

LATITUDE: 40° 36' 57" LONGITUDE: -83° 48' 56"



HARDIN COUNTY, OHIO OFFICE OF THE COUNTY ENGINEER

HAR-CR150-3.40 ROUNDHEAD TOWNSHIP

INDEX OF SHEETS:

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HAR-CR150-03.400	

- PORTION TO BE IMPROVED _____
- INTERSTATE HIGHWAY _____
- FEDERAL ROUTES _____
- STATE ROUTES _____
- COUNTY & TOWNSHIP ROADS _____
- OTHER ROADS _____

DESIGN DESIGNATION

CURRENT ADT (2023) 385
 DESIGN YEAR ADT (2043) 385
 DIRECTIONAL DISTRIBUTION 0.50
 TRUCKS (24 HOUR B&C) 4%
 DESIGN SPEED 55 MPH
 LEGAL SPEED 55 MPH
 DESIGN FUNCTIONAL CLASSIFICATION: 07 LOCAL (RURAL)
 NHS PROJECT NO

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVER: NONE REQUIRED

PLAN PREPARED BY:
 BG ENGINEERING GROUP, LLC
 5910 WILCOX PLACE, SUITE C
 DUBLIN, OHIO, 43016

ENGINEER'S SEAL:

 SIGNED: Gregory J. Perchinske
 DATE: 01-13-2023

STANDARD CONSTRUCTION DRAWINGS	SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-4.1	7-19-13	
DM-4.3	1-15-16	800 (2019) 10/21/22
DM-4.4	1-15-16	802 7/15/22
MG-1.1	7-16-21	ASBESTOS SURVEY 10-11-22
MG-2.1	1-19-18	
MG-3.1	1-19-18	
MG-4.2	7-19-13	
MG-4.3	1-18-13	
MG-5.3	7-15-16	
MT-101.60	1-17-20	
MT-105.10	1-17-20	
TC-61.30	7-19-19	

UNDERGROUND UTILITIES
 Contact Two Working Days
 Before You Dig

 Before You Dig
OH10811, 8-1-1, or 1-800-362-2764
 (Non-members must be called directly)

FEDERAL PROJECT NUMBER
 E220 (487)

RAILROAD INVOLVEMENT
 NONE

PROJECT DESCRIPTION
 REHABILITATION OF THE EXISTING STRUCTURE HAR-CR150-03.400 (SFN 3332268) CARRYING CR 150 TRAFFIC OVER THE SCIOTO RIVER. WORK INCLUDES REPLACING THE SUPERSTRUCTURE ON THE EXISTING SUBSTRUCTURE AND MINOR ROADWAY APPROACH.

EARTH DISTURBED AREAS
 PROJECT EARTH DISTURBED AREA: 0.26 ACRES
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.05 ACRES
 NOTICE OF INTENT EARTH DISTURBED AREA: N/A (NOT REQUIRED)

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLAN AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT THE DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 5.

APPROVED:
 DATE: 1/26/23
 HARDIN COUNTY ENGINEER

APPROVED:
 DATE: 1/26/23
 HARDIN COUNTY COMMISSIONER

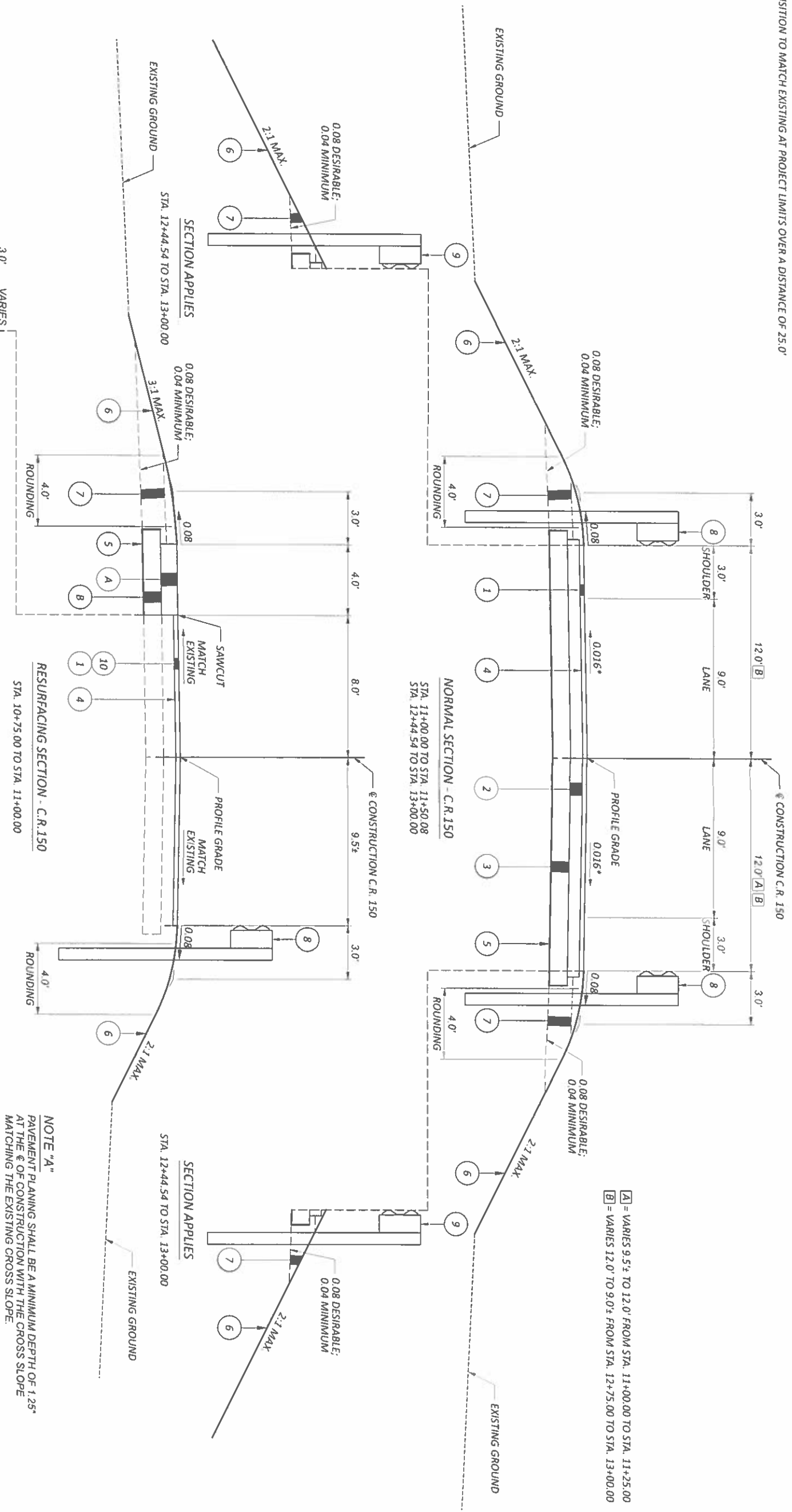
APPROVED:
 DATE: 1/26/23
 HARDIN COUNTY COMMISSIONER

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 DATE: 1/26/23
 HARDIN COUNTY COMMISSIONER

DESIGN AGENCY:
 www.bgenggroup.com
 5910 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

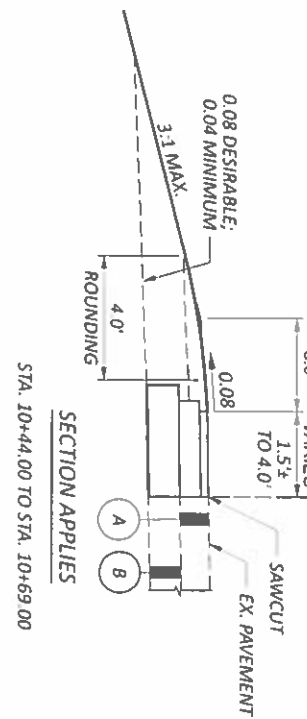
DESIGNER: JEP
 REMEMBER: RG 01-12-23
 PROJECT ID: 117353
 SHEET TOTAL: 1 / 23

* = TRANSITION TO MATCH EXISTING AT PROJECT LIMITS OVER A DISTANCE OF 25.0'

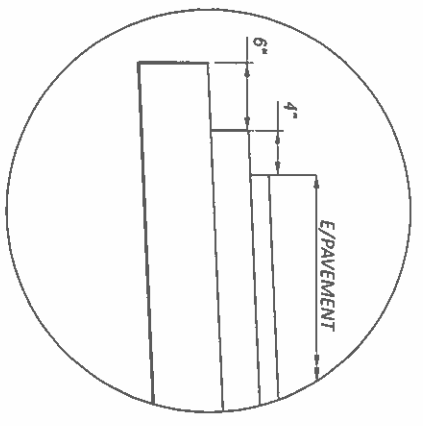


LEGEND

- 1 ITEM 441 - 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22
- 2 ITEM 301 - 4" ASPHALT CONCRETE BASE, PG64-22, (449)
- 3 ITEM 304 - 6" AGGREGATE BASE
- 4 ITEM 407 - TACK COAT
- 5 ITEM 204 - SUBGRADE COMPACTION
- 6 ITEM 659 - SEEDING AND MULCHING
- 7 ITEM 605 - AGGREGATE DRAINS
- 8 ITEM 606 - GUARDRAIL, TYPE MGS
- 9 ITEM 606 - GUARDRAIL, TYPE MGS WITH LONG POSTS
- 10 ITEM 254 - PAVEMENT PLANNING, ASPHALT CONCRETE (SEE NOTE "A")
- A MATCH EXISTING PAVEMENT THICKNESS
- B MATCH EXISTING AGGREGATE LAYER



NOTE "A"
 PAVEMENT PLANNING SHALL BE A MINIMUM DEPTH OF 1.25" AT THE @ OF CONSTRUCTION WITH THE CROSS SLOPE MATCHING THE EXISTING CROSS SLOPE.



TYPICAL SECTIONS

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS, EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

THERE ARE NO KNOWN UNDERGROUND, OR OVERHEAD UTILITIES, WITHIN THE PROJECT CONSTRUCTION LIMITS.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE THIS SHEET FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING: PROJECT CONTROL

POSITIONING METHOD: ODOT VRS
 MONUMENT TYPE: TYPE B, REBAR AND CAP
 VERTICAL POSITIONING
 ORTHOMETRIC HEIGHT DATUM: NAVD88
 GEOD: GEOID18
 HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011)
 ELLIPSOID: GRS80
 MAP PROJECTION: LAMBERT CONFORMAL CONIC
 COORDINATE SYSTEM: OHIO STATE PLANE, NORTH ZONE
 COMBINED SCALE FACTOR: N/A (GRID)
 ORIGIN OF COORDINATE SYSTEM: (0, 0)

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.
 UNITS ARE IN U.S. SURVEY FEET.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDING AREAS:

659, TOPSOIL	37 CU. YD.
659, SEEDING AND MULCHING	337 SQ. YD.
659, COMMERCIAL FERTILIZER	0.05 TON
659, LIME	0.07 ACRES
659, WATER	2 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
 THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E. EACH AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

FARM DRAINS

PROVIDE UNOBSTRUCTED OUTLETS TO ALL FARM DRAINS ENCOUNTERED DURING CONSTRUCTION. REPLACE EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY WITHIN THE (RIGHT OF WAY) CONSTRUCTION LIMITS WITH ITEM 611, CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

OUTLET EXISTING COLLECTORS AND ISOLATED FARM DRAINS WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES INTO THE ROADWAY.

DITCH USING ITEM 611, TYPE E CONDUIT. THE OPTIMUM OUTLET ELEVATION IS ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. INTERCEPT LATERAL FIELD TILES WHICH CROSS THE ROADWAY WITH ITEM 611, TYPE E CONDUIT, AND CARRY IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS IS DETERMINED BY THE ENGINEER AND PAYMENT MADE ON FINAL MEASUREMENTS.

PROVIDE EROSION CONTROL PADS AT THE OUTLET END OF ALL FARM DRAINS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANY NECESSARY BENDS OR BRANCHES IS INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

611, 6" CONDUIT, TYPE E	30 FT
611, 6" CONDUIT, TYPE F	30 FT

ITEM 605 - AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT 50 FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 25 FEET FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE, AND AT 25 FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

C.R. 150		
10+50	LT	5'
10+75	LT	11'
11+00	RT	7'
11+25	RT	4'
12+50	RT	2'
12+75	LT	2'
13+00	RT	5'
TOTAL = 36'		

ENVIRONMENTAL COMMITMENTS

AN ASBESTOS SURVEY OF THE HAR-CR 150-3.40 BRIDGE, SCHEDULED FOR DEMOLITION, WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED REGULATED ASBESTOS-CONTAINING MATERIALS ARE NOT PRESENT ON THE STRUCTURE. THE ASBESTOS SURVEY REPORT IS FOUND IN THE SPECIAL PROVISIONS ATTACHED TO THE PLANS.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED BY THE BRIDGE OWNER, HAS BEEN INCLUDED AT THE END OF THE ASBESTOS SURVEY REPORT IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL COMPLETE AND SIGN THE FORMS AND SUBMIT THEM TO:

OHIO EPA, DARC ASBESTOS
 50 W. TOWN STREET, 7TH FLOOR OR P.O. BOX 1049
 COLUMBUS, OH 43216-1049

OR SUBMIT THE FORMS ELECTRONICALLY (ELECTRONIC SUBMISSION INSTRUCTIONS PROVIDED ON THE FORMS), AT LEAST 10 WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION WORK. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED AND SIGNED FORMS TO THE ENGINEER. INFORMATION REQUIRED ON THE FORMS SHALL INCLUDE AT A MINIMUM:
 1) THE ODOT PROJECT NUMBER, 2) THE CONTRACTOR'S NAME, ADDRESS, AND TELEPHONE NUMBER, 3) THE SCHEDULED DATES FOR THE START AND COMPLETION OF BRIDGE DEMOLITION.

BASIS FOR PAYMENT: THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION OF DEMOLITION AND RENOVATION FORMS. PAYMENTS FOR THIS WORK SHALL BE INCIDENTAL TO THE ITEM 202 STRUCTURE REMOVAL (ITEMS) IN THE PLAN.

THIS PROJECT WAS DEVELOPED TO BE CONSTRUCTED WITHOUT EQUIPMENT OR MATERIALS BEING PLACED (PERMANENTLY OR TEMPORARILY) BELOW THE ORDINARY HIGH WATER MARK OF THE SCIOTO RIVER.

GENERAL NOTES

CENTERLINE REFERENCE & CONSTRUCTION C.R. 150 - GRID COORDINATES					
STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
9+99.98	0.00' @	348592.803	1603109.715	975.881	P.O.T.
13+94.74	0.00' @	348587.220	1603504.435	970.970	P.O.T.

CONTROL POINTS - GRID COORDINATES (@ CONSTRUCTION C.R. 150)						
CONTROL POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP#1	9+93.20	13.28' RT	348579.619	1603102.747	975.881	3/4" REBAR & CAP
CP#2	12+32.34	34.74' LT	348624.251	1603342.539	970.970	3/4" REBAR & CAP
CP#3	15+57.84	13.08' LT	348597.996	1603667.707	973.068	3/4" REBAR & CAP

DESIGN AGENCY
BG
 www.bgenggroup.com
 5910 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER	JEP
REVIEWER	RG
PROJECT #	117353
SHEET	3
TOTAL	23

MAINTENANCE OF TRAFFIC
 ALL WORK ZONES SHALL BE MAINTAINED IN ACCORDANCE WITH THE OHIO DEPARTMENT OF TRANSPORTATION'S STANDARD CONSTRUCTION DRAWINGS, ITEM 614 IN C&MS, THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND THESE PLANS.

ITEM 614, MAINTAINING TRAFFIC

C.R. 150 WILL BE CLOSED AT SLIM 3.40 TO TRAFFIC FOR THE DURATION OF CONSTRUCTION. ROAD CLOSURES SHALL BE SIGNED PER SCD MT-101.60. DETOURS SHALL BE SIGNED AS SHOWN ON THE DETOUR PLAN SHEETS.

ALL NECESSARY ITEMS REQUIRED TO MAINTAIN TRAFFIC AS OUTLINED ABOVE SHALL BE INCLUDED IN THE LUMP SUM COST FOR ITEM 614 - MAINTAINING TRAFFIC.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

BEFORE THE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAME(S) AND TELEPHONE NUMBER(S) OF A PERSON OR PERSONS WHO CAN BE CONTACTED TWENTY-FOUR (24) HOURS PER DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR PLACING OR REPLACING NECESSARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW.

ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
ROAD CLOSURES	≥ 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	≤ 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE.

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

CR 150 WILL BE
 CLOSED "MMM-DD"
 FOR 45 DAYS
 INFO: 1-419-999-6803

W20-H13-60

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48 X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC:

- AT THE LIMITS OF THE WORK AREA FOR C.R. 150

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES OF THE TYPE AND LOCATION AS FOLLOWS:

- SOUTHEAST CORNER OF C.R. 150 / S.R. 235 INTERSECTION

- NORTHWEST CORNER OF C.R. 150 / C.R. 75 INTERSECTION

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
ROAD CLOSURES	≥ 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	≤ 12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	≥ 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATIONS TIME TABLE.

