

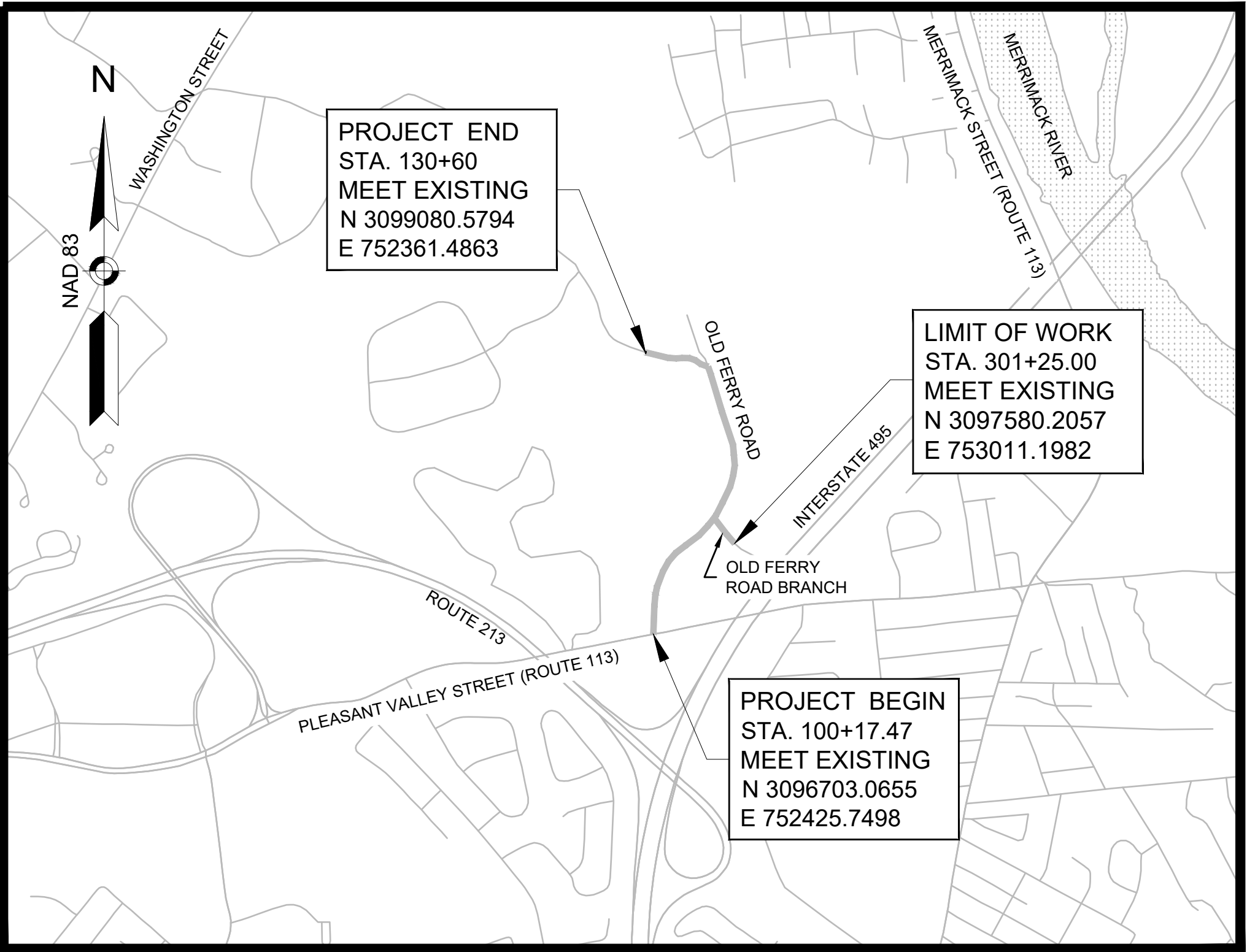
# CITY OF METHUEN, MASSACHUSETTS

## DEPARTMENT OF PUBLIC WORKS

### OLD FERRY ROAD ROADWAY RECONSTRUCTION

#### INDEX

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LENGTH OF PROJECT = 3,042.53 FEET = 0.576 MILES



MAYOR  
DAVID P. BEAUREGARD, JR

DPW DIRECTOR  
PATRICK BOWER, PE

DEPUTY DPW DIRECTOR  
FELIX GARCIA, PE

CITY COUNCIL CHAIR  
RONALD MARSAN

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CITY COUNCIL MEMBERS  
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NICHOLAS DIZOGLIO  
FRANCISCO SURILLO  
PATRICIA VALLEY  
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NOTICE:  
McClure Engineering Company waives any and all responsibility and liability for problems which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for problems which arise from failure to obtain and/or follow the engineers guidance with respect to any errors, omissions, inconsistencies, ambiguities, or conflicts which are alleged.

PREPARED FOR:  
DEPARTMENT OF PUBLIC WORKS  
10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION**  
**METHUEN, MASSACHUSETTS**

REVISIONS		
NO.	REVISION	DATE

1/05/2026










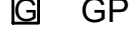









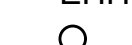

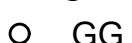























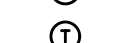





















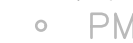




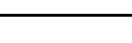











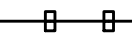

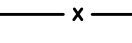



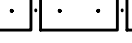












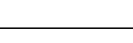
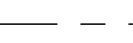

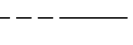
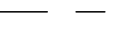
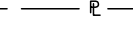
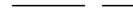





**TITLE SHEET &  
INDEX**

SCALE: AS NOTED  
  
DRAWN/DESIGN BY: JHP  
CHECKED BY: JFO  
  
SHEET NO. 1 OF 71








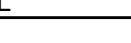







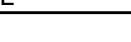

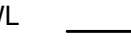





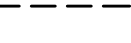

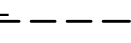




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DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: LE (01)

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		JERSEY BARRIER
		CATCH BASIN
		CATCH BASIN CURB INLET
		FLAG POLE
		GAS PUMP
		MAIL BOX
		POST SQUARE
		POST CIRCULAR
		WELL
		ELECTRIC HANDHOLE
		FENCE GATE POST
		GAS GATE
		BORING HOLE
		MONITORING WELL
		TEST PIT
		HYDRANT
		LIGHT POLE
		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
		MASSACHUSETTS HIGHWAY BOUND
		MONUMENT
		STONE BOUND
		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
		TROLLEY POLE OR GUY POLE
		TRANSMISSION POLE
		UTILITY POLE W / 1 LIGHT
		UTILITY POLE
		BUSH
		TREE
		STUMP
		SWAMP / MARSH
		WATER GATE
		PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
		CONTOURS (ON-THE-GROUND SURVEY DATA)
		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		GUARD RAIL - DOUBLE FACE - STEEL POSTS
		GUARD RAIL - DOUBLE FACE - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		HAY BALES/SILT FENCE
		TREE LINE OR LIMIT OF CLEARING AND GRUBBING
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
		LEGEND "ONLY" - WHITE
		STOP LINE (12" WHITE)
		CROSSWALK (12" OR 24")
		SOLID WHITE LINE (6" OR 12")
		SOLID YELLOW LINE (6" OR 12")
		* BROKEN WHITE LINE (6")
		* BROKEN YELLOW LINE (6")
		*** DOTTED WHITE LINE (6")
		*** DOTTED YELLOW LINE (6")
		** DOTTED WHITE LINE EXTENSION (6")
		** DOTTED YELLOW LINE EXTENSION (6")
		* DOUBLE WHITE LINE (6")
		* DOUBLE YELLOW LINE (6")
* BROKEN WHITE/YELLOW LINES TO BE 10' LINE SEGMENTS WITH 30' GAPS (TYP.) (BYL ON SHARED USE PATH TO BE 3' IN LENGTH WITH 9' GAP)		
** DWLEx AND DYLEx LINES TO BE 2' IN LENGTH WITH 6' GAP (TYP.)		
*** DWL AND DYL LINES TO BE 3' IN LENGTH WITH 9' GAP (TYP.) (IF WIDE LINE IS SPECIFIED, THE WIDTH SHALL BE 12")		

GENERAL NOTES

- TOPOGRAPHICAL INFORMATION WAS PROVIDED BY McCLURE, MAY 2025. VERTICAL DATUM IS BASED ON NAVD 1988. HORIZONTAL DATUM IS BASED ON MA MAINLAND NAD 83.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE EXACTLY AND TO PRESERVE ANY AND ALL UNDERGROUND UTILITIES. CALL "DIG-SAFE" 1-888-DIGSAFE (344-7233) AT LEAST 72 HOURS BEFORE COMMENCING CONSTRUCTION.
- WHERE AN EXISTING UNDERGROUND UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS, OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE & RESET" (R&R).
- ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS NOTED OTHERWISE.
- ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
- ALL EXISTING STATE, COUNTY, CITY AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
- ALL TRANSVERSE AND LONGITUDINAL JOINTS BETWEEN NEW SURFACE PAVEMENT AND EXISTING SURFACE PAVEMENT TO REMAIN SHALL BE COATED WITH A HOT POURED RUBBERIZED ASPHALT SEALANT MEETING THE REQUIREMENTS OF ITEM 453.
- ALL DISTURBED AREAS NOT DESIGNATED TO BE PAVED SHALL HAVE LOAM BORROW PLACED AND SEEDED. THE LOAM BORROW SHALL HAVE A MINIMUM DEPTH OF 4 INCHES AND SHALL BE PLACED FLUSH WITH THE TOP OF THE ADJACENT CURB, EDGING, BERM OR PAVEMENT SURFACE.
- THE LIMIT OF WORK AREA SHALL BE THE STREET RIGHT OF WAY UNLESS SHOWN OTHERWISE.
- ALL PROPERTY LINES BETWEEN ABUTTERS ARE APPROXIMATE ONLY.
- PRIOR TO THE START OF ANY NEW UTILITY WORK, ALL ELEVATIONS OF EXISTING UTILITIES IN THOSE AREAS ARE TO BE VERIFIED. THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY SHOULD ANY DISCREPANCIES OCCUR.
- ALL CASTINGS SHALL BE SET FLUSH WITH FINISHED GRADE.
- ALL PUBLICLY OWNED GATE BOXES, SERVICE BOXES, MANHOLE FRAMES AND COVERS SHALL BE ADJUSTED TO GRADE BY THE CONTRACTOR.
- ALL NEW DRIVEWAY GRADES SHALL MATCH EXISTING GRADES AT THE LIMITS OF REMOVAL UNLESS SHOWN OTHERWISE ON THE PLANS AND CROSS-SECTIONS.
- THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO PROTECT ALL EXISTING TREES AND ROOTS THAT ARE NOT DESIGNATED FOR REMOVAL.
- CONTRACTOR TO CONTACT ENGINEER PRIOR TO INSTALLATION OF BOUNDS FOR FINAL LOCATIONS.
- DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. ANY FIELD ADJUSTMENTS TO LINE AND GRADE UP TO A DEPTH OF 5 FEET SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5 FEET WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.

GENERAL ABBREVIATIONS

AADT	ANNUAL AVERAGE DAILY TRAFFIC	EXC	EXCAVATION	PVC	POINT OF VERTICAL CURVATURE
ABAN	ABANDON	F&C	FRAME AND COVER	PVCC	POINT OF VERTICAL COMPOUND CURVATURE
ADJ	ADJUST	F&G	FRAME AND GRATE	PVI	POINT OF VERTICAL INTERSECTION
APPROX.	APPROXIMATE	FDN.	FOUNDATION	PVRC	POINT OF VERTICAL REVERSE CURVATURE
A.C.	ASPHALT CONCRETE	FES	FLARED END SECTION	PVT	POINT OF VERTICAL TANGENCY
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE	FLDSTN	FIELDSTONE	PVMT	PAVEMENT
BIT.	BITUMINOUS	GAR	GARAGE	PWW	PAVED WATER WAY
BC	BOTTOM OF CURB	GD	GROUND	R	RADIUS OF CURVATURE
BD.	BOUND	GG	GAS GATE	R&D	REMOVE AND DISPOSE
BL	BASELINE	GI	GUTTER INLET	RCP	REINFORCED CONCRETE PIPE
BLDG	BUILDING	GIP	GALVANIZED IRON PIPE	RD	ROAD
BLSF	BORDERING LANDS SUBJECT TO FLOODING	GRAN	GRANITE	RDWY	ROADWAY
BM	BENCHMARK	GRAV	GRAVEL	REM	REMOVE
BO	BY OTHERS	GRD	GUARD	RET	RETAIN
BOS	BOTTOM OF SLOPE	HDW	HEADWALL	RET WALL	RETAINING WALL
BR.	BRIDGE	HMA	HOT MIX ASPHALT	ROW	RIGHT OF WAY
BVW	BORDERING VEGETATED WETLANDS	HOR	HORIZONTAL	RR	RAILROAD
BW	BOTTOM OF WALL	HYD	HYDRANT	R&R	REMOVE AND RESET
CB	CATCH BASIN	INV	INVERT	R&S	REMOVE AND STACK
CBCI	CATCH BASIN WITH CURB INLET	JCT	JUNCTION	RT	RIGHT
CC	CEMENT CONCRETE	L	LENGTH OF CURVE	SB	STONE BOUND
CCM	CEMENT CONCRETE MASONRY	LB	LEACH BASIN	SHLD	SHOULDER
CEM	CEMENT	LP	LIGHT POLE	SMH	SEWER MANHOLE
CI	CURB INLET	LT	LEFT	ST	STREET
CIP	CAST IRON PIPE	MAX	MAXIMUM	STA	STATION
CIPP	CURED IN PLACE PIPE	MB	MAILBOX	SSD	STOPPING SIGHT DISTANCE
CLF	CHAIN LINK FENCE	MH	MANHOLE	SHLO	STATE HIGHWAY LAYOUT LINE
CL	CENTERLINE	MHB	MASSACHUSETTS HIGHWAY BOUND	SW	SIDEWALK
CMP	CORRUGATED METAL PIPE	MIN	MINIMUM	T	TANGENT DISTANCE OF CURVE/TRUCK %
CSP	CORRUGATED STEEL PIPE	M&O	MILL & OVERLAY	TAN	TANGENT
CO.	COUNTY	NIC	NOT IN CONTRACT	TEMP	TEMPORARY
CONC	CONCRETE	NO.	NUMBER	TC	TOP OF CURB
CONT	CONTINUOUS	N.T.S.	NOT TO SCALE	TOS	TOP OF SLOPE
CONST	CONSTRUCTION	PC	POINT OF CURVATURE	TW	TOP OF WALL
CR GR	CROWN GRADE	PCC	POINT OF COMPOUND CURVATURE	TYP	TYPICAL
DHV	DESIGN HOURLY VOLUME	PCR	PEDESTRIAN CURB RAMP	UP	UTILITY POLE
DI	DROP INLET	P.G.L.	PROFILE GRADE LINE	VAR	VARIES
DIA	DIAMETER	PI	POINT OF INTERSECTION	VERT	VERTICAL
DIP	DUCTILE IRON PIPE	POC	POINT ON CURVE	VC	VERTICAL CURVE
DW	STEADY DON'T WALK - PORTLAND ORANGE	POT	POINT ON TANGENT	WG	WATER GATE
DWY	DRIVEWAY	PRC	POINT OF REVERSE CURVATURE	WIP	WROUGHT IRON PIPE
ELEV (or EL.)	ELEVATION	PROJ	PROJECT	WM	WATER METER/WATER MAIN
EMB	EMBANKMENT	PROP	PROPOSED	WSO	WATER SHUT OFF
EOP	EDGE OF PAVEMENT	PSB	PLANTABLE SOIL BORROW	X-SECT	CROSS SECTION
EXIST (or EX)	EXISTING	PT	POINT OF TANGENCY		



225 Friend Street  
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PREPARED FOR:  
DEPARTMENT OF PUBLIC WORKS  
10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

LEGEND & ABBREVIATIONS

SCALE:  
NOT TO SCALE

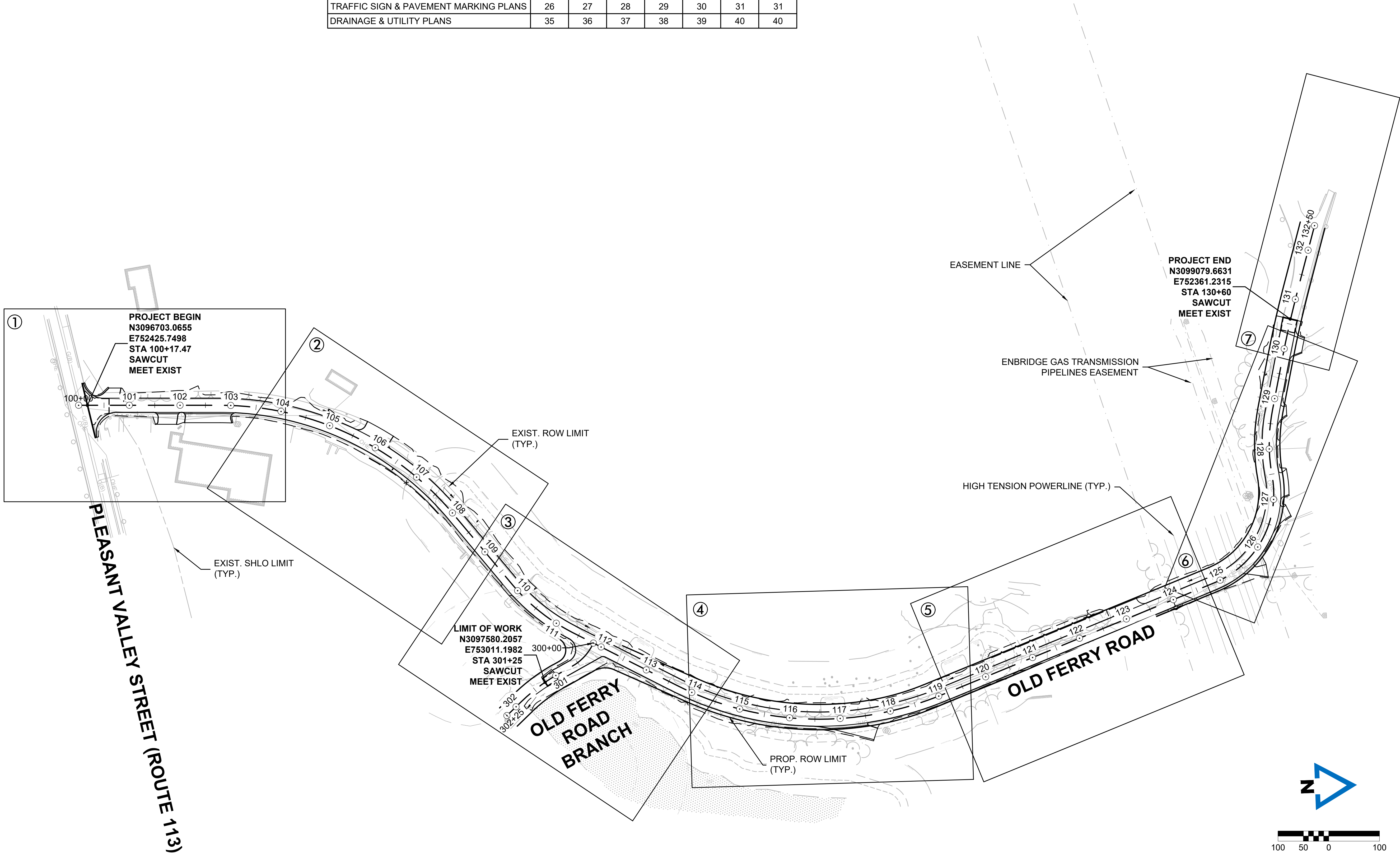
DRAWN/DESIGN BY: DJM  
CHECKED BY: JFO

SHEET NO.  
2 OF 71



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BY: JPATTEN  
DATE: 1/5/2026  
LAYOUT: KEY (01)

SHEET REFERENCE	1	2	3	4	5	6	7
DRAWING TITLE	SHEET NUMBER						
CONSTRUCTION BASELINE TIES	6	7	8	9	10	11	11
CONSTRUCTION PLANS	12	13	14	15	16	17	17
PROFILES - OLD FERRY ROAD	18	19	20	21	22	23	24
PROFILES - OLD FERRY ROAD BRANCH	-	-	25	-	-	-	-
TRAFFIC SIGN & PAVEMENT MARKING PLANS	26	27	28	29	30	31	31
DRAINAGE & UTILITY PLANS	35	36	37	38	39	40	40



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REVISIONS		
NO.	REVISION	DATE

1/05/2026

**KEY PLAN**

SCALE:  
1" = 100'

DRAWN/DESIGN BY: DJM  
CHECKED BY: JFO

SHEET NO.  
3 OF 71

PAVEMENT NOTES

FULL DEPTH HMA CONSTRUCTION

- SURFACE COURSE:

2" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5) OVER
- INTERMEDIATE COURSE:

2½" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5) OVER
- SUB-BASE:

8" RECLAIMED SUB-BASE COURSE W/ ASPHALT EMULSION OVER EXISTING SUB-GRADE

HMA DRIVEWAYS

- SURFACE COURSE:

1½" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5) OVER
- INTERMEDIATE COURSE:

2½" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5) OVER
- SUB-BASE:

8" GRAVEL BORROW TYPE B

GENERAL NOTES

1. ALL HMA, PAVEMENT STANDARD MILLING, HMA FOR PATCHING, ASPHALT EMULSION FOR TACK COAT AND HMA JOINT SEALANT SHALL BE IN ACCORDANCE WITH SECTION 450.



McCLURE™

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NO.	REVISION	DATE

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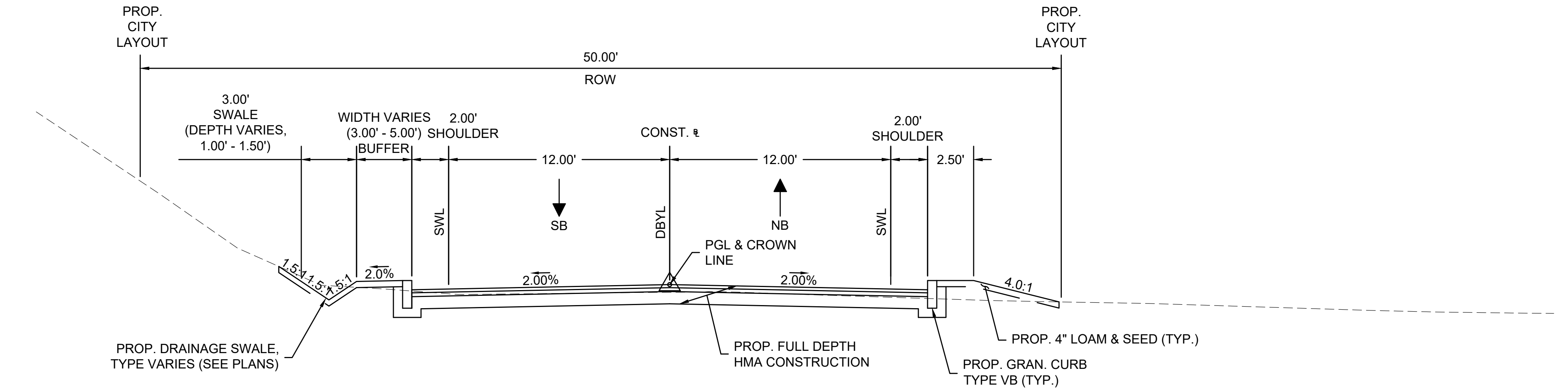
TYPICAL SECTIONS

SCALE:  
1" = 4'

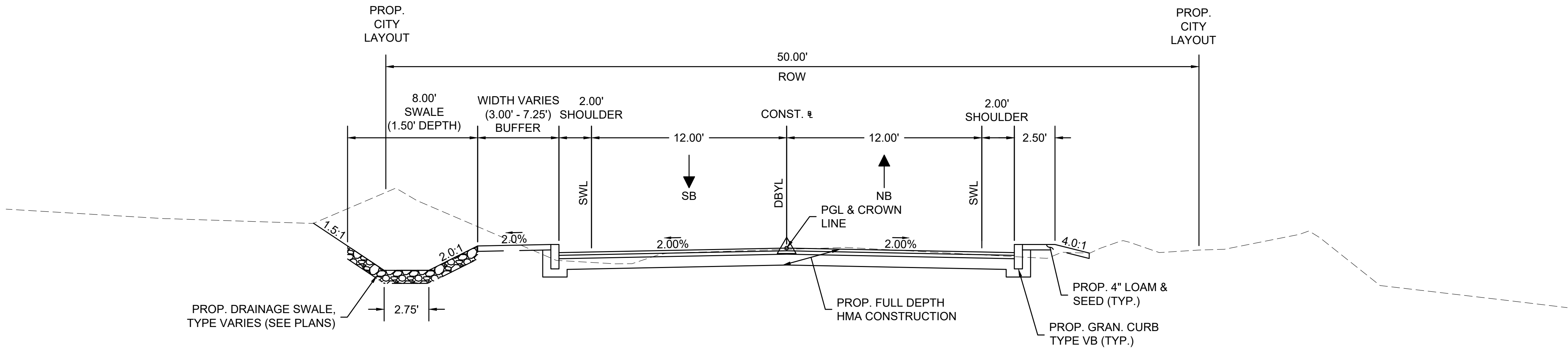
DRAWN/DESIGN BY:  
KSR

CHECKED BY:  
JFO

SHEET NO.  
4 OF 71



TYPICAL SECTION - OLD FERRY ROAD  
STA. 100+95 - 105+45  
STA. 115+00 - 117+45



TYPICAL SECTION - OLD FERRY ROAD  
STA. 106+30 - 114+50



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REVISIONS		
NO.	REVISION	DATE

1/05/2026

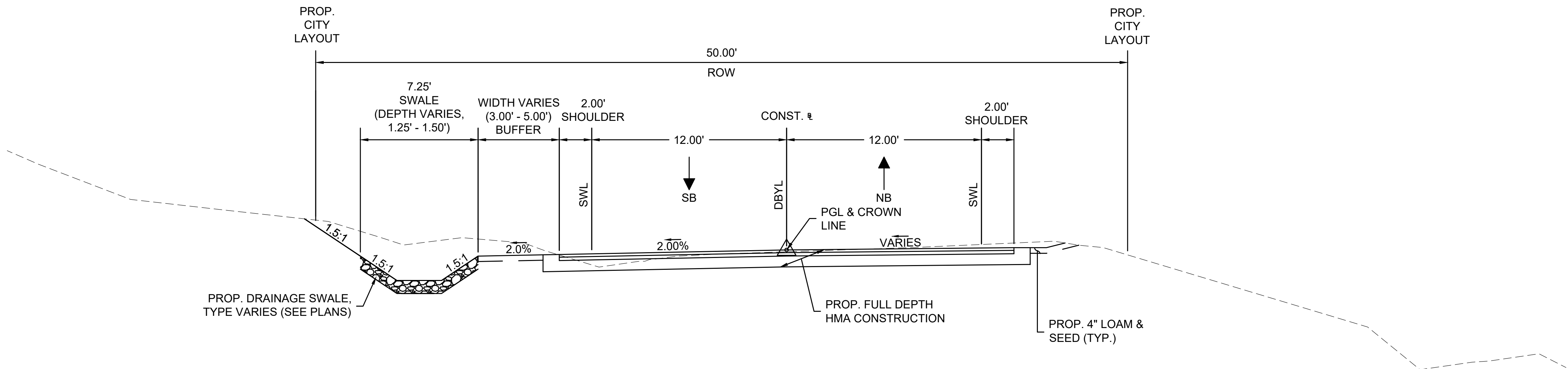
**TYPICAL SECTIONS**

SCALE:  
1" = 4'

DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

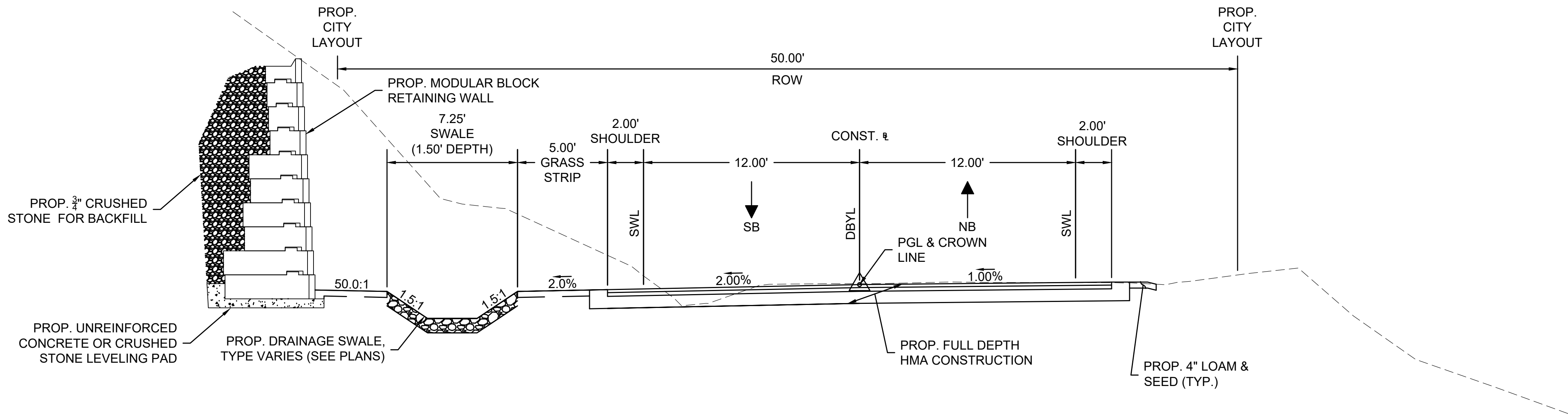
SHEET NO.

5 OF 71



**TYPICAL SECTION - OLD FERRY ROAD**

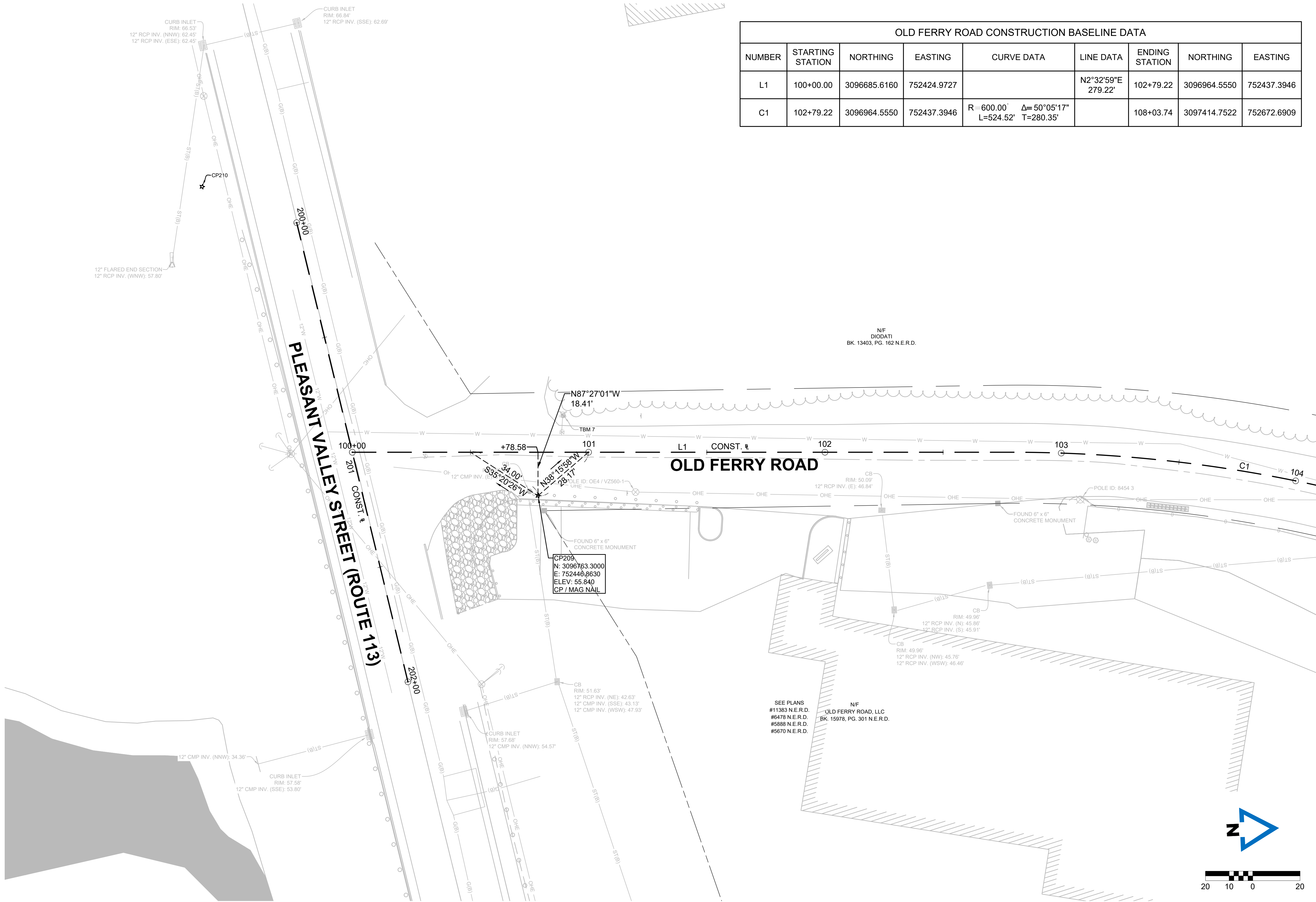
STA. 118+00 - 120+25  
STA. 123+50 - 130+60



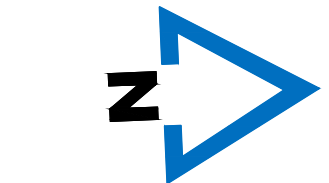
**TYPICAL SECTION - OLD FERRY ROAD**

STA. 120+25 - 122+63





OLD FERRY ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	100+00.00	3096685.6160	752424.9727		N2°32'59"E 279.22'	102+79.22	3096964.5550	752437.3946
C1	102+79.22	3096964.5550	752437.3946	R=600.00' Δ=50°05'17" L=524.52' T=280.35'		108+03.74	3097414.7522	752672.6909



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PREPARED FOR:  
DEPARTMENT OF PUBLIC WORKS  
10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS**

REVISIONS		
NO.	REVISION	DATE

1/05/2026

**CONSTRUCTION  
BASELINE TIES**

SCALE:  
1" = 20'

DRAWN/DESIGN BY: DJM  
CHECKED BY: JFO

SHEET NO.  
6 OF 71

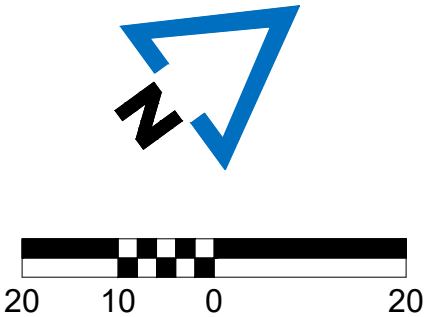


CONTINUED ON  
SHEET NO. 6



CONTINUED ON  
SHEET NO. 8

OLD FERRY ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C1	102+79.22	3096964.5550	752437.3946	R=600.00' Δ=50°05'17" L=524.52' T=280.35'		108+03.74	3097414.7522	752672.6909
L2	108+03.74	3097414.7522	752672.6909		N52°38'17"E 180.82'	109+84.55	3097524.4806	752816.4070



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PREPARED FOR:  
DEPARTMENT OF PUBLIC WORKS  
10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS**

REVISIONS		
NO.	REVISION	DATE

1/05/2026

**CONSTRUCTION  
BASELINE TIES**

SCALE:  
1" = 20'

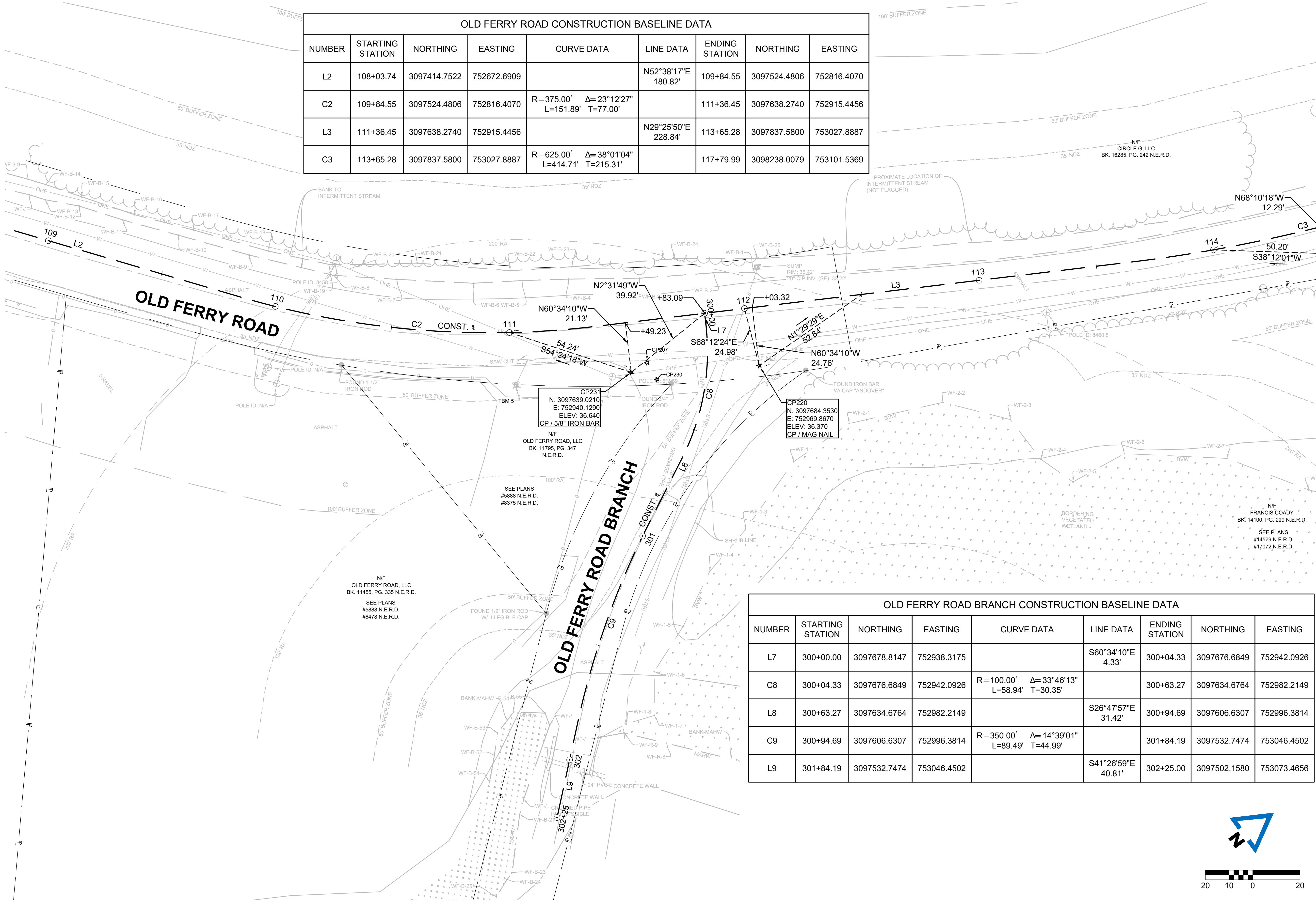
DRAWN/DESIGN BY: DJM CHECKED BY: JFO

SHEET NO.

7 OF 71




CONTINUED ON  
SHEET NO. 7



OLD FERRY ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L2	108+03.74	3097414.7522	752672.6909		N52°38'17"E 180.82'	109+84.55	3097524.4806	752816.4070
C2	109+84.55	3097524.4806	752816.4070	R=375.00' Δ=23°12'27" L=151.89' T=77.00'		111+36.45	3097638.2740	752915.4456
L3	111+36.45	3097638.2740	752915.4456		N29°25'50"E 228.84'	113+65.28	3097837.5800	753027.8887
C3	113+65.28	3097837.5800	753027.8887	R=625.00' Δ=38°01'04" L=414.71' T=215.31'		117+79.99	3098238.0079	753101.5369

OLD FERRY ROAD BRANCH CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L7	300+00.00	3097678.8147	752938.3175		S60°34'10"E 4.33'	300+04.33	3097676.6849	752942.0926
C8	300+04.33	3097676.6849	752942.0926	R=100.00' Δ=33°46'13" L=58.94' T=30.35'		300+63.27	3097634.6764	752982.2149
L8	300+63.27	3097634.6764	752982.2149		S26°47'57"E 31.42'	300+94.69	3097606.6307	752996.3814
C9	300+94.69	3097606.6307	752996.3814	R=350.00' Δ=14°39'01" L=89.49' T=44.99'		301+84.19	3097532.7474	753046.4502
L9	301+84.19	3097532.7474	753046.4502		S41°26'59"E 40.81'	302+25.00	3097502.1580	753073.4656

CONTINUED ON  
SHEET NO. 9



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P 617-466-6765

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PREPARED FOR:  
DEPARTMENT OF PUBLIC WORKS  
10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION**  
METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

**CONSTRUCTION  
BASELINE TIES**

SCALE:  
1" = 20'

DRAWN/DESIGN BY:  
DJM

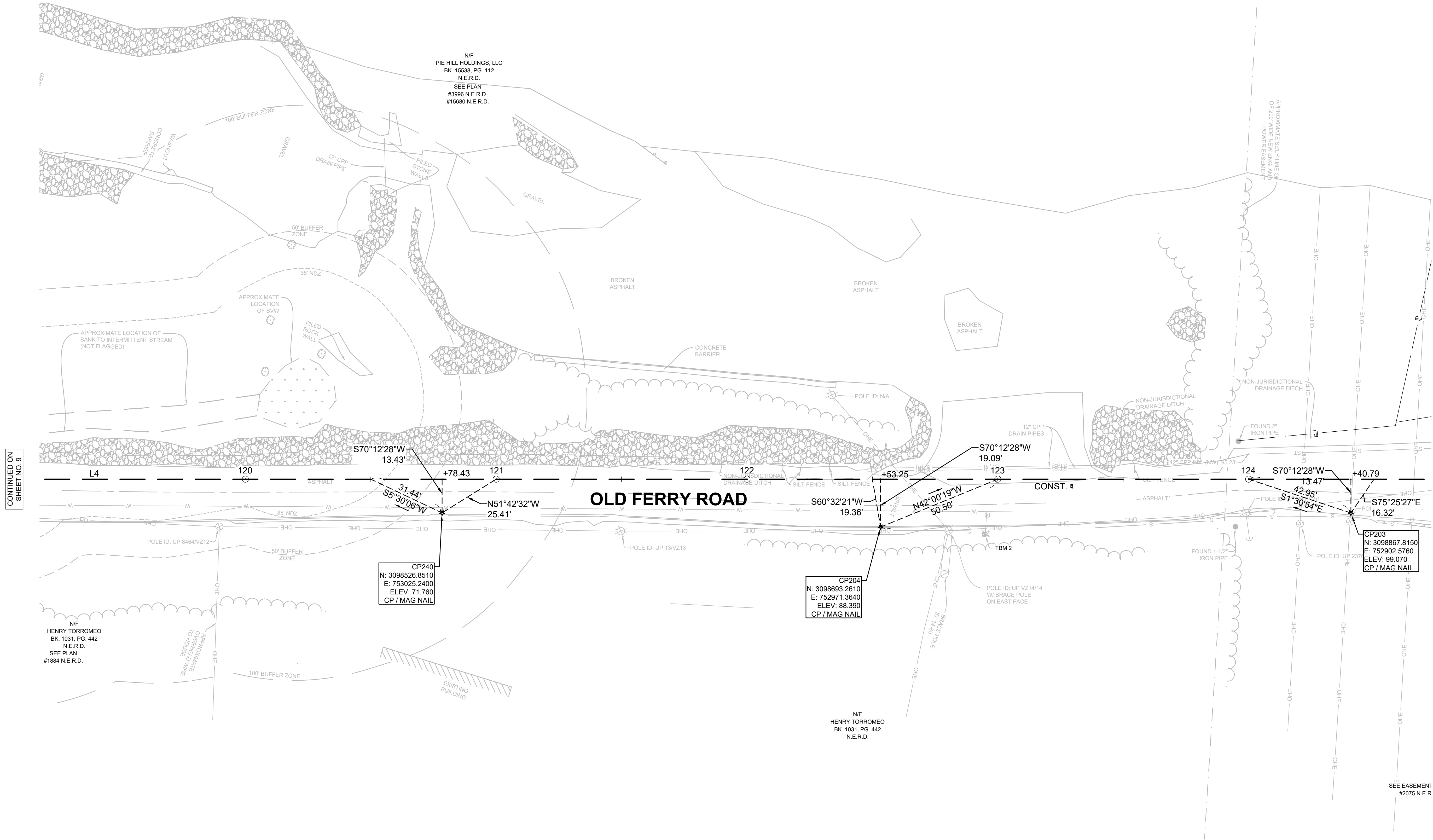
CHECKED BY:  
JFO

SHEET NO.  
8 OF 71

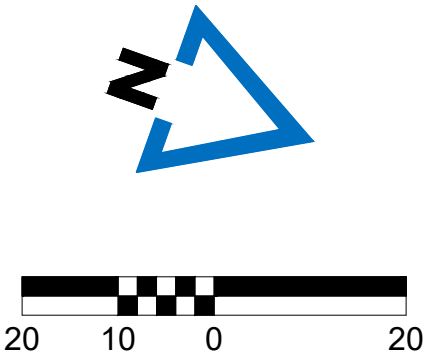








OLD FERRY ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L4	119+09.06	3098362.9419	753069.9475		N19°47'32"W 577.74'	124+86.80	3098906.5482	752874.3202



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PREPARED FOR:  
DEPARTMENT OF PUBLIC WORKS  
10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS**

REVISIONS		
NO.	REVISION	DATE

1/05/2026

**CONSTRUCTION  
BASELINE TIES**

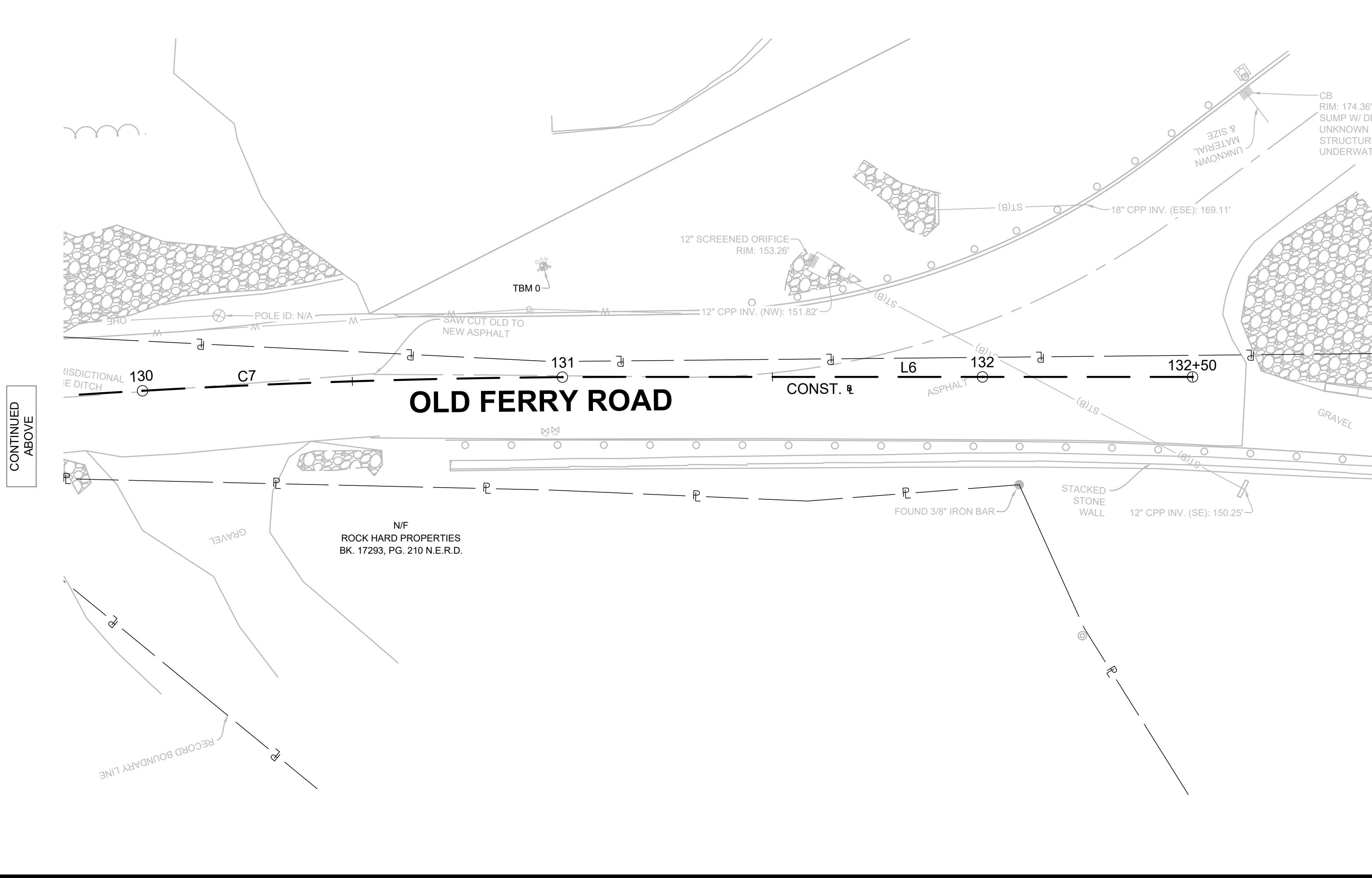
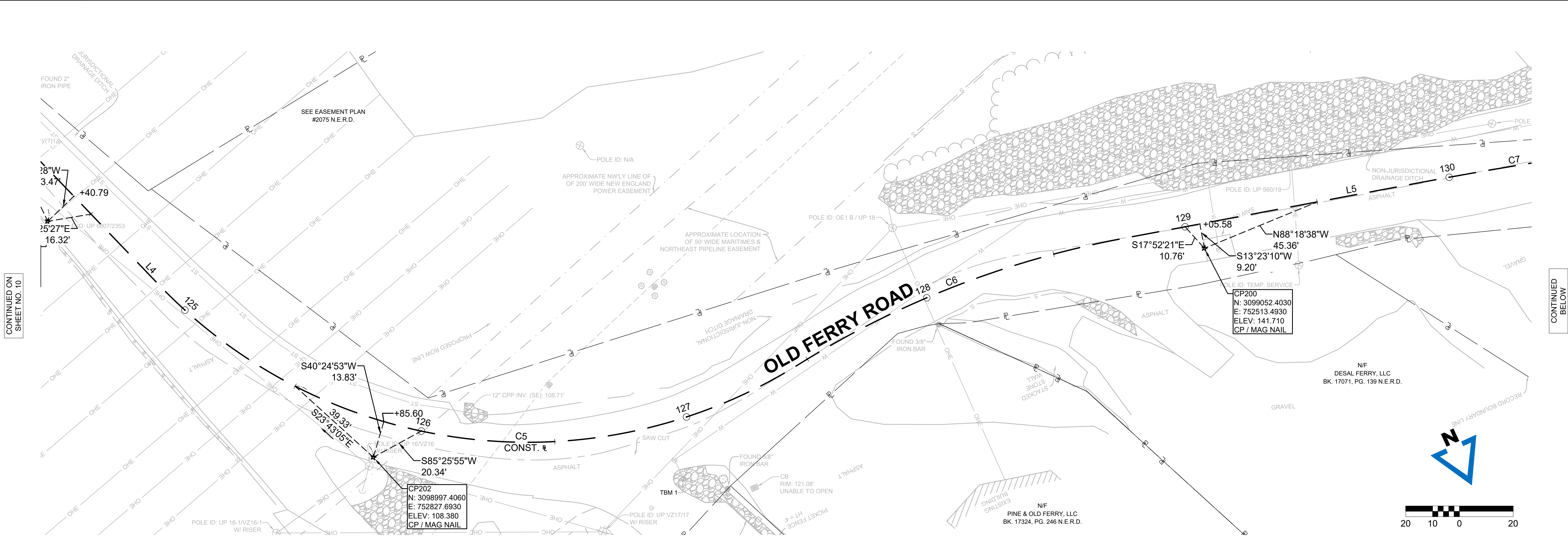
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1" = 20'

DRAWN/DESIGN BY: DJM  
CHECKED BY: JFO

SHEET NO.  
10 OF 71



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DATE: 1/5/2026  
BY: JPATTEN



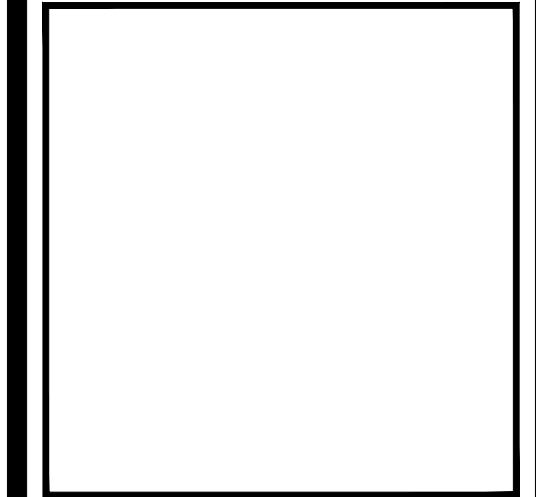
OLD FERRY ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L4	119+09.06	3098362.9419	753069.9475		N19°47'32"W 577.74'	124+86.80	3098906.5482	752874.3202
C5	124+86.80	3098906.5482	752874.3202	R=190.00' Δ=78°06'52" L=259.04' T=154.17'		127+45.84	3099030.4059	752669.4073
C6	127+45.84	3099030.4059	752669.4073	R=350.00' Δ=21°17'35" L=130.07' T=65.79'		128+75.91	3099036.5873	752540.2312
L5	128+75.91	3099036.5873	752540.2312		N76°36'50"W 108.84'	129+84.75	3099061.7860	752434.3443
C7	129+84.75	3099061.7860	752434.3443	R=2000.00' Δ=3°43'41" L=130.13' T=65.09'		131+14.88	3099096.0089	752308.8168
L6	131+14.88	3099096.0089	752308.8168		N72°53'09"W 135.12'	132+50.00	3099135.7701	752179.6844



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PREPARED FOR:  
DEPARTMENT OF PUBLIC WORKS  
10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

