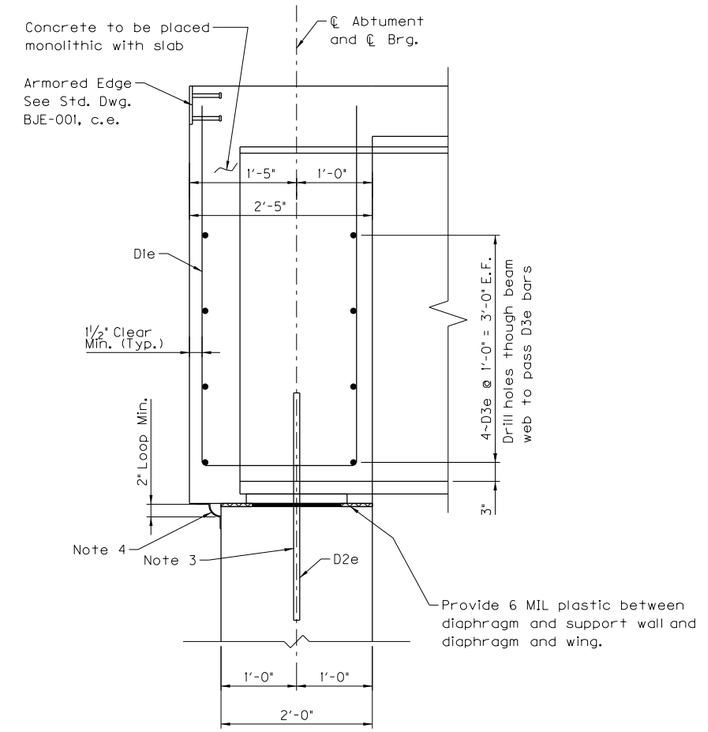
(Looking Back on Survey)



SECTION THROUGH SOLE PLATE

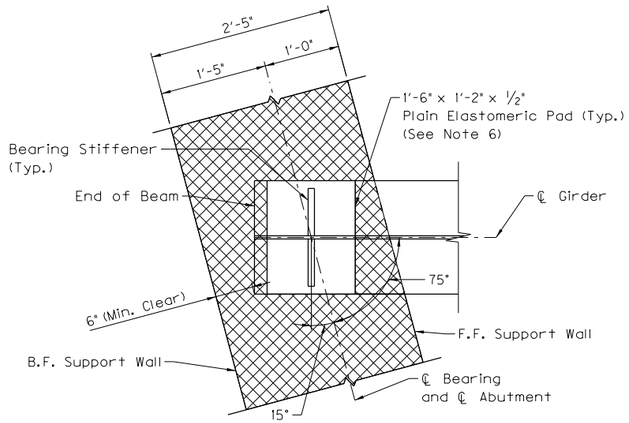


PLAN OF SOLE PLATE

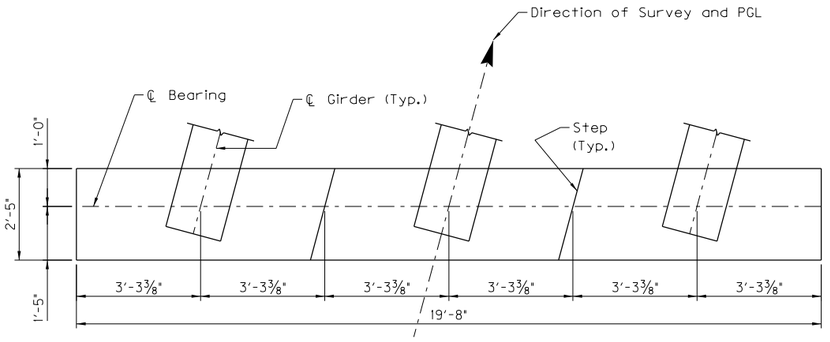


SECTION A–A

(Perpendicular to Diaphragm)



END OF BEAM DETAIL



ABUTMENT 1 DIAPHRAGM PLAN VIEW

Notes:

1. Diaphragm stirrups are to project into the slab regardless of slab forming method.
2. Place stirrup bars parallel to face of beams.
3. 5~#8 bars 3'-0" Long (D2e) between beams spaced equally. Embed 1'-6" into support wall.
4. The contractor shall provide 12" wide mastic tape to waterproof the joint between support wall and diaphragm. Tape shall be looped as shown at expansion ends of bridge to prevent damage to tape.
5. All labor and materials associated with bearings is to be considered incidental to bid for Structural Steel.
6. See Sheet S12 for notes on elastomeric bearing pads. Each elastomeric pad shall be secured to the sole plate by vulcanization or an approved adhesive.