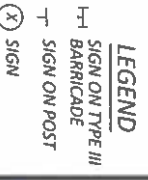
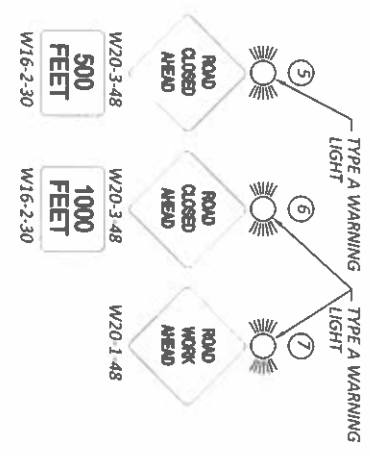
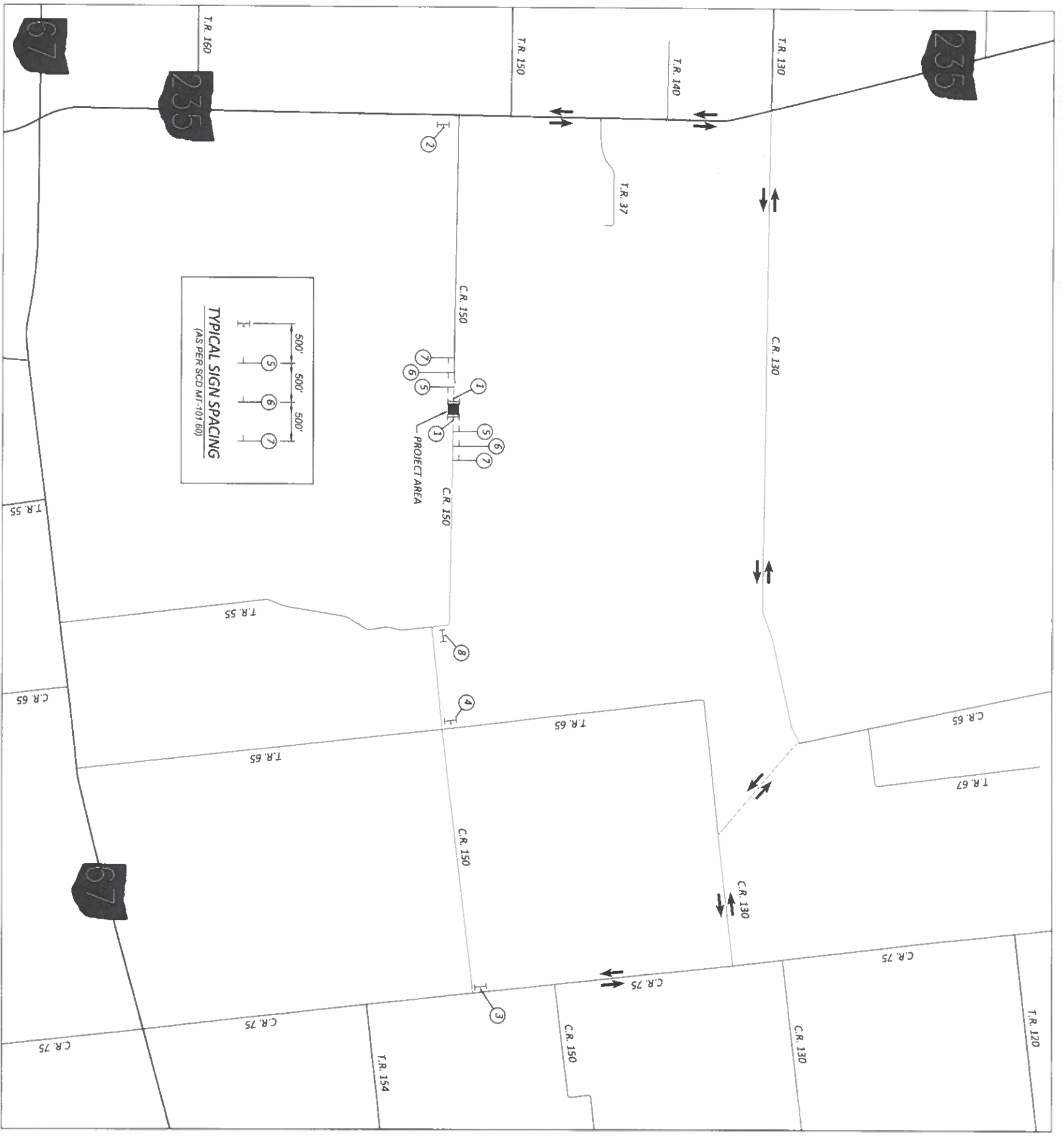
DETOUR SIGNING

ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SEE SHEET 5 FOR THE DETOUR PLAN. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR:

ITEM 614, DETOUR SIGNING

LUMP

MAINTENANCE OF TRAFFIC NOTES



HARDIN COUNTY ENGINEER
 LUCAS J. UNDERWOOD, P.E., P.S.
 1040 WEST FRANKLIN STREET
 KENTON, OHIO 43326
 (419) 674-2222

DATE	REVISION	BY
3/30/23	Removed Detour Signs	T.B.

PROJECT: HAR-CR150-3.40 ROUNDHEAD TWP BRIDGE REHABILITATION	SHEET TITLE DETOUR PLAN
PROJECT NO.	PAGE 5/23
SCALE: AS NOTED	
DRAWN BY: TAB	DATE 3/30/23
CHECKED BY: LJU	DATE 3/30/23

3	4	7	14	19	OFFICE CALCS	PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
						01/06/14	02/06/14						
LS		233	54			LS	233	201	11000	LS	SY	CLEARING AND GRUBBING	
			37			LS	203	202	23000	233	SY	PAVEMENT REMOVED	
						LS	203	203	10000	54	CY	EXCAVATION	
						LS	204	204	20000	37	CY	EMBANKMENT	
						LS	204	204	10000	372	SY	SUBGRADE COMPACTION	
						LS	606	606	15050	62.5	FT	GUARDRAIL, TYPE MGS	
						LS	606	606	15100	50	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS	
						LS	606	606	26150	2	EACH	ANCHOR ASSEMBLY, MGS TYPE E (INCHRP 350/MASH 2016)	
						LS	606	606	26550	2	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
						LS	606	606	35002	3	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
						LS	601	601	32104	91	CY	EROSION CONTROL	
						LS	639	639	00900	37	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	
						LS	639	639	10000	337	SY	TOPSOIL	
						LS	639	639	20000	0.05	TON	SEEDING AND MULCHING	
						LS	639	639	20000	0.05	TON	COMMERCIAL FERTILIZER	
						LS	659	659	31000	0.07	ACRE	LIME	
						LS	659	659	35000	2	MGAL	WATER	
						LS	832	832	30000	5,300	EACH	EROSION CONTROL	
						LS	605	605	31100	36	FT	AGGREGATE DRAINS	
						LS	611	611	01400	30	FT	6" CONDUIT, TYPE E	
						LS	611	611	01500	30	FT	6" CONDUIT, TYPE F	
						LS	254	254	01000	49	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.25")	
						LS	301	301	56000	34	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
						LS	304	304	20000	64	CY	AGGREGATE BASE	
						LS	407	407	10000	22	GAL	TACK COAT	
						LS	441	441	70000	12	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22	
						LS	630	630	84900	6	EACH	TRAFFIC CONTROL	
						LS	630	630	86002	6	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
						LS	644	644	00300	0.04	MILE	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
						LS	202	202	11203	LS	SY	STRUCTURE OVER 20 FOOT SPAN (SFH 3332268)	
						LS	202	202	23500	254	SY	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	
						LS	203	203	21100	28	CY	WEARING COURSE REMOVED	
						LS	509	509	10000	609	LB	UNCLASSIFIED EXCAVATION	
						LS	510	510	10001	88	EACH	EPOXY COATED STEEL REINFORCEMENT	
						LS	511	511	34445	67	CV	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	
						LS	511	511	44110	7	CV	CLASS O/C2 CONCRETE, BRIDGE DECK, AS PER PLAN	
						LS	511	511	81200	LS	CV	CLASS O/C1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING	
						LS	511	511	81200	LS	CV	CONCRETE, MISC.: CONCRETE DECK DESIGN	
						LS	511	511	81200	LS	CV	CONCRETE, MISC.: EPOXY COATED STEEL REINFORCEMENT FOR CONCRETE DECK, AS PER PLAN	
						LS	512	512	10100	56	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
						LS	512	512	33000	23	SY	TYPE 2 WATERPROOFING	
						LS	513	513	10121	LS	SY	STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN	
						LS	513	513	95020	LS	SY	STRUCTURAL STEEL, MISC.: STEEL TRUSS DESIGN	
						LS	516	516	11210	48	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	
						LS	517	517	70000	193	FT	RAILING (TWIN STEEL TUBE)	
						LS	236	236	5182300	236	FT	STEEL DRIP STRIP	
						LS	613	613	41251	18	CV	LOW STRENGTH MORTAR BACKFILL (TYPE 1), AS PER PLAN	
						LS	614	614	11000	LS	SY	MAINTAINING TRAFFIC	
						LS	619	619	16000	6	MINTH	FIELD OFFICE, TYPE A	
						LS	623	623	10000	LS	SY	CONSTRUCTION LAYOUT STAKES AND SURVEYING	
						LS	623	623	50000	LS	SY	PRECONSTRUCTION SURVEY MONUMENT VERIFICATION AND REPORT	
						LS	623	623	51000	LS	SY	POST CONSTRUCTION SURVEY MONUMENT VERIFICATION AND REPORT	
						LS	624	624	10000	LS	SY	MOBILIZATION	

HARDIN COUNTY ENGINEER
LUCAS J. UNDERWOOD, P.E., P.S.
1040 WEST FRANKLIN STREET
KENTON, OHIO 43326
(419) 674-2222

DATE	REVISION	BY
3/29/23	Update quantities	T.B.
A		
B		
C		
D		

PROJECT: HAR-CR150-3.40
ROUNDHEAD TWP
BRIDGE REHABILITATION
PROJECT NO.
SCALE: AS NOTED
DRAWN BY: TAB
CHECKED BY: LJU

SHEET TITLE
GENERAL SUMMARY
PAGE
6/23

HAR-CR150-3.40

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 1/13/2023 TIME: 12:01:06 PM USER: JPerchinske
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REF. NO.	SHEET NO.	STATION TO STATION	SIDE	202	204	304	601	606	630	644					
				PAVEMENT REMOVED SQ YD	SUBGRADE COMPACTION SQ YD	8" AGGREGATE BASE CU YD	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC CU YD	GUARDRAIL, TYPE MGS FEET	GUARDRAIL, TYPE MGS WITH LONG POSTS FEET	ANCHOR ASSEMBLY, MGS TYPE E EACH	ANCHOR ASSEMBLY, MGS TYPE T EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	CENTER LINE (DOUBLE, SOLID) MILE
DR-1	8	C.R. 150 11+10.40	LT		51	11									
E-1	8	11+52 - 11+65	LT/RT				50	50.0							
E-2	8	12+32 - 12+43	LT/RT				41	12.5							
GR-1	8	10+24.81 - 11+50.43	RT					50.0		1		1			
GR-2	8	11+25.99 - 11+50.43	LT					12.5			1	1			
GR-3	8	12+44.18 - 13+44.81	RT					25.0	25.0	1		1			
GR-4	8	12+44.18 - 13+06.79	LT					25.0	25.0		1	1			
CL-1	8	10+75 - 13+00	CL												0.04
R-1	8	10+44 - 11+50	LT/RT	117									2	2	
R-2	8	12+45 - 13+00	LT/RT	116									1	1	
R-3	8	11+42 - 11+50	RT										2	2	
R-4	8	11+48	LT										1	1	
R-5	8	12+54 - 12+57	LT										2	2	
R-6	8	12+56	RT										1	1	
TOTALS CARRIED TO GENERAL SUMMARY				233	51	11	91	62.5	50.0	2	2	3	6	6	0.04

ROADWAY SUBSUMMARY

DESIGN AGENCY
BG
 www.bgenggroup.com
 5910 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER
 JEP

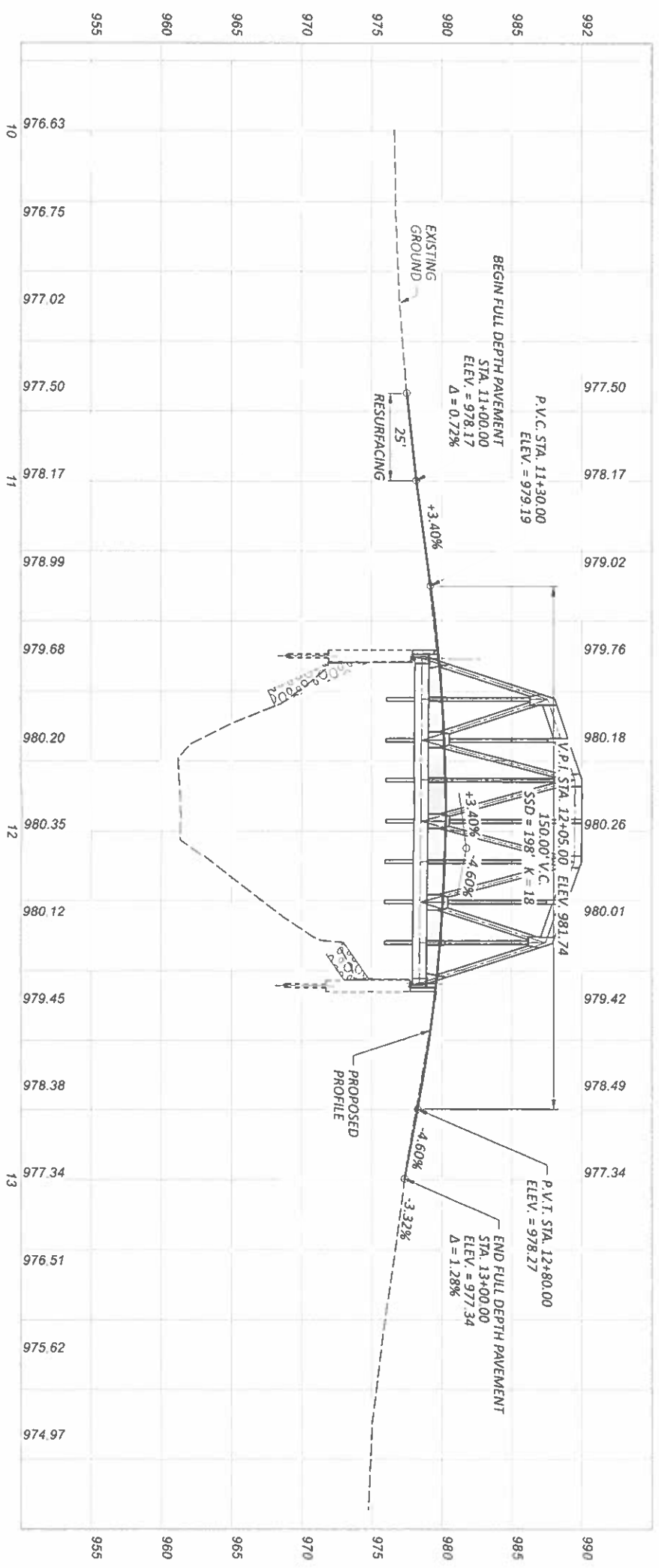
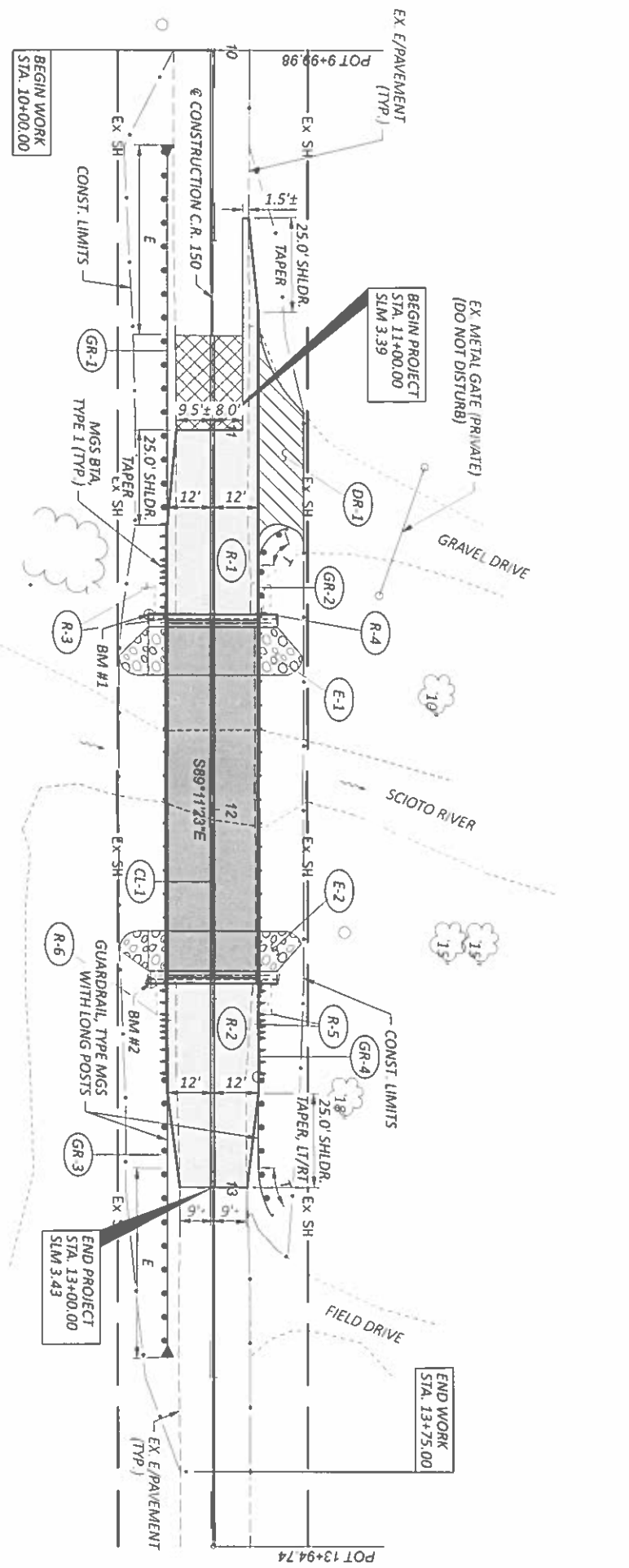
REVIEWER
 RG 01-12-23

PROJECT ID
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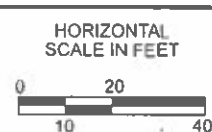
SHEET TOTAL
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BENCHMARK DATA	
BM #1	STA. 11+48.72 16.75' RT ELEV. 979.43 CHISELED BOX ON SW CORNER OF EXISTING SW WINGWALL
BM #2	STA. 12+45.92 16.31' RT ELEV. 979.39 CHISELED BOX ON SE CORNER OF EXISTING SE WINGWALL

- E = ANCHOR ASSEMBLY, MGS TYPE E
- T = ANCHOR ASSEMBLY, MGS TYPE T
- PROPOSED PAVEMENT
- PROPOSED BRIDGE
- PROPOSED RESURFACING
- PROPOSED GRAVEL DRIVE
- PROPOSED RCP