CONSTRUCTION  
BASELINE TIES

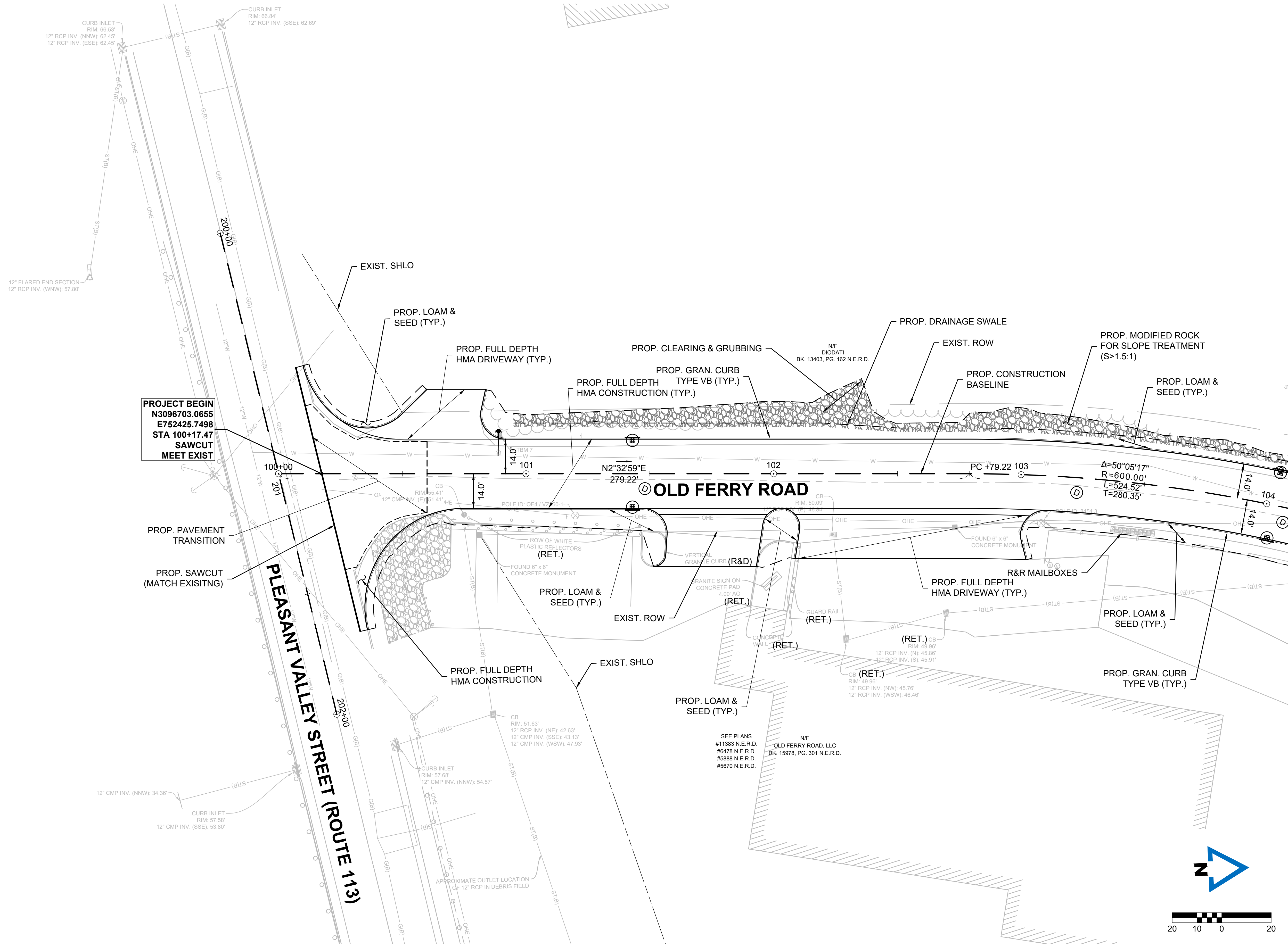
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DRAWN/DESIGN BY: DJM  
CHECKED BY: JFO

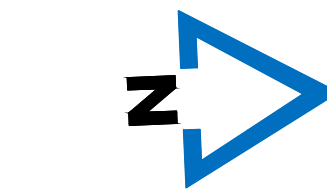
SHEET NO.  
11 OF 71



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DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: CP (01)



CONTINUED ON  
SHEET NO. 13



FOR CONSTRUCTION PROFILE:  
SEE SHEET NO. 18



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PREPARED FOR:  
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10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

# OLD FERRY ROAD ROADWAY RECONSTRUCTION METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

## CONSTRUCTION PLANS

SCALE:  
1" = 20'

DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

SHEET NO.  
12 OF 71



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PREPARED FOR:  
DEPARTMENT OF PUBLIC WORKS  
10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS**

REVISIONS		
NO.	REVISION	DATE

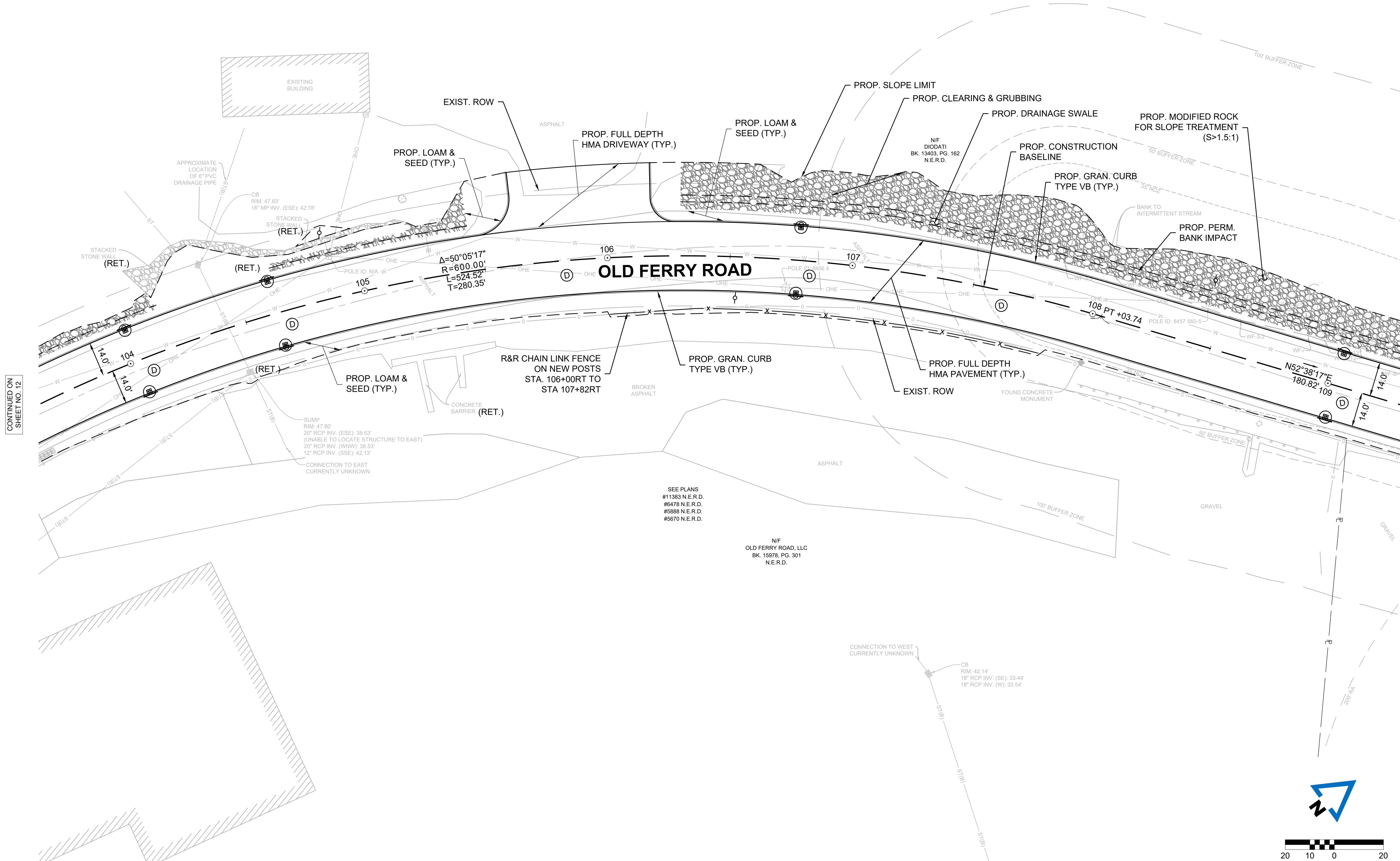
1/05/2026

**CONSTRUCTION  
PLANS**

SCALE:  
1" = 20'

DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

SHEET NO.  
13 OF 71



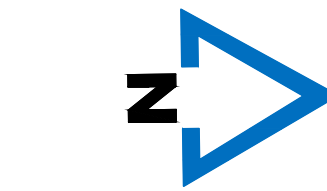
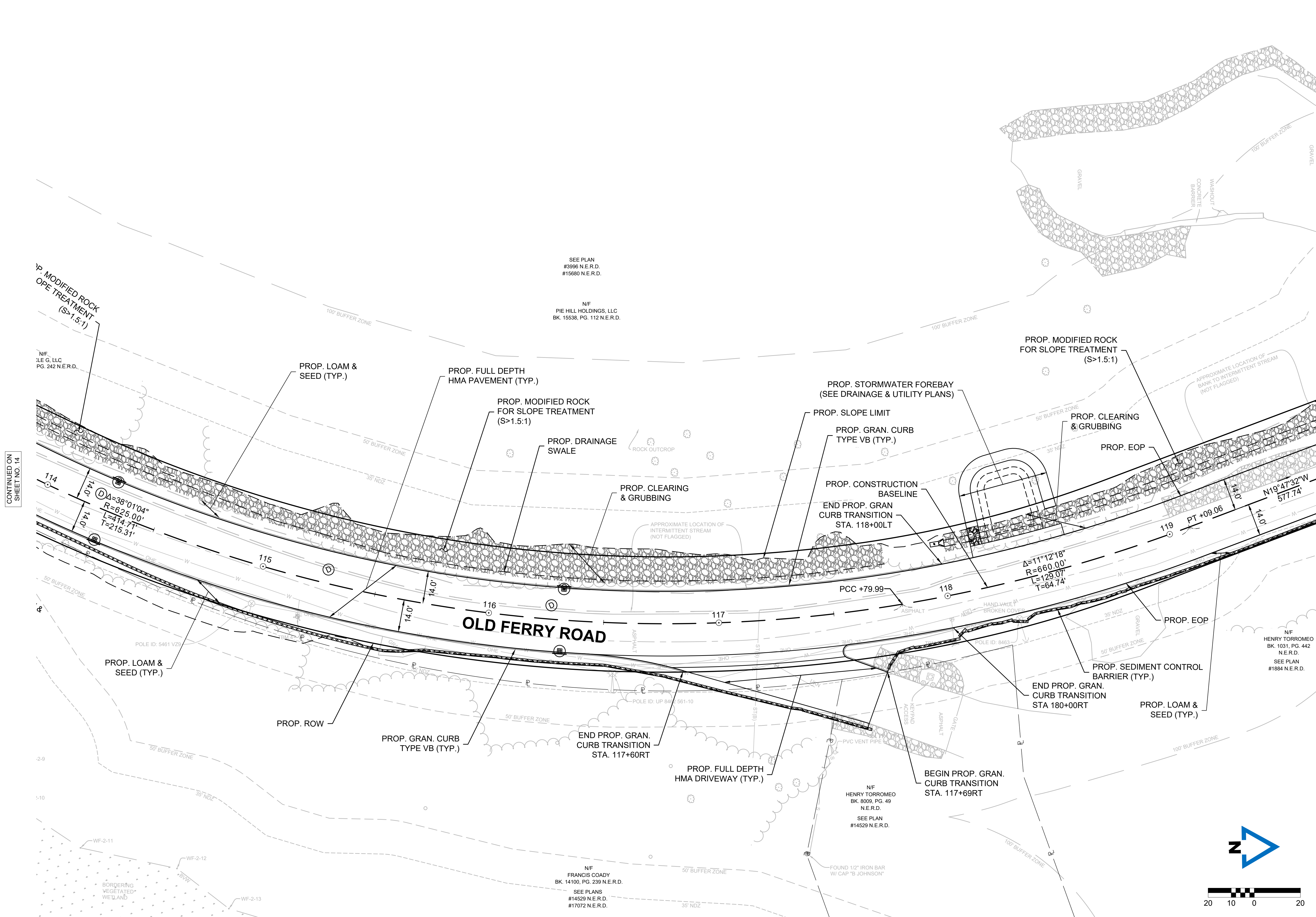
FOR CONSTRUCTION PROFILE:  
SEE SHEET NO. 19







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DATE: 1/5/2026  
BY: JPATTEN



FOR CONSTRUCTION PROFILE:  
SEE SHEET NO. 21



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PREPARED FOR:  
DEPARTMENT OF PUBLIC WORKS  
10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

# OLD FERRY ROAD ROADWAY RECONSTRUCTION METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

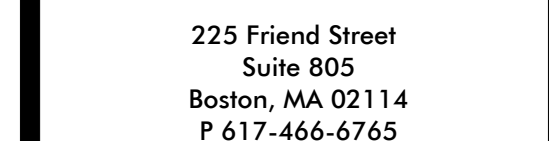
## CONSTRUCTION PLANS

SCALE:  
1" = 20'

DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

SHEET NO.  
15 OF 71





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DEPARTMENT OF PUBLIC WORKS  
10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION**

**METHUEN, MASSACHUSETTS**

REVISIONS		
NO.	REVISION	DATE

1/05/2026

## CONSTRUCTION PLANS

SCALE:

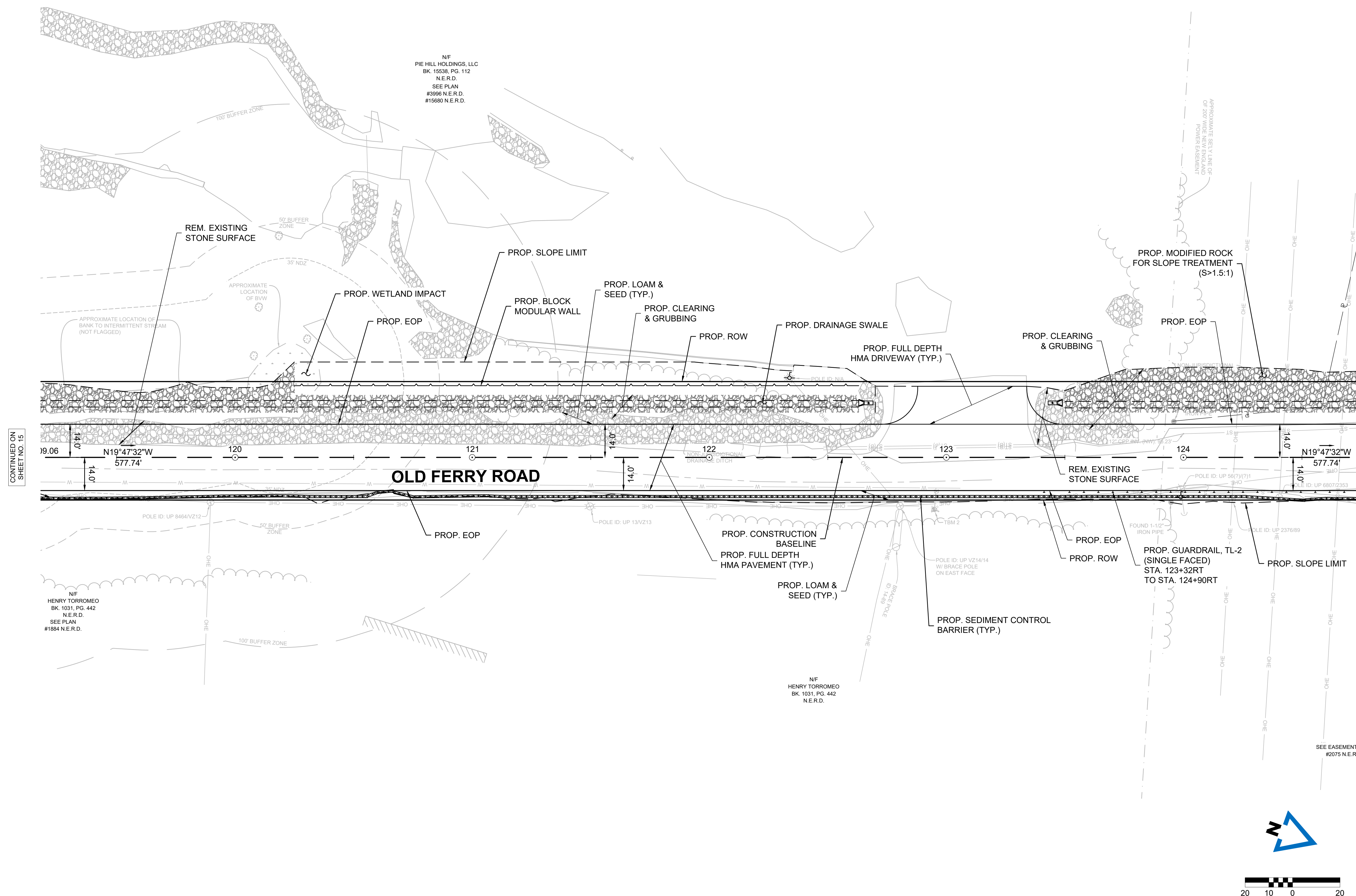
1" = 20'

DRAWN/DESIGN BY: KSR

CHECKED BY: JFO

SHEET NO.

16 OF 71



FOR CONSTRUCTION PROFILE:  
SEE SHEET NO. 22



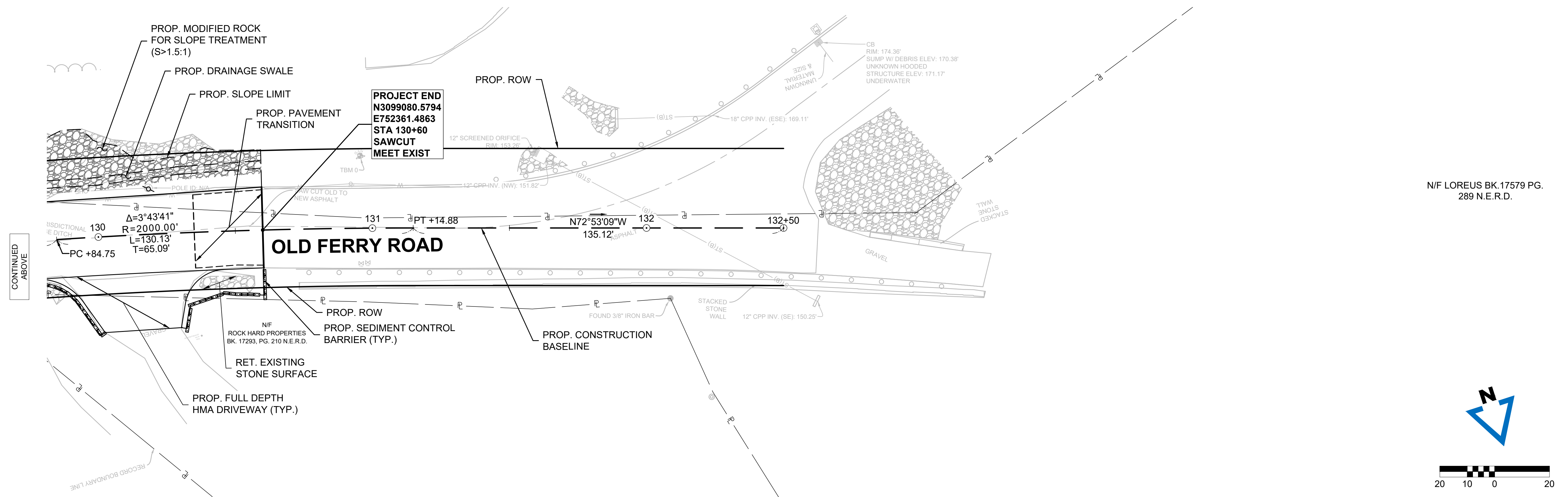
**NOTICE:**  
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SCALE: 1" = 20'

DRAWN/DESIGN BY: KSR

CHECKED BY: JFO

SHEET NO. 17 OF 71



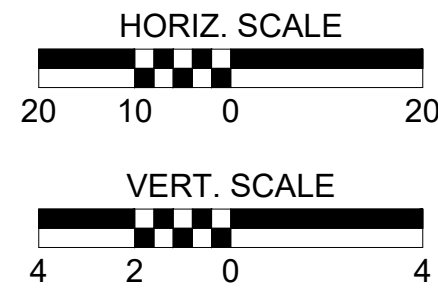
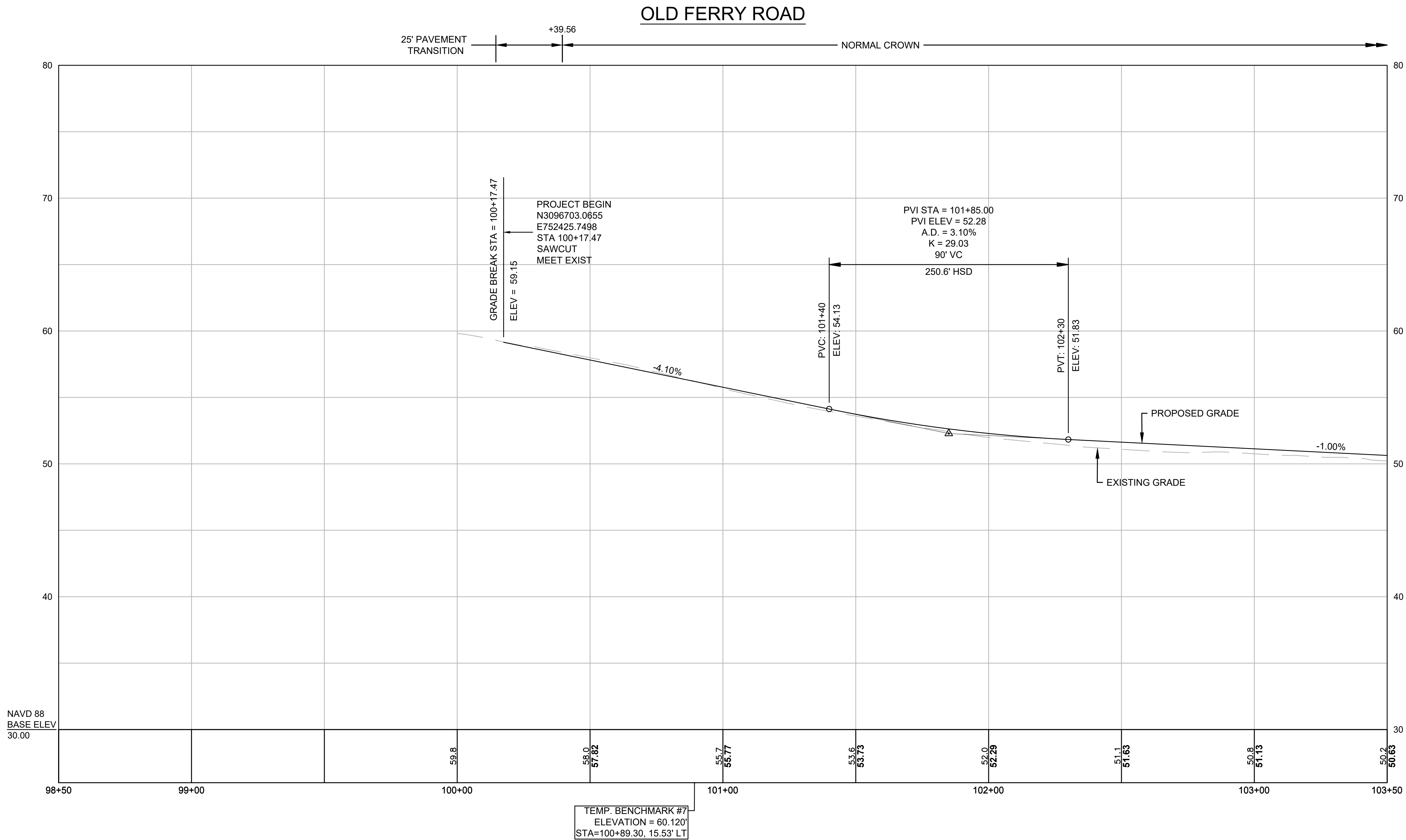
FOR CONSTRUCTION PROFILE:  
SEE SHEETS NO. 23 AND 24

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LAYOUT: CP (06)	DATE: 1/5/2026
BY: JPATTEN	



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DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: PROF (01)

CONTINUED ON  
SHEET NO. 17



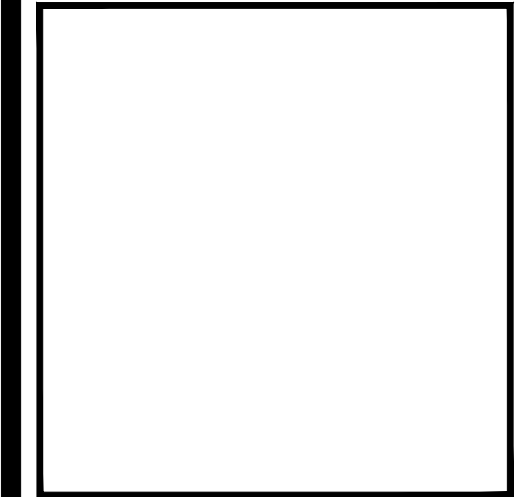
FOR CONSTRUCTION PLAN:  
SEE SHEET NO. 12



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PREPARED FOR:  
DEPARTMENT OF PUBLIC WORKS  
10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION**

**METHUEN, MASSACHUSETTS**

REVISIONS		
NO.	REVISION	DATE

1/05/2026

**PROFILES - OLD  
FERRY ROAD**

SCALE: AS NOTED

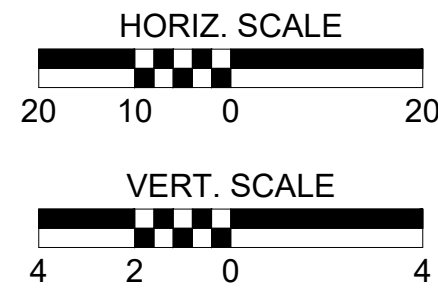
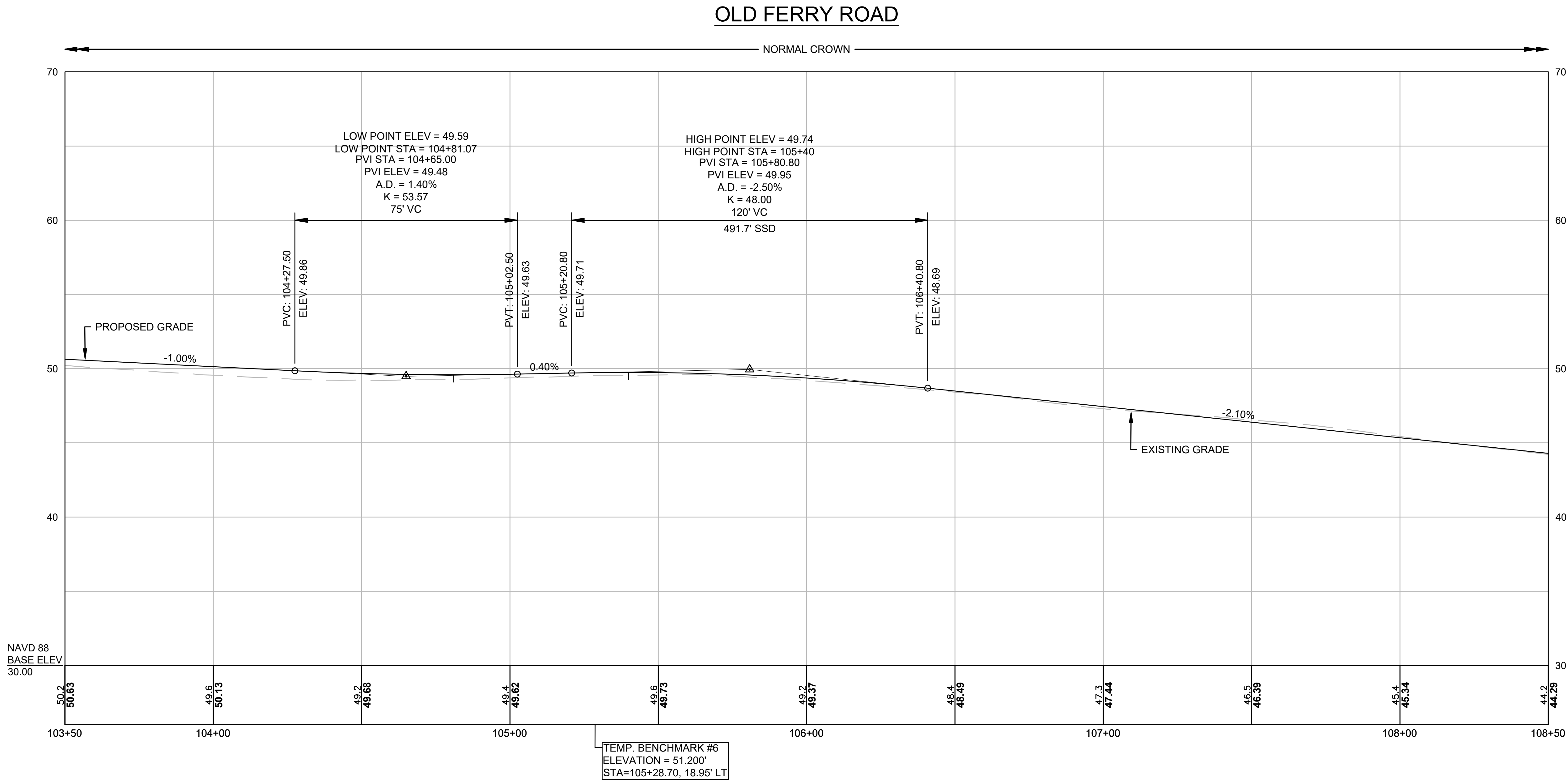
DRAWN/DESIGN BY: KSR      CHECKED BY: JFO

SHEET NO.  
**18** OF **71**



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DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: PROF (02)

CONTINUED ON  
SHEET NO. 18



FOR CONSTRUCTION PLAN:  
SEE SHEET NO. 13

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PREPARED FOR:  
DEPARTMENT OF PUBLIC WORKS  
10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION**  
METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

**PROFILES - OLD  
FERRY ROAD**

SCALE: AS NOTED

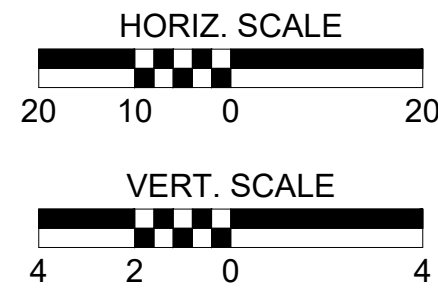
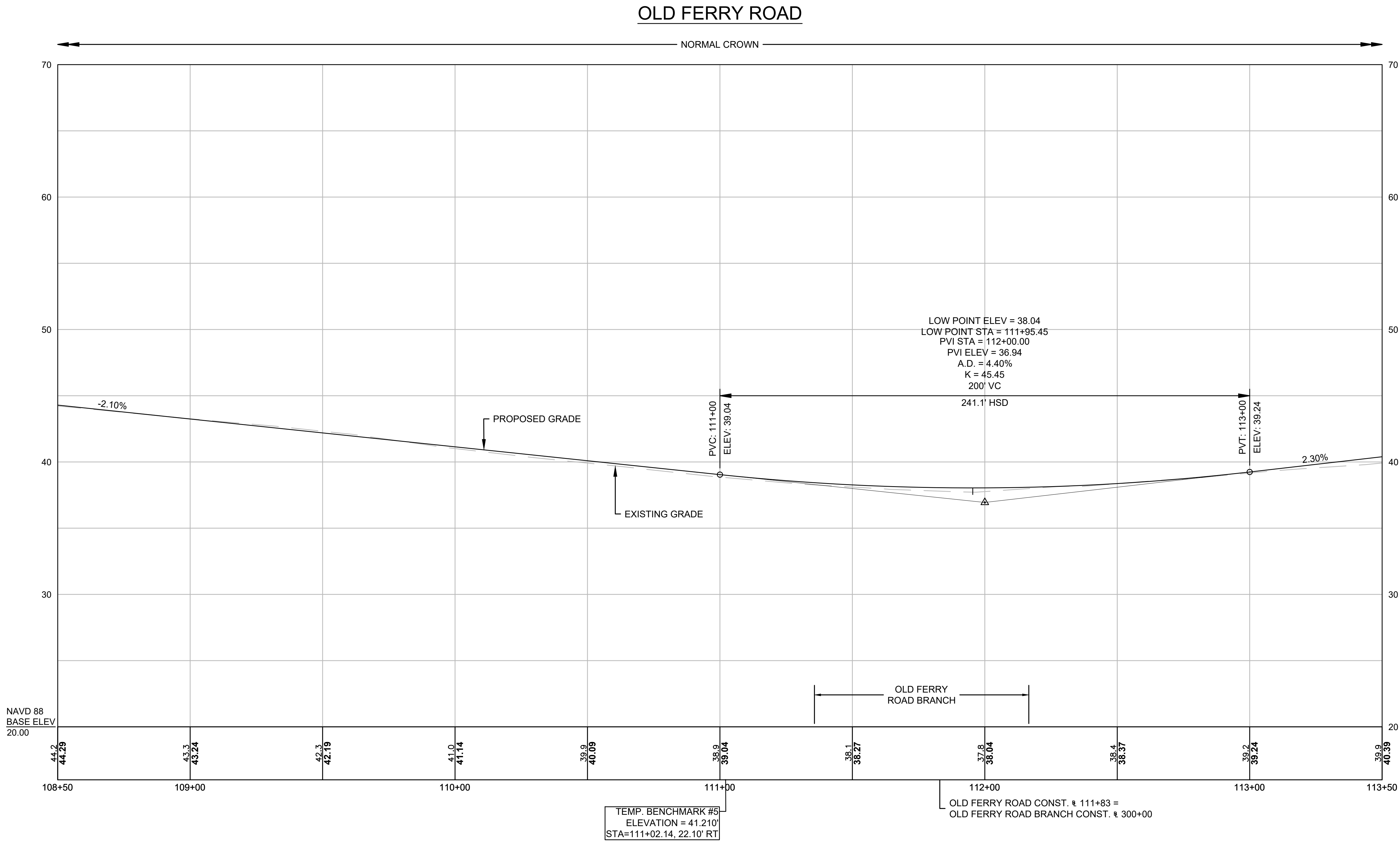
DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

SHEET NO.  
19 OF 71



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DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: PROF (03)

CONTINUED ON  
SHEET NO. 19



FOR CONSTRUCTION PLAN:  
SEE SHEET NO. 14

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PREPARED FOR:  
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10 DITSON PLACE, SUITE 100  
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**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION**  
METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

**PROFILES - OLD  
FERRY ROAD**

SCALE: AS NOTED

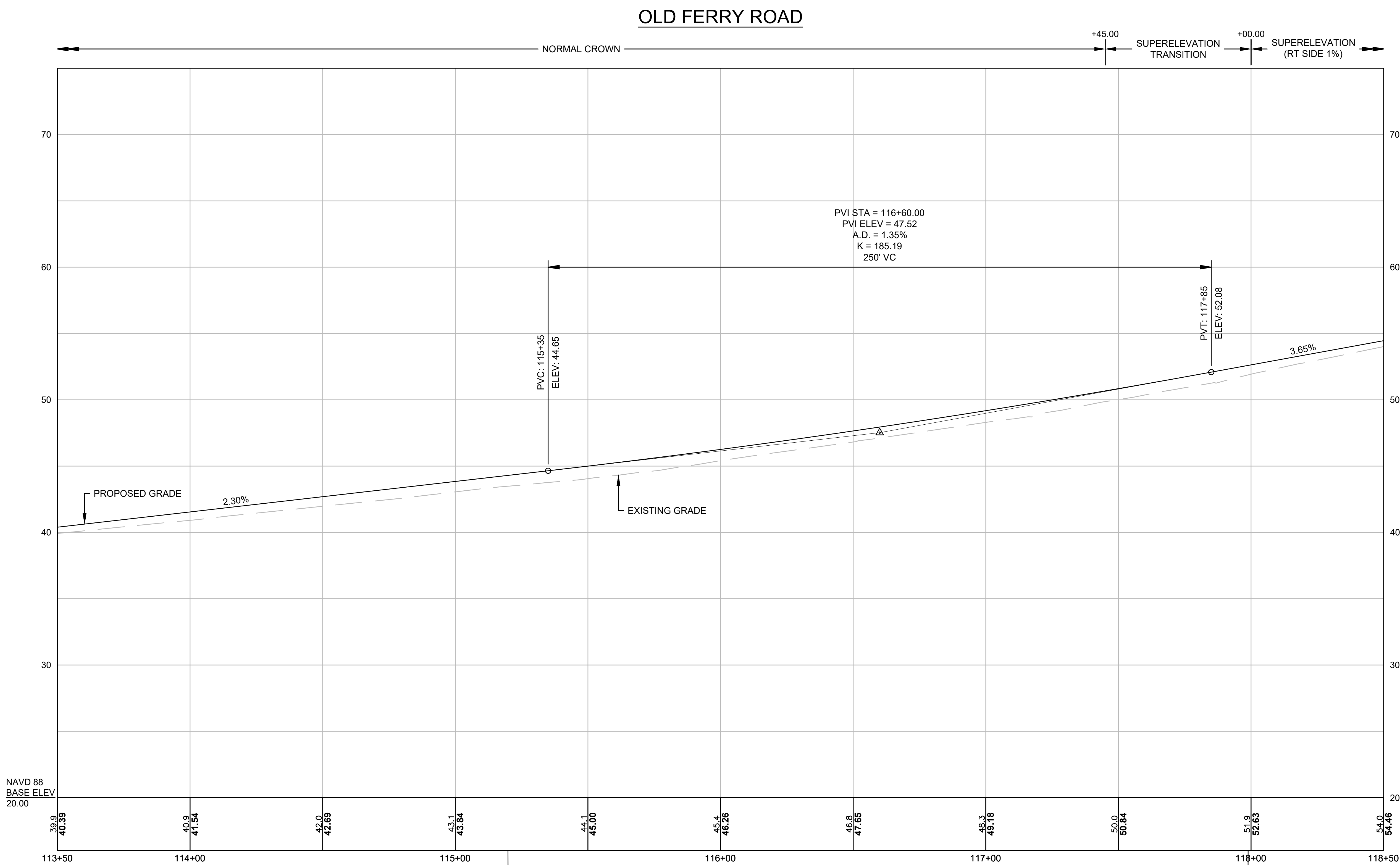
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CHECKED BY: JFO

SHEET NO.  
**20** OF **71**



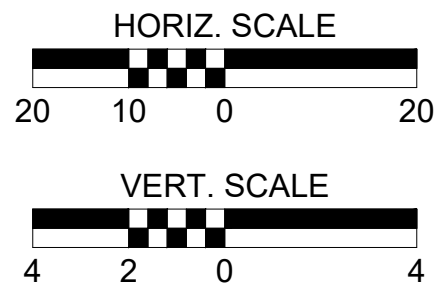
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CONTINUED ON  
SHEET NO. 20



TEMP. BENCHMARK #4  
ELEVATION = 45.275'  
STA=115+19.86, 16.90' RT

TEMP. BENCHMARK #3  
ELEVATION = 54.101'  
STA=117+98.89, 20.17 RT



FOR CONSTRUCTION PLAN:  
SEE SHEET NO. 15

NOTICE:  
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PREPARED FOR:  
DEPARTMENT OF PUBLIC WORKS  
10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

PROFILES - OLD  
FERRY ROAD

SCALE:  
AS NOTED

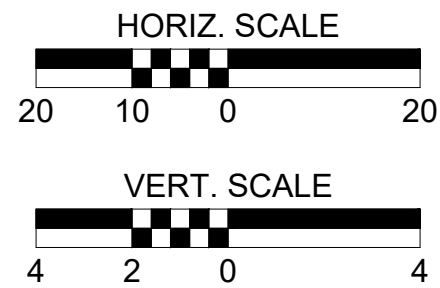
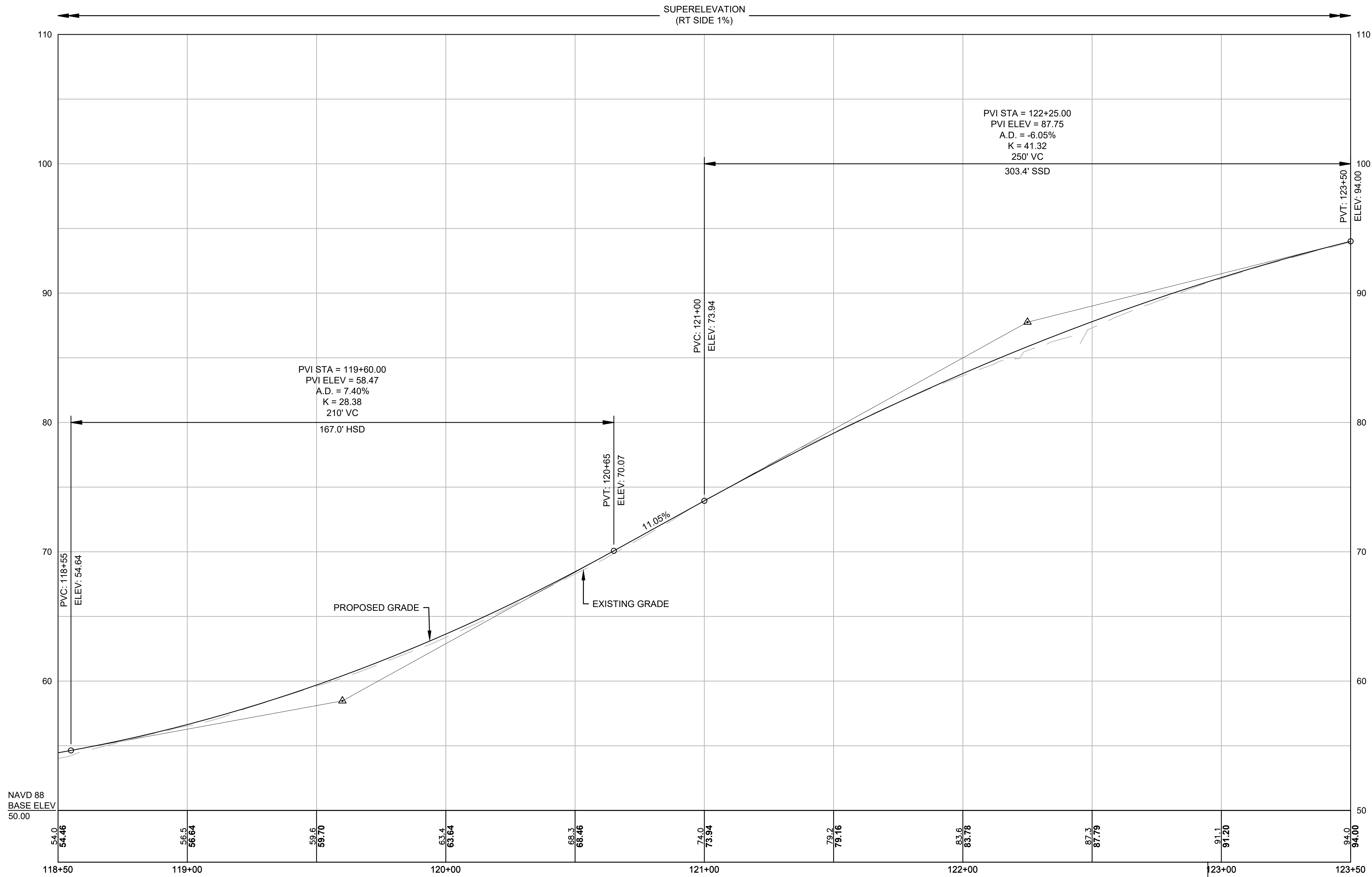
DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

SHEET NO.  
21 OF 71



P:\2024\002146\04-DRAWINGS\PROJECT DRAWING DATA\PLAN SHEET FILES\PLAN SHEET DWG\2024\002146\_HD08\PROF.DWG  
DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: PROF (05)

CONTINUED ON  
SHEET NO. 21



TEMP. BENCHMARK #2  
ELEVATION = 93.580'  
STA=122+94.77, 21.97' RT

FOR CONSTRUCTION PLAN:  
SEE SHEET NO. 16

CONTINUED ON  
SHEET NO. 23



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METHUEN, MASSACHUSETTS**

REVISIONS		
NO.	REVISION	DATE

1/05/2026

**PROFILES - OLD  
FERRY ROAD**

SCALE: AS NOTED

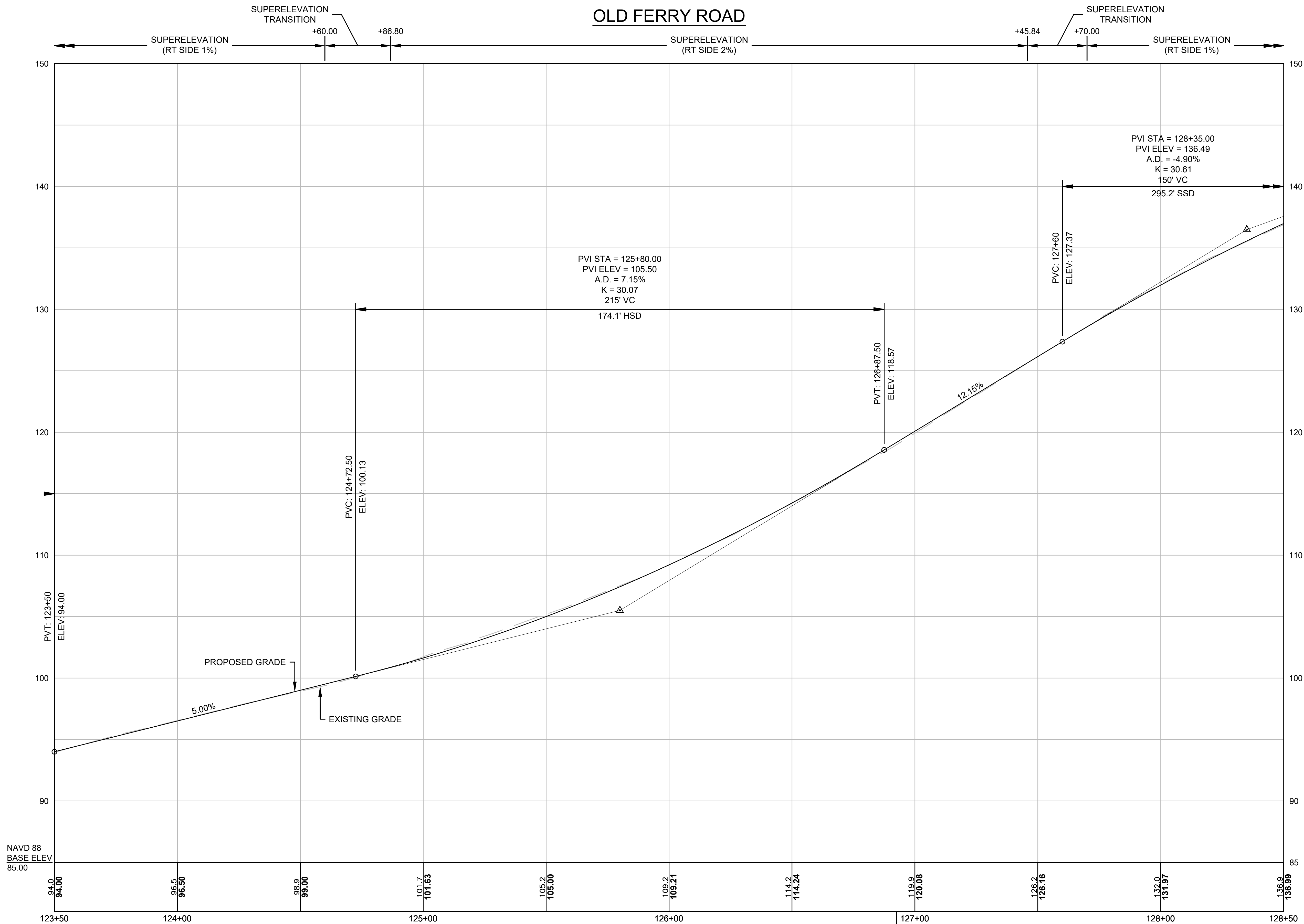
DRAWN/DESIGN BY: KSR      CHECKED BY: JFO

SHEET NO. 22 OF 71

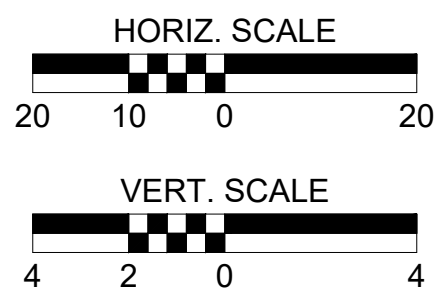


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DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: PROF (06)

CONTINUED ON  
SHEET NO. 22



TEMP. BENCHMARK #1  
ELEVATION = 120.868'  
STA=126+92.53, 21.79' RT



FOR CONSTRUCTION PLAN:  
SEE SHEET NO. 17

CONTINUED ON  
SHEET NO. 24



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DEPARTMENT OF PUBLIC WORKS  
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# OLD FERRY ROAD ROADWAY RECONSTRUCTION METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

## PROFILES - OLD FERRY ROAD

SCALE: AS NOTED

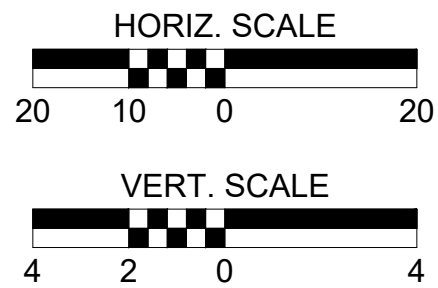
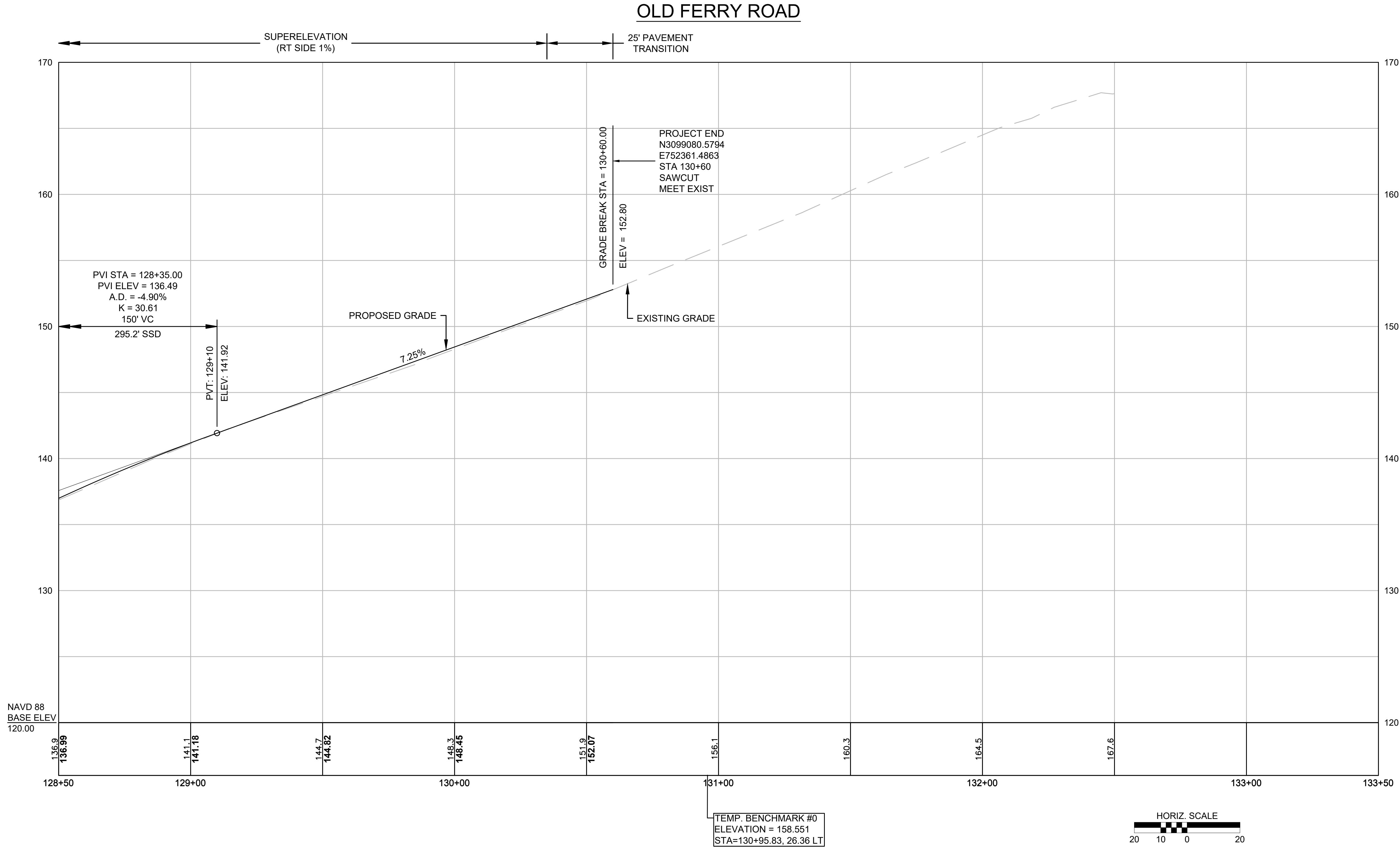
DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

SHEET NO.  
23 OF 71



P:\2024\002146\04-DRAWINGS\PROJECT DRAWING DATA\PLAN SHEET FILES\PLAN SHEET DWG\2024002146\_HD08\PROF.DWG  
DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: PROF (07)

CONTINUED ON  
SHEET NO. 23



FOR CONSTRUCTION PLAN:  
SEE SHEET NO. 17

CONTINUED ON  
SHEET NO. 25

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10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS**