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DETAILED BY: J. CROSSLIN	A. EDELEN

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DEPARTMENT OF HIGHWAYS

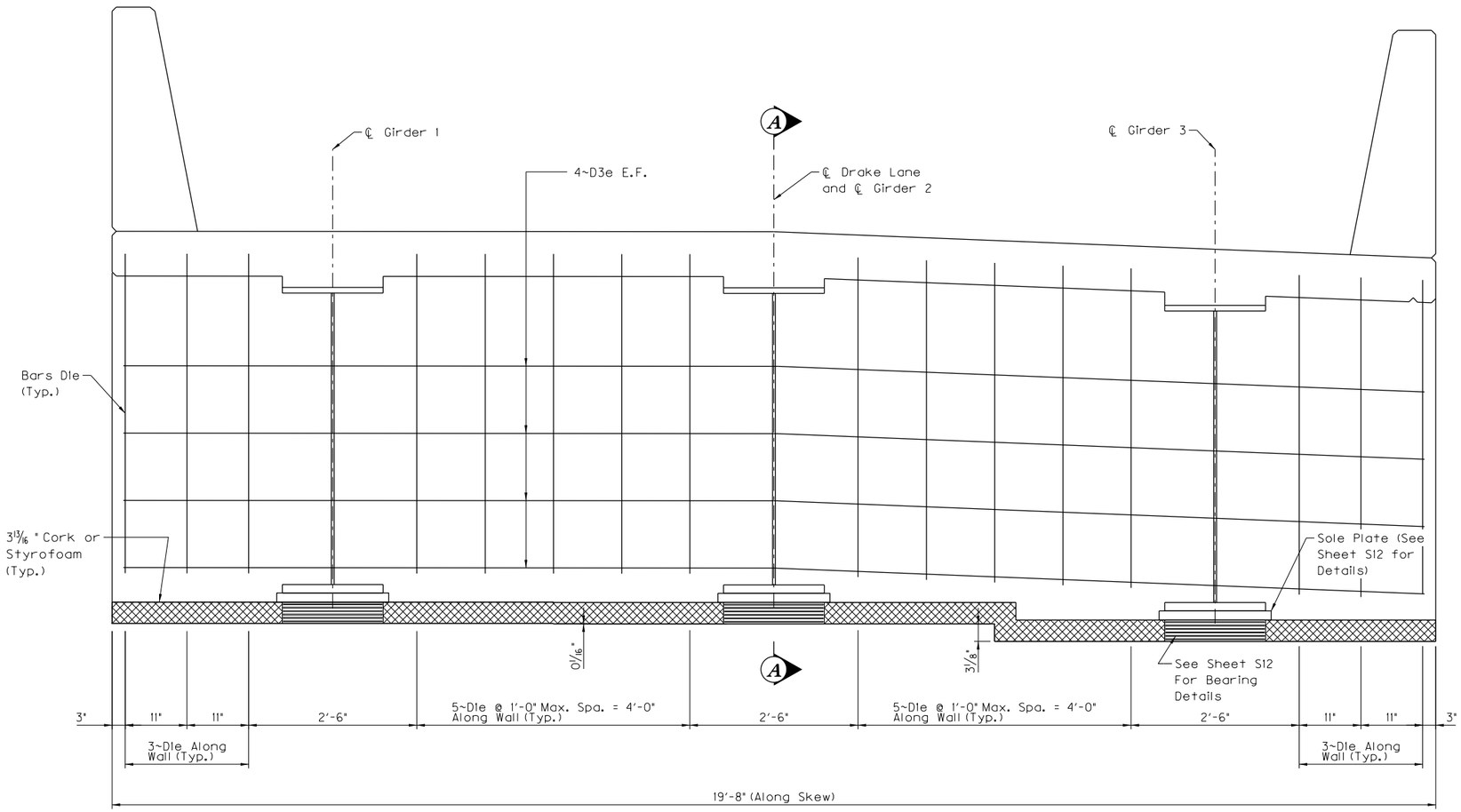
COUNTY: JESSAMINE

ROUTE: DRAKE LANE

CROSSING: NS (CNO & TP)