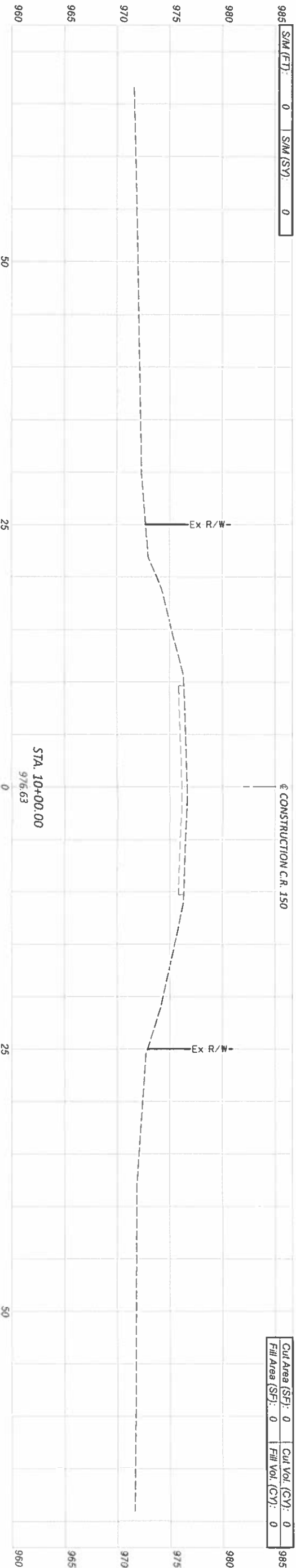
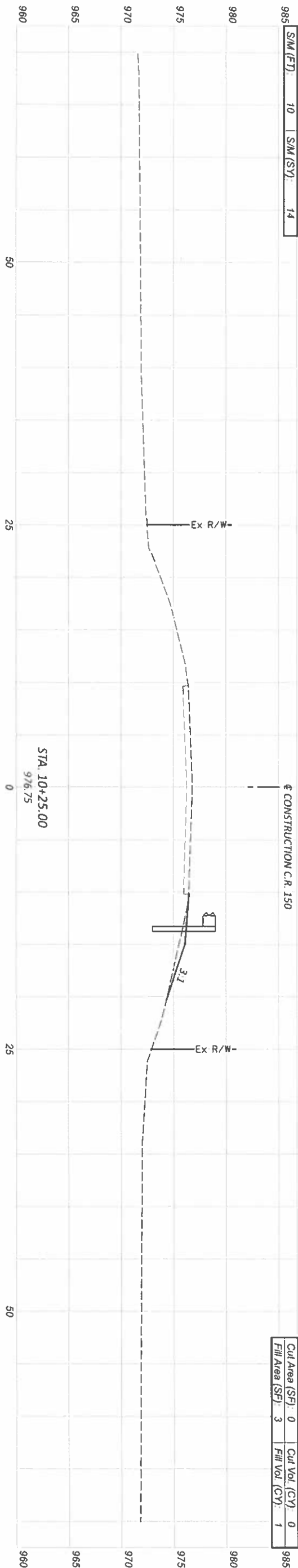
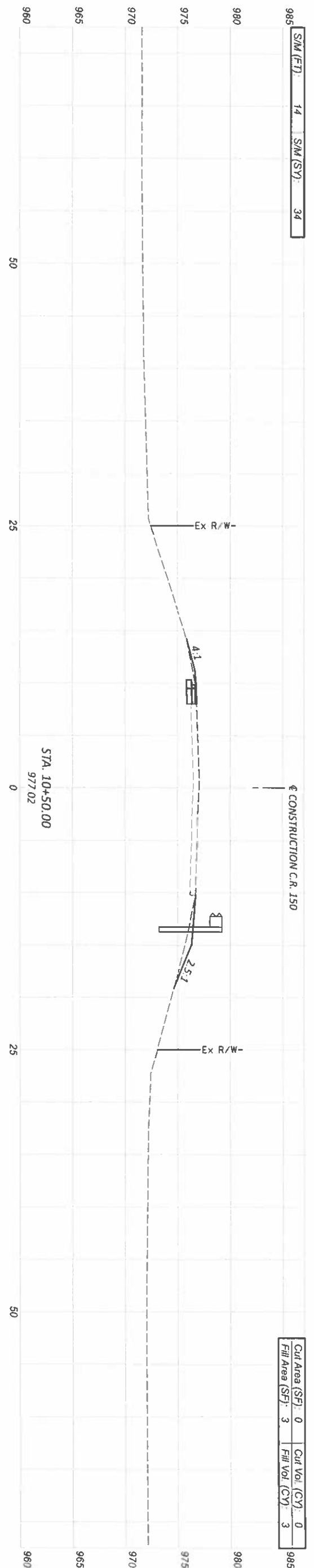
PLAN AND PROFILE
 STA. 10+00.00 TO STA. 14+00.00



DESIGNER: JEP
 REVIEWER: JEP
 PROJECT ID: 117353
 SHEET TOTAL: 23

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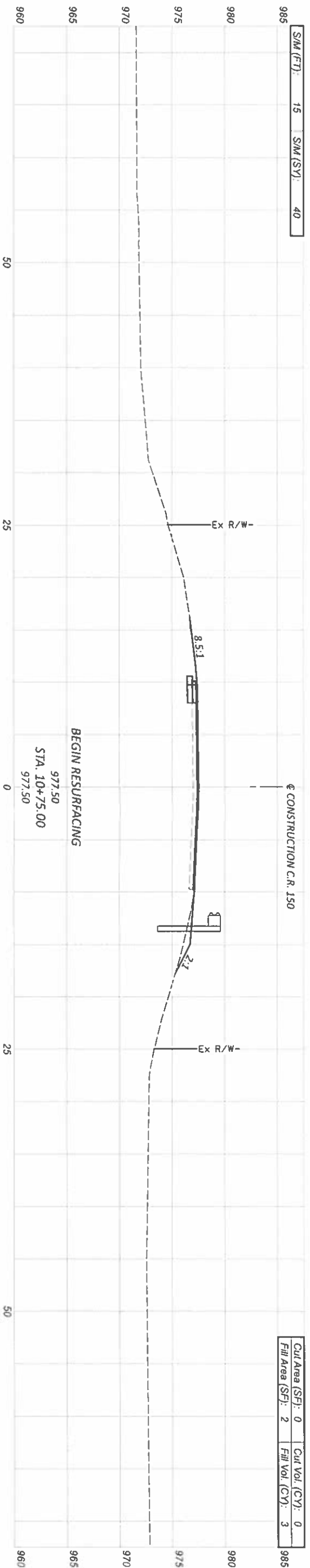
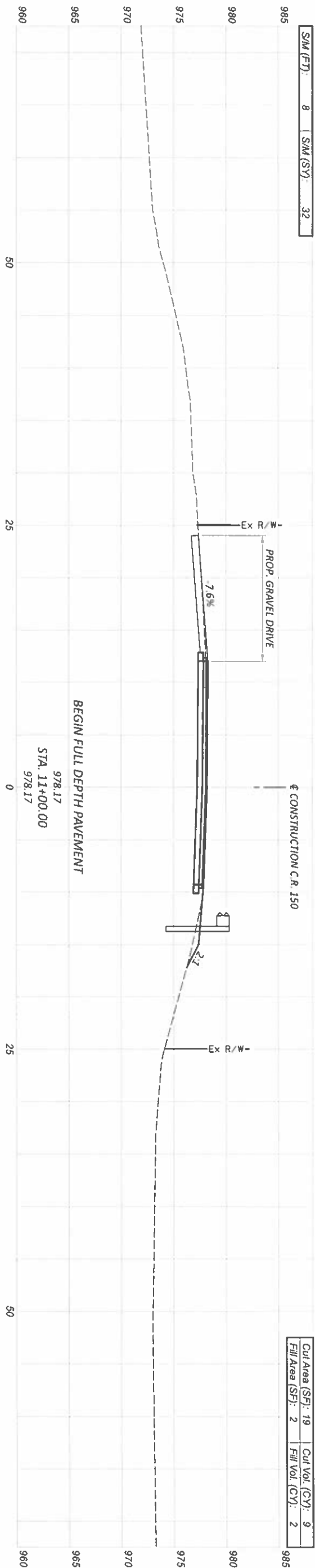
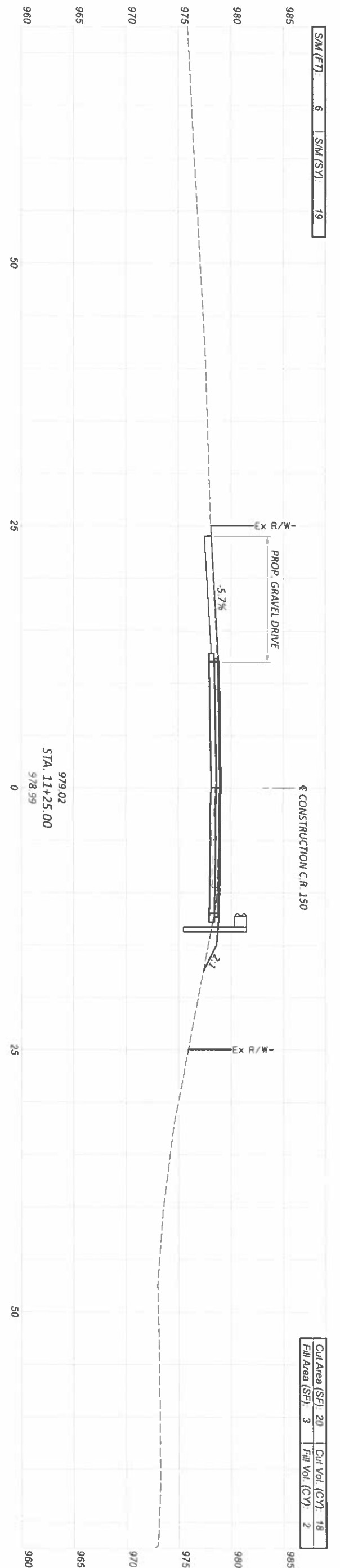


CROSS SECTIONS
 STA. 10+00.00 TO STA. 10+50.00


DESIGN AGENCY: **BG**
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DESIGNER: JEP
 REVIEWER: JEP
 PROJECT ID: 117353
 RG: 01-12-23

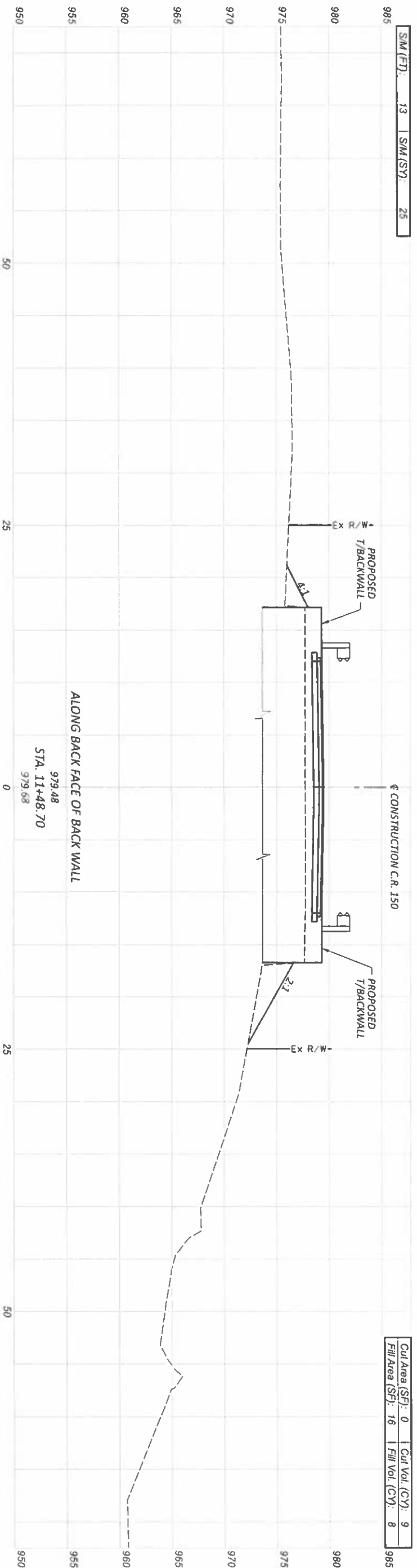
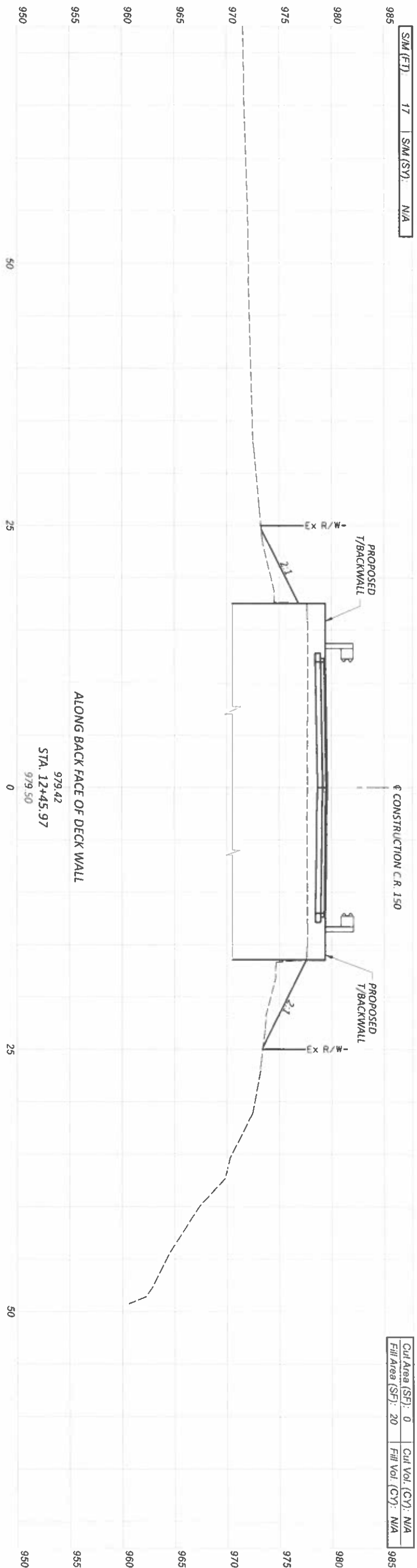
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CROSS SECTIONS
 STA. 10+75.00 TO STA. 11+25.00

DESIGNER	JEP
REVIEWER	JEP
PROJECT ID	117353
RG	01-12-23
	
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Sheet Totals		
Seeding	Cut	Fill
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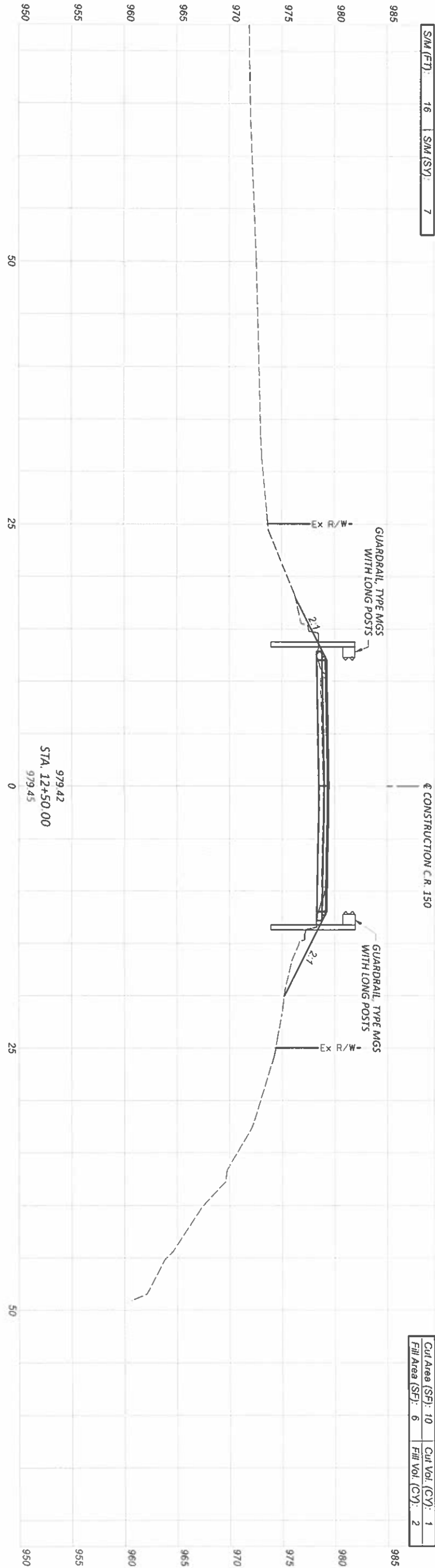
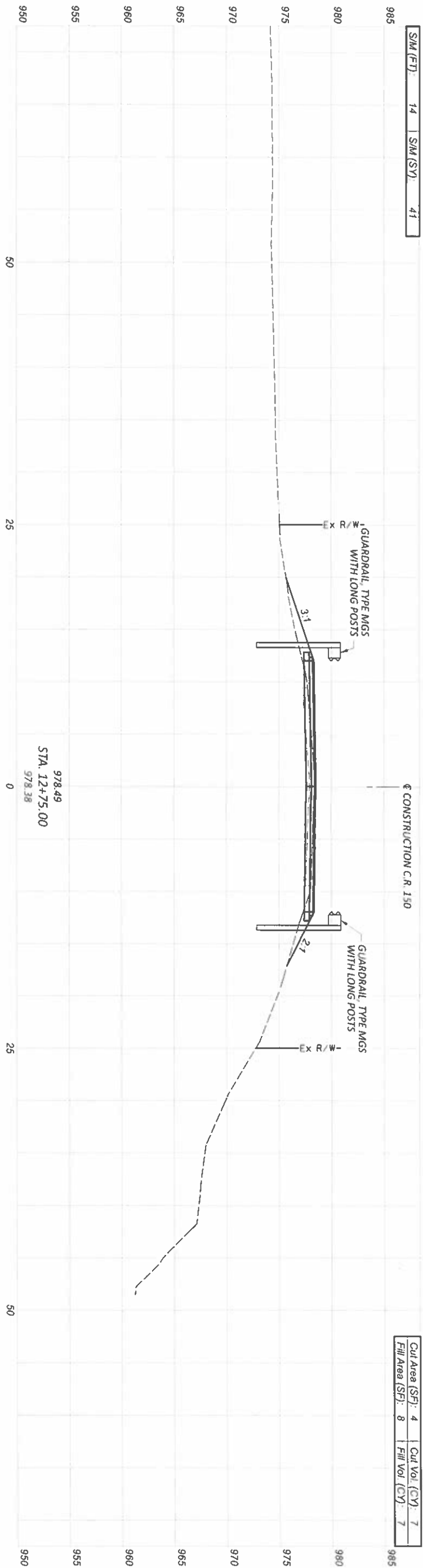


