

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



DANFORTH
WASHINGTON COUNTY
SOUTH CROOKED BROOK BRIDGE
U.S. ROUTE 1
BRIDGE NO. 6594
FEDERAL PROJECT NO. 2284900
PROJECT LENGTH: 0.04 MILES

PLAN LEGEND

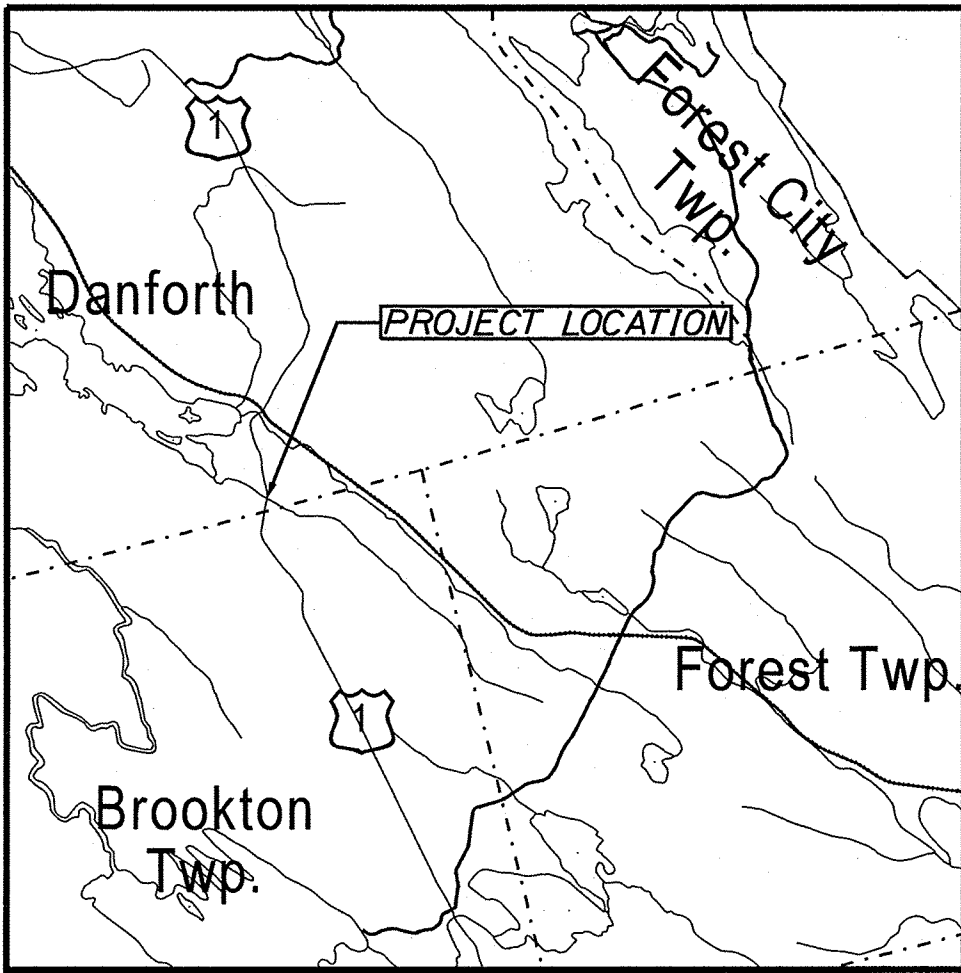
Town, County, State	Catch Basins	Existing	Proposed
Property Lines	Manholes	Existing	Proposed
R/W Lines-Existing	Proposed Underdrain		
R/W Lines-Proposed	Proposed Ditch		
Culvert-Existing	Existing Ditch		
Culvert Proposed	Utility Poles	Existing	Proposed
Curbing	Fire Hydrants	Existing	Proposed
Type 1	Existing Water Line		
Type 3	Existing San. Sewer		
Type 5	Existing San. Sewer Manhole		
Outline of Bodies of Water	Guardrail-Existing		
Exposed Bedrock	Guardrail-Proposed		
Buildings	Guardrail-Cable, Other		
Trees	Centerline-Existing		
Tree Line	Centerline-Proposed		
Clearing Limit Line	Travelway-Existing		
Railroad	Travelway-Proposed		
Boring	Probe		
Pavement Core			
Test Pit			

INDEX OF SHEETS

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Boring Location Plan & Interpretive Subsurface Profile with Boring Logs	4
Plan/Profile	5
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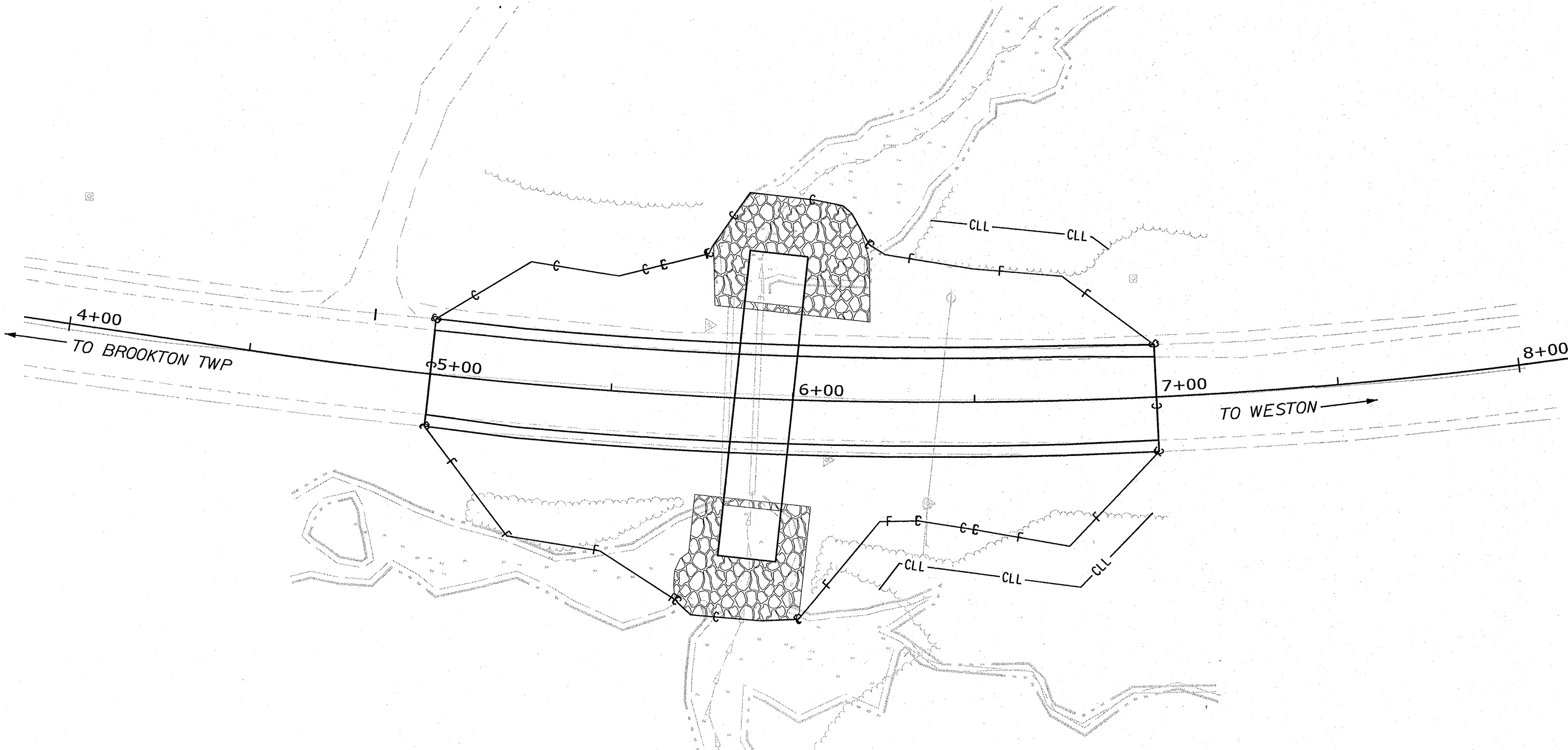
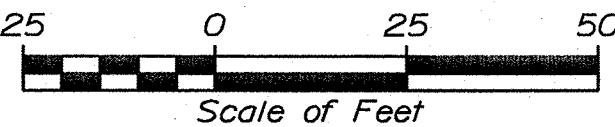
TRAFFIC DATA