REVISIONS		
NO.	REVISION	DATE

1/05/2026

**PROFILES - OLD  
FERRY ROAD**

SCALE:  
AS NOTED

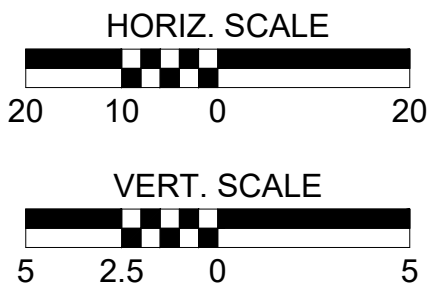
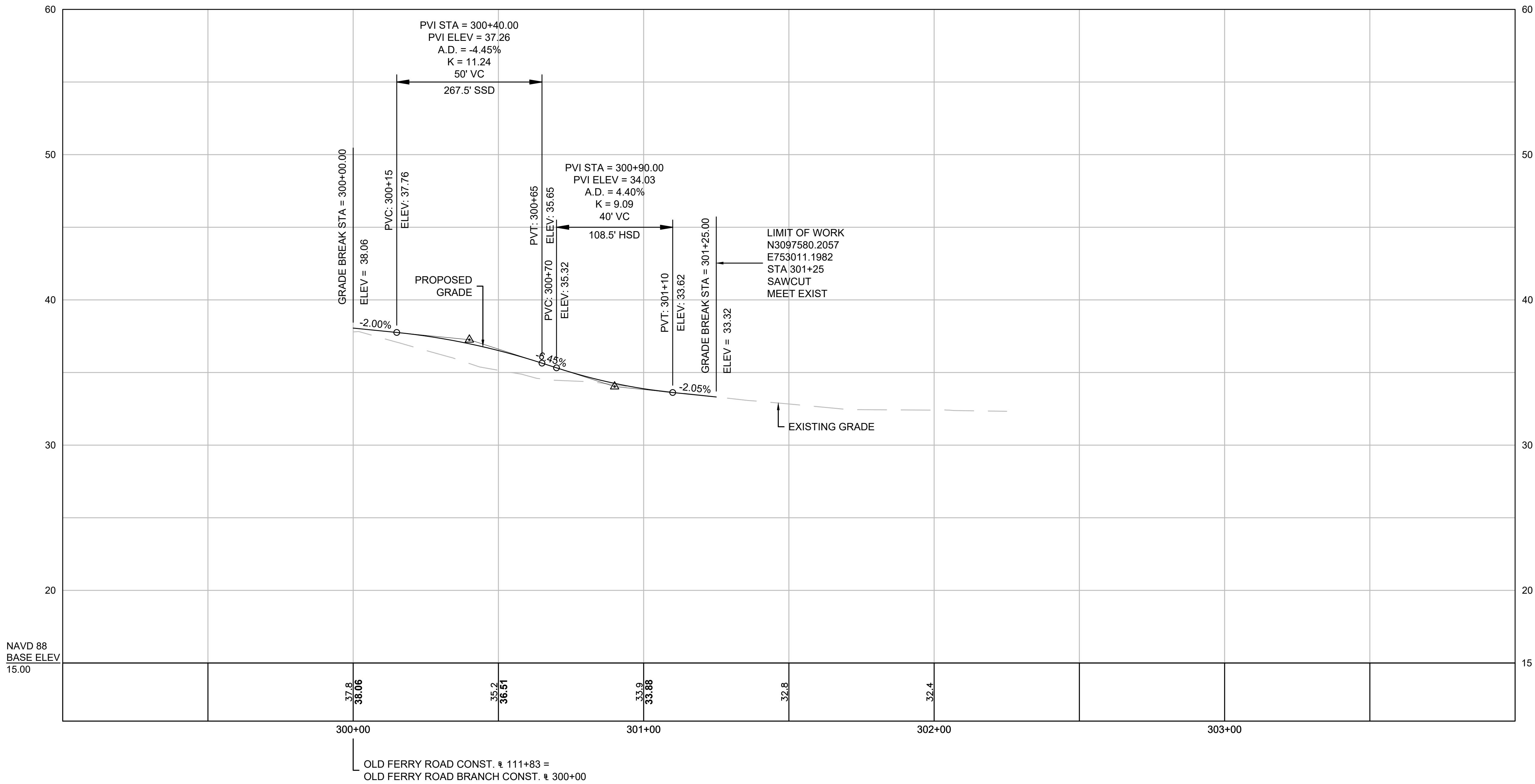
DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

SHEET NO.  
24 OF 71



P:\20240021 46\04-DRAWINGS\PROJECT DRAWING DATA\PLAN SHEET FILES\PLAN SHEET DWG\20240021 46\_HD09\SIDE PROJ\DWG  
LAYOUT: MEC-PROFILES - SIDE STREETS  
BY: JPATTEN  
DATE: 1/5/2026

OLD FERRY ROAD BRANCH



FOR CONSTRUCTION PLAN:  
SEE SHEET NO. 14

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OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS

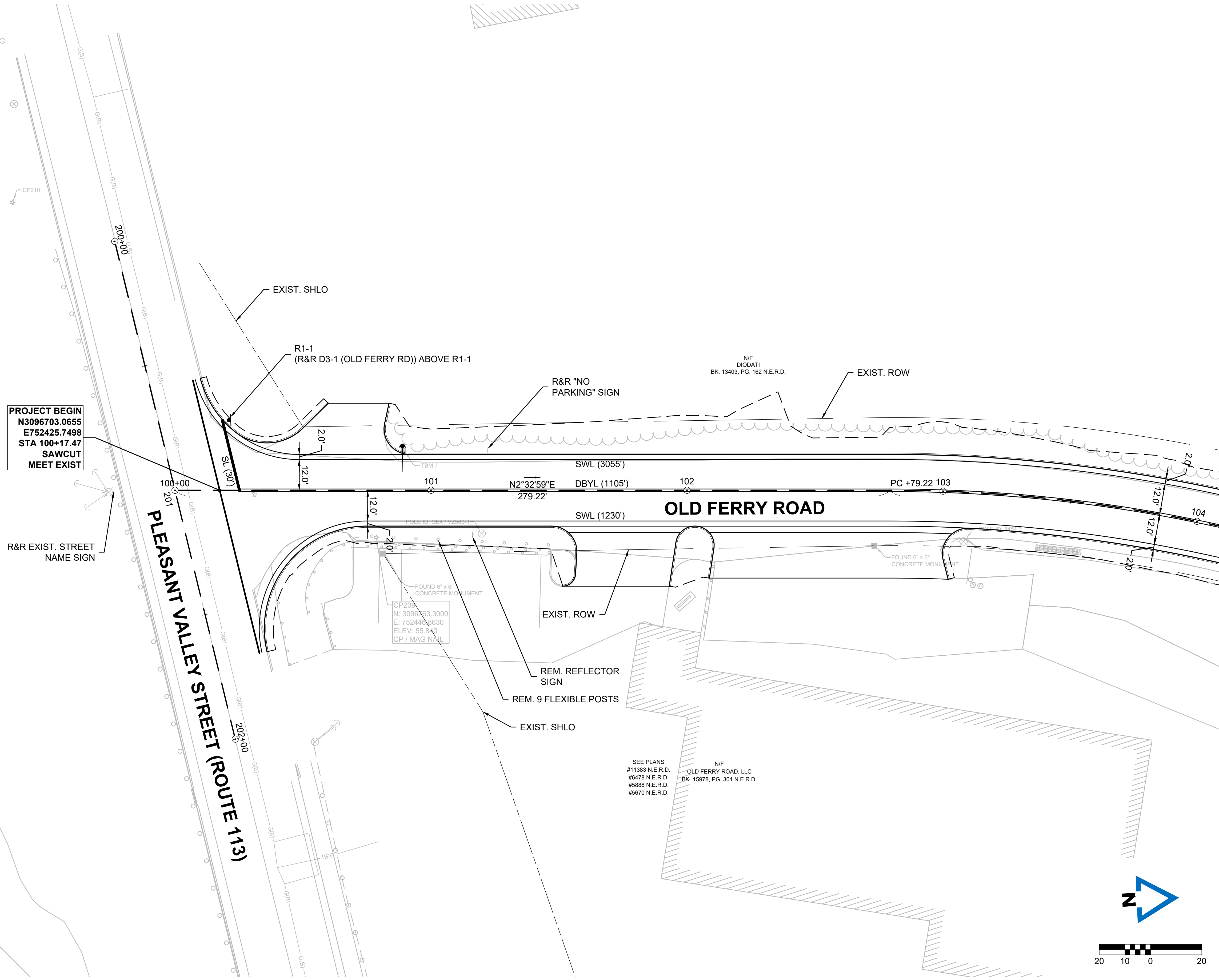
REVISIONS		
NO.	REVISION	DATE

1/05/2026

PROFILES - OLD  
FERRY ROAD  
BRANCH

SCALE: AS NOTED  
DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO  
SHEET NO. 25 OF 71





CONTINUED ON  
SHEET NO. 27



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# OLD FERRY ROAD ROADWAY RECONSTRUCTION METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

## TRAFFIC SIGN & PAVEMENT MARKING PLANS

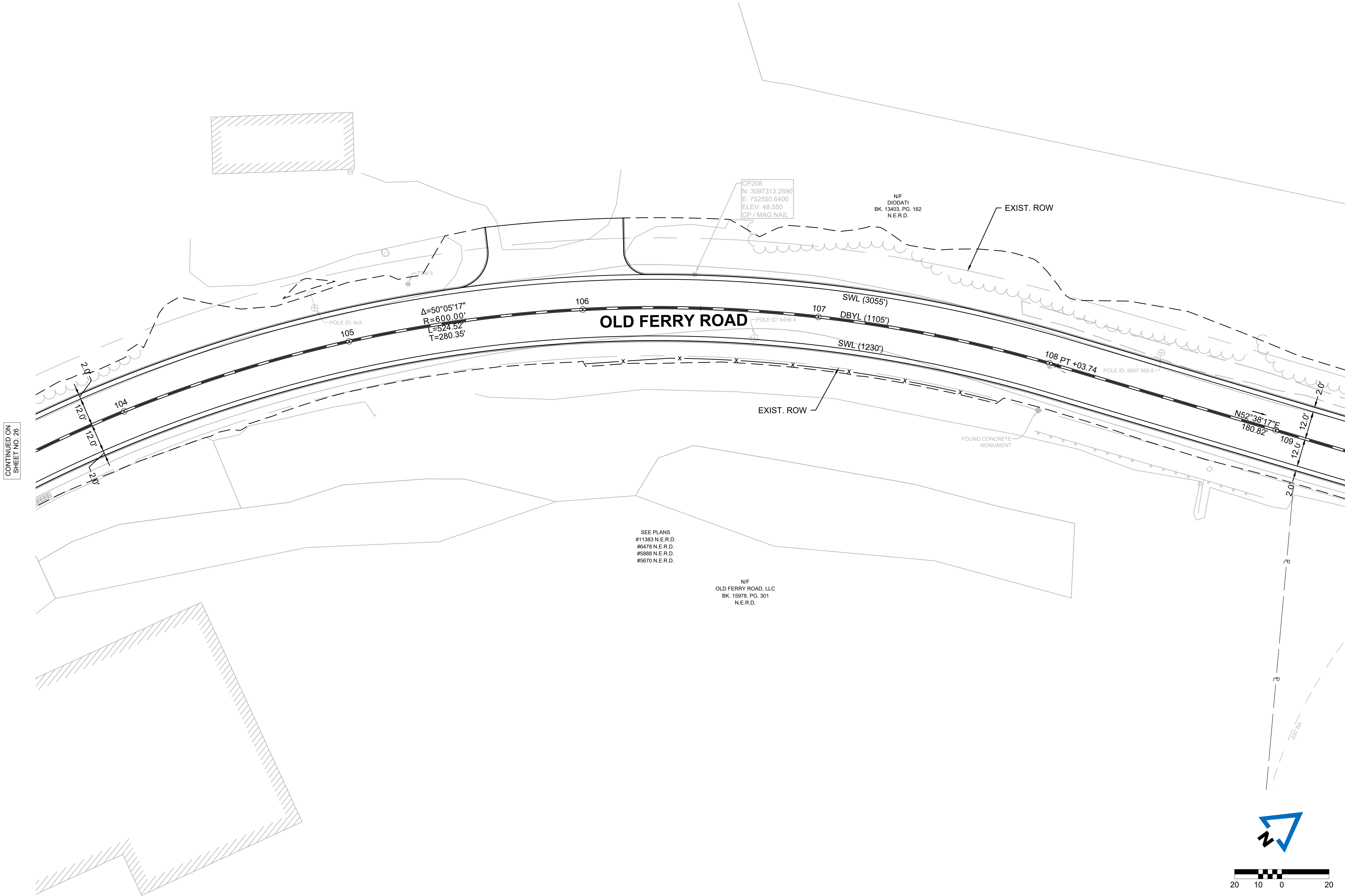
SCALE:  
1" = 20'

DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

SHEET NO.  
26 OF 71

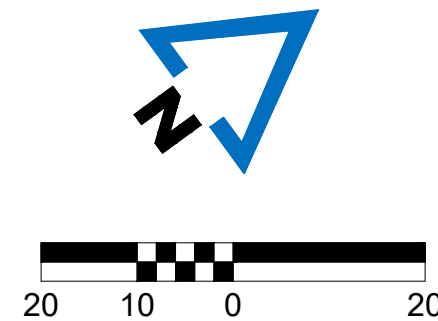


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LAYOUT: TSPM (02) BY: JPATTEN DATE: 1/5/2026



CONTINUED ON  
SHEET NO. 26

CONTINUED ON  
SHEET NO. 28



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OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

TRAFFIC SIGN &  
PAVEMENT  
MARKING PLANS

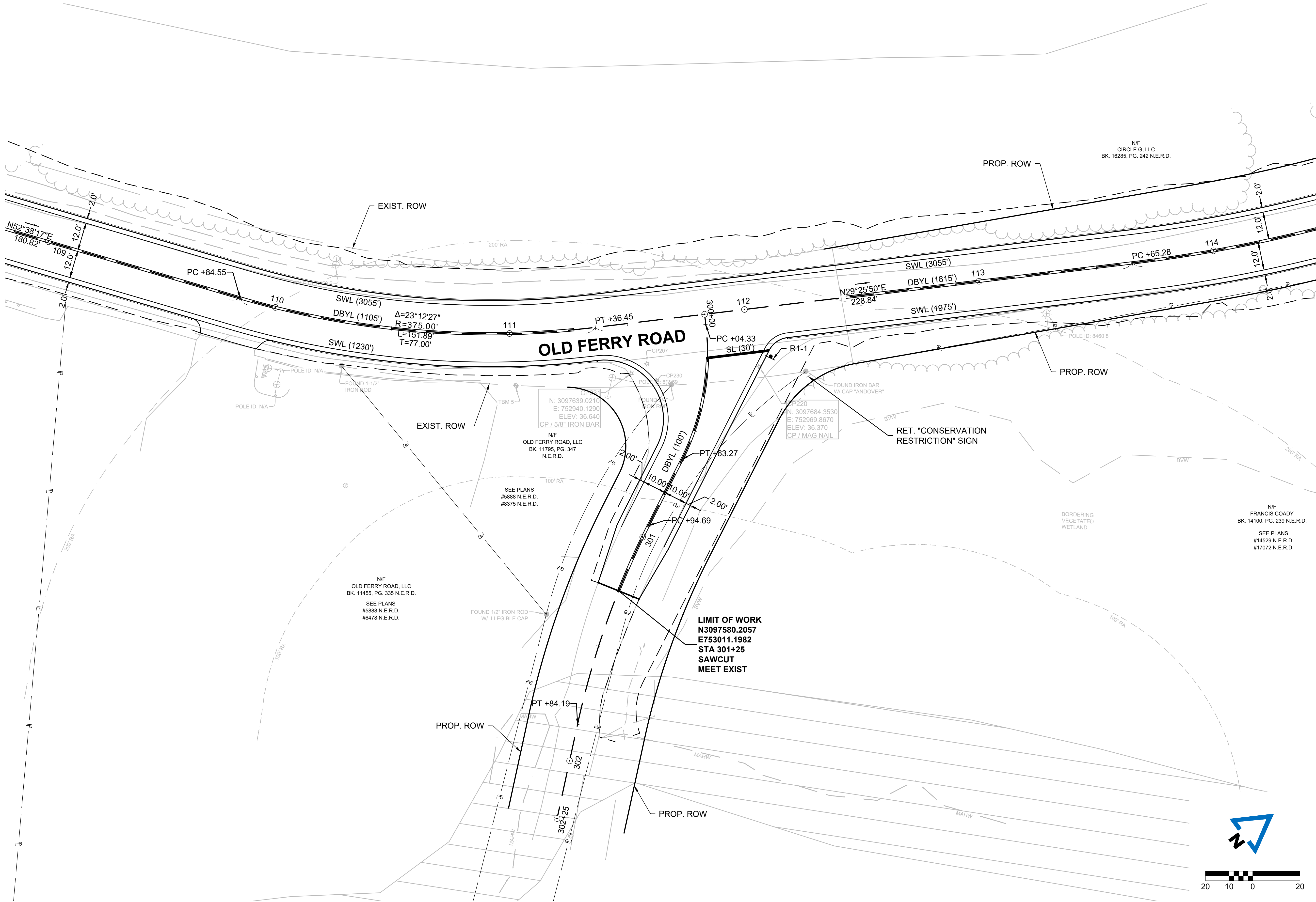
SCALE:  
1" = 20'

DRAWN/DESIGN BY: KSR CHECKED BY: JFO

SHEET NO.  
27 OF 71



CONTINUED ON  
SHEET NO. 27



CONTINUED ON  
SHEET NO. 29



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# OLD FERRY ROAD ROADWAY RECONSTRUCTION METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

## TRAFFIC SIGN & PAVEMENT MARKING PLANS

SCALE:  
1" = 20'

DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

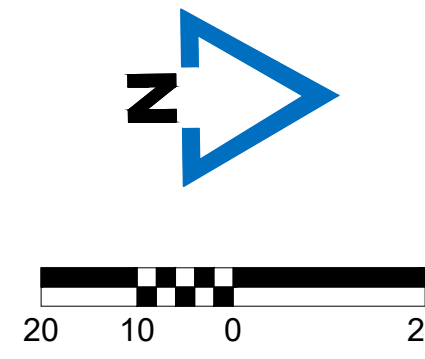
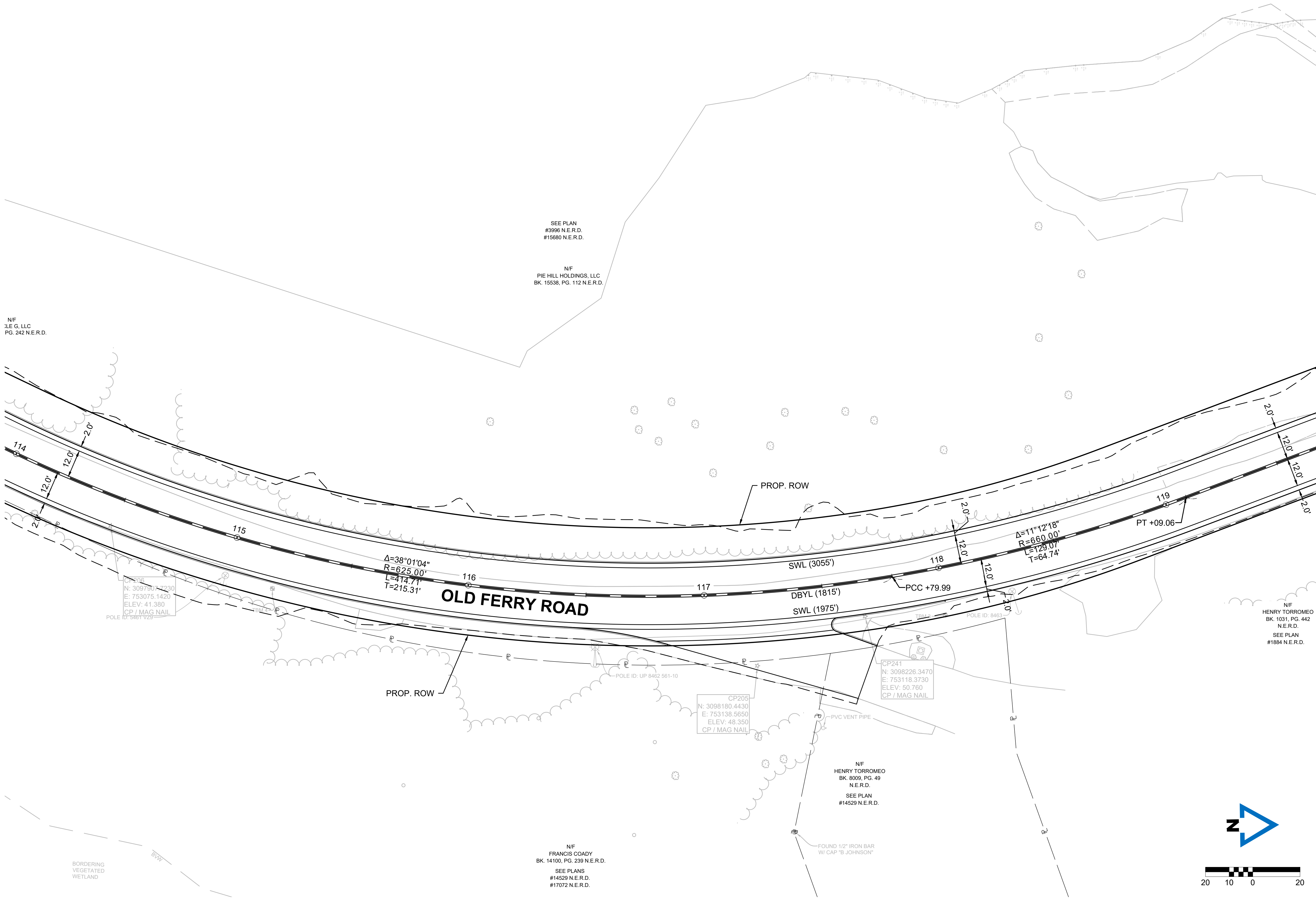
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28 OF 71



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DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: TSPM (04)

CONTINUED ON  
SHEET NO. 28

CONTINUED ON  
SHEET NO. 30



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**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS**

REVISIONS		
NO.	REVISION	DATE

1/05/2026

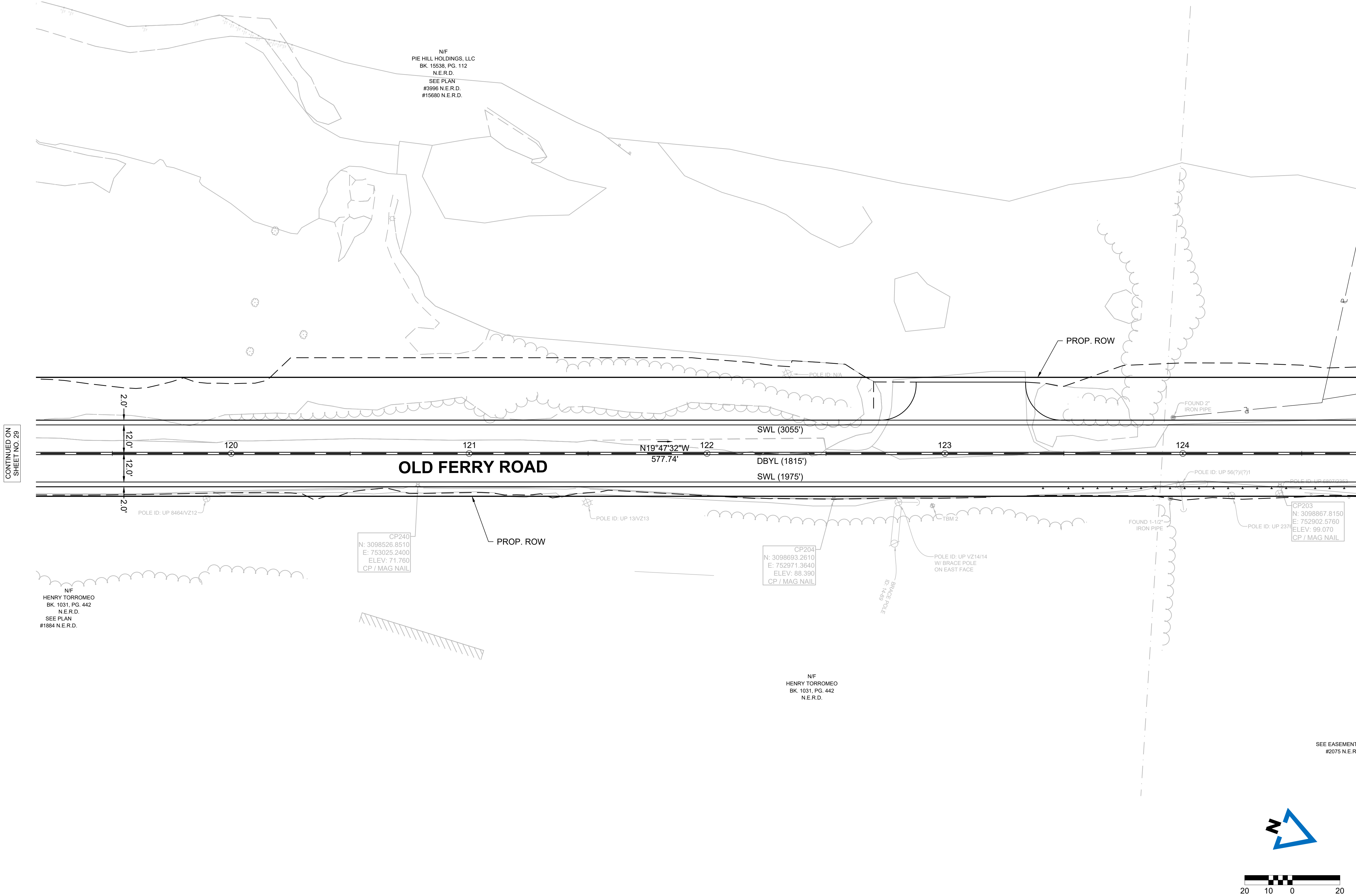
**TRAFFIC SIGN &  
PAVEMENT  
MARKING PLANS**

SCALE:  
1" = 20'

DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

SHEET NO.  
29 OF 71





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10 DITSON PLACE, SUITE 100  
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**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS**

REVISIONS		
NO.	REVISION	DATE

1/05/2026

**TRAFFIC SIGN &  
PAVEMENT  
MARKING PLANS**

SCALE:  
1" = 20'

DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

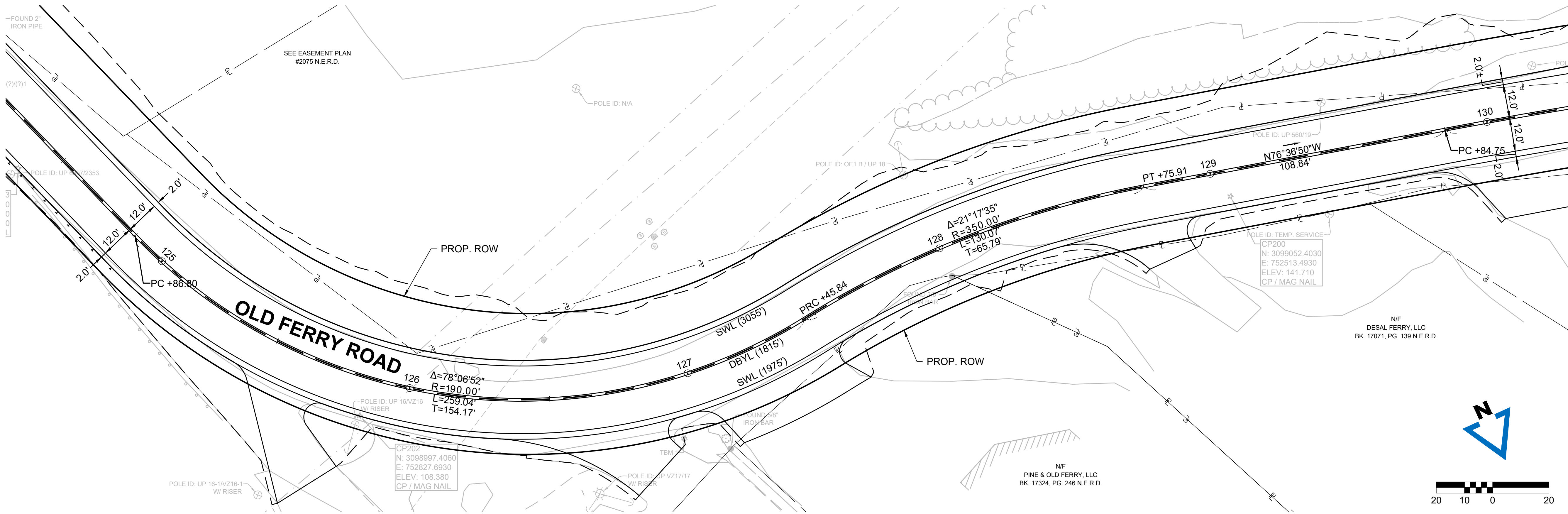
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30 OF 71



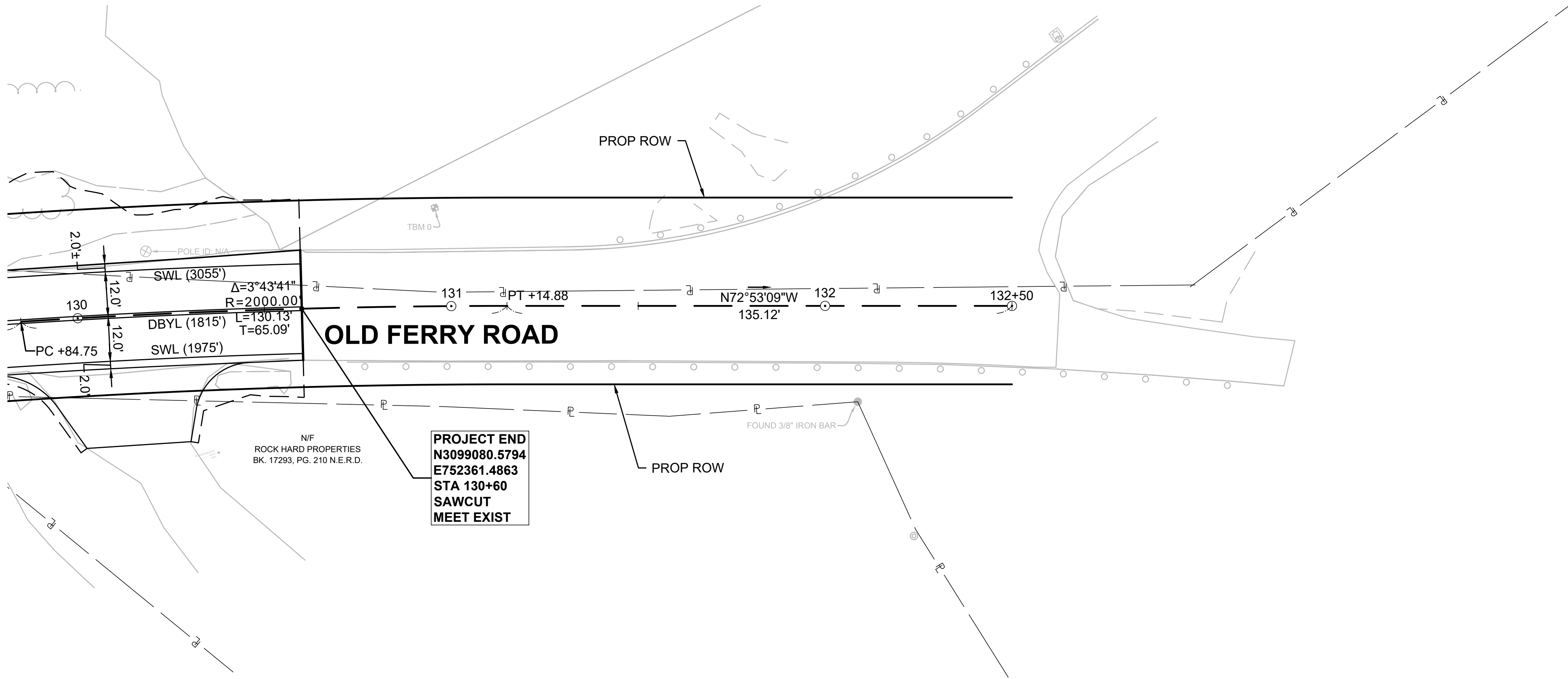
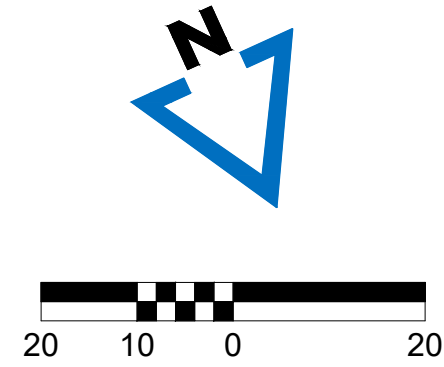
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DATE: 1/5/2026  
BY: JPATTEN

CONTINUED ON  
SHEET NO. 30

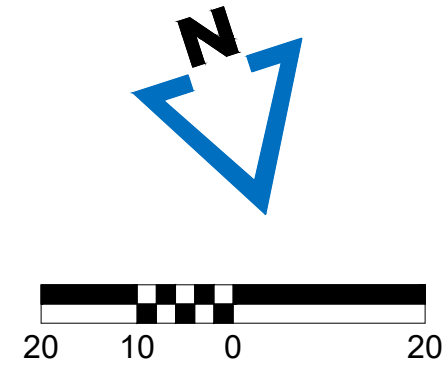
CONTINUED  
ABOVE



CONTINUED  
BELOW



N/F LOREUS BK. 17579 PG.  
289 N.E.R.D.



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PREPARED FOR:  
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10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

# OLD FERRY ROAD ROADWAY RECONSTRUCTION METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

## TRAFFIC SIGN & PAVEMENT MARKING PLANS

SCALE:  
1" = 20'

DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

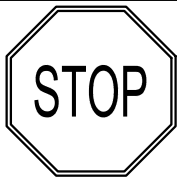
SHEET NO.

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BY: JPATTEN  
DATE: 1/5/2026  
LAYOUT: TSPM (07)

TRAFFIC SIGN SUMMARY

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)		NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH (INCHES)	HEIGHT (INCHES)		LETTER HEIGHT	VERTICAL SPACING		BACK- GROUND	LEGEND	BORDER			
R1-1	30	30		MUTCD		2	RED	WHITE	WHITE	P5 (2)	6.25	12.50

NOTES

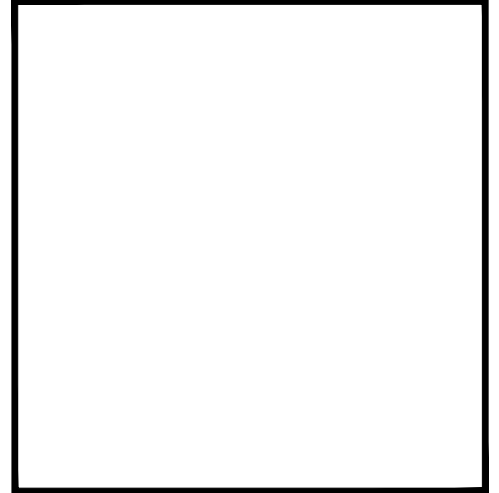
1. ALL WARNING, REGULATORY AND ROUTE MARKERS SHALL BE FABRICATED WITH HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING (SEE SECTION M9.30.0) TYPE III OR IV.
2. ALL SIGNS NOTED AS "(R&R)" SHALL BE MOUNTED ON NEW P5 POSTS OR AS OTHERWISE INDICATED.
3. ALL P5 POSTS SHALL BE TELESCOPIC SQUARE TYPE POSTS.
4. QUANTITIES OF SIGNS AND POSTS SHOWN ON THIS SHEET MAY DIFFER FROM THE TRAFFIC SIGN & PAVEMENT MARKING PLANS. WHERE DIFFERENCES OCCUR, THE TRAFFIC SIGN & PAVEMENT MARKING PLANS SHALL PREVAIL.

12.50 SF PAID UNDER ITEM 832.  
2 EA PAID UNDER ITEM 847.1

  
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PREPARED FOR:  
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METHUEN, MA 01844

OLD FERRY ROAD  
ROADWAY RECONSTRUCTION

METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

TRAFFIC SIGN  
SUMMARY

SCALE: NOT TO SCALE

DRAWN/DESIGN BY:  
JHP

CHECKED BY:  
JFO

SHEET NO.  
32 OF 71



TEMPORARY TRAFFIC CONTROL NOTES

GENERAL

- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERSEDED BY THESE PLANS.
- ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR THE CONTROL OF TRAFFIC.
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350 "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
- CONTRACTORS SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, OR SIMILAR OPERATIONS.
- THE FIRST TEN (10) PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH SEQUENTIAL FLASHING LIGHTS.
- DISTANCES SHOWN ON THE TEMPORARY TRAFFIC CONTROL PLANS ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
- MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) SHALL BE EQUAL IN FEET TO THE POSTED SPEED LIMIT IN MPH.
- MINIMUM LANE WIDTH SHALL BE 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH SHALL BE MEASURED FROM THE EDGE OF CHANNELIZING DEVICE OR BARRIER.
- ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL NOT COVERED IN THIS PLAN SET SHALL REFER TO TO THE MASSDOT "STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TRAFFIC MANAGEMENT PLANS".

WORK ZONE OPERTATIONS

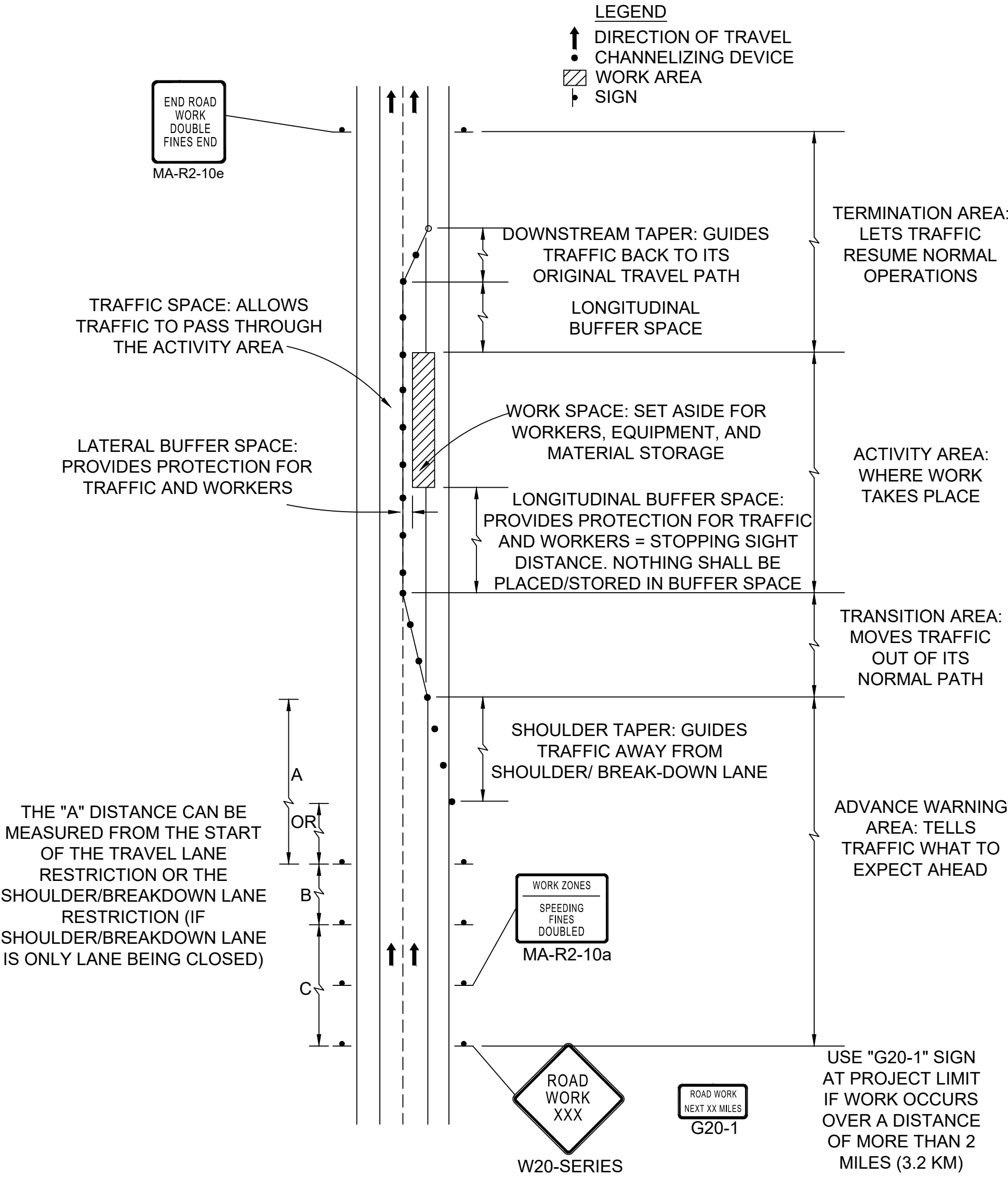
- LANE RESTRICTIONS SHALL BE LIMITED TO ACTIVE WORK HOURS, TYPICALLY BETWEEN 9:00 A.M. AND 4:00 P.M., MONDAY THROUGH FRIDAY, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- A MINIMUM OF ONE (1) 11-FOOT TRAVEL LANE SHALL BE MAINTAINED FOR TRAFFIC IN EACH DIRECTION OR ALTERNATING ONE-WAY TRAFFIC UNDER FLAGGER OR POLICE CONTROL AT ALL TIMES.
- FLASHING ARROW PANELS SHALL BE OPERATED IN THE "ARROW" MODE FOR LANE CLOSURES AND IN THE "CAUTION" MODE FOR SHOULDER WORK.
- ADVISORY SPEED PLAQUES (W13-1P) SHALL BE INSTALLED WHERE DIRECTED BY THE ENGINEER.
- POLICE DETAILS OR CERTIFIED FLAGGERS SHALL BE PROVIDED WHEN WORK ENCROACHES UPON AN ACTIVE TRAVEL LANE.
- EMERGENCY VEHICLE ACCESS SHALL BE MAINTAINED AT ALL TIMES.
- THE CONTRACTOR SHALL COORDINATE TRAFFIC CONTROL STAGING WITH THE CITY OF METHUEN DEPARTMENT OF PUBLIC WORKS, THE METHUEN POLICE DEPARTMENT, AND ALL AFFECTED UTILITY COMPANIES.

GRADE DIFFERENCES AND PAVEMENT TRANSITIONS

- WHERE LONGITUDINAL ELEVATION DIFFERENCES EXCEED TWO (2) INCHES, A TEMPORARY HOT MIX ASPHALT (HMA) WEDGE WITH A 12:1 OR FLATTER SLOPE SHALL BE PROVIDED FOR A SMOOTH TRANSITION.
- TRANSVERSE DROP-OFFS GREATER THAN FOUR (4) INCHES SHALL BE BACKFILLED TO A 4:1 SLOPE AND DELINEATED WITH REFLECTORIZED DRUMS.
- TEMPORARY EDGE SLOPES ALONG TRAVEL LANES SHALL NOT BE STEEPER THAN 4:1 DURING NON-WORKING HOURS.

CONSTRUCTION SIGNING

- ALL CONSTRUCTION SIGNS SHALL HAVE A BLACK LEGEND ON A FLUORESCENT ORANGE RETROREFLECTIVE BACKGROUND.
- CONSTRUCTION SIGNS SHALL BE COVERED OR REMOVED WHEN WORK IS NOT ACTIVE.
- FLAGS (16" X 16" MINIMUM) MAY BE ATTACHED TO ADVANCE WARNING SIGNS IF APPROVED BY THE ENGINEER.



COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL (TTC) ZONE (FIGURE GEN-4) NOT TO SCALE

TEMPORARY TRAFFIC CONTROL LEGEND

	WORK AREA
	SIGN
	DIRECTION OF TRAFFIC
	REFLECTORIZED DRUM OR CONE REFLECTORIZED
	POLICE OFFICER
	ARROW BOARD

SUGGESTED WORK ZONE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS **		
	A	B	C
LOCAL OR LOW VOLUME ROADWAYS*	350	350	350
MOST OTHER ROADWAYS*	500	500	500
FREEWAYS AND EXPRESSWAYS*	1,000	1,500	2,640

\* ROAD TYPE TO BE DETERMINED BY MASSDOT OFFICE OF TRANSPORTATION PLANNING.

\*\* DISTANCES ARE SHOWN IN FEET. THE COLUMN HEADINGS A, B, AND C ARE THE DIMENSIONS SHOWN IN THE DETAIL/ TYPICAL SETUP FIGURES. THE A DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN. THE B DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS. THE C DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS. (THE "THIRD" SIGN IS THE FIRST ONE TYPICALLY ENCOUNTERED BY A DRIVER APPROACHING A TEMPORARY TRAFFIC CONTROL (TTC) ZONE.)

THE "THIRD" SIGN ABOVE IS TYPICALLY REFERRED TO AS AN "ADVANCE WARNING" SIGN ON THE TTCP SETUPS. THESE ADVANCE WARNING SIGNS ARE LOCATED PRIOR TO THE PROJECT LIMITS ON ALL APPROACHES (i.e. THE W20-1 SERIES (ROAD WORK XX FT) SIGNS), AND USUALLY REMAIN FOR THE DURATION OF THE PROJECT. ADDITIONAL SIGNS (i.e. "RIGHT LANE CLOSED 1 MILE" AND "LEFT LANE CLOSED 1 MILE") HAVE BEEN SHOWN IN SOME FIGURES AS EXAMPLES OF REINFORCEMENT SIGN PLACEMENT BUT ARE USED IN RARE OCCASIONS.

THE FIRST AND SECOND WARNING SIGNS ABOVE ARE REFERRED TO AS THE OPERATIONAL (DAY-TO-DAY) WORK ZONE SIGNS AND MAY BE MOVED DEPENDING ON WHERE THE SPECIFIC ROADWAY WORK FOR THAT DAY IS LOCATED.

MA-R2-10a SIGNS SHALL BE PLACED BETWEEN THE SECOND AND THIRD SIGNS AS DESCRIBED ABOVE.

MA-R2-10a, MA-R2-10e, AND W20-1 SERIES SIGNS ARE TO BE INCLUDED ON ALL DETAILS/TYPICAL SETUPS.

Source: Table 6C-1 MUTCD LATEST EDITION

CONVENTIONAL ROADWAY- A STREET OR HIGHWAY OTHER THAN A LOW-VOLUME ROAD, EXPRESSWAY, OR FREEWAY.

EXPRESSWAY- A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.

FREEWAY- A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS.

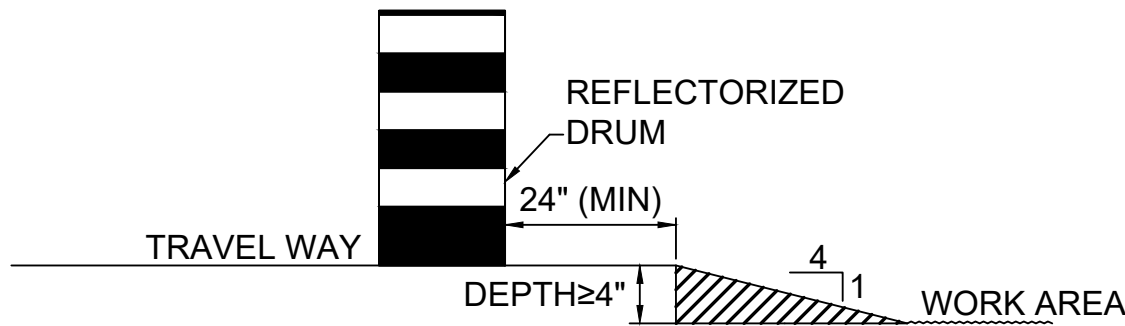
LOW-VOLUME ROAD- A FACILITY LYING OUTSIDE OF BUILT-UP AREAS OF CITIES, TOWNS, AND COMMUNITIES, AND IT SHALL HAVE A TRAFFIC VOLUME OF LESS THAN 400 AADT. IT SHALL NOT BE A FREEWAY, EXPRESSWAY, INTERCHANGE RAMP, FREEWAY SERVICE ROAD OR A ROAD ON A DESIGNATED STATE HIGHWAY SYSTEM.

Source: MUTCD LATEST EDITION

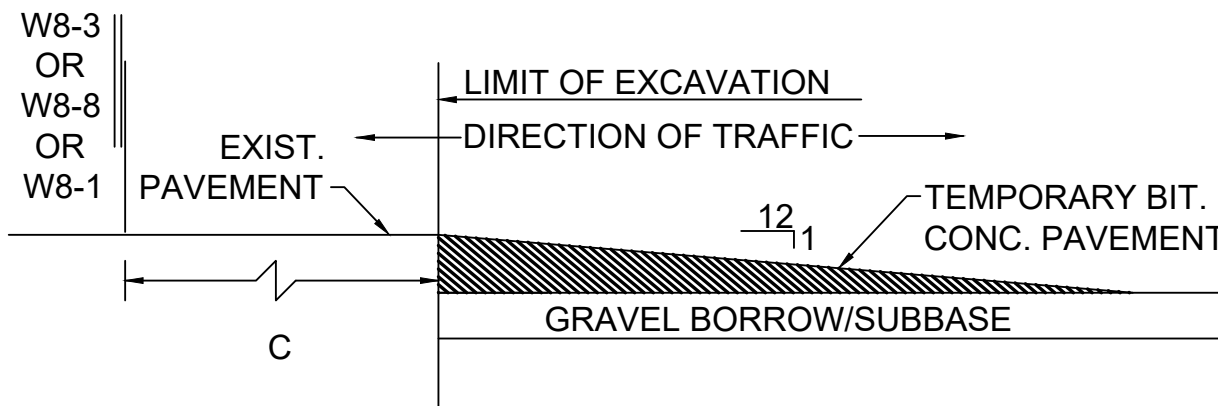
TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH (L)*
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST 0.5L
SHOULDER TAPER	AT LEAST 0.33L
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FT MIN. 100 FT MAX.
DOWNSTREAM TAPER	50 FT MIN. 100 FT MAX. PER LANE

Source: Table 6C-3 MUTCD LATEST EDITION



LATERAL DROP-OFF DETAIL NOT TO SCALE



LONGITUDINAL DROP-OFF DETAIL NOT TO SCALE

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PREPARED FOR:  
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OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

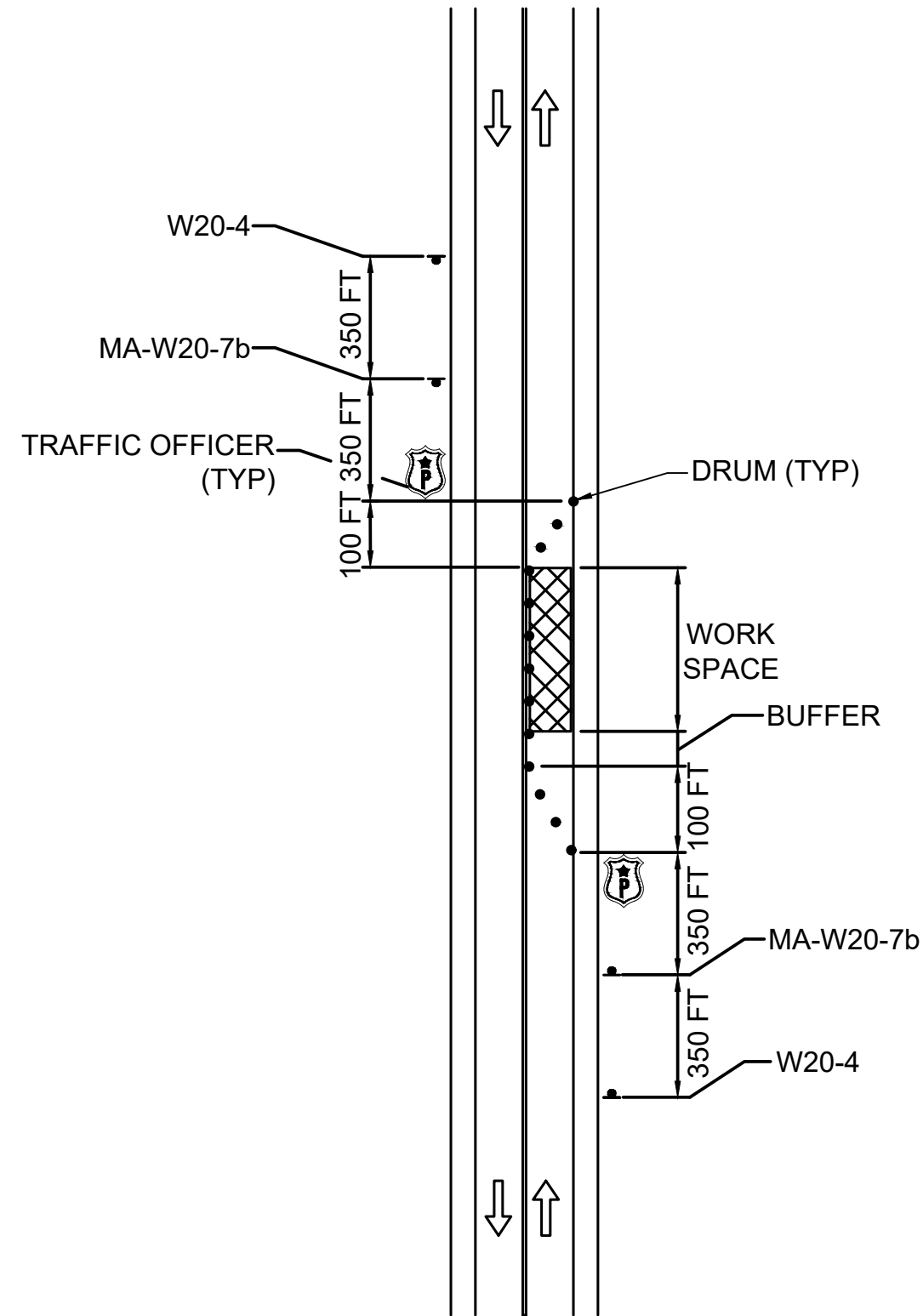
1/05/2026

TEMPORARY TRAFFIC CONTROL PLANS

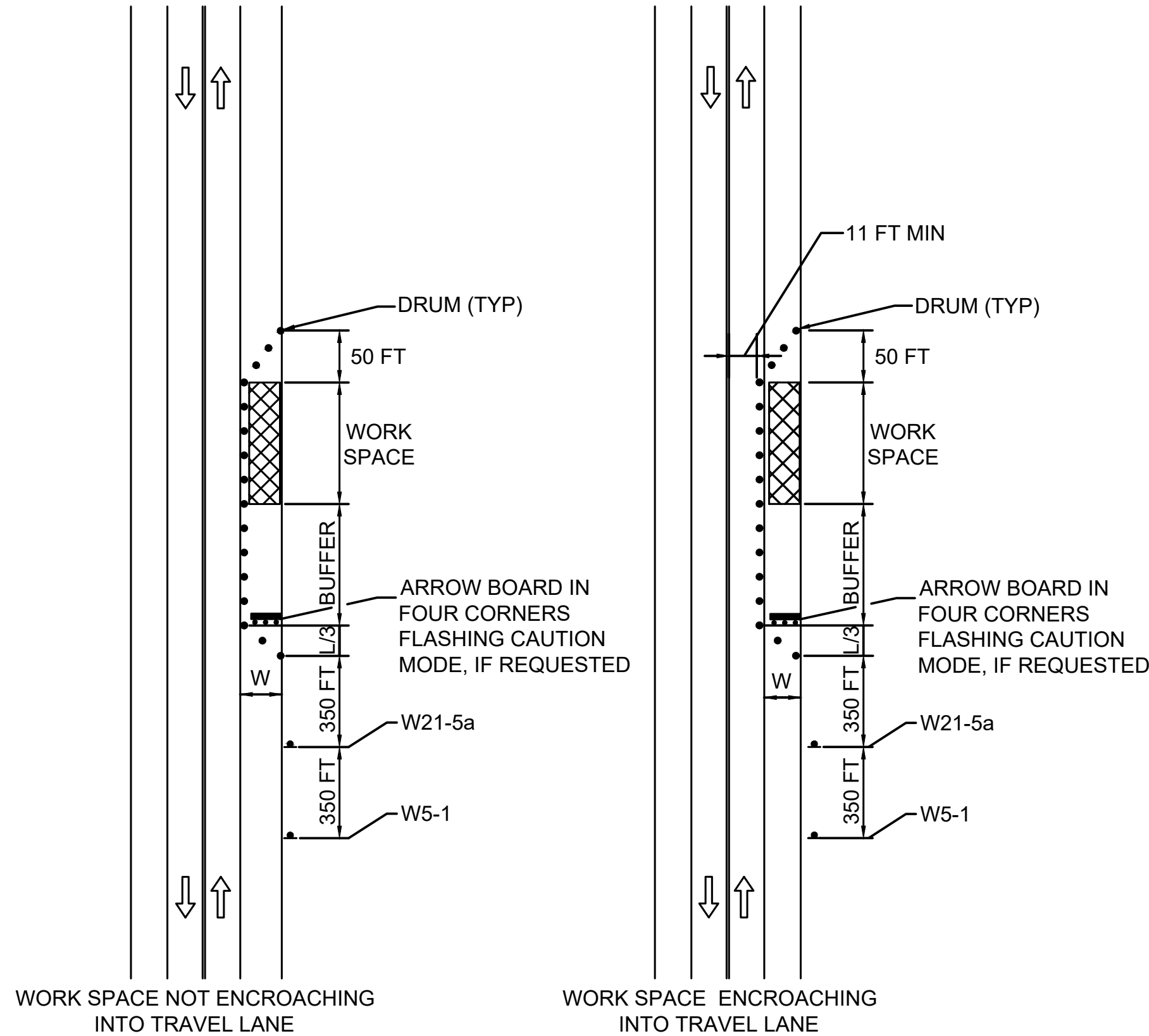
SCALE:  
NOT TO SCALE  
DRAWN/DESIGN BY: JHP  
CHECKED BY: JFO  
SHEET NO.  
33 OF 71



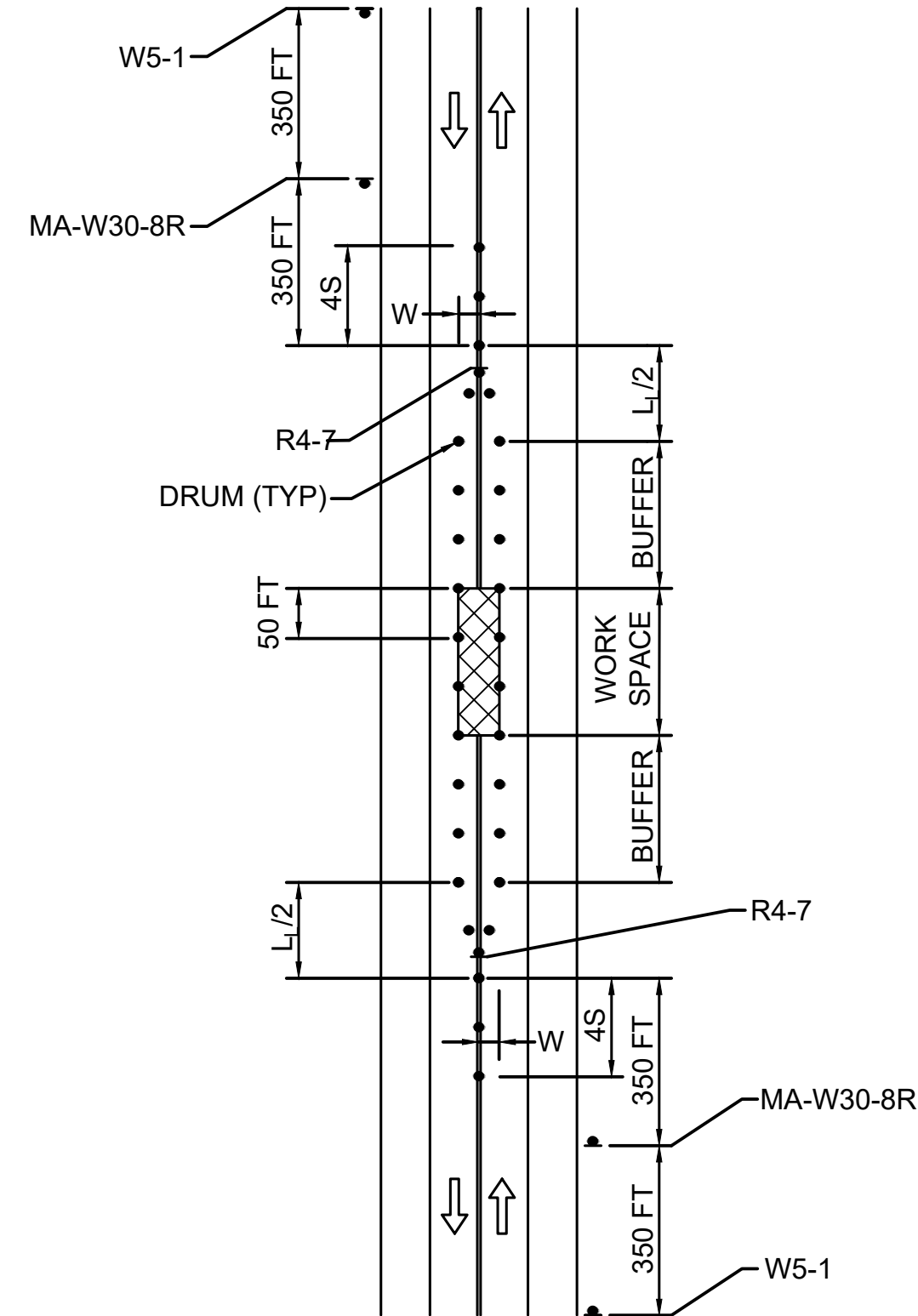
P:\2024002146\04-DRAWINGS\PROJECT DRAWING DATA\PLAN SHEET FILES\PLAN SHEET DWG\2024002146\_HD12(TTCP).DWG  
DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: TTCP (2)



**ALTERNATING ONE-WAY  
(TRAFFIC OFFICER)  
(FIGURE TL-3)**  
NOT TO SCALE



**TWO LANE ROAD  
SHOULDER CLOSURE  
(FIGURE TL-9)**  
NOT TO SCALE



**TWO LANE ROAD  
CENTER OF ROAD CLOSURE  
(FIGURE TL-8)**  
NOT TO SCALE

**TYPICAL TAPER LENGTHS (L) IN FEET**

SPEED LIMIT (S) IN MPH	WIDTH OF OFFSET (W) IN FEET		
	10	11	12
25	104	115	125
30	150	165	180
35	204	225	245
40	267	293	320

NOTE: FOR SHOULDER WIDTHS NOT LISTED IN TABLE, USE  $L = \frac{WS^2}{60}$

MINIMUM LENGTH OF LONGITUDINAL BUFFER IS EQUAL TO THE STOPPING SIGHT DISTANCE AT THE POSTED SPEED LIMIT AND CAN BE DETERMINED FROM THE FOLLOWING TABLE:

STOPPING SITE DISTANCE	
SPEED (MPH)	DISTANCE (FT)
25	155
30	200
35	250
40	305

**NOTES:**

1. MAXIMUM DRUM SPACING IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
2. MINIMUM LANE WIDTH IS TO BE 11 FEET MEASURED FROM THE EDGE OF DRUMS.

