

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



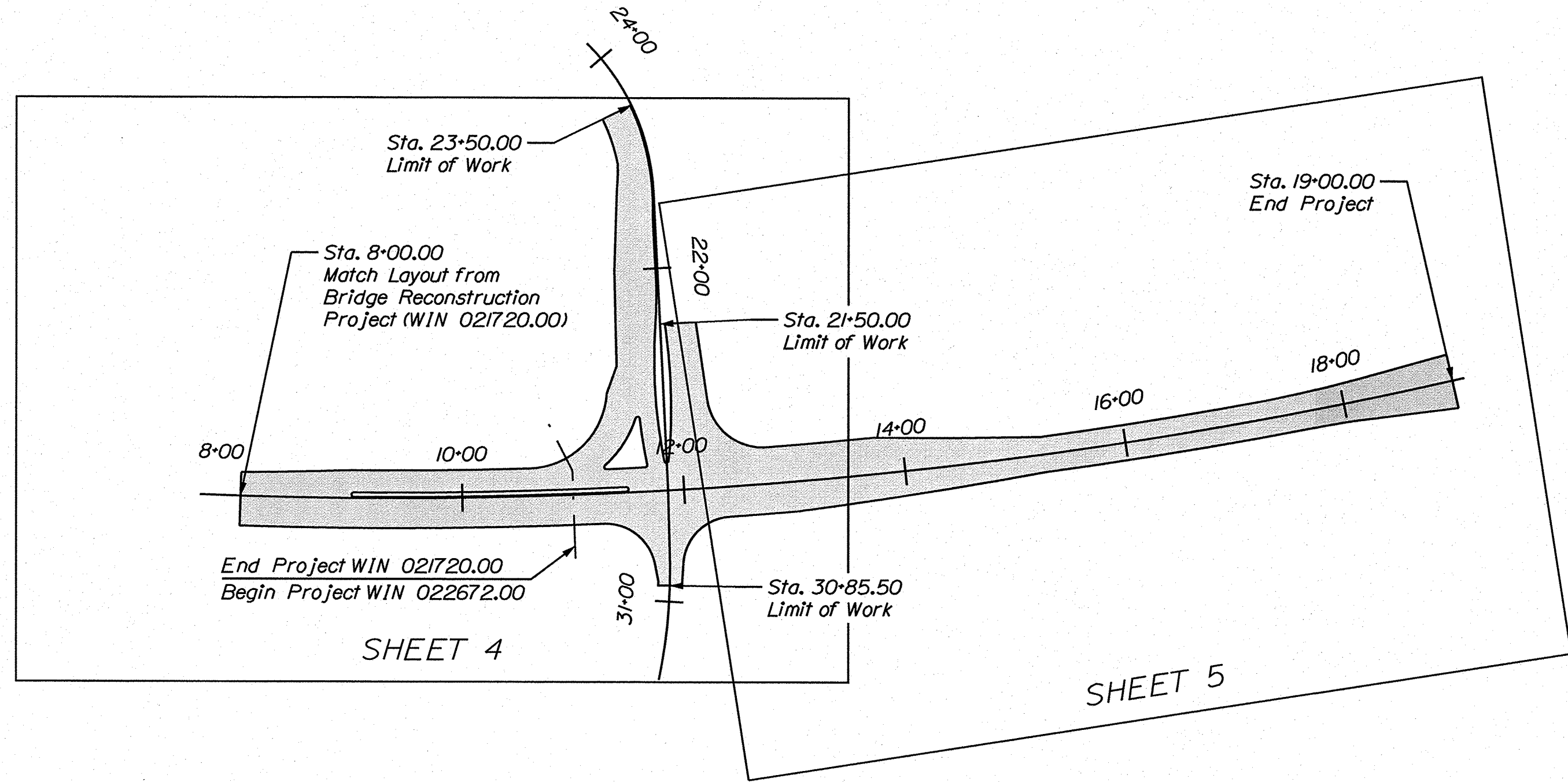
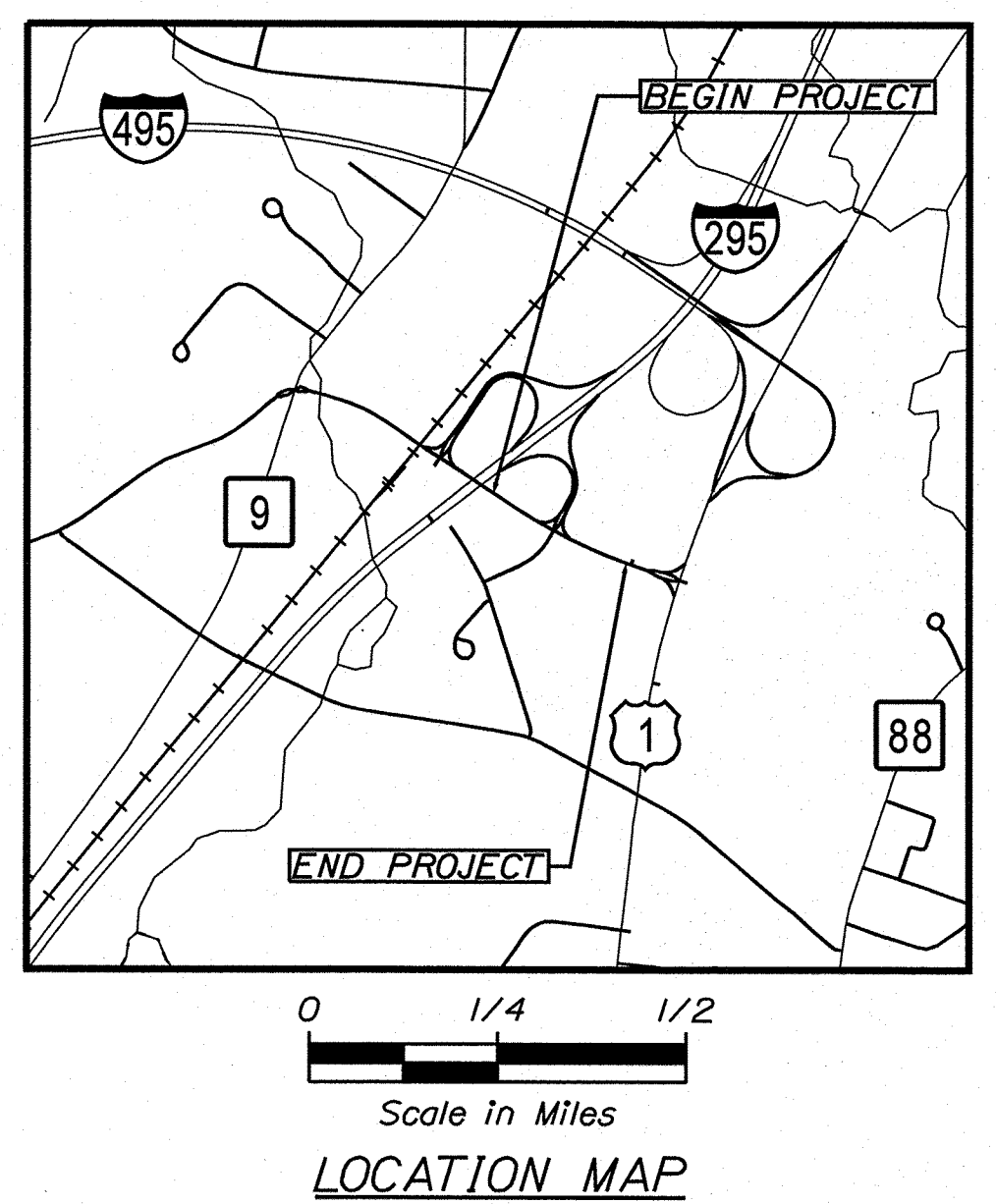
FALMOUTH
CUMBERLAND COUNTY
BUCKNAM ROAD
PROJECT NO. 022672.00
PROJECT LENGTH : 0.21 MILES

PLAN LEGEND

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

INDEX OF SHEETS

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|------------------------------------|-----------|
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TRAFFIC DATA

| | Bucknam West of I-295 NB Ramps | Bucknam East of I-295 NB Ramps | I-295 NB On-Ramp North of Bucknam | I-295 NB Off-Ramp North of Bucknam | Legion Rd South of Bucknam |
|--------------------------------|--------------------------------|--------------------------------|-----------------------------------|------------------------------------|----------------------------|
| Current (2022) AADT | 15,480 | 13,190 | 4,580 | 3,380 | 660 |
| Future (2042) AADT | 18,490 | 15,760 | 5,470 | 4,030 | 790 |
| DHV - % of AADT | 8 | 9 | 8 | 15 | 9 |
| Design Hour Volume | 1,262 | 1,172 | 384 | 499 | 62 |
| % Heavy Trucks (DHV) | 1 | 2 | 2 | 1 | 3 |
| Directional Distribution (DHV) | 52 | 52 | 100 | 100 | 60 |
| Design Speed (mph) | 35 | 35 | 25 | 25 | 25 |
| Functional Class | Min. Urban Art. | Min. Urban Art. | Prin. Art. | Prin. Art. | Local |
| Corridor Priority | 3 | 3 | 1 | 1 | 6 |

| | |
|--------------------------|---|
| PROJECT LOCATION: | Intersection of Bucknam Road, Legion Road, and I-295 NB Ramps in Falmouth |
| PROGRAM AREA: | Bridge Program |
| SCOPE OF WORK: | Intersection Improvements Including Traffic Signal, Auxiliary Lanes, and Coordination with Bridge Improvement Project (WIN 021720.00) |

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED
COMMISSIONER: [Signature]
CHIEF ENGINEER: [Signature]

DATE
4-21-22

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STEPHEN E. HAS
No. 16284
P.E. NUMBER
April 6, 2022
DATE

FALMOUTH
BUCKNAM ROAD
TITLE SHEET

SHEET NUMBER
1
OF 46

GENERAL CONSTRUCTION NOTES

1.

Pavement thicknesses shown on the typical sections are intended to be nominal.
2.

All clearing limits as shown on the plans are approximate. The exact limits will be established in the field by the Resident. Payment for clearing will be considered incidental to Contract items.
3.

Grubbing in fill areas has been shown on the cross sections and the quantities noted. These limits are approximate and have been used for estimating purposes only. Actual grubbing limits may vary based on field conditions as directed by the Resident.
4.

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.
5.

All inslope and ditches in cut areas shall be graded as shown on the typicals or flatter, or as directed by the Resident.
6.

The Contractor shall plan and conduct work so that upon completion of the project there is no drop-off from the edge of the shoulder pavement.
7.

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.
8.

Required ditch protection shown on the Plans or in the Construction Notes is for estimating purposes only. The actual type and location of ditch protection may be altered by the Resident.
9.

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.
10.

Commercial paved entrances shall be constructed with 3 inches of hot mix asphalt and 11 inches of aggregate subbase course gravel.
11.

All paved walks shall be constructed with 12 inches of aggregate subbase course gravel and 2 inches of hot mix asphalt unless otherwise noted in the Plans or directed by the Resident.
12.

Any necessary cleaning of existing pavement prior to paving (or milling) shall be incidental to the related paving (or milling) items. This includes killing and removal of all vegetative matter.
13.

All existing paved shoulders and widenings shall be resurfaced as directed by the Resident.
14.

When superelevation exceeds the slope of the low-side shoulder, the low-side shoulder will have same slope as the travelway.
15.

Existing culverts and catch basins will be cleaned as directed by the Resident under the appropriate pay items.
16.

No existing drainage shall be abandoned, removed or plugged without prior approval of the Resident.
17.

Inlets and outlets of all culverts shall be riprapped unless otherwise noted on the Plans or directed by the Resident.
18.

Flat tops for catch basins are not allowed unless noted on the Plans or directed by the Resident.
19.

Existing abandoned water mains broken by the Contractor during construction shall have the ends plugged with brick and mortar. Cost for all labor and material will be considered incidental to the Contract and no direct payment will be made.
20.

Guardrail end treatments shall be installed concurrently with the placement of each section of beam guardrail.
21.

All existing guardrail removed and not reused on the project will become the property of the Contractor. Removal and disposal shall be considered incidental to the guardrail items.
22.

Two reflectorized flexible guardrail markers (Standard Specifications Item 606.353, Reflectorized Flexible Guardrail Marker) will be installed at each guardrail end.
23.

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.
24.

Unless otherwise noted Seeding Method No. 1 shall be utilized on all lawns and developed areas; Seeding Method No. 2 shall be utilized on all other areas.
25.

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.
26.

Acrylic latex color finish green (Standard Specifications Item 658.20, Acrylic Latex Color Finish) shall be placed on all paved islands.
27.

White pavement/curb marking (Standard Specifications Item 627.75, White or Yellow Pavement & Curb Marking) shall be applied to all island tapered ends.
28.

Any base pavement not surfaced before winter will require temporary pavement markings of paint, both yellow centerline and white edge lines and will be considered part of Standard Specifications Item 627.78, Temporary Pavement Marking Line, White or Yellow.
29.

The Contractor will be responsible for maintaining all existing operational business directional signs (OBDS) to ensure that they are visible to the traveling public. Payment for this work will be considered incidental to the contract.
30.

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.

31.

Areas on the project requiring fill will come from suitable sites such as excavation, ditch and inslope or equipment rental areas.
32.

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.
33.

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.
34.

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.
35.

The Contractor will place appropriately-marked stakes at the following locations on the project: striping pattern changes, cross-slope changes, and every 500 feet for stationing. The Contractor will paint every full station (100 feet) on the existing roadway and will transfer the painted stationing through all intermediate lifts (not surface). Appropriately-sized striping pattern changes will be painted on surface. Stationing control must be placed before work can commence. Cross-slope and striping change controls must be placed before paving can commence.
36.

All utility facilities shall be adjusted by the respective utilities unless otherwise noted.
37.

Existing signs within the Project limits shall be removed and reset as directed by the Resident. Payment for removal and reinstallation of existing signs will be made under appropriate items.
38.

Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.
39.

In areas where the Resident directs the Contractor not to excavate to the subgrade line shown on the plans, payment for removing existing pavement, grubbing, shaping, ditching, and compacting the existing subbase and layers of new subbase 6 inches or less thick will be made under appropriate equipment rental items.
40.

Erosion Control Mix may be substituted in those areas normally receiving loam and seed as directed by the Resident. Placement shall be in accordance with Standard Specifications Section 619, Mulch. Payment will be made under Pay Item 619.14, Erosion Control Mix.
41.

Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction in payment to the Contractor if the actual final quantities are different from the MaineDOT provided estimated quantities, except as follows:

a.

If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.

b.

If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.

c.

If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation and Time.

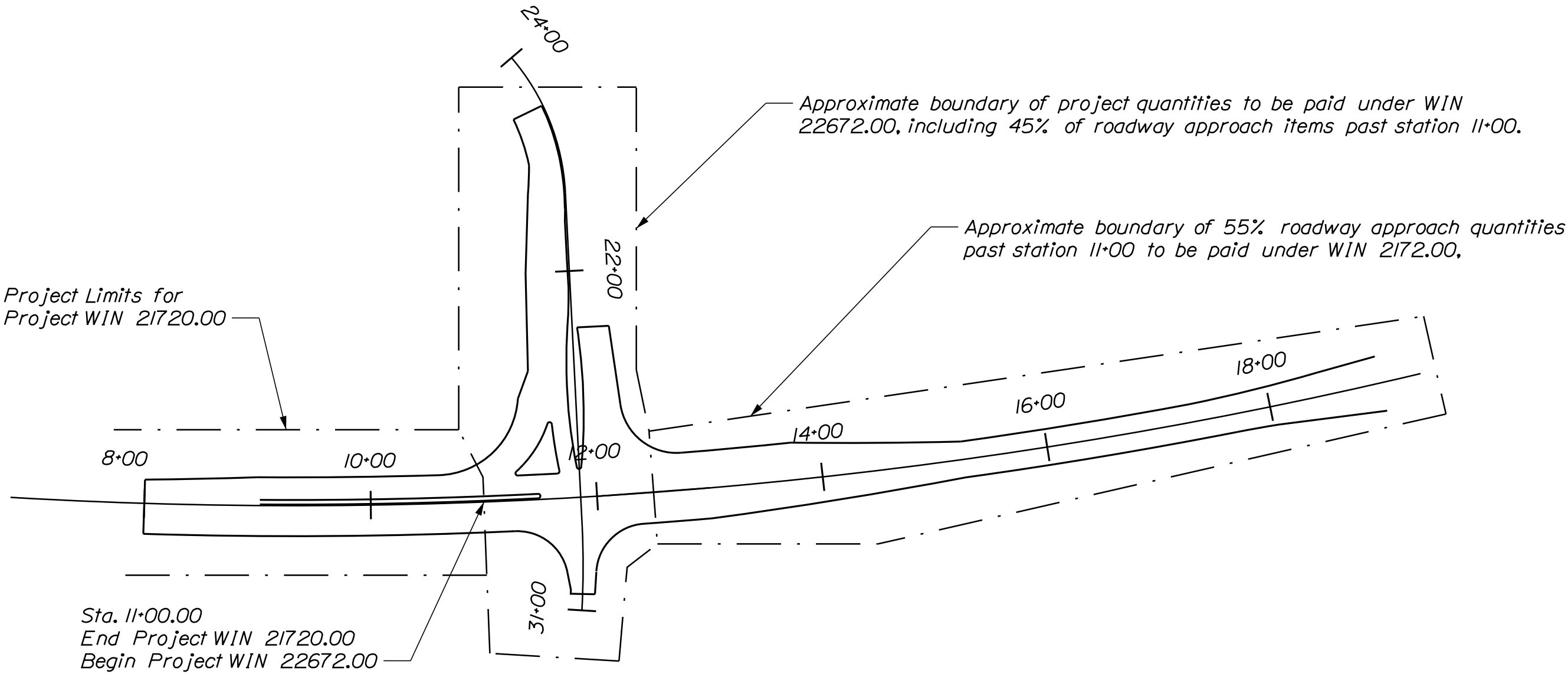
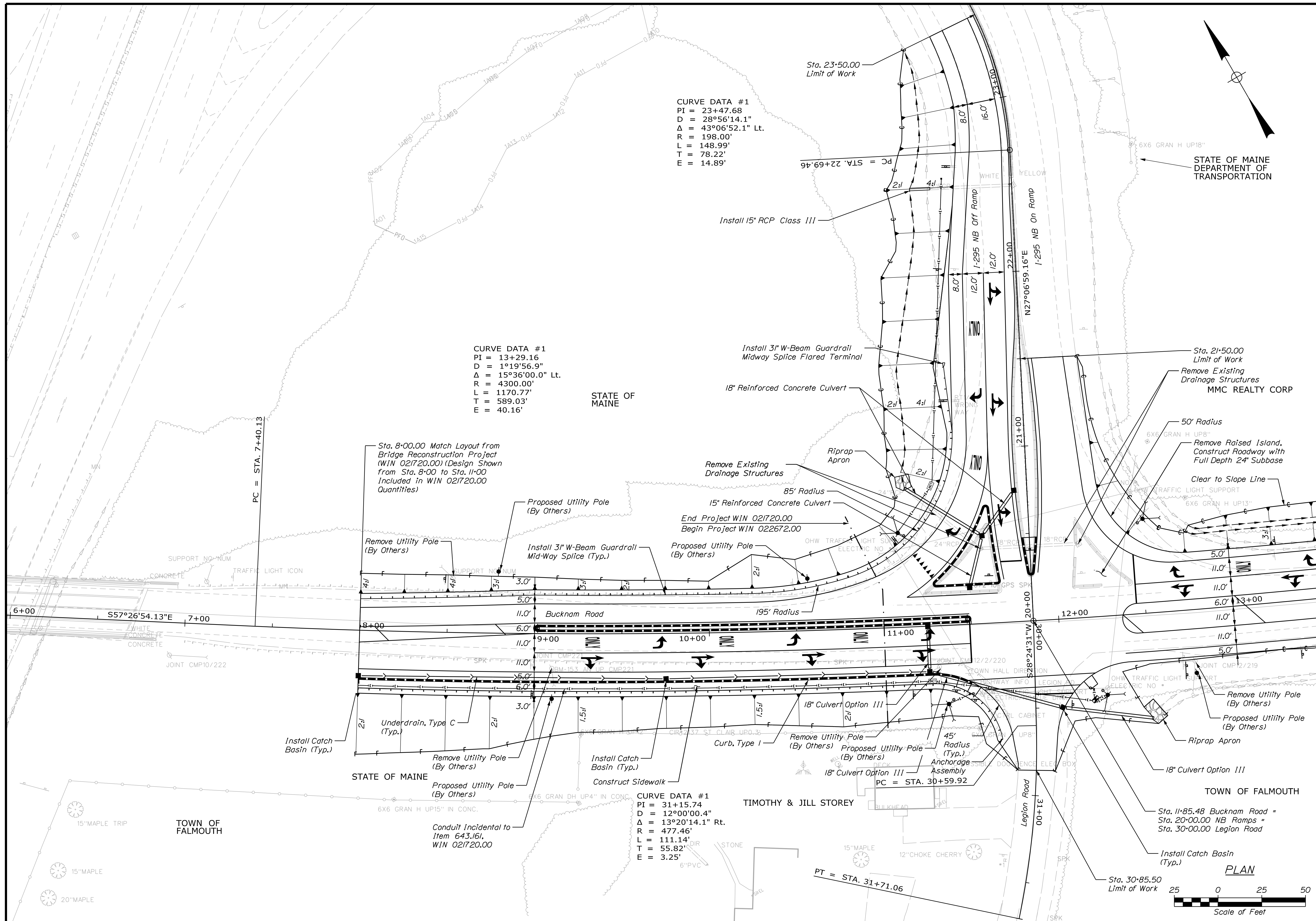


DIAGRAM OF PROJECT PAYMENT

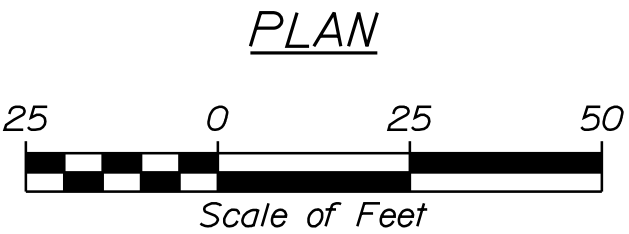
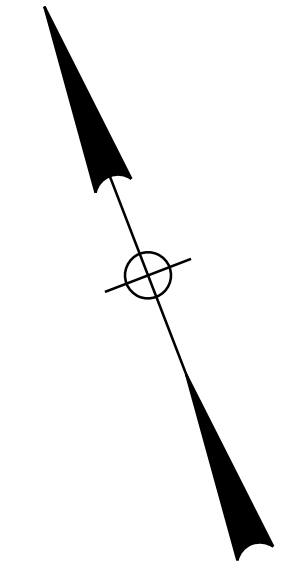
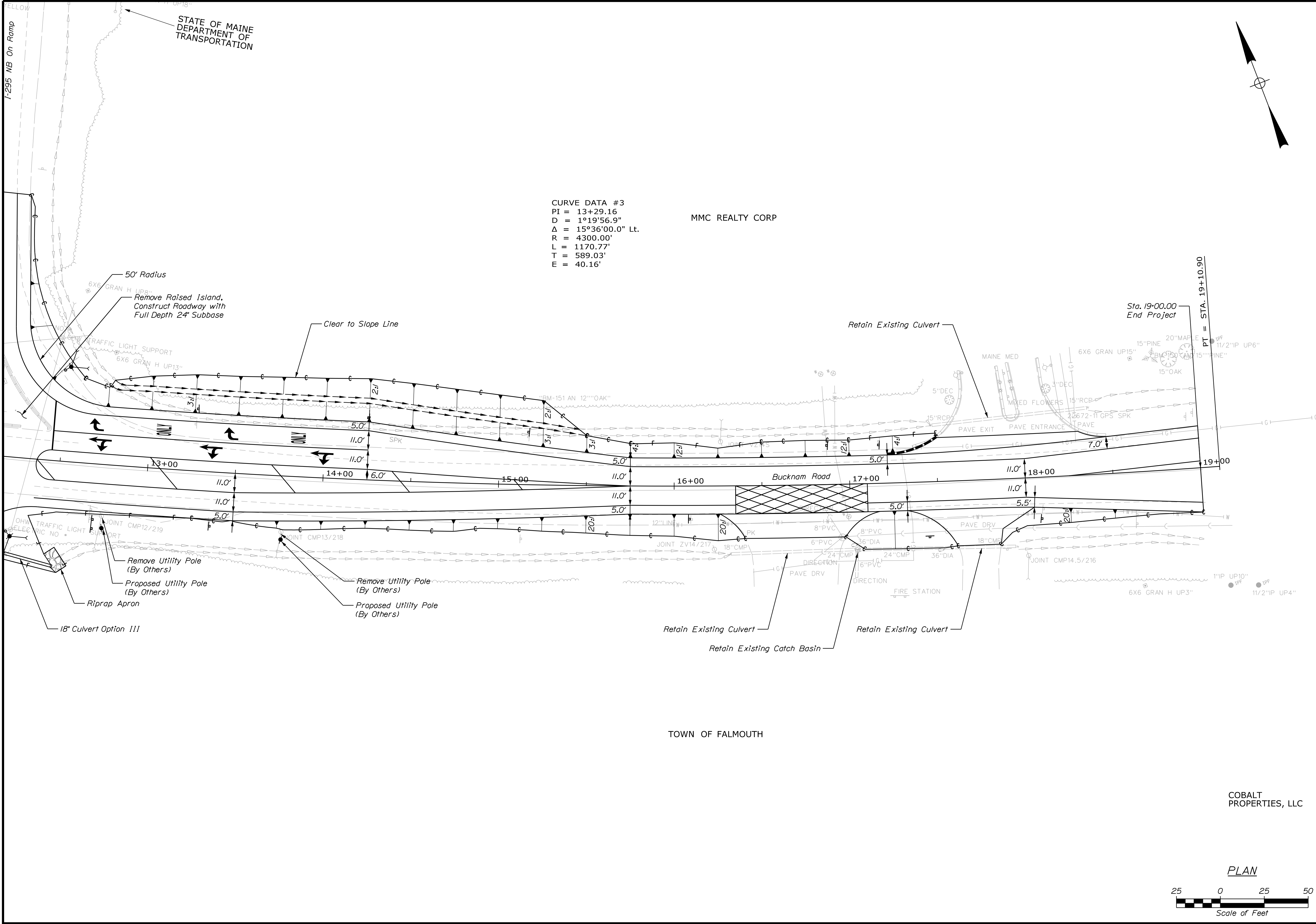
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| STATE OF MAINE | | DEPARTMENT OF TRANSPORTATION | | WIN | | 022672.00 | | BRIDGE PLANS | |
| BUCKNAM ROAD | | I-295 NB RAMPS INTERSECTION | | CUMBERLAND COUNTY | | FALMOUTH | | GENERAL NOTES | |
| SHEET NUMBER | | 3 | | OF 46 | | | | | |



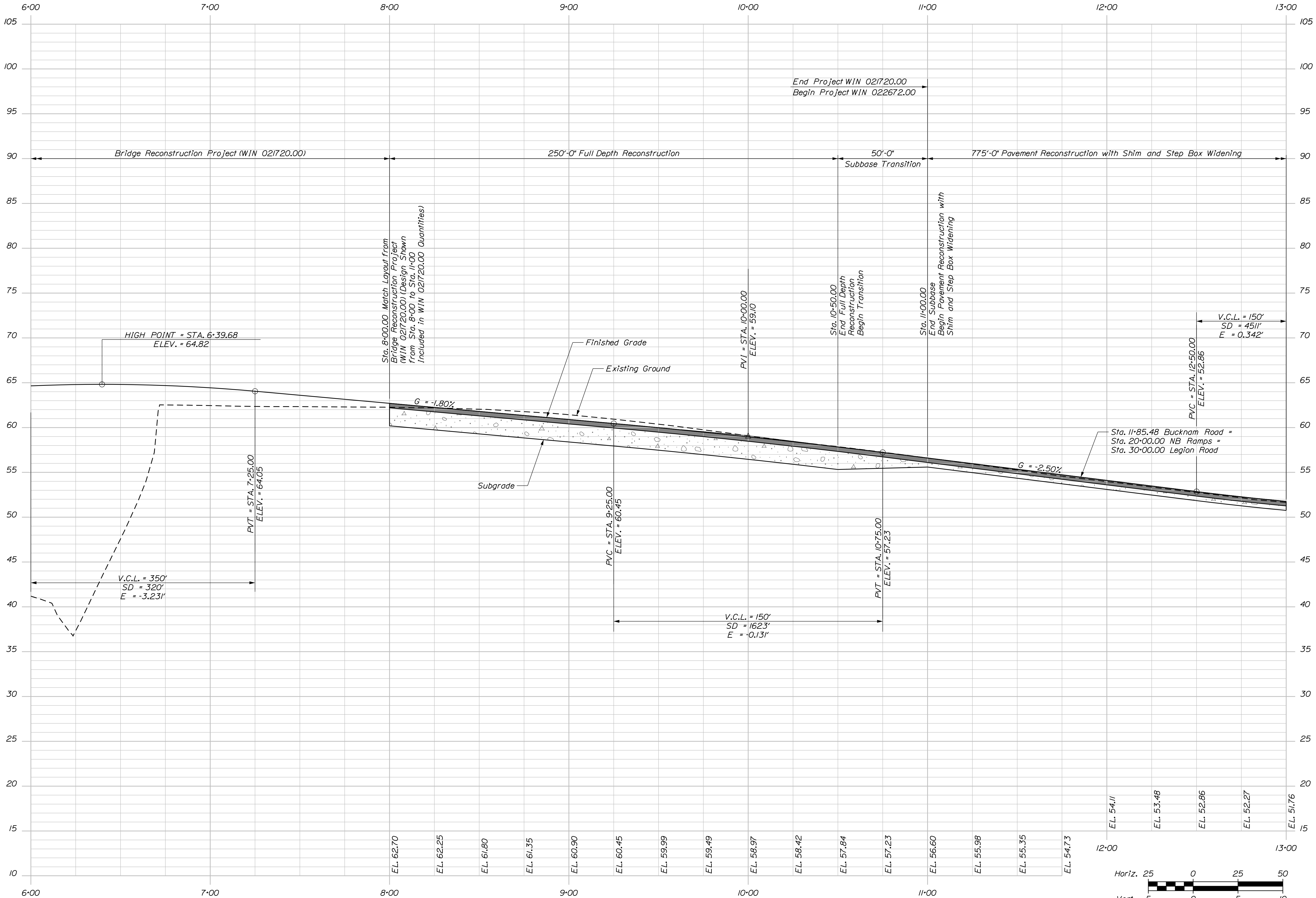
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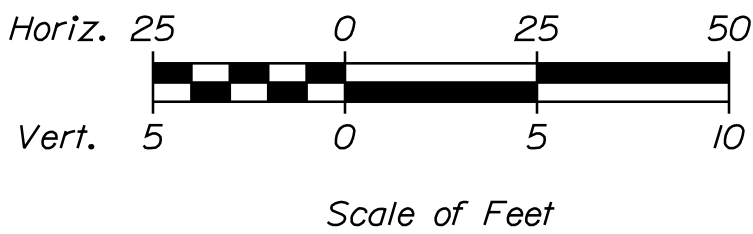
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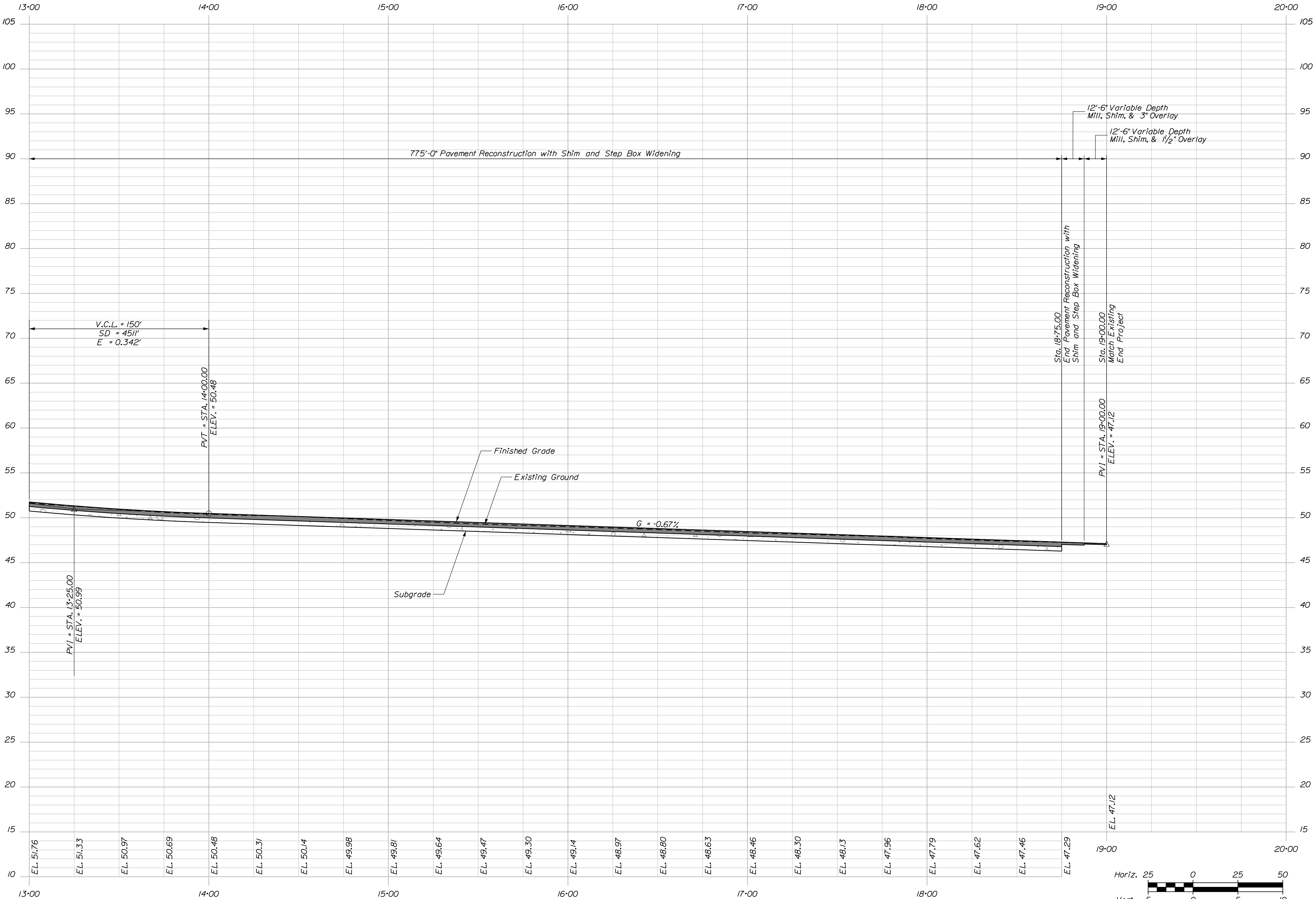
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| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | | SIGNATURE | |
| | | P.E. NUMBER | |
| | | DATE | |
| PROJECT: BUCKNAM ROAD I-295 NB RAMP INTERSECTION FALMOUTH CUMBERLAND COUNTY | | PROJ. MANAGER M. Kersbergen | BY KJP |
| GENERAL PLAN 2 | | CHECKED-REVIEWED JMS JCC | DATE 1-2022 |
| | | DESIGN-DETAILED JCC | DATE |
| | | DESIGN-DETAILED JCC | DATE |
| | | REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 | DATE |
| SHEET NUMBER | | FIELD CHANGES | |
| 5 | | | |
| OF 46 | | | |
| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | | BRIDGE PLANS | |
| WIN | | 022672.00 | |