Current (2018) AADT	1230
Future (2030) AADT	1300
DHV - % of AADT	9%
Design Hour Volume	117
% Heavy Trucks (AADT)	30%
Directional Distribution (DHV)	52%
Design Speed (mph)	50
Functional Class:	MAJOR/URB COLLECTOR
Corridor Priority	3



Scale in Miles
0 2 4
LOCATION MAP

LAYOUT SCALE



PROJECT LOCATION:

LARGE CULVERT REPLACEMENT ON U.S. ROUTE 1 IN DANFORTH, 0.12 MILES NORTH OF THE BROOKTON TWP / DANFORTH TOWN LINE

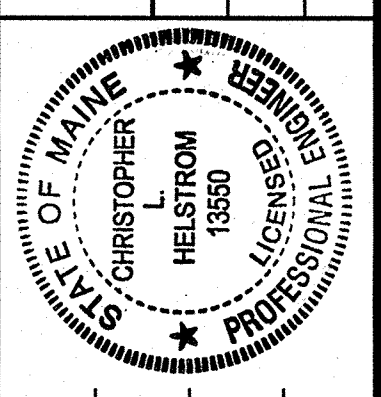
PROGRAM AREA:

HIGHWAY PROGRAM

SCOPE OF WORK:

HIGHWAY SAFETY AND SPOT IMPROVEMENTS (LARGE CULVERT REPLACEMENT)

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
COMMISSIONER		5/13/19
CHIEF ENGINEER		5-13-19



SIGNATURE	P.E. NUMBER	DATE
	13550	5/13/2019

PROJECT INFORMATION	PROGRAM	PROJECT MANAGER	DESIGNER	CONSULTANT	PROJECT RESIDENT	CONTRACTOR	PROJECT COMPLETION DATE
HIGHWAY PROGRAM	ROGER SOUCY	CHRIS HELSTROM					

DANFORTH - U.S. ROUTE 1 SOUTH CROOKED BROOK BRIDGE	TITLE SHEET
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SHEET NUMBER	1
OF 10	

WIN 22849.00 FEDERAL PROJECT NO. 2284900

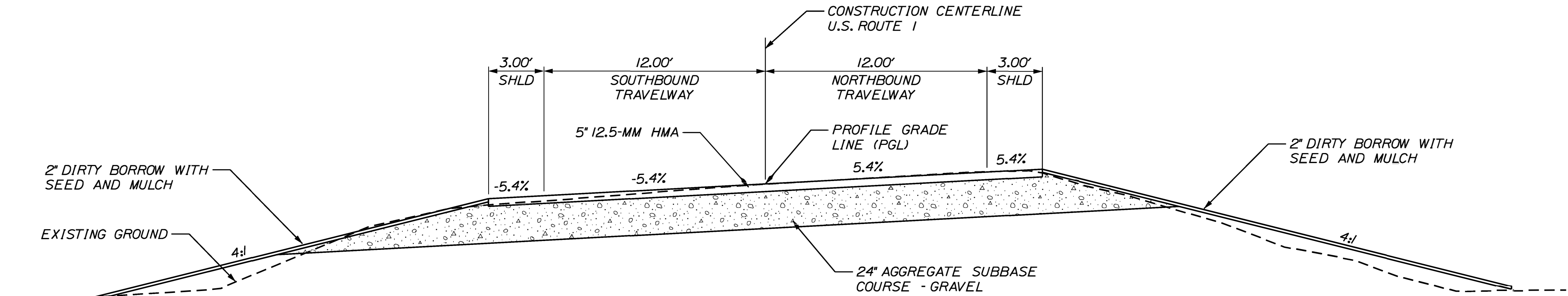
ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
			WIN 022849.00 U.S. ROUTE 1
203.20	COMMON EXCAVATION	CY	710
203.25	GRANULAR BORROW	CY	50
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	CY	650
403.2081	HOT MIX ASPHALT, 12.5 MM HMA SURFACE (POLYMER MODIFIED)	TON	100
403.213	HOT MIX ASPHALT, 12.5 MM BASE	TON	100
409.15	BITUMINOUS TACK COAT, APPLIED	GAL	50
508.13	MEMBRANE WATERPROOFING (210 SY)	LS	1
511.07	COFFERDAM: UPSTREAM	LS	1
511.071	COFFERDAM: DOWNSTREAM	LS	1
534.7101	PRECAST CONCRETE BOX CULVERT - STATE SUPPLIED	LS	1
610.08	PLAIN RIPRAP	CY	150
615.10	DIRTY BORROW	CY	50
618.14	SEEDING METHOD NUMBER 2	UN	8
619.12	MULCH	UN	8
620.58	EROSION CONTROL GEOTEXTILE	SY	300
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	LF	1200
627.78	TEMP 4" PAINT PVMT MARK LINE W OR Y	LF	200
629.05	HAND LABOR, STRAIGHT TIME	HR	20
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	HR	20
631.172	TRUCK-LARGE (INCLUDING OPERATOR)	HR	40
639.19	FIELD OFFICE, TYPE B	EA	1
643.72	TEMPORARY TRAFFIC SIGNAL	LS	1
652.33	DRUM	EA	8
652.34	CONE	EA	20
652.35	CONSTRUCTION SIGNS	SF	290
652.36	MAINTENANCE OF TRAFFIC CONTROL DEVICES	CD	45
652.38	FLAGGER	HR	50
652.61	STAGED CONSTRUCTION AND TRAFFIC CONTROL	LS	1
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LS	1
659.10	MOBILIZATION	LS	1

GENERAL NOTES

- PAVEMENT THICKNESSES SHOWN ON THE TYPICAL SECTIONS ARE INTENDED TO BE NOMINAL.
- CLEARING LIMITS SHALL BE 10FT BEYOND AND PARALLEL TO THE CONSTRUCTION SLOPE LINES OR AS SHOWN ON THE PLANS UNLESS OTHERWISE AUTHORIZED BY THE RESIDENT.
- ALL CLEARING SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT WILL BE MADE. THE ACTUAL LINES FOR CLEARING SHALL BE ESTABLISHED IN THE FIELD BY THE CONTRACTOR AS INDICATED ON THE PLANS AND APPROVED BY THE RESIDENT.
- GRUBBING IN FILL AREAS HAS BEEN SHOWN ON THE CROSS SECTIONS AND THE QUANTITIES NOTED. THESE LIMITS ARE APPROXIMATE AND HAVE BEEN USED FOR ESTIMATING PURPOSES ONLY. ACTUAL GRUBBING LIMITS MAY VARY BASED ON FIELD CONDITIONS AS DIRECTED BY THE RESIDENT.
- ALL INSLOPE AND DITCHES IN CUT AREAS SHALL BE GRADED AS SHOWN ON THE TYPICALS OR FLATTER, OR AS DIRECTED BY THE RESIDENT.
- THE CONTRACTOR SHALL PLAN AND CONDUCT THEIR WORK ACCORDINGLY SO THAT UPON FINAL COMPLETION OF THE PROEJCT THERE IS NO DROP-OFF FROM THE EDGE OF SHOULDER PAVEMENT.
- ALL WASTE MATERIAL NOT USED ON THE PROJECT SHALL BE DISPOSED OF OFF THE PROJECT IN ACCEPTABLE WASTE AREAS REVIEWED BY THE RESIDENT. GRADING, SEEDING AND MULCHING OF WASTE AREAS SHALL BE CONSIDERED INCIDENTAL.
- GRANULAR BORROW USED TO BACKFILL MUCK EXCAVATION, IN LOW WET AREAS TO 1FT ABOVE WATER LEVEL OR OLD GROUND SHALL MEET REQUIREMENTS FOR GRANULAR BORROW MATERIAL FOR UNDERWATER BACKFILL AS SPECIFIED IN STANDARD SPECIFICATION 703.19.
- EXISTING INSLOPES IN PROPOSED FILL AREAS SHALL BE BENCHED BY EXCAVATING STEPS OF SUFFICIENT WIDTH TO PERMIT PLACING AND COMPACTING THE FILL MATERIAL ALONG WITH THE MATERIAL REMOVED.
- NO EXISTING DRAINAGE SHALL BE ABANDONED, REMOVED OR PLUGGED WITHOUT PRIOR APPROVAL OF THE RESIDENT.
- INLETS AND OUTLETS OF ALL CULVERTS SHALL BE RIPRAPPED UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE RESIDENT.

GENERAL NOTES (CON'T)

- DIRTY BORROW HAS BEEN ESTIMATED FOR ALL DISTURBED SLOPE AREAS OTHER THAN LAWN AREAS. ACTUAL PLACEMENT OF THE DIRTY BORROW SHALL BE AS NOTED ON THE PLANS OR DESIGNATED BY THE RESIDENT.
- UNLESS OTHERWISE NOTED SEEDING METHOD NO.1 SHALL BE UTILIZED ON ALL LAWNS AND DEVELOPED AREAS; SEEDING METHOD NO.2 SHALL BE UTILIZED ON ALL OTHER AREAS.
- DIRTY BORROW SHALL BE PLACED TO A NOMINAL DEPTH OF 2IN UNLESS OTHERWISE NOTED OR DIRECTED.
- ANY DAMAGE TO THE SLOPES CAUSED BY THE CONTRACTOR'S EQUIPMENT, PERSONNEL, OR OPERATION SHALL BE REPAIRED TO THE SATISFACTION OF THE RESIDENT. ALL WORK, EQUIPMENT, AND MATERIALS REQUIRED TO MAKE REPAIRS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- THE PROJECT GEOTECHNICAL REPORT TITLED "GEOTECHNICAL DESIGN REPORT FOR THE CONSTRUCTION OF SOUTH CROOKED BRIDGE, SOILS REPORT 2019-13, APRIL 22, 2019" CAN BE ACESSED AT THE MAINEDOT WEBSITE
HTTP://WWW.MAINE.GOV/MDOT/CONTRACTORS.
- GEOTECHNICAL INFORMATION FURNISHED OR REFERRED TO IN THE BID DOCUMENTS IS FOR THE USE OF THE BIDDERS. NO ASSURANCE IS GIVEN THAT THE INFORMATION OR INTERPRETATIONS WILL BE REPRESENTATIVE OF THE ACTUAL SUBSURFACE CONDITIONS THROUGH THE CONSTRUCTION SITE. MAINEDOT WILL NOT BE RESPONSIBLE FOR ANY INTERPRETATIONS OR CONCLUSION DRAWN FROM THE GEOTECHNICAL INFORMATION. THE BORING LOGS PROVIDED IN THE BID DOCUMENTS (IF ANY) PRESENT FACTUAL AND INTERPRETIVE SUBSURFACE INFORMATION COLLECTED AT DISCRETE LOCATIONS. DATA PROVIDED MAY NOT BE REPRESENTATIVE OF THE SUBSURFACE CONDITIONS BETWEEN BORING LOCATIONS.
- AREAS REQUIREING FILL ON THE PROJECT WILL COME FROM SUITABLE EXCAVATION FROM EXCAVATION, DITCH AND INSLOPE OR EQUIPMENT RENTAL AREAS.
- NO SEPARATE PAYMENT FOR SUPERINTENDENT OR FOREMAN WILL BE MADE FOR THE SUPERVISION OF EQUIPMENT AND LAYOUT OF WORK BEING PAID FOR UNDER THE EQUIPMENT RENTAL ITEMS.
- FINAL STRIPING FOR THE PROEJCT SHALL BE DONE BY THE CONTRACTOR PER THE STRIPING LAYOUT IN THE CONTRACT DOCUMENTS OR AS PROVIDED BY THE DEPARTMENT. PAYMENT SHALL BE MADE UNDER APPROPRIATE CONTRACT ITEMS.



TYPICAL SECTION FULL CONSTRUCTION
STA. 5+25.00 TO STA. 6+75.00
N.T.S.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2284900

WIN
22849.00

HIGHWAY PLANS

DANFORTH - U.S. ROUTE 1
SOUTH CROOKED BROOK BRIDGE

ESTIMATED QUANTITIES,
GENERAL NOTES, & TYPICAL SECTION

SHEET NUMBER

2

OF 10

PROJ. MANAGER	DATE	BY	R. SOURCE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	05/2019	D. WARDWELL	C. HELSTROM			
CHECKED-REVIEWED	05/2019	R. SOUCY	C. HELSTROM			
DESIGN-DETAILED						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

Date:10/28/2019

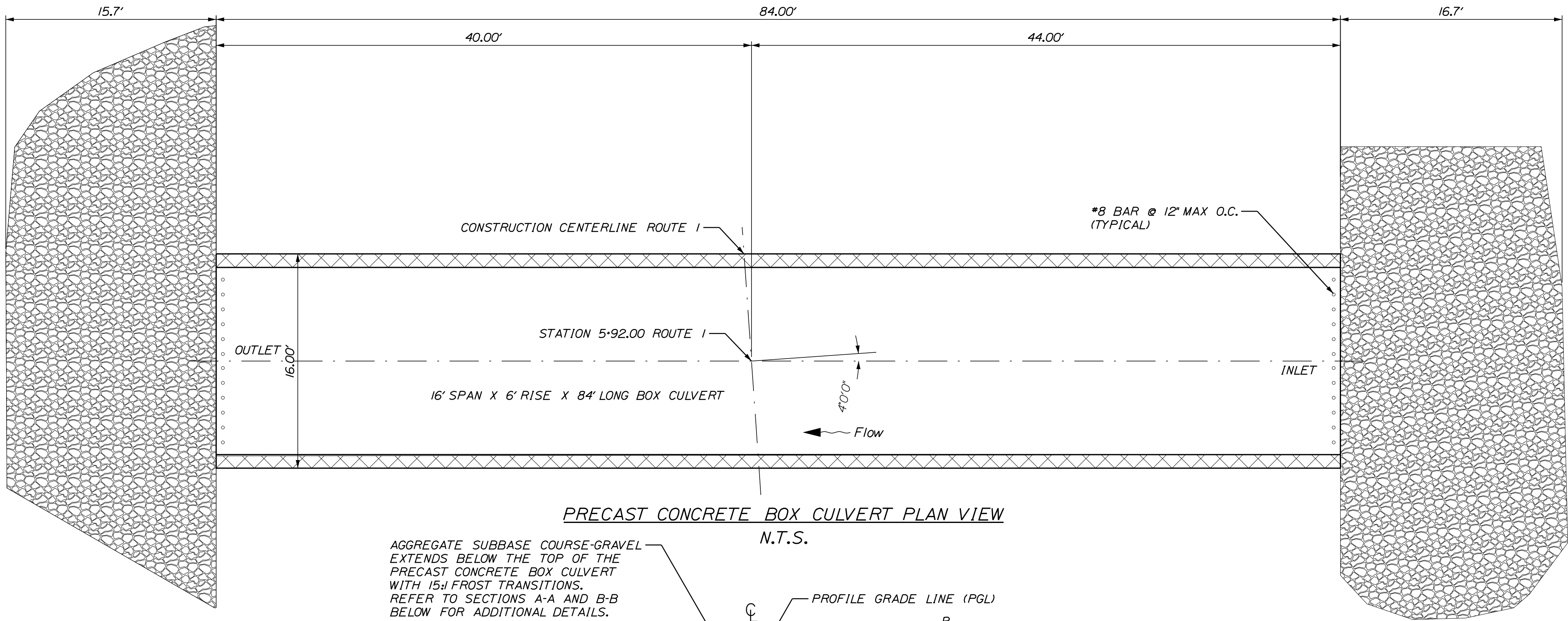
Username: chris.helstrom

Division: HIGHWAY

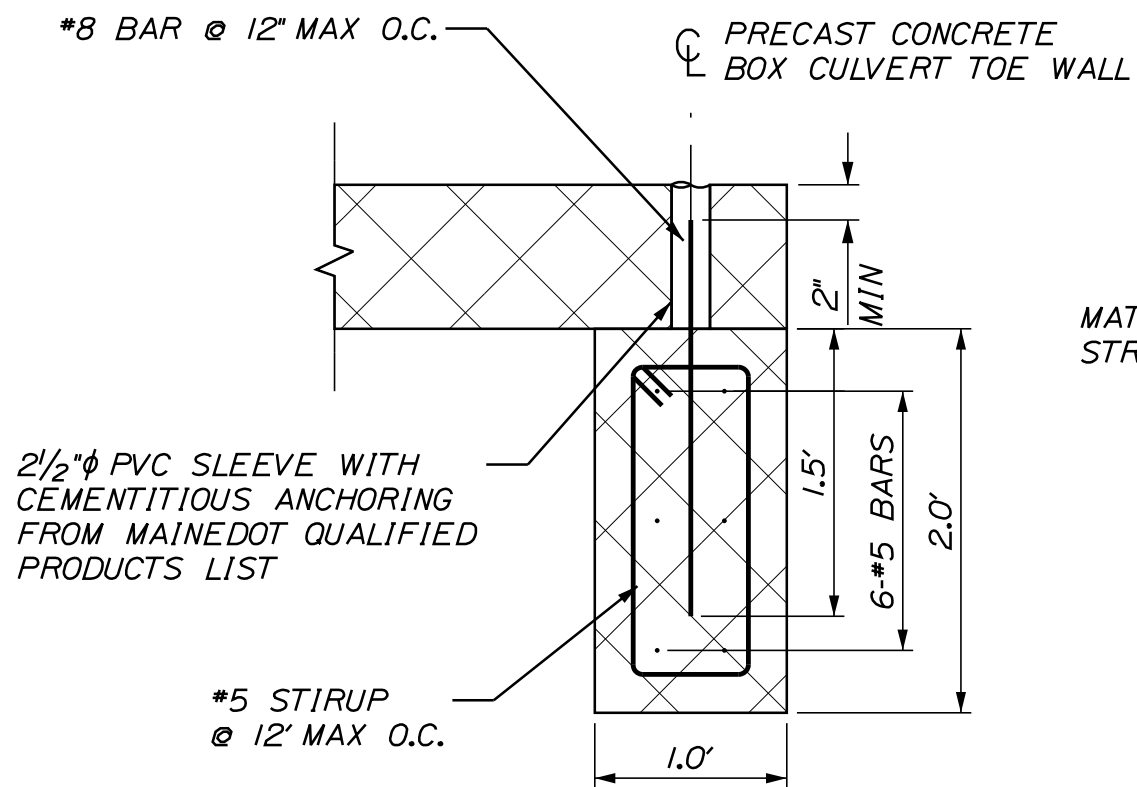
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PRECAST CONCRETE
BOX CULVERT NOTES:

1. THE CONSTRUCTION, HANDLING, AND ASSEMBLY OF THE PRECAST UNITS SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 534 AND ALL APPLICABLE SPECIFICATIONS.
2. INSTALL MEMBRANE WATERPROOFING OVER THE TOP AND TO 40" DOWN THE EXTERIOR SIDES OF THE PRECAST UNITS.
3. THE PRECAST CONCRETE BOX CULVERT SHALL BE BEDDED ON A 1-FOOT LAYER OF COMPACTED GRANULAR BORROW MATERIAL FOR UNDERWATER BACKFILL.
4. COFFERDAMS ARE TO BE PLACED AT BOTH THE DOWNSTREAM AND UPSTREAM ENDS OF THE STREAM CHANNEL TO ALLOW WORK TO BE COMPLETED IN THE DRY.
5. RIPRAP WILL BE USED TO INSLOPE AROUND THE CULVERT ENDS AT BOTH THE INLET AND OUTLET. SEE PLAN FOR LOCATIONS.

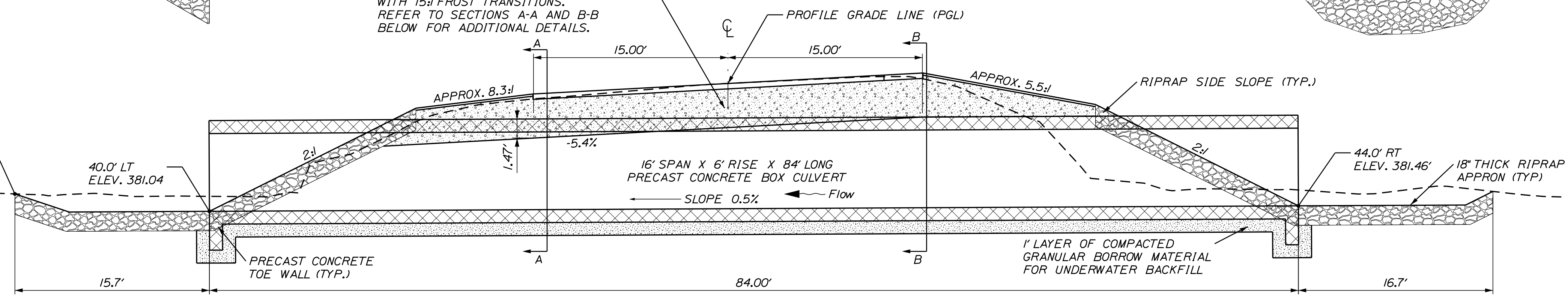


PRECAST CONCRETE BOX CULVERT PLAN VIEW
N.T.S.

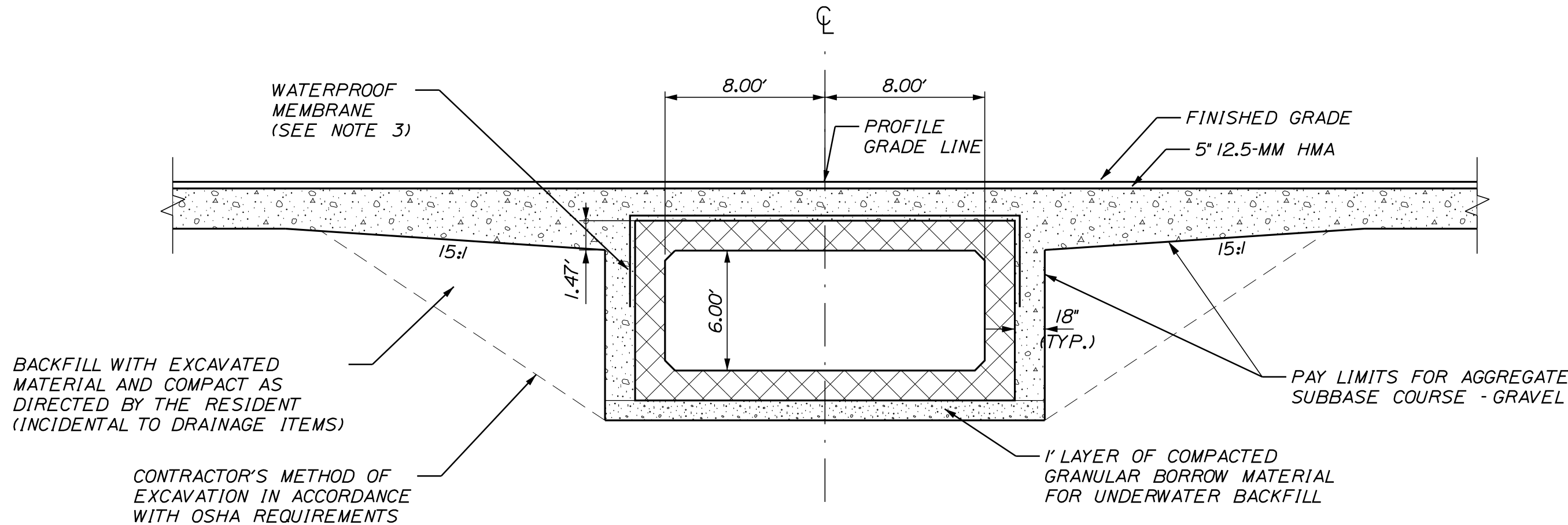


PRECAST CONCRETE TOE WALL DETAIL
N.T.S.

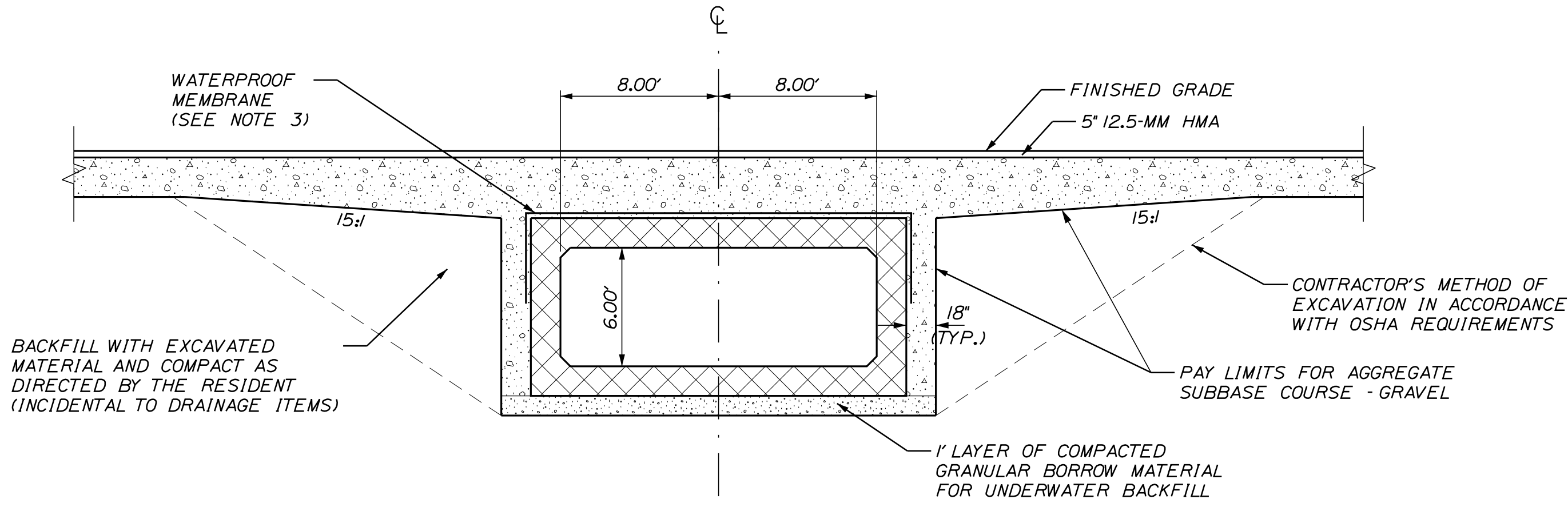
MATCH EXISTING
STREAMBED (TYP.)



PRECAST CONCRETE BOX CULVERT LONGITUDINAL SECTION
N.T.S.



PRECAST CONCRETE BOX CULVERT SECTION A-A
N.T.S.

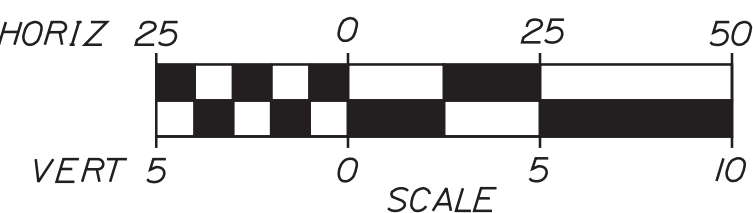


PRECAST CONCRETE BOX CULVERT SECTION B-B
N.T.S.

PROJ. MANAGER	DESIGN-DETAILED	CHECKED	REVIEWED	DATE
C. HELSTROM	C. HELSTROM	R. SOUCY	R. SOUCY	05/2019
DESIGN-DETAILED	DESIGN-DETAILED	DESIGN-DETAILED	DESIGN-DETAILED	DESIGN-DETAILED
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
REVISIONS	REVISIONS	REVISIONS	REVISIONS	REVISIONS
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2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
FIELD CHANGES	FIELD CHANGES	FIELD CHANGES	FIELD CHANGES	FIELD CHANGES
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3	3	3	3	3
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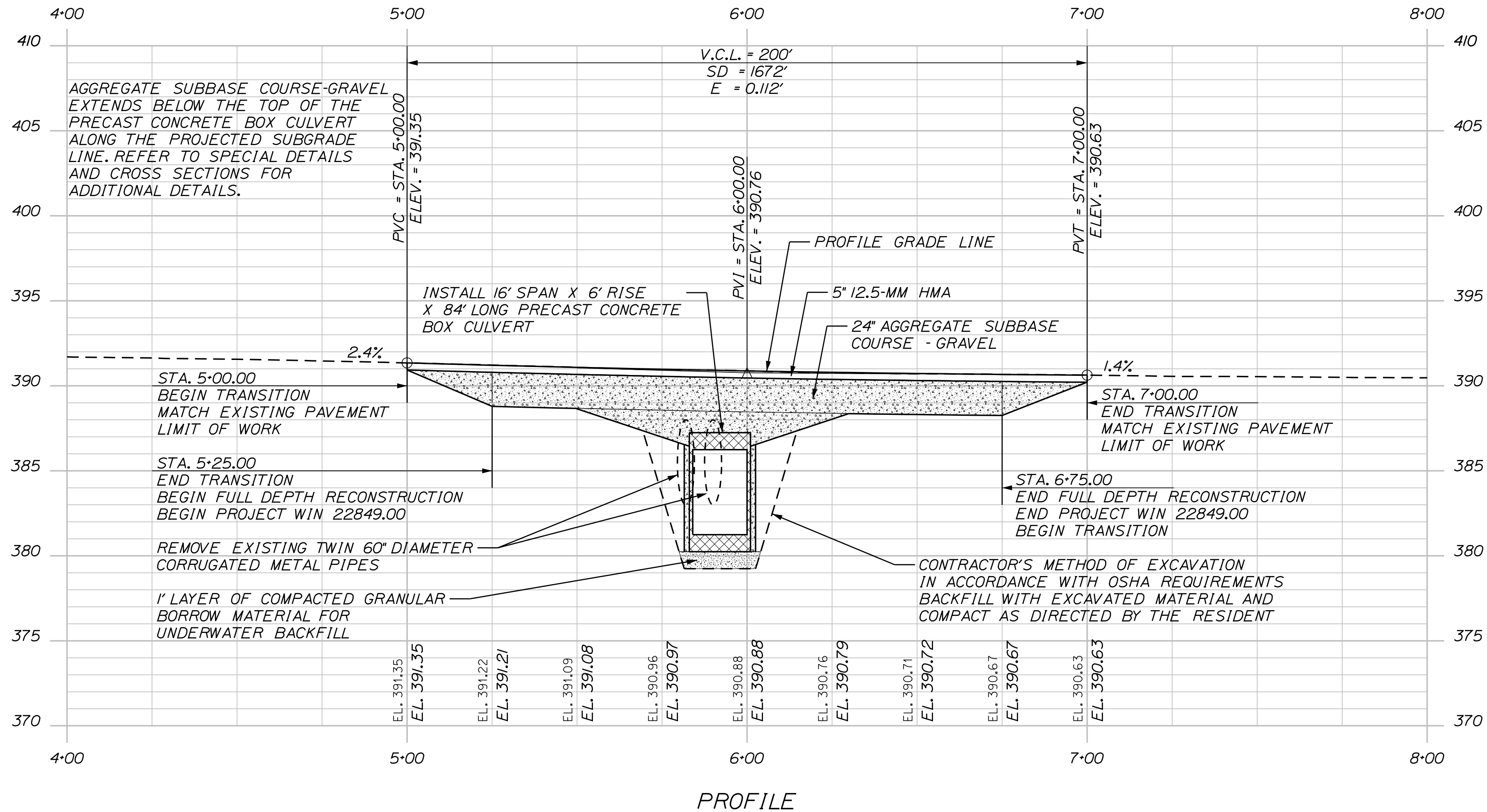
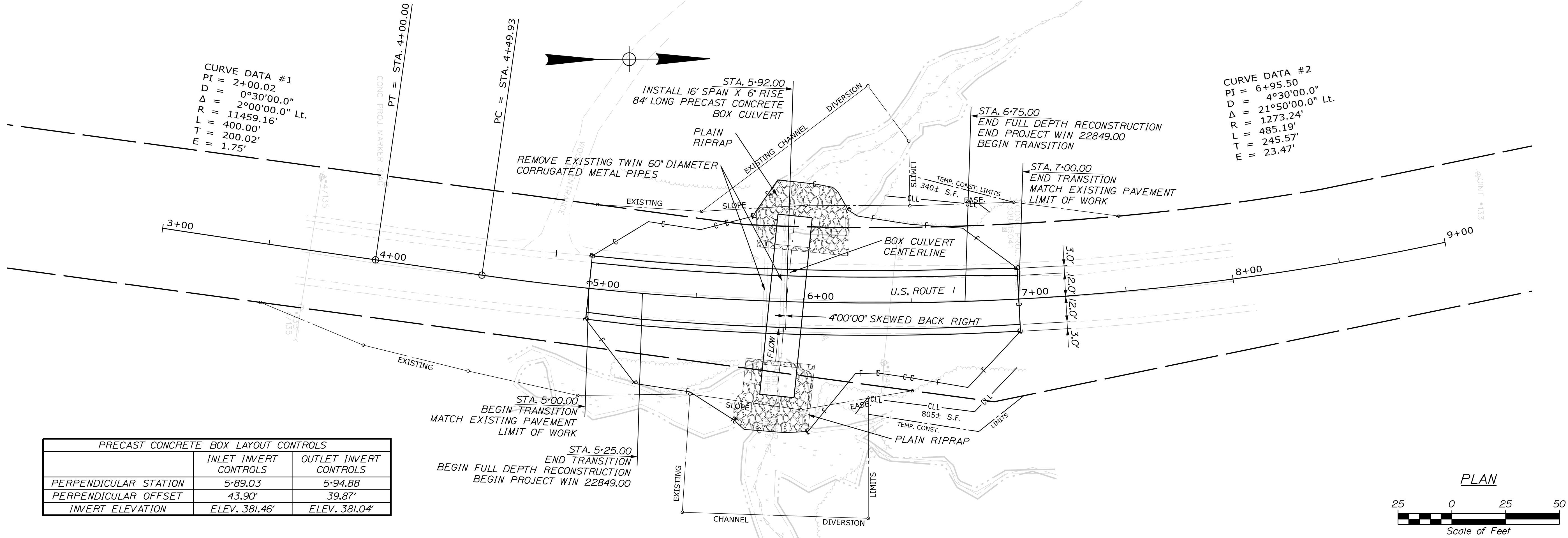


The diagram illustrates a vertical borehole log. At the top, a horizontal line is labeled "Weathered Bedrock, if applicable". Below this, a section of the log is labeled "Approximate Top of Bedrock". The main body of the log is a vertical rectangle with a hatched pattern, labeled "Rock Quality Designation of Bedrock Core Sample". Above the log, the text "BOE = Bottom of Exploration" is written. To the right of the log, the text "Pavement Thickness, if applicable" is written. The log itself is labeled "BOE" at the bottom and "BOE" at the top. The text "BOE" is also written at the top right of the diagram.



CURV
PI =
D =
 Δ =
R =
L =
T =
E :

[illegible]

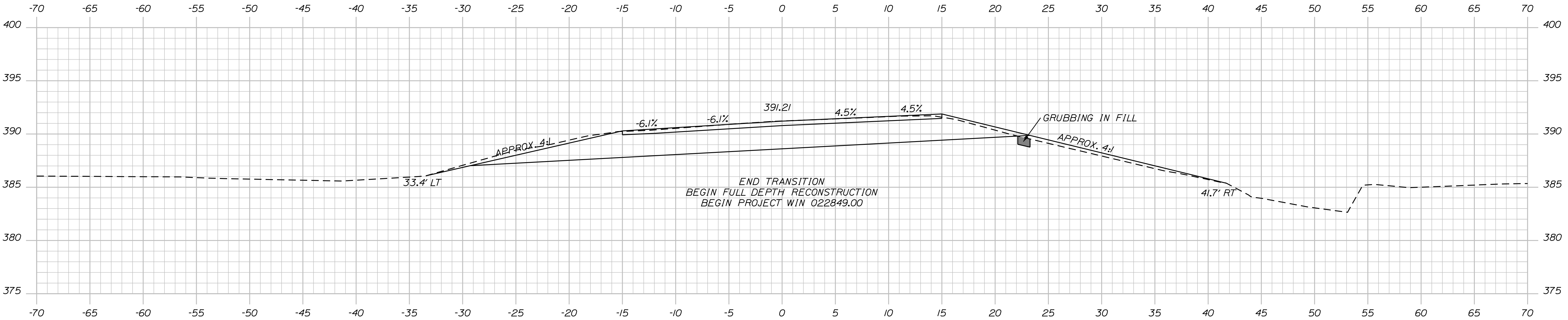


Date:10/28/2019

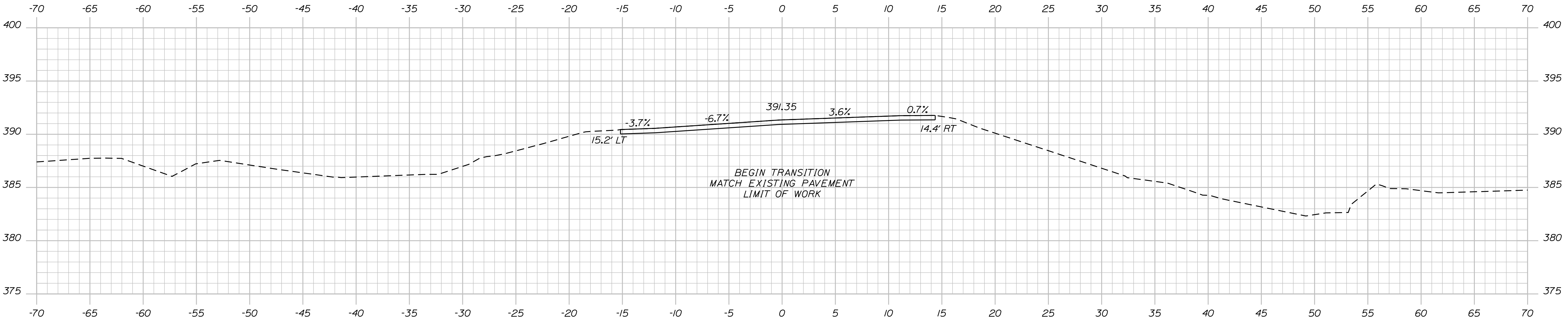
Username: chris.helstrom

Division: HIGHWAY

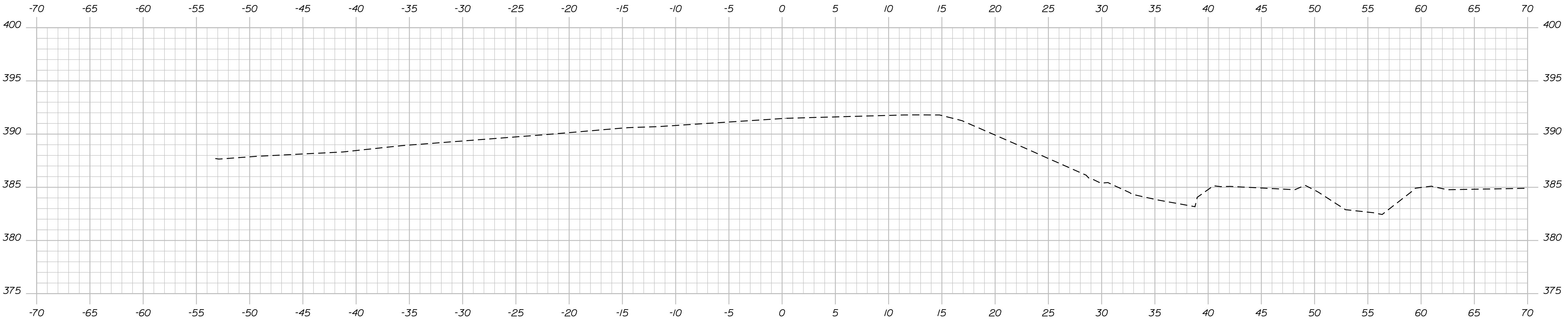
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5+25.00



5+00.00



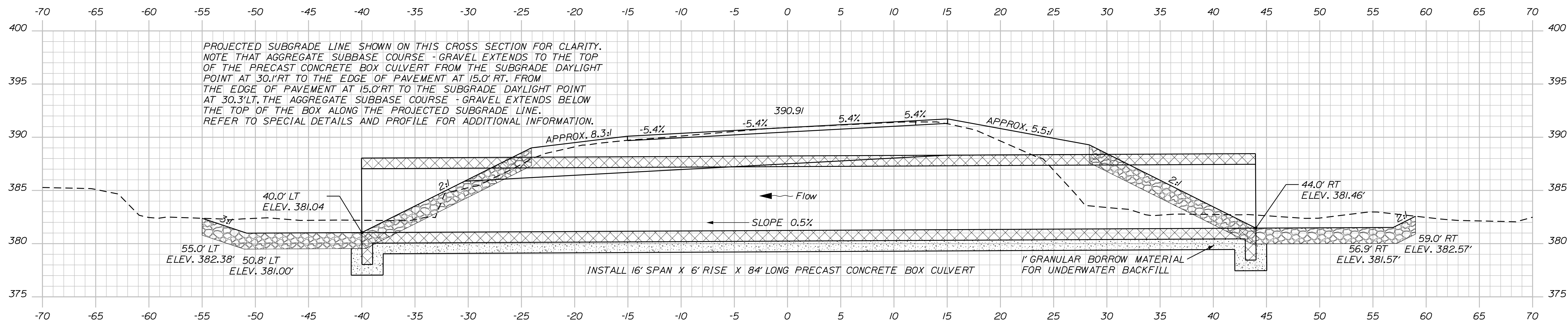
4+75.00

STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
2284900	
WIN	
22849.00	
HIGHWAY PLANS	

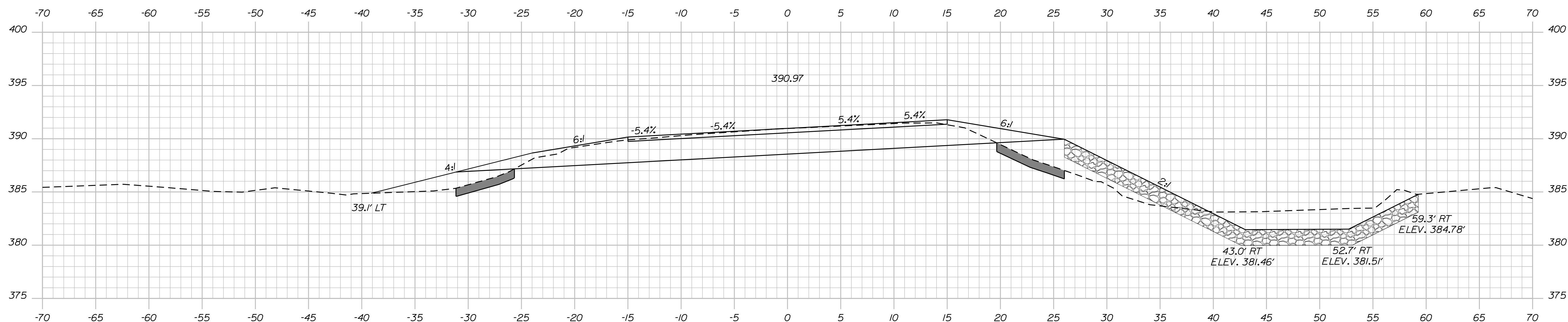
SIGNATURE	
P.E. NUMBER	
DATE	
DATE	05/2019
BY	D. WARDWELL
R. SOUCY	R. SOUCY
PROJ. MANAGER	C. HELSTROM
DESIGN-DETAILED	C. HELSTROM
CHECKED-REVIEWED	C. HELSTROM
DESIGN-DETAILED	C. HELSTROM
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

DANFORTH - U.S. ROUTE 1	
SOUTH CROOKED BROOK BRIDGE	
CROSS SECTIONS	

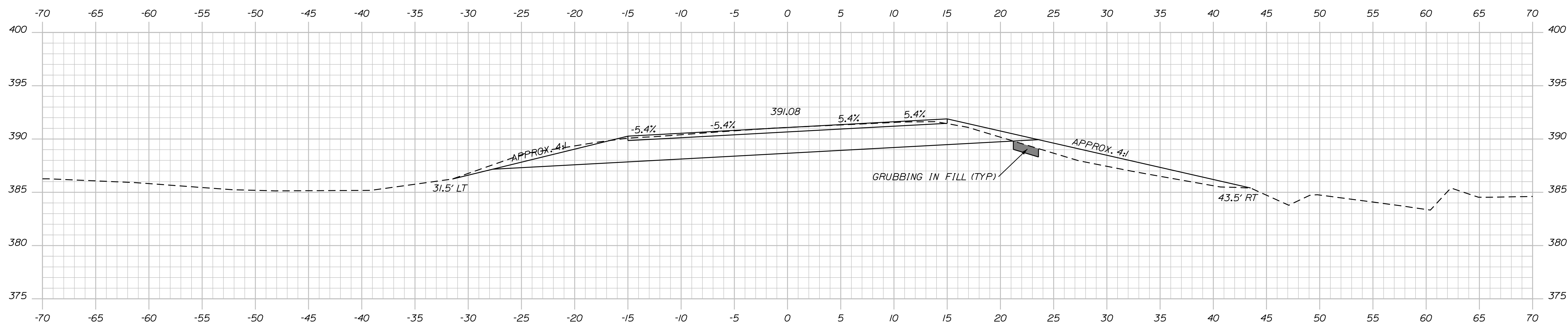
SHEET NUMBER	
6	
OF 10	



5+92.00 (SKEWED 4 DEGREES BACK RIGHT)



5+75.00



5+50.00

PROJ. MANAGER	R. SOUCY	BY	DATE
DESIGN-DET ALED	C. HELSTROM	D. WARDWELL	05/2019
CHECKED-REVIEWED	C. HELSTROM	R. SOUCY	05/2019
DESIGN-DET ALED	DES2		SIGNATURE
DESIGN-DET ALED	DES3		
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			P.E. NUMBER
REVISIONS 4			
FIELD CHANGES			
			DATE

DANFORTH - U.S. ROUTE 1
SOUTH CROOKED BROOK BRIDGE

CROSS SECTIONS

SHEET NUMBER

7

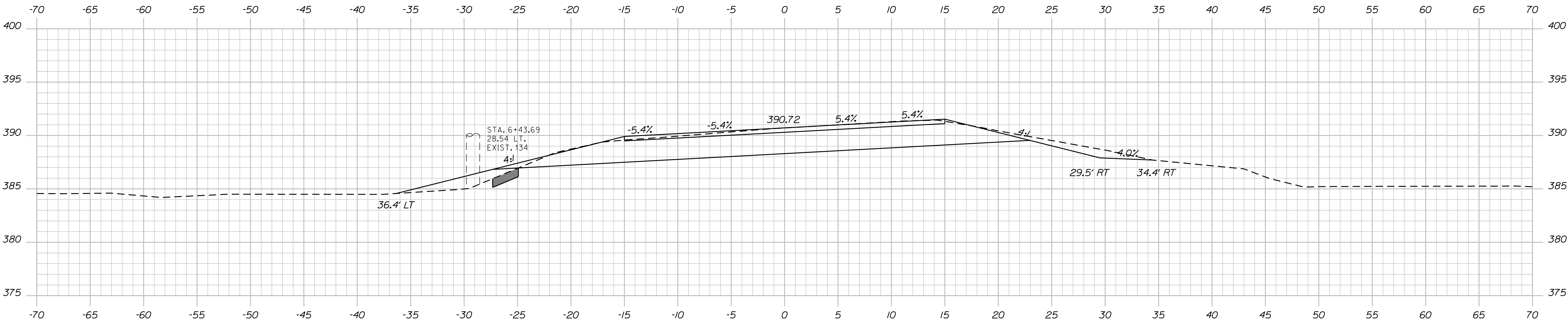
OF 10

Date:10/28/2019

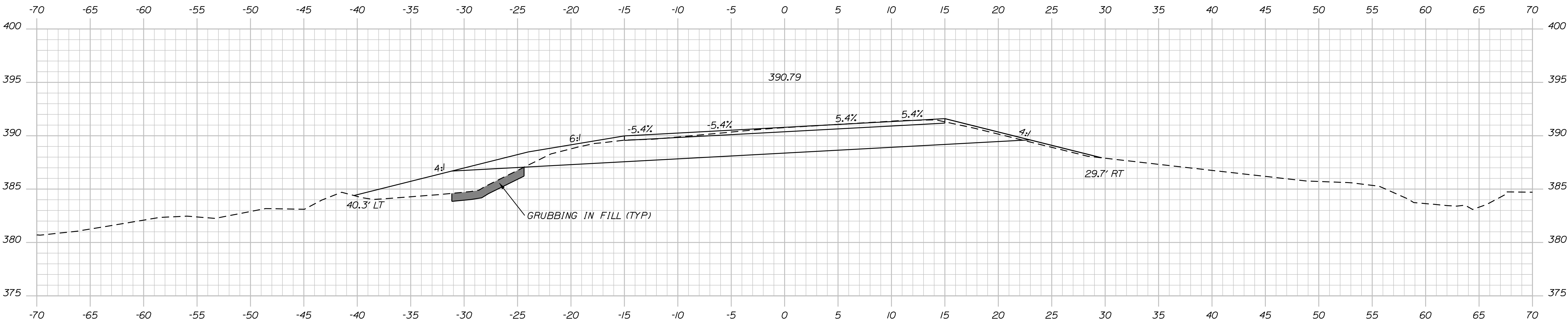
Username: chris.helstrom

Division: HIGHWAY

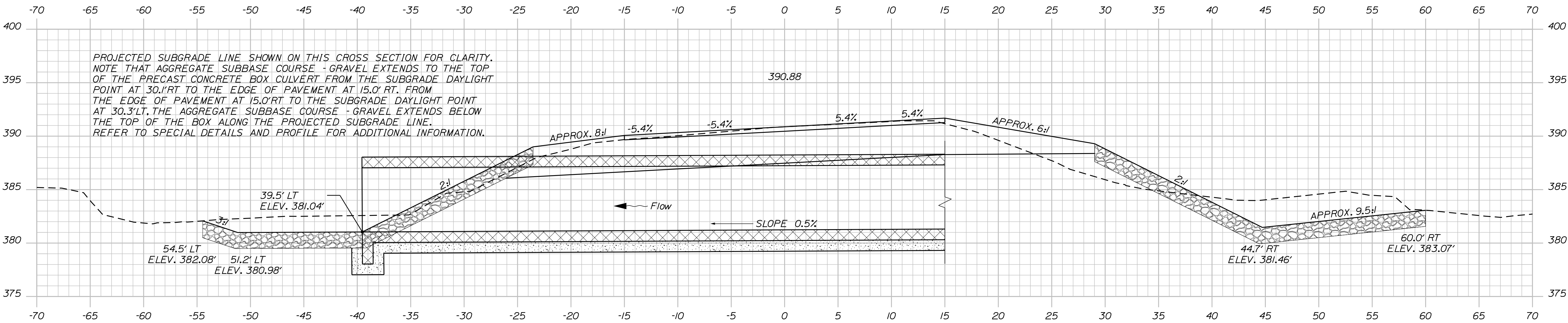
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6+50.00



6+25.00



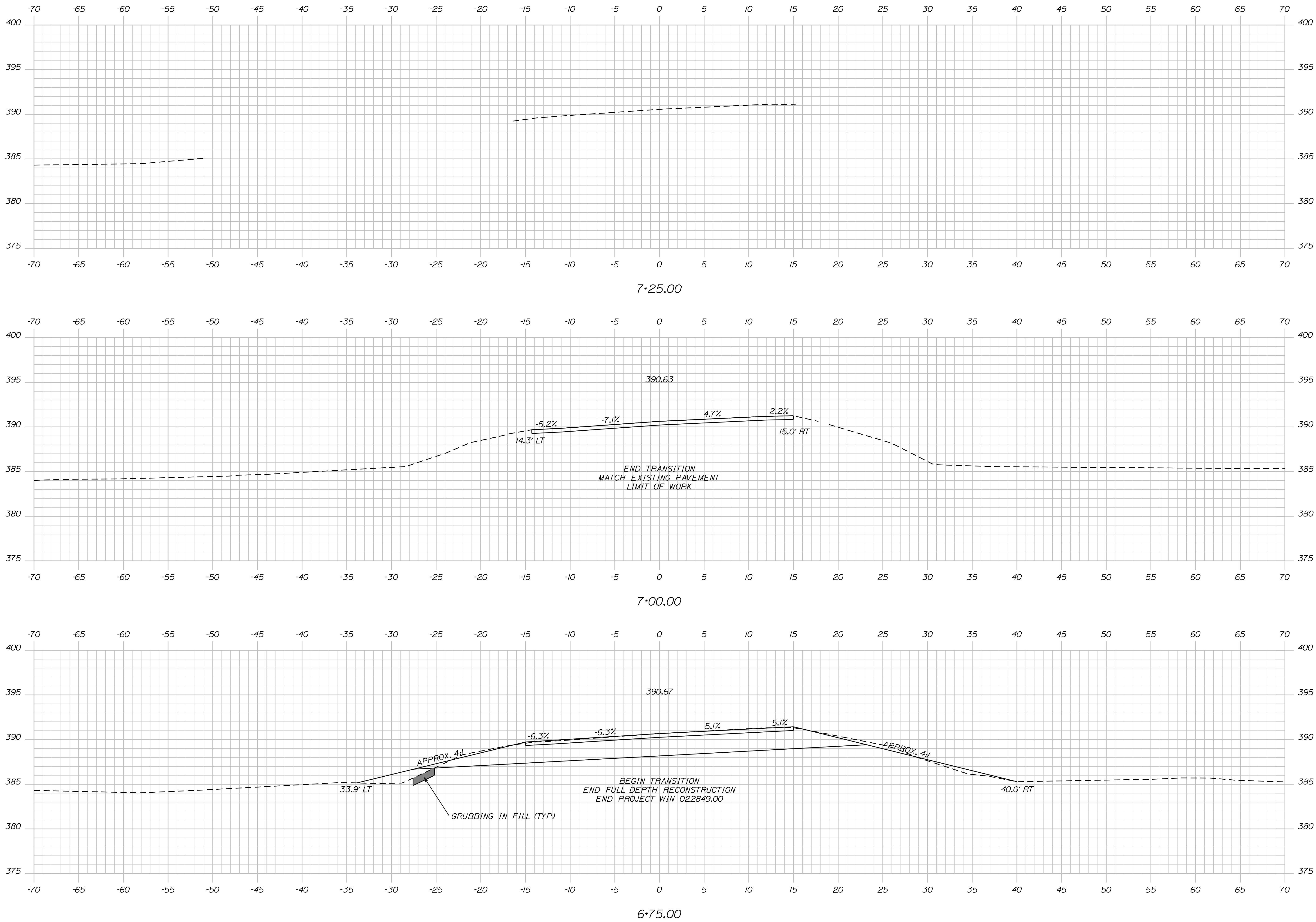
6+00.00

STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
2284900	
WIN	HIGHWAY PLANS
22849.00	

PROJ. MANAGER	BY	DATE
DESIGNED-DETAILED	R.SOUCY	05/2019
CHECKED-REVIEWED	C.HELSTROM	05/2019
DESIGNED-DETAILED	R.SOUCY	05/2019
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

DANFORTH - U.S. ROUTE 1	
SOUTH CROOKED BROOK BRIDGE	
CROSS SECTIONS	

SHEET NUMBER	
8	
OF 10	



STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
2284900	
WIN	22849.00
HIGHWAY PLANS	

DESIGN-DETAILED	C.H.ELSTROM	BY	DATE
CHECKED-REVIEWED	C.H.ELSTROM	D.WARDWELL	05/2019
DESIGN-DETAILED2	R.SOUCY		05/2019
DESIGN-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
SIGNATURE			
P.E. NUMBER			
DATE			

DANFORTH - U.S. ROUTE 1
SOUTH CROOKED BROOK BRIDGE

CROSS SECTIONS

SHEET NUMBER

9

OF 10

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