**CONSTRUCTION SIGN SUMMARY**

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)		NUMBER OF SIGNS REQUIRED	COLOR			UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH (INCHES)	HEIGHT (INCHES)		LETTER HEIGHT	VERTICAL SPACING		BACK- GROUND	LEGEND	BORDER		
MA-W20-7b	36	36		MASSDOT STANDARD		2	FLUOR. ORANGE H/I	BLACK H/I	BLACK H/I	9.00	18.00
MA-W30-8R	36	36				2				9.00	18.00
R4-7	24	30		MUTCD		2	WHITE H/I	BLACK H/I	BLACK H/I	5.00	10.00
W5-1	36	36				3	FLUOR. ORANGE H/I	BLACK H/I	BLACK H/I	9.00	27.00
W20-4	36	36				2				9.00	18.00
W21-5a	36	36				1				9.00	9.00

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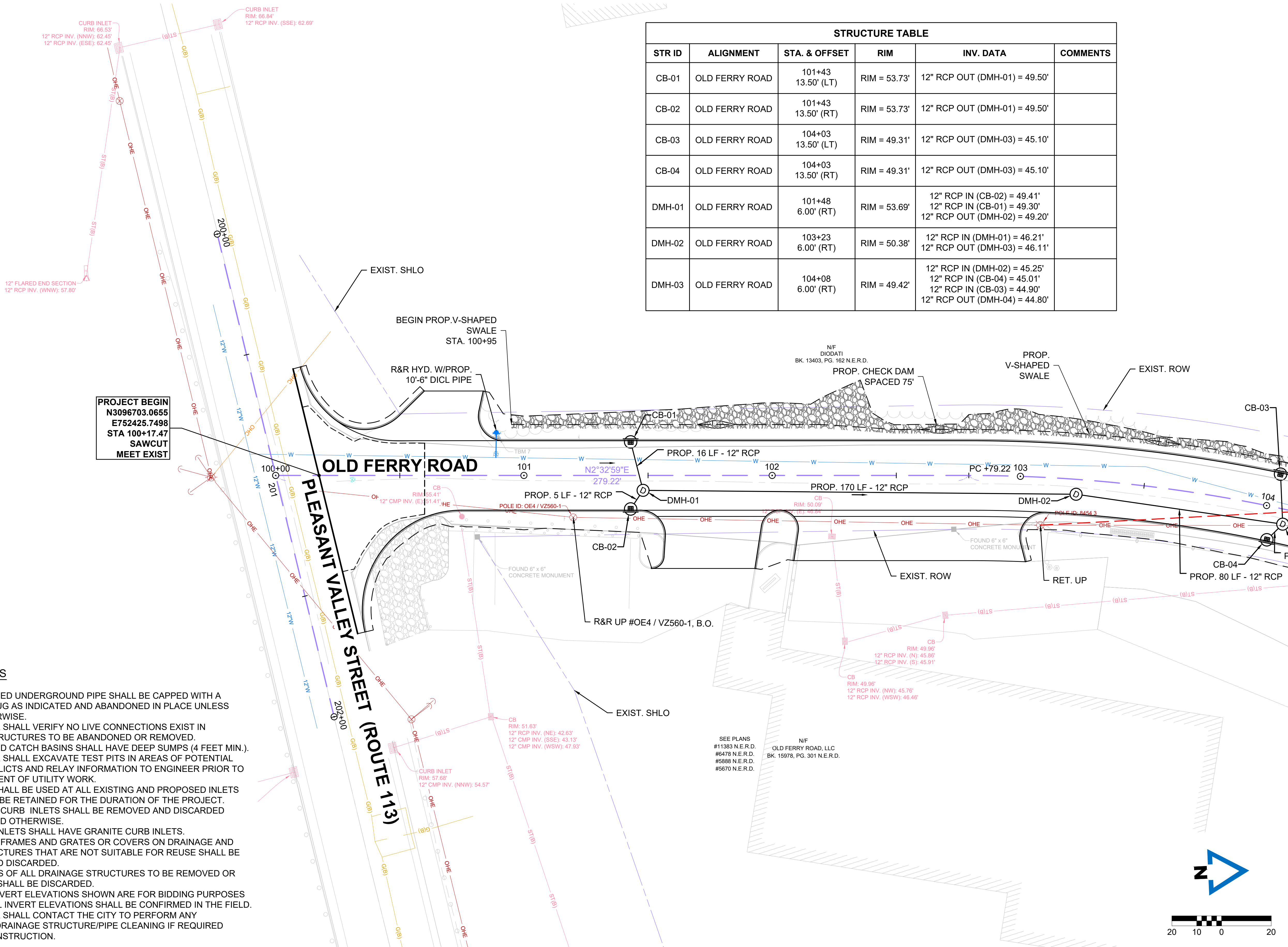
**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS**

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1/05/2026

**TEMPORARY  
TRAFFIC CONTROL  
PLANS**





STRUCTURE TABLE					
STR ID	ALIGNMENT	STA. & OFFSET	RIM	INV. DATA	COMMENTS
CB-01	OLD FERRY ROAD	101+43 13.50' (LT)	RIM = 53.73'	12" RCP OUT (DMH-01) = 49.50'	
CB-02	OLD FERRY ROAD	101+43 13.50' (RT)	RIM = 53.73'	12" RCP OUT (DMH-01) = 49.50'	
CB-03	OLD FERRY ROAD	104+03 13.50' (LT)	RIM = 49.31'	12" RCP OUT (DMH-03) = 45.10'	
CB-04	OLD FERRY ROAD	104+03 13.50' (RT)	RIM = 49.31'	12" RCP OUT (DMH-03) = 45.10'	
DMH-01	OLD FERRY ROAD	101+48 6.00' (RT)	RIM = 53.69'	12" RCP IN (CB-02) = 49.41' 12" RCP IN (CB-01) = 49.30' 12" RCP OUT (DMH-02) = 49.20'	
DMH-02	OLD FERRY ROAD	103+23 6.00' (RT)	RIM = 50.38'	12" RCP IN (DMH-01) = 46.21' 12" RCP OUT (DMH-03) = 46.11'	
DMH-03	OLD FERRY ROAD	104+08 6.00' (RT)	RIM = 49.42'	12" RCP IN (DMH-02) = 45.25' 12" RCP IN (CB-04) = 45.01' 12" RCP IN (CB-03) = 44.90' 12" RCP OUT (DMH-04) = 44.80'	

GENERAL NOTES

- ALL ABANDONED UNDERGROUND PIPE SHALL BE CAPPED WITH A MASONRY PLUG AS INDICATED AND ABANDONED IN PLACE UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL VERIFY NO LIVE CONNECTIONS EXIST IN DRAINAGE STRUCTURES TO BE ABANDONED OR REMOVED.
- ALL PROPOSED CATCH BASINS SHALL HAVE DEEP SUMPS (4 FEET MIN.).
- CONTRACTOR SHALL EXCAVATE TEST PITS IN AREAS OF POTENTIAL UTILITY CONFLICTS AND RELAY INFORMATION TO ENGINEER PRIOR TO COMMENCEMENT OF UTILITY WORK.
- SILT SACKS SHALL BE USED AT ALL EXISTING AND PROPOSED INLETS THAT ARE TO BE RETAINED FOR THE DURATION OF THE PROJECT.
- ALL EXISTING CURB INLETS SHALL BE REMOVED AND DISCARDED UNLESS NOTED OTHERWISE.
- ALL GUTTER INLETS SHALL HAVE GRANITE CURB INLETS.
- ALL EXISTING FRAMES AND GRATES OR COVERS ON DRAINAGE AND SEWER STRUCTURES THAT ARE NOT SUITABLE FOR REUSE SHALL BE REMOVED AND DISCARDED.
- THE CASTINGS OF ALL DRAINAGE STRUCTURES TO BE REMOVED OR ABANDONED SHALL BE DISCARDED.
- PROPOSED INVERT ELEVATIONS SHOWN ARE FOR BIDDING PURPOSES ONLY. ACTUAL INVERT ELEVATIONS SHALL BE CONFIRMED IN THE FIELD.
- CONTRACTOR SHALL CONTACT THE CITY TO PERFORM ANY NECESSARY DRAINAGE STRUCTURE/PIPE CLEANING IF REQUIRED PRIOR TO CONSTRUCTION.

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PREPARED FOR:  
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10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS**

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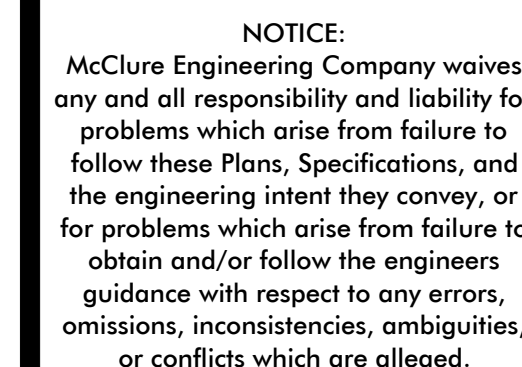
1/05/2026

**DRAINAGE &  
UTILITY PLANS**

SCALE:  
1" = 20'  
DRAWN/DESIGN BY:  
CJD  
CHECKED BY:  
LAD  
SHEET NO.  
35 OF 71

FOR CONSTRUCTION PROFILE:  
SEE SHEET NO. 18





**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION**

---

**METHUEN, MASSACHUSETTS**

## DRAINAGE & UTILITY PLANS

SCALE: 1" = 20'

DRAWN/DESIGN BY: CJD CHECKED BY: LAD

SHEET NO. 36 OF 71





P:\2024002146\04-DRAWINGS\PROJECT DRAWING DATA\PLAN SHEET FILES\PLAN SHEET DWG\2024002146\_HD 13(DU).DWG  
DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: DU [03]

CONTINUED ON  
SHEET NO. 36

STRUCTURE TABLE					
STR ID	ALIGNMENT	STA. & OFFSET	RIM	INV. DATA	COMMENTS
CB-09	OLD FERRY ROAD	109+03 13.50' (LT)	RIM = 42.96'	12" RCP OUT (DMH-08) = 38.70'	
CB-10	OLD FERRY ROAD	109+03 13.50' (RT)	RIM = 42.96'	12" RCP OUT (DMH-08) = 38.70'	
CB-11	OLD FERRY ROAD	111+24 13.50' (LT)	RIM = 38.63'	12" RCP OUT (DMH-10) = 34.40'	
CB-12	OLD FERRY ROAD	111+24 13.50' (RT)	RIM = 38.63'	12" RCP OUT (DMH-10) = 34.40'	
CB-13	OLD FERRY ROAD	112+02 13.50' (LT)	RIM = 38.20'	15" RCP IN (FES-1) = 33.60' 18" RCP OUT (DMH-11) = 33.50'	

STRUCTURE TABLE					
STR ID	ALIGNMENT	STA. & OFFSET	RIM	INV. DATA	COMMENTS
DMH-14	OLD FERRY ROAD	114+23 6.00' (LT)	RIM = 41.49'	24" RCP IN (DMH-15) = 36.24' 12" RCP IN (CB-16) = 37.11' 12" RCP IN (CB-17) = 37.00' 24" RCP OUT (DMH-13) = 36.14'	SPECIAL MANHOLE - 6' DIAM.
FES-1	OLD FERRY ROAD	112+02 23.32' (LT)	RIM = 38.02'	15" RCP OUT (CB-13) = 36.50'	
PIPE END -1	OLD FERRY ROAD	111+35 144.63' (RT)	RIM = 32.58'	36" RCP IN (DMH-12) = 29.64'	

STRUCTURE TABLE					
STR ID	ALIGNMENT	STA. & OFFSET	RIM	INV. DATA	COMMENTS
DMH-09	OLD FERRY ROAD	110+28 6.00' (RT)	RIM = 40.42'	15" RCP IN (DMH-08) = 36.21' 15" RCP OUT (DMH-10) = 36.11'	
DMH-10	OLD FERRY ROAD	111+29 6.00' (LT)	RIM = 38.73'	12" RCP IN (CB-11) = 34.31' 12" RCP IN (CB-12) = 34.20' 15" RCP IN (DMH-09) = 34.29' 15" RCP OUT (DMH-11) = 34.19'	SPECIAL MANHOLE - 5' DIAM.
DMH-11	OLD FERRY ROAD	112+08 6.00' (LT)	RIM = 38.36'	15" RCP IN (DMH-10) = 33.11' 18" RCP IN (CB-13) = 32.85' 24" RCP OUT (DMH-12) = 32.45'	SPECIAL MANHOLE - 6' DIAM.
DMH-12	OLD FERRY ROAD	112+35 6.00' (LT)	RIM = 38.43'	24" RCP IN (DMH-13) = 32.70' 24" RCP IN (DMH-11) = 31.90' 36" RCP OUT (PIPE END -1) = 31.90'	SPECIAL MANHOLE
DMH-13	OLD FERRY ROAD	112+48 6.00' (LT)	RIM = 38.50'	24" RCP IN (DMH-14) = 33.25' 12" RCP IN (CB-14) = 34.11' 12" RCP IN (CB-15) = 34.00' 24" RCP OUT (DMH-12) = 33.15'	SPECIAL MANHOLE - 6' DIAM.

STRUCTURE TABLE					
STR ID	ALIGNMENT	STA. & OFFSET	RIM	INV. DATA	COMMENTS
CB-15	OLD FERRY ROAD	112+53 13.50' (RT)	RIM = 38.38'	12" RCP OUT (DMH-13) = 34.20'	
CB-16	OLD FERRY ROAD	114+28 13.51' (LT)	RIM = 41.46'	12" RCP OUT (DMH-14) = 37.20'	
CB-17	OLD FERRY ROAD	114+28 13.49' (RT)	RIM = 41.46'	12" RCP OUT (DMH-14) = 37.20'	
CB-14	OLD FERRY ROAD	112+53 13.50' (LT)	RIM = 38.38'	12" RCP OUT (DMH-13) = 34.20'	
DMH-08	OLD FERRY ROAD	109+08 6.00' (RT)	RIM = 43.00'	15" RCP IN (DMH-07) = 38.22' 12" RCP IN (CB-10) = 38.61' 12" RCP IN (CB-09) = 38.50' 15" RCP OUT (DMH-09) = 38.12'	



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10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS

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NO.	REVISION	DATE

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DRAINAGE &  
UTILITY PLANS

SCALE:  
1" = 20'

DRAWN/DESIGN BY: CJD  
CHECKED BY: LAD

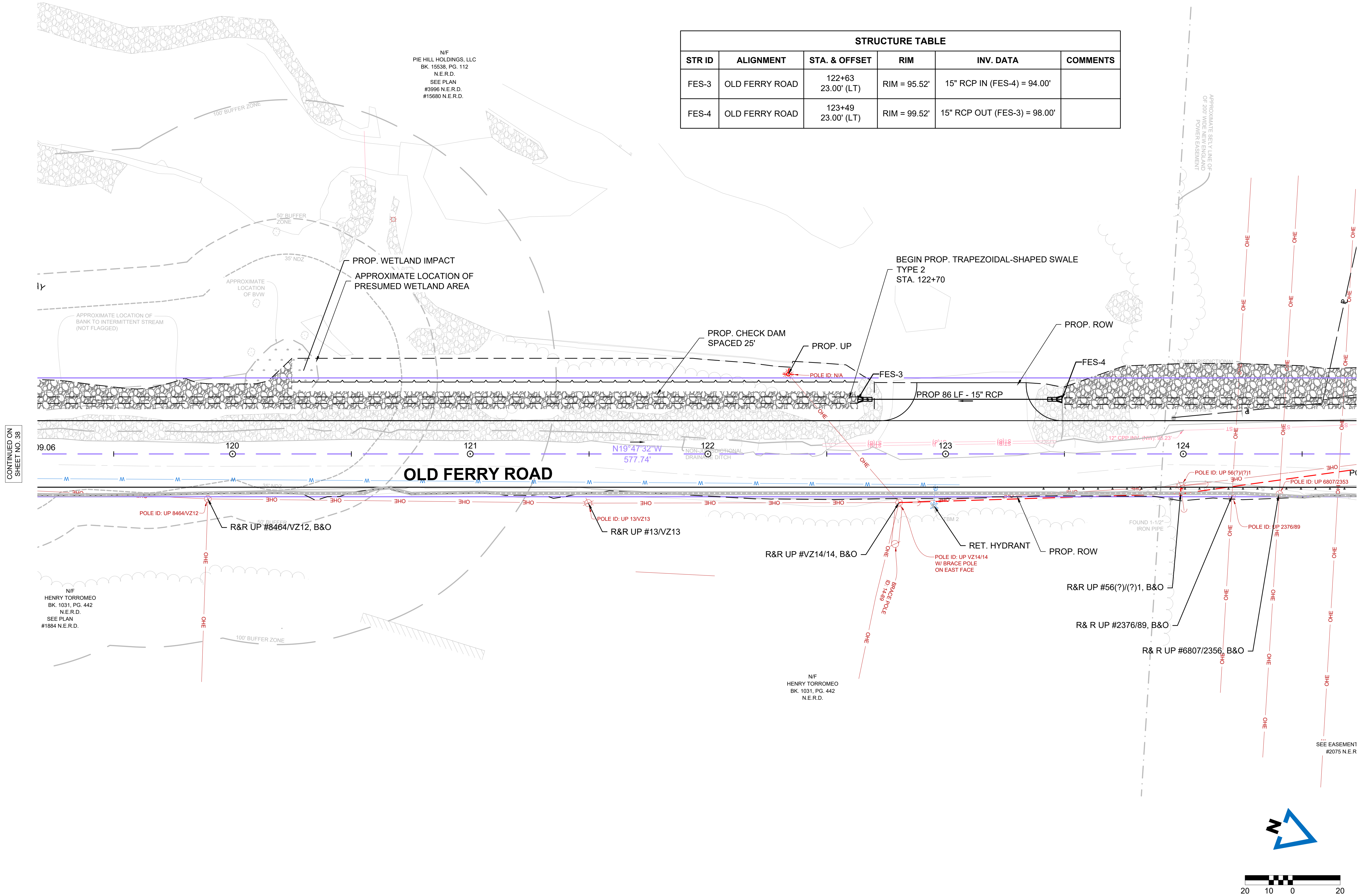
SHEET NO.  
37 OF 71

FOR CONSTRUCTION PROFILE:  
SEE SHEET NO. 20









STRUCTURE TABLE					
STR ID	ALIGNMENT	STA. & OFFSET	RIM	INV. DATA	COMMENTS
FES-3	OLD FERRY ROAD	122+63 23.00' (LT)	RIM = 95.52'	15" RCP IN (FES-4) = 94.00'	
FES-4	OLD FERRY ROAD	123+49 23.00' (LT)	RIM = 99.52'	15" RCP OUT (FES-3) = 98.00'	



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REVISIONS		
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1/05/2026

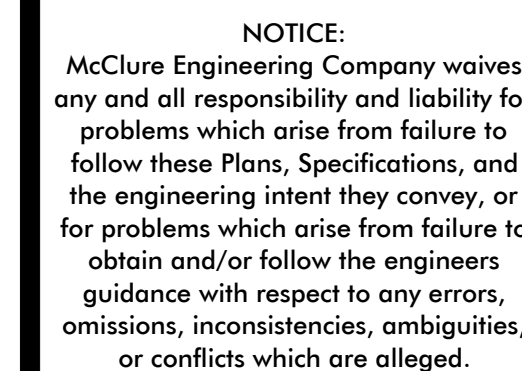
DRAINAGE &  
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SCALE:  
1" = 20'

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SHEET NO.  
39 OF 71





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**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION**

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**METHUEN, MASSACHUSETTS**

REVISIONS		
NO.	REVISION	DATE

1/05/2026

## DRAINAGE & UTILITY PLANS

SCALE

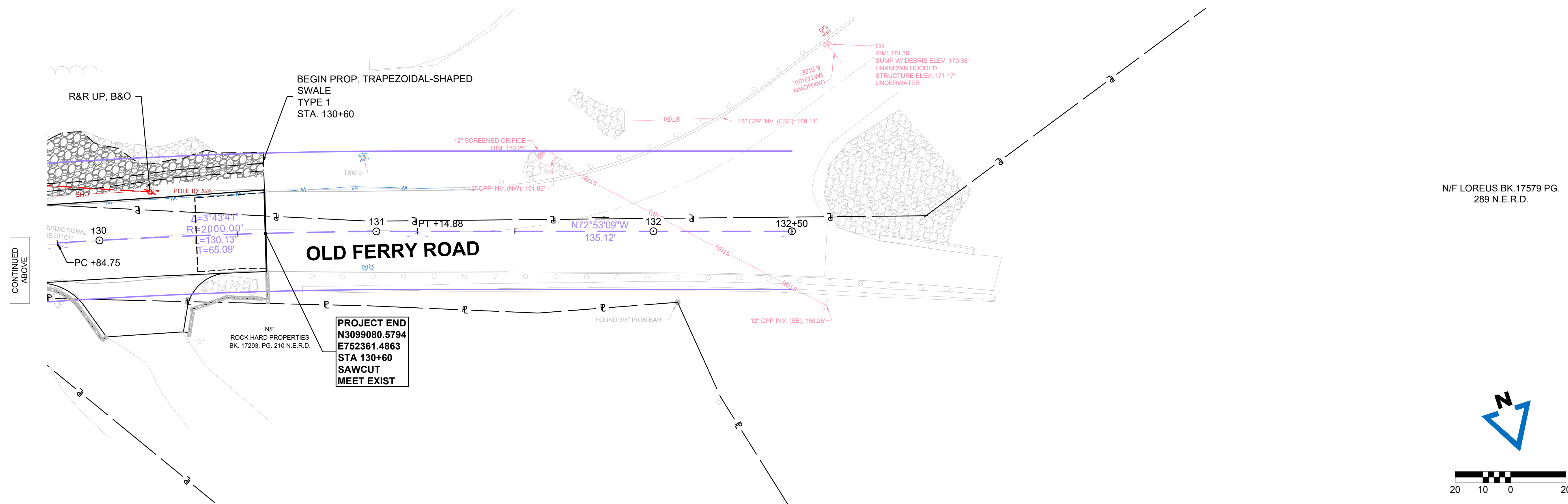
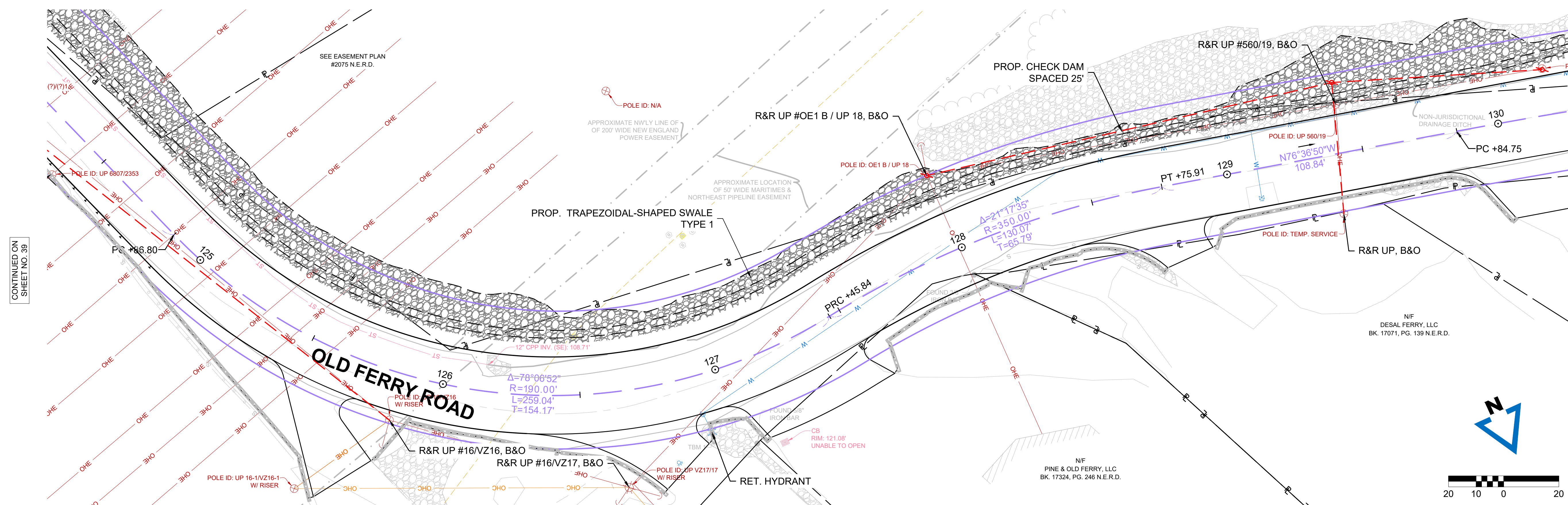
$$1'' = 20'$$

DRAWN/DESIGN BY  
CJD

CHECKED BY:  
LAD

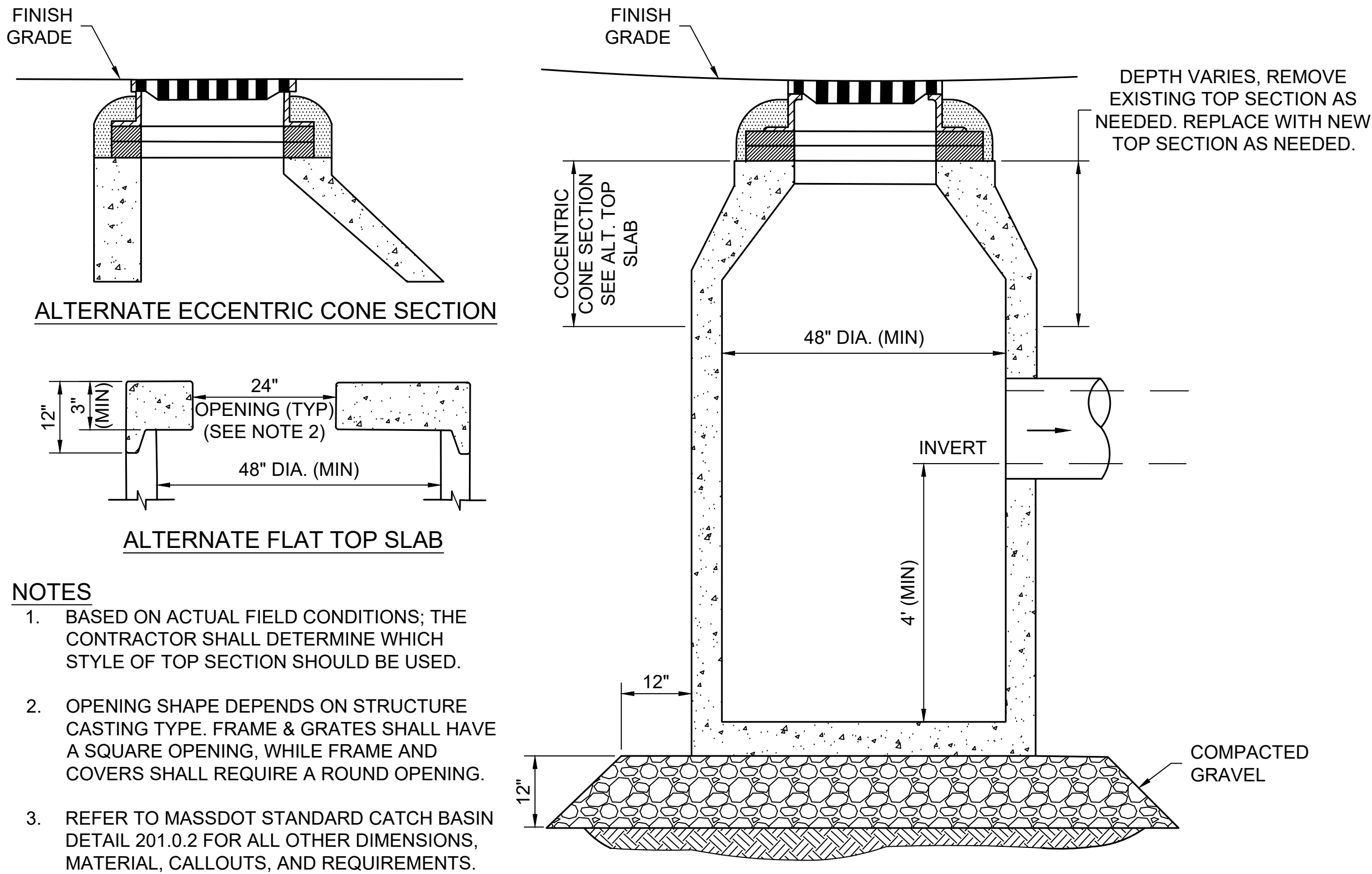
SHEET NO.

40 OF 71

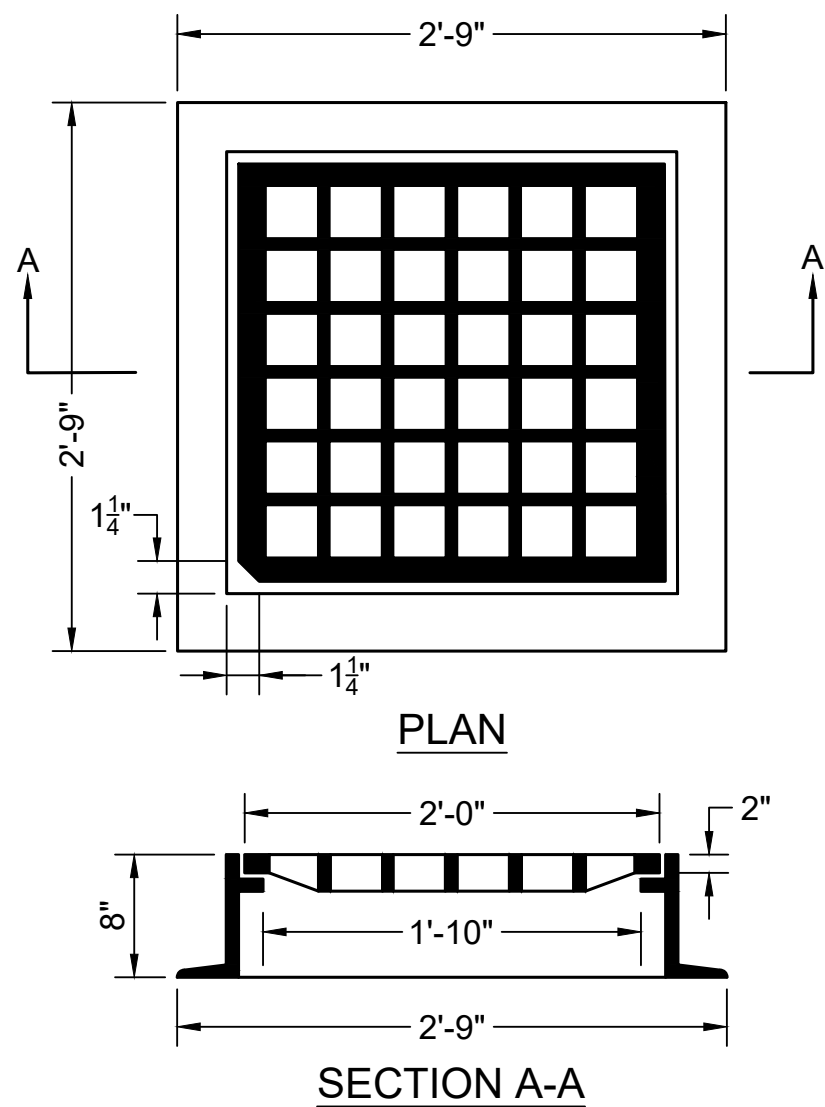


FOR CONSTRUCTION PROFILE:  
SEE SHEET NO. 23 & NO. 24

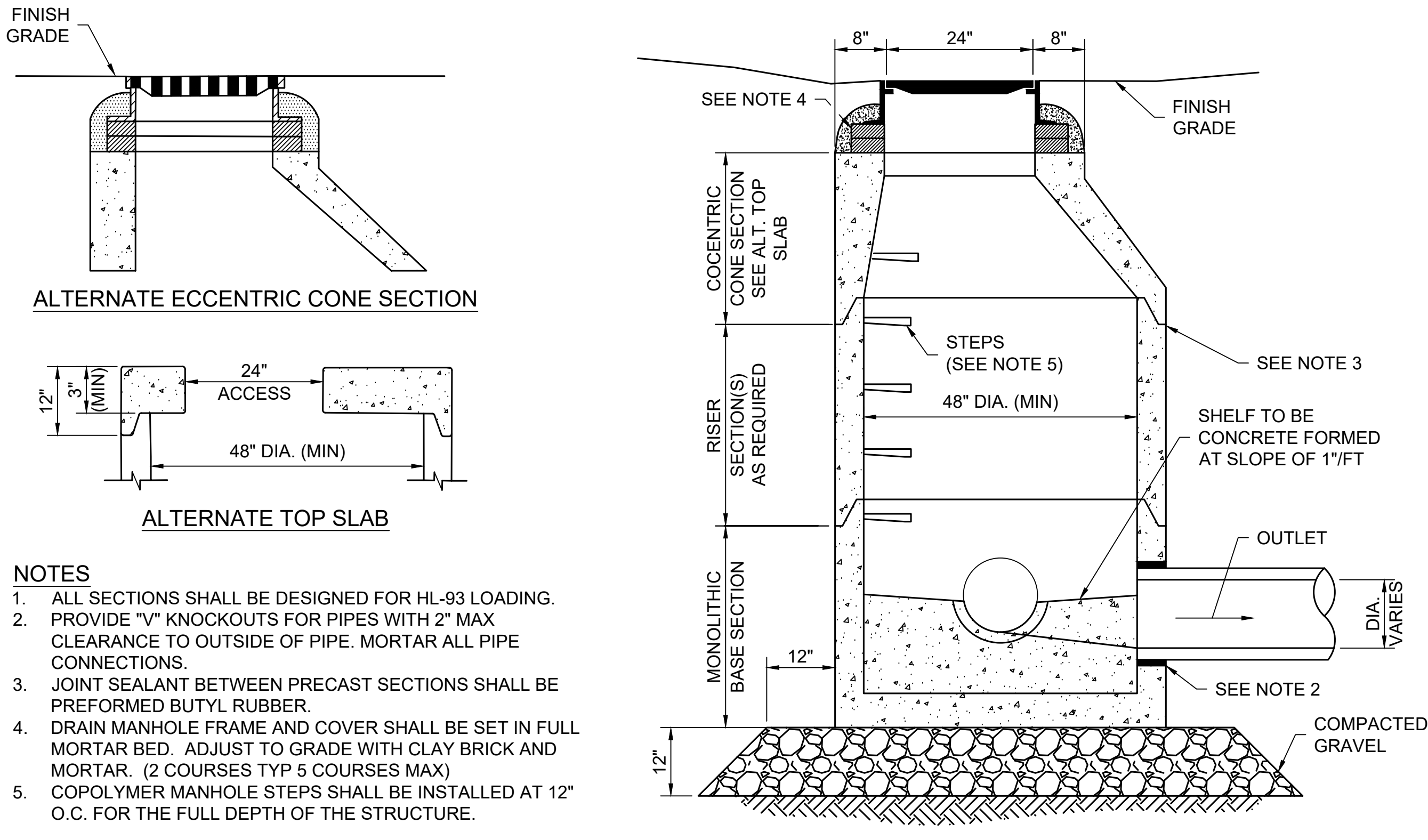




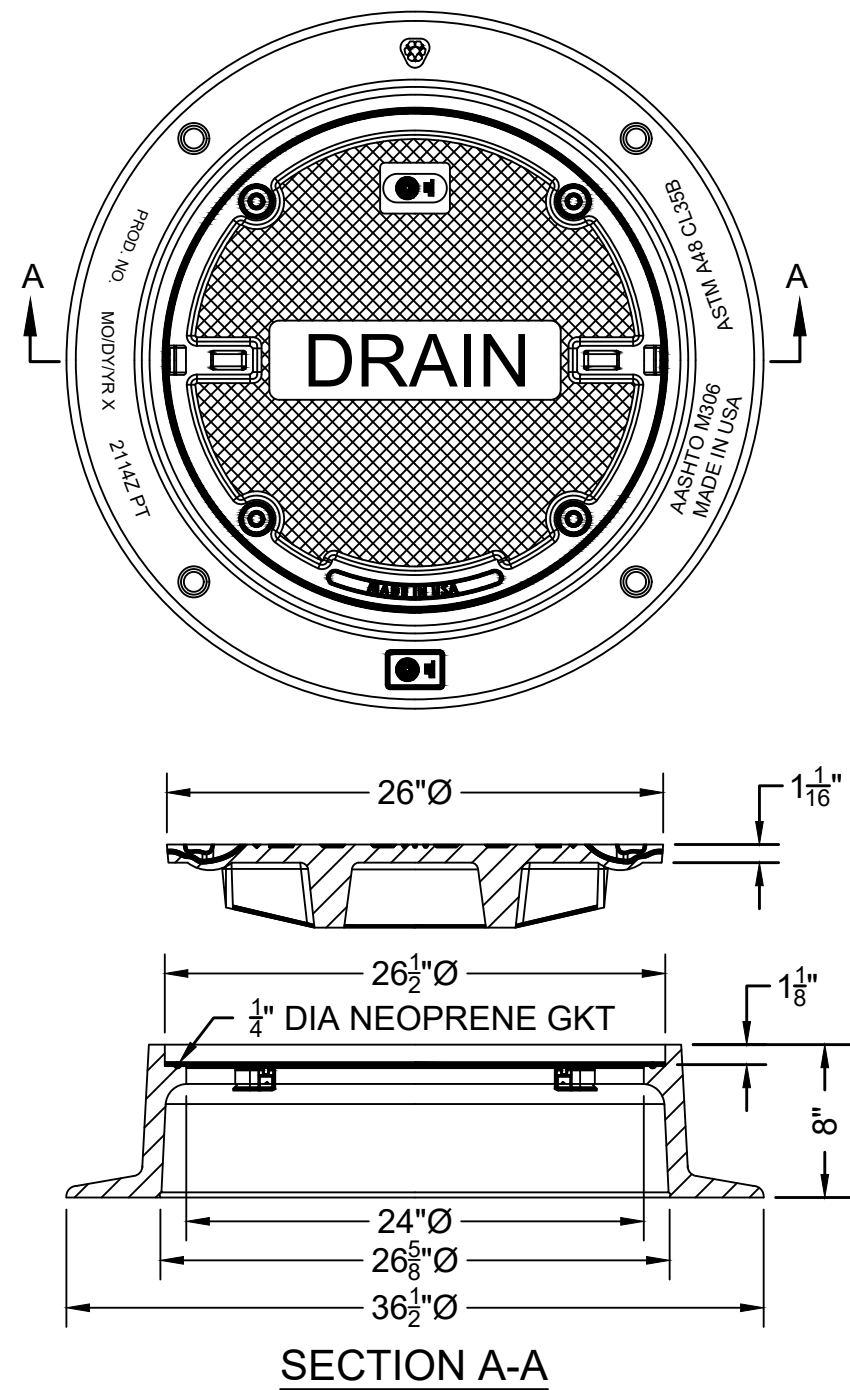
DEEP SUMP CATCH BASIN  
NOT TO SCALE



CATCH BASIN FRAME & GRATE (MUNICIPAL STANDARD)  
NOT TO SCALE



DRAIN MANHOLE  
NOT TO SCALE



MANHOLE FRAME & COVER  
NOT TO SCALE

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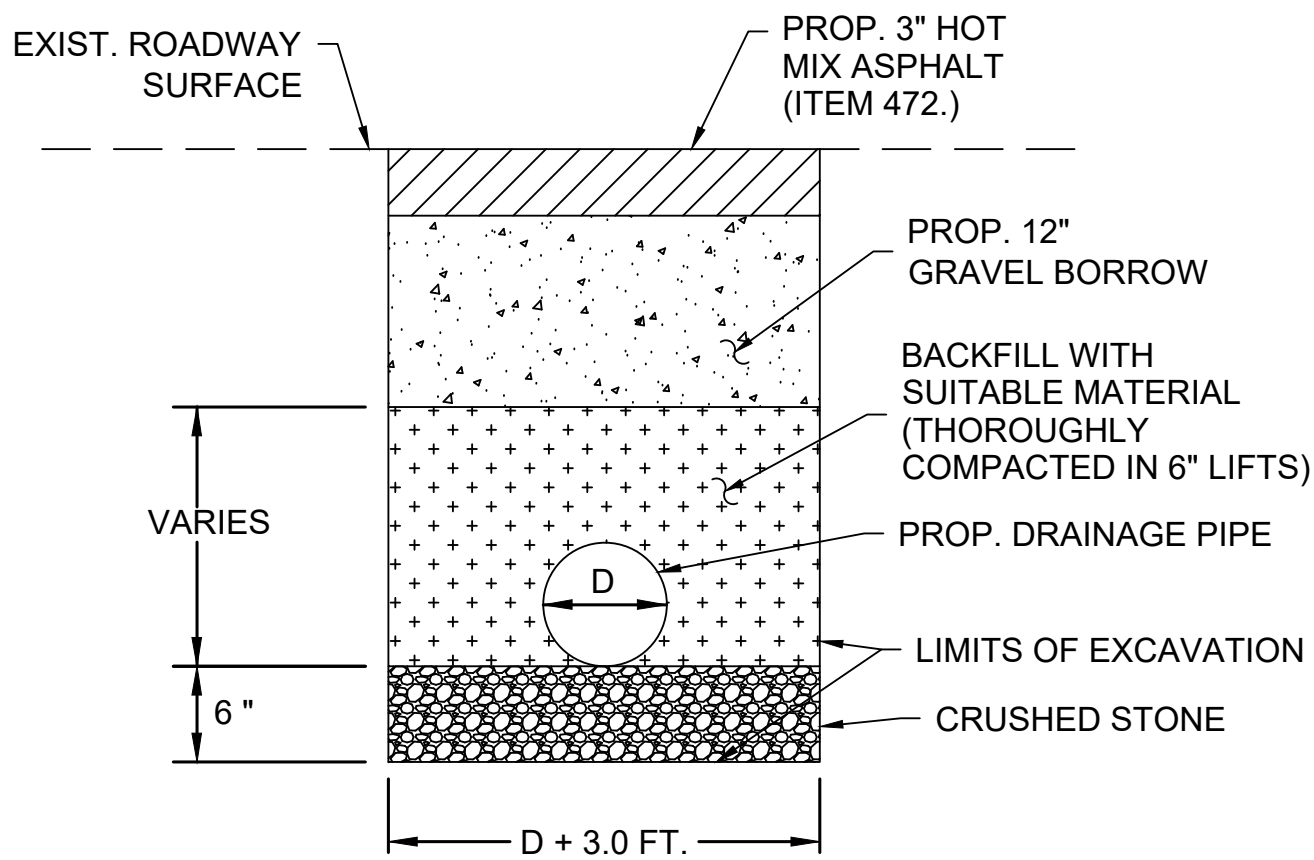
DRAINAGE  
DETAILS

SCALE:  
NOT TO SCALE

DRAWN/DESIGN BY: JHP  
CHECKED BY: LAD

SHEET NO.  
41 OF 71





TEMPORARY PATCH  
(IN AREAS OF FULL DEPTH PAVEMENT RECONSTRUCTION)

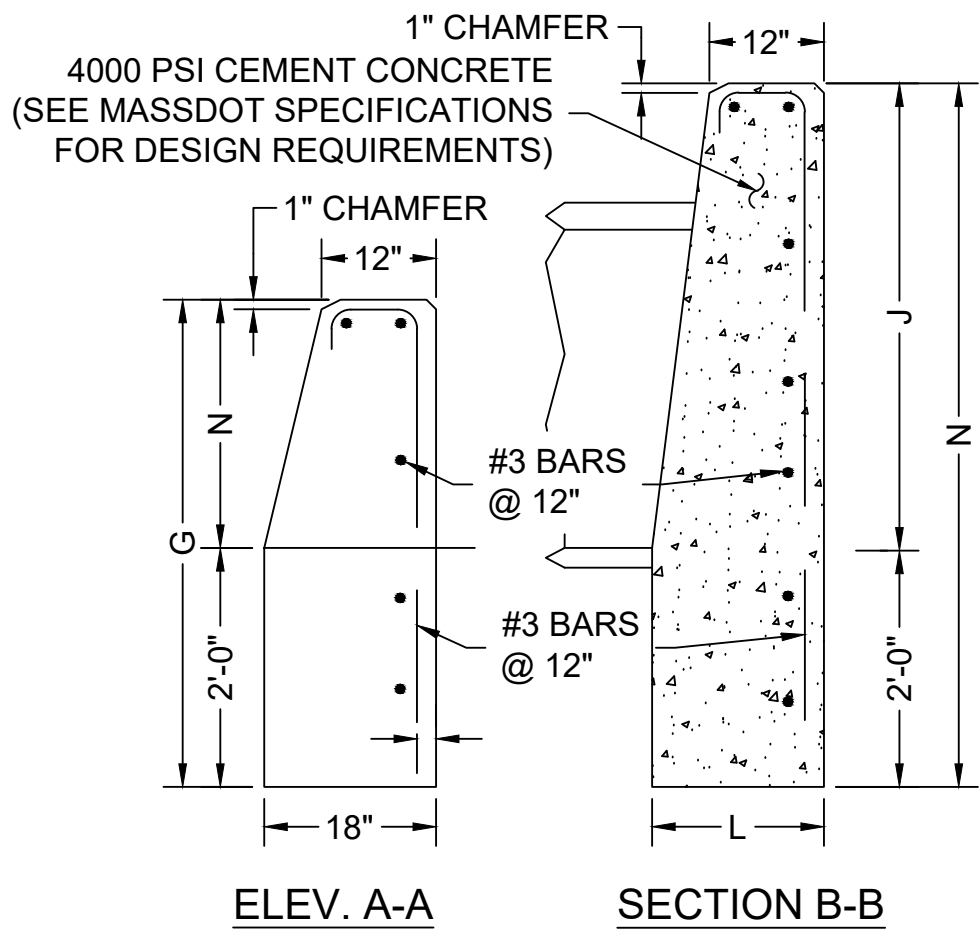
NOTE  
IF UNSUITABLE MATERIAL IS ENCOUNTERED AS DETERMINED BY THE ENGINEER, ADDITIONAL  
BEDDING SHALL BE PAID FOR UNDER ITEM 156.

DRAINAGE TRENCH DETAIL  
NOT TO SCALE

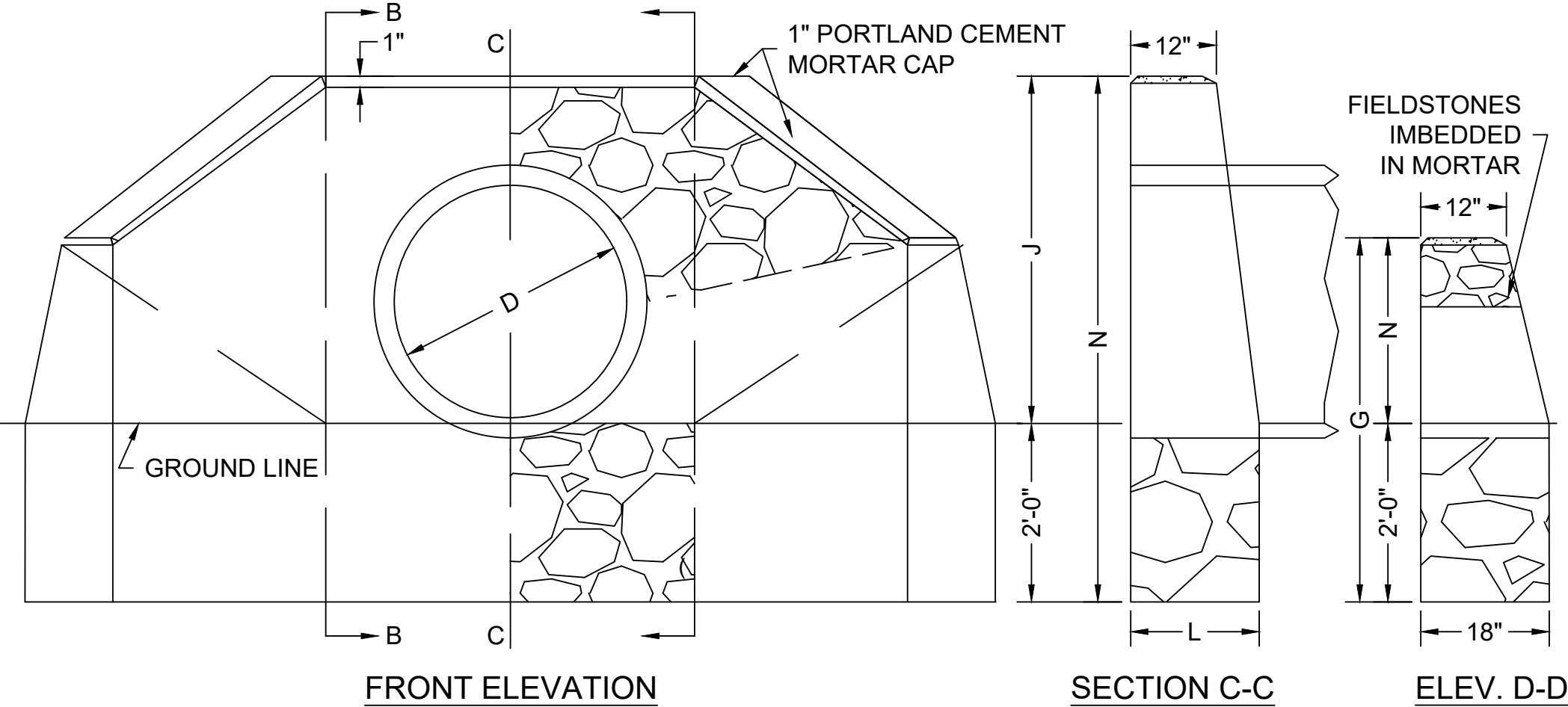
- NOTES
- FOR DESCRIPTION, MATERIALS AND CONSTRUCTION METHOD, SEE STANDARD SPECIFICATIONS.
  - ALL CONCRETE DIMENSIONS SHOWN ARE MINIMUM.
  - PAYMENTS WILL BE BASED ON THE QUANTITIES SHOWN IN THE ACCOMPANYING TABLE.

