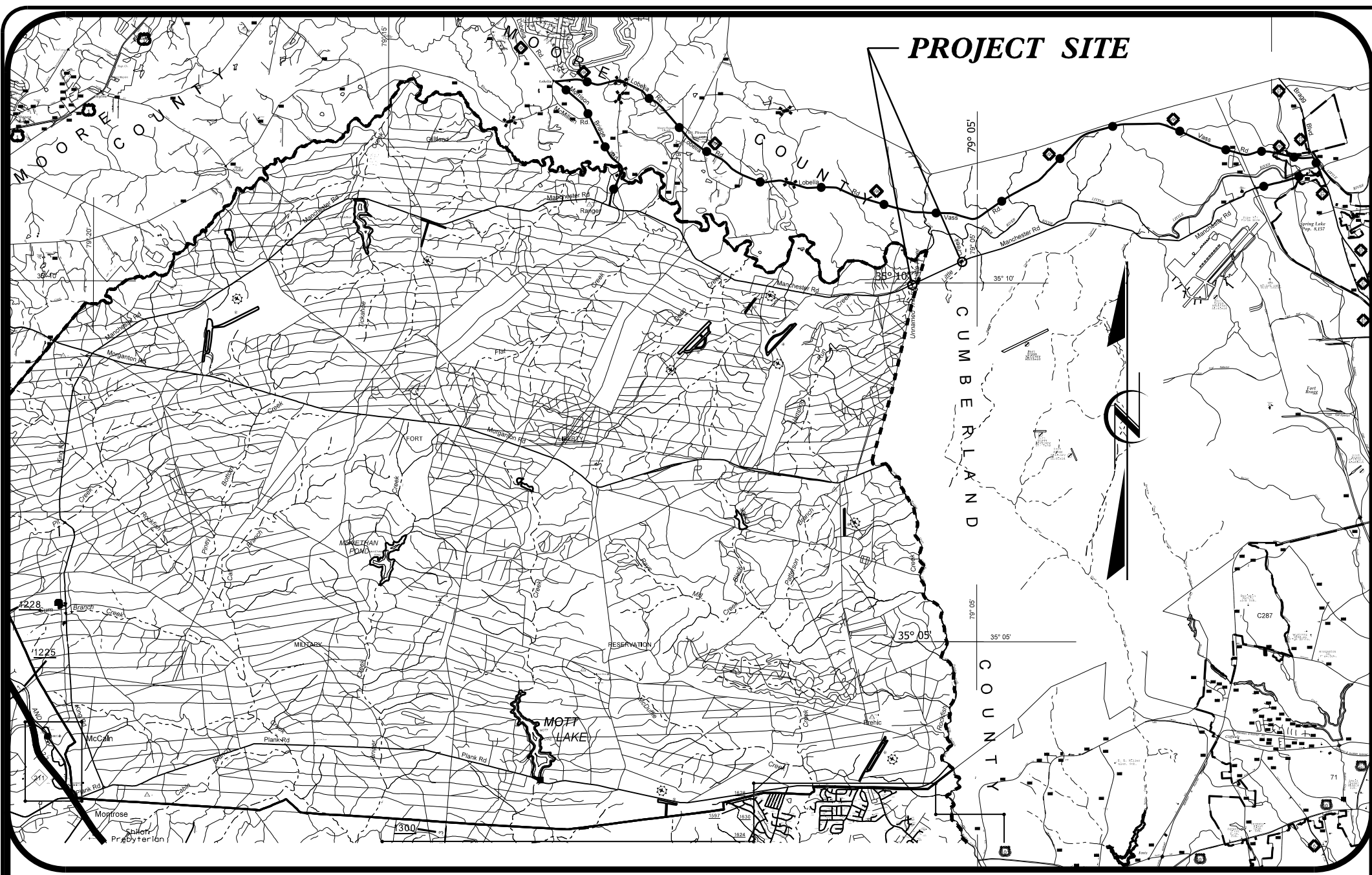


09_05/19

PROJECT: 49218.21



VICINITY MAP

OFF-SITE DETOUR

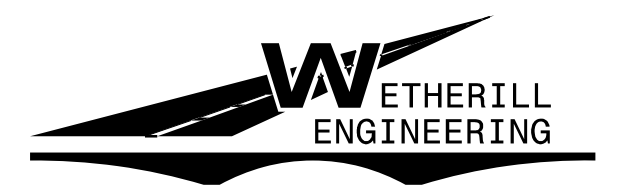
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HOKE COUNTY

LOCATION: PIPE CROSSINGS ON MANCHESTER ROAD

TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURE

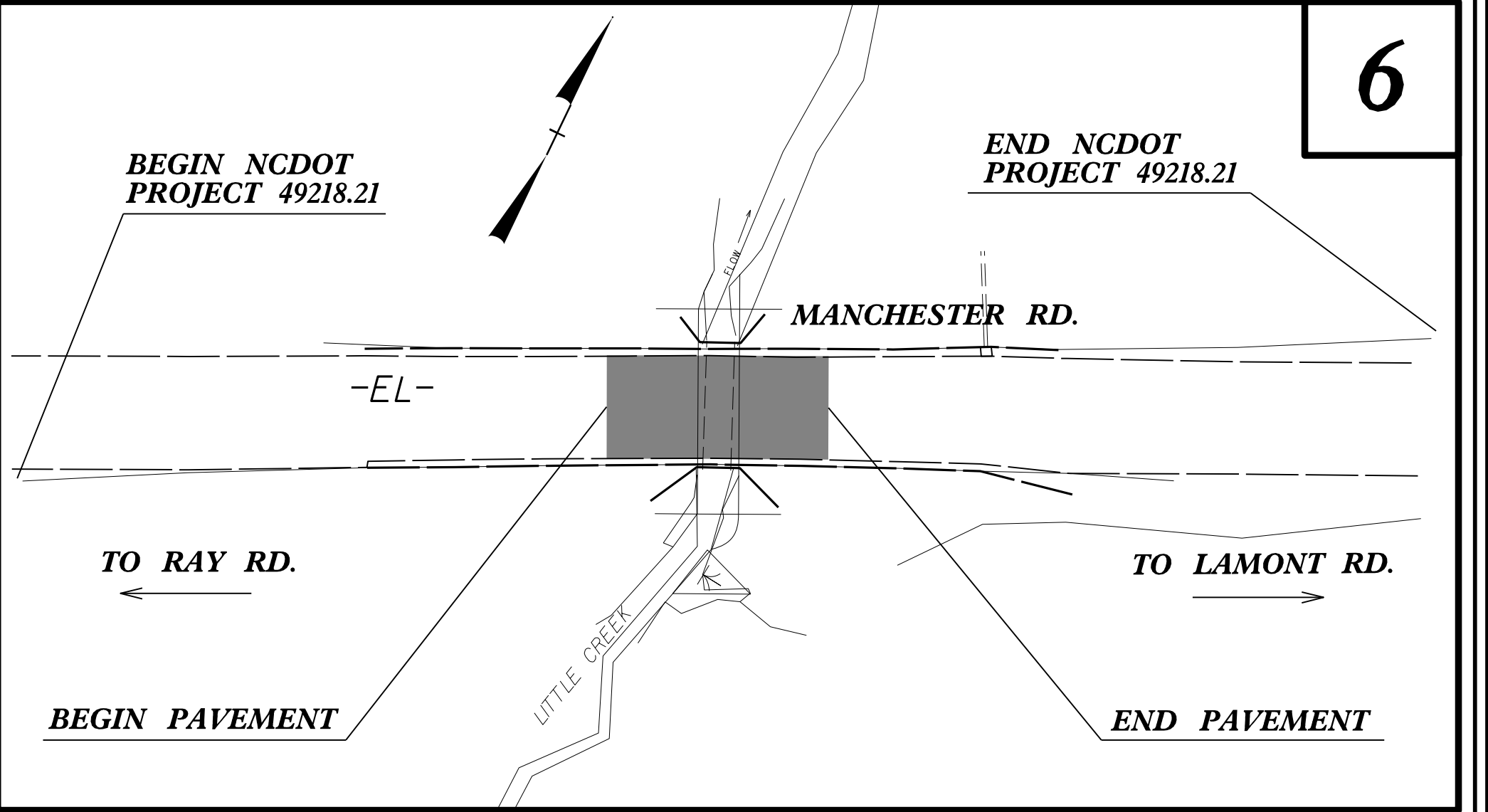
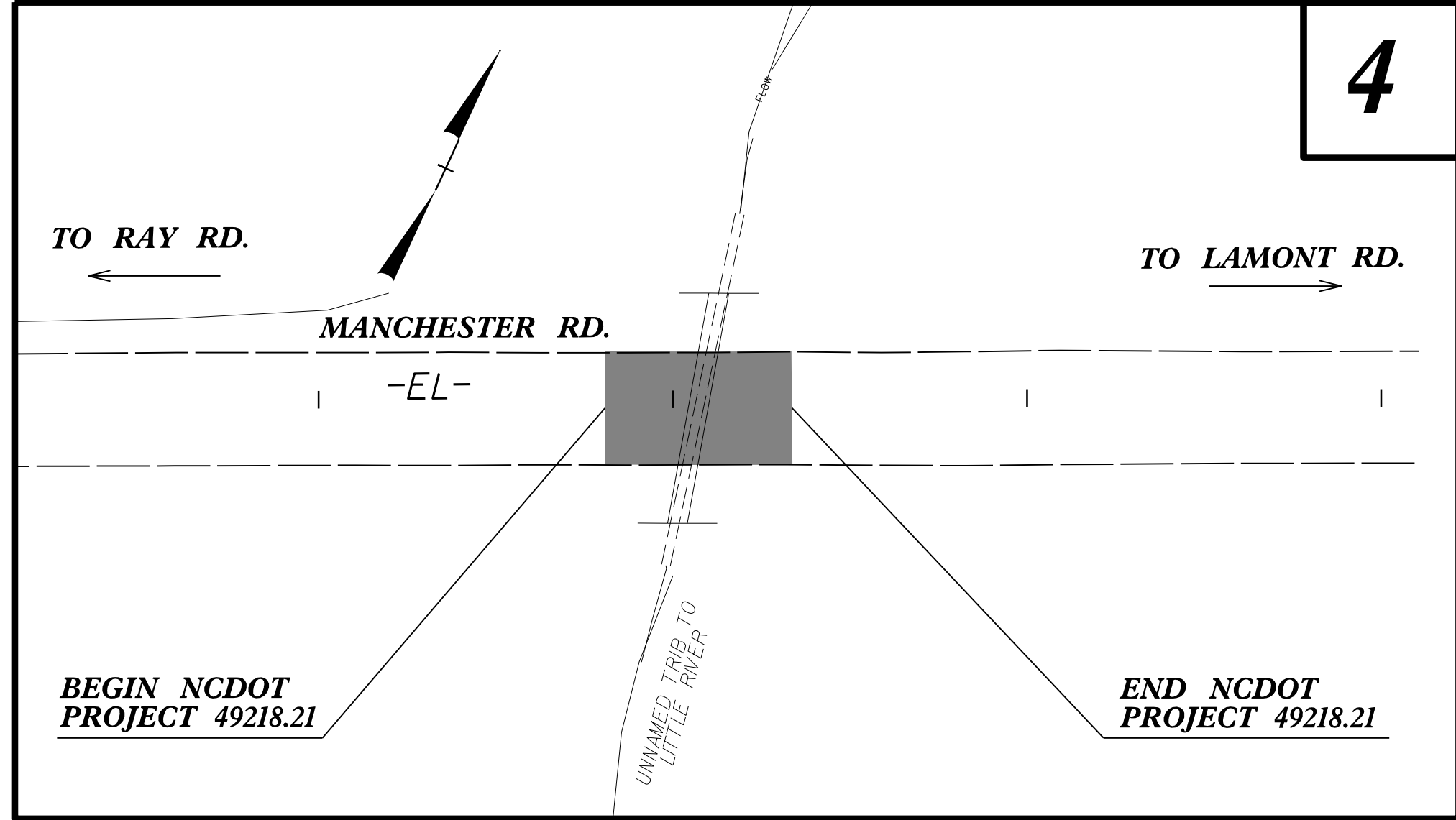
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	49218.21	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
49218.21		PE, UTIL., RW	
49218.21		CONST.	



1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

FINAL PLANS

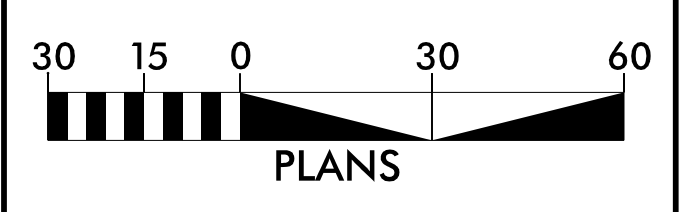


INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-B	CONVENTIONAL SYMBOLS
2A-1	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2D-1	METHOD OF PIPE INSTALLATION DETAIL
3B-1	GUARDRAIL SUMMARY
4, 6	PLAN SHEETS
5, 7	PROFILE AND HEADWALL DETAILS
TMP-01	TRANSPORTATION MANAGEMENT PLANS
EC-1 THRU EC-7	EROSION CONTROL TITLE SHEET, SOIL STABILIZATION TIME FRAMES, PUMP AROUND DETAIL AND PLAN SHEET
UO-1 THRU UO-3	UTILITY BY OTHERS PLANS

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



PROJECT LENGTH

LENGTH ROADWAY PROJECT 49218.21 (PIPE AT UNNAMED TRIB TO LITTLE RIVER)	=	0.019 MILES
LENGTH STRUCTURE PROJECT 49218.21 (PIPE AT UNNAMED TRIB TO LITTLE RIVER)	=	0.000 MILES
LENGTH ROADWAY PROJECT 49218.21 (PIPE AT LITTLE CREEK)	=	0.075 MILES
LENGTH STRUCTURE PROJECT 49218.21 (PIPE AT LITTLE CREEK)	=	0.000 MILES
TOTAL LENGTH PROJECT 49218.16	=	0.094 MILES

NCDOT CONTACT: MICHAEL RICKETTS, PE
DIVISION DESIGN/CONSTRUCT ENGINEER

Prepared for:
DIVISION OF HIGHWAYS
DIVISION EIGHT
121 Dot Drive, Carthage NC, 28327

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: EDWARD G. WETHERILL, PE
PROJECT ENGINEER

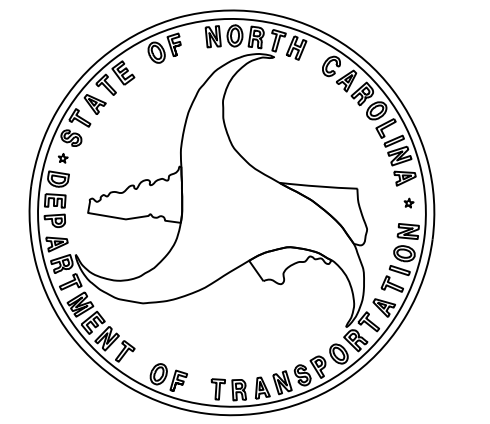
LETTING DATE: R.K. MURPHY, JR., PE
PROJECT DESIGN ENGINEER
JANUARY 9, 2024

HYDRAULICS ENGINEER
12/5/2023
SEAL 15833
JERRY L. HINDSEY
ENGINEER

Designed by: Jerry L. Hindsey, P.E.
SIGNATURE: [Signature]

ROADWAY DESIGN ENGINEER
12/5/2023
SEAL 018981
R.K. MURPHY, JR.
ENGINEER

Designed by: R.K. Murphy, Jr., P.E.
SIGNATURE: [Signature]



12/5/2023
I:\49218.21\Manchester Rd.rdy_TSH.dgn
USER:skennedy

CONTRACT:

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS
CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

BOUNDARIES AND PROPERTY:

Table listing boundary types such as State Line, County Line, Township Line, City Line, Reservation Line, Property Line, Existing Iron Pin (EIP), Computed Property Corner, Existing Concrete Monument (ECM), Parcel/Sequence Number, Existing Fence Line, Proposed Woven Wire Fence, Proposed Chain Link Fence, Proposed Barbed Wire Fence, Existing Wetland Boundary, Proposed Wetland Boundary, Existing Endangered Animal Boundary, Existing Endangered Plant Boundary, Existing Historic Property Boundary, Known Contamination Area: Soil, Potential Contamination Area: Soil, Known Contamination Area: Water, Potential Contamination Area: Water, Contaminated Site: Known or Potential.

BUILDINGS AND OTHER CULTURE:

Table listing building and cultural symbols such as Gas Pump Vent or U/G Tank Cap, Sign, Well, Small Mine, Foundation, Area Outline, Cemetery, Building, School, Church, Dam.

HYDROLOGY:

Table listing hydrology symbols such as Stream or Body of Water, Hydro, Pool or Reservoir, Jurisdictional Stream, Buffer Zone 1, Buffer Zone 2, Flow Arrow, Disappearing Stream, Spring, Wetland, Proposed Lateral, Tail, Head Ditch, False Sump.

RAILROADS:

Table listing railroad symbols such as Standard Gauge, RR Signal Milepost, Switch, RR Abandoned, RR Dismantled.

RIGHT OF WAY & PROJECT CONTROL:

Table listing right of way and project control symbols such as Primary Horiz Control Point, Primary Horiz and Vert Control Point, Secondary Horiz and Vert Control Point, Vertical Benchmark, Existing Right of Way Monument, Proposed Right of Way Monument (Rebar and Cap), Proposed Right of Way Monument (Concrete), Existing Permanent Easement Monument, Proposed Permanent Easement Monument (Rebar and Cap), Existing C/A Monument, Proposed C/A Monument (Rebar and Cap), Proposed C/A Monument (Concrete), Existing Right of Way Line, Proposed Right of Way Line, Existing Control of Access Line, Proposed Control of Access Line, Proposed ROW and CA Line, Existing Easement Line, Proposed Temporary Construction Easement, Proposed Temporary Drainage Easement, Proposed Permanent Drainage Easement, Proposed Permanent Drainage/Utility Easement, Proposed Permanent Utility Easement, Proposed Temporary Utility Easement, Proposed Aerial Utility Easement.

