

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



CUMBERLAND
CUMBERLAND COUNTY
ROUTE 9

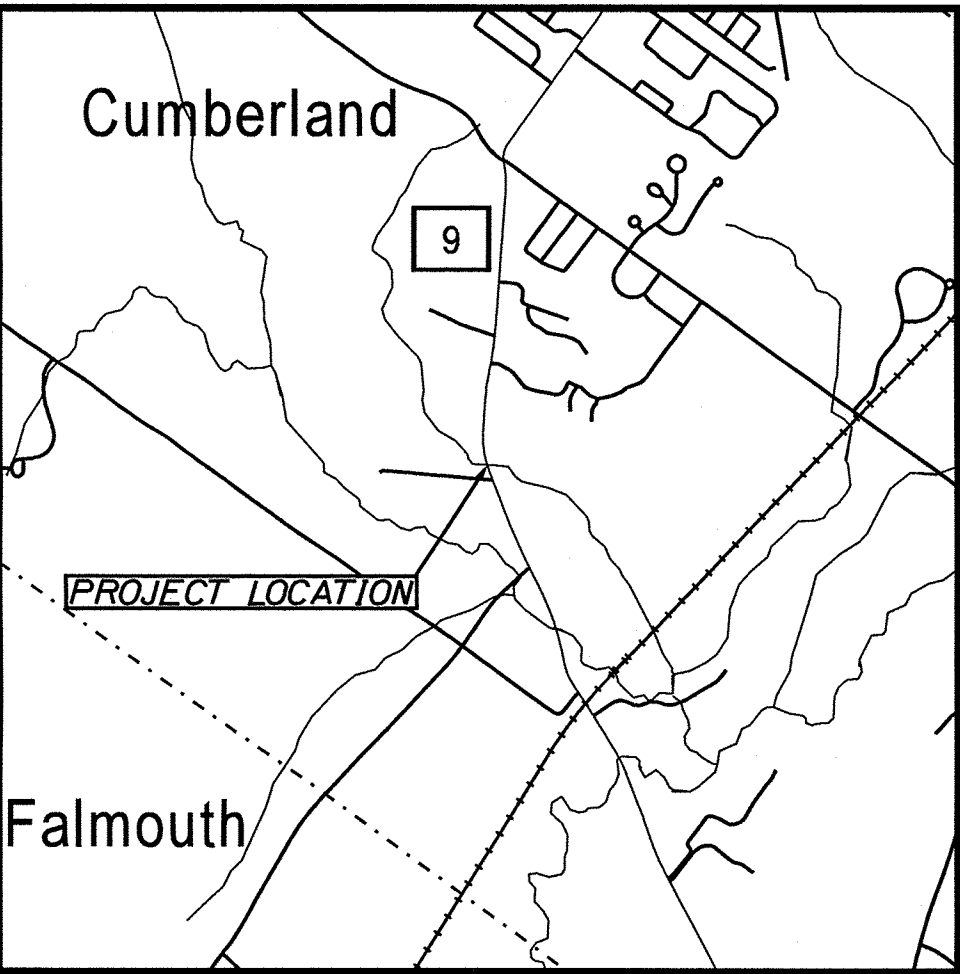
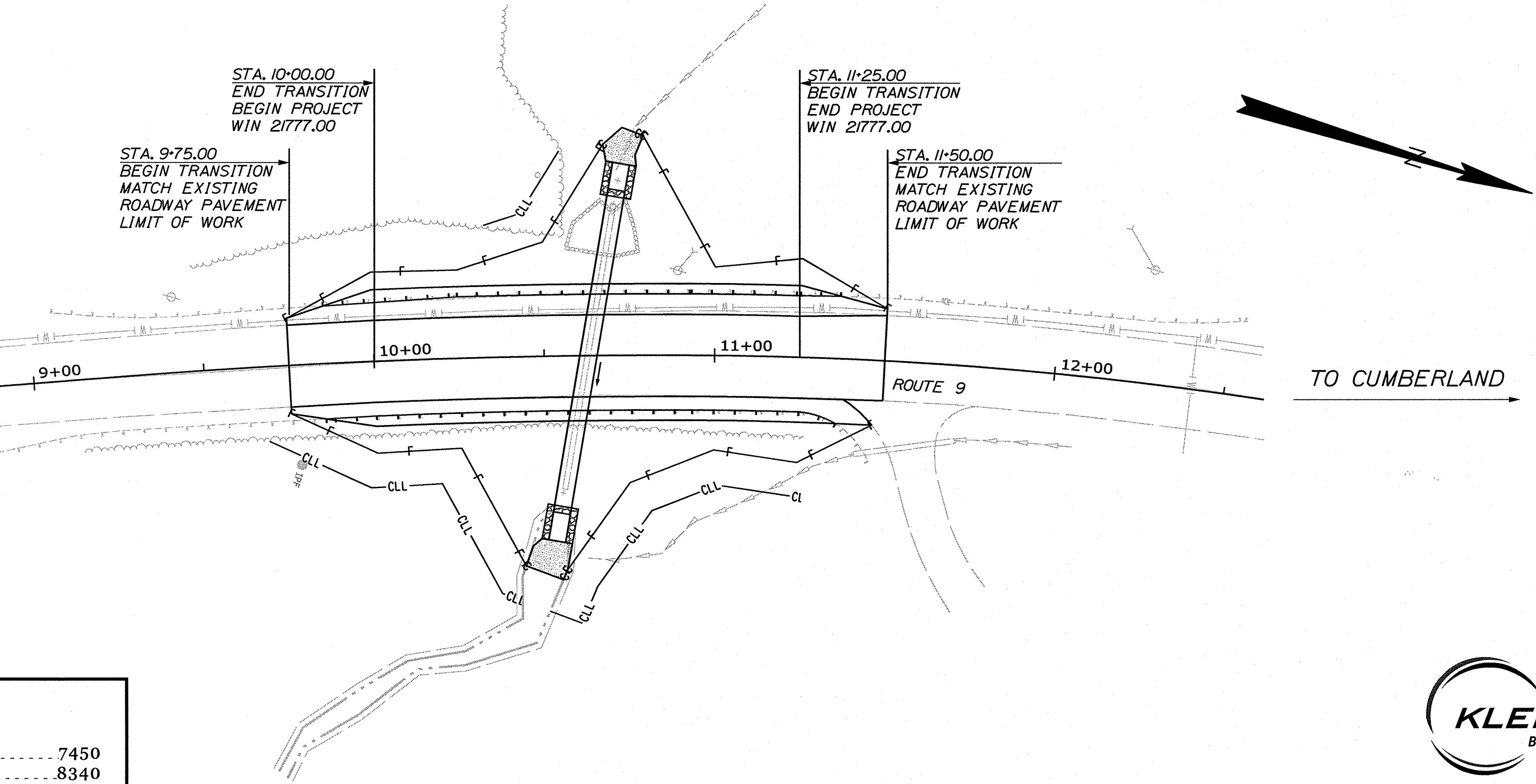
STATE PROJECT NO. 02177700
PROJECT LENGTH : 0.02 MILES

PLAN LEGEND

Town, County, State	Centerline-Existing	
Property Lines	Centerline-Proposed	10+00
R/W Lines-Existing	Travelway-Existing	
R/W Lines-Proposed	Travelway-Proposed	
Culvert-Existing	Railroad	
Culvert Proposed	Catch Basins	Existing Proposed
Curbing Existing Proposed	Manholes	Existing Proposed
Type 1	Proposed Underdrain	
Type 3	Proposed Ditch	
Type 5	Existing Ditch	
Outline of Bodies of Water	Utility Poles	Existing Proposed
Exposed Bedrock	Fire Hydrants	Existing Proposed
Buildings	Existing Water Line	
Trees Conifer Deciduous	Existing San. Sewer	
Tree Line	Existing San. Sewer Manhole	
Clearing Limit Line	Guardrail-Existing	
Probe P-#.#X	Guardrail-Proposed	
#.# = Depth	Guardrail-Cable, Other	
X = W (Weathered Rock)	Boring HB-XXX-###	
R (Refusal)	Pavement Core PC-#	
NR (No Refusal)	Test Pit TP-XXX-###	

INDEX OF SHEETS

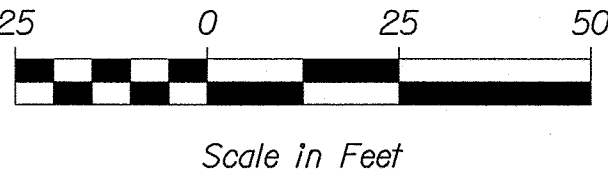
Description	Sheet No.
Title Sheet	1
Typical Sections	2
Estimate Quantities & General Notes	3
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Boring Location Plan	5
Interpretive Subsurface Profile	6
Boring Logs	7
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Cross Sections	9-15
Detour Plan	16
Right of Way Map	17



TRAFFIC DATA

Current (2019) AADT	7450
Future (2031) AADT	8340
DHV - % of AADT	12%
Design Hour Volume	1001
% Heavy Trucks (AADT)	7%
Directional Distribution (DHV)	60%
Design Speed (mph)	35
Functional Class	Urban Collector
Corridor Priority	3

LAYOUT SCALE



PROJECT LOCATION:

LARGE CULVERT (#46804) LOCATED 0.04 OF A MILE NORTH OF TURKEY LANE.