1V:1.5H AND 1V:2H SLOPES								1V:1.5H SLOPE			1V:2H SLOPE			TRENCH EXCAV. FOR 1:2 SLOPE FOR 1'-0" DEPTH CU. FT.
D	E	G	H	J	L	N	P	F	CONC. MASONRY (CY)	STEEL (LBS)	F	CONC. MASONRY (CY)	STEEL (LBS)	
30"	4'-0"	4'-0"	5'-6"	3'-6"	1'-6"	2'-0"	5'-3"	3'-0"	2.60	45	4'-3"	3.16	54	55.16
36"	4'-6"	4'-3"	6'-0"	4'-0"	1'-8"	2'-3"	5'-11"	3'-6"	3.35	54	5'-0"	4.15	64	64.36
42"	5'-0"	4'-6"	6'-6"	4'-6"	1'-10"	2'-6"	6'-6"	4'-0"	4.20	59	5'-9"	5.25	70	73.70
48"	5'-6"	4'-9"	7'-0"	5'-0"	2'-0"	2'-9"	7'-2"	4'-6"	5.19	65	6'-6"	6.50	83	83.96
54"	6'-0"	5'-0"	7'-6"	5'-6"	2'-2"	3'-0"	7'-10"	5'-0"	6.26	73	7'-3"	7.88	93	94.46
60"	6'-6"	5'-3"	8'-0"	6'-0"	2'-4"	3'-3"	8'-5"	5'-6"	7.43	85	8'-0"	9.37	106	105.30
72"	7'-6"	5'-9"	9'-0"	7'-0"	2'-8"	3'-9"	9'-9"	6'-6"	10.25	98	9'-6"	12.99	128	128.92
84"	8'-6"	6'-3"	10'-0"	8'-0"	3'-0"	4'-3"	11'-0"	7'-6"	13.49	120	11'-0"	17.32	154	153.86

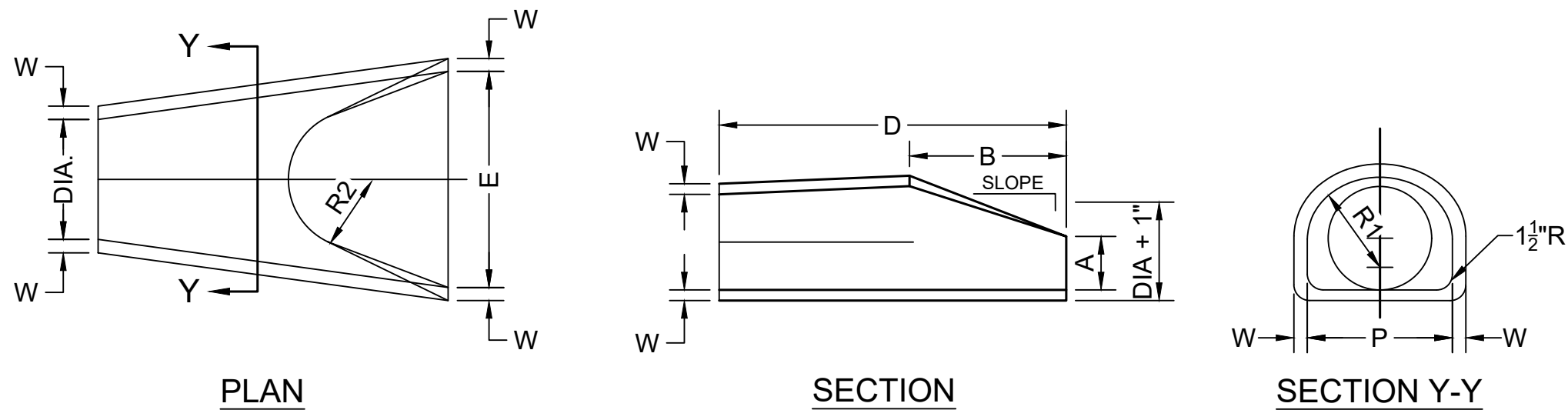
CONCRETE ENDS



FIELD STONE MASONRY ENDS

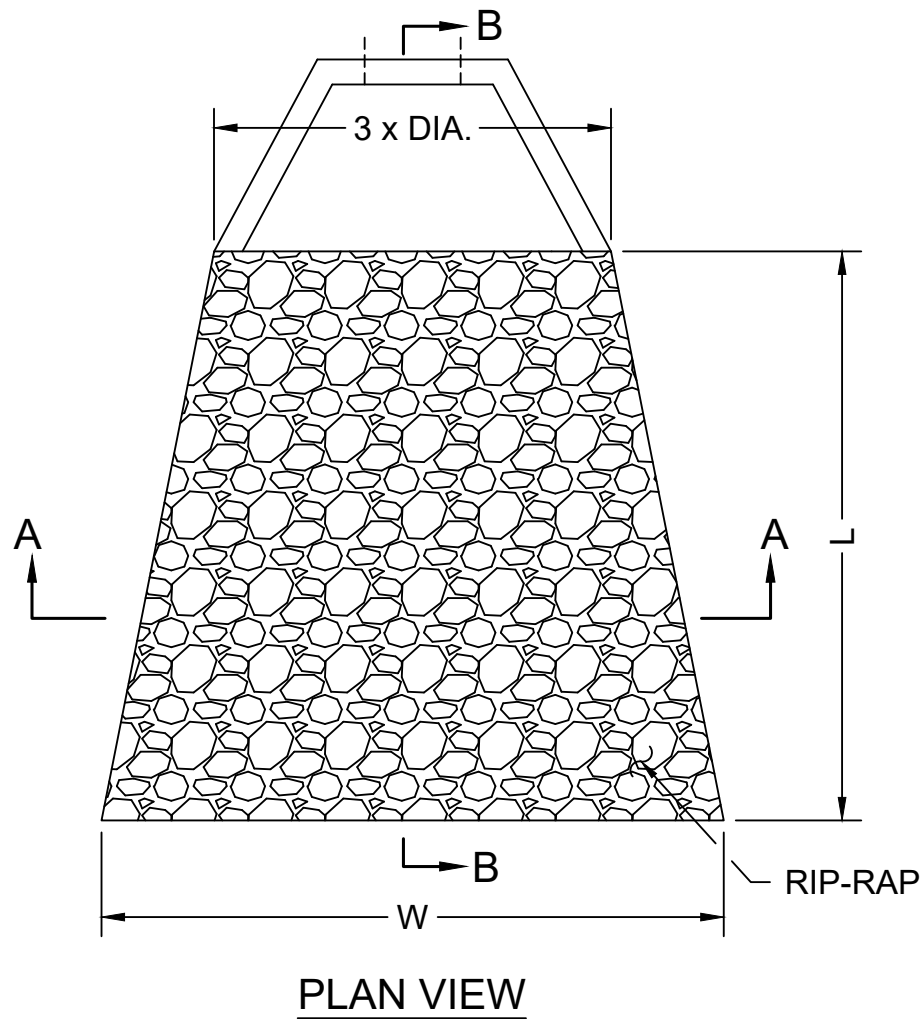
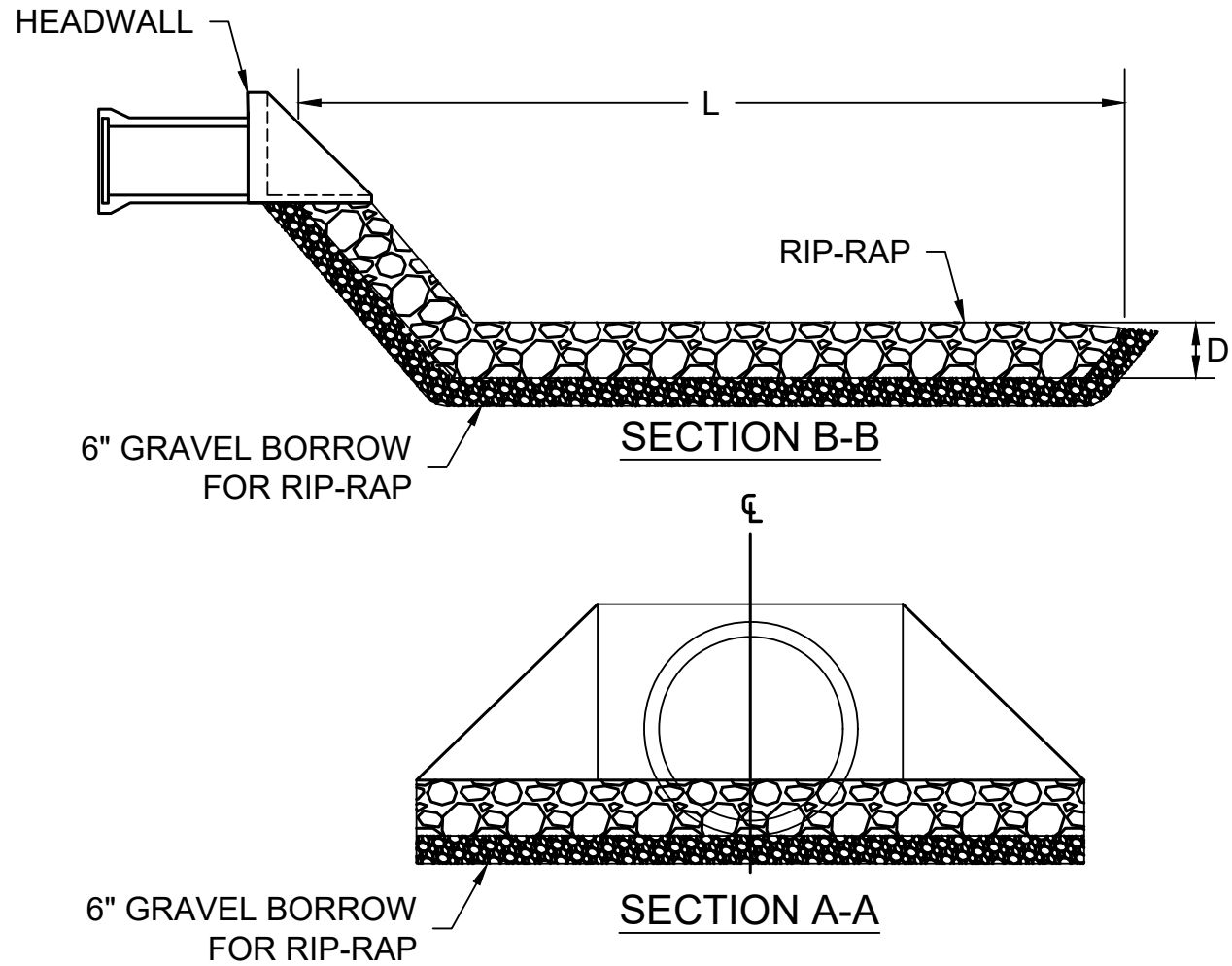


CONCRETE AND FIELD STONE MASONRY  
PIPE ENDS FOR PIPE CULVERTS  
NOT TO SCALE



FLARED END DIMENSIONS										
MOVE	W	A	B	D	E	P	DIA + 1"	R1	R2	SLOPE
12"	2"	4"	2'-0"	6'-0"	2'-0"	19 <sup>11</sup> / <sub>16</sub> "	13"	10 <sup>1</sup> / <sub>8</sub> "	9"	1V:3H
15"	2 <sup>1</sup> / <sub>2</sub> "	6"	2'-3"	6'-0"	2'-6"	24 <sup>5</sup> / <sub>16</sub> "	16"	12 <sup>1</sup> / <sub>2</sub> "	11"	1V:3H
18"	2 <sup>1</sup> / <sub>2</sub> "	9"	2'-3"	6'-0"	3'-0"	29"	19"	15 <sup>1</sup> / <sub>2</sub> "	12"	1V:3H
21"	2 <sup>1</sup> / <sub>2</sub> "	9"	2'-11"	6'-0"	3'-6"	31 <sup>5</sup> / <sub>8</sub> "	22"	16 <sup>1</sup> / <sub>8</sub> "	13"	1V:3H
24"	3"	9 <sup>1</sup> / <sub>2</sub> "	3'-7 <sup>1</sup> / <sub>2</sub> "	6'-0"	4'-0"	33 <sup>3</sup> / <sub>8</sub> "	25"	16 <sup>3</sup> / <sub>8</sub> "	14"	1V:3H
27"	3 <sup>1</sup> / <sub>2</sub> "	10 <sup>3</sup> / <sub>2</sub> "	4'-0"	6'-0"	4'-6"	36"	28"	18 <sup>1</sup> / <sub>8</sub> "	14 <sup>1</sup> / <sub>2</sub> "	1V:3H
30"	3 <sup>1</sup> / <sub>2</sub> "	12"	4'-6"	6'-0"	5'-0"	37"	31"	18 <sup>1</sup> / <sub>2</sub> "	15"	1V:3H
36"	4"	15"	5'-3"	8'-0"	6'-0"	47 <sup>1</sup> / <sub>8</sub> "	37"	24 <sup>5</sup> / <sub>8</sub> "	20"	1V:3H
42"	4 <sup>1</sup> / <sub>2</sub> "	21"	5'-3"	8'-0"	6'-6"	53 <sup>3</sup> / <sub>8</sub> "	43"	27 <sup>1</sup> / <sub>2</sub> "	22"	1V:3H
48"	5"	24"	6'-0"	8'-0"	7'-0"	56 <sup>1</sup> / <sub>2</sub> "	49"	28 <sup>1</sup> / <sub>2</sub> "	22"	1V:3H

REINFORCED CONCRETE PIPE FLARED END  
NOT TO SCALE



SPLASH DIMENSIONS TABLE					
OUTFALL	PIPE SIZE	L	W	D	MIN D50
PIPE END-1	36"	18'	12'	1.5'	1'

RIP-RAP APRON  
NOT TO SCALE

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guidance with respect to any errors,  
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or conflicts which are alleged.

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OLD FERRY ROAD  
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METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

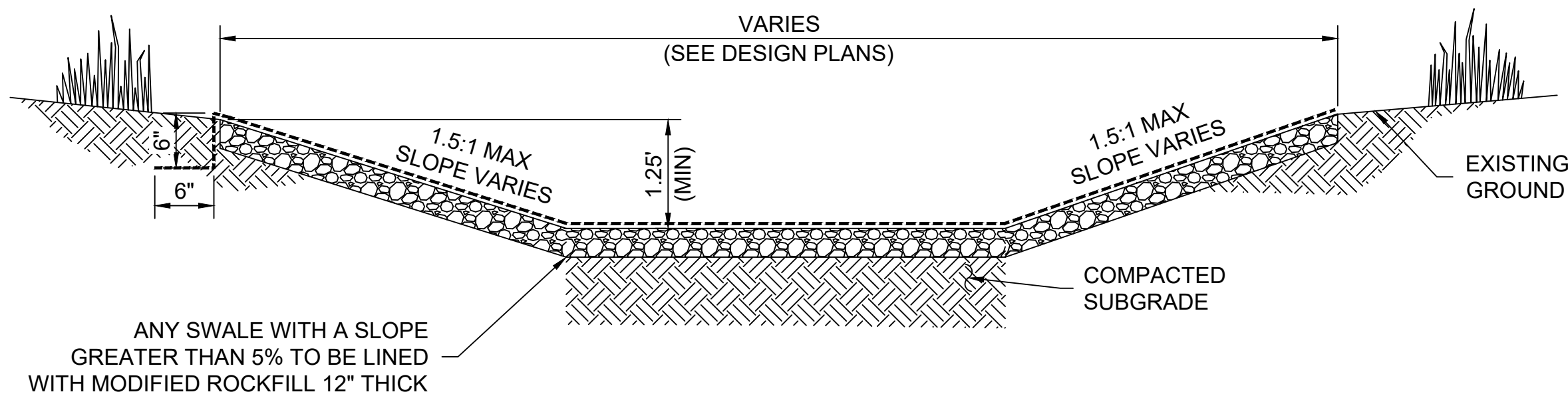
1/05/2026

DRAINAGE  
DETAILS

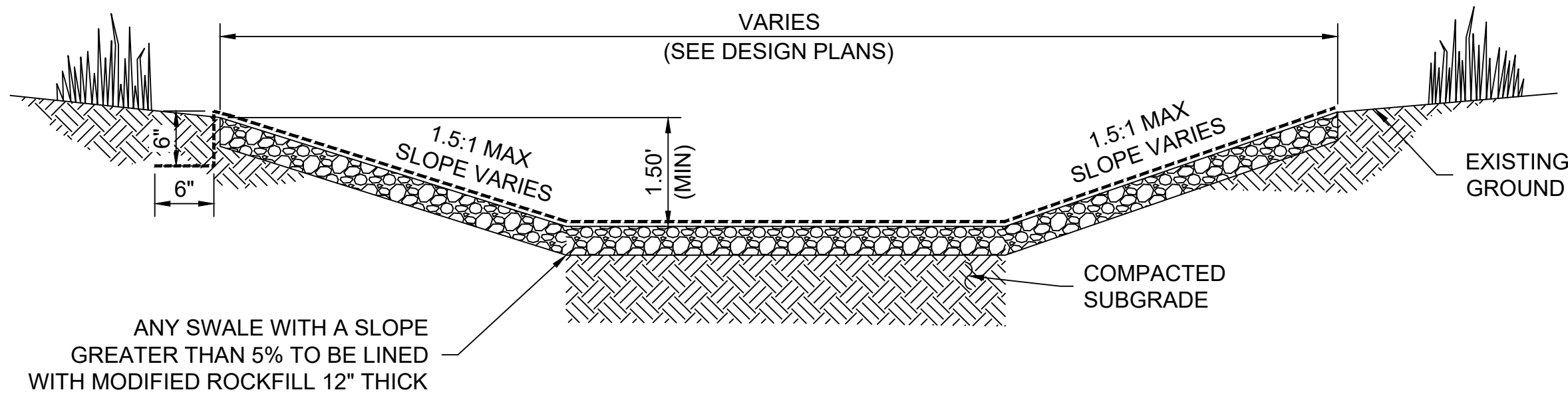
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DRAWN/DESIGN BY: JHP  
CHECKED BY: LAD  
SHEET NO.  
42 OF 71



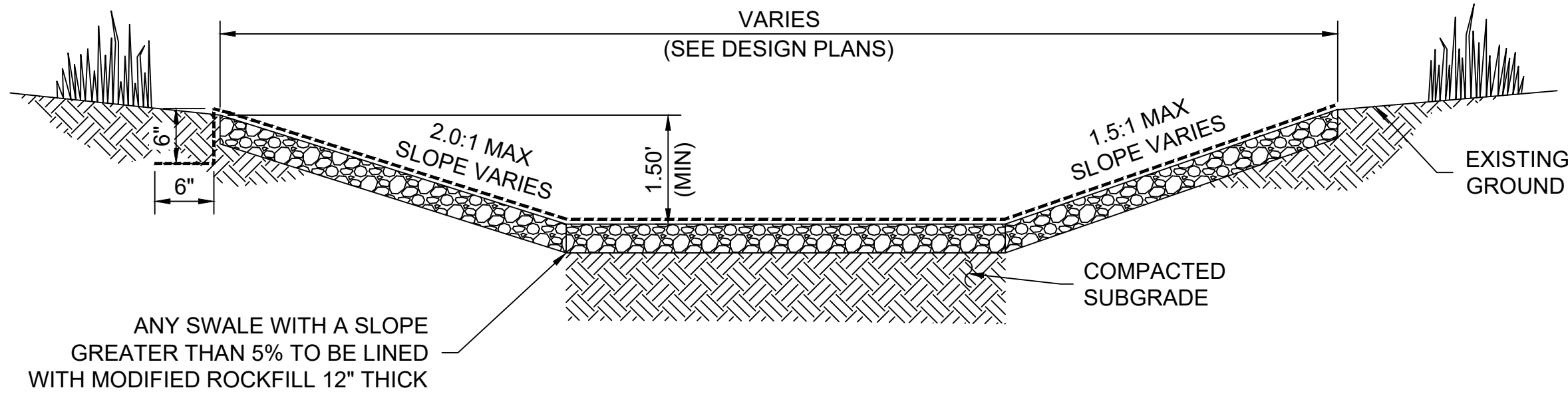
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DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: DU DETAILS (03)



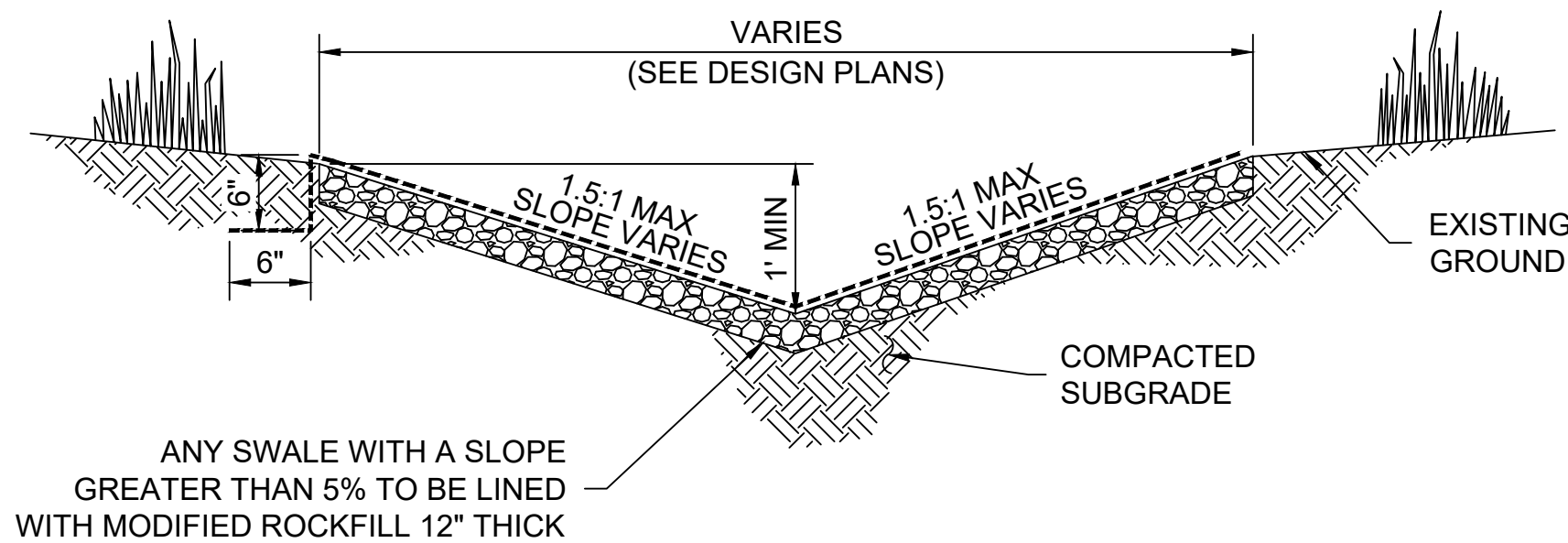
**TYPICAL TRAPEZOIDAL-SHAPE SWALE TYPE 1**  
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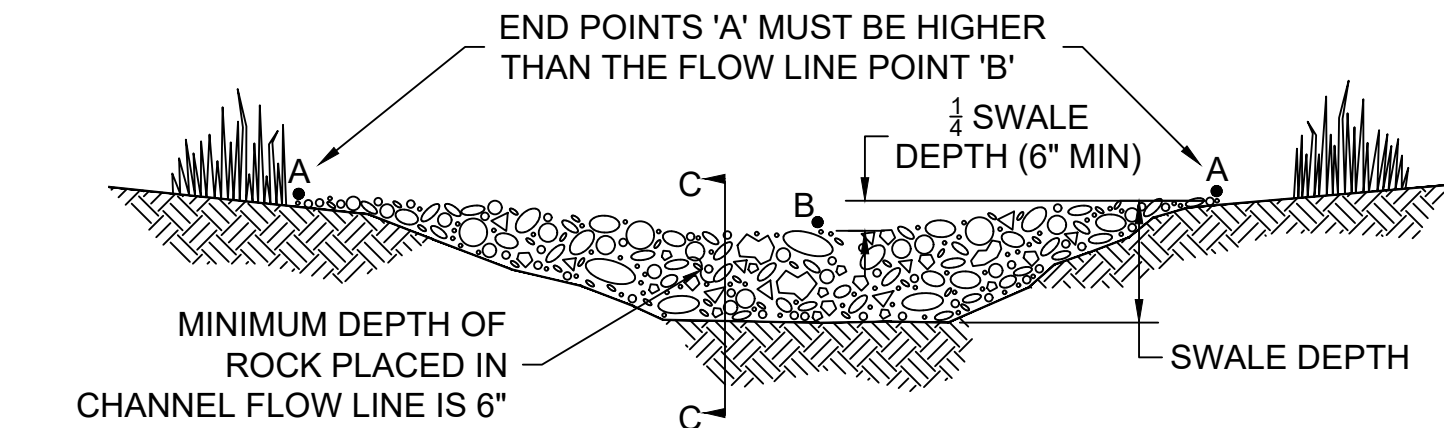
**TYPICAL TRAPEZOIDAL-SHAPE SWALE TYPE 2**  
NOT TO SCALE



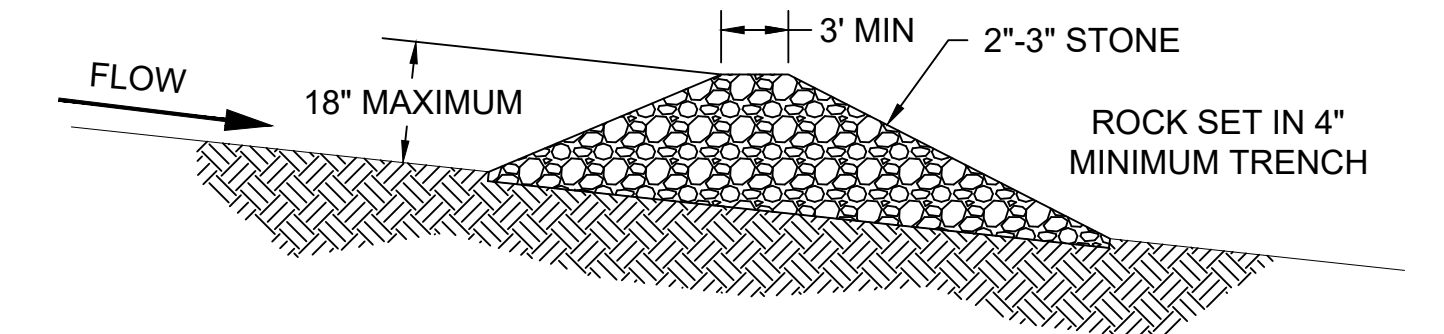
**TYPICAL TRAPEZOIDAL-SHAPE SWALE TYPE 3**  
NOT TO SCALE



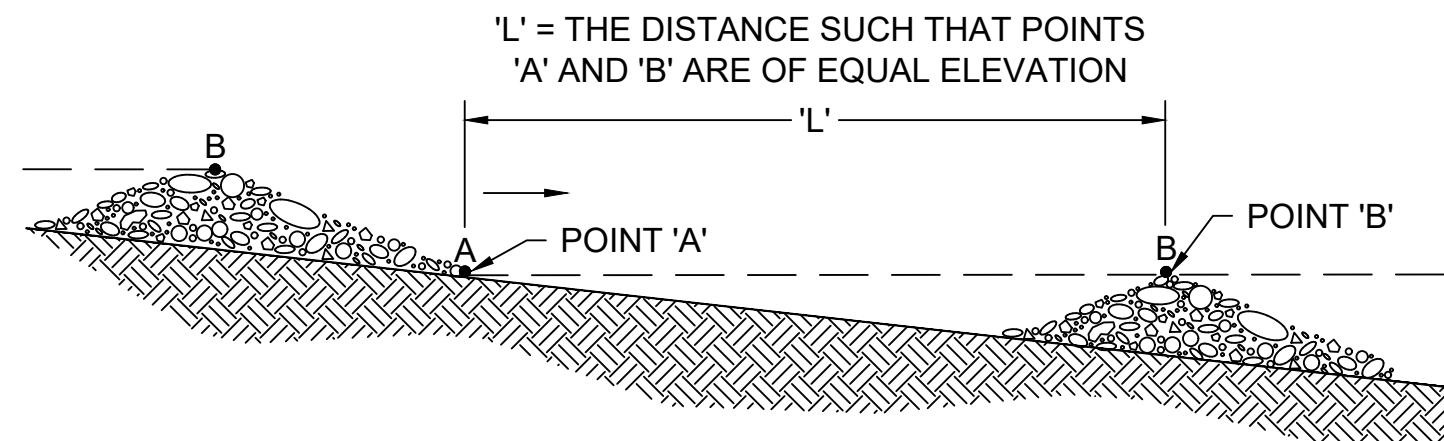
**TYPICAL V-SHAPED SWALE**  
NOT TO SCALE



**VIEW LOOKING UPSTREAM**



**SECTION C-C**



**PROFILE - CHECK DAM SPACING**

**NOTES**

1. STONE CHECK DAMS SHOULD BE INSTALLED BEFORE RUNOFF IS DIRECTED TO THE SWALE OR DRAINAGE DITCH.
2. STONE CHECK DAMS SHOULD NOT BE USED IN A FLOWING STREAM.
3. STONE CHECK DAMS SHOULD BE CONSTRUCTED OF WELL-GRADED ANGULAR 2 TO 3 INCH STONE. THE INSTALLATION OF 3/4-INCH STONE ON THE UPGRADIENT FACE IS RECOMMENDED FOR BETTER FILTERING.
4. WHEN INSTALLING STONE CHECK DAMS THE CONTRACTOR SHALL KEY THE STONE INTO THE CHANNEL BANKS AND EXTEND THE STONE BEYOND THE ABUTMENTS A MINIMUM OF 18-INCHES TO PREVENT FLOW AROUND THE DAM.

**STONE CHECK DAM**  
NOT TO SCALE

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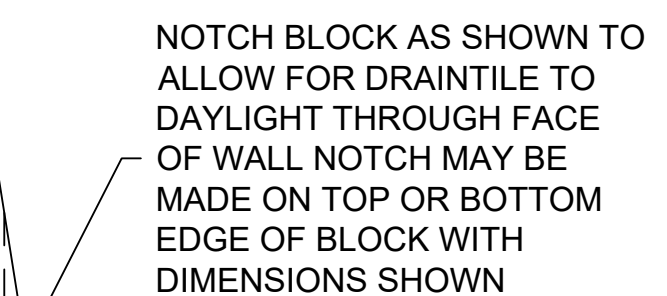
REVISIONS		
NO.	REVISION	DATE

1/05/2026

**DRAINAGE  
DETAILS**

SCALE:  
NOT TO SCALE  
DRAWN/DESIGN BY: CJD  
CHECKED BY: LAD  
SHEET NO.  
43 OF 71





1. THIS RETAINING WALL DETAIL IS PROVIDED FOR PRELIMINARY REFERENCE ONLY. THE FINAL WALL DESIGN, INCLUDING ALL CONSTRUCTION DETAILS, CALCULATIONS, AND STABILITY EVALUATIONS, MUST BE PREPARED AND STAMPED BY A LICENSED PROFESSIONAL ENGINEER BASED ON ACTUAL SITE CONDITIONS. THE CONTRACTOR AND DESIGN ENGINEER OF RECORD ARE RESPONSIBLE FOR VERIFYING FIELD CONDITIONS AND DETERMINING THE SUITABILITY OF THIS DETAIL. MANUFACTURER REQUIREMENTS, STAMPED SHOP DRAWINGS, AND APPROVED CALCULATIONS TAKE PRECEDENCE OVER THIS PRELIMINARY DETAIL.
2. WALL HEIGHT VARIES AND IS THE TOTAL HEIGHT FROM TOP OF LEVELING PAD TO TOP OF WALL.
3. MINIMUM WALL EMBEDMENT IS TYPICALLY 6-INCHES OR 5% OF THE TOTAL WALL HEIGHT, WHICHEVER IS GREATER (WALLS WITH A LEVEL TOE SLOPE). REFER TO RECON'S EMBEDMENT RECOMMENDATION DOCUMENT FOR ADDITIONAL INFORMATION FOR WALLS WITH A TOE SLOPE CONDITION.
4. LEVELING PAD MATERIAL ASSUMED TO HAVE AN INTERNAL FRICTIONAL ANGLE EQUAL TO 40-DEGREES.
5. SUBSURFACE MATERIAL (FOUNDATION SOILS) SHALL BE CAPABLE OF SUPPORTING THE WALL SYSTEM.
6. FINISHED GRADE AT TOP AND BOTTOM OF WALL SHALL PROVIDE POSITIVE DRAINAGE.
7. DRAINAGE ZONE MATERIAL SHALL BE FREE-DRAINING GRANULAR MATERIAL SUCH AS 3/4-INCH CRUSHED STONE.
8. ALL RETAINED BACKFILL MATERIALS SHALL BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR DENSITY.

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**METHUEN, MASSACHUSETTS**

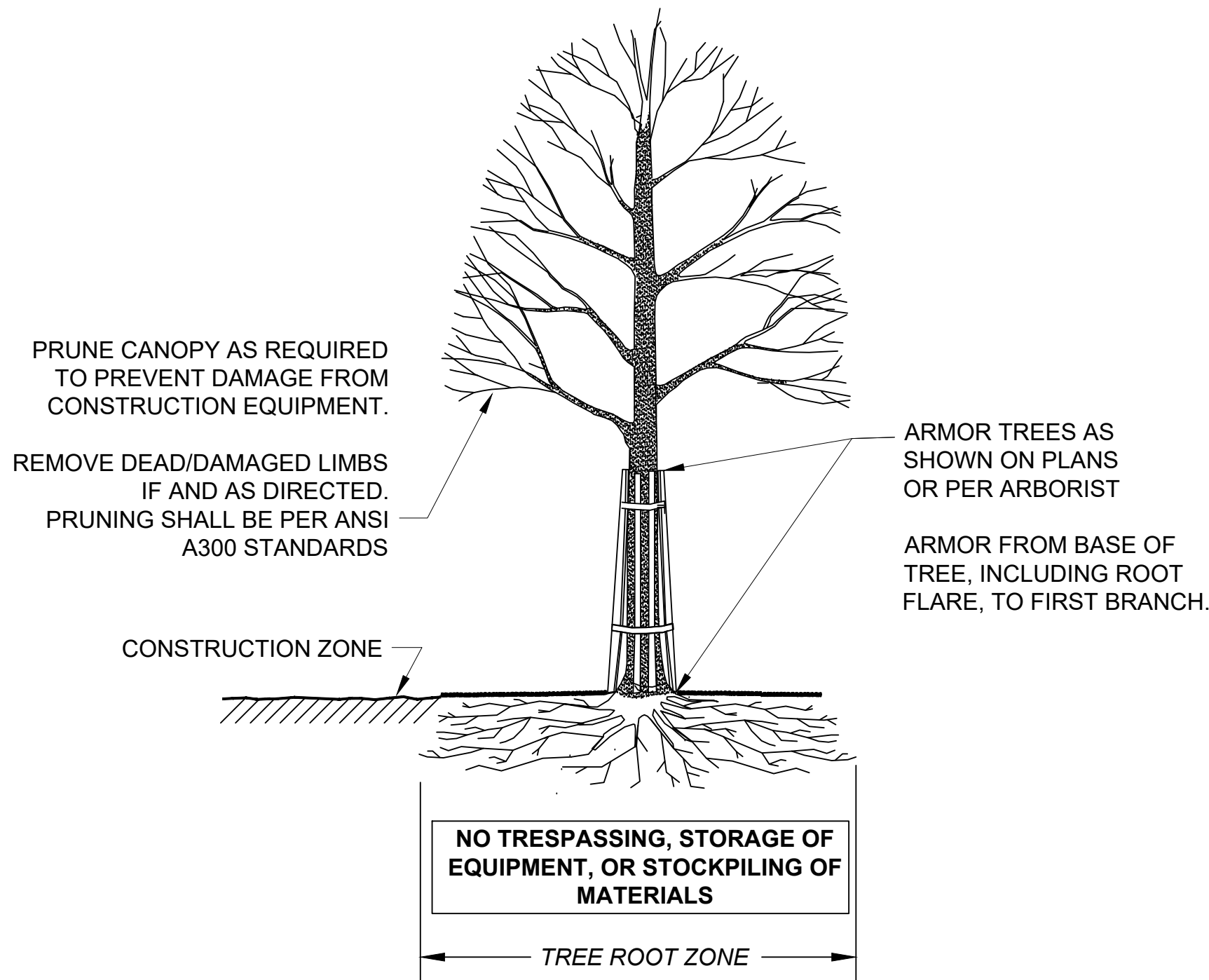
REVISIONS		
NO.	REVISION	DATE

1/05/2026

## RETAINING WALL DETAILS



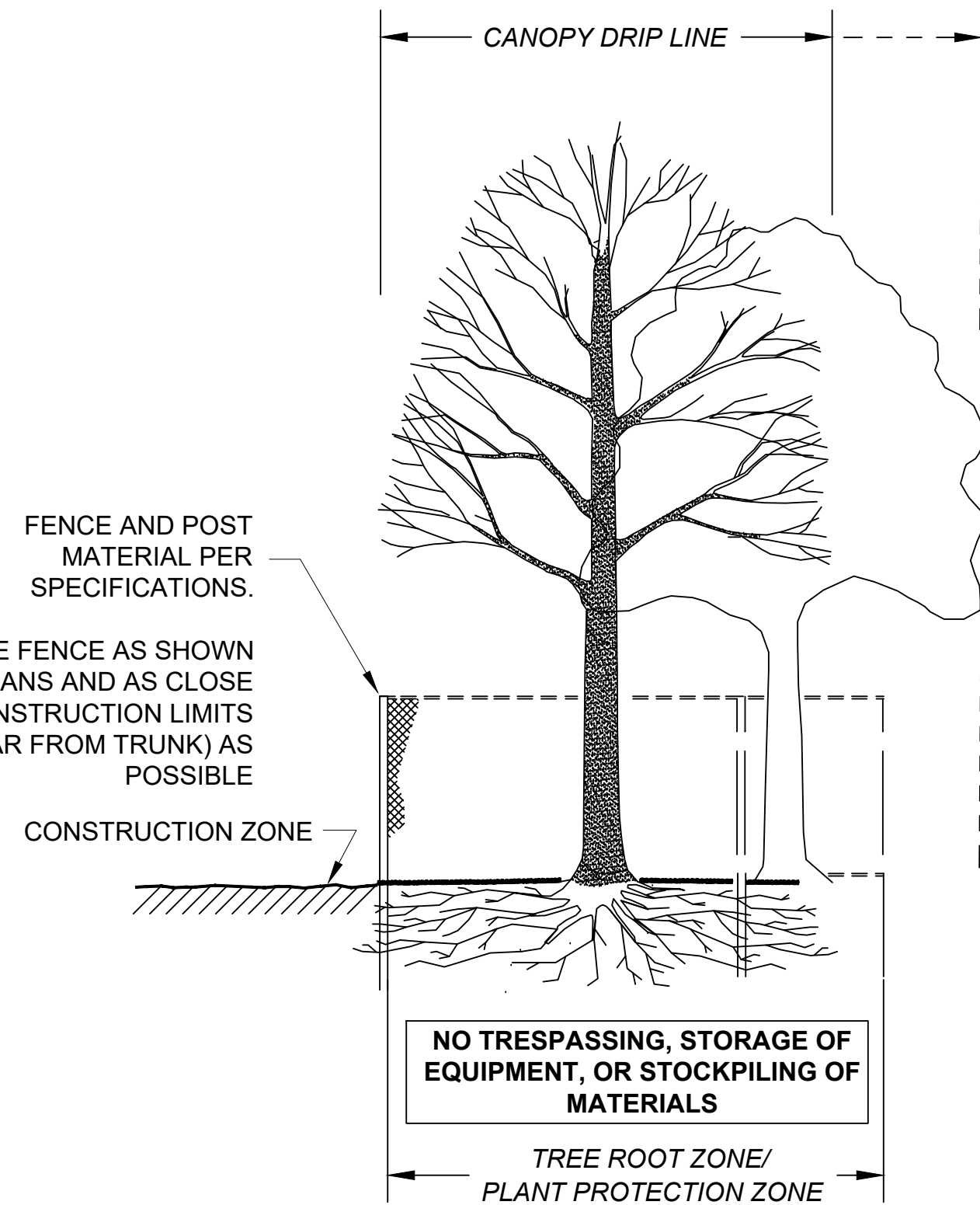
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DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: CONST DETS (01)



SECTION - TRUNK ARMORING & PRUNING

**TREE PROTECTION - TRUNK**

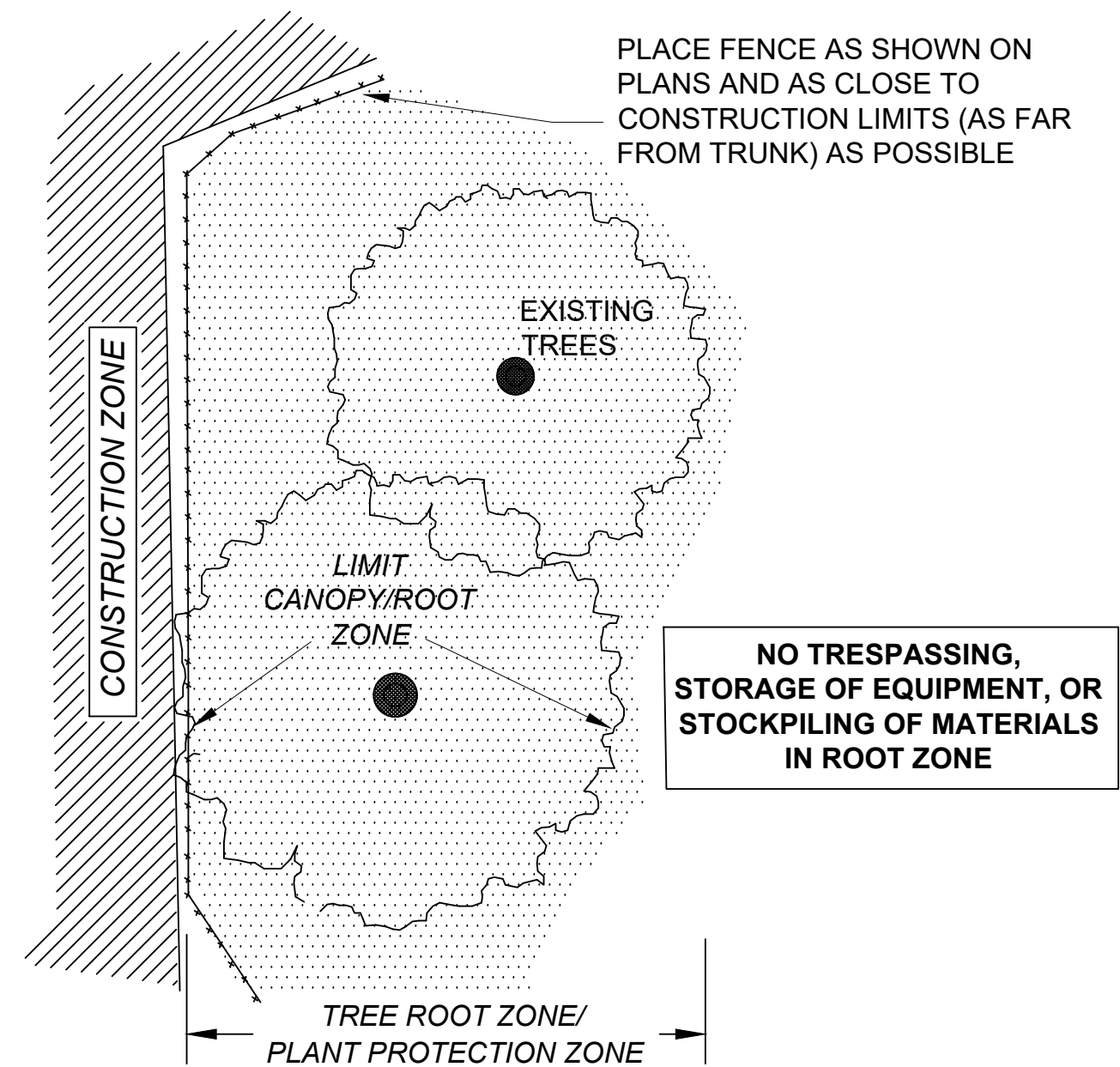
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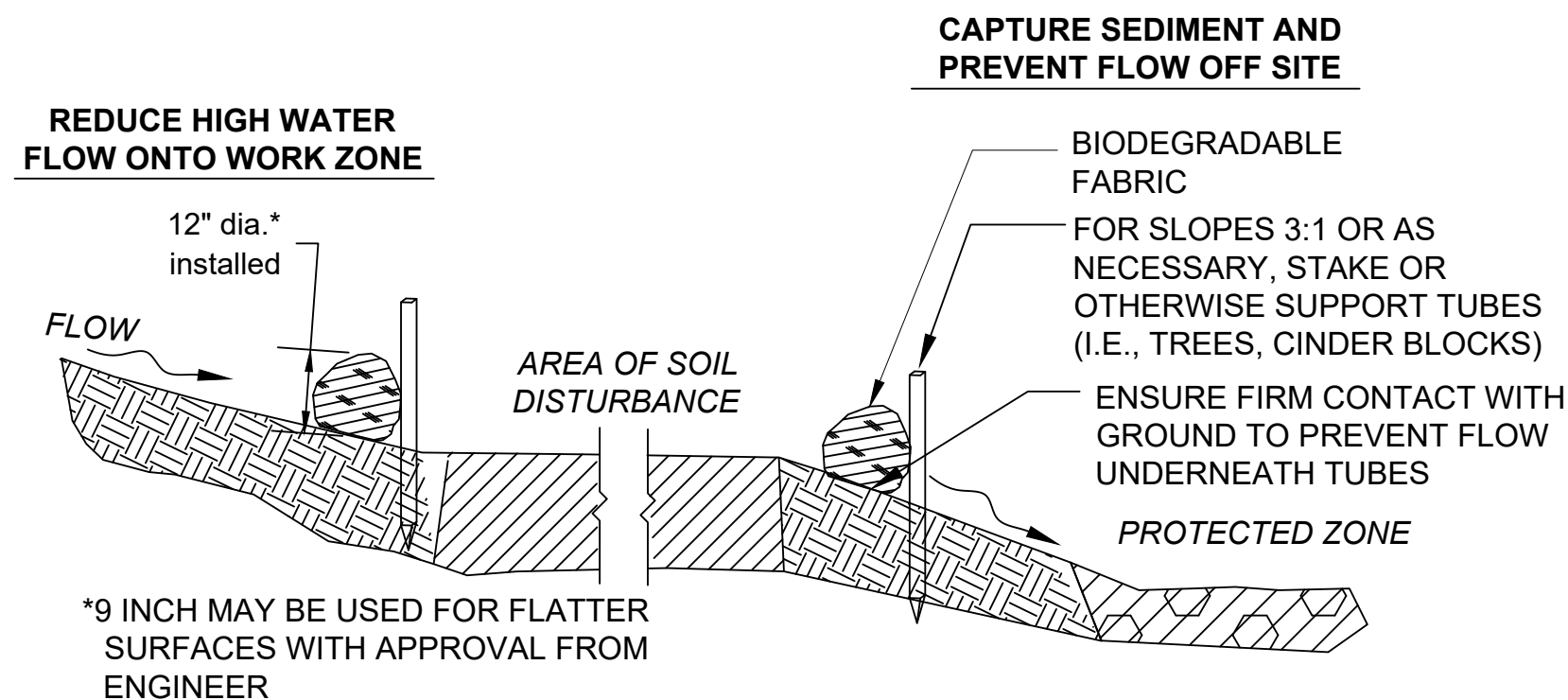
SECTION - FENCE PROTECTION OF ROOT ZONE

**TREE PROTECTION - ROOT ZONE**

NOT TO SCALE



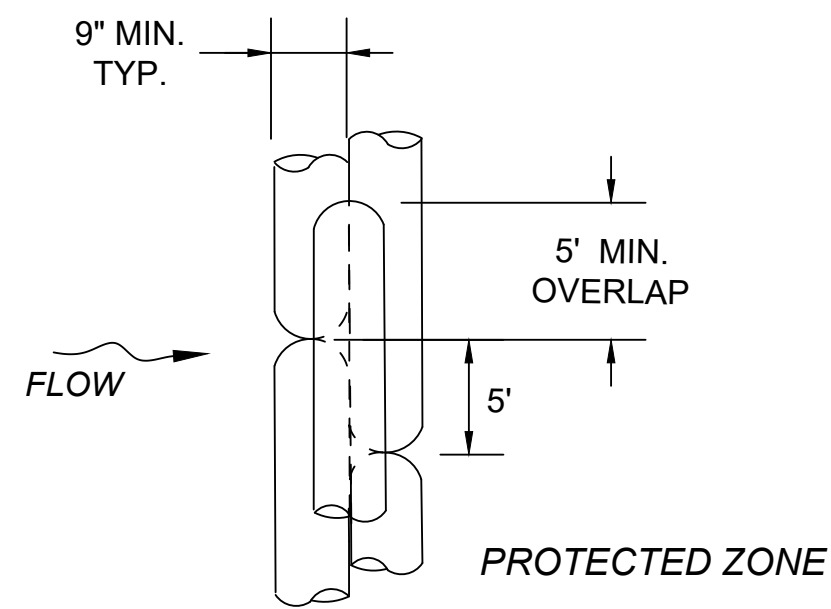
PLAN VIEW - FENCE PROTECTION OF ROOT ZONE



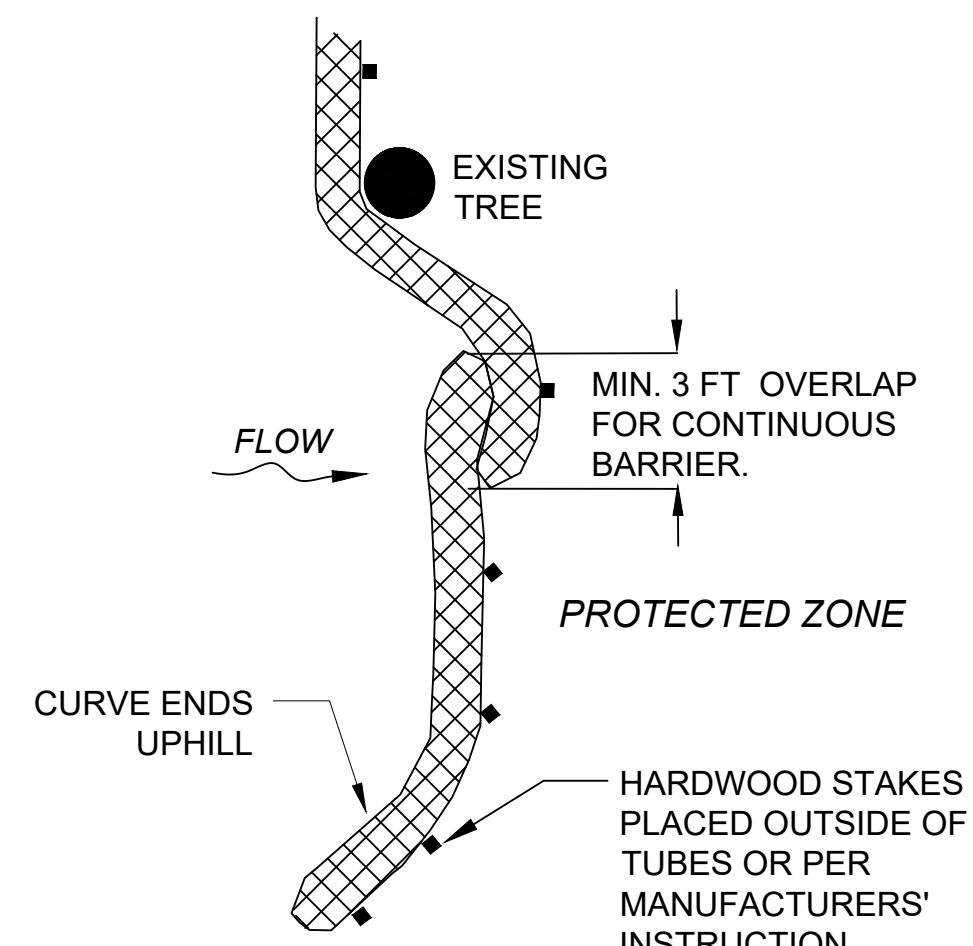
SECTION

**SEDIMENT BARRIER - COMPOST FILTER TUBES**

NOT TO SCALE



PLAN VIEW



PLACE TUBE ALONG CONTOURS AND PERPENDICULAR TO FLOW.

PLACE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE

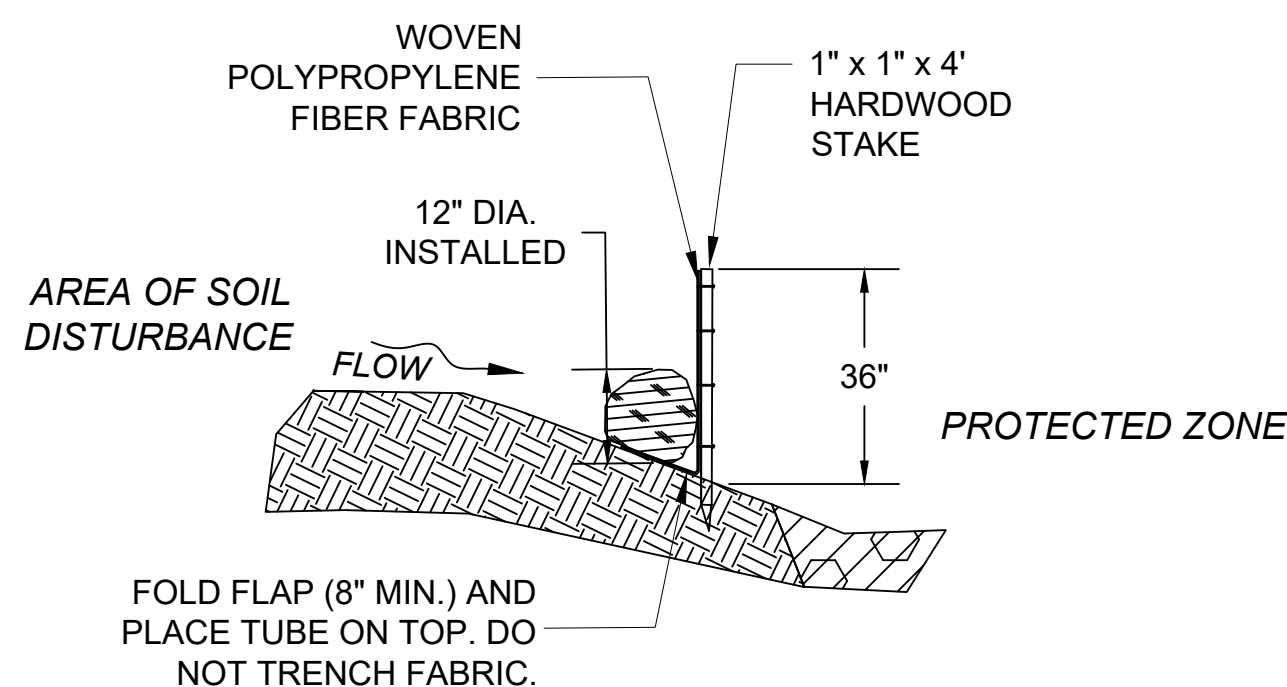
ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

PLACE STAKES AS NEEDED TO SECURE TUBES IN PLACE.

PLAN VIEW

**COMPOST FILTER TUBE**

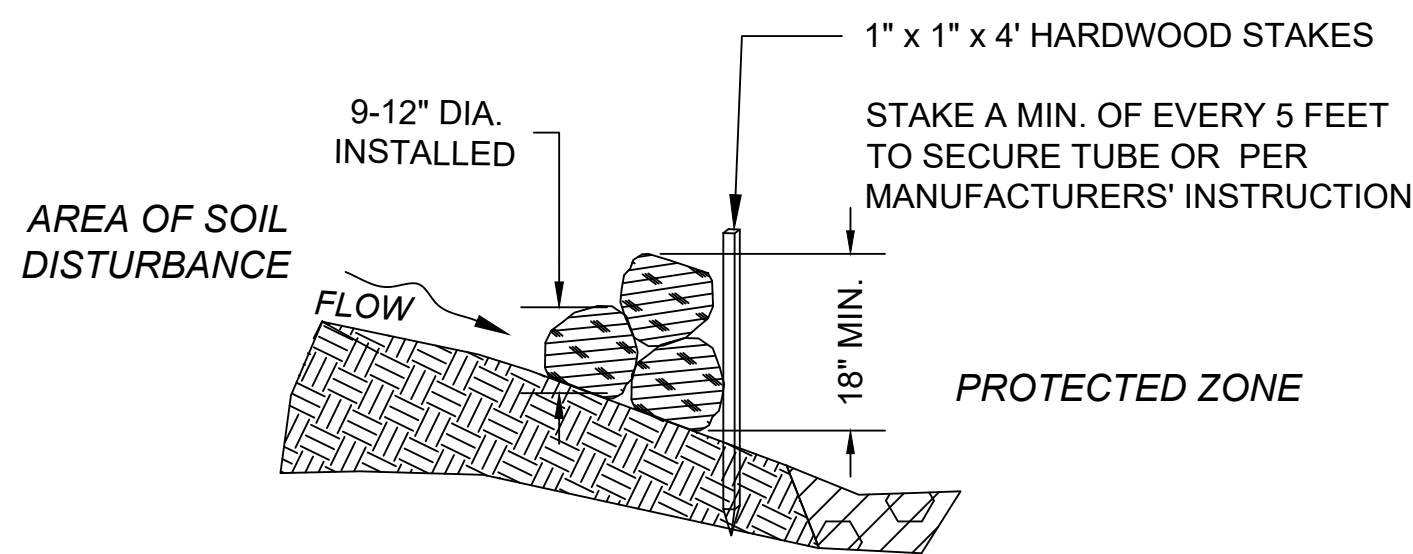
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SECTION

**COMPOST FILTER TUBE & SILT FENCE**

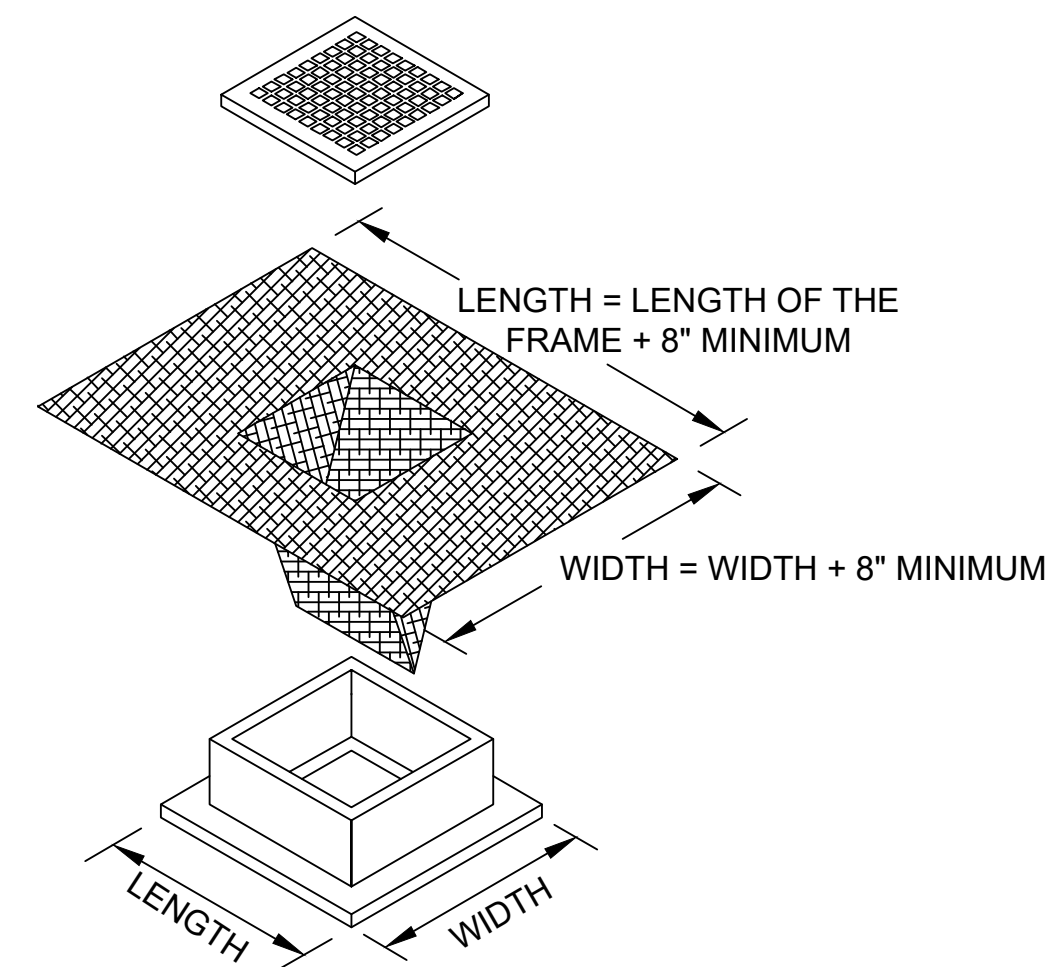
NOT TO SCALE



SECTION

**COMPOST FILTER TUBE BERM (SLOPES 2:1 OR STEEPER)**

NOT TO SCALE



**NOTES**

1. LENGTH AND WIDTH OF POLYPROPYLENE FABRIC MUST EXCEED EXISTING CATCH BASIN FRAME DIMENSIONS BY A MINIMUM OF 8".
2. REMOVE CATCH BASIN GRATE AND INSTALL POLYPROPYLENE FABRIC OVER CATCH BASIN FRAME. REPLACE CATCH BASIN GRATE TO SECURE POLYPROPYLENE FABRIC IN PLACE.
3. FOR USE ON ALL EXISTING CATCH BASINS WITHIN THE PROJECT LIMITS AND PROPOSED CATCH BASINS THAT ARE IN OPERATION DURING CONSTRUCTION.

**INLET SEDIMENT CONTROL DEVICE**

NOT TO SCALE



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**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS**

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NO.	REVISION	DATE

1/05/2026

**CONSTRUCTION  
DETAILS**

SCALE:  
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CHECKED BY: JFO

SHEET NO.

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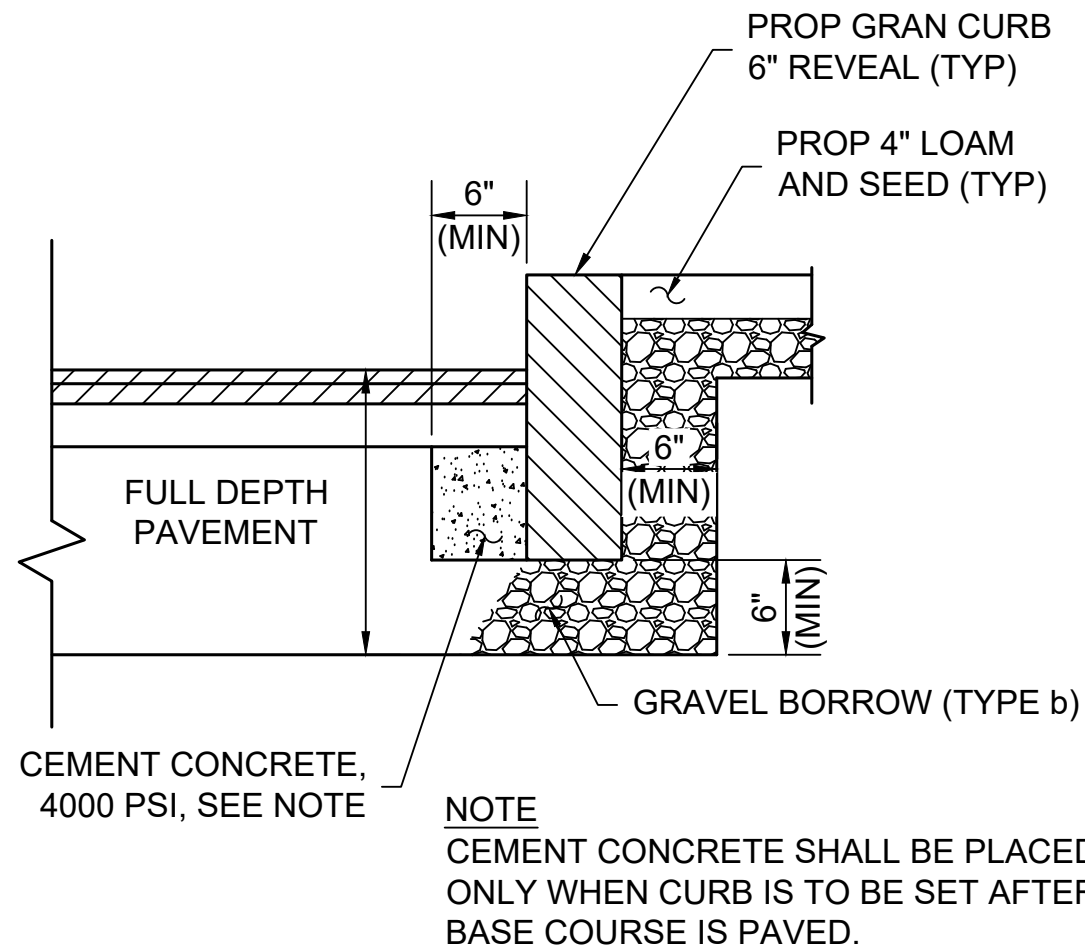
**OLD FERRY ROAD  
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NO.	REVISION	DATE

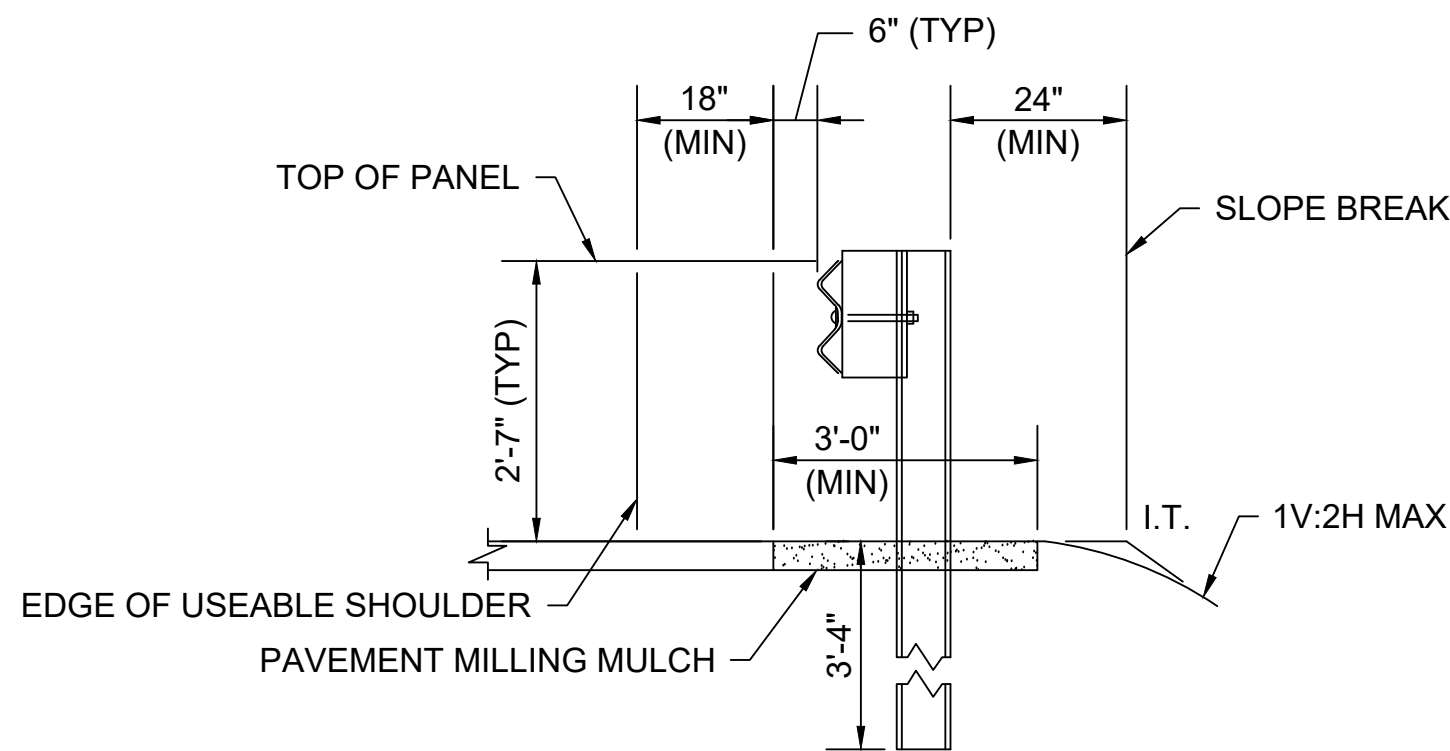
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**CONSTRUCTION  
DETAILS**

SCALE:  
NOT TO SCALE  
  
DRAWN/DESIGN BY: JHP  
CHECKED BY: JFO  
  
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**46** OF **71**



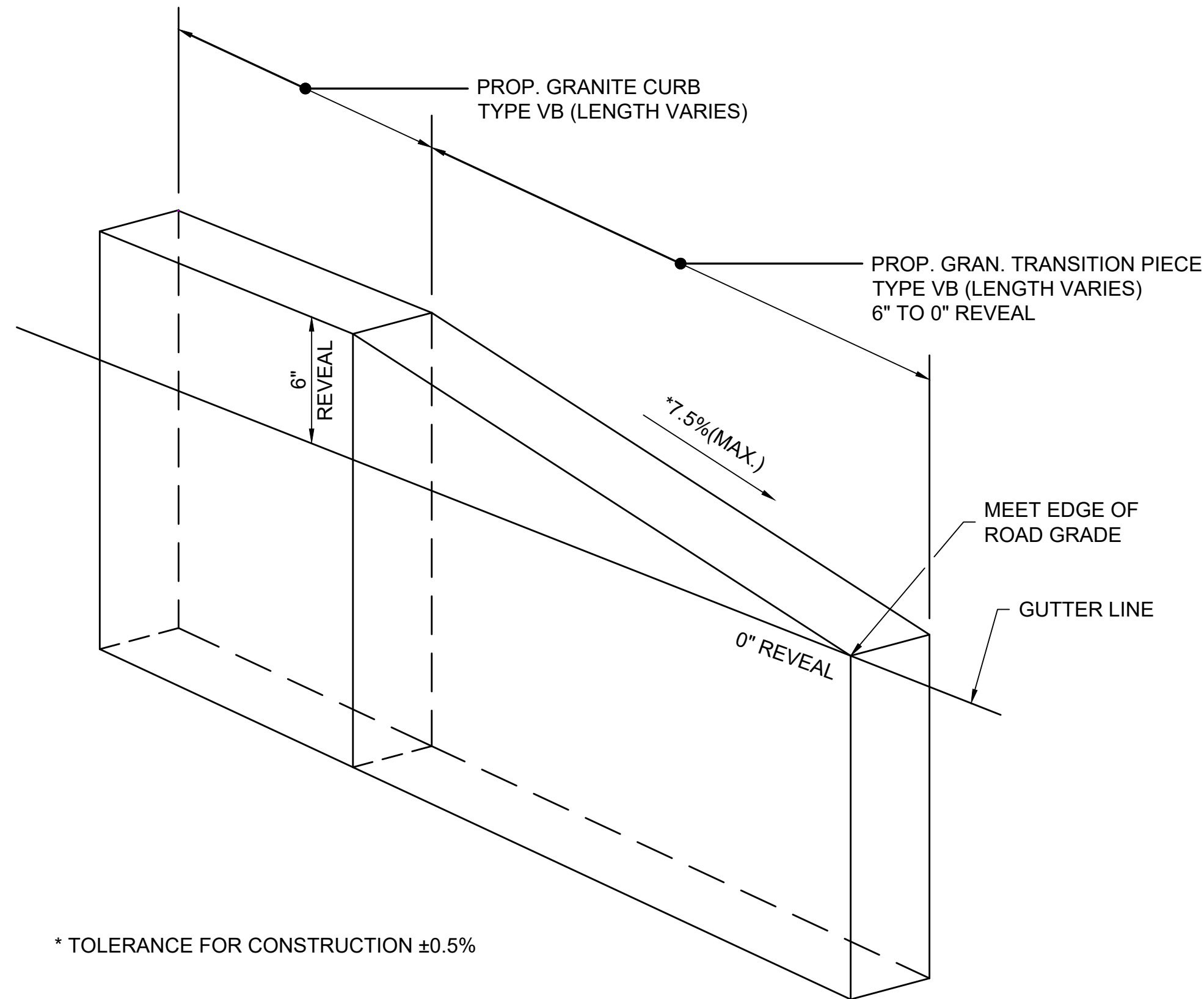
**GRANITE CURB, TYPE VB, IN FULL DEPTH PAVEMENT**  
NOT TO SCALE



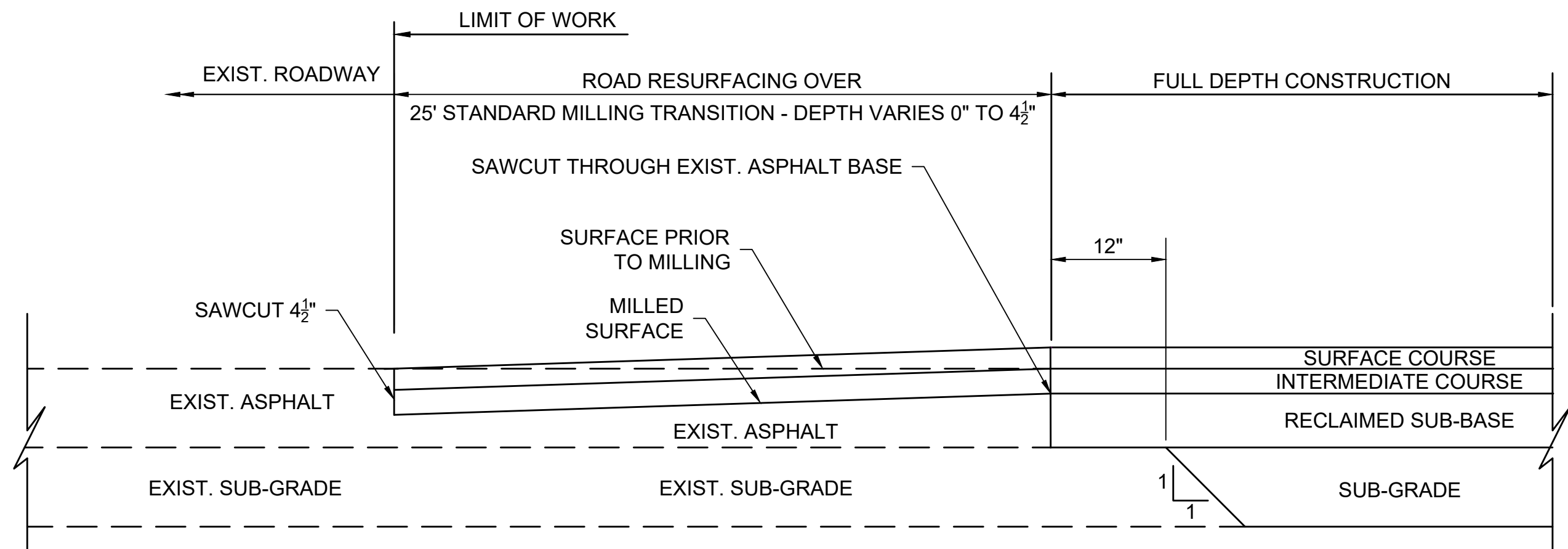
**GUARDRAIL DETAIL**  
NOT TO SCALE

**GUARDRAIL NOTES**

1. ALL GUARDRAIL MATERIALS SHALL CONFORM TO M8.07.0 UNLESS OTHERWISE INDICATED.
2. APPROVAL BY THE ENGINEER IS REQUIRED WHERE A DIFFERING GUARDRAIL CONFIGURATION IS REQUIRED FOR CONSTRUCTABILITY BEYOND THE OPTIONS SHOWN IN THESE STANDARDS OR THE PLANS.
3. THE BEGIN OR END STATION LABELS SHOWN IN THESE STANDARDS CORRESPOND TO THE STATION AND OFFSET CALLOUTS SPECIFIED IN THE PLANS.
4. USE 12'-6" NOMINAL LENGTH PANELS UNLESS OTHERWISE INDICATED IN THE PLANS.
5. ALL LAP SPLICES SHALL BE MIDSPAN UNLESS OTHERWISE SHOWN.
6. LAP SPLICES SHALL BE CONSTRUCTED WITH THE SPLICE RIDGE ORIENTED DOWNSTREAM OF THE FINAL DIRECTION OF TRAFFIC IN THE NEAREST TRAVEL LANE. REORIENTING LAP SPLICES FOR TEMPORARY TRAFFIC CONTROL IS NOT REQUIRED.
7. STANDARD POSTS SHALL BE STEEL OR TIMBER, UNLESS OTHERWISE INDICATED IN THE PLANS, FABRICATED TO THE DIMENSIONS SHOWN ON 601.0.3. POSTS OF A SINGLE MATERIAL TYPE SHALL BE USED THROUGHOUT AN ENTIRE RUN OF GUARDRAIL; EXCEPTIONS ARE ALLOWED ONLY WHEN SPECIFIC MATERIAL TYPES ARE REQUIRED FOR TRANSITIONS, END TREATMENTS, AND/OR ANCHORAGES.
8. DEEP POST SHALL ONLY BE USED WHERE INDICATED IN THESE STANDARDS OR THE PLANS.
9. OFFSET BLOCKS, WHERE REQUIRED, SHALL BE TIMBER AND FABRICATED TO THE NOMINAL DIMENSIONS SHOWN ON 601.0.3. PLASTIC OR COMPOSITE OFFSET BLOCKS OF THE SAME NOMINAL DIMENSIONS THAT ARE LISTED ON THE QUALIFIED CONSTRUCTION MATERIALS LIST MAY BE SUBSTITUTED. OFFSET BLOCKS OF A SINGLE MATERIAL TYPE SHALL BE USED THROUGHOUT AN ENTIRE RUN OF GUARDRAIL; EXCEPTIONS ARE ALLOWED ONLY WHEN SPECIFIC MATERIAL TYPES ARE REQUIRED FOR TRANSITIONS, END TREATMENTS, AND/OR ANCHORAGES.
10. PAVEMENT MILLING MULCH, WHERE CALLED FOR IN THE STANDARDS, SHALL CONFORM TO SUBSECTION 769.
11. GUARDRAIL DELINEATORS, CONFORMING TO SECTION 601, SHALL BE INSTALLED AT 25' INTERVALS WITHIN 100' OF AN END TREATMENT OR TRAILING ANCHORAGE, AT 25' INTERVALS ON CURVES WITH A RADIUS OF 150' OR LESS, AT 50' INTERVALS ON CURVES WITH A RADIUS GREATER THAN 150' TO 300', AT 75' INTERVALS ON CURVES GREATER THAN 300' TO 700', AND AT 100' INTERVALS IN ALL OTHER AREAS UNLESS OTHERWISE SHOWN IN THE PLANS. DELINEATORS SHALL BE INSTALLED ON THE SPLICE. DELINEATORS SHALL NOT BE INSTALLED AT THE POST EXCEPT AT TRANSITIONS.
12. MINIMUM OFFSET DISTANCE FROM FACE OF W-BEAM PANEL TO A FIXED (NON-BREAKAWAY) OBJECT SHALL BE 48" FOR TL-2 AND 60" FOR TL-3.



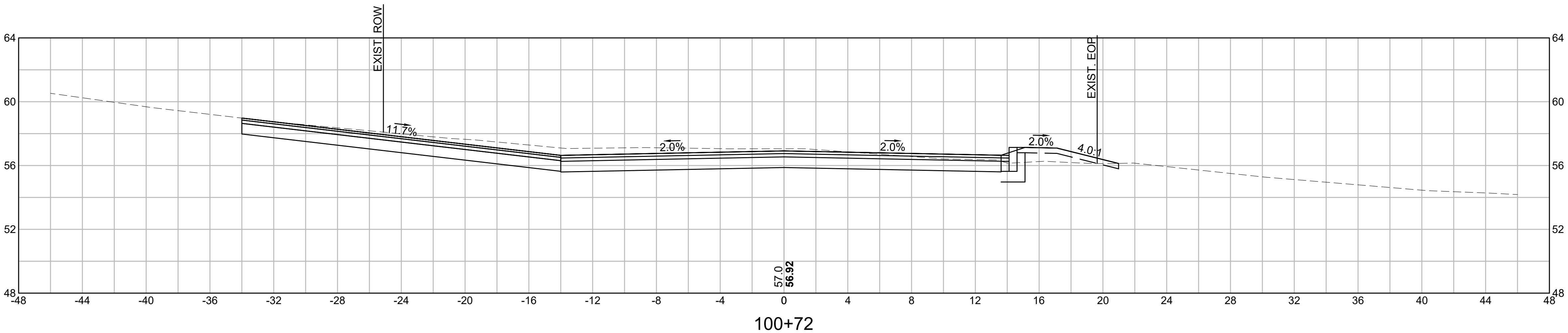
**GRANITE CURB TRANSITION (6" TO 0" REVEAL)**  
NOT TO SCALE



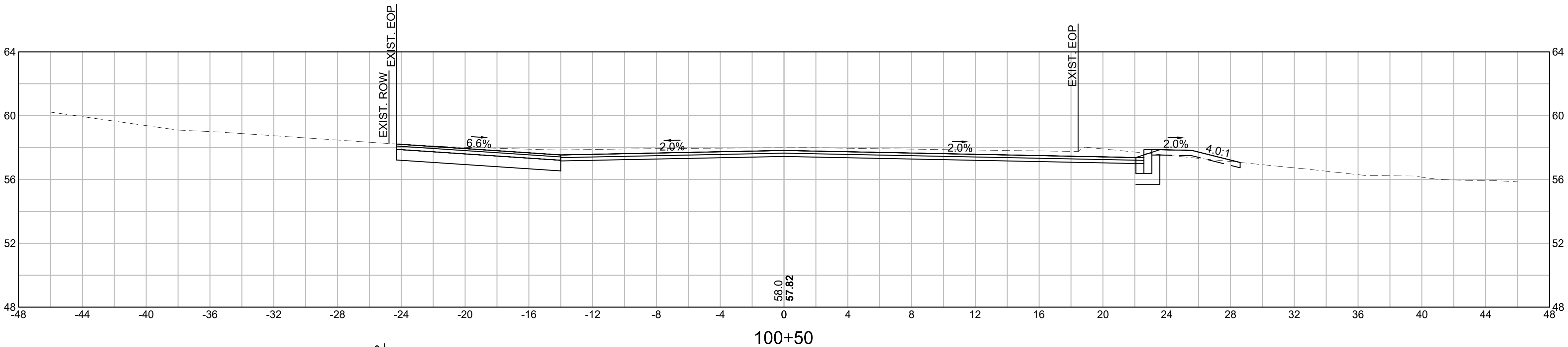
**PAVEMENT TRANSITION DETAIL**  
NOT TO SCALE



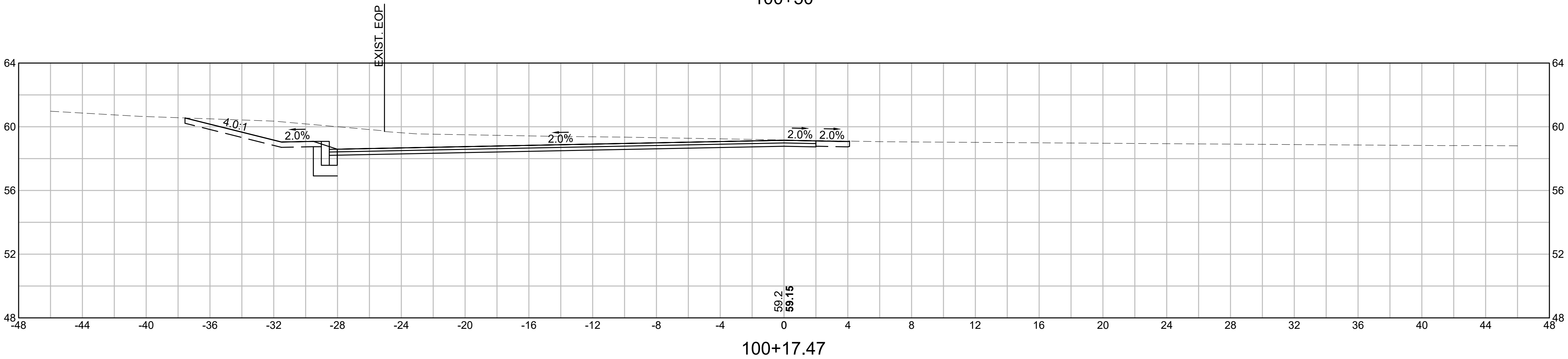
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DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: XS01



CUT: 26.44 SF  
FILL: 0.00 SF



CUT: 17.24 SF  
FILL: 0.00 SF



CUT: 217.81 SF  
FILL: 0.00 SF

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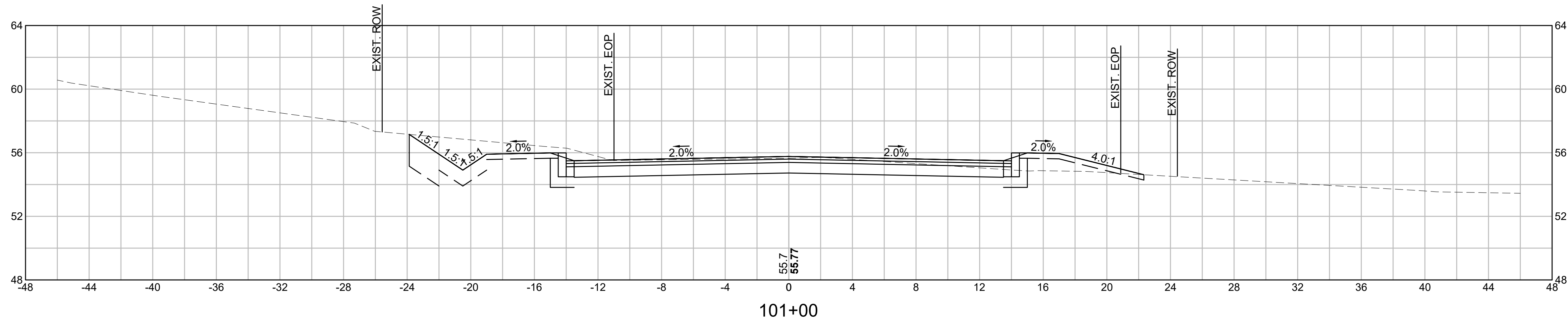
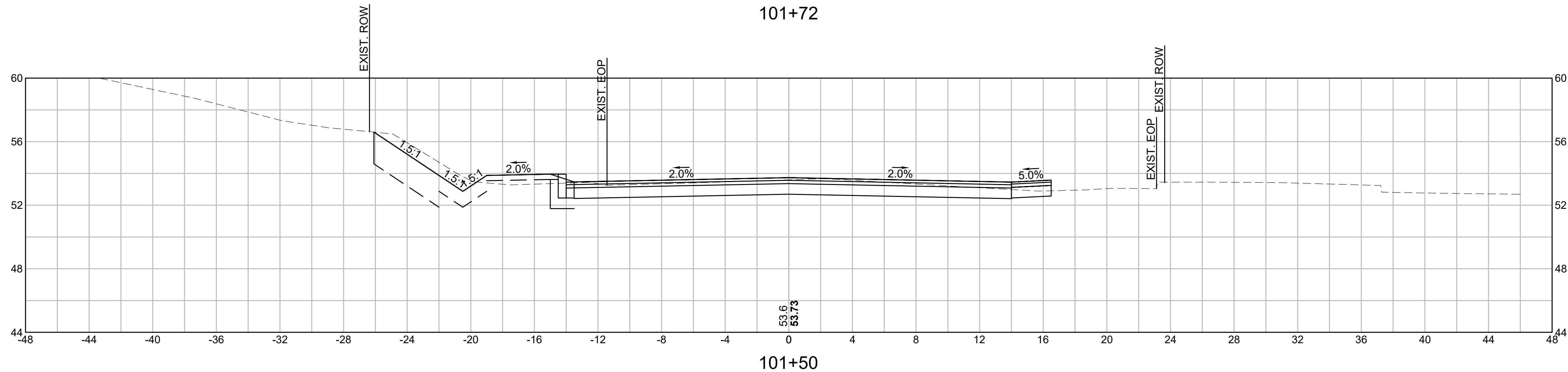
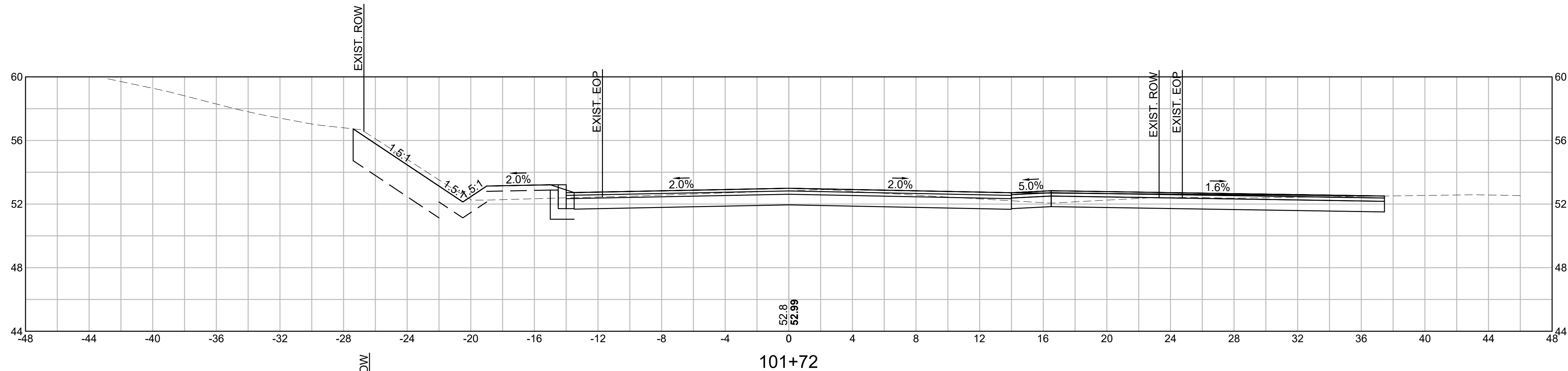
REVISIONS		
NO.	REVISION	DATE

1/05/2026

**CROSS SECTIONS**



P:\2024\0021 46\04-DRAWINGS\PROJECT DRAWING DATA\PLAN SHEET FILES\PLAN SHEET DWG\2024\0021 46\_HD21 (CROSS SECT).DWG  
BY: JPATTEN  
DATE: 1/5/2026  
LAYOUT: XS02



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**CROSS SECTIONS**

SCALE: AS NOTED

DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

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**48** OF **71**



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METHUEN, MA 01844

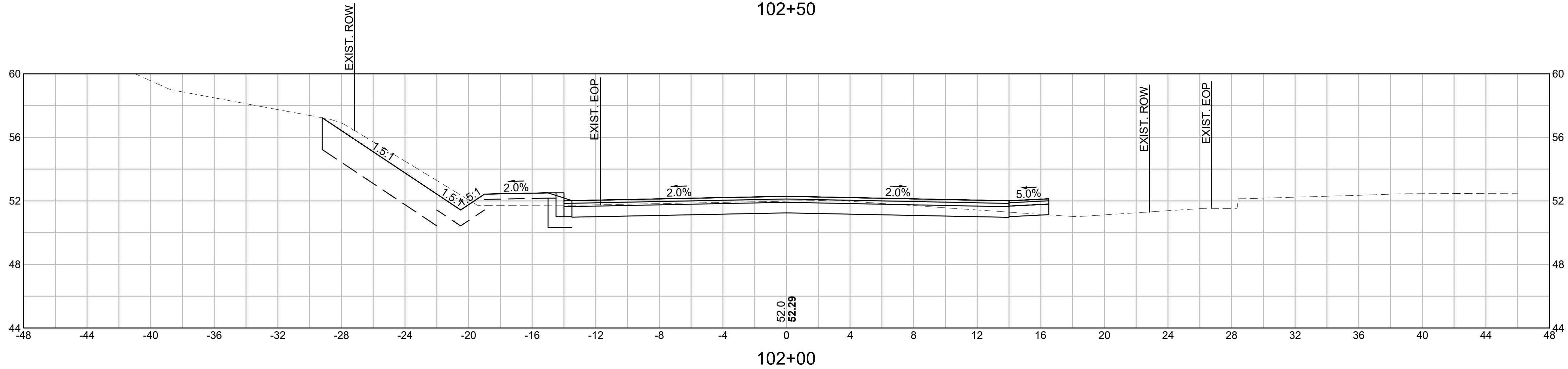
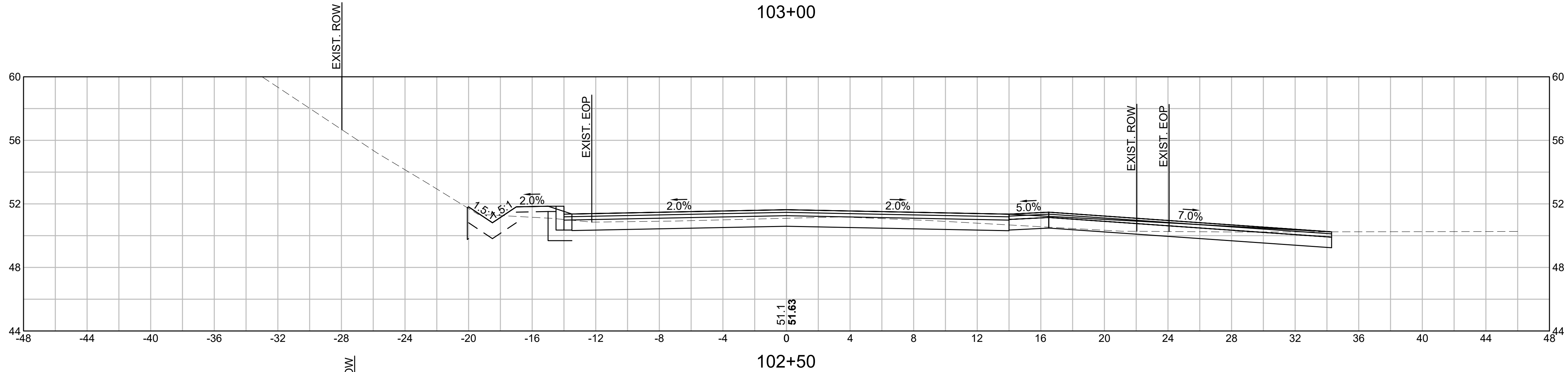
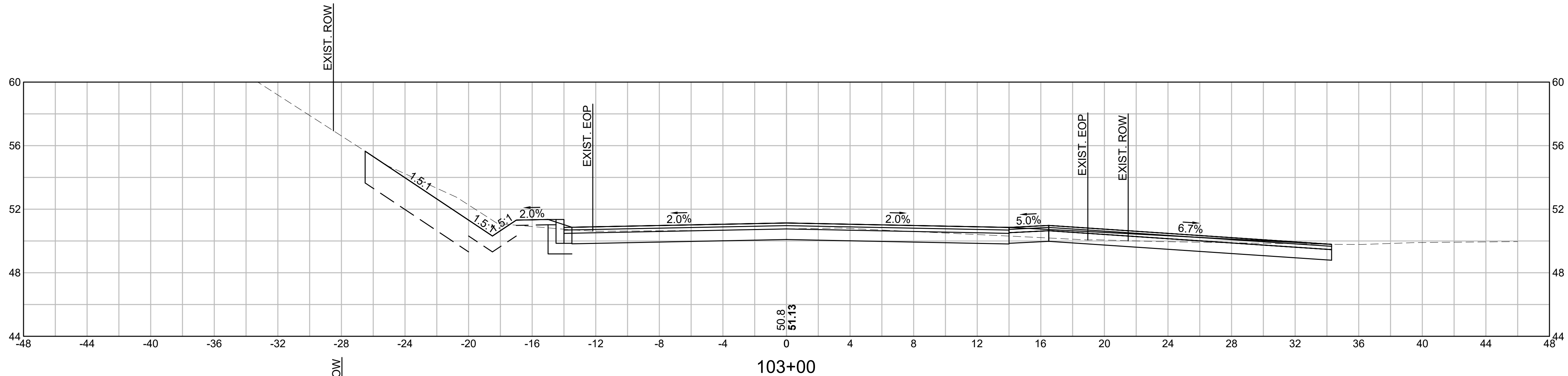
OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS

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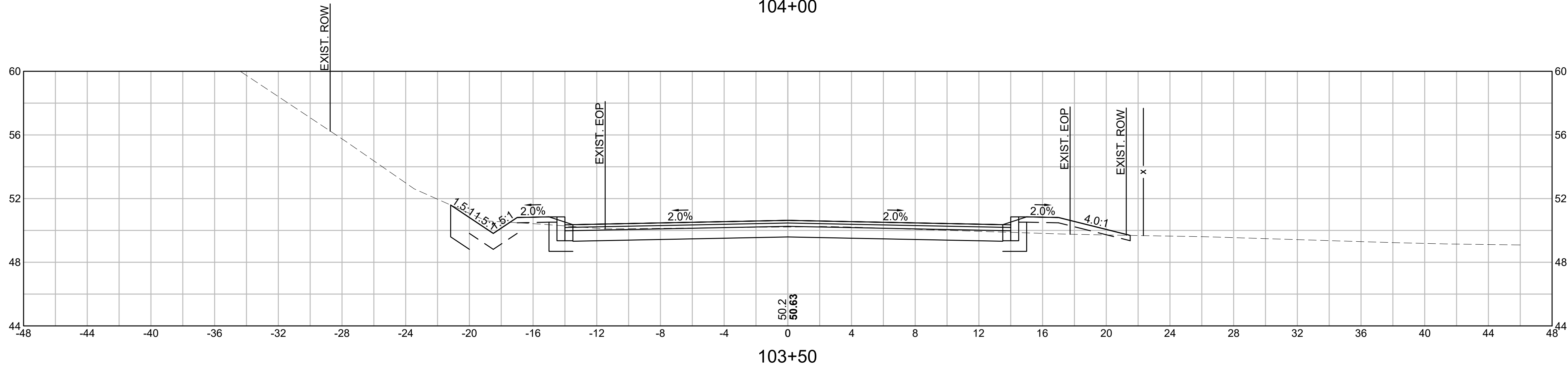
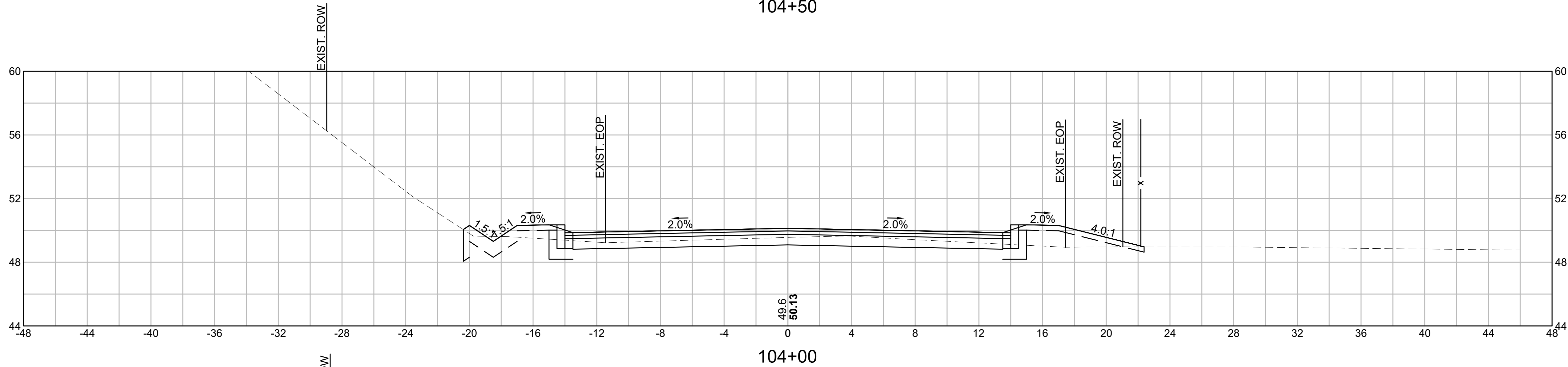
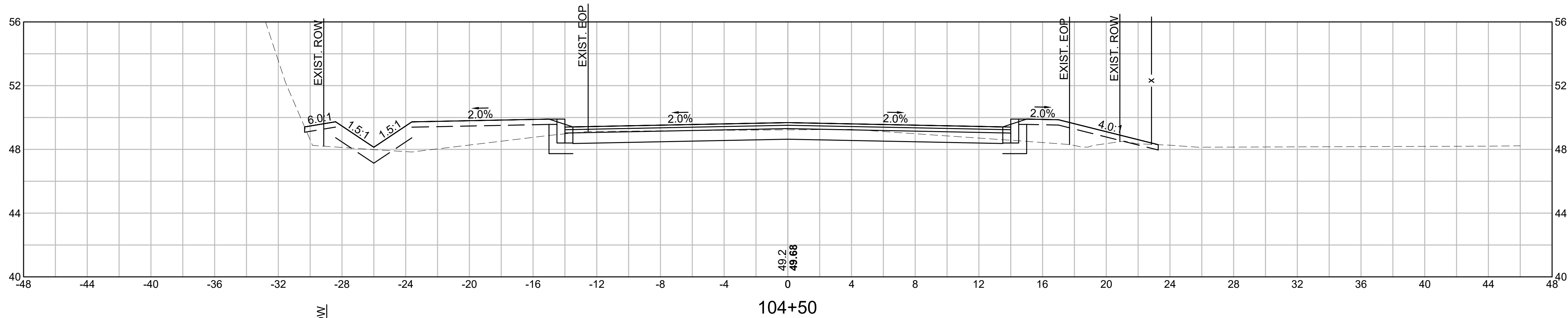
CROSS SECTIONS

SCALE: AS NOTED  
  
DRAWN/DESIGN BY: KSR      CHECKED BY: JFO  
  
SHEET NO.  
49 OF 71





P:\20240021 46\04-DRAWINGS\PROJECT DRAWING DATA\PLAN SHEET FILES\PLAN SHEET DWG\20240021 46\_HD21 (CROSS SECT).DWG  
BY: JPATTEN  
DATE: 1/5/2026  
LAYOUT: XS04



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METHUEN, MA 01844

**OLD FERRY ROAD  
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METHUEN, MASSACHUSETTS**

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P 617-466-6765

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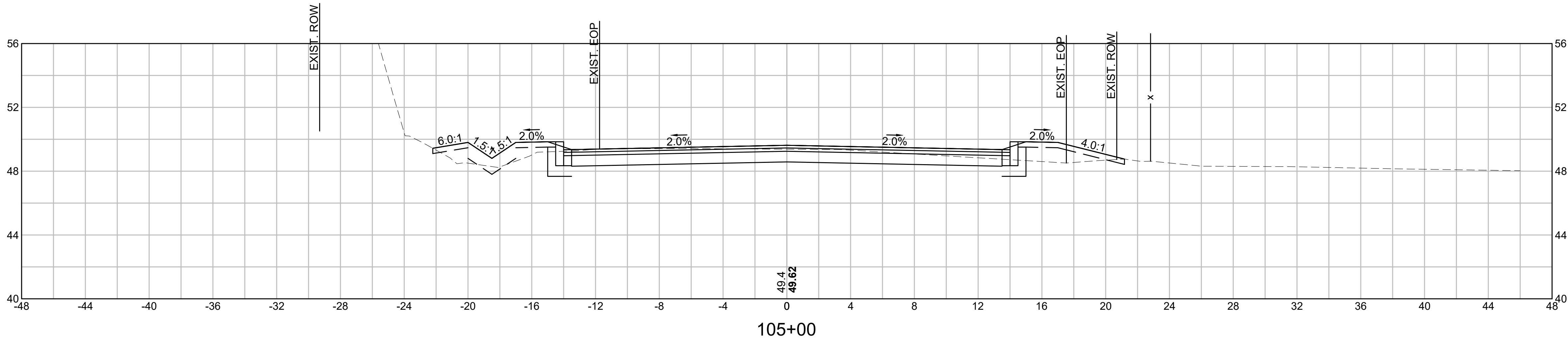
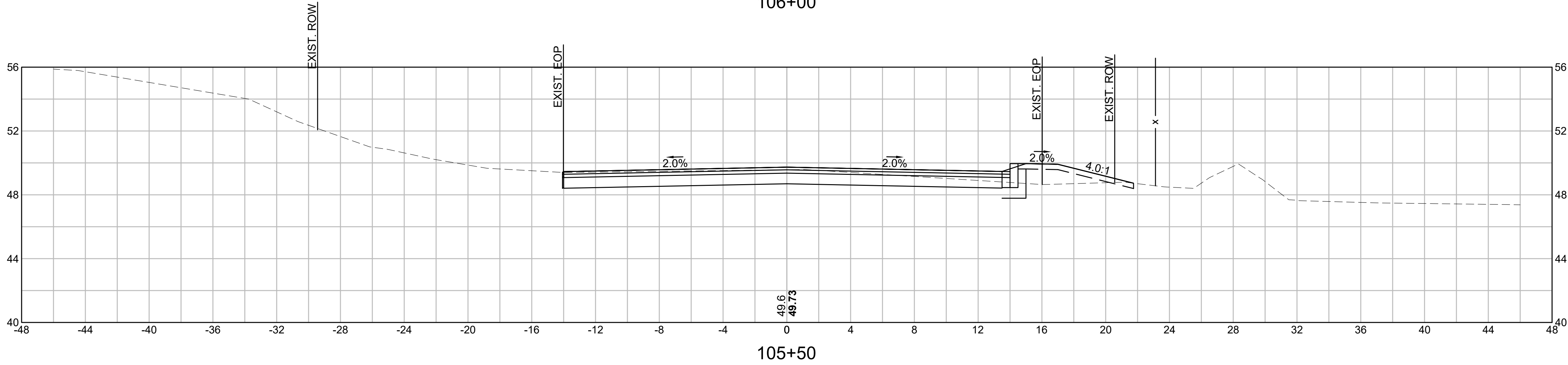
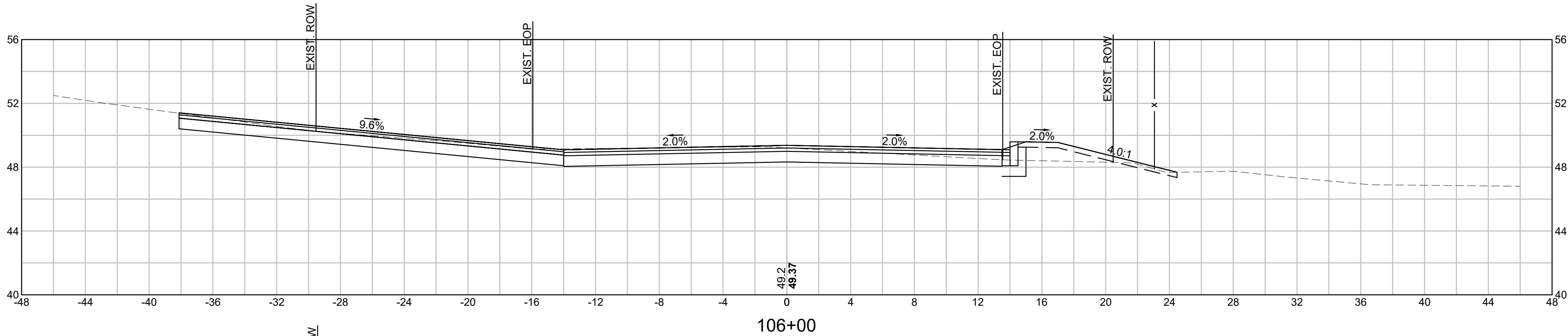
OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

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SCALE: AS NOTED  
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SHEET NO. 51 OF 71