ROADS AND RELATED FEATURES:

Table listing road and related features symbols such as Existing Edge of Pavement, Existing Curb, Proposed Slope Stakes Cut, Proposed Slope Stakes Fill, Proposed Curb Ramp, Existing Metal Guardrail, Proposed Guardrail, Existing Cable Guiderail, Proposed Cable Guiderail, Equality Symbol, Pavement Removal, VEGETATION: Single Tree, Single Shrub, Hedge.

Table listing symbols for Woods Line, Orchard, Vineyard.

EXISTING STRUCTURES:

Table listing existing structures symbols such as Bridge, Tunnel or Box Culvert, Bridge Wing Wall, Head Wall and End Wall, Head and End Wall, Pipe Culvert, Footbridge, Drainage Box: Catch Basin, DI or JB, Paved Ditch Gutter, Storm Sewer Manhole, Storm Sewer.

UTILITIES:

* SUE - Subsurface Utility Engineering
LOS - Level of Service - A, B, C or D (Accuracy)

Table listing utility symbols such as Existing Power Pole, Proposed Power Pole, Existing Joint Use Pole, Proposed Joint Use Pole, Power Manhole, Power Line Tower, Power Transformer, U/G Power Cable Hand Hole, H-Frame Pole, U/G Power Line Test Hole (SUE - LOS A)*, U/G Power Line (SUE - LOS B)*, U/G Power Line (SUE - LOS C)*, U/G Power Line (SUE - LOS D)*.

TELEPHONE:

Table listing telephone symbols such as Existing Telephone Pole, Proposed Telephone Pole, Telephone Manhole, Telephone Pedestal, Telephone Cell Tower, U/G Telephone Cable Hand Hole, U/G Telephone Test Hole (SUE - LOS A)*, U/G Telephone Cable (SUE - LOS B)*, U/G Telephone Cable (SUE - LOS C)*, U/G Telephone Cable (SUE - LOS D)*, U/G Telephone Conduit (SUE - LOS B)*, U/G Telephone Conduit (SUE - LOS C)*, U/G Telephone Conduit (SUE - LOS D)*, U/G Fiber Optics Cable (SUE - LOS B)*, U/G Fiber Optics Cable (SUE - LOS C)*, U/G Fiber Optics Cable (SUE - LOS D)*.

WATER:

Table listing water symbols such as Water Manhole, Water Meter, Water Valve, Water Hydrant, U/G Water Line Test Hole (SUE - LOS A)*, U/G Water Line (SUE - LOS B)*, U/G Water Line (SUE - LOS C)*, U/G Water Line (SUE - LOS D)*, Above Ground Water Line.

TV:

Table listing TV symbols such as TV Pedestal, TV Tower, U/G TV Cable Hand Hole, U/G TV Test Hole (SUE - LOS A)*, U/G TV Cable (SUE - LOS B)*, U/G TV Cable (SUE - LOS C)*, U/G TV Cable (SUE - LOS D)*, U/G Fiber Optic Cable (SUE - LOS B)*, U/G Fiber Optic Cable (SUE - LOS C)*, U/G Fiber Optic Cable (SUE - LOS D)*.

GAS:

Table listing gas symbols such as Gas Valve, Gas Meter, U/G Gas Line Test Hole (SUE - LOS A)*, U/G Gas Line (SUE - LOS B)*, U/G Gas Line (SUE - LOS C)*, U/G Gas Line (SUE - LOS D)*, Above Ground Gas Line.

SANITARY SEWER:

Table listing sanitary sewer symbols such as Sanitary Sewer Manhole, Sanitary Sewer Cleanout, U/G Sanitary Sewer Line, Above Ground Sanitary Sewer, SS Force Main Line Test Hole (SUE - LOS A)*, SS Force Main Line (SUE - LOS B)*, SS Force Main Line (SUE - LOS C)*, SS Force Main Line (SUE - LOS D)*.

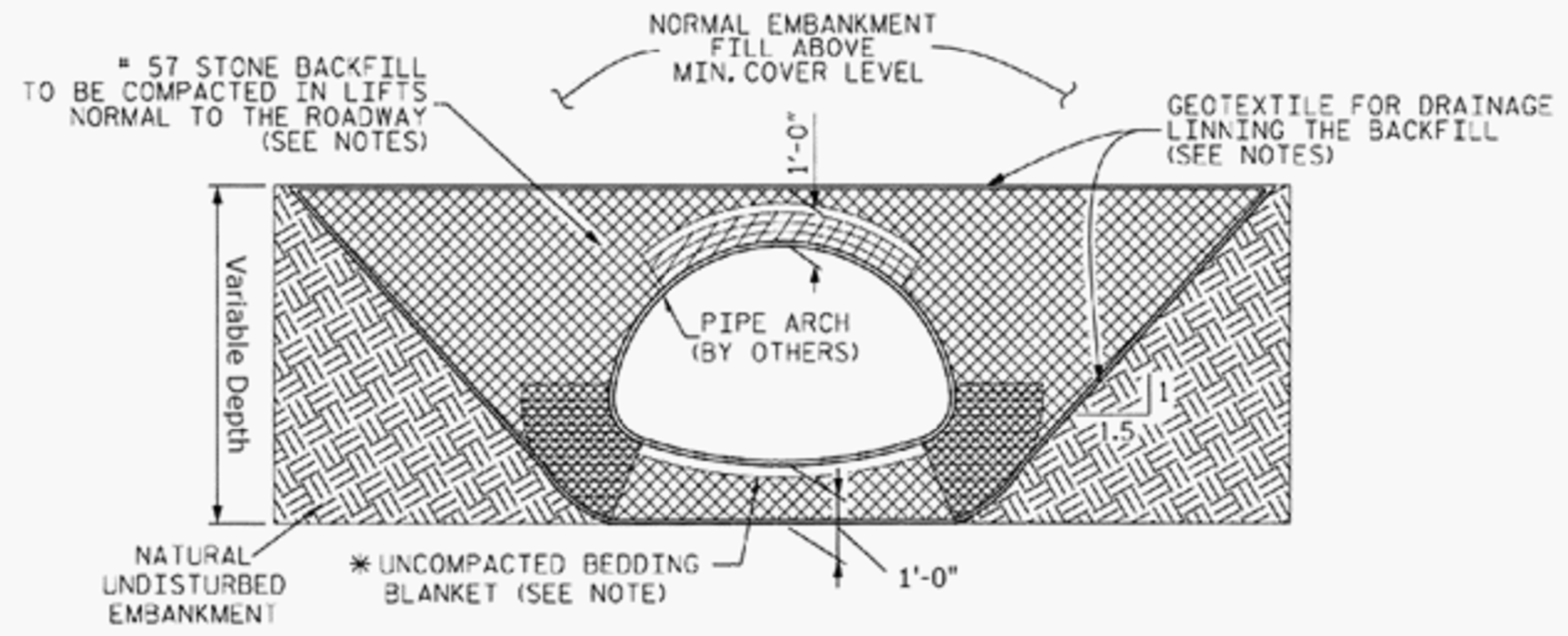
MISCELLANEOUS:

Table listing miscellaneous symbols such as Utility Pole, Utility Pole with Base, Utility Located Object, Utility Traffic Signal Box, Utility Unknown U/G Line (SUE - LOS B)*, U/G Tank; Water, Gas, Oil, Underground Storage Tank, Approx. Loc., A/G Tank; Water, Gas, Oil, Geoenvironmental Boring, Abandoned According to Utility Records, End of Information.



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS



- CRITICAL BACKFILL ZONE, PRESSURE ON SOIL GREATEST HERE.
- INITIAL LIFTS OVER CROWN OF STRUCTURE AS INDICATED BY SHADED AREA TO BE COMPACTED TO REQUIRED DENSITY WITH HAND OPERATED EQUIPMENT
- # 57 STONE BACKFILL LIMITS.

NOTES:

ALL BACKFILL TO BE PLACED IN A BALANCED FASHION IN THIN LIFTS (6"-8" LOOSE TYPICALLY) AND COMPACTED TO 90 PERCENT DENSITY PER AASHTO T-180.

GEOTEXTILE FOR DRAINAGE IN FOUNDATION BEDDING AND BACKFILL IS INCIDENTAL TO COST OF PIPE ARCH.

COMPLETE AND REGULAR MONITORING OF THE CSP ARCH SHAPE IS NECESSARY DURING ALL BACKFILLING OF THE STRUCTURE.

PREVENT EXCESSIVE DISTORTION OF SHAPE AS NECESSARY BY VARYING COMPACTION METHODS AND EQUIPMENT.

* SHAPED BED FOR A MINIMUM WIDTH OF SPAN/2. MINIMUM BEDDING THICKNESS IS TWICE THE CORRUGATION DEPTH.

EMBANKMENT SLOPE TO BE 1.5:1 MINIMUM SUCH THAT A STABLE EMBANKMENT CAPABLE OF RESISTING SIDE PRESSURES FROM CSP PIPE-ARCH SHAPE WILL BE MAINTAINED THROUGHOUT THE LIFE OF INSTALLATION.

TYPICAL BACKFILL SECTION ALONG PIPE

NTS

8/17/99



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Raleigh, N.C. 27606
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Fax: 919 851 8107

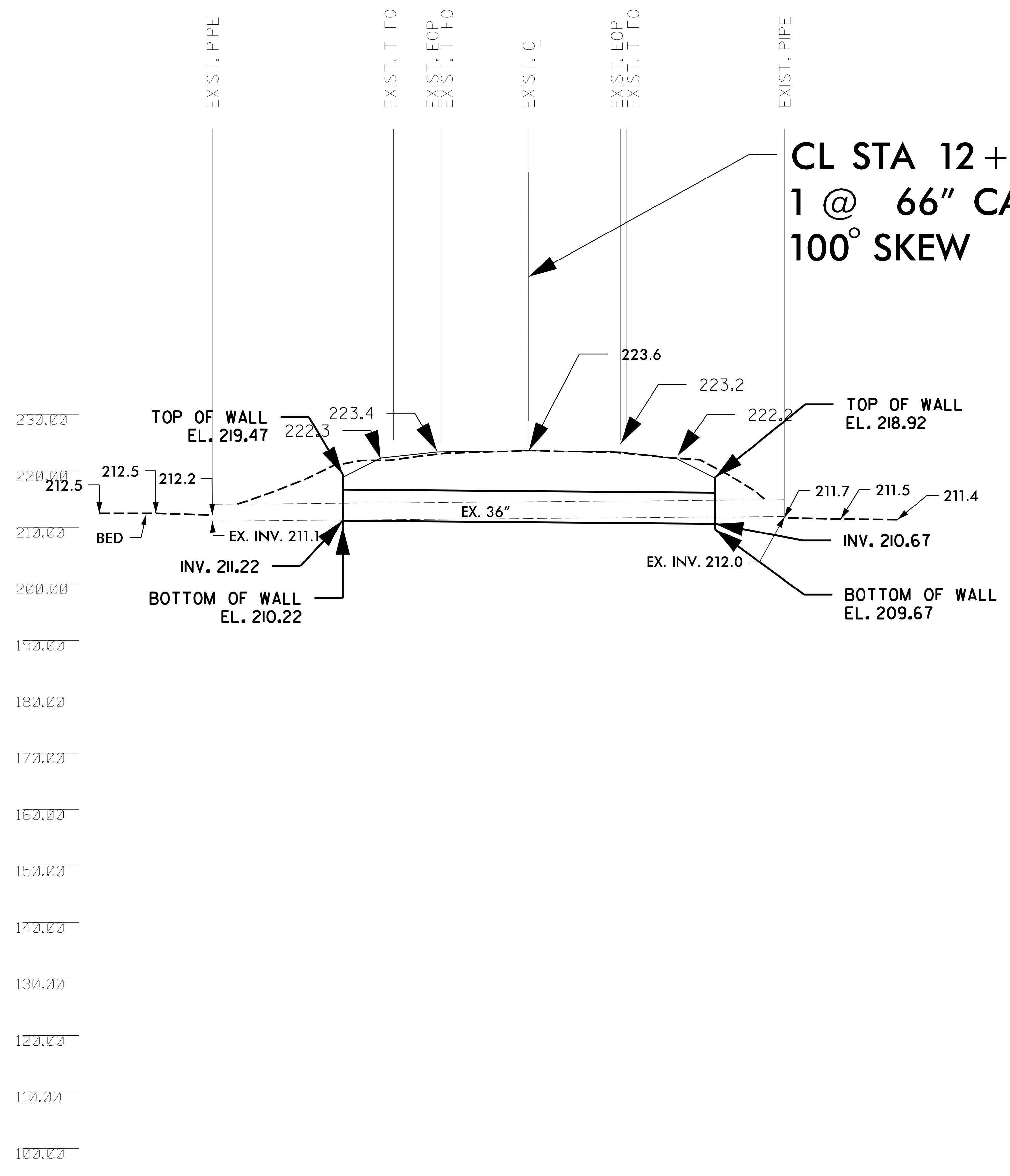
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. 49218.21	SHEET NO. 5
-----------------------------------	----------------

RW SHEET NO.	
ROADWAY DESIGN ENGINEER <i>Signature</i> SEAL 018981 K. K. MURPHY 7/12/2023	HYDRAULICS ENGINEER 7/12/2023 SEAL 15833 LARRY L. LINDEY <i>Signature</i>

MANCHESTER ROAD

CL STA 12 + 09.81 1 @ 66" CAAP 100° SKEW



REVISIONS

7/11/2023
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USER:KKN

10

11

8/17/99



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Raleigh, N.C. 27606
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Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. 49218.21	SHEET NO. 6
Roadway Design Engineer 12/7/2023 SEAL 018981 MURPHY	Hydraulics Engineer 12/7/2023 SEAL 15833 LINDSEY
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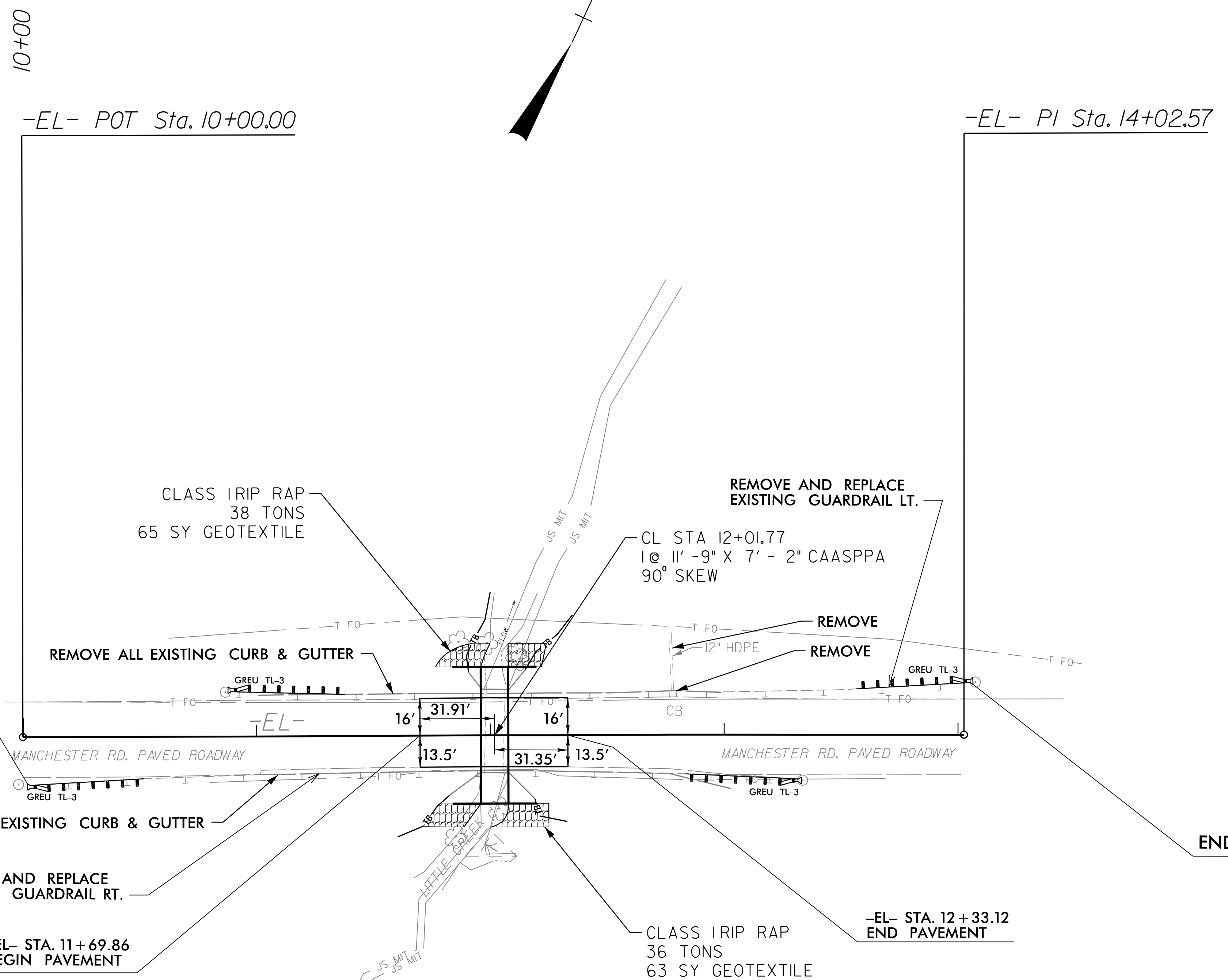
MANCHESTER ROAD

SCALE 1" = 30'