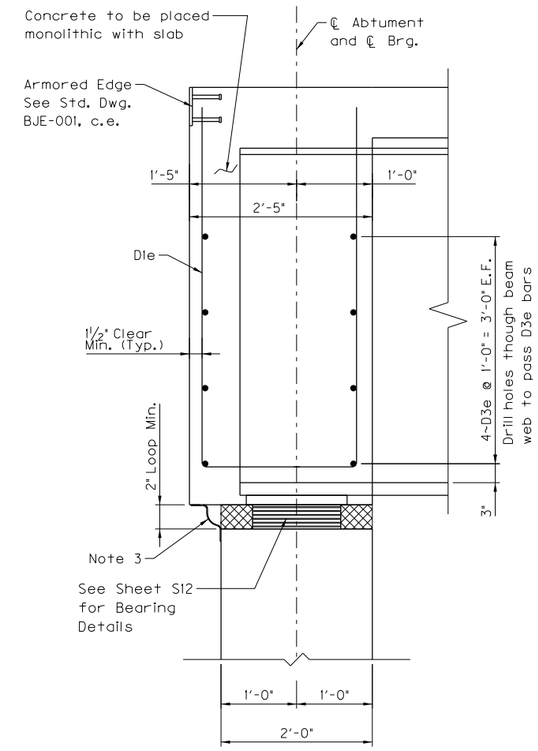
DIAPHRAGM DETAILS ABT. 1

ITEM NUMBER	PREPARED BY	SHEET NO.
7-1144	AECOM	S10
		DRAWING NO. 28500



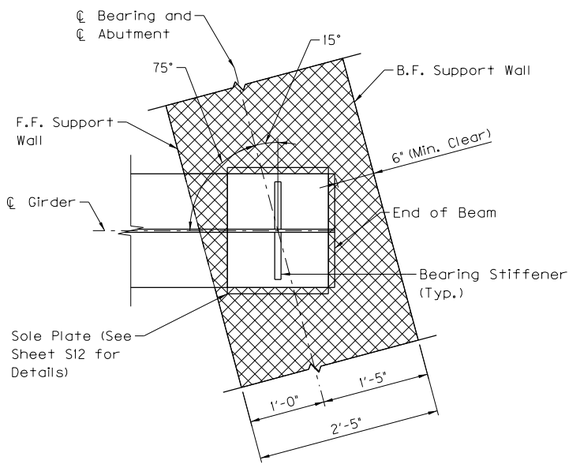
ABUTMENT 2 DIAPHRAGM

(Looking Ahead on Survey)

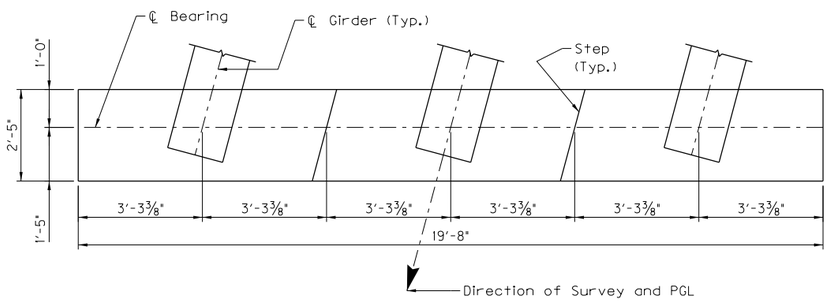


SECTION A-A

(Perpendicular to Diaphragm)



END OF BEAM DETAIL



ABUTMENT 2 DIAPHRAGM PLAN VIEW

Notes:
1. Diaphragm stirrups are to project into the slab regardless of slab forming method.
2. Place stirrup bars parallel to face of beams.
3. The contractor shall provide 12" wide mastic tape to waterproof the joint between support wall and diaphragm. Tape shall be looped as shown at expansion ends of bridge to prevent damage to tape.
4. All labor and materials associated with bearings is to be considered incidental to bid for Structural Steel.

REVISION	DATE

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DETAILED BY: J. CROSSLIN	A. EDELEN

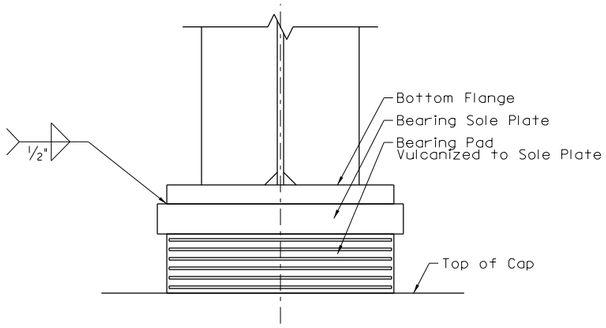
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
JESSAMINE

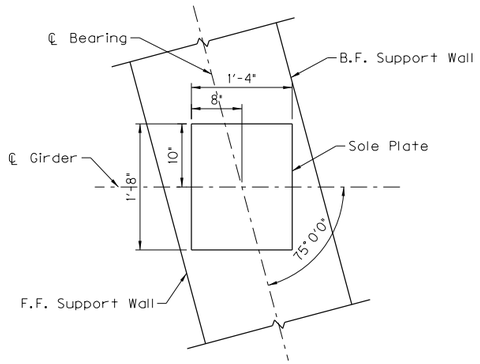
ROUTE	CROSSING
DRAKE LANE	NS (CNO & TP)