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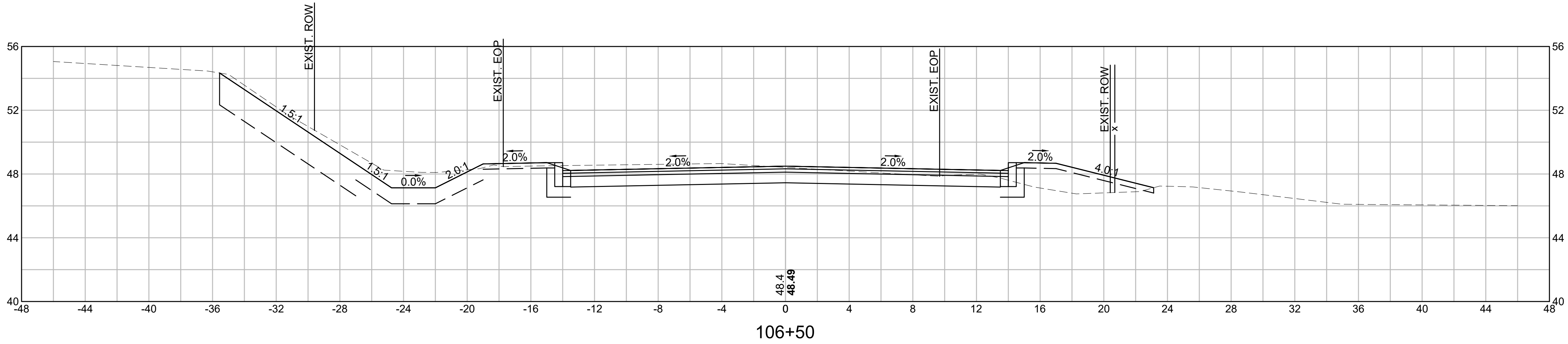
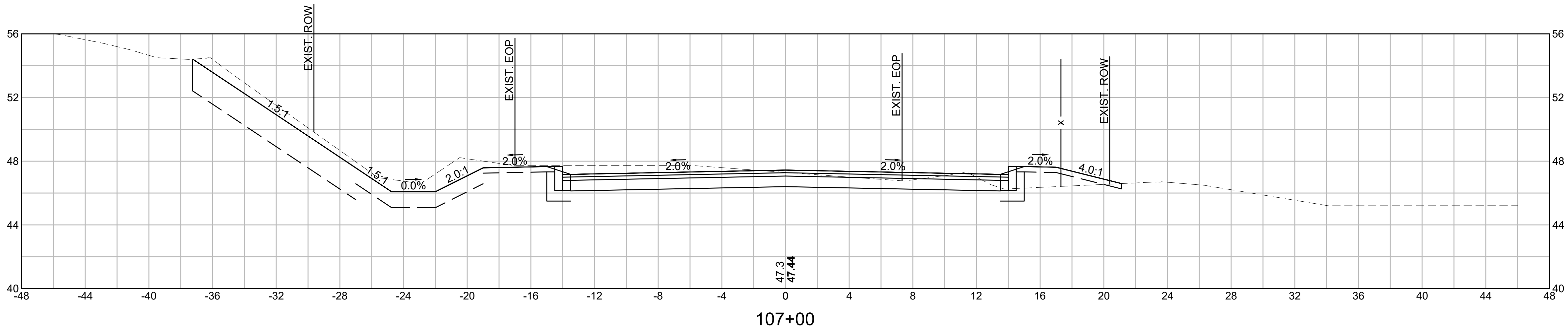
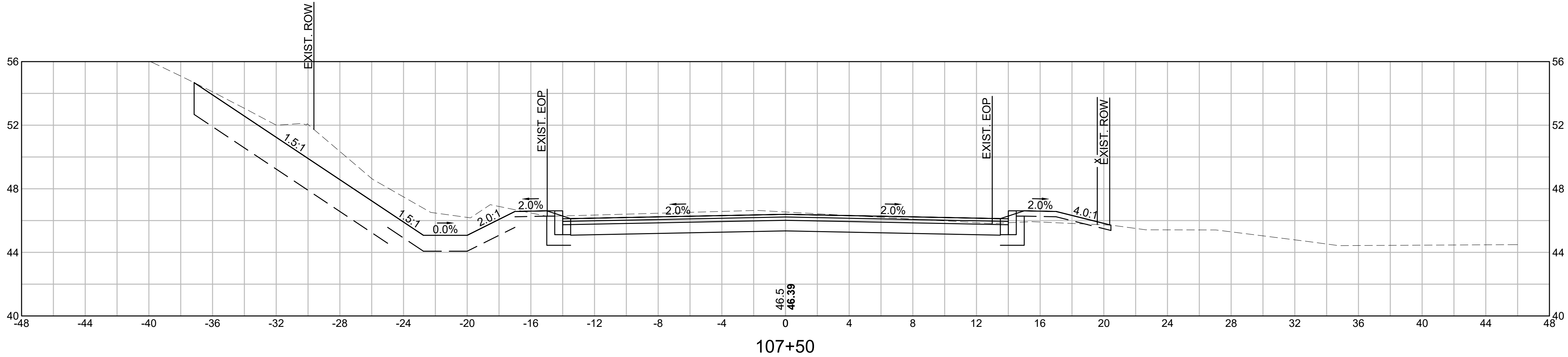
OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

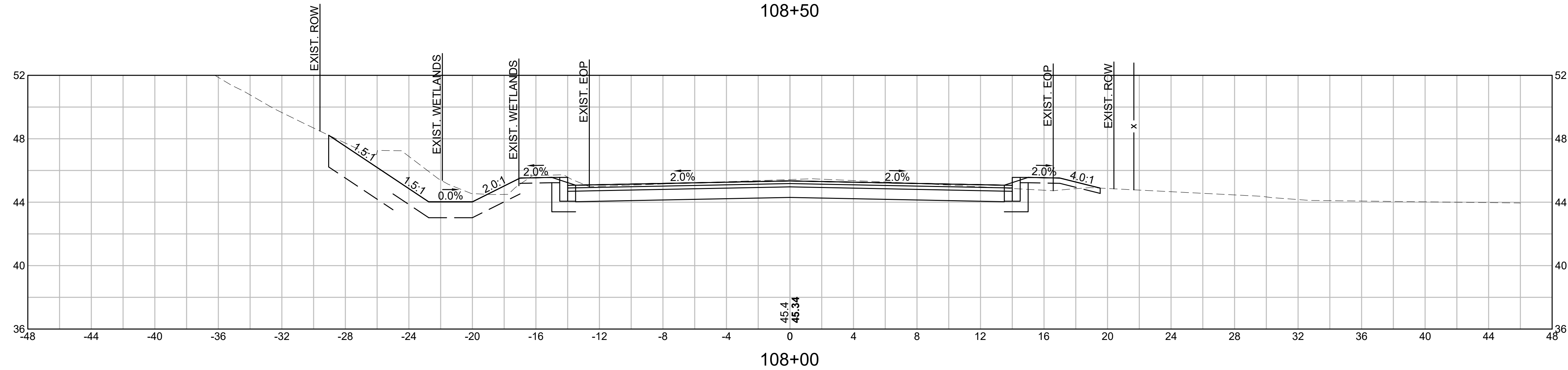
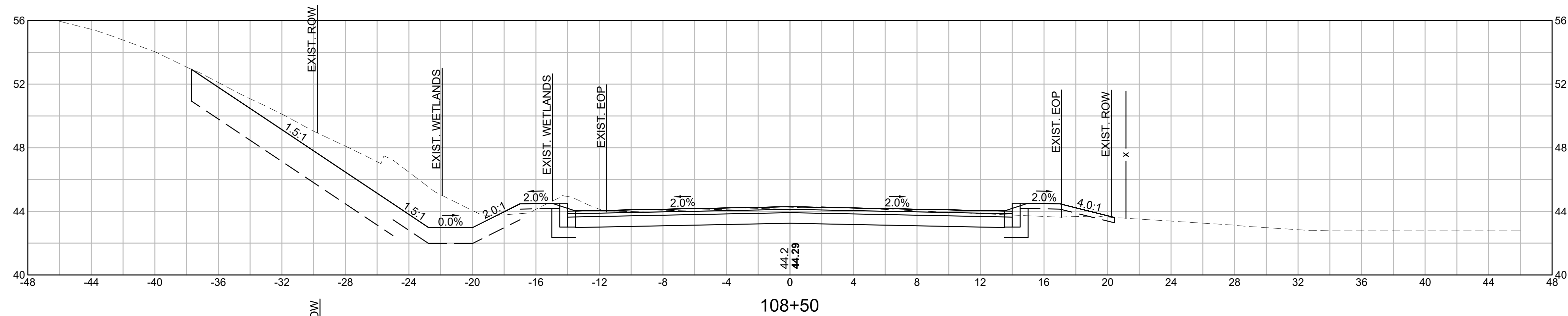
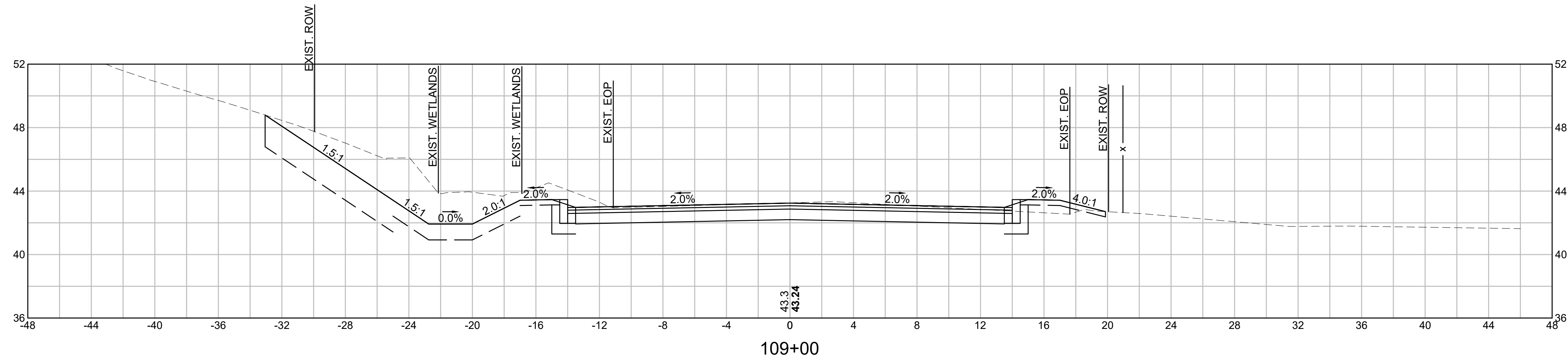
CROSS SECTIONS

SCALE: AS NOTED  
DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO  
SHEET NO. 52 OF 71





P:\20240021 46\04-DRAWINGS\PROJECT DRAWING DATA\PLAN SHEET FILES\PLAN SHEET DWG\20240021 46\_HD2\1 (CROSS SECT) LDWG  
BY: JPATTEN  
DATE: 1/5/2026  
LAYOUT: XS07



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METHUEN, MASSACHUSETTS**

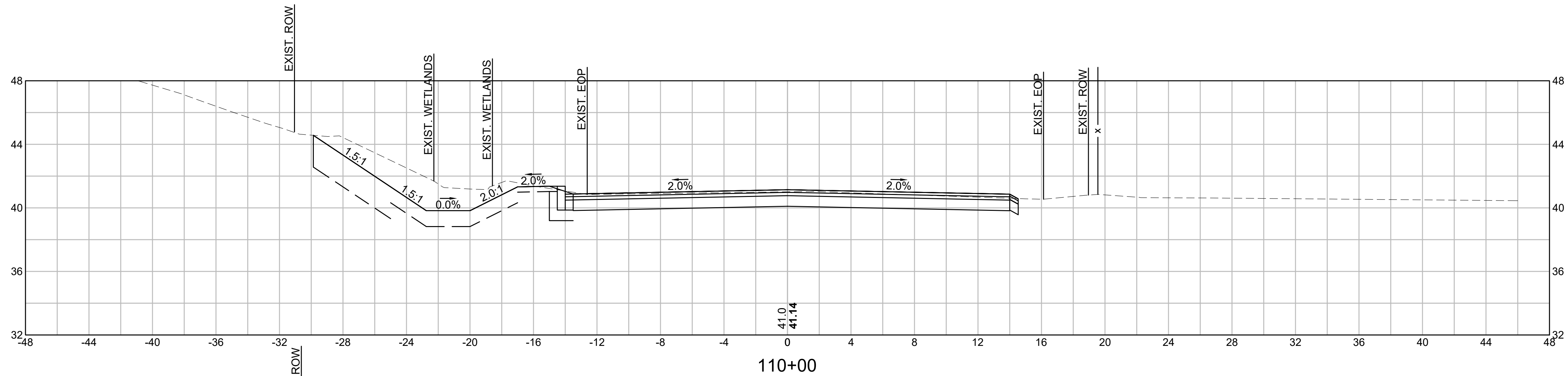
REVISIONS		
NO.	REVISION	DATE

1/05/2026

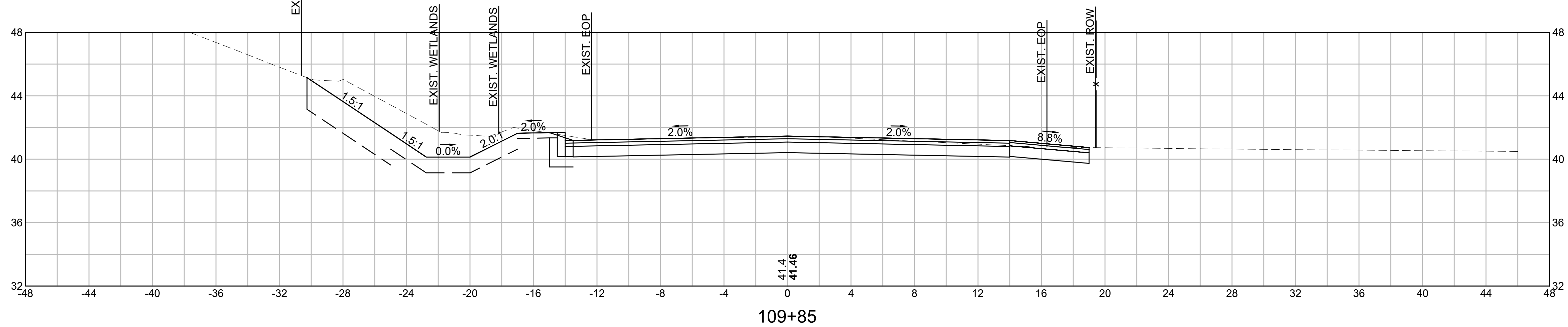
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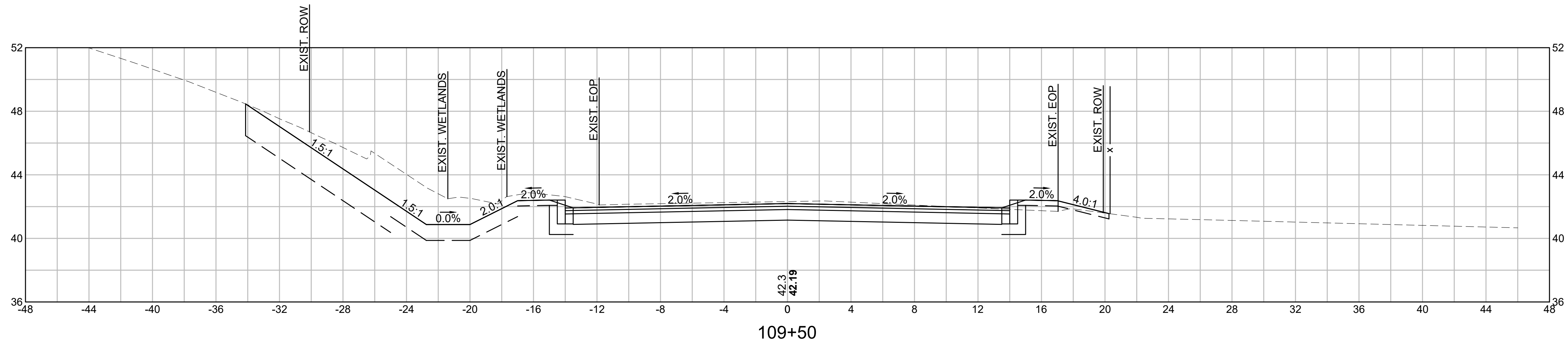
P:\20240021 46\04-DRAWINGS\PROJECT DRAWING DATA\PLAN SHEET FILES\PLAN SHEET DWG\20240021 46\_HD21 (CROSS SECT).DWG  
DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: XS08



CUT: 45.68 SF  
FILL: 0.00 SF



CUT: 47.50 SF  
FILL: 0.00 SF



CUT: 56.85 SF  
FILL: 0.00 SF

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**OLD FERRY ROAD  
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DEPARTMENT OF PUBLIC WORKS  
10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

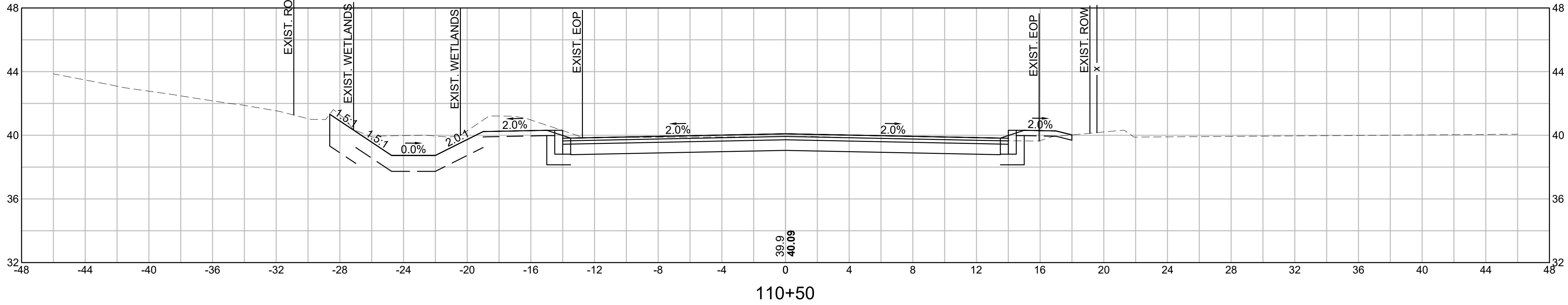
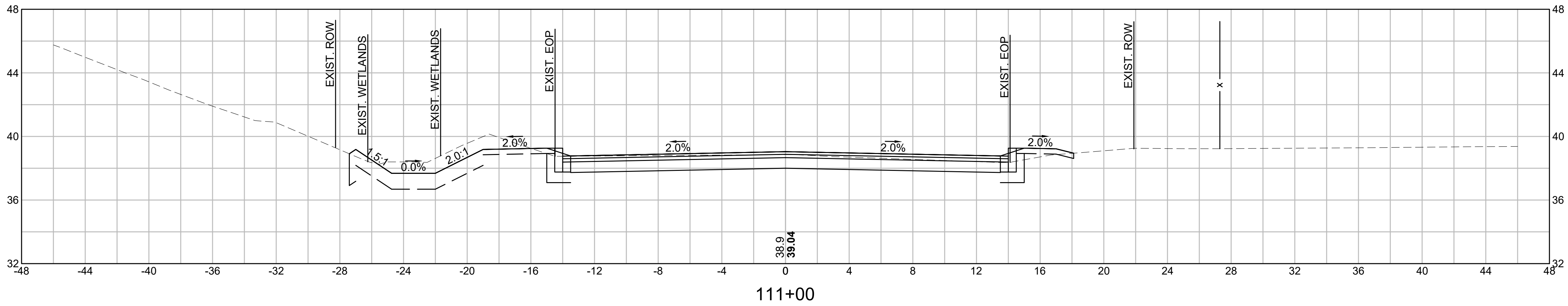
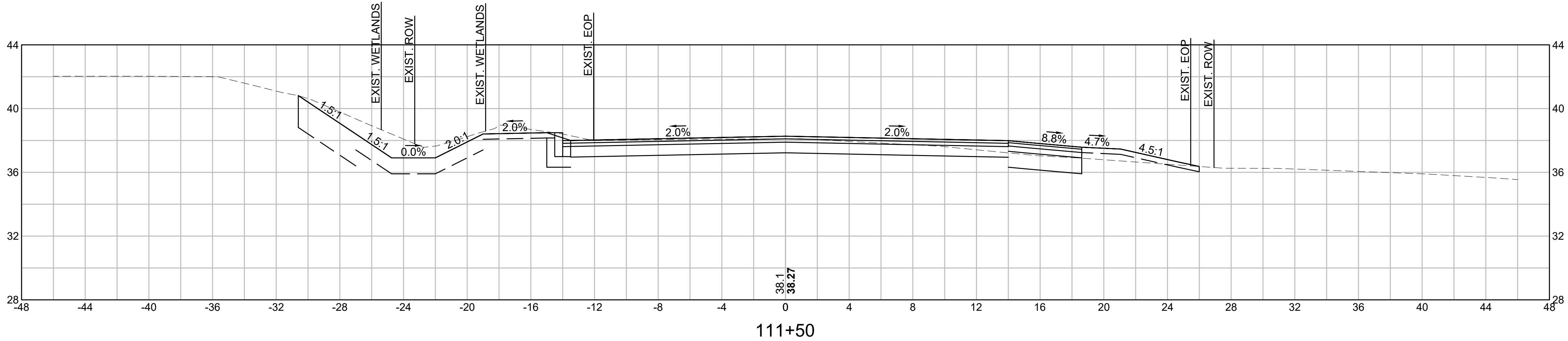
OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

CROSS SECTIONS

SCALE: AS NOTED  
DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO  
SHEET NO. 55 OF 71





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DEPARTMENT OF PUBLIC WORKS  
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METHUEN, MA 01844

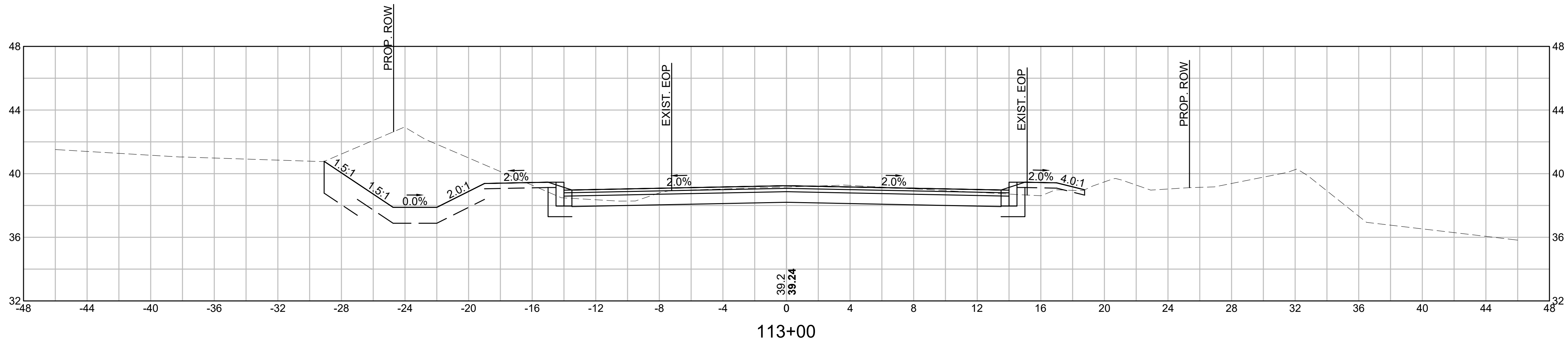
OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

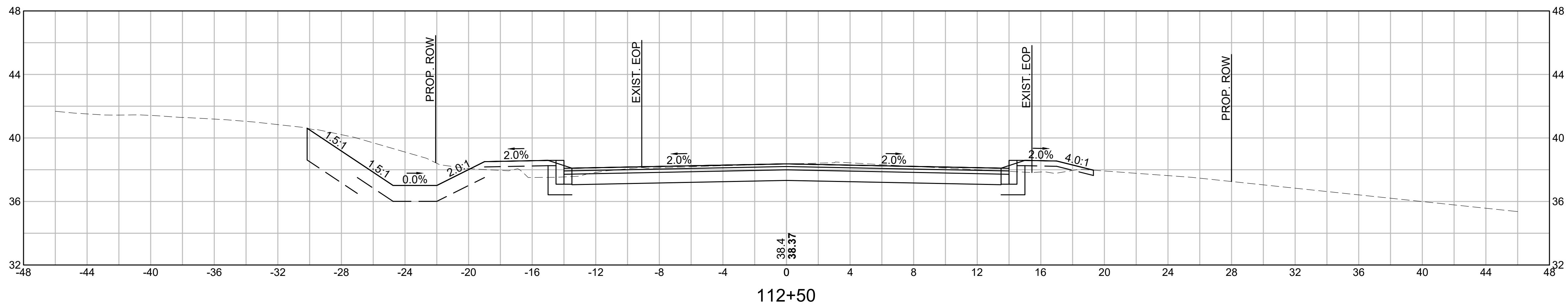
1/05/2026

CROSS SECTIONS

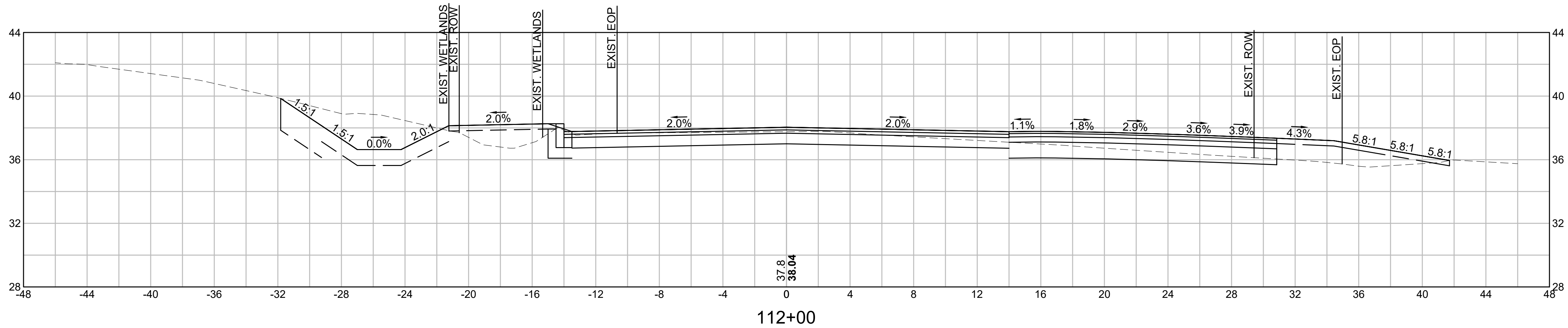
SCALE: AS NOTED  
DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO  
SHEET NO. 56 OF 71



CUT: 51.11 SF  
FILL: 0.00 SF



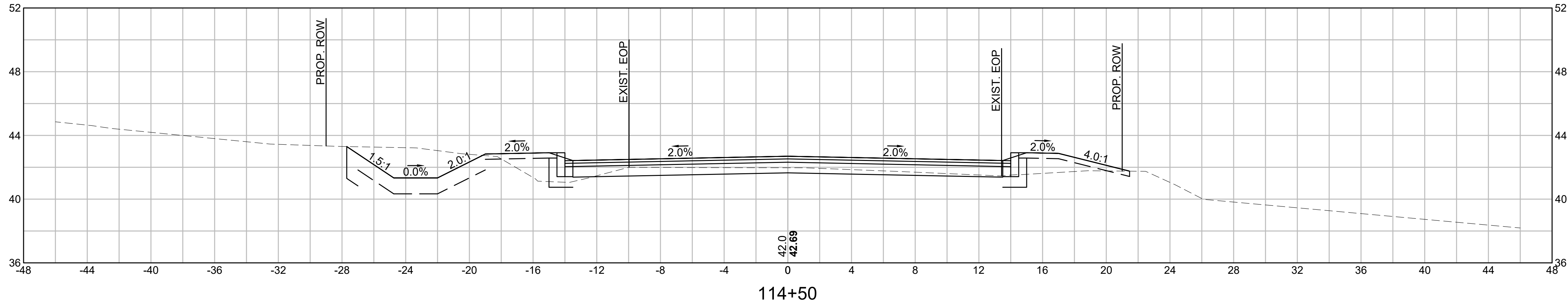
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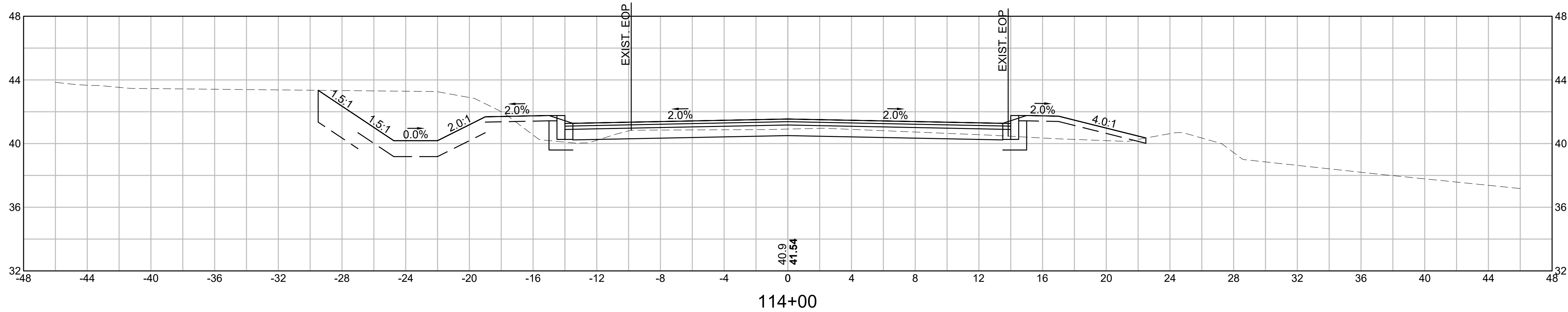
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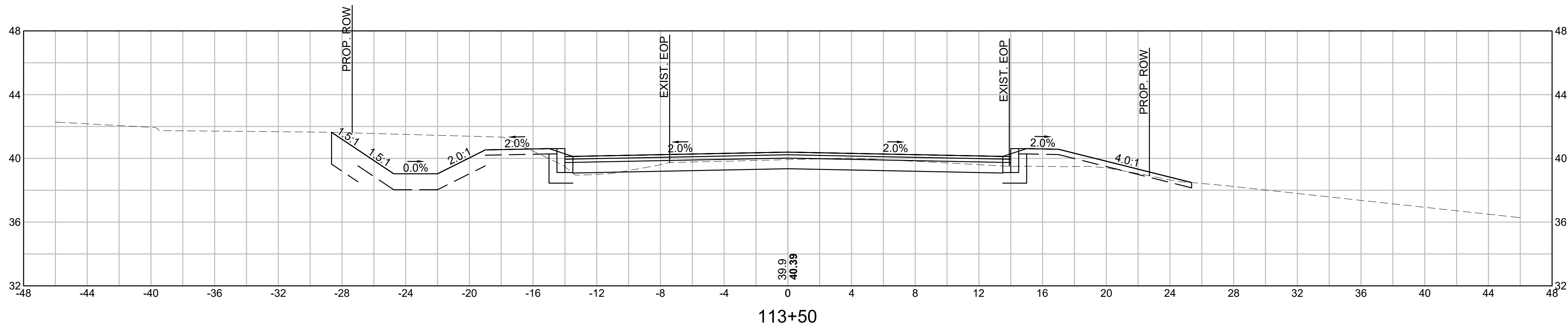
P:\20240021 46\04-DRAWINGS\PROJECT DRAWING DATA\PLAN SHEET FILES\PLAN SHEET DWG\20240021 46\_HD22(CROSS SECT).DWG  
BY: JPATTEN  
DATE: 1/5/2026  
LAYOUT: XS11



CUT: 28.28 SF  
FILL: 0.00 SF



CUT: 45.41 SF  
FILL: 0.00 SF

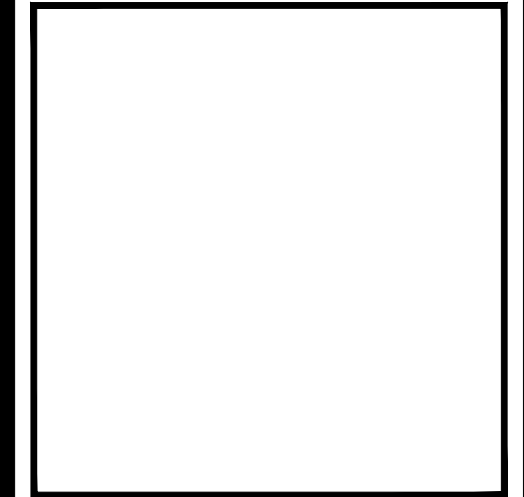


CUT: 37.67 SF  
FILL: 0.00 SF



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10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

# OLD FERRY ROAD ROADWAY RECONSTRUCTION METHUEN, MASSACHUSETTS

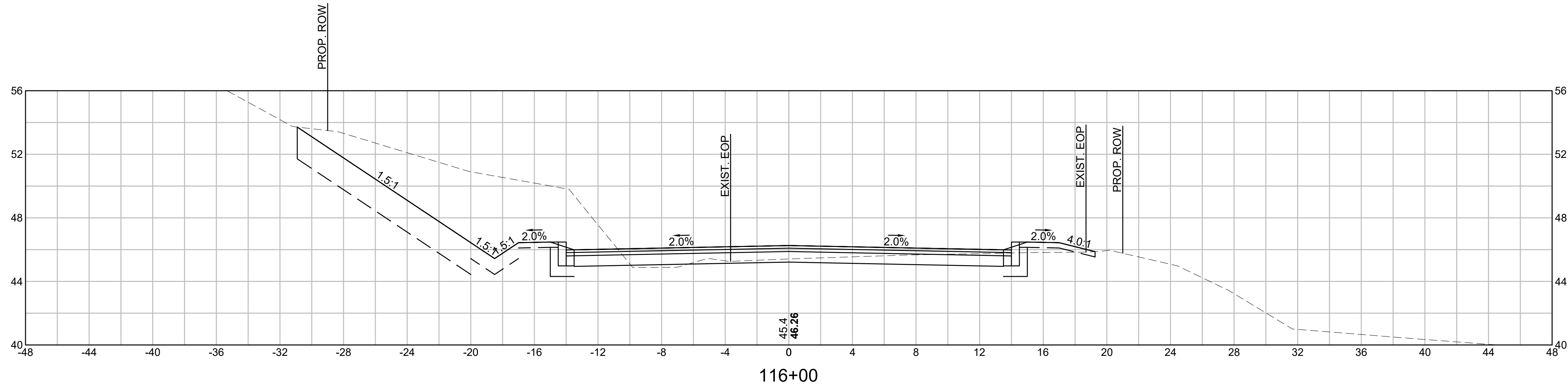
REVISIONS		
NO.	REVISION	DATE

1/05/2026

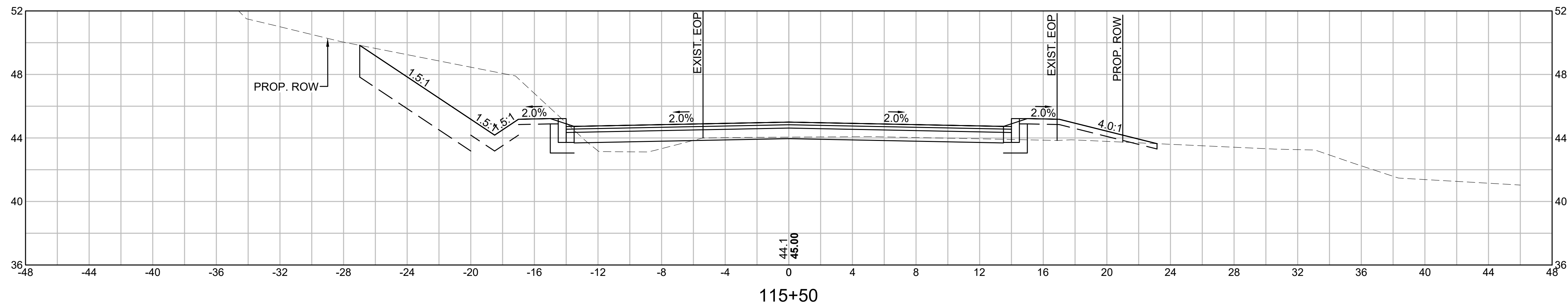
## CROSS SECTIONS

SCALE: AS NOTED  
DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO  
SHEET NO. 57 OF 71

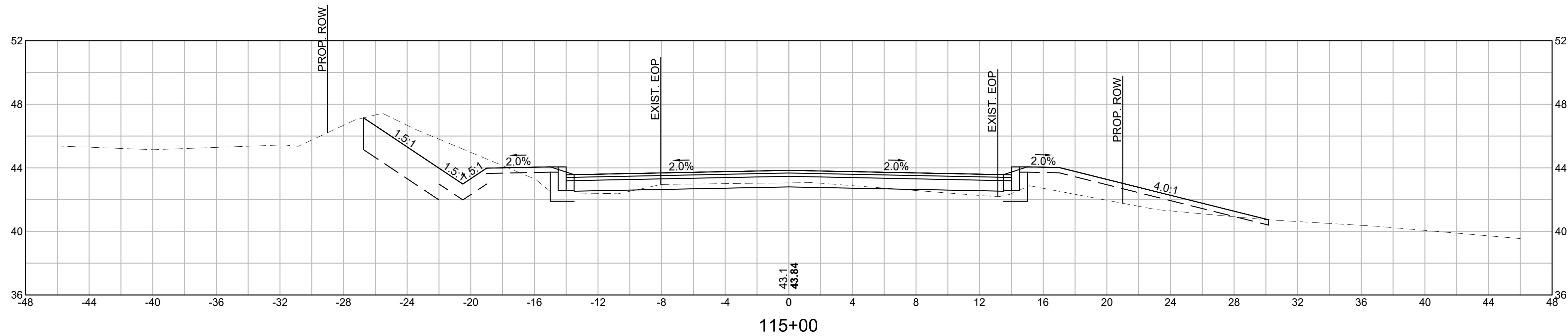
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DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: XS12



CUT: 90.78 SF  
FILL: 0.00 SF



CUT: 51.89 SF  
FILL: 0.00 SF



CUT: 38.11 SF  
FILL: 0.00 SF



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# OLD FERRY ROAD ROADWAY RECONSTRUCTION METHUEN, MASSACHUSETTS

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NO.	REVISION	DATE

1/05/2026

## CROSS SECTIONS

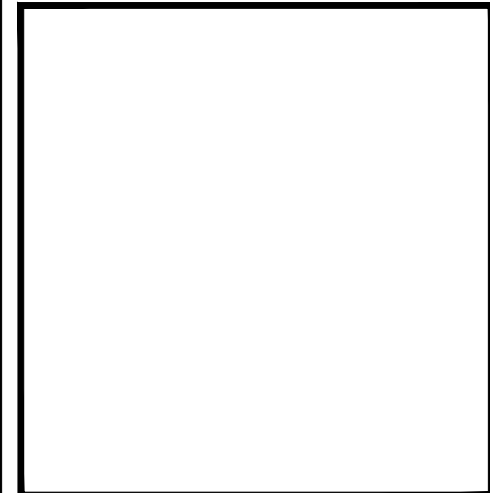
SCALE: AS NOTED

DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

SHEET NO.  
58 OF 71



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METHUEN, MA 01844

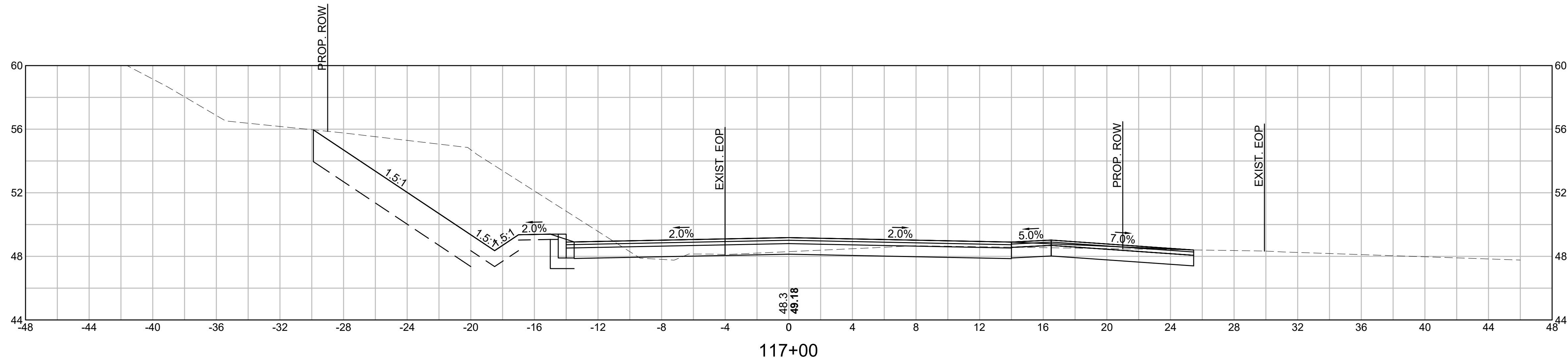
OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

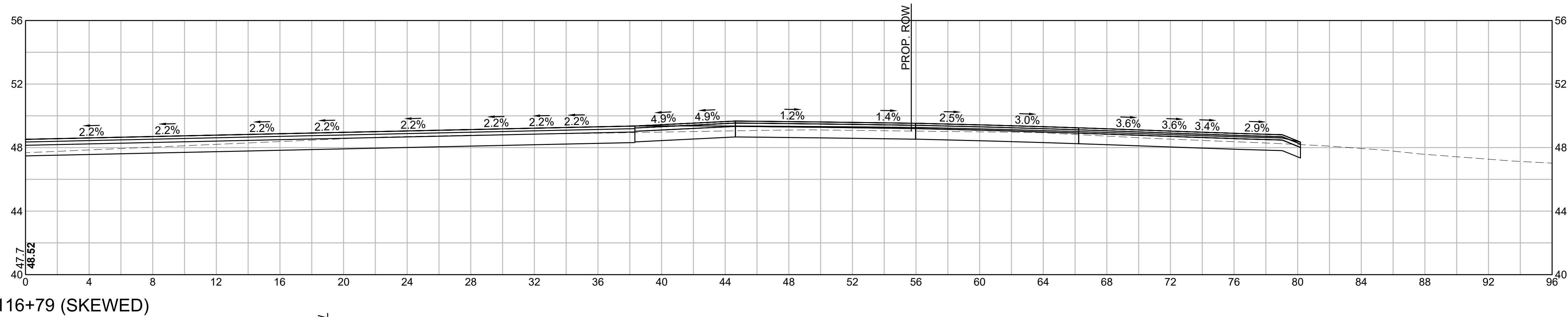
1/05/2026

CROSS SECTIONS

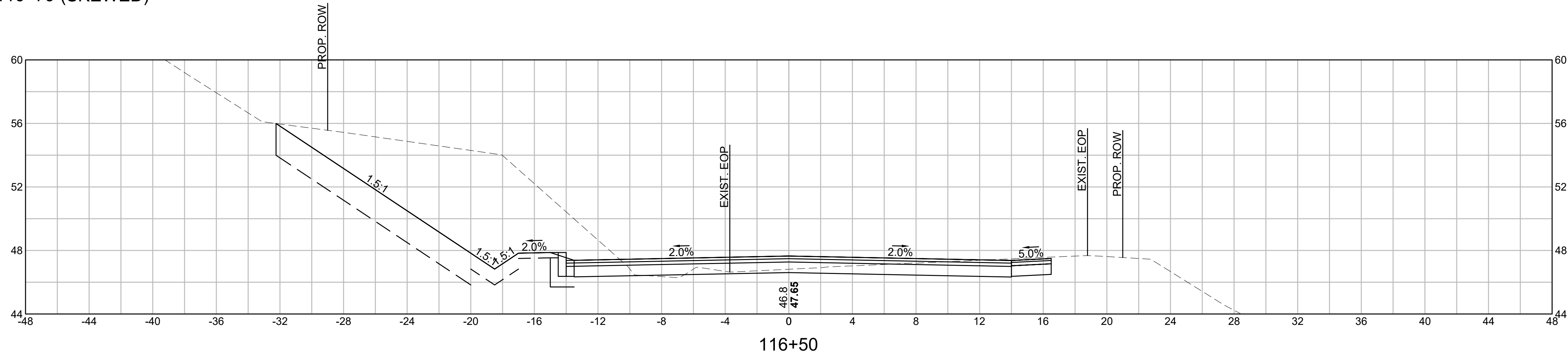
SCALE: AS NOTED  
DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO  
SHEET NO. 59 OF 71



CUT: 88.01 SF  
FILL: 0.00 SF

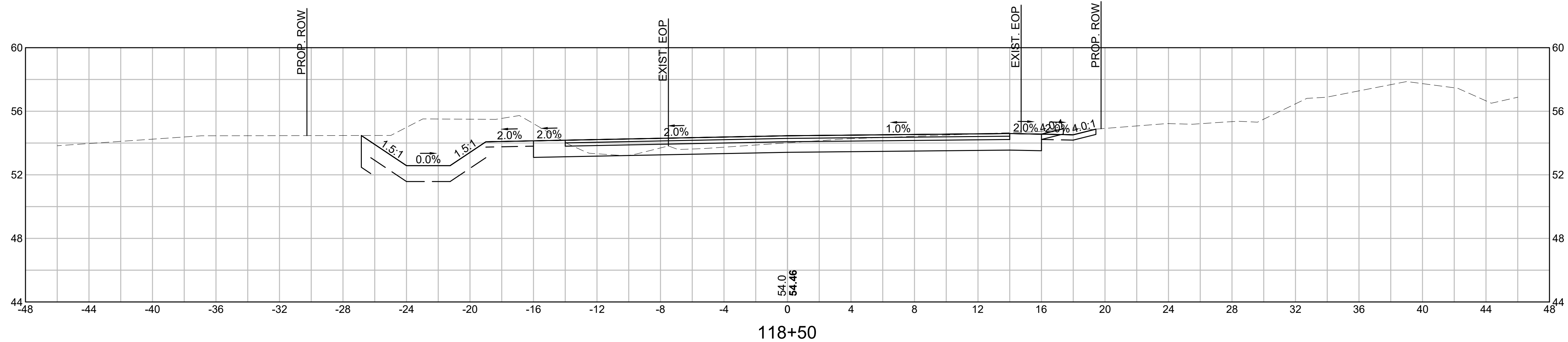


CUT: 105.35 SF  
FILL: 0.00 SF

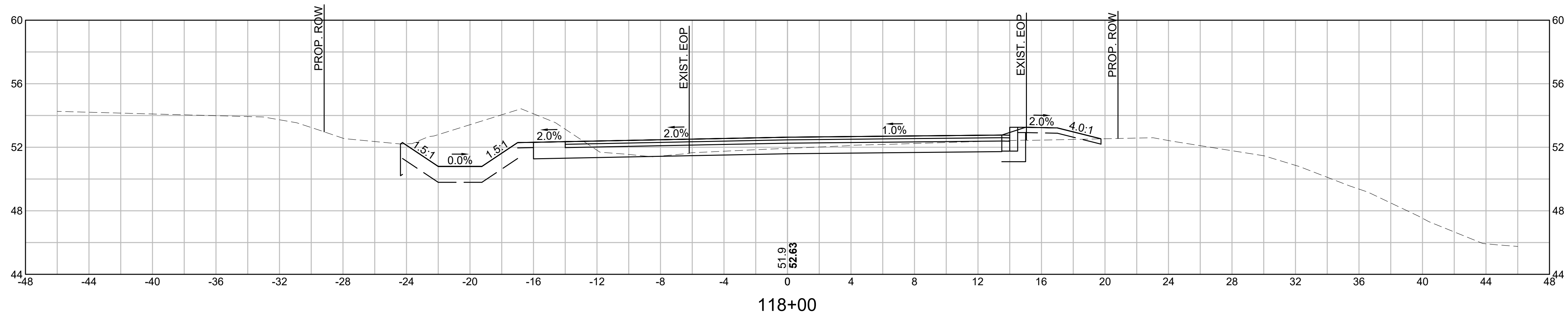


CUT: 112.25 SF  
FILL: 0.00 SF

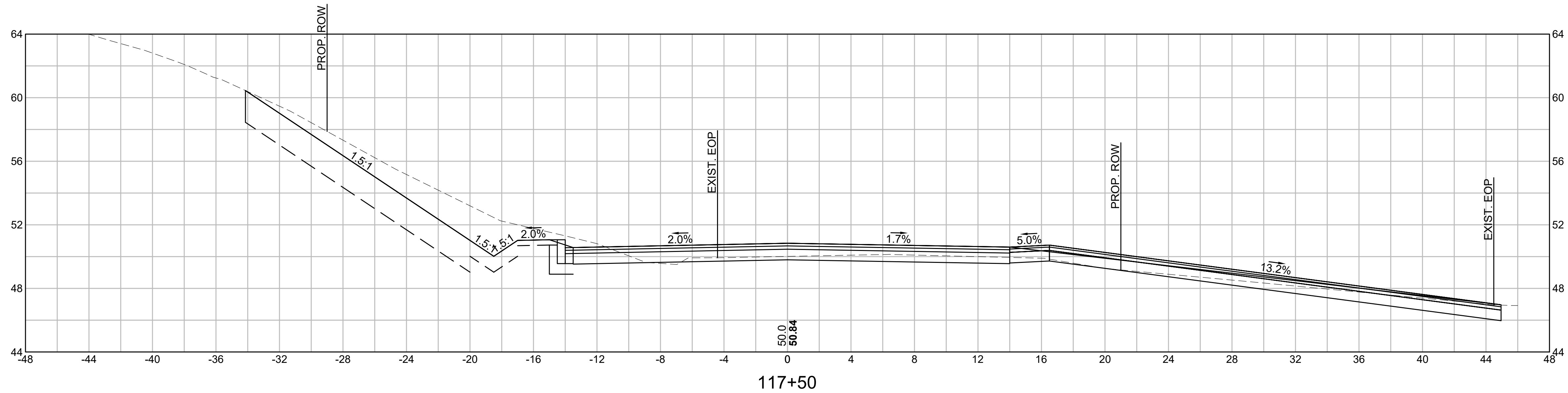
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BY: JPATTEN  
DATE: 1/5/2026  
LAYOUT: XS14



CUT: 37.67 SF  
FILL: 0.00 SF



CUT: 31.22 SF  
FILL: 0.00 SF



CUT: 74.75 SF  
FILL: 0.00 SF

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NO.	REVISION	DATE

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SCALE: AS NOTED  
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SHEET NO. 60 OF 71





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OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

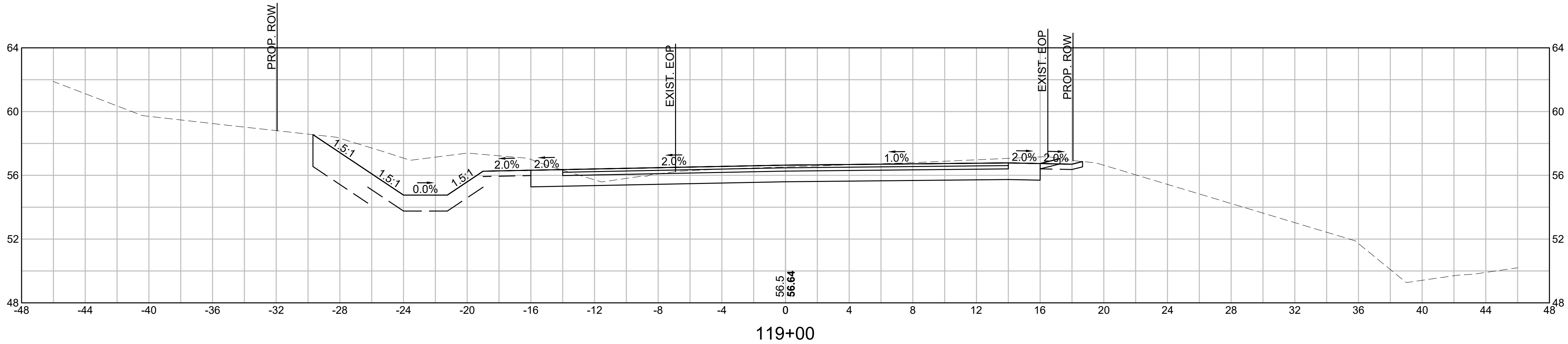
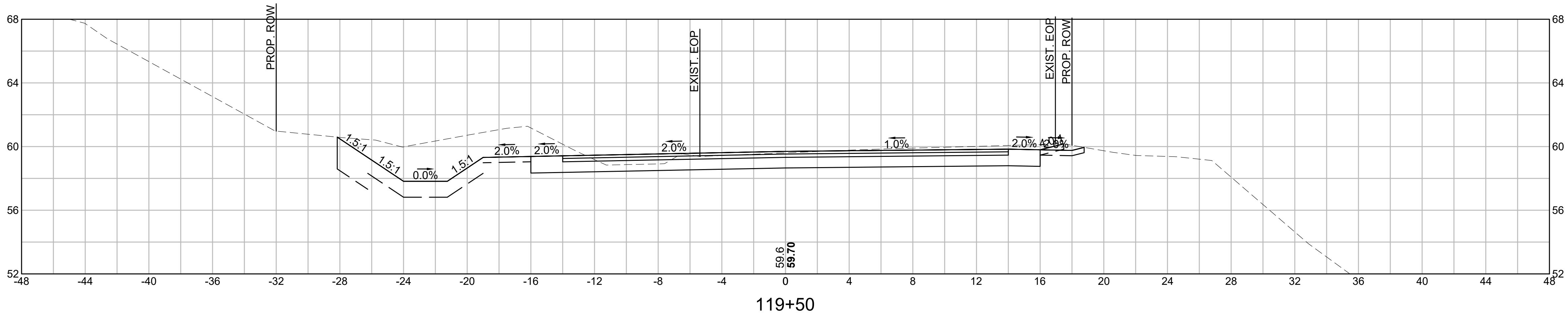
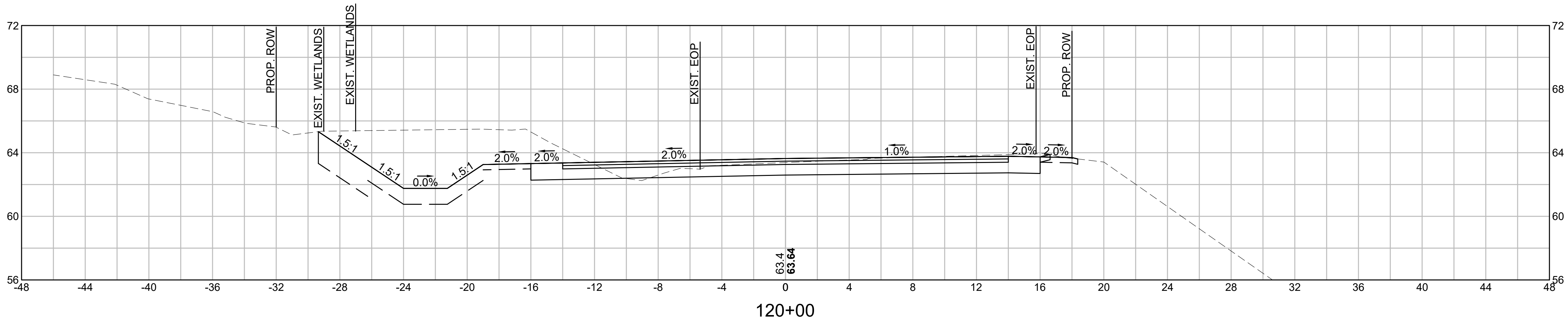
CROSS SECTIONS

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AS NOTED

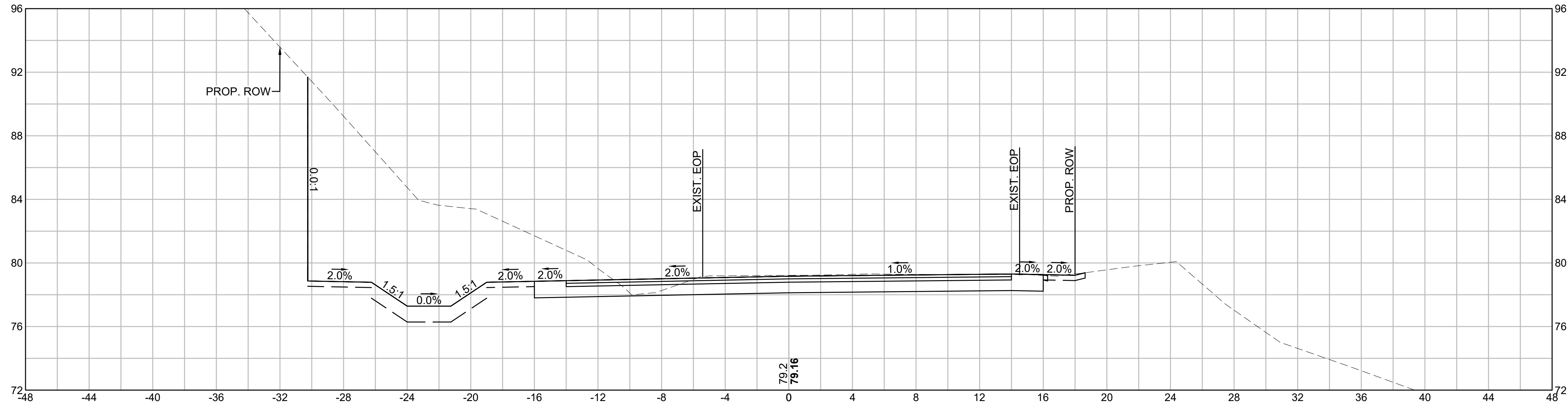
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SHEET NO.

