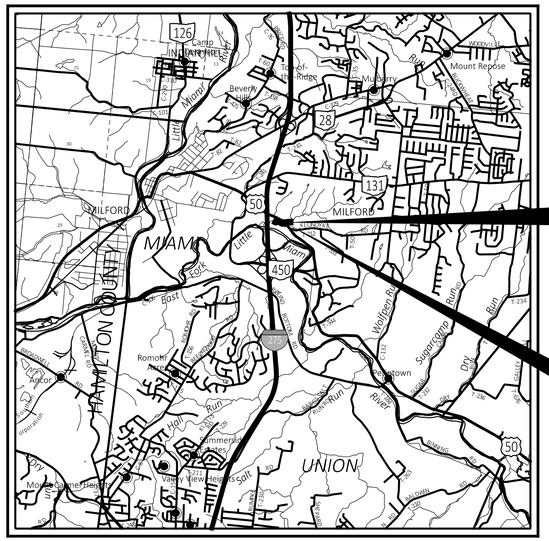
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CLE-50-2.25

CITY OF MILFORD

CLERMONT COUNTY



BEGIN PROJECT
STA. 120+29.78
S.L.M. = 2.278

END PROJECT
STA. 120+65.56
S.L.M. = 2.285

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LOCATION MAP

LATITUDE: 39°10'03" LONGITUDE: -84°15'51"

N

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

DESIGN DESIGNATION

CURRENT ADT (2025)	5200
DESIGN YEAR ADT (2037)	5200
DESIGN HOURLY VOLUME (2037)	700
DIRECTIONAL DISTRIBUTION	50.1%
TRUCKS (24 HOUR B&C)	2%
DESIGN SPEED	45 MPH
LEGAL SPEED	45 MPH

DESIGN FUNCTIONAL CLASSIFICATION:
MINOR ARTERIAL (URBAN)

NHS PROJECT ____ NO

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:

TETRA TECH
420 Madison Ave., Suite 1001
Toledo, Ohio 43604
Phone: (419) 255-9500

INDEX OF SHEETS:

was the H&H updated to include the revised sediment trap?

STAGE 3 SUBMITTAL
FEBRUARY 28, 2025

FEDERAL PROJECT NUMBER

E230505

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

IMPROVE THE HYDRAULIC CHANNEL AT THE CLE-50-2.250 BRIDGE TO MINIMIZE FLOODING AND ROADWAY OVERTOPPING CAUSED BY SEDIMENTATION/AGGRADATION WITHIN THE CHANNEL AND PROTECT THE BRIDGE AND EMBANKMENT FROM SCOUR.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	0.74 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.40 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	1.14 ACRES

2023 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 PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

Tammy K. Campbell
Tammy K. Campbell, P.E.
District 08 Deputy Director

Pamela Boratyn
Pamela Boratyn
Director, Department of Transportation

REVIEW COMPLETE

PM	
BRIDGES	
CONSTRUCT	
DRAINAGE	
ENVIRON	
GEOTECH	
ITS	
MOT	
PAVEMENT	
ROADWAY	
R/W	
SURVEY	
TRAFFIC	Teri C. Scanlon, P.E. 03/12/2025
UTILITIES	
OTHER	
OTHER	

STANDARD CONSTRUCTION DRAWINGS

BP-4.1	7/19/13	TC-41.20	10/18/13				
		TC-42.20	10/18/13				
DM-1.1	1/17/25	TC-52.20	1/15/21				
DM-4.4	1/15/16	TC-61.30	7/19/24				
F-1.1	7/19/13						
MGS-1.1	1/17/25						
MGS-2.1	1/17/25						
MGS-4.3	1/18/13						
RM-1.1	1/20/23						
MT-103.10	1/21/22						
MT-105.10	1/17/20						

SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS
800-2023	7/18/25	
832	7/19/24	

TITLE SHEET

DESIGN AGENCY

DESIGNER GCB
REVIEWER DTC 02/25/25
PROJECT ID 119024
SHEET P.1 TOTAL 38

CLE-50-2.25

MODEL: Sheet_SurvFt PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:14:51 PM USER: Dave.Charville
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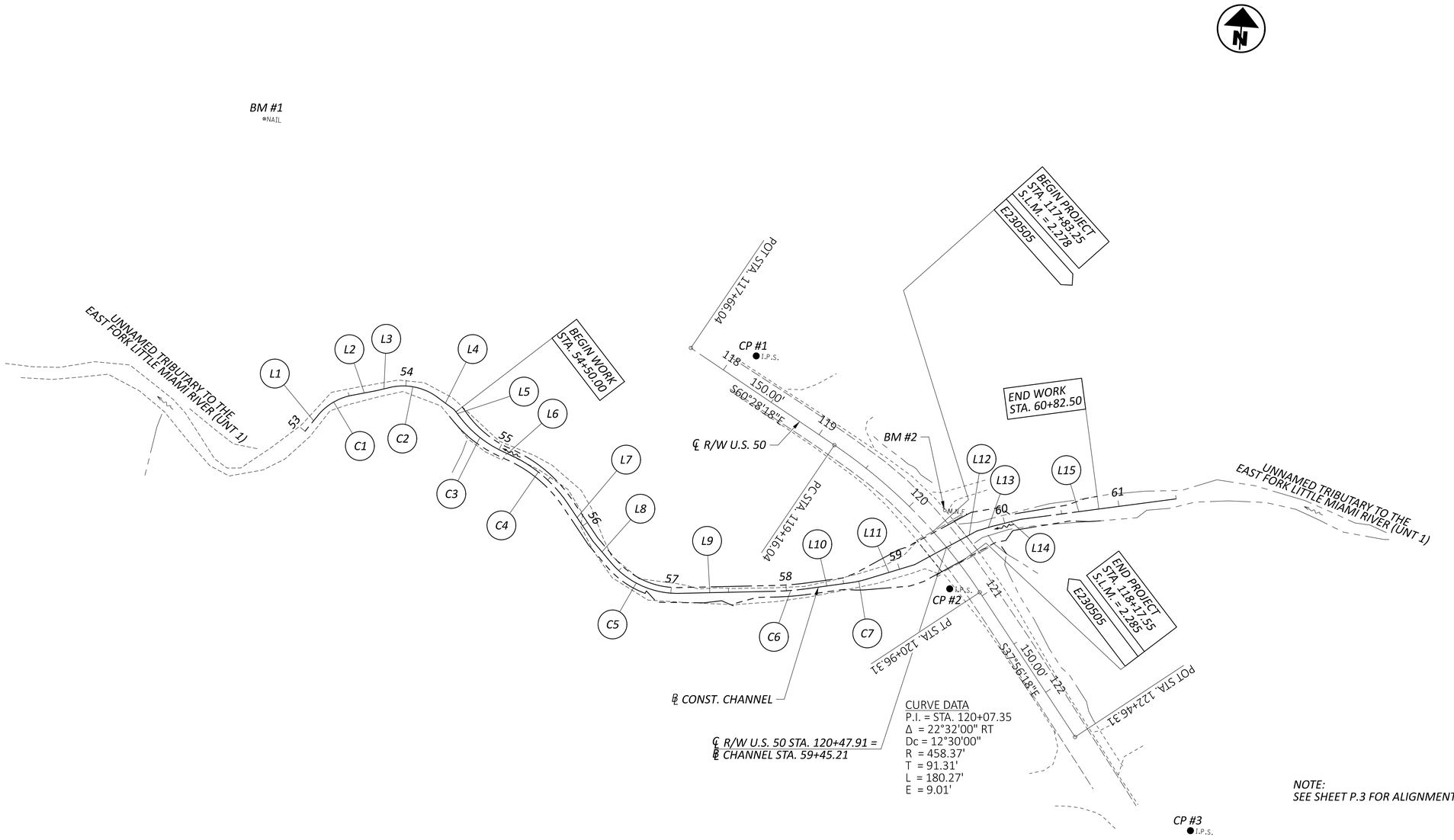

NOTE:
SEE SHEET P.3 FOR ALIGNMENT DATA

PRIMARY PROJECT CONTROL INFORMATION - CLE-50-2.25				
POINT CONTROL	GRID COORDINATES US SURVEY FEET		U.S. 50 STATION/ OFFSETS	DESCRIPTION
	NORTHING	EASTING		
CP #1	430307.2392	1468380.0496	118+16.71, 26.02' LT	IRON PIN SET
	ELEVATION			
	524.784			
CP #2	430119.5525	1468563.0599	120+78.71, 19.76' RT	IRON PIN SET
	ELEVATION			
	519.863			
CP #3	429927.4390	1468787.4998		IRON PIN SET
	ELEVATION			
	528.229			

PRIMARY PROJECT CONTROL INFORMATION - CLE-50-2.25				
BENCHMARK	GRID COORDINATES US SURVEY FEET		U.S. 50 STATION/ OFFSETS	DESCRIPTION
	NORTHING	EASTING		
BM #1	430477.9573	1467939.2330		MAG NAIL FOUND
	ELEVATION			
	528.588			
BM #2	430186.9199	1468553.4542	120+23.27, 19.82' LT	CARPENTERS NAIL FOUND
	ELEVATION			
	521.587			
BM #3	429640.7437	1468326.2320		RAILROAD SPIKE FOUND
	ELEVATION			
	518.279			

HORIZONTAL SCALE IN FEET
0 25 50 100

SCHEMATIC PLAN (SHEET 1 OF 2)

DESIGN AGENCY

DESIGNER GCB
REVIEWER DTC 02/25/25
PROJECT ID 119024
SHEET P.2 TOTAL 38

CLE-50-2.25

MODEL: CLX_1 - CLE-50 - Schematic Plan [Sheet] PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:15:05 PM USER: Dave.Charville
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CURVE DATA										
CURVE	PC (CHANNEL STA.)	PT (CHANNEL STA.)	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD BEARING	NORTHING (PC)	EASTING (PC)
C1	53+17.37	53+52.34	34.97'	50.00	40°04'25.59"	18.23'	34.26'	N54°34'27"E	430225.43	1468005.80
C2	53+86.24	54+29.54	43.30'	50.00	49°36'54.29"	23.11'	41.96'	S82°50'08"E	430254.76	1468066.25
C3	54+55.77	55+04.58	48.81'	100.00	27°57'55.25"	24.90'	48.33'	S56°04'42"E	430233.88	1468128.67
C4	55+10.90	55+77.32	66.42'	120.00	31°42'46.69"	34.09'	65.58'	S54°12'14"E	430204.76	1468174.71
C5	56+40.41	57+07.20	66.79'	75.00	51°01'37.93"	35.80'	64.61'	S70°18'43"E	430118.75	1468269.10
C6	57+89.80	58+18.45	28.65'	250.00	06°33'56.01"	14.34'	28.63'	N80°53'31"E	430105.37	1468412.10
C7	58+55.11	58+70.83	15.71'	100.00	09°00'10.61"	7.87'	15.70'	N73°06'27"E	430117.77	1468476.18

LINE DATA					
LINE	LENGTH	BEARING	NORTHING	EASTING	PI (CHANNEL STA.)
L1	17.38'	N34°32'14"E	430211.11	1467995.95	53+00.00
L2	21.05'	N74°36'40"E	430245.29	1468033.72	53+52.34
L3	12.84'	N72°21'25"E	430250.87	1468054.01	53+73.39
L4	17.99'	S58°01'41"E	430249.53	1468107.88	54+29.54
L5	8.25'	S42°05'44"E	430240.01	1468123.14	54+47.52
L6	6.31'	S70°03'39"E	430206.92	1468168.78	55+04.58
L7	38.70'	S38°20'50"E	430166.41	1468227.90	55+77.32
L8	24.39'	S44°47'54"E	430136.06	1468251.91	56+16.02
L9	82.60'	N84°10'29"E	430096.98	1468329.93	57+07.20
L10	36.67'	N77°36'33"E	430109.90	1468440.37	58+18.45
L11	42.91'	N68°36'22"E	430122.33	1468491.20	58+70.83
L12	61.26'	N45°56'38"E	430137.98	1468531.16	59+13.74
L13	14.06'	N68°48'31"E	430171.40	1468582.51	59+75.01
L14	25.09'	N71°38'16"E	430176.48	1468595.62	59+89.07
L15	135.84'	N77°55'12"E	430184.39	1468619.43	60+14.16

SCHEMATIC PLAN
(SHEET 2 OF 2)

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.3 TOTAL 38

CLE-50-2.25

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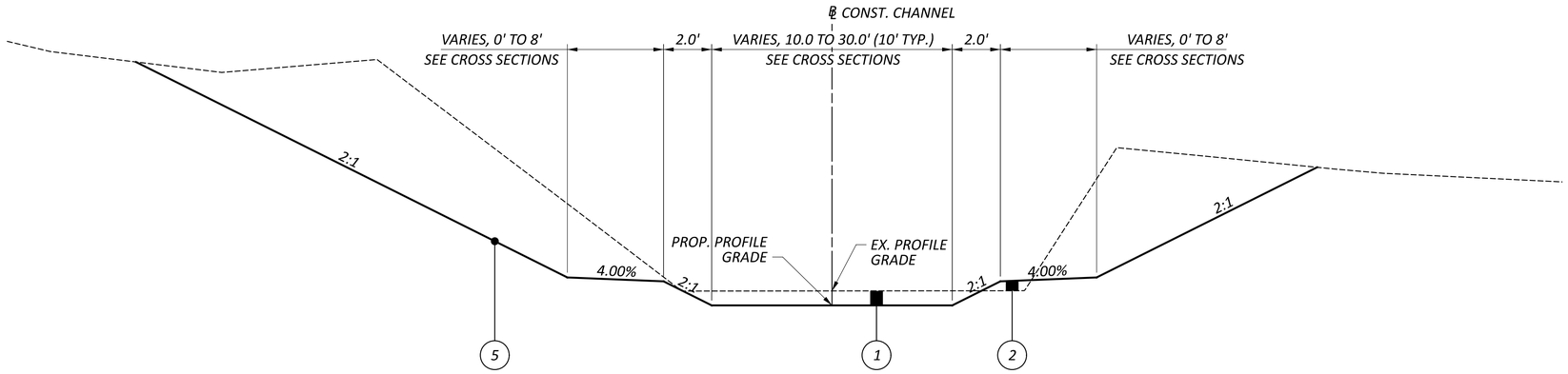
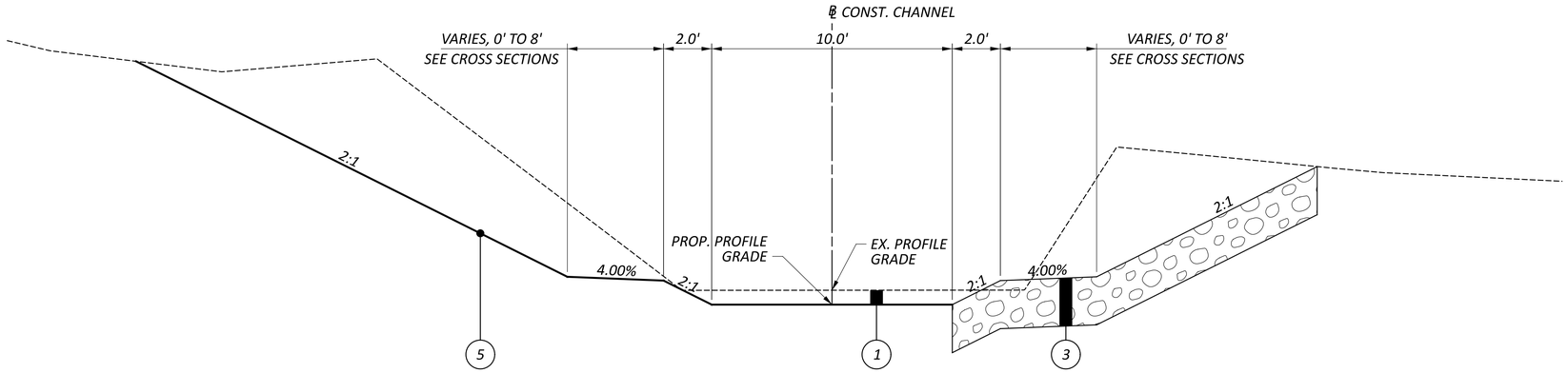


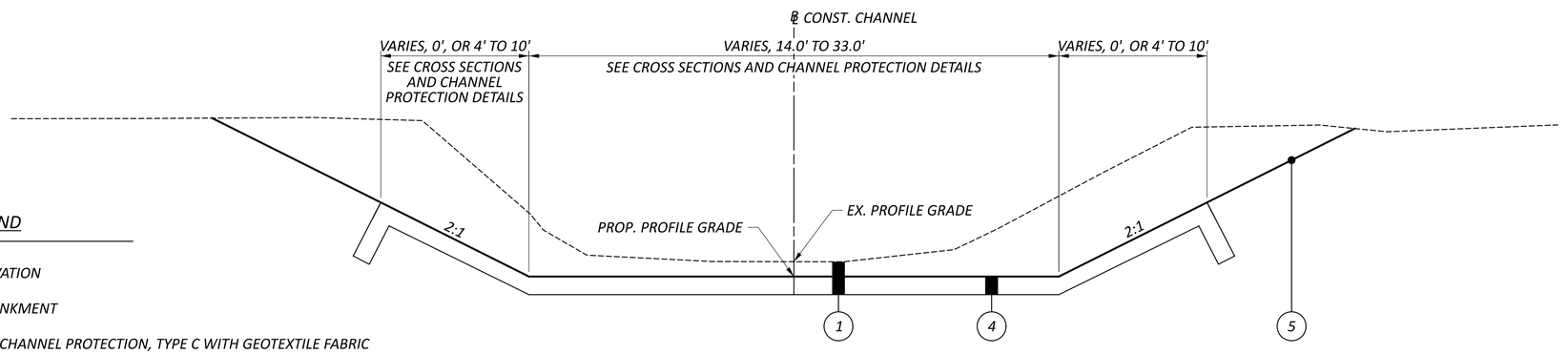
CHANNEL TYPICAL SECTION

STA. 54+50.00 TO STA. 56+25.00
STA. 56+78.97 TO STA. 59+03.89
STA. 60+70.50 TO STA. 60+82.50



CHANNEL TYPICAL SECTION

STA. 56+25.00 TO STA. 56+78.97



CHANNEL TYPICAL SECTION

STA. 59+03.89 TO STA. 60+70.50

LEGEND

1. ITEM 203 - EXCAVATION
2. ITEM 203 - EMBANKMENT
3. ITEM 601 - ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC
4. ITEM 601 - RIPRAP, TYPE D, AS PER PLAN, 9" THICK
   OR ITEM 503 - CLASS QC1 CONCRETE, MISC.: SEDIMENT BASIN
5. ITEM 659 - SEEDING AND MULCHING

TYPICAL SECTIONS

CLE-50-2.25

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DESIGN AGENCY

DESIGNER GCB
REVIEWER DTC 02/25/25
PROJECT ID 119024
SHEET P.4 TOTAL 38

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

ALTAFIBER - AERIAL
221 E. 4TH ST, BLDG. 121-900
CINCINNATI, OH 45201
513-566-8039 (NANCY MORRIS)
NANCY.MORRIS@ALTAFIBER.COM

ALTAFIBER – UNDERGROUND STRUCTURES
221 E 4TH STREET (BUILDING 121-900)
CINCINNATI, OH 45202
513-565-7187 (BRECK COWAN)
BRECK.COWAN@ALTAFIBER.COM

CLERMONT COUNTY WATER RESOURCES
4400 HASKELL LANE
BATAVIA, OH 45103
513-479-4031 (TIM CHERRY)
TCHERRY@CLERMONTCOUNTYOHIO.GOV

CITY OF MILFORD
NATE CLAYTON, PUBLIC WORKS DIRECTOR
NCLAYTON@MILFORDOHIO.ORG

DUKE ENERGY – ELECTRIC (DISTRIBUTION)
2010 DANA AVE
CINCINNATI, OH 45207
513-514-8211 (AARON WRIGHT)
AARON.WRIGHT@DUKE-ENERGY.COM

DUKE ENERGY GAS
139 EAST 4TH ST., ROOM 460A
CINCINNATI, OH 45202
OH/KYHOUSEBILL@DUKE-ENERGY.COM
513-287-2532 (DENISE GROSS)
DENISE.GROSS@DUKE-ENERGY.COM

CHARTER COMMUNICATIONS
10920 KENWOOD ROAD
BLUE ASH, OHIO 45242
DL-SOUTHERN-OHIO-OUTSIDE-PLANT@CHARTER.COM
513-386-5499 (KENT RIEGER)
KENT.RIEGER@CHARTER.COM

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

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.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET P.2 OF THE PLANS 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: VRS - ODOT CORS NETWORK, DIFFERENTIAL LEVELING
MONUMENT TYPE: IRON PINS SET

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 18

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83
ELLIPSOID: GRS 80
MAP PROJECTION: LAMBERT CONFORMAL CONIC 2 STANDARD PARALLEL
COORDINATE SYSTEM: OHIO STATE PLANE (SOUTH ZONE 3402)
COMBINED SCALE FACTOR: 1.00000000000
ORIGIN OF COORDINATE SYSTEM: OHIO STATE PLANE, SOUTH ZONE
NORTHING = 0.000
EASTING = 0.000

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.

CLEARING AND GRUBBING, AS PER PLAN

DUE TO ENVIRONMENTAL REGULATIONS, TREES WITHIN THE PROPOSED CONSTRUCTION LIMITS WILL BE CUT PRIOR TO THE START OF THE PROJECT THROUGH A SEPARATE TREE CLEARING CONTRACT THROUGH ODOT. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL STUMPS, AND ANY REMAINING TREES AND BRUSH. A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN. ALL PROVISIONS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN.

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. RW.3.

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

ITEM 623 - MONUMENT ASSEMBLY, TYPE D 4 EACH

SEEDING AND MULCHING

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

659, TOPSOIL	418 CU. YD.
659, SEEDING AND MULCHING	3764 SQ. YD.
659, REPAIR SEEDING AND MULCHING	188 SQ. YD.
659, INTER-SEEDING	188 SQ. YD.
659, COMMERCIAL FERTILIZER	0.55 TON
659, LIME	0.78 ACRES
659, WATER	21 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 WITH THE EXCEPTION OF THE PROPOSED CHANNEL BOTTOM. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

ITEM 202 - REMOVAL MISC.: POST WITH ELECTRIC OUTLET

THIS ITEM CONSISTS OF REMOVING AN EXISTING POST WITH A POST MOUNTED ELECTRIC OUTLET AT THE LOCATION SHOWN IN THE PLANS. THE CONTRACTOR SHALL REMOVE ALL PORTIONS OF THE POST, ELECTRIC OUTLET, AND WIRING WITHIN THE CHANNEL EASEMENT INCLUDING BUT NOT LIMITED TO CONDUIT, WIRING, AND ALL PORTIONS OF THE POST THAT ARE BELOW GRADE INCLUDING A FOUNDATION IF PRESENT.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 202 - REMOVAL, MISC.: POST WITH ELECTRIC OUTLET, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, MATERIALS, DISPOSAL, AND OTHER INCIDENTALS NECESSARY TO REMOVE THE EXISTING POST WITH ELECTRIC OUTLET.

GENERAL NOTES

DESIGN AGENCY

DESIGNER GCB
REVIEWER DTC 02/25/25
PROJECT ID 119024
SHEET P.5 TOTAL 38

CLE-50-2.25

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ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS 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 27.75 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, MASH 2016, 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.

ITEM 606 BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN

THIS PAY ITEM SHALL INCLUDE THE COST TO FURNISH AND INSTALL ALL GUARDRAIL COMPONENTS (NORMAL AND EXTRA) OF THE 25' LONG BRIDGE TERMINAL ASSEMBLY, TYPE 4 AS SEEN ON THE PLAN INSERT SHEET.

ITEM 607 - GATE, TYPE CLT, AS PER PLAN

THIS ITEM OF WORK SHALL BE COMPLETED IN ACCORDANCE WITH C&MS 607 AND SCD F-1.1 WITH THE EXCEPTION OF THE END POST SPACING WHICH SHALL BE 24'-0". TWO SWINGING 12' GATES WITH A PLUNGER BAR POSITIONED IN THE CENTER OF THE END POSTS SHALL BE USED.

THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER AND THE ENGINEER A MINIMUM OF FIVE (5) BUSINESS DAYS PRIOR TO THE REMOVAL OF THE EXISTING FENCE AND INSTALLATION OF GATE. IT IS THE CONTRACTORS RESPONSIBILITY TO CLOSE AND LOCK THE GATE AT ALL TIMES THAT CONSTRUCTION ACTIVITIES ARE NOT OCCURRING WITHIN THE CHANNEL EASEMENT.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT BID PRICE FOR ITEM 609 - GATE, TYPE CLT, AS PER PLAN, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THIS ITEM OF WORK IN A SATISFACTORY AND WORKMANLIKE MANNER.

ENVIRONMENTAL COMMITMENTS

ENSURE IMPACTS TO THE FEDERALLY LISTED AND PROTECTED INDIANA BAT, NORTHERN LONG-EARED BAT, AND TRICOLORED BAT AND THE STATE LISTED AND PROTECTED LITTLE BROWN BAT ARE AVOIDED AND MINIMIZED. DO NOT REMOVE TREES FROM APRIL 1 THROUGH SEPTEMBER 30. PERFORM ALL NECESSARY TREE REMOVAL FROM OCTOBER 1 THROUGH MARCH 31. DEMARCATE CLEARING LIMITS IN THE FIELD TO AVOID ANY UNAUTHORIZED TREE CLEARING. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

PETROLEUM CONTAMINATED SOILS

ENVIRONMENTAL STUDIES INDICATED THAT PETROLEUM CONTAMINATED SOIL (PCS) MAY BE ENCOUNTERED AT 799 US-50 MILFORD, OH 45150 (PARCEL 182410A105) DURING EXCAVATIONS WITHIN THE PROJECT LIMITS FROM STA. 54+50, LT TO STA. 59+06, LT. ENVIRONMENTAL STUDIES ARE AVAILABLE UPON REQUEST. THE CONTRACTOR MUST DETERMINE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT FOR THOSE WHO CONDUCT WORK WITHIN THE LIMITS OF THE PCS.

ALL EXCAVATED PCS THAT CANNOT BE REUSED AS PROJECT FILL PER CMS 203.03(J)., SHALL BE MANAGED AND DISPOSED OF AT A LICENSED LANDFILL. THE ENGINEER MAY PERMIT THE CONTRACTOR TO DIRECT LOAD THE EXCAVATED PCS INTO TRUCKS FOR TRANSPORT AND DISPOSAL. AS AN ALTERNATE, THE ENGINEER MAY PERMIT THE CONTRACTOR TO TEMPORARILY STOCKPILE THE EXCAVATED PCS ON AN IMPERMEABLE MEMBRANE, IN AN AREA PROVIDE BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE STOCKPILE SHOULD BE SURROUNDED BY STRAW BALES TO REDUCE RUNOFF. THE CONTRACTOR WILL PROVIDE COMPLETED LOG FORMS AND MANIFESTS FOR TRANSPORT AND DISPOSAL TO THE ENGINEER FOR SIGNATURE. THE CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL TESTING THAT THE LANDFILL MAY REQUIRE FOR DISPOSAL.

ALL EXCAVATED AREAS SHALL BE BACKFILLED WITH SUITABLE MATERIAL IN ACCORDANCE WITH PROJECT PLANS, APPLICABLE ODOT SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ALL THE LABOR, EQUIPMENT AND MATERIALS NECESSARY TO PROPERLY MANAGE, STORE (IF NECESSARY), TEST FOR DISPOSAL, TRANSPORT AND DISPOSE OF REGULATED MATERIALS, INCLUDING ANY REQUIRED PERMITS OR FEES WITHIN THE IDENTIFIED LIMITS. PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT PRICE BID. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY.

ITEM SPECIAL – WORK INVOLVING PETROLEUM CONTAMINATED SOILS 650 TON

GENERAL NOTES

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.6 TOTAL 38

CLE-50-2.25

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NOTES

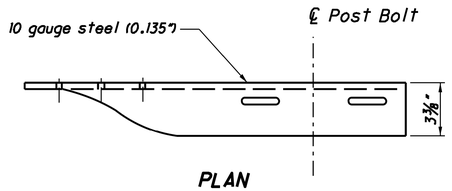
GENERAL: Components shown on this drawing are used in a variety of guardrail systems. See individual guardrail drawing for specific applications.

See CMS 606 for guardrail specifications not covered on these drawings.

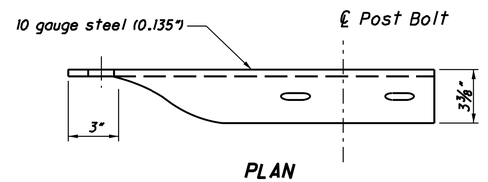
Refer to AASHTO M 180 for dimensional details of W-Beam and Thrie-Beam rail elements, related buffer and end sections, beam splices, post and splice bolts, nuts, and Type 1 W-Beam to Thrie-Beam Transition sections.

RAIL ELEMENTS: W-Beam Rail has an effective length of 12'-6" unless otherwise specified, with ¾" x 2½" post bolt slots on 6'-3" centers regardless of post spacing. Field punch or drill bolt holes or slots for irregularly spaced posts as specified in CMS 606.04.

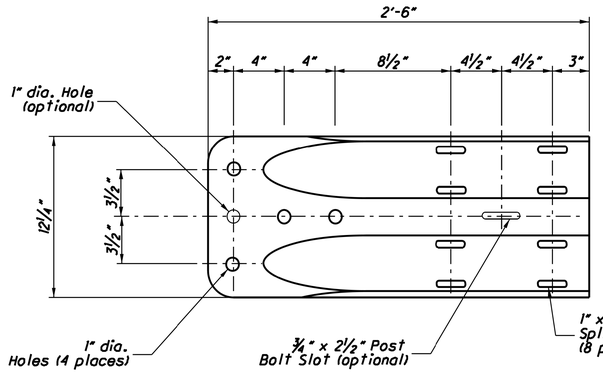
RAIL SPLICES: Lap splices between two rail elements or between a rail and terminal connector in the direction of traffic. Lap the buffer or flared end sections in the direction of traffic.



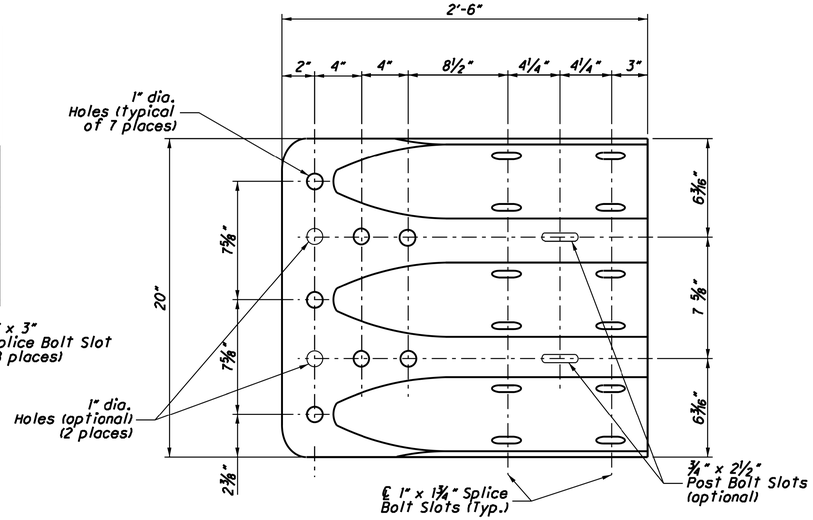
PLAN



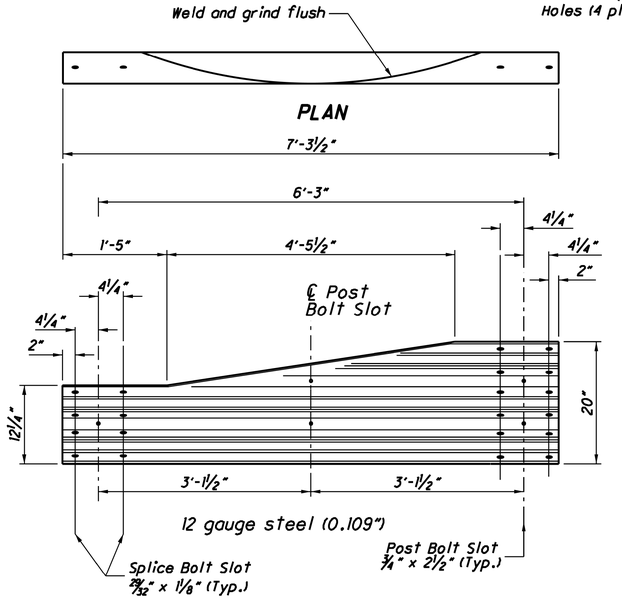
PLAN



ELEVATION
W-BEAM TERMINAL CONNECTOR

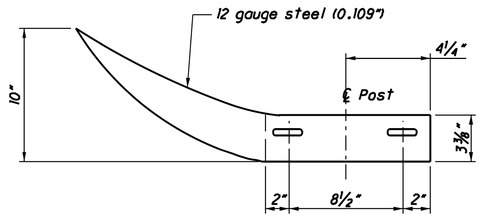


ELEVATION
THRIE-BEAM TERMINAL CONNECTOR



ELEVATION
TYPE 2 TRANSITION SECTION
(Asymmetric W to Thrie-Beam)

For details of Type 1 Transition Section (Symmetric), refer to AASHTO M 180, Figure 4.



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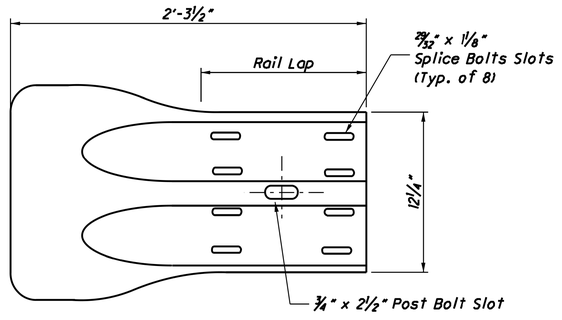
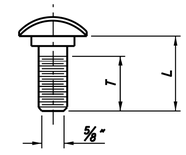


ELEVATION
W-BEAM FLARED END SECTION



GUARDRAIL BOLT (For Post and Splice Bolts)		
L	**T min.**	**Bolt Use**
18" (Standard Rail)	4"	Type 5: WP/WB, PB
26" (Barrier Rail)		
10"	4"	Type 5: SP/WB, PB
1¼	1⅛	Splice Bolt

WP = Wood Post WB = Wood Blockout
SP = Steel Post PB = Plastic Blockout

Longer Bolt may be needed for round Wood Post larger than 8" dia.

THIS DRAWING REPLACES gr-1.1 DATED 7-16-04.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Michael Bline — ADMINISTRATOR — 7-20-12 DATE

STDS. ENGINEER: M. Ruppe

OFFICE OF ROADWAY ENGINEERING

STANDARD ROADWAY CONSTRUCTION DRAWING
GUARDRAIL DETAILS (Rail Components)

SCD NUMBER: GR-1.1

1 / 3

GUARDRAIL DETAILS (MISC. COMPONENTS)

DESIGN AGENCY

DESIGNER: GCB
REVIEWER: DTC 02/25/25
PROJECT ID: 119024
SHEET: P.7 TOTAL: 38

CLE-50-2.25

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:15:53 PM USER: Dave.Charville
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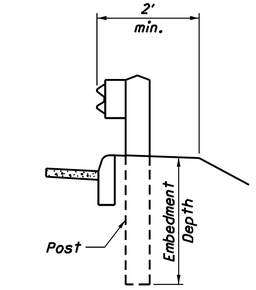
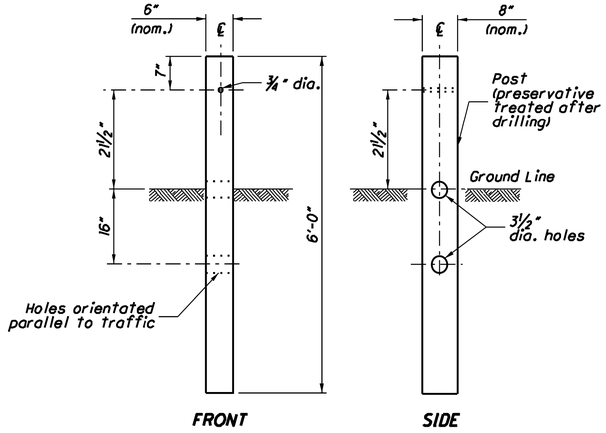
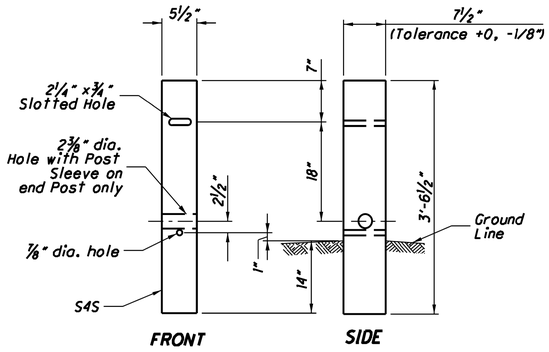


DETAIL A

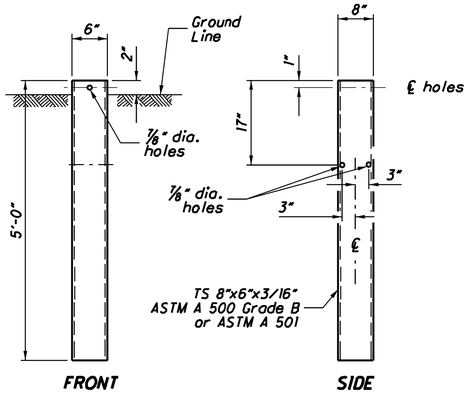
See POST EMBEDMENT DEPTH Note



TYPE 1 BREAKAWAY CRT POST



TYPE 2 BREAKAWAY CRT POST



STEEL GROUND TUBE

NOTES

GUARDRAIL HEIGHT: For initial installation, construct the guardrail within ± 1" of the standard height, h, or **29"** to the top of W-Beam rail. (See MEASURING GUARDRAIL HEIGHT Detail.)

When subsequent projects, such as resurfacings, affect the height of existing guardrail, the finished height is to be within ±2.5" of the standard height.

POST EMBEDMENT DEPTH: Standard embedment is 3'-5" min. Where less than 2' of graded shoulder width (10:1 or flatter) exists, measured from the face of the guardrail (see DETAIL "A"), use longer posts so that a minimum of 5'-5" embedment depth is provided. Payment for the longer posts will be made at the unit price bid for **ITEM 606 - GUARDRAIL POST, 9', Each.**

SPECIAL POST MOUNTINGS: Install posts located over a drainage inlet or structure as shown in the FOOTING ANCHOR Detail, or anchor per the details shown on **SCD GR-2.2.**

Install posts located over a footing with a cover of less than 2'-6" with a footing anchor as detailed here. (A plate, as detailed on SECTION B-B of **SCD GR-2.2**, may be used as an alternative attachment method.) Where the cover is between 2'-6" and 3'-5", the footing anchor may be omitted and the post encased instead with 4" (min.) of concrete.

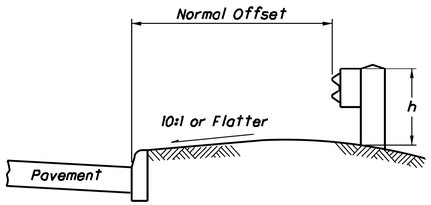
Do not drive posts located over a culvert with less than 4'-3" of cover; instead set in drilled or dug holes. Where the available post embedment depth is less than 3'-5", encase the post with a minimum of 4" concrete.

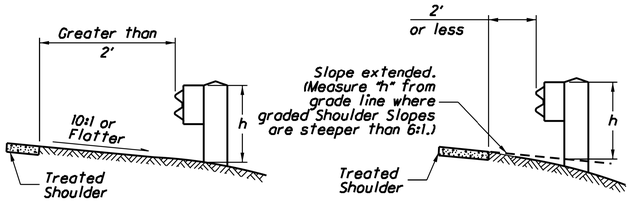
All costs associated with special post mountings are included in the unit price bid of Item 606 Guardrail of the type specified in the plans.

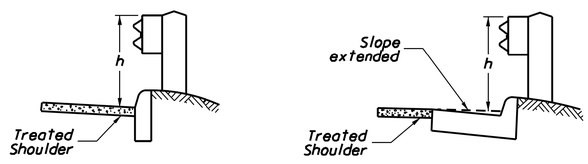
ANCHORS: Holes and grouting shall comply with CMS 510. Use either cement or non-shrink, nonmetallic grout.

Expansion shield anchors as specified in CMS 712.01 may be substituted except where concrete deterioration has occurred, as determined by the Engineer. Where self-drilling anchors are used, drill the holes with the expansion shield (not by a drill bit) and install the shield flush with the concrete surface.

PROTECTIVE COATING: In lieu of the complying with CMS 710.06, coat expansion shields, anchors and concrete insert anchor assemblies embedded in concrete in accordance with ASTM A 153 or be of stainless steel. Any bolts screwed into these devices shall meet CMS 710.06. (See sheet 3 for Concrete Insert Anchor Assembly Detail.)

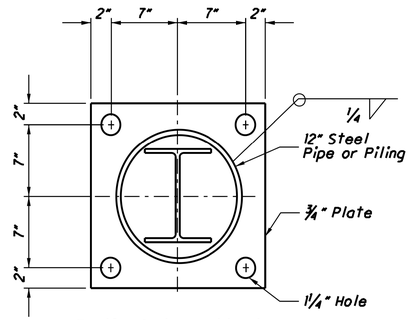






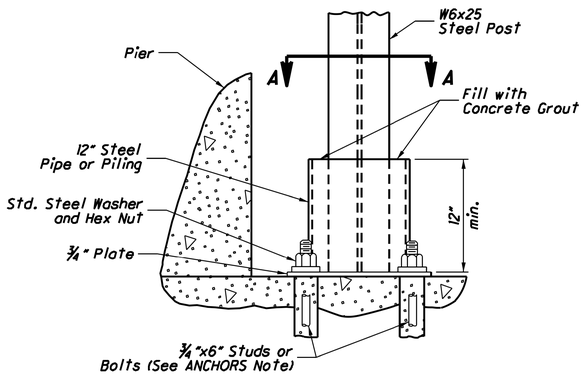
h = Standard Height (See GUARDRAIL HEIGHT Note)

MEASURING GUARDRAIL HEIGHT



Footing Anchor and hardware need not be galvanized

SECTION A-A



ELEVATION
FOOTING ANCHOR

See SPECIAL POST MOUNTINGS Note.

THIS DRAWING REPLACES gr-1.1 DATED 7-16-04.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Michael Bline — ADMINISTRATOR — DATE 7-20-12

STDS. ENGINEER M. Ruppe

OFFICE OF ROADWAY ENGINEERING

STANDARD ROADWAY CONSTRUCTION DRAWING
GUARDRAIL DETAILS (Posts)

SCD NUMBER GR-1.1

2 / 3

GUARDRAIL DETAILS (MISC. COMPONENTS)

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.8 TOTAL 38

CLE-50-2.25

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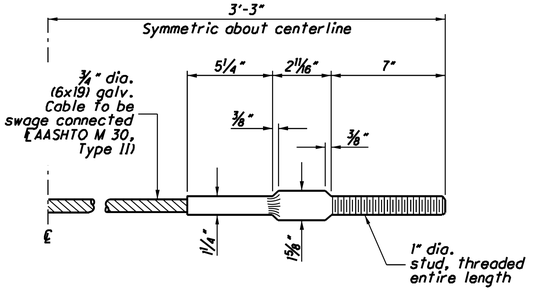
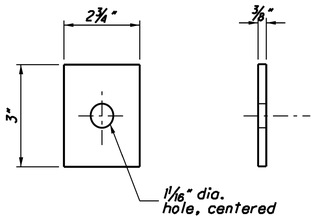
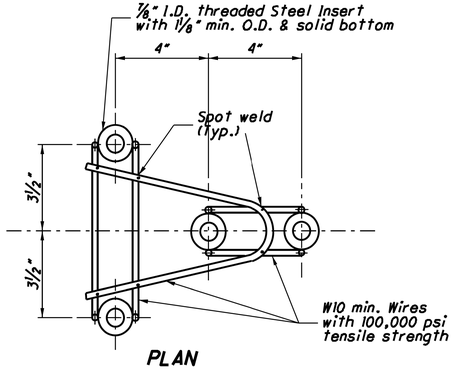


STANDARD SWAGED FITTING AND STUD

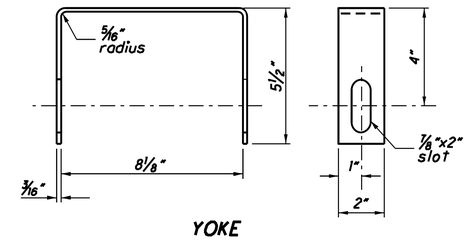
CABLE ANCHOR



END PLATE

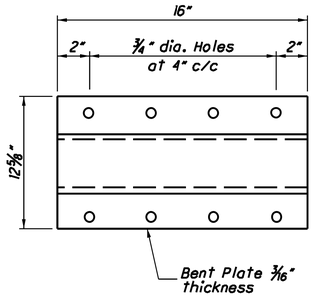


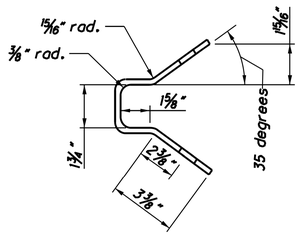
PLAN



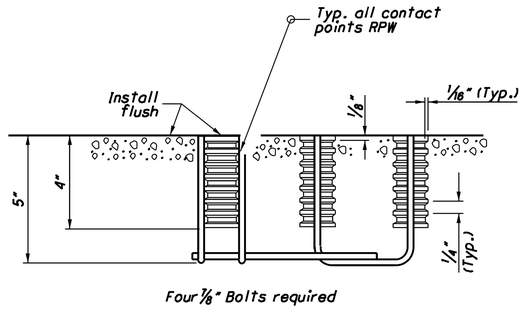
YOKE

Two required in Assembly





ANCHOR BRACKET

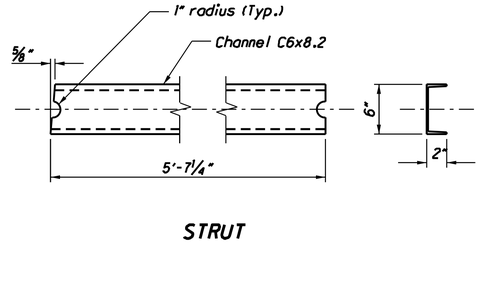


Four ⅞" Bolts required

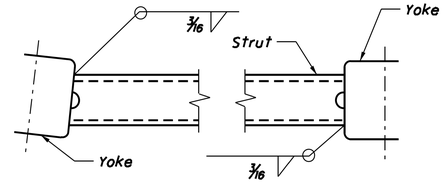
ELEVATION

CONCRETE INSERT ANCHOR ASSEMBLY (W-BEAM ONLY)

See ANCHORS and PROTECTIVE COATINGS Notes on Sheet 2



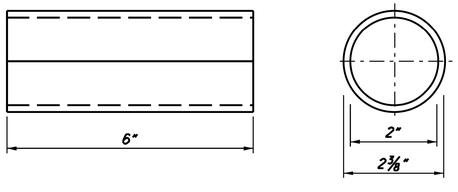
STRUT



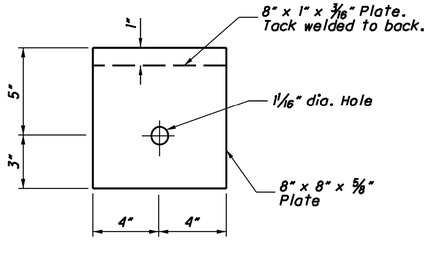
ANCHOR BRACKET ASSEMBLY DETAILS

Channel legs shown down. For opposite hand, install Channel legs up.