DIAPHRAGM DETAILS ABT. 2

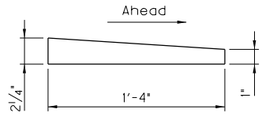
ITEM NUMBER	PREPARED BY		SHEET NO.
7-1144	AECOM		S11
			DRAWING NO. 28500



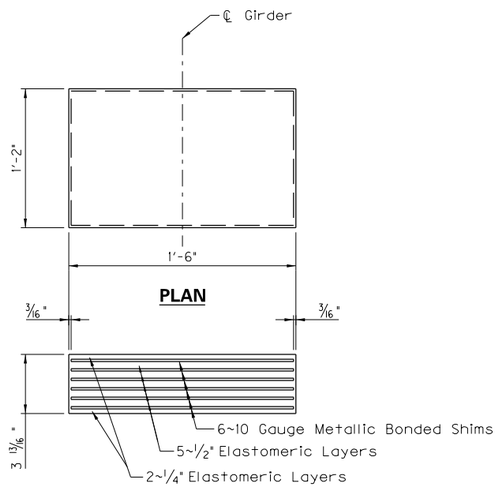
BEARING PAD ASSEMBLY AT ABUTMENT 2



PLAN OF SOLE PLATE



SECTION THROUGH SOLE PLATE



SECTION

BEARING PAD DETAIL

ELASTOMERIC BEARING PADS

SPECIFICATIONS: Fabricate the Elastomeric Bearing Pads to the design and dimensions as shown on these drawings and to AASHTO LRFD Bridge and Construction Specifications, Section 18.

Ensure bearings are low temperature Grade 3 with durometer hardness of 50 and subjected to the load testing requirements corresponding to Design Method A.

Contrary to AASHTO Specifications, Division II, Section 18.2.3, the raw elastomer material shall be virgin Neoprene (polychloroprene), Natural Rubber (polysoprene) will not be allowed.

The placement and orientation of each pad within its group shall be marked, or otherwise shown by the manufacturer.

Before final erection of the structural steel, the contractor shall establish centerline bearing of the substructures by survey and Roadway Stationing. These bearing pad groups shall be placed upon the substructures according to this established line.

The cost of the bearing pads is to be included in the lump sum bid for structural steel.

REVISION	DATE

DATE: 1/23/2023	CHECKED BY
DESIGNED BY: J. CROSSLIN	A. EDELEN
DETAILED BY: J. CROSSLIN	A. EDELEN

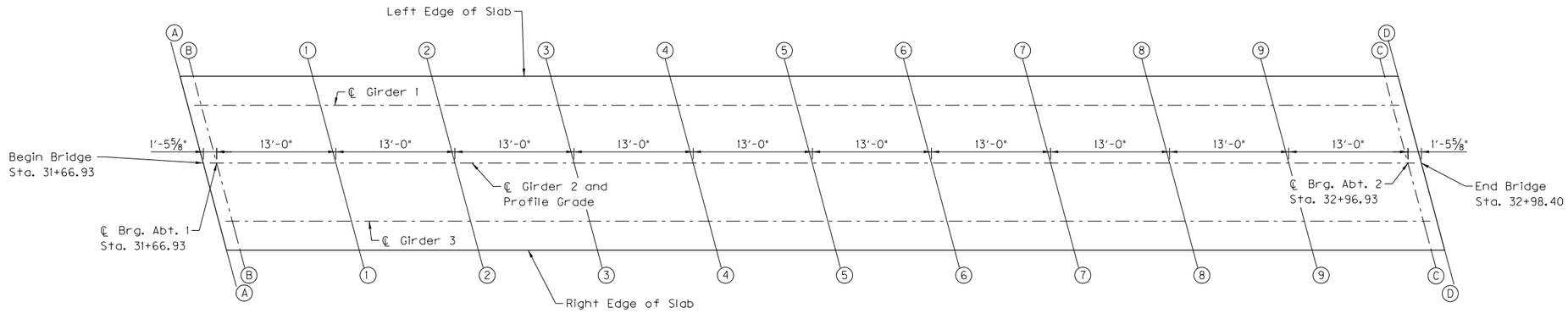
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
JESSAMINE

ROUTE	CROSSING
DRAKE LANE	NS (CNO & TP)