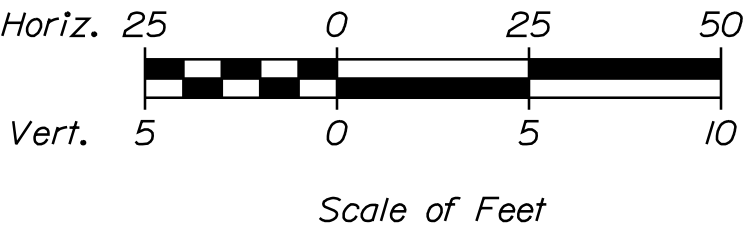
BUCKNAM ROAD PROFILE



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| STATE OF MAINE | | DEPARTMENT OF TRANSPORTATION | | WIN 022672.00 | | BRIDGE PLANS | |
| BUCKNAM ROAD | | I-295 NB RAMPS INTERSECTION | | CUMBERLAND COUNTY | | BUCKNAM ROAD | |
| FALMOUTH | | FALMOUTH | | FALMOUTH | | FALMOUTH | |
| PROFILE 1 | | PROFILE 1 | | PROFILE 1 | | PROFILE 1 | |
| SHEET NUMBER | | 6 | | OF 46 | | | |
| PROJ. MANAGER | | M. Kersbergen | | BY | | DATE | |
| DESIGN-DETAILED | | JMS | | KIP | | 1-2022 | |
| CHECKED-REVIEWED | | JCC | | SBH | | SIGNATURE | |
| DESIGN-DETAILED | | | | | | P.E. NUMBER | |
| REVISIONS 1 | | | | | | DATE | |
| REVISIONS 2 | | | | | | | |
| REVISIONS 3 | | | | | | | |
| REVISIONS 4 | | | | | | | |
| FIELD CHANGES | | | | | | | |



BUCKNAM ROAD PROFILE



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BUCKNAM ROAD
I-295 NB RAMPS INTERSECTION
FALMOUTH CUMBERLAND COUNTY

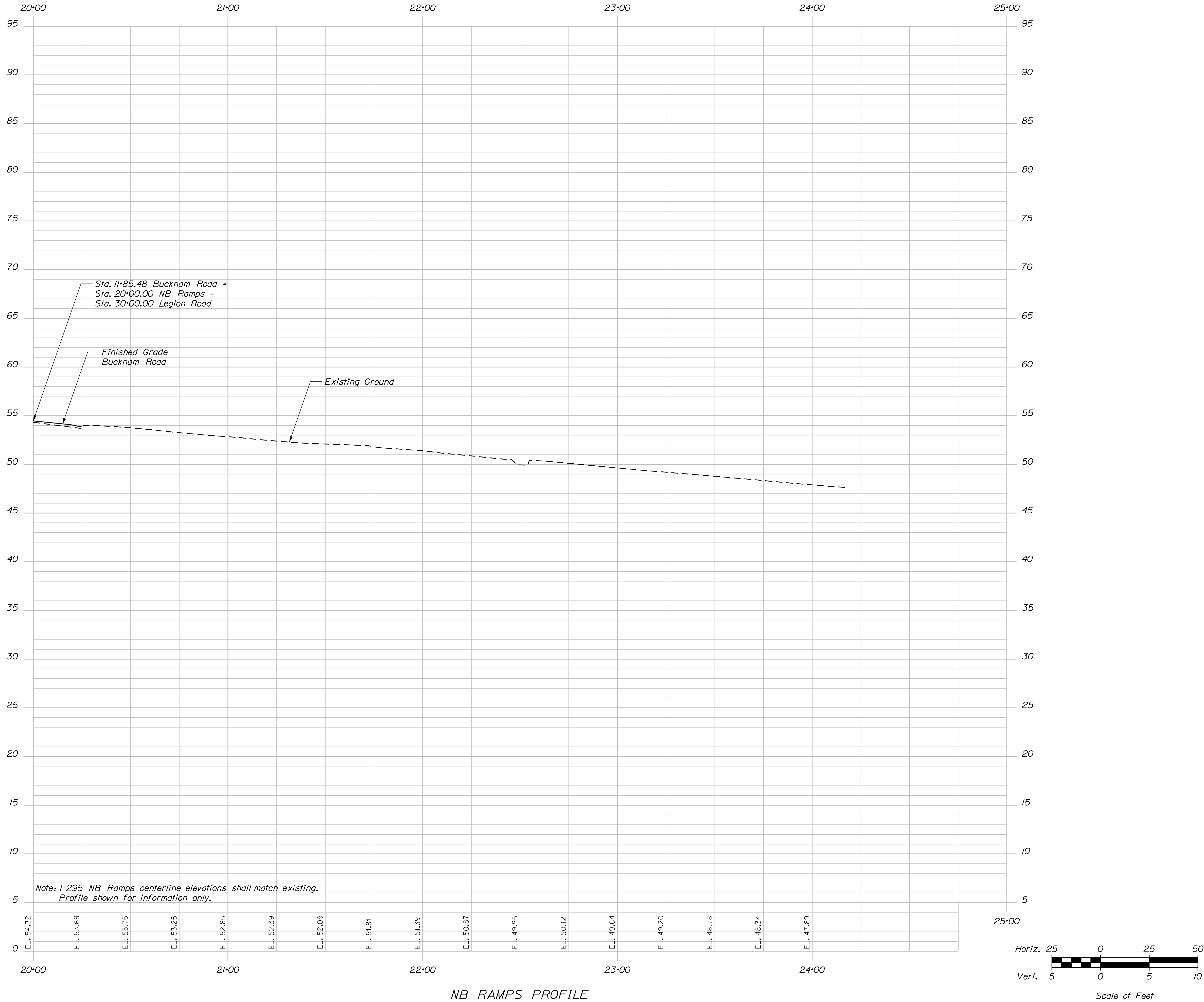
BUCKNAM ROAD
PROFILE 2

SHEET NUMBER
2
OF 46

| | | | | | |
|-----------------|---------------|-----------------|-----|-------------|--------|
| PROJ. MANAGER | M. Kersbergen | BY | KJP | DATE | 1-2022 |
| DESIGN-DETAILED | JMS | CHKD-REVIEWED | JCC | SIGNATURE | |
| DESIGN-DETAILED | | DESIGN-DETAILED | | P.E. NUMBER | |
| REVISIONS 1 | | REVISIONS 1 | | DATE | |
| REVISIONS 2 | | REVISIONS 2 | | | |
| REVISIONS 3 | | REVISIONS 3 | | | |
| REVISIONS 4 | | REVISIONS 4 | | | |
| FIELD CHANGES | | | | | |

WIN
022672.00

BRIDGE PLANS



NB RAMPS PROFILE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BUCKNAM ROAD
I-295 NB RAMPS INTERSECTION
FALMOUTH CUMBERLAND COUNTY

I-295 NB ON/OFF RAMP
PROFILE

SHEET NUMBER
8
OF 46

DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

PROJ. MANAGER
M. Kersbergen

BY
KDP
SBH

DATE
1-2022

SIGNATURE

P.E. NUMBER

DATE

BRIDGE PLANS
WIN
022672.00

Date:4/6/2022

Username:

Division: HIGHWAY

Filename: ... \HIGHWAY\MSTA\009_Curb_01.dgn

| Control Points for Curbing | | | | | |
|----------------------------|--------|----------|----------|--------------|-------------|
| Point | Reveal | Station | Offset | X-Coord | Y-Coord |
| 1 | 7" | 8+00.00 | 27.00 RT | 1020926.8378 | 325867.9766 |
| 2 | 7" | 11+26.35 | 27.00 RT | 1021212.3844 | 325705.8983 |
| 2A | 7" | 11+43.00 | 29.73 RT | 1021224.7700 | 325696.4270 |
| 3 | 0" | 11+48.85 | 33.19 RT | 1021229.6781 | 325690.0261 |
| 4 | 5" | 9+02.00 | 5.00 LT | 1021030.9384 | 325842.6014 |
| 5 | 5" | 11+48.00 | 5.00 LT | 1021246.3190 | 325724.4108 |
| 6 | 5" | 11+48.00 | 1.00 LT | 1021244.4957 | 325720.8505 |
| 7 | 5" | 9+02.00 | 1.00 LT | 1021028.9151 | 325839.1509 |
| 8 | 5" | 11+31.00 | 22.00 LT | 1021239.0364 | 325747.2772 |
| 9 | 5" | 20+25.41 | 55.65 LT | 1021239.5209 | 325751.0060 |
| 10 | 5" | 20+64.50 | 26.08 LT | 1021284.4636 | 325773.9027 |
| 11 | 5" | 20+65.69 | 22.22 LT | 1021287.6368 | 325771.6226 |
| 12 | 5" | 20+24.18 | 17.62 LT | 1021272.8174 | 325732.5898 |
| 13 | 5" | 20+21.87 | 19.59 LT | 1021270.0099 | 325731.4202 |
| 14 | 5" | 20+47.72 | 4.62 LT | 1021295.1156 | 325747.6126 |
| 15 | 5" | 20+27.70 | 2.00 LT | 1021288.3250 | 325728.5919 |
| 16 | 5" | 20+27.71 | 1.96 RT | 1021291.8494 | 325726.7976 |
| 17 | 5" | 20+47.71 | 4.53 RT | 1021303.2487 | 325743.4206 |
| 18 | 7" | 17+21.73 | 16.00 LT | 1021775.9485 | 325508.3258 |
| 18A | 7" | 17+25.73 | 16.21 LT | 1021780.3060 | 325507.0100 |
| 19 | 7" | 17+50.66 | 25.00 LT | 1021806.0915 | 325507.3161 |

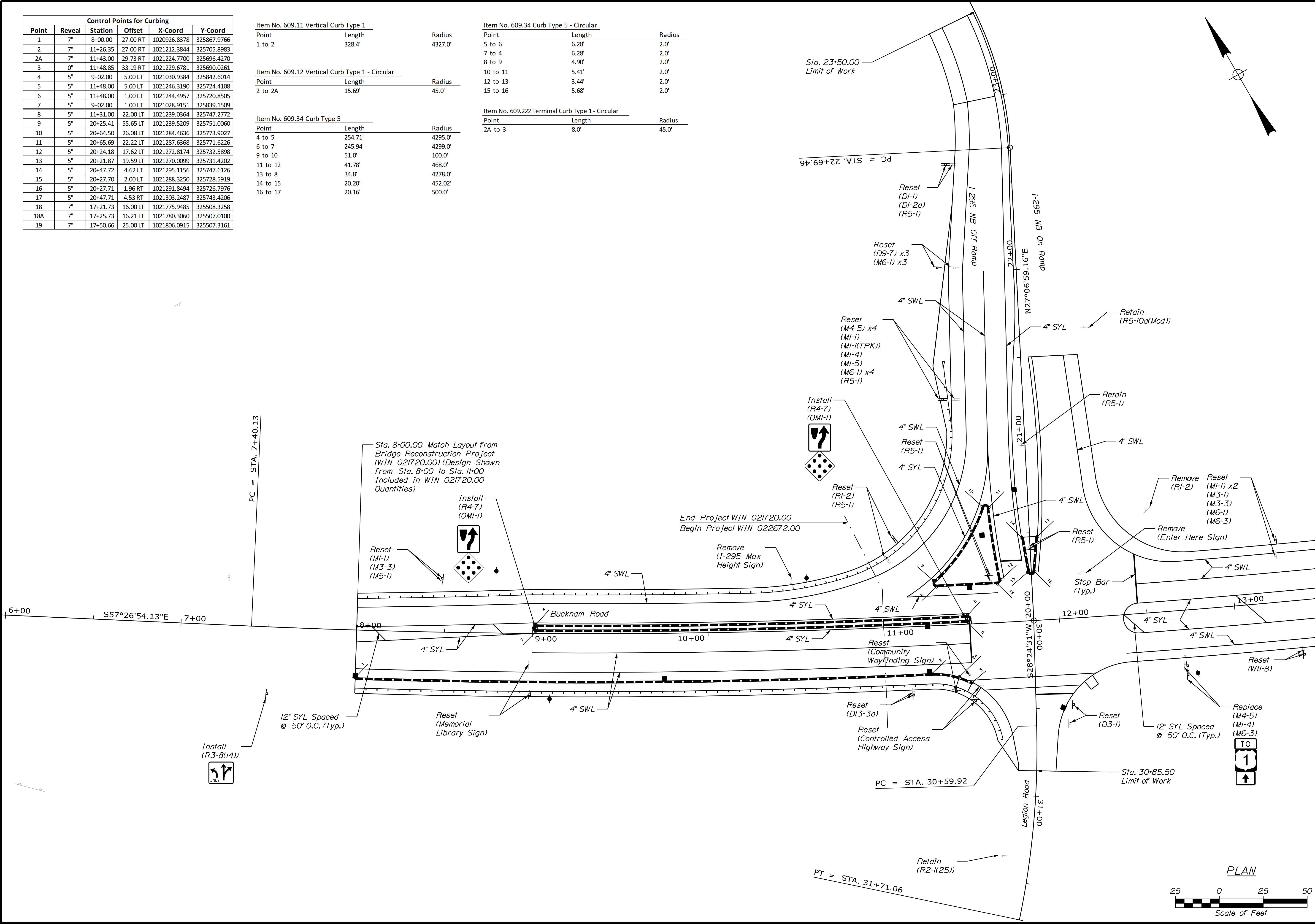
| Item No. 609.11 Vertical Curb Type 1 | | |
|--------------------------------------|--------|---------|
| Point | Length | Radius |
| 1 to 2 | 328.4' | 4327.0' |

| Item No. 609.12 Vertical Curb Type 1 - Circular | | |
|---|--------|--------|
| Point | Length | Radius |
| 2 to 2A | 15.69' | 45.0' |

| Item No. 609.34 Curb Type 5 | | |
|-----------------------------|---------|---------|
| Point | Length | Radius |
| 4 to 5 | 254.71' | 4295.0' |
| 6 to 7 | 245.94' | 4299.0' |
| 9 to 10 | 51.0' | 100.0' |
| 11 to 12 | 41.78' | 468.0' |
| 13 to 8 | 34.8' | 4278.0' |
| 14 to 15 | 20.20' | 452.02' |
| 16 to 17 | 20.16' | 500.0' |

| Item No. 609.34 Curb Type 5 - Circular | | |
|--|--------|--------|
| Point | Length | Radius |
| 5 to 6 | 6.28' | 2.0' |
| 7 to 4 | 6.28' | 2.0' |
| 8 to 9 | 4.90' | 2.0' |
| 10 to 11 | 5.41' | 2.0' |
| 12 to 13 | 3.44' | 2.0' |
| 15 to 16 | 5.68' | 2.0' |

| Item No. 609.222 Terminal Curb Type 1 - Circular | | |
|--|--------|--------|
| Point | Length | Radius |
| 2A to 3 | 8.0' | 45.0' |



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BUCKNAM ROAD
I-295 NB RAMP INTERSECTION
FALMOUTH CUMBERLAND COUNTY

SHEET NUMBER
9
OF 46

WIN
022672.00

BRIDGE PLANS

| | | | | | | | | | | | |
|-----------|------------|---------------|-----------------|------------------|-----------------|-----------------|-------------|-------------|-------------|-------------|---------------|
| DATE | BY | PROJ. MANAGER | DESIGN-DETAILED | CHECKED-REVIEWED | DESIGN-DETAILED | DESIGN-DETAILED | REVISIONS 1 | REVISIONS 2 | REVISIONS 3 | REVISIONS 4 | FIELD CHANGES |
| 1-2022 | KDP SBH | M. Kersbergen | JEMS | JCC | | | | | | | |
| SIGNATURE | | | | | P.E. NUMBER | | DATE | | | | |

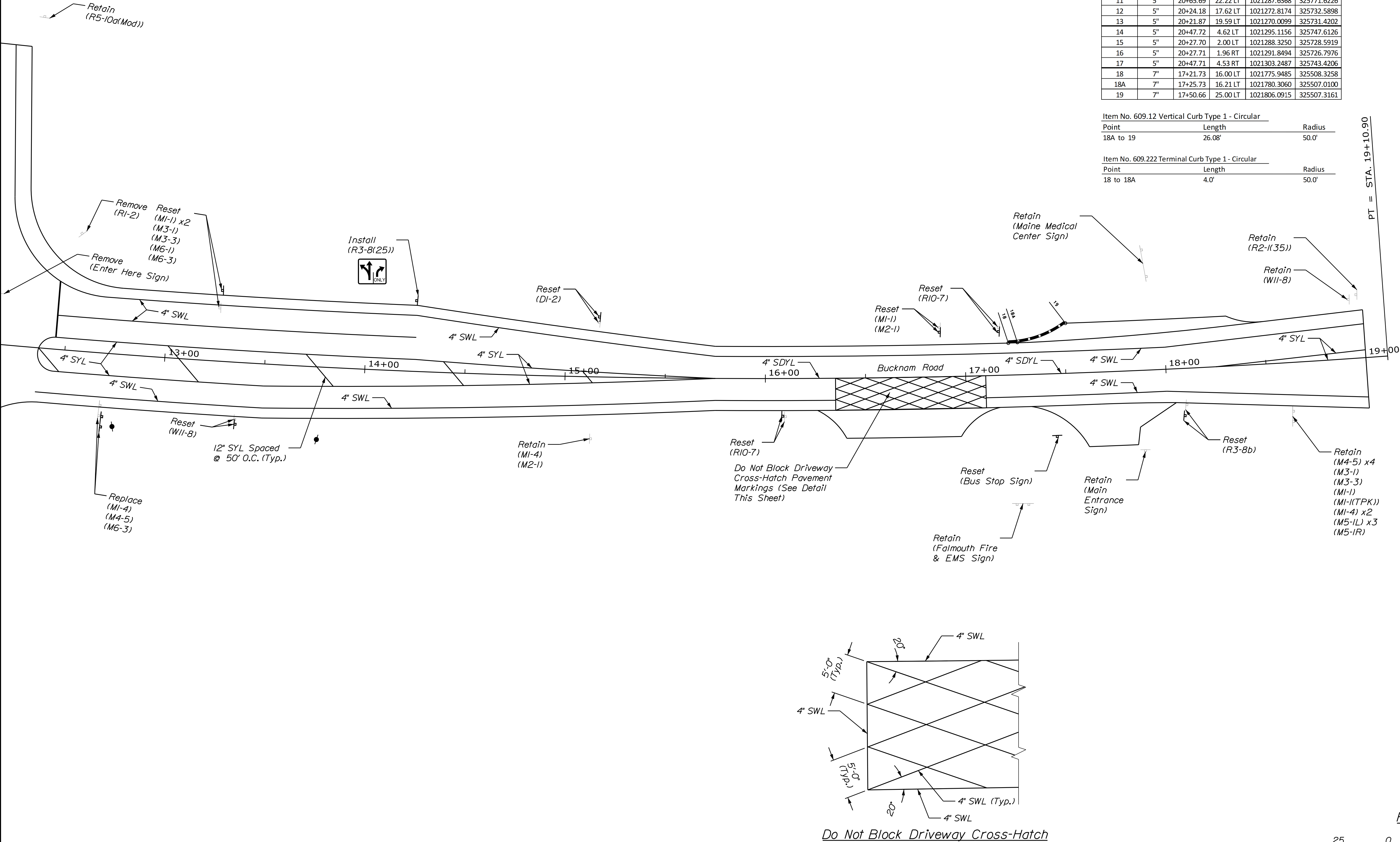
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Division: HIGHWAY

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I-295 NB On Ramp

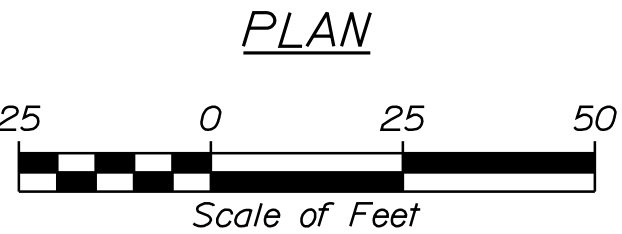
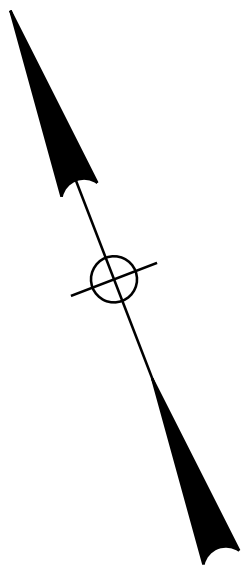


| Control Points for Curbing | | | | |
|----------------------------|--------|----------|----------|--------------|
| Point | Reveal | Station | Offset | |
| 1 | 7" | 8+00.00 | 27.00 RT | 1020926.8378 |
| 2 | 7" | 11+26.35 | 27.00 RT | 1021212.3844 |
| 2A | 7" | 11+43.00 | 29.73 RT | 1021224.7700 |
| 3 | 0" | 11+48.85 | 33.19 RT | 1021229.6781 |
| 4 | 5" | 9+02.00 | 5.00 LT | 1021030.9384 |
| 5 | 5" | 11+48.00 | 5.00 LT | 1021246.3190 |
| 6 | 5" | 11+48.00 | 1.00 LT | 1021244.4957 |
| 7 | 5" | 9+02.00 | 1.00 LT | 1021028.9151 |
| 8 | 5" | 11+31.00 | 22.00 LT | 1021239.0364 |
| 9 | 5" | 20+25.41 | 55.65 LT | 1021239.5209 |
| 10 | 5" | 20+64.50 | 26.08 LT | 1021284.4636 |
| 11 | 5" | 20+65.69 | 22.22 LT | 1021287.6368 |
| 12 | 5" | 20+24.18 | 17.62 LT | 1021272.8174 |
| 13 | 5" | 20+21.87 | 19.59 LT | 1021270.0099 |
| 14 | 5" | 20+47.72 | 4.62 LT | 1021295.1156 |
| 15 | 5" | 20+27.70 | 2.00 LT | 1021288.3250 |
| 16 | 5" | 20+27.71 | 1.96 RT | 1021291.8494 |
| 17 | 5" | 20+47.71 | 4.53 RT | 1021303.2487 |
| 18 | 7" | 17+21.73 | 16.00 LT | 1021775.9485 |
| 18A | 7" | 17+25.73 | 16.21 LT | 1021780.3060 |
| 19 | 7" | 17+50.66 | 25.00 LT | 1021806.0915 |

| Item No. 609.12 Vertical Curb Type 1 - Circular | | |
|---|--------|--------|
| Point | Length | Radius |
| 18A to 19 | 26.08' | 50.0' |

| Item No. 609.222 Terminal Curb Type 1 - Circular | | |
|--|--------|--------|
| Point | Length | Radius |
| 18 to 18A | 4.0' | 50.0' |

PT = STA. 19+10.90



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BUCKNAM ROAD
I-295 NB RAMP INTERSECTION
FALMOUTH CUMBERLAND COUNTY

SHEET NUMBER
10
OF 46

SIGNATURE
P.E. NUMBER
DATE

DESIGNED: JEMS
CHECKED: JCC
DESIGNED: JCC
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

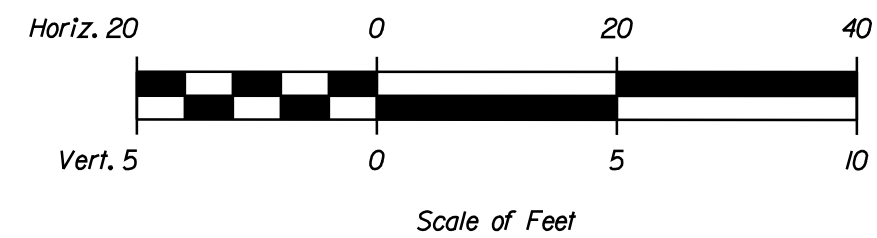
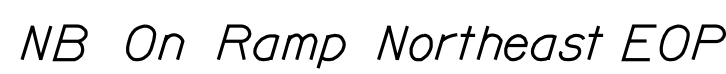
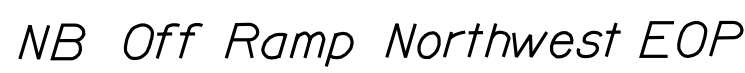
DATE
1-2022

BY
KDP
SBH

PROJ. MANAGER
M. Kersbergen

BRIDGE PLANS
WIN
022672.00

CURBING, LAYOUT, AND
SIGNING PLANS 2



| | | | | | | | | | | |
|-------------|------------------|---|------|-----|--|---------------|---------------|-------------|------|--|
| 12 OF 46 | SHEET NUMBER | BUCKNAM ROAD I-295 NB RAMPS INTERSECTION FALMOUTH CUMBERLAND COUNTY | | | | PROJ. MANAGER | M. Kersbergen | BY | DATE | STATE OF MAINE DEPARTMENT OF TRANSPORTATION |
| | | DESIGN-DETAILED | JFMS | KOP | | | | | | |
| | CHECKED-REVIEWED | JCC | SBH | | | | | SIGNATURE | | |
| | DESIGN-DETAILED2 | | | | | | | | | |
| | DESIGN-DETAILED3 | | | | | | | P.E. NUMBER | | |
| | REVISIONS 1 | | | | | | | | | |
| | REVISIONS 2 | | | | | | | | | |
| | REVISIONS 3 | | | | | | | | | |
| | REVISIONS 4 | | | | | | | DATE | | |
| | | FIELD CHANGES | | | | | | | | |

GENERAL TRAFFIC SIGNAL NOTES

1. TRAFFIC SIGNAL WORK FOR THIS PROJECT WILL INCLUDE, BUT NOT BE LIMITED TO, FURNISHING AND INSTALLING A NEW CONTROLLER CABINET FOUNDATION, RELOCATING EXISTING ATC GROUND-MOUNTED AND POLE-MOUNTED TRAFFIC SIGNAL CABINETS, FURNISHING AND INSTALLING TRAFFIC SIGNAL ASSEMBLIES, ADVANCE RADAR DETECTION FOR DILEMMA ZONE PROTECTION, INTERSECTION LIGHTING, EMERGENCY VEHICLE OPTICAL PREEMPTION RECEIVERS AND CONFIRMATION STROBE, VIDEO DETECTION FOR STOP BAR DETECTION AT THE TRAFFIC SIGNAL AND PHASE PRIORITY DETECTION ON THE I-295 NB OFF RAMP, RECONNECTION OF EXISTING RAILROAD PREEMPTION EQUIPMENT, AND RELATED INCIDENTAL WORK AND MATERIALS, EXISTING CONTROLLERS, MMU, FLASHER UNIT, DETECTOR RACK, AND OTHER ANCILLARY COMPONENTS SHALL BE REUSED.
2. ALL WORK SHALL BE COMPLETED IN CONFORMANCE WITH THE LATEST REVISIONS OF THE STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE NATIONAL ELECTRICAL CODE, AND ANY REQUIREMENTS OF THE POWER COMPANY.
3. THE CONTROL CABINET AND THE POWER DISCONNECT ENCLOSURE EACH SHALL BE MARKED WITH ARC HAZARD TYPE 2, 3 OR 4 AND THE APPROPRIATE PPE REQUIRED, SEE SECTION 643.09 FOR OTHER REQUIREMENTS.
4. THE EXISTING TRAFFICWARE 980 ATC TYPE 2 CONTROLLERS AT I-295 NB RAMPS, I-295 SB RAMPS, AND MIDDLE ROAD SHALL BE REUSED AND COORDINATED TOGETHER. COORDINATION SHALL BE FIBER INTER-CONNECT USING EXISTING AERIAL FIBER LINE.
5. THE CONTROL CABINET SHALL ACCOMMODATE NECESSARY WIRING AND CONTROL HARDWARE FOR INTERSECTION LIGHTING AS WELL AS TRAFFIC SIGNAL CONTROL COMPONENTS.
6. SIGNAL ASSEMBLIES SHALL BE POLYCARBONATE WITH DOUBLE SPANWIRE SUPPORT. ASSEMBLIES SHALL HAVE 5-INCH LOUVERED BACKPLATES AND 3-INCH MINIMUM WIDTH YELLOW RETROREFLECTIVE TAPE AROUND THE DISPLAY FACE. PERIMETER OF THE BACKPLATES, ALL SIGNAL ASSEMBLIES, OVERHEAD SIGNAGE, AND EMERGENCY VEHICLE PREEMPTION EQUIPMENT ATTACHED TO SPANWIRES SHALL BE STABILIZED WITH A BOTTOM TETHER.
7. ADVANCE DETECTION FOR DILEMMA ZONE PROTECTION AT THE NB OFF RAMP AND SB OFF RAMP INTERSECTIONS SHALL BE WAVETRONIX SMARTSENSOR 'ADVANCE' WITH SAFE ARRIVAL TECHNOLOGY OR APPROVED EQUAL. DETECTORS SHALL BE INDIVIDUALLY SURGE PROTECTED AND FUSED.
8. LOCATIONS OF ANY EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE PRESENCE OF UNDERGROUND UTILITY FACILITIES PRIOR TO COMMENCING ANY EXCAVATION WORK OR INSTALLATION OF POLES, FOUNDATIONS, JUNCTION BOXES, CONDUIT OR GROUND-MOUNTED SIGNAGE AND SHALL NOTIFY UTILITIES OF PROPOSED WORK IN ACCORDANCE WITH MRSA TITLE 23 SECTION 3360-A, MAINE 'DIG SAFE' SYSTEM. CONTRACTOR SHALL CONTACT DIG SAFE AT LEAST THREE WORKING DAYS PRIOR TO THE BEGINNING OF EXCAVATION. ALL UTILITIES SHALL BE LOCATED BEFORE BEGINNING EXCAVATION.
9. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AT LEAST 48 HOURS BEFORE ANY OPERATIONS ARE CONDUCTED THAT POTENTIALLY COULD CONFLICT WITH AERIAL UTILITIES.
10. CONDUIT FROM THE POWER SOURCE TO THE METER SHALL BE RIGID METAL CONDUIT. OTHER NEW CONDUIT NOT UNDER PAVEMENT SHALL BE 3 INCH MINIMUM PVC SCHEDULE 40, MINIMUM BURIAL DEPTH FOR CONDUIT SHALL BE 36". TOP 3 INCHES OF CONDUIT SHALL BE SEALED TO PREVENT ENTRY BY RODENTS.
11. THERE SHALL BE NO UNDERGROUND SPLICES AND NO PULL BOXES EXCEPT AS NOTED ON PLANS.
12. PULL BOXES AND COVERS SHALL BE TIER 22 RATED AND LABELED 'TRAFFIC'.
13. SPECIFIED TRAFFIC SIGNAL POLE LOCATIONS ARE MEASURED TO THE CENTER OF THE POLES. SPECIFIED LOCATIONS FOR THE CONTROLLERS ARE MEASURED TO THE CENTER OF THE CONTROLLER FOUNDATIONS.
14. ALL FIELD WIRING SHALL BE NEATLY BUNDLED AND CLEARLY IDENTIFIED WITH PERMANENT, LEGIBLE, WEATHERPROOF TAGS SECURELY ATTACHED TO EACH CABLE.
15. AT THE TIME OF FINAL PROJECT INSPECTION, THE CONTRACTOR SHALL FURNISH TO THE RESIDENT THREE COMPLETE SETS OF AS-BUILT TRAFFIC SIGNAL PLANS. ONE ADDITIONAL SET SHALL REMAIN IN THE CABINET. ONE ELECTRONIC SET SHALL BE SUPPLIED TO THE ASSISTANT TRAFFIC ENGINEER. FINAL INSPECTION OF SIGNALS SHALL INCLUDE SIGN OFF BY MAINE DOT ELECTRICIAN.
16. THE MAINTENANCE OF TRAFFIC SIGNALS SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR UNTIL FINAL ACCEPTANCE BY MAINE DOT.
17. PAYMENT UNDER ITEM 643.71 SHALL INCLUDE, BUT NOT BE LIMITED TO, POWER SERVICE AND METER, METER DISCONNECT AND ENCLOSURE, WOOD POLES, BRACKET ARMS, SPANWIRES, TETHER WIRES, SIGNAL ASSEMBLIES AND LED LAMPS, BACKPLATES, VISORS, GUY LEADS AND ANCHORS, RELOCATED CONTROLLER AND CABINET, LUMINAIRES, TOMAR EMERGENCY PREEMPTION EQUIPMENT, WIRING, CABLE, POLE RISERS, AND ALL APPURTENANCES AND INCIDENTALS NECESSARY FOR A COMPLETELY FUNCTIONING TRAFFIC SIGNAL INSTALLATION, OTHER THAN RELATED LABOR, MATERIALS AND EQUIPMENT INCLUDED IN OTHER PAY ITEMS OF THE CONTRACT.
18. CONTRACTOR SHALL FURNISH AND INSTALL VIDEO DETECTION SYSTEMS (STOP BAR). PAYMENT UNDER ITEM 643.83, AT BUCKNAM ROAD INTERSECTIONS WITH I-295 NB RAMPS AND I-295 SB RAMPS, STOP BAR VIDEO DETECTION SHALL UTILIZE ONE GRIDSMA RT FISHEYE CAMERA GS-3-CAM PER INTERSECTION, OR APPROVED EQUAL.
19. CONTRACTOR SHALL FURNISH AND INSTALL NON-INVASIVE DETECTION (PHASE PRIORITY). PAYMENT UNDER ITEM 643.23, AT BUCKNAM ROAD INTERSECTION WITH I-295 NB RAMPS, PHASE PRIORITY DETECTION FOR DETECTOR ZONE 4 AT NB RAMPS INTERSECTION SHALL UTILIZE A FLIR TRAFICAM OR APPROVED EQUAL.
20. DETECTION EQUIPMENT SHALL BE CONNECTED TO THE FIELD MONITORING UNITS AND CELL MODEMS WITH REMOTE MONITORING AND ADJUSTMENT CAPABILITY.
21. THE CELL MODEM IN THE ATC CABINET SHALL BE INTEGRATED INTO A CLOUD BASED MONITORING SYSTEM, SIERRA WIRELESS RAVEN RV50 OR APPROVED EQUAL.
22. ALL DETECTION EQUIPMENT SHALL BE INDIVIDUALLY SURGE PROTECTED AND FUSED.
23. BUSHINGS SHALL BE INSTALLED ON ALL CONDUIT TERMINATIONS.
24. PULL WIRE SHALL BE INSTALLED IN ALL CONDUIT.
25. ALL EXPOSED STEEL FITTINGS AND HARDWARE SHALL BE GALVANIZED, EXCEPT NON-CONDUCTIVE BUSHINGS SHALL BE USED FOR CONNECTION OF RIGID METAL CONDUIT TO ALUMINUM CABINETS.
26. ALL TRAFFIC SIGNAL EQUIPMENT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.
27. EACH CONTROL CABINET FOUNDATION SHALL HAVE ONE OR MORE GROUND RODS LOCATED IN OR ADJACENT TO THE FOUNDATION THAT ARE BONDED TO THE GROUNDING CONDUCTOR.
28. REINFORCEMENT WILL BE REQUIRED IN THE CONTROLLER CABINET FOUNDATION. REINFORCEMENT SHALL BE GRADE 60 BLACK EPOXY COATED NO.5 STEEL BARS SPACED AT 12 INCHES CENTER ON ALL SIDES, TOP, AND BOTTOM. BARS SHALL HAVE 2 INCHES MINIMUM CLEARANCE FROM OUTSIDE OF THE CONCRETE. CONCRETE SHALL BE CHAMFERED 3/4-INCH ON EXPOSED EDGES ABOVE SURROUNDING GRADE.
29. THE ENGINEER AND MAINE DOT SHALL HAVE THE RIGHT AND AUTHORITY TO DETERMINE THE ACCEPTABILITY OF WORK AND MATERIAL IN PROGRESS OR COMPLETED AND SHALL HAVE THE RIGHT TO REJECT ANY WORK OR MATERIALS WHICH DO NOT CONFORM, IN IT'S SOLE OPINION, TO THE PLANS OR SPECIFICATIONS.
30. OVERHEAD LANE USE SIGNING INSTALLED ON SPAN WIRES WILL BE PAID AS ITEM 645.271.
31. ALL MATERIALS SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULES BASED UPON PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.

PREEMPTION NOTES

1. EMERGENCY VEHICLE PREEMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS INSTALLED BY OTHERS IN EMERGENCY VEHICLES.
2. OPTICAL PREEMPTION RECEIVERS AND CONFIRMATION STROBE TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR SHALL BE MANUFACTURED BY TOMAR ELECTRONICS, INC. THE CONTRACTOR SHALL CONFIRM OPERATIONAL COMPATIBILITY OF NEW EQUIPMENT WITH EXISTING TOMAR PREEMPTION EMITTERS OF TOWN OF FALMOUTH EMERGENCY VEHICLES.
3. PREEMPTION CONFIRMATION RECEIVERS AND STROBE SHALL BE ATTACHED TO SPANWIRE WITH APPROVED SPANWIRE MOUNT HARDWARE MANUFACTURED BY TOMAR AND SHALL BE BOTTOM TETHERED.
4. PREEMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST).
5. IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED BY AN OPTICAL RECEIVER, THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD THE EMERGENCY ACTIVE PHASE GREEN FOR A MINIMUM OF TEN SECONDS OR UNTIL THE PREEMPTION SIGNAL CEASES. THE CONTROLLER THEN SHALL TIME PREEMPTION PHASE CLEARANCE OF 3.5 SECONDS YELLOW AND 3.0 SECONDS ALL RED AND SERVICE SUBSEQUENT EMERGENCY VEHICLE PREEMPTION PHASES AS NECESSARY. THE CONTROLLER SHALL RESUME NORMAL SIGNAL OPERATION AFTER SERVICING THE LAST PREEMPTION CALL AND PREEMPTION CLEARANCE.
6. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TERMINATED BY PREEMPTION DEMAND.
7. THE CONFIRMATION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PREEMPTION GREEN INDICATION IS ON.
8. ALL THREE SIGNALS SHALL MAINTAIN CONNECTION AND PROGRAMMING FROM EXISTING PREEMPTION DEVICE OPPOSITE FIRE STATION.
9. THE SIGNAL AT THE SB RAMPS SHALL REESTABLISH CONNECTION AND PROGRAMMING WITH EXISTING RAILROAD PREEMPTION (RRI).
10. RAILROAD PREEMPTION SHALL OVERRIDE EMERGENCY VEHICLE PREEMPTION.
11. IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED BY RAILROAD PREEMPTION (RRI - NOT SHOWN), THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD RAILROAD CLEARANCE (PHASE 1 AND 6) FOR NOT LESS THAN 45 SECONDS. IT SHALL THEN ADVANCE TO AND HOLD PHASES 4 & 8. THE DURATION OF THE HOLD TIME SHALL BE DETERMINED BY THE RAILROAD. AT COMPLETION OF THE RAILROAD PREEMPTION CYCLE, THE CONTROLLER SHALL SERVICE SUBSEQUENT EMERGENCY VEHICLE PREEMPTION PHASES, AS NECESSARY. THE CONTROLLER SHALL THEN RETURN TO PHASE 2 & 6 AND RESUME NORMAL SIGNAL OPERATION AFTER SERVICING THE LAST PREEMPTION CALL AND PREEMPTION CLEARANCE.
12. RAILROAD INPUT SHALL BE LOCKED WITH AN OVERRIDE TO A HIGHER PREEMPT CALL.

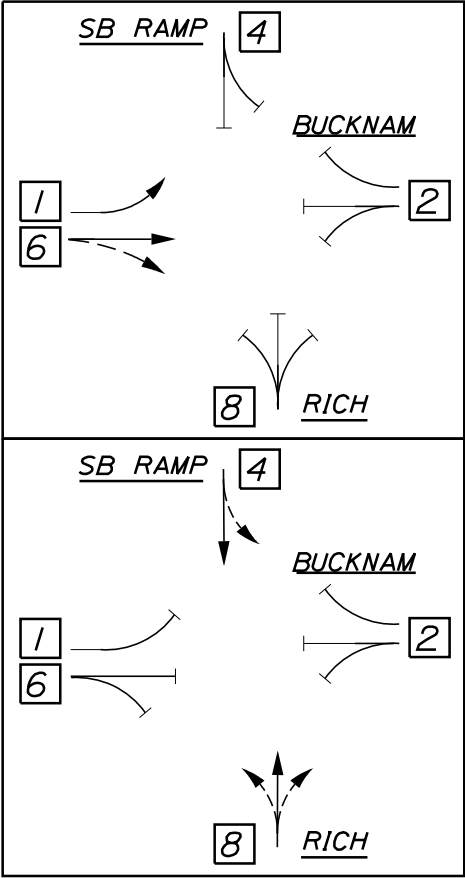
LUMINAIRE NOTES

1. ALL PROPOSED LIGHTING SHALL BE PHOTOCELL ACTIVATED BY A PHOTOCELL ON THE CONTROL CABINET.
2. LIGHTING FIXTURE VOLTAGE SHALL BE 240 VOLTS.
3. LIGHTING FIXTURES SHALL BE 1ES FULL CUTOFF LIGHT EMITTING DIODE (LED) FIXTURES. 1ES DISTRIBUTION TYPE 3. LED COLOR TEMPERATURE SHALL BE 4000K.
4. ALL FIXTURES SHALL BE GASKETED AND HAVE SURGE PROTECTION AND A DOUBLE FUSE KIT. FIXTURES SHALL BE GRAY.
5. LUMINAIRES ON POLES SP1 AND SP4 SHALL BE AMERICAN ELECTRIC LIGHTING 'AUTOBAHN' ATB SERIES, 54 WATT LED FIXTURES, CATALOG NUMBER ATBmic P154.
6. LUMINAIRES ON POLES SP2 AND SP3 SHALL BE AMERICAN ELECTRIC LIGHTING 'AUTOBAHN' ATB SERIES, 88 WATT LED FIXTURES, CATALOG NUMBER ATB0 P204.
7. LUMINAIRES SHALL BE ATTACHED TO WOOD SIGNAL POLES WITH STEEL BRACKETS AND 2-INCH DIAMETER MINIMUM LENGTH GALVANIZED STEEL HORIZONTAL PIPE TENON MOUNT.
8. LUMINAIRES SHALL OPERATE ON THE SAME METER AS THE TRAFFIC SIGNALS.
9. PAYMENT FOR ALL LABOR, MATERIALS, AND EQUIPMENT FOR HIGHWAY LIGHTING WILL BE INCIDENTAL TO PAYMENT UNDER ITEM 643.71.

EMERGENCY VEHICLE
PREEMPTION OPERATION

| ID | PREEMPT ASSIGNMENT | RECEIVER PRIORITY | ACTIVE PHASE |
|---------------------|--------------------|-------------------|--------------|
| BUCKNAM @ NB RAMPS | | | |
| R1 | 1 | 1 | 2 |
| R2 | 2 | 2 | 6 |
| R3 | 3 | 3 | 4 |
| R4 | 4 | 4 | 8 |
| BUCKNAM @ SB RAMPS | | | |
| RR1 | 1 | 1 | 1 & 6 |
| R5 | 2 | 2 | 2 |
| R6 | 3 | 3 | 6 |
| R7 | 4 | 4 | 4 |
| BUCKNAM @ MIDDLE RD | | | |
| R8 | 1 | 1 | 2 |
| R9 | 2 | 2 | 4 |
| R10 | 3 | 3 | 6 |
| R11 | 4 | 4 | 8 |

RAILROAD PREEMPTION
PHASING DIAGRAM
(SB RAMPS ONLY)



SIGNAL PLANS LEGEND

| | |
|---------|--|
| Ø | EXISTING POWER POLE |
| ⌵ | WOOD SIGNAL POLE W/ GUY |
| ⌵ | CONTROLLER CABINET - GROUND MOUNTED |
| 2 4 6 8 | NEW SIGNAL HEADS |
| R1 | OPTICAL PREEMPTION RECEIVER |
| CS | PREEMPTION CONFIRMATION STROBE |
| —MOW— | AERIAL POWER |
| [] | DETECTION ZONE |
| —C— | CONDUIT |
| ■ | 24" STOP BAR - PAINTED |
| ▼▼▼▼▼ | 24"x36" YIELD LINE - PAINTED |
| ⌵ ARI | WAVETRONIX SMARTSENSOR "ADVANCE" UNIT ON BRACKET ARM |
| — | APPROXIMATE RIGHT OF WAY |
| ⌵ | OVERHEAD SIGN |
| ⌵ | LUMINAIRE |
| ● □ | PEDESTAL POLE |
| —● VI | VIDEO DETECTION FISHEYE CAMERA |
| ▼ IRI | PHASE PRIORITY DETECTION CAMERA |

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BUCKNAM ROAD
I-295 NB RAMPS INTERSECTION
FALMOUTH CUMBERLAND COUNTY

SHEET NUMBER
13
OF 46

WIN
022672.00
BRIDGE PLANS

DATE
1-2022
BY
KJP
SBH
DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
DESIGN-DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

SIGNATURE
P.E. NUMBER
DATE

PROPOSED
SIGNAL NOTES

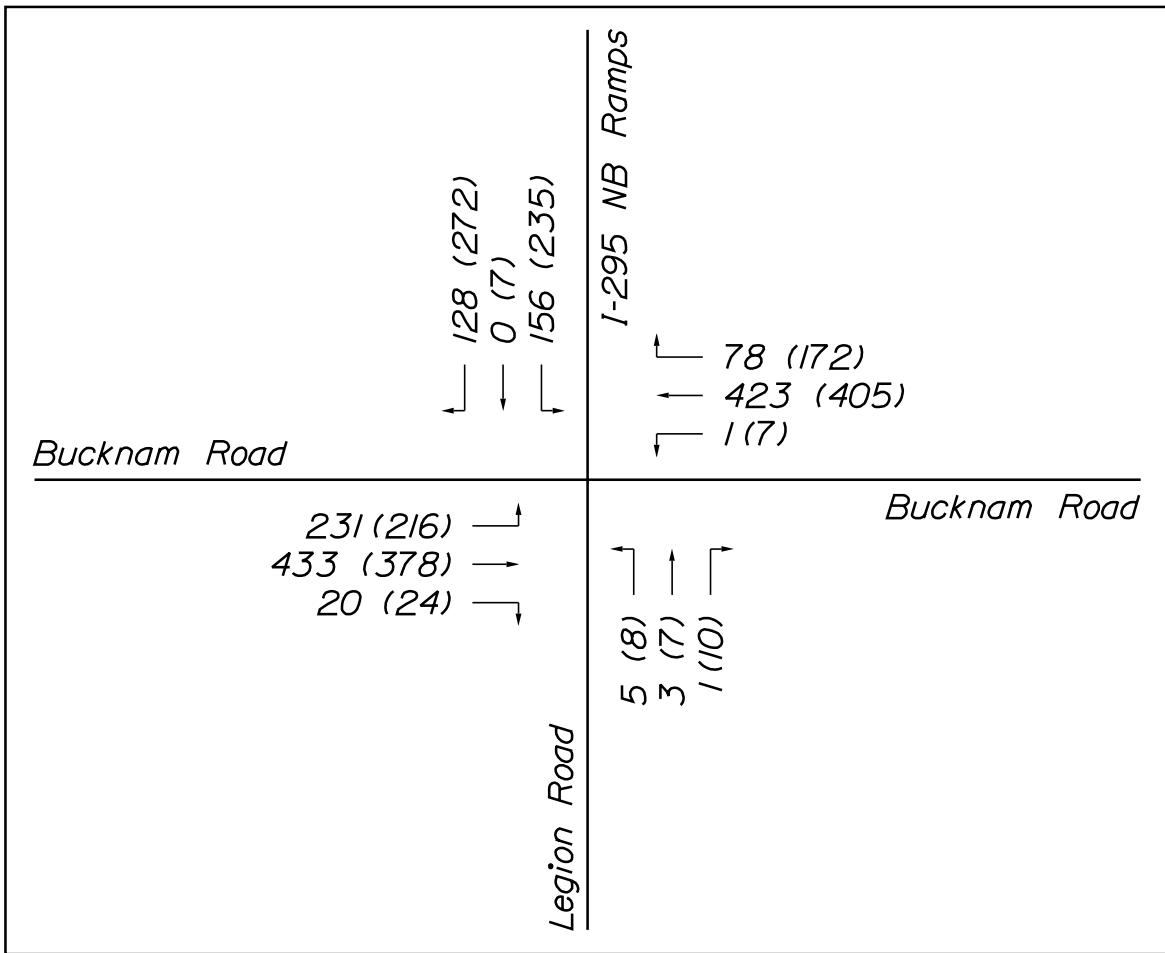
Date:4/6/2022

Username:

Division: HIGHWAY

Filename: ...\\HIGHWAY\\MSTA\\014_Signal_02.dgn

2022 SYSTEM DESIGN VOLUMES AM (PM)



STRUCTURE LIST

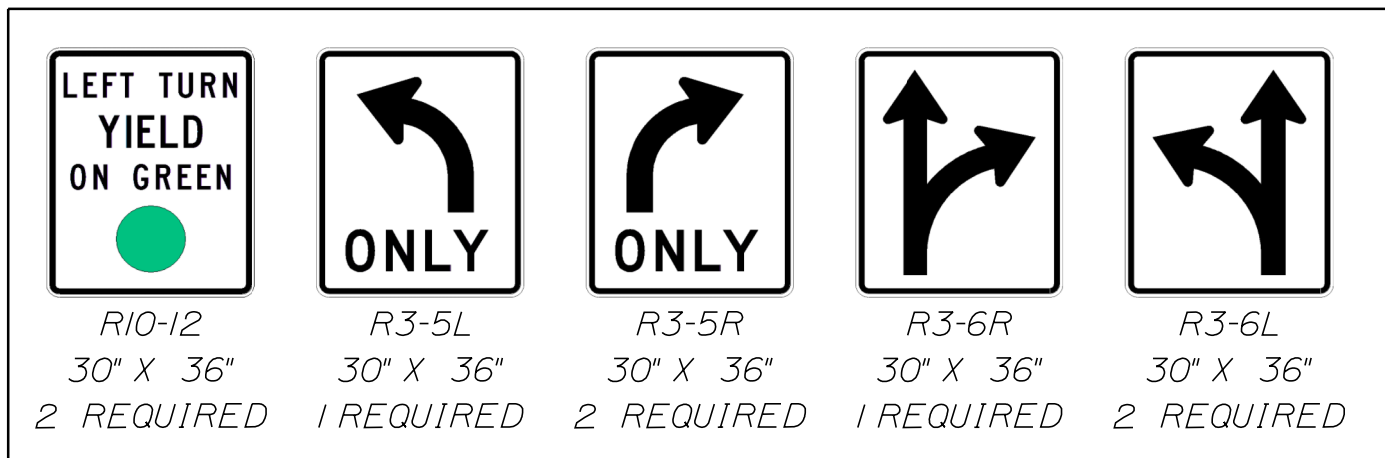
| STRUCTURE | DESCRIPTION | FOUNDATION | STATION/OFFSET |
|-----------|------------------------------|--------------------|----------------------|
| CCI | RELOCATED CONTROLLER CABINET | L48" X W36" X H48" | 12+18.00 47.0' RT |
| PPI | 8' PEDESTAL POLE | 24" DIAMETER | 12+17.50 41.2' RT |
| PP2 | 8' PEDESTAL POLE | 24" DIAMETER | 11+47.00 40.0' RT |
| SPI | WOOD STRAIN POLE | - | 12+25.00 45.0' RT |
| SP2 | WOOD STRAIN POLE | - | 12+52.00 54.0' LT |
| SP3 | WOOD STRAIN POLE | - | 11+10.00 54.0' LT |
| SP4 | WOOD STRAIN POLE | - | 11+35.00 45.0' RT |
| CPI | WOOD CAMERA POLE | - | 22+55.00 40.0' LT |

DETECTOR SCHEDULE

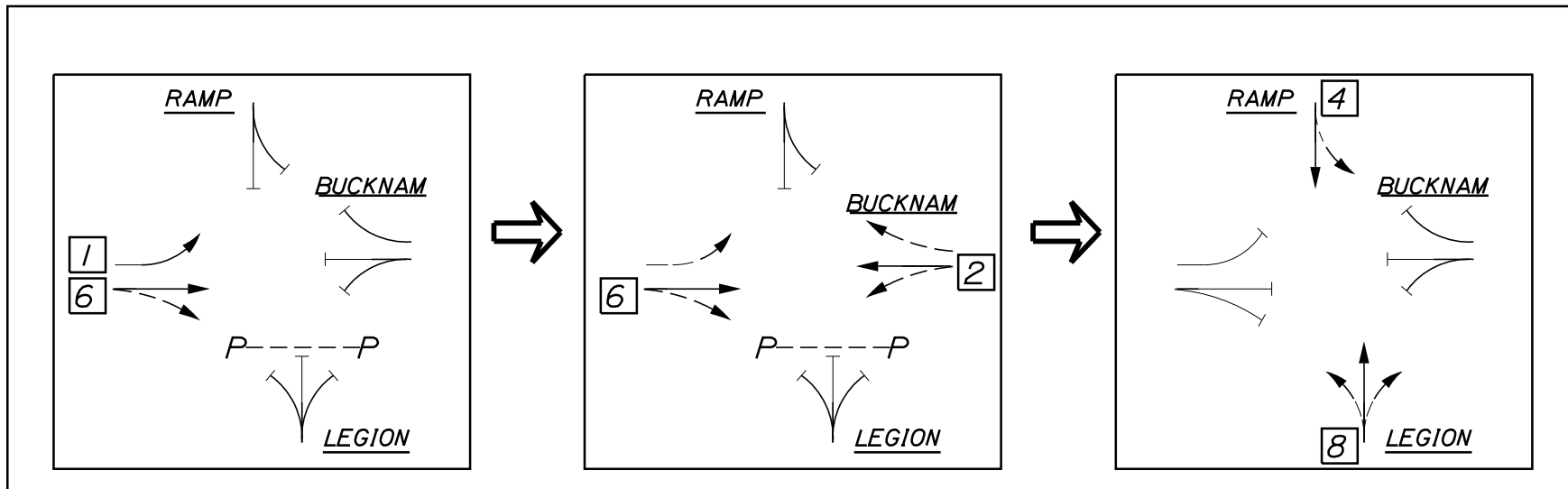
| DETECTOR ZONE NO. | DETECTOR | LOCATION | φ CALLED | φ EXIT | MODE A= ADV B= SL | DELAY TIME |
|-------------------|----------|--------------------------------|----------|--------|-------------------------|---------------|
| 1 | VI | Bucknam Road EB Thru/RT | 6 | 6 | B | - |
| 2 | VI | Bucknam Road EB Lt | 1 | 1 | B | - |
| 3 | VI | I-295 NB Off Ramp SB Thru/LT | 4 | 4 | B | - |
| 4 | IRI | I-295 NB Off Ramp 245' From SL | 4 | 4 | A | 30 |
| 5 | VI | Bucknam Road WB Rt | 2 | 2 | B | 5 |
| 6 | VI | Bucknam Road WB Thru/Lt | 2 | 2 | B | - |
| 7 | VI | Legion Road NB Lt/Thru/RT | 8 | 8 | B | - |
| AI (NOT SHOWN) | ARI | Bucknam Road WB | 2 | 2 | A | - |

DETECTION ZONE 4 SHALL PRIORITIZE PHASE 4 WHEN ACTIVATED AFTER A 30 SECOND DELAY.

OVERHEAD SIGNS



PHASING SEQUENCE



DAILY & WEEKLY COORDINATION PROGRAM

| | MON-FRI | SATURDAY | SUNDAY |
|--------------------------|-------------------------------------|-----------|-----------|
| PLAN 1 AM PEAK | 0630-0930 | | |
| PLAN 2 PM PEAK | 1500-1800 | | |
| PLAN 3 FREE OPERATION | 0000-0630 0930-1500 1800-2400 | 0000-2400 | 0000-2400 |

COORDINATION NOTES

1. OFFSET REFERENCE IS TO BEGINNING OF YELLOW FOR COORDINATED (φ2 & φ6) PHASE.
2. COORDINATION MODE SHALL BE FIXED FORCE-OFF.
3. COORDINATION TO OPERATE BY TIME-OF-DAY.

INITIAL SIGNAL TIMING

| PHASE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--------------|------|------|---|------|---|------|---|------|
| MIN INITIAL | 5.0 | 10.0 | - | 5.0 | - | 10.0 | - | 5.0 |
| VEH EXT | 3.0 | 3.0 | - | 3.0 | - | 3.0 | - | 3.0 |
| MAX. GREEN 1 | 10.0 | 30.0 | - | 15.0 | - | 40.0 | - | 15.0 |
| MAX. GREEN 2 | - | - | - | 30.0 | - | - | - | - |
| YELLOW | 3.5 | 3.5 | - | 3.0 | - | 3.5 | - | 3.0 |
| ALL RED | 2.0 | 2.0 | - | 2.5 | - | 2.0 | - | 2.5 |
| FLASH | Y | Y | - | R | - | Y | - | R |
| RECALL | - | SOFT | - | - | - | SOFT | - | - |
| PED WALK | - | 7 | - | - | - | 7 | - | - |
| PED CLEAR | - | 20 | - | - | - | 20 | - | - |

*MAX. GREEN 1: FREE OPERATION
**ARI SHALL HOLD THE GREEN FOR PHASE 2 WHILE A VEHICLE IS OCCUPYING THE DILEMMA ZONE. IF THE MAX GREEN TIME IS REACHED WHILE A VEHICLE IS OCCUPYING THE DILEMMA ZONE, THEN THE ALL RED TIME SHALL BE INCREASED TO 6.5 SECONDS.
***IF PHASE 4 IS ACTIVATED BY THE PHASE PRIORITY DETECTION ZONE (D4) THEN THE MAXIMUM GREEN TIME FOR PHASE 4 SHALL BE INCREASED TO 30.0 SECONDS.

POLE NOTES

'A' RELOCATED POLE. CMP 12 1/2 (POWER SOURCE).
INSTALL AERIAL POWER FROM POLE 'A' TO SPI.

SPI STA. 12+25.45' RT;
INSTALL 40' CLASS 4 WOOD TRAFFIC SIGNAL POLE WITH GUY AND ANCHOR.
INSTALL FIBER INTERCONNECT AND POLE RISERS AS REQUIRED FOR POWER SERVICE TO CONTROLLER AND FOR POWER AND COMMUNICATION CONDUCTORS TO TRAFFIC SIGNALS, TRAFFIC DETECTORS, LUMINAIRES, AND EMERGENCY PREEMPTION EQUIPMENT.
INSTALL METALLIC CONDUIT FROM SPI TO CCI FOR POWER.
INSTALL NON-METALLIC CONDUIT FROM SPI TO CCI FOR SPARE.
INSTALL GRIDSMA RT FISHEYE CAMERA GS-3-CAM ON VERTICAL MOUNTING ARM WITH 90-DEGREE BEND AND ATTACH TO STRAIN POLE. HEIGHT OF CAMERA ABOVE ROADWAY SHALL BE MINIMUM 30'.
INSTALL LUMINAIRE ON POLE AT HEIGHT OF 30' ABOVE ROAD ELEVATION.
CONNECT POWER AND COMMUNICATIONS CONDUCTORS AERIALY FROM SPI TO SP2.

SP2 STA. 12+52.54' RT;
INSTALL 40' CLASS 4 WOOD TRAFFIC SIGNAL POLE WITH GUY AND ANCHOR.
INSTALL LUMINAIRE ON POLE AT HEIGHT OF 30' ABOVE ROAD ELEVATION.
CONNECT POWER AND COMMUNICATIONS CONDUCTORS AERIALY FROM SP2 TO SP3.

SP3 STA. 11+10.54' LT;
INSTALL 40' CLASS 4 WOOD TRAFFIC SIGNAL POLE WITH GUY AND ANCHOR.
INSTALL LUMINAIRE ON POLE AT HEIGHT OF 30' ABOVE ROAD ELEVATION.
INSTALL WAVETRONIX SMARTSENSOR 'ADVANCE' DETECTOR ON 10' BRACKET ARM FOR ADVANCE DETECTION OF APPROACHING WESTBOUND TRAFFIC ON BUCKNAM ROAD. MOUNT TOP OF ARM AT 17' ABOVE ROADWAY ELEVATION.
CONNECT POWER AND COMMUNICATIONS CONDUCTORS AERIALY FROM SP3 TO SP4.

SP4 STA. 11+35.45' RT;
INSTALL 40' CLASS 4 WOOD TRAFFIC SIGNAL POLE WITH GUY AND ANCHOR.
INSTALL POLE RISERS AS REQUIRED FOR POWER AND COMMUNICATION CONDUCTORS TO PP2
INSTALL LUMINAIRE ON POLE AT HEIGHT OF 30' ABOVE ROAD ELEVATION.
CONNECT POWER AND COMMUNICATIONS CONDUCTORS AERIALY FROM SP4 TO SPI.

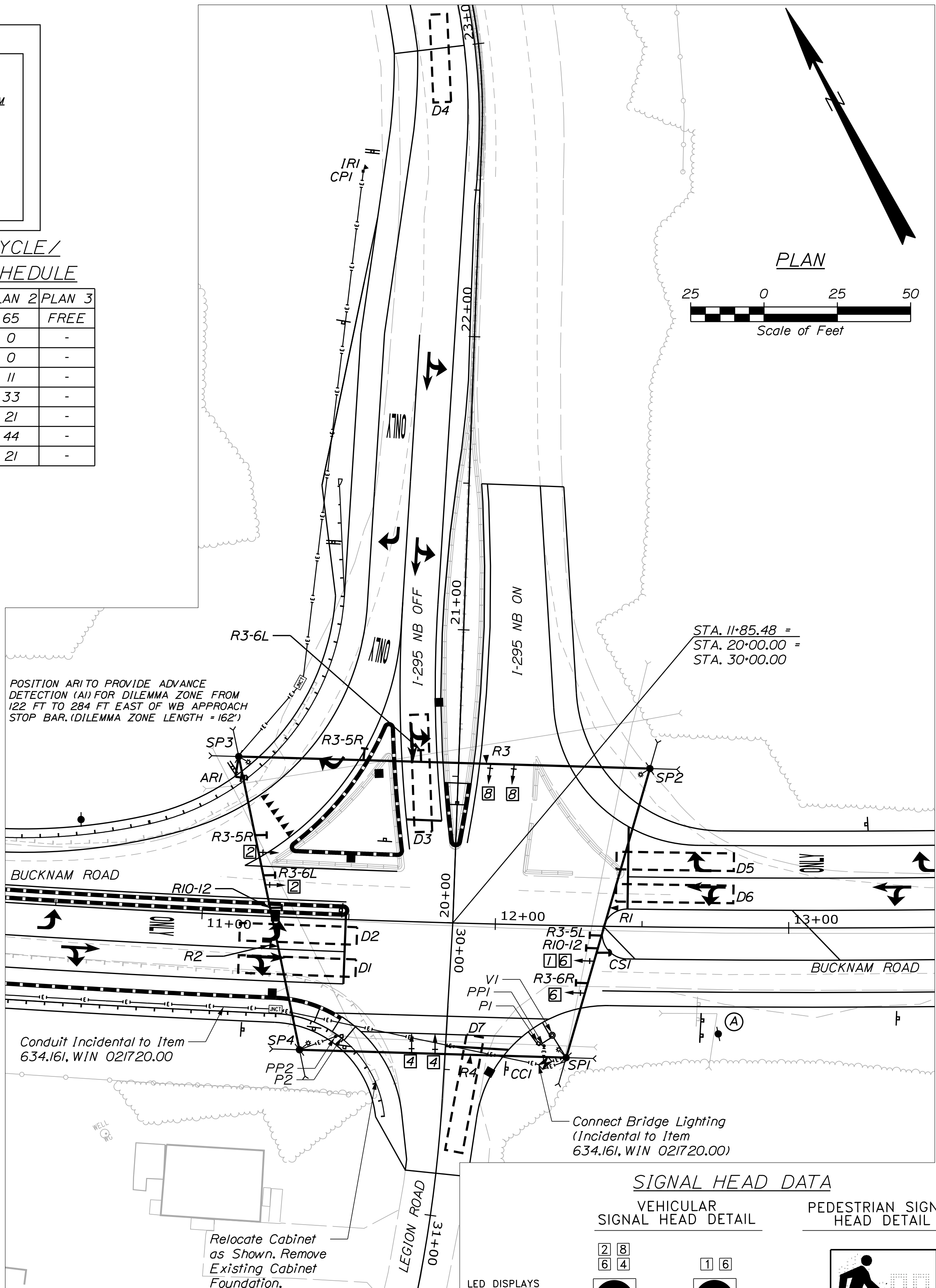
PPI STA. 12+18.41' RT;
INSTALL 8' PEDESTAL POLE WITH COUNTDOWN PEDESTRIAN SIGNAL HEAD AND ADA COMPLIANT PUSH BUTTON AND R10-36 INFORMATIONAL SIGN.
INSTALL NON-METALLIC CONDUIT FROM PPI TO CONTROLLER CABINET FOR POWER AND COMMUNICATIONS CONDUCTORS.

PP2 STA. 11+47.40' RT;
INSTALL 8' PEDESTAL POLE WITH COUNTDOWN PEDESTRIAN SIGNAL HEAD AND ADA COMPLIANT PUSH BUTTON AND R10-36 INFORMATIONAL SIGN.
INSTALL NON-METALLIC CONDUIT FROM SP4 TO PP2 FOR POWER AND COMMUNICATIONS CONDUCTORS.

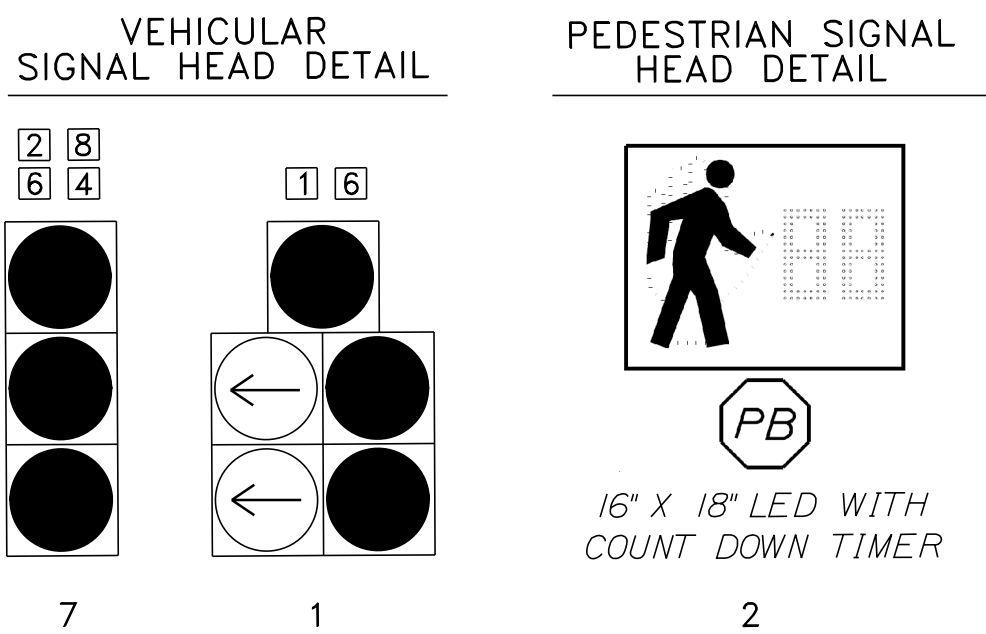
CPI STA. 22+55.40' LT;
INSTALL 6' X 6' WOOD POST (BREAKAWAY) WITH ALUMINUM DT-26 CABINET
INSTALL FLIR TRAFICAM AT TOP OF POST AIMED TOWARD DETECTION ZONE D4
INSTALL NON-METALLIC CONDUIT FROM CPI TO SP3, INCLUDING ONE ELECTRICAL JUNCTION BOX AS SHOWN

COORDINATION CYCLE/
SPLIT OFFSET SCHEDULE

| | PLAN 1 | PLAN 2 | PLAN 3 |
|---------------|--------|--------|--------|
| CYCLE LENGTH | 65 | 65 | FREE |
| OFFSET | 0 | 0 | - |
| YIELD POINT | 0 | 0 | - |
| SPLIT TIME φ1 | 11 | 11 | - |
| SPLIT TIME φ2 | 35 | 33 | - |
| SPLIT TIME φ4 | 19 | 21 | - |
| SPLIT TIME φ6 | 46 | 44 | - |
| SPLIT TIME φ8 | 19 | 21 | - |



SIGNAL HEAD DATA



ALL SIGNAL FACE DISPLAYS SHALL BE 12" LED.
ALL SIGNAL FACE DISPLAYS SHALL HAVE TUNNEL VISORS
AND 5" WIDE BACKPLATES WITH YELLOW RETROREFLECTIVE TAPE.

INITIAL SIGNAL TIMING

| PHASE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--------------|------|------|---|------|---|------|---|------|
| MIN INITIAL | 5.0 | 10.0 | - | 5.0 | - | 10.0 | - | 5.0 |
| VEH EXT | 3.0 | 3.0 | - | 3.0 | - | 3.0 | - | 3.0 |
| MAX. GREEN 1 | 10.0 | 25.0 | - | 15.0 | - | 35.0 | - | 15.0 |
| MAX. GREEN 2 | - | - | - | - | - | - | - | - |
| YELLOW | 3.0 | 3.0 | - | 3.0 | - | 3.0 | - | 3.0 |
| ALL RED | 2.0 | 2.0 | - | 2.0 | - | 2.0 | - | 2.0 |
| FLASH | Y | Y | - | R | - | Y | - | R |
| RECALL | - | SOFT | - | - | - | SOFT | - | - |
| PED WALK | - | - | - | - | - | - | - | - |
| PED CLEAR | - | - | - | - | - | - | - | - |

*MAX. GREEN 1: FREE OPERATION
**AR2 SHALL HOLD THE GREEN FOR PHASE 6 WHILE A VEHICLE IS OCCUPYING THE DILEMMA ZONE. IF THE MAX GREEN TIME IS REACHED WHILE A VEHICLE IS OCCUPYING THE DILEMMA ZONE, THEN THE ALL RED TIME SHALL BE INCREASED TO 6.5 SECONDS.
***AR3 SHALL HOLD THE GREEN FOR PHASE 4 WHILE A VEHICLE IS OCCUPYING THE DILEMMA ZONE. IF THE MAX GREEN TIME IS REACHED WHILE A VEHICLE IS OCCUPYING THE DILEMMA ZONE, THEN THE ALL RED TIME SHALL BE INCREASED TO 7.0 SECONDS.

DAILY & WEEKLY COORDINATION PROGRAM

| | MON-FRI | SATURDAY | SUNDAY |
|--------------------------|-------------------------------------|-----------|-----------|
| PLAN 1 AM PEAK | 0630-0930 | | |
| PLAN 2 PM PEAK | 1500-1800 | | |
| PLAN 3 FREE OPERATION | 0000-0630 0930-1500 1800-2400 | 0000-2400 | 0000-2400 |

COORDINATION CYCLE/
SPLIT OFFSET SCHEDULE

| | PLAN 1 | PLAN 2 | PLAN 3 |
|---------------------|--------|--------|--------|
| CYCLE LENGTH | 65 | 65 | FREE |
| OFFSET | 13 | 14 | - |
| YIELD POINT | 0 | 0 | - |
| SPLIT TIME ϕ 1 | 22 | 11 | - |
| SPLIT TIME ϕ 2 | 24 | 34 | - |
| SPLIT TIME ϕ 4 | 19 | 20 | - |
| SPLIT TIME ϕ 6 | 46 | 45 | - |
| SPLIT TIME ϕ 8 | 19 | 20 | - |

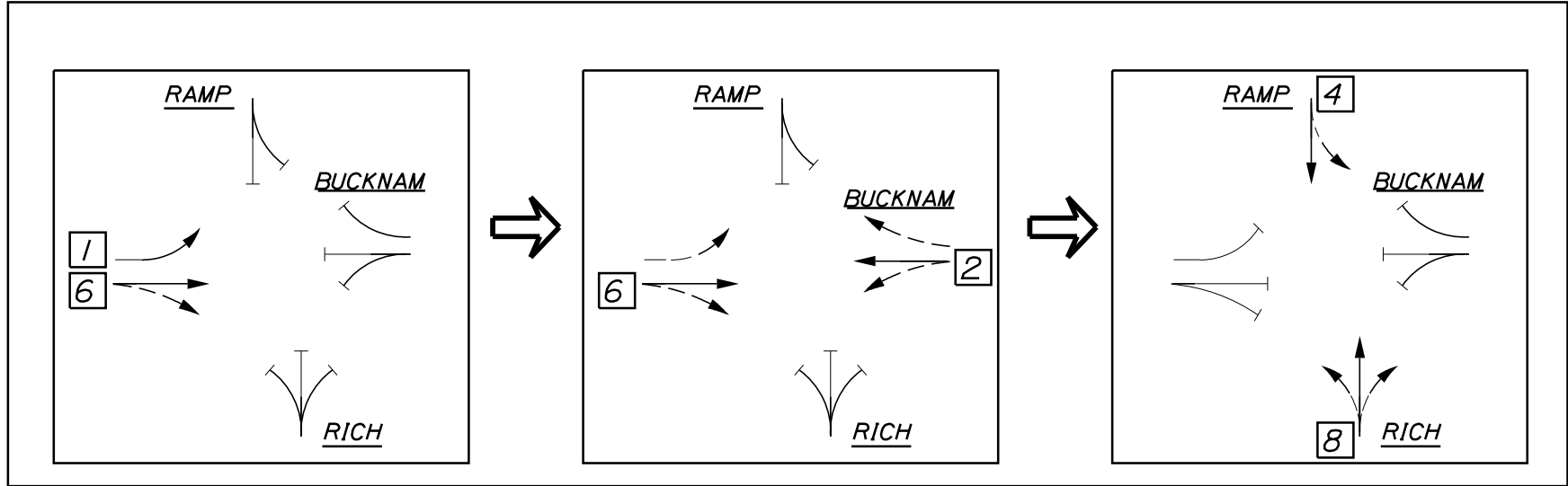
COORDINATION NOTES

1. OFFSET REFERENCE IS TO BEGINNING OF YELLOW FOR COORDINATED (ϕ 2 & ϕ 6) PHASE.
2. COORDINATION MODE SHALL BE FIXED FORCE-OFF.
3. COORDINATION TO OPERATE BY TIME-OF-DAY.

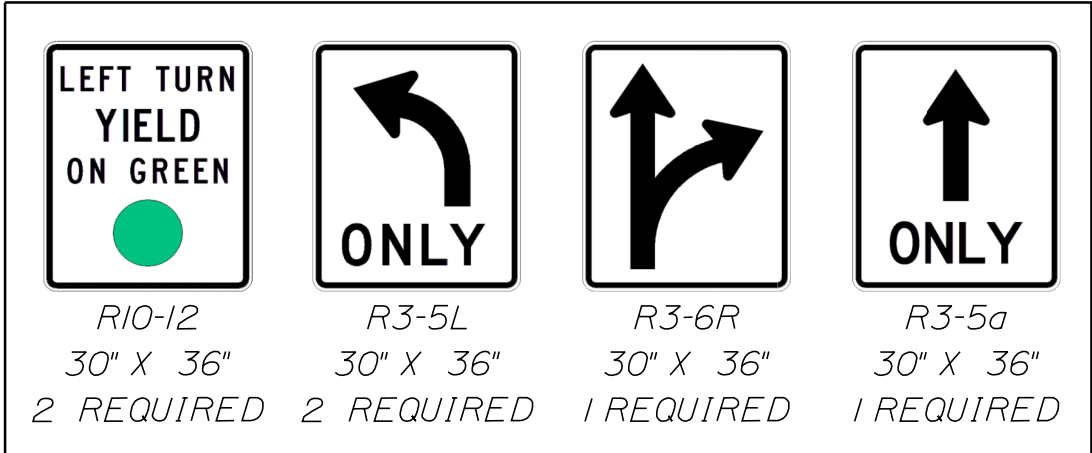
2022 SYSTEM DESIGN VOLUMES AM (PM)

| | | | |
|----------------|----------------------------------|--------------|---------------------------------|
| Bucknam Road | 207 (236) 112 160 (140) | Rich Way | 307 (179) 241 (494) 8 (8) |
| | 424 (159) 516 (462) 20 (8) | | 4 (18) 2 (0) 11 (16) |
| I-295 SB Ramps | | Bucknam Road | |

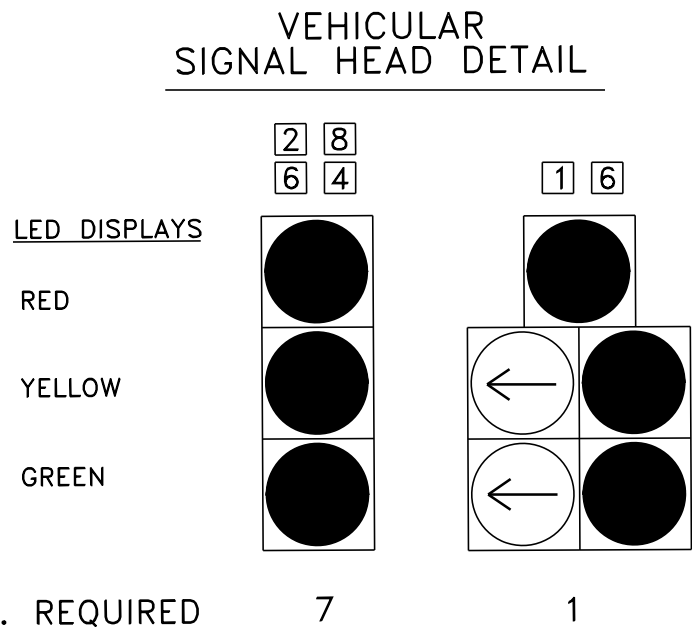
PHASING SEQUENCE



OVERHEAD SIGNS



SIGNAL HEAD DATA



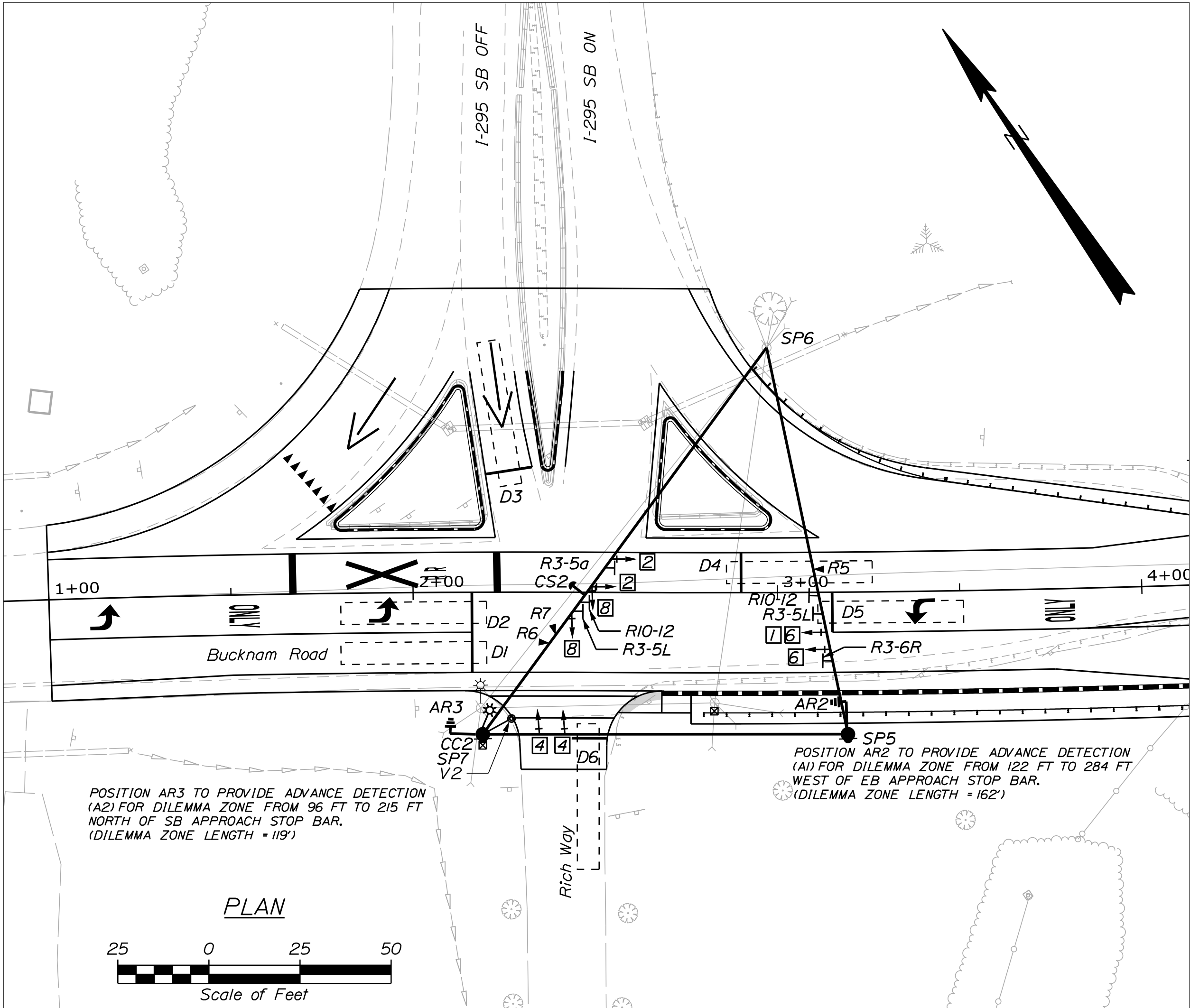
ALL SIGNAL FACE DISPLAYS SHALL BE 12" LED.
ALL SIGNAL FACE DISPLAYS SHALL HAVE TUNNEL VISORS
AND 5" WIDE BACKPLATES WITH YELLOW RETROREFLECTIVE TAPE.

DETECTOR SCHEDULE

| DETECTOR ZONE NO. | DETECTOR | LOCATION | ϕ CALLED | ϕ EXIT | MODE A= ADV B= SL | DELAY TIME |
|-------------------|----------|------------------------------|---------------|-------------|-------------------------|------------|
| 1 | V2 | Bucknam Road EB Thru/Rt | 6 | 6 | B | - |
| 2 | V2 | Bucknam Road EB Lt | 1 | 1 | B | - |
| 3 | V2 | I-295 SB Off Ramp SB Thru/Lt | 4 | 4 | B | - |
| 4 | V2 | Bucknam Road WB Thru | 2 | 2 | B | - |
| 5 | V2 | Bucknam Road WB Lt | 2 | 2 | B | - |
| 6 | V2 | Rich Way NB Lt/Thru/Rt | 8 | 8 | B | - |
| (NOT SHOWN) A1 | AR2 | Bucknam Road EB | 6 | 6 | A | - |
| (NOT SHOWN) A2 | AR3 | Bucknam Road WB Thru | 2 | 2 | A | - |

STRUCTURE LIST

| STRUCTURE | DESCRIPTION | FOUNDATION | STATION/OFFSET |
|-----------|------------------------|------------------------|---------------------|
| CC2 | CONTROLLER CABINET | RELOCATED POLE-MOUNTED | 2+19.00 39.0' RT |
| SP5 | RELOCATED UTILITY POLE | - | 3+19.00 39.0' RT |
| SP6 | WOOD STRAIN POLE | - | EXISTING |
| SP7 | RELOCATED UTILITY POLE | - | 2+19.00 39.0' RT |



POLE NOTES

SP5 STA. 3+19.39' RT:
RELOCATED POLE (POWER SOURCE).
INSTALL WAVETRONIX SMARTSENSOR 'ADVANCE' DETECTOR ON 10' BRACKET ARM FOR ADVANCE DETECTION OF APPROACHING EASTBOUND TRAFFIC ON BUCKNAM ROAD. MOUNT TOP OF ARM AT 17' ABOVE ROADWAY ELEVATION. SEE PLAN NOTE FOR DETECTION ZONE SIZE AND LOCATION.
CONNECT POWER AND COMMUNICATIONS CONDUCTORS AERIALY FROM SP5 TO SP6.

SP6 STA. 2+97.67' LT:
RETAIN EXISTING WOOD TRAFFIC SIGNAL POLE WITH GUY AND ANCHOR.
CONNECT POWER AND COMMUNICATIONS CONDUCTORS AERIALY FROM SP6 TO SP7.

SP7 STA. 2+19.39' RT:
RELOCATED POLE.
INSTALL SERVICE METER AND POLE-MOUNTED METER DISCONNECT ENCLOSURE.
INSTALL FIBER INTERCONNECT AND POLE RISERS AS REQUIRED FOR POWER SERVICE TO CONTROLLER AND FOR POWER AND COMMUNICATIONS CONDUCTORS TO TRAFFIC SIGNALS, TRAFFIC DETECTORS, LUMINAIRES, AND EMERGENCY PREEMPTION EQUIPMENT.
INSTALL RELOCATED POLE MOUNTED CABINET (CC2).
MOVE EXISTING RAILROAD PREEMPTION EQUIPMENT AND VERIFY OPERATION.
INSTALL GRIDSMART FISHEYE CAMERA GS-3-CAM ON VERTICAL MOUNTING ARM. HEIGHT OF CAMERA ABOVE ROADWAY SHALL BE MINIMUM 30'.
RETAIN LUMINAIRE ON POLE.
INSTALL WAVETRONIX SMARTSENSOR 'ADVANCE' DETECTOR ON 10' BRACKET ARM FOR ADVANCE DETECTION OF APPROACHING SOUTHBOUND TRAFFIC ON I-295 SOUTHBOUND OFF RAMP. MOUNT TOP OF ARM AT 17' ABOVE ROADWAY ELEVATION. SEE PLAN NOTE FOR DETECTION ZONE SIZE AND LOCATION.
CONNECT POWER AND COMMUNICATIONS CONDUCTORS AERIALY FROM SP7 TO SP5.

INITIAL SIGNAL TIMING

| PHASE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-------------|---|------|---|------|---|------|------|------|
| MIN INITIAL | - | 10.0 | - | 5.0 | - | 10.0 | 5.0 | 5.0 |
| VEH EXT | - | 3.0 | - | 3.0 | - | 3.0 | 3.0 | 3.0 |
| MAX.GREEN 1 | - | 25.0 | - | 25.0 | - | 25.0 | 15.0 | 10.0 |
| MAX.GREEN 2 | - | - | - | - | - | - | - | - |
| YELLOW | - | 3.0 | - | 3.0 | - | 3.0 | 3.0 | 3.0 |
| ALL RED | - | 2.0 | - | 2.0 | - | 2.0 | 2.0 | 2.0 |
| FLASH | - | Y | - | R | - | Y | R | R |
| RECALL | - | SOFT | - | - | - | SOFT | - | - |
| PED WALK | - | - | - | - | - | - | - | - |
| PED CLEAR | - | - | - | - | - | - | - | - |

*MAX.GREEN 1: FREE OPERATION

DAILY & WEEKLY
COORDINATION PROGRAM

| | MON-FRI | SATURDAY | SUNDAY |
|--------------------------|-------------------------------------|-----------|-----------|
| PLAN 1 AM PEAK | 0630-0930 | | |
| PLAN 2 PM PEAK | 1500-1800 | | |
| PLAN 3 FREE OPERATION | 0000-0630 0930-1500 1800-2400 | 0000-2400 | 0000-2400 |

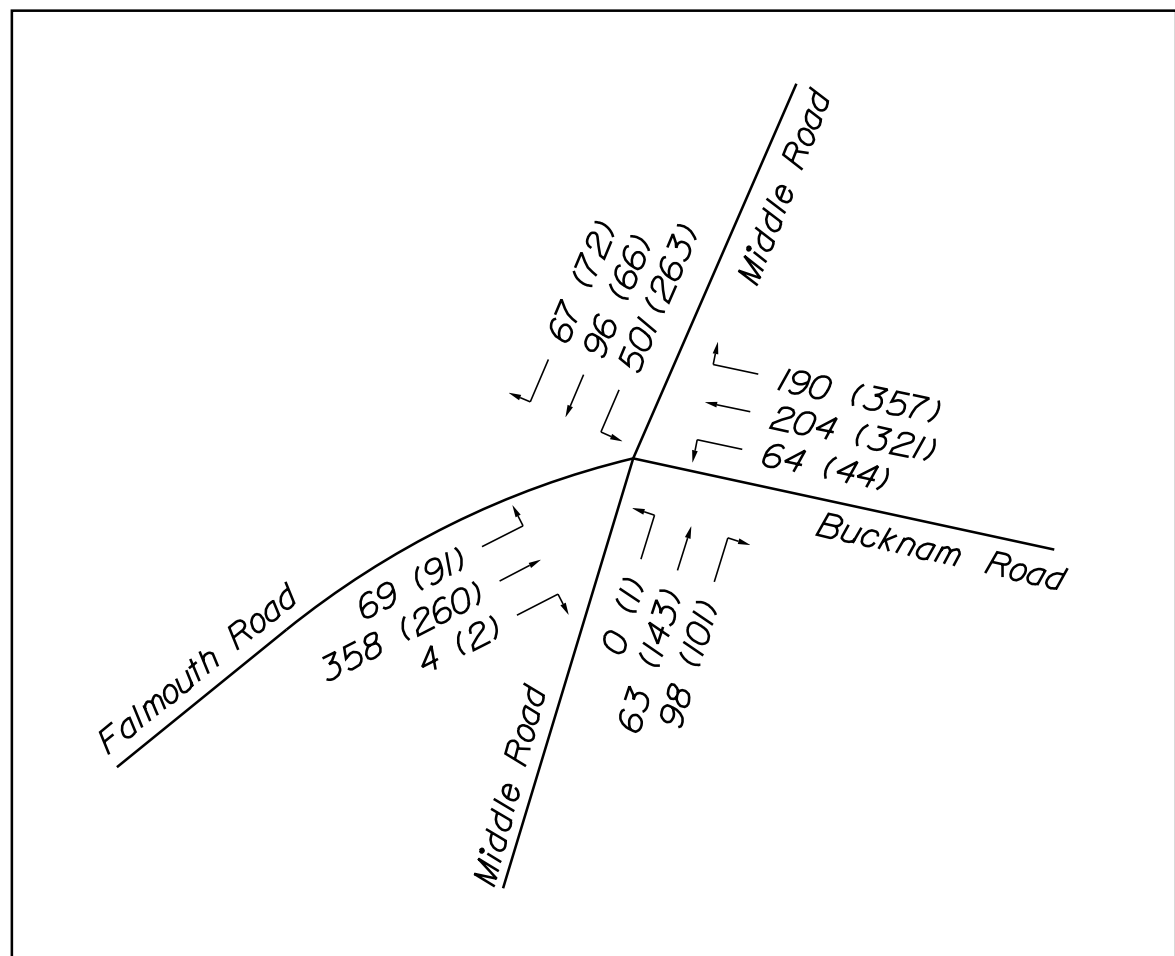
COORDINATION CYCLE/
SPLIT OFFSET SCHEDULE

| | PLAN 1 | PLAN 2 | PLAN 3 |
|---------------------|--------|--------|--------|
| CYCLE LENGTH | 65 | 65 | FREE |
| OFFSET | 30 | 39 | - |
| YIELD POINT | 0 | 0 | - |
| SPLIT TIME ϕ 2 | 29 | 34 | - |
| SPLIT TIME ϕ 4 | 36 | 31 | - |
| SPLIT TIME ϕ 6 | 29 | 34 | - |
| SPLIT TIME ϕ 7 | 26 | 18 | - |
| SPLIT TIME ϕ 8 | 10 | 13 | - |

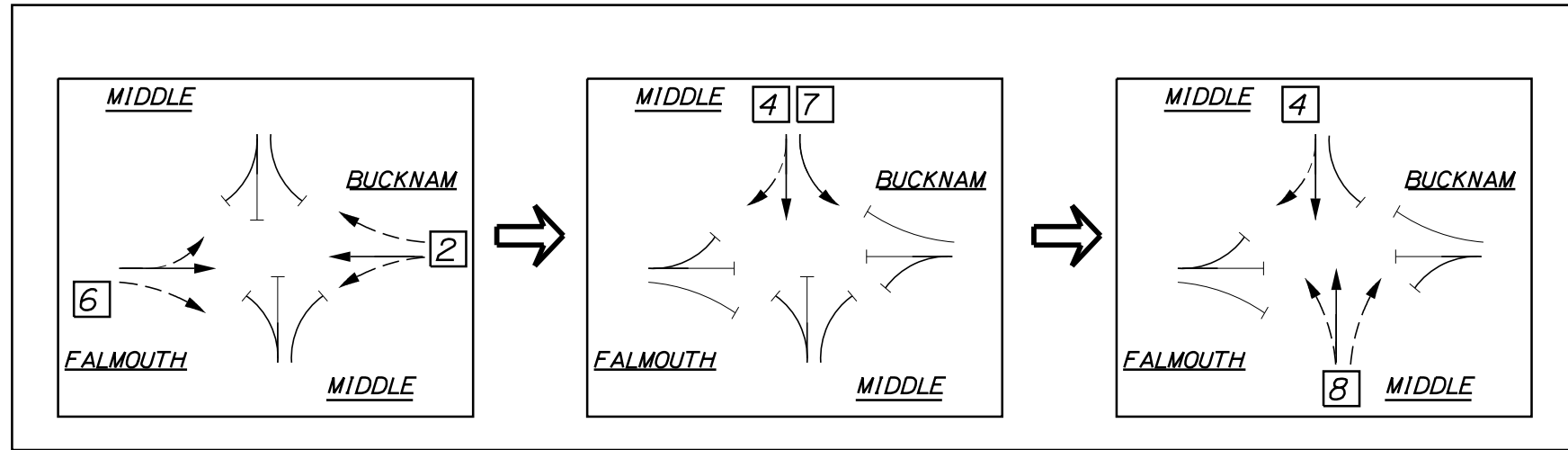
COORDINATION NOTES

1. OFFSET REFERENCE IS TO BEGINNING OF YELLOW FOR COORDINATED (ϕ 2 & ϕ 6) PHASE.
2. COORDINATION MODE SHALL BE FIXED FORCE-OFF.
3. COORDINATION TO OPERATE BY TIME-OF-DAY.

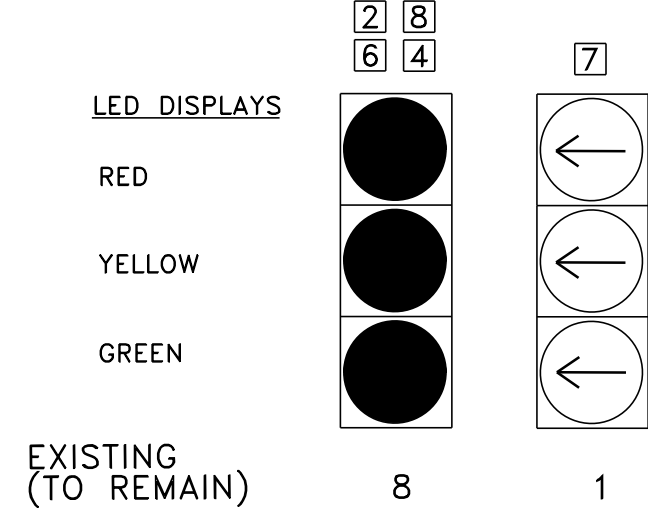
2022 SYSTEM DESIGN VOLUMES AM (PM)



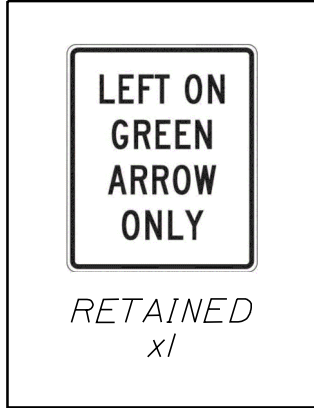
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SIGNAL HEAD DATA



EXISTING SIGNS



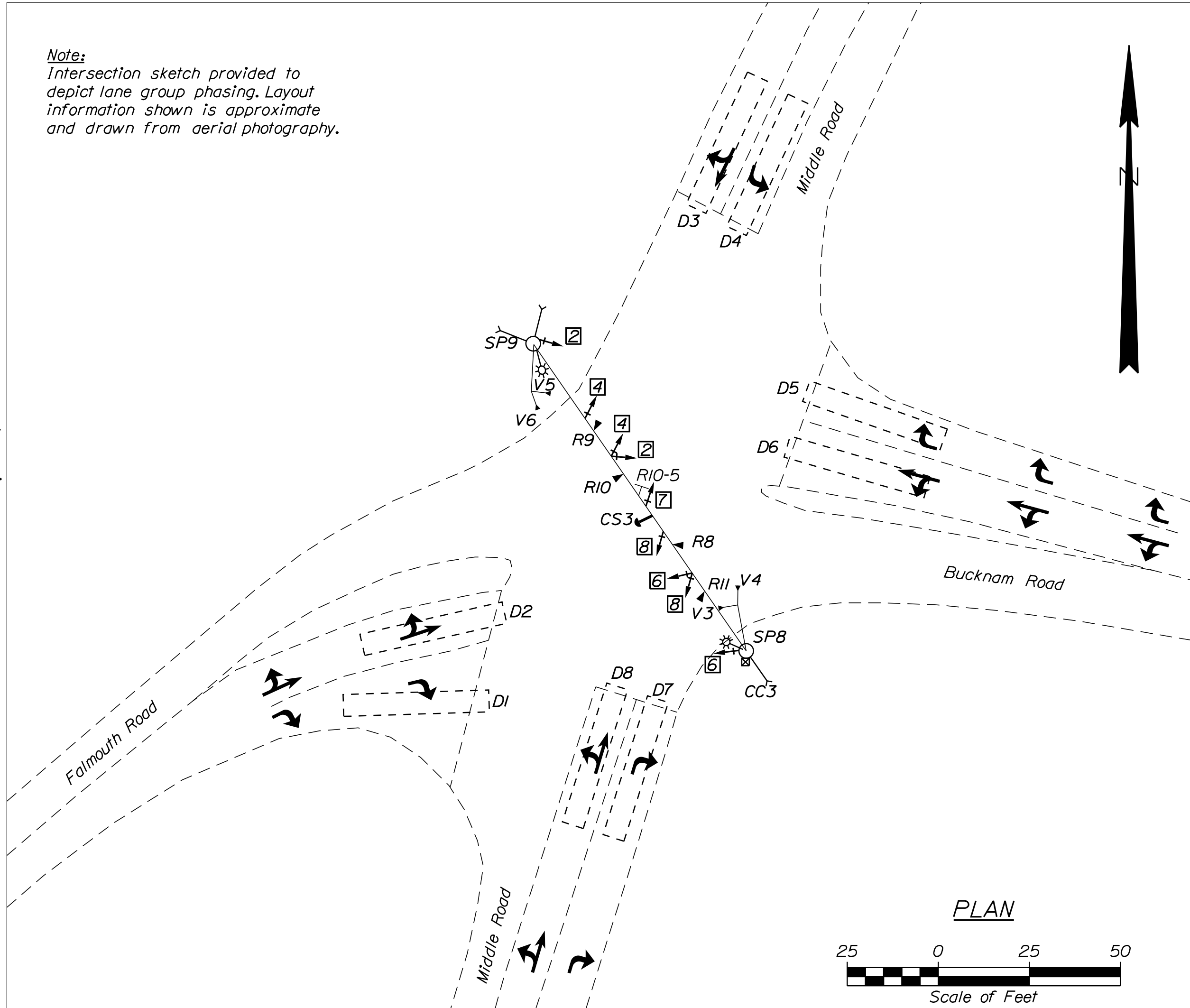
ALL SIGNAL FACE DISPLAYS SHALL HAVE TUNNEL VISORS
AND 5" WIDE BACKPLATES WITH YELLOW RETROREFLECTIVE TAPE.

DETECTOR SCHEDULE

| DETECTOR ZONE NO. | DETECTOR | LOCATION | ϕ CALLED | ϕ EXIT | MODE A= ADV B= SL | DELAY TIME |
|-------------------|----------|--------------------------|---------------|-------------|-------------------------|------------|
| 1 | V3 | Falmouth Road EB Rt | 6 | 6 | B | - |
| 2 | V3 | Falmouth Road EB Thru/Lt | 6 | 6 | B | - |
| 3 | V4 | Middle Road SB Thru/Rt | 4 | 4 | B | - |
| 4 | V4 | Middle Road SB Lt | 7 | 7 | B | - |
| 5 | V5 | Bucknam Road WB Rt | 2 | 2 | B | - |
| 6 | V5 | Bucknam Road WB Thru/Lt | 2 | 2 | B | - |
| 7 | V6 | Middle Road NB Rt | 8 | 8 | B | - |
| 8 | V6 | Middle Road NB Thru/Lt | 8 | 8 | B | - |

STRUCTURE LIST

| STRUCTURE | DESCRIPTION | FOUNDATION | STATION/OFFSET |
|-----------|--------------------|-----------------------|----------------|
| CC3 | CONTROLLER CABINET | EXISTING POLE-MOUNTED | - |
| SP8 | WOOD STRAIN POLE | - | - |
| SP9 | WOOD STRAIN POLE | - | - |



POLE NOTES

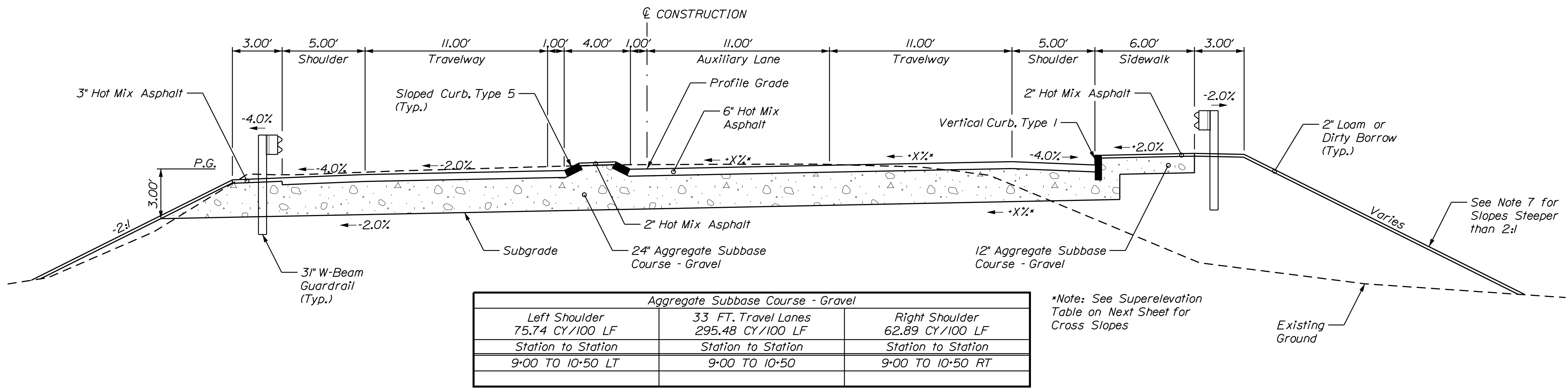
- SP8 SOUTHEAST QUADRANT OF BUCKNAM ROAD & MIDDLE ROAD INTERSECTION:
RETAIN EXISTING WOOD TRAFFIC SIGNAL POLE WITH GUY AND ANCHOR.
RETAIN SERVICE METER AND POLE-MOUNTED METER DISCONNECT ENCLOSURE.
RETAIN POLE MOUNTED CONTROLLER CABINET AND ALL CONTROLLER COMPONENTS.
RETAIN EXISTING DETECTION CAMERAS.
RETAIN LUMINAIRE ON POLE.
- SP9 NORTHWEST QUADRANT OF BUCKNAM ROAD & MIDDLE ROAD INTERSECTION:
RETAIN EXISTING WOOD TRAFFIC SIGNAL POLE WITH GUY AND ANCHOR.
RETAIN EXISTING DETECTION CAMERAS.
RETAIN LUMINAIRE ON POLE.

Date: 4/6/2022

Username:

Division: HIGHWAY

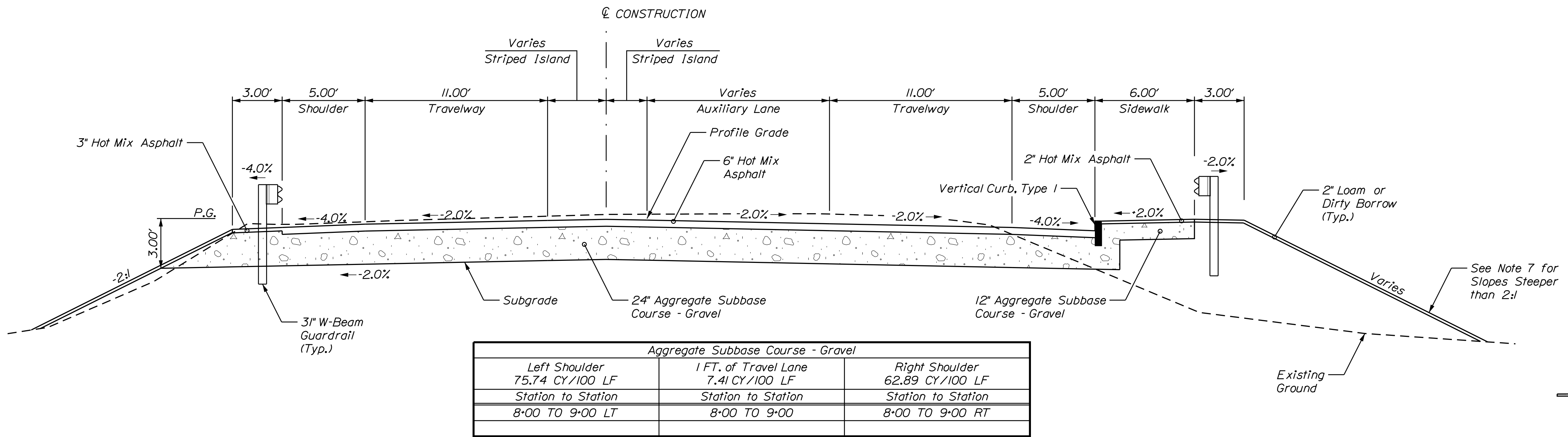
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| Aggregate Subbase Course - Gravel | | |
|-----------------------------------|---------------------|--------------------|
| Left Shoulder | 33 FT. Travel Lanes | Right Shoulder |
| 75.74 CY/100 LF | 295.48 CY/100 LF | 62.89 CY/100 LF |
| Station to Station | Station to Station | Station to Station |
| 9+00 TO 10+50 LT | 9+00 TO 10+50 | 9+00 TO 10+50 RT |

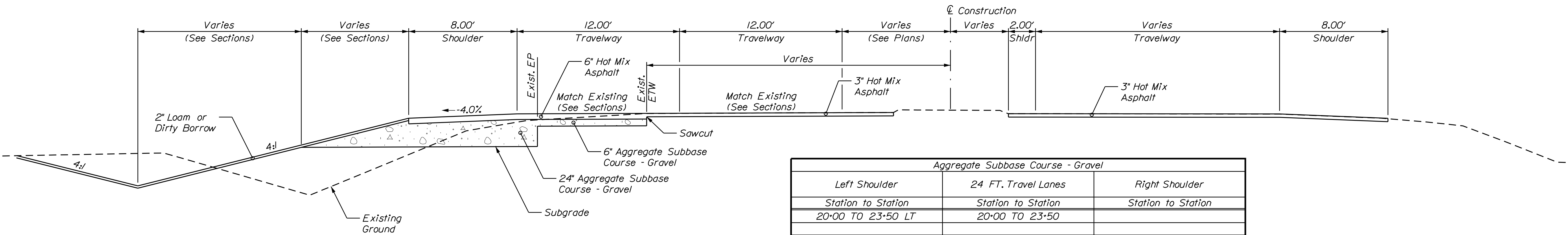
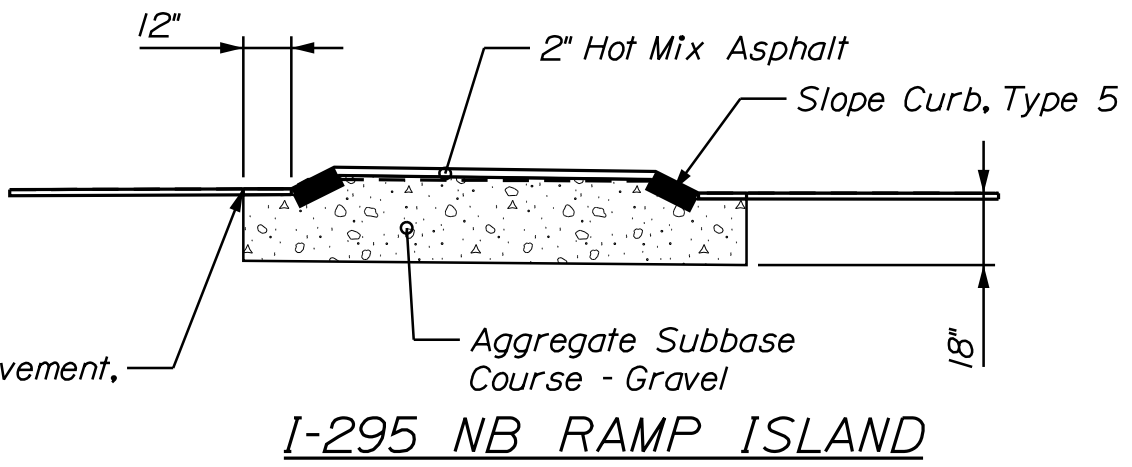
*Note: See Superelevation Table on Next Sheet for Cross Slopes

BUCKNAM ROAD
FULL RECONSTRUCTION
SUPERELEVATED



| Aggregate Subbase Course - Gravel | | |
|-----------------------------------|----------------------|--------------------|
| Left Shoulder | 1 FT. of Travel Lane | Right Shoulder |
| 75.74 CY/100 LF | 7.41 CY/100 LF | 62.89 CY/100 LF |
| Station to Station | Station to Station | Station to Station |
| 8+00 TO 9+00 LT | 8+00 TO 9+00 | 8+00 TO 9+00 RT |

BUCKNAM ROAD
FULL RECONSTRUCTION
SUPERELEVATED



| Aggregate Subbase Course - Gravel | | |
|-----------------------------------|---------------------|--------------------|
| Left Shoulder | 24 FT. Travel Lanes | Right Shoulder |
| Station to Station | Station to Station | Station to Station |
| 20+00 TO 23+50 LT | 20+00 TO 23+50 | |

I-295 RAMPS
3\"/>

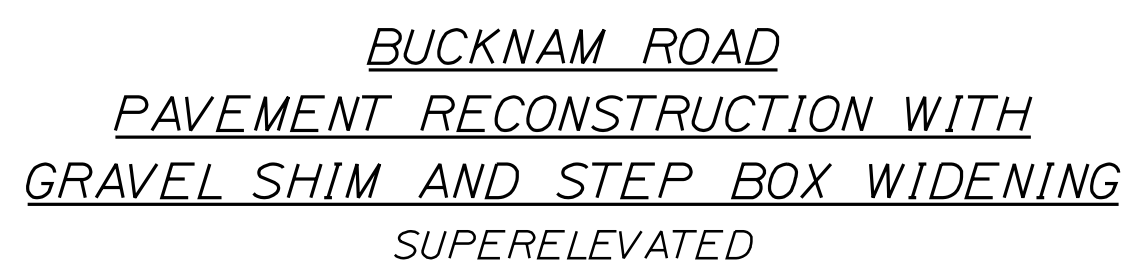
Notes:

1. The pavement, base and subbase depths as shown on the plans are intended to be nominal.
2. When superelevation exceeds the slope of the low side shoulder, the low side shoulder shall have the same slope as the travelway.
3. Crowns for both normal and superelevation sections for all courses of subbase and pavement shall be straight.
4. The gravel quantity calculation is based on a 2\"/>

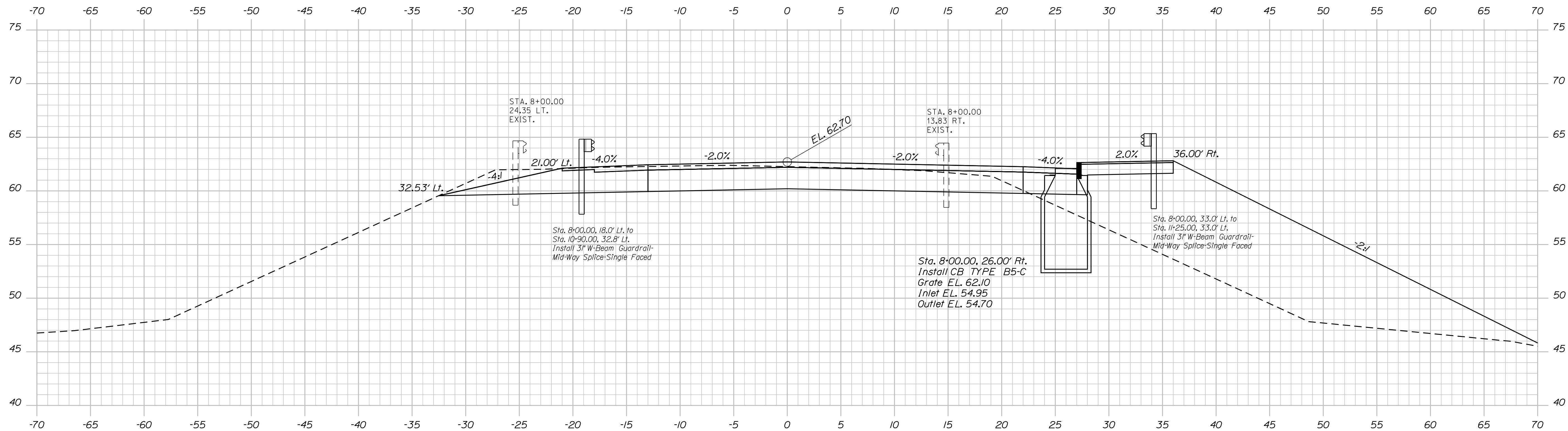
| | | | | | | | | | |
|----------------|--|------------------------------|--|-------------------|--|-----------|--|------------------|--|
| STATE OF MAINE | | DEPARTMENT OF TRANSPORTATION | | WIN | | 022672.00 | | BRIDGE PLANS | |
| BUCKNAM ROAD | | I-295 NB RAMPS INTERSECTION | | CUMBERLAND COUNTY | | FALMOUTH | | TYPICAL SECTIONS | |
| SHEET NUMBER | | 17 | | OF 46 | | | | | |

| | | | | | | |
|--------|-----|---------------|---------|----------|-----------|---------------|
| DATE | BY | PROJ. MGR. | CHECKED | DESIGNED | REVISIONS | FIELD CHANGES |
| 1-2022 | KJP | M. Kersbergen | JCMS | JCC | 1 | |
| | SBH | | JCC | | 2 | |
| | | | | | 3 | |
| | | | | | 4 | |

| | | |
|-----------|-------------|------|
| SIGNATURE | P.E. NUMBER | DATE |
| | | |



- | <i>LT Shoulder</i> | <i>LT Travelway</i> | <i>Station</i> | <i>RT Travelway</i> | <i>RT Shoulder</i> |
|--------------------|---------------------|----------------|---------------------|--------------------|
| | | <i>Start</i> | | |
| -4.0 | -2.0 | 8+00 | -2.0 | -4.0 |
| | | <i>To</i> | | |
| -4.0 | -2.0 | 10+00 | -2.0 | -4.0 |
| -4.0 | -2.0 | 10+25 | -1.2 | -4.0 |
| -4.0 | -2.0 | 10+50 | -0.4 | -4.0 |
| -4.0 | -2.0 | 10+75 | +0.4 | -4.0 |
| -4.0 | -2.0 | 11+00 | +1.2 | -4.0 |
| -4.0 | -2.0 | 11+25 | +2.0 | -4.0 |
| | | <i>To</i> | | |
| -4.0 | -2.0 | 12+25 | +2.0 | -4.0 |
| -4.0 | -2.0 | 12+50 | +1.2 | -4.0 |
| -4.0 | -2.0 | 12+75 | +0.4 | -4.0 |
| -4.0 | -2.0 | 13+00 | -0.4 | -4.0 |
| -4.0 | -2.0 | 13+25 | -1.2 | -4.0 |
| -4.0 | -2.0 | 13+50 | -2.0 | -4.0 |
| | | <i>To</i> | | |
| -4.0 | -2.0 | 19+00 | -2.0 | -4.0 |
| | | <i>End</i> | | |



8+00.00
PLAN MATCH TO ADJACENT PROJECT:
BUCKNAM ROAD BRIDGE WIN# 021720.00

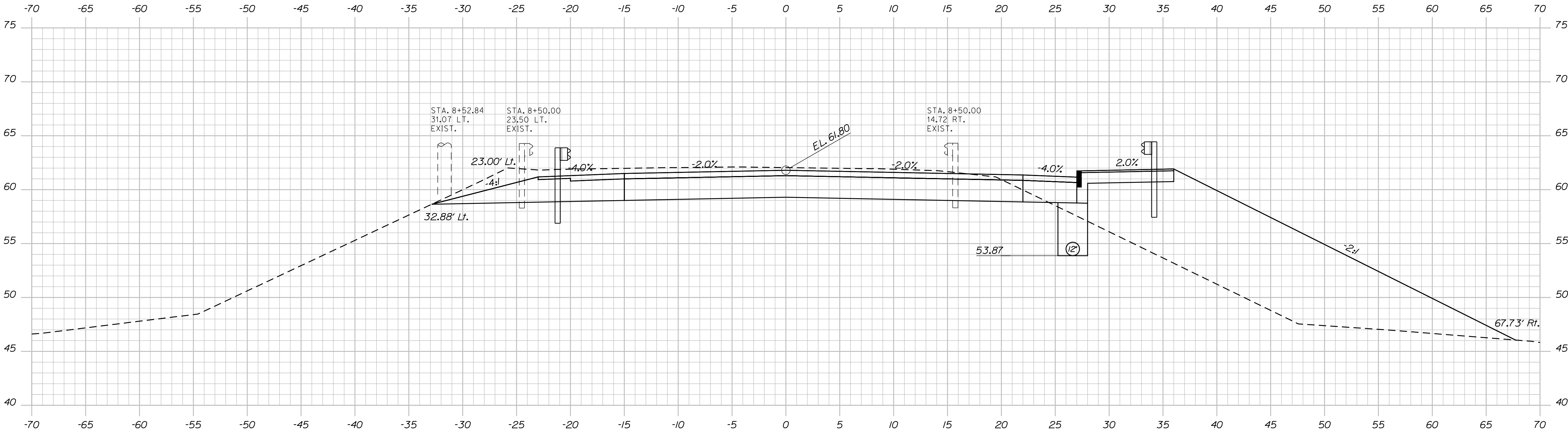
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|-------|--|--|--|--------------|--|--|--|---|--|--|--|-------------------|--|--|--|---------------|--|-----|--|--------|--|--|--|--|--|
| 19 | | | | SHEET NUMBER | | | | BUCKNAM ROAD I-295 NB RAMPS INTERSECTION FALMOUTH CUMBERLAND COUNTY | | | | PROJ. MANAGER | | | | M. Kersbergen | | BY | | DATE | | STATE OF MAINE DEPARTMENT OF TRANSPORTATION | | | |
| | | | | | | | | | | | | DESIGN-DETAILED | | | | JMS | | KOP | | | | | | | |
| OF 46 | | | | | | | | | | | | CHECKED-REVIEWED | | | | ICC | | SBH | | 1-2022 | | SIGNATURE | | | |
| | | | | | | | | | | | | DESIGN2-DETAILED2 | | | | | | | | | | | | | |
| | | | | | | | | | | | | DESIGN3-DETAILED3 | | | | | | | | | | P.E. NUMBER | | | |
| | | | | | | | | | | | | REVISIONS 1 | | | | | | | | | | | | | |
| | | | | | | | | | | | | REVISIONS 2 | | | | | | | | | | | | | |
| | | | | | | | | | | | | REVISIONS 3 | | | | | | | | | | | | | |
| | | | | | | | | | | | | REVISIONS 4 | | | | | | | | DATE | | WIN 022672.00 BRIDGE PLANS | | | |
| | | | | | | | | | | | | FIELD CHANGES | | | | | | | | | | | | | |

Date:4/6/2022

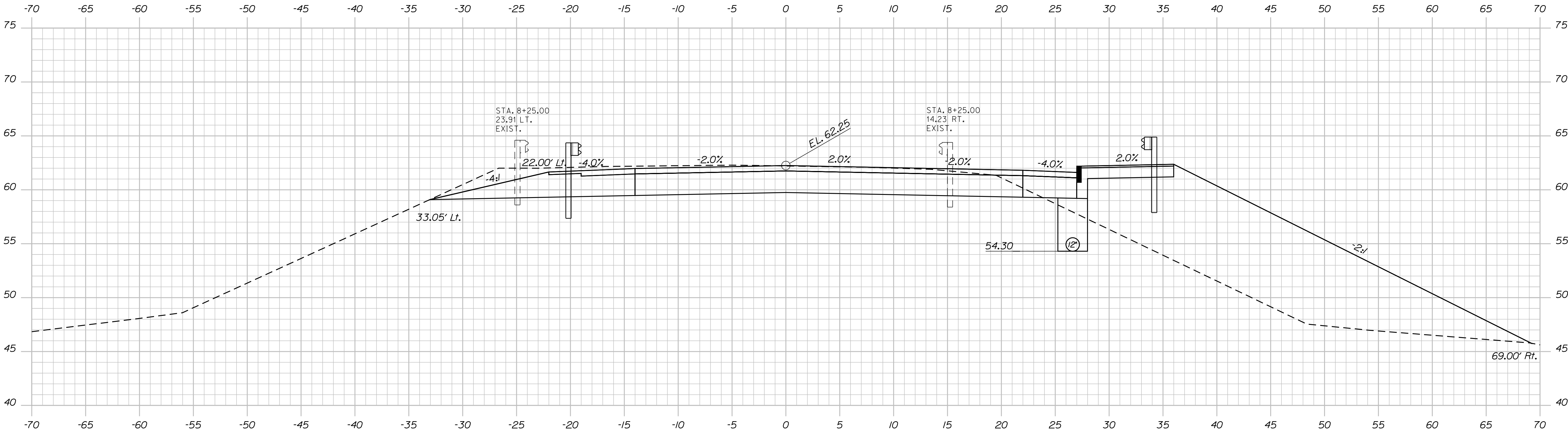
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Division: HIGHWAY

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8+50.00



8+25.00

| PROJ. MANAGER | BY | DATE |
|-------------------|-----|--------|
| M. Kersbergen | KDP | 1-2022 |
| CHECKED-REVIEWED | SBH | |
| DESIGNED-DETAILED | | |
| DESIGNED-DETAILED | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

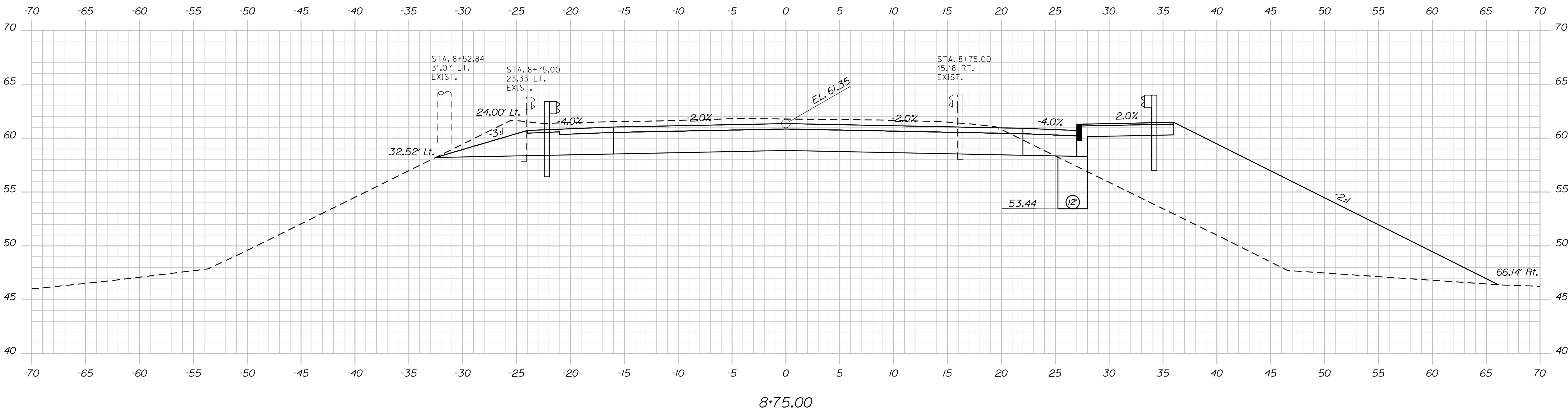
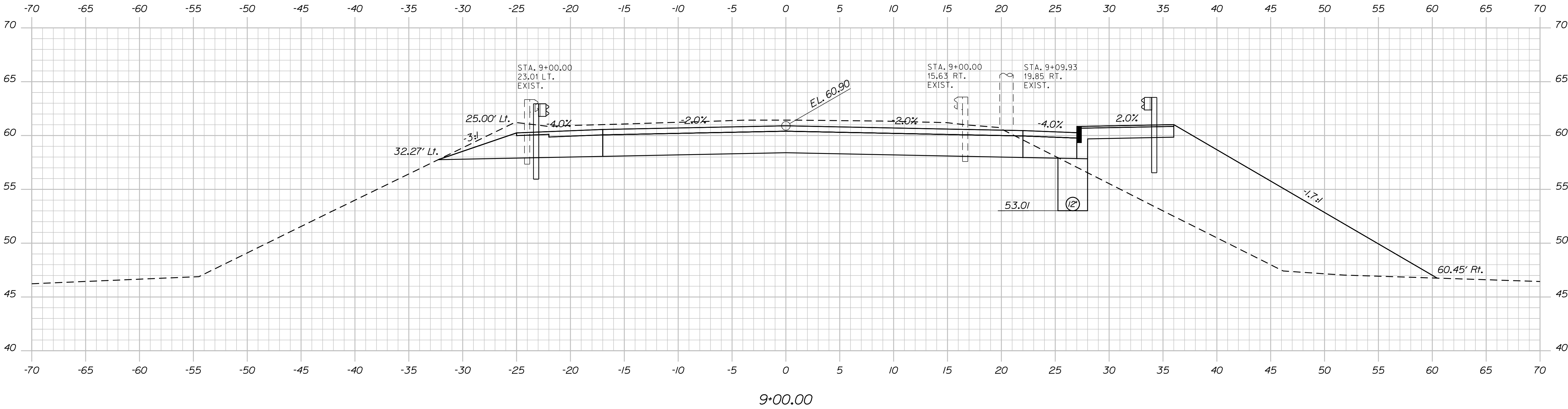
BUCKNAM ROAD
I-295 NB RAMP INTERSECTION
FALMOUTH CUMBERLAND COUNTY
BUCKNAM ROAD
CROSS SECTIONS

Date:4/6/2022

Username:

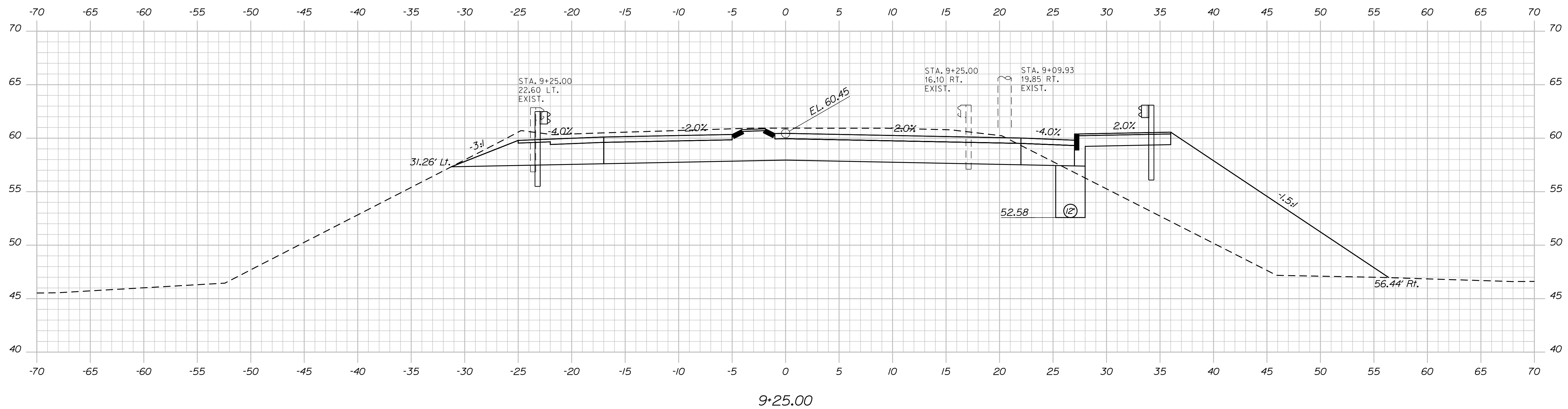
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| PROJ. MANAGER | BY | DATE | SIGNATURE |
|------------------|-----|--------|-----------|
| M. Kersbergen | KBP | 1-2022 | |
| CHECKED-REVIEWED | JMS | | |
| DESIGN-REVIEWED | SBH | | |
| DESIGN-REVIEWED | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

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OF 46

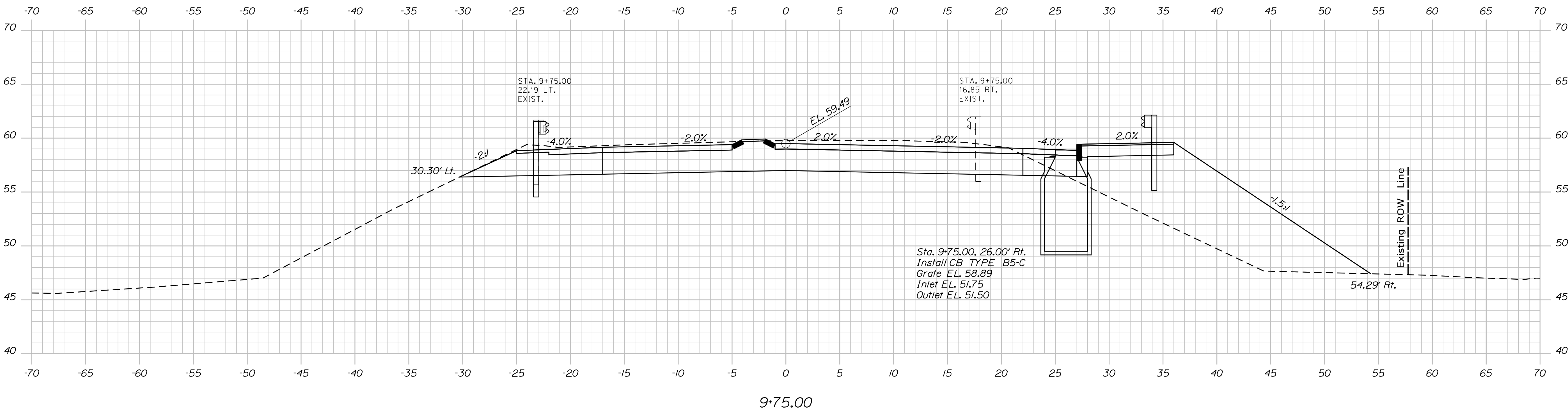
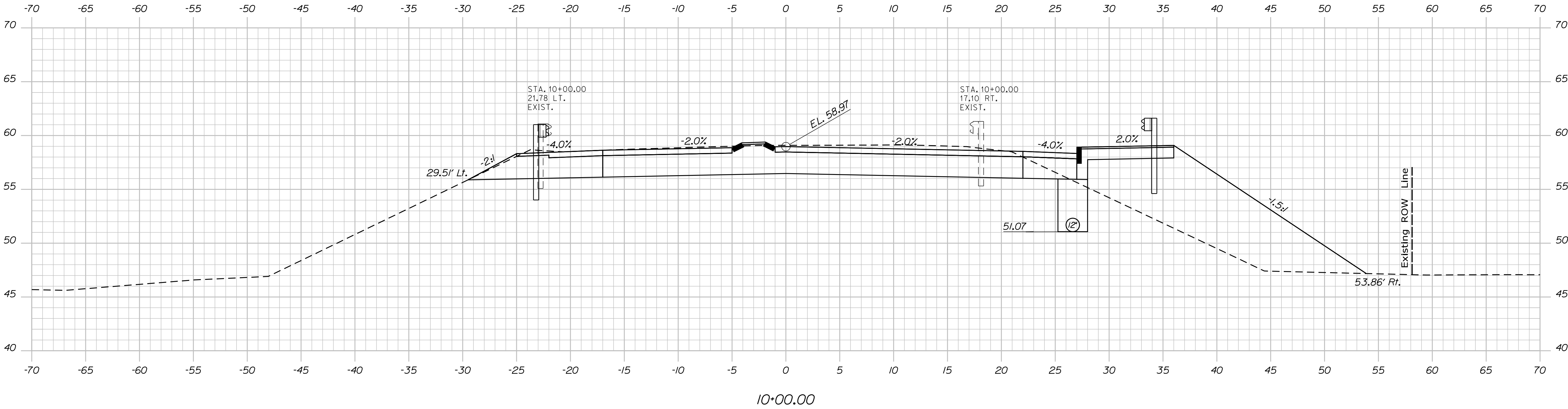
Sta. 9+25.00 to Sta. 9+50.00

Date:4/6/2022

Username:

Division: HIGHWAY

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| PROJ. MANAGER | BY | DATE | SIGNATURE |
|------------------|-----|--------|-------------|
| M. Kersbergen | KDP | 1-2022 | |
| CHECKED-REVIEWED | SBH | | P.E. NUMBER |
| DESIGN-DETAILED | | | DATE |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

BUCKNAM ROAD
I-295 NB RAMPS INTERSECTION
FALMOUTH CUMBERLAND COUNTY

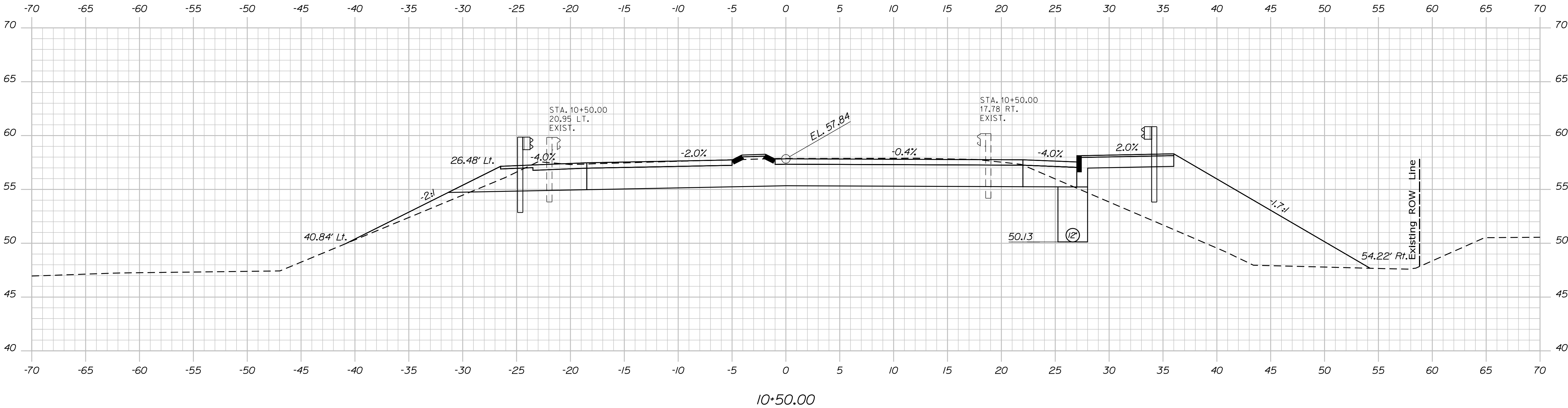
BUCKNAM ROAD
CROSS SECTIONS

Date:4/6/2022

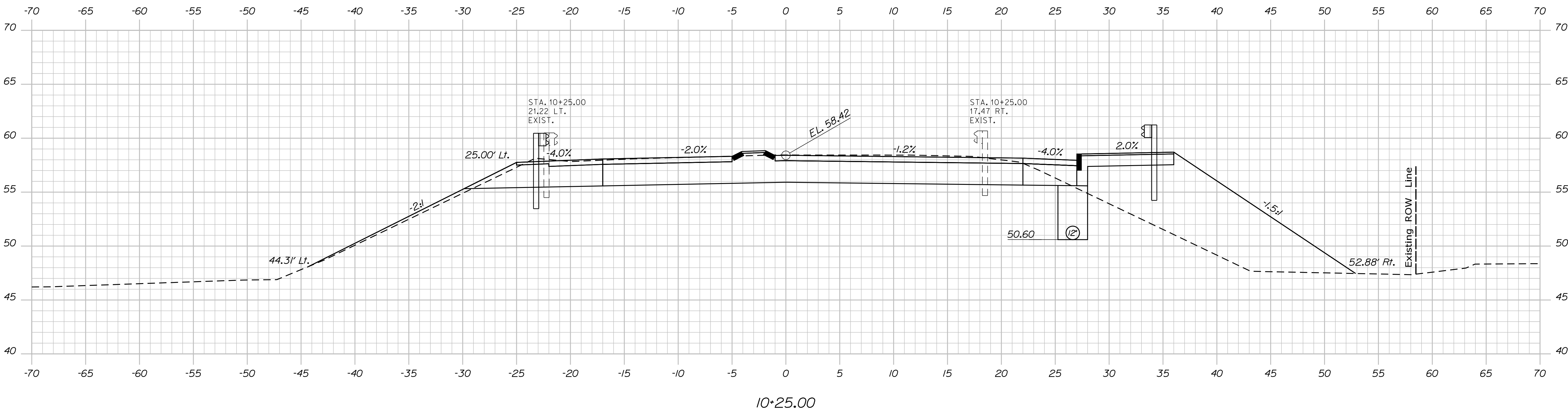
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10+50.00



10+25.00

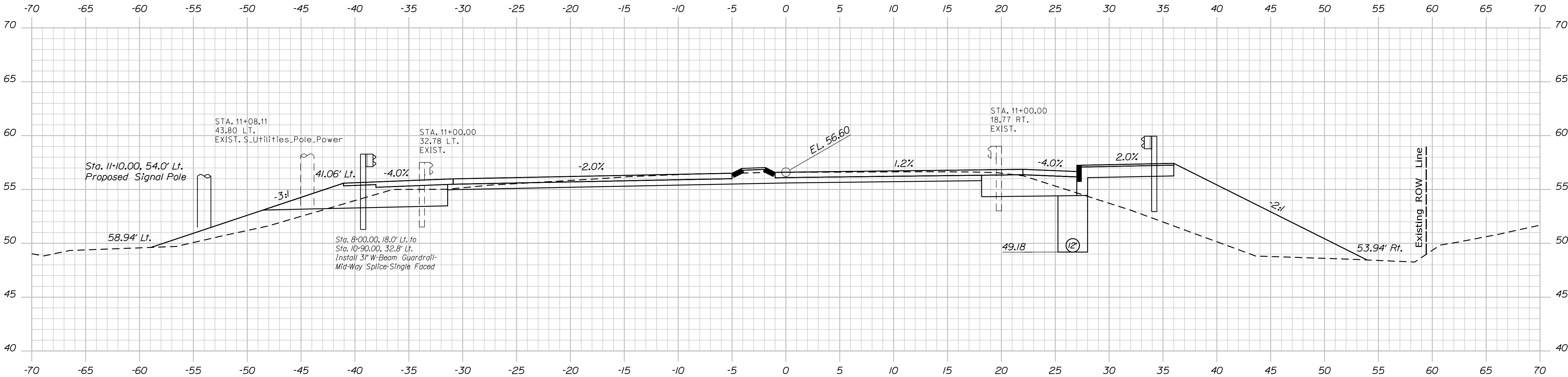
| PROJ. MANAGER | BY | DATE |
|------------------|-----|-------------|
| M. Kersbergen | KJP | 1-2022 |
| CHECKED-REVIEWED | SBH | SIGNATURE |
| DESIGN-REVIEWED | | P.E. NUMBER |
| REVISIONS 1 | | DATE |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

Date:4/6/2022

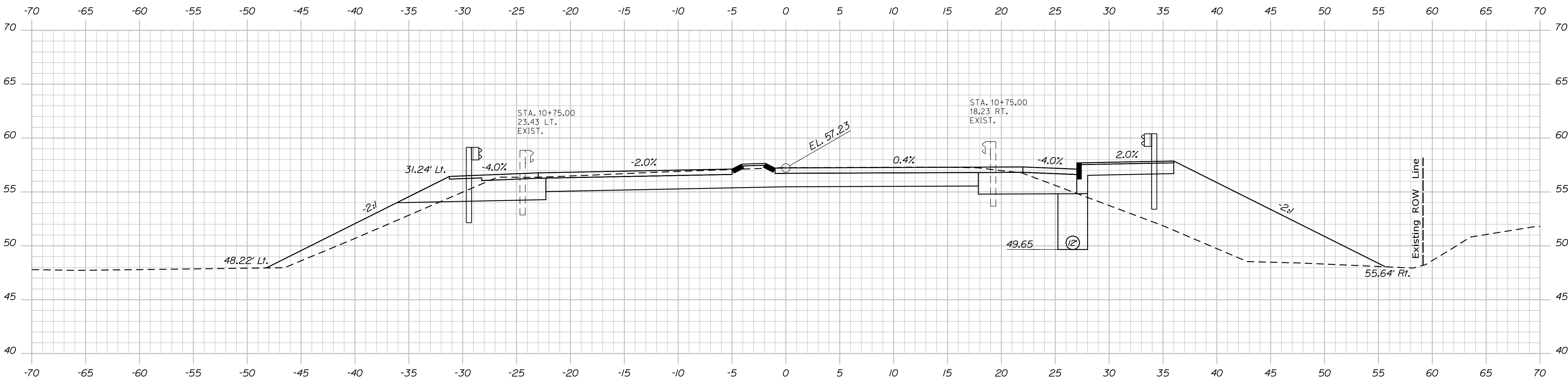
Username:

Division: HIGHWAY

Filename: ... \MSTAD025_XSECT_10+75_007.dgn



11+00.00
QUANTITY MATCH TO ADJACENT PROJECT:
BUCKNAM ROAD BRIDGE WIN# 021720.00



10+75.00

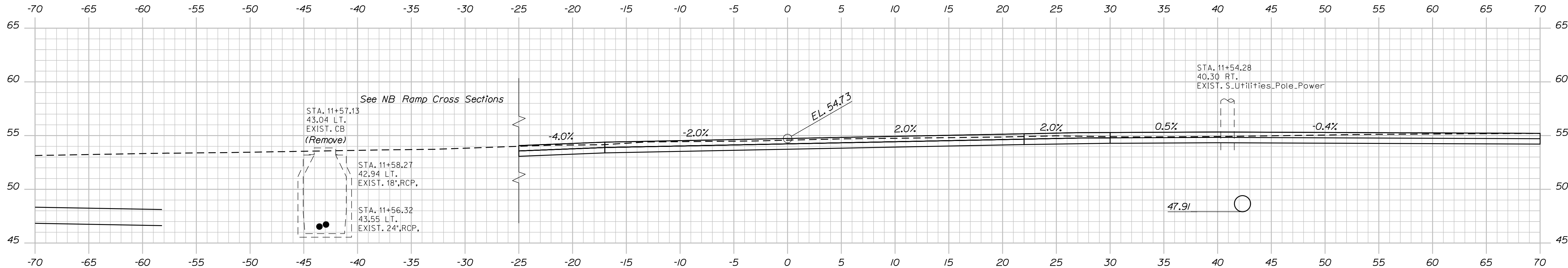
| PROJ. MANAGER | BY | DATE | SIGNATURE |
|------------------|-----|--------|-----------|
| M. Kersbergen | KBP | 1-2022 | |
| CHECKED-REVIEWED | JMS | | |
| DESIGNED-DETAILS | SBH | | |
| DESIGNED-DETAILS | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

Date:4/6/2022

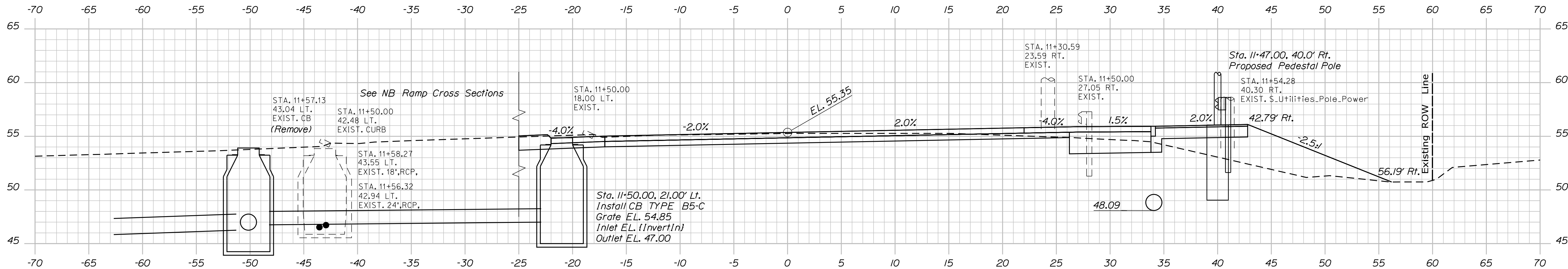
Username:

Division: HIGHWAY

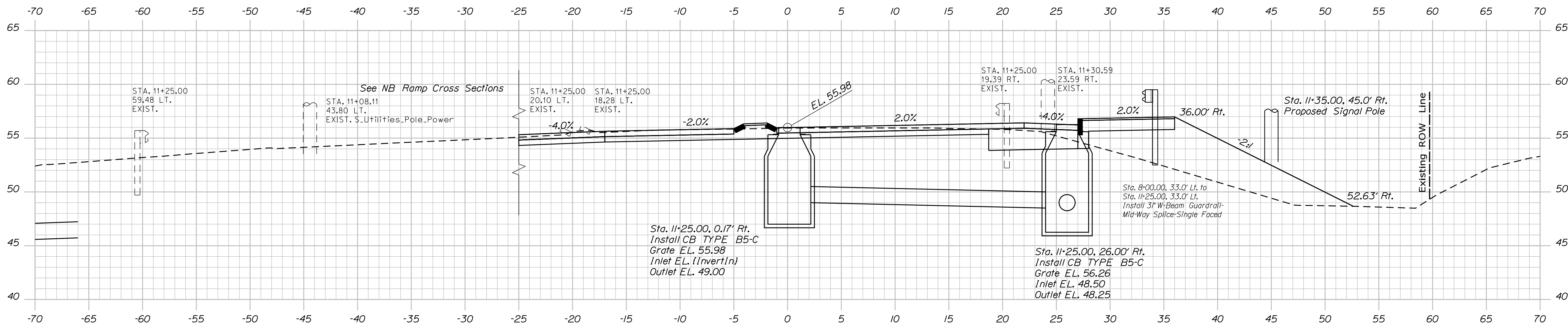
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11+75.00



11+50.00



11+25.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BUCKNAM ROAD
I-295 NB RAMP INTERSECTION
FALMOUTH CUMBERLAND COUNTY

SHEET NUMBER
26
OF 46

DATE
1-2022

BY
KJP
SBH

PROJ. MANAGER
M. Kersbergen

CHECKED-REVIEWED
JEMS
JCC

DESIGNED-DETAILED
DESIGNED-DETAILED

REVISIONS
1
2
3
4

FIELD CHANGES

SIGNATURE

P.E. NUMBER

DATE

BRIDGE PLANS

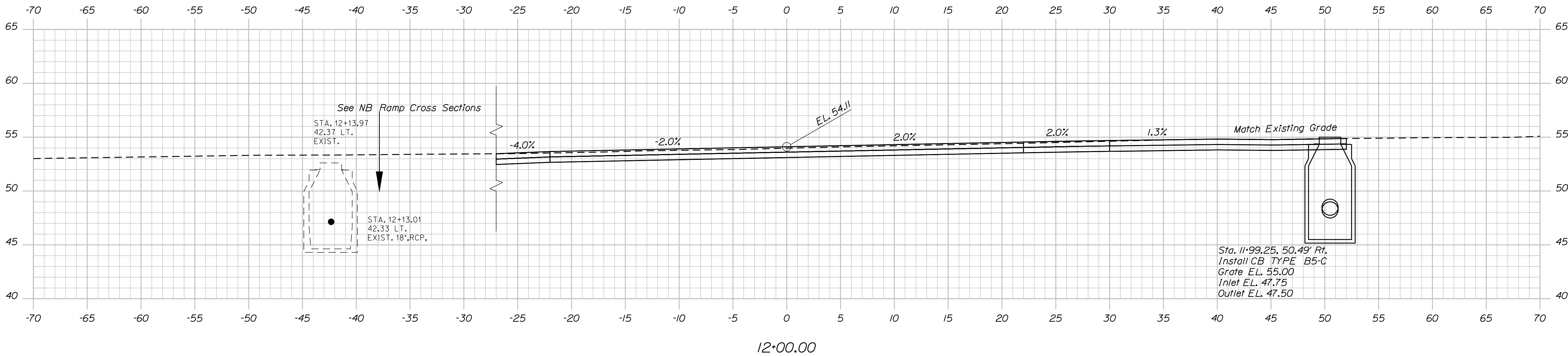
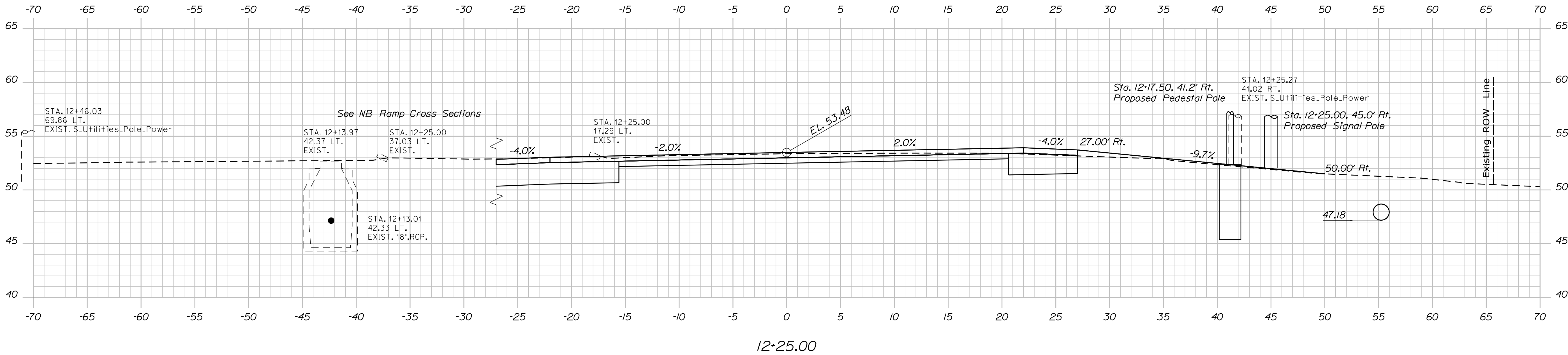
WIN
022672.00

Date:4/6/2022

Username:

Division: HIGHWAY

Filename: ... \MSTAD27_XSECT_12+00_009.dgn

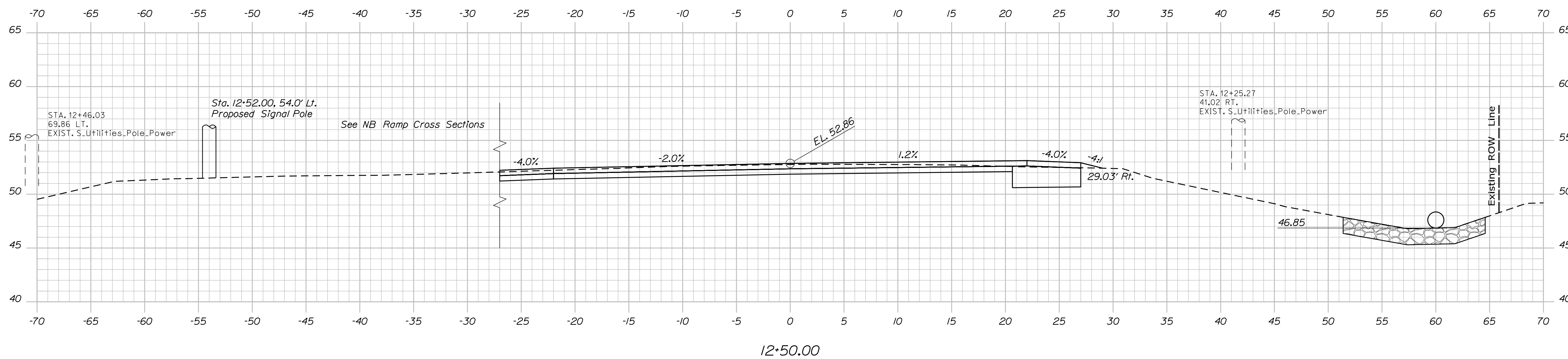
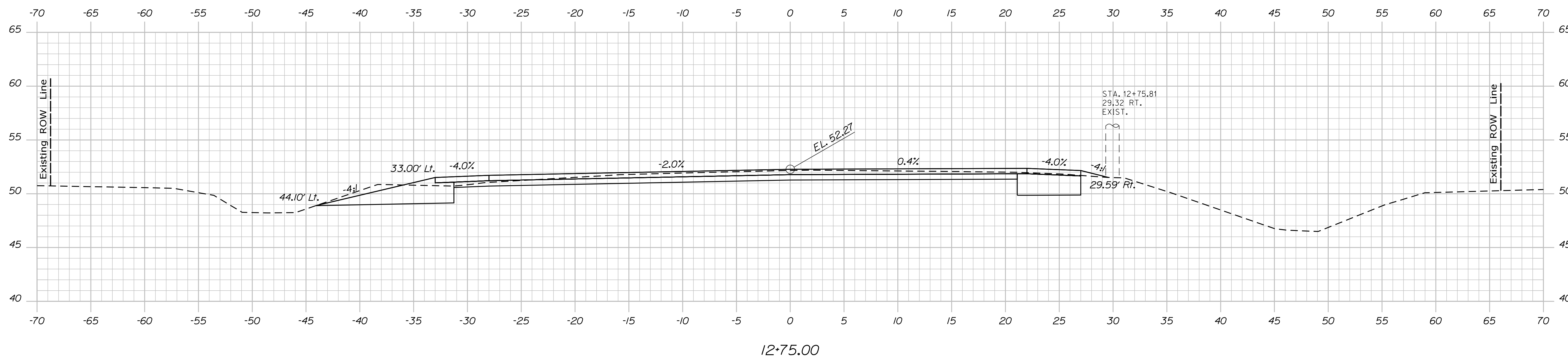
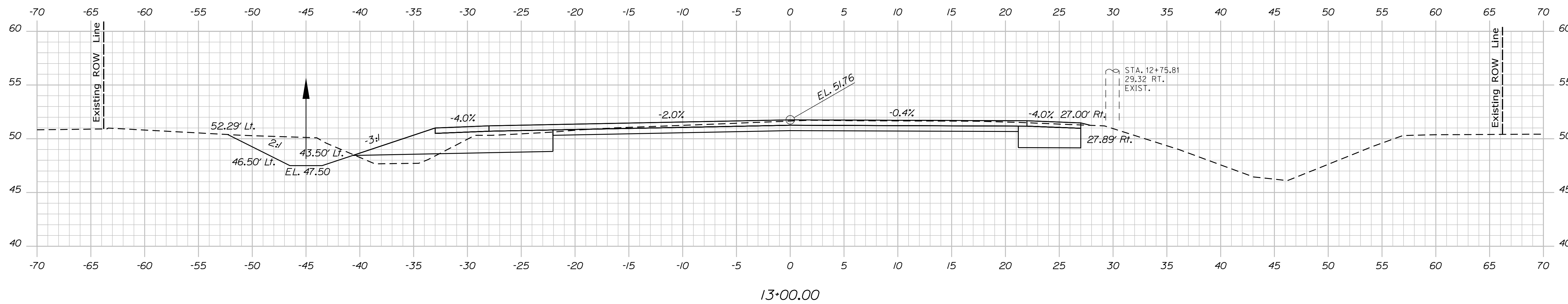


Sta. 12+00.00 to Sta. 12+25.00

| DATE | BY | PROJ. MANAGER | DESIGN-DETAILED | CHECKED-REVIEWED | DESIGN-DETAILED | REVISIONS 1 | REVISIONS 2 | REVISIONS 3 | REVISIONS 4 | FIELD CHANGES |
|-------------|------------|---------------|-----------------|------------------|-----------------|-------------|-------------|-------------|-------------|---------------|
| 1-2022 | KOP SBH | M. Kersbergen | JEMS | JCC | | | | | | |
| SIGNATURE | | | | | | | | | | |
| P.E. NUMBER | | | | | | | | | | |
| DATE | | | | | | | | | | |

BUCKNAM ROAD
I-295 NB RAMPS INTERSECTION
FALMOUTH CUMBERLAND COUNTY

BUCKNAM ROAD
CROSS SECTIONS



Date: 4/6/2022

Username:

Division: HIGHWAY

Filename: ... \MSTA\028_XSECT_12+50_010.dgn

STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

WIN

BRIDGE PLANS

SIGNATURE

FIGURE 1

P.E. NUMBER

DATE _____

DATE

-2022

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BY

SBH

11

M. Kers

| | |
|----|-----|
| CC | JCC |
|----|-----|

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J. MANA

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NOISII

310131

BUCKNAM ROAD
I-295 NB RAMPS INTERSECTION
FALMOUTH CUMBERLAND COUNTY

BUCKNAM ROAD
CROSS SECTIONS

SHEET NUMBER

28

OF 46

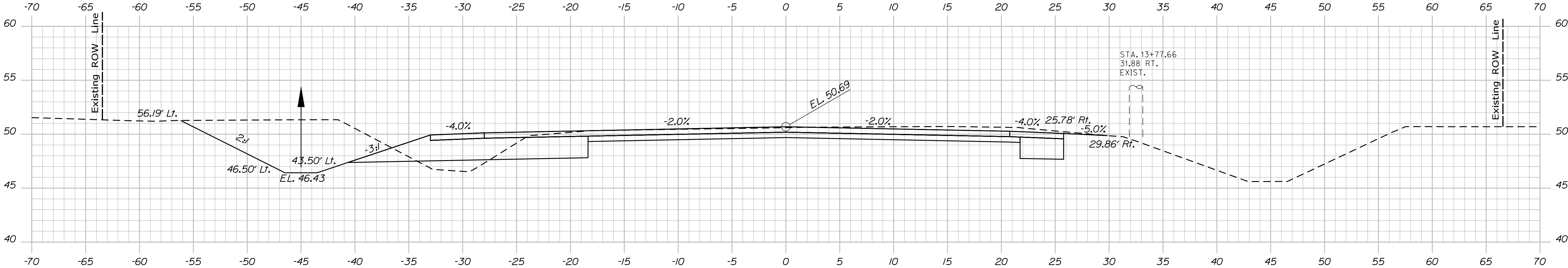
Sta. 12+50.00 to Sta. 13+00.00

Date:4/6/2022

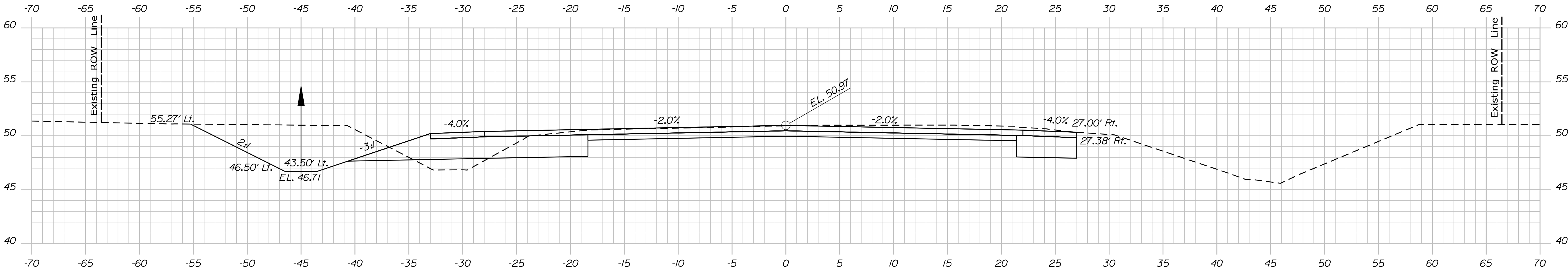
Username:

Division: HIGHWAY

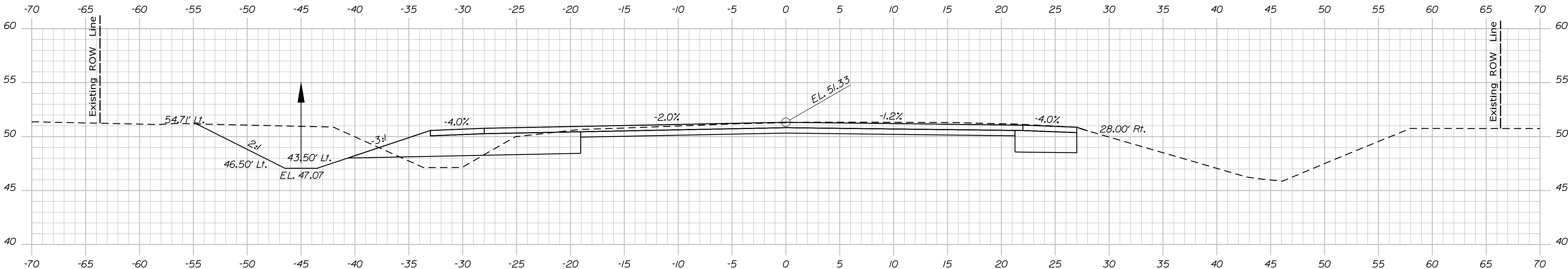
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13+75.00



13+50.00



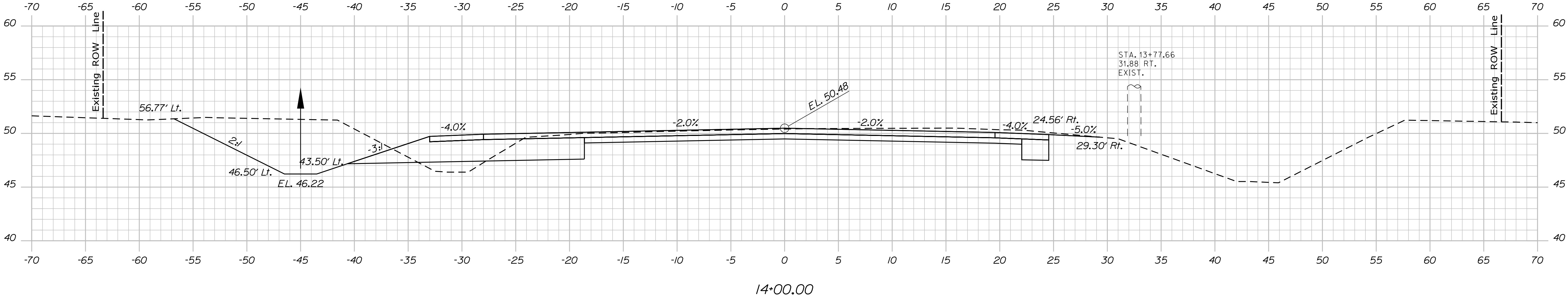
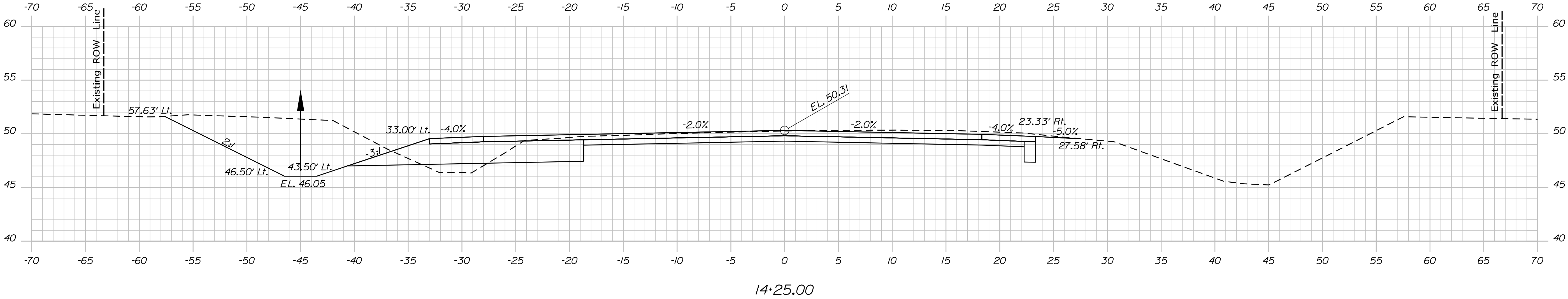
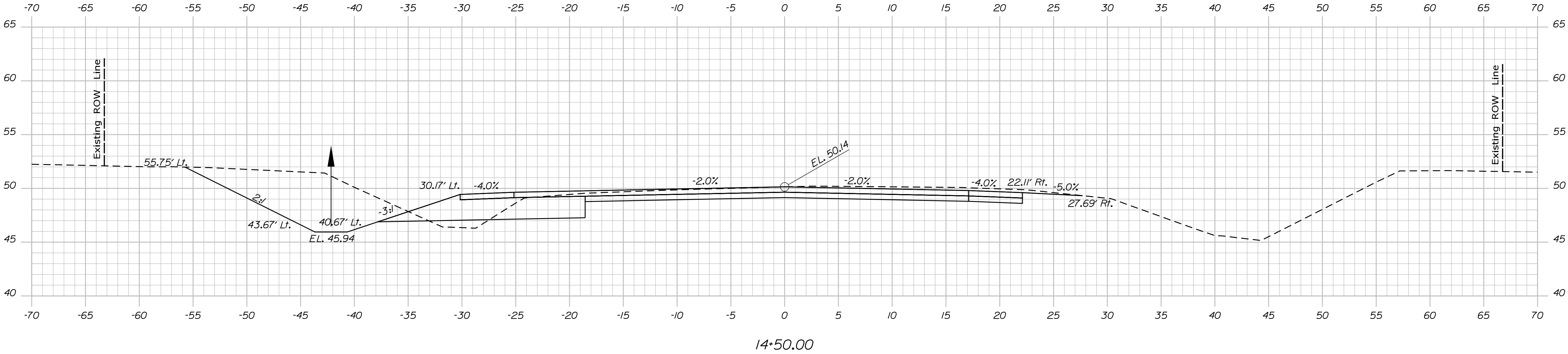
13+25.00

Date:4/6/2022

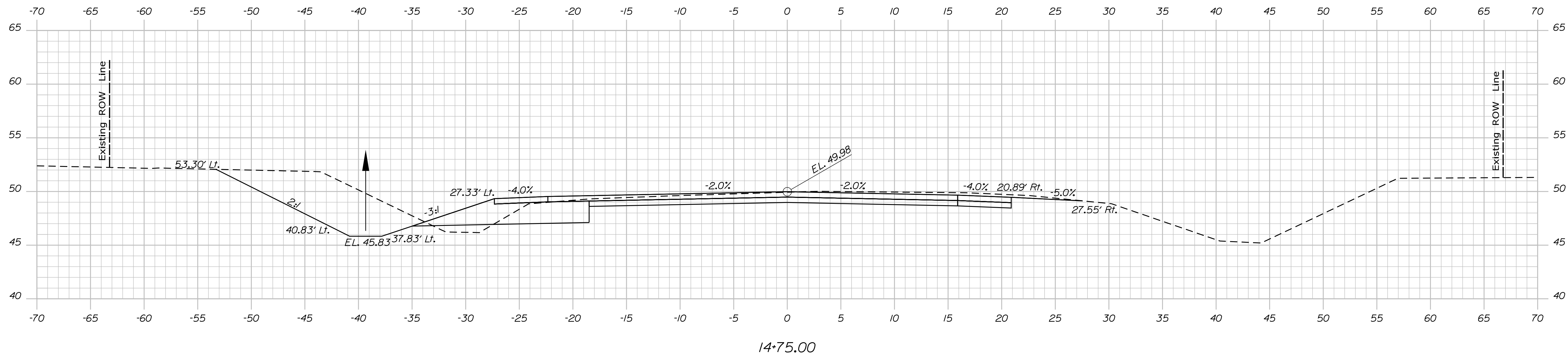
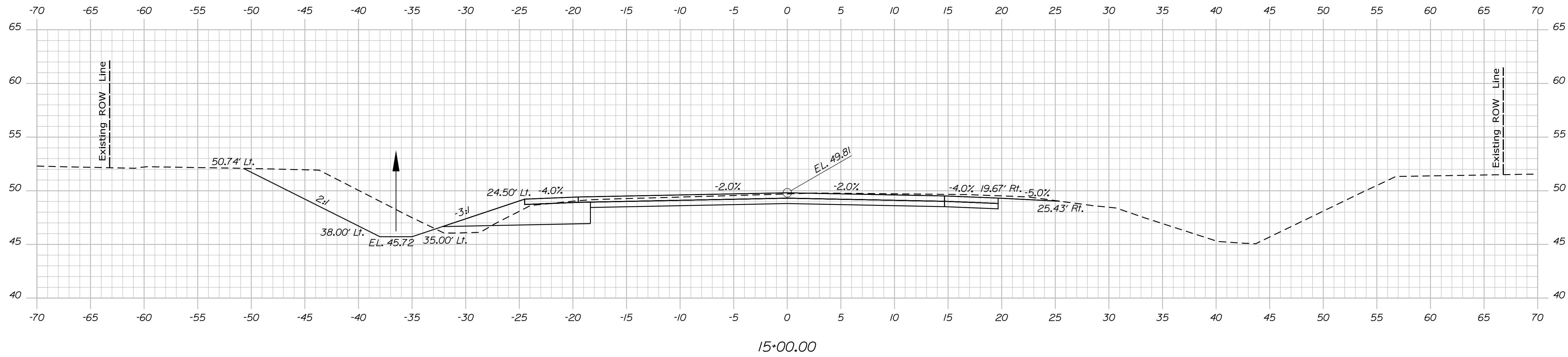
Username:

Division: HIGHWAY

Filename: ... \MSTAD30_XSECT_14+00_012.dgn



| | | | | | |
|-----------------|--|------------------------------|--|-------------------|--|
| STATE OF MAINE | | DEPARTMENT OF TRANSPORTATION | | BRIDGE PLANS | |
| | | SIGNATURE | | P.E. NUMBER | |
| | | DATE | | DATE | |
| PROJECT MANAGER | | BY | | DATE | |
| M. Kersbergen | | KJP | | 1-2022 | |
| DESIGN-DETAILED | | CHECKED-REVIEWED | | DESIGN-DETAILED | |
| JCC | | JCC | | JCC | |
| DESIGN-DETAILED | | DESIGN-DETAILED | | DESIGN-DETAILED | |
| REVISIONS 1 | | REVISIONS 2 | | REVISIONS 3 | |
| REVISIONS 4 | | REVISIONS 4 | | FIELD CHANGES | |
| BUCKNAM ROAD | | I-295 NB RAMP INTERSECTION | | CUMBERLAND COUNTY | |
| FALMOUTH | | BUCKNAM ROAD | | CROSS SECTIONS | |
| SHEET NUMBER | | 30 | | OF 46 | |

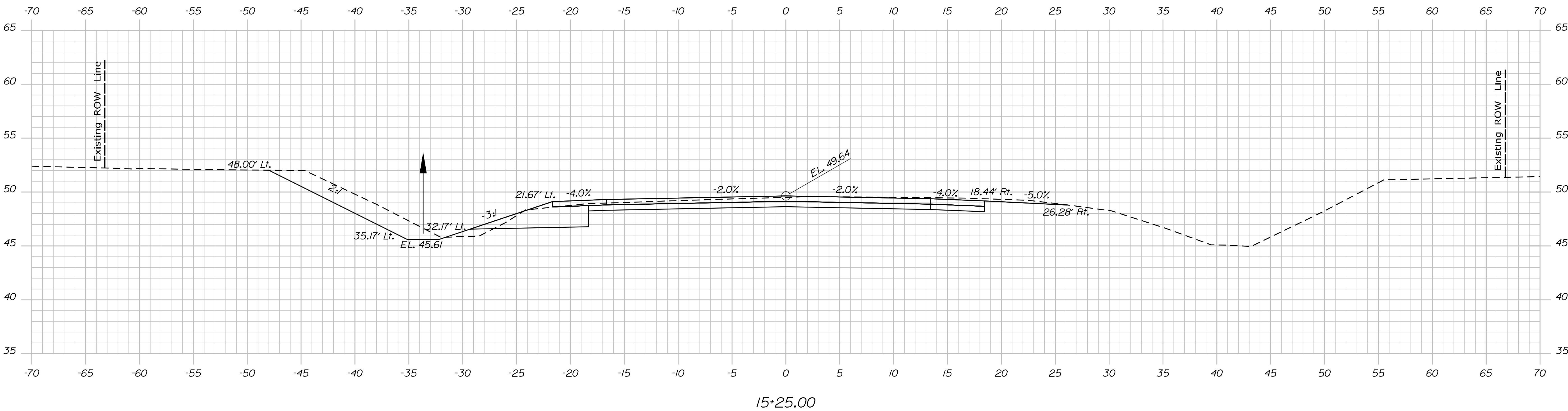
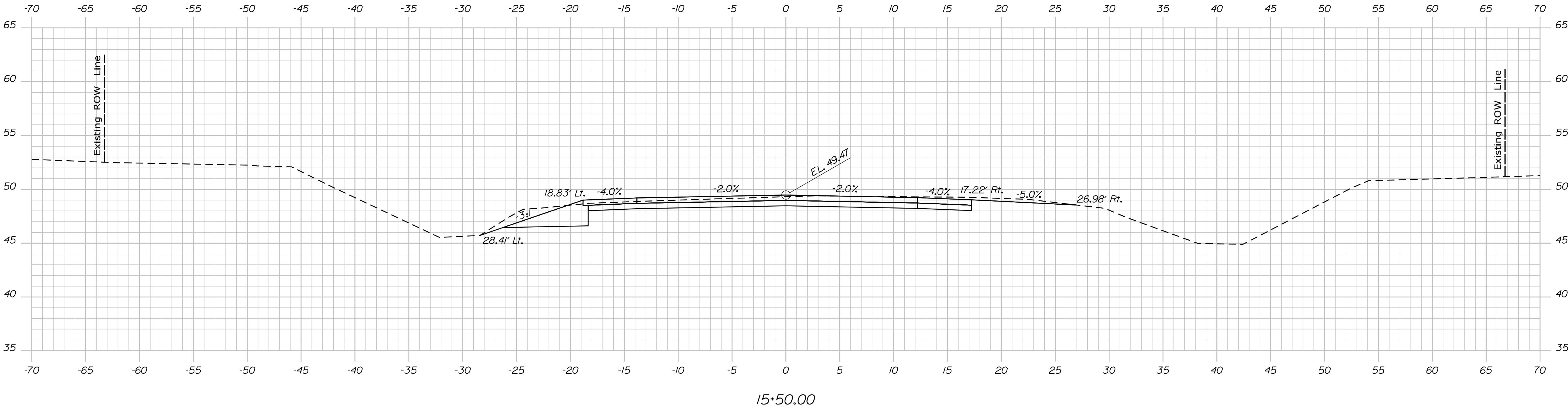


Date:4/6/2022

Username:

Division: HIGHWAY

Filename: ... \MSTAO32_XSECT_15+25_014.dgn

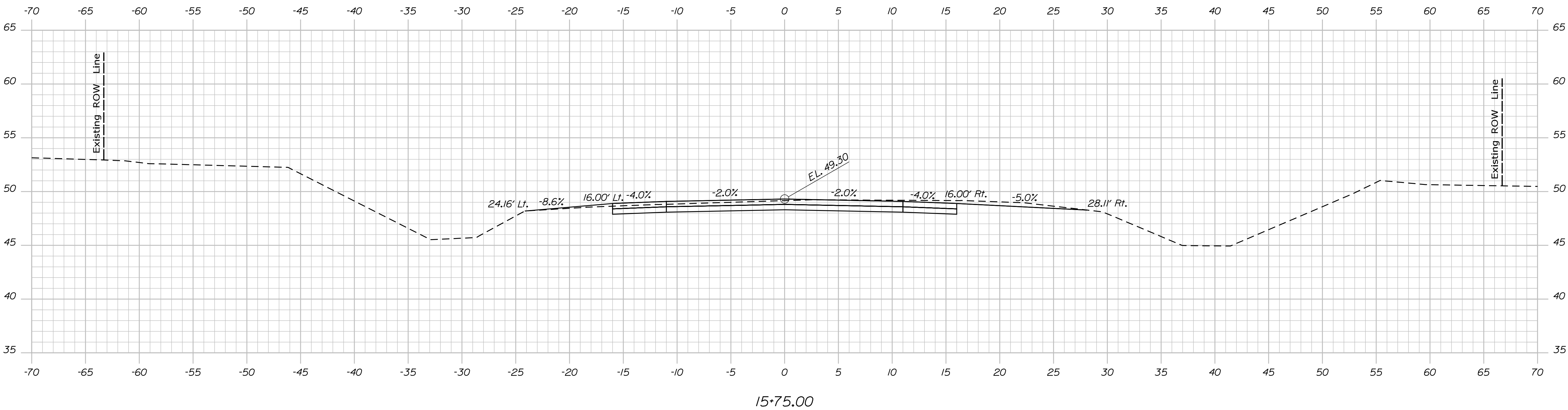
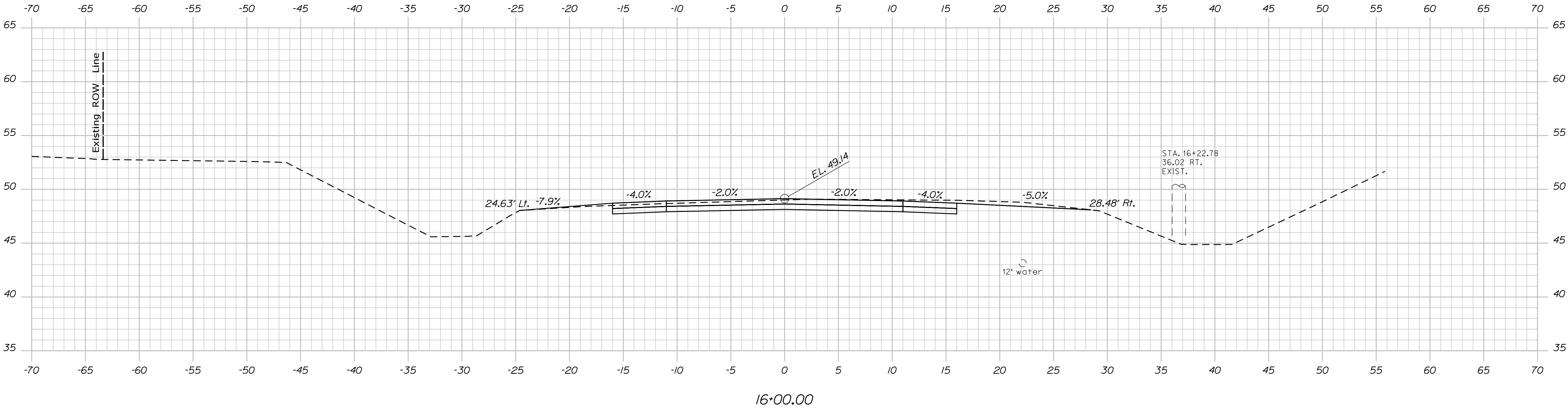


Date:4/6/2022

Username:

Division: HIGHWAY

Filename: ... \MSTAO33_XSECT_15+75_015.dgn

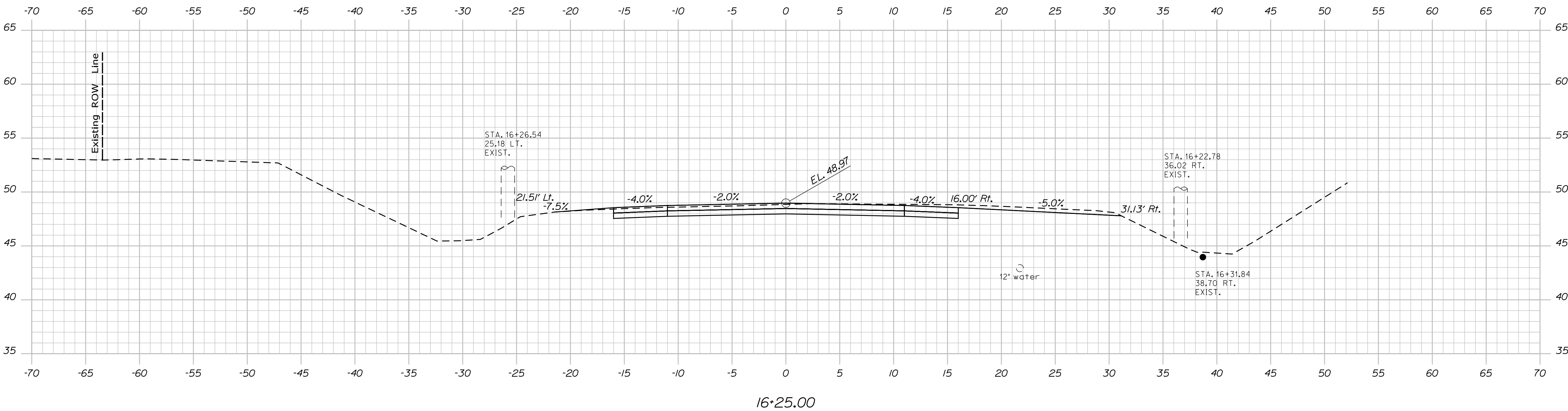
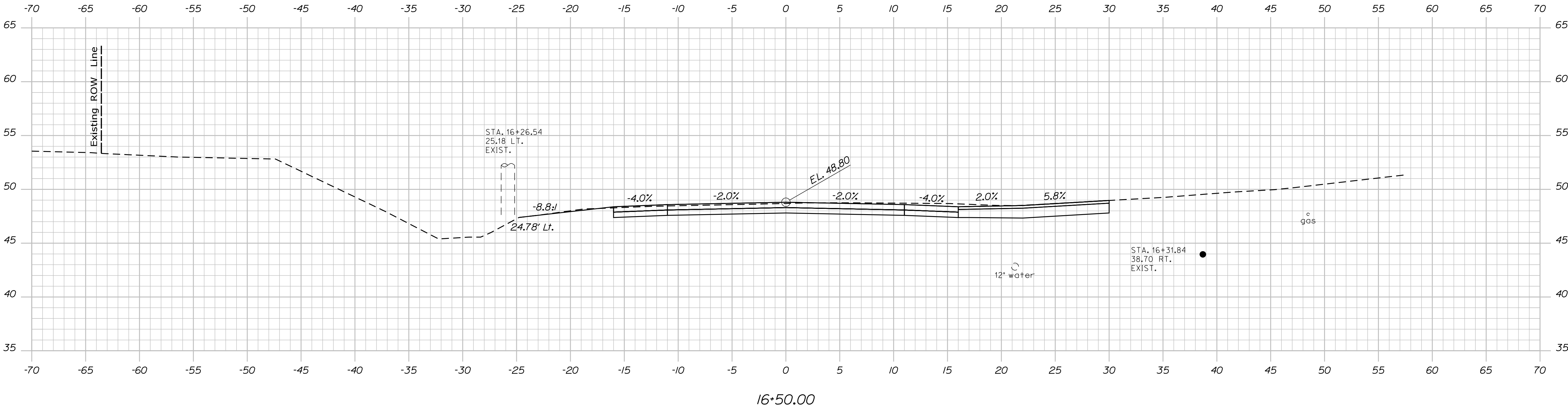


Date:4/6/2022

Username:

Division: HIGHWAY

Filename: ... \MSTAO34_XSECT_16+25_016.dgn



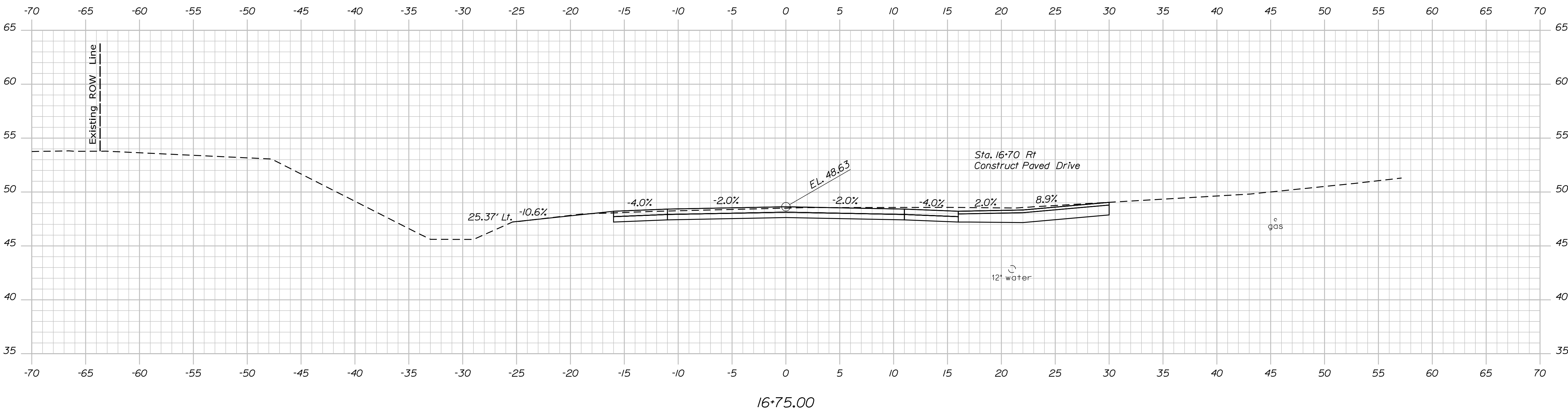
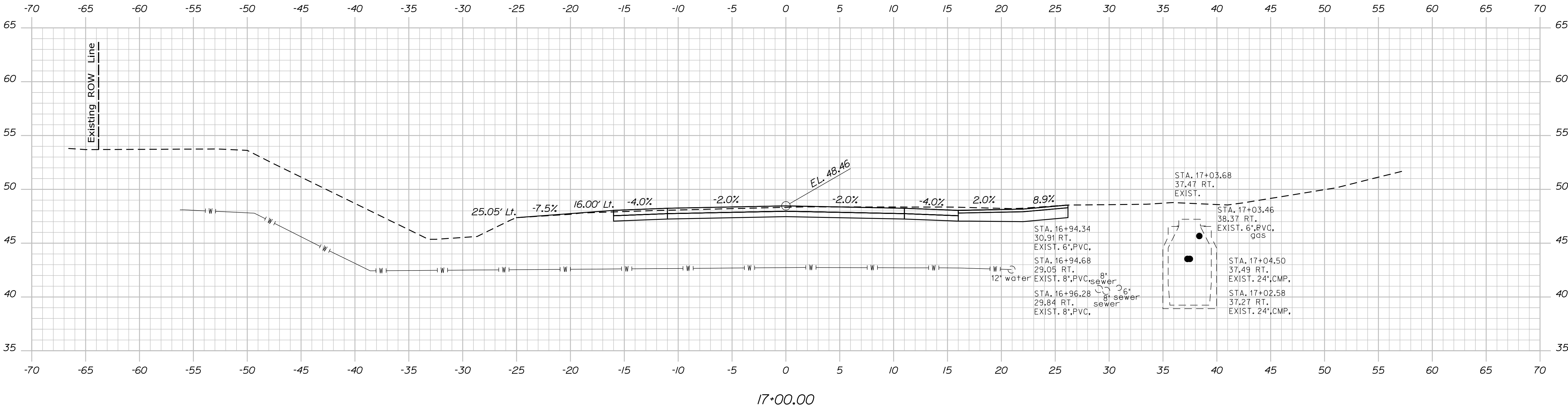
| PROJ. MANAGER | BY | DATE |
|------------------|-----|-------------|
| M. Kersbergen | KOP | 1-2022 |
| CHECKED-REVIEWED | SBH | SIGNATURE |
| DESIGN-DETAILED | | P.E. NUMBER |
| DESIGN-DETAILED | | DATE |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

Date:4/6/2022

Username:

Division: HIGHWAY

Filename: ... \MSTAO35_XSECT_16+75_017.dgn

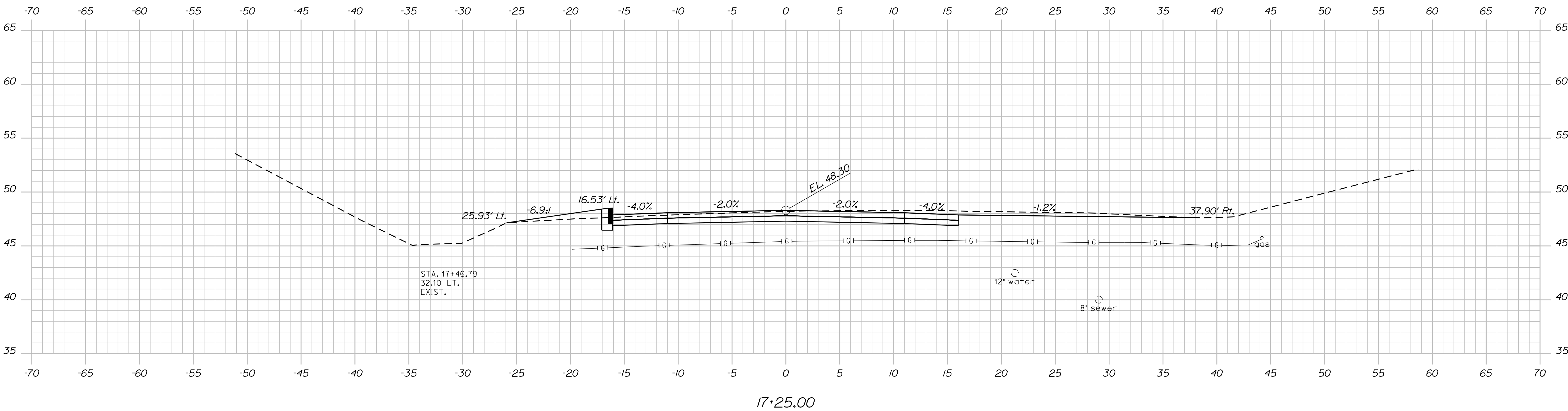
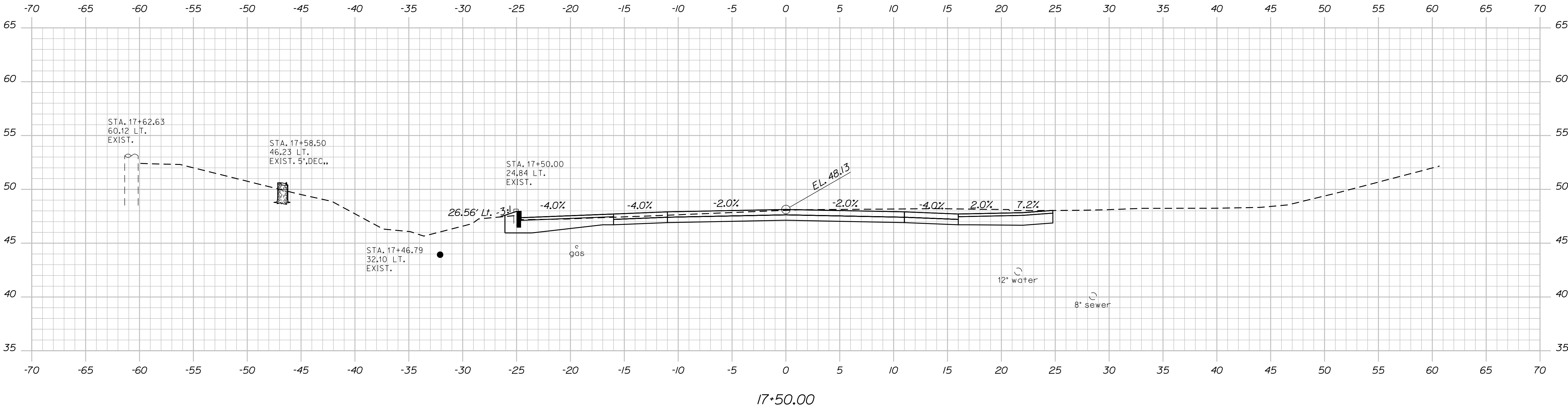


Date:4/6/2022

Username:

Division: HIGHWAY

Filename: ... \MSTAO36_XSECT_17+25_018.dgn



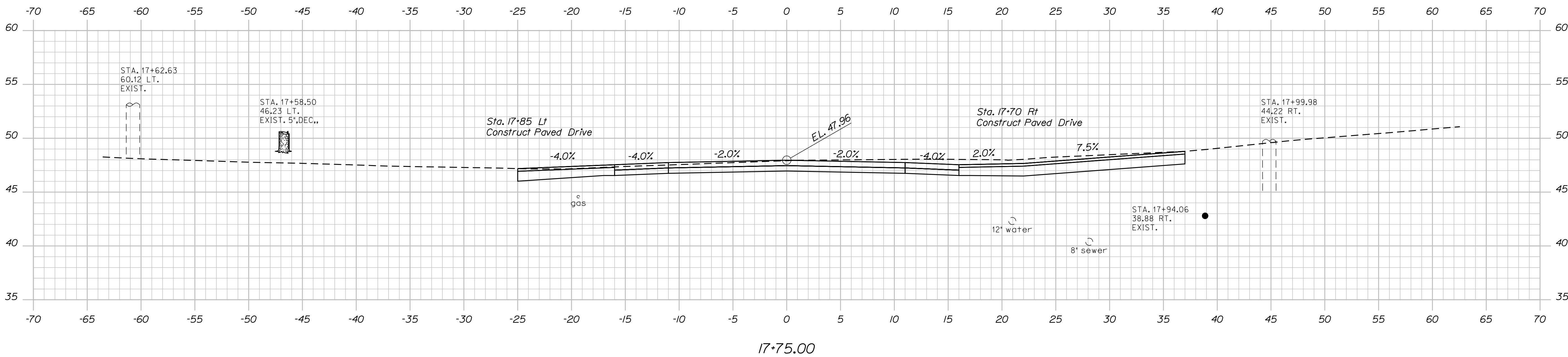
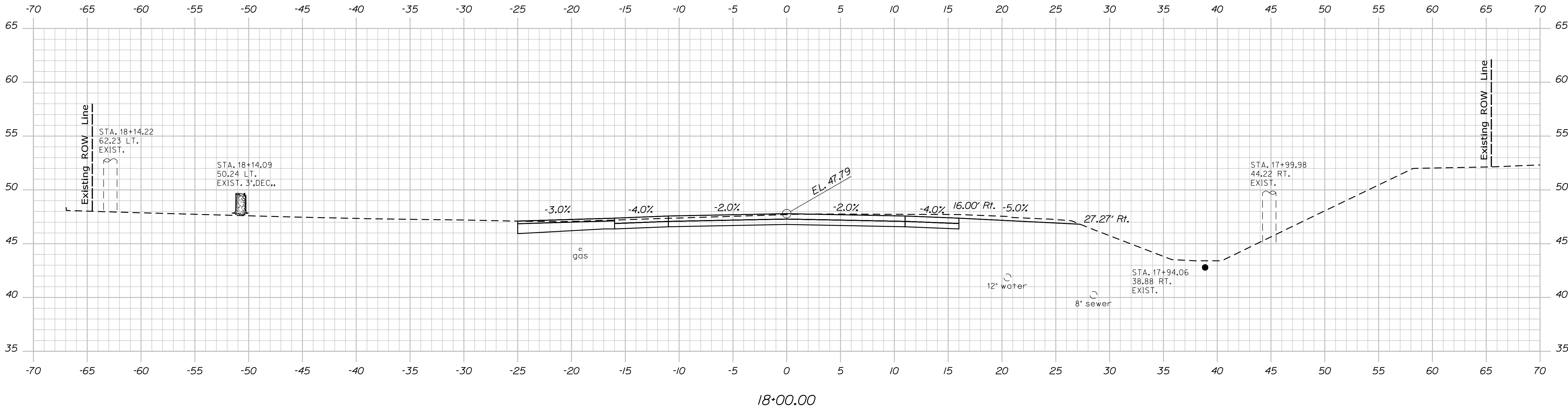
| | | | | | | | | | | | | | | | | | | | |
|---|--|--|--|--|-----------|--|--|--|-------------|--------------------------------|--|--|------|--|--|--|--|--|--|
| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | | | | | SIGNATURE | | | | P.E. NUMBER | | | | DATE | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BUCKNAM ROAD I-295 NB RAMPS INTERSECTION FALMOUTH CUMBERLAND COUNTY | | | | | | | | | | BUCKNAM ROAD CROSS SECTIONS | | | | | | | | | |
| SHEET NUMBER | | | | | | | | | | 36 | | | | | | | | | |
| OF 46 | | | | | | | | | | | | | | | | | | | |
| WIN | | | | | | | | | | 022672.00 | | | | | | | | | |
| BRIDGE PLANS | | | | | | | | | | | | | | | | | | | |

Date:4/6/2022

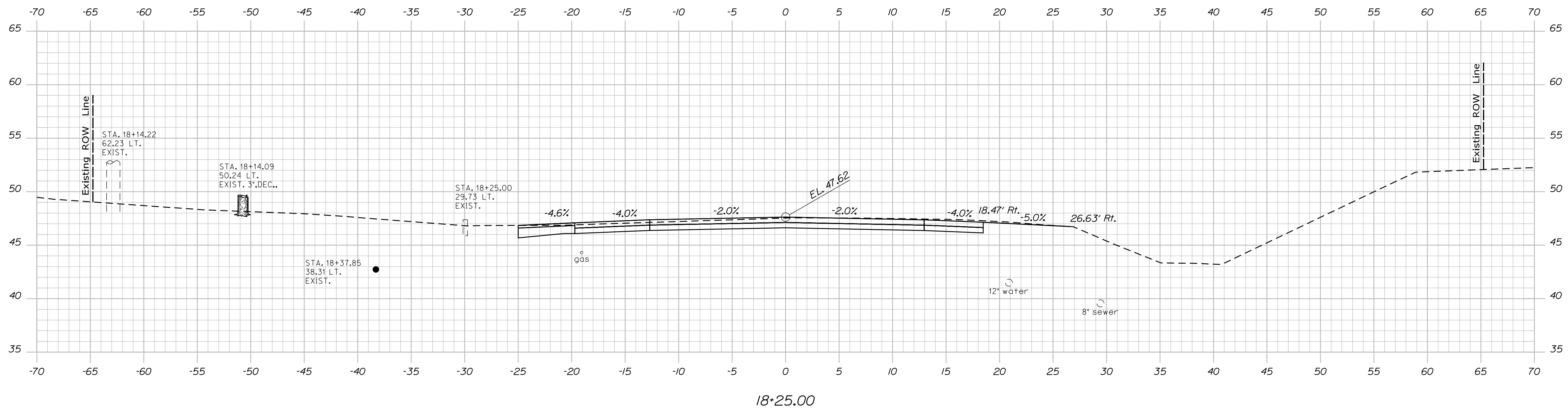
Username:

Division: HIGHWAY

Filename: ... \MSTA037_XSECT_17+75_019.dgn



Filename: ... \MSTA\038_XSECT_18+25_020.dgn



WIN
022672.00

SHEET NUMBER

38

OF 46

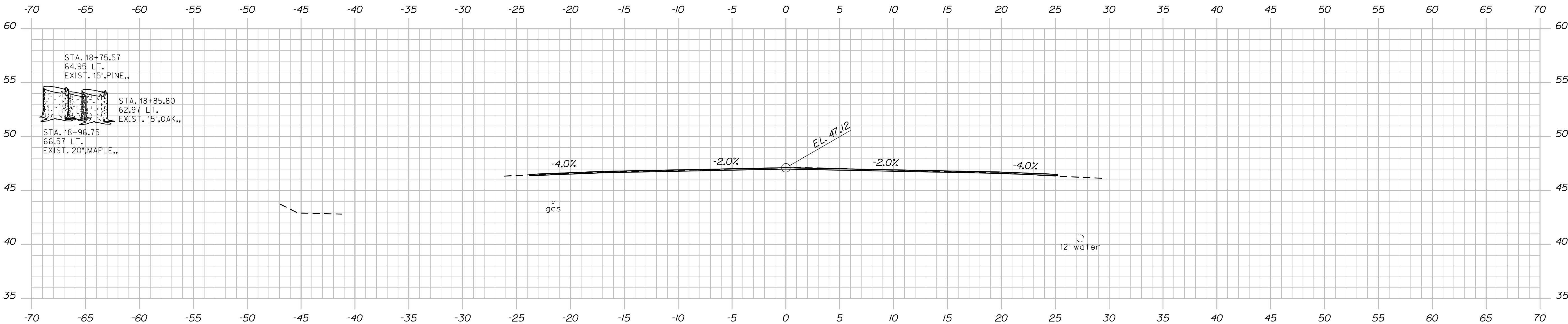
Sta. 18+25.00 to Sta. 18+50.00

Date:4/6/2022

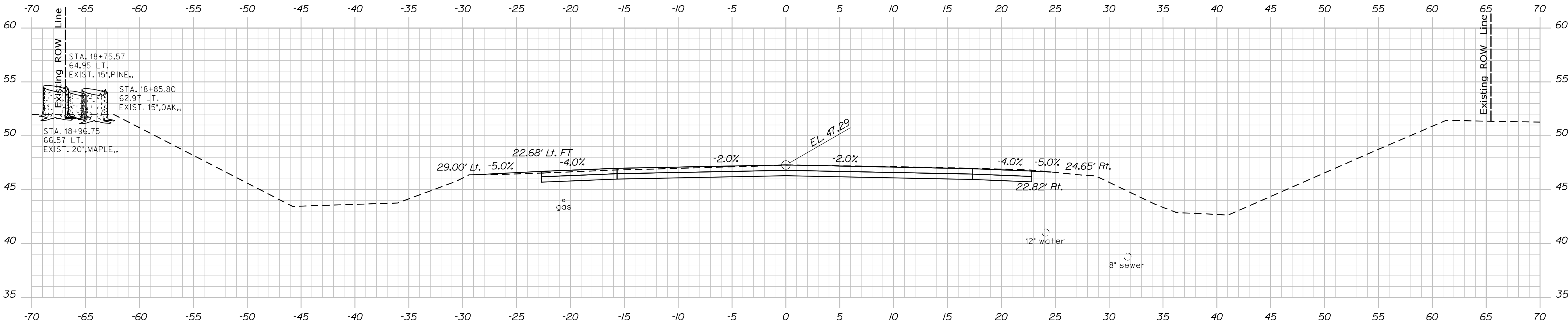
Username:

Division: HIGHWAY

Filename: ... \MSTAO39_XSECT_18+75_021.dgn



19+00.00
END OF PROJECT LIMITS
MATCH EXISTING



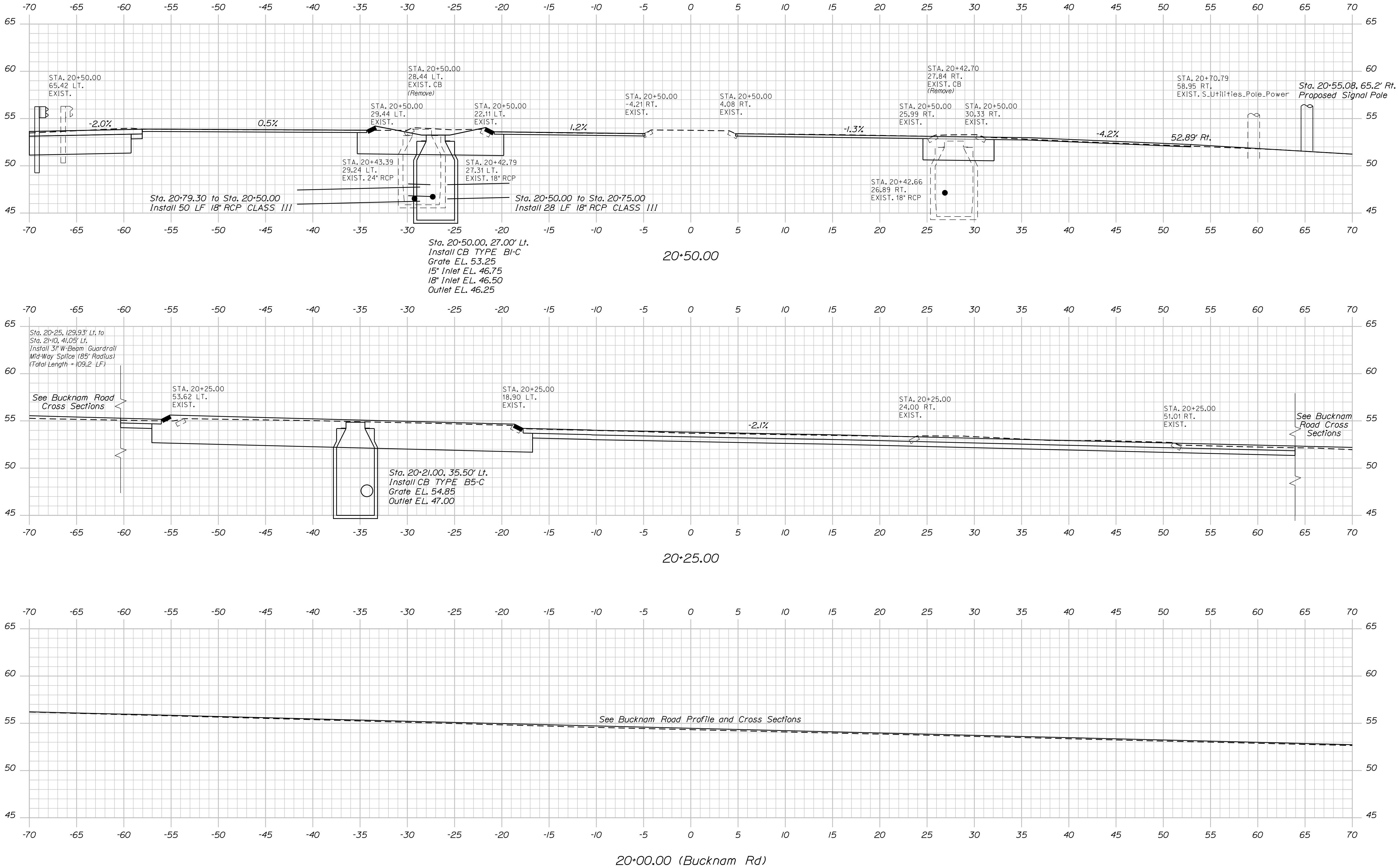
18+75.00

Date:4/6/2022

Username:

Division: HIGHWAY

Filename: ... \MSTAD040_XSECT_20+00_001.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BUCKNAM ROAD
I-295 NB RAMP INTERSECTION
FALMOUTH CUMBERLAND COUNTY

SHEET NUMBER
40
OF 46

WIN
022672.00

BRIDGE PLANS

| PROJ. MANAGER | BY | DATE | SIGNATURE | P.E. NUMBER | DATE |
|-------------------|-----|--------|-----------|-------------|------|
| M. Kersbergen | KIP | 1-2022 | | | |
| DESIGNED-DETAILED | SBH | | | | |
| CHECKED-REVIEWED | JMS | | | | |
| DESIGNED-DETAILED | | | | | |
| REVISIONS 1 | | | | | |
| REVISIONS 2 | | | | | |
| REVISIONS 3 | | | | | |
| REVISIONS 4 | | | | | |
| FIELD CHANGES | | | | | |

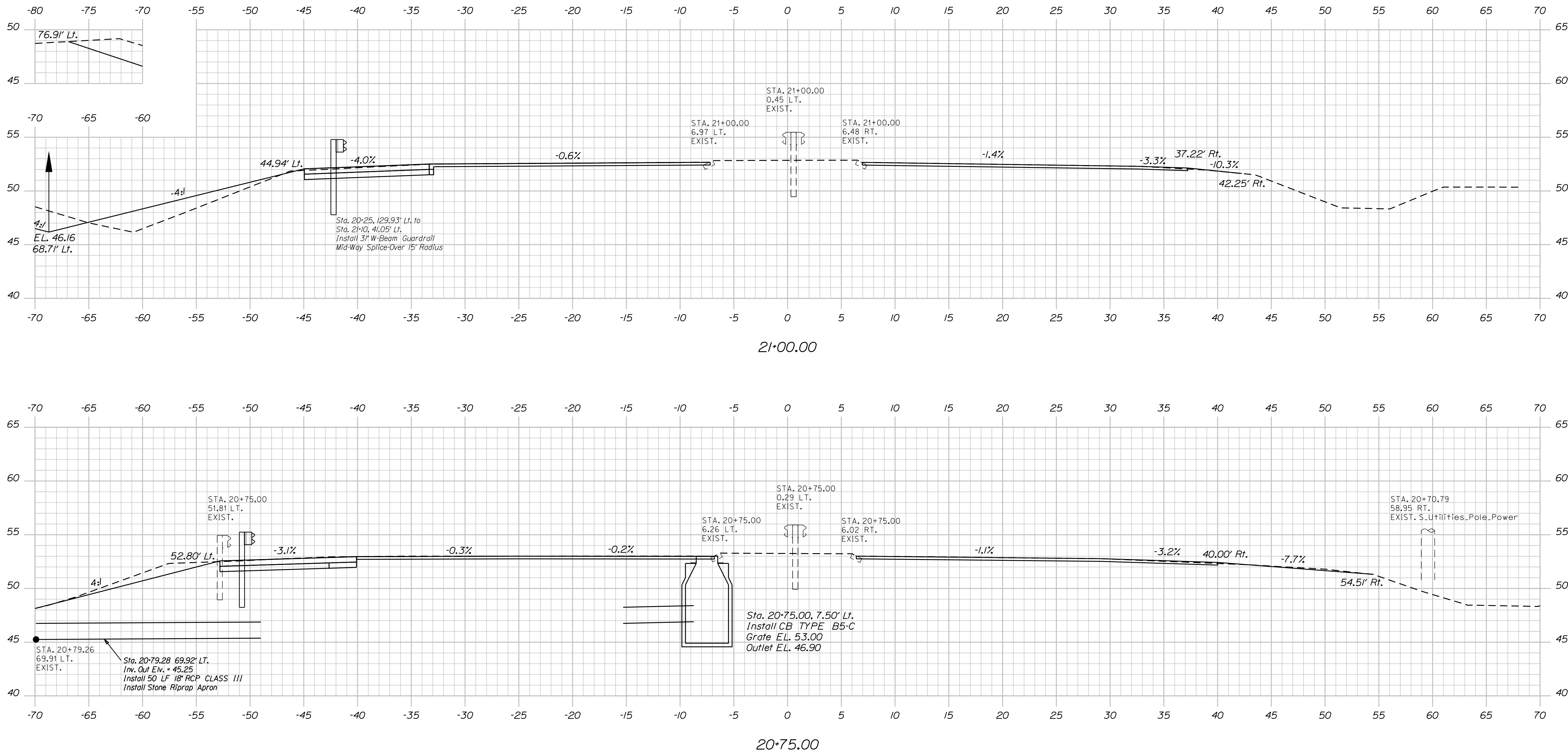
I-295 NORTHBOUND RAMP
CROSS SECTIONS

Filename: ... \MSTA\041_XSECT_20+75_002.dgn

Division: HIGHWAY

Username:

Date: 4/6/2022



Sta. 20+75.00 to Sta. 21+00.00

SHEET NUMBER

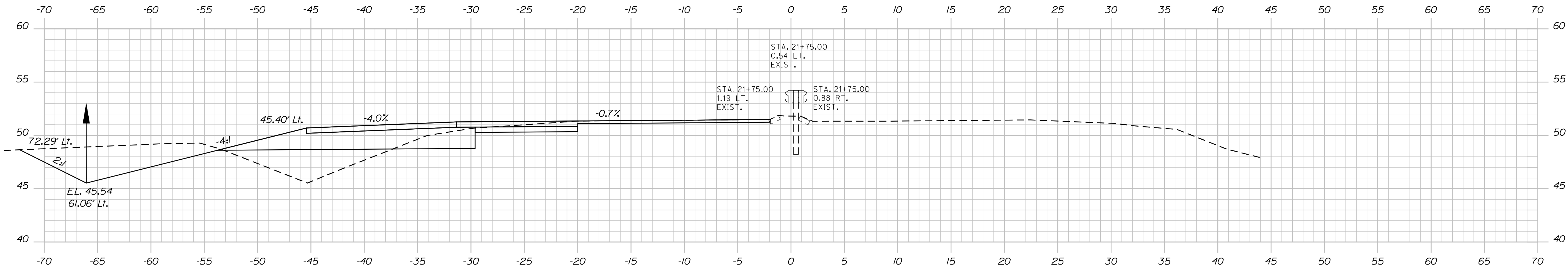
41

OF 46

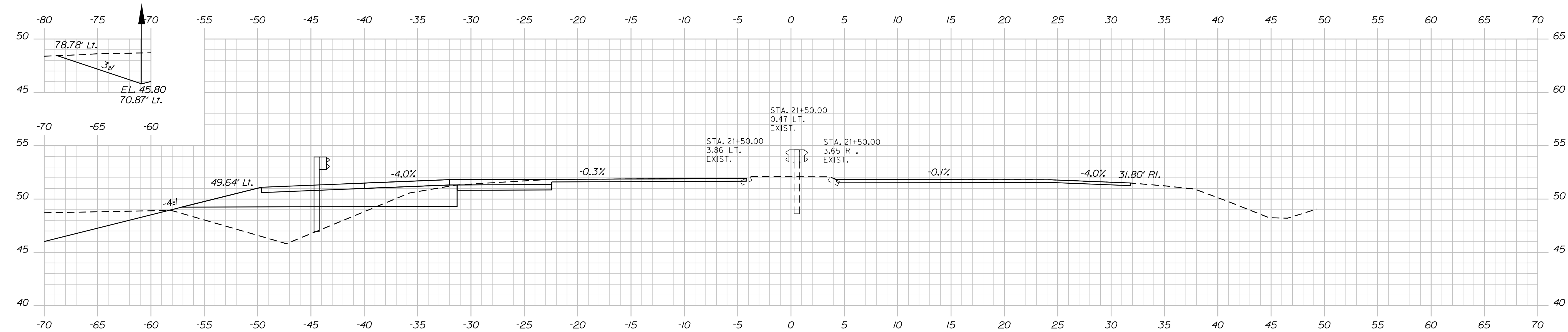
BUCKNAM ROAD
I-295 NB RAMPS INTERSECTION
CUMBERLAND COUNTY
FALMOUTH
I-295 NORTHBOUND RAMP
CROSS SECTIONS

| PROJ. MANAGER | M. Kerstgen | BY | DATE |
|-------------------|-------------|-----|--------|
| DESIGN-DET ALED | JFMS | KDP | |
| CHECCKED-REVIEWED | JCC | SBH | 1-2022 |
| DESIGN2-DET ALED2 | | | |
| DESIGN3-DET ALED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

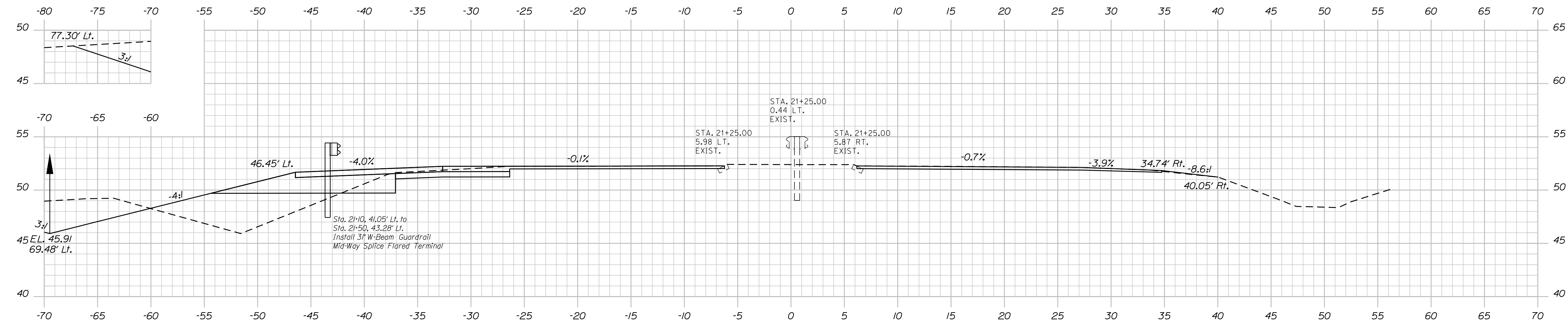
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|-------------------------|--|
| SIGNATURE | STATE OF MAINE DEPARTMENT OF TRANSPORTATION |
| P.E. NUMBER | |
| DATE | |
| WIN 022672.00 | |
| BRIDGE PLANS | |



21+75.00



21+50.00



21+25.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN
022672.00

BRIDGE PLANS

BUCKNAM ROAD
I-295 NB RAMPS INTERSECTION
FALMOUTH CUMBERLAND COUNTY

I-295 NORTHBOUND RAMP
CROSS SECTIONS

SHEET NUMBER
42
OF 46

DATE
1-2022
SIGNATURE
P.E. NUMBER
DATE

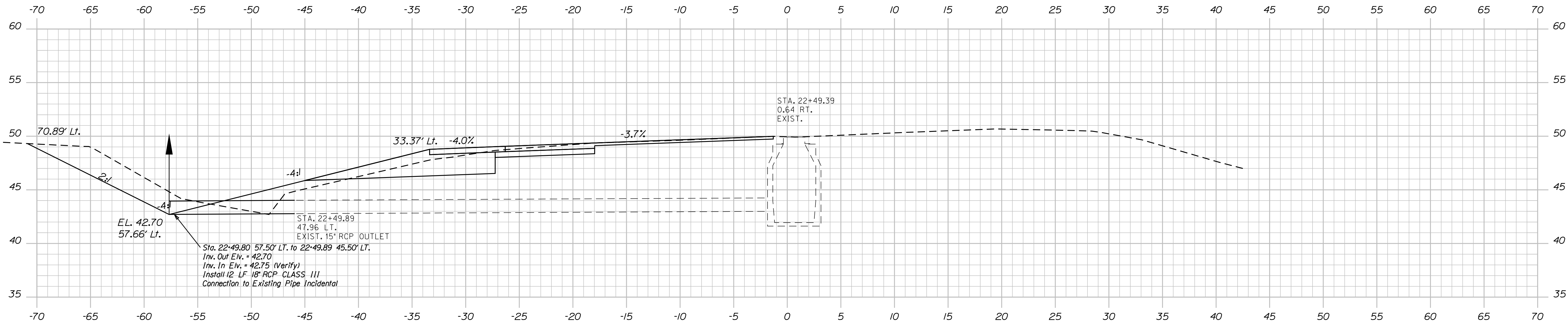
PROJ. MANAGER
M. Kersbergen
DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
DESIGN-DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

Date:4/6/2022

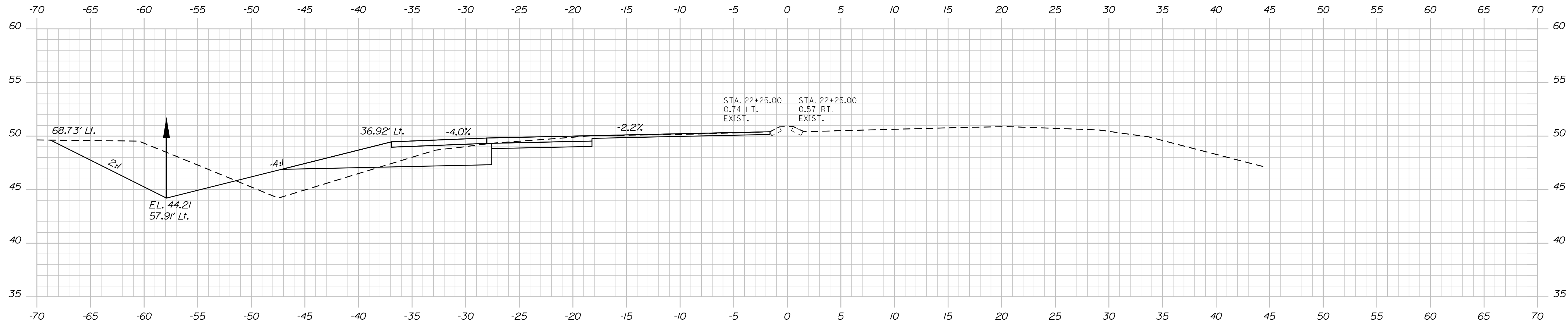
Username:

Division: HIGHWAY

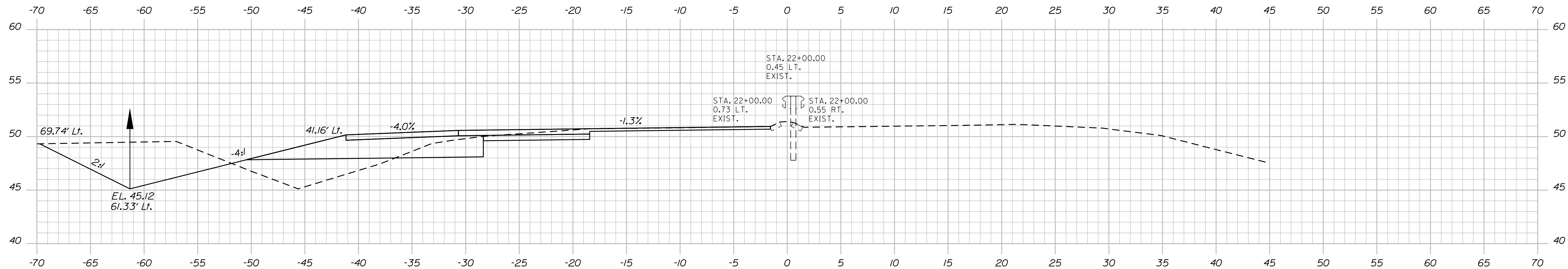
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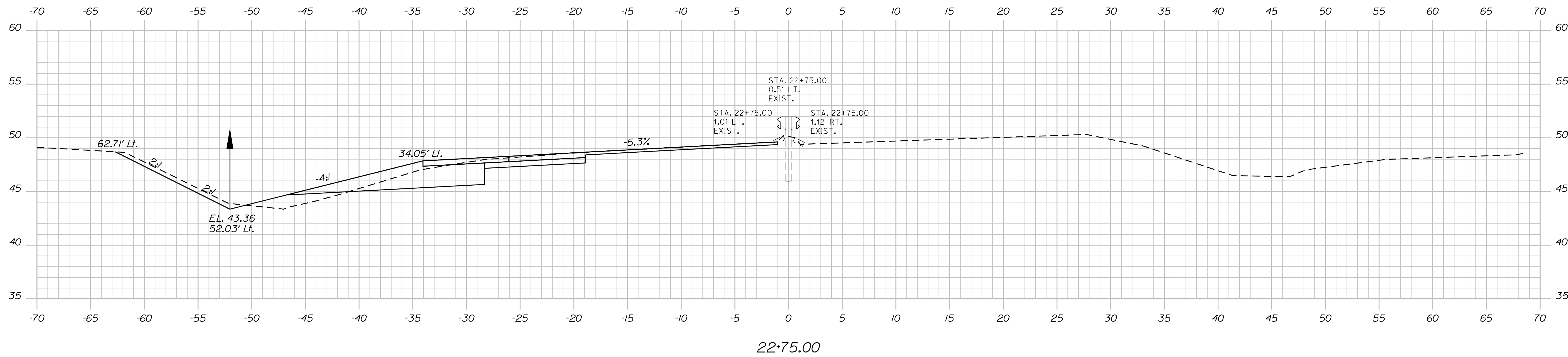
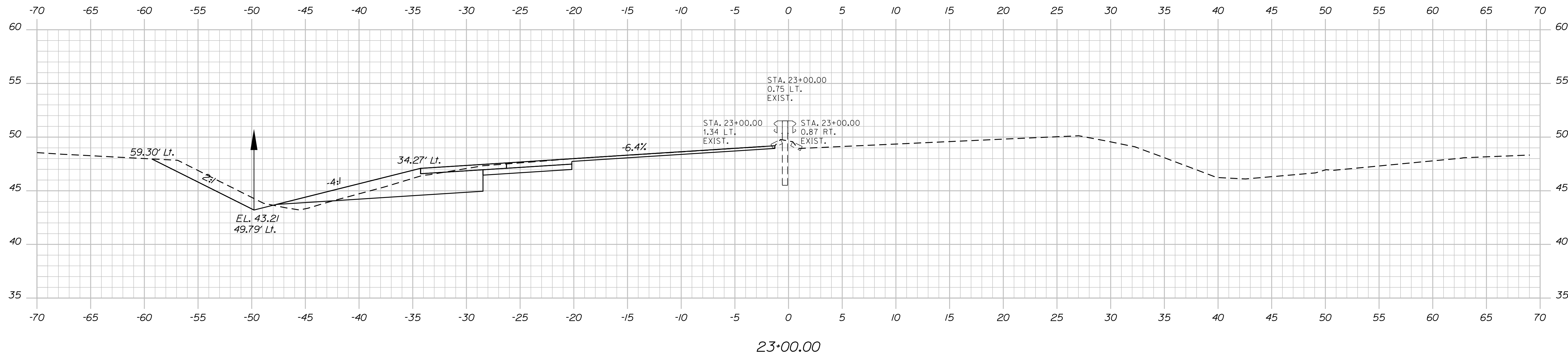
22+50.00

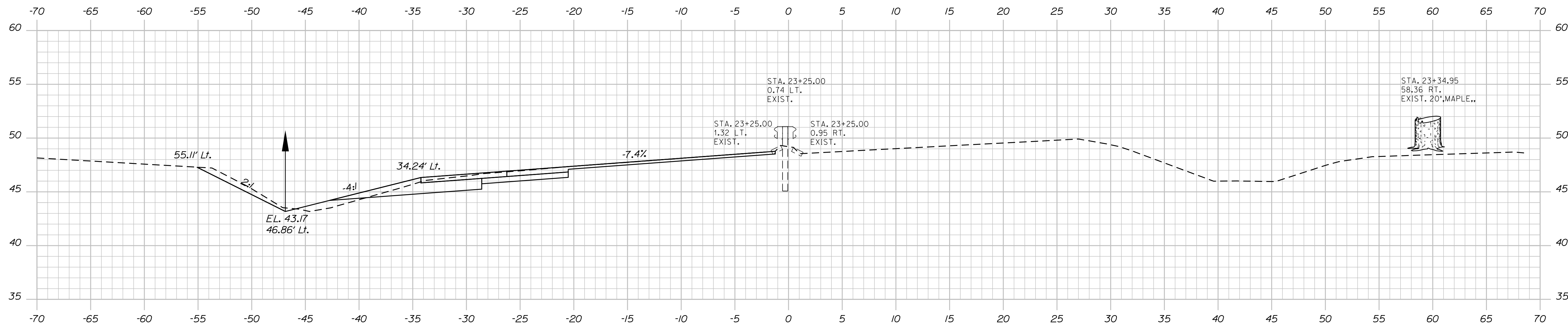


22+25.00



22+00.00





23+25.00

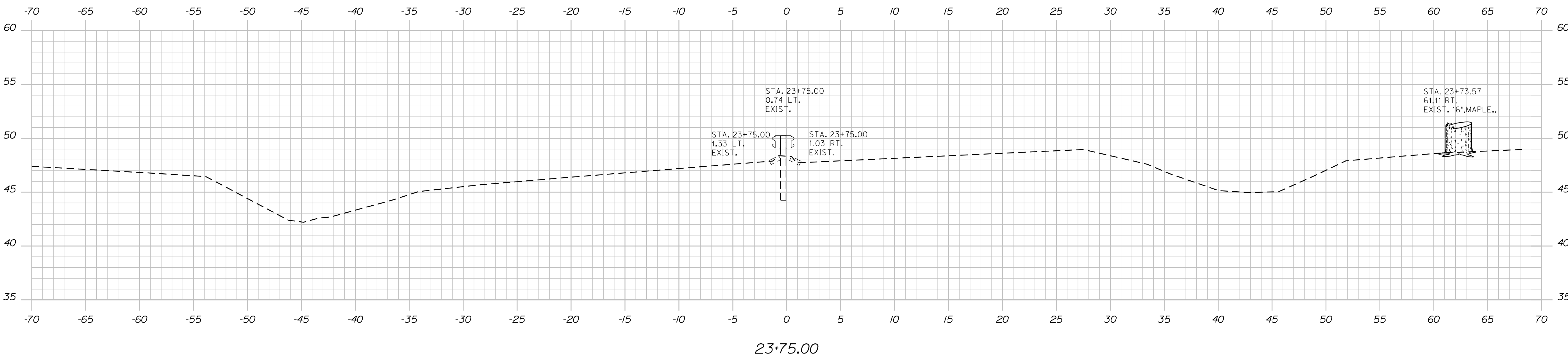
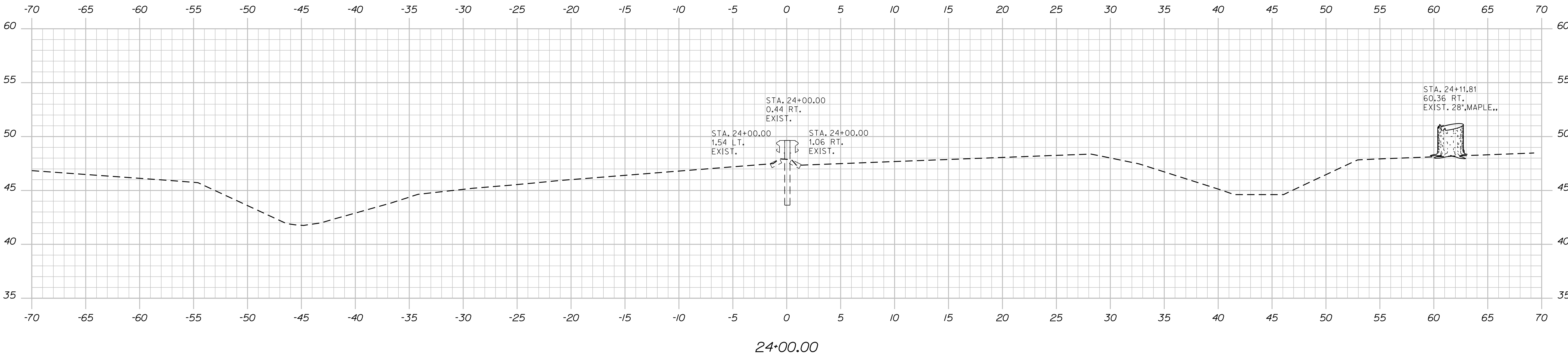
Sta. 23+25.00 to Sta. 23+50.00

Date:4/6/2022

Username:

Division: HIGHWAY

Filename: ... \MSTAO46_XSECT_23+75_007.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN
022672.00

BRIDGE PLANS

BUCKNAM ROAD
I-295 NB RAMP INTERSECTION
FALMOUTH CUMBERLAND COUNTY

I-295 NORTHBOUND RAMP
CROSS SECTIONS

SHEET NUMBER
46
OