STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0016

Janet T. Mills
GOVERNOR

Bruce A. Van Note
COMMISSIONER

February 26, 2024
Subject: Large Culvert replacements
State WINs: 023697.00 & 023755.00
Location: **Oakfield & Smyrna**
Amendment No. 1

Dear Sir/Ms.:

For your information and review:

The shop drawings for the State supplied box culverts have been posted to the MaineDOT web site; https://www.maine.gov/mdot/contractors/

Please make the following changes to the Bid Documents:

In the Bid Book:

REMOVE pages 17 – 21, Proposal Schedule of Items, 5 pages, dated 1/30/2024, and **REPLACE** with the attached Proposal Schedule of Items, 5 pages, dated 2/15/2024.

In the Plan Set:

For WIN 023697.00 Oakfield, **REMOVE** the entire plan set, 14 sheets, and **REPLACE** with the attached plan set, 14 sheets.

For WIN 023755.00 Smyrna, **REMOVE** the entire plan set, 14 sheets, and **REPLACE** with the attached plan set, 14 sheets.

The following questions have been received:

Question: On the schedule of items for the Oakfield & Smyrna large culvert replacements listed above, item 409.15 Bituminous tack coat – applied calls for a total quantity of 255 gallons. This number seems high in relation to the amount of pavement being placed. Can you confirm the quantity, please?

Response: Please see the attached, revised Proposal Schedule of Items, dated 2/15/2024.

Question: The plans are posted for the Oakfield site, but the Smyrna plan set does not appear to be uploaded.

Response: The plan set for Smyrna 23755.00 has been posted to the MaineDOT web site.

Question: The MDOT website shows the plan set for the 023697.00 Oakfield project but doesn't have the 023755.00 Smyrna project.

Response: Please see previous response.

Question: Are there shop drawings available for the boxes to calculate weight?

Response: Shop drawings for both projects have been posted to the MaineDOT web site.

Question: The 023697.00 Oakfield project shows 1.5" surface and 2.5" base pavement, but special provision section 403 shows 1.5" surface and 3.5" base pavement. Which may conflict the schedule of items.

Response: The 403 special provisions is correct. Please note the two projects are requiring different total pavement depths. 023697.00 - Oakfield road project is requiring total pavement depth of 4" (1.5" surface & 2.5" base). 023755.00 - Smyrna, Route 2, project is requiring a total pavement depth of 5" (1.5" surface & 3.5" base).

Consider these changes and information prior to submitting your bid on **March 6, 2024**.

Sincerely,

George M. A. Macdougall P.E.
Contracts & Specifications Engineer

Type text here

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 023697.00 **Project(s):** 023697.00, 023755.00

SECTION: 1 HIGHWAY ITEMS

Alt Set ID: **Alt Mbr ID:**

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price Dollars	 Cents	Bid Amount Dollars	 Cents
0010	203.20 COMMON EXCAVATION	770.000 CY				
0020	203.25 GRANULAR BORROW	220.000 CY				
0030	203.33 SPECIAL FILL	85.000 CY				
0040	206.07 STRUCTURAL ROCK EXCAVATION - DRAINAGE AND MINOR STRUCTURES	60.000 CY				
0050	304.16 AGGREGATE BASE COURSE - TYPE C	705.000 CY				
0060	403.208 HOT MIX ASPHALT 12.5 MM HMA SURFACE	75.000 T				
0070	403.213 HOT MIX ASPHALT 12.5 MM BASE	155.000 T				
0080	409.15 BITUMINOUS TACK COAT - APPLIED	25.000 G				
0090	502.21 STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	55.000 CY				
0100	502.565 CONCRETE FILL	15.000 CY				
0110	503.12 REINFORCING STEEL, FABRICATED AND DELIVERED 023755.00	7,000.000 LB				
0120	503.13 REINFORCING STEEL, PLACING	7,000.000 LB				

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 023697.00 **Project(s):** 023697.00, 023755.00

SECTION: 1 HIGHWAY ITEMS

Alt Set ID: **Alt Mbr ID:**

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price Dollars Cents	Bid Amount Dollars Cents
0130	508.13 SHEET WATERPROOFING MEMBRANE 023697.00	LUMP SUM	LUMP SUM	_____.____
0140	508.13 SHEET WATERPROOFING MEMBRANE 023755.00	LUMP SUM	LUMP SUM	_____.____
0150	511.07 COFFERDAM: 023697.00 - DOWNSTREAM	LUMP SUM	LUMP SUM	_____.____
0160	511.07 COFFERDAM: 023697.00 - UPSTREAM	LUMP SUM	LUMP SUM	_____.____
0170	511.07 COFFERDAM: 023755.00 - DOWNSTREAM	LUMP SUM	LUMP SUM	_____.____
0180	511.07 COFFERDAM: 023755.00 - UPSTREAM	LUMP SUM	LUMP SUM	_____.____
0190	515.21 PROTECTIVE COATING FOR CONCRETE SURFACES 023697.00	LUMP SUM	LUMP SUM	_____.____
0200	515.21 PROTECTIVE COATING FOR CONCRETE SURFACES 023755.00	LUMP SUM	LUMP SUM	_____.____
0210	534.701 PRECAST STRUCTURAL CONCRETE ARCH, STATE SUPPLIED 023755.00	LUMP SUM	LUMP SUM	_____.____
0220	534.7101 PRECAST CONCRETE BOX CULVERT - STATE SUPPLIED 023697.00	LUMP SUM	LUMP SUM	_____.____
0230	605.09 6 INCH UNDERDRAIN TYPE B	170.000 LF	_____.____	_____.____

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 023697.00 **Project(s):** 023697.00, 023755.00

SECTION: 1 HIGHWAY ITEMS

Alt Set ID: **Alt Mbr ID:**

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price Dollars	 Cents	Bid Amount Dollars	 Cents
0240	606.36 GUARDRAIL REMOVED AND RESET	275.000 LF				
0250	610.203 FEATURE ROCKS	12.000 EA				
0260	610.210 STREAM CHANNEL ROCK	50.000 CY				
0270	610.213 VOID FILLED RIPRAP	250.000 CY				
0280	613.319 EROSION CONTROL BLANKET	680.000 SY				
0290	615.07 LOAM	35.000 CY				
0300	618.14 SEEDING METHOD NUMBER 2	6.000 UN				
0310	619.12 MULCH	6.000 UN				
0320	620.58 EROSION CONTROL GEOTEXTILE	450.000 SY				
0330	627.73 4 INCH YELLOW PAVEMENT MARKING LINE	380.000 LF				
0340	627.733 4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	380.000 LF				
0350	627.78 TEMPORARY 4 INCH PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW	760.000 LF				

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 023697.00 **Project(s):** 023697.00, 023755.00

SECTION: 1 HIGHWAY ITEMS

Alt Set ID: **Alt Mbr ID:**

Contractor: _____

Proposal Line Number	Item ID / Description	Approximate Quantity and Units	Unit Price Dollars	Unit Price Cents	Bid Amount Dollars	Bid Amount Cents
0360	629.05 HAND LABOR, STRAIGHT TIME	40.000 HR				
0370	631.12 ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	40.000 HR				
0380	631.172 TRUCK - LARGE (INCLUDING OPERATOR)	80.000 HR				
0390	639.20 FIELD OFFICE TYPE C	1.000 EA				
0400	652.312 TYPE III BARRICADE	8.000 EA				
0410	652.33 DRUM	20.000 EA				
0420	652.34 CONE	40.000 EA				
0430	652.35 CONSTRUCTION SIGNS	960.000 SF				
0440	652.36 MAINTENANCE OF TRAFFIC CONTROL DEVICES	90.000 CD				
0450	652.38 FLAGGER	450.000 HR				
0460	656.75 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LUMP SUM	LUMP SUM			
0470	659.10 MOBILIZATION	LUMP SUM	LUMP SUM			

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 023697.00 **Project(s):** 023697.00, 023755.00

Section: 1 **Total:** _____.____

Total Bid: _____.____

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

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	Existing / Proposed	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	Conifer, Deciduous	Centerline-Existing	
Tree Line		Centerline-Proposed	10+00
Clearing Limit Line		Travelway-Existing	
Railroad		Travelway-Proposed	

Boring HB-XXX-###

Pavement Core PC-#

Test Pit TP-XXX-###

Probe P-#.#X

#.# = Depth

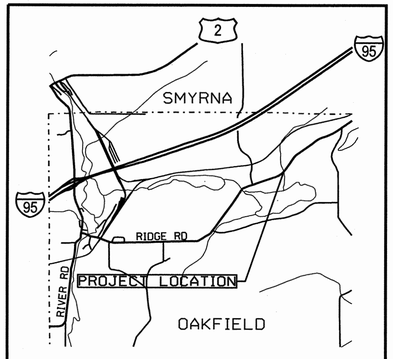
X = W (Weathered Rock)

R (Refusal)

NR (No Refusal)

TRAFFIC DATA

Current (2023) AADT	330
Future (2043) AADT	360
DHV - % of AADT	12%
Design Hour Volume	43
% Heavy Trucks (AADT)	9%
% Heavy Trucks (DHV)	5%
Directional Distribution (DHV)	63%
18 kip Equivalent P 2.0	12
18 kip Equivalent P 2.5	11
Design Speed (mph)	45
Functional Class:	Minor Collector
Highway Corridor Priority:	4



0 1 2

Scale in Miles

LOCATION MAP

OAKFIELD

AROOSTOOK COUNTY

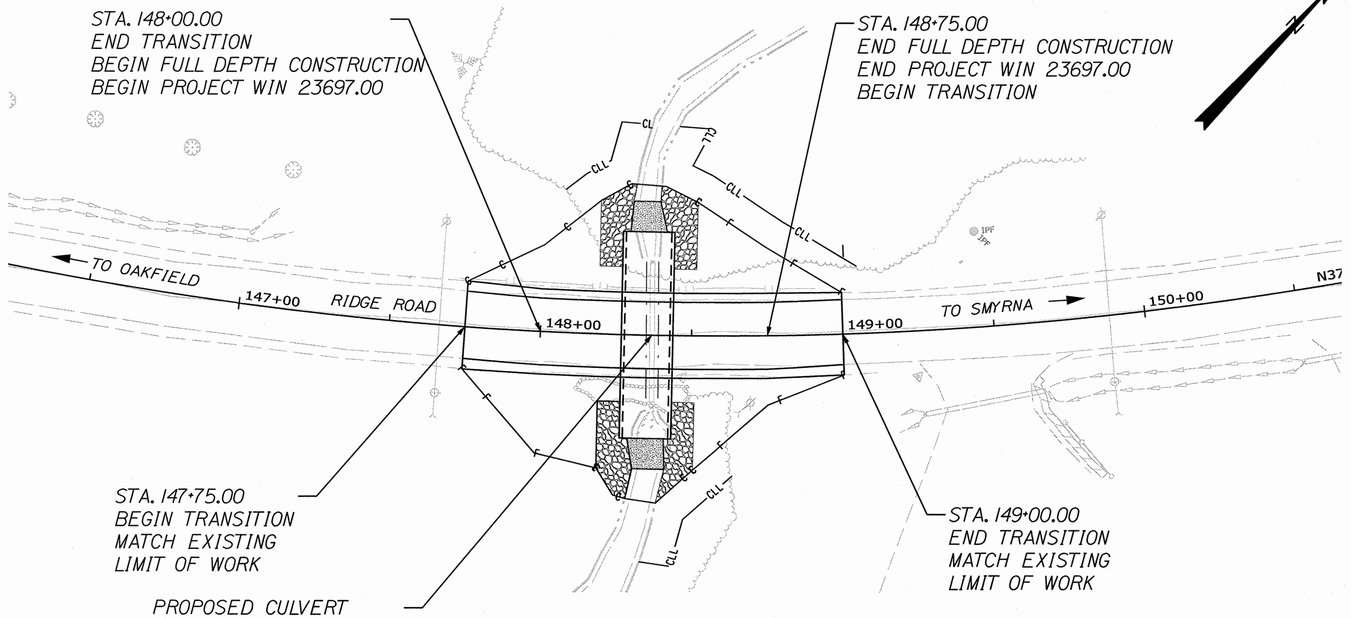
RIDGE ROAD

SPAULDING LAKE BRIDGE

BRIDGE NO. 6638

STATE PROJECT NO. 23697.00

PROJECT LENGTH : 0.01 MILES



LAYOUT SCALE

25 0 25 50

Scale in Feet

INDEX OF SHEETS

PROJECT LOCATION:	OAKFIELD, RIDGE ROAD, LOCATED 1.2 MILES EAST OF SPAULDING LAKE ROAD INTERSECTION
PROGRAM AREA:	REGIONAL PROGRAM
SCOPE OF WORK:	LARGE CULVERT REPLACEMENT

WIN 23697.00 STATE PROJECT NO. 23697.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED

COMMISSIONER: DATE 2-23-24

CHIEF ENGINEER: DATE 2-23-2024

STATE OF MAINE PROFESSIONAL ENGINEER Liam B. Kalloch 15070 LICENSED

Liam Kalloch SIGNATURE 15070

P.E. NUMBER 01-25-2024 DATE

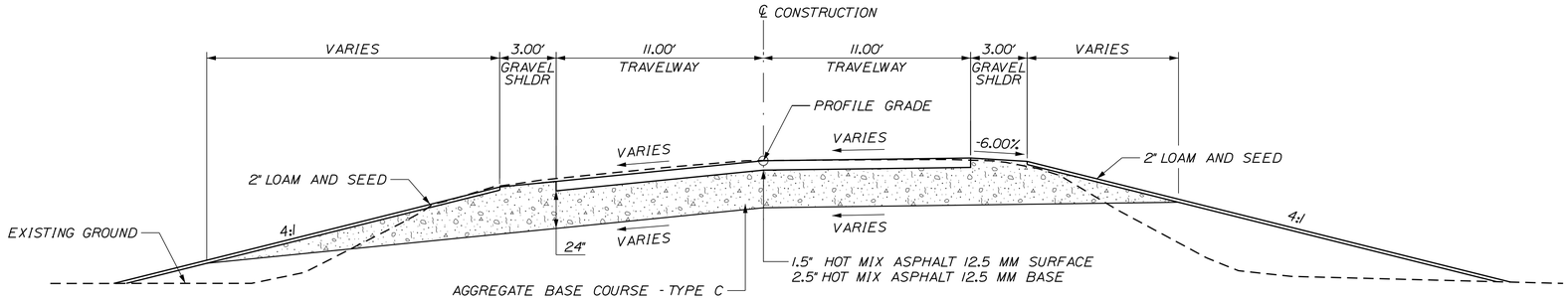
PROJECT INFORMATION		
PROGRAM	HIGHWAY	
PROJECT MANAGER	ROGER SOUCY	
DESIGNER	L. KALLOCH	
CONSULTANT	CMA ENGINEERS, INC.	
PROJECT RESIDENT		
CONTRACTOR		
PROJECT COMPLETION DATE		

OAKFIELD
RIDGE ROAD

TITLE SHEET

SHEET NUMBER 1 OF 14

Filename: ...\Consultant\001_Title .dgn Division: HIGHWAY Username: common Date:1/17/2024



AGGREGATE BASE COURSE - TYPE C		
SHOULDER 68.40 CY/100 LF	TRAVEL LANE 162.96 CY/100 LF	SHOULDER 46.95 CY/100 LF
STATION TO STATION	STATION TO STATION	STATION TO STATION
148+00 TO 148+75	148+00 TO 148+75	148+00 TO 148+75

ROADWAY TYPICAL SECTION

SUPERELEVATED
N.T.S.

SUPERELEVATION TABLE		
LT. TRAVEL LANE	STATION	RT. TRAVEL LANE
	BEGIN	
MATCH	147+75	MATCH
-9.0%	148+00	0.6%
-9.5%	148+25	1.0%
-10.0%	148+50	1.3%
-10.5%	148+75	1.7%
MATCH	149+00	MATCH

NOTES:

1. THE PAVEMENT, BASE AND SUBBASE DEPTHS AS SHOWN ON THE PLANS ARE INTENDED TO BE NOMINAL.

2. THE GRAVEL QUANTITY CALCULATION IS BASED ON A 2 INCH LOAM OR DIRTY BORROW DEPTH. THE ACTUAL DEPTH MAY VARY. SEE THE GENERAL NOTES.

3. STATIONING SHOWN UNDER EACH TYPICAL IS APPROXIMATE.

4. THE ALGEBRAIC DIFFERENCE BETWEEN THE SHOULDER AND TRAVELWAY CROSS SLOPES "ROLLOVER" SHALL NOT EXCEED 8%.

NOT TO SCALE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

23697.00

WIN 23697.00

BRIDGE NO. 6638 HIGHWAY PLANS

PROJ. MANAGER	ROGER SOUCY	BY	DATE
DESIGN-DETAILED	L. KALLOCH	W. GORDON	
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

OAKFIELD
RIDGE ROAD

TYPICAL SECTIONS

SHEET NUMBER

2

OF 14

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
203.20	COMMON EXCAVATION	400	CY
203.25	GRANULAR BORROW	110	CY
203.33	SPECIAL FILL	75	CY
206.07	STRUCTURAL ROCK EXCAVATION-DRAINAGE & MINOR STRUCTURES	10	CY
304.16	AGGREGATE BASE COURSE - TYPE C	345	CY
403.208	HOT MIX ASPHALT 12.5 MM HMA SURFACE	30	T
403.213	HOT MIX ASPHALT 12.5 MM BASE	45	T
409.15	BITUMINOUS TACK COAT - APPLIED	10	G
508.13	SHEET WATERPROOFING MEMBRANE (130 SY)	1	LS
511.07	COFFERDAM: UPSTREAM	1	LS
511.07	COFFERDAM: DOWNSTREAM	1	LS
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES (80 SY)	1	LS
534.7101	PRECAST CONCRETE BOX CULVERT - STATE SUPPLIED (130 CY)	1	LS
610.203	FEATURE ROCKS	12	EA
610.210	STREAM CHANNEL ROCK	50	CY
610.213	VOID-FILLED RIPRAP	90	CY
613.319	EROSION CONTROL BLANKET	450	SY
615.07	LOAM	25	CY
618.14	SEEDING METHOD NUMBER 2	4	UN
619.12	MULCH	4	UN
620.58	EROSION CONTROL GEOTEXTILE	240	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	380	LF
627.78	TEMPORARY 4" PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW	380	LF
629.05	HAND LABOR, STRAIGHT TIME	20	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	40	HR
639.20	FIELD OFFICE - TYPE C	0.5	EA
652.312	TYPE III BARRICADE	4	EA
652.33	DRUM	10	EA
652.34	CONE	20	EA
652.35	CONSTRUCTION SIGN	480	SF
652.36	MAINTENANCE OF TRAFFIC CONTROL DEVICES	30	CD
652.38	FLAGGER	150	HR
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL NOTES

1. PAVEMENT THICKNESSES SHOWN ON THE TYPICAL SECTIONS ARE INTENDED TO BE NOMINAL.

2. CLEARING LIMITS SHALL BE 10 FEET BEYOND AND PARALLEL TO THE CONSTRUCTION SLOPE LINES OR AS SHOWN ON THE PLANS UNLESS OTHERWISE AUTHORIZED BY THE RESIDENT.

3. 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.

4. THE CLEARING AND SELECTIVE CLEARING AND THINNING LINES SHOWN ON THE PLANS ARE FOR ESTIMATING PURPOSES ONLY. THE ACTUAL LINES FOR CLEARING AND THINNING SHALL BE ESTABLISHED IN THE FIELD BY THE CONTRACTOR AND APPROVED BY THE RESIDENT.

5. WHERE DEEMED NECESSARY BY THE RESIDENT, UNSUITABLE EXCESS MATERIAL SHALL BE REMOVED FROM THE EDGES OF SHOULDERS AND PLACED IN DESIGNATED AREAS OR DISPOSED OF. PAYMENT WILL BE MADE UNDER THE APPROPRIATE CONTRACT ITEMS.

6. 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.

7. GRANULAR BORROW USED TO BACKFILL MUCK EXCAVATION OR IN LOW WET AREAS TO 1 FOOT ABOVE WATER LEVEL OR OLD GROUND SHALL MEET REQUIREMENTS FOR GRANULAR BORROW MATERIAL FOR UNDERWATER BACKFILL AS SPECIFIED IN STANDARD SPECIFICATIONS ITEM 703.19, GRANULAR BORROW.

8. 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.

9. WHEN SUPERELEVATION EXCEEDS THE SLOPE OF THE LOW-SIDE SHOULDER, THE LOW-SIDE SHOULDER WILL HAVE SAME SLOPE AS THE TRAVELWAY.

10. CROSS SLOPES FOR NORMAL AND SUPERELEVATED SECTIONS WILL BE STRAIGHT UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.

11. THE ALGEBRAIC DIFFERENCE BETWEEN TRAVELWAY AND SHOULDER CROSS SLOPE SHALL NOT EXCEED 8 PERCENT.

12. NO EXISTING DRAINAGE SHALL BE ABANDONED, REMOVED OR PLUGGED WITHOUT PRIOR APPROVAL OF THE RESIDENT.

13. INLETS AND OUTLETS OF ALL CULVERTS SHALL BE RIPRAPPED UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE RESIDENT.

14. LOAM HAS BEEN ESTIMATED FOR DISTURBED LAWN AREAS. ACTUAL PLACEMENT OF THE LOAM SHALL BE AS NOTED ON THE PLANS OR DESIGNATED BY THE RESIDENT.

15. LOAM SHALL BE PLACED TO A NOMINAL DEPTH OF 4 INCHES IN LAWN AREAS AND 2 INCHES IN ALL OTHER AREAS UNLESS OTHERWISE NOTED OR DIRECTED.

16. THE CONTRACTOR IS RESPONSIBLE FOR THE CAREFUL SIDE STAKING OF EXISTING CENTERLINE AS PER STANDARD SPECIFICATION SECTION 105.6.2, CONTRACTOR PROVIDED SERVICES. SIDE STAKES SHALL BE PLACED SAFELY OUTSIDE OF THE CONSTRUCTION LIMITS AND THE EXISTING CENTERLINE GRADES SHALL BE TRANSFERRED TO THESE STAKES. THESE STAKES AND GRADES WILL BE USED TO LAY OUT CENTERLINE AND DETERMINE NEW CONSTRUCTION FINISH GRADES FROM DIFFERENTIAL ELEVATION SHEETS FURNISHED BY MAINEDOT. ALL LAYOUT, STAKES, AND GRADES WILL BE CHECKED AND MUST BE ACCEPTABLE TO THE RESIDENT. (REHABILITATION ONLY)

17. 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.

18. THE PROJECT GEOTECHNICAL REPORT TITLED "GEOTECHNICAL DESIGN REPORT FOR THE CONSTRUCTION OF SPAULDING LAKE BRIDGE", SOILS REPORT 2024-01, JANUARY 17, 2024 CAN BE ACCESSED AT THE MAINEDOT WEBSITE http://www.maine.gov/mdot/contractors/.

19. 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 THROUGHOUT THE CONSTRUCTION SITE. MAINEDOT WILL NOT BE RESPONSIBLE FOR ANY INTERPRETATIONS OR CONCLUSIONS 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.

20. AREAS ON THE PROJECT REQUIRING FILL WILL COME FROM SUITABLE SITES SUCH AS EXCAVATION, DITCH AND INSLOPE OR EQUIPMENT RENTAL AREAS.

21. ESTIMATED QUANTITIES FOR REQUIRED STRUCTURAL EARTH EXCAVATION, DRAINAGE AND MINOR STRUCTURES ARE INFORMATIONAL ONLY AND REPRESENT THE APPROXIMATE MINIMUM QUANTITY REQUIRED TO INSTALL DRAINAGE STRUCTURES. ADDITIONAL EXCAVATION FOR THE CONTRACTOR'S CONVENIENCE OR TO COMPLY WITH BACKSLOPING REQUIREMENTS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED INCIDENTAL TO THE RELATED DRAINAGE ITEMS.

22. 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.

23. "UNDETERMINED LOCATIONS" SHALL BE DETERMINED BY THE RESIDENT.

24. FINAL STRIPING FOR THE PROJECT 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.

25. DURING CONSTRUCTION, THE ROAD WILL BE CLOSED TO TRAFFIC FOR A TIME PERIOD SPECIFIED IN THE SPECIAL PROVISIONS.

26. PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO THE FOLLOWING AREAS:

ALL EXPOSED SURFACES OF PRECAST CONCRETE BOX CULVERTS

27. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE MAINEDOT BEST MANAGEMENT PRACTICES FOR EROSION CONTROL AND SEDIMENT CONTROL (FEBRUARY 2008).

28. ALL COMPUTATION METHODS AND QUANTITIES USED FOR THE ENGINEER'S ESTIMATE FOR PLAN QUANTITY ITEMS ONLY ARE AVAILABLE BY CONTACTING REGION 5 PROJECT MANAGER.

29. BASED ON THE BORINGS PERFORMED AT THIS SITE, IT IS NOT ANTICIPATED THAT BEDROCK WILL BE ENCOUNTERED. ITEM 206.07 IS INCLUDED IN THE CONTRACT INCASE UNEXPECTED BEDROCK, BOULDERS, OR OTHER ITEMS LISTED IN THE STANDARD SPECIFICATIONS FOR PAYMENT UNDER THIS ITEM ARE ENCOUNTERED.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

23697.00

WIN 23697.00

HIGHWAY PLANS

PROJ. MANAGER	ROGER SOUCY				
DESIGN-DETAILED	L. KALLOCH	W. GORDON			
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET			
DESIGN2-DETAILED2					
DESIGN3-DETAILED3					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

SIGNATURE

P.E. NUMBER

DATE

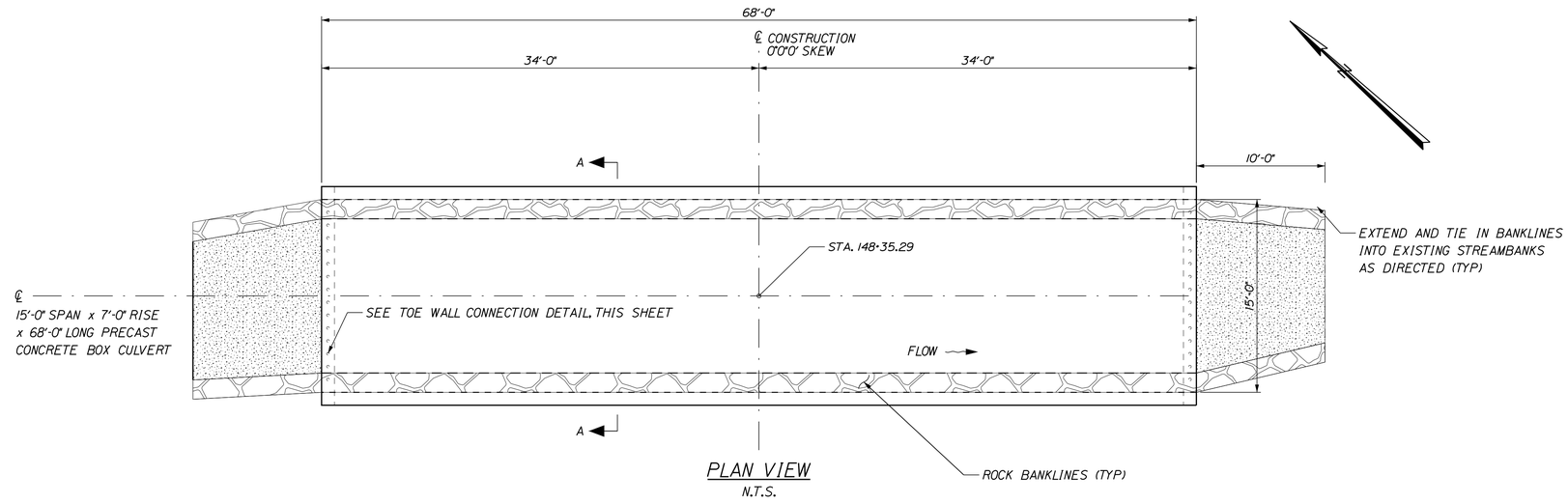
OAKFIELD
RIDGE ROAD

ESTIMATED QUANTITIES
AND GENERAL NOTES

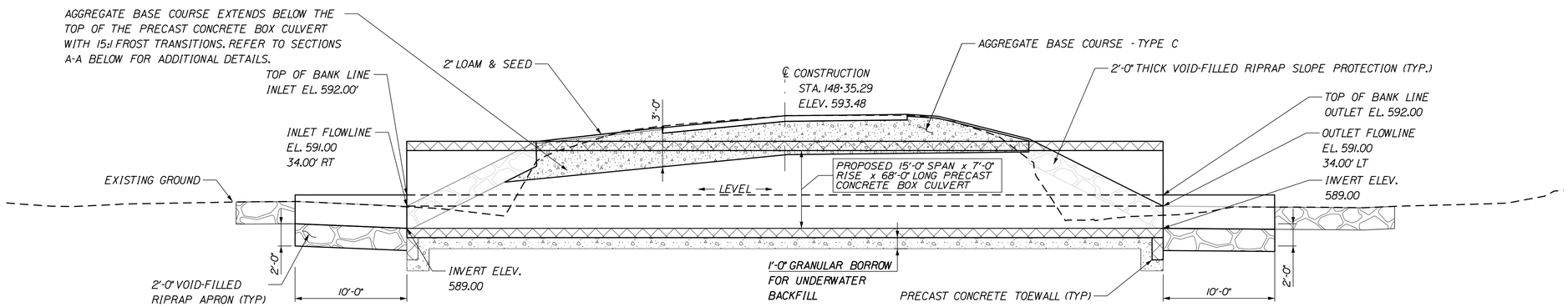
SHEET NUMBER

3

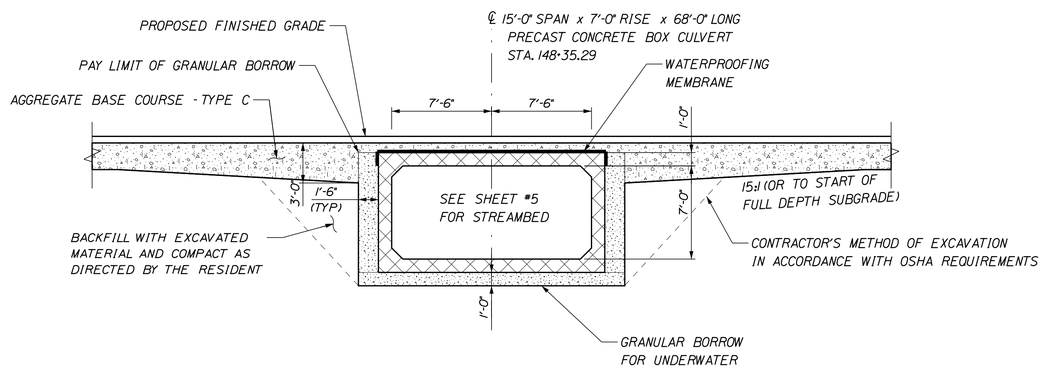
OF 14



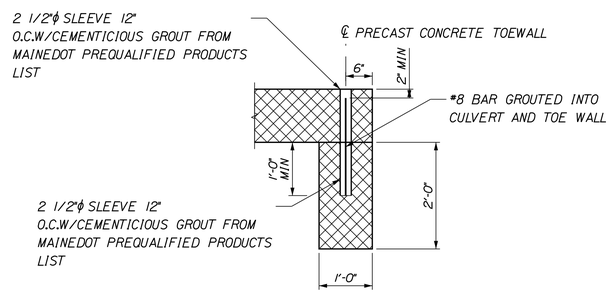
PLAN VIEW
N.T.S.



TRANSVERSE SECTION ALONG LENGTH OF CULVERT
N.T.S.



TYPICAL SECTION A-A
N.T.S.



PRECAST CONCRETE
TOEWALL DETAIL
N.T.S.

PRECAST CONCRETE BOX CULVERT NOTES:

1. THE PRECAST UNITS SHALL BE DESIGNED TO CARRY CONSTRUCTION LOADINGS WITH A MINIMUM FILL COVER OF 18 INCHES OVER THE TOP OF THE UNITS.

2. INSTALL STANDARD MEMBRANE WATERPROOFING OVER THE TOP AND TO 12 INCHES 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 END OF THE PRECAST CONCRETE BOX CULVERT TO ALLOW FOR THE CONSTRUCTION OF THE PRECAST CONCRETE BOX CULVERT IN THE DRY.

5. RIPRAP WILL BE USED TO INSLOPE AROUND THE CULVERT ENDS AT BOTH THE INLET AND OUTLET. SEE PLAN AND PROFILE FOR LOCATIONS.

6. THE PRECAST CONCRETE BOX CULVERT SHALL BE LINED WITH 2-FEET OF SPECIAL FILL IN ACCORDANCE WITH SPECIAL PROVISION 203.

7. A "CLAMSHELL" PRECAST CONCRETE BOX CULVERT SHALL BE USED.

8. CONSTRUCTION, HANDLING AND ASSEMBLY OF THE PRECAST UNIT SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS APPLICABLE.

NOT TO SCALE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

23697.00

WIN 23697.00

BRIDGE NO. 6638

HIGHWAY PLANS

SIGNATURE

P.E. NUMBER

DATE

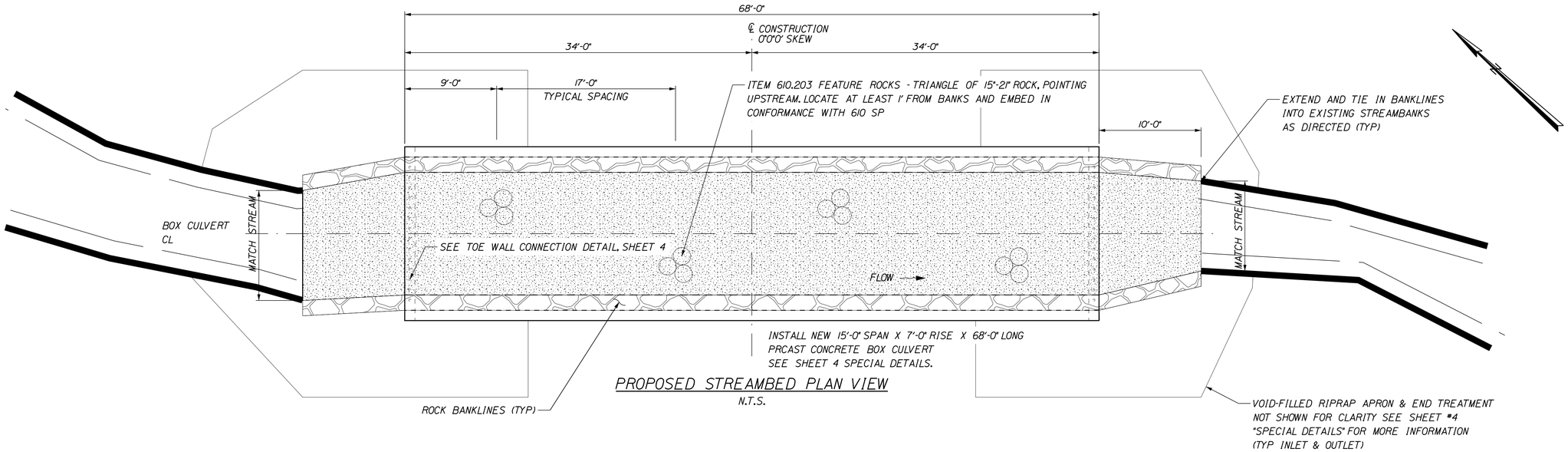
	BY	DATE
PROJ. MANAGER	ROGER SOUCY	
DESIGN-DETAILED	L. KALLOCH	W. GORDON
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

OAKFIELD
RIDGE ROAD

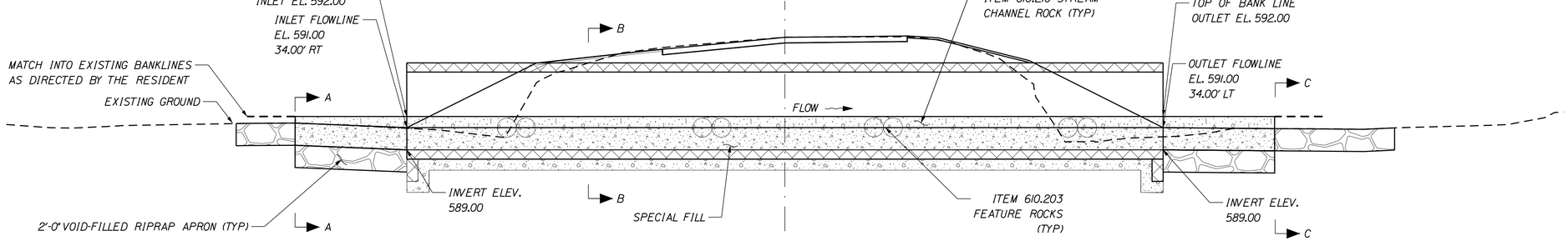
SPECIAL DETAILS

SHEET NUMBER
4
OF 14

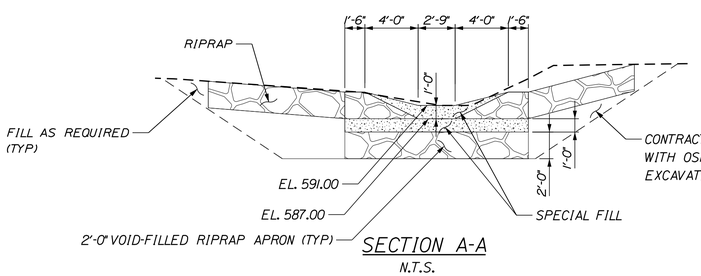
Filename: ...\005_Special Detail.dgn Division: HIGHWAY Username: common Date:1/18/2024



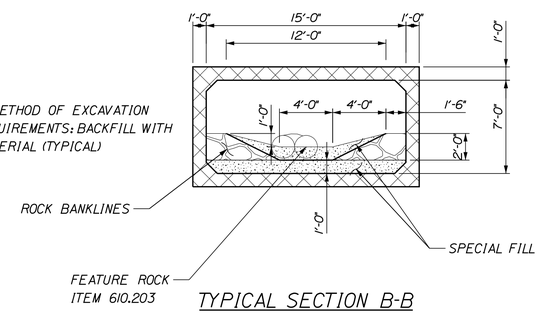
PROPOSED STREAMBED PLAN VIEW
N.T.S.



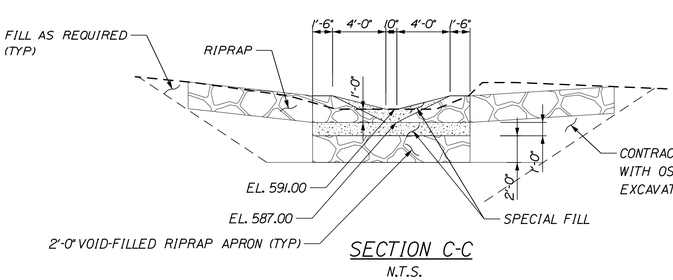
PROPOSED STREAMBED TRANSVERSE SECTION
N.T.S.



SECTION A-A
N.T.S.



TYPICAL SECTION B-B
N.T.S.



SECTION C-C
N.T.S.

NOT TO SCALE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

23697.00

WIN 23697.00

BRIDGE NO. 6638

HIGHWAY PLANS

	BY	DATE
PROJ. MANAGER	ROGER SOUCY	
DESIGN-DETAILED	W. GORDON	
CHECKED-REVIEWED	L. KALLOCH	
DESIGN2-DETAILED2	S. TORTER	
DESIGN3-DETAILED3	J. BEAUDET	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

OAKFIELD
RIDGE ROAD

STREAMBED DETAILS

SHEET NUMBER
5
OF 14

Filename: ...\005_SpecialDetail.dgn Division: HIGHWAY Username: common Date:1/18/2024

CURVE DATA #1
PI = 145+08.91
D = 5°43'46.5"
Δ = 9°56'48.7" Lt.
R = 1000.00'
L = 173.61'
T = 87.02'
E = 3.78'

CURVE DATA #2
PI = 148+27.58
D = 4°46'28.7"
Δ = 21°53'32.0" Lt.
R = 1200.00'
L = 458.51'
T = 232.09'
E = 22.24'

PCC = STA. 145+95.50

PT = STA. 150+54.01

N37°05'38.67"E

146+00 147+00 148+00 149+00 150+00 151+00

HB-OAK-101 HB-OAK-102 HB-OAK-103 HB-OAK-104

CLL

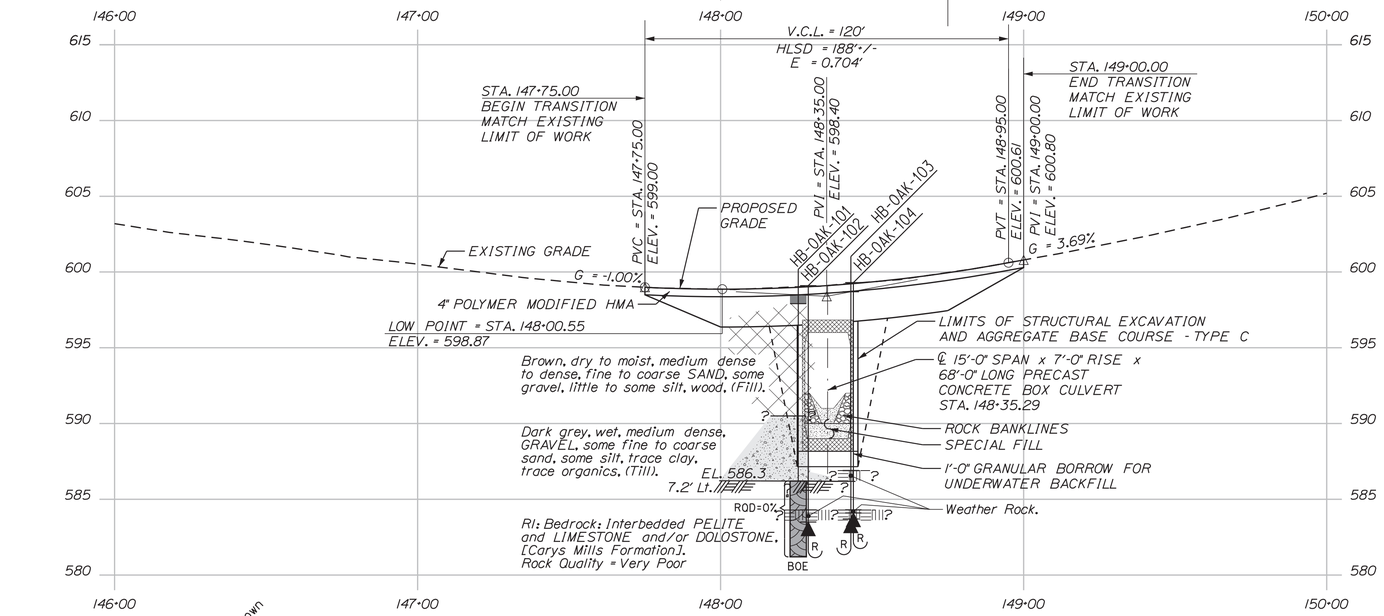
LEGEND
CASED WASH BORING
PROBE

PLAN

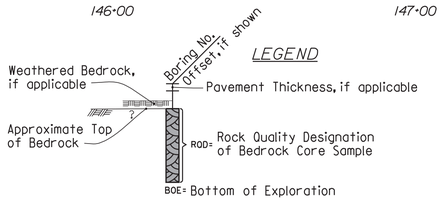
25 0 25 50
Scale of Feet

STA 148+00.00
END TRANSITION
BEGIN FULL DEPTH CONSTRUCTION
BEGIN PROJECT WIN 23697.00

STA. 148+75.00
END FULL DEPTH CONSTRUCTION
END PROJECT WIN 23697.00
BEGIN TRANSITION



LEGEND



PROFILE

HORIZ 25 0 25 50
VERT 5 0 5 10
SCALE

No Refusal
NR
Refusal
R

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.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

023697.00

WIN 23697.00

HIGHWAY PLANS

STATE OF MAINE Cody A. Russell 15866 REGISTERED ENGINEER PROFESSIONAL

Cody A. Russell

SIGNATURE

15866 P.E. NUMBER

1/22/2024 DATE

	BY	DATE
PROJ. MANAGER	-------	------
DESIGN-DETAILED	-------	------
CHECKED-REVIEWED	-------	------
DESIGN2-DETAILED2	C.RUSSELL	JAN 2024
DESIGN3-DETAILED3	-------	------
REVISIONS 1	-------	------
REVISIONS 2	-------	------
REVISIONS 3	-------	------
REVISIONS 4	-------	------
FIELD CHANGES	-------	------

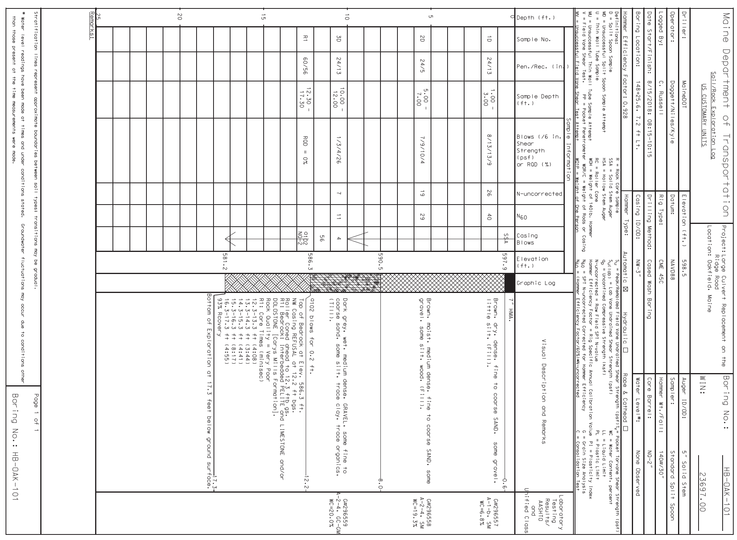
OAKFIELD
RIDGE ROAD

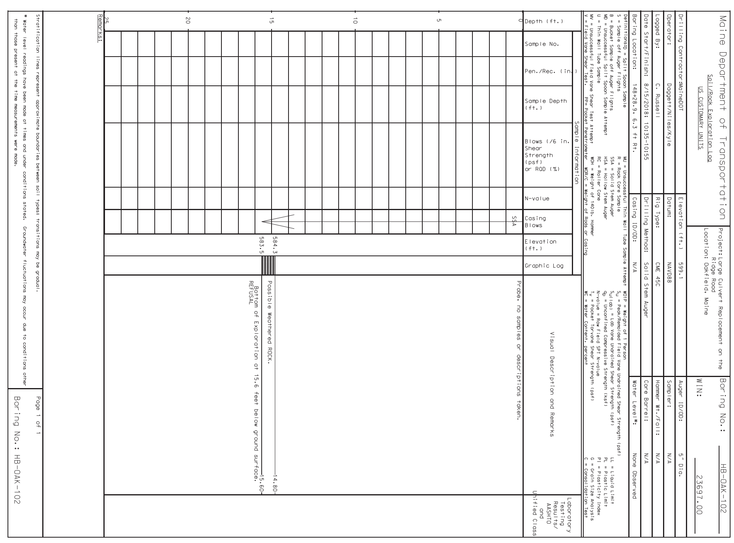
BORING LOCATION PLAN &
INTERPRETIVE SUBSURFACE PROFILE

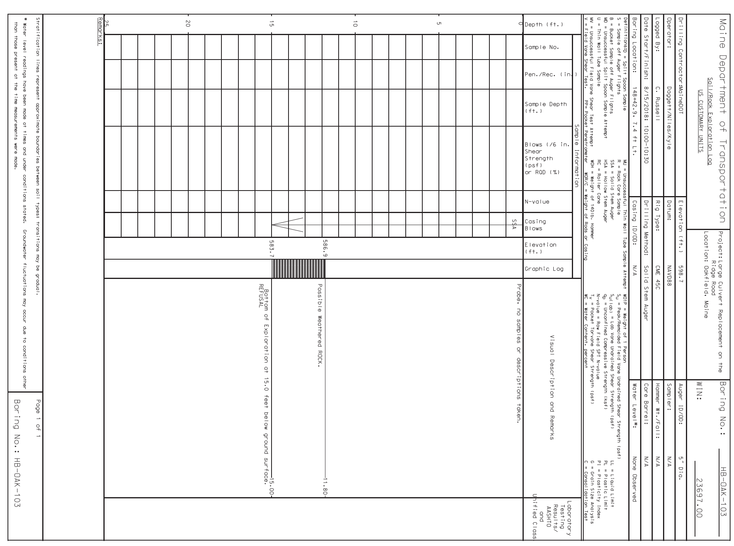
SHEET NUMBER

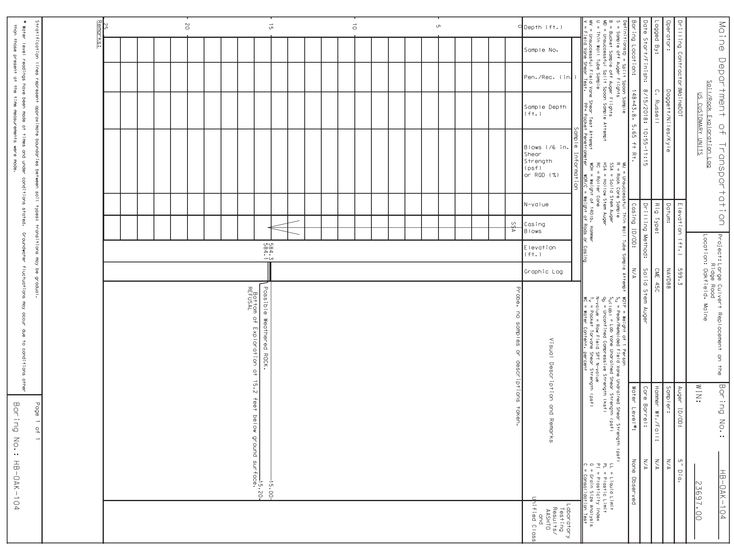
6

OF 14









PROJ. MANAGER		BY	DATE
DESIGN-DETAILED			
CHECKED-REVIEWED			
DESIGN2-DETAILED2	C.RUSSELL	T.WHITE	JAN 2024
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

OAKFIELD
RIDGE ROAD

BORING LOGS

Cody A. Russell
SIGNATURE
15866
P.E. NUMBER
1/22/2024
DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

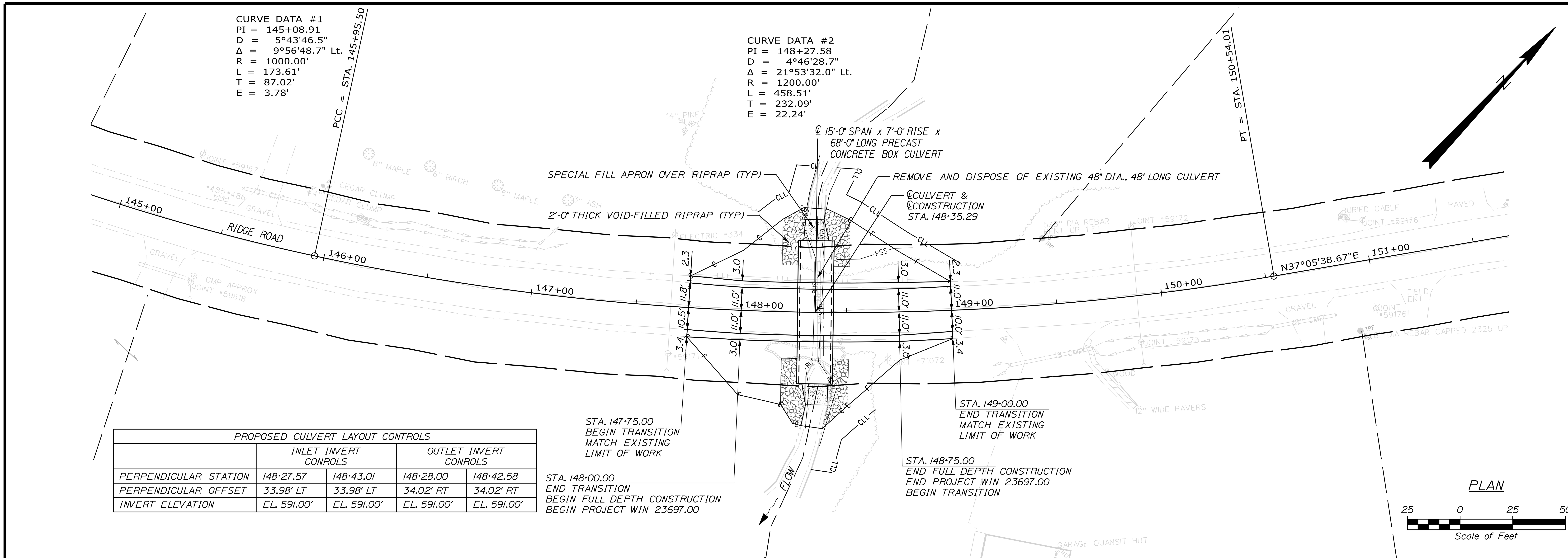
023697.00

WIN
23697.00

HIGHWAY PLANS

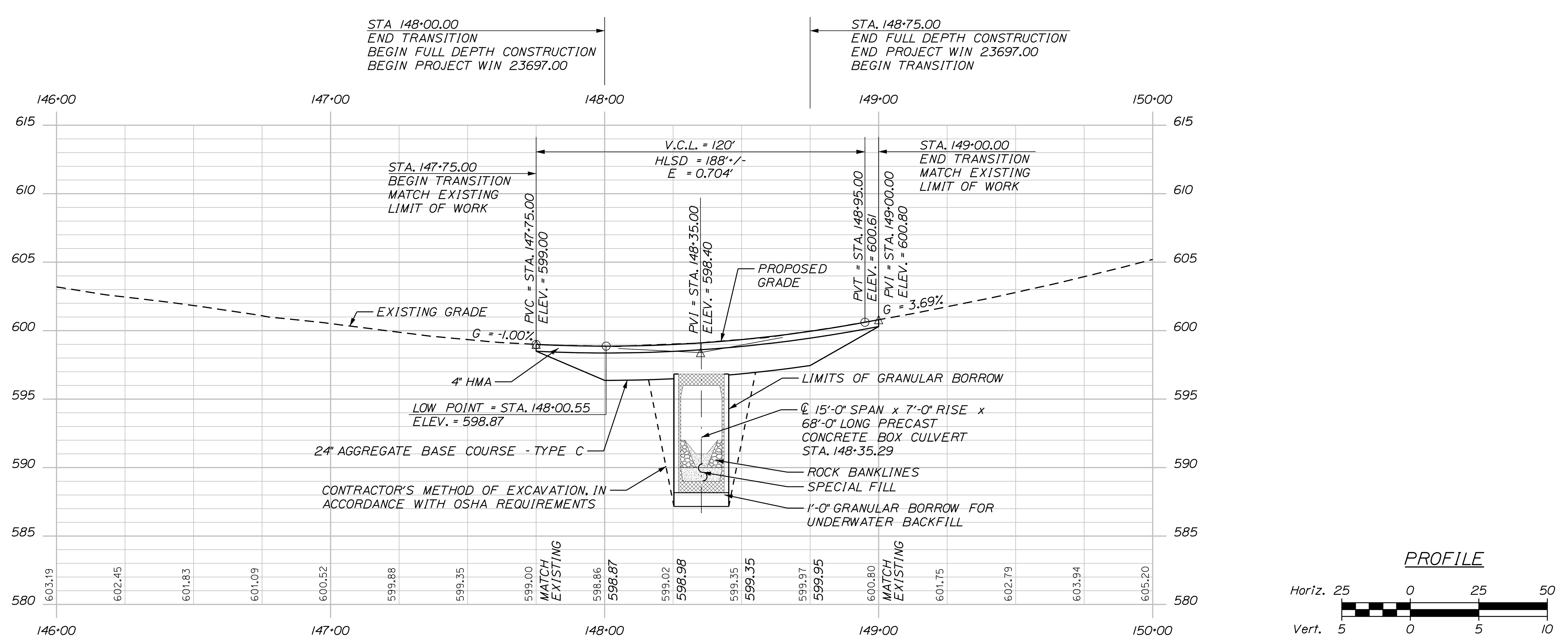
SHEET NUMBER
2
OF 14

Filename: ...\Consultant\006_HDPlan.dgn Division: HIGHWAY Username: common Date:1/17/2024



CURVE DATA #1
PI = 145+08.91
D = 5°43'46.5"
Δ = 9°56'48.7" Lt.
R = 1000.00'
L = 173.61'
T = 87.02'
E = 3.78'
PCC = STA. 145+95.50
CURVE DATA #2
PI = 148+27.58
D = 4°46'28.7"
Δ = 21°53'32.0" Lt.
R = 1200.00'
L = 458.51'
T = 232.09'
E = 22.24'
PT = STA. 150+54.01
℄ 15'-0" SPAN x 7'-0" RISE x 68'-0" LONG PRECAST CONCRETE BOX CULVERT
SPECIAL FILL APRON OVER RIPRAP (TYP)
REMOVE AND DISPOSE OF EXISTING 48" DIA., 48' LONG CULVERT
℄CULVERT & ℄CONSTRUCTION STA. 148+35.29
2'-0" THICK VOID-FILLED RIPRAP (TYP)
RIDGE ROAD
145+00
146+00
147+00
148+00
149+00
150+00
151+00
N37°05'38.67"E
STA. 147+75.00
BEGIN TRANSITION
MATCH EXISTING
LIMIT OF WORK
STA. 148+00.00
END TRANSITION
BEGIN FULL DEPTH CONSTRUCTION
BEGIN PROJECT WIN 23697.00
STA. 148+75.00
END FULL DEPTH CONSTRUCTION
END PROJECT WIN 23697.00
BEGIN TRANSITION
STA. 149+00.00
END TRANSITION
MATCH EXISTING
LIMIT OF WORK
FLOW
PLAN
25 0 25 50
Scale of Feet

PROPOSED CULVERT LAYOUT CONTROLS				
	INLET INVERT CONROLS		OUTLET INVERT CONROLS	
PERPENDICULAR STATION	148+27.57	148+43.01	148+28.00	148+42.58
PERPENDICULAR OFFSET	33.98' LT	33.98' LT	34.02' RT	34.02' RT
INVERT ELEVATION	EL. 591.00'	EL. 591.00'	EL. 591.00'	EL. 591.00'



STA 148+00.00
END TRANSITION
BEGIN FULL DEPTH CONSTRUCTION
BEGIN PROJECT WIN 23697.00
STA. 148+75.00
END FULL DEPTH CONSTRUCTION
END PROJECT WIN 23697.00
BEGIN TRANSITION
V.C.L. = 120'
HLSD = 188'+/-
E = 0.704'
STA. 147+75.00
BEGIN TRANSITION
MATCH EXISTING
LIMIT OF WORK
STA. 149+00.00
END TRANSITION
MATCH EXISTING
LIMIT OF WORK
PVC = STA. 147+75.00 ELEV. = 599.00
PVI = STA. 148+35.00 ELEV. = 598.40
PVT = STA. 148+95.00 ELEV. = 600.61
PVI = STA. 149+00.00 ELEV. = 600.80
PROPOSED GRADE
EXISTING GRADE
G = -1.00%
G = 3.69%
4" HMA
LOW POINT = STA. 148+00.55
ELEV. = 598.87
24" AGGREGATE BASE COURSE - TYPE C
CONTRACTOR'S METHOD OF EXCAVATION, IN ACCORDANCE WITH OSHA REQUIREMENTS
LIMITS OF GRANULAR BORROW
℄ 15'-0" SPAN x 7'-0" RISE x 68'-0" LONG PRECAST CONCRETE BOX CULVERT STA. 148+35.29
ROCK BANKLINES
SPECIAL FILL
1'-0" GRANULAR BORROW FOR UNDERWATER BACKFILL
603.19 602.45 601.83 601.09 600.52 599.88 599.35 599.00 MATCH EXISTING 598.86 598.87 599.02 598.98 599.35 599.35 599.97 599.95 600.80 MATCH EXISTING 601.75 602.79 603.94 605.20
146+00 147+00 148+00 149+00 150+00
615 610 605 600 595 590 585 580
PROFILE
Horiz. 25 0 25 50
Vert. 5 0 5 10
Scale of Feet

PROFILE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

23697.00

HIGHWAY PLANS
WIN 23697.00
BRIDGE NO. 6638

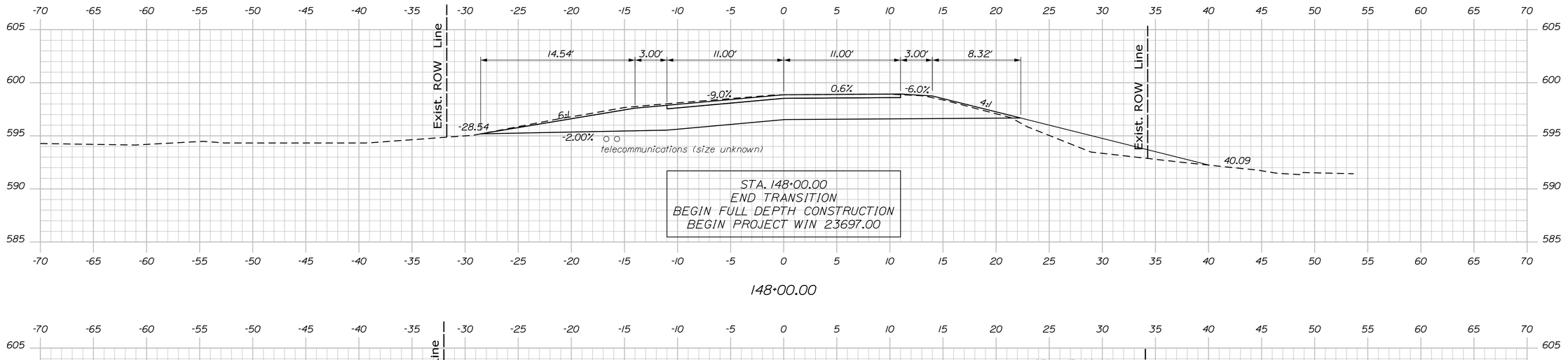
	BY	DATE
PROJ. MANAGER	ROGER SOUCY	
DESIGN-DETAILED	L. KALLOCH	W. GORDON
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE
P.E. NUMBER
DATE

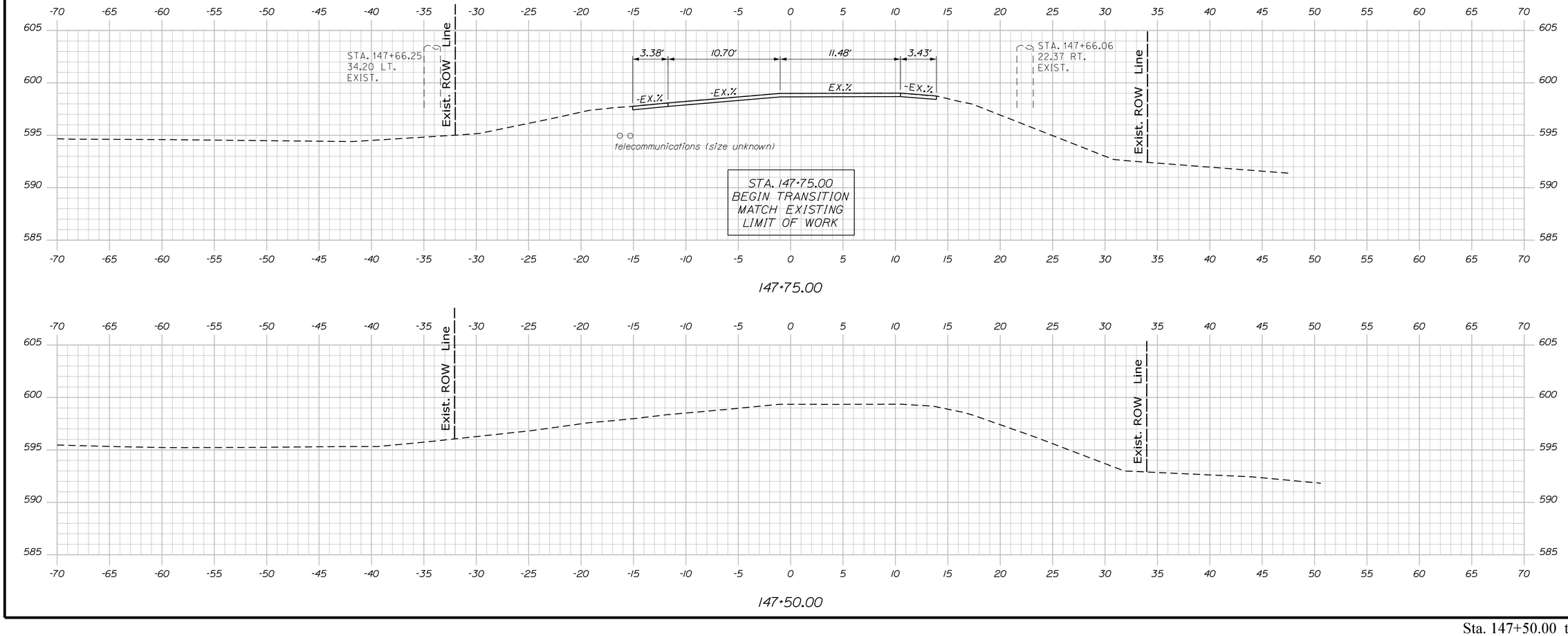
OAKFIELD RIDGE ROAD

PLAN AND PROFILE

SHEET NUMBER
8
OF 14



148+00.00



147+75.00

147+50.00

Sta. 147+50.00 to Sta. 148+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

23697.00

WIN 23697.00

BRIDGE NO. 6638

HIGHWAY PLANS

	BY	DATE
PROJ. MANAGER	ROGER SOUCY	
DESIGN-DETAILED	L. KALLOCH	W. GORDON
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

OAKFIELD
RIDGE ROAD

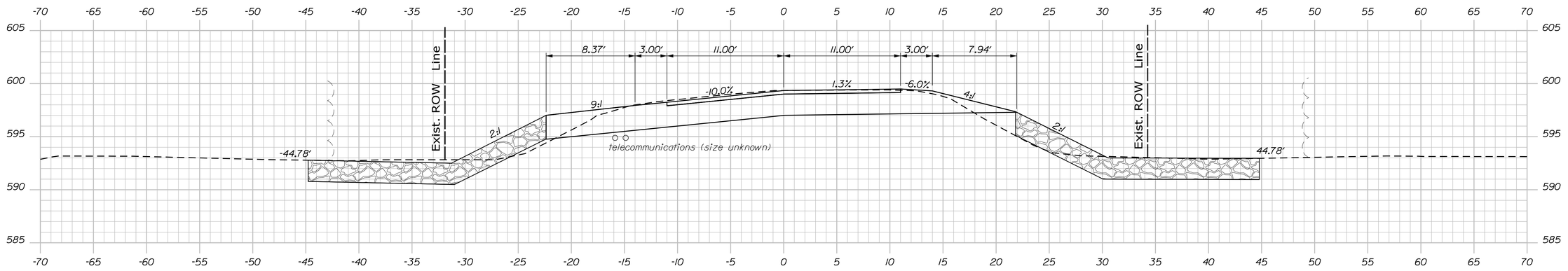
CROSS SECTIONS

SHEET NUMBER

9

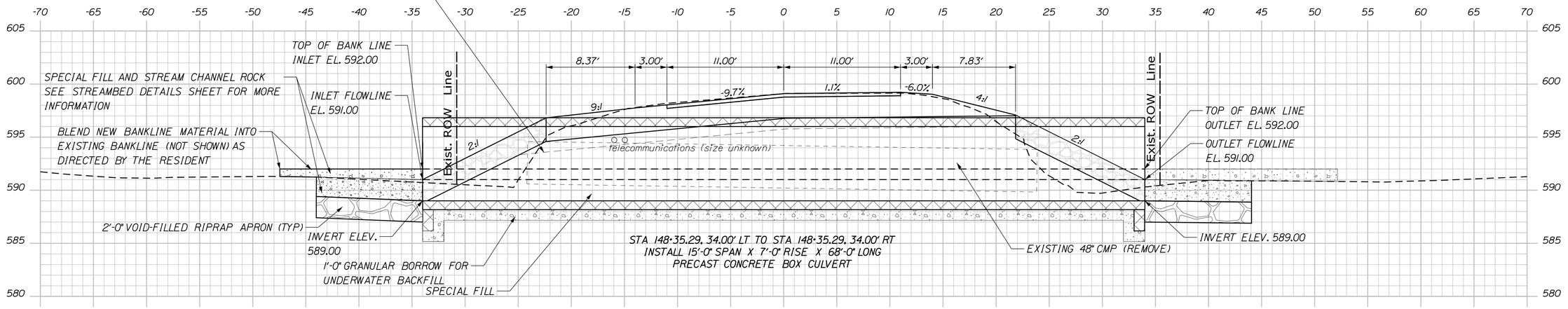
OF 14

Filename: ...\Consultant\007_Xsect.dgn Division: HIGHWAY Username: common Date:1/17/2024

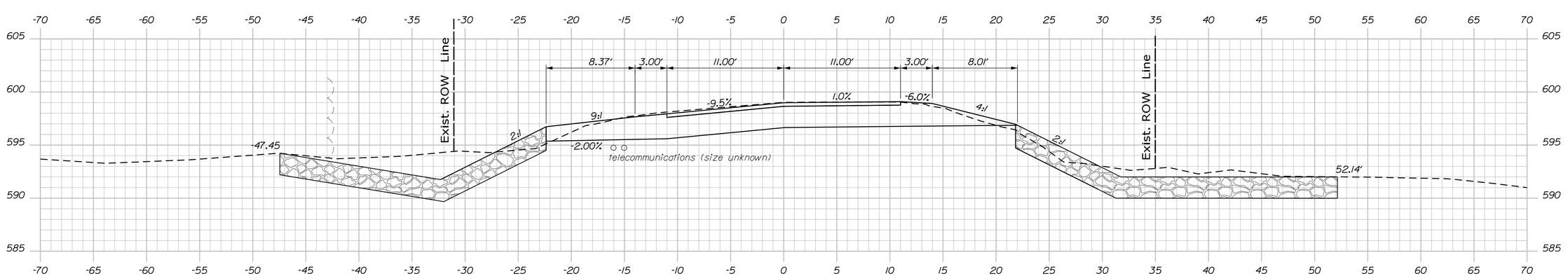


148+50.00

LIMIT OF ADDITIONAL 1'-0" LIFT OF SUBBASE FOR FROST TRANSITION AT CULVERT



148+35.29



148+25.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

23697.00

WIN 23697.00

BRIDGE NO. 6638

HIGHWAY PLANS

	BY	DATE
PROJ. MANAGER	ROGER SOUCY	
DESIGN-DETAILED	L. KALLOCH	W. GORDON
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

OAKFIELD
RIDGE ROAD

CROSS SECTIONS

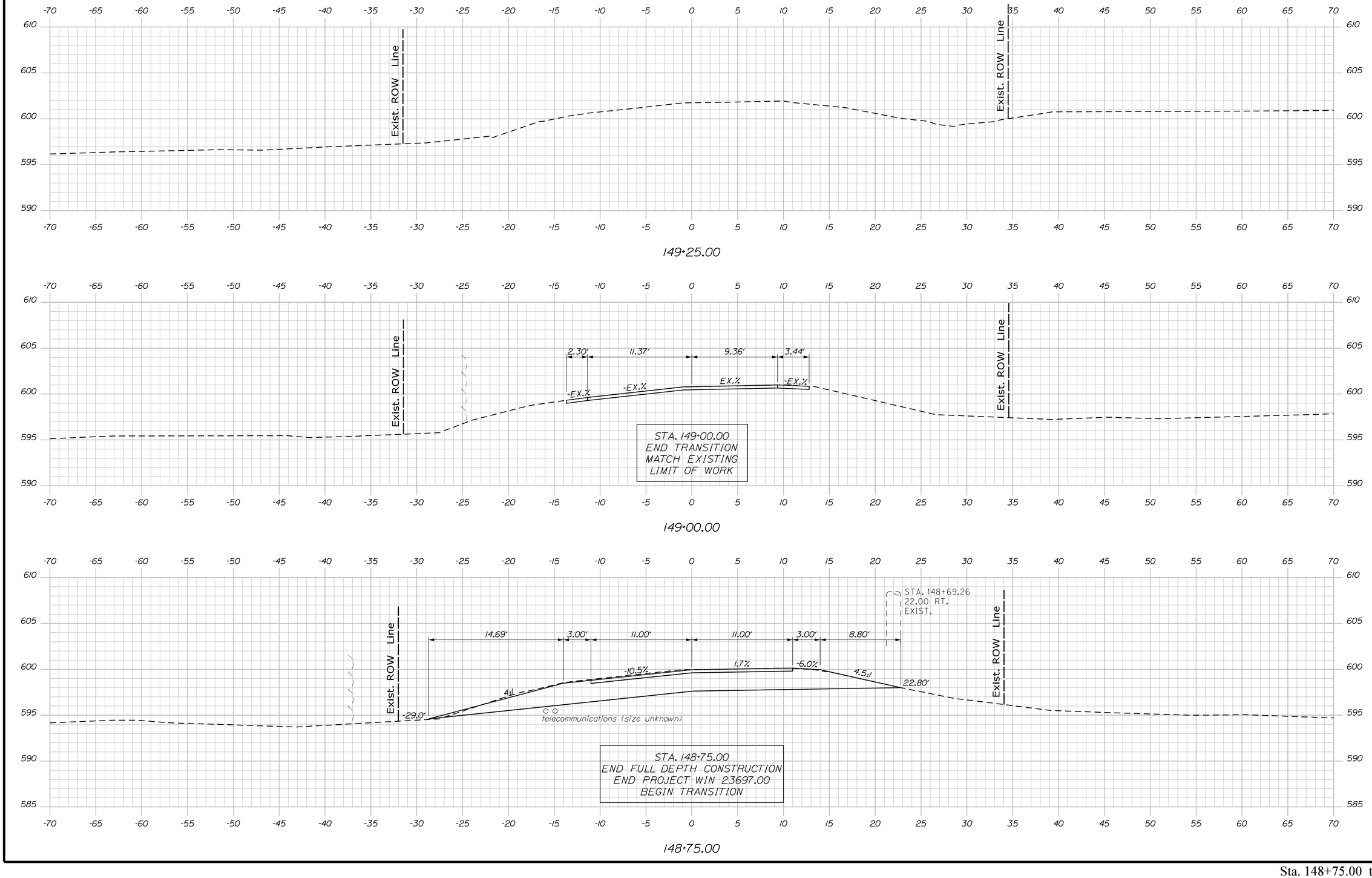
SHEET NUMBER

10

OF 14

Sta. 148+25.00 to Sta. 148+50.00

Filename: ...\Consultant\007_Xsect.dgn Division: HIGHWAY Username: common Date:1/17/2024



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

23697.00

WIN 23697.00

BRIDGE NO. 6638

HIGHWAY PLANS

			DATE
PROJ. MANAGER	ROGER SOUCY	BY	
DESIGN-DETAILED	L. KALLOCH	W. GORDON	
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

OAKFIELD
RIDGE ROAD

CROSS SECTIONS

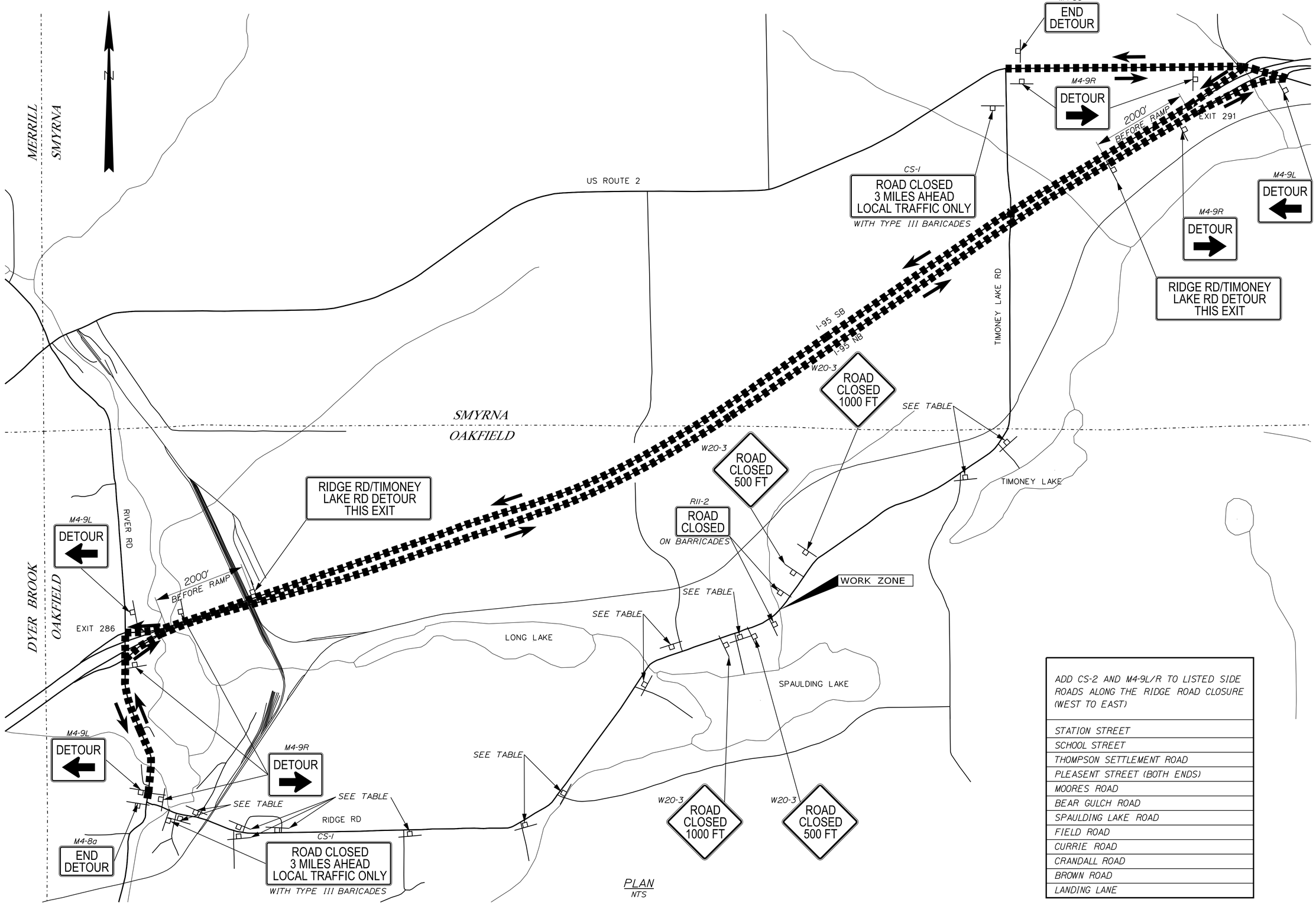
SHEET NUMBER

11

OF 14

Division: HIGHWAY
Username: common
Date:1/17/2024
Filename: ...\Consultant\007_Xsect.dgn

Sta. 148+75.00 to Sta. 149+25.00



PLAN
NTS

ADD CS-2 AND M4-9L/R TO LISTED SIDE ROADS ALONG THE RIDGE ROAD CLOSURE (WEST TO EAST)
STATION STREET
SCHOOL STREET
THOMPSON SETTLEMENT ROAD
PLEASENT STREET (BOTH ENDS)
MOORES ROAD
BEAR GULCH ROAD
SPAULDING LAKE ROAD
FIELD ROAD
CURRIE ROAD
CRANDALL ROAD
BROWN ROAD
LANDING LANE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

23697.00

WIN 23697.00
BRIDGE NO. 6638

HIGHWAY PLANS

		DATE
PROJ. MANAGER	ROGER SOUCY	
DESIGN-DETAILED	L.KALLOCH	
CHECKED-REVIEWED	S.FORTIER	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BY
W. GORDON
J. BEAUDET

SIGNATURE

P.E. NUMBER

DATE

OAKFIELD
RIDGE ROAD

ROAD CLOSURE PLAN

SHEET NUMBER
12
OF 14

CONSTRUCTION SIGN SUMMARY

ITEM NUMBER	IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		AREA IN SQUARE FEET
		WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR		BACK-GROUND	LEGEND BOARDER	
652.35	CS-1	60"	30"	ROAD CLOSED 3 MILES AHEAD LOCAL TRAFFIC ONLY	6"C 5"C 4"C	3.4" 3.4"		2	ORANGE	BLACK	12.50 (25.00)
652.35	CS-2	30"	30"	RIDGE ROAD CLOSED USE DETOUR	4"C 4"C 4"C	3.0" 3.0"		13	ORANGE	BLACK	6.25 (81.25)
652.35	CS-3	54"	30"	RIDGE RD/TIMONEY LAKE RD DETOUR THIS EXIT	6"C 5"C 4"C	3.4" 3.4"		2	ORANGE	BLACK	11.25 (22.50)
652.35	M4-8A	24"	18"	END DETOUR	TEXT DIMENSIONS SHALL CONFORM TO 'STANDARD HIGHWAY SIGNS"			2	ORANGE	BLACK	3.00 (6.00)
652.35	M4-9R	30"	24"	DETOUR →				12	ORANGE	BLACK	5.00 (60.00)
652.35	M4-9L	30"	24"	DETOUR ←				10	ORANGE	BLACK	5.00 (50.00)
652.35	R11-2	48"	30"	ROAD CLOSED				2	ORANGE	BLACK	10.00 (20.00)
652.35	W20-3 (500 FT)	48"	48"	ROAD CLOSED 500 FT				2	ORANGE	BLACK	16.00 (32.00)
652.35	W20-3 (1000 FT)	48"	48"	ROAD CLOSED 1000 FT				2	ORANGE	BLACK	16.00 (32.00)

NOTES:

1. SIGN LOCATIONS ARE APPROXIMATE AND TO BE VERIFIED IN THE FIELD.
2. INFORMATION SHOWN REFLECTS SIGNAGE FOR DETOUR PLANS ONLY. ADDITIONAL SIGNAGE IS REQUIRED FOR HIGHWAY CONSTRUCTION WORK.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

23697.00

WIN 23697.00

BRIDGE NO. 6638

HIGHWAY PLANS

		BY	DATE
PROJ. MANAGER	ROGER SOUCY		
DESIGN-DETAILED	L. KALLOCH	W. GORDON	
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

OAKFIELD
RIDGE ROAD

SIGN SUMMARY

SHEET NUMBER

13

OF 14

PLAN LEGEND

Town, County, State; Approx. Property Lines (P.L.); Existing Right of Way; Limits of Wrought Portion (L.O.W.P.); Control Of Access (C.O.A.); New Right of Way; New Easement; New Temporary Rights; New R/W Within Existing R/W

New R/W Along Existing R/W; Building; Clearing Limit Line; Trees: Conifer, Deciduous; Tree Line; Bush Line; Water Edge; Ledge; Rock/Boulder; Flag Pole; Fence: Chain Link, Barb Wire, Stockade; Sign; Well; Mailbox

	Existing	Proposed
Sanitary Sewer		
Telephone Line		
Electric Line		
Water Line		
Underdrain Line		
Gas Line		
Guardrail		
Culvert		
Traveled Way		
Ditch		
Catch Basin		
Manhole		
Sewer Manhole		
Utility Pole		
Fire Hydrant		
Curbing		

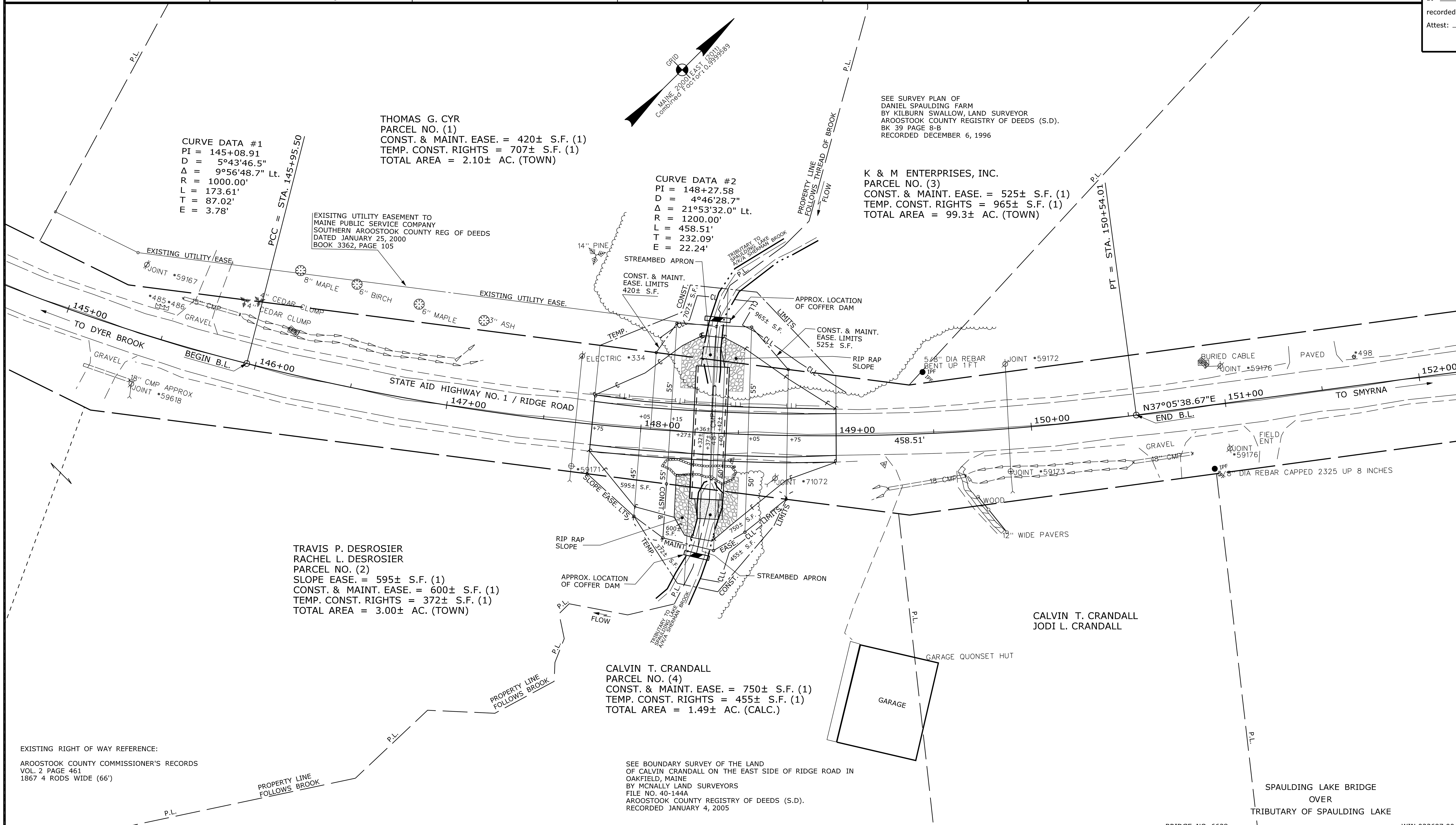
Cut Line; Fill Line; Stonewall; Retaining Wall; Baseline (10+00, 11+00, 12+00); Monument; Traverse Point; Iron Rod Found (IRF); Pipe Found (IPF); Replacement Pin Set

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

STATE OF MAINE REGISTRY OF DEEDS

COUNTY ____________
RECEIVED ____________, ______
at ______h______m______M and recorded in Plan Bk ______, Pg.______
Attest: ____________ REGISTER



GRID
MAINE 2000 EAST (2011)
Combined Factor 0.9999989
CURVE DATA #1
PI = 145+08.91
D = 5°43'46.5"
Δ = 9°56'48.7" Lt.
R = 1000.00'
L = 173.61'
T = 87.02'
E = 3.78'
PCC = STA. 145+95.50
THOMAS G. CYR
PARCEL NO. (1)
CONST. & MAINT. EASE. = 420± S.F. (1)
TEMP. CONST. RIGHTS = 707± S.F. (1)
TOTAL AREA = 2.10± AC. (TOWN)
CURVE DATA #2
PI = 148+27.58
D = 4°46'28.7"
Δ = 21°53'32.0" Lt.
R = 1200.00'
L = 458.51'
T = 232.09'
E = 22.24'
SEE SURVEY PLAN OF DANIEL SPAULDING FARM BY KILBURN SWALLOW, LAND SURVEYOR AROOSTOOK COUNTY REGISTRY OF DEEDS (S.D.) BK 39 PAGE 8-B RECORDED DECEMBER 6, 1996
K & M ENTERPRISES, INC.
PARCEL NO. (3)
CONST. & MAINT. EASE. = 525± S.F. (1)
TEMP. CONST. RIGHTS = 965± S.F. (1)
TOTAL AREA = 99.3± AC. (TOWN)
PROPERTY LINE FOLLOWS THREAD OF BROOK
FLOW
PT = STA. 150+54.01
EXISTING UTILITY EASEMENT TO MAINE PUBLIC SERVICE COMPANY SOUTHERN AROOSTOOK COUNTY REG OF DEEDS DATED JANUARY 25, 2000 BOOK 3362, PAGE 105
EXISTING UTILITY EASE.
STREAMBED APRON
CONST. & MAINT. EASE. LIMITS 420± S.F.
APPROX. LOCATION OF COFFER DAM
CONST. & MAINT. EASE. LIMITS 525± S.F.
RIP RAP SLOPE
TRIBUTARY TO SPAULDING LAKE A/K/A SHERMAN BROOK
145+00
TO DYER BROOK
BEGIN B.L.
146+00
147+00
STATE AID HIGHWAY NO. 1 / RIDGE ROAD
148+00
149+00
458.51'
150+00
N37°05'38.67"E
END B.L.
151+00
152+00
TO SMYRNA
5/8" DIA REBAR BENT UP 1 FT
BURIED CABLE
PAVED
GRAVEL
FIELD ENT
5/8" DIA REBAR CAPPED 2325 UP 8 INCHES
12" WIDE PAVERS
WOOD
18" CMP
TRAVIS P. DESROSIER
RACHEL L. DESROSIER
PARCEL NO. (2)
SLOPE EASE. = 595± S.F. (1)
CONST. & MAINT. EASE. = 600± S.F. (1)
TEMP. CONST. RIGHTS = 372± S.F. (1)
TOTAL AREA = 3.00± AC. (TOWN)
RIP RAP SLOPE
APPROX. LOCATION OF COFFER DAM
STREAMBED APRON
FLOW
CALVIN T. CRANDALL
JODI L. CRANDALL
GARAGE QUONSET HUT
GARAGE
CALVIN T. CRANDALL
PARCEL NO. (4)
CONST. & MAINT. EASE. = 750± S.F. (1)
TEMP. CONST. RIGHTS = 455± S.F. (1)
TOTAL AREA = 1.49± AC. (CALC.)
PROPERTY LINE FOLLOWS BROOK
SEE BOUNDARY SURVEY OF THE LAND OF CALVIN CRANDALL ON THE EAST SIDE OF RIDGE ROAD IN OAKFIELD, MAINE BY MCNALLY LAND SURVEYORS FILE NO. 40-144A AROOSTOOK COUNTY REGISTRY OF DEEDS (S.D.) RECORDED JANUARY 4, 2005
EXISTING RIGHT OF WAY REFERENCE:
AROOSTOOK COUNTY COMMISSIONER'S RECORDS VOL. 2 PAGE 461 1867 4 RODS WIDE (66')
SPAULDING LAKE BRIDGE OVER TRIBUTARY OF SPAULDING LAKE
BRIDGE NO. 6638
WIN 023697.00

TECH	CHECKED	ITEM
T.L.B.	D.H.	EXISTING CONDITION PLAN
T.L.B.	B.D.M.	FINAL RIGHT OF WAY
T.L.B.	J.D.F.	AREAS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
OAKFIELD
RIGHT OF WAY MAP

REVISIONS			
NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK		PAGE	COUNTY RECORD			
NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE	

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE AID HIGHWAY NO. 1
RIDGE ROAD
OAKFIELD AROOSTOOK COUNTY
STATE PROJECT NO. 23697.00

SEPTEMBER 2023 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 2-647
SCALE 1" = 25' | SHEET 1 OF 1

SHEET NUMBER
14
OF 14

Date:$date$ Username: $user$ Division: $wkgroup$ Filename: $file$

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

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	Existing / Proposed	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	Conifer / Deciduous	Centerline-Existing	
Tree Line		Centerline-Proposed	10+00
Clearing Limit Line		Travelway-Existing	
Railroad		Travelway-Proposed	

Boring — HB-XXX-###

Pavement Core — PC-#

Test Pit — TP-XXX-###

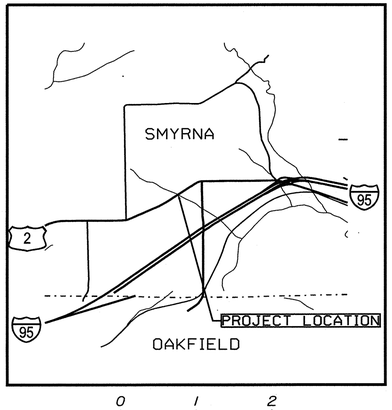
Probe — P-#.#X

#.# = Depth

X = W (Weathered Rock)
R (Refusal)
NR (No Refusal)

TRAFFIC DATA

Current (2023) AADT	920
Future (2043) AADT	1,010
DHV - % of AADT	12%
Design Hour Volume	121
% Heavy Trucks (AADT)	17%
% Heavy Trucks (DHV)	23%
Directional Distribution (DHV)	56%
18 kip Equivalent P 2.0	100
18 kip Equivalent P 2.5	96
Design Speed (mph)	50
Functional Class:	Major Collector
Highway Corridor Priority:	4



0 1 2

Scale in Miles

LOCATION MAP

SMYRNA

AROOSTOOK COUNTY

US ROUTE 2

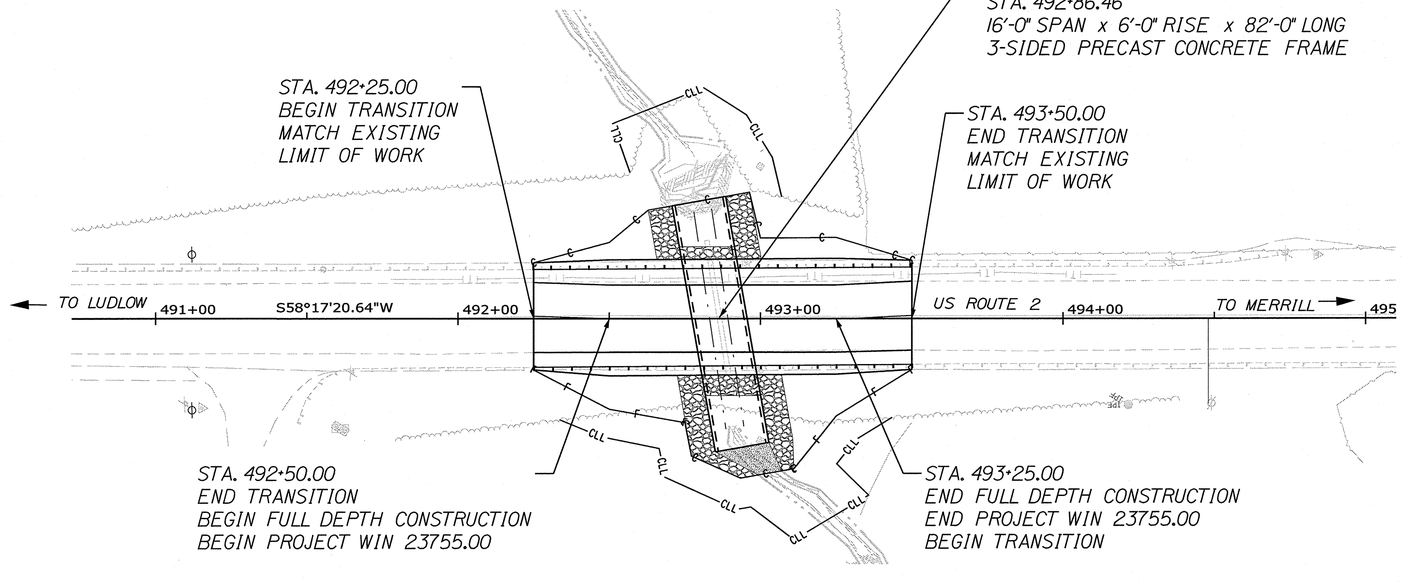
LIMESTONE BROOK BRIDGE

BRIDGE NO. 6637

FEDERAL PROJECT NO. 2375500

PROJECT LENGTH : 0.01 MILES

INDEX OF SHEETS



LAYOUT SCALE

25 0 25 50

Scale in Feet

PROJECT LOCATION:	SMYRNA, ROUTE 2, LOCATED 0.4 MILES WEST OF TIMONEY LAKE ROAD INTERSECTION.
PROGRAM AREA:	REGIONAL PROGRAM
SCOPE OF WORK:	LARGE CULVERT REPLACEMENT

WIN 23755.00 FEDERAL PROJECT NO. 2375500

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
APPROVED	
COMMISSIONER: Bill Hinkley	2-23-24
CHIEF ENGINEER: Lucas Neal Taylor	2-23-24

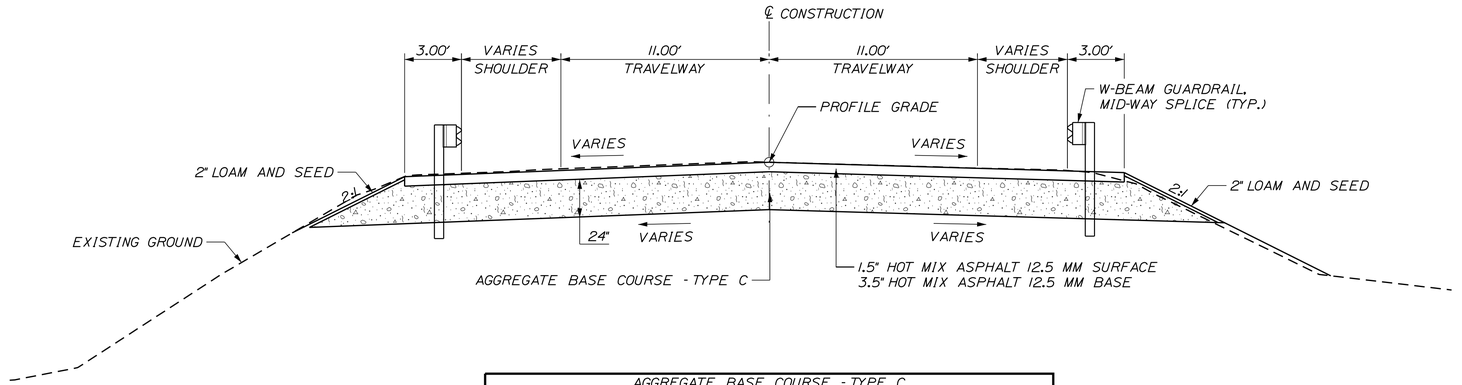
STATE OF MAINE ★ Liam B. Kalloch 15070 LICENSED PROFESSIONAL ENGINEER ★

PROJECT INFORMATION		SIGNATURE	P.E. NUMBER	DATE
PROGRAM	HIGHWAY	Liam Kalloch	15070	01-25-2024
PROJECT MANAGER	ROGER SOUCY			
DESIGNER	L. KALLOCH			
CONSULTANT	CMA ENGINEERS, INC			
PROJECT RESIDENT				
CONTRACTOR				
PROJECT COMPLETION DATE				

SMYRNA
US ROUTE 2

TITLE SHEET

SHEET NUMBER
1
OF 15



AGGREGATE BASE COURSE - TYPE C		
SHOULDER 82.85 CY/100 LF	TRAVEL LANE 162.96 CY/100 LF	SHOULDER 78.81 CY/100 LF
STATION TO STATION	STATION TO STATION	STATION TO STATION
492+50 TO 493+25	492+50 TO 493+25	492+50 TO 493+25

ROADWAY TYPICAL SECTION

N.T.S.

CROSS SLOPE TABLE		
LT. TRAVEL LANE	STATION	RT. TRAVEL LANE
	BEGIN	
MATCH	492+25	MATCH
-3.6%	492+50	-2.9%
-3.5%	492+75	-3.0%
-3.4%	493+00	-3.0%
-3.3%	493+25	-3.1%
MATCH	493+50	MATCH

NOTES:

1. THE PAVEMENT, BASE AND SUBBASE DEPTHS AS SHOWN ON THE PLANS ARE INTENDED TO BE NOMINAL.

2. THE GRAVEL QUANTITY CALCULATION IS BASED ON A 2 INCH LOAM DEPTH. THE ACTUAL DEPTH MAY VARY. SEE THE GENERAL NOTES.

3. STATIONING SHOWN UNDER EACH TYPICAL IS APPROXIMATE.

4. THE ALGEBRAIC DIFFERENCE BETWEEN THE SHOULDER AND TRAVELWAY CROSS SLOPES "ROLLOVER" SHALL NOT EXCEED 8%.

NOT TO SCALE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2375500

WIN 23755.00

BRIDGE NO. 6637 REGIONAL PROGRAM

PROJ. MANAGER	ROGER SOUCY	BY	DATE
DESIGN-DETAILED	L. KALLOCH	W. GORDON	
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SMYRNA
US ROUTE 2

TYPICAL SECTIONS

SHEET NUMBER

2

OF 15

Filename: ...\Consultant\002_TypicaL.dgn Division: HIGHWAY Username: common Date:1/17/2024

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
203.20	COMMON EXCAVATION	370	CY
203.25	GRANULAR BORROW	110	CY
203.33	SPECIAL FILL	10	CY
206.07	STRUCTURAL ROCK EXCAVATION-DRAINAGE & MINOR STRUCTURES	50	CY
304.16	AGGREGATE BASE COURSE - TYPE C	360	CY
403.208	HOT MIX ASPHALT 12.5 MM HMA SURFACE	45	T
403.213	HOT MIX ASPHALT 12.5 MM BASE	110	T
409.15	BITUMINOUS TACK COAT - APPLIED	15	G
502.21	STRUCTURAL CONCRETE ABUTMENT & RETAINING WALL	55	CY
502.565	CONCRETE FILL	15	CY
503.12	REINFORCING STEEL, FABRICATED & DELIVERED (7000 LB)	7000	LB
503.13	REINFORCING STEEL, PLACING	7000	LB
508.13	SHEET WATERPROOFING MEMBRANE (160 SY)	1	LS
511.07	COFFERDAM: UPSTREAM	1	LS
511.07	COFFERDAM DOWNSTREAM	1	LS
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES (120 SY)	1	LS
534.701	PRECAST STRUCTURAL CONCRETE ARCH - STATE SUPPLIED (95 CY)	1	LS
605.09	6" UNDERDRAIN TYPE B	170	LF
606.36	GR REMOVED AND RESET	275	LF
610.213	VOID-FILLED RIPRAP	160	CY
613.319	EROSION CONTROL BLANKET	230	SY
615.07	LOAM	10	CY
618.14	SEEDING METHOD NUMBER 2	2	UN
619.12	MULCH	2	UN
620.58	EROSION CONTROL GEOTEXTILE	210	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	380	LF
627.78	TEMPORARY 4" PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW	380	LF
629.05	HAND LABOR, STRAIGHT TIME	20	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	40	HR
639.20	FIELD OFFICE - TYPE C	0.5	EA
652.312	TYPE III BARRICADE	4	EA
652.33	DRUM	10	EA
652.34	CONE	20	EA
652.35	CONSTRUCTION SIGN	480	SF
652.36	MAINTENANCE OF TRAFFIC CONTROL DEVICES	60	CD
652.38	FLAGGER	300	HR
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL NOTES

1. PAVEMENT THICKNESSES SHOWN ON THE TYPICAL SECTIONS ARE INTENDED TO BE NOMINAL.

2. CLEARING LIMITS SHALL BE 10 FEET BEYOND AND PARALLEL TO THE CONSTRUCTION SLOPE LINES OR AS SHOWN ON THE PLANS UNLESS OTHERWISE AUTHORIZED BY THE RESIDENT.

3. 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.

4. THE CLEARING AND SELECTIVE CLEARING AND THINNING LINES SHOWN ON THE PLANS ARE FOR ESTIMATING PURPOSES ONLY. THE ACTUAL LINES FOR CLEARING AND THINNING SHALL BE ESTABLISHED IN THE FIELD BY THE CONTRACTOR AND APPROVED BY THE RESIDENT.

5. WHERE DEEMED NECESSARY BY THE RESIDENT, UNSUITABLE EXCESS MATERIAL SHALL BE REMOVED FROM THE EDGES OF SHOULDERS AND PLACED IN DESIGNATED AREAS OR DISPOSED OF. PAYMENT WILL BE MADE UNDER THE APPROPRIATE CONTRACT ITEMS.

6. 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.

7. GRANULAR BORROW USED TO BACKFILL MUCK EXCAVATION OR IN LOW WET AREAS TO 1 FOOT ABOVE WATER LEVEL OR OLD GROUND SHALL MEET REQUIREMENTS FOR GRANULAR BORROW MATERIAL FOR UNDERWATER BACKFILL AS SPECIFIED IN STANDARD SPECIFICATIONS ITEM 703.19, GRANULAR BORROW.

8. 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.

9. CROSS SLOPES FOR NORMAL AND SUPERELEVATED SECTIONS WILL BE STRAIGHT UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.

10. NO EXISTING DRAINAGE SHALL BE ABANDONED, REMOVED OR PLUGGED WITHOUT PRIOR APPROVAL OF THE RESIDENT.

11. GUARDRAIL END TREATMENTS SHALL BE INSTALLED CONCURRENTLY WITH THE PLACEMENT OF EACH SECTION OF BEAM GUARDRAIL.

12. CONNECTIONS FOR PROPOSED GUARDRAIL TO EXISTING GUARDRAIL WILL BE CONSIDERED INCIDENTAL TO STANDARD SPECIFICATIONS SECTION 606, GUARDRAIL.

13. LOAM HAS BEEN ESTIMATED FOR DISTURBED LAWN AREAS. ACTUAL PLACEMENT OF THE LOAM SHALL BE AS NOTED ON THE PLANS OR DESIGNATED BY THE RESIDENT.

14. LOAM SHALL BE PLACED TO A NOMINAL DEPTH OF 4 INCHES IN LAWN AREAS AND 2 INCHES IN ALL OTHER AREAS UNLESS OTHERWISE NOTED OR DIRECTED.

15. THE CONTRACTOR IS RESPONSIBLE FOR THE CAREFUL SIDE STAKING OF EXISTING CENTERLINE AS PER STANDARD SPECIFICATION SECTION 105.6.2. CONTRACTOR PROVIDED SERVICES. SIDE STAKES SHALL BE PLACED SAFELY OUTSIDE OF THE CONSTRUCTION LIMITS AND THE EXISTING CENTERLINE GRADES SHALL BE TRANSFERRED TO THESE STAKES. THESE STAKES AND GRADES WILL BE USED TO LAY OUT CENTERLINE AND DETERMINE NEW CONSTRUCTION FINISH GRADES FROM DIFFERENTIAL ELEVATION SHEETS FURNISHED BY MAINEDOT. ALL LAYOUT, STAKES, AND GRADES WILL BE CHECKED AND MUST BE ACCEPTABLE TO THE RESIDENT. (REHABILITATION ONLY)

16. 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.

17. THE PROJECT GEOTECHNICAL REPORT TITLED "GEOTECHNICAL DESIGN REPORT FOR THE CONSTRUCTION OF LIMESTONE BROOK BRIDGE", SOILS REPORT 2024-02, JANUARY 17, 2024 CAN BE ACCESSED AT THE MAINEDOT WEBSITE HTTP://WWW.MAINE.GOV//MDOT/CONTRACTORS/.

18. 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 THROUGHOUT THE CONSTRUCTION SITE. MAINEDOT WILL NOT BE RESPONSIBLE FOR ANY INTERPRETATIONS OR CONCLUSIONS 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.

19. AREAS ON THE PROJECT REQUIRING FILL WILL COME FROM SUITABLE SITES SUCH AS EXCAVATION, DITCH AND INSLOPE OR EQUIPMENT RENTAL AREAS.

20. ESTIMATED QUANTITIES FOR REQUIRED STRUCTURAL EARTH EXCAVATION, DRAINAGE AND MINOR STRUCTURES ARE INFORMATIONAL ONLY AND REPRESENT THE APPROXIMATE MINIMUM QUANTITY REQUIRED TO INSTALL DRAINAGE STRUCTURES. ADDITIONAL EXCAVATION FOR THE CONTRACTOR'S CONVENIENCE OR TO COMPLY WITH BACKSLOPING REQUIREMENTS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED INCIDENTAL TO THE RELATED DRAINAGE ITEMS.

21. 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.

22. "UNDETERMINED LOCATIONS" SHALL BE DETERMINED BY THE RESIDENT.

23. FINAL STRIPING FOR THE PROJECT 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.

24. DURING CONSTRUCTION, THE ROAD WILL BE CLOSED TO TRAFFIC FOR A TIME PERIOD SPECIFIED IN THE SPECIAL PROVISIONS.

25. PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO THE FOLLOWING AREAS:

ALL EXPOSED SURFACES OF PRECAST CONCRETE FRAME

26. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE MAINE DEPARTMENT OF TRANSPORTATION BEST MANAGEMENT PRACTICES FOR EROSION CONTROL AND SEDIMENT CONTROL (FEBRUARY 2008).

27. ALL COMPUTATION METHODS AND QUANTITIES USED FOR THE ENGINEER'S ESTIMATE FOR PLAN QUANTITY ITEMS ONLY ARE AVAILABLE BY CONTACTING REGION 5 PROJECT MANAGER.

CONSTRUCTION NOTES

1. ROCK EXCAVATION MAY BE NECESSARY TO ACHIEVE PLANNED GRADES FOR THE PROJECT. EXCAVATED FRACTURE ROCK SHALL BE INCIDENTAL TO ITEM 534.701 PRECAST STRUCTURAL CONCRETE ARCH AND SOUND ROCK REQUIRING HAMMERING OR BLASTING WILL BE PAID AS STRUCTURAL ROCK EXCAVATION (PAY ITEM 206.07).

2. BLASTING MAY BE REQUIRED TO ACHIEVE THE PLANNED GRADES FOR THE PROJECT. IF BLASTING IS REQUIRED, THE CONTRACTOR SHALL CONDUCT WORK IN ACCORDANCE WITH STANDARD SPECIFICATION SECTIONS 105.2.7 - USE OF EXPLOSIVES AND 203.042 - ROCK EXCAVATION AND BLASTING.

3. ANY EXCAVATED DREDGE MATERIAL THAT CAN BE REUSED ON SITE, AS DIRECTED BY THE RESIDENT, SHALL BE REUSED TO FILL WITHIN EMBANKMENT AND INTO VOIDS OF RIPRAP. THIS WORK WILL BE CONSIDERED INCIDENTAL TO RELATED CONTRACT ITEMS.

4. CONSTRUCTION ACTIVITIES SHOULD NOT BE PERMITTED TO CREATE ANY OPEN FISSURES IN THE BEDROCK SURFACE. ANY IRREGULARITIES IN THE EXPOSED BEDROCK SURFACE OR IRREGULARITIES CREATED DURING THE EXCAVATION PROCESS SHALL BE FILLED USING CONCRETE FILL (PAY ITEM 502.565) PRIOR TO PEDESTAL FOOTING CONSTRUCTION.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2375500

WIN 23755.00 REGIONAL PROGRAM

PROJ. MANAGER	ROGER SOUCY		DATE
DESIGN-DETAILED	L. KALLOCH	W. GORDON	
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SMYRNA
U.S. ROUTE 2

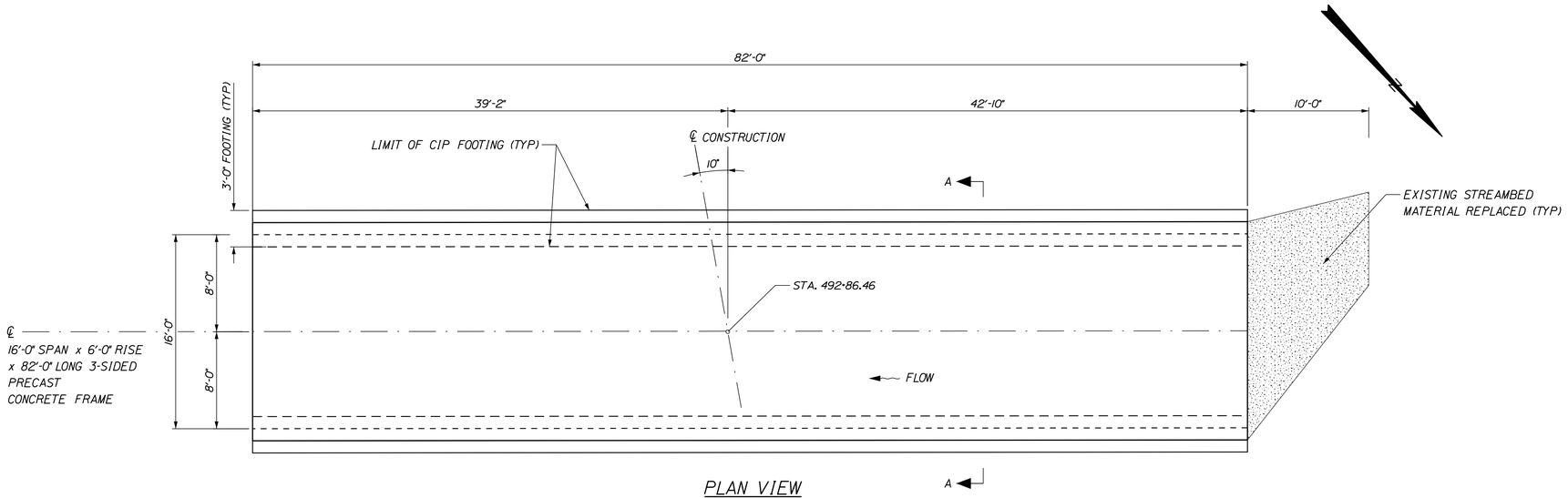
ESTIMATED QUANTITIES
AND GENERAL NOTES

SHEET NUMBER

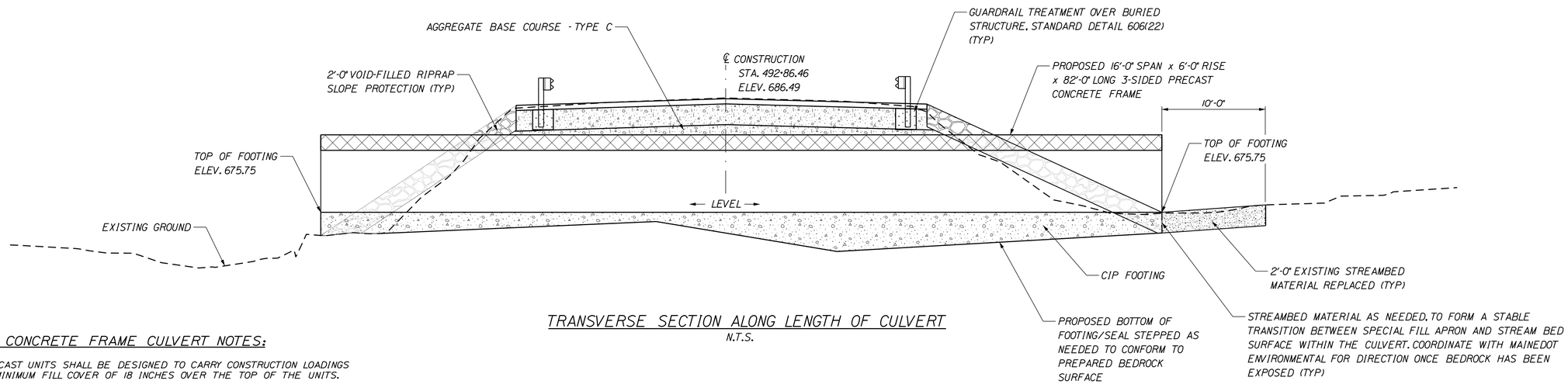
3

OF 15

Filename: ...\003_Estimate_GeneralNotes_DOT Revised.dgn Design: HIGHWAY Username: David.Wardwell Date:2/15/2024



PLAN VIEW
N.T.S.



TRANSVERSE SECTION ALONG LENGTH OF CULVERT
N.T.S.

PRECAST CONCRETE FRAME CULVERT NOTES:

1. THE PRECAST UNITS SHALL BE DESIGNED TO CARRY CONSTRUCTION LOADINGS WITH A MINIMUM FILL COVER OF 18 INCHES OVER THE TOP OF THE UNITS.
2. THE CONSTRUCTION, HANDLING, AND ASSEMBLY OF THE PRECAST UNITS SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 534 PRECAST STRUCTURAL CONCRETE, AND WITH THE MANUFACTURER'S SPECIFICATIONS AS APPLICABLE.
3. INSTALL MEMBRANE WATERPROOFING OVER THE TOP AND TO 12 INCHES DOWN THE EXTERIOR SIDES OF THE PRECAST UNITS.
4. COFFERDAMS ARE TO BE PLACED AT BOTH THE DOWNSTREAM AND UPSTREAM ENDS OF THE CULVERT TO ALLOW WATER TO BE PUMPED AND REMOVED DURING CONSTRUCTION OF THE CULVERT. IF ADDITIONAL COFFERDAM(S) ARE REQUIRED TO CONSTRUCT THE FOOTINGS IN THE DRY, ALL COSTS FOR FOOTING COFFERDAM(S), INCLUDING PUMPING, MAINTENANCE, RELATED TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROLS, AND REMOVAL, WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED INCIDENTAL TO RELATED CONTRACT ITEMS
5. VOID-FILLED RIPRAP WILL BE USED TO INSLOPE AROUND THE CULVERT ENDS AT BOTH THE INLET AND OUTLET. SEE PLAN AND PROFILE FOR LOCATIONS. RIPRAP ADJACENT TO THE CULVERT AND IT'S FOOTINGS SHALL BE CAREFULLY PLACED SO AS NOT TO DAMAGE THE STRUCTURE AND SO THAT THE FINISHED SLOPE WILL MATCH THE ENDS OF THE CULVERT. ANY EXTRA LABOR, MATERIAL OR EQUIPMENT USED WILL BE INCIDENTAL TO ITEM 610.213 VOID-FILLED RIPRAP. ANY DAMAGE TO THE STRUCTURE DURING CONSTUCTION SHALL BE REPAIRED OR REPLACED AS DETERMINED BY THE RESIDENT AT THE CONRACTOR'S EXPENSE.
6. PLACE INDIVIDUAL STONES IN THE STREAMBED, AS DIRECTED BY THE RESIDENT AND/OR MAINEDOT ENVIRONMENTAL STAFF. ONCE THE BEDROCK SURFACE HAS BEEN EXPOSED (TYP).

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2375500

WIN 23755.00

BRIDGE NO. 6637 REGIONAL PROGRAM

PROJ. MANAGER	ROGER SOUCY		
DESIGN-DETAILED	W. GORDON		
CHECKED-REVIEWED	J. BEAUDET		
DESIGN2-DETAILED2	L. KALLOCH		
DESIGN3-DETAILED3	S. FORTIER		
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BY | DATE

SIGNATURE

P.E. NUMBER

DATE

SMYRNA
US ROUTE 2

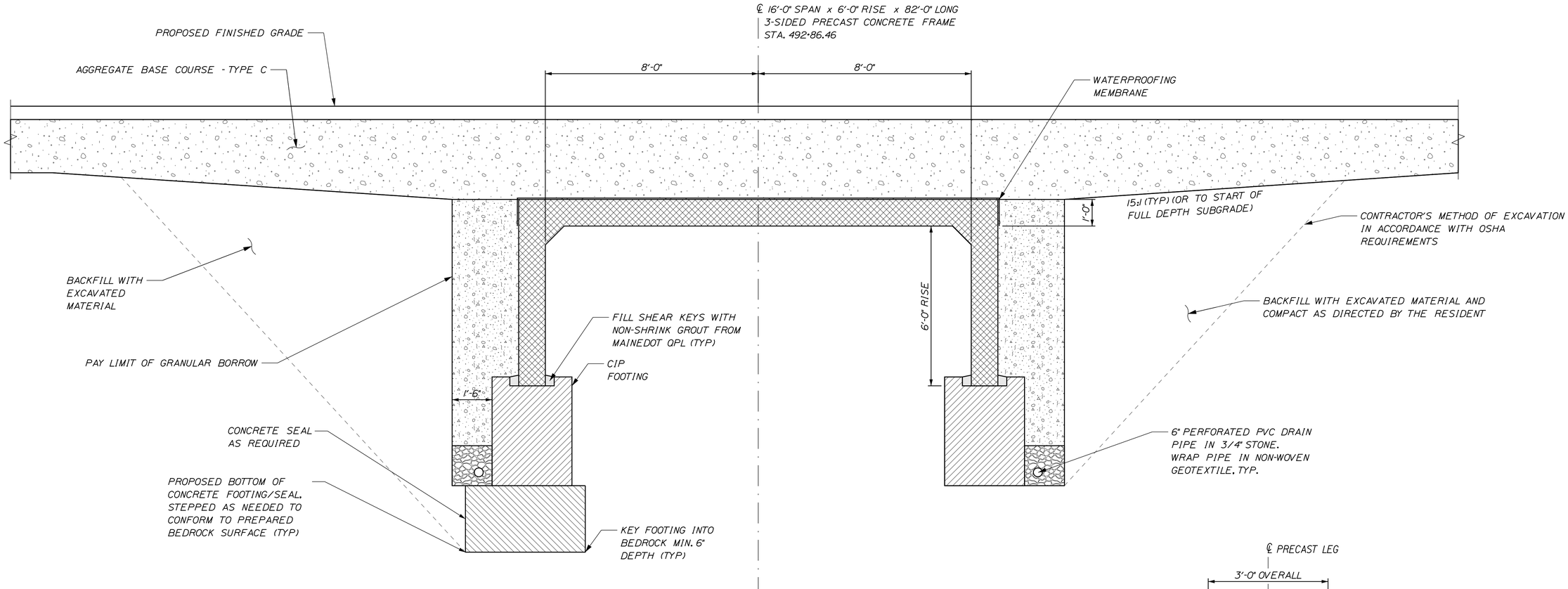
SPECIAL DETAILS

SHEET NUMBER

4

OF 15

Filename: ...\Consultant\005_Detail.dgn Division: HIGHWAY Username: common Date:1/18/2024

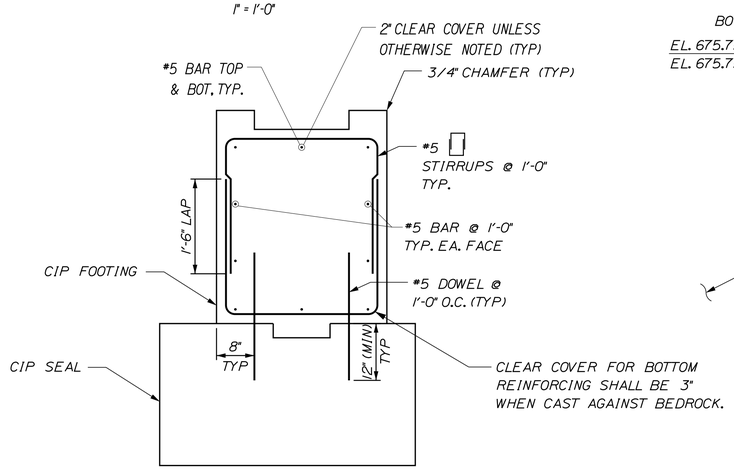


TYPICAL CULVERT SECTION A-A

1" = 1'-0"

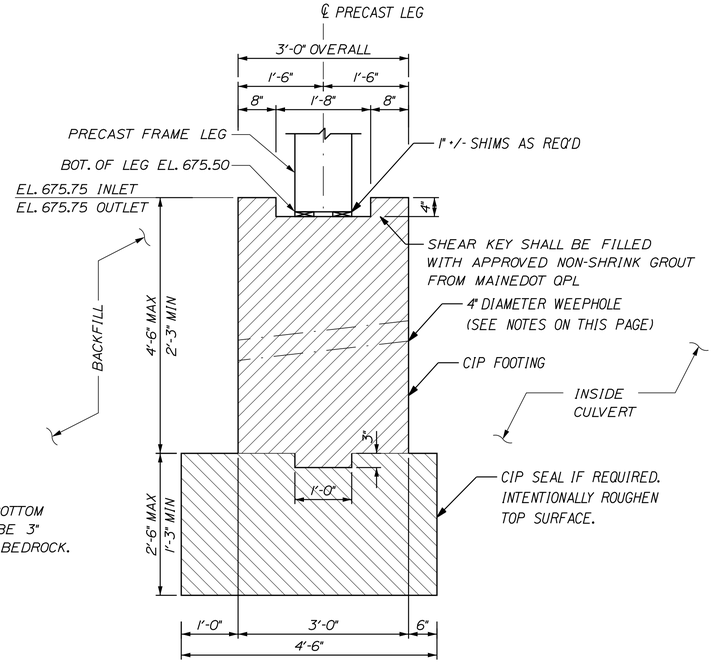
CIP FOOTING NOTES:

1. CAST-IN-PLACE FOOTING CONCRETE SHALL BE MAINEDOT CLASS LP.
2. CAST-IN-PLACE SEAL CONCRETE SHALL BE MAINEDOT CLASS S.
3. BEDROCK ELEVATIONS WILL VARY. ALL LOOSE WEATHERED BEDROCK SHALL BE REMOVED PRIOR TO CASTING SEAL OR FOOTING CONCRETE.
4. ALL EXPOSED BEDROCK SHALL BE CLEANED WITH HIGH PRESSURE WATER AND AIR PRIOR TO PLACING CONCRETE. CONCRETE FOOTING SHALL BE CAST IN THE DRY.
5. BEDROCK ELEVATIONS VARY. ALL LOOSE AND WEATHERED ROCK SHALL BE CLEANED FROM THE BEARING SURFACE PRIOR TO FOOTING CONSTRUCTION PER STANDARD SPECIFCATION 206. WHERE THE SLOPE OF THE BEDROCK IS STEEPER THAN 4H:1V THE BEDROCK SURFACE SHALL BE STEPPED AND BENCHED. EQUIPMENT USED TO PREPARE THE BEDROCK SURFACE FOR THE NEW FOOTINGS SHALL BE CONVENTIONAL CONSTRUCTION EQUIPMENT AS APPROVED BY THE RESIDENT. BEDROCK SURFACE PROPARATION AS DESCRIBED AND SHOWN IN THE PLANS SHALL BE INCIDENTAL TO ITEM 534.70 PRECAST STRUCTURAL CONCRETE ARCH. THE RESIDENT OR GEOTECHNICAL ENGINEER SHALL APPROVE THE BEDROCK SUBGRADE PRIOR TO PLACEMENT OF THE FOOTING OR SEAL CONCRETE.
6. GROUTED SHEAR KEY SHALL HAVE A SLOPED FINISH SUCH THAT WATER RUNS AWAY FROM PRECAST CONCRETE FRAME.
7. CHAMFER ALL EXPOSED EDGES ¾" UNLESS OTHERWISE NOTED.
8. ALL REINFORCEMENT SHALL HAVE 2" CLEAR UNLESS OTHERWISE NOTED.
9. CONSTRUCT 4 INCH DIAMETER WEEP HOLES IN THE CAST-IN-PLACE FOOTING AT A 10 FOOT MAXIMUM SPACING. HEIGHT OF WEEP HOLES SHALL BE WITHIN BOTTOM 2 FEET OF FOOTING.
10. VERTICAL WATERSTOP SHALL BE USED AT VERTICAL CONSTRUCTION JOINT IN ACCORDANCE WITH STANDARD DETAIL 502(01).



TYPICAL FOOTING REINFORCING

¾" = 1'-0"



TYPICAL FOOTING

¾" = 1'-0"

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2375500

WIN 23755.00

BRIDGE NO. 6637 REGIONAL PROGRAM

PROJ. MANAGER	ROGER SOUCY		
DESIGN-DETAILED	L. KALLOCH	W. GORDON	
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SMYRNA
US ROUTE 2

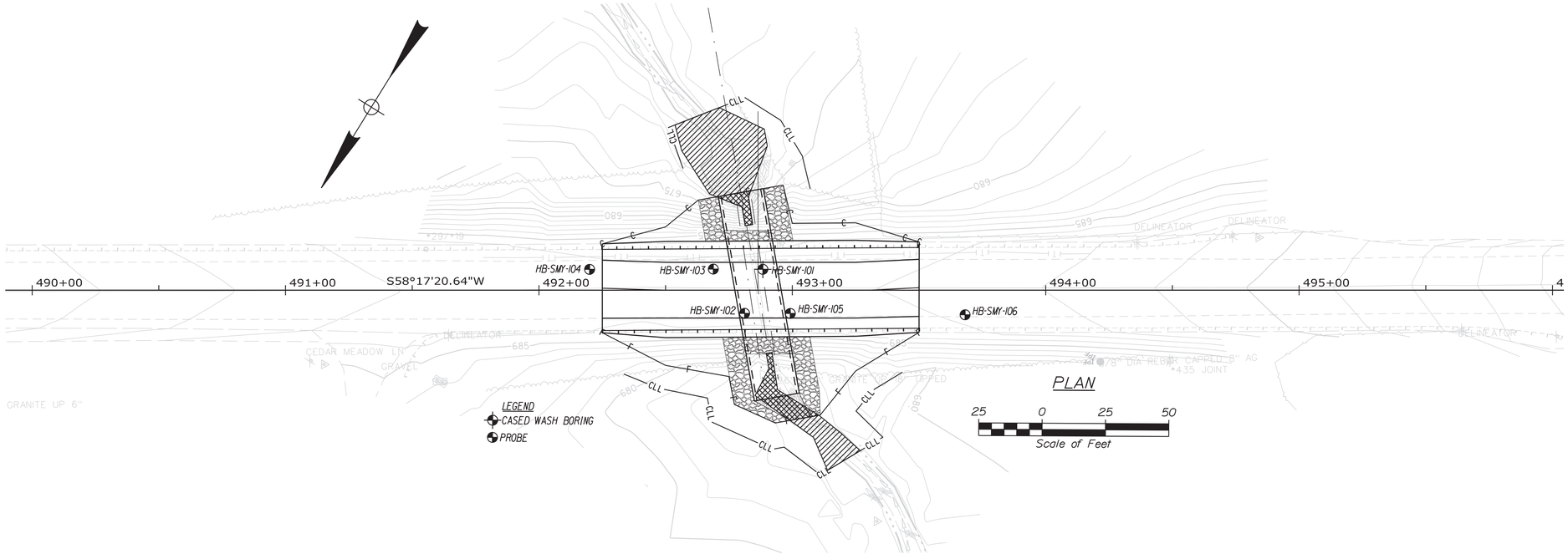
SPECIAL DETAILS

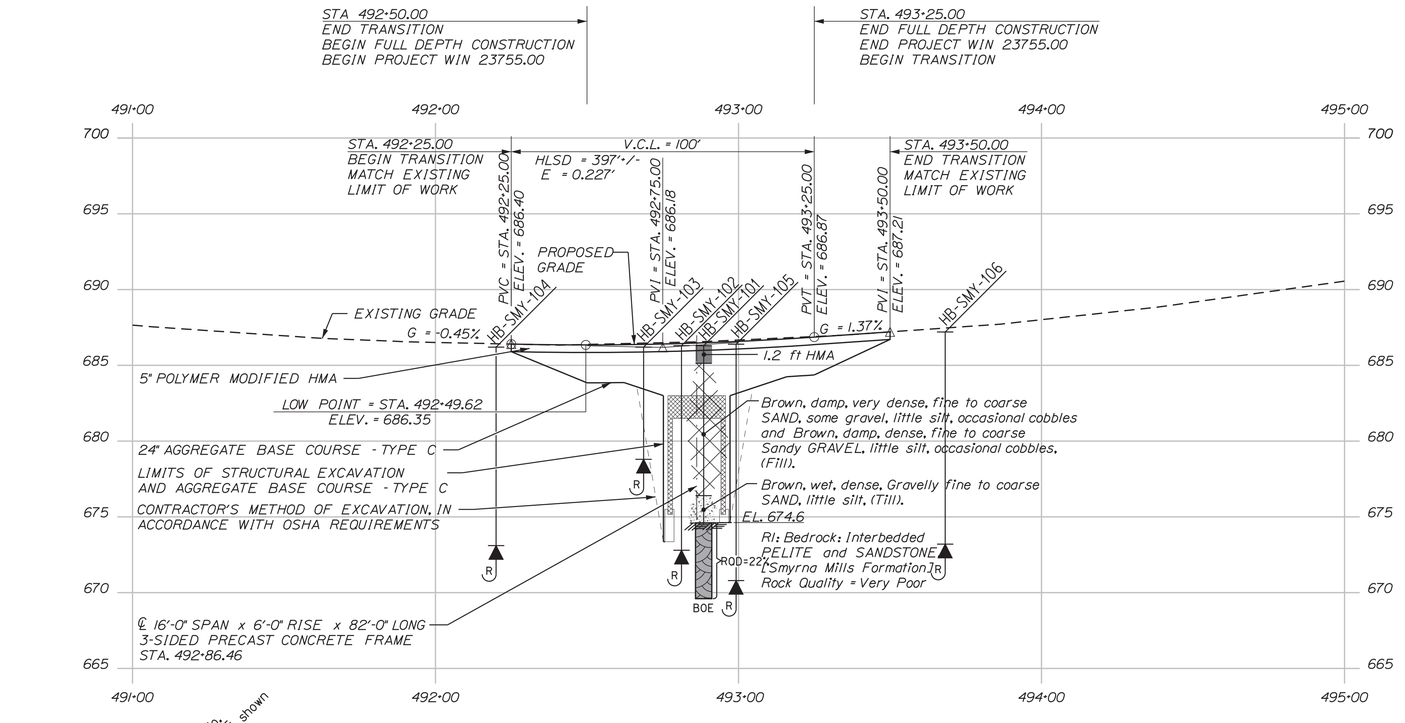
SHEET NUMBER

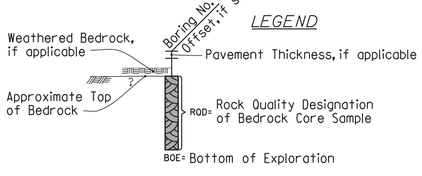
5

OF 15

Filename: ...\Consultant\005_Detail.dgn Division: HIGHWAY Username: common Date:1/18/2024







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.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02375500

WIN 23755.00

HIGHWAY PLANS

STATE OF MAINE · Kathleen Maguire · 7120 · Licensed PROFESSIONAL ENGINEER

SIGNATURE
7120
P.E. NUMBER
1/11/2024
DATE

	R. SOUCY	K.MAGUIRE	T. WHITE	JAN 2024
PROJ. MANAGER				
DESIGN-DETAILED				
CHECKED-REVIEWED				
DESIGN2-DETAILED2				
DESIGN3-DETAILED3				
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				

SMYRNA
U.S. ROUTE 2

BORING LOCATION PLAN & INTERPRETIVE SUBSURFACE PROFILE

SHEET NUMBER
6
OF 15

Filename: ...\GEOTECH\MSTA\006_BLP&ISP1.dgn Division: GEOTECH Username: Kate.Maguire Date:1/12/2024

Maine Department of Transportation — Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Large Culvert Replacement on Route 2
Location: Smyrna, Maine

Boring No.: HB-SMY-101
WIN: 23755.00

Driller:	MaineDOT	Elevation (ft.)	686.3	Auger ID/OD:	5" Dia.
Operator:	Daggett/Niles	Datum:	NAVD88	Sampler:	N/A
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	N/A
Date Start/Finish:	9/5/2018; 08:00-13:00	Drilling Method:	Solid Stem Auger	Core Barrel:	N/A
Boring Location:	492+88.5, 8.2 ft Lt.	Casing ID/OD:	N/A	Water Level*:	6.0 ft bgs.
Hammer Efficiency Factor: 0.928		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA			14" HMA	
								685.1		1.2	
	1D	24/18	1.50 - 3.50	23/22/19/17	41	63				Brown, damp, very dense, fine to coarse SAND, some gravel, little silt, occasional cobble, (Fill).	G#296621 A-1-a, SM WC=4.1%
5	2D	24/14	5.00 - 7.00	15/14/9/9	23	36				Brown, damp, dense, fine to coarse Sandy GRAVEL, little silt, occasional cobble, (Fill).	G#296622 A-1-a, GM WC=5.9%
								677.3		9.0	
10	3D	20.4/20.4	10.00 - 11.70	8/16/14/30(2.4")	30	46				Brown, wet, dense, Gravelly fine to coarse SAND, little silt, (Till).	G#296623 A-1-a, SW-SM WC=10.4%
	R1	60/60	11.70 - 16.70	RQD = 22%			NQ-2	674.6		11.7	
										Top of Bedrock at Elev. 674.6 ft. R1: Bedrock: Interbedded pelite and limestone and/or dolostone (Carys Mills Formation). R1: Core Times (min:sec) 11.7-12.7 ft (3:57) 12.7-13.7 ft (4:27) 13.7-14.7 ft (4:32) 14.7-15.7 ft (5:07) 15.7-16.7 ft (5:15) 100% Recovery Rock Quality = Very Poor	
15								669.6		16.7	
										Bottom of Exploration at 16.7 feet below ground surface.	
20											
25											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1

Boring No.: HB-SMY-101

Maine Department of Transportation — Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Large Culvert Replacement on Route 2
Location: Smyrna, Maine

Boring No.: HB-SMY-102
WIN: 23755.00

Drilling Contractor:	MaineDOT	Elevation (ft.)	686.3	Auger ID/OD:	5" Dia.
Operator:	Daggett/Niles	Datum:	NAVD88	Sampler:	N/A
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	N/A
Date Start/Finish:	9/5/2018	Drilling Method:	Solid Stem Auger	Core Barrel:	N/A
Boring Location:	492+81.2, 9.3 ft Rt.	Casing ID/OD:	N/A	Water Level*:	None Observed

Definitions:
D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0						SSA			Probe, no samples taken. Soils similar to HB-SMY-101.	
5										
10										
							672.80		13.50	
									Bottom of Exploration at 13.5 feet below ground surface. REFUSAL	
15										
20										
25										

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1

Boring No.: HB-SMY-102

Maine Department of Transportation — Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Large Culvert Replacement on Route 2
Location: Smyrna, Maine

Boring No.: HB-SMY-103
WIN: 23755.00

Drilling Contractor:	MaineDOT	Elevation (ft.)	686.2	Auger ID/OD:	5" Dia.
Operator:	Daggett/Niles	Datum:	NAVD88	Sampler:	N/A
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	N/A
Date Start/Finish:	9/5/2018	Drilling Method:	Solid Stem Auger	Core Barrel:	N/A
Boring Location:	492+68.4, 8.1 ft Lt.	Casing ID/OD:	N/A	Water Level*:	None Observed

Definitions:
D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0						SSA			Probe, no samples taken. Soils similar to HB-SMY-101.	
5										
							678.80		7.40	
									Bottom of Exploration at 7.4 feet below ground surface. REFUSAL	
10										
15										
20										
25										

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1

Boring No.: HB-SMY-103

Maine Department of Transportation — Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Large Culvert Replacement on Route 2
Location: Smyrna, Maine

Boring No.: HB-SMY-104
WIN: 23755.00

Drilling Contractor:	MaineDOT	Elevation (ft.)	686.2	Auger ID/OD:	5" Dia.
Operator:	Daggett/Niles	Datum:	NAVD88	Sampler:	N/A
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	N/A
Date Start/Finish:	9/5/2018	Drilling Method:	Solid Stem Auger	Core Barrel:	N/A
Boring Location:	492+20, 8.3 ft Lt.	Casing ID/OD:	N/A	Water Level*:	None Observed

Definitions:
D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0						SSA			Probe, no samples taken. Soils similar to HB-SMY-101.	
5										
10										
							673.10		13.10	
									Bottom of Exploration at 13.1 feet below ground surface. REFUSAL	
15										
20										
25										

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1

Boring No.: HB-SMY-104

Maine Department of Transportation — Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Large Culvert Replacement on Route 2
Location: Smyrna, Maine

Boring No.: HB-SMY-105
WIN: 23755.00

Drilling Contractor:	MaineDOT	Elevation (ft.)	686.4	Auger ID/OD:	5" Dia.
Operator:	Daggett/Niles	Datum:	NAVD88	Sampler:	N/A
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	N/A
Date Start/Finish:	9/5/2018	Drilling Method:	Solid Stem Auger	Core Barrel:	N/A
Boring Location:	492+99.2, 9.2 ft Rt.	Casing ID/OD:	N/A	Water Level*:	None Observed

Definitions:
D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
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WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0						SSA			Probe, no samples taken. Soils similar to HB-SMY-101.	
5										
10										
15							670.80		15.60	
									Bottom of Exploration at 15.6 feet below ground surface. REFUSAL	
20										
25										

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1

Boring No.: HB-SMY-105

Maine Department of Transportation — Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Large Culvert Replacement on Route 2
Location: Smyrna, Maine

Boring No.: HB-SMY-106
WIN: 23755.00

Drilling Contractor:	MaineDOT	Elevation (ft.)	687.2	Auger ID/OD:	5" Dia.
Operator:	Daggett/Niles	Datum:	NAVD88	Sampler:	N/A
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	N/A
Date Start/Finish:	9/5/2018	Drilling Method:	Solid Stem Auger	Core Barrel:	N/A
Boring Location:	493+68.2, 9.7 ft Rt.	Casing ID/OD:	N/A	Water Level*:	None Observed

Definitions:
D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0						SSA			Probe, no samples taken. Soils similar to HB-SMY-101.	
5										
10										
							673.20		14.00	
									Bottom of Exploration at 14.0 feet below ground surface. REFUSAL	
15										
20										
25										

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1

Boring No.: HB-SMY-106

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02375500

WIN 23755.00

HIGHWAY PLANS

STATE OF MAINE — Kathleen Maguire — 7120 — LICENSED — PROFESSIONAL ENGINEER

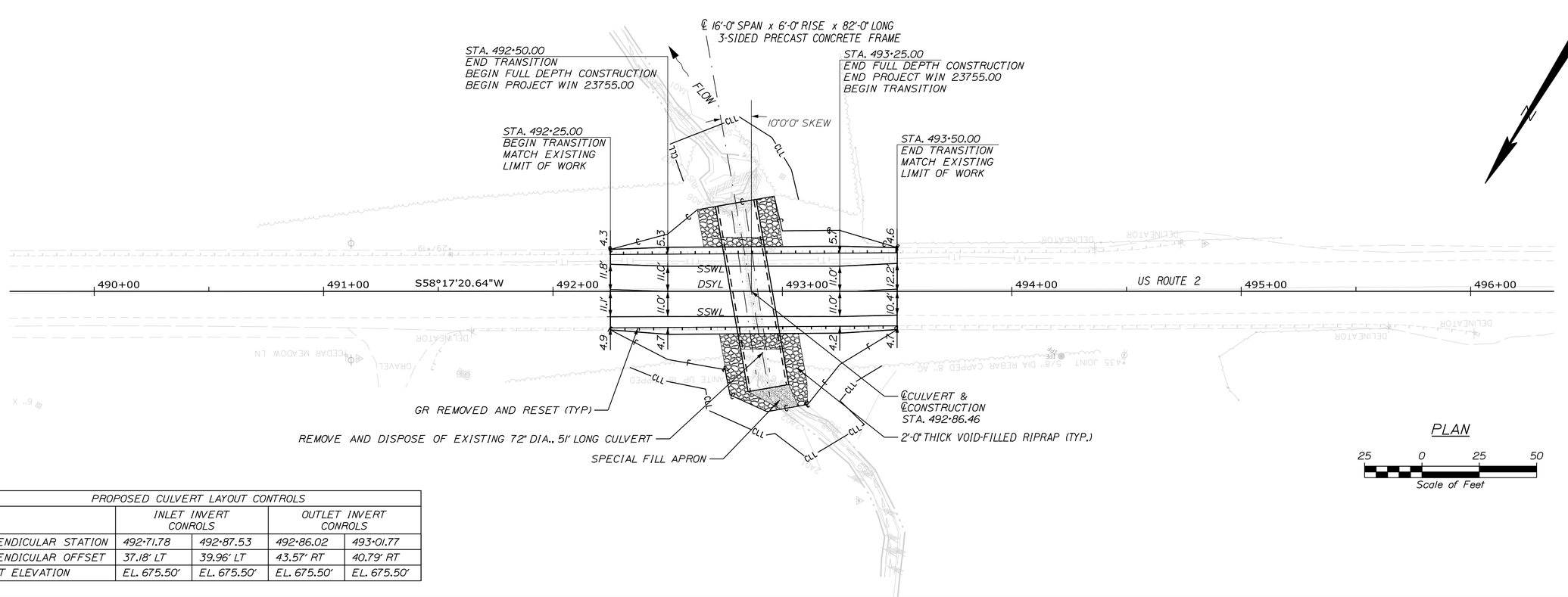
SIGNATURE 7120
P.E. NUMBER 1/11/2024
DATE

		BY	DATE
PROJ. MANAGER	R. Soucy		
DESIGN-DETAILED			
CHECKED-REVIEWED			
DESIGN2-DETAILED2	K.MAGUIRE	T.WHITE	JAN 2024
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

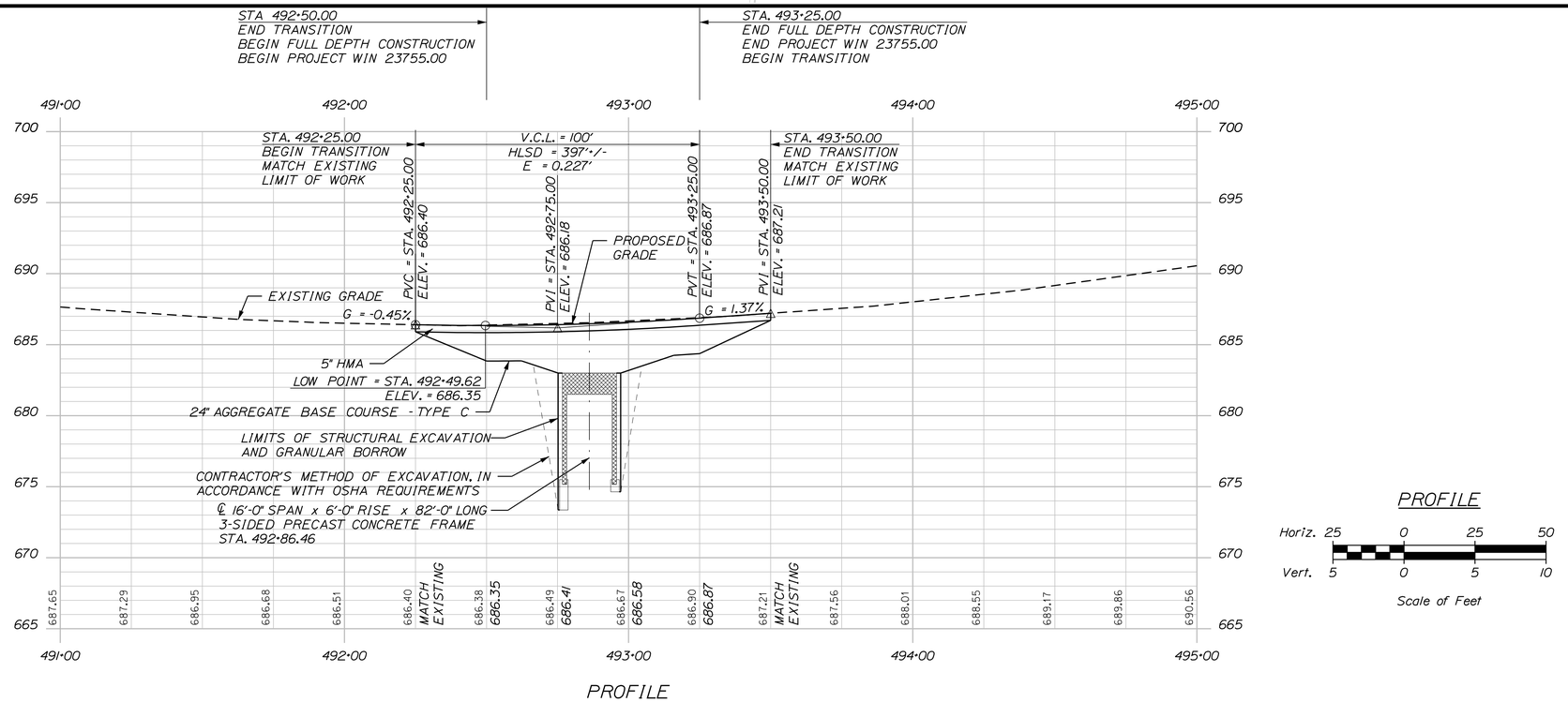
SMYRNA
U.S. ROUTE 2

BORING LOGS

SHEET NUMBER
7
OF 15



PROPOSED CULVERT LAYOUT CONTROLS				
	INLET INVERT CONROLS		OUTLET INVERT CONROLS	
PERPENDICULAR STATION	492+71.78	492+87.53	492+86.02	493+01.77
PERPENDICULAR OFFSET	37.18' LT	39.96' LT	43.57' RT	40.79' RT
INVERT ELEVATION	EL. 675.50'	EL. 675.50'	EL. 675.50'	EL. 675.50'



PROFILE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2375500

WIN 23755.00

BRIDGE NO. 6637

REGIONAL PROGRAM

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	ROGER SOUCY		
DESIGN-DETAILED	L. KALLOCH	W. GORDON	
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SMYRNA
US ROUTE 2

PLAN AND PROFILE

SHEET NUMBER

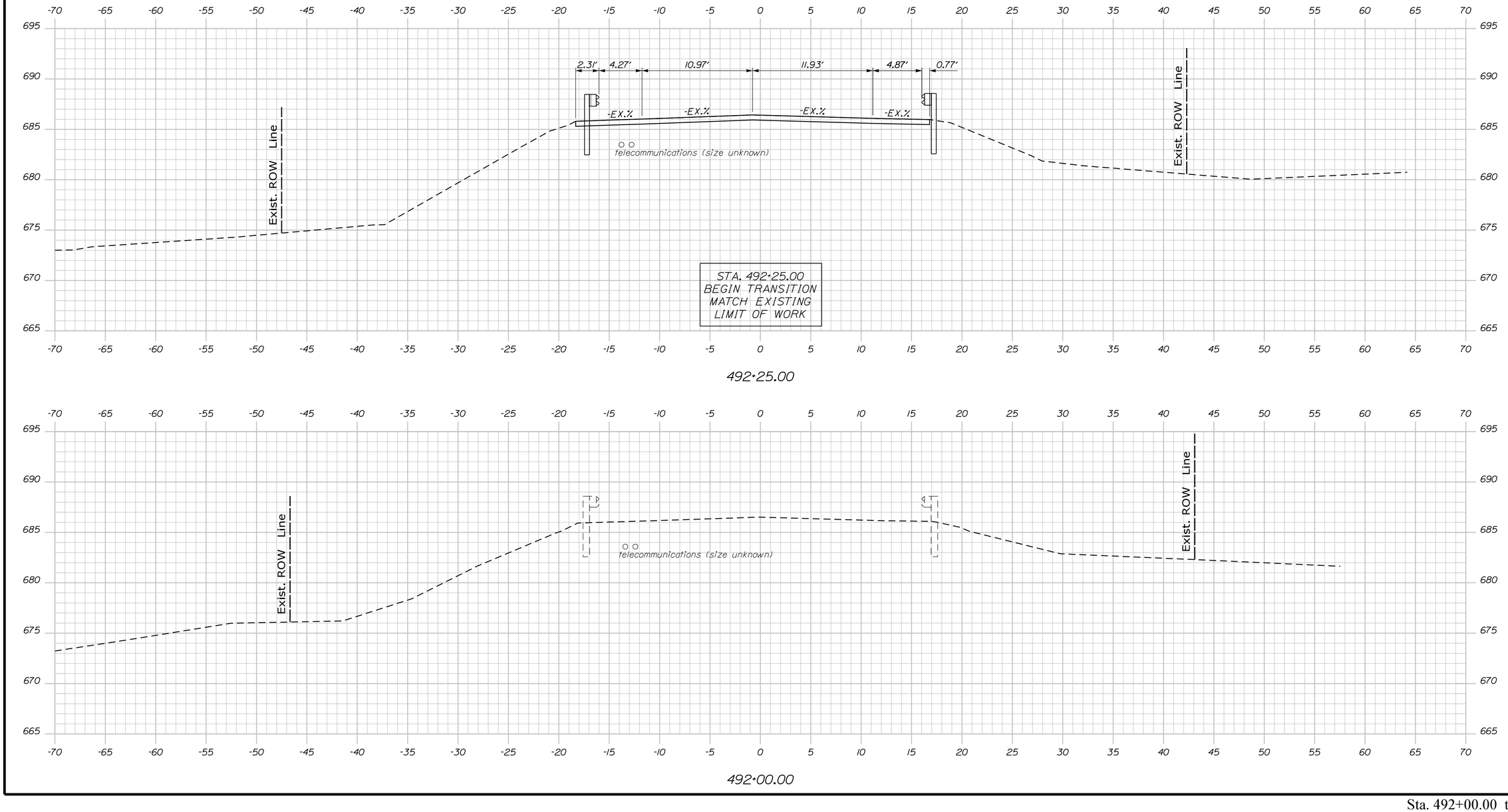
8

OF 15

Username: common Date:1/18/2024

Division: HIGHWAY

Filename: ...\Consultant\006_HDPlan.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2375500

WIN 2375500

BRIDGE NO. 6637

REGIONAL PROGRAM

PROJ. MANAGER	ROGER SOUCY	BY	DATE
DESIGN-DETAILED	L. KALLOCH	W. GORDON	
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET	
DESIGN2-DETAILED2		ED2	
DESIGN3-DETAILED3		ED3	
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SMYRNA
US ROUTE 2

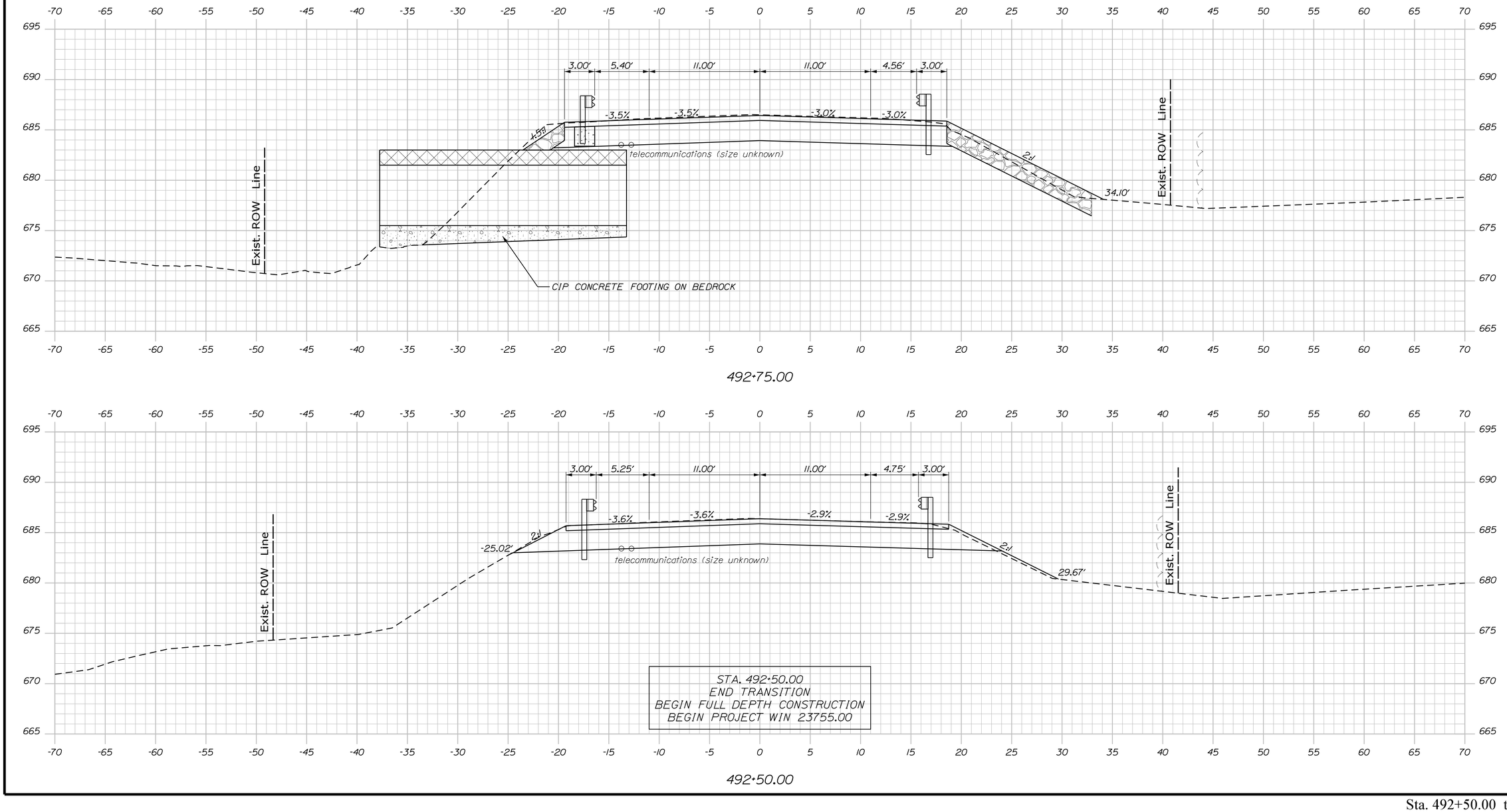
CROSS SECTIONS

SHEET NUMBER

9

OF 15

Sta. 492+00.00 to Sta. 492+25.00



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2375500

WIN 2375500

BRIDGE NO. 6637

REGIONAL PROGRAM

		BY	DATE
PROJ. MANAGER	ROGER SOUCY		
DESIGN-DETAILED	L. KALLOCH	W. GORDON	
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SMYRNA
US ROUTE 2

CROSS SECTIONS

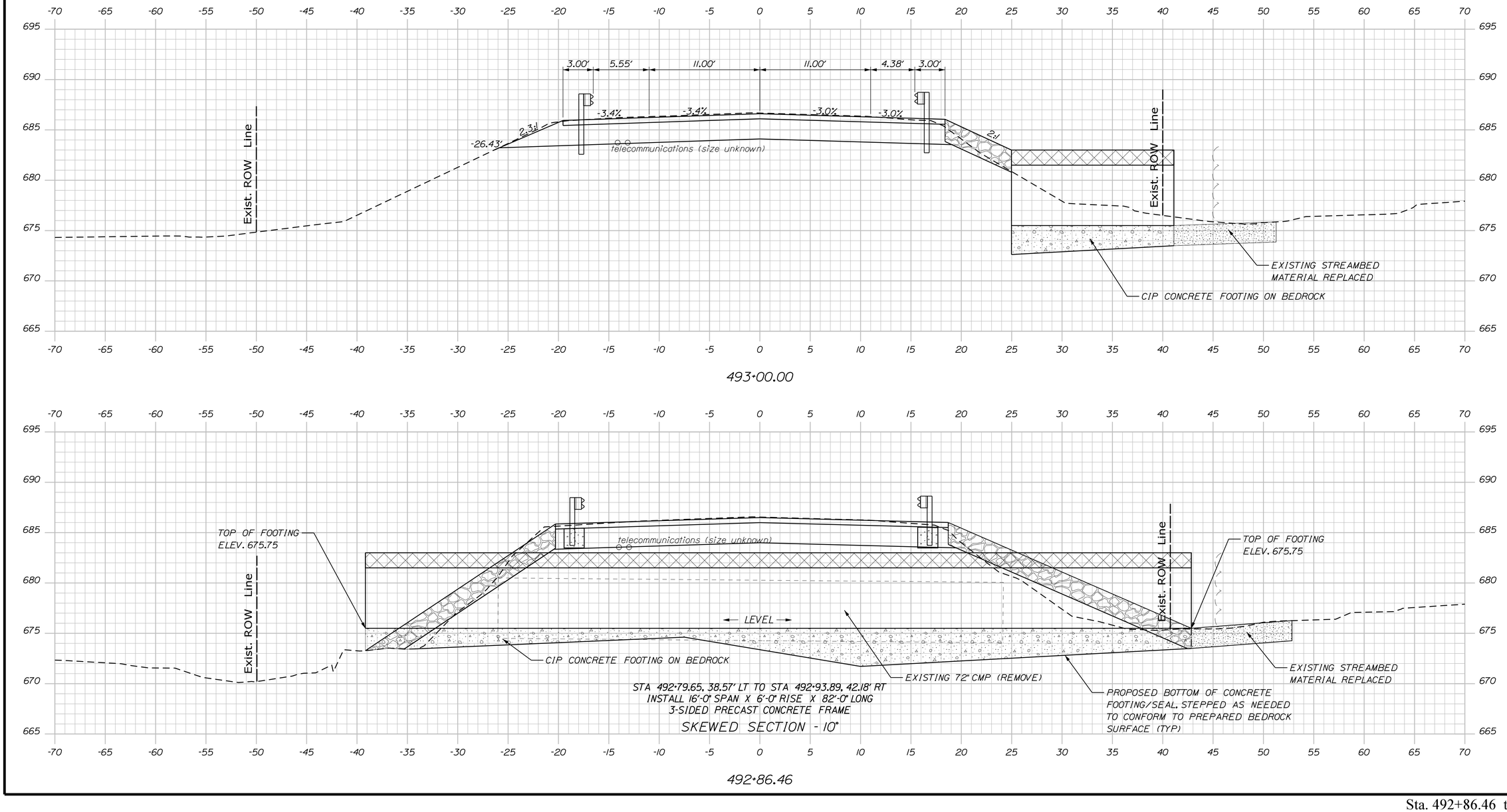
SHEET NUMBER

10

OF 15

Sta. 492+50.00 to Sta. 492+75.00

Filename: ...\Consultant\007_Xsect.dgn Division: HIGHWAY Username: common Date:1/17/2024



Sta. 492+86.46 to Sta. 493+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2375500

WIN 2375500

BRIDGE NO. 6637

REGIONAL PROGRAM

PROJ. MANAGER	ROGER SOUCY		DATE
DESIGN-DETAILED	L. KALLOCH	W. GORDON	
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SMYRNA
US ROUTE 2

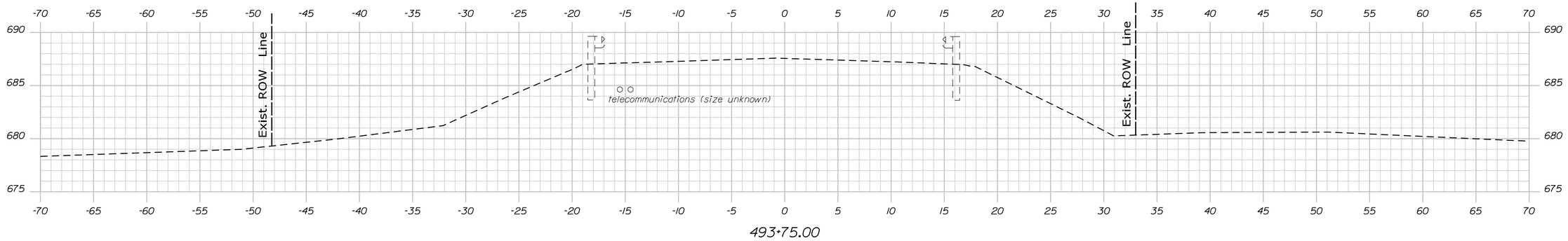
CROSS SECTIONS

SHEET NUMBER

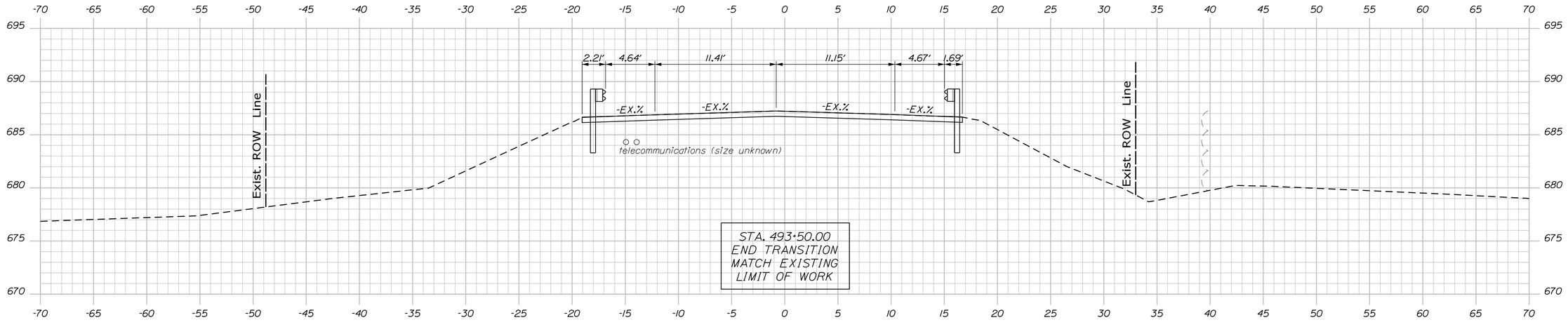
11

OF 15

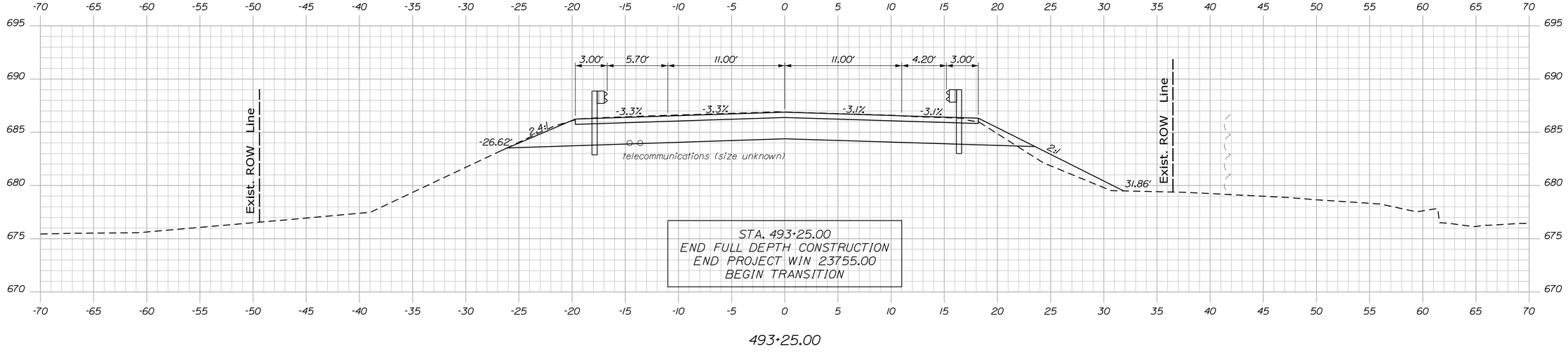
Filename: ...\Consultant\007_Xsect.dgn Division: HIGHWAY Username: common Date:1/18/2024



493+75.00



493+50.00



493+25.00

Filename: ...\Consultant\007_Xsect.dgn Division: HIGHWAY Username: common Date:1/17/2024

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2375500

WIN 2375500

BRIDGE NO. 6637

REGIONAL PROGRAM

		BY	DATE
PROJ. MANAGER	ROGER SOUCY		
DESIGN-DETAILED	L. KALLOCH	W. GORDON	
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REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SMYRNA
US ROUTE 2

CROSS SECTIONS

SHEET NUMBER

12

OF 15

Sta. 493+25.00 to Sta. 493+75.00

SMYRNA CENTER ROAD

NON-MOTORIZED VEHICLE DETOUR

W20-3 ROAD CLOSED 500 FT

W20-3 ROAD CLOSED 1000 FT

M4-9L DETOUR ON RT 2

RII-2 ROAD CLOSED ON BARRICADES

ROAD CLOSED 1.3 MILES AHEAD LOCAL TRAFFIC ONLY WITH TYPE III BARICADES

RTE 2 WEST CLOSED 1.9 MILES AHEAD USE DETOUR EXIT 286 ON I-95

M4-9 DETOUR ON RAMP

1000' 2000' 2000'

LIMESTONE BROOK

WORK ZONE

EXIT 291

RTE 2 EAST CLOSED 0.7 MILES AHEAD NON-MOTORIZED TRAFFIC USE SMYRNA CENTER RD

M4-9L DETOUR

US ROUTE 2

ROUTE 2 CLOSED USE DETOUR

M4-9R DETOUR ON DUCK POND RD

RTE 2 EAST CLOSED 4.2 MILES AHEAD MOTORIZED TRAFFIC USE DETOUR I-95

MERRILL

SMYRNA

ROUTE 2 CLOSED USE DETOUR

M4-9 DETOUR ON RT 212

M4-9L DETOUR ON MISSION ROAD

1000'

M4-8a END DETOUR

ROAD CLOSED 4 MILES AHEAD LOCAL TRAFFIC ONLY WITH TYPE III BARICADES

M4-9L DETOUR ON CURRIE ROAD

W20-3 ROAD CLOSED 1000 FT

W20-3 ROAD CLOSED 500 FT

RII-2 ROAD CLOSED ON BARRICADES

I-95 SB

I-95 NB

TIMONEY LAKE RD

M4-9R DETOUR

ROUTE 2 DETOUR THIS EXIT

ROUTE 2 CLOSED USE DETOUR

M4-9R DETOUR ON TIMONEY LAKE ROAD

M4-9R DETOUR

RTE 2 WEST CLOSED 1.6 MILES AHEAD MOTORIZED TRAFFIC USE DETOUR I-95

ON RT 2

M4-8a END DETOUR

M4-9R DETOUR

SMYRNA

OAKFIELD

M4-9R DETOUR ON RT 2

M4-9R DETOUR ON RAMP

RTE 2 EAST CLOSED 4.2 MILES AHEAD MOTORIZED TRAFFIC USE DETOUR I-95

RIVER RD

DYER BROOK

OAKFIELD

EXIT 286

TIMONEY LAKE

RTE 2 WEST CLOSED 1.4 MILES AHEAD NON-MOTORIZED TRAFFIC USE SMYRNA CENTER RD ON RT 2

LONG LAKE

SPAULDING LAKE

M4-9L DETOUR ON RT 212

1000'

ROUTE 2 DETOUR THIS EXIT

M4-9R DETOUR ON RT 212

RTE 2 EAST CLOSED 6.0 MILES AHEAD USE DETOUR EXIT 291

M4-9 DETOUR

RTE 2 EAST CLOSED 5.6 MILES AHEAD MOTORIZED TRAFFIC USE DETOUR I-95

PLAN
NTS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2375500

WIN 23755.00

BRIDGE NO. 6637

REGIONAL PROGRAM

		BY	DATE
PROJ. MANAGER	ROGER SOUCY		
DESIGN-DETAILED	L. KALLOCH	W. GORDON	
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SMYRNA US ROUTE 2 ROAD CLOSURE PLAN

SHEET NUMBER

13

OF 15

CONSTRUCTION SIGN SUMMARY

ITEM NUMBER	IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		AREA IN SQUARE FEET
		WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR		BACK-GROUND	LEGEND	
652.35	CS-1	60"	30"	ROAD CLOSED 4 MILES AHEAD LOCAL TRAFFIC ONLY	6"C 5"C 4"C	3.4" 3.4"		1	ORANGE	BLACK	12.50 (12.50)
652.35	CS-2	48"	36"	RTE 2 WEST CLOSED 1.9 MILES AHEAD USE DETOUR EXIT 286	4"C 4"C 4"C 4"C	3.0" 3.0" 3.0"		1	ORANGE	BLACK	12.00 (12.00)
652.35	CS-3	48"	36"	RTE 2 EAST CLOSED 4.2 MILES AHEAD MOTORIZED TRAFFIC USE DETOUR I-95	4"C 4"C 4"C 4"C	3.0" 3.0" 3.0"		2	ORANGE	BLACK	12.00 (24.00)
652.35	CS-4	48"	36"	RTE 2 EAST CLOSED 5.6 MILES AHEAD MOTORIZED TRAFFIC USE DETOUR I-95	4"C 4"C 4"C 4"C	3.0" 3.0" 3.0"		1	ORANGE	BLACK	12.00 (12.00)
652.35	CS-5	48"	36"	RTE 2 WEST CLOSED 1.6 MILES AHEAD MOTORIZED TRAFFIC USE DETOUR I-95	4"C 4"C 4"C 4"C	3.0" 3.0" 3.0"		1	ORANGE	BLACK	12.00 (12.00)
652.35	CS-6	60"	30"	ROAD CLOSED 1.3 MILES AHEAD LOCAL TRAFFIC ONLY	6"C 5"C 4"C	3.4" 3.4"		1	ORANGE	BLACK	12.50 (12.50)
652.35	CS-7	48"	36"	RTE 2 EAST CLOSED 6.0 MILES AHEAD USE DETOUR EXIT 291	4"C 4"C 4"C 4"C	3.0" 3.0" 3.0"		1	ORANGE	BLACK	12.00 (12.00)
652.35	CS-8	48"	42"	RTE 2 WEST CLOSED 1.4 MILES AHEAD NON-MOTORIZED TRAFFIC USE SMYRNA CENTER RD	4"C 4"C 4"C 4"C 4"C	3.0" 3.0" 3.0" 3.0"		1	ORANGE	BLACK	14.00 (14.00)
652.35	CS-9	48"	42"	RTE 2 EAST CLOSED 0.7 MILES AHEAD NON-MOTORIZED TRAFFIC USE SMYRNA CENTER RD	4"C 4"C 4"C 4"C 4"C	3.0" 3.0" 3.0" 3.0"		1	ORANGE	BLACK	14.00 (14.00)
652.35	CS-10	30"	30"	ROUTE 2 DETOUR THIS EXIT	4"C 4"C 4"C	3.0" 3.0"		2	ORANGE	BLACK	6.25 (12.50)
652.35	CS-11	30"	30"	ROUTE 2 CLOSED USE DETOUR	4"C 4"C 4"C	3.0" 3.0"		4	ORANGE	BLACK	6.25 (25.00)
652.35	M4-8A	24"	18"	END DETOUR				2	ORANGE	BLACK	3.00 (6.00)
652.35	M4-9	30"	24"	DETOUR ↑				3	ORANGE	BLACK	5.00 (15.00)
652.35	M4-9R	30"	24"	DETOUR →				8	ORANGE	BLACK	5.00 (40.00)
652.35	M4-9L	30"	24"	DETOUR ←				5	ORANGE	BLACK	5.00 (25.00)
652.35	R11-2	48"	30"	ROAD CLOSED				2	ORANGE	BLACK	10.00 (20.00)
652.35	W20-3	48"	48"	ROAD CLOSED 500 FT				2	ORANGE	BLACK	16.00 (32.00)
652.35	W20-3	48"	48"	ROAD CLOSED 1000 FT				2	ORANGE	BLACK	16.00 (32.00)

NOTES:

1. SIGN LOCATIONS ARE APPROXIMATE AND TO BE VERIFIED IN THE FIELD.
2. INFORMATION SHOWN REFLECTS SIGNAGE FOR DETOUR PLANS ONLY. ADDITIONAL SIGNAGE IS REQUIRED FOR HIGHWAY CONSTRUCTION WORK.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2375500

WIN 23755.00 REGIONAL PROGRAM

BRIDGE NO. 6637

SIGNATURE

P.E. NUMBER

DATE

		BY	DATE
PROJ. MANAGER	ROGER SOUCY		
DESIGN-DETAILED	L. KALLOCH	W. GORDON	
CHECKED-REVIEWED	S. FORTIER	J. BEAUDET	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SMYRNA
US ROUTE 2

SIGN SUMMARY

SHEET NUMBER

14

OF 15

Filename: ...\Consultant\010_DetourPlan.dgn Division: HIGHWAY Username: common Date:1/25/2024

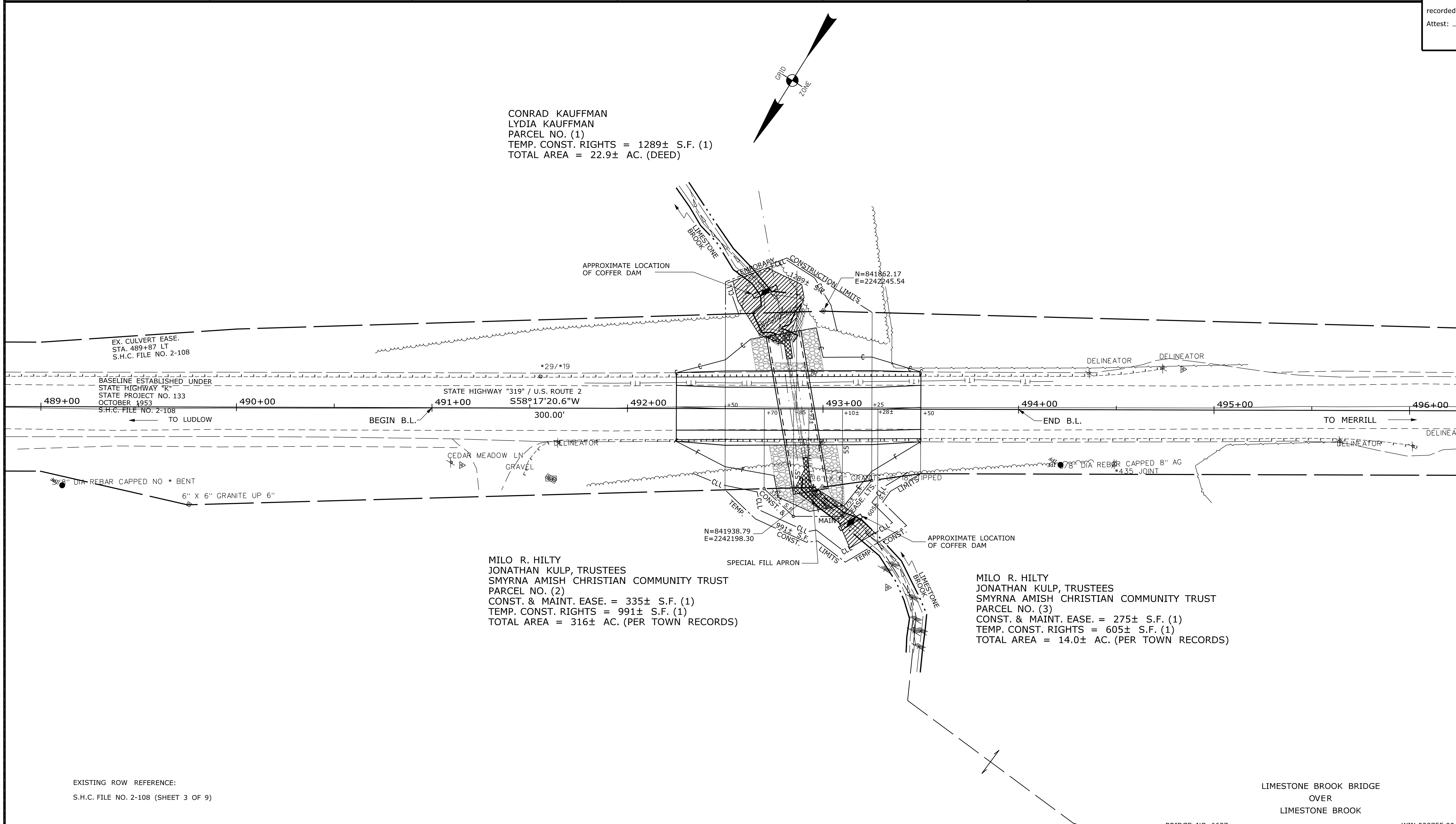
PLAN LEGEND

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

Scale of Feet: 25 0 25 50 75 100

STATE OF MAINE
REGISTRY OF DEEDS

COUNTY ____________
RECEIVED ________, ________
at ____h____m____M and
recorded in Plan Bk ____, Pg. ____
Attest: ____________ REGISTER



EXISTING ROW REFERENCE:
S.H.C. FILE NO. 2-108 (SHEET 3 OF 9)

LIMESTONE BROOK BRIDGE
OVER
LIMESTONE BROOK

BRIDGE NO. 6637 WIN 023755.00

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	T.L.B.	D.H.
FINAL RIGHT OF WAY	T.L.B.	B.D.M.
AREAS	T.L.B.	P.N.S.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
SMYRNA
RIGHT OF WAY MAP

REVISIONS			
NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK		PAGE	COUNTY RECORD		
NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

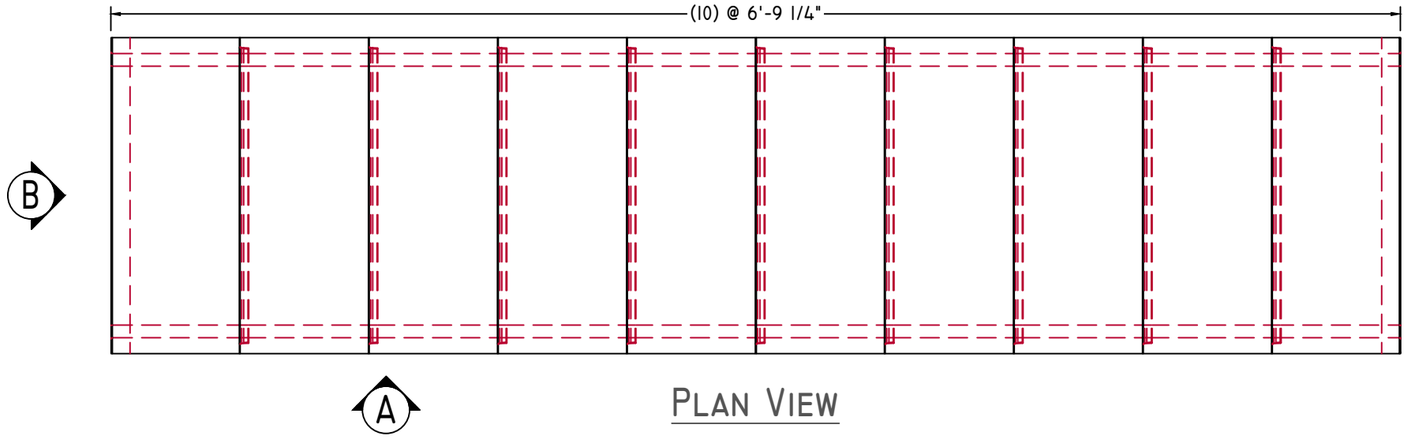
BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HIGHWAY "319"
U.S. ROUTE 2
SMYRNA AROOSTOOK COUNTY
FEDERAL AID PROJECT NO. 2375500

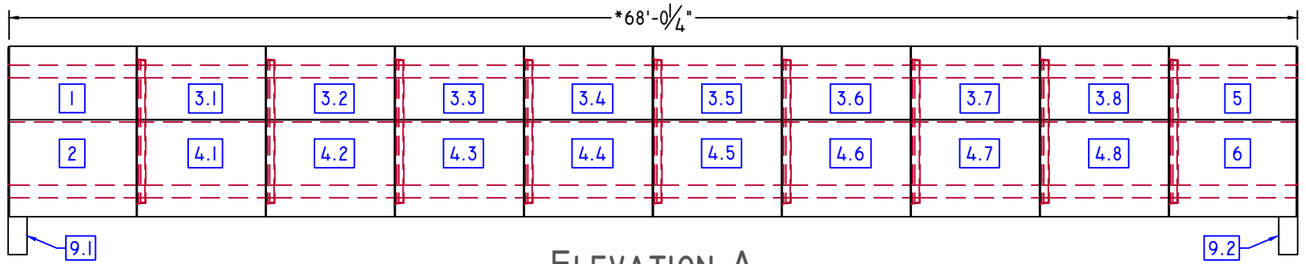
OCTOBER 2023 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 2-648
SCALE 1" = 25' | SHEET 1 OF 1

SHEET NUMBER
15
OF 15

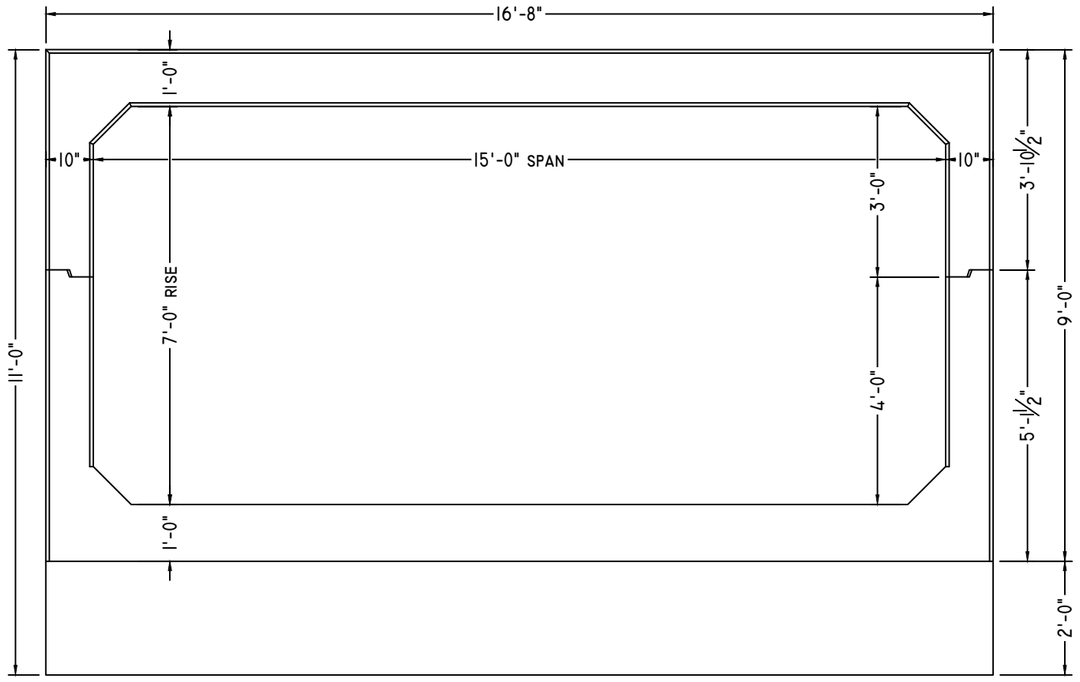
OVERALL



PLAN VIEW

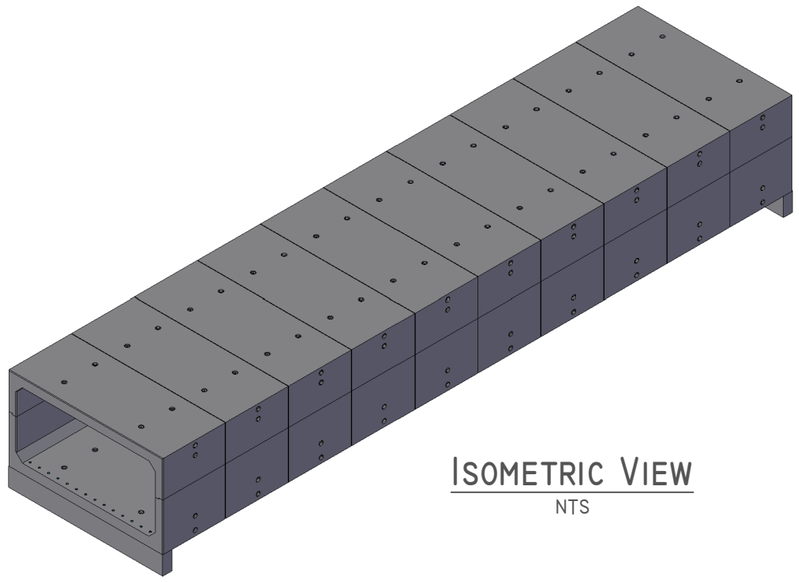


ELEVATION-A



ELEVATION-B

3/8" = 1'-0"



ISOMETRIC VIEW

NTS

American Concrete Industries
1717 Stillwater Ave. Veazie, ME. 04401
Tel: 207-947-8334
Fax: 207-947-3580
www.americanconcrete.com

Bill of Materials

ITEM	QTY	DESCRIPTION	WEIGHT# EA
1	1	UPSTREAM END TOP	22,715
2	1	UPSTREAM END BOTTOM	24,590
3	8	MID SECTION TOP	22,265
4	8	MID SECTION BOTTOM	24,170
5	1	DOWNSTREAM END TOP	21,865
6	1	DOWNSTREAM END BOTTOM	23,660
9	2	1' X 2' X 16'-8" TOEWALL	4,870
10	28	#8 X 26" TOEWALL PIN (SHIPPED LOOSE)	

Design Notes:

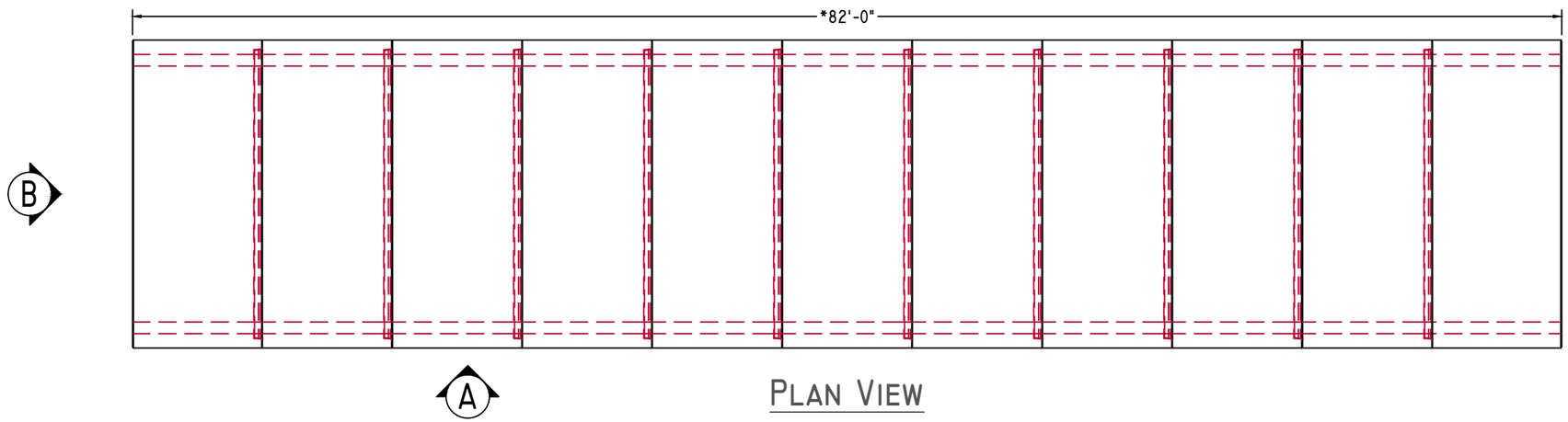
1. **Concrete**
   - 1.1. Comp. strength min. 5,000psi @ 28 days
   - 1.2. Air-Entrainment: 5.5% min - 7.5% max
2. **Structural Reinforcement:**
   - 2.1. Bar per ASTM A615, Grade 60
   - 2.2. WWF per ASTM A1064, Grade 75
   - 2.3. Supplemental reinforcing as shown (only shown if required.)
   - 2.4. Designed for 125% HL-93 wheel load rating
   - 2.5. 2" CLR Ext., 1 1/2" CLR Int. Unless noted otherwise
3. **Manufacturing / Installation:**
   - 3.1. *Projected length when factoring 1/2" growth per joint
   - 3.2. Joints sealed with butyl rubber sealant.
   - 3.3. All joints filled w/ non-shrink grout after installation.
4. **Soil / Fill Requirements:**
   - Minimum allowable fill: 1.00'
   - Maximum allowable fill: 2.50'

NOTE: Some details not shown for clarity.
SCALE: 1/8" = 1'-0" Unless noted otherwise.

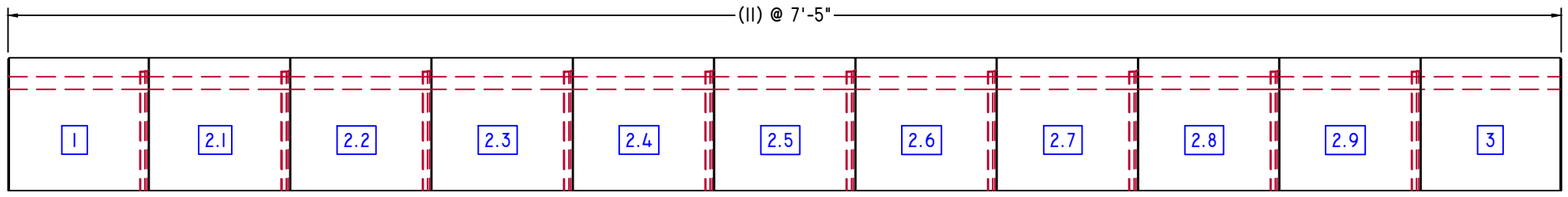
Structure Name:	15' x 7' x 68' Clamshell Culvert
Job Name:	Ridge Road (WIN: 23697.10)
Location:	Oakfield, ME
Contractor:	ME Dot

DRAWN BY:	DATE:	
SSM	02/05/2024	C1.0
REV.#:	DATE:	
0.00	02/05/2024	

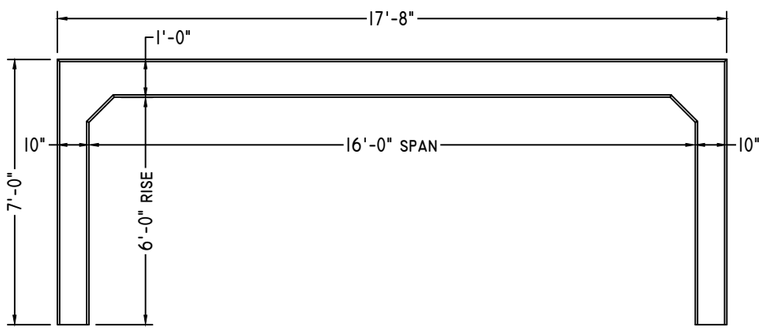
OVERALL



PLAN VIEW



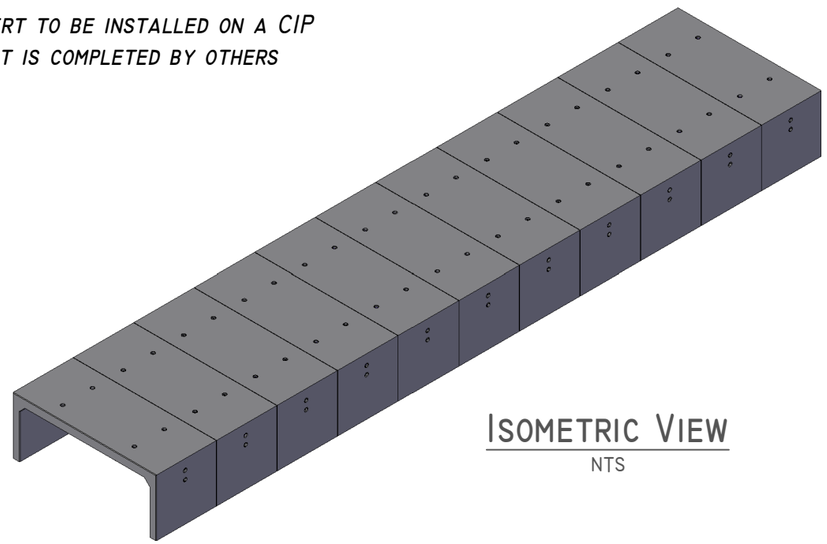
ELEVATION-A



ELEVATION-B

1/4" = 1'-0"

NOTE: CULVERT TO BE INSTALLED ON A CIP FOOTING THAT IS COMPLETED BY OTHERS



ISOMETRIC VIEW

NTS

American Concrete Industries
1717 Stillwater Ave. Veazie, ME. 04401
Tel: 207-947-8334
Fax: 207-947-3580
www.americanconcrete.com

BILL OF MATERIALS

ITEM	QTY	DESCRIPTION	WEIGHT# EA
1	1	DOWNSTREAM END	30,635
2	9	MID SECTION	31,180
3	1	UPSTREAM END	31,755

DESIGN NOTES:

1. **Concrete**
   - 1.1. COMP. STRENGTH MIN. 5,000PSI @ 28 DAYS
   - 1.2. AIR-ENTRAINMENT: 5.5% MIN - 7.5% MAX
2. **Structural Reinforcement:**
   - 2.1. BAR PER ASTM A615, GRADE 60
   - 2.2. WWF PER ASTM A1064, GRADE 75
   - 2.3. SUPPLEMENTAL REINFORCING AS SHOWN (IF REQUIRED)
   - 2.4. DESIGNED FOR 125% HL-93 WHEEL LOAD RATING
   - 2.5. 2" CLR EXT., 1 1/2" CLR INT. UNLESS NOTED OTHERWISE
3. **Manufacturing / Installation:**
   - 3.1. *PROJECTED LENGTH WHEN FACTORING 1/2" GROWTH PER JOINT
   - 3.2. JOINTS SEALED WITH BUTYL RUBBER SEALANT.
   - 3.3. ALL JOINTS FILLED W/ NON-SHRINK GROUT AFTER INSTALLATION.
4. **Soil / Fill Requirements:**
   - MINIMUM ALLOWABLE FILL: 2.50'
   - MAXIMUM ALLOWABLE FILL: 3.60'

NOTE: Some details not shown for clarity.
SCALE: 1/8" = 1'-0" Unless noted otherwise.

STRUCTURE NAME:	16' x 6' x 82' THREE-SIDED CULVERT
JOB NAME:	SMYRNA, US ROUTE 2 (WIN: 23755.10)
LOCATION:	SMYRNA, ME
CONTRACTOR:	ME DOT

DRAWN BY:	DATE:	
SSM	02/05/2024	C1.0
REV.#:	DATE:	
0.00	02/05/2024	