PROGRAM AREA:

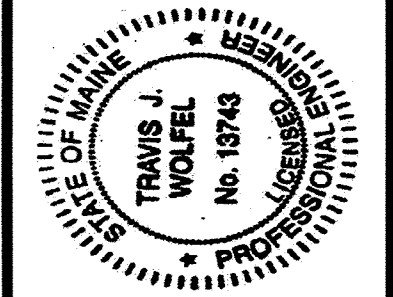
HIGHWAY PROGRAM

SCOPE OF WORK:

LARGE CULVERT REPLACEMENT



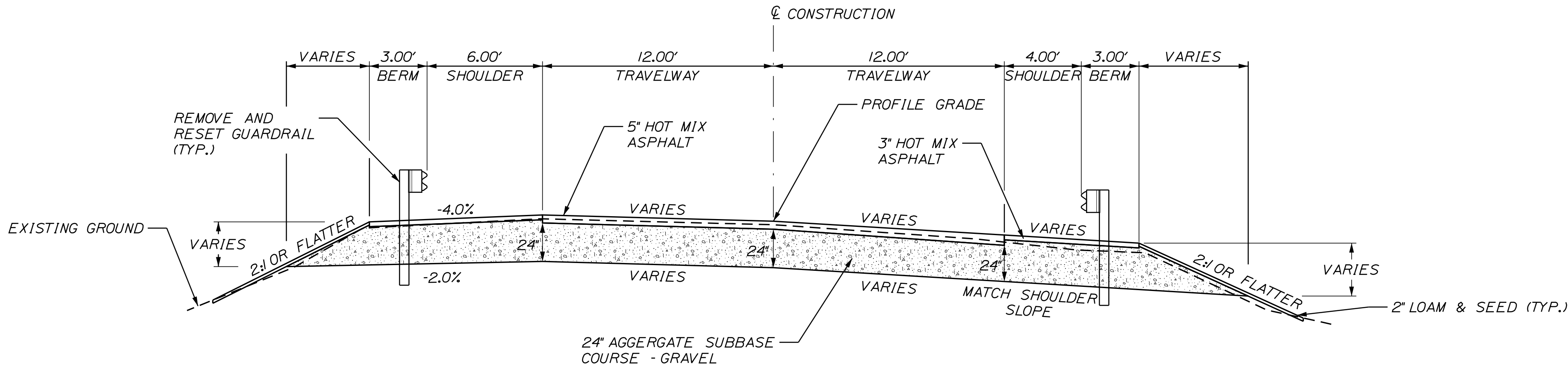
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
COMMISSIONER: <i>Debra Hall</i>	<i>Debra Hall</i>	4/19/19
CHIEF ENGINEER: <i>Debra Hall</i>	<i>Debra Hall</i>	4-8-19



PROJECT INFORMATION	PROGRAM	PROJECT MANAGER	DESIGNER	CONSULTANT	PROJECT RESIDENT	CONTRACTOR	PROJECT COMPLETION DATE
HIGHWAY	LARRY HAMILTON	TRAVIS WOLFEL	KLEINFELDER				
SIGNATURE	13743	P.E. NUMBER	3/22/2019	DATE			

CUMBERLAND
ROUTE 9
TITLE SHEET

SHEET NUMBER
1



FULL CONSTRUCTION
STA. 10+00 TO STA. 11+25

ROUTE 9 CROSS SLOPES (e)				
LEFT %		STATION	RIGHT %	
SHOULDER	TRAVELWAY		TRAVELWAY	SHOULDER
MATCH EXISTING	MATCH EXISTING	9+75	MATCH EXISTING	MATCH EXISTING
-4.0	+0.7	10+00	-6.0	-6.0
-4.0	+1.7	10+25	-6.0	-6.0
-4.0	+2.8	10+50	-6.0	-6.0
-4.0	+2.8	10+75	-6.0	-6.0
-4.0	+2.8	11+00	-6.5	-6.5
-4.0	+1.8	11+25	-7.5	-7.5
MATCH EXISTING	MATCH EXISTING	11+50	MATCH EXISTING	MATCH EXISTING

NOTES:

1. THE PAVEMENT, BASE AND SUBBASE DEPTHS AS SHOWN ON THE PLANS ARE INTENDED TO BE NOMINAL.
2. WHEN SUPERELEVATION EXCEEDS THE SLOPE OF THE LOW SIDE SHOULDER, THE LOW SIDE SHOULDER SHALL HAVE THE SAME SLOPE AS THE TRAVELWAY.
3. CROWNS FOR BOTH NORMAL AND SUPERELEVATION SECTIONS FOR ALL COURSES OF SUBBASE AND PAVEMENT SHALL BE STRAIGHT.
4. THE ALGEBRAIC DIFFERENCE BETWEEN THE SHOULDER AND TRAVELWAY CROSS SLOPES "ROLLOVER" SHALL NOT EXCEED 8%.
5. THE STATIONING SHOWN UNDER EACH TYPICAL SECTION IS APPROXIMATE.

STATE OF MAINE
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021777.00

WIN
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HIGHWAY PLANS

CUMBERLAND
ROUTE 9

TYPICAL SECTIONS

SHEET NUMBER

2

OF 17

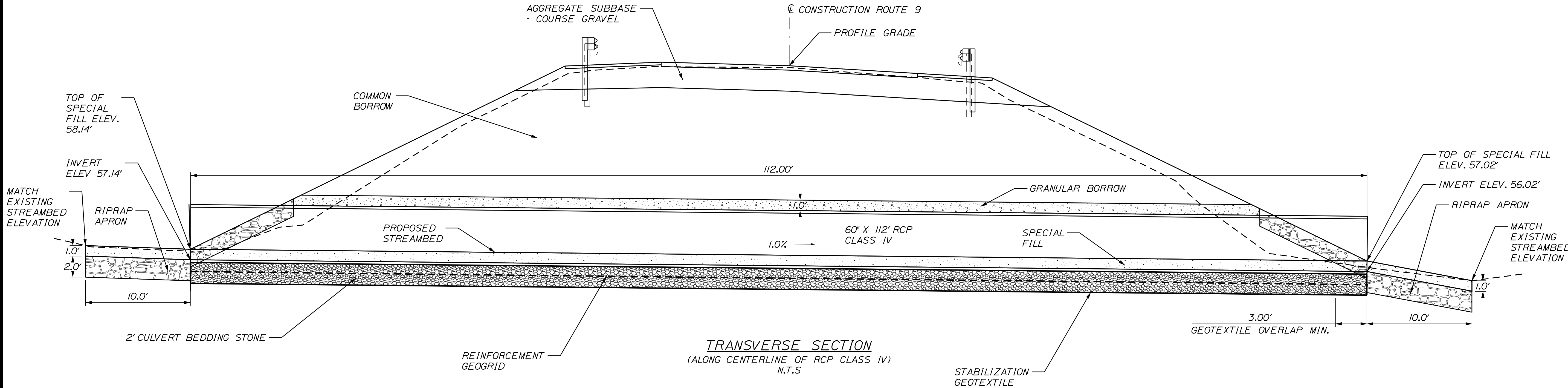
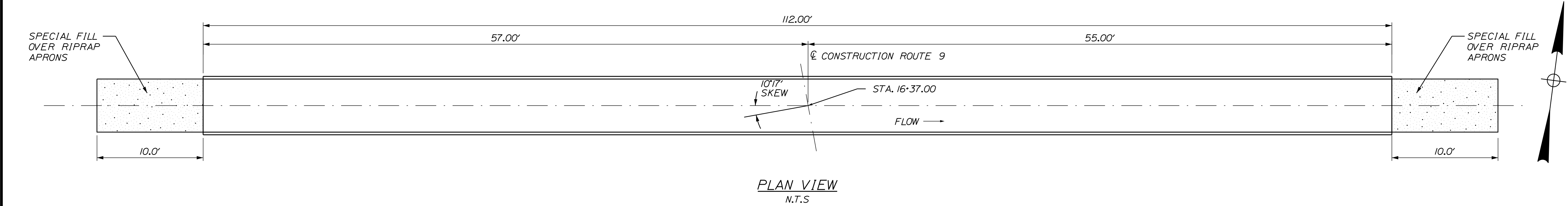
PROJ. MANAGER	L. HAMILTON	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	T. WOLFE	T. WOLFE	3/2019			
CHECKED-REVIEWED	K. WOOD	M. STEELE	3/2019			
DESIGN-DETAILED						
DESIGN-DETAILED						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

Date:4/11/2019

Username:

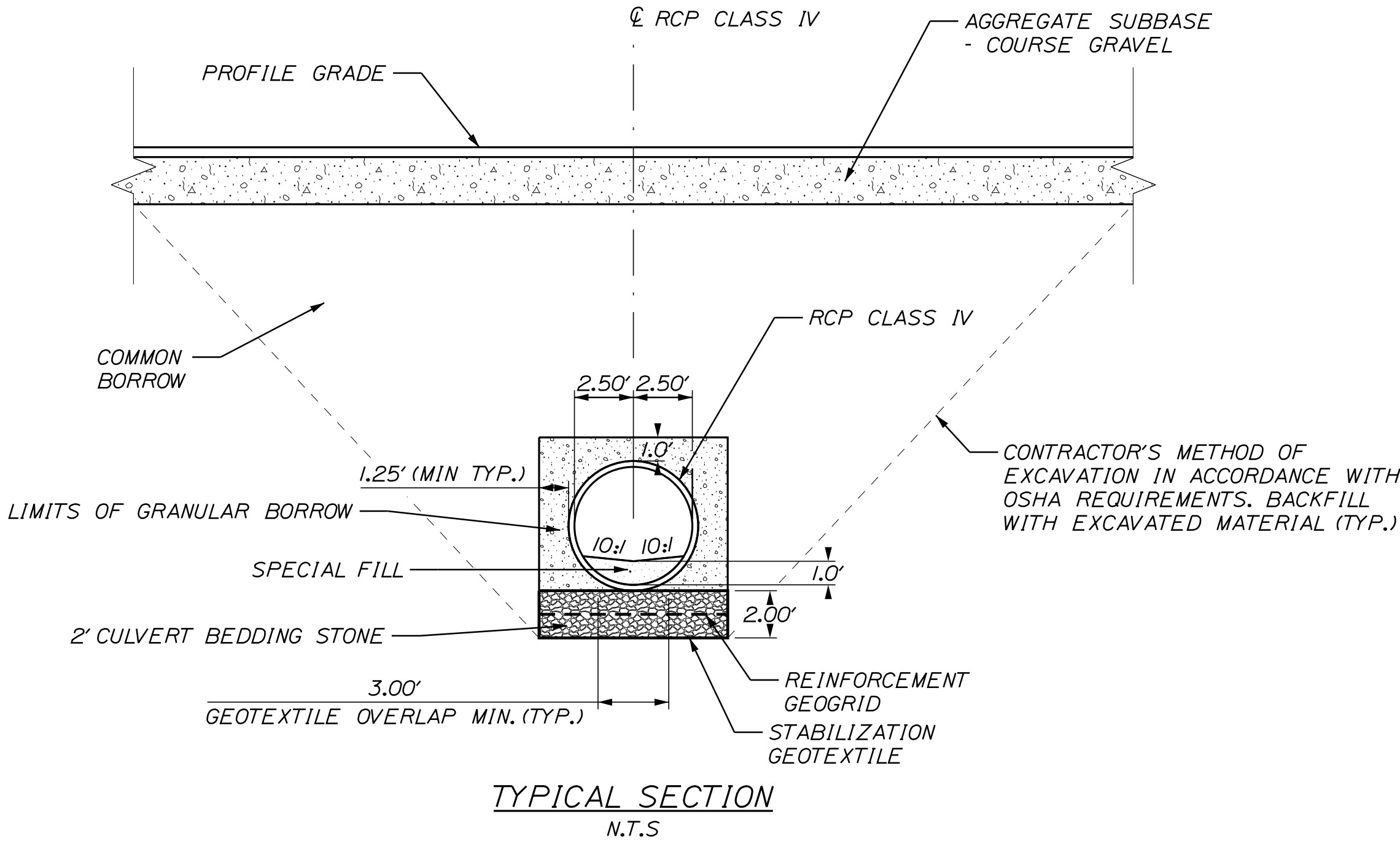
Division: HIGHWAY

Filename: ...\\004_Culvert\\Details.dgn



CULVERT NOTES

- 1.CONSTRUCTION, HANDLING, AND ASSEMBLY OF THE PRECAST UNITS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS APPLICABLE.
- 2.THE FURNISHING AND PLACING OF BACKFILL MATERIAL BETWEEN THE GRANULAR BORROW PAY LIMIT AND THE NORMAL SUBGRADE LINE WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED INCIDENTAL TO THE WORK. BACKFILL MATERIAL SHALL BE FROM SUITABLE EXCAVATION WITHIN PROJECT LIMITS, AS DIRECTED BY THE RESIDENT.
- 3.THE PIPE SHALL BE BEDDED ON A 2' THICK GEOTEXTILE WRAPPED, UNDERDRAIN BACKFILL MATERIAL, TYPE C WITH A LAYER OF GEOGRID AT THE CENTER. PAYMENT WILL BE MADE UNDER THE APPROPRIATE CONTRACT ITEMS.
- 4.BEDDING MATERIAL SHALL MEET THE REQUIREMENTS OF SPECIAL PROVISION 203 - CULVERT BEDDING STONE AND 703.22 - UNDERDRAIN BACKFILL MATERIAL TYPE C.
- 5.INLET AND OUTLET GRADING SHALL BE COORDINATED WITH THE MAINEDOT HYDROLOGY SECTION. THE CONTRACTOR SHALL GIVE THE RESIDENT A MINIMUM OF 48 HOURS NOTICE BEFORE INLET OR OUTLET GRADING MAY BEGIN. ROCK EXCAVATION, RIPRAP, AND SPECIAL FILL WILL BE PAID UNDER THE APPROPRIATE ITEMS.
- 6.STABALIZATION GEOTEXTILE SHALL BE OVERLAPPED A MINIMUM OF 3'.
- 7.THE SOFT CLAY AT THE BEDDING ELEVATION SHOULD BE EXCAVATED USING A SMOOTH-EDGED BACKHOE BUCKET TO MINIMIZE DISTURBANCE TO THE SOFT SOILS AT THE SITE. ANY DISTURBED SOILS AT THE BEDDING ELEVATION RESULTING FROM EXCAVATION ACTIVITIES SHOULD BE REMOVED BY HAND PRIOR TO PLACEMENT OF THE GEOTEXTILE WRAPPED, GEOGRID REINFORCED, CRUSHED STONE MAT.
- 8.THE REINFORCEMENT GEOGRID SHALL MEET THE REQUIREMENTS OF SPECIAL PROVISION 620.
- 9.VOIDS IN RIPRAP APRONS SHALL BE INFILLED WITH SPECIAL FILL WATER-IN AND TAMPED.

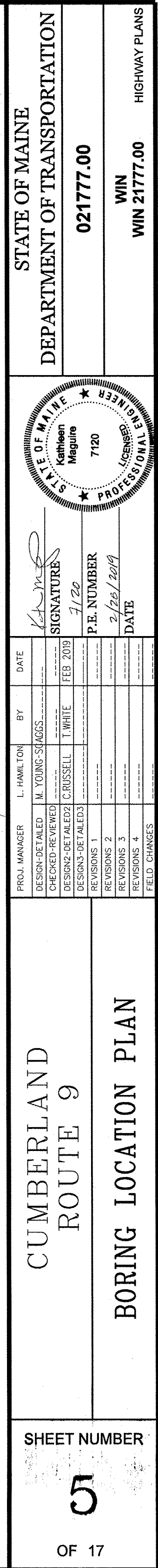


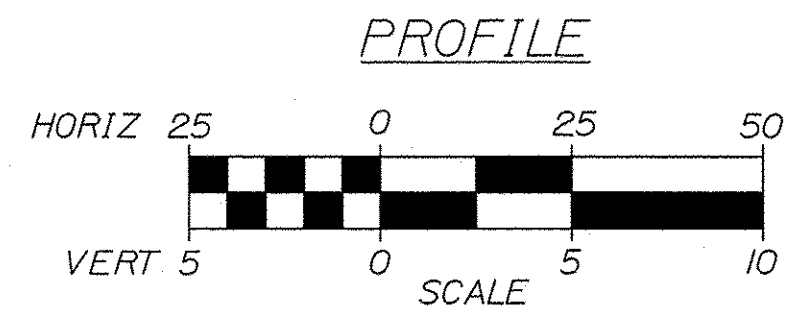
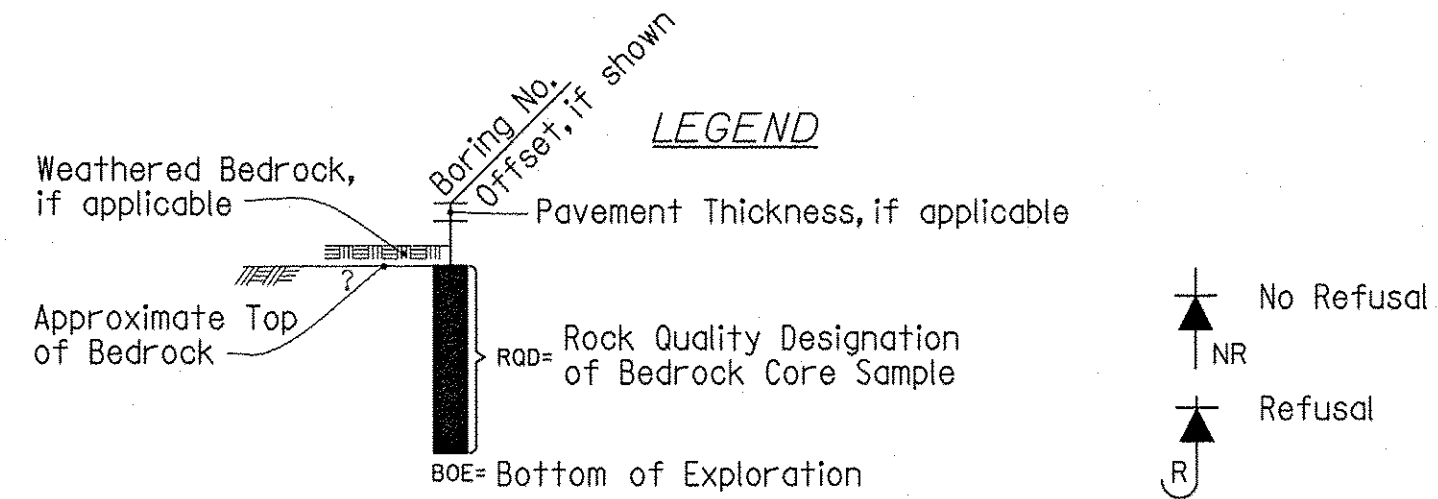
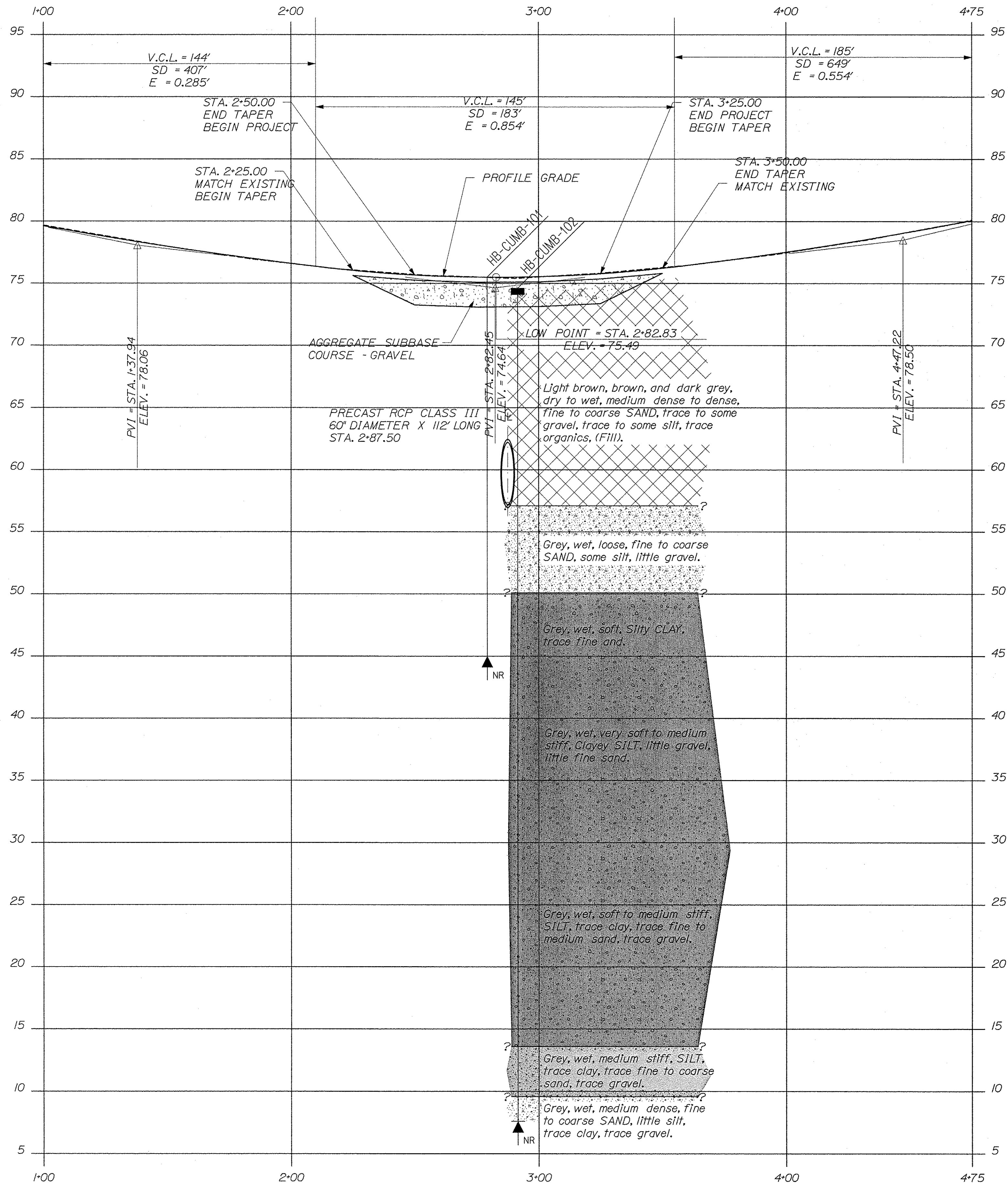
STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
021777.00	
WIN	21777.00
HIGHWAY PLANS	

PROJ. MANAGER	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
L. HAMILTON	T. WOLFEL	3/2019			
DESIGNED-Detailed	T. WOLFEL	3/2019			
CHECKED-Reviewed	M. STEELE	3/2019			
DESIGNED-Detailed					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

CUMBERLAND	
ROUTE 9	
CULVERT DETAILS	

SHEET NUMBER
4
OF 17





Note: This generalized interpretive soil profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil and bedrock transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.

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WIN
WIN 21777.00

HIGHWAY PLANS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Kathleen Maguire
7120
LICENSED PROFESSIONAL ENGINEER

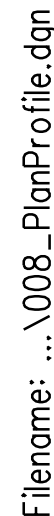
SIGNATURE
7/22
P.E. NUMBER
2/20/2019
DATE

PROJ. MANAGER	BY	DATE
DESIGN-DETAILED	L. HAMILTON	
CHECKED-REVIEWED	M. YOUNG-SHAGOS	FEB 2019
DESIGN-DETAILED2	C. RUSSELL	
DESIGN-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

CUMBERLAND
ROUTE 9

INTERPRETIVE SUBSURFACE PROFILE

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6
OF 17

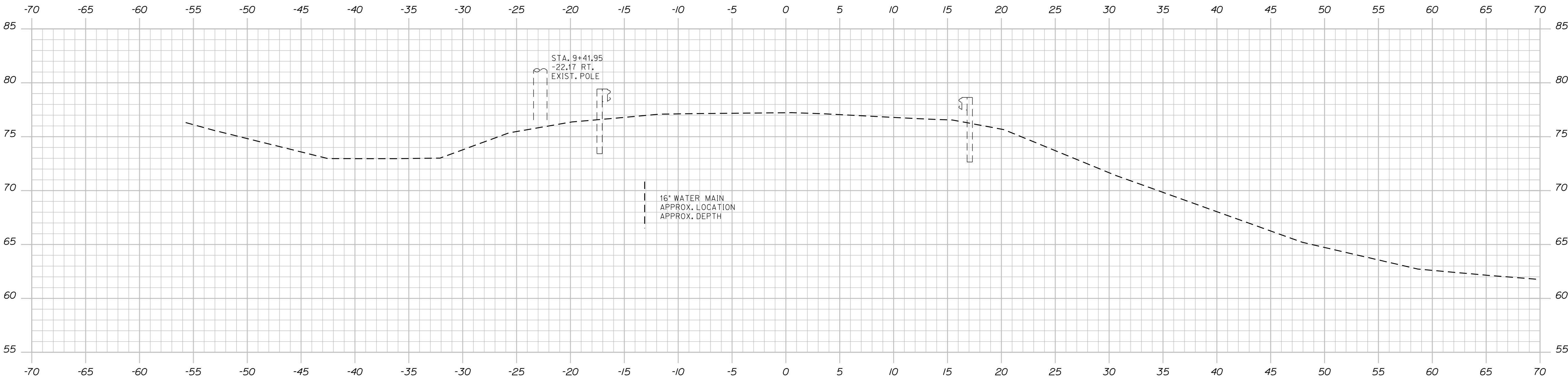
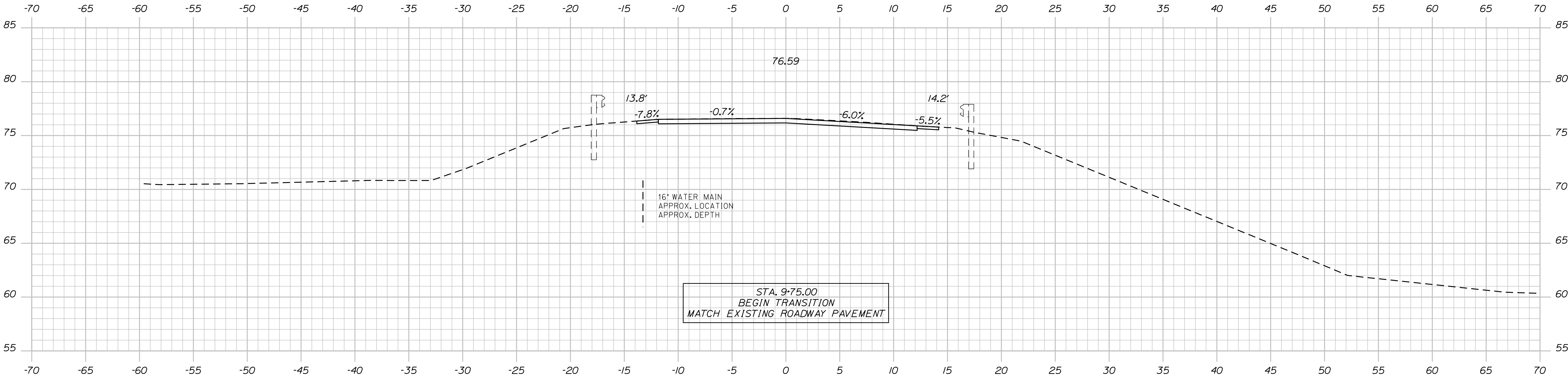