CROSS SECTIONS
 STA. 11+50.00 TO STA. 12+44.54

<p>DESIGN AGENCY BG www.bggroup.com 5910 WILCOX PLACE SUITE C DUBLIN, OHIO 43016</p>	<p>DESIGNER JEP</p> <p>REVIEWER JEP</p> <p>PROJECT ID 117353</p> <p>RG 01-12-23</p>						
<p>Sheet Totals</p> <table border="1" style="margin: auto;"> <tr> <td>Seeding</td> <td>Cut</td> <td>Fill</td> </tr> <tr> <td>25</td> <td>9</td> <td>8</td> </tr> </table>		Seeding	Cut	Fill	25	9	8
Seeding	Cut	Fill					
25	9	8					

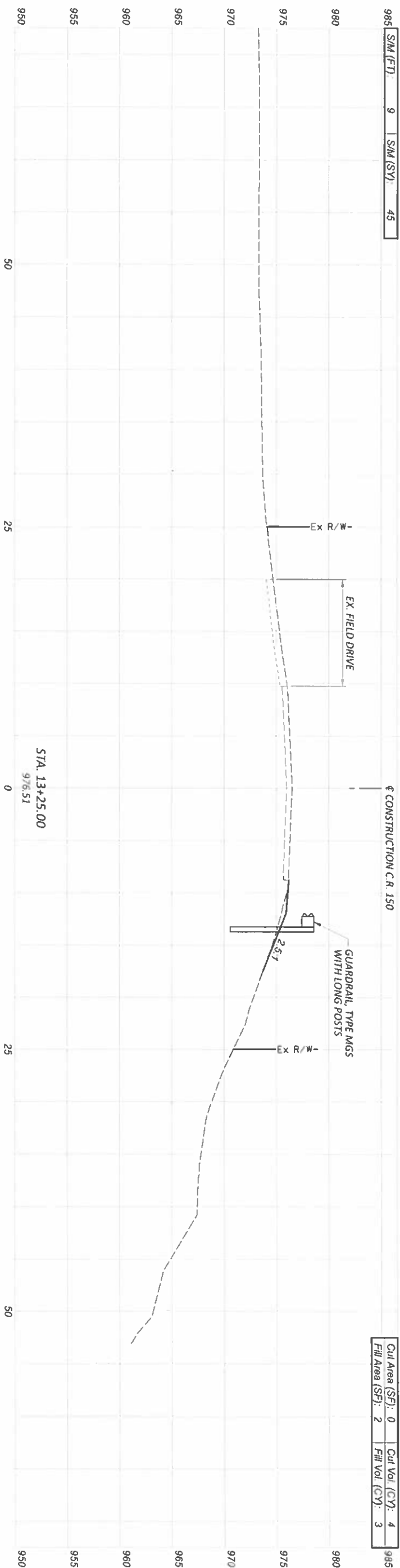
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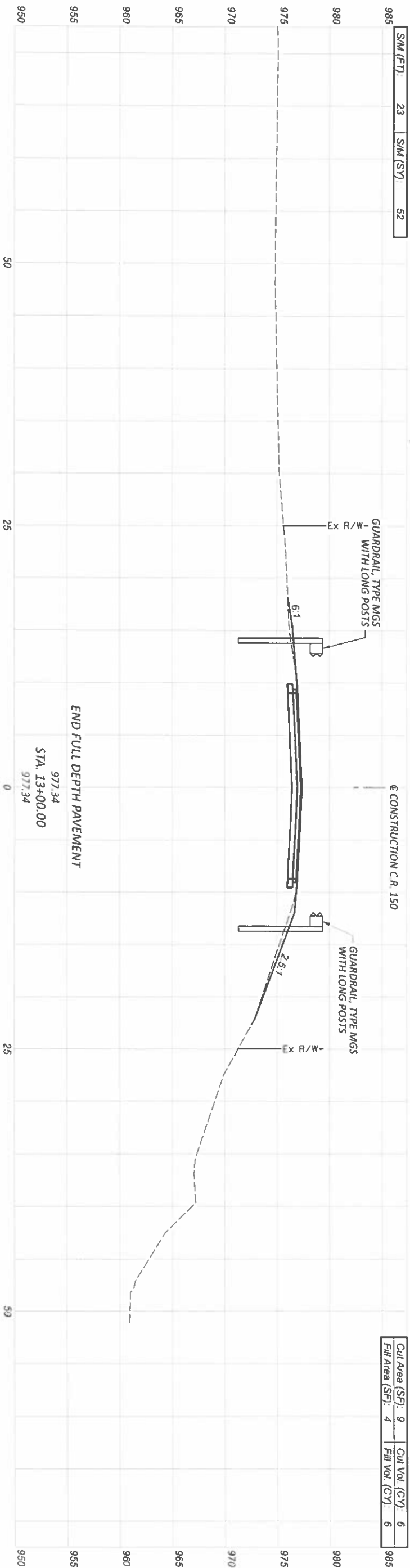


CROSS SECTIONS
 STA. 12+50.00 TO STA. 12+75.00

DESIGN AGENCY	 www.bgenggroup.com		
DESIGNER	JEP		
REVIEWER	JEP		
PROJECT ID	117353		
PROJECT	RG 01-12-23		
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CROSS SECTIONS
 STA. 13+00.00 TO STA. 13+25.00



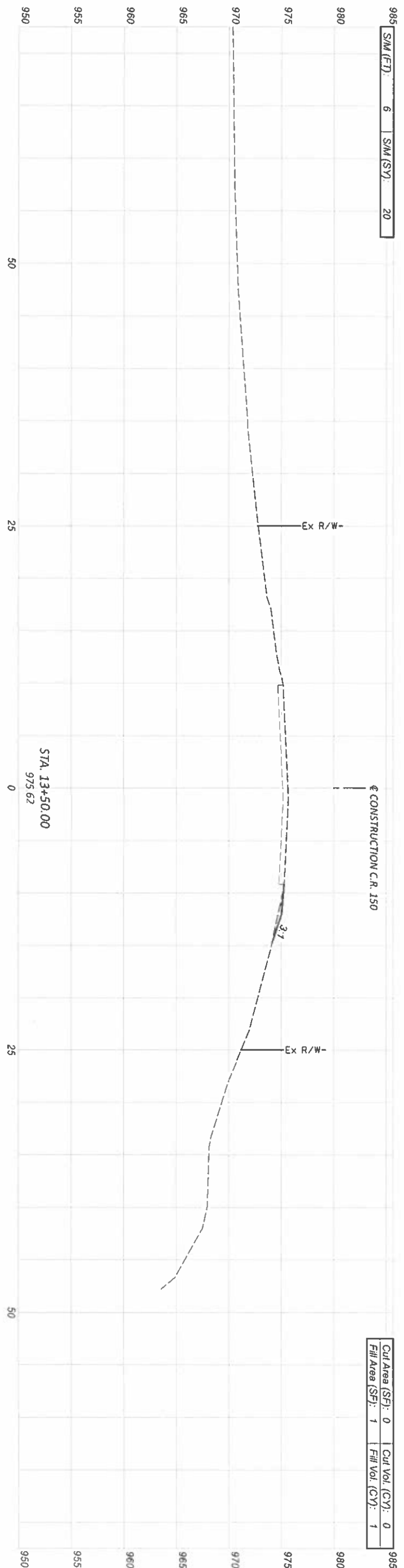
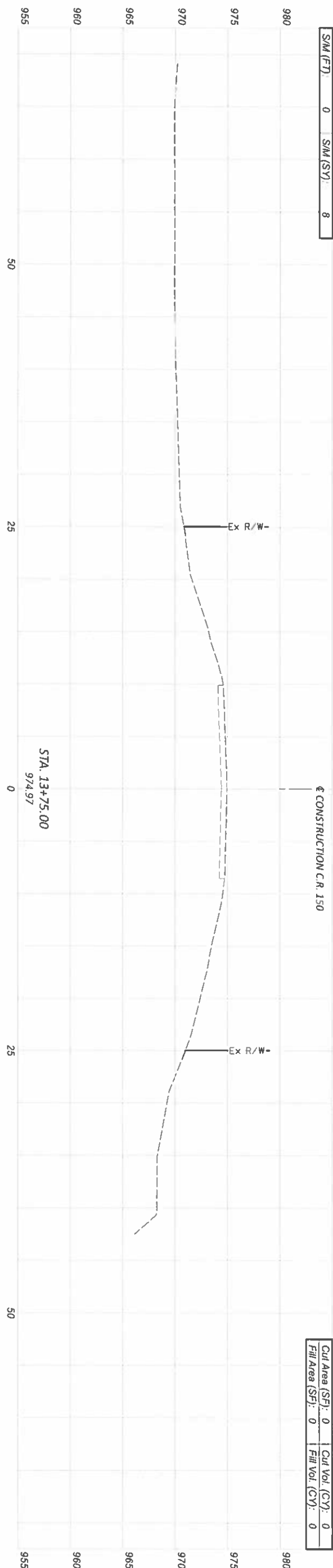
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TOTAL	23

DESIGN AGENCY	BG
DESIGNER	JEP
REVIEWER	JEP
PROJECT ID	117353
PROJECT	RG 01-12-23

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 DUBLIN, OHIO 43016

CROSS SECTION TOTALS	
SM (SY):	337*
CUT (CY):	54**
FILL (SY):	37**

* = TOTALS CARRIED TO THE GENERAL NOTES
 ** = TOTALS CARRIED TO THE GENERAL SUMMARY



CROSS SECTIONS
 STA. 13+50.00 TO STA. 13+75.00

DESIGN AGENCY	BG
DESIGNER	JEP
REVIEWER	JEP
PROJECT ID	117353
PROJECT	RG 01-12-23
SHEET	14
TOTAL SHEETS	23

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:
DS-1-92 REVISED 7/15/2022
EX-4-87 REVISED 7/15/2022
TS-1-99 REVISED 1/15/2021
REFER TO THE FOLLOWING SPECIFICATIONS:
800 DATED 1/15/2023

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATIONS OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 9TH EDITION, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING:

DECK: HL-93 & 0.060-KSF FUTURE WEARING SURFACE (FWS)
SUPERSTRUCTURE: PROPOSED TRUSS MEMBERS - HL-93 & 0.060 FUTURE WEARING SURFACE
SUBSTRUCTURE: EXISTING ABUTMENTS - H-15 & 0.00 FUTURE WEARING SURFACE
FOUNDATION: EXISTING PILES - H-15 & 0.00 FUTURE WEARING SURFACE

DESIGN DATA:

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
CONCRETE REINFORCEMENT
EPOXY COATED STEEL REINFORCEMENT - MINIMUM YIELD STRENGTH 60 KSI
DECK, ABUTMENTS
STRUCTURAL STEEL - ASTM A709, GRADE 50 - YIELD STRENGTH 50 KSI

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

ITEM 202 PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

THE EXISTING SUPERSTRUCTURE SHALL BE REMOVED UPON RECEIVING PERMISSION FROM THE ENGINEER. REMOVE EXISTING WEARING SURFACE, RAILING, AND DECK JOINTS. REMOVE AND DISPOSE OF ALL EXISTING STRUCTURAL STEEL. REMOVE EXISTING ABUTMENT BACKWALL TO BEAM SEAT. CLEAR AND CLEAN UP ALL DEBRIS WHICH FELL DURING REMOVAL OPERATIONS. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS ACCORDING TO CMS 501.05. SUBMIT A DEMOLITION PLAN DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER AT LEAST 14 DAYS BEFORE STARTING THE DEMOLITION WORK TO OBTAIN THE ENGINEER'S APPROVAL BEFORE STARTING THE DEMOLITION WORK. THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING REMOVAL OPERATIONS. THE COST TO CLEAR AND CLEAN UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

ITEM 513- STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN:

THIS ITEM SHALL CONSIST OF FURNISHING, TRANSPORTING, ERECTING AND INSTALLING IN PLACE THE COMPLETE TRUSS SUPERSTRUCTURE, INCLUDING ALL FRAMING, RAILINGS, DECK, BEARING AND ALL INCIDENTALS, IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS AND THESE SPECIFICATIONS. SEPARATE PAYMENT WILL BE MADE FOR STEEL TRUSS DESIGN, CONCRETE DECK DESIGN, DECK CONCRETE, EXPANSION JOINT, TST RAIL, DRIP STRIP AND SUBSTRUCTURE ITEMS LISTED ON THE ESTIMATED QUANTITIES SHEET. HOWEVER, ALL OTHER WORK OR ITEMS NECESSARY TO PROVIDE THE COMPLETED IN-PLACE TRUSS SUPERSTRUCTURE ARE INCIDENTAL TO AND INCLUDED FOR PAYMENT WITH THE ITEM. THESE SPECIFICATIONS ARE FOR A TRUSS STRUCTURE OF BOLTED STEEL CONSTRUCTION AND SHALL BE REGARDED AS MINIMUM STANDARDS FOR DESIGN AND CONSTRUCTION. ALL STEEL WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF ODOT CMS SECTION 512.

CONTRACTOR'S DESIGNER:

1. THE CONTRACTOR SHALL ENGAGE A PRE-QUALIFIED DESIGN FIRM TO PERFORM PROFESSIONAL SERVICES AS A SIGNATORY TO AN AGREEMENT WITH THE CONTRACTOR OR AS A PART OF THE CONTRACTOR'S STAFF TO PROVIDE ALL NECESSARY SERVICES TO DESIGN THE TRUSS, ELASTOMERIC BEARINGS, AND THE DECK FOR THE PROJECT. (THE PRE-QUALIFIED DESIGN FIRM SHALL BE REFERRED TO IN THIS NOTE AS THE "CONTRACTOR'S DESIGNER". THE CONTRACTOR'S DESIGNER SHALL ALSO REVIEW AND APPROVE SHOP DRAWINGS PRODUCED BY THE FABRICATOR(S) FOR

COMPLIANCE WITH THE TRUSS, ELASTOMERIC BEARINGS, AND DECK DESIGNS (AS APPROPRIATE) FOR THE PROJECT. ALL WORK SHALL CONFORM TO CURRENT DEPARTMENT, FHWA AND AASHTO STANDARDS, PRACTICES, POLICIES, GUIDELINES AND SPECIFICATIONS. THE STANDARD OF CARE FOR ALL SUCH SERVICES PERFORMED OR FURNISHED PURSUANT TO THE CONTRACT WILL BE THE CARE AND SKILL ORDINARILY EXERCISED BY MEMBERS OF THE ENGINEERING PROFESSION PRACTICING UNDER SIMILAR CONDITIONS AT THE SAME TIME AND LOCALITY.

2. THE CONTRACTOR'S DESIGNER SHALL BE AN ODOT PREQUALIFIED LEVEL 2 CONSULTANT WITH TRUSS DESIGN EXPERIENCE OF SIMILAR OR LARGER SIZE OR THE DESIGN FIRM SHALL HAVE EXPERIENCE OF THE DESIGNING AT LEAST 5 TRUSS BRIDGES OF SIMILAR SIZE OR LARGER.
3. THE CONTRACTOR'S DESIGNER SHALL DESIGNATE THE TENSION AND COMPRESSION ZONE IN THE FRACTURE CRITICAL MEMBERS.
4. THE CONTRACTOR'S DESIGNER SHALL REVIEW AND APPROVE ALL TRUSS SHOP DRAWINGS PRIOR TO SUBMISSION TO THE ODOT ENGINEER.
5. THE CONTRACTOR'S DESIGNER SHALL PREPARE AND SUBMIT THE LOAD RATING REPORT PER LATEST ODOT BRIDGE DESIGN MANUAL.

DIMENSIONS:
WIDTH: INSIDE CLEAR ROADWAY WIDTH OF BRIDGE SHALL BE 24'-0" (E/F RAILINGS);
LENGTH: BRIDGE CENTER TO CENTER BEARING LENGTH IS TO BE 93'-0".

DESIGN:

1. THE STEEL TRUSS SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL WITH AN ALLOWANCE FOR A 0.060 KSF FUTURE WEARING SURFACE. THE STEEL TRUSS DESIGN SHALL BE INCLUDED WITH ITEM 513, STRUCTURAL STEEL, MISC.: STEEL TRUSS DESIGN, FOR PAYMENT.
2. BRIDGE TYPE: THE BRIDGE SHALL BE GIRDER TRUSS TYPE AS SHOWN ON SHEET 10/11. TRUSS TO CONSIST OF INTERMEDIATE VERTICAL MEMBERS AT THE INTERIOR BOTTOM CHORD PANEL POINTS AND AT LEAST ONE DIAGONAL PER PANEL.
3. GUSSET PLATES TO BE DESIGNED TO ADEQUATELY TRANSFER MEMBER STRESSES AT PANEL POINTS. ALL GUSSET PLATE CORNERS SHALL HAVE A 1" RADIUS.
4. CLEARLY IDENTIFY MEMBERS OR THEIR COMPONENTS THAT ARE FRACTURE CRITICAL (FCM) IN THE PLANS.
5. ALL SHOP AND FIELD BOLTED CONNECTIONS SHALL UTILIZE ZINC COATED ASTM A-325 TYPE I HIGH STRENGTH BOLTS.
6. RAILING SHALL BE IN ACCORDANCE WITH ODOT SPECIFICATION SECTION 517.
7. DESIGN THE ELASTOMERIC BEARING PER SECTION 516 OF THE CMS AND CHAPTER 14 OF THE AASHTO LRFD.

DECK DESIGN:

1. THE CONCRETE DECK SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL WITH AN ALLOWANCE FOR A 0.060 KSF FUTURE WEARING SURFACE. THE CONCRETE DECK DESIGN SHALL BE INCLUDED WITH ITEM 513, CONCRETE, MISC.: CONCRETE DECK DESIGN, FOR PAYMENT.
2. MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.
3. MINIMUM THICKNESS OF CONCRETE DECK SHALL BE 8" AS PER SECTION 302.2.1 OF THE BDM.
4. DECK CONCRETE SHOULD BE AS PER ITEM 511.
5. STAINLESS STEEL DRIP STRIPS (DS-1-92) SHALL BE PROVIDED TO PROJECT DECK EDGES AND SHALL BE INCLUDED WITH ITEM 518, SPECIAL-STEEL DRIP STRIP, FOR PAYMENT.
DESIGN SUBMISSIONS:
1. THE CONTRACTOR'S DESIGNER'S TRUSS, DECK, AND ELASTOMERIC BEARING DESIGNS SHALL BE REVIEWED BY THE DEPARTMENT. THE CONTRACTOR'S DESIGNER SHALL BE AVAILABLE DURING CONSTRUCTION TO ANSWER QUESTIONS, ISSUE CERTIFICATIONS, AND CORRECT ERRORS AND OMISSIONS. THE DEPARTMENT'S FAILURE TO IDENTIFY IMPROPER OR INCORRECT DESIGN SHALL NOT, IN ANY WAY, PREVENT LATER REJECTION WHEN AN IMPROPER OR INCORRECT DESIGN IS DISCOVERED, OR OBLIGATE THE DEPARTMENT TO GRANT ACCEPTANCE UNDER 109.11 OR 109.12.

2. THE CONTRACTOR'S DESIGNER WILL SUBMIT STAGE 2 DETAILED DESIGN PLANS AS PER LOCATION & DESIGN MANUAL, VOLUME 3 FOR REVIEW BY ODOT FOR THE DESIGNS. THE DETAILED DESIGN PLANS MAY BE ABBREVIATED AS APPROPRIATE AND AS AGREED BY THE PROJECT ENGINEER. EACH PLAN SHEET WILL BE CLEARLY MARKED "STAGE 2 NOT FOR CONSTRUCTION".

3. THE DEPARTMENT WILL HAVE TEN (10) WORKDAYS (THE FOLLOWING ARE EXCLUDED AS WORKDAYS: STATE HOLIDAYS, FEDERAL HOLIDAYS, SATURDAYS, SUNDAYS, FRIDAY AFTER THANKSGIVING DAY, DAY BEFORE CHRISTMAS DAY, DAYS BETWEEN CHRISTMAS DAY AND NEW YEAR'S DAY) FROM RECEIPT TO REVIEW COMPLETE SUBMISSIONS.

4. FOLLOWING THE REVIEW, THE DEPARTMENT WILL RETURN TO THE CONTRACTOR'S DESIGNED MARKED PLANS NOTED 'ACCEPTED', 'ACCEPTED AS NOTED' OR 'NOT ACCEPTED' AS DESCRIBED IN SECTION 105.02. OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE CONTRACTOR'S DESIGNER WILL CORRECT ERRORS, INCORPORATE CHANGES, PERFORM INVESTIGATIONS AND MAKE RELATED CHANGES TO THE PLANS AND SUPPORTING DOCUMENTS

PRIOR TO SUBMITTING CONSTRUCTION PLANS:

5. AFTER THE REVIEW COMMENTS FROM THE STAGE 2 REVIEW SUBMISSION HAVE BEEN COMPILED WITH, AND FOLLOWING APPROVAL OF THE DESIGN DOCUMENTATION, THE CONTRACTOR'S DESIGNER WILL PREPARE PLAN SETS FOR USE DURING CONSTRUCTION. ALL REVIEW COMMENTS WILL BE RESOLVED IN WRITING BY THE CONTRACTOR'S DESIGNER TO THE SATISFACTION OF THE DEPARTMENT BEFORE THE CONTRACTOR'S DESIGNER SUBMITS THE CONSTRUCTION PLANS.

FABRICATOR:

1. FABRICATOR SHALL BE IN ODOT LEVEL 6 QUALIFIED FABRICATOR AS PER ODOT CMS 513.
2. THE FABRICATOR SHALL PROVIDE THE ENGINEER AND THE DESIGNER WITH SHOP DRAWINGS AS PER SECTION 501.04 OF THE CMS. WORKMANSHIP, FABRICATION, AND SHOP DESIGN SHALL BE IN ACCORDANCE WITH AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS SPECIFICATIONS (AASHTO).
3. THE FABRICATION AND SHOP DRAWING SUBMISSION OF THE TRUSS SUPERSTRUCTURE, INCLUDING ALL FRAMING, RAILING, FLOOR SYSTEM, BEARINGS AND ALL INCIDENTALS, IN ACCORDANCE WITH THE DETAILS SHOWN IN THE TRUSS DESIGN, IS THE RESPONSIBILITY OF THE MANUFACTURER OF THE TRUSS SUPERSTRUCTURE UNIT.
4. IN ADDITION TO THE REQUIREMENTS OF CMS 513 & 711.02, GALVANIZED COATING SYSTEM SHALL MEET THE REQUIREMENTS OF THE NOTE "GALVANIZED COATING SYSTEM FOR STRUCTURAL STEEL BRIDGES" ON SHEET 3/11 AND 4/11.

GENERAL:

1. TRUSS, STRINGERS AND FLOOR BEAMS SHALL MEET CHARPY V-NOTCH REQUIREMENTS PER CMS 711.01, 15 FT-LBS @ 40°F.
2. FINING SURFACES OF THE BOLTED SPLICES SHALL BE ROUGHENED IN THE SHOP AFTER GALVANIZING BY HAND WIRE BRUSH. POWER WIRE BRUSHING IS NOT PERMITTED. ALL FIELD SPLICE BOLT HOLES SHALL BE FREE OF ZINC BUILD UP AND EACH HOLE SHALL BE CHECKED IN THE SHOP AFTER GALVANIZING TO RECEIVE A 3/8" DIAMETER DRIFT PIN.
3. AREAS OF FIELD CONNECTIONS SHALL HAVE A UNIFORM GALVANIZED COATING THICKNESS FREE OF LOCAL EXCESSIVE ROUGHNESS WHICH WOULD PREVENT SPLICE PLATES, BEARINGS, OR OTHER FIELD CONNECTIONS FROM MAKING INTIMATE CONTACT.
4. MATERIAL SHALL BE FREE OF IMPERFECTIONS OR DEPRESSIONS CAUSED BY MATERIAL HANDLING. THE FABRICATOR, GALVANIZER, AND ERECTOR SHALL USE LIFTING CLAMPS OR SOFT HANDLING PRIOR TO GALVANIZING. IMPERFECTIONS THAT ARE GREATER THAN THE LIMITS ALLOWED BY GRINDING PER ASTM A6 SHALL BE DOCUMENTED.
5. AFTER GALVANIZING, MATERIAL SHALL BE PLACED IN SHOP ASSEMBLY PER SECTION 513.24 OF THE SPECIFICATION 513 TO CHECK ALIGNMENT OF HOLES. SWEEP, AND CAMBER AGAINST THE FABRICATOR'S ORIGINAL RECORDED LAY DOWN DIMENSIONS.
6. ROLLED, SHEARED, AND FLAMED CUT SURFACES SHALL BE FINISHED IN ACCORDANCE WITH ODOT CMS 513.12. WHERE STEEL BEAM SURFACES ARE TO RECEIVE A COATING OR GALVANIZING, ALL FOUR ROLLED EDGES OF THE BOTTOM FLANGE AND THE TWO BOTTOM EDGES OF THE TOP FLANGE SHALL BE GROUND TO A 1/8" RADIUS ± 1/16" IN ACCORDANCE WITH ODOT CMS 514.13 B.
7. BEAM HOLES SHALL BE DRILLED FULL SIZE IN ASSEMBLY USING A TEMPLATE AND ROTO-BROACH, SHELL DRILL OR OTHER SIMILAR TOOL AS PER 513.19.
8. CAMBER TOLERANCE: -0" TO +4"
9. ALL WELDING SHALL BE IN ACCORDANCE WITH AASHTO/AWS D1.5 BRIDGE WELDING CODE AS AMENDED BY SUPPLEMENT 1011 PER 513.21.
10. SUBMIT ERECTION PLANS ACCORDING TO C&MS 501.05.

METHOD OF MEASUREMENT:

THE DEPARTMENT WILL MEASURE THE TRUSS SUPERSTRUCTURE AS EACH DESIGN, FURNISHED, DELIVERED, ERECTED AND INSTALLED.

BASIS OF PAYMENT:

THE DEPARTMENT WILL PAY THE CONTRACT UNIT PRICE PER LUMP SUM OF THE ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN.

GENERAL NOTES - 1
BRIDGE NO. HAR-CR150-03.400
CR150 OVER SCIOTO RIVER



SR#	3332268
DESIGN AGENCY	
DESIGNER	GTB
CHECKER	RG
PROJECT ID	117353
SUBSET	2
TOTAL	9
SHEET	16
TOTAL	23

GALVANIZED COATING SYSTEM FOR STRUCTURAL STEEL

1.0 DESCRIPTION
 IN ADDITION TO THE REQUIREMENTS OF CONSTRUCTION AND MATERIAL SPECIFICATION 513, THIS ITEM CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO CLEAN AND GALVANIZE ALL STRUCTURAL STEEL SURFACES, AS SPECIFIED HEREIN. THE GALVANIZED COATING SYSTEM MABE APPLIED BY A GALVANIZER NOT QUALIFIED AS A FABRICATION SHOP UNDER CONSTRUCTION AND MATERIAL SPECIFICATION 513, BUT THE APPROVED FABRICATOR OF THE STRUCTURAL STEEL SHALL BE RESPONSIBLE FOR THE QUALITY OF THE GALVANIZED COATING SYSTEM AND ANY REPAIRS, RE-FABRICATING, ADDITIONAL LAYDOWNS REQUIRED TO ASSURE THE FABRICATED STEEL MEETS ALL REQUIREMENTS OF THIS SPECIFICATION. SECTIONS 513.27 AND 513.28 SHALL NOT APPLY.

THIS ITEM SHALL ALSO INCLUDE GALVANIZING, PER 711.02, OF ALL NUTS, WASH, ANCHOR BOLTS. SHEAR STUDS SHALL BE INSTALLED AS PER SECTION 513.22.

2.0 PRE-FABRICATION MEETING

IN ADDITION TO THE PRE-FABRICATION MEETING REQUIREMENTS UNDER 513.07, BOTH THE FABRICATOR'S QUALITY CONTROL SPECIALIST, (QCS) AND GALVANIZER'S QCS COATING APPLICATOR SHALL BE PRESENT AND DISCUSS METHODS OF OPERATION, QUALITY CONTROL, INCLUDING REPAIRS, TRANSPORTATION, ERECTION METHODS TO ACCOMPLISH ALL PHASES OF THE PREPARATION AND COATING WORK REQUIRED BY THIS SPECIFICATION.

3.0 QUALITY CONTROL

3.1 QUALITY CONTROL SPECIALIST

THE GALVANIZER'S QCS (QUALITY CONTROL SPECIALIST) REQUIRED UNDER 514, IS RESPONSIBLE FOR ALL QUALITY CONTROL REQUIREMENTS OF THIS SPECIFICATION. THE QCS SHALL HAVE THE TESTING EQUIPMENT SPECIFIED IN 514.05.

3.2 QUALITY CONTROL POINTS (QCP)

QUALITY CONTROL POINTS (QCP) ARE POINTS IN TIME WHEN ONE PHASE OF THE WORK IS COMPLETE AND READY FOR INSPECTION BY THE FABRICATOR'S QCS AND THE DEPARTMENT'S QA REPRESENTATIVE. THE NEXT OPERATIONAL STEP MUST NOT PROCEED UNLESS THE QCP HAS BEEN ACCEPTED OR QA INSPECTION WAIVED BY THE DEPARTMENT'S QA REPRESENTATIVE. AT THESE POINTS THE FABRICATOR MUST AFFORD ACCESS TO INSPECT ALL AFFECTED SURFACES. IF INSPECTION INDICATES A DEFICIENCY, THAT PHASE OF THE WORK MUST BE CORRECTED IN ACCORDANCE WITH THESE SPECIFICATIONS PRIOR TO BEGINNING THE NEXT PHASE OF WORK. DISCOVERY OF DEFECTIVE WORK OR MATERIAL AFTER A QUALITY CONTROL POINT IS PAST OR FUTURE OF THE FINAL PRODUCT BEFORE FINAL ACCEPTANCE, MUST NOT IN ANY WAY PREVENT REJECTION OR OBLIGATE THE DEPARTMENT TO FINAL ACCEPTANCE.

QUALITY CONTROL POINTS	
QUALITY CONTROL POINTS (QCP)	PURPOSE
A. SOLVENT CLEANING	REMOVE ASPHALTIC CEMENT, OIL, GREASE, SALT, DIRT, ETC.
B. GRINDING EDGES	REMOVE SHARP CORNERS PER AWS.
C. ABRASIVE BLASTING	BLAST SURFACES, INCLUDING REPAIR FINS, TEARS, SLIVERS OR SHARP EDGES.
D. GALVANIZING	CHECK COATING THICKNESS
E. FAYING SURFACE CLEANING	CHECK FAYING SURFACE ROUGHNESS. CHECK BOLT HOLE CLEARANCE. CHECK FOR OTHER FIELD CONNECTIONS UNIFORM COATING THICKNESS.
F. SECOND LAY DOWN	CHECK SWEEP AND CAMBER TOLERANCES OF EACH STRUCTURAL MEMBER.
G. FIELD REPAIR OF DAMAGE AREAS	CHECK FOR DAMAGE AREA AFTER ERECTION OF STRUCTURE. PERFORM DAMAGE REPAIRS.
H. FINAL REVIEW	CLEAN STRUCTURE AS PER QCP#1. VISUALLY INSPECT SYSTEM FOR ACCEPTANCE.

A. SOLVENT CLEANING (QCP #1)

THE STEEL MUST BE SOLVENT CLEANED WERE NECESSARY TO REMOVE ALL TRACES OF ASPHALTIC CEMENT, OIL, GREASE, DIESEL FUEL DEPOSITS, AND OTHER SOLUBLE CONTAMINANTS PER SSPC-SP 1 SOLVENT CLEANING. UNDER NO CIRCUMSTANCES MUST ANY ABRASIVE BLASTING BE DONE TO AREAS WITH ASPHALTIC CEMENT, OIL, GREASE, OR DIESEL FUEL DEPOSITS. STEEL MUST BE ALLOWED TO DRY BEFORE BLAST CLEANING BEGINS. THE GALVANIZER'S QCS SHALL INSPECT AND DOCUMENT THAT THE CLEANING CONFORMS TO SSPC-SP1 AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

B. GRINDING EDGES (QCP #2)

ALL CORNERS OF THERMALLY CUT OR SHEARED EDGES MUST HAVE A 1/18 INCH RADIUS OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE. THERMALLY CUT MATERIAL THICKER THAN 1/8 INCH MUST HAVE THE SIDES GROUND TO REMOVE THE HEAT EFFECTED ZONE, AS NECESSARY TO ACHIEVE THE SPECIFIED SURFACE CLEANING. THE GALVANIZER'S QCS MUST VISUALLY INSPECT AND DOCUMENT THAT THE GRINDING CONFORMS TO THIS SPECIFICATION AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

C. ABRASIVE BLASTING (QCP #3)

BEAMS AND GIRDERS MUST BE PREPARED AT THE FABRICATOR TO STEEL STRUCTURES PAINTING COUNCIL (SSPC) GRADE SIX (6) COMMERCIAL BLAST CLEANING PRIOR TO GALVANIZING. ALL MATERIALS MUST BE FREE OF PAINT MARKS, SECONDARY ANGLE, PLATES, BARS AND SHAPES NEED NOT BE BLAST CLEANED.

ABRASIVES MUST ALSO BE CHECKED FOR OIL CONTAMINATION BEFORE USE. A SMALL SAMPLE OF ABRASIVE MUST BE ADDED TO ORDINARY TAP WATER. ANY DETECTION OF A OIL FILM ON THE SURFACE OF THE WATER MUST BE CAUSE FOR REJECTION. THE GALVANIZER'S QCS MUST PERFORM AND RECORD THIS TEST AT THE START OF EACH SHIFT.

ALL FINS, TEARS, SLIVERS AND BURRED OR SHARP EDGES THAT ARE PRESENT ON ANY STEEL MEMBER OR THAT APPEAR AFTER THE BLASTING OPERATION MUST BE CONDITIONED PER ASTM A6. WELDING REPAIRS MUST ONLY BE PERFORMED BY THE 513 FABRICATOR.

THE GALVANIZER'S QCS MUST VISUALLY INSPECT AND DOCUMENT THAT THE BLAST CONFORMS TO SSPC-SP6, THAT ALL CONDITIONING IS PERFORMED PER ASTM A6, AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

D. GALVANIZING (QCP #4)

GALVANIZED PER 711.02 AND THIS SPECIFICATION. COATING THICKNESS MUST BE A MINIMUM OF 4 MILS [100 MM] MEASURED AS SPECIFIED.

MATERIAL MUST BE FREE OF IMPERFECTIONS OR DEPRESSIONS CAUSED BY MATERIAL HANDLING. THE FABRICATOR, GALVANIZER AND ERECTOR MUST USE LIFTING CLAMPS OR SOFTENERS FOR HANDLING. PRIOR TO GALVANIZING, SURFACE IMPERFECTIONS MAY BE REPAIRED BY THE FABRICATOR IN CONFORMANCE WITH ASTM A6. IMPERFECTIONS GREATER THAN THE LIMIT ALLOWED BY ASTM A6 MUST BE DOCUMENTED. REPAIR OR REPLACEMENT OF THIS MEMBER WILL BE AT THE DISCRETION OF THE DEPARTMENT.

ALL DAMAGED GALVANIZING MUST BE REPAIRED IN ACCORDANCE WITH 711.02.

DOCUMENTATION OF COATING THICKNESS MUST BE PERFORMED BY THE GALVANIZER'S QCS. THE GALVANIZER'S QCS MUST RECORD THE GAGE READINGS AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

E. FAYING SURFACE CLEANING (QCP #5)

AREAS OF FIELD CONNECTIONS MUST HAVE A UNIFORM GALVANIZED COATING THICKNESS FREE OF LOCAL EXCESSIVE ROUGHNESS WHICH WOULD PREVENT SPICE PLATES, BEARINGS OR OTHER FIELD CONNECTIONS FROM MAKING INTIMATE CONTACT.

FAYING SURFACES OF THE BOLTED SPICES MUST BE ROUGHENED IN THE SHOP AFTER GALVANIZING BY HAND WIRE BRUSHING. POWER WIRE BRUSHING IS NOT PERMITTED. ALL FIELD SPICE BOLT HOLES MUST BE FREE OF ZINC BUILD UP. AFTER GALVANIZING, CLEAN EACH HOLE AS NECESSARY SO THAT A DRIFT PIN 1/16" LESS THAN THE DIAMETER OF THE HOLE CAN BE FULLY INSERTED. CONSIDERATION WILL BE GIVEN TO OTHER METHODS OF TREATING THE FAYING SURFACES AND BOLT HOLES IF A WRITTEN REQUEST IS SUBMITTED TO THE OFFICE OF MATERIAL MANAGEMENT (OMM) IN ACCORDANCE WITH CMS 108.05.

INSPECTION OF THE ROUGHENING OF THE FAYING SURFACES AND CHECKING OF HOLES WITH DRIFT PINS MUST BE PERFORMED BY THE GALVANIZER'S QCS. ACCEPTANCE OF THE FAYING SURFACES AND HOLES SHALL BE DOCUMENTED BY THE GALVANIZER'S QCS.