REVISIONS

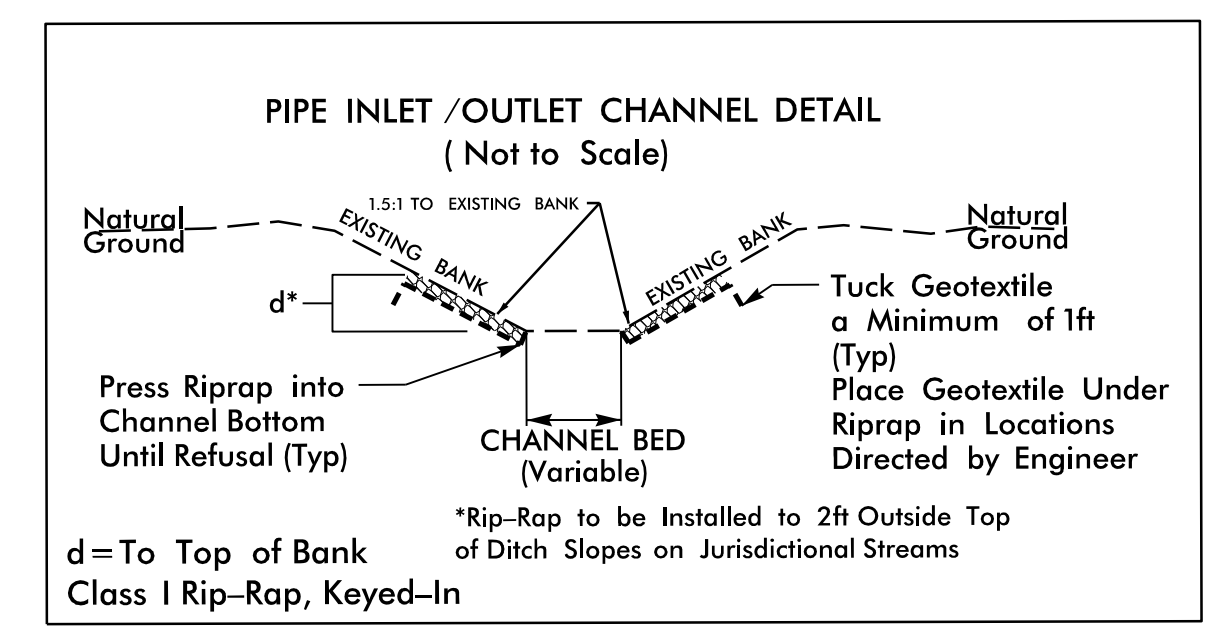
BEGIN TIP PROJECT 49218.21

END TIP PROJECT 49218.21



-EL- STA. 11+69.86
BEGIN PAVEMENT

-EL- STA. 12+33.12
END PAVEMENT



12/7/2023
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8/17/99



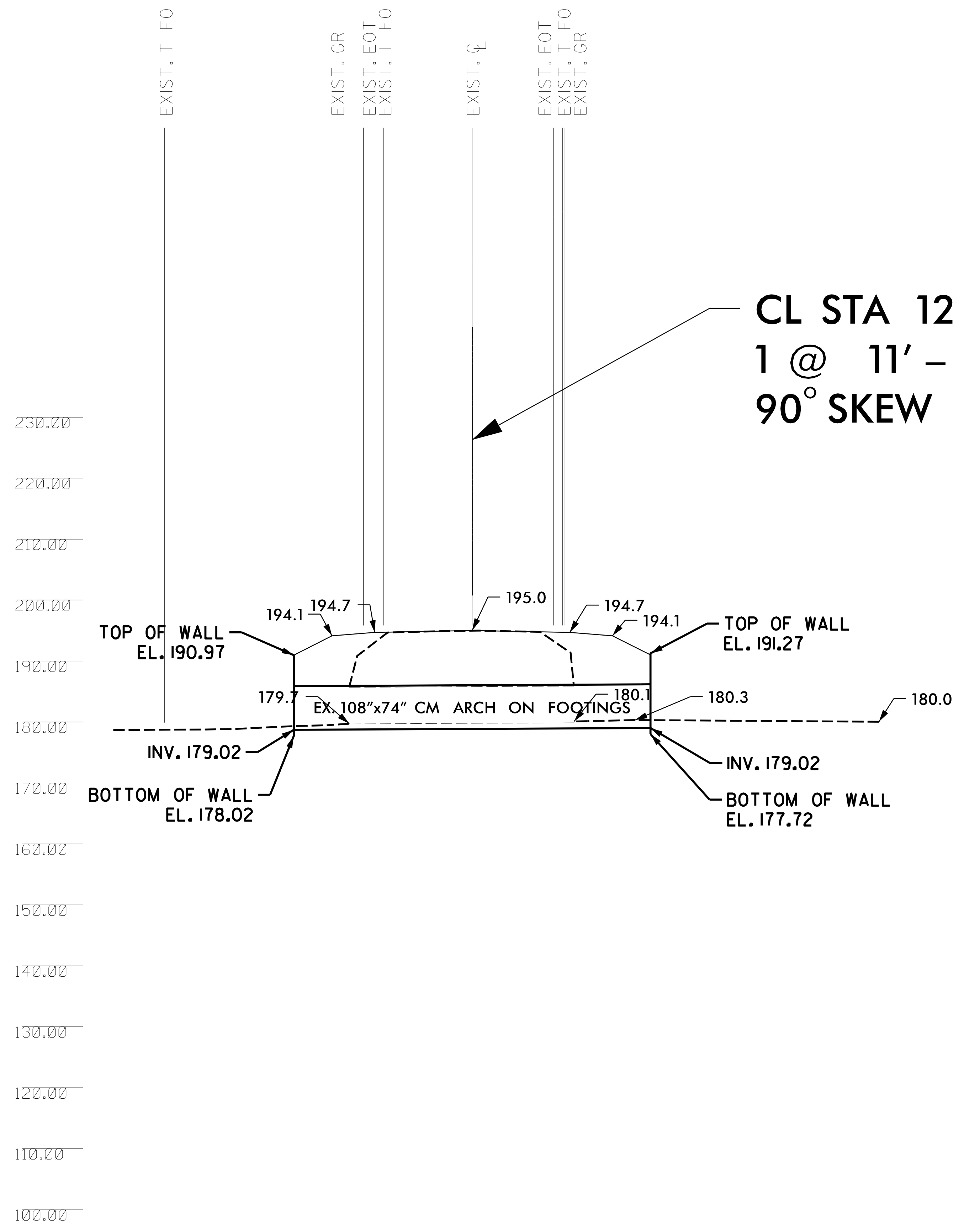
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. 49218.21	SHEET NO. 7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER <i>[Signature]</i> SEAL 018981 7/12/2023	HYDRAULICS ENGINEER 7/12/2023 SEAL 15833 <i>[Signature]</i>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MANCHESTER ROAD

CL STA 12 + 01.77 1 @ 11' - 9" X 7' - 2" CAASPPA 90° SKEW



REVISIONS

7/11/2023
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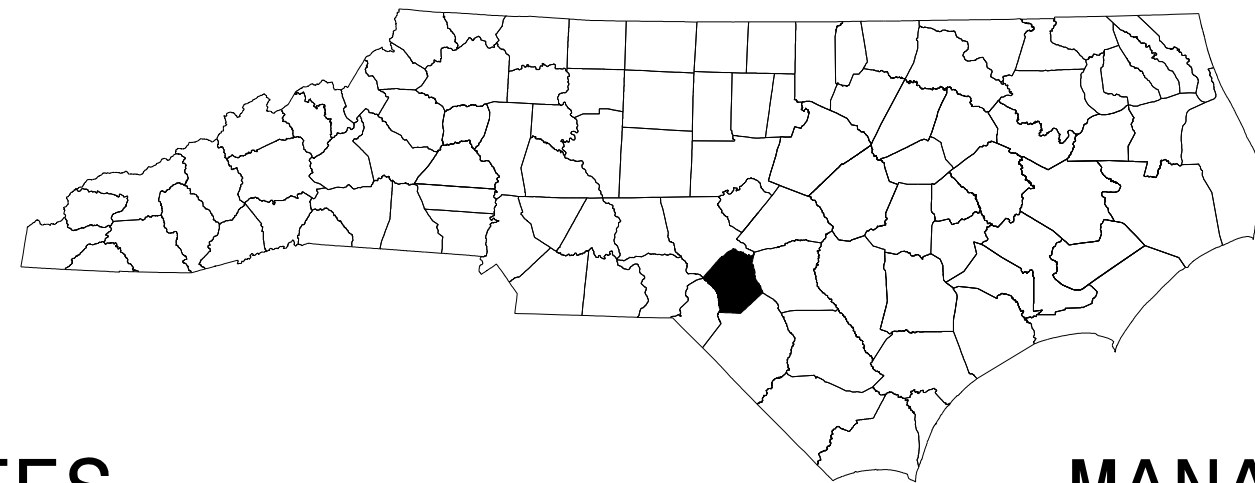
10

11

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

HOKE COUNTY



GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TRAFFIC PATTERN ALTERATIONS

- A) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- B) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS.

AND

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

- C) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

AND

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

- D) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

- E) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

MANAGEMENT STRATEGIES

THE FOLLOWING LISTED WORK ZONE STRATEGIES ARE RECOMMENDED FOR INCLUSION WITHIN THIS TRANSPORTATION MANAGEMENT PLAN (TMP).

RECOMMENDED STRATEGIES:

TRAFFIC MANAGEMENT STRATEGIES:
OFF-SITE DETOURS

PHASING

STEP 1) INSTALL ALL ROAD CLOSURE SIGNING AND DEVICES. COVER SIGNS USING AN APPROVED METHOD PER THE DISCRETION OF THE ENGINEER.
- NOTE: INSTALL WING BARRICADES AT MORGANTON AND KING, MANCHESTER AND MORRISON BRIDGE, AND AT PLANK AND KING.

- NOTE: INSTALL ROAD CLOSURE BARRICADES (TYPE III WITH BARRICADE MOUNTED SIGN R11-2 ATTACHED) AT EACH SIDE OF THE CULVERT CROSSING. INSTALL ROAD CLOSURE BARRICADES (TYPE III WITH BARRICADE MOUNTED SIGN R11-2 ATTACHED) JUST WEST OF KIEST LAKE AND JUST WEST OF JOHN NEIL SHAW ROAD ON MANCHESTER.

- NOTE: THE CONTRACTOR MAY CLOSE ROAD AND WORK ON BOTH CULVERTS AT THE TIME.

STEP 2) WHEN READY TO CLOSE THE ROADWAY, UNCOVER THE DETOUR AND ROAD CLOSURE SIGNING, CLOSE -L- (MANCHESTER ROAD), AND DETOUR TRAFFIC.

STEP 3) AWAY FROM TRAFFIC, REMOVE EXISTING CULVERT, AND CONSTRUCT PROPOSED -L- STRUCTURE AND APPROACHES FROM THE BEGIN PROJECT LIMITS TO THE END PROJECT LIMITS UP TO AND INCLUDING THE FINAL LIFT OF SURFACE COURSE.
[SEE ROADWAY PLANS]

STEP 4) OPEN -L- TO THE FINAL TRAFFIC PATTERN, AND REMOVE ALL ROAD CLOSURE SIGNING, OFFSITE DETOUR SIGNING, TEMPORARY TRANSPORTATION MANAGEMENT DEVICES.

INDEX OF SHEETS

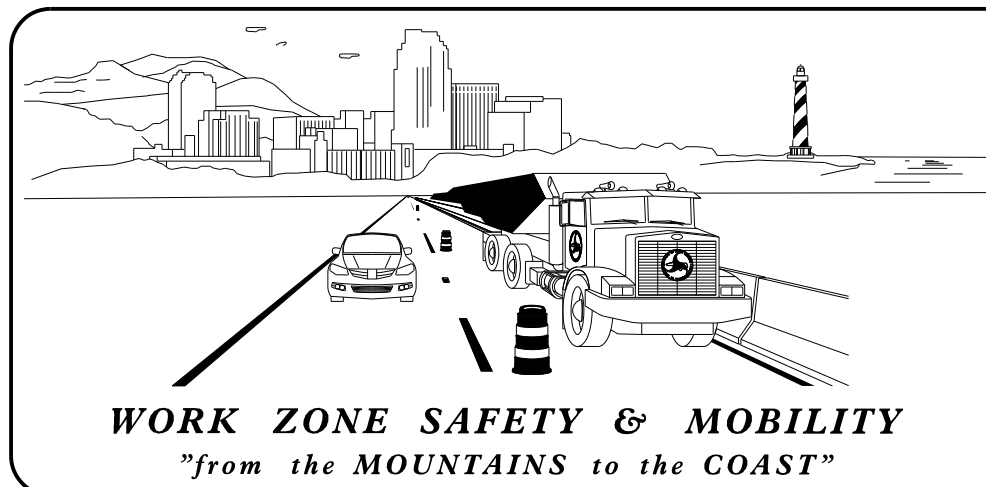
SHEET NO.	TITLE
TMP-01	TITLE SHEET, INDEX OF SHEETS, LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES & GENERAL NOTES), AND PHASING
TMP-02	OFF-SITE DETOUR

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.03	TEMPORARY ROAD CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1145.01	BARRICADES

12/7/2023 P:\2023\23156.01\Div 8 Fort Bragg Roads\Div 8 Roads and Pipes\Traffic Design\2 Plan Design\4 WZTC\49218.21_TMP_01 Title.dgn User:AHayes



PLANS PREPARED BY:
R. K. MURPHY, J.R., P.E.
D. ALLEN HAYES, E.I.

NCDOT CONTACTS:
MICHAEL RICKETTS, P.E.
PROJECT ENGINEER
PROJECT DESIGN ENGINEER



WETHERILL ENGINEERING
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-6377
Bus: 919 851 8077
Fax: 919 851 8107

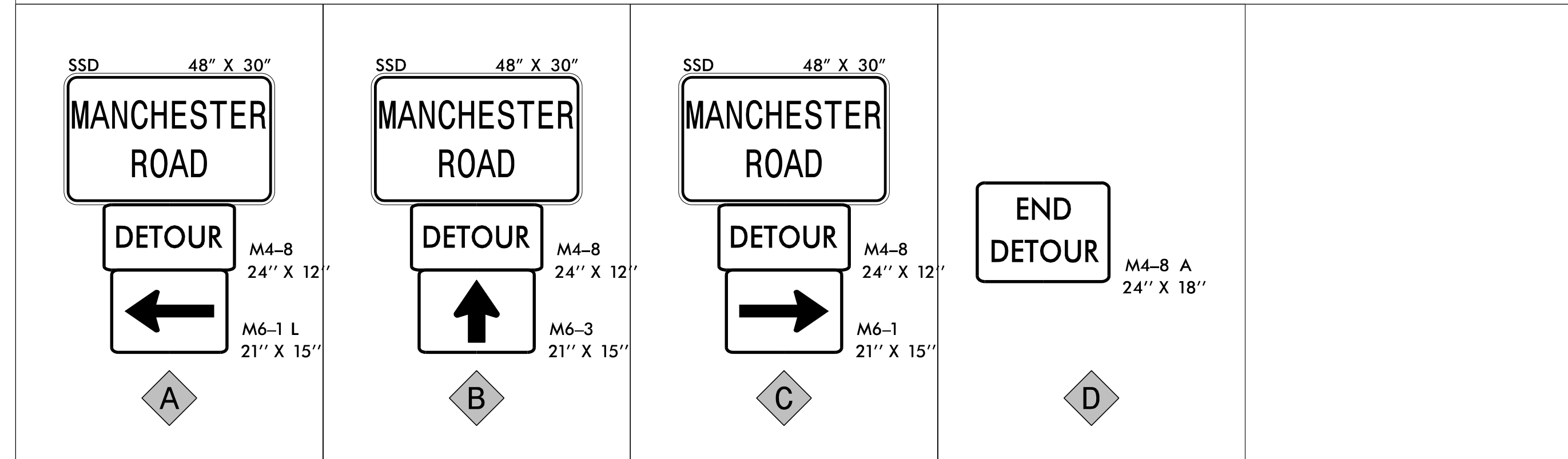
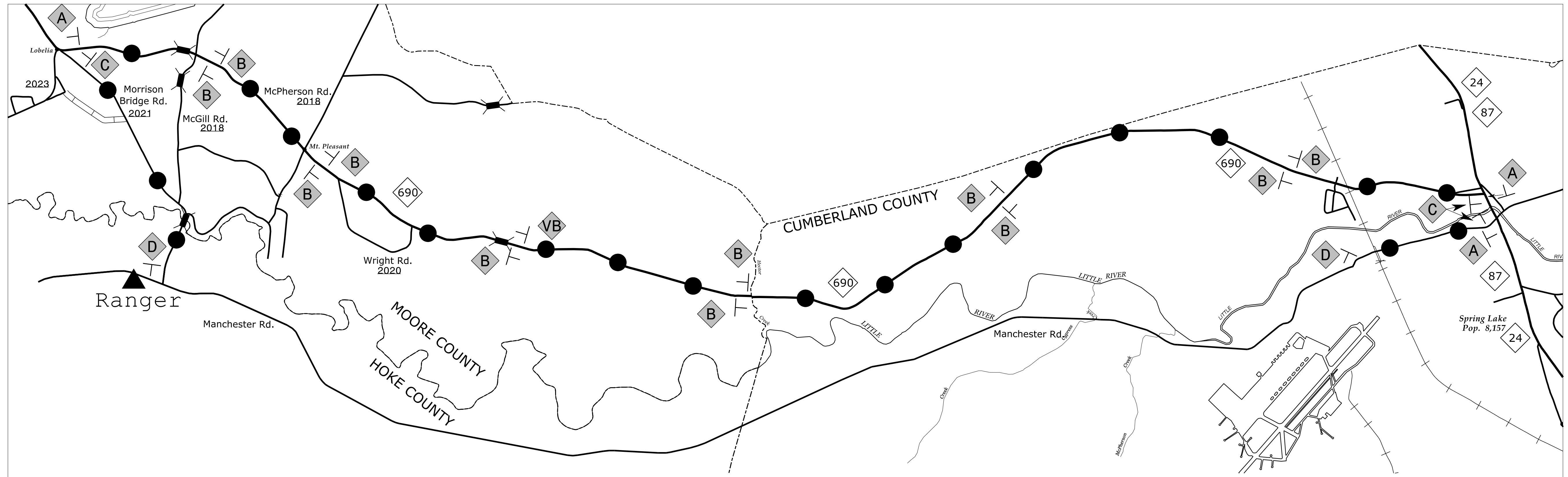
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