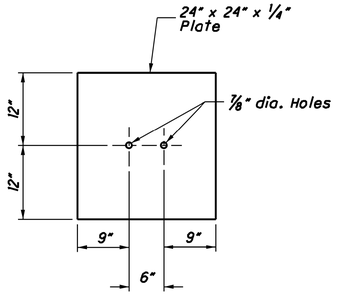
STRUT AND YOKE ASSEMBLY



POST SLEEVE



BEARING PLATE



SOIL PLATE

THIS DRAWING REPLACES gr-1.1 DATED 7-16-04.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Michael Bline — ADMINISTRATOR — 7-20-12 DATE

STDS. ENGINEER: M. Ruppe

OFFICE OF ROADWAY ENGINEERING

STANDARD ROADWAY CONSTRUCTION DRAWING
GUARDRAIL DETAILS (Misc. Components)

SCD NUMBER: GR-1.1

3 / 3

GUARDRAIL DETAILS (MISC. COMPONENTS)

DESIGN AGENCY

DESIGNER: GCB
REVIEWER: DTC 02/25/25
PROJECT ID: 119024
SHEET: P.9 | TOTAL: 38

CLE-50-2.25

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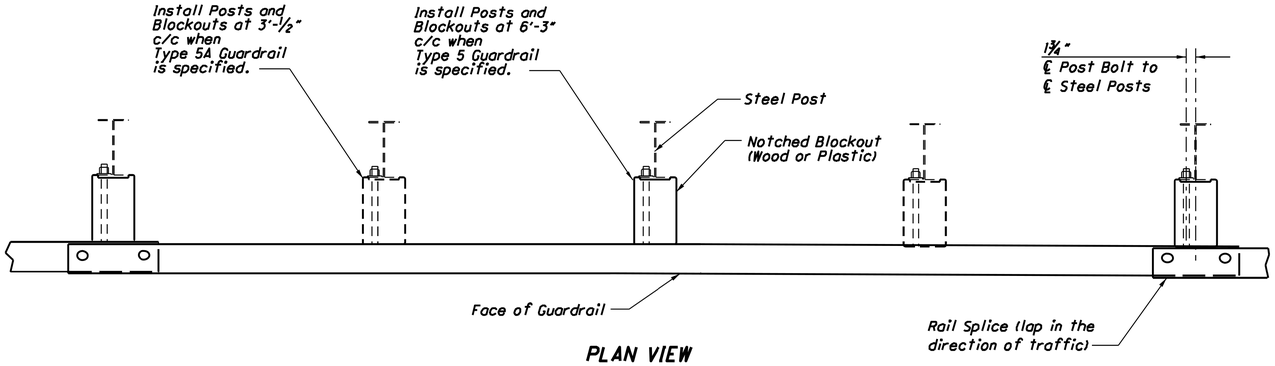
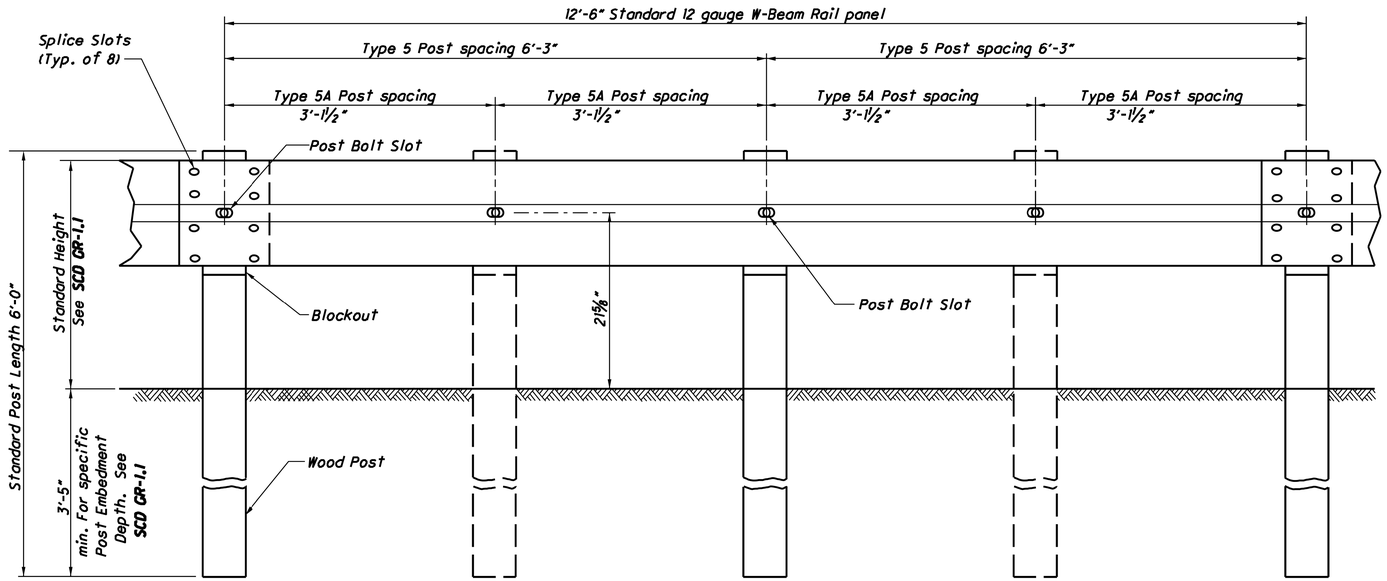


PLAN VIEW
(Steel Posts shown)



ELEVATION
(Wood Posts shown)

NOTES

RAIL: Use W-Beam rail meeting AASHTO M 180 Type II Class A, as specified in CMS 606.

POSTS: Posts may be constructed of wood or steel. Wood posts may be round or 6"x8" square-sawed.

Use round wood posts on runs of single-sided rail. The round posts shall be 8"±1 in diameter at the top and not more than 3" larger at the butt with a uniform taper.

Fabricated wood posts with square ends. Posts shall be pressure-treated as per CMS 710.14. Bore bolt holes and, if required, trim the tops of posts after the posts are set.

Steel posts are to be W6x9 or W6x8.5 galvanized steel. Use the same type of post throughout the length of the project unless otherwise specified in the plans or permitted by the Engineer.

All posts are 6'-0" long unless specified otherwise in the Contract Document. Posts may be set in drilled holes or may be driven to grade.

WELDED BEAM POSTS: Welded beam guardrail posts may be used for Item 606, Guardrail, provided the web and flange sizes are as shown here. Welding of the web to the flanges must comply with ASTM A 769, Class I, using Grade 36 steel [250 MPa yield point] with the following exceptions:

Sec. 7.2 Test reports of tensile properties for each lot shall accompany each shipment.

Sec. 12 Beams that have imperfections repaired by welding shall not be accepted for use in Item 606.

Sec. 13 Random samples shall be tested by the Department from materials delivered to the project site, or other locations designated by the Laboratory.

ALTERNATE POSTS: Engineered guardrail posts having met NCHRP 350 criteria, and listed on the **Office of Materials Management's** Approved List are permitted as an equal alternate when installed according to the Manufacturer's instructions and within the limitations shown on the Approved List.

BLOCKOUTS: Blockout dimensions are dependent on post used. Wood Blockouts are to be pressure treated as specified in CMS 710.14. Bore bolt holes. Approved alternate blockouts may be used in lieu of the wood blockouts shown. The approved list is maintained by the **Office of Roadway Engineering.**

WASHERS: Install appropriate sized standard galvanized steel washers on the nut side of bolts installed on wood posts.

DELINEATION: For barrier reflectors, see CMS 626.

MISCELLANEOUS: For other guardrail details, see **SCD GR-1.1.**

STEEL BEAM POSTS (English)

Size	Beam depth	Flange width	Flange thickness	Web thickness
Rolled W6x8.5	5.8"	3.94"	0.193"	0.170"
Rolled W6x9	5.9"	3.94"	0.215"	0.170"
Welded 6x8.5	6.0"	3.94"	0.193"	0.170"
Welded 6x9	6.0"	3.94"	0.215"	0.170"

THIS DRAWING REPLACES GR-2.1 DATED 1-16-04.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Michael Bline — ADMINISTRATOR — 7-20-12 DATE

STDS. ENGINEER M. Ruppe

OFFICE OF ROADWAY ENGINEERING

STANDARD ROADWAY CONSTRUCTION DRAWING
GUARDRAIL TYPE 5 & 5A

SCD NUMBER GR-2.1

1 / 2

GUARDRAIL TYPE 5 & 5A

DESIGN AGENCY

DESIGNER GCB
REVIEWER DTC 02/25/25
PROJECT ID 119024
SHEET P.10 TOTAL 38

CLE-50-2.25

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:18:20 PM USER: Dave.Chanville
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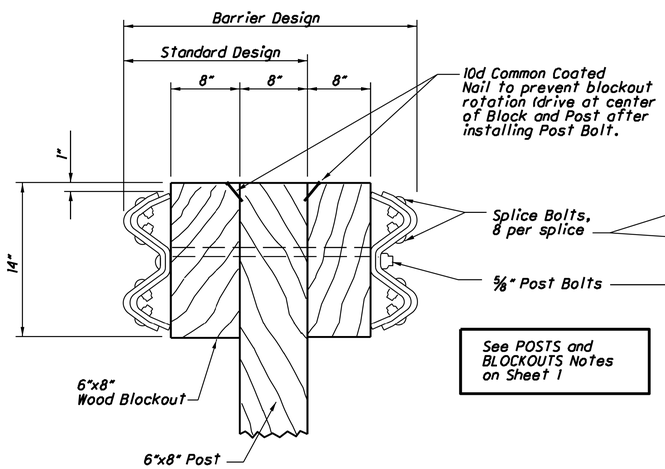
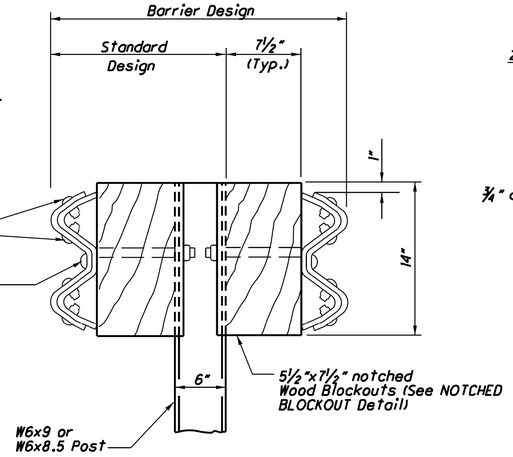
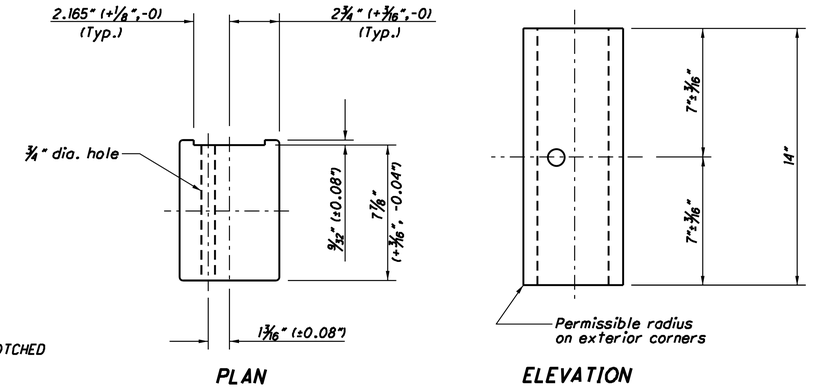


SQUARE WOOD POST



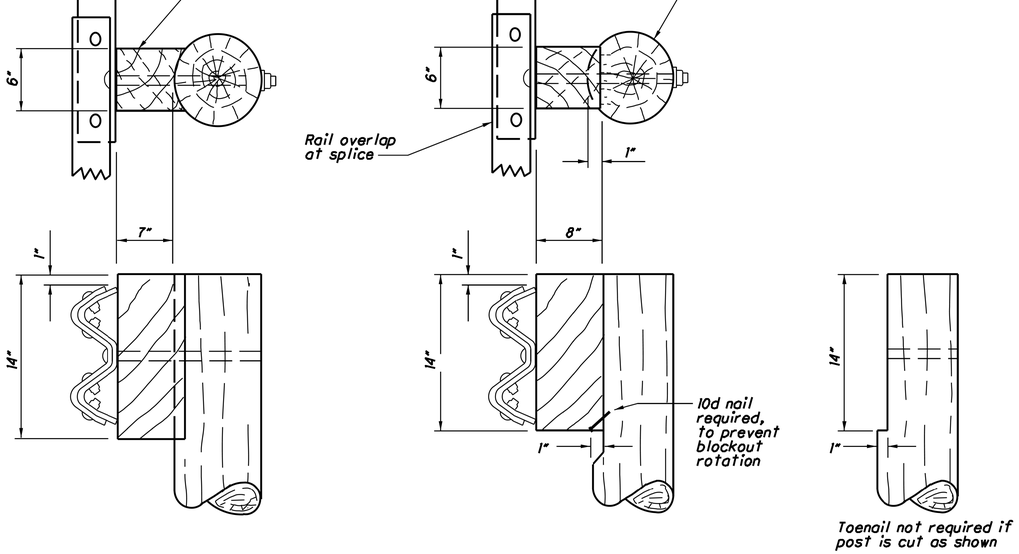
STEEL POST

See POSTS Note, Sheet 1



NOTCHED BLOCKOUTS FOR STEEL POSTS

See BLOCKOUTS Note on Sheet 1



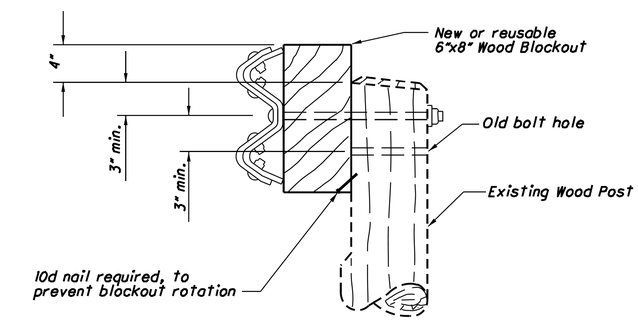
Method 1
Routed Blockout

Method 2
Notched Post

Alternate methods of placing the Blockouts on round Posts may be submitted for consideration and approved by the Engineer.

ROUND WOOD POSTS

Single Sided runs only (Standard Design)



WOOD POSTS WITH WOOD BLOCK RAISING EXISTING GUARDRAIL HEIGHT

THIS DRAWING REPLACES GR-2.1 DATED 1-16-04.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Michael Bline
ADMINISTRATOR
7-20-12
DATE

STDS. ENGINEER
M. Ruppe

OFFICE OF ROADWAY ENGINEERING

STANDARD ROADWAY CONSTRUCTION DRAWING
GUARDRAIL TYPE 5 & 5A

SCD NUMBER
GR-2.1

2 / 2

GUARDRAIL TYPE 5 & 5A

DESIGN AGENCY

DESIGNER
GCB

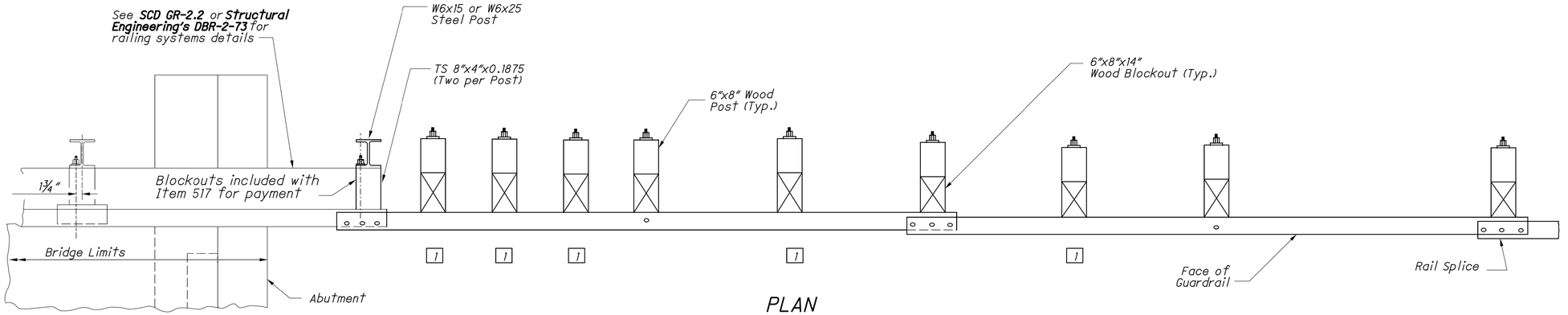
REVIEWER
DTC 02/25/25

PROJECT ID
119024

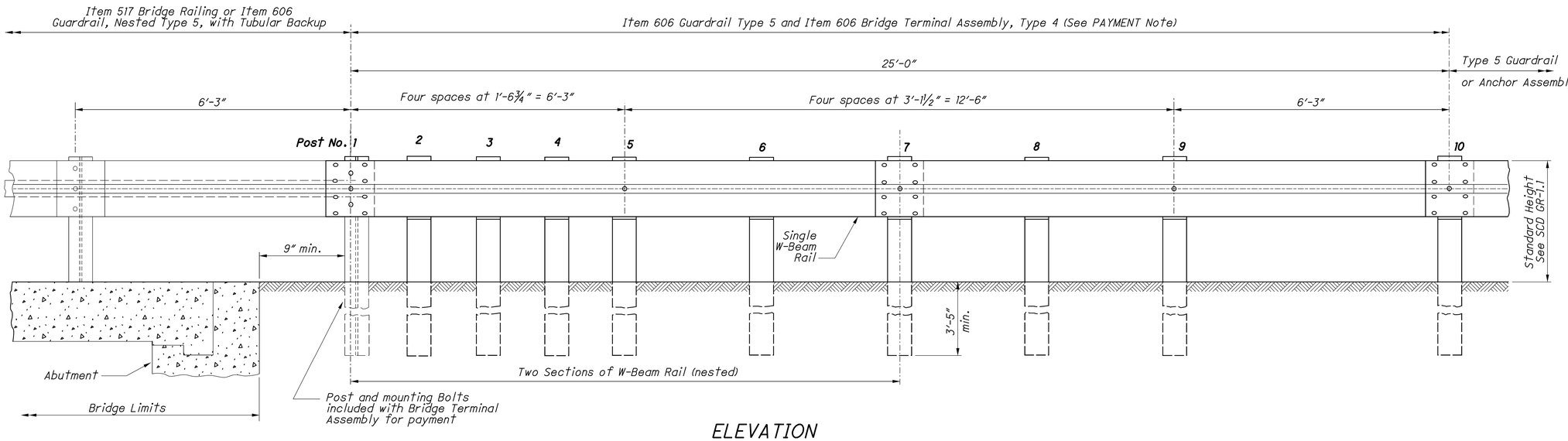
SHEET P.11 TOTAL 38

CLE-50-2.25

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:19:14 PM USER: Dave.Chanville
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Clermont\119024\401-Engineering_TetraTech\MOT\Sheets\119024_MM002.dgn



PLAN



ELEVATION

NOTES

GENERAL: *For additional details, see* ***SCD GR-1.1.***

APPLICATION: *The Type 4 Bridge Terminal Assembly shall connect Type 5 Guardrail runs to Type 5 Guardrail with Tubular Backup or To Deep Beam Bridge Guardrail (as shown on* ***Structural Engineering SCD DBR-2-73****).*

DETAIL INFORMATION: *The first post off the bridge shall be steel (W6x15 or W6x25). All holes in the off-structure end of the approach panel rail section spanning the abutment are slotted ¾"x2½". Tighten the bolts as specified for expansion joints in Item 606.05.*

POSTS: *Posts may be set in drilled holes or driven to grade. See* ***SCD GR-1.1*** *for additional Post embedment details. Guardrail is not attached to certian posts (see LEGEND).*

WOOD POSTS - Use square sawed pressure treated wood as specified in CMS 710.14 and fabricated with square ends. Bore bolt holes and trim the tops of posts, if required after the posts are set.

STEEL POSTS - are allowed as an alternate. Use W6x9 or W6x8.5 in lieu of the 6"x8" wood post. Use same post material through-out assembly.

BLOCKOUTS: *Approved alternate blockouts can be found on the Office of Roadway Engineering website. Steel blockouts are not permitted.*

FLARED GUARDRAIL: *Start Standard Guardrail Flares as shown on* ***SCD GR-5.1*** *at or beyond Post No. 10; however, the flare may begin at Post No. 7.*

PAYMENT: Item 606 - Bridge Terminal Assembly, Type 4, Each, *includes the cost of extra components in excess of normal guardrail, such as additional posts and other hardware. The TS 8"x4" spacers and tubular backup rail extending to the first post off the bridge is included with* ***Item 517 - Railing,*** *or* ***Item 606 - Guardrail, Nested Type 5 with Tubular Backup,*** *for payment.*

LEGEND

[1] *Guardrail is not attached to posts at Posts 2, 3, 4, 6, and 8. Blockout is fastened to post with standard Post Bolt.*

OFFICE OF ROADWAY ENGINEERING

DESIGNED XXX | REVIEWED XXX

REVISION DATE 7/20/2018 | CHECKED CHECKED

PLAN INSERT SHEET

BRIDGE TERMINAL ASSEMBLY, TYPE 4

PIS GR-3.4

1 / 1

0 / 0

BRIDGE TERMINAL ASSEMBLY, TYPE 4

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.12 | TOTAL 38

CLE-50-2.25

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:20:03 PM USER: Dave.Charville
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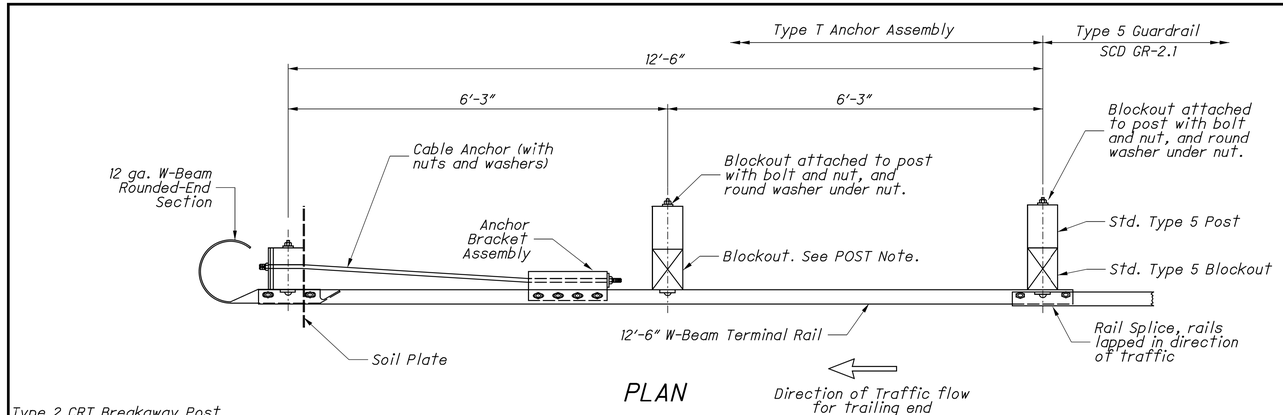
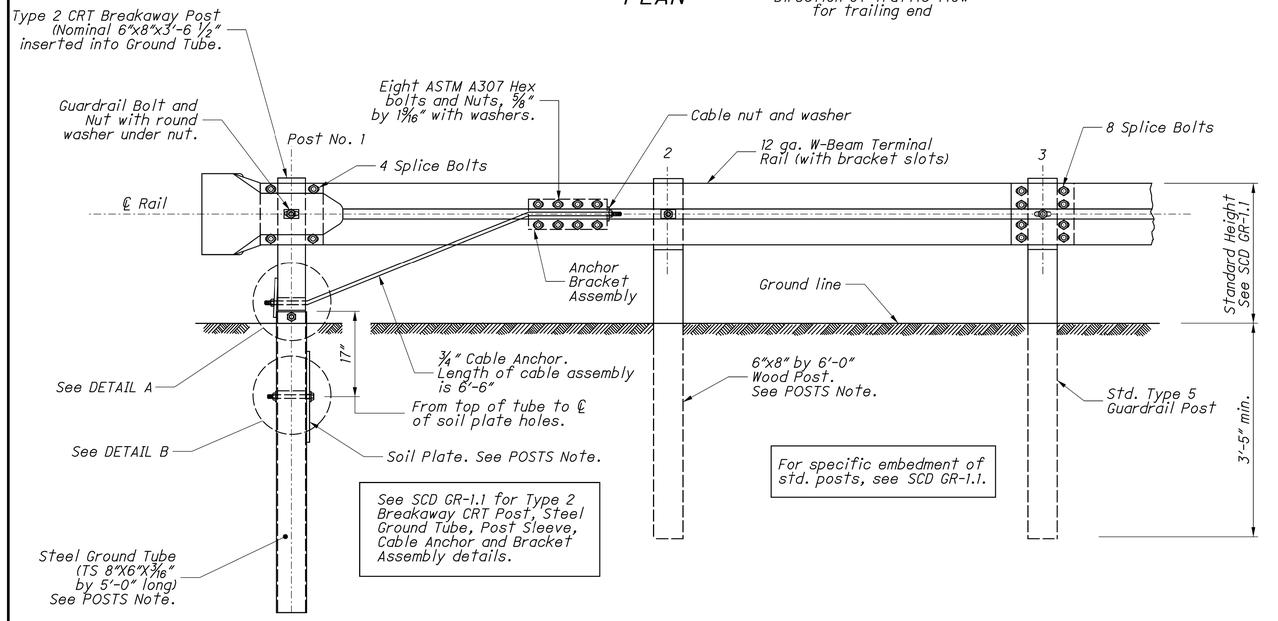
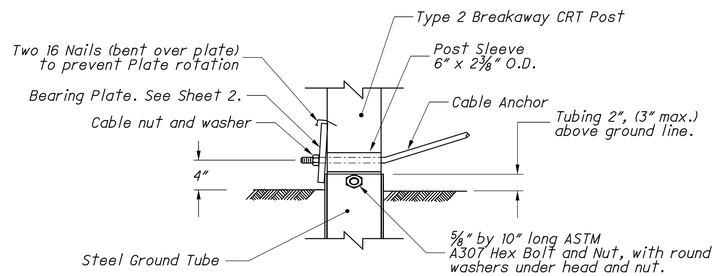


PLAN

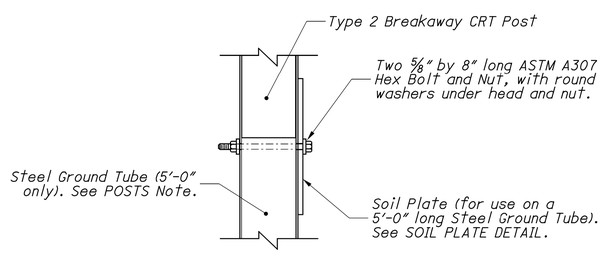
Direction of Traffic flow for trailing end



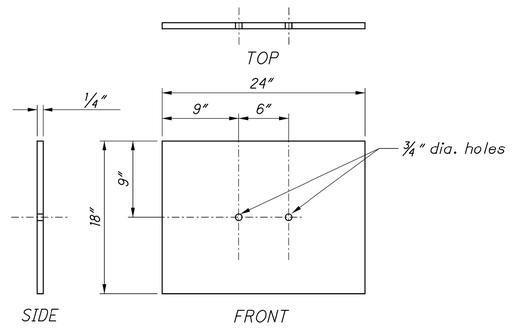
ELEVATION - FOUNDATION TUBE



DETAIL A



DETAIL B



SOIL PLATE DETAIL

NOTES

APPLICATION: *Use Type T Anchor Assemblies on the trailing end of guardrail runs, located outside of the clear zone of opposing traffic. The assembly is 12'-6" long, none of which can be considered the Length of Need for the guardrail run.*

For termination requirements at driveways, see DRIVEWAY OPENING Detail on Sheet 2. For side road approaches and Terminals at Structures, see Location & Design Manual, Volume 1, Figure 603-3.