F. SECOND LAY DOWN (QCP #6)

AFTER GALVANIZING, MATERIALS MUST BE PLACED IN A SECOND SHOP ASSEMBLY PER CMS SECTION 513.24 TO CHECK ALIGNMENT OF HOLES, SWEEP AND CAMBER AGAINST THE FABRICATOR'S ORIGINAL RECORDED LAY DOWN DIMENSIONS. THIS SHOP ASSEMBLY MAY BE PERFORMED AT THE GALVANIZER'S FACILITY, BY THE FABRICATOR'S PERSONNEL, IF APPROVED BY THE OFFICE OF MATERIAL MANAGEMENT (OMM). THE SECOND LAY DOWN MAY BE WAIVED BY THE OMM IF THE FABRICATOR RECORDS INDIVIDUAL BEAM CAMBERS AND SWEEPS, DURING THE FIRST LAY DOWN, AND THE NEW INDIVIDUAL BEAM CAMBERS AND SWEEPS, AFTER GALVANIZING, COMPARED TO THE FIRST LAY DOWN ARE WITHIN THE FOLLOWING TOLERANCES.

BEARING POINTS AFTER GALVANIZING MUST BE WITHIN ±1/8 INCH [3.2 MM] OF THE APPROVED SHOP DRAWING LAY DOWN.

CAMBER POINTS AFTER GALVANIZING MUST BE ±1/4 INCH [6 MM] OR -0 INCH FROM THE FIRST LAY DOWN.

SWEEP POINTS AFTER GALVANIZING MUST BE ±3/8 INCH [9 MM] FROM THE FIRST LAY DOWN.

INDIVIDUAL BEAMS THAT EXCEED THE LISTED TOLERANCES MUST BE PLACED WITH AT LEAST TWO ADJACENT BEAMS IN LAY DOWN FOR CHECKING AGAINST THE RECORDED SHOP ASSEMBLY RECORDS PER 513.24. DOCUMENTATION OF THE SECOND LAY DOWN OR INDIVIDUAL MEMBER CAMBERS MUST BE RECORDED BY THE FABRICATOR'S QCS OR GALVANIZER'S QCS PER 513.24.

G. FIELD REPAIR OF DAMAGED AREAS (QCP #7)

MATERIAL MUST BE FREE OF IMPERFECTIONS OR DEPRESSIONS CAUSED BY MATERIAL HANDLING. THE CONTRACTOR MUST USE LIFTING CLAMPS OR SOFTENERS FOR HANDLING. IMPERFECTIONS MAY BE REPAIRED BY GRINDING AS ALLOWED BY ASTM A6 BY THE CONTRACTOR. IMPERFECTIONS THAT ARE GREATER THAN THE GRINDING LIMITS ALLOWED BY ASTM A6 MUST BE DOCUMENTED. REPAIR OR REPLACEMENT OF THIS MEMBER WILL BE AT THE DISCRETION OF THE OMM.

ALL DAMAGED GALVANIZING MUST BE REPAIRED IN ACCORDANCE WITH 711.02.

DAMAGED GALVANIZING WHICH WILL BE INACCESSIBLE FOR REPAIR AFTER ERECTION MUST BE REPAIRED PRIOR TO ERECTION.

IN ORDER TO MINIMIZE DAMAGE TO THE GALVANIZED STEEL, CONCRETE SPLATTER AND FORM LEAKAGE MUST BE WASHED FROM THE SURFACE OF THE STEEL SHORTLY AFTER THE CONCRETE IS PLACED AND BEFORE IT IS DRY. IF THE CONCRETE DRIES, IT MUST BE REMOVED.

TEMPORARY ATTACHMENTS, SUPPORTS FOR SCAFFOLDING AND FINISHING MACHINE OR FORMS MUST NOT DAMAGE THE COATING SYSTEM. IN PARTICULAR, SUFFICIENT SIZE SUPPORT PADS MUST BE USED ON THE FASCIAS WHERE BRACING IS USED.

DOCUMENTATION OF GALVANIZING REPAIRS MUST BE PERFORMED BY THE GALVANIZER'S QCS BY A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

H. FINAL REVIEW (QCP #8)

AFTER THE ERECTION WORK HAS BEEN COMPLETED, INCLUDING ALL CONNECTIONS AND THE APPROVED REPAIR OF ANY DAMAGED BEAMS, GIRDERS OR OTHER STEEL MEMBERS, AND THE DECK HAS BEEN PLACED, THE CONTRACTOR AND ENGINEER MUST INSPECT THE STRUCTURE FOR DAMAGED COATING. (QCP #8). DAMAGED AREAS MUST BE REPAIRED BY QCP #7. AT THE COMPLETION OF CONSTRUCTION, THE GALVANIZING MUST BE UNDAMAGED AND THE SURFACES FREE FROM GREASE, OIL, CHALK MARKS, PAINT, CONCRETE SPLATTER OR OTHER SILAGE. SUCH SILAGE WILL BE REMOVED BY SOLVENT CLEANING PER SPC-SP1(QCP #1)

DOCUMENTATION OF FINAL REVIEW MUST BE PERFORMED BY THE GALVANIZER'S QCS BY A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

4.0 TESTING EQUIPMENT

THE FABRICATOR MUST PROVIDE THE GALVANIZER'S QCS INSPECTOR THE FOLLOWING TESTING EQUIPMENT IN GOOD WORKING ORDER FOR THE DURATION OF THE PROJECT. ONE POSITECTOR 2000 OR 6000, QUANIX 2200, OR ELCOMETER A45FB11) AND THE CALIBRATION PLATES, 38-200 MM AND 250-625 MM [1.5-8 MILS AND 10-25 MILS] AS PER THE NBS CALIBRATION STANDARDS IN ACCORDANCE WITH ASTM D-1186.

GENERAL NOTES - 2
 BRIDGE NO. HAR-CR150-03.400
 CR150 OVER SCIOTO RIVER

SFN 3332268
 DESIGN AGENCY

 www.bggroup.com
 5910 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER: RG
 CHECKER: RG
 REVIEWER: RG

PROJECT ID: 117353
 CCL: 01-12-23

SUBSET	TOTAL
3	9
SHEET	TOTAL
17	23

GALVANIZED COATING SYSTEM FOR STRUCTURAL STEEL BRIDGE (CONTINUED)

5.0 COATING THICKNESS
 GALVANIZED THICKNESS MUST BE DETERMINED BY USE OF TYPE Z MAGNETIC GAGE IN ACCORDANCE WITH THE FOLLOWING.

FIVE SEPARATE SPOT MEASUREMENTS MUST BE MADE, SPACED EVENLY OVER ONE (1) RANDOMLY SELECTED, 100 SQUARE FEET (9 SQUARE METERS) OF SURFACE AREA ON EACH STRUCTURAL MEMBER. THREE GAGE READINGS MUST BE MADE FOR EACH SPOT MEASUREMENT. THE PROBE MUST BE MOVED A DISTANCE OF 1 TO 3 INCHES (25 TO 75 MM) FOR EACH NEW GAGE READING. ANY UNUSUALLY HIGH OR LOW GAGE READING THAT CANNOT BE REPEATED CONSISTENTLY MUST BE DISCARDED. THE AVERAGE (MEAN) OF THE 3 GAGE READINGS MUST BE USED AS THE SPOT MEASUREMENT. THE AVERAGE OF FIVE SPOT MEASUREMENTS FOR EACH SUCH 100 SQUARE FOOT (9 SQUARE METER) AREA MUST NOT BE LESS THAN THE SPECIFIED THICKNESS. NO SINGLE SPOT MEASUREMENT IN ANY 100 SQUARE FEET (9 SQUARE METER) AREA MUST BE LESS THAN 80% OF THE SPECIFIED MINIMUM THICKNESS. ANY ONE OF THE 3 READINGS WHICH ARE AVERAGED TO PRODUCE EACH SPOT MEASUREMENT, MAY UNDER-RUN OR OVER-RUN BY A GREATER AMOUNT. THE 5 SPOT MEASUREMENTS MUST BE MADE FOR ONE (1) RANDOMLY SELECTED, 100 SQUARE FEET (9 SQUARE METER) OF AREA ON EACH STRUCTURAL MEMBER. ALL SPlice MATERIAL AND SECONDARY MEMBERS MUST HAVE AT LEAST ONE SPOT MEASURED ON EACH PIECE. THE PROBE MUST BE MOVED SO THAT ONE READING IS TAKEN AT EACH END AND MIDDLE OF THE PIECE FOR A TOTAL OF THREE READINGS.

THE GALVANIZER'S QCS MUST INSPECT AND PROVIDE DOCUMENTATION OF ACTUAL DATA, THE GALVANIZED THICKNESS CHECKS WERE PERFORMED PER SPECIFICATION, AND THE COATING THICKNESS MEETS SPECIFICATION REQUIREMENTS.

6.0 HANDLING AND SHIPPING

REASONABLE CARE MUST BE EXERCISED IN HANDLING THE GALVANIZED STEEL DURING SHIPPING, ERECTION, AND SUBSEQUENT CONSTRUCTION OF THE BRIDGE. THE STEEL MUST BE INSULATED FROM THE BINDING CHAINS BY SOFTENERS, HOOKS AND SLINGS USED TO HOIST STEEL. MUST BE PADDED. DIAPHRAGMS AND SIMILAR PIECES MUST BE SPACED IN SUCH A WAY THAT NO RUBBING WILL OCCUR DURING SHIPMENT THAT MAY DAMAGE THE GALVANIZING. THE STEEL MUST BE STORED ON PALLETS AT THE JOB SITE, OR BY OTHER MEANS, SO THAT IT DOES NOT REST ON THE GROUND OR SO THAT COMPONENTS DO NOT FALL OR REST ON EACH OTHER.

7.0 SAFETY REQUIREMENTS AND PRECAUTIONS

THE CONTRACTOR MUST MEET THE SAFETY REQUIREMENTS OF THE OHIO INDUSTRIAL COMMISSION AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), IN ADDITION TO THE SCAFFOLDING REQUIREMENTS BELOW.

THE CONTRACTOR IS REQUIRED TO MEET THE APPLICABLE SAFETY REQUIREMENTS OF THE OHIO INDUSTRIAL COMMISSION IN ADDITION TO THE SCAFFOLDING REQUIREMENTS SPECIFIED BELOW.

8.0 SCAFFOLDING

RUBBER ROLLERS, OR OTHER PROTECTIVE DEVICES MEETING THE APPROVAL OF THE ENGINEER, MUST BE USED ON SCAFFOLD FASTENINGS, METAL ROLLERS OR CLAMPS AND OTHER TYPES OF FASTENINGS WHICH WILL MAR OR DAMAGE COATED SURFACES MUST NOT BE USED.

9.0 INSPECTION ACCESS FOR FIELD REPAIR

IN ADDITION TO THE REQUIREMENT OF 105.10, THE CONTRACTOR MUST FURNISH, ERECT, AND MOVE SCAFFOLDING AND OTHER APPROPRIATE EQUIPMENT, TO PERMIT THE INSPECTOR THE OPPORTUNITY TO INSPECT (CLOSELY OBSERVE), ALL AFFECTED SURFACES. THIS OPPORTUNITY MUST BE PROVIDED TO THE INSPECTOR DURING ALL PHASES OF THE WORK AND CONTINUE FOR A PERIOD OF AT LEAST TEN (10) WORKING DAYS AFTER THE TOUCH-UP WORK HAS BEEN COMPLETED. WHEN SCAFFOLDING IS USED, IT MUST BE PROVIDED IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS. WHEN SCAFFOLDING, OR THE HANGERS ATTACHED TO THE SCAFFOLDING ARE SUPPORTED BY HORIZONTAL WIRE ROPE, OR WHEN SCAFFOLDING IS PLACED DIRECTLY UNDER THE SURFACE TO BE PAINTED, THE FOLLOWING REQUIREMENT MUST BE COMPLIED WITH:

WHEN SCAFFOLDING IS SUSPENDED 43" (1100 MM) OR MORE BELOW THE COATED SURFACE TO BE REPAIRED, TWO ROWS OF GUARDRAIL MUST BE PLACED ON ALL SIDES OF THE SCAFFOLDING. ONE ROW OF GUARDRAIL MUST BE PLACED AT 42" (1050 MM) ABOVE THE SCAFFOLDING AND THE OTHER ROW AT 20" (500 MM) ABOVE THE SCAFFOLDING.

WHEN THE SCAFFOLDING IS SUSPENDED AT LEAST 21" (530 MM), BUT LESS THAN 43" (1100 MM) BELOW THE COATED SURFACE TO BE REPAIRED, A ROW OF GUARDRAIL MUST BE PLACED ON ALL SIDES OF THE SCAFFOLDING AT 20" (500 MM) ABOVE THE SCAFFOLDING.

TWO ROWS OF GUARDRAIL MUST BE PLACED ON ALL SIDES OF SCAFFOLDING NOT PREVIOUSLY MENTIONED. THE ROWS OF GUARDRAIL MUST BE PLACED AT 42" (1050 MM) AND 20" (500 MM) ABOVE SCAFFOLDING, AS PREVIOUSLY MENTIONED.

ALL SCAFFOLDING MUST BE AT LEAST 24" (610 MM) WIDE WHEN GUARDRAIL IS USED AND 28" (710 MM) WIDE WHEN THE SCAFFOLDING IS SUSPENDED LESS THAN 21" (530 MM) BELOW THE COATED SURFACE TO BE REPAIRED AND GUARDRAIL IS NOT USED. IF TWO OR MORE SCAFFOLDING ARE LAID PARALLEL TO ACHIEVE THE PROPER WIDTH, THEY MUST BE RIGIDLY ATTACHED TO EACH OTHER TO PRELUDE ANY DIFFERENTIAL MOVEMENT.

ALL GUARDRAILS MUST BE CONSTRUCTED AS A SUBSTANTIAL BARRIER WHICH IS SECURELY FASTENED IN PLACE AND IS FREE FROM PROTRUDING OBJECTS SUCH AS NAILS, SCREWS AND BOLTS. THERE MUST BE AN OPENING IN THE GUARDRAIL, PROPERLY LOCATED, TO ALLOW THE INSPECTOR ACCESS ONTO THE SCAFFOLDING.

THE RAILS AND UPRIGHTS MUST BE EITHER METAL OR WOOD. IF PIPE RAILING IS USED, THE RAILING MUST HAVE A NOMINAL DIAMETER OF NO LESS THAN ONE AND ONE HALF INCHES. IF STRUCTURAL STEEL RAILING IS USE, THE RAILS MUST BE 2 X 2 X 3/8 INCH (50 X 50 X 10 MM) STEEL ANGLES OR OTHER METAL SHAPES OF EQUAL OR GREATER STRENGTH. IF WOOD RAILING IS USED, THE RAILING MUST BE 2 X 4 INCH (50 X 100 MM) (NOMINAL) STOCK. ALL UPRIGHTS MUST BE SPACED AT NO MORE THAN 8 FEET (2.4 M) ON CENTER. IF WOOD UPRIGHTS ARE USED, THE UPRIGHTS MUST BE 2 X 4 INCHES (50 X 100 MM) (NOMINAL) STOCK.

WHEN THE SURFACE TO BE INSPECTED IS MORE THAN 15 FEET (4.6 M) ABOVE THE GROUND OR WATER, AND THE SCAFFOLDING IS SUPPORTED FROM THE STRUCTURE BEING PAINTED, THE CONTRACTOR MUST PROVIDE THE INSPECTOR WITH A SAFETY BELT AND LIFELINE. THE LIFELINE MUST NOT ALLOW A FALL GREATER THAN 6 FEET (2 M). THE CONTRACTOR MUST PROVIDE A METHOD OF ATTACHING THE LIFELINE TO THE STRUCTURE INDEPENDENT OF THE SCAFFOLDING, CABLES, OR BRACKETS SUPPORTING THE SCAFFOLDING.

WHEN SCAFFOLDING IS MORE THAN TWO AND ONE HALFFEET (0.75 M) ABOVE THE GROUND, THE CONTRACTOR MUST PROVIDE A LADDER FOR ACCESS ONTO THE SCAFFOLDING. THE LADDER AND ANY EQUIPMENT USED TO ATTACH THE LADDER TO THE STRUCTURE MUST BE CAPABLE OF SUPPORTING 250 POUNDS (115 KG) WITH A SAFETY FACTOR OF AT LEAST FOUR (4). ALL RUNGS, STEPS, CLEATS, OR TREADS MUST HAVE UNIFORM SPACING AND MUST NOT EXCEED 12" (305 MM) ON CENTER. AT LEAST ONE SIDE RAIL MUST EXTEND AT LEAST 36" (915 MM) ABOVE THE LANDING NEAR THE TOP OF THE LADDER.

AN ADDITIONAL LANDING MUST BE REQUIRED WHEN THE DISTANCE FROM THE LADDER TO THE POINT WHERE THE SCAFFOLDING MAY BE ACCESSED, EXCEEDS 12" (305 MM). THE LANDING MUST BE A MINIMUM OF AT LEAST 24" (610 MM) WIDE AND 24" (610 MM) LONG. IT MUST ALSO BE OF ADEQUATE SIZE AND SHAPE SO THAT THE DISTANCE FROM THE LANDING TO THE POINT WHERE THE SCAFFOLDING IS ACCESSED DOES NOT EXCEED 12" (305 MM). THE LANDING MUST BE RIGID AND FIRMLY ATTACHED TO THE LADDER. HOWEVER, IT MUST NOT BE SUPPORTED BY THE LADDER. THE SCAFFOLDING MUST BE CAPABLE OF SUPPORTING A MINIMUM OF 1000 LBS (455 KG).

IN ADDITION TO THE AFOREMENTIONED REQUIREMENTS, THE CONTRACTOR IS STILL RESPONSIBLE TO OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS, ORDINANCES, REGULATIONS, ORDERS AND DECREES.

THE CONTRACTOR MUST FURNISH ALL NECESSARY TRAFFIC CONTROL TO PERMIT INSPECTION DURING AND AFTER ALL PHASES OF THE PROJECT.

10.0 PROTECTION OF PERSONS AND PROPERTY

THE CONTRACTOR MUST INSTALL AND MAINTAIN SUITABLE SHIELDS OR ENCLOSURES TO PREVENT DAMAGE TO ADJACENT BUILDINGS, PARKED CARS, TRUCKS, BOATS, OR VEHICLES TRAVELING ON, OVER, OR UNDER STRUCTURES HAVING GALVANIZED REPAIRS. THEY MUST BE SUITABLY ANCHORED AND REINFORCED TO PREVENT INTERFERING WITH NORMAL TRAFFIC OPERATIONS IN THE OPEN LANES. PAYMENT FOR THE SHIELDS MUST BE INCLUDED AS INCIDENTAL TO THE APPLICABLE FIELD COATING OPERATION. WORK MUST BE SUSPENDED WHEN DAMAGE TO ADJACENT BUILDING, MOTOR VEHICLES, BOATS, OR OTHER PROPERTY IS OCCURRING.