APPROVED: *[Signature]*
DATE: 12/7/2023
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
R. K. MURPHY, JR.
018981

49218.21

TIP PROJECT:

SHEET NO.
TMP-01



SIGN NUMBER: name TYPE: D QUANTITY: 1 SIGN WIDTH: 4'-0" HEIGHT: 2'-6" TOTAL AREA: 10.0 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0.38" WIDTH: 0.63" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Orange COPY COLOR: Black SYMBOL X Y WID HT MAT'L: 0.125" (3.2 mm) ALUMINUM	DESIGN BY: DAH PROJECT ID: 49218.21	CHECKED BY: WEI LOCATION: OFFSITE DETOUR Nov 7, 2023 DIV: 8
--	--	--	--

USE NOTES:

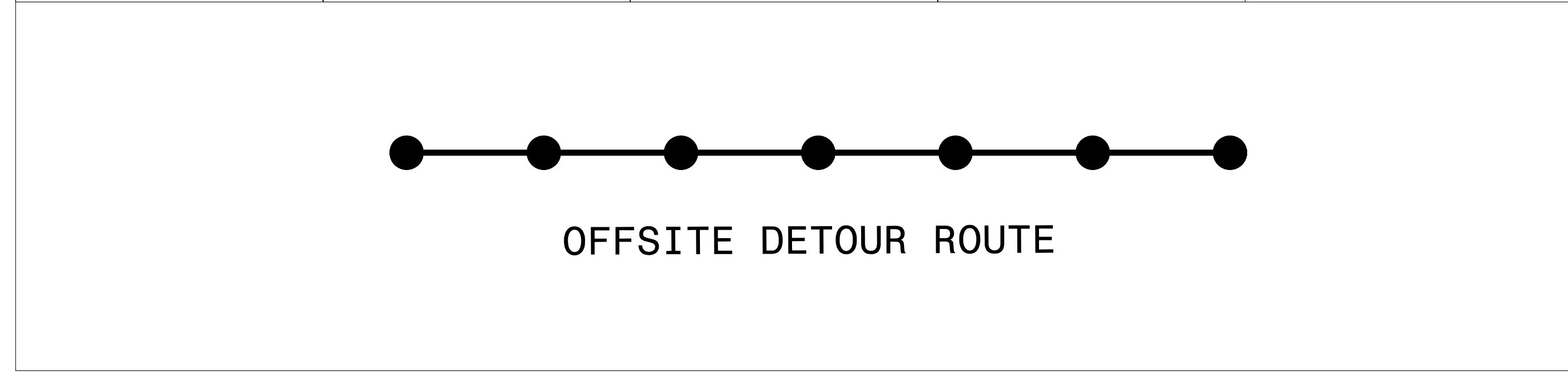
- Legend and border (except those that are colored black) shall be direct applied Grade A sheeting.
- Background shall be Grade A, B, or C reflective sheeting.
- Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum with Grade A reflective sheeting and demountable.
- Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Arrow shall be on 0.032" aluminum, black non-reflective sheeting and demountable. Yellow panel is:

LETTER POSITIONS

Letter locations are panel edge to lower left corner										Series/Size
M	A	N	C	H	E	S	T	E	R	Text Length
5	9.4	13.6	17.6	21.5	25.6	29	32.6	36.1	39.7	C 2000 38
										C 2000 15.3

BORDER R=1.5" TH=0.63" IN=0.38"

Spacing Factor is 1 unless specified otherwise



11/9/2023
 \\weir-fs01\projects\2023\23156\01Div 8 Fort Bragg Roads\Div 8 Roads and Pipes\Traffic\Traffic Design\2 Plan Design\4 WZTC\49218.21\TMP_02 OSD.dgn
 User: AHayes

NOTES:
 1) REFER TO ROADWAY STANDARD DRAWINGS 1101.03, SHEETS 1 & 2 OF 9 FOR APPLICABLE NOTES AND ROAD CLOSURE SIGNING AND DEVICES.

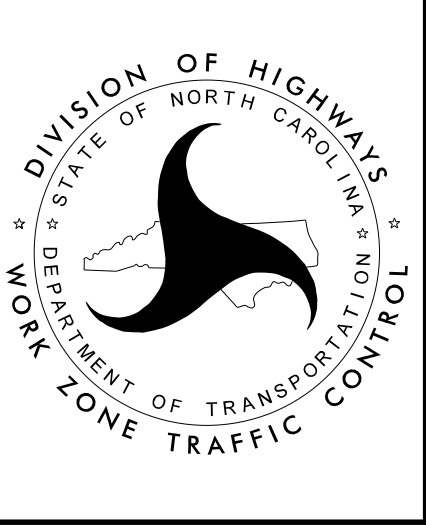
1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
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 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED:

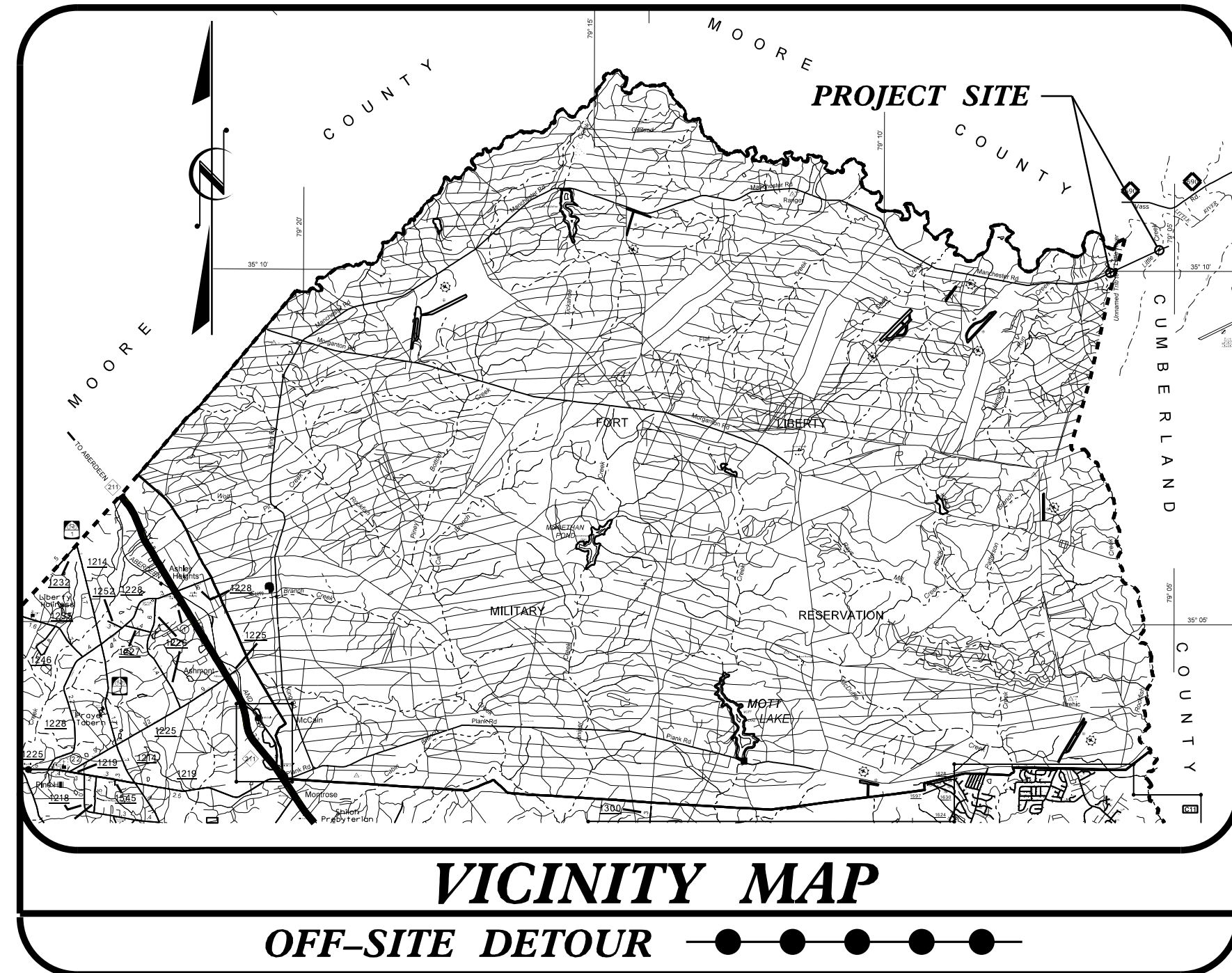
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OFFSITE DETOUR

TIP PROJECT: 49218.21



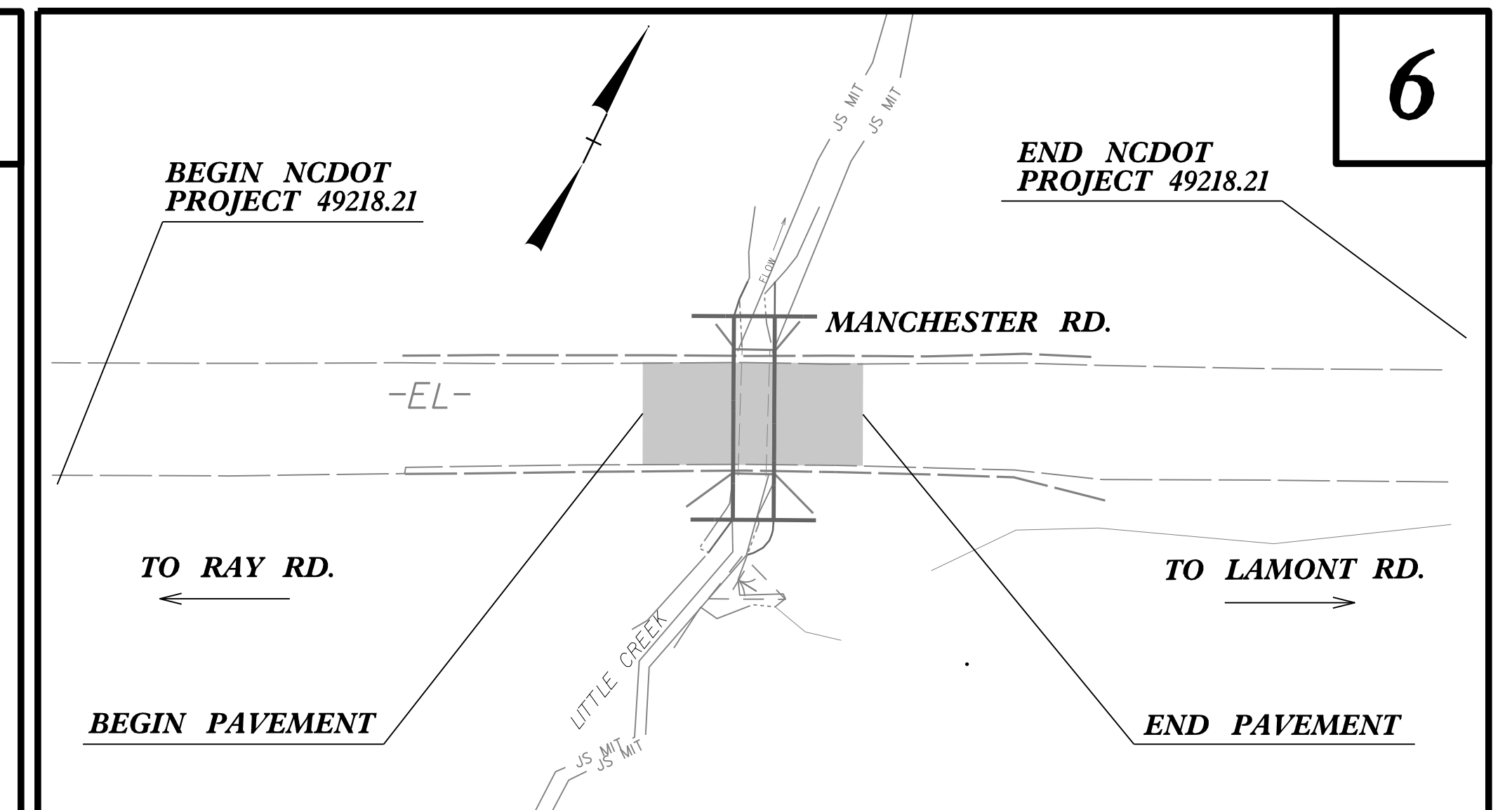
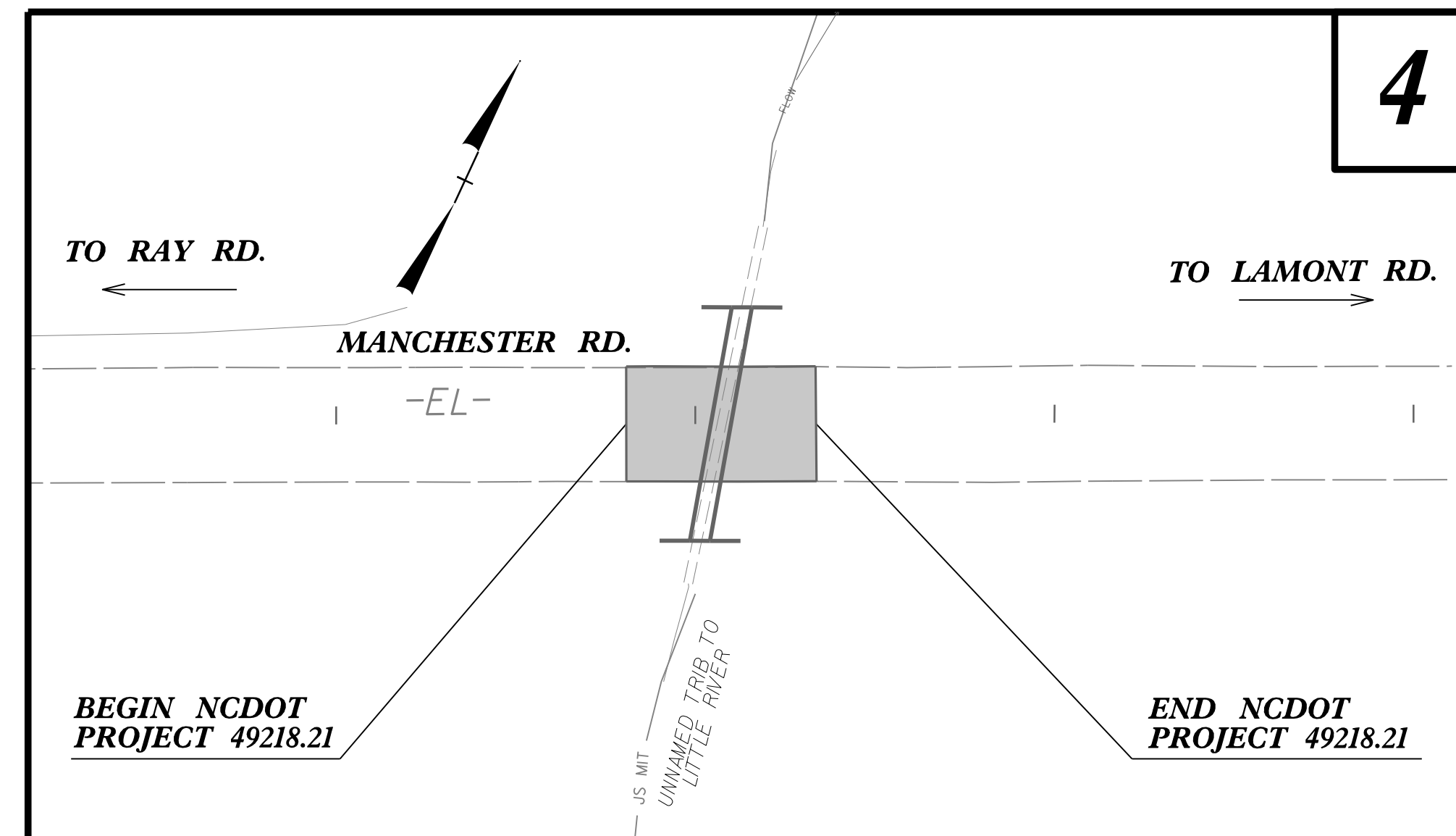
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 PLAN FOR PROPOSED
 HIGHWAY EROSION CONTROL
HOKE COUNTY

LOCATION: PIPE CROSSINGS ON MANCHESTER ROAD

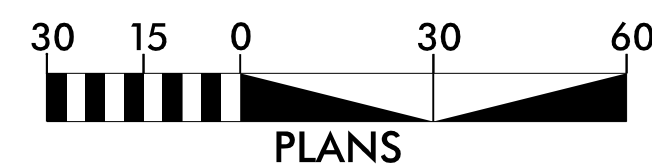
TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	49218.21	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

THIS PROJECT CONTAINS
 EROSION CONTROL PLANS
 FOR CLEARING AND
 GRUBBING PHASE OF
 CONSTRUCTION.



GRAPHIC SCALE



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH
 THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000
 GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019
 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF
 ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.



Prepared in the Office of:
WETHERILL ENGINEERING, INC.
 1223 JONES FRANKLIN ROAD
 RALEIGH, NC 27606

Designed by:
KATIE ESTEP 4485
 NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

The "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2024 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

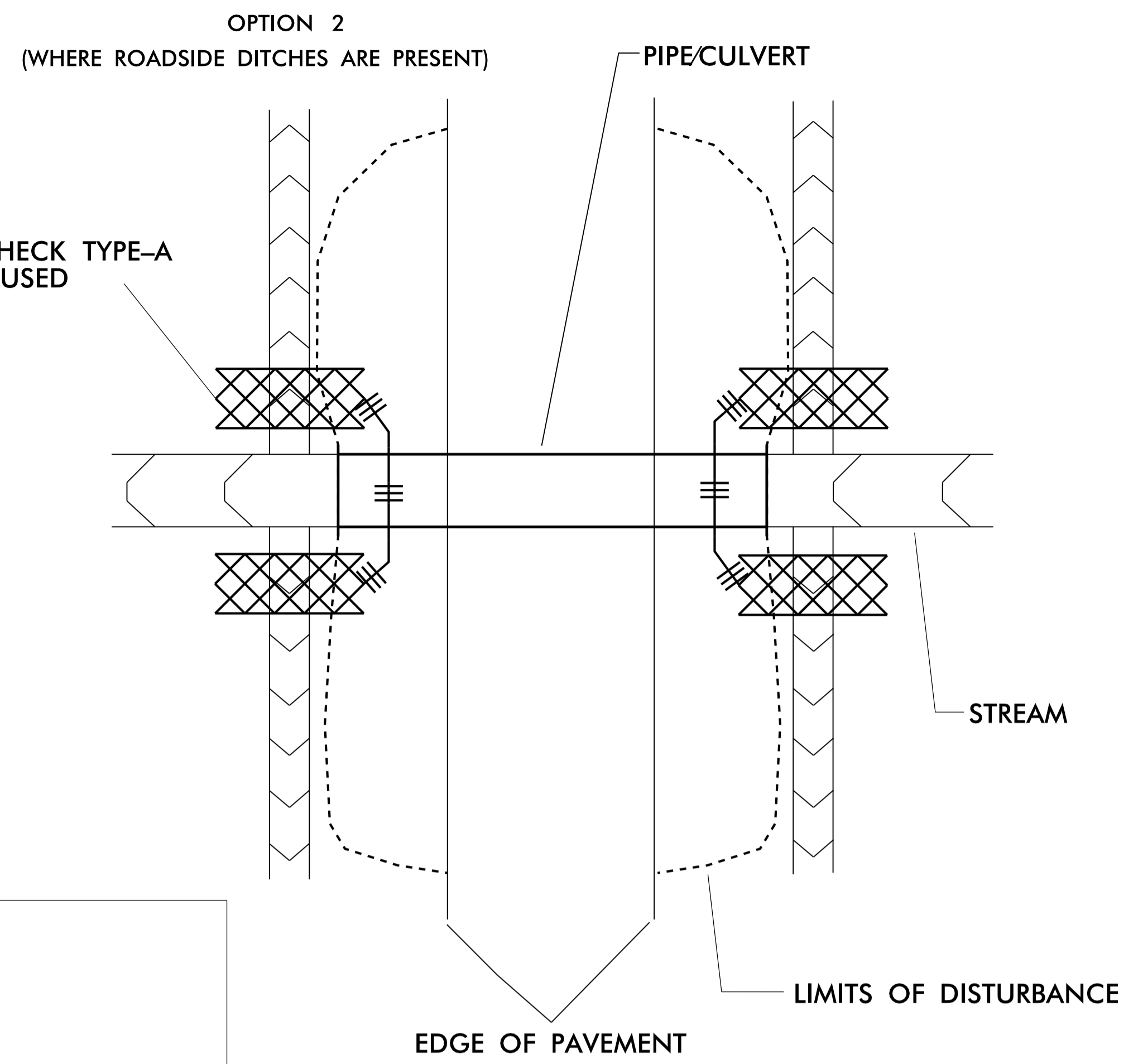
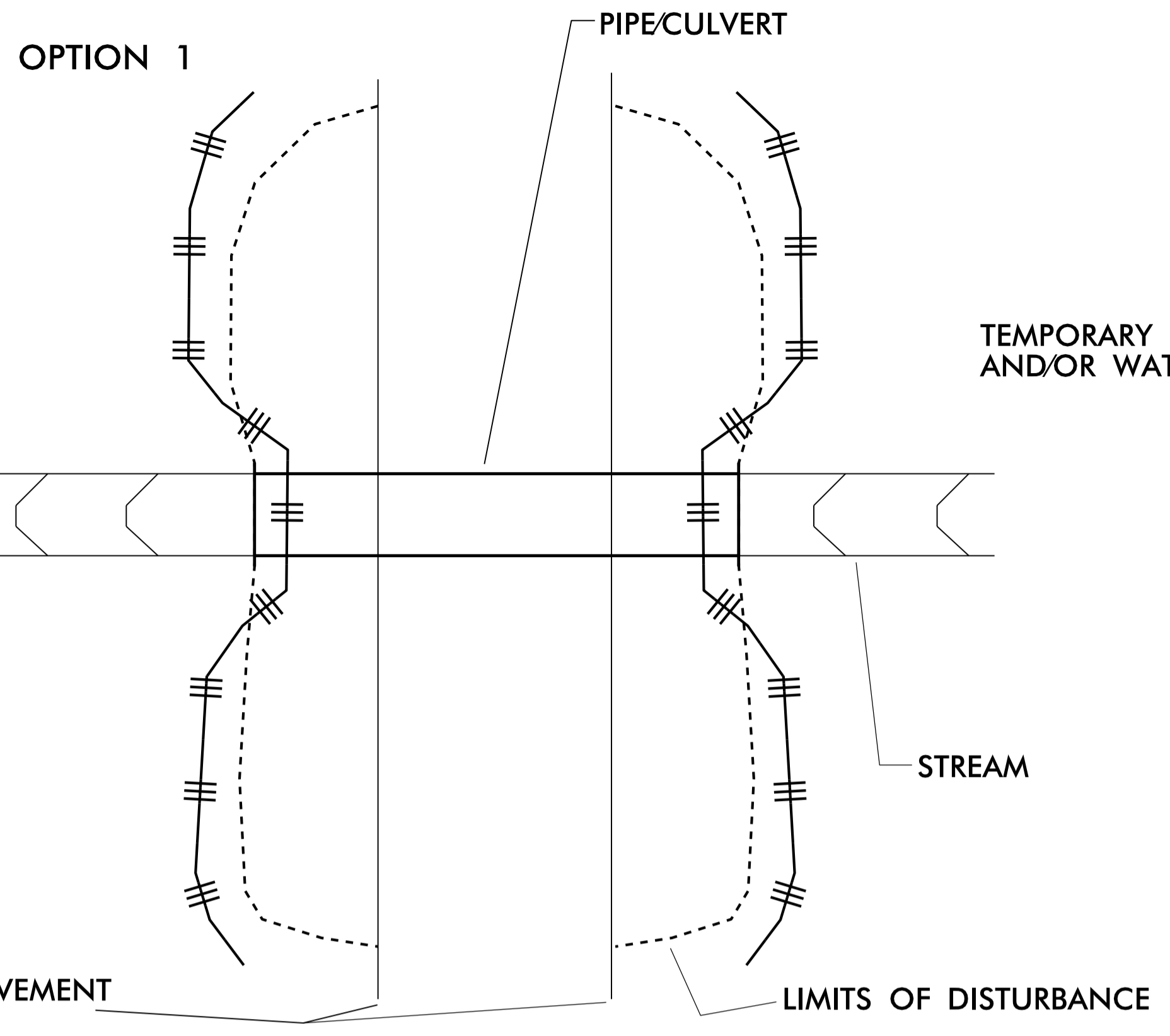
PROJECT REFERENCE NO. 49218.21	SHEET NO. EC-02
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EROSION & SEDIMENT CONTROL LEGEND

Std. #	Description	Symbol	Std. #	Description	Symbol
1605.01	Temporary Silt Fence		1633.01	Temporary Rock Silt Check Type A	
1606.01	Special Sediment Control Fence		1633.02	Temporary Rock Silt Check Type B	
1622.01	Temporary Berms and Slope Drains		1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
1630.02	Silt Basin Type B		1634.01	Temporary Rock Sediment Dam Type A	
1630.03	Temporary Silt Ditch		1634.02	Temporary Rock Sediment Dam Type B	
1630.04	Stilling Basin		1635.01	Rock Pipe Inlet Sediment Trap Type A	
1630.05	Temporary Diversion		1635.02	Rock Pipe Inlet Sediment Trap Type B	
1630.06	Special Stilling Basin		1636.01	Excelsior Wattle Check	
1630.07	Skimmer Basin		1636.01	Excelsior Wattle Check with Flocculant	
1630.08	Tiered Skimmer Basin		1636.01	Coir Fiber Wattle Check	
1630.09	Earthen Dam with Skimmer		1636.01	Coir Fiber Wattle Check with Flocculant	
	Infiltration Basin		1636.02	Silt Fence Excelsior Wattle Break	
	Rock Inlet Sediment Trap:			Silt Fence Coir Fiber Wattle Break	
1632.01	Type A		1636.03	Excelsior Wattle Barrier	
1632.02	Type B		1636.03	Coir Fiber Wattle Barrier	
1632.03	Type C				

PROJECT REFERENCE NO. 49218.21	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ROADSIDE ENVIRONMENTAL UNIT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.
2018 STANDARD SPECIFICATIONS
DRAWINGS NOT DRAWN TO SCALE



LEGEND:

	IMPERVIOUS DIKE
	PUMP
	SPECIAL STILLING BASIN
	STABILIZED DISCHARGE PAD (GEOTEXTILE)
	EOP
	ETF
	TEMPORARY ROCK SILT CHECK TYPE-A AND/OR WATTLE
	TEMPORARY SILT FENCE

SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA:

1. INSTALL SPECIAL STILLING BASIN.
2. INSTALL UPSTREAM PUMP, TEMPORARY FLEXIBLE HOSE, AND STABILIZED DISCHARGE PAD.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION DISCHARGING ONTO STABILIZED OUTLET PAD.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER WORK ZONE. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. INSTALL PIPE(S), STREAM BED STABILIZATION, AND SLOPE STABILIZATION AS DIRECTED.
6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, TEMPORARY FLEXIBLE HOSE, AND STABILIZED DISCHARGE PAD. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
7. REMOVE SPECIAL STILLING BASIN AND RESTORE AREA TO ORIGINAL CONDITIONS.
8. STABILIZE ALL DISTURBED AREAS THROUGHOUT PROJECT WITH SEED AND MATTING FOR EROSION CONTROL.

NOTES:

INSTALL EROSION CONTROL MEASURES PRIOR TO ANY EARTH DISTURBING ACTIVITIES. INSTALL SPECIAL SEDIMENT CONTROL FENCE BREAKS OR TEMPORARY ROCK SILT CHECKS TYPE-A AT LOW POINTS IN SILT FENCE.

FOR OPTION 1 INSTALL SILT FENCE SUCH THAT ALL EARTH DISTURBANCE IS CONTAINED. FOR CULVERT CONSTRUCTION SEQUENCING SEE THE PUMP AROUND DETAIL OR CONSULT "BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES".

ALL EXCAVATION IN JURISDICTIONAL STREAMS SHALL BE PERFORMED IN ONLY DRY OR ISOLATED SECTIONS OF THE WORK ZONE.

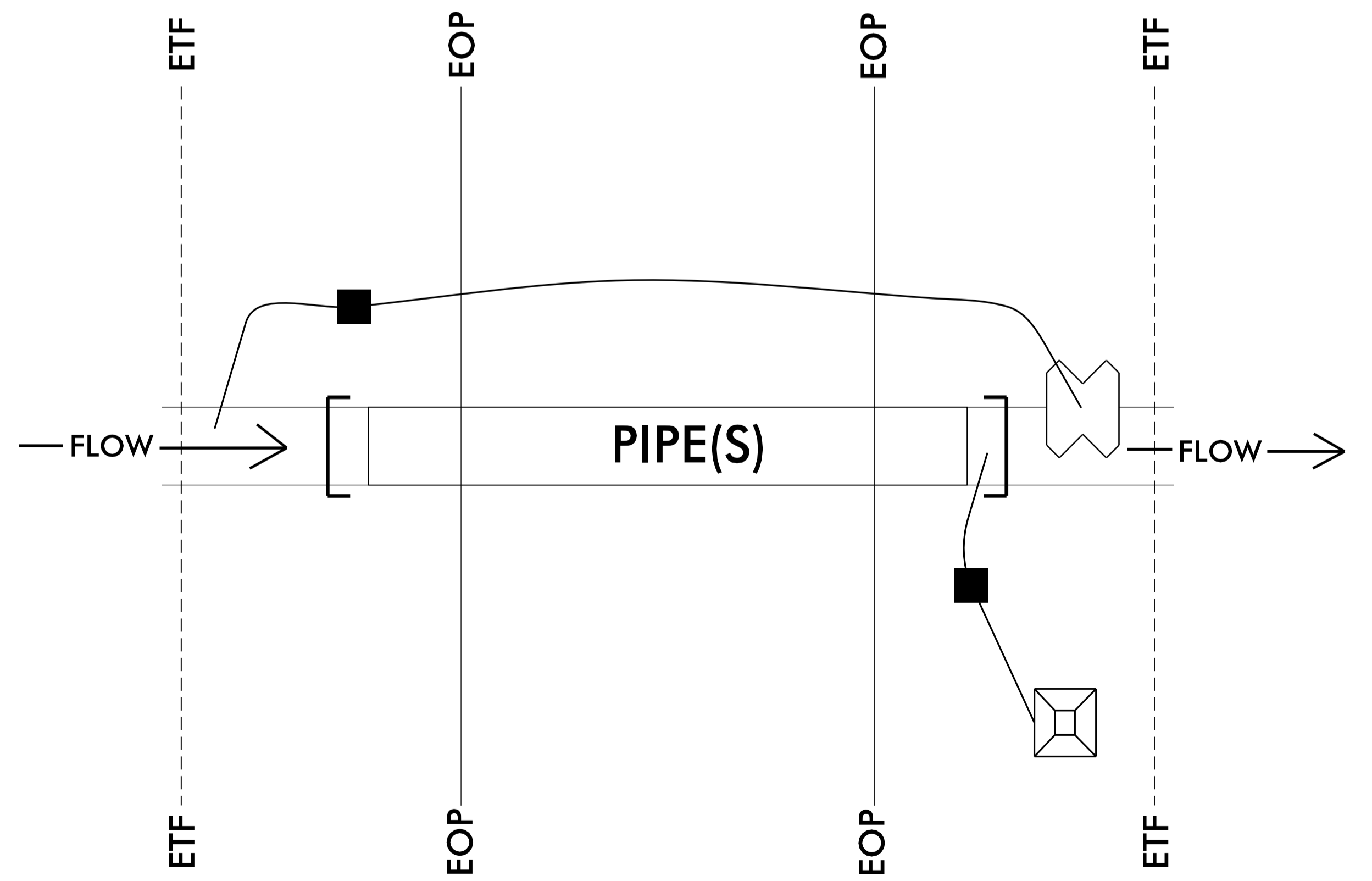
IMPERVIOUS DIKES ARE TO BE USED TO ISOLATE WORK FROM STREAM FLOW WHEN NECESSARY. MAINTENANCE OF STREAM FLOW OPERATIONS SHALL BE INCIDENTAL TO THE WORK. THIS INCLUDES THE DISCHARGE PAD, DIVERSION PIPES, PUMPS, AND HOSES.

PUMPS AND HOSES SHALL BE OF SUFFICIENT SIZE TO MAINTAIN STREAM FLOW AND TO DEWATER THE WORK AREA.

INSTALL SPECIAL STILLING BASIN IN VEGETATED AREA WITHIN RIGHT OF WAY. DISCHARGE SHOULD BE DIRECTED THROUGH VEGETATED BUFFER AWAY FROM WORK SITE.

INSTALL SILT FENCE AS DIRECTED TO CONTAIN DISTURBED AREAS AND/OR EXCAVATED STOCKPILES. BORROW MATERIAL FROM OR DISPOSAL OF MATERIAL TO ANY UNPERMITTED SITE WILL REQUIRE A RECLAMATION PLAN.

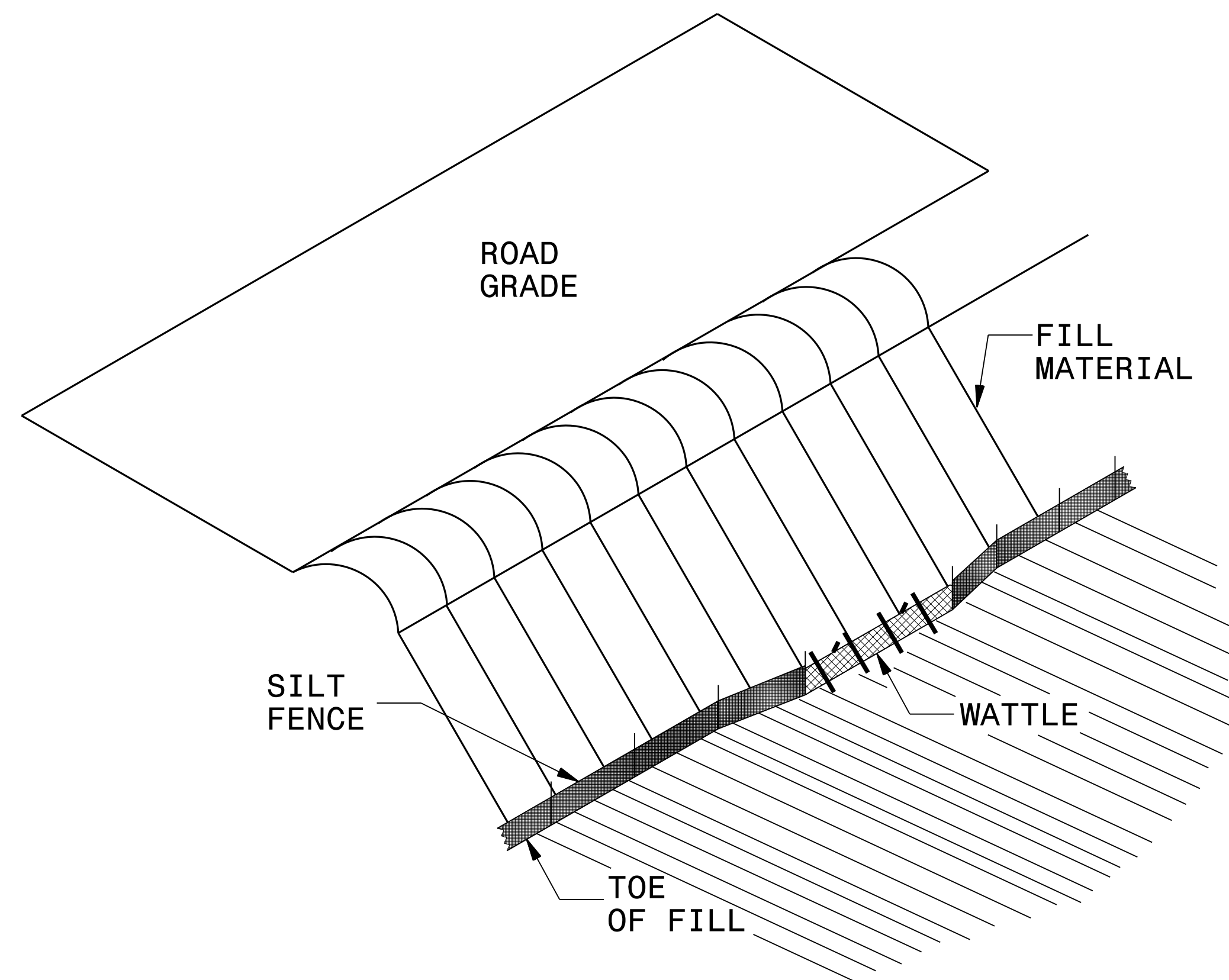
INSTALL PIPE(S) IN JURISDICTIONAL AREAS IN ACCORDANCE WITH NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.



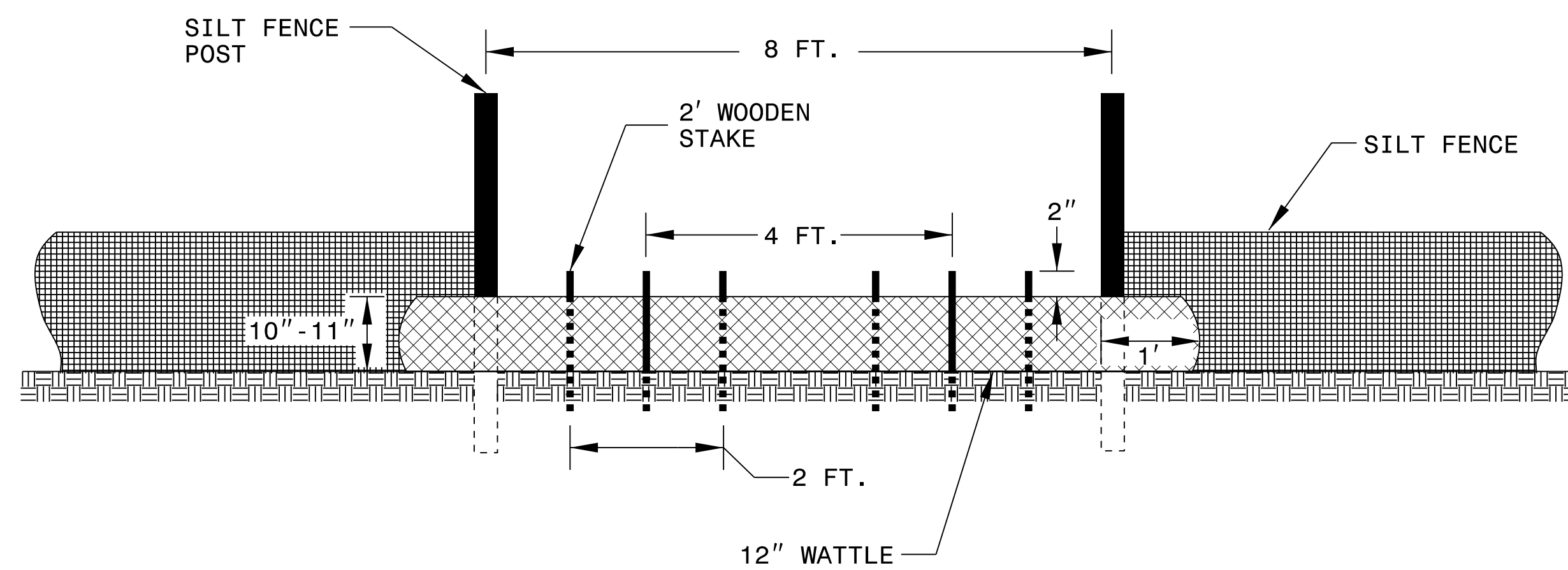
PUMP-AROUND OPERATION FOR PIPE REPLACEMENT IN JURISDICTIONAL STREAMS EROSION CONTROL DETAIL

SILT FENCE COIR FIBER WATTLE BREAK DETAIL

PROJECT REFERENCE NO. 49218.21	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ISOMETRIC VIEW



VIEW FROM SLOPE

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLE ON TOE OF SLOPE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

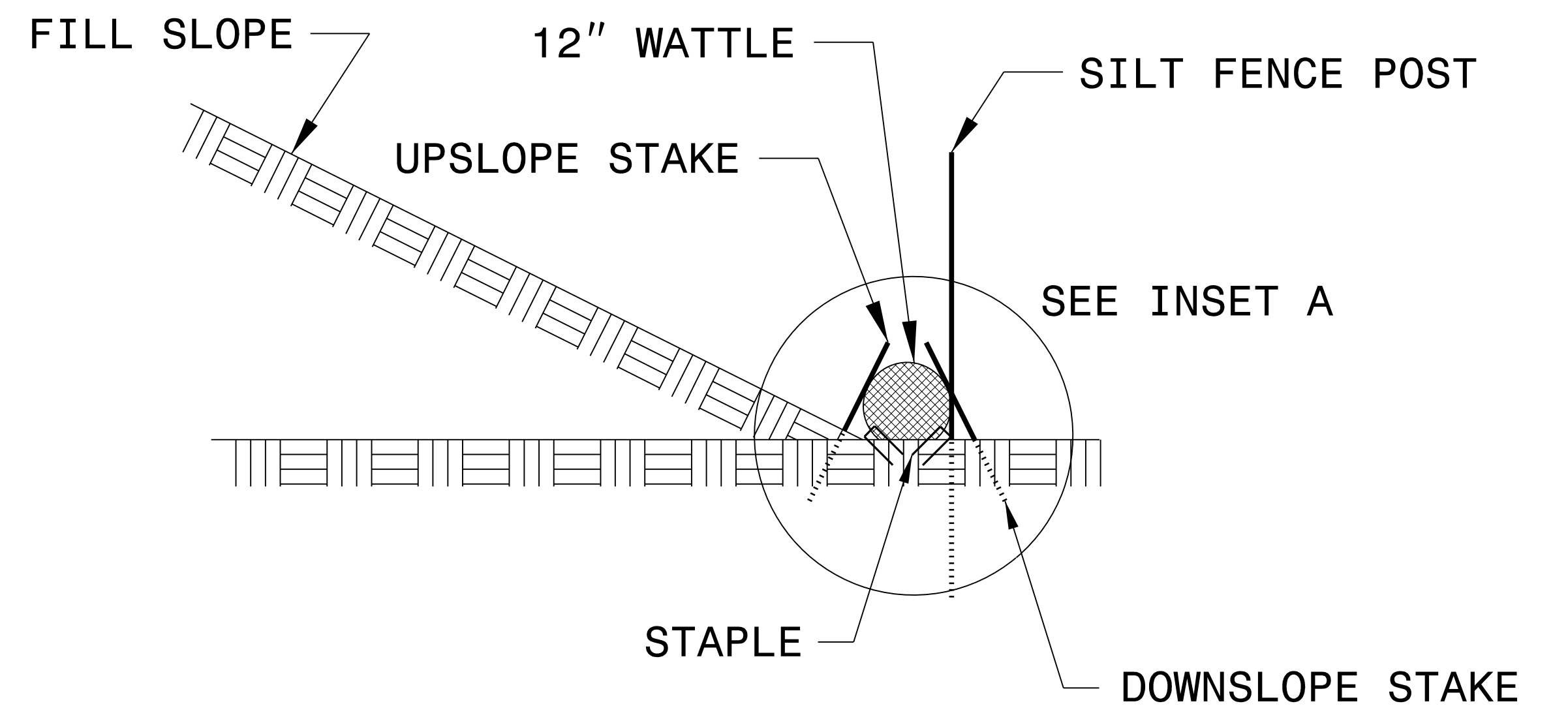
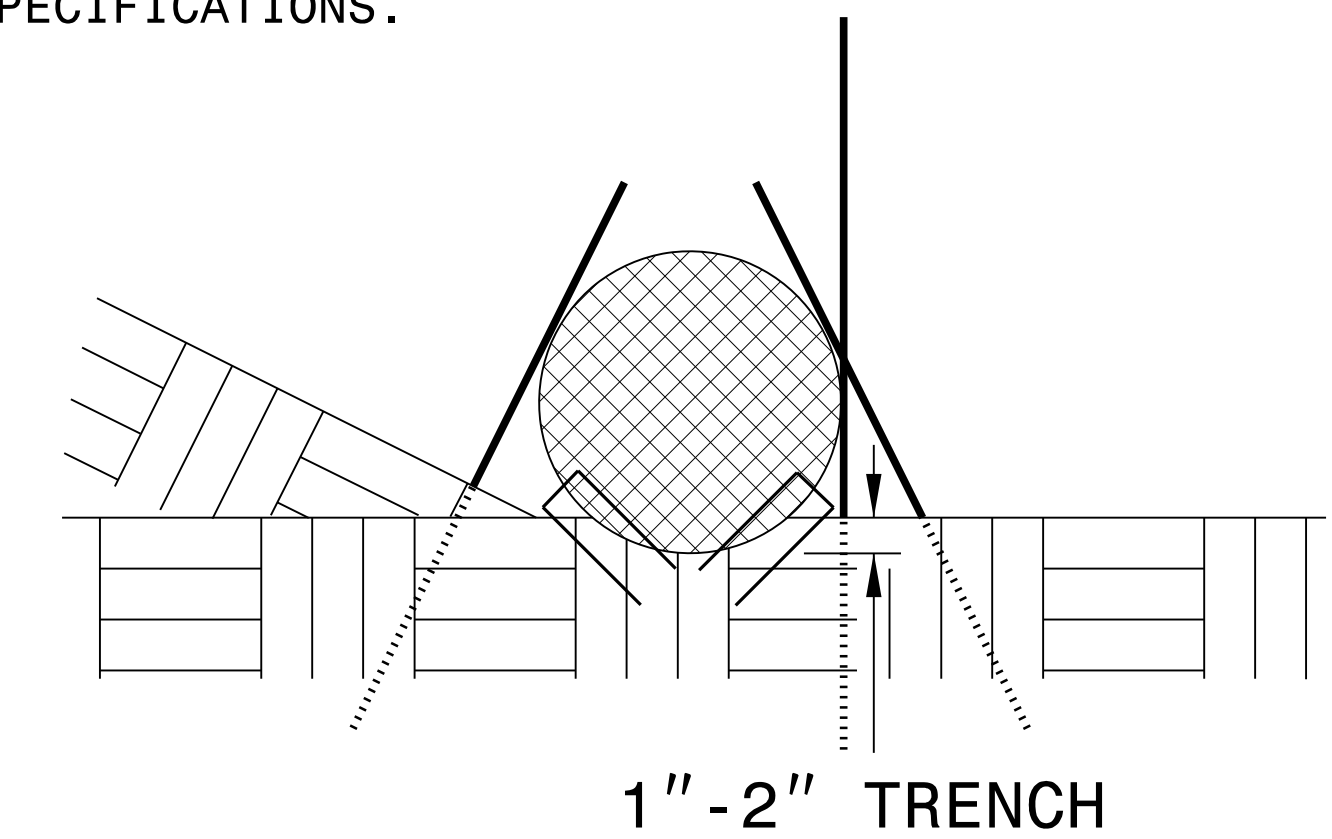
PROVIDE STAPLES MADE OF 11 GAUGE STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 6" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A



SIDE VIEW

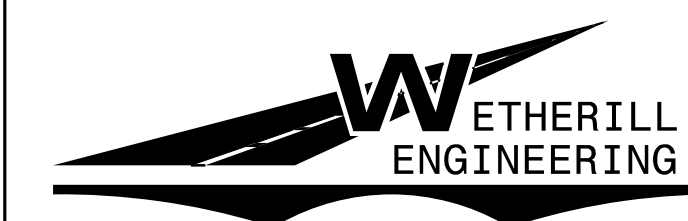
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.	SHEET NO.
49218.21	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

CLEARING AND GRUBBING EROSION CONTROL FOR PLAN SHEET 6



TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

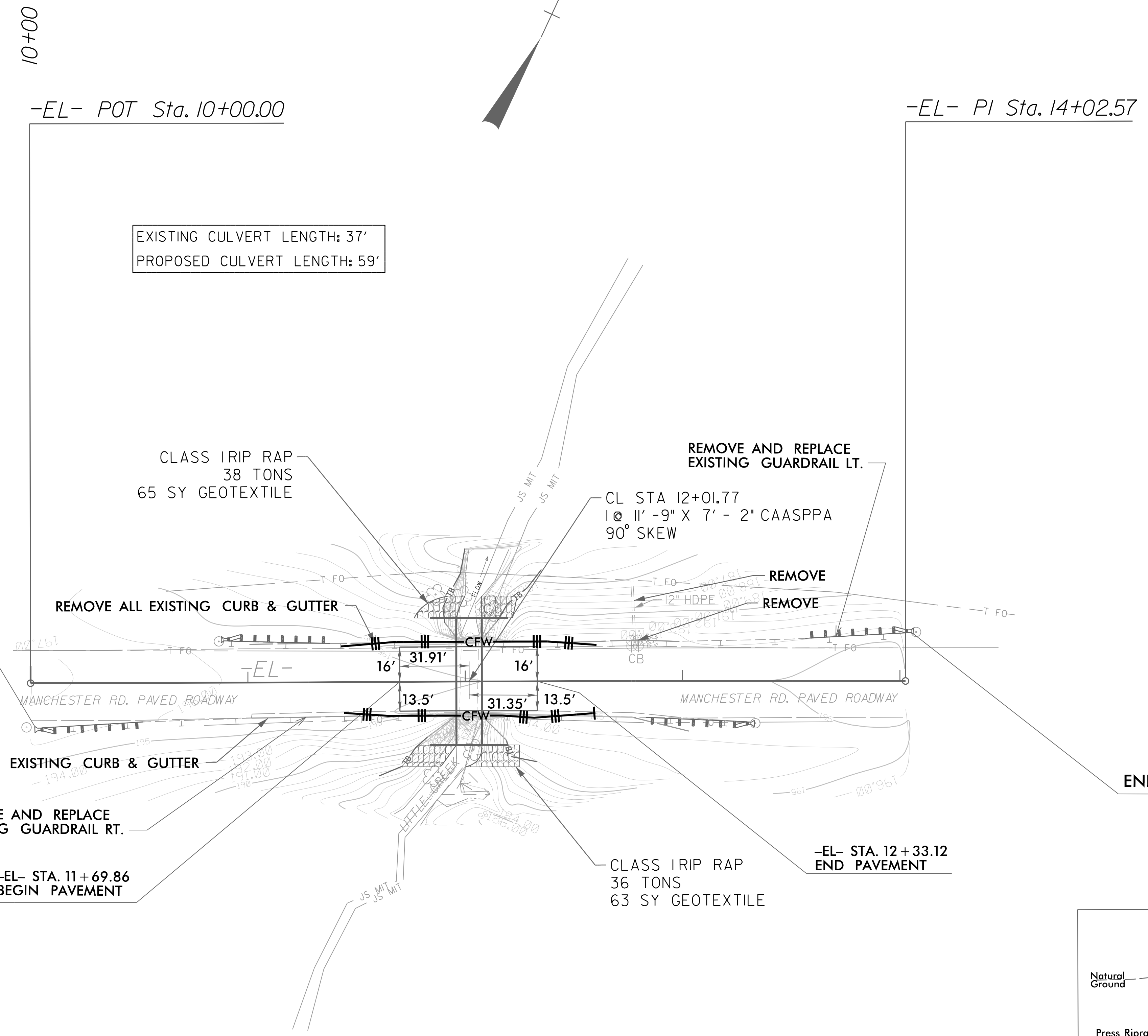
1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

PROJECT REFERENCE NO. 49218.21	SHEET NO. EC-5/ CONSTR.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MANCHESTER ROAD

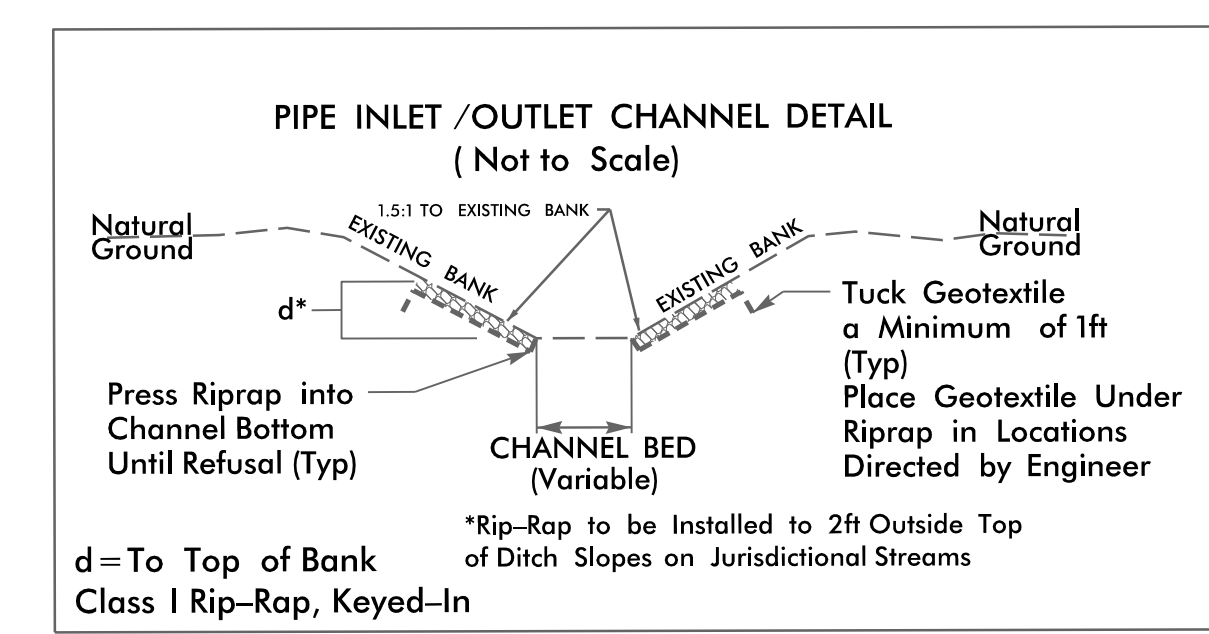
SCALE 1" = 30'

REVISIONS



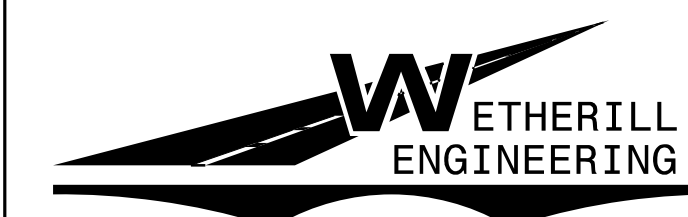
BEGIN TIP PROJECT 49218.21

END TIP PROJECT 49218.21



8/17/99

12/7/2023
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 JSE/PLK/STP



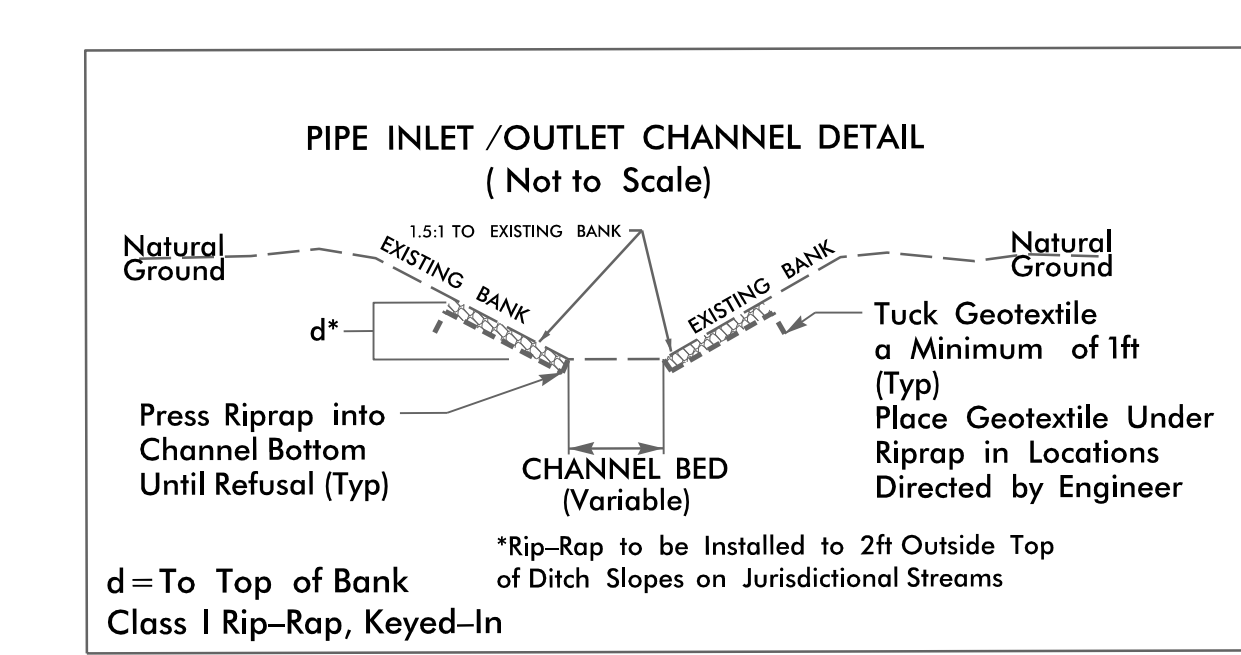
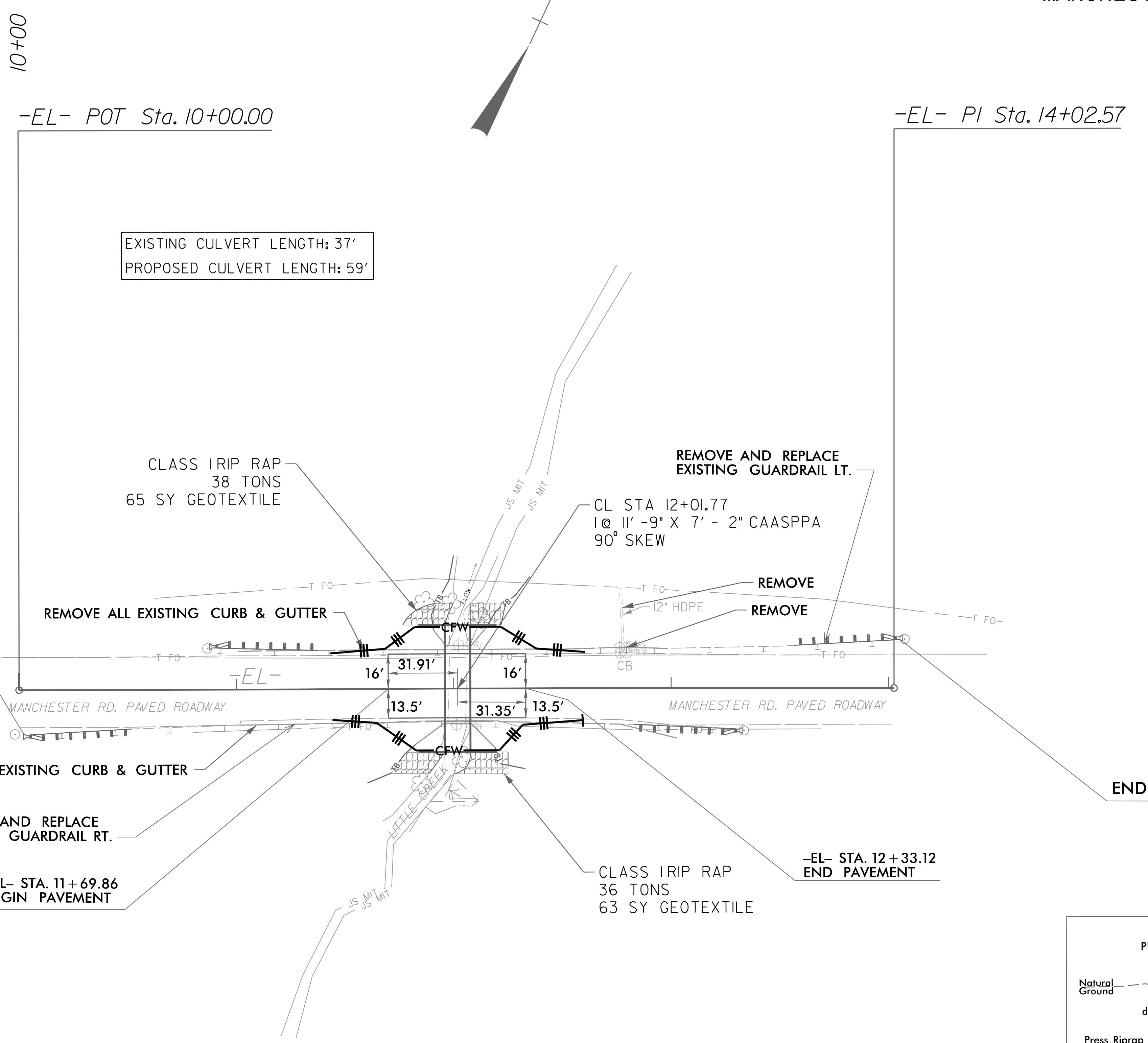
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

PROJECT REFERENCE NO. 49218.21		SHEET NO. EC-7/ CONSTR.6	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

MANCHESTER ROAD

SCALE 1" = 30'



BEGIN TIP PROJECT 49218.21

END TIP PROJECT 49218.21

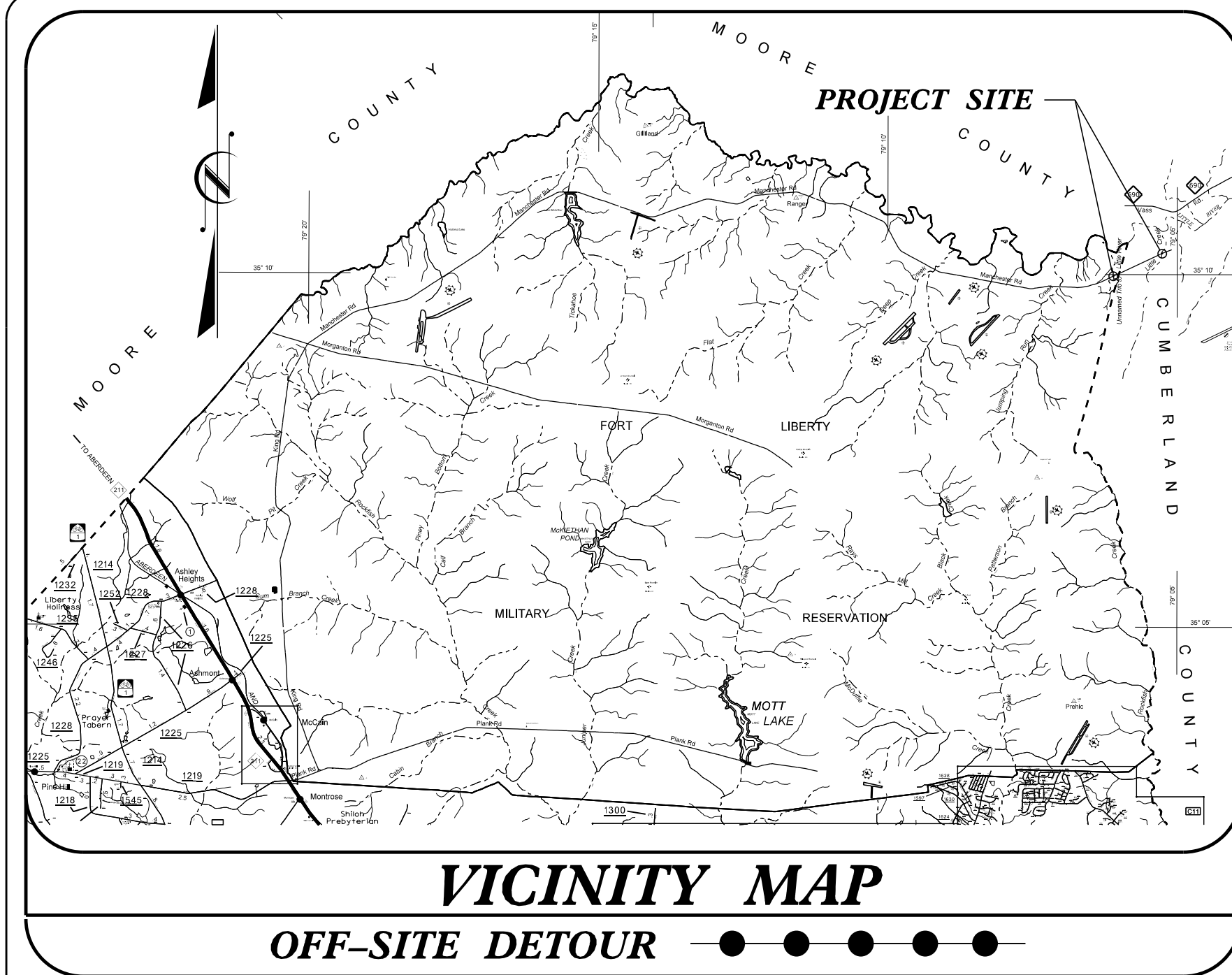
REVISIONS

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12/7/2023
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JSH

09/08/99

PROJECT: 49218.21



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES BY OTHERS PLANS
HOKE COUNTY

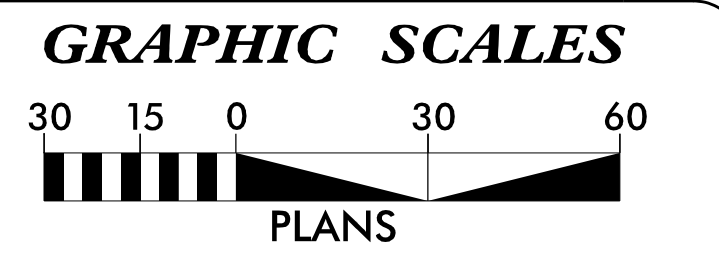
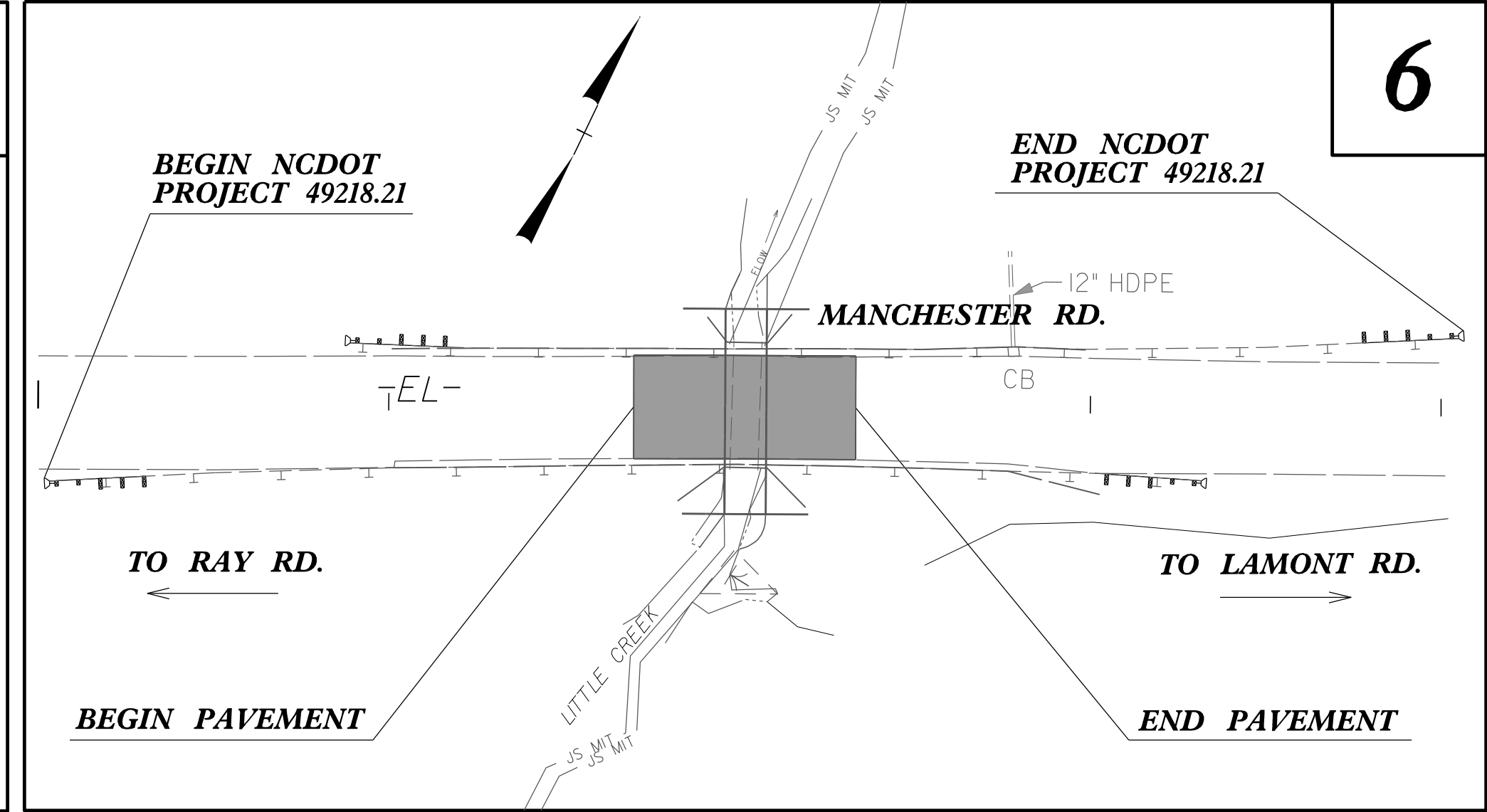
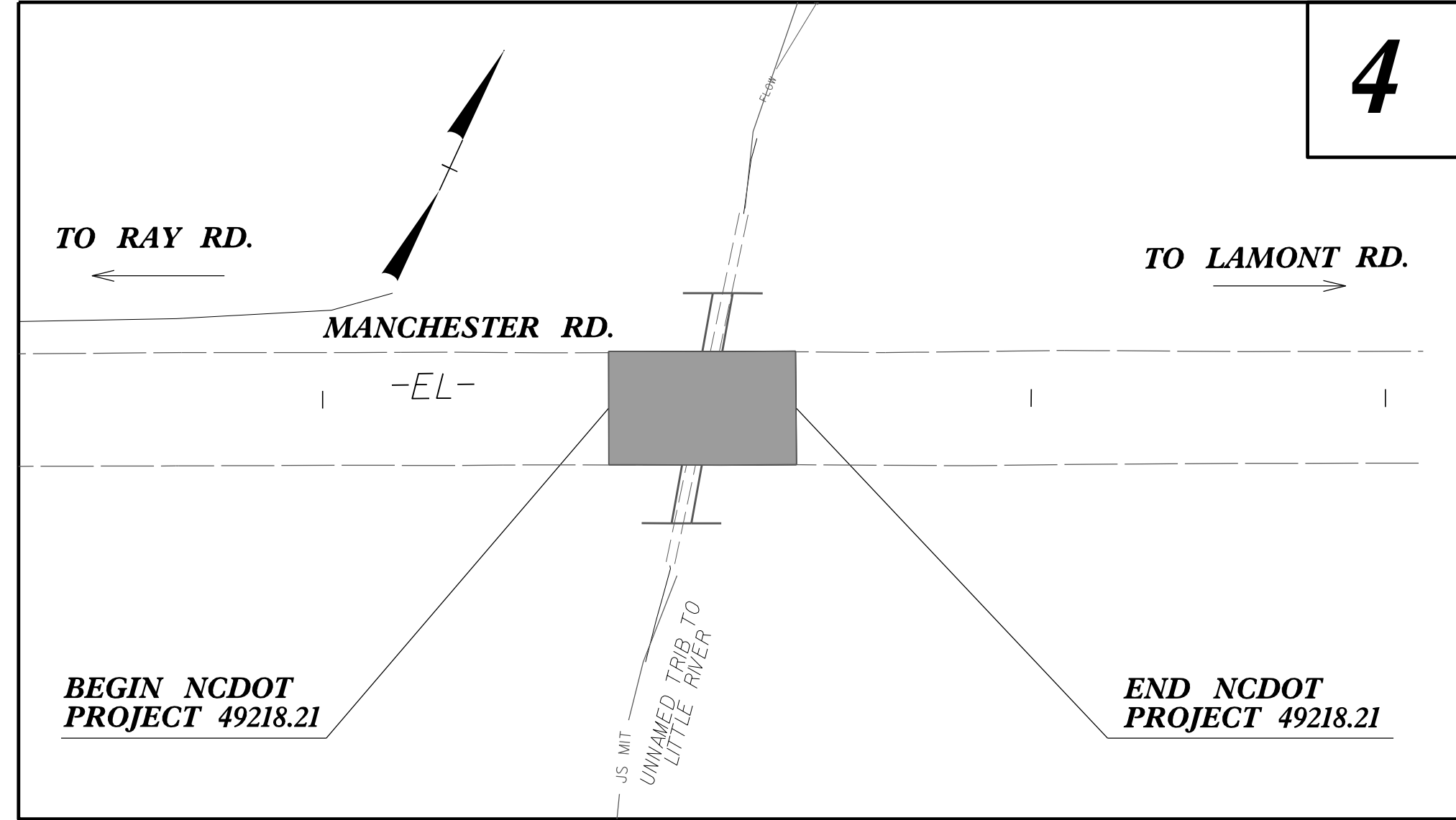
LOCATION: PIPE CROSSINGS ON MANCHESTER ROAD

TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURE

STATE PROJECT REFERENCE NO.	SHEET NO.
49218.21	UO-1

NOTE:
ALL UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.

FINAL PLANS



INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UO-1	TITLE SHEET
UO-2	UBO PLAN SHEET
UO-3	UBO PLAN SHEET

UTILITY OWNERS WITH CONFLICTS

(A) NEC - COMMUNICATION

PREPARED IN THE OFFICE OF:

1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - SURVEY/SUE - UTILITIES - CONSTRUCTION OBSERVATION

PANKIL K. PATEL UTILITY PROJECT MANAGER

DIVISION OF HIGHWAYS
DIVISION EIGHT

121 Dot Drive
Carthage NC, 28327

JAMIE YOW DIVISION UTILITY COORDINATOR

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

8/17/99

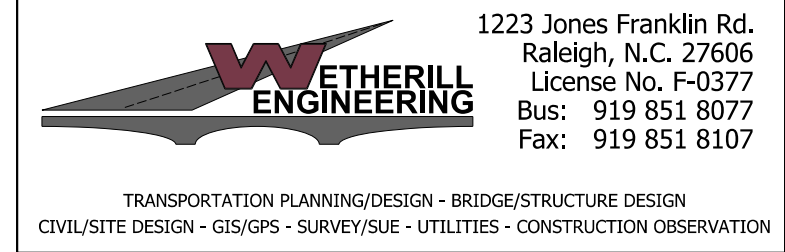
NOTES:

- 1. CONTRACTOR TO COORDINATE WITH NEC PRIOR TO EXCAVATION.
NEC CONTACT: JESSIE MOORE; 910-308-6843; JESSIE.T.MOORE.CIV@ARMY.MIL
- 2. EXISTING U/G CABLES TO REMAIN. CONTRACTOR TO SUPPORT AND PROTECT ALL EXPOSED CABLED DURING CONSTRUCTION.

PROJECT REFERENCE NO.	SHEET NO.
49218.16	U0-2
THIS SHEET CORRESPONDS TO RDY- 4	

UTILITIES BY OTHERS

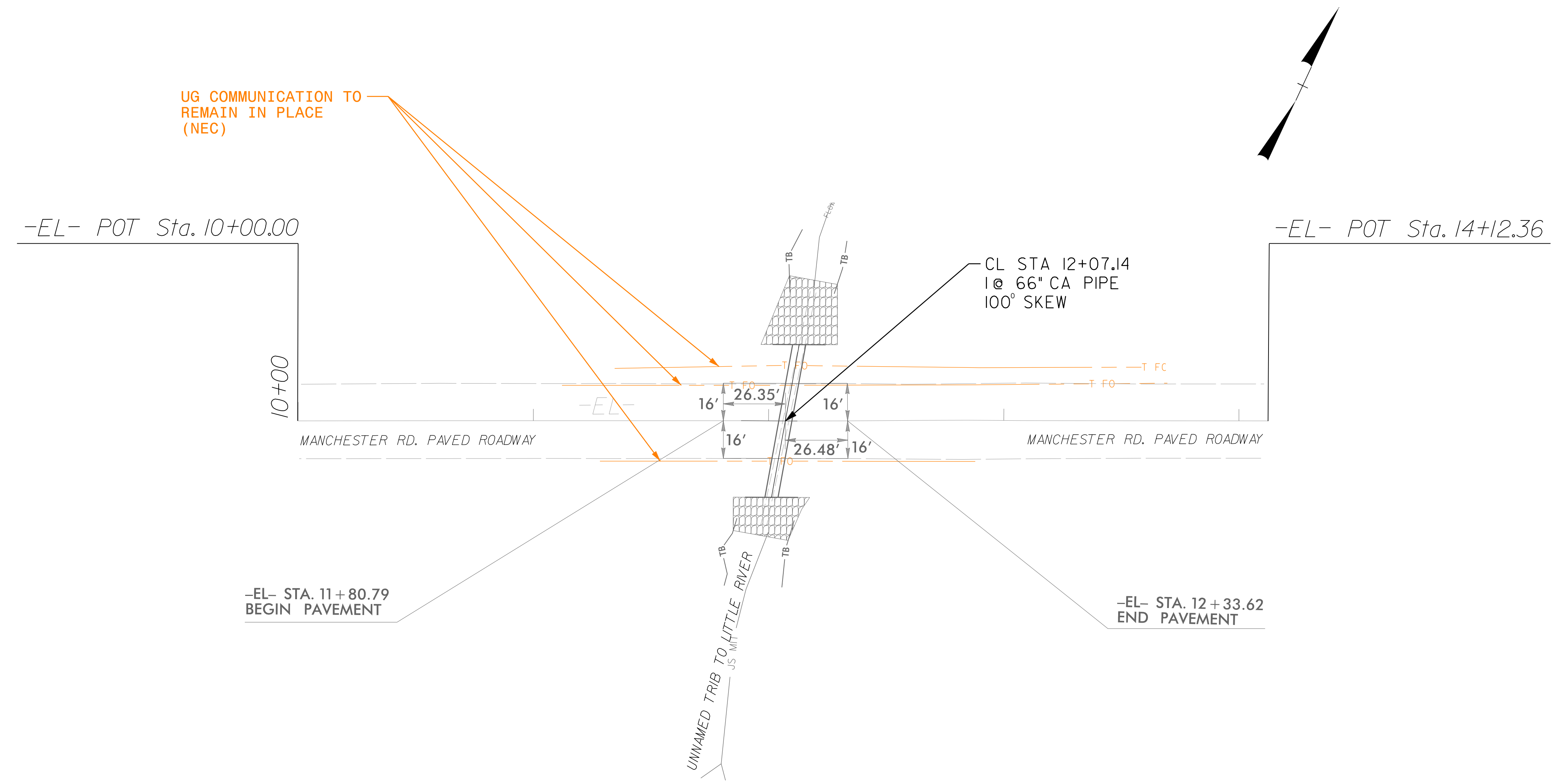
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



SCALE 1" = 30'

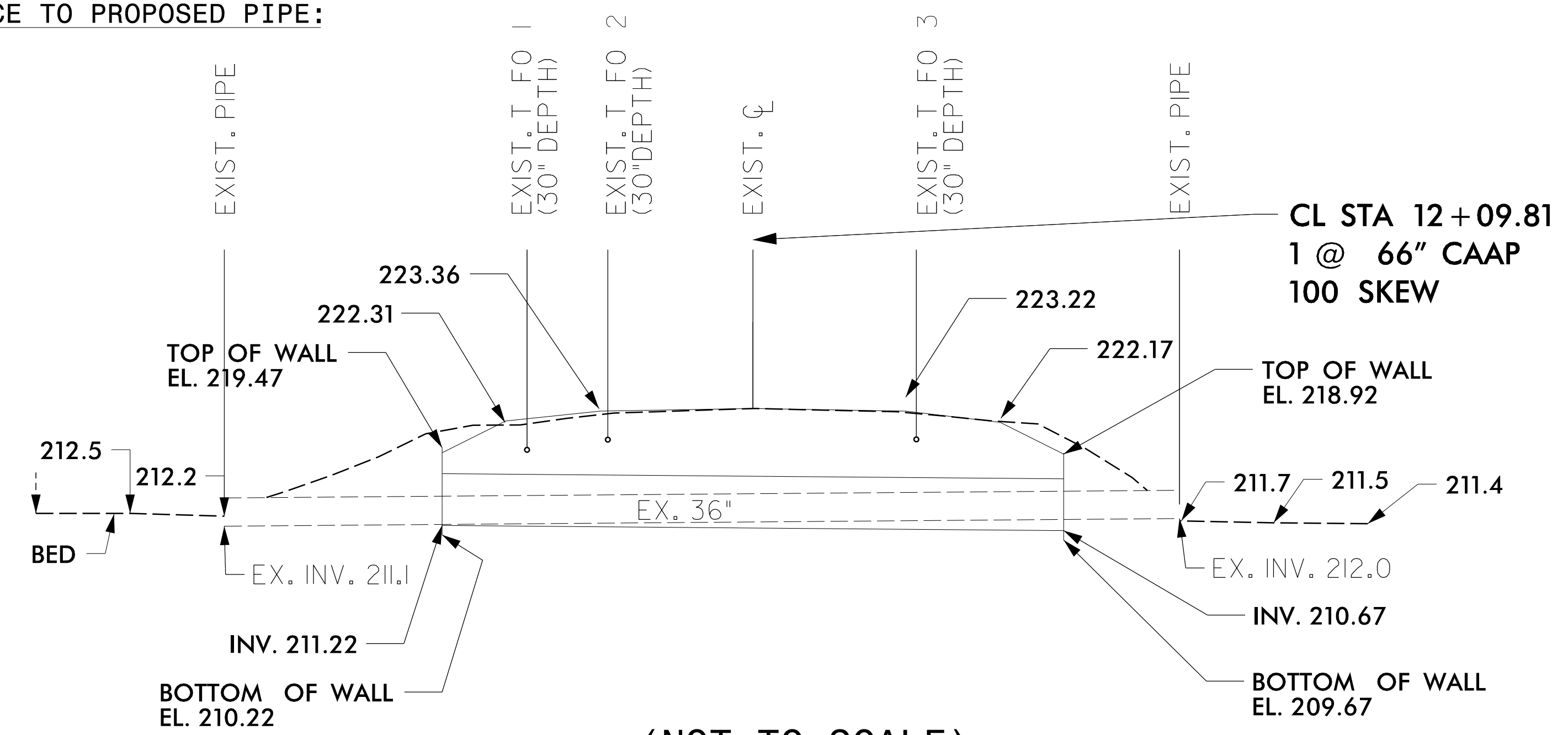
FINAL PLANS - 10/23/2023

**MANCHESTER ROAD
(AT UNNAMED TRIB TO LITTLE RIVER)**



UTILITY CLEARANCE TO PROPOSED PIPE:

- T FO 1 - 2.36'
- T FO 2 - 3.50'
- T FO 3 - 3.81'



(NOT TO SCALE)

REVISIONS

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 4:32:36 PM
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 12/7/2023

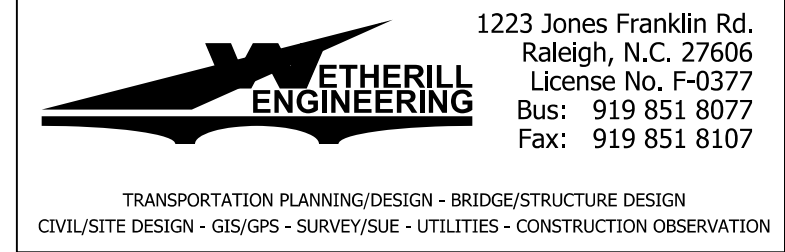
NOTES:

1. CONTRACTOR TO COORDINATE WITH NEC PRIOR TO EXCAVATION.
NEC CONTACT: JESSIE MOORE; 910-308-6843; JESSIE.T.MOORE.CIV@ARMY.MIL
2. EXISTING U/G CABLES TO REMAIN. CONTRACTOR TO SUPPORT AND PROTECT ALL EXPOSED CABLED DURING CONSTRUCTION.

**MANCHESTER ROAD
(AT LITTLE CREEK)**

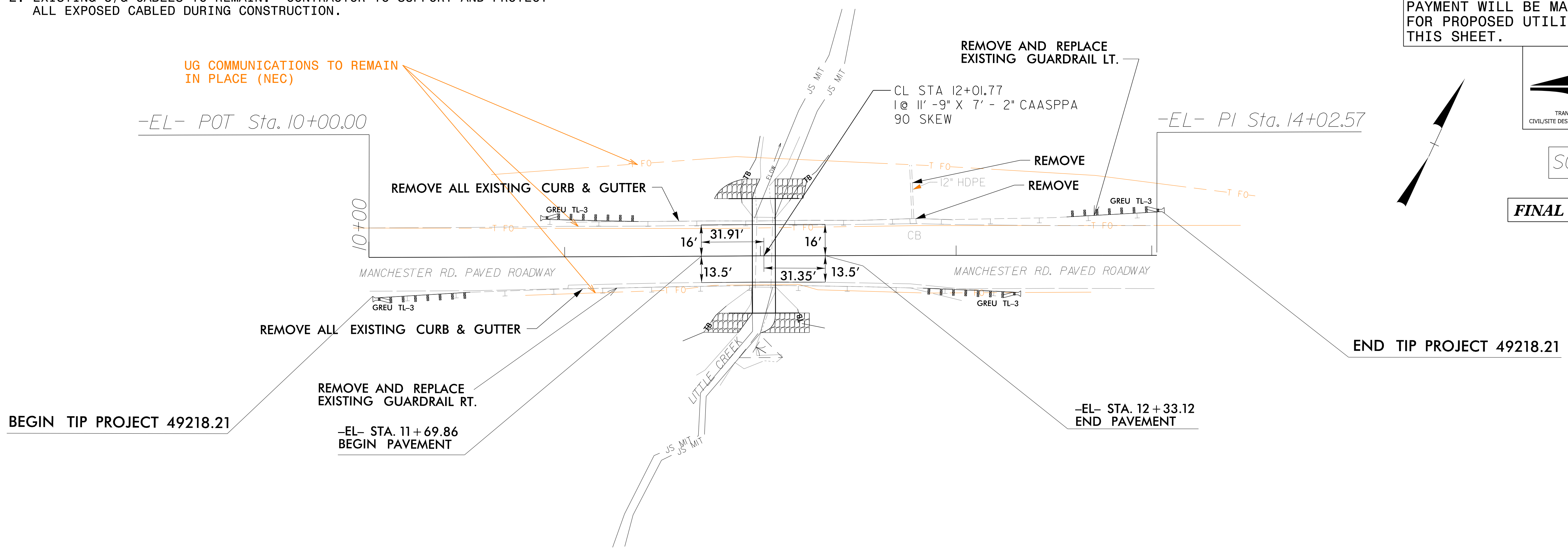
PROJECT REFERENCE NO.	SHEET NO.
49218.16	U0-3
THIS SHEET CORRESPONDS TO RDY- 6	

ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



SCALE 1" = 30'

FINAL PLANS - 10/23/2023



UTILITY CLEARANCE TO PROPOSED PIPE:

- T FO 1 - n/a
- T FO 2 - 5.18'
- T FO 3 - 2.98'