ANCHORING OPTIONS: *Contractor may choose either the foundation tube (shown on this Sheet) or the concrete footing option (Sheet 2) to construct this anchor assembly.*

If the foundation tube option is chosen, the contractor will take proper care to insure that the Soil Plate fasteners are not broken during the driving process.

Concrete footings may be cast-in-place or precast. Compact fill after placing precast unit.

MATERIALS: *See* ***SCD GR-1.1*** *for parts used on this anchor, including the CRT Breakaway Posts, Steel Ground Tube, Post Sleeve, Cable Anchor and Bracket Assembly.*

Bearing Plate and Soil Plate is ASTM A709 Grade 36. Steel Ground Tube shall be ASTM A500, Grade B, and meet CMS 707.10. All angles, channels and plates shall meet CMS 711.01. All structural steel shall be galvanized as specified in CMS 711.02. All bolt washers indicated are standard galvanized steel of the appropriate size.

Concrete shall be class C.

Components on this anchor that are not detailed on SCD GR-1.1 include: 1) 12'-6" W-Beam Terminal Rail (standard part RWM14a), and 2) W-Beam Rounded End Section (RWE03a). For complete details and specifications, see part descriptions in the ***AASHTO/AGC/ARTBA Standardized Hardware Guide.***

POSTS: *Post No. 1 may be an 8'-0" long Steel Ground Tube without a Soil Plate in lieu of the 5'-0" tube with Soil Plate.*

Post No. 2 can be W6x9 (or W6x8.5) with notched wood blockouts or a standard Type 5 post and blockout. Recycled plastic blockouts are permitted.

PAYMENT: *All labor and materials, including the W-Beam Rounded End Section and the W-Beam Terminal Rail for the 12'-6" anchor assembly shall be included in the unit price bid for*

Item 606 - Anchor Assembly, Type T, Each.

OFFICE OF ROADWAY ENGINEERING

DESIGNED XXX
REVIEWED XXX
REVISION DATE 01-18-2013
CHECKED
CHECKED

PLAN INSERT SHEET
TYPE T ANCHOR ASSEMBLY
(Foundation Tube Option)

PIS GR-4.2

1 / 2

0
0

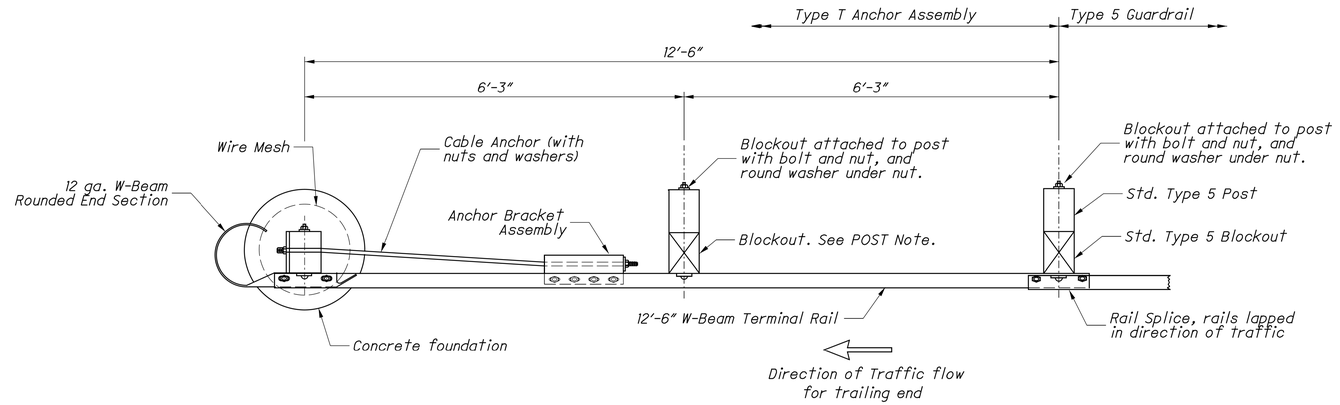
TYPE T ANCHOR ASSEMBLY (FOUNDATION TUBE OPTION)

DESIGN AGENCY

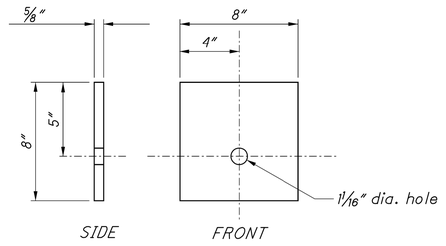
DESIGNER GCB
REVIEWER DTC 02/25/25
PROJECT ID 119024
SHEET P.13 TOTAL 38

CLE-50-2.25

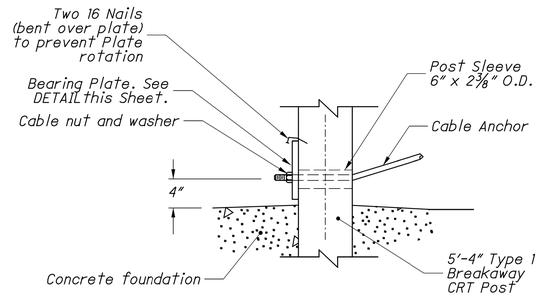
MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:20:59 PM USER: Dave.Charville
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Clermont\119024401-Engineering_TetraTech\MOT\Sheets\119024_MM008.dgn



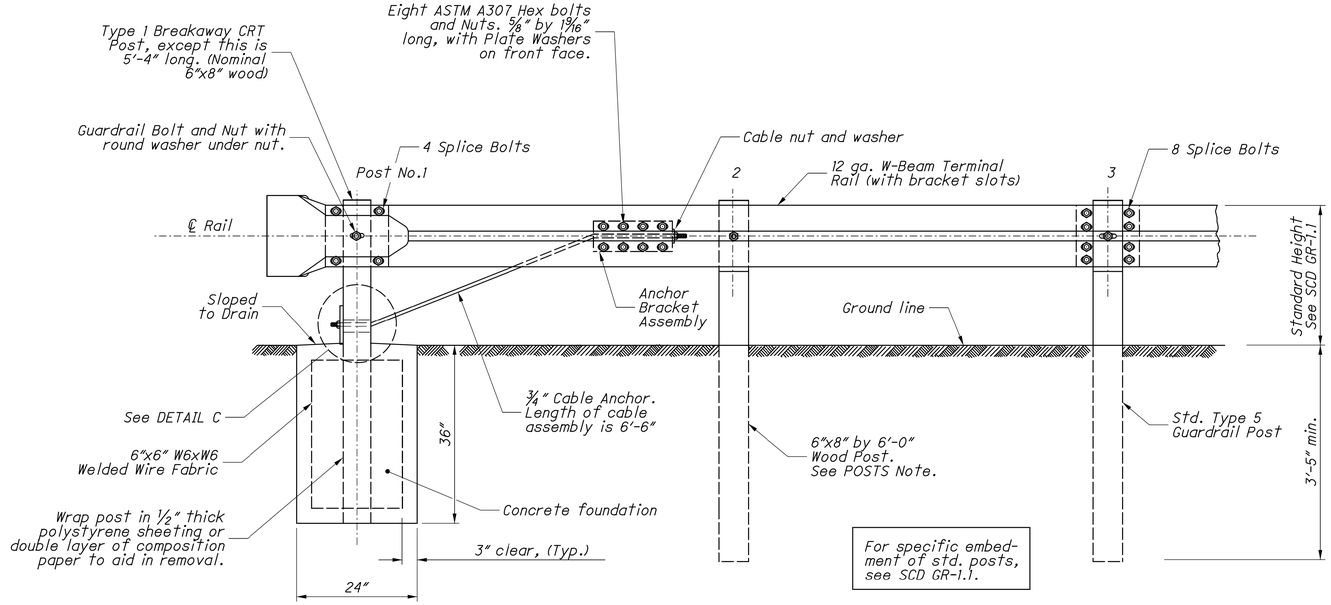
PLAN



BEARING PLATE DETAIL

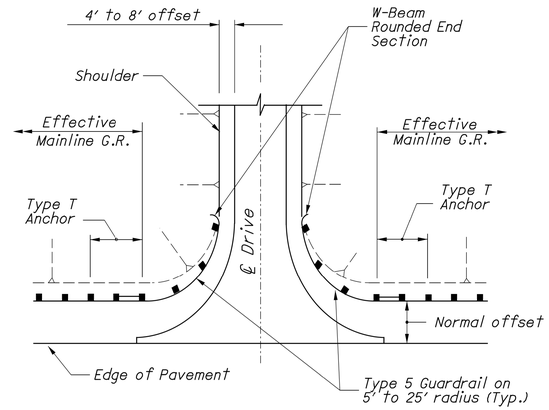


DETAIL C



See SCD GR-1.1 for Type 1 Breakaway CRT Post, Steel Ground Tube, Post Sleeve, Cable Anchor and Bracket Assembly details.

ELEVATION - CONCRETE FOOTER



DRIVEWAY OPENING

OFFICE OF ROADWAY ENGINEERING

DESIGNED XXX
REVIEWED XXX
REVISION DATE 01-18-2013
CHECKED CHECKED
CHECKED CHECKED

PLAN INSERT SHEET
TYPE T ANCHOR ASSEMBLY
(Foundation Tube Option)

PIS GR-4.2

2 / 2

0
0

TYPE T ANCHOR ASSEMBLY (FOUNDATION TUBE OPTION)

DESIGN AGENCY

DESIGNER GCB
REVIEWER DTC 02/25/25
PROJECT ID 119024
SHEET P.14 TOTAL 38

CLE-50-2.25

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:21:51 PM USER: Dave.Charville
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Clermont\119024\401-Engineering_TetraTech\MOT\Sheets\119024_MM009.dgn

ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF 1 LANE OF TRAFFIC IN EACH DIRECTION OF US-50 SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, EXCEPT FLAGGING IS PERMITTED DURING WORKING HOURS. FLAGGING SHALL BE PROVIDED FOR CONTRACTOR INGRESS AND EGRESS AT THE TEMPORARY ACCESS POINT AT US-50 STA. 119+76.27 WHEN INGRESS AND EGRESS ARE ANTICIPATED TO IMPACT THE NORMAL TRAFFIC PATTERNS OF U.S. 50 AS A RESULT OF VEHICHLES BACKING INTO THE TEMPORARY ACCESS POINT OR HEAVY LOADS SLOWLY EXITING THE TEMPOARY ACCESS POINT.

THE CONRACTOR SHALL PROVIDE, ERECT, MAINTAIN AND REMOVE ALL SIGNS, AND SIGN SUPPORTS, BARRICADES, CONES, DRUMS, FLAGGERS, AND ANY INCIDENTALS AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

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. THE LEVEL OF UTILIZATION OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDE IN THE GENERAL SUMMARY FOR US AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

ITEM 410, TRAFFIC COMPACTED SURFACE, TYPE A OR B — 150 CY

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.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER — 12 M. GAL.

DRIVEWAY & PROPERTY ACCESS

ACCESS TO ALL PROPERTIES MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE RESIDENTS AND/OR BUSINESSES WITH A MINIMUM TWENTY-FOUR (24) HOUR NOTICE WHEN ACCESS TO THEIR DRIVEWAYS WILL BE RESTRICTED/CHANGED DUE TO CONSTRUCTION.

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.

NOTIFICATION TIME TABLE

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMP & ROAD CLOSURES	>= 2 WEEKS > 12 HOURS & < 2 WEEKS <= 12 HOURS	21 CALENDAR DAYS PRIOR TO CLOSURE 14 CALENDAR DAYS PRIOR TO CLOSURE 4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE 5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONST. & 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 NOTIFICATION TIME TABLE.

ITEM 606, GUARDRAIL, TYPE 5, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING, INSTALLING, AND REMOVING GUARDRAIL, TYPE 5, AS PER PLAN AS SHOWN ON P.13 AND PER THE REQUIREMENTS OF THE PLAN INSERT SHEETS.

ALL EQUIPMENT, MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK OUTLINED ABOVE AND PER C&MS 606 SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 606 - GUARDRAIL, TYPE 5, AS PER PLAN

ITEM 606, GUARDRAIL, TYPE MGS, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING, INSTALLING, AND REMOVING GUARDRAIL, TYPE MGS, AS PER PLAN AS SHOWN ON P.13.

ALL EQUIPMENT, MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK OUTLINED ABOVE AND PER C&MS 606 SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 606 - GUARDRAIL, TYPE MGS, AS PER PLAN

ITEM 606, ANCHOR ASSEMBLY, TYPE T, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING, INSTALLING, AND REMOVING AN ANCHOR ASSEMBLY, TYPE T, AS PER PLAN AS SHOWN ON P.13 AND PER THE REQUIREMENTS OF THE PLAN INSERT SHEETS.

ALL EQUIPMENT, MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK OUTLINED ABOVE AND PER C&MS 606 SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 606 - ANCHOR ASSEMBLY, TYPE T, AS PER PLAN

ITEM 606, ANCHOR ASSEMBLY, MGS TYPE T, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING, INSTALLING, AND REMOVING AN ANCHOR ASSEMBLY, MGS TYPE T, AS PER PLAN AS SHOWN ON P.13.

ALL EQUIPMENT, MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK OUTLINED ABOVE AND PER C&MS 606 SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE T, AS PER PLAN

SHEET NO.	REF NO.	STATION TO STATION			SIDE	606 GUARDRAIL, TYPE 5, AS PER PLAN	606 GUARDRAIL, TYPE MGS, AS PER PLAN	606 ANCHOR ASSEMBLY, TYPE T, AS PER PLAN	606 ANCHOR ASSEMBLY, MGS TYPE T, AS PER PLAN
						FT	FT	EACH	EACH
		U.S. 50							
16	TGR-1	119+33.26	TO	119+62.54	RT		25		1
16	TGR-2	119+98.17	TO	120+10.91	RT	12.5		1	
TOTALS CARRIED TO GENERAL SUMMARY						12.5	25	1	1

MAINTENANCE OF TRAFFIC GENERAL NOTES

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.15 TOTAL 38

CLE-50-2.25

MODEL: Sheet_SurvFt PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:22:40 PM USER: Dave.Charville
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LEGEND:

WORK AREA

STA. 120+23.86, 15.71' RT
END REMOVAL OF EXISTING GUARDRAIL

INSTALL PROP. BTA, TYPE 4 SHOWN ON P.33 TO POST NO. 7 SHOWN ON P.12

TEMPORARY TYPE T AA

TEMPORARY TYPE 5 GUARDRAIL

TEMPORARY ACCESS DRIVE

STA. 119+62.54, 33.89' RT

TEMPORARY MGS GUARDRAIL

TEMPORARY MGS TYPE T AA

STA. 119+33.26, 15.71' RT
BEGIN MGS TYPE T AA

STA. 119+08.02, 14.97' RT
BEGIN REMOVAL OF EXISTING GUARDRAIL

END ROAD WORK
G20-2-48
STA. 115+00

TGR-1

TGR-2

U.S. 50

℄ R/W U.S. 50

Ex R/W

SH

CH

ROUNDED W-BEAM END SECTION

INSTALL PROP. MGS GUARDRAIL AND TYPE E AA AS SHOWN ON P.33

STA. 120+10.91, 15.71' RT
END TYPE T AA
BTA, TYPE 4 POST NO. 7

STA. 119+98.17, 16.65' RT
BEGIN TYPE T AA

STA. 119+91.23, 27.18' RT

TRUCKS ENTERING AND EXITING
W8-H6a-48
STA. 124+30

ROAD WORK AHEAD
W20-1-48
STA. 128+00

END ROAD WORK
G20-2-48
STA. 124+30

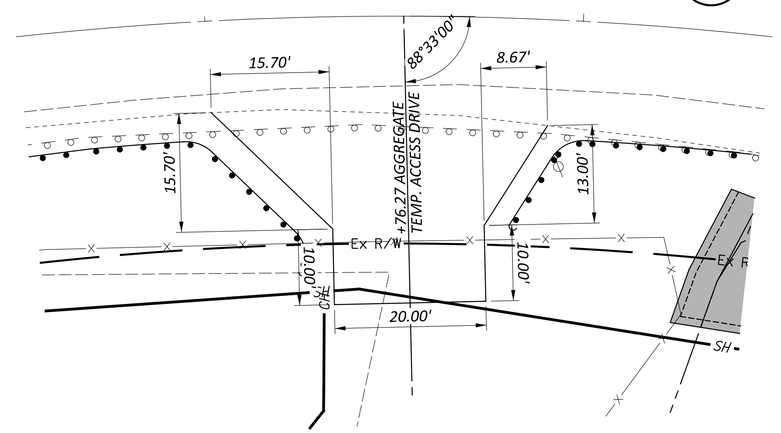
ROAD WORK AHEAD
W20-1-48
STA. 112+75

TRUCKS ENTERING AND EXITING
W8-H6a-48
STA. 116+25

℄ CONST. CHANNEL

118 119 120 121 122 123 56 57 58 61

HORIZONTAL SCALE IN FEET
0 10 20 40



TEMPORARY ACCESS DRIVEWAY DETAIL

SCALE: 0 10 5 20

MAINTENANCE OF TRAFFIC PLAN
STA. 117+50 TO STA. 123+25

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.16 TOTAL 38

CLE-50-2.25

MODEL: MOT - Plan 1 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:22:56 PM USER: Dave.Charville
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Clermont\119024\401-Engineering_TetraTech\MOT\Sheets\119024_MP001.dgn

HUEBER INDUSTRIES EAST LLC
210738.122P

HACKER GARY C & BRENDA J
210738.119P

OLYMPIC DRIVE LLC
210738.134P

DJJ PROPERTIES MILFORD LLC
210739.048P

DJJ PROPERTIES MILFORD LLC
182410A105

HUGHES JOHN P
182411G116

DAYCOLE LLC
210738.118P

JLJ ASSET MANAGEMENT VI LLC
182410A107

JLJ ASSET MANAGEMENT VI LLC
182410A137

JLJ ASSET MANAGEMENT VI LLC
210738.033P

STATE OF OHIO
210738.131P

ROBY COMPANY LIMITED PART
210738.051P

G & G REAT ESTATE INVESTMENTS LLC
182410A123

REMOVE FENCE AND INSTALL 24' WIDE SWING GATE TO PROVIDE ACCESS TO CHANNEL EASEMENT

REMOVE BRIDGE GUARDRAIL, INSTALL TEMPORARY ACCESS DRIVE, AND INSTALL PROPOSED AND TEMPORARY GUARDRAIL

ACCESS THE CHANNEL EASEMENT USING EXISTING DRIVE

ACCESS TO ODOT PARCEL USING EXISTING INGRESS/EGRESS EASEMENT

COORDINATE GATE ACCESS TO ODOT PROPERTY WITH MIKE THOMPSON AT 513-382-6948

Ex R/W
Ex U
Ex CH
CH
SH
54
53
55
56
57
58
118
119
120
121
122
61

HORIZONTAL SCALE IN FEET
0 25 50 100

ACCESS PLAN

CLE-50-2.25

MODEL: Sheet_Survft PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:23:08 PM USER: Dave.Charville
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Clermont\119024\401-Engineering_TetraTech\MOT\Sheets\119024_MB001.dgn

DESIGN AGENCY

DESIGNER
GCB

REVIEWER
DTC 02/25/25

PROJECT ID
119024

SHEET P.17 | TOTAL 38

SHEET NUMBER													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	6	15	19	35	RW.3								01/S>2/13						
																		ROADWAY	
													LS	201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN	5
			271										271	202	30700	271	FT	CONCRETE BARRIER REMOVED	
			50										50	202	38000	50	FT	GUARDRAIL REMOVED	
			1										1	202	42050	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE B	
			1										1	202	47000	1	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
			462										462	202	75000	462	FT	FENCE REMOVED	
			2										2	202	98100	2	EACH	REMOVAL MISC.: POST WITH ELECTRIC OUTLET	5
			2,289										2,289	203	10000	2,289	CY	EXCAVATION	
			4										4	203	20000	4	CY	EMBANKMENT	
			62.5										62.5	606	15050	62.5	FT	GUARDRAIL, TYPE MGS	
			1										1	606	26150	1	EACH	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	
			1										1	606	35141	1	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN	6
			1										1	607	61201	1	EACH	GATE, TYPE CLT, AS PER PLAN	6
					4								4	623	38550	4	EACH	MONUMENT ASSEMBLY, TYPE D	
	650												650	SPECIAL	69065016	650	TON	WORK INVOLVING PETROLEUM CONTAMINATED SOIL	6
																		EROSION CONTROL	
				LS									LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
				84									84	511	53010	84	CY	CLASS QC1 CONCRETE, MISC.: SEDIMENT BASIN	35
				63									63	518	21200	63	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
				227									227	518	40000	227	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
				86									86	518	40010	86	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
				400									400	601	11001	400	SY	RIPRAP, TYPE D, AS PER PLAN, 9" THICK	35
			99										99	601	32204	99	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	
418													418	659	00300	418	CY	TOPSOIL	
3,764													3,764	659	10000	3,764	SY	SEEDING AND MULCHING	
188													188	659	14000	188	SY	REPAIR SEEDING AND MULCHING	
188													188	659	15000	188	SY	INTER-SEEDING	
0.55													0.55	659	20000	0.55	TON	COMMERCIAL FERTILIZER	
0.78													0.78	659	31000	0.78	ACRE	LIME	
21													21	659	35000	21	MGAL	WATER	
													LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
													LS	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
													LS	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
													15,000	832	30000	15,000	EACH	EROSION CONTROL	
																		TRAFFIC CONTROL	
			3										3	626	00110	3	EACH	BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL)	
			20										20	630	03100	20	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
			3										3	630	80100	3	SF	SIGN, FLAT SHEET	
																		MAINTENANCE OF TRAFFIC	
		150											150	410	12000	150	CY	TRAFFIC COMPACTED SURFACE, TYPE A OR B	
		12.5											12.5	606	13001	12.5	FT	GUARDRAIL, TYPE 5, AS PER PLAN	15
		25											25	606	15051	25	FT	GUARDRAIL, TYPE MGS, AS PER PLAN	15
		1											1	606	26501	1	EACH	ANCHOR ASSEMBLY, TYPE T, AS PER PLAN	15
		1											1	606	26551	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T, AS PER PLAN	15
		12											12	616	10000	12	MGAL	WATER	
																		INCIDENTALS	
													LS	614	11000	LS		MAINTAINING TRAFFIC	
													LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
													LS	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.18 TOTAL 38

CLE-50-2.25

MODEL: Sheet_SurvFt PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:23:53 PM USER: Dave.Charville
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Clermont\119024\401-Engineering_TetraTech\Roadway\Sheets\119024_GG001.dgn

SHEET NO.	REF NO.	STATION TO STATION			SIDE	202 CONCRETE BARRIER REMOVED FT	202 GUARDRAIL REMOVED FT	202 ANCHOR ASSEMBLY REMOVED, TYPE B EACH	202 BRIDGE TERMINAL ASSEMBLY REMOVED EACH	202 FENCE REMOVED FT	202 REMOVAL MISC.: POST WITH ELECTRIC OUTLET EACH		203 EXCAVATION CY	203 EMBANKMENT CY	601 ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC CY	606 GUARDRAIL, TYPE MGS FT	606 ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016 EACH	606 BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN EACH		607 GATE, TYPE CLT, AS PER PLAN EACH		626 BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL) EACH		630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 SIGN, FLAT SHEET SF
		CHANNEL																								
25		55+00.00	TO	55+50.00									90	4												
26		56+00.00	TO	56+50.00									291													
27		57+00.00	TO	57+50.00									401													
28		58+00.00	TO	58+50.00									384													
29		59+00.00	TO	59+50.00									575													
30		60+00.00	TO	60+50.00									449													
31		60+82.50	TO	61+00.00									99													
21	R-1	54+87.79	TO	55+81.82	RT					110																
21	R-2	54+92.56	TO	56+84.98	RT	195																				
21	R-3			56+13.66	LT						1															
21	R-4			56+68.88	LT						1															
21	R-5	56+63.97	TO	56+73.30	LT	8																				
21	F-1	54+87.79	TO	54+91.17																	1					
21	EC-1	56+25.00	TO	56+78.97	RT										99											
22	R-6	57+16.45	TO	59+05.20	LT					187																
22	R-7	57+66.46	TO	58+05.56	LT	68																				
		U.S. 50																								
22	R-8	118+42.06	TO	120+12.95	RT					165																
22	S-1			120+35.00	LT																				10	1.5
22	S-2			120+75.00	LT																				10	1.5
33	R-9	119+08.02	TO	120+23.86	RT		50	1	1																	
33	GR-1	118+75.54	TO	120+23.86	RT											62.5	1	1				3				
TOTALS CARRIED TO GENERAL SUMMARY						271	50	1	1	462	2		2289	4	99	62.5	1	1		1		3		20	3

ROADWAY SUBSUMMARY

DESIGN AGENCY

DESIGNER GCB

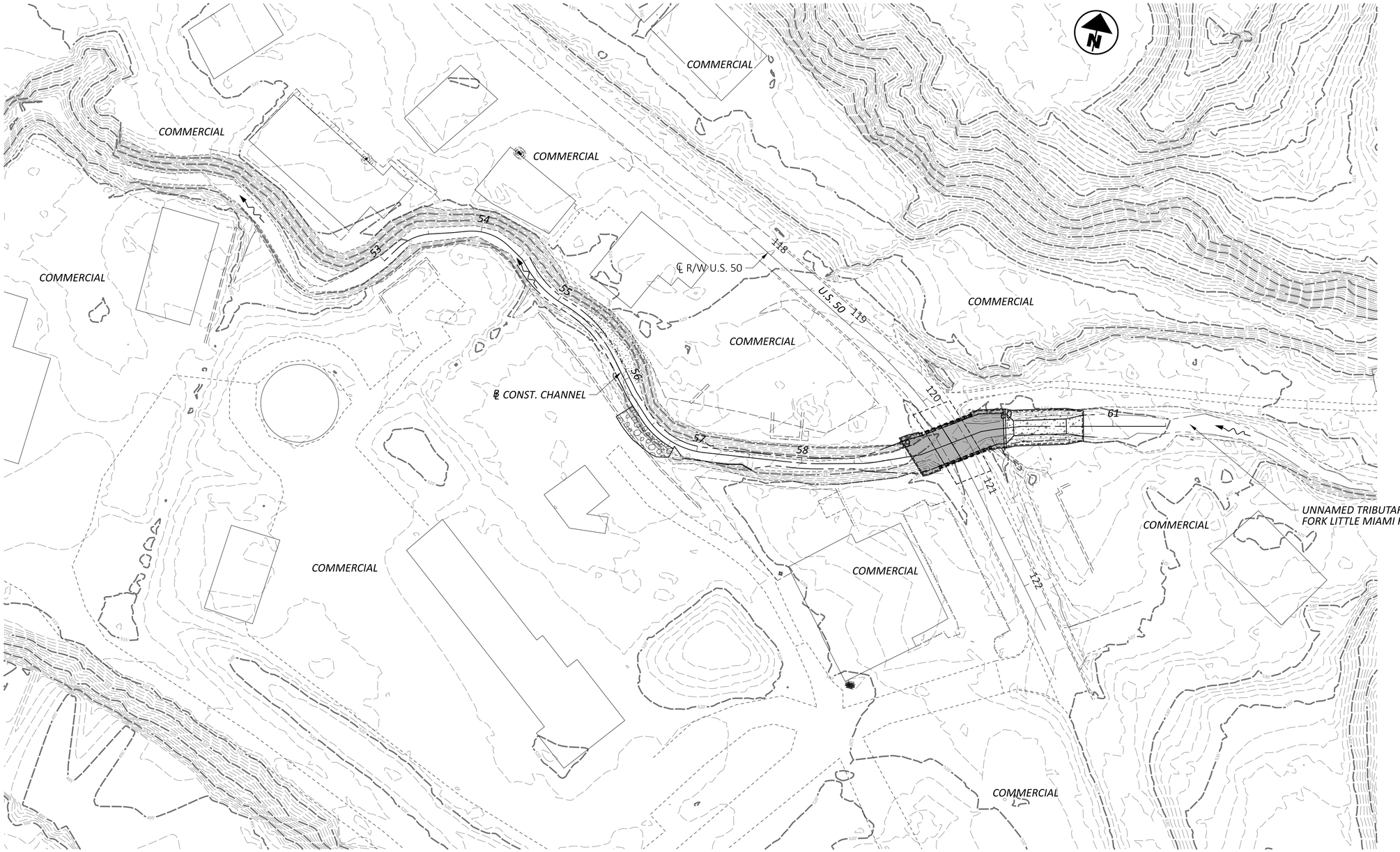
REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.19 TOTAL 38

CLE-50-2.25

MODEL: Sheet_SurvFt PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:24:03 PM USER: Dave.Charville
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Clermont\119024\401-Engineering_TetraTech\Roadway\Sheets\119024_GS001.dgn



HORIZONTAL SCALE IN FEET
0 25 50 100

PROJECT SITE PLAN

PROJECT DESCRIPTION

IMPROVE THE HYDRAULIC CHANNEL AT THE CLE-50-2.250 BRIDGE TO MINIMIZE FLOODING AND ROADWAY OVERTOPPING CAUSED BY SEDIMENTATION/AGGRADATION WITHIN THE CHANNEL AND PROTECT THE BRIDGE AND EMBANKMENT FROM SCOUR.

USGS MAP

MADEIRA QUADRANGLE
OHIO - CLERMONT COUNTY
7.5-MINUTE SERIES
NSN. 7 6 4 3 0 1 6 3 8 7 7 3 2
NGA REF NO. U S G S X 2 4 K 2 7 1 6 1

APPROXIMATE CENTER OF SITE

39°10'03"
-84°15'51"

LEGEND

FLOW DIRECTION

PROJECT DATA			
TOTAL AREA (RIGHT-OF-WAY):	1.33 AC	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE:	0.67
PROJECT EARTH DISTURBED AREA:	0.74 AC	RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE:	0.69
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.40 AC	POST CONSTRUCTION BMP: NOT REQUIRED TO MEET NPDES POST-CONSTRUCTION REQUIREMENTS.	
NOTICE OF INTENT EARTH DISTURBED AREA:	1.14 AC		
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE:	0.29 AC	IMMEDIATE RECEIVING WATERS:	UNNAMED TRIBUTARY TO THE EAST FORK LITTLE MIAMI RIVER (UNT 1)
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE:	0.39 AC	SUBSEQUENT RECEIVING WATERS:	EAST FORK LITTLE MIAMI RIVER

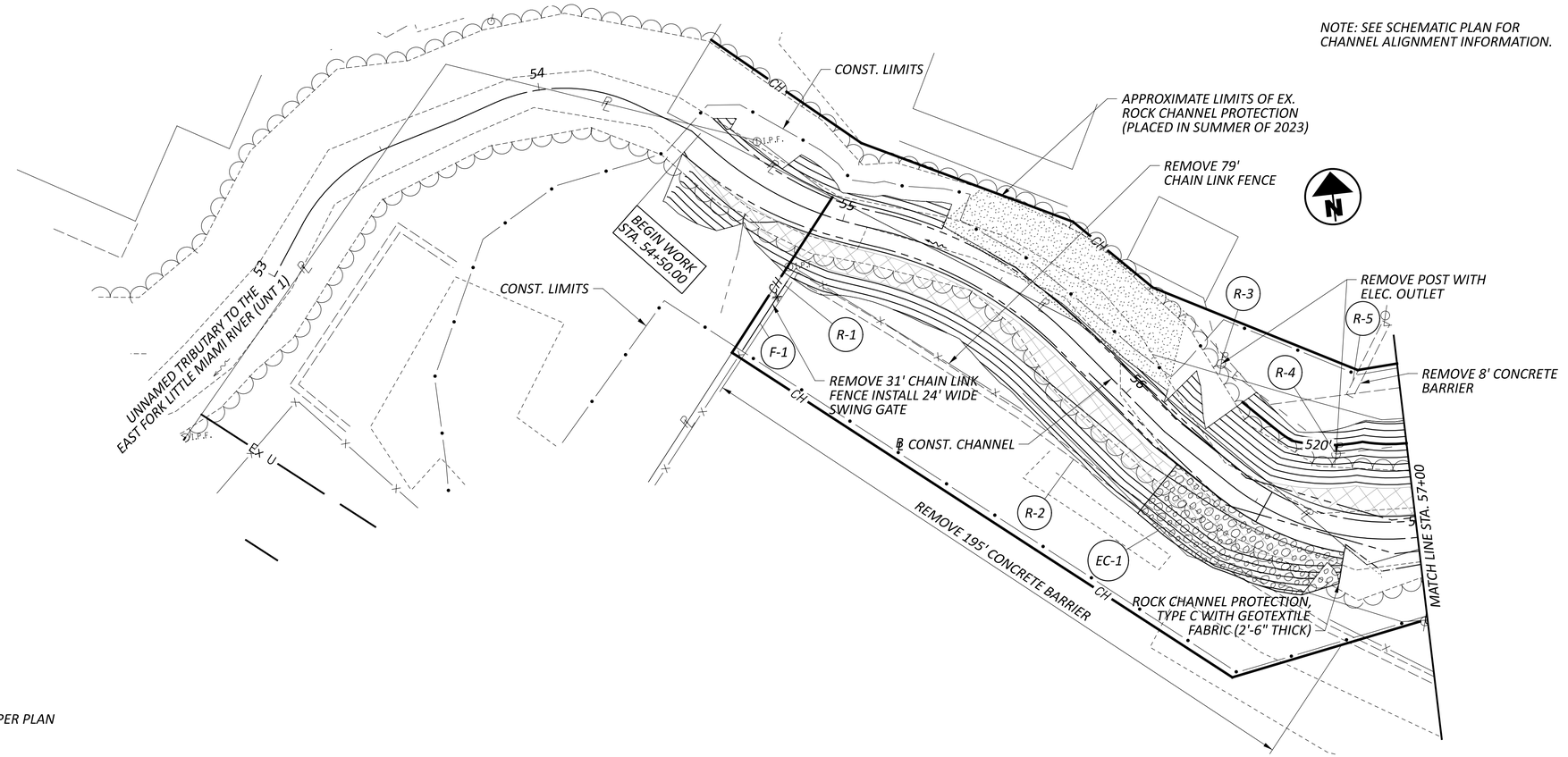
DESIGN AGENCY

DESIGNER GCB
REVIEWER DTC 02/25/25
PROJECT ID 119024
SHEET P.20 TOTAL 38

CLE-50-2.25

MODEL: Site Plan [Sheet] PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:24:17 PM USER: Dave.Charville
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Clermont\119024\401-Engineering_ TetraTech\Drainage\Sheets\119024_DE101.dgn

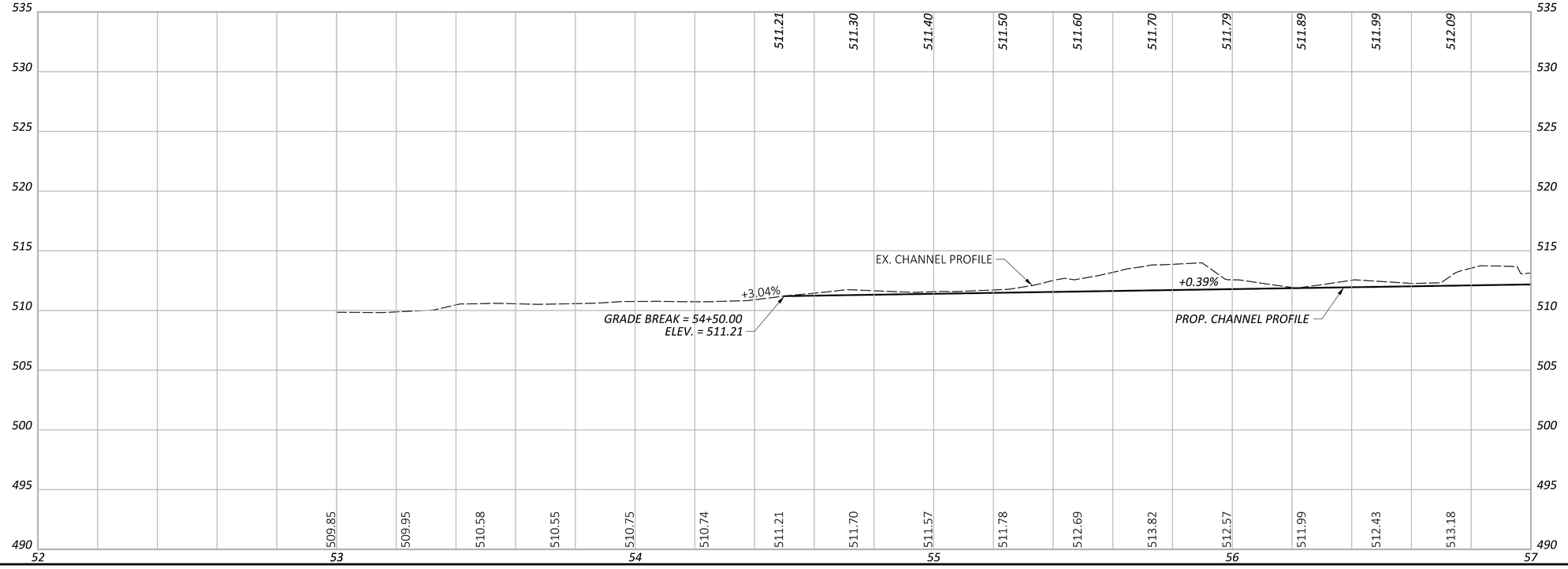
NOTE: SEE SCHEMATIC PLAN FOR CHANNEL ALIGNMENT INFORMATION.



LEGEND

CHANNEL BENCH

ITEM 601 - RIPRAP, TYPE D, AS PER PLAN



HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE - CHANNEL STA. 53+00.00 TO STA. 57+00.00

CLE-50-2.25

MODEL: Channel - Plan 1 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:24:30 PM USER: Dave.Charville
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Clermont\119024\401-Engineering_TetraTech\Roadway\Sheets\119024_GP000.dgn

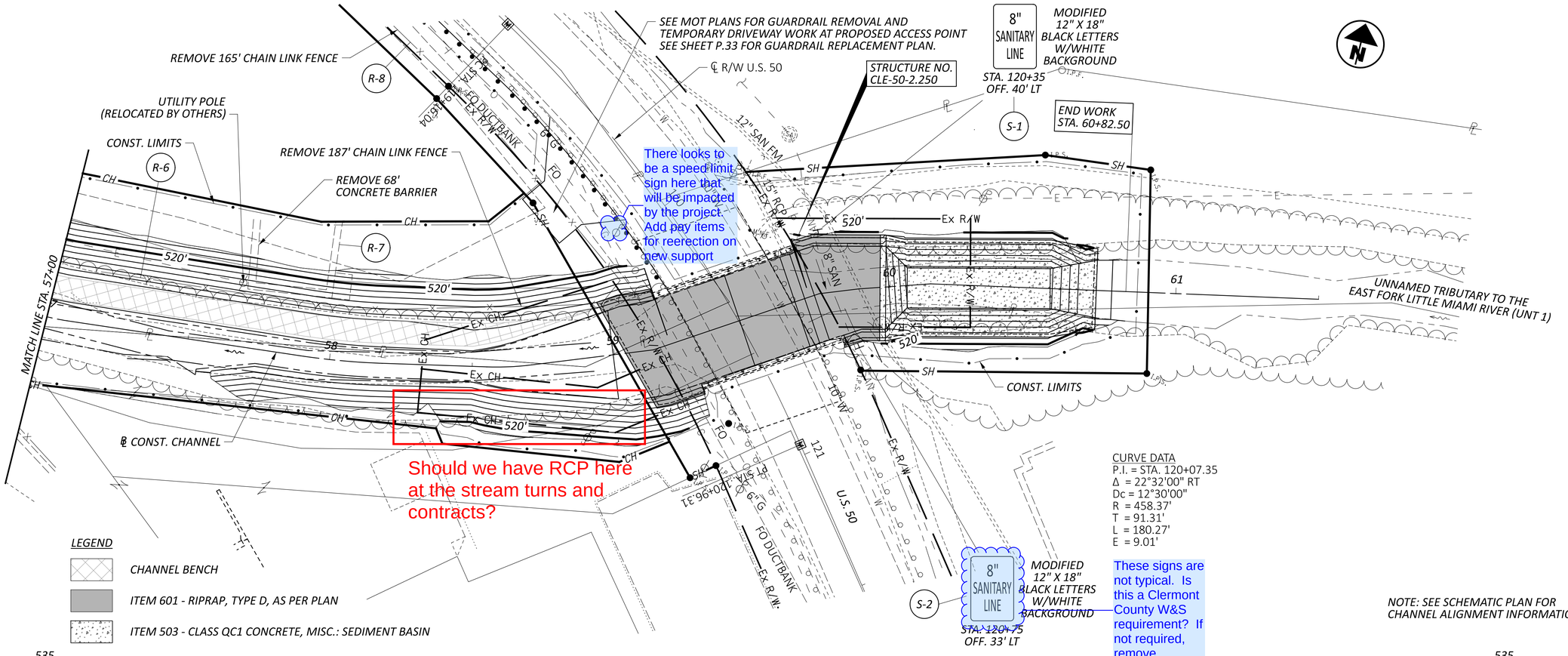
DESIGN AGENCY

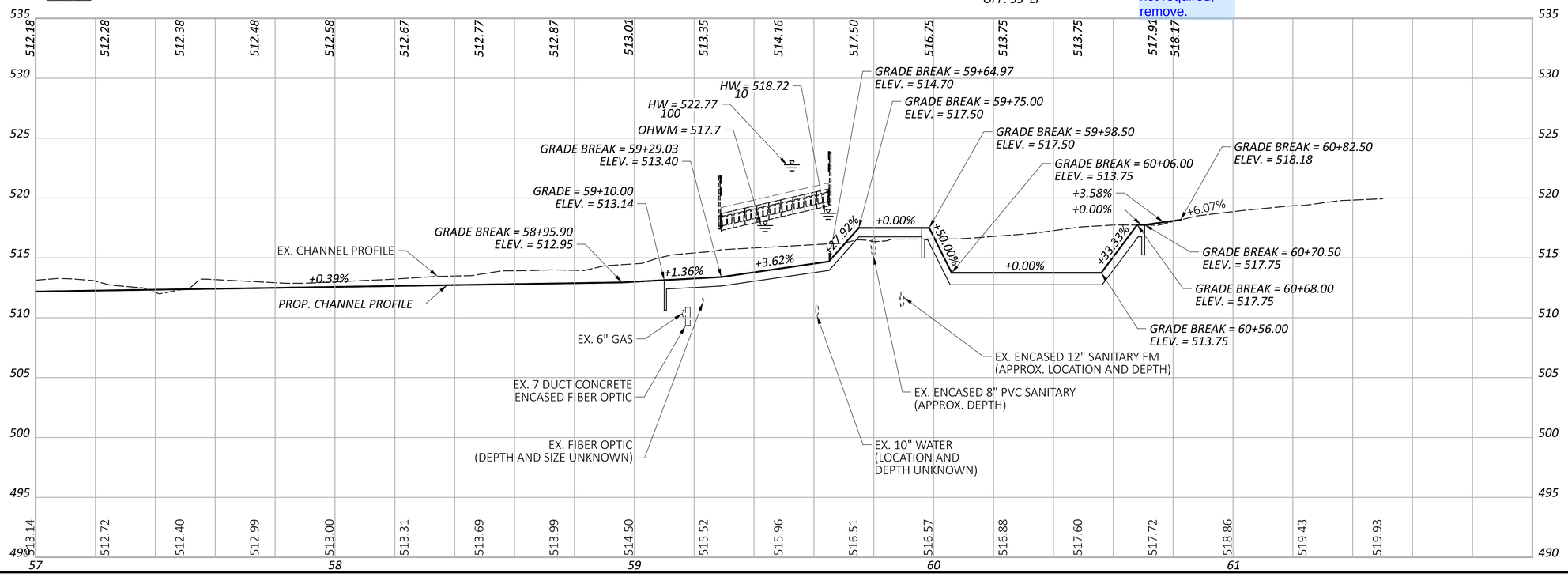
DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.21 TOTAL 38





PLAN AND PROFILE - CHANNEL STA. 57+00.00 TO STA. 61+50.00

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.22 TOTAL 38

CLE-50-2.25

MODEL: Channel - Plan 2 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:24:31 PM USER: Dave.Charville
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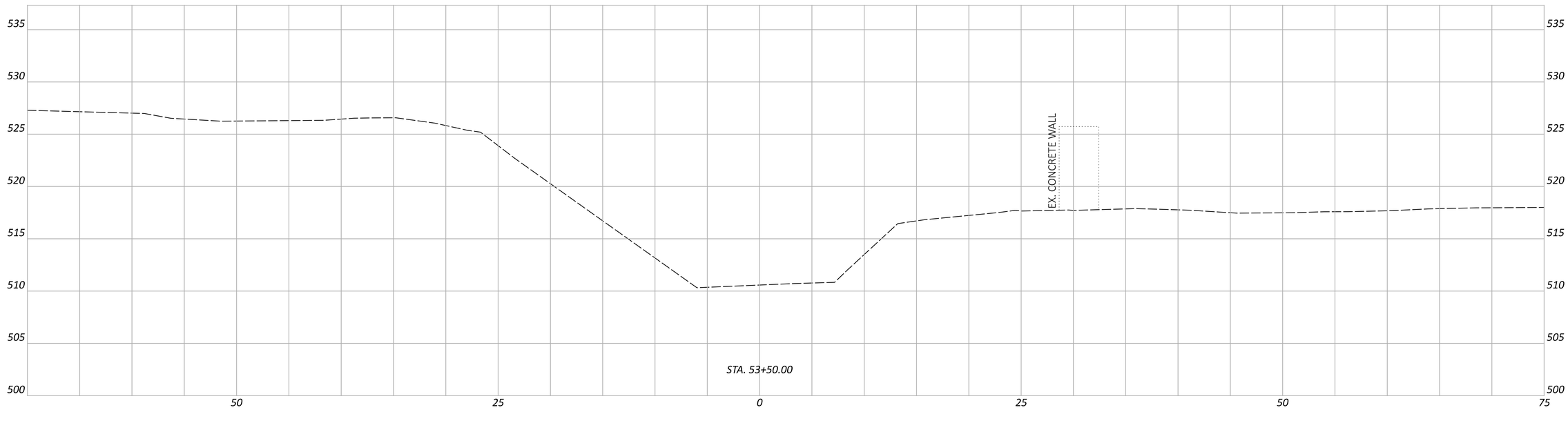

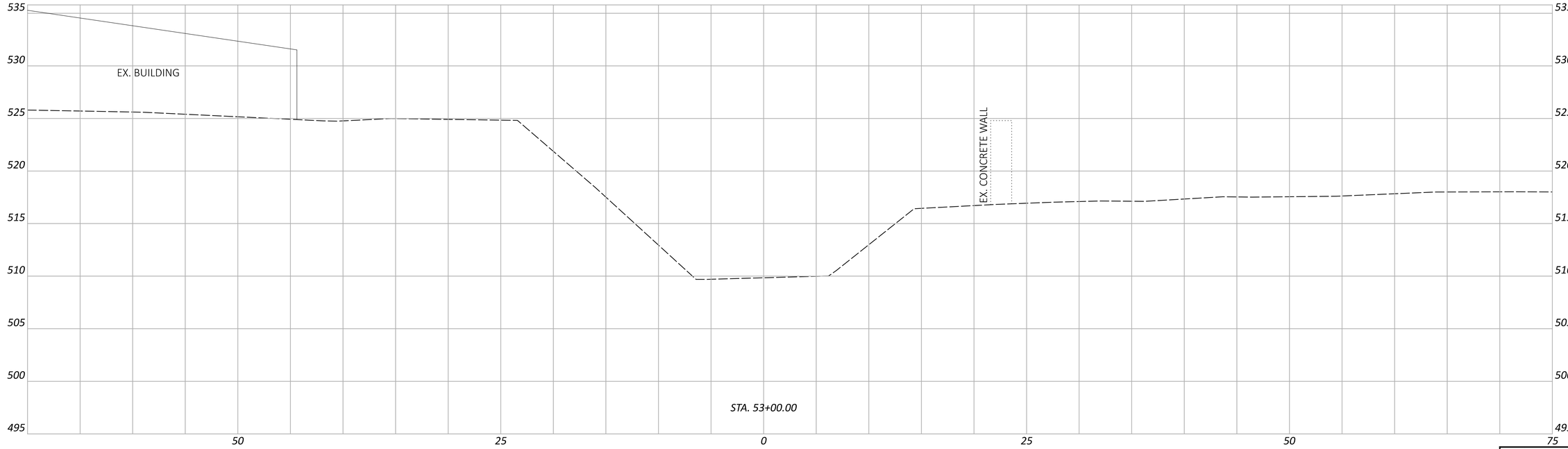

CROSS SECTIONS - CHANNEL
STA. 53+00.00 TO STA. 53+50.00

CLE-50-2.25

MODEL: CLP_1 - 53+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:00:28 PM USER: Dave.Charville
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Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.23 TOTAL 38

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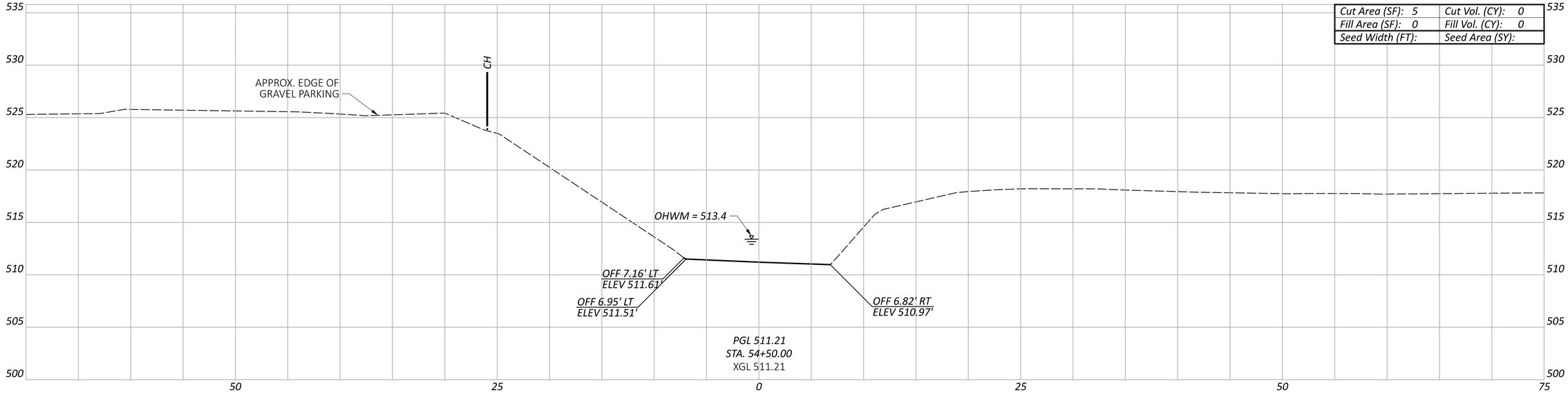

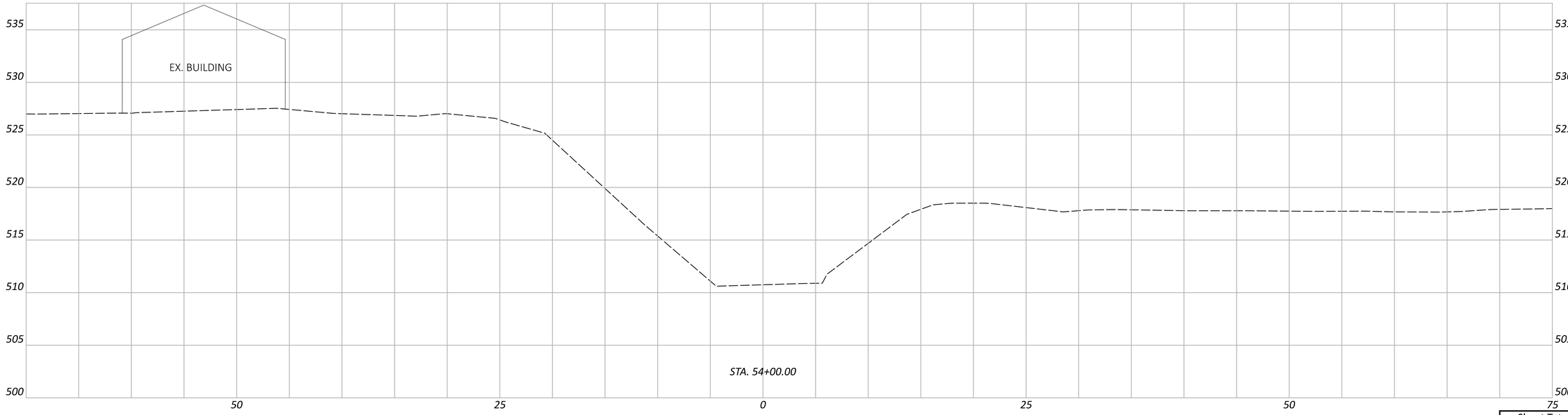

CROSS SECTIONS - CHANNEL
STA. 54+00.00 TO STA. 54+50.00

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.24 | TOTAL 38

CLE-50-2.25

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CROSS SECTIONS - CHANNEL
STA. 55+00.00 TO STA. 55+50.00

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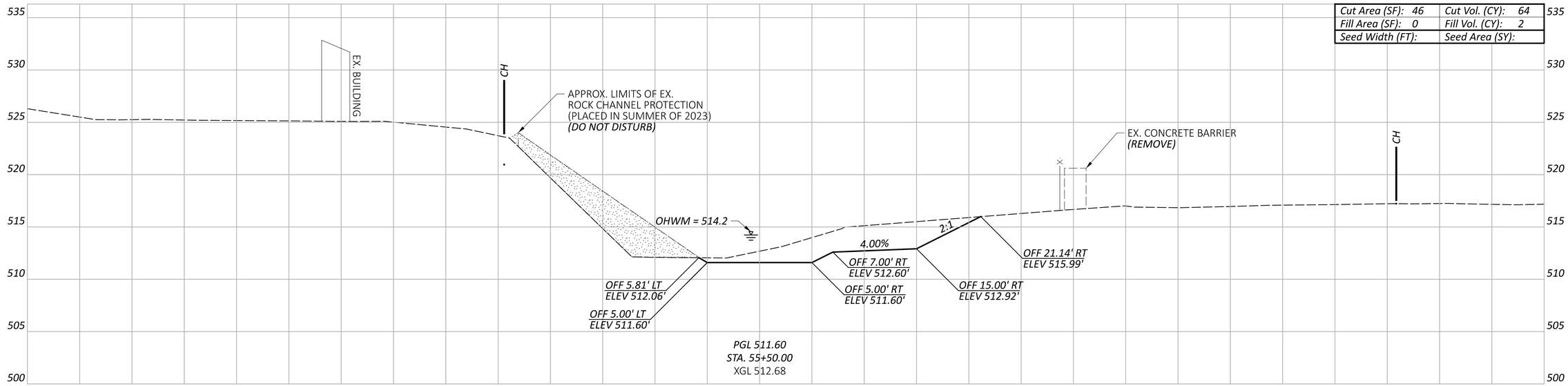
Fill Area (SF): 0	Fill Vol. (CY): 2
Seed Width (FT):	Seed Area (SY):



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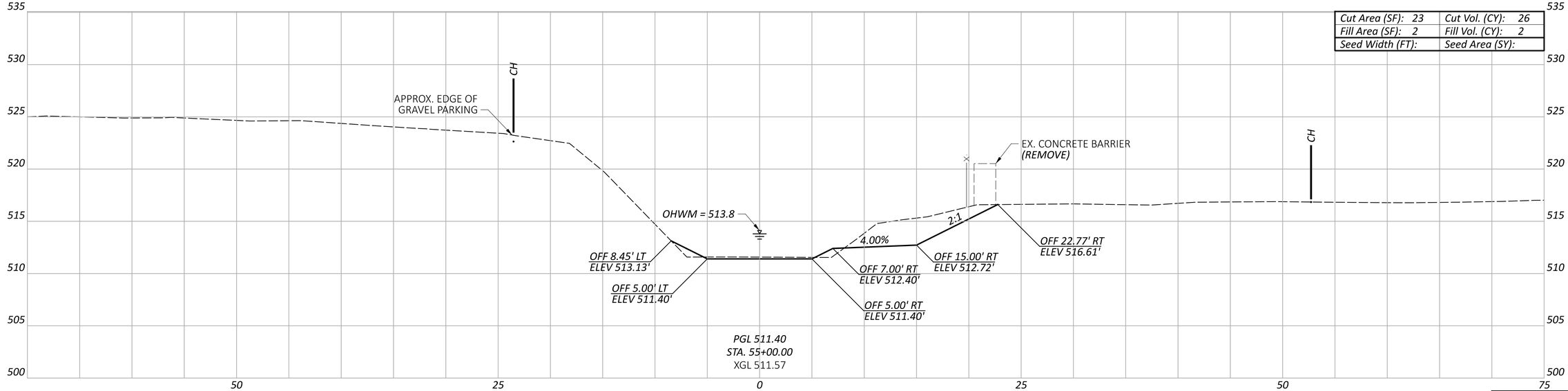
Fill Area (SF): 2	Fill Vol. (CY): 2
Seed Width (FT):	Seed Area (SY):



Sheet Totals		
Seeding	Cut	Fill
	90	4

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.25 TOTAL 38

CLE-50-2.25

MODEL: CLP_1 - 55+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:00:37 PM USER: Dave.Charville
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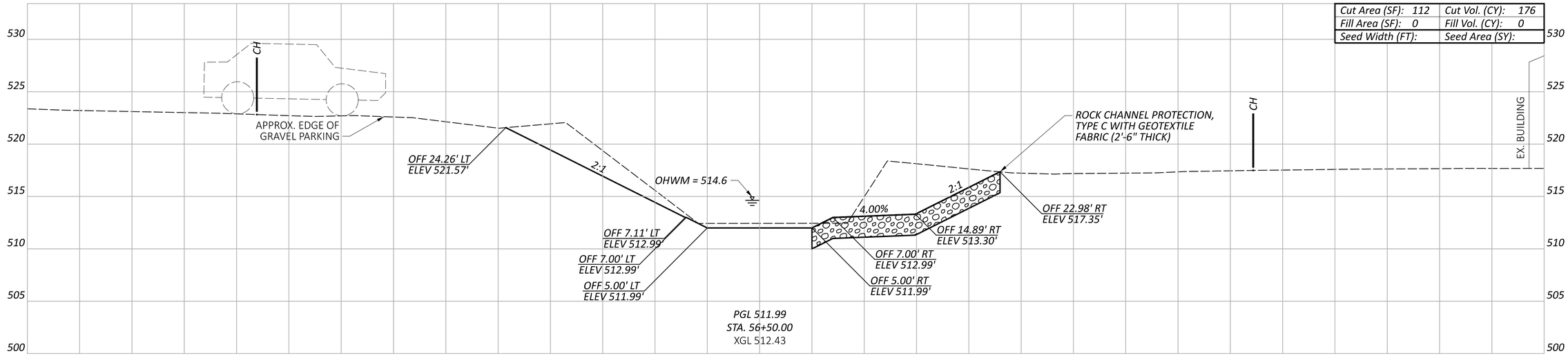
CROSS SECTIONS - CHANNEL
STA. 56+00.00 TO STA. 56+50.00

Cut Area (SF): 112	Cut Vol. (CY): 176
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):



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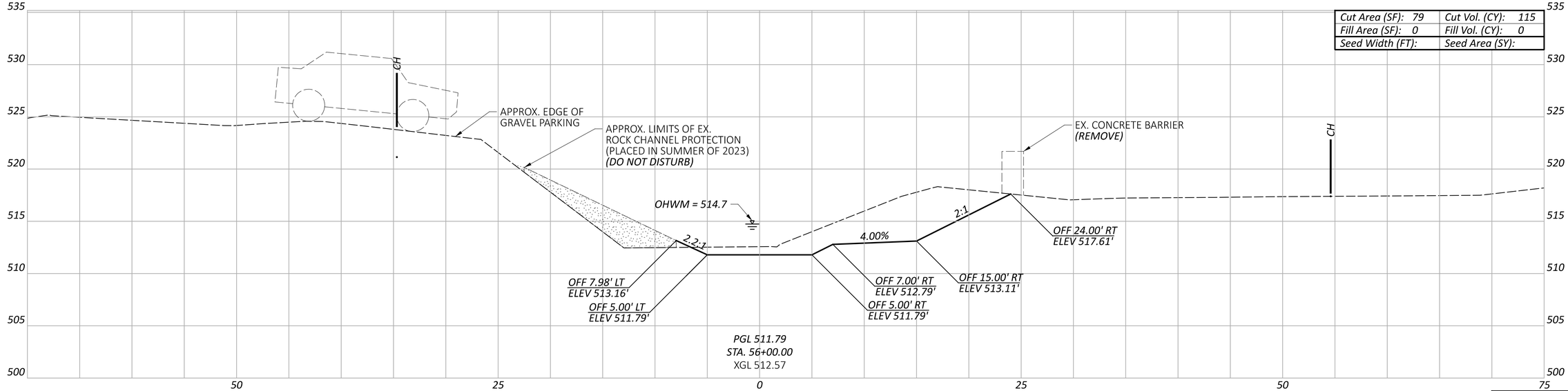
Seed Width (FT):	Seed Area (SY):



Sheet Totals		
Seeding	Cut	Fill
	291	

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.26 TOTAL 38

CLE-50-2.25

MODEL: CLP_1 - 56+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:00:39 PM USER: Dave.Charville
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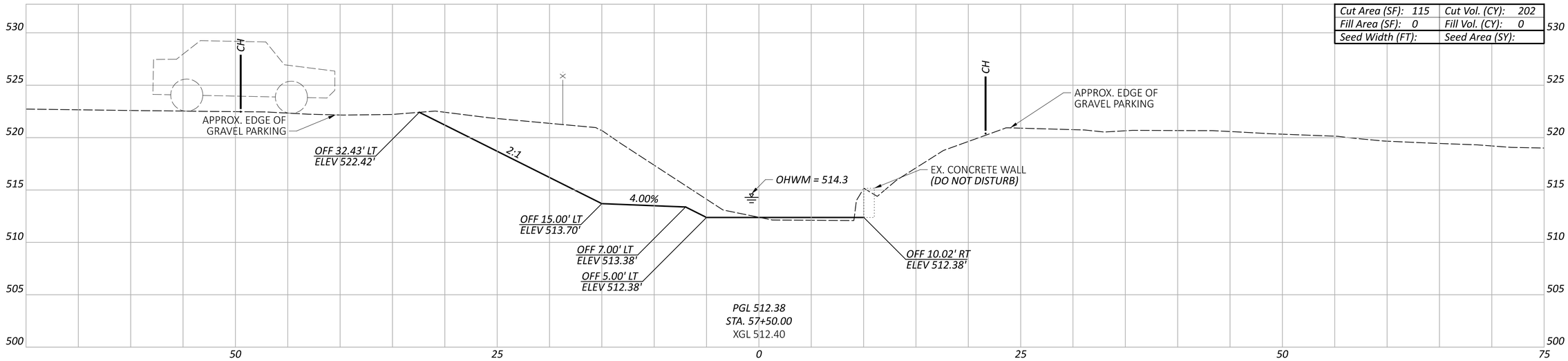

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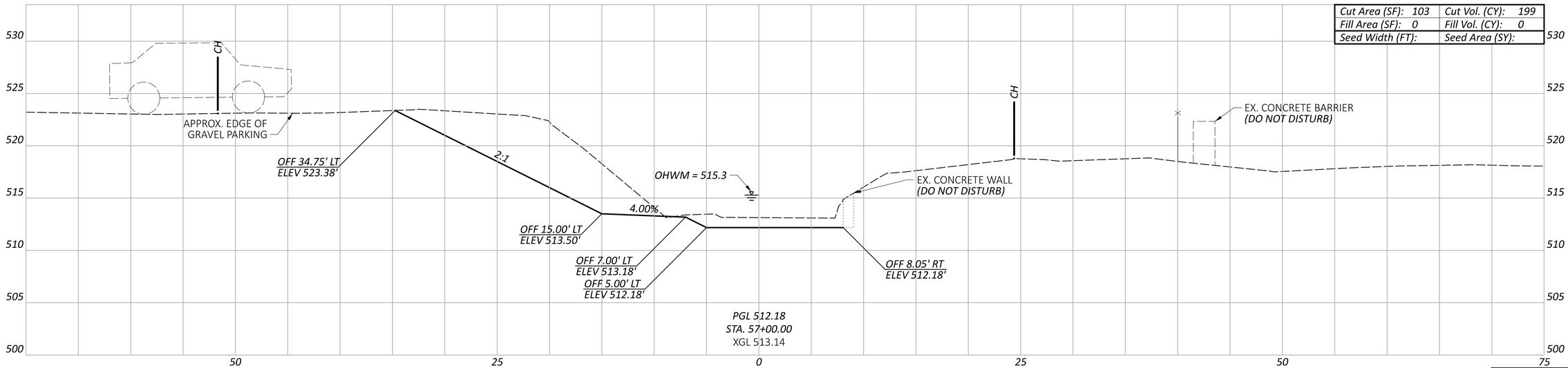

Cut Area (SF): 103	Cut Vol. (CY): 199
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

Sheet Totals		
Seeding	Cut	Fill
	401	

CROSS SECTIONS - CHANNEL
STA. 57+00.00 TO STA. 57+50.00

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.27 TOTAL 38

CLE-50-2.25

MODEL: CLP_1 - 57+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:00:45 PM USER: Dave.Charville
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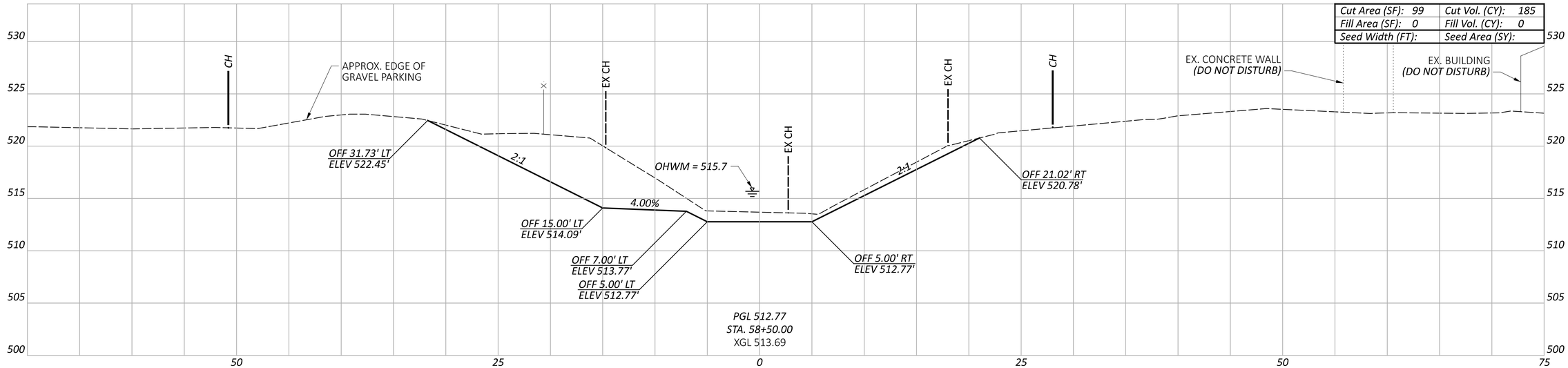

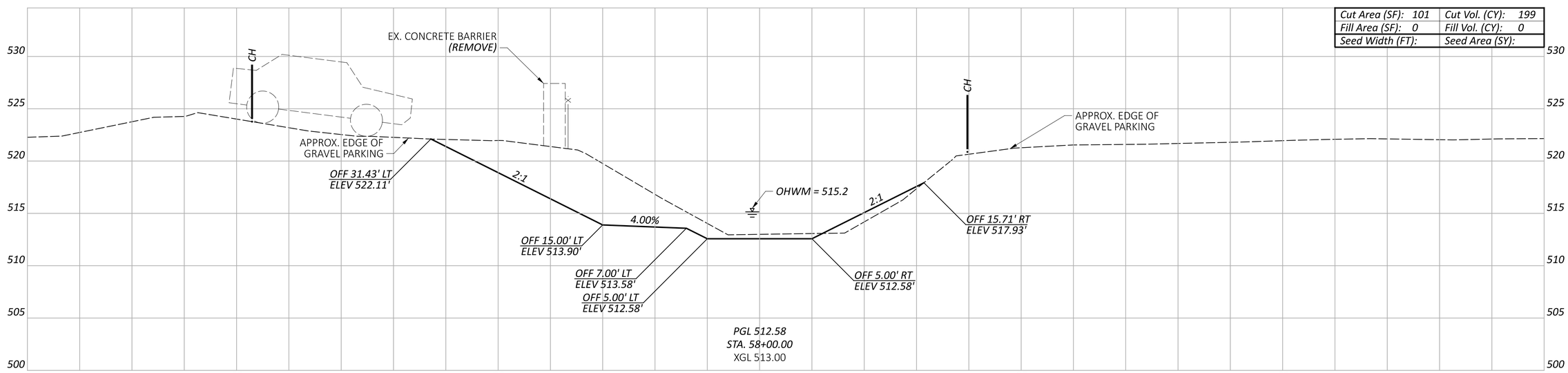

CROSS SECTIONS - CHANNEL
STA. 58+00.00 TO STA. 58+50.00

Sheet Totals		
Seeding	Cut	Fill
	384	

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.28 TOTAL 38

CLE-50-2.25

MODEL: CLP_1 - 58+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:00:50 PM USER: Dave.Charville
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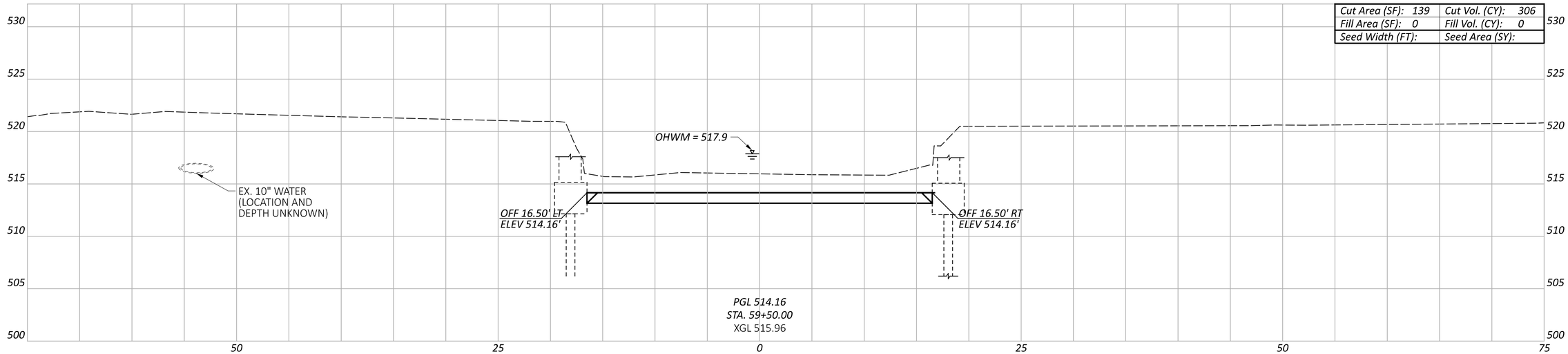

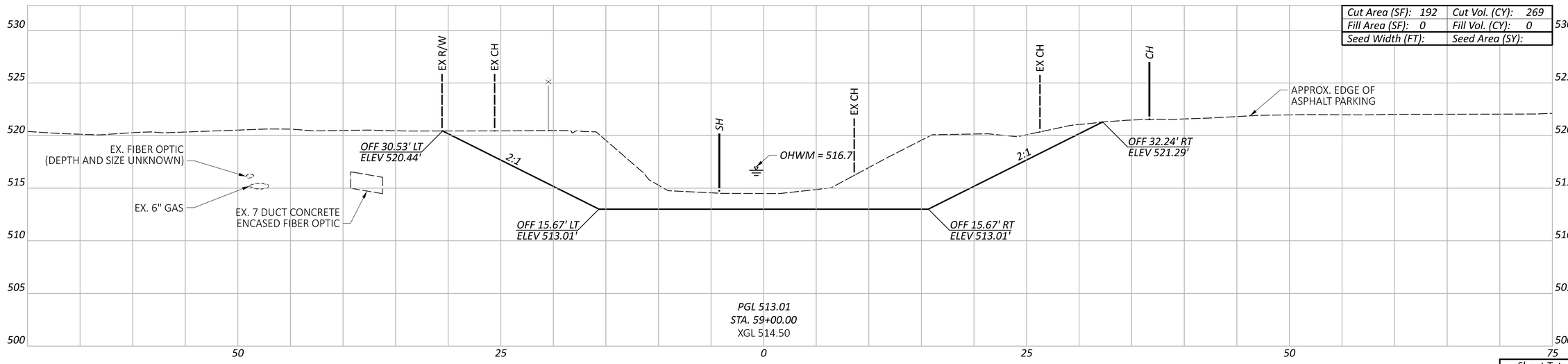

CROSS SECTIONS - CHANNEL
STA. 59+00.00 TO STA. 59+50.00

Sheet Totals		
Seeding	Cut	Fill
	575	

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.29 TOTAL 38

CLE-50-2.25

MODEL: CLP_1 - 59+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:00:52 PM USER: Dave.Charville
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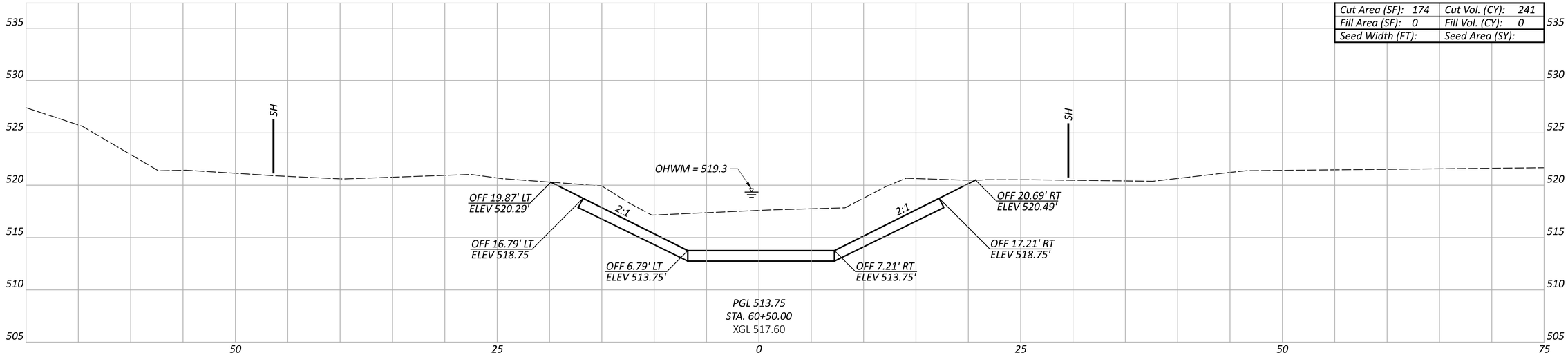
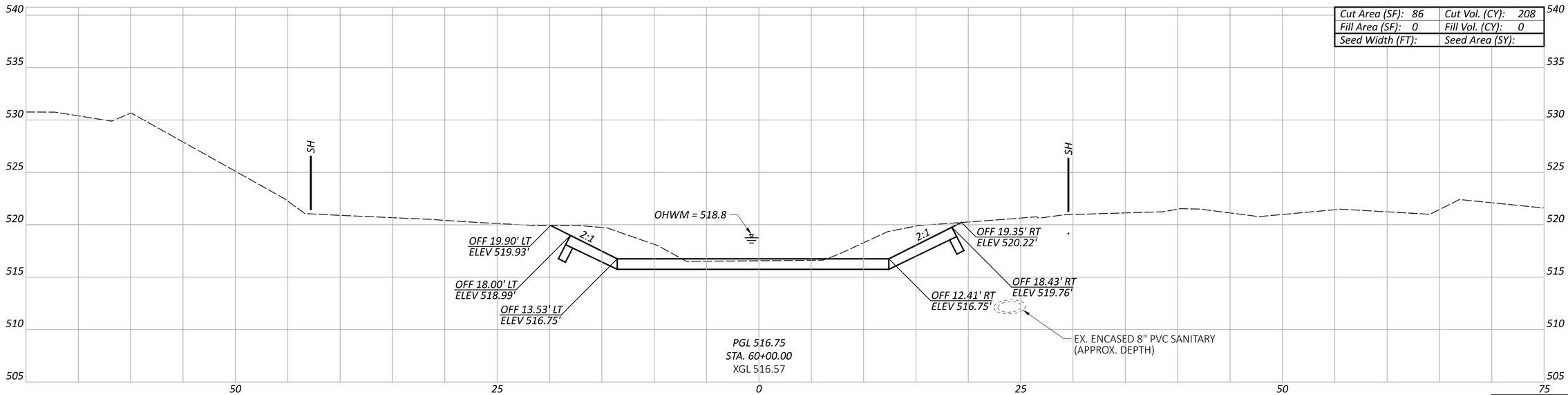




CROSS SECTIONS - CHANNEL
STA. 60+00.00 TO STA. 60+50.00

Sheet Totals		
Seeding	Cut	Fill
	449	

DESIGN AGENCY

DESIGNER GCB

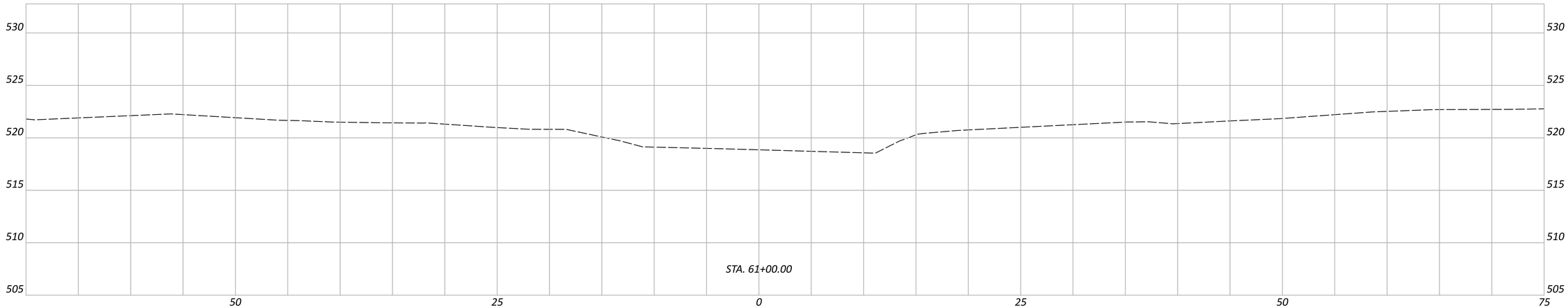
REVIEWER DTC 02/25/25

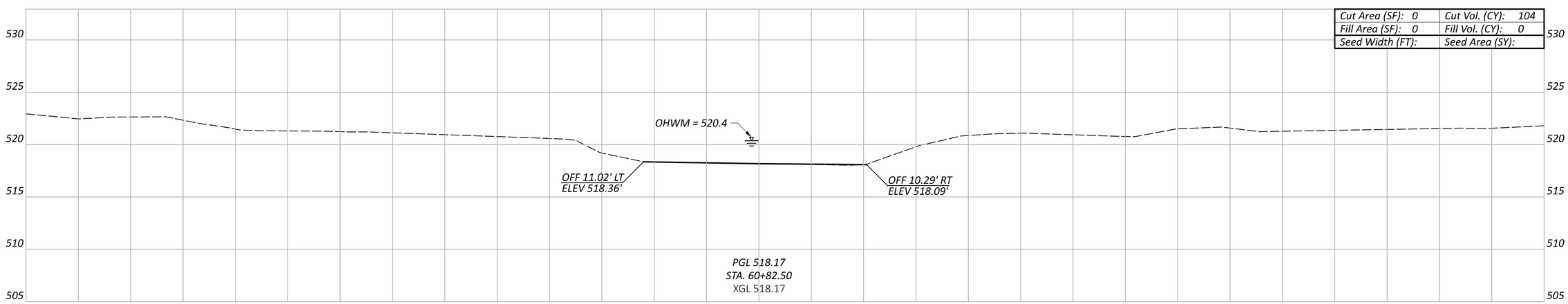
PROJECT ID 119024

SHEET P.30 TOTAL 38

CLE-50-2.25

MODEL: CLP_1 - 60+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:00:55 PM USER: Dave.Charville
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Clermont\119024\401-Engineering_TetraTech\Roadway\Sheets\119024_XS101.dgn





CROSS SECTIONS - CHANNEL
STA. 60+82.50 TO STA. 61+00.00

DESIGN AGENCY

DESIGNER
GCB

REVIEWER
DTC 02/25/25

PROJECT ID
119024

SHEET P.31 TOTAL 38

Sheet Totals		
Seeding	Cut	Fill
	99	

CLE-50-2.25

MODEL: CLP_1 - 60+50.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:00:58 PM USER: Dave.Charville
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CLE-50-2.25

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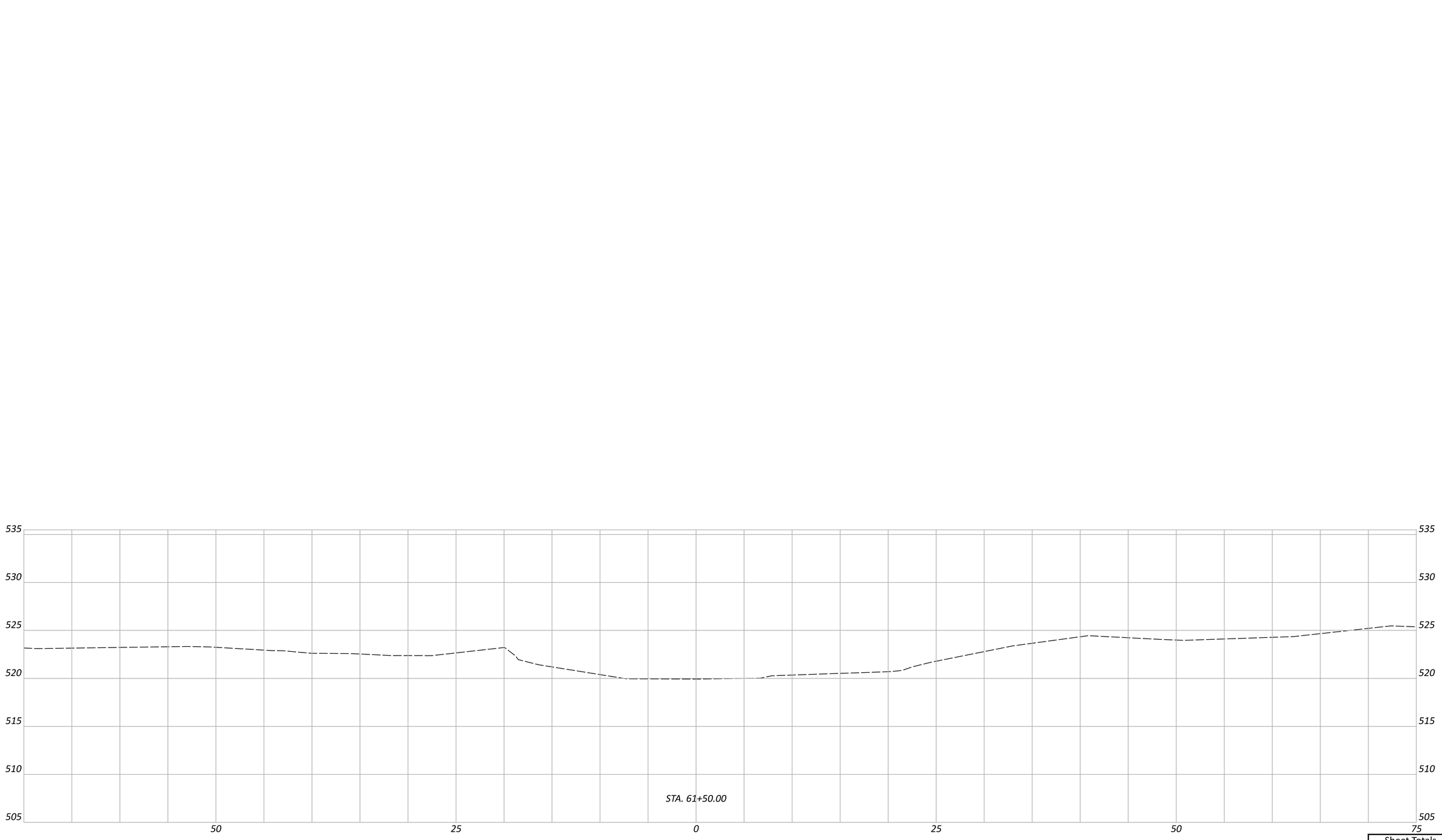


CROSS SECTIONS - CHANNEL
STA. 61+50.00

Sheet Totals		
Seeding	Cut	Fill

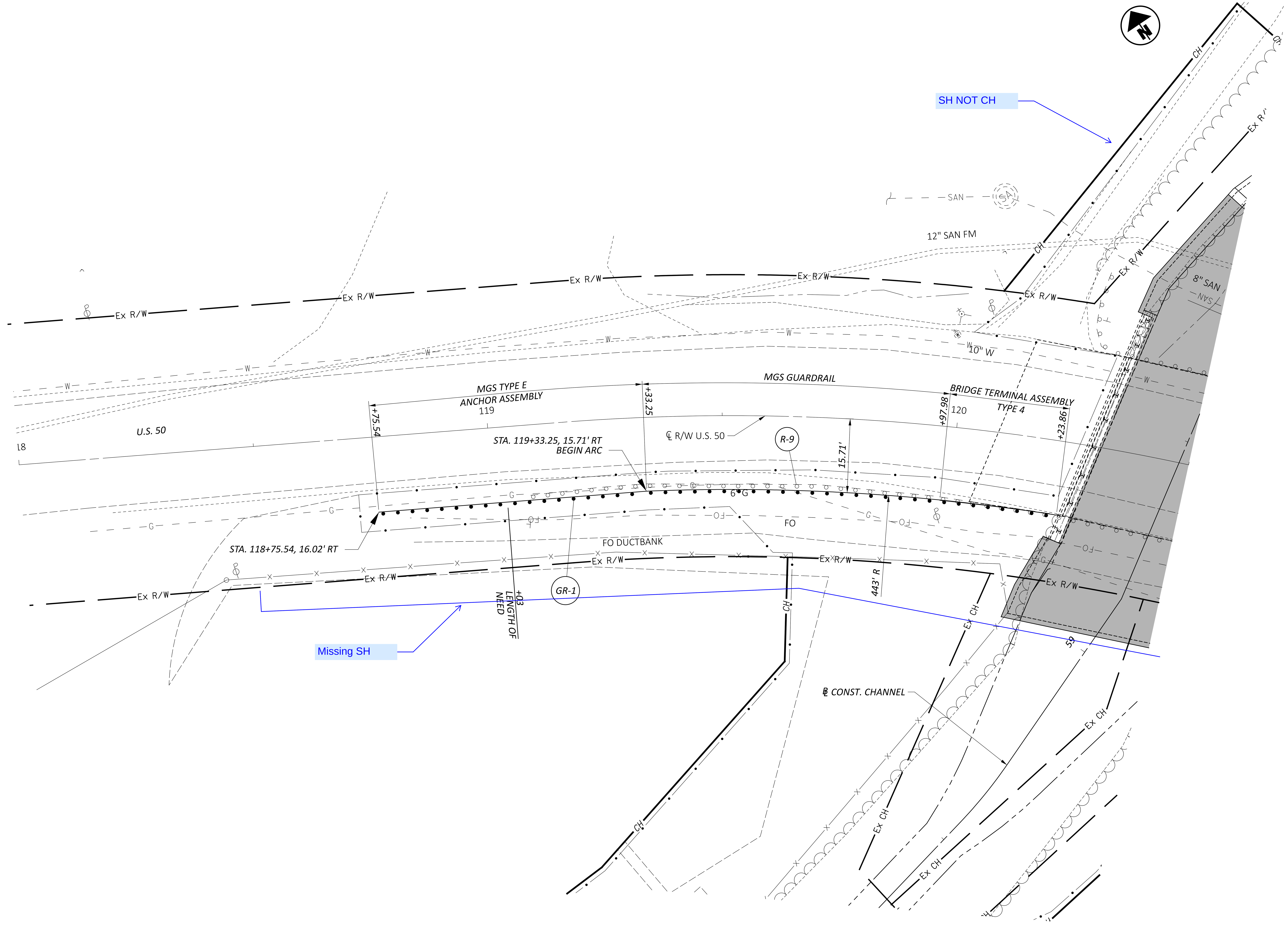
DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.32 TOTAL 38



HORIZONTAL SCALE IN FEET
0 5 10 20

GUARDRAIL PLAN
U.S. 50 - STA. 118+00 TO STA. 120+50

DESIGN AGENCY

DESIGNER	GCB
REVIEWER	DTC 02/25/25
PROJECT ID	119024
SHEET	P.33
TOTAL	38

CLE-50-2.25

MODEL: Guardrail - Plan 1 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:12:17 PM USER: Dave.Charville
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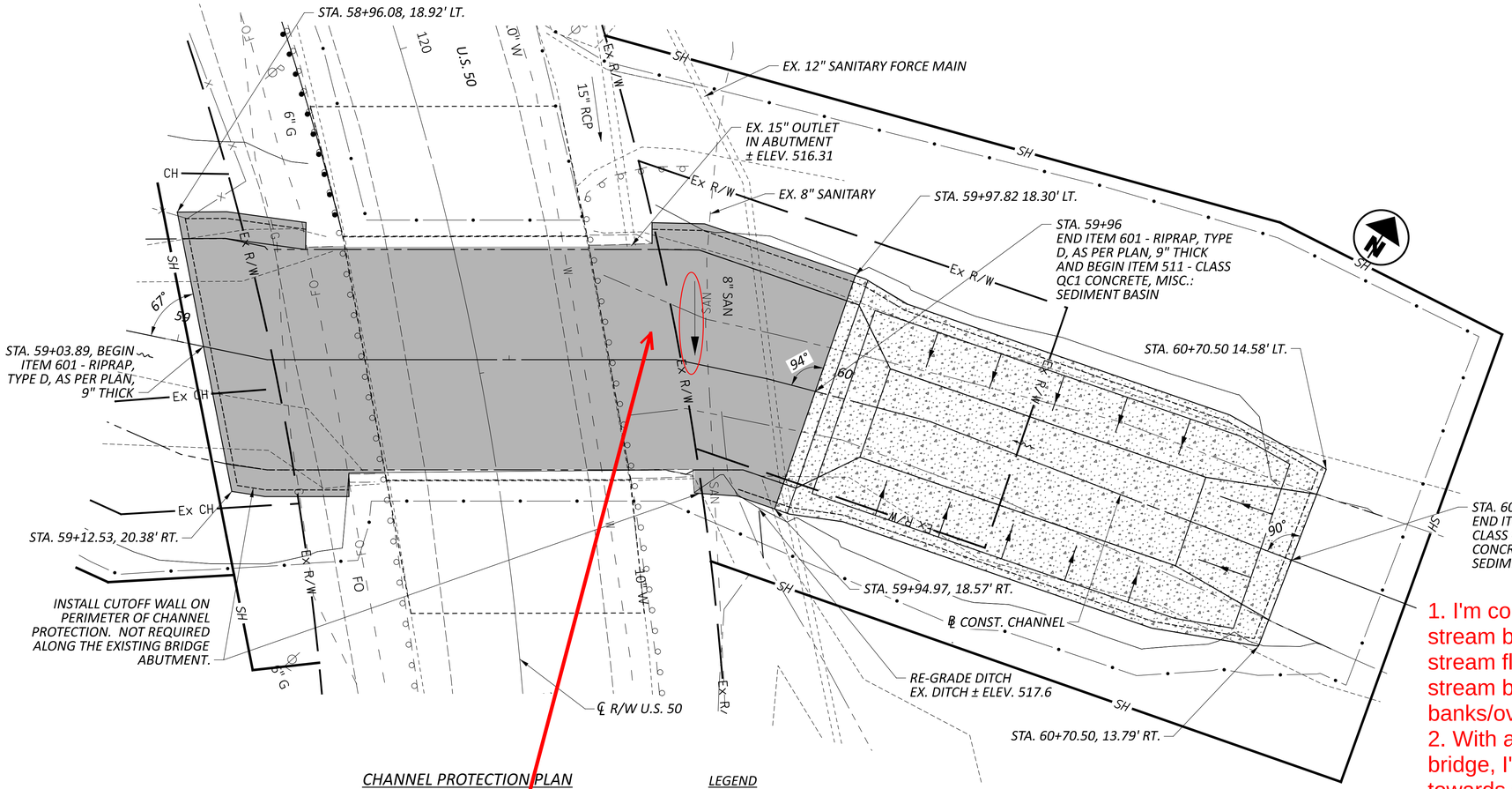


1. I'm concerned that we are raising the existing stream bottom. From at least 2002 to 2018, the stream flowed under this pipe by 6"+. Will raising the stream bottom this high cause water to get out of the banks/over the road at a higher frequency?
2. With a large flat area immediately upstream of the bridge, I'm concerned larger logs will be directed towards the bridge and get stuck. If we keep at the proposed elevation, I would prefer to start the downslope immediately after the sanitary pipe and sloping steeper to maximize the opening for debris passing and cleanout purposes.
3. If we cannot lower or move the sanitary crossing upstream (preferred), could we lower the concrete letting the pipe be an aerial crossing like it once was originally designed to be and let low flow pass underneath?

CHANNEL PROTECTION PLAN

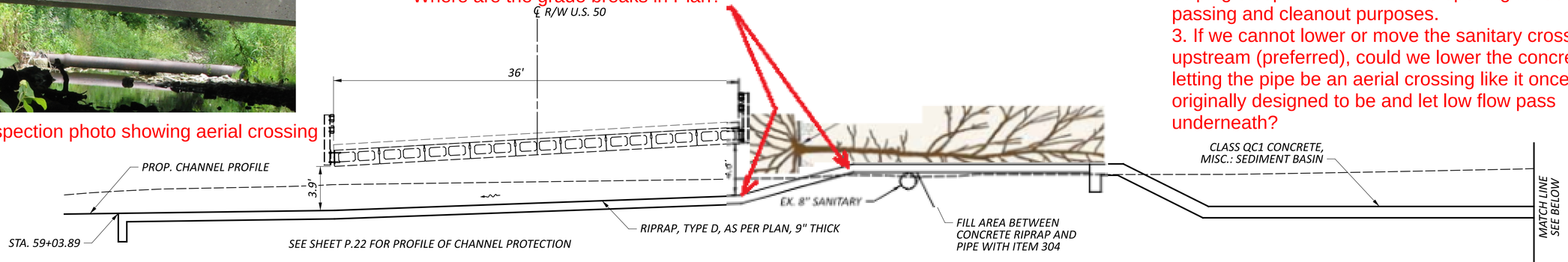
LEGEND

RIPRAP, TYPE D, AS PER PLAN, 9" THICK

CLASS QC1 CONCRETE, MISC.: SEDIMENT BASIN

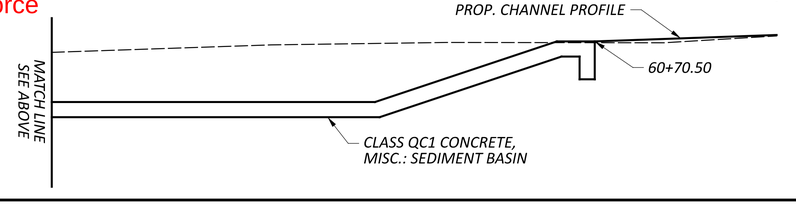
Where are the grade breaks in Plan?

2008 inspection photo showing aerial crossing



CHANNEL PROTECTION TRANSVERSE SECTION

Where is the 12" sanitary force main in cross section?



CHANNEL PROTECTION DETAIL
TRIBUTARY OF THE EAST FORK OF LITTLE MIAMI RIVER

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.34 TOTAL 38

CLE-50-2.25

MODEL: Channel Protection - Plan [Sheet] PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:12:31 PM USER: Dave.Charville
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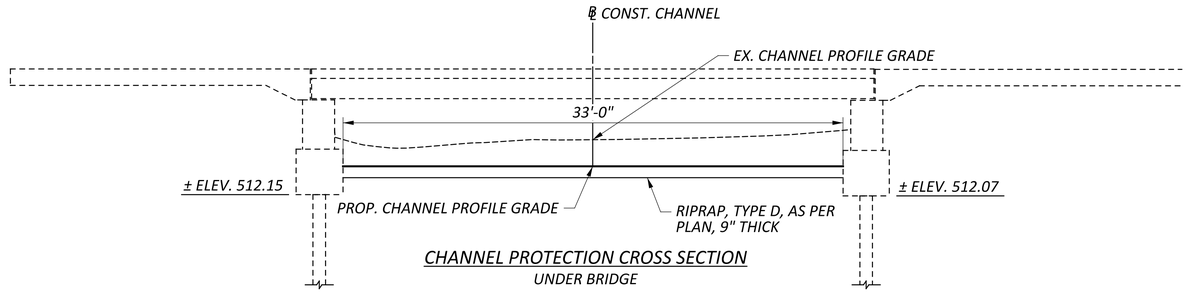
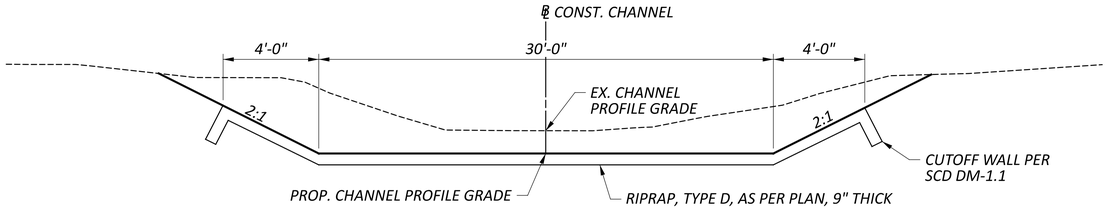
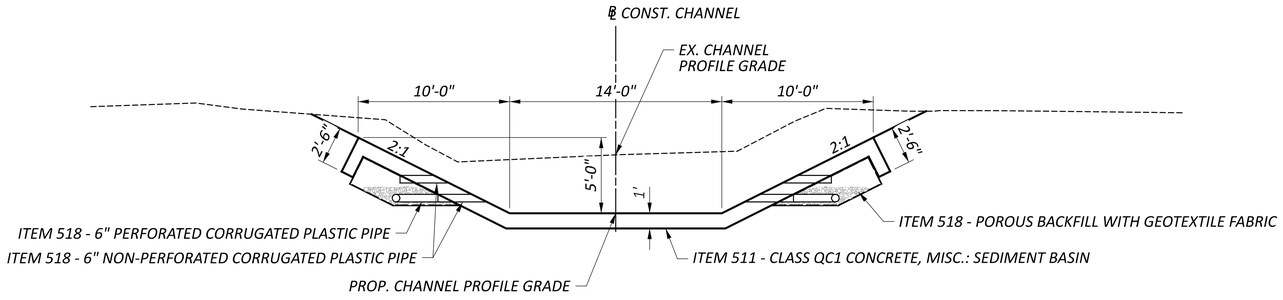


CHANNEL PROTECTION CROSS SECTION
UNDER BRIDGE



CHANNEL PROTECTION CROSS SECTION
UPSTREAM AND DOWNSTREAM OF BRIDGE



SEDIMENT BASIN CROSS SECTION

ITEM 601 - RIPRAP, TYPE D, AS PER PLAN, 9" THICK

THIS ITEM SHALL CONSIST OF CONSTRUCTING A 9" REINFORCED CONCRETE SLAB IN THE PROPOSED CHANNEL AT THE LOCATIONS DETAILED ON THIS SHEET IN ACCORDANCE WITH CMS 601 AND SCD DM-1.1, EXCEPT THAT THE REINFORCING SHALL BE STEEL BARS OR FABRICATED REINFORCEMENT EQUIVALENT TO #4 ROUND BARS AT 24" ON CENTER IN TWO DIRECTIONS, OR AN EQUIVALENT WIRE FABRIC.

ALL EXISTING STORM SEWER AND DITCH OUTLETS WITHIN THE VICINITY OF THE REINFORCED CONCRETE SLAB CHANNEL PROTECTION SHALL NOT BE OBSTRUCTED BY THE CONCRETE SLAB.

ALTERNATE CONSTRUCTION OF THE SLAB USING A WET-MIX PNEUMATICALLY PLACED SHOTCRETE IN ACCORDANCE WITH CMS 520 IS ACCEPTABLE PROVIDED THAT THE FINISH OF THE SLAB IS SMOOTH AND PARALLEL TO THE CHANNEL BASELINE.

CONSTRUCTION OF THE REINFORCED CONCRETE SLAB SHALL BE COMPLETED IN THE DRY.

ITEM 511 - CLASS QC1 CONCRETE, MISC.: SEDIMENT BASIN

CONSTRUCT THE SEDIMENT BASIN ACCORDING TO CMS 511 AND THE PLANS, WITH CLASS QC1 CONCRETE. CONSTRUCT THE BASIN IN THE DRY. FURNISH AND PLACE UNCOATED STEEL REINFORCEMENT ACCORDING TO CMS 509 AND THE PLAN. PLACE NON-PERFORATED PLASTIC PIPE FOR WEEP HOLES AS SHOWN IN THE PLAN. CURE THE CONCRETE UTILIZING METHOD A OR BY FLOODING WITH WATER, OR A COMBINATION OF THE TWO METHODS. PLACE BENT STAINLESS STEEL HARDWARE CLOTH IN EACH WEEP HOLE OUTLET AS AN ANIMAL GUARD.

ALL WORK NOTED ABOVE IS INCLUDED WITH THE BID UNIT PRICE PER CUBIC YARD FOR ITEM 511 - CLASS QC1 CONCRETE, MISC.: SEDIMENT BASIN, EXCEPT INCLUDE THE COST OF WATER CONTROL IN ITEM 503 - COFFERDAMS AND EXCAVATION BRACING.

SHEET NO.	STATION TO STATION			SIDE	503 COFFERDAMS AND EXCAVATION BRACING	511 CLASS QC1 CONCRETE, MISC.: SEDIMENT BASIN	518 POROUS BACKFILL WITH GEOTEXTILE FABRIC	518 6" PERFORATED CORRUGATED PLASTIC PIPE	518 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		601 RIPRAP, TYPE D, AS PER PLAN, 9" THICK
						CY	CY	FT	FT		SY
	CHANNEL										
34	59+04.00	TO	59+96.00	LT/RT							400
34	59+96.00	TO	60+70.50	LT/RT	LUMP	84	63	227	86		
TOTALS CARRIED TO GENERAL SUMMARY					LS	84	63	227	86		400

CHANNEL PROTECTION DETAILS AND SUBSUMMARY
TRIBUTARY OF THE EAST FORK OF LITTLE MIAMI RIVER

DESIGN AGENCY

DESIGNER GCB
REVIEWER DTC 02/25/25
PROJECT ID 119024
SHEET P.35 TOTAL 38

CLE-50-2.25

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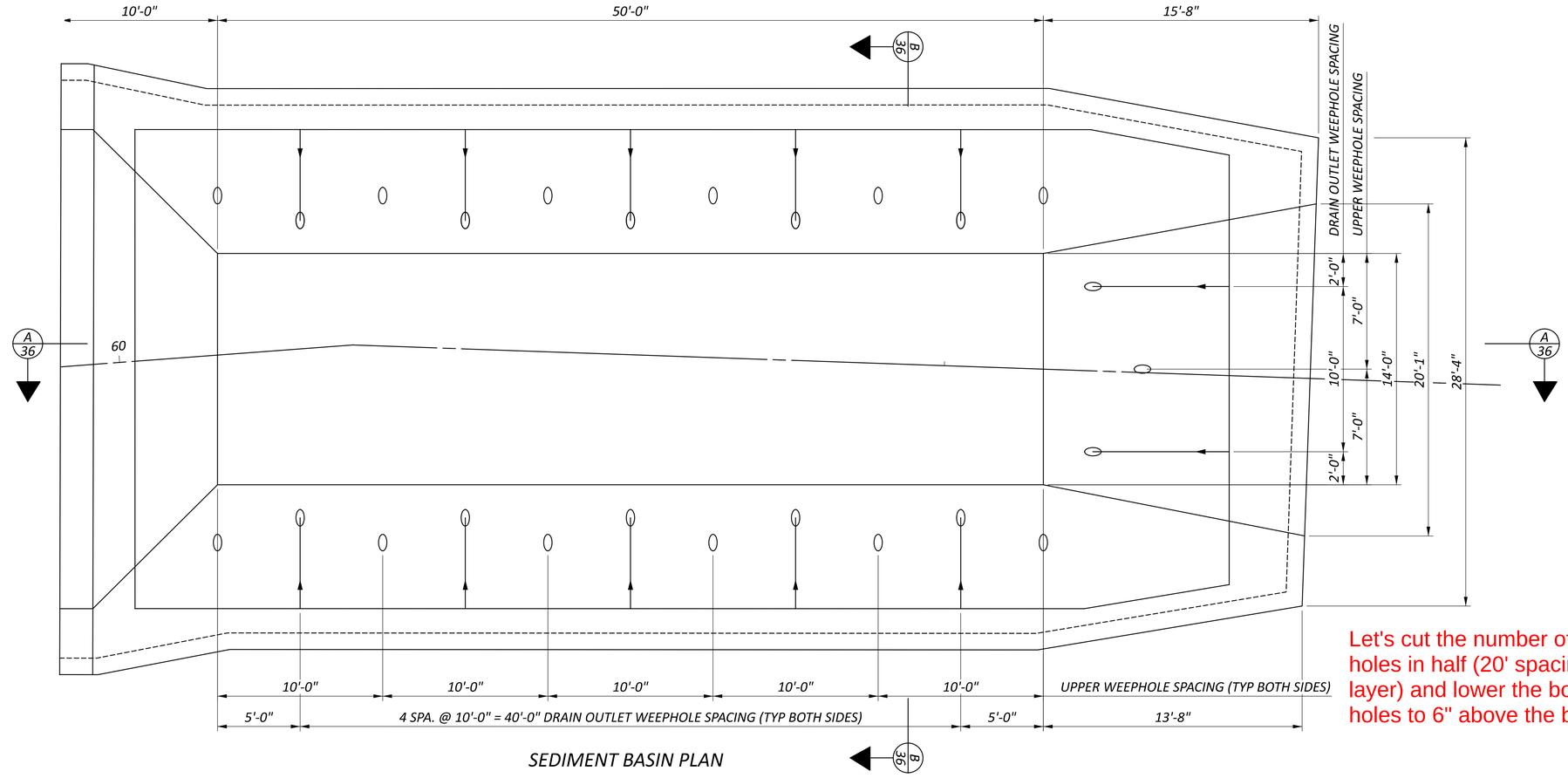
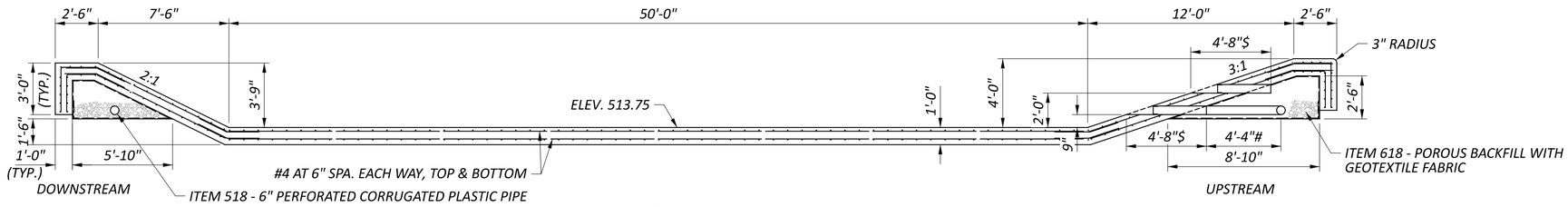
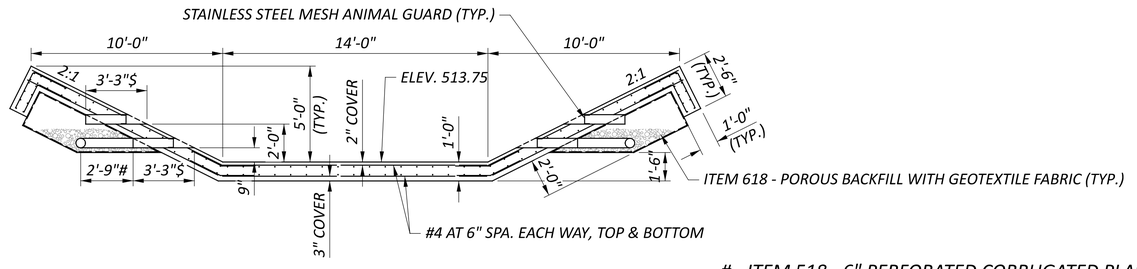


SEDIMENT BASIN PLAN



SECTION A-A



SECTION B-B

\# - ITEM 518 - 6" PERFORATED CORRUGATED PLASTIC PIPE
$ - ITEM 518 - 6" NON-PERFORATED CORRUGATED PLASTIC PIPE

Let's cut the number of weep holes in half (20' spacing per layer) and lower the bottom holes to 6" above the bottom.

SEDIMENT BASIN DETAIL
TRIBUTARY OF THE EAST FORK OF LITTLE MIAMI RIVER

DESIGN AGENCY

DESIGNER GCB

REVIEWER DTC 02/25/25

PROJECT ID 119024

SHEET P.36 TOTAL 38

CLE-50-2.25

MODEL: Sheet_SurvFt PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:12:53 PM USER: Dave.Charville
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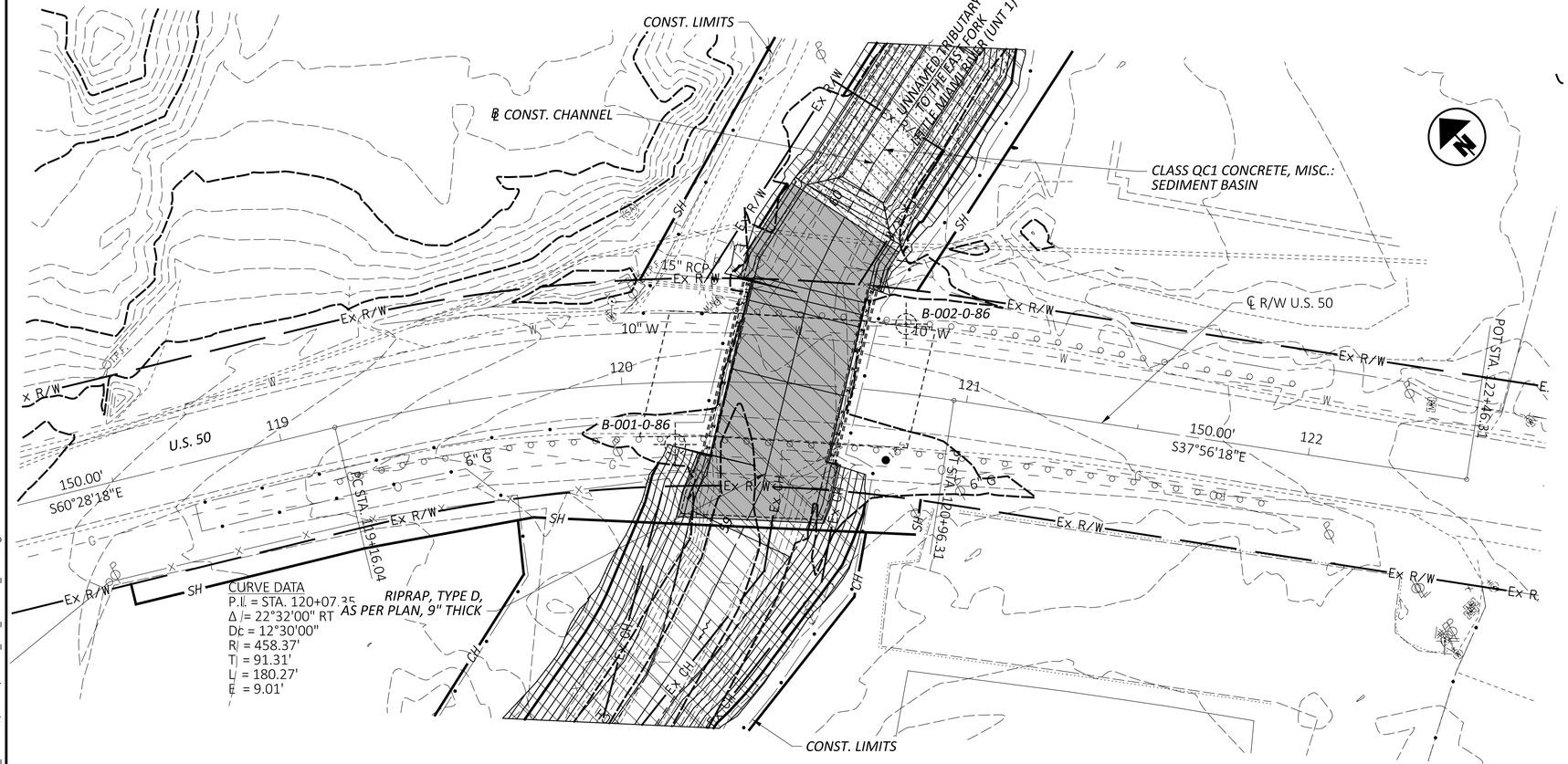

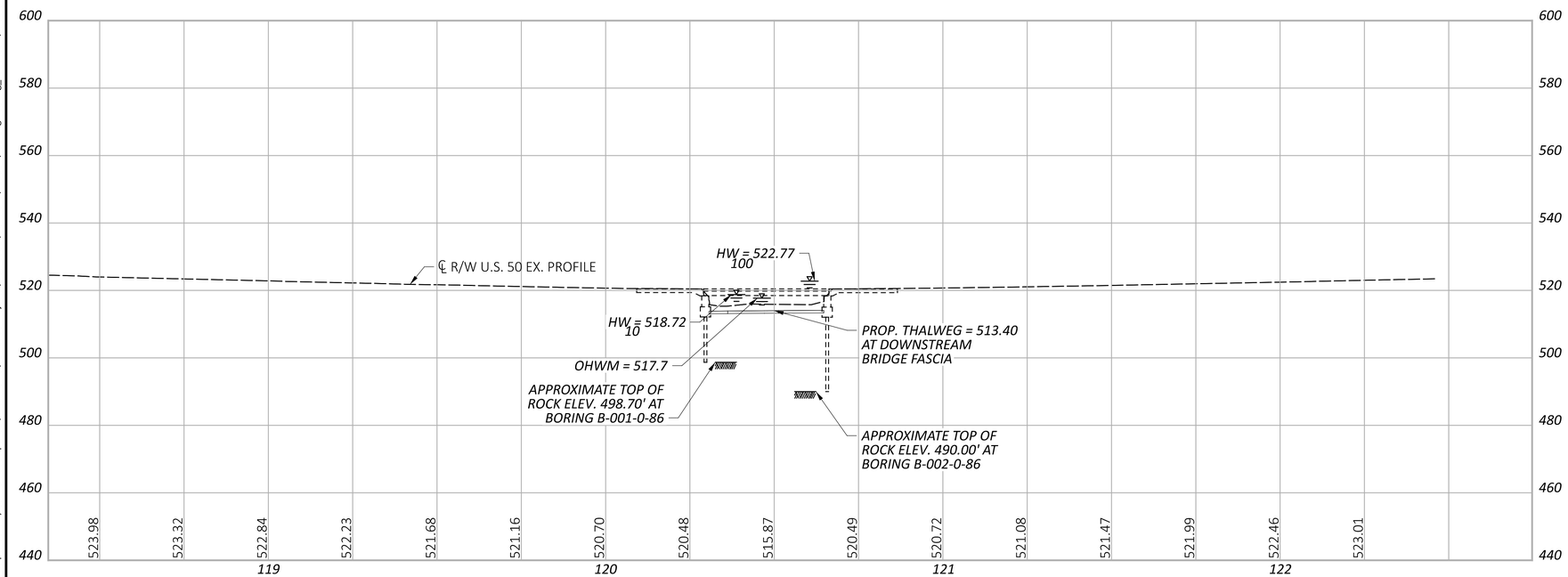

BENCHMARK DATA

BM #2 STA. 120+23.27, ELEV. 521.587, OFFSET 19.82, LEFT

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET P.2

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:
2025 ADT = 5200 2025 ADTT = 104
2037 ADT = 5200 2037 ADTT = 104
DIRECTIONAL DISTRIBUTION = 50.1%

LEGEND

- HISTORIC BORING LOCATION
- CHANNEL EXCAVATION

HYDRAULIC DATA

DRAINAGE AREA = 0.96 SQ. MILES
Q (10) = 564 CFS V (10) = 4.45 FT/S
Q (100) = 1180 CFS V (100) = 9.64 FT/S
STRUCTURE CLEARS THE 10 YEAR
DESIGN HW BY 0.63 FEET
DOWNSTREAM SIDE OF BRIDGE UNDER PRESSURE FLOW).

EXISTING STRUCTURE

TYPE: SINGLE SPAN PRESTRESSED CONCRETE COMPOSITE BOX BEAM SUPERSTRUCTURE WITH REINFORCED CONCRETE SUBSTRUCTURE

SPANS: 36'-0"
ROADWAY: 36'-0" F/F GUARDRAIL
LOADING: HS 20-44 AND THE ALTERNATE MILITARY LOADING
SKEW: 10°00'00" LEFT FORWARD
WEARING SURFACE: BITUMINOUS
APPROACH SLABS: AS-1-81 (20' LONG)
ALIGNMENT: CHORD OF 12°-30'00" CURVE RT.
SUPERELEVATION: 0.060 FT/FT
STRUCTURE FILE NUMBER: 1300830
DATE BUILT: 1990
DISPOSITION: GOOD CONDITION, TO REMAIN

SITE PLAN
BRIDGE NO. CLE-50-2.250
US 50 OVER TRIBUTARY OF THE EAST FORK OF THE LITTLE MIAMI RIVER

SFN 1300830
DESIGN AGENCY
DESIGNER GCB | CHECKER ---NA---
REVIEWER DTC 02/25/25
PROJECT ID 119024
SUBSET 1 | TOTAL 1
SHEET P.37 | TOTAL 38

CLE-50-2.25

MODEL: 119024_SFN_1300830_SP002 PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:13:08 PM USER: Dave.Charville
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CLERMONT COUNTY
BRIDGE CLE-50-02.28
3
3

LOG OF BORING

DATE STARTED 1-9-86 SAMPLER: TYPE S.S. DIA. 1-3/8 WATER ELEVATION 511.5
DATE COMPLETED 1-9-86 CASING: LENGTH 0 DIA. 0
BORING NUMBER B-1
STATION & OFFSET 120+15, 18' RT. (REAR ABUTMENT) SURFACE ELEVATION 519.0'

ELEV.	Depth	Std. Pen. (N)	DESCRIPTION	Sa. No.	PHYSICAL CHARACTERISTICS % Agg	% CS	% FS	% Silt	% Clay	LL	PI	WC	SHTL Class
519.0	0												
	2	6-4-3	BROWN CLAYEY SAND AND GRAVEL	1	–	–	–	–	–	–	–	11	VISUAL
515.0	4	3-3-2	BROWN CLAYEY SAND, GRAVEL, LIMESTONE ROCK	2	62	7	12	9	10	NP	NP	16	A-1-b
	6	2-30-45	BROWN CLAYEY SANDY SILT	3	14	14	11	38	23	30	9	21	A-4-a
511.0	8	8-9-17	BROWN CLAYEY SANDY SILT	4	15	8	13	39	25	23	7	14	A-4-a
507.0	10	9-14-16	BROWN SILTY SAND AND GRAVEL WITH LIMESTONE ROCKS	5	–	–	–	–	–	NP	NP	9	VISUAL
	12	8-11-14	BROWN CLAYEY SAND AND GRAVEL WITH LIMESTONE ROCKS	6	25	22	19	20	11	33	14	14	A-2-6
503.0	14	16-19-28	LIGHT TAN SILTY CLAY	7	0	2	3	59	55	45	24	18	A-7-6
	16	19-23-28	LIGHT TAN SILTY CLAY	8	0	3	5	49	47	44	24	16	A-7-6
499.0	18												
498.7	20	7-25/0	LIGHT TAN CLAY SHALE	9	–	–	–	–	–	–	–	–	VISUAL
	22	CORE REC. LOSS FT. FT.	GRAY SOFT SHALE WITH 9% LIMESTONE LAYERS, HORIZONTALLY BEDDED, 2" CLAY SEAM IN TIP. CORE LOSS 9%. RQD=47%										
495.0	24	5.25 0.75											
	26		GRAY SOFT SHALE, HORIZONTALLY BEDDED, THINLY LOMINATED. NO LIMESTONE. FEW VERY THIN CLAY SEAMS. CORE LOSS 5%. RQD=36%										
	28	4.75 0.25											
491.0	30												
488.7													

TOP OF ROCK
BOTTOM OF BORING

LOG OF BORING

DATE STARTED 1-10-86 SAMPLER: TYPE S.S. DIA. 1-3/8 WATER ELEVATION: 508.0
DATE COMPLETED 1-11-86 CASING: LENGTH 0 DIA. 0
BORING NUMBER B-2
STATION & OFFSET 120+80, 20' LT. (FORWARD ABUTMENT) SURFACE ELEVATION 519.0'

ELEV.	Depth	Std. Pen. (N)	DESCRIPTION	Sa. No.	PHYSICAL CHARACTERISTICS % Agg	% CS	% FS	% Silt	% Clay	LL	PI	WC	SHTL Class
519.0	0												
	2	15 10-7	DARK BROWN SILTY SAND BROWN SAND, GRAVEL AND LIMESTONE ROCKS	1	–	–	–	–	–	NP	NP	23	VISUAL
				2	–	–	–	–	–	NP	NP	10	VISUAL
515.0	4	6-5-3	BROWN SAND, GRAVEL AND LIMESTONE ROCKS	3	–	–	–	–	–	NP	NP	19	VISUAL
	6	4-3-3	BROWN SANDY CLAYEY SILT	4	21	7	12	45	15	28	10	22	A-6-2
511.0	8												
	10	16-11-13	BROWN SILTY SAND, GRAVEL AND LIMESTONE ROCKS	5	66	13	8	8	5	28	10	14	A-2-4
507.0	12	8-8-6	BROWN CLAYEY SAND AND GRAVEL MIXED WITH LIMESTONE ROCKS	6	–	–	–	–	–	–	–	17	VISUAL
	14	11-10-7	BROWN CLAYEY SAND AND GRAVEL MIXED WITH LIMESTONE ROCKS	7	61	8	15	10	6	28	10	20	A-2-4
503.0	16	4-5-4	NO SAMPLE RECOVERY	8	–	–	–	–	–	–	–	–	–
	18	6-7-9	LIGHT TAN SILTY CLAY	9	0	8	7	39	46	45	28	15	A-7-5
499.0	20												
	22	8-13-14	LIGHT TAN SILTY CLAY	10	–	–	–	–	–	–	–	18	VISUAL
495.0	24	16-19-28	LIGHT TAN SILTY CLAY	11	0	2	2	47	49	41	18	23	A-7-6
	26	21-27-34	LIGHT GRAY CLAY SHALE	12	–	–	–	–	–	–	–	22	VISUAL
491.0	28												
490.0		39-62	LIGHT GRAY CLAY SHALE	13	–	–	–	–	–	–	–	21	VISUAL
	30	CORE REC. LOSS FT. FT.	GRAY, HARD SHALE, HORIZONTALLY BEDDED, THINLY LAMINATED 15% LIMESTONE LAYERS, THREE 1" CLAY SEAMS. CORE LOSS 7%, RQD=50%										
485.0	34	4.66 0.34											
	36	5.00 0.00	GRAY HARD SHALE, FINE GRAINED, SOME FOSSILIFEROUS LAYERS, NO LIMESTONE, NO CLAY SEAMS. CORE LOSS 0%. RQD=53%										
480.0	38												
	40												

TOP OF ROCK
BOTTOM OF BORING

THE H. C. NUTTING COMPANY
GEOTECHNICAL ENGINEERS
AIRPORT ROAD CINCINNATI, OHIO 45226

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. CLE-50-02.28 OVER TRIBUTARY OF LITTLE MIAMI RIVER

SEC: CLERMONT COUNTY

BORING DATA

	REVIEWED BY	DATE
	CRL	2-28-86

HISTORIC BORING LOGS

DESIGN AGENCY

DESIGNER GCB
REVIEWER DTC 02/25/25
PROJECT ID 119024
SHEET P.38 TOTAL 38

CLE-50-2.25

MODEL: Sheet_SurvFt PAPERSIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 10:13:20 PM USER: Dave.Charville
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