WHEN OR WHERE ANY DIRECT OR INDIRECT DAMAGE OR INJURY IS DONE TO PUBLIC OR PRIVATE PROPERTY, THE CONTRACTOR MUST RESTORE, AT HIS OWN EXPENSE, SUCH PROPERTY, TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE OR INJURY WAS DONE.

11.0 POLLUTION CONTROL

THE CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS TO COMPLY WITH POLLUTION CONTROL LAWS, RULES OR REGULATIONS OF FEDERAL, STATE OR LOCAL AGENCIES.

12.0 METHOD OF MEASUREMENT

THE COST OF ALL LABOR, MATERIALS, EQUIPMENT NECESSARY TO GALVANIZE AND TO FABRICATE THE STRUCTURAL STEEL IN ACCORDANCE WITH 513 AND PERFORM ANY NECESSARY FIELD REPAIR SHALL BE INCLUDED IN THIS 513, AS PER PLAN ITEM.

13.0 BASIS OF PAYMENT

PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR THE ITEM 513- STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN.

ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN

PRIOR TO DRILLING HOLES, LOCATE ALL EXISTING REINFORCING STEEL WITH AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. ALL WORK AND EQUIPMENT REQUIRED FOR LOCATING EXISTING BARS SHALL BE INCLUDED FO PAYMENT UNDER ITEM 510, DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT AS PER PLAN.

ITEM 511 - CLASS QCS CONCRETE, BRIDGE DECK, AS PER PLAN

THE FORMWORK FOR THE BRIDGE DECK CONCRETE SHALL BE STAY IN PLACE (SIP) FORMS. THE SIP CORRUGATED METAL DECK FORMS SHALL HAVE A MINIMUM DEPTH OF 2" AND A MINIMUM THICKNESS OF 20 GAGE AND SHALL HAVE G165 GALVANIZED COATING. THE SIP FORM'S SECTION PROPERTIES (DEPTH, SHAPE AND PITCH) SHALL BE PUBLISHED BY THE MANUFACTURER AND BE SELECTED TO WITHSTAND THE PLANNED CONSTRUCTION LOADS. ADDITIONALLY, THEY SHALL MEET ALLOWABLE STRESS STRENGTH AND DEFLECTION LIMIT REQUIREMENTS. THE SIP FORMS SHALL BE SUPPORTED BY LIGHT GAGE FORM SUPPORT ANGLES ATTACHED TO THE STRINGER BEAMS. THE METHOD OF ATTACHMENT TO THE BEAM SHALL BE APPROVED BY THE OWNER. THE SIP FORM LENGTH SHALL BE DESIGNED TO PROVIDE A MINIMUM BEARING OF ONE INCH ALONG THE FORM SUPPORT ANGLES. THE GORM'S LAVING WIDTH SHALL PROVIDE A MINIMUM OF 1" LAP OF ADJACENT SELF-TAPPING SCREWS SUPPLIED IN ACCORDANCE WITH THE SIP MANUFACTURER'S RECOMMENDATIONS. CLOSURE PLATES SHALL BE PROVIDED WHERE SKEW CUTS LEAVE THE FORMWORK WITH OPEN CELLS. CALCULATIONS AND INSTALLATION DRAWINGS OF THE FORMWORK SHALL BE PART OF THE BRIDGE PREFABRICATOR'S DESIGN SUBMITTAL AND PLANS.

ITEM 511 - CONCRETE, MISC.: EPOXY COATED STEEL REINFORCEMENT FOR CONCRETE DECK, AS PER PLAN

EPOXY COATED REINFORCING STEEL FOR CONCRETE DECK QUANTITY IS ESTIMATED TO BE ABOUT 14,000 LB. THIS QUANTITY IS PROVIDED FOR ESTIMATE PURPOSE ONLY. THIS ITEM SHALL BE PAID ON A LUMP SUM BASIS.

ITEM 613, LOW STRENGTH MORTAR BACKFILL (TYPE II), AS PER PLAN

THE BACKFILL MATERIAL BEHIND THE ABUTMENT SHALL BE LOW STRENGTH MORTAR BACKFILL, TYPE II, IN AREAS OF UNCLASSIFIED EXCAVATION AS SHOWN ON THE PLANS. LSM, TYPE I SHALL CONFORM TO CMS 613 AND IT MAY ALSO BE USED TO CONSTRUCT THE SL OPES IN THE SAME AREA AS LONG AS IT IS COVERED WITH ONE FOOT OF SOIL TO MATCH THE EXISTING GRADE.

LSM SHALL BE PLACED WITHIN THE LIMITS IN 4 FEET MAXIMUM PER LIFT AND WITH A MINIMUM OF 24 HOUR WAITING PERIOD BETWEEN LIFTS. ALLOW THE LOW STRENGTH MORTAR BACKFILL TO CURE FOR A MINIMUM OF 4 DAYS PRIOR TO PLACEMENT OF EQUIPMENT OR MATERIALS ON THE SURFACE.

PAYMENT FOR LOW STRENGTH MORTAR BACKFILL SHALL BE MADE ONLY FOR BACKFILL PLACED TO THE LIMITS SHOWN.

PAYMENT FOR ALL EQUIPMENT, MATERIALS, AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE CUBIC YARD CONTRACT PRICE FOR ITEM 613, LOW STRENGTH MORTAR BACKFILL (TYPE II), AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

GENERAL NOTES - 3
 BRIDGE NO. HAR-CR150-03.400
 CR150 OVER SCIOTO RIVER

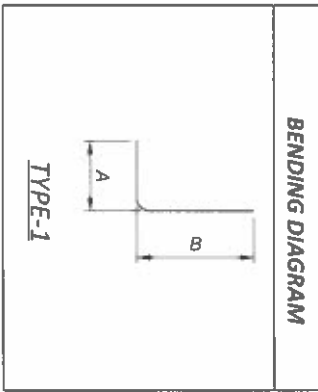
SN 3332268
 DESIGN AGENCY

 www.bggroup.com
 2910 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER	GTB	CHECKER	RG
REVISION	CCJ	DATE	01-12-23
PROJECT ID	117353		
SUBSET TOTAL	4	TOTAL	9
SHEET TOTAL	18	TOTAL	23

DESIGN: GTB		DATE: 10/12/2022		ESTIMATED QUANTITIES		SFN: 3332268		
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	SUPER.	GEN.	REFERENCE SHEET NO.
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LUMP	2
202	23500	254	SY	WEARING COURSE REMOVED			254	
503	21100	28	CY	UNCLASSIFIED EXCAVATION	28			
509	10000	609	LB	EPOXY COATED STEEL REINFORCEMENT	609			
510	10001	88	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	88			4
511	34445	67	CY	CLASS QC2 CONCRETE, BRIDGE DECK, AS PER PLAN		67		4
511	44110	7	CY	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING			7	4
511	81200	LUMP		CONCRETE, MISC.: CONCRETE DECK DESIGN			LUMP	2
511	81200	LUMP		CONCRETE, MISC.: EPOXY COATED STEEL REINFORCEMENT FOR CONCRETE DECK, AS PER PLAN			LUMP	4
512	10100	56	SY	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)	56			
512	33000	23	SY	TYPE 2 WATERPROOFING	23			
513	10121	LUMP		STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN		LUMP		2
513	95030	LUMP		STRUCTURAL STEEL, MISC.: STEEL TRUSS DESIGN		LUMP		2
516	11210	48	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			48	
517	70000	193	FT	RAILING (TWIN STEEL TUBE)			193	
518	22300	236	FT	SPECIAL - STEEL DRIP STRIP			236	9
613	41251	18	CY	LOW STRENGTH MORTAR BACKFILL (TYPE 1), AS PER PLAN			18	4

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS							
					A	B	C	D	E	R	INC	
A601	44	3'-1"	204	1	8"							
A602	8	33'-8"	405	STR	2'-7"							
SUBTOTAL			609									

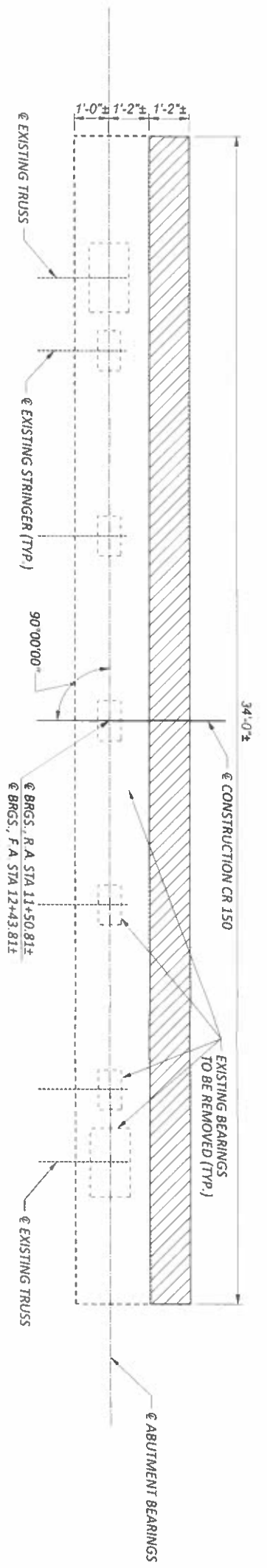


NOTES:

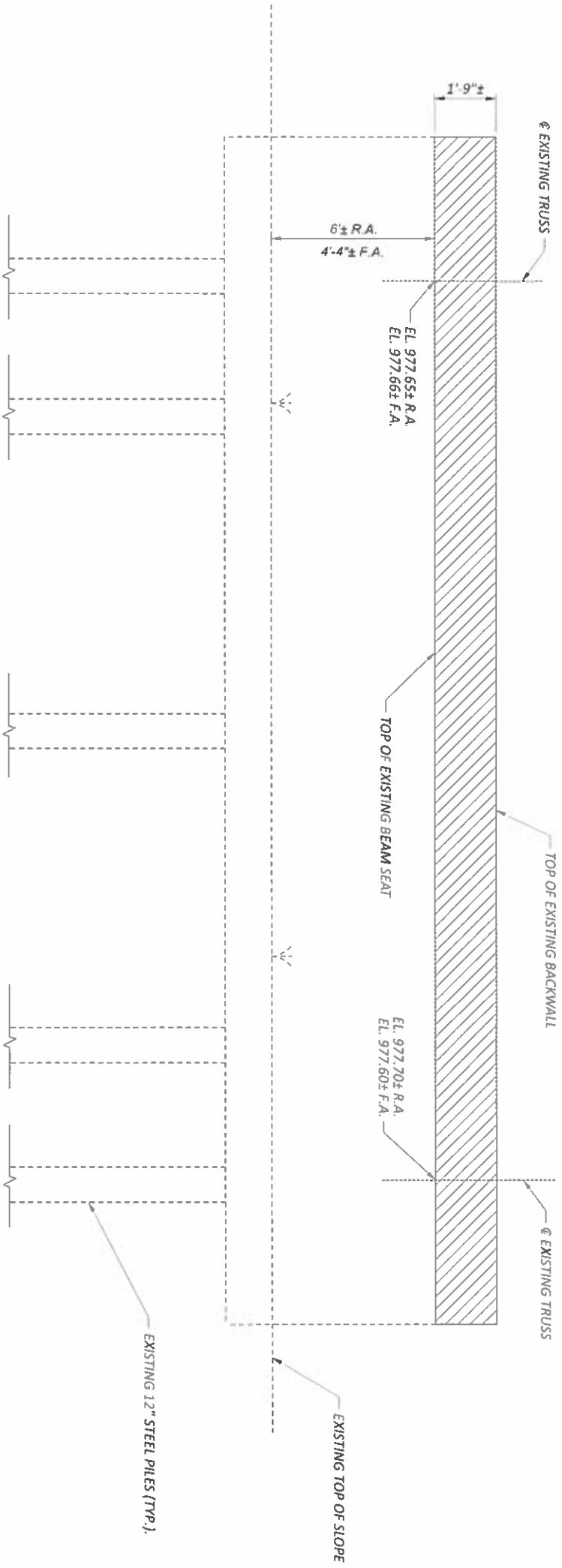
- THE LETTER PREFIX INDICATES BAR LOCATION. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLAN IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE TWO DIGITS WHEN FOUR DIGITS ARE USED INDICATES BAR SIZE NUMBER. ALL REINFORCING IS ASSUMED EPOXY COATED UNLESS OTHERWISE INDICATED BY A LETTER SUFFIX.
- THE LOCATION OF THE BARS IN THE ABUTMENTS
- BAR SIZE DIMENSION NO. 6
- SEQUENCE NUMBER
- BAR DIMENSIONS ARE SHOWN OUT-TO-OUT UNLESS OTHERWISE NOTED.
- STRAIGHT BARS ARE INDICATED BY "STR."

ESTIMATED QUANTITIES & REINFORCING STEEL LIST
 BRIDGE NO. HAR-CR150-03.400
 CR150 OVER SCIOTO RIVER

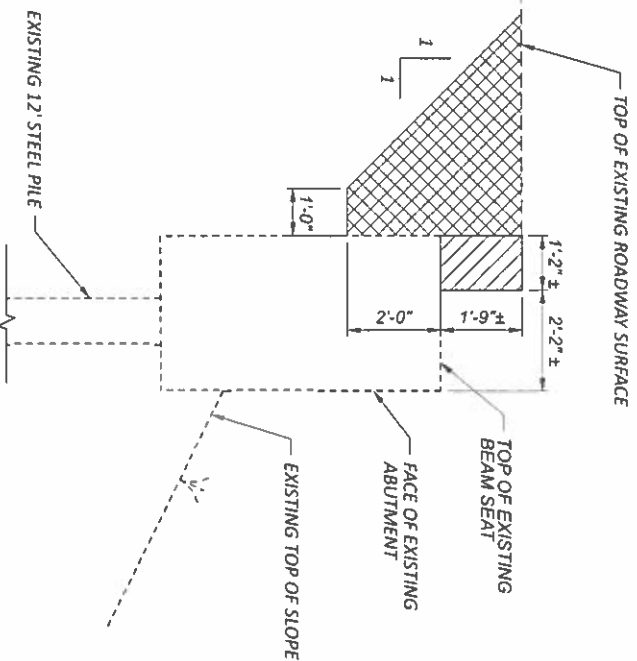
SFN: 3332268
 DESIGN AGENCY: BG
 5910 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016
 PROJECT ID: 117353
 SUBSET TOTAL: 9
 SHEET TOTAL: 23
 DESIGNER: GTB
 CHECKER: RG
 REVIEWER: CCL
 PROJECT ID: 01-12-23



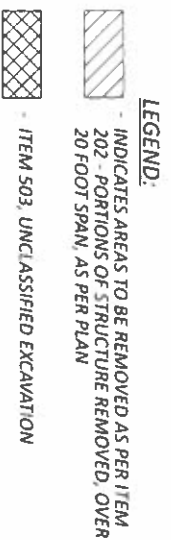
EXISTING ABUTMENT PLAN



EXISTING ABUTMENT ELEVATION



EXISTING ABUTMENT SECTION

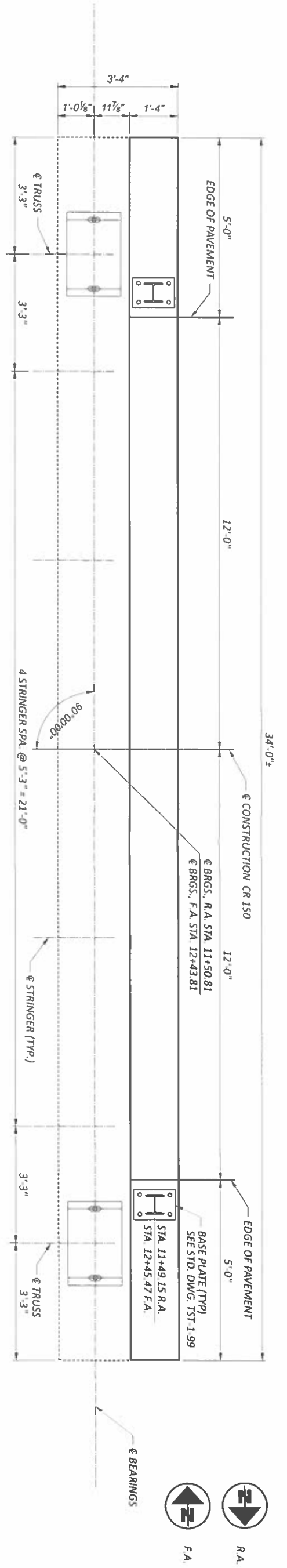


- NOTES:**
1. THE REMOVAL LIMITS SHOWN ARE THE MINIMUM AMOUNT NECESSARY TO PERFORM THE PROPOSED WORK. ANY ADDITIONAL REMOVAL PERFORMED BY THE CONTRACTOR SHALL BE APPROVED BY THE ENGINEER PRIOR TO STARTING REMOVAL. ALL ADDITIONAL REMOVAL SHALL BE REPLACED IN KIND AT NO ADDITIONAL COST TO THE DEPARTMENT.
 2. CUT ALL EXISTING REINFORCING STEEL AT REMOVAL LINES AS DIRECTED BY PLANS.

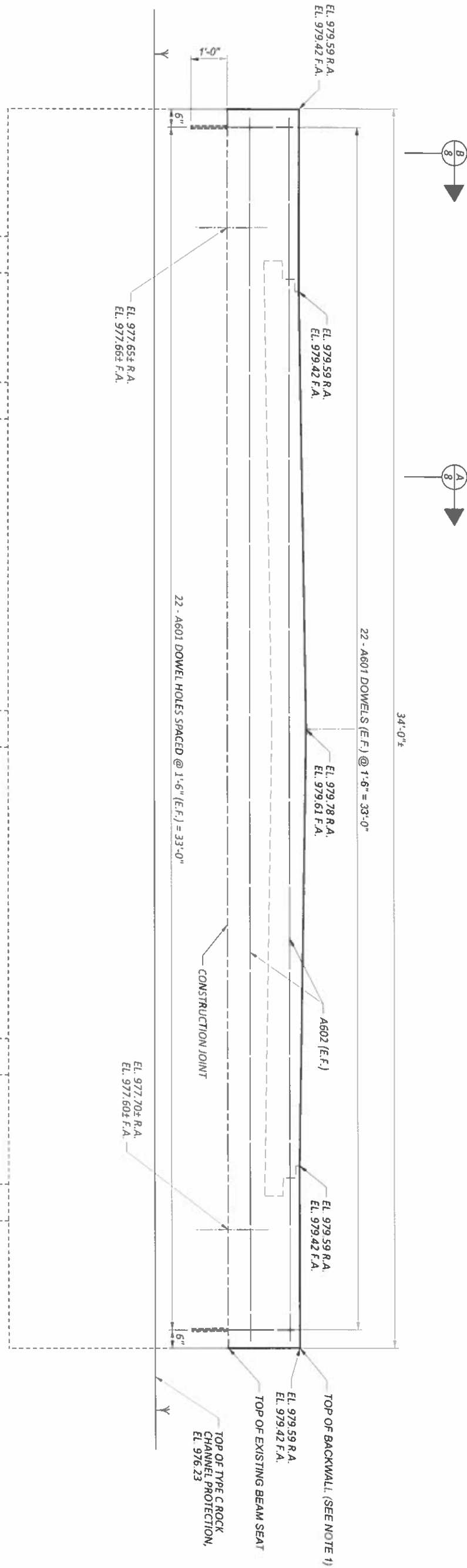
ABUTMENT REMOVAL DETAILS
BRIDGE NO. HAR-CR150-03.400
CR150 OVER SCIOTO RIVER

SFN	3332268
DESIGN AGENCY	BG
DESIGNER	GTB
CHECKER	RG
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SUBSET TOTAL	9
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ABUTMENT PLAN



ABUTMENT ELEVATION

NOTES:

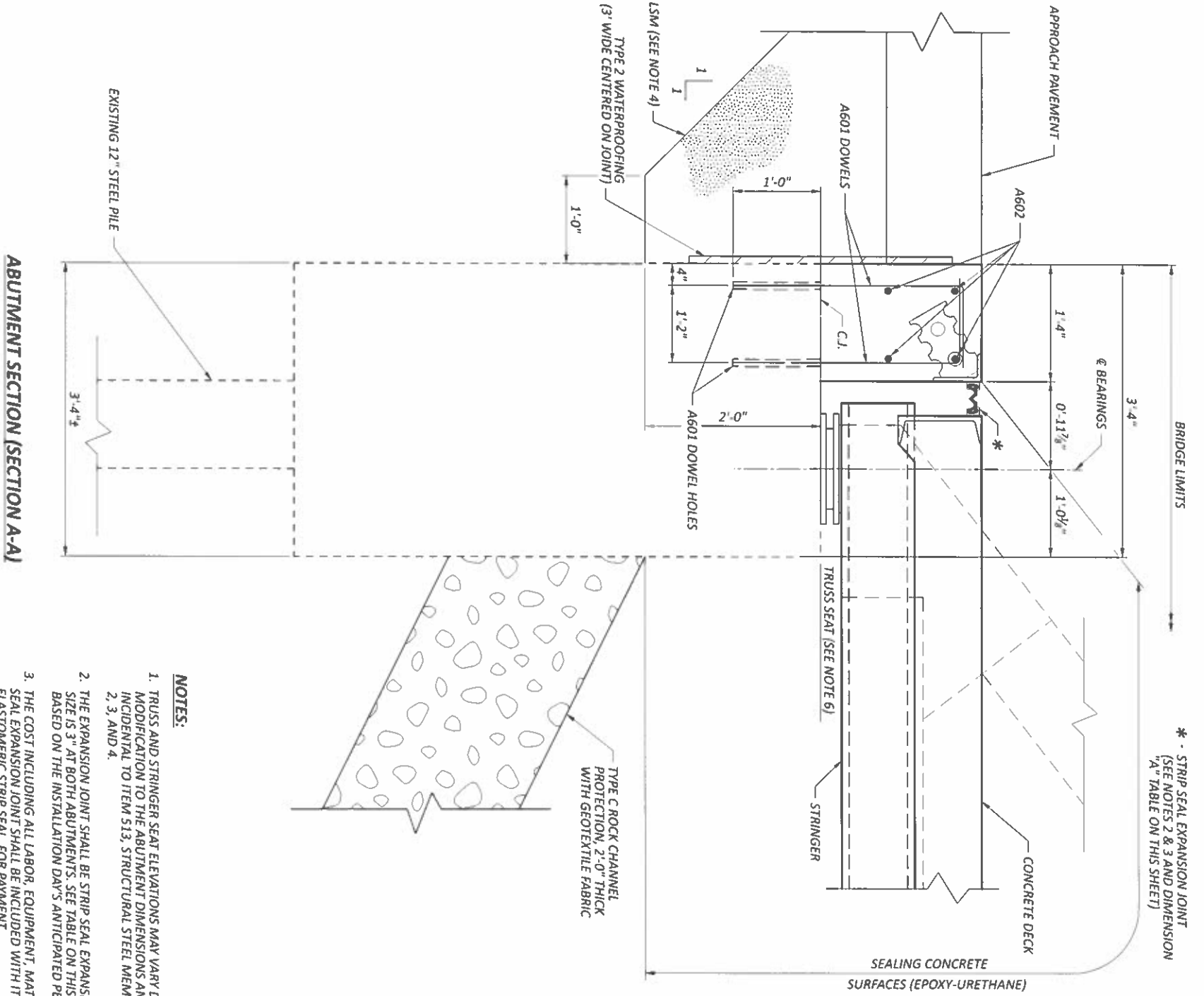
- ELEVATIONS SHOWN ARE AT THE CENTERLINE OF BEARINGS. CONTRACTOR IS TO VERIFY THE EXISTING BEAM SEAT ELEVATIONS AND PROVIDE A BACKWALL HEIGHT THAT MATCHES THE PROPOSED SUPERSTRUCTURE DEPTH INCLUDING THE BEARING HEIGHT. THE A601 DOWEL BARS MAY NEED TO BE ADJUSTED ACCORDINGLY.

EXISTING 12" STEEL PILE (TYP.)

ABUTMENT PLAN AND ELEVATION
 BRIDGE NO. HAR-CR150-03.400
 CR150 OVER SCIOTO RIVER

SR#	3332268
DESIGN AGENCY	BG
DESIGNER	STB
CHECKER	RG
REVIEWER	
PROJECT NO.	117353
SUBSET TOTAL	7
TOTAL	9
SHEET TOTAL	21
SHEET	23

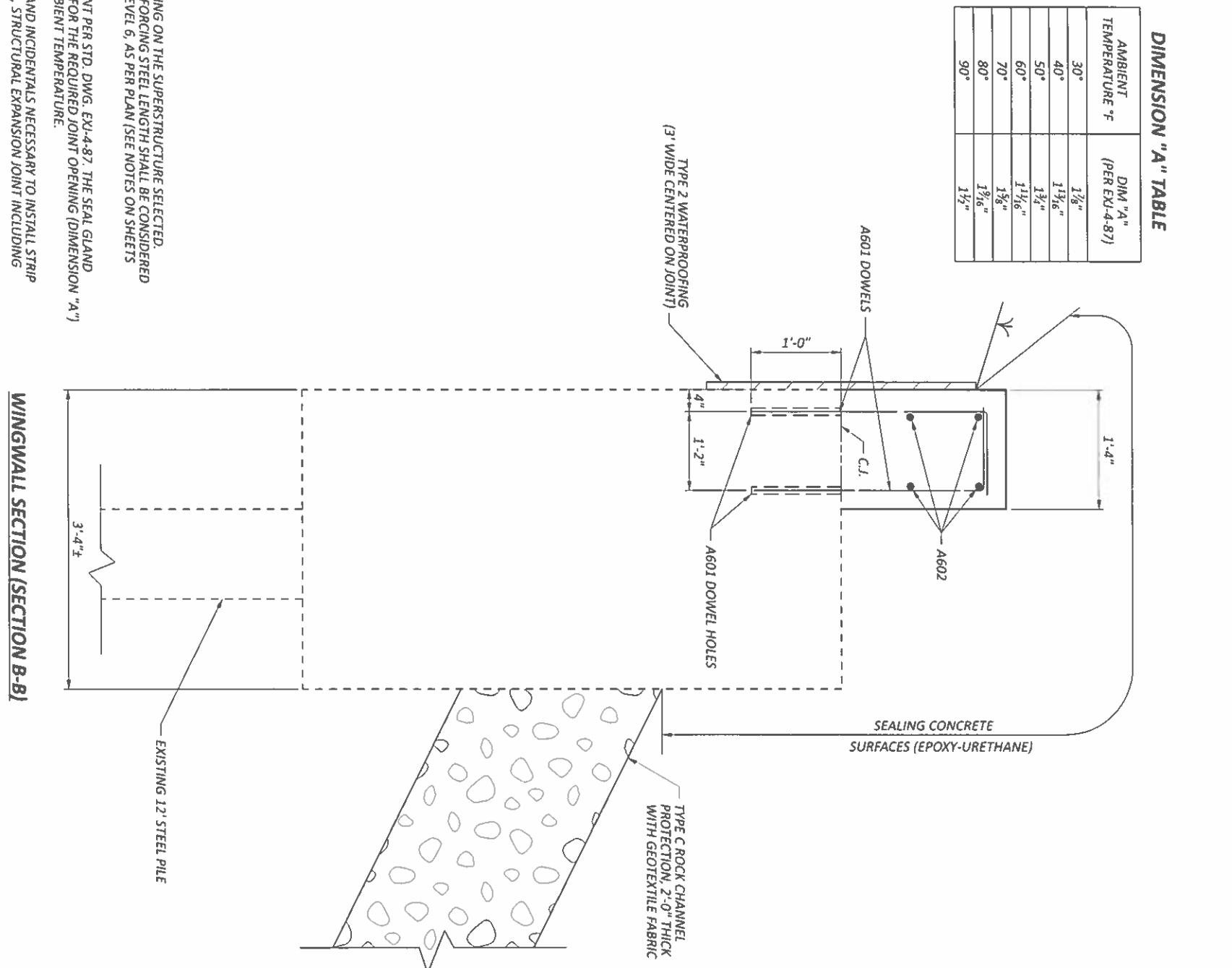




* - STRIP SEAL EXPANSION JOINT
 (SEE NOTES 2 & 3 AND DIMENSION
 'A' TABLE ON THIS SHEET)

DIMENSION "A" TABLE

AMBIENT TEMPERATURE °F	DIM "A" (PER EXJ-4.87)
30°	1 1/2"
40°	1 3/8"
50°	1 3/4"
60°	1 1/2"
70°	1 3/8"
80°	1 3/16"
90°	1 1/2"



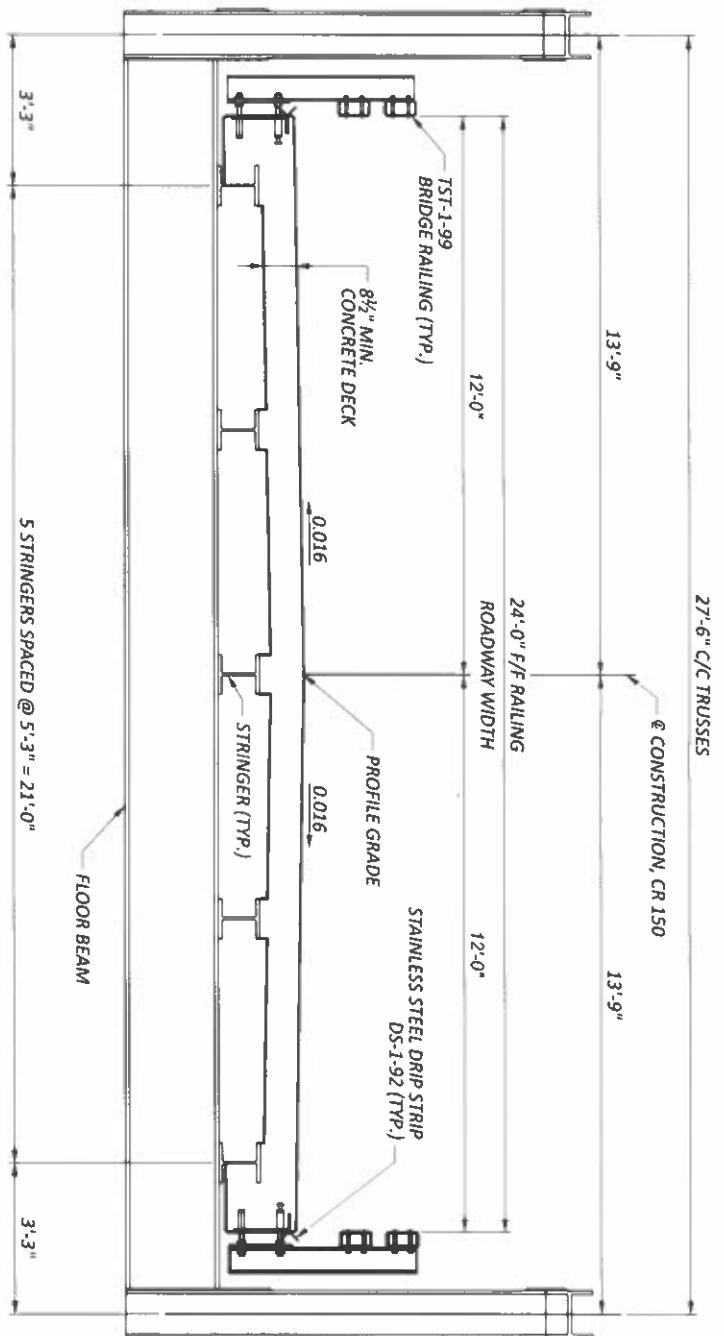
NOTES:

1. TRUSS AND STRINGER SEAT ELEVATIONS MAY VARY DEPENDING ON THE SUPERSTRUCTURE SELECTED. MODIFICATION TO THE ABUTMENT DIMENSIONS AND REINFORCING STEEL LENGTH SHALL BE CONSIDERED INCIDENTAL TO ITEM 513, STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN (SEE NOTES ON SHEETS 2, 3, AND 4).
2. THE EXPANSION JOINT SHALL BE STRIP SEAL EXPANSION JOINT PER STD. DWG. EXJ-4.87. THE SEAL GLAND SIZE IS 3" AT BOTH ABUTMENTS. SEE TABLE ON THIS SHEET FOR THE REQUIRED JOINT OPENING (DIMENSION "A") BASED ON THE INSTALLATION DAY'S ANTICIPATED PEAK AMBIENT TEMPERATURE.
3. THE COST INCLUDING ALL LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS NECESSARY TO INSTALL STRIP SEAL EXPANSION JOINT SHALL BE INCLUDED WITH ITEM 516, STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, FOR PAVEMENT.
4. LOW STRENGTH MORTAR (LSM) SHALL BE BACK FILLED IN THE EXCAVATED AREA BEHIND THE ABUTMENTS. THE MINIMUM AREA LIMITS THAT SHALL BE BACKFILLED WITH LSM ARE AS THE LIMITS SHOWN ON SHEET X. THE ESTIMATED QUANTITY OF THE LSM BACKFILL IS BASED ON THE CROSS SECTION LIMITS ASSUMING A 1'-0" HORIZONTAL OFFSET FROM THE BACK FACE OF THE ABUTMENT FOLLOWED BY A 1:1 MAXIMUM SLOPE UP TO THE BOTTOM OF THE PROPOSED PAVEMENT SUBGRADE.
5. FOR LOCATIONS OF ABUTMENT AND WINGWALL SECTIONS A-A & B-B, SEE SHEET 7.
6. BEAM SEAT SHALL BE CLEAN OF ALL DEBRIS PRIOR TO SETTING TRUSS AND STRINGER BEARINGS.

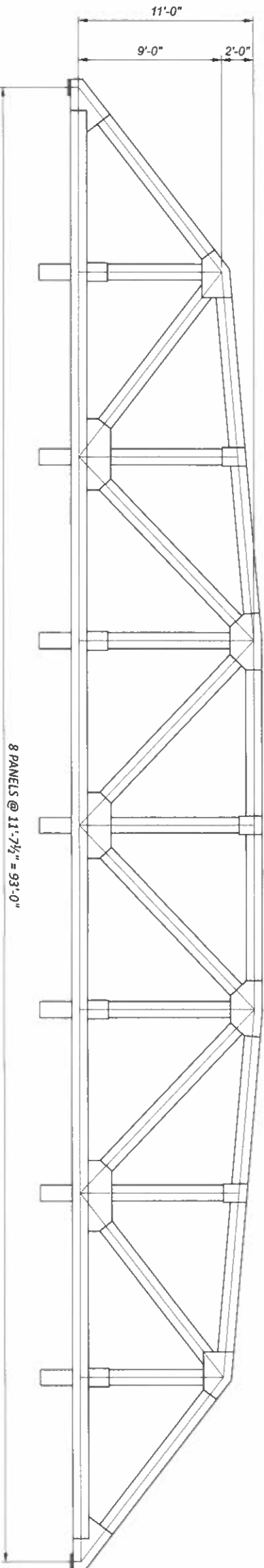
**ABUTMENT SECTIONS
 BRIDGE NO. HAR-CR150-03.400
 CR150 OVER SCIOTO RIVER**

SFN 3332268
 DESIGN AGENCY
BG
 www.bggroup.com
 5910 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER	GTB	RG
CHECKER	GTB	RG
REVISION	CCJ	01-12-23
PROJECT ID	117353	
SUBSET	TOTAL	9
SHEET	TOTAL	23



TRANSVERSE SECTION



TRUSS ELEVATION

TOP CHORDS, DIAGONALS, AND VERTICALS = W12
 BOTTOM CHORDS TO BE FABRICATED FROM 2 PLATE MEMBERS

NOTES:

1. TRUSS SUPERSTRUCTURE INCLUDING ALL FRAMING, ~~PAINTING~~ AND ~~DECK CONCRETE~~ ~~FROM~~ ~~CONCRETE~~ ~~REINFORCING~~ ~~STEEL~~, BEARINGS, ~~AND~~ ~~EXPANSION~~ ~~JOINTS~~ SHALL BE INCLUDED WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN FOR PAVEMENT. SEE SHEETS 2 THROUGH 4 FOR NOTES.
2. THE TRUSS STYLE SHALL BE WARREN TRUSS WITH VERTICALS AND POLYGON TOP CHORDS.

SFN	3332266
DESIGN AGENCY	BG
DESIGNER	GTB
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SUPERSTRUCTURE DETAILS
 BRIDGE NO. HAR-CR150-03.400
 CR150 OVER SCIOTO RIVER