Date:4/11/2019

Username:

Division: HIGHWAY

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STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
021777.00	
WIN	21777.00
HIGHWAY PLANS	

PROJ. MANAGER	L. HAMILTON	BY	T. WOLFEL	DATE	3/2019
DESIGN-DETAILED	T. WOLFEL	CHECKED-REVIEWED	M. STEELE	SIGNATURE	
DESIGN-DETAILED	K. WOOD	DESIGN-DETAILED		P.E. NUMBER	
DESIGN-DETAILED		REVISIONS 1		DATE	
REVISIONS 2		REVISIONS 3			
REVISIONS 4		REVISIONS 4			
FIELD CHANGES					

CUMBERLAND ROUTE 9	CROSS SECTIONS
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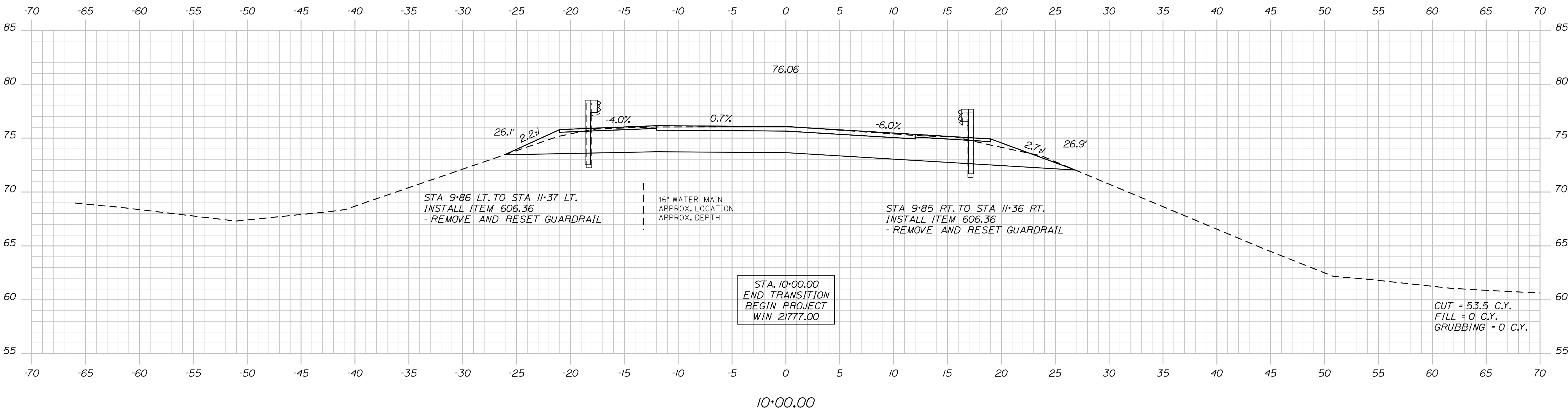
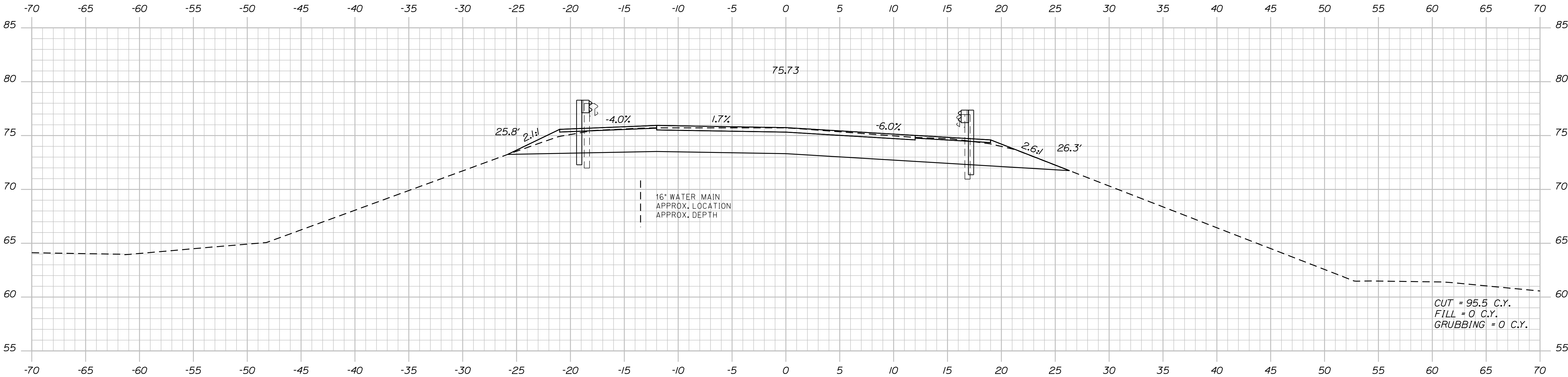
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Date:4/11/2019

Username:

Division: HIGHWAY

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L. HAMILTON	T. WOLFEL	K. WOOD	T. WOLFEL	M. STEELE					
DATE	3/2019	3/2019	SIGNATURE	P.E. NUMBER	DATE				

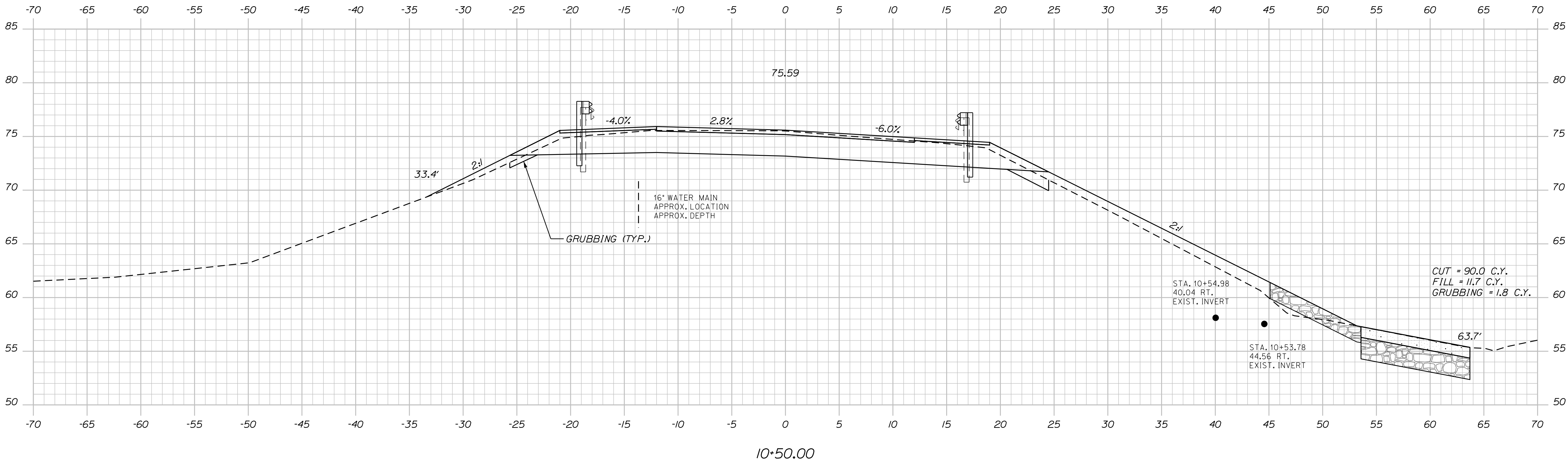
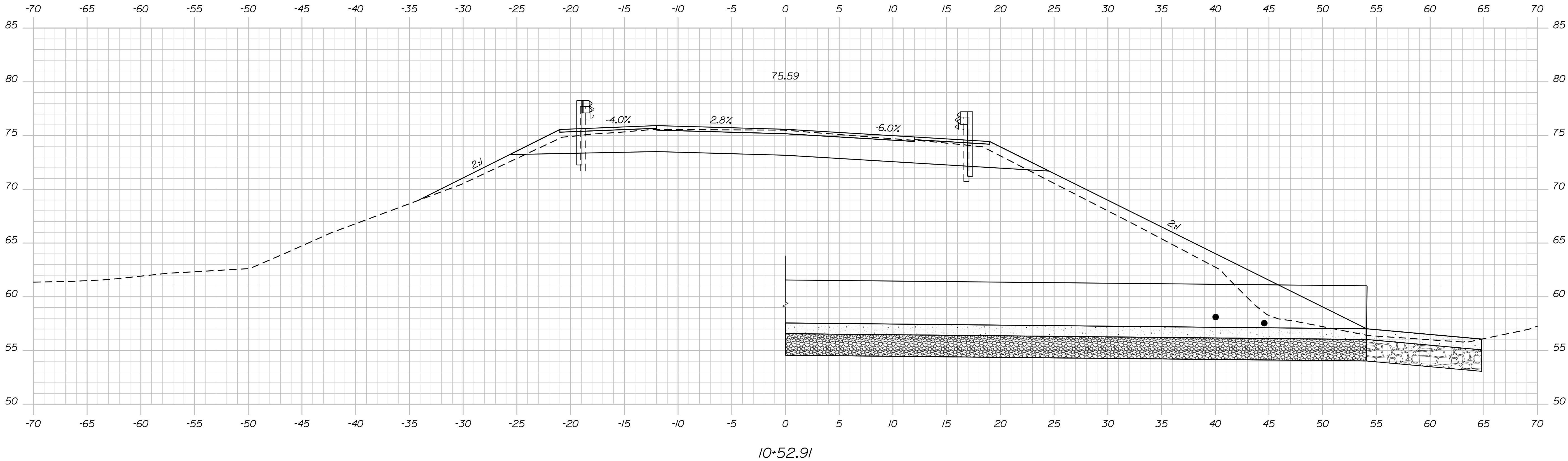
CUMBERLAND
ROUTE 9
CROSS SECTIONS

Date:4/11/2019

Username:

Division: HIGHWAY

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STATE OF MAINE DEPARTMENT OF TRANSPORTATION		
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	WIN	21777.00

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DESIGN-DETAILED	T. WOLFEL	CHECKED-REVIEWED	M. STEELE	SIGNATURE	
DESIGN-DETAILED	K. WOOD			P.E. NUMBER	
DESIGN-DETAILED				DATE	
REVISIONS 1					
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REVISIONS 4					
FIELD CHANGES					

CUMBERLAND ROUTE 9	CROSS SECTIONS
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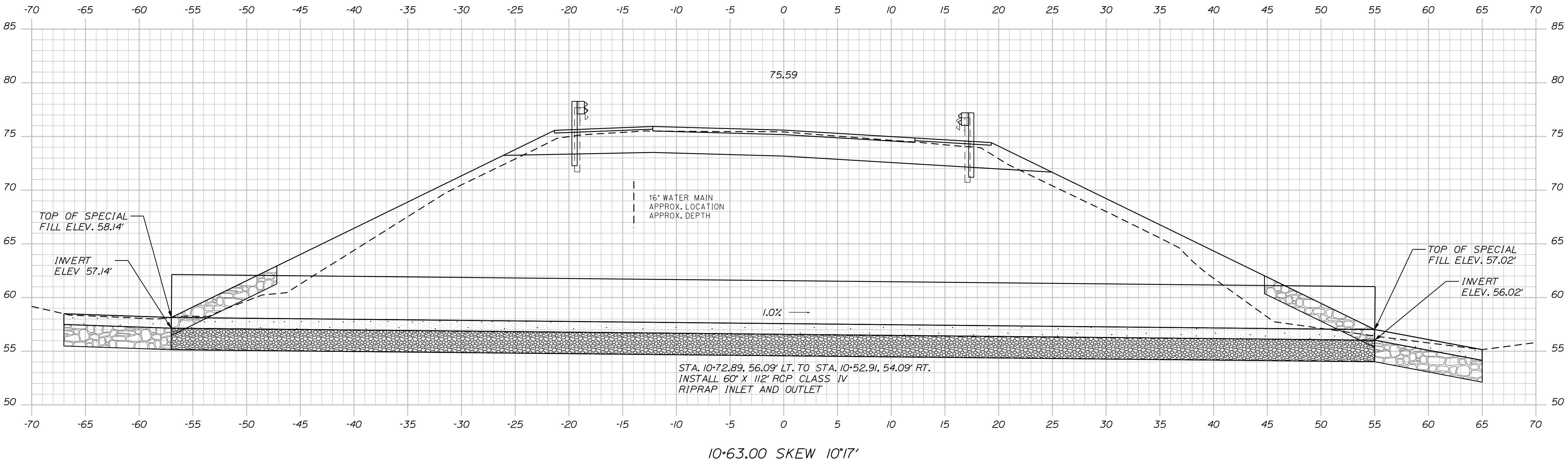
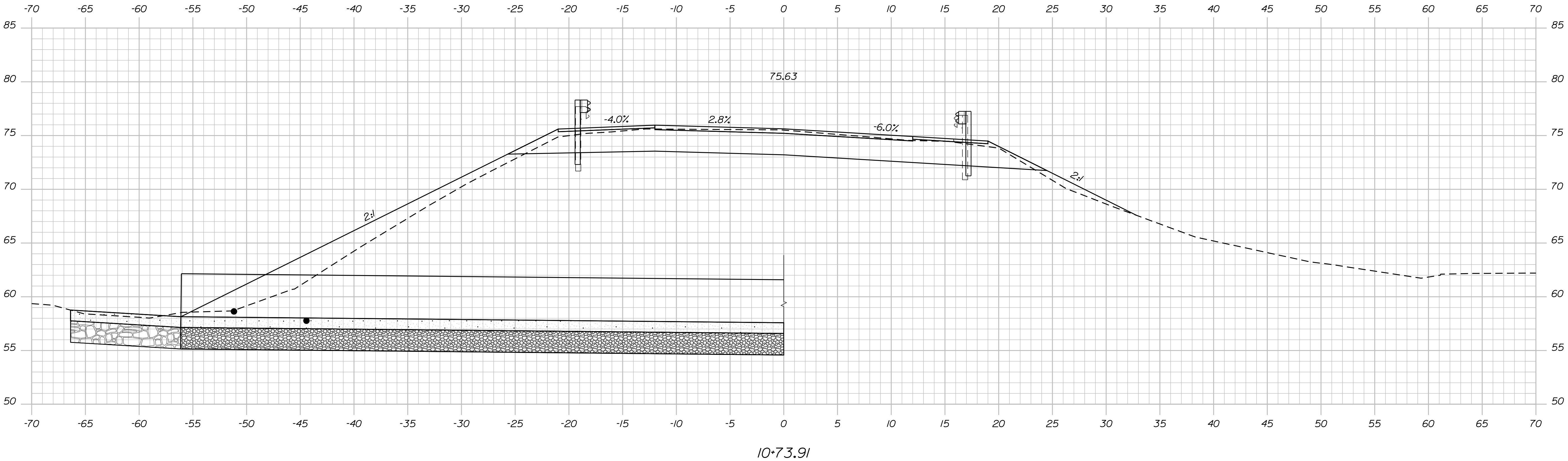
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Date:4/11/2019

Username:

Division: HIGHWAY

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DEPARTMENT OF TRANSPORTATION
021777.00
WIN
21777.00
HIGHWAY PLANS

PROJ. MANAGER	L. HAMILTON	BY	T. WOLFEL	DATE	3/2019
DESIGN-DETAILED	T. WOLFEL	CHECKED-REVIEWED	K. WOOD	SIGNATURE	
DESIGNS-DETAILED		DESIGNS-DETAILED		P.E. NUMBER	
REVISIONS 1		REVISIONS 2		DATE	
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FIELD CHANGES					

CUMBERLAND
ROUTE 9
CROSS SECTIONS

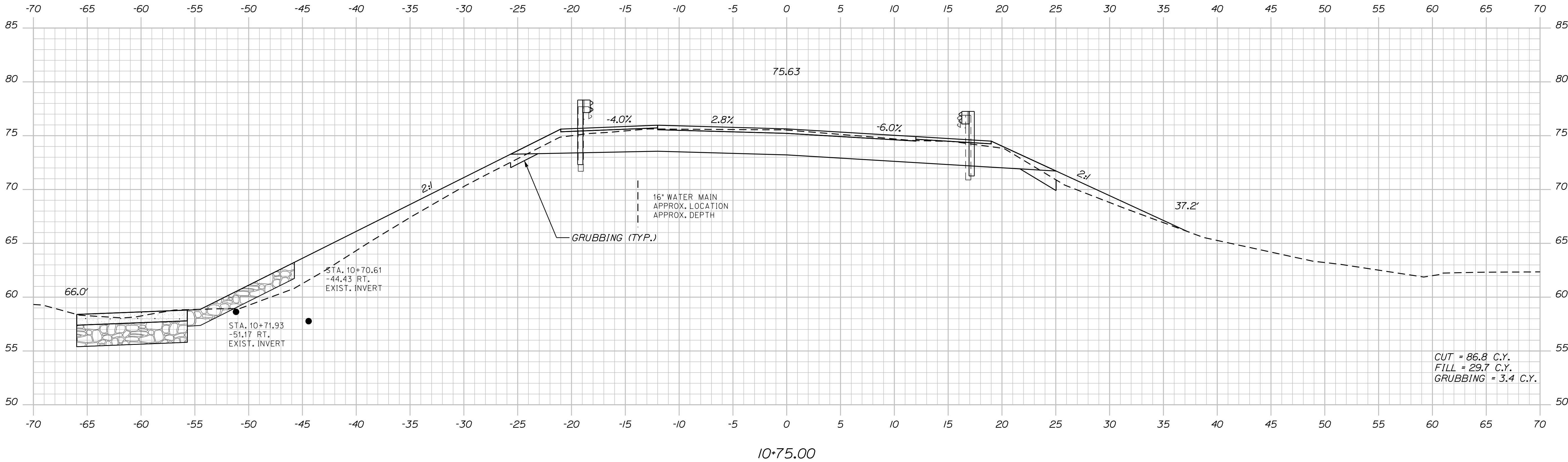
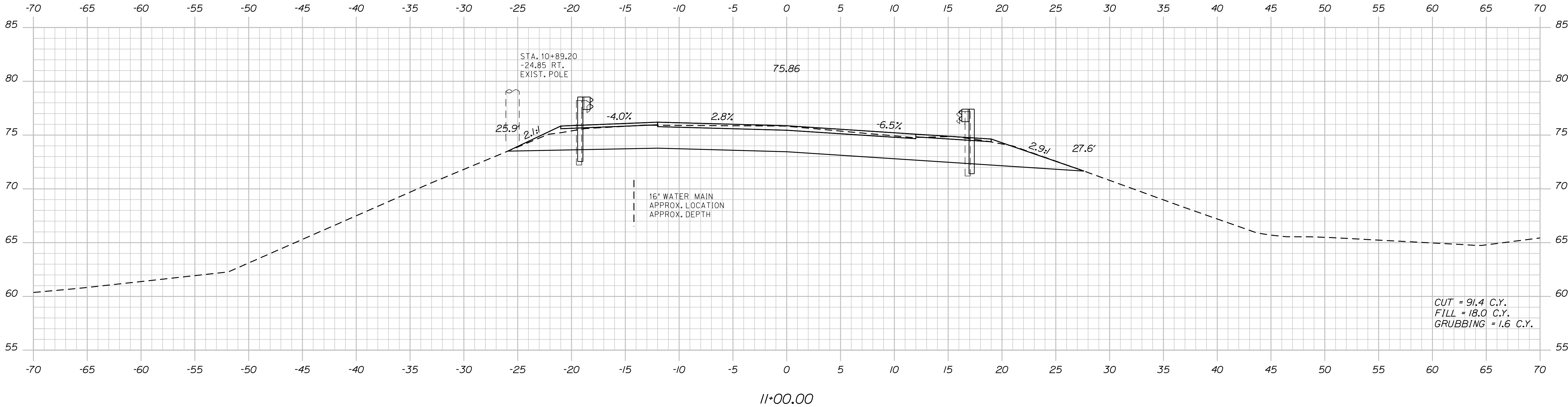
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Date:4/11/2019

Username:

Division: HIGHWAY

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DEPARTMENT OF TRANSPORTATION	
021777.00	
WIN	21777.00
HIGHWAY PLANS	

PROJ. MANAGER	L. HAMILTON	BY	T. WOLFEL	DATE	3/2019
DESIGN-DETAILED	T. WOLFEL	CHECKED-REVIEWED	M. STEELE	SIGNATURE	
DESIGN-DETAILED	K. WOOD			P.E. NUMBER	
DESIGN-DETAILED				DATE	
REVISIONS 1					
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FIELD CHANGES					

CUMBERLAND	ROUTE 9
CROSS SECTIONS	

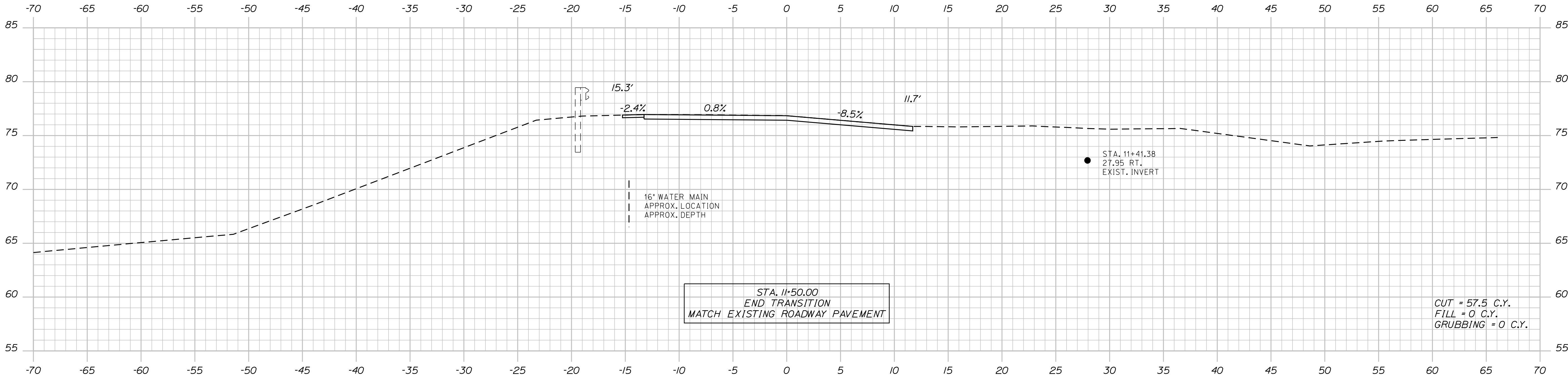
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OF 17

Date:4/11/2019

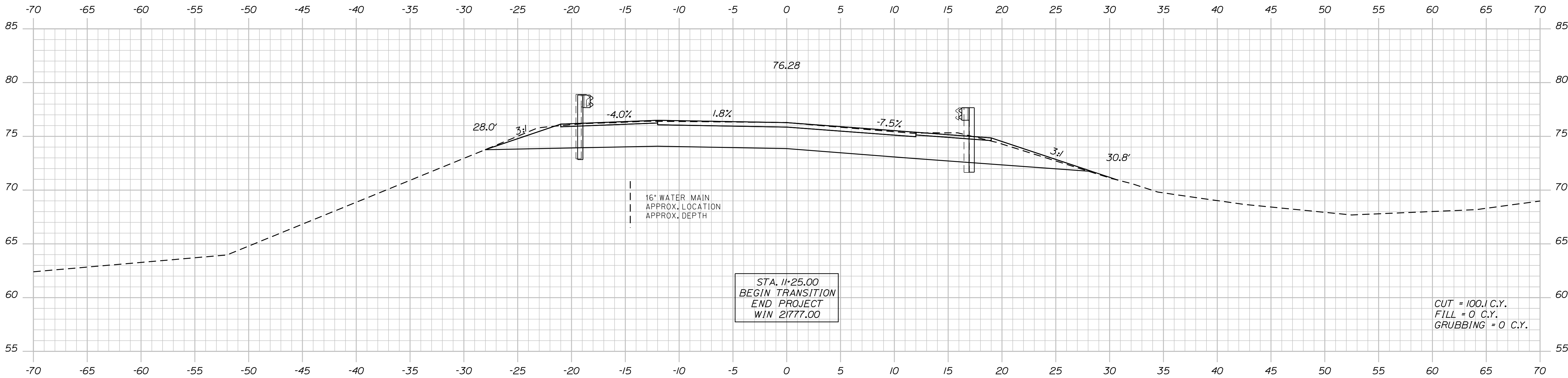
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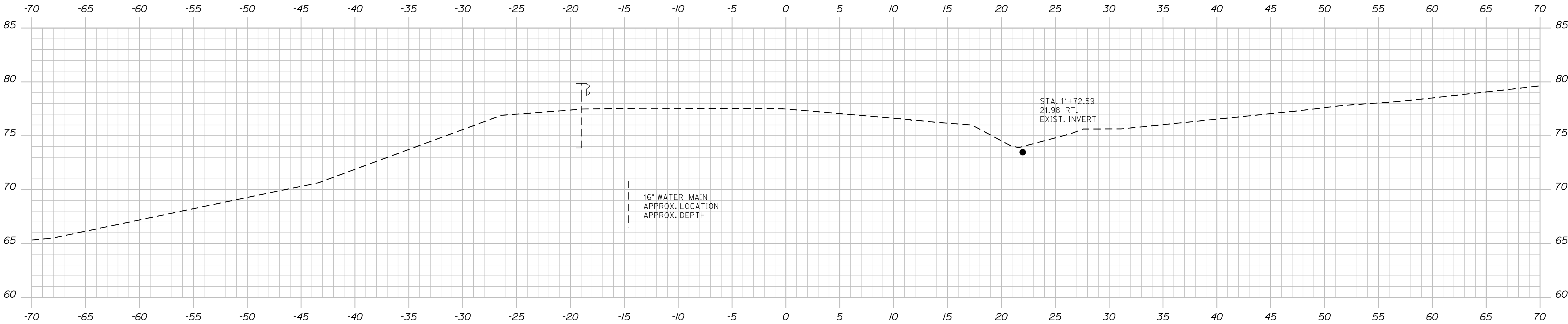
11+50.00



11+25.00

PROJ. MANAGER	DESIGN-DETAILED	CHECKED-REVIEWED	DESIGN-DETAILED	DESIGN-DETAILED	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES
L. HAMILTON	T. WOLFEL	K. WOOD	T. WOLFEL	M. STEELE					
DATE	3/2019	3/2019	SIGNATURE	P.E. NUMBER	DATE				

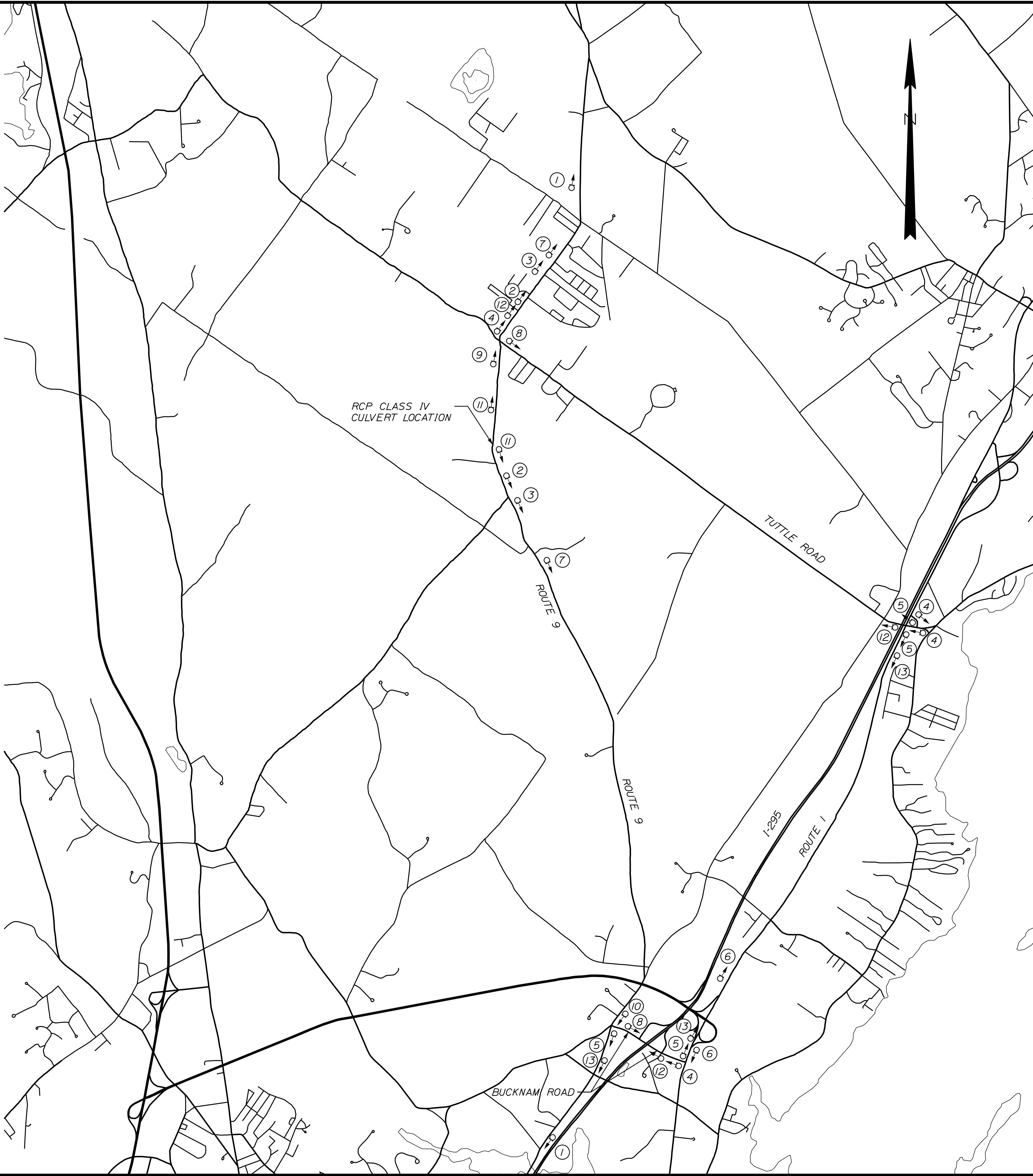
CUMBERLAND
ROUTE 9
CROSS SECTIONS



11+75.00

Sta. 11+75.00 to Sta. 11+75.00

CUMBERLAND ROUTE 9 CROSS SECTIONS		PROJ. MANAGER		L. HAMILTON	BY	DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION	
		DESIGN DETAILED		T. WOLFEL		3/2019		
		CHECKED-REVIEWED		K. WOOD	M. STEELE	3/2019		
		DESIGN DETAILED 2						
		DESIGN DETAILED 3						
		REVISED 1						
		REVISED 2						
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		REVISED 4						
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SHEET NUMBER		15					WIN 21777.00	HIGHWAY PLANS
OF 17								

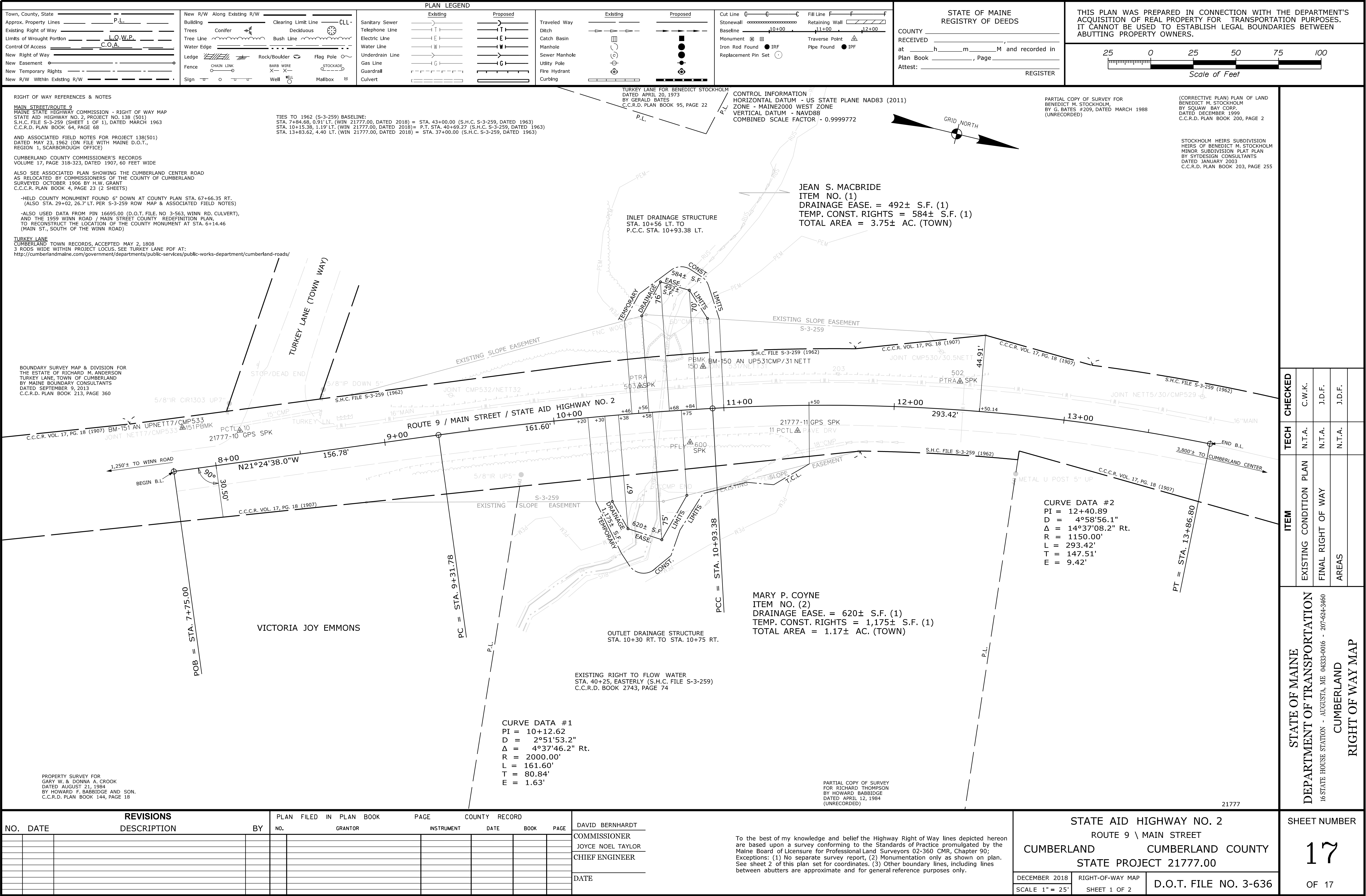


SHEET NUMBER 16 OF 17	CUMBERLAND ROUTE 9 DETOUR PLAN	PROJ. MANAGER	L. HAMILTON	BY	DATE
		DESIGN-DETAILED	I. WOLFFEL	I. WOLFFEL	3/2019
		CHECKED-REVIEWED	K. WOOD	M. STEELE	3/2019
		DESIGNS DETAIL D2			SIGNATURE
		DESIGNS DETAIL D3			
		REVISIONS 1			P.E. NUMBER
		REVISIONS 2			
		REVISIONS 3			
		REVISIONS 4			DATE
		FIELD CHANGES			
STATE OF MAINE DEPARTMENT OF TRANSPORTATION					
		021777.00			
		WIN 21777.00			
		HIGHWAY PLANS			

Username: Ronold M. Carpentier Date: 4/11/2019

Division: ROW

Filenome: ... \000\ROW\MSTA017_RWP\PLAN1.dgn



PROJECT:

ROUTE 9 - 60" CULVERT CUMBERLAND, MAINE WATER MAIN REPLACEMENT

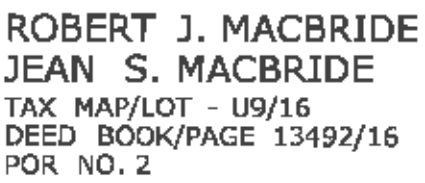
ASSET MANAGEMENT AND PLANNING DEPARTMENT
225 DOUGLASS STREET, PORTLAND ME 04104
(207) 774-5961 • WWW.PWD.ORG

SHEET:

- ### LEGEND

TEMPORARY WATER MAIN

1" = 25'



MARY P. COYNE
TAX MAP/LOT - U9/3A
DEED BOOK/PAGE 29755/65
POR NO. 3

VICTORIA JOY EMMONS
TAX MAP/LOT - U9/3
DEED BOOK/PAGE - 29119/317
POR NO. 1



CONTRACTOR'S METHOD OF EXCAVATION IN
ACCORDANCE WITH OSHA REQUIREMENTS.
BACKFILL WITH EXCAVATED MATERIAL (TYP.)