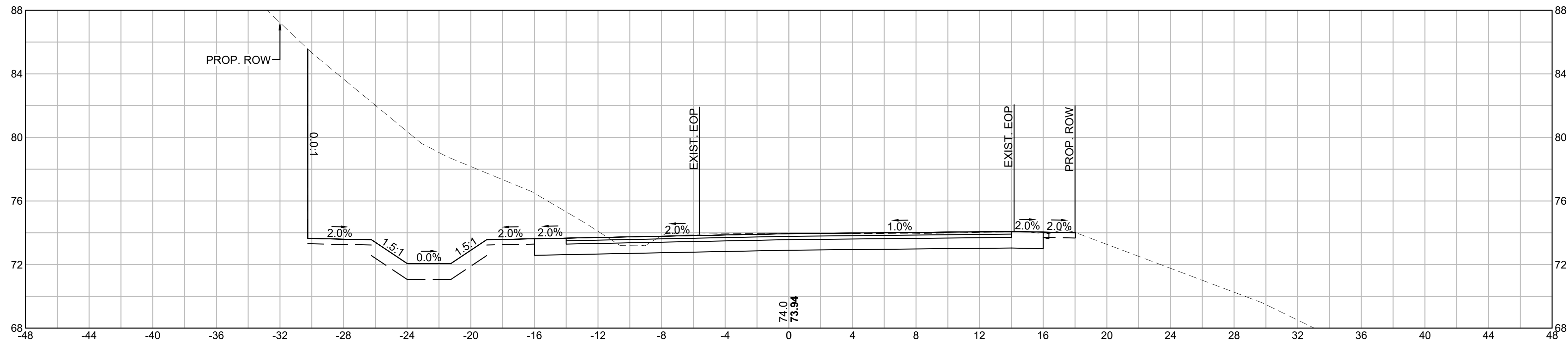
61 OF 71



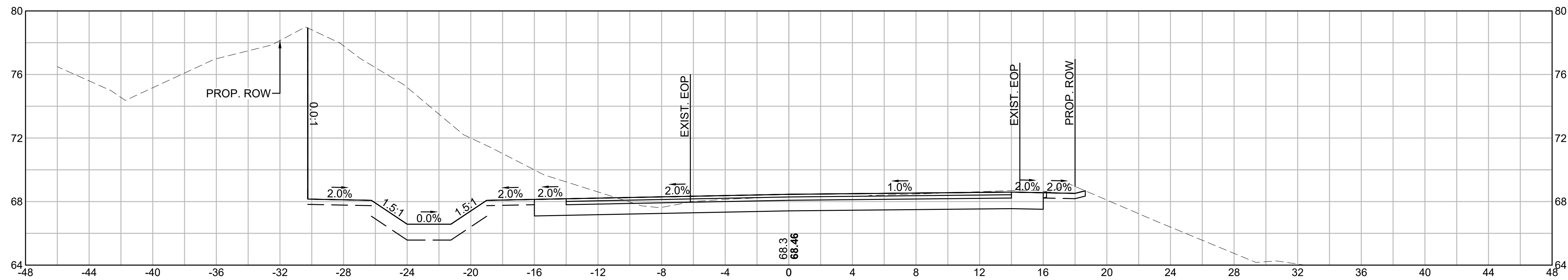
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DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: XS16



CUT: 129.41 SF  
FILL: 0.00 SF



CUT: 131.93 SF  
FILL: 0.00 SF



CUT: 123.02 SF  
FILL: 0.00 SF



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METHUEN, MA 01844

# OLD FERRY ROAD ROADWAY RECONSTRUCTION METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

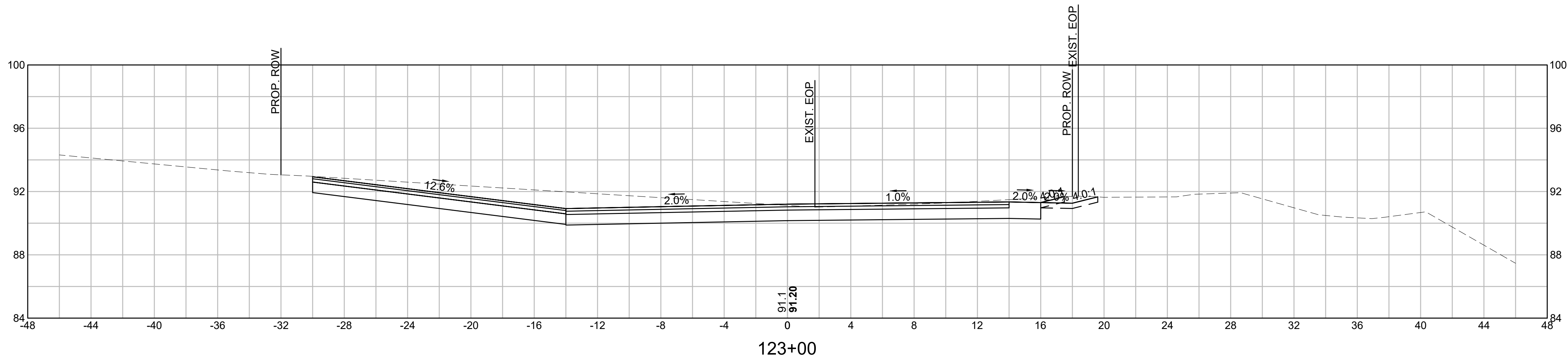
1/05/2026

## CROSS SECTIONS

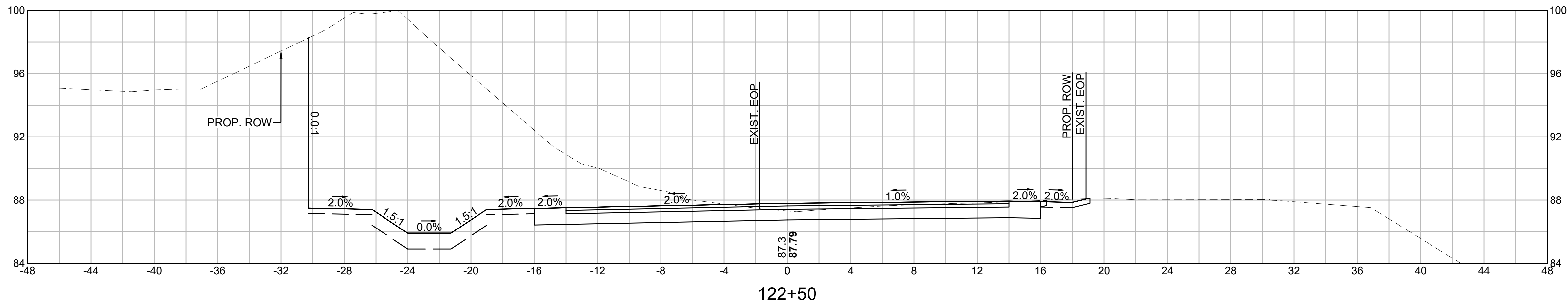
SCALE: AS NOTED  
DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO  
SHEET NO. 62 OF 71



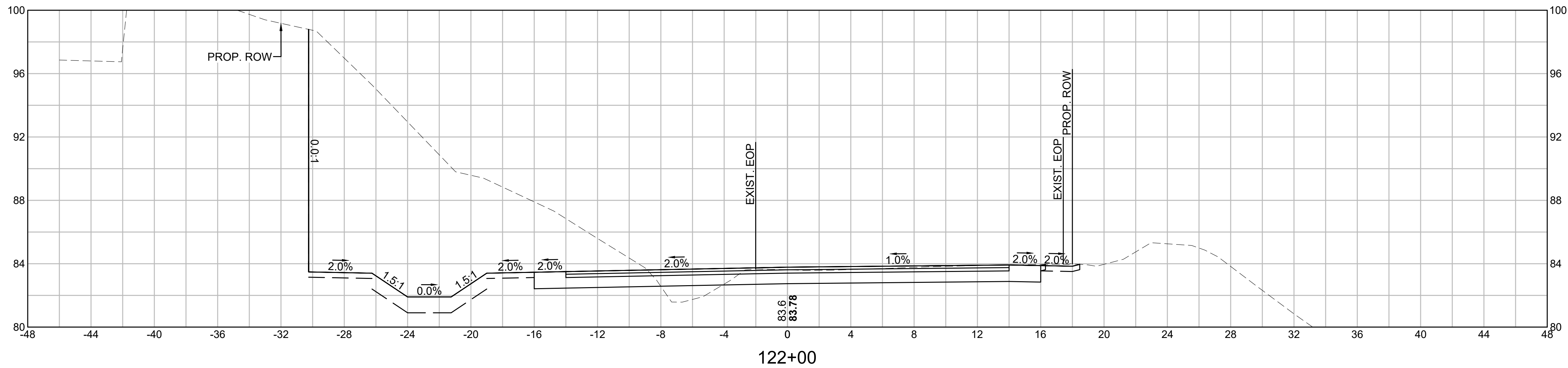
P:\20240021 46\04-DRAWINGS\PROJECT DRAWING DATA\PLAN SHEET FILES\PLAN SHEET DWG\20240021 46\_HD22(CROSS SECT).DWG  
DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: XS17



CUT: 48.30 SF  
FILL: 0.00 SF



CUT: 196.59 SF  
FILL: 0.00 SF



CUT: 176.86 SF  
FILL: 0.00 SF

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PREPARED FOR:  
DEPARTMENT OF PUBLIC WORKS  
10 DITSON PLACE, SUITE 100  
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**OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS**

REVISIONS		
NO.	REVISION	DATE

1/05/2026

**CROSS SECTIONS**

SCALE: AS NOTED  
DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO  
SHEET NO. 63 OF 71



225 Friend Street  
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DEPARTMENT OF PUBLIC WORKS  
10 DITSON PLACE, SUITE 100  
METHUEN, MA 01844

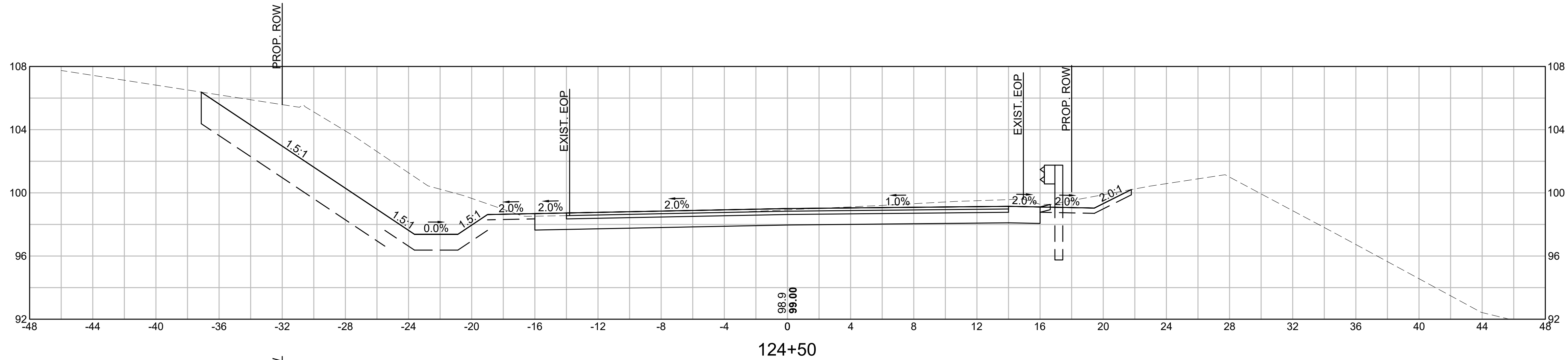
OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

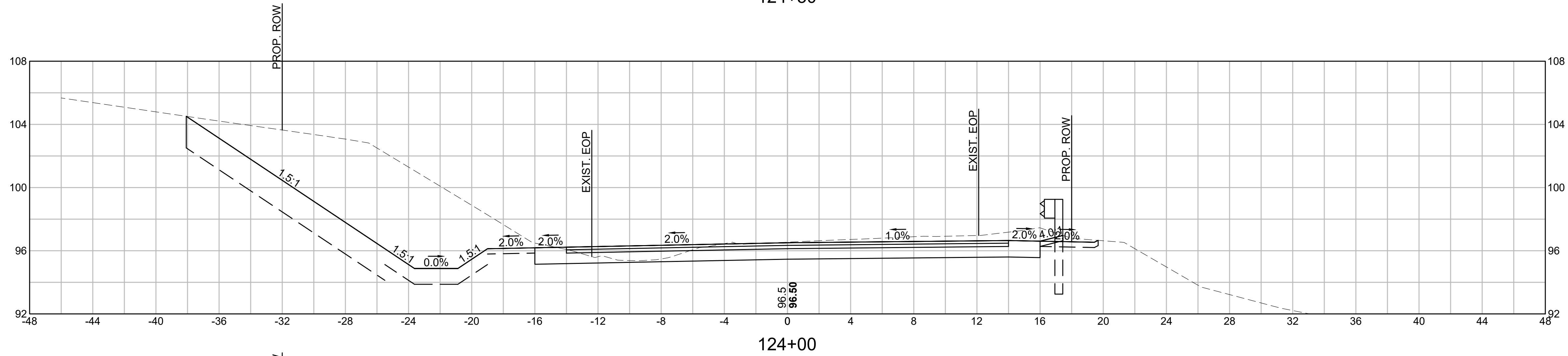
1/05/2026

CROSS SECTIONS

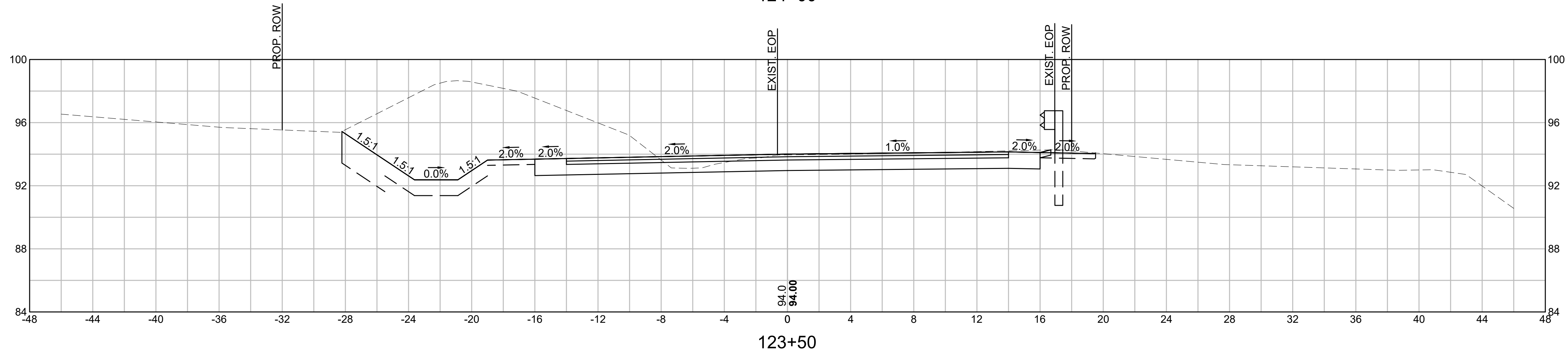
SCALE: AS NOTED  
DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO  
SHEET NO. 64 OF 71



CUT: 87.25 SF  
FILL: 0.00 SF



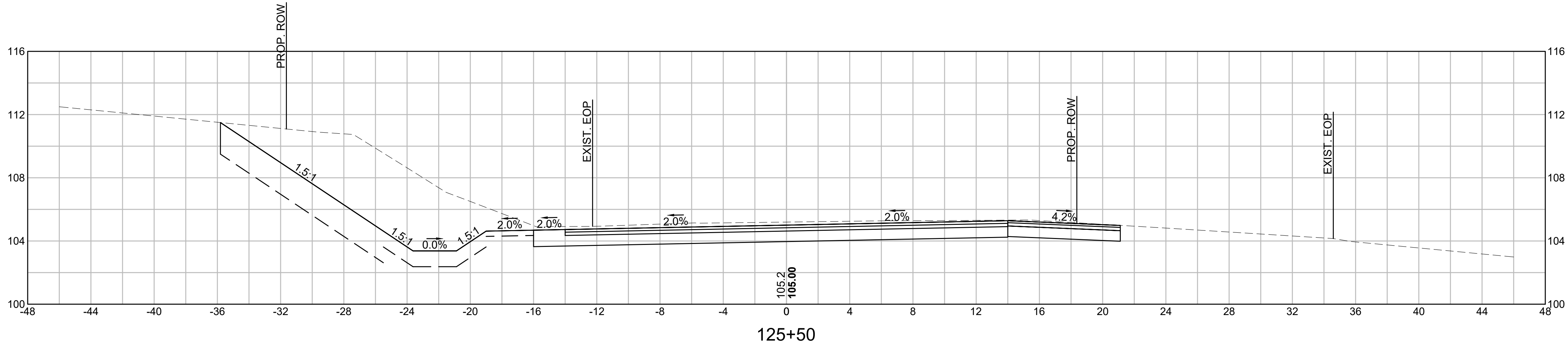
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FILL: 0.00 SF



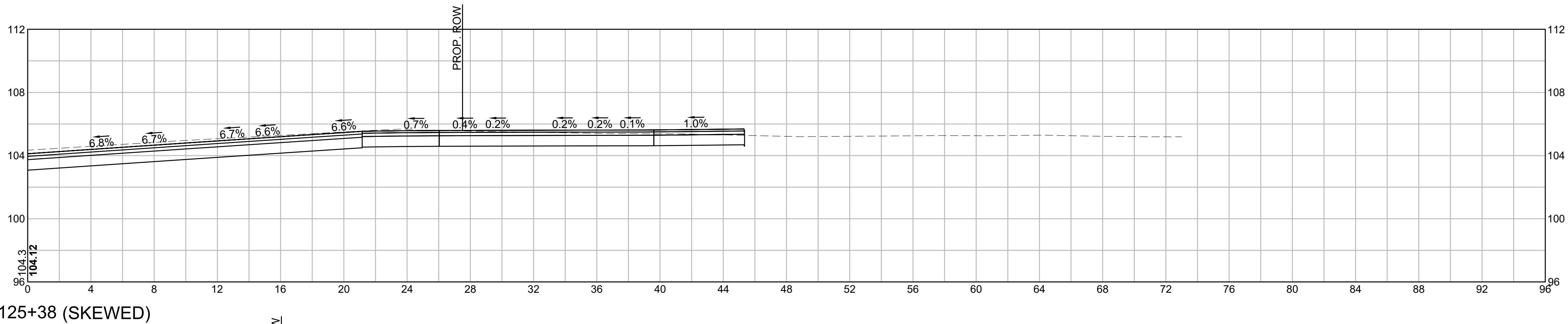
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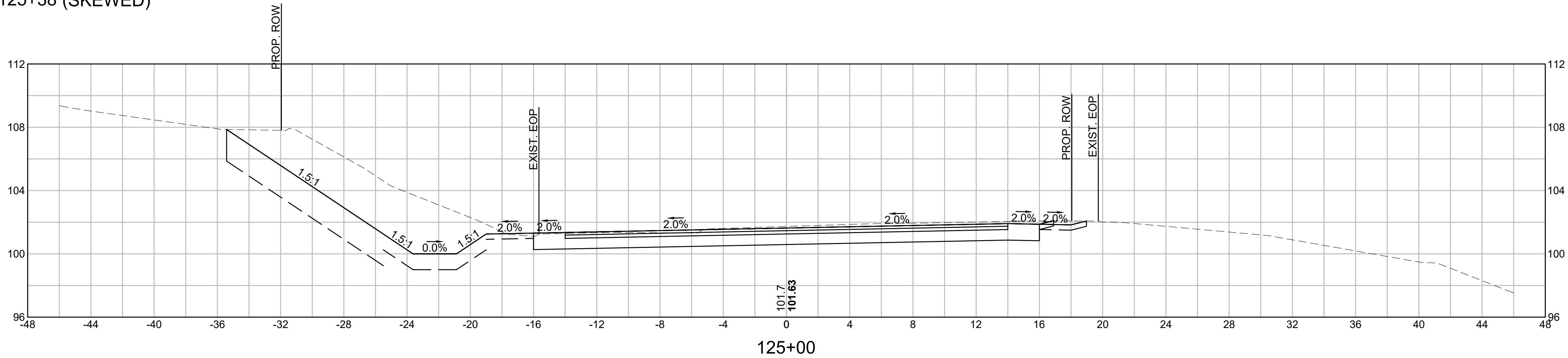
P:\2024\0021 46\04-DRAWINGS\PROJECT DRAWING DATA\PLAN SHEET FILES\PLAN SHEET DWG\2024\0021 46\_HD22(CROSS SECT).DWG  
DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: XS19



CUT: 95.91 SF  
FILL: 0.00 SF



CUT: 99.34 SF  
FILL: 0.00 SF



CUT: 76.04 SF  
FILL: 0.00 SF

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REVISIONS		
NO.	REVISION	DATE

1/05/2026

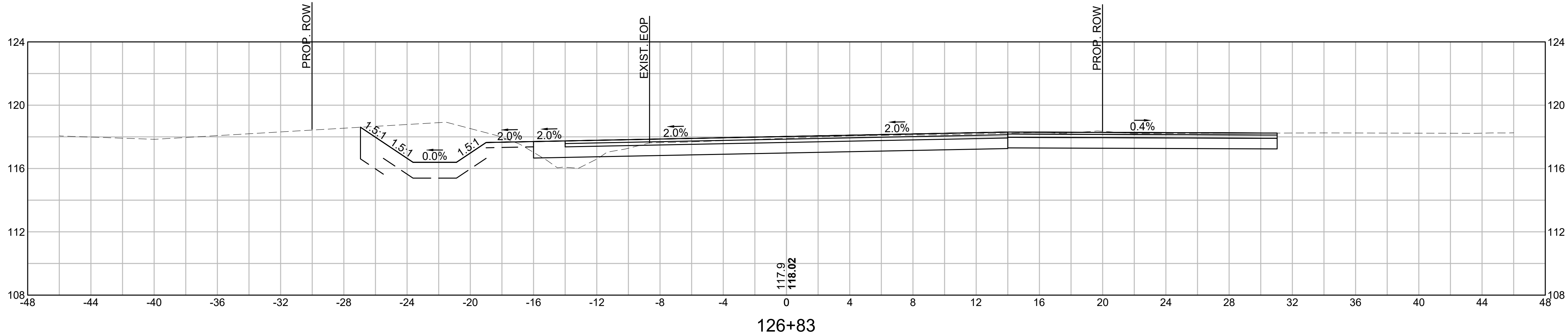
**CROSS SECTIONS**

SCALE: AS NOTED

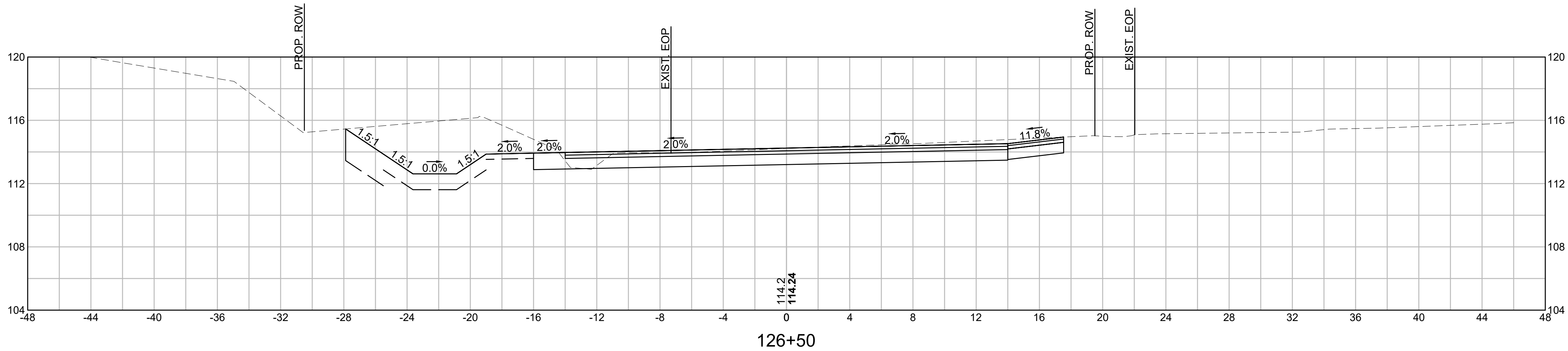
DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

SHEET NO. 65 OF 71

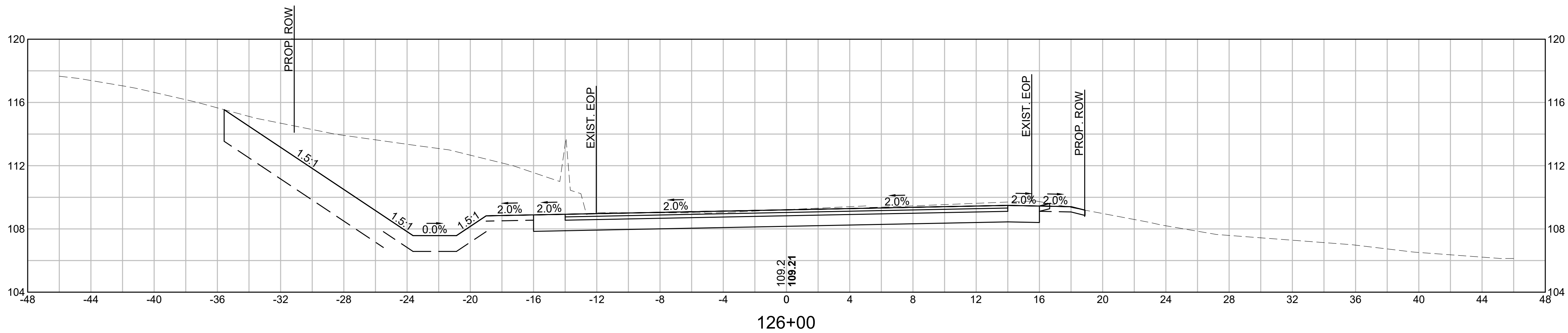
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DATE: 1/5/2026  
BY: JPATTEN  
LAYOUT: XS20



CUT: 40.57 SF  
FILL: 0.00 SF



CUT: 45.27 SF  
FILL: 0.00 SF



CUT: 106.46 SF  
FILL: 0.00 SF

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# OLD FERRY ROAD ROADWAY RECONSTRUCTION METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

1/05/2026

## CROSS SECTIONS

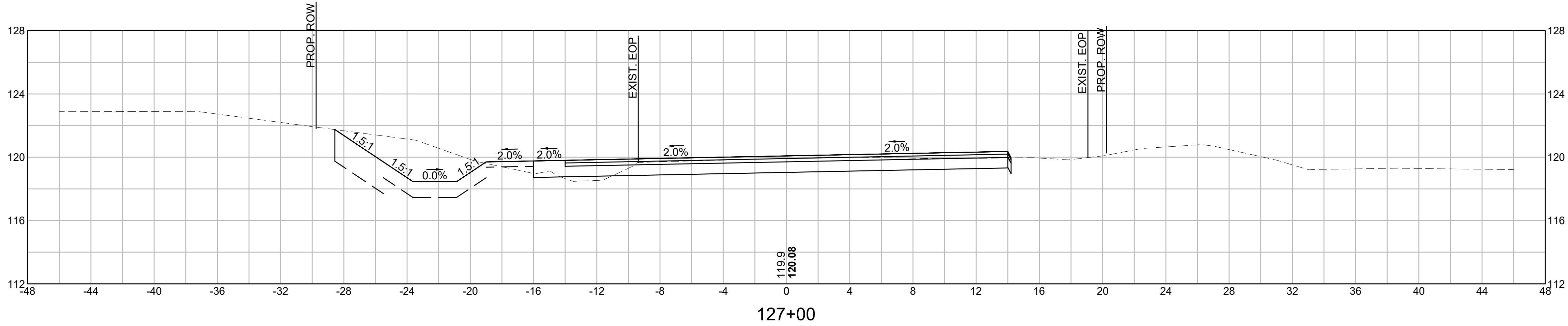
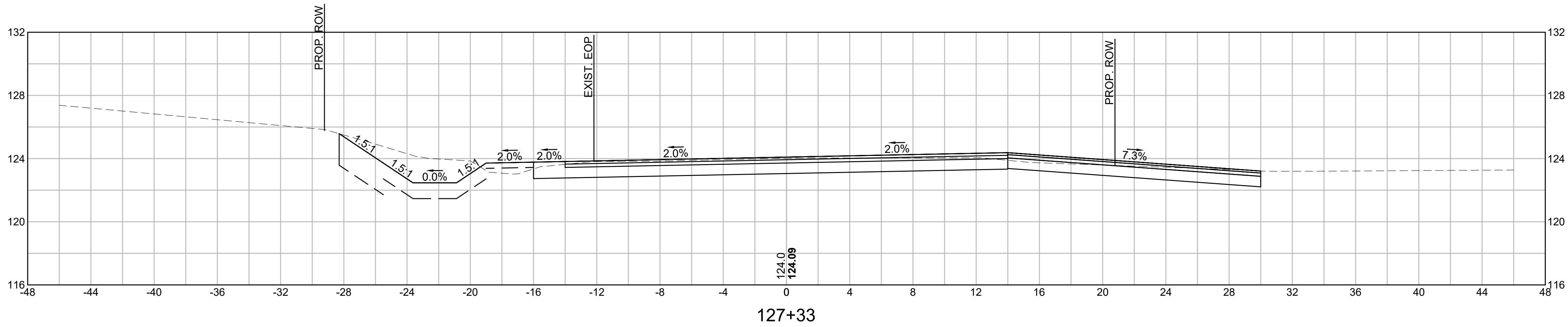
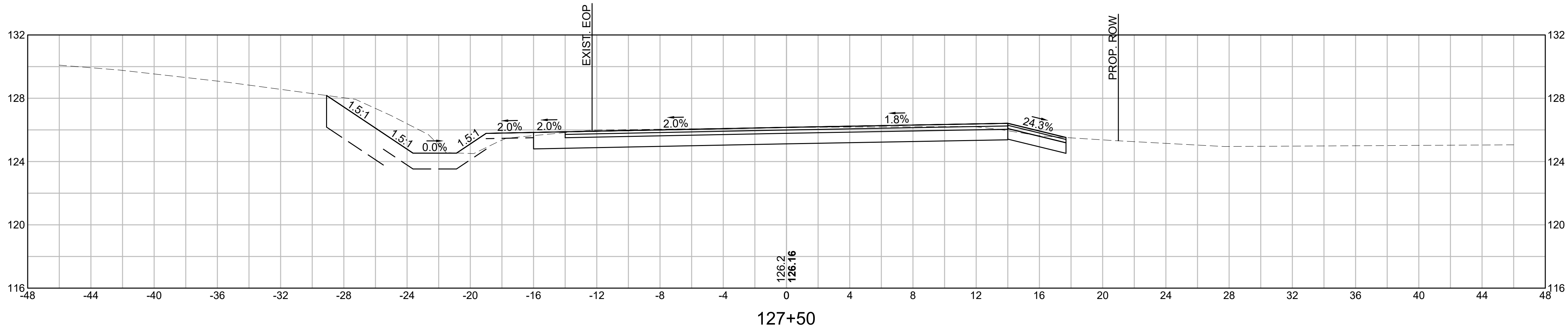
SCALE: AS NOTED

DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

SHEET NO. 66 OF 71



P:\20240021 46\04-DRAWINGS\PROJECT DRAWING DATA\PLAN SHEET FILES\PLAN SHEET DWG\20240021 46\_HD23(CROSS SECT).DWG  
BY: KRAFFERTY DATE: 1/5/2026  
LAYOUT: XS21



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**OLD FERRY ROAD  
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REVISIONS		
NO.	REVISION	DATE

1/05/2026

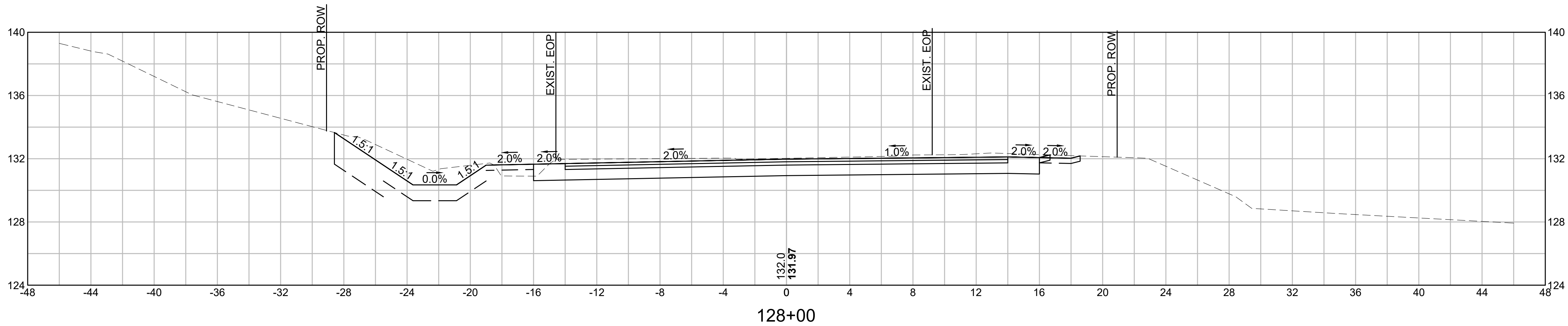
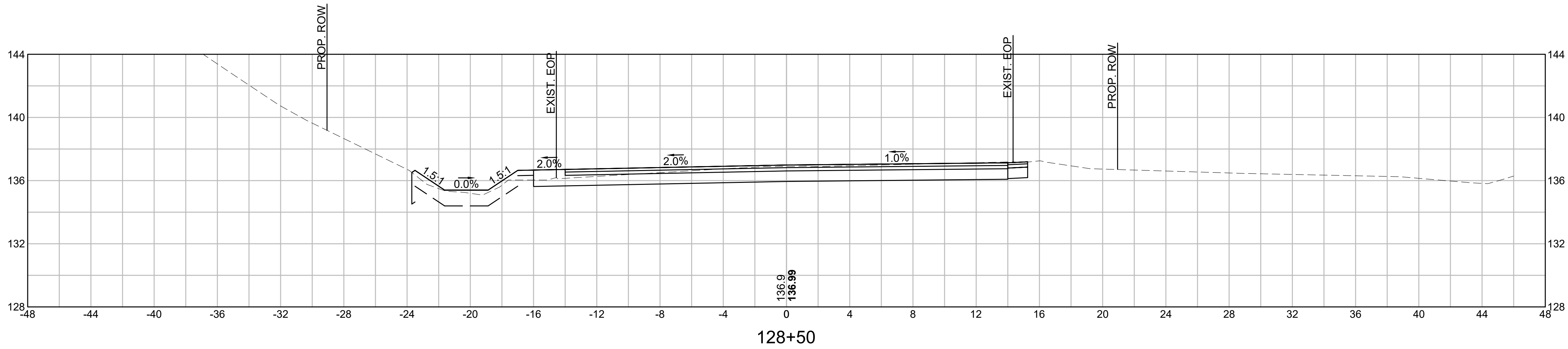
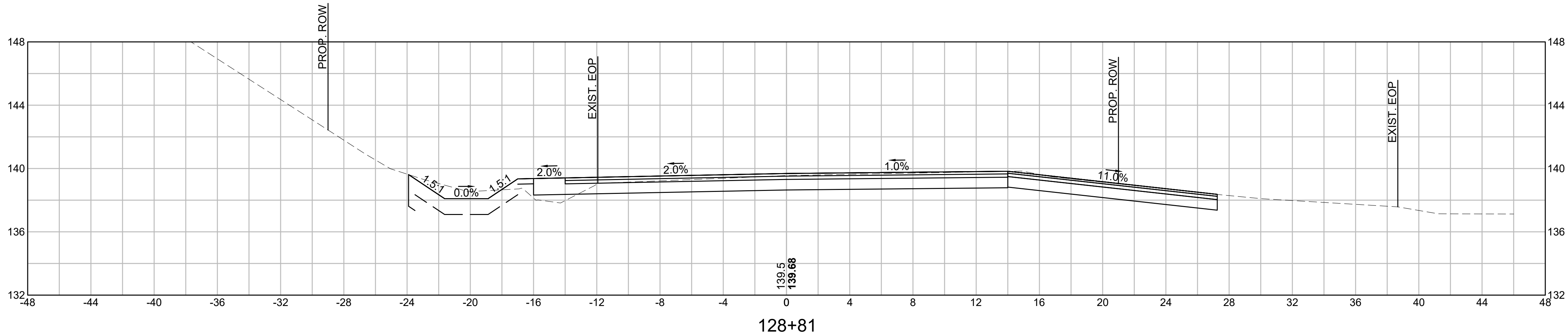
**CROSS SECTIONS**

SCALE: AS NOTED

DRAWN/DESIGN BY: KSR CHECKED BY: JFO

SHEET NO.  
**67** OF **71**

P:\20240021 46\04-DRAWINGS\PROJECT DRAWING DATA\PLAN SHEET FILES\PLAN SHEET DWG\20240021 46\_HD23(CROSS SECT).DWG  
BY: KRAFFERTY DATE: 1/5/2026  
LAYOUT: XS22



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REVISIONS		
NO.	REVISION	DATE

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**CROSS SECTIONS**





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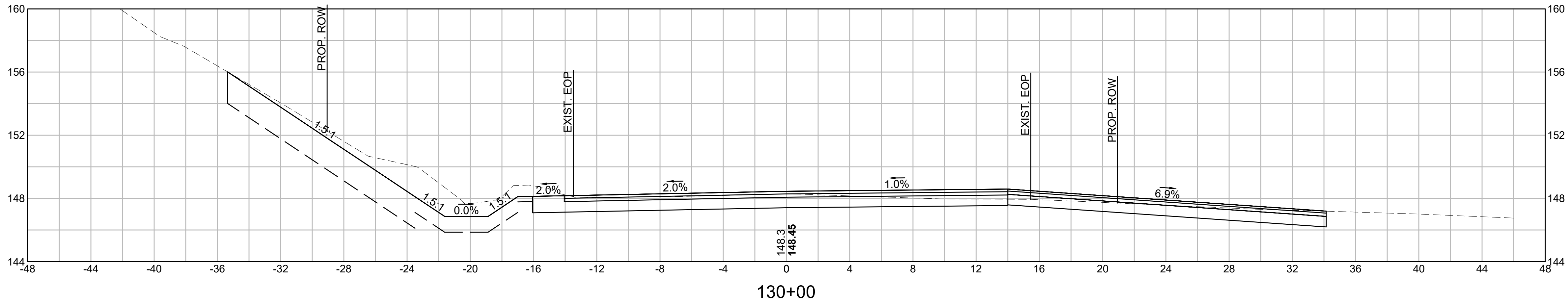
OLD FERRY ROAD  
ROADWAY RECONSTRUCTION  
METHUEN, MASSACHUSETTS

REVISIONS		
NO.	REVISION	DATE

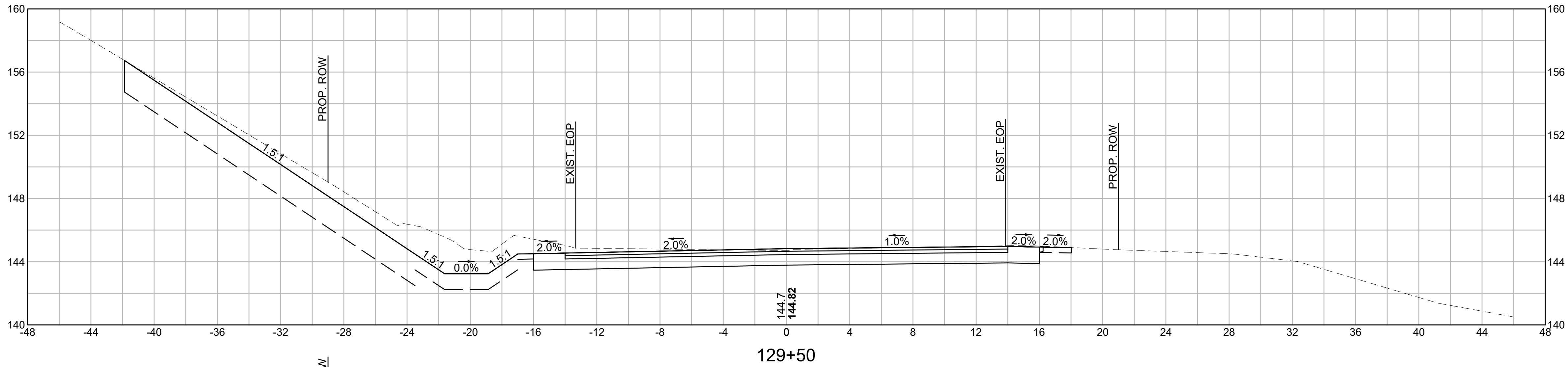
1/05/2026

CROSS SECTIONS

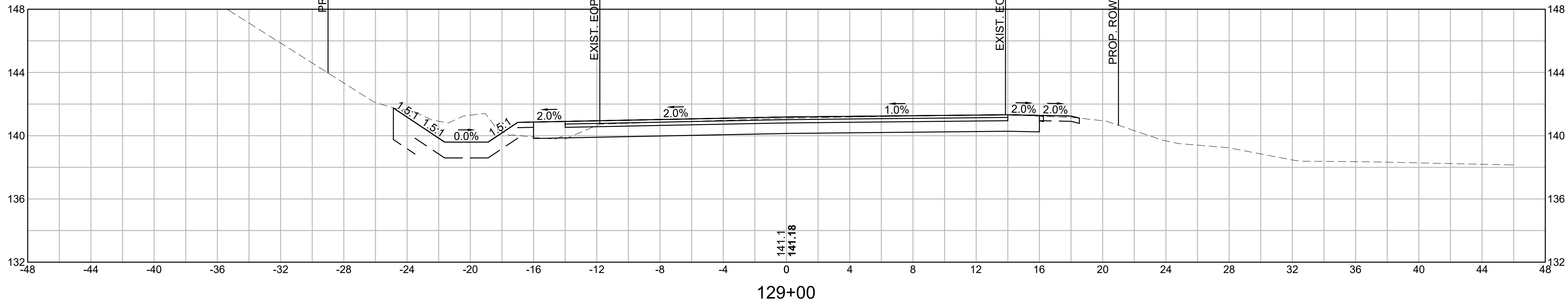
SCALE: AS NOTED  
DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO  
SHEET NO. 69 OF 71



CUT: 63.79 SF  
FILL: 0.00 SF

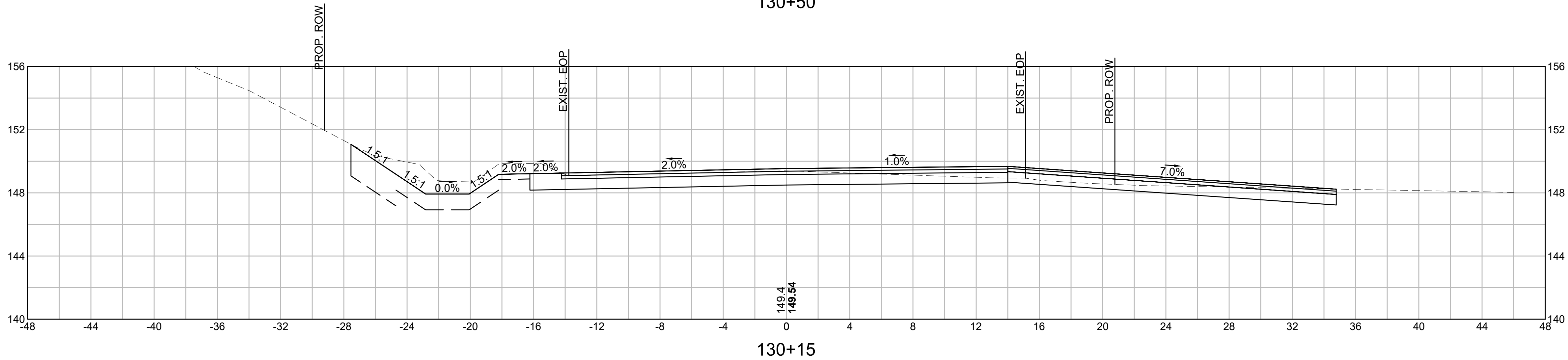
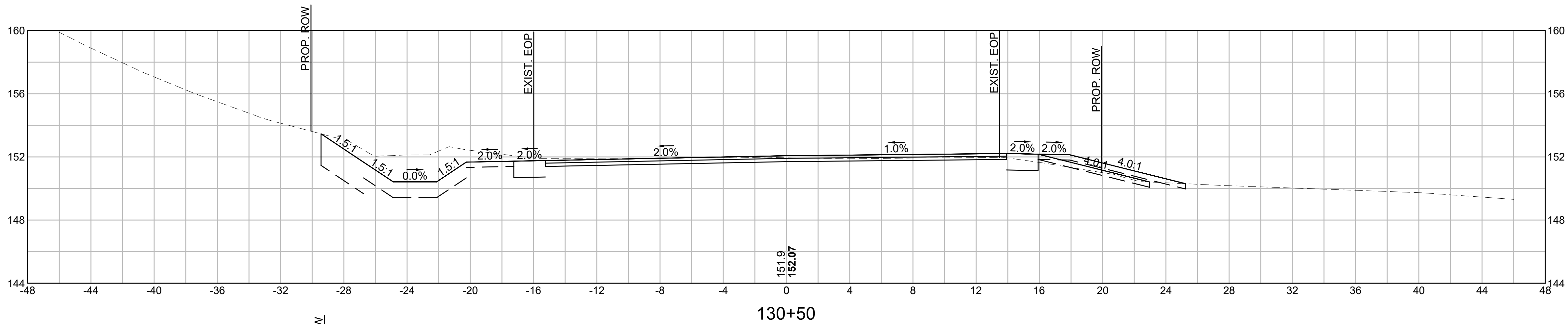
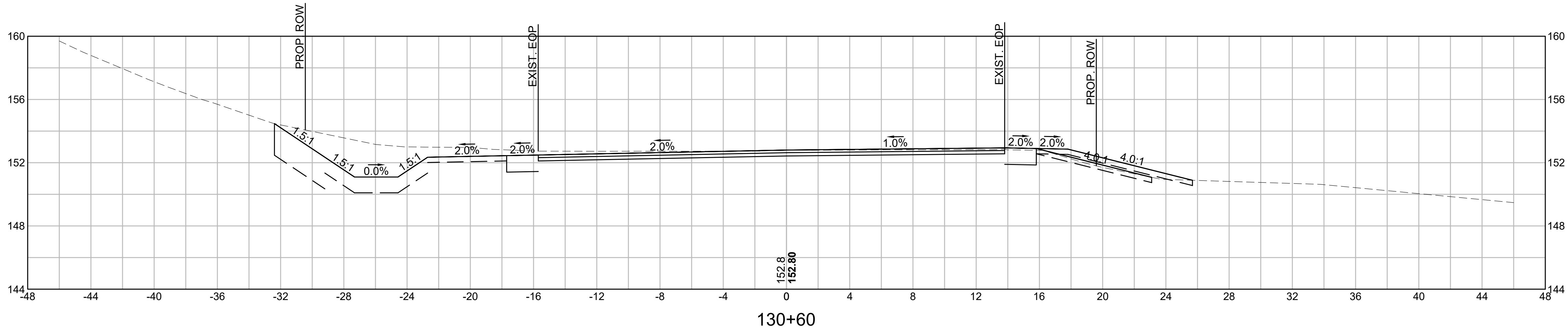


CUT: 74.93 SF  
FILL: 0.00 SF



CUT: 20.33 SF  
FILL: 0.00 SF

P:\2024\0021 46\04-DRAWINGS\PROJECT DRAWING DATA\PLAN SHEET FILES\PLAN SHEET DWG\2024\0021 46\_HD23(CROSS SECT).DWG  
BY: KRAFFERTY DATE: 1/5/2026  
LAYOUT: XS24



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NO.	REVISION	DATE

1/05/2026

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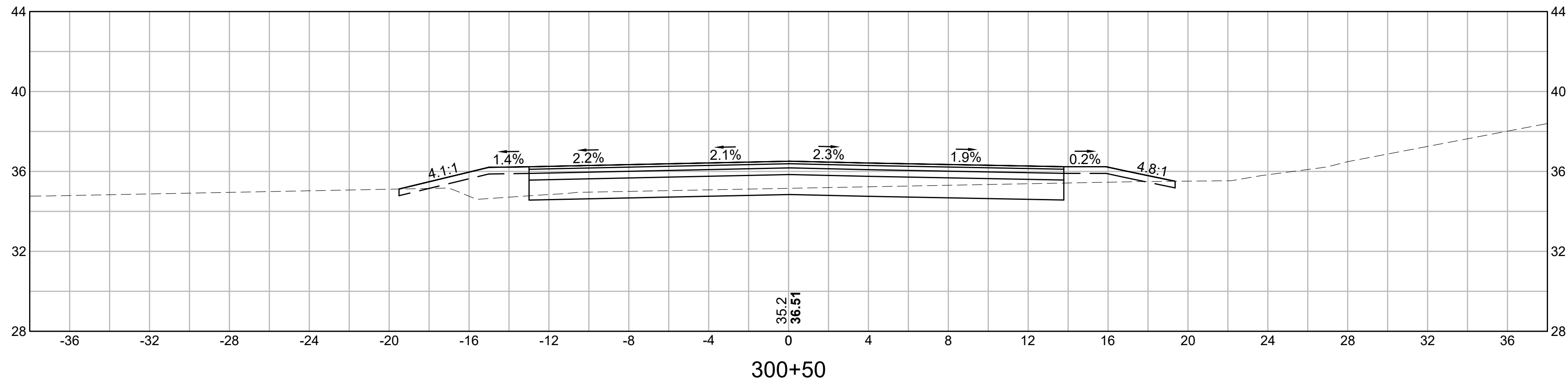
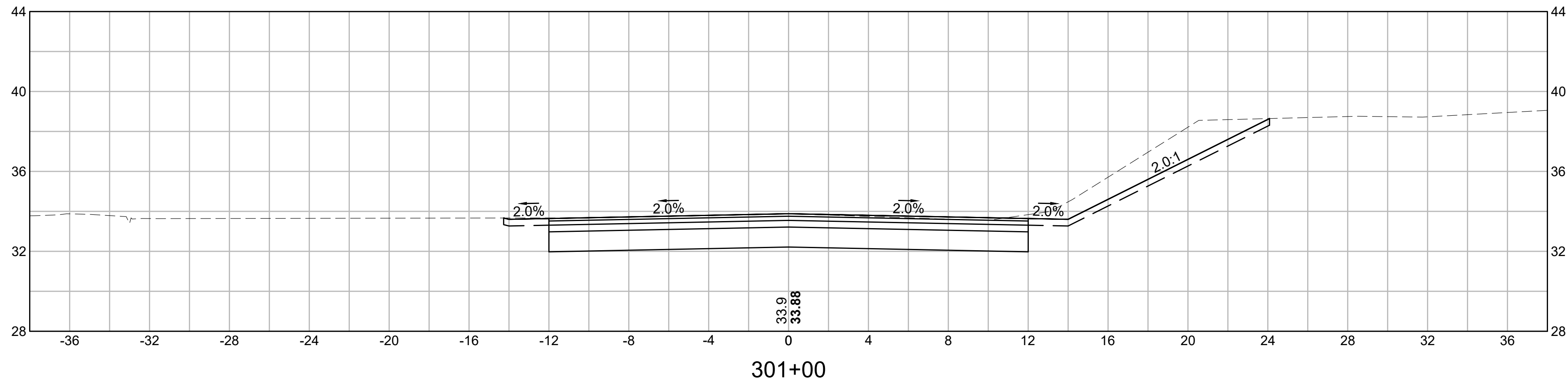
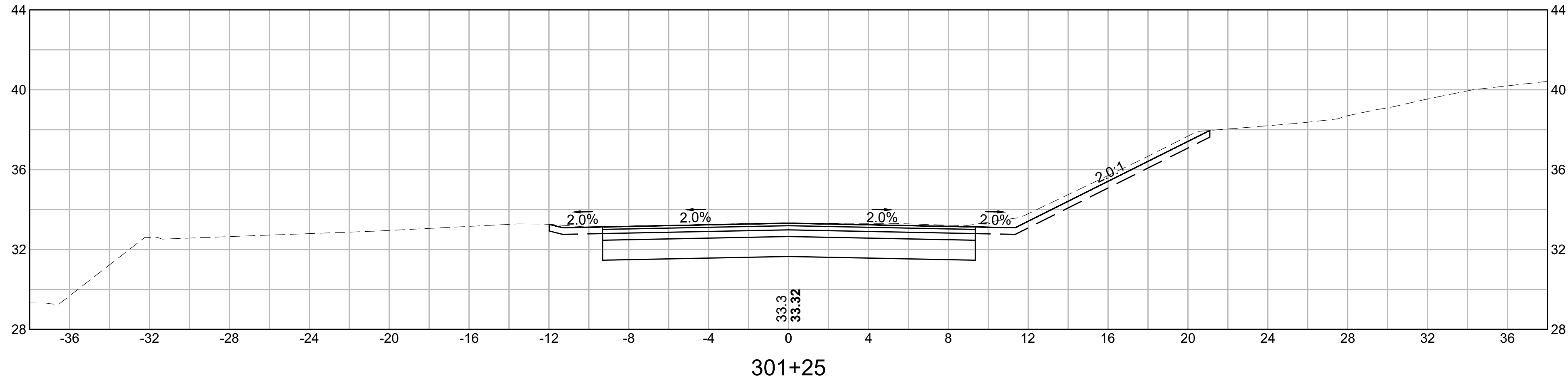
SCALE:  
AS NOTED

DRAWN/DESIGN BY: KSR  
CHECKED BY: JFO

SHEET NO.  
70 OF 71

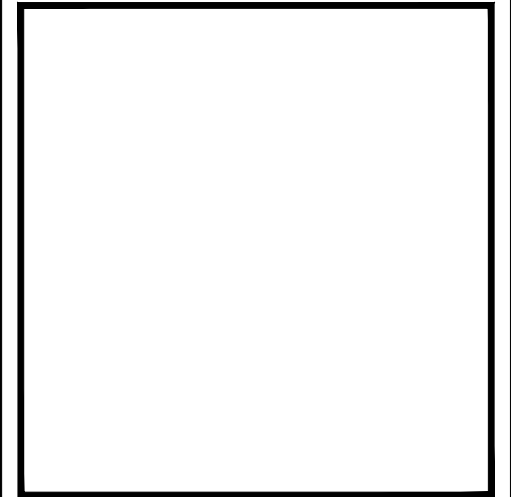


P:\20240021 46\04-DRAWINGS\PROJECT DRAWING DATA\PLAN SHEET FILES\PLAN SHEET DWG\20240021 46\_HD23(CROSS SECT).DWG  
LAYOUT: XS25  
BY: KRAFFERTY  
DATE: 1/5/2026



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NO.	REVISION	DATE

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SCALE: AS NOTED  
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CHECKED BY: JFO  
SHEET NO. 71 OF 71