BEARING DETAILS ABT. 2

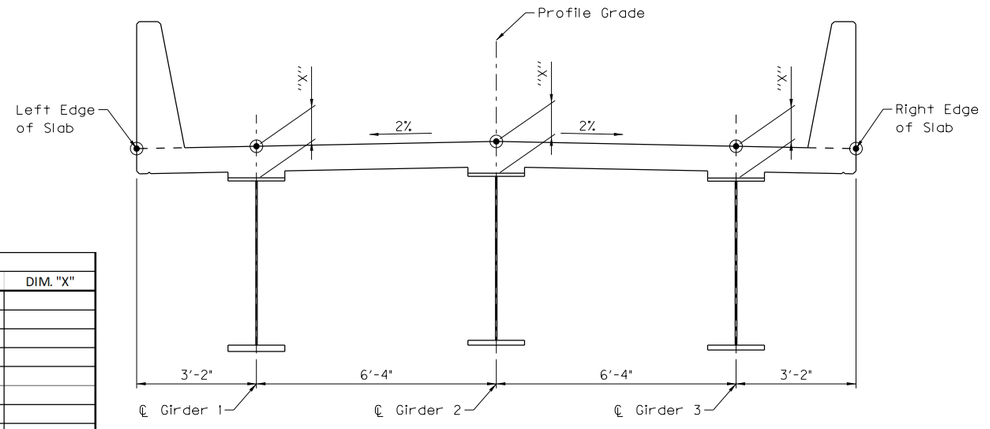
ITEM NUMBER	PREPARED BY		SHEET NO.
7-1144	AECOM		S12
			DRAWING NO. 28500



PLAN

CONSTRUCTION ELEVATIONS

Line	Lt. Edge Slab			G1			G2/PGL			G3			Rt. Edge Slab		
	CONST. EL.	TOP OF BEAM	DIM. "X"	CONST. EL.	TOP OF BEAM	DIM. "X"	CONST. EL.	TOP OF BEAM	DIM. "X"	CONST. EL.	TOP OF BEAM	DIM. "X"	CONST. EL.	TOP OF BEAM	DIM. "X"
A-A	925.043			925.175			925.437			925.446			925.451		
B-B	925.151			925.292			925.554			925.563			925.567		
1	926.251			926.372			926.611			926.594			926.584		
2	927.129			927.237			927.450			927.406			927.382		
3	927.781			927.875			928.060			927.988			927.951		
4	928.198			928.279			928.437			928.338			928.288		
5	928.378			928.445			928.575			928.449			928.385		
6	928.318			928.371			928.475			928.322			928.244		
7	928.021			928.061			928.137			927.957			927.865		
8	927.490			927.516			927.565			927.358			927.253		
9	926.729			926.741			926.764			926.529			926.410		
C-C	925.750			925.749			925.744			925.483			925.352		
D-D	925.638			925.635			925.628			925.366			925.235		



TYPICAL SECTION
(Looking Forward Survey)

NOTES FOR ELEVATIONS TAKEN ON STEEL BEAMS

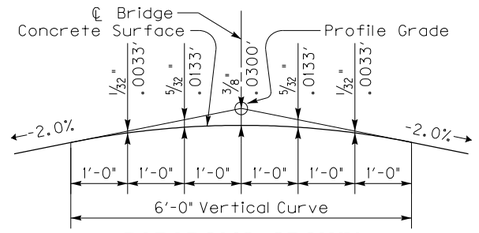
Take elevations on top of beam at points indicated by the grid layout. The beam elevations are to be read to three decimals, and entered in tables under "Top of Beam" elevations.

Compute dimension "X" as follows: "Construction Elevation" minus "Top of Beam" elevation equals dimension "X". Construction Elevations include camber due to weight of the concrete slab and barrier. Measuring of dimension "X" gives the final check on beam tolerances for camber, beam damage, and errors in erection that produce reverse cambers, sags, and unsightly fascia beams.

For setting templates, measure dimension "X" above top of beams for top of template. Do not set template by elevationss.

Temporary supports for shoring will not be permitted under the girders when pouring the concrete floor slab or when taking "Top of Beam" elevations.

Construct barrier to roadway grade. Do not add camber to the barrier.



PARABOLIC CROWN

REVISION	DATE

DATE: 1/23/2023	CHECKED BY
DESIGNED BY: J. CROSSLIN	A. EDELEN
DETAILED BY: J. CROSSLIN	A. EDELEN

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
JESSAMINE

ROUTE	CROSSING
DRAKE LANE	NS (CNO & TP)

CONSTRUCTION ELEVATIONS

ITEM NUMBER	PREPARED BY		SHEET NO.
7-1144	AECOM		S13
			DRAWING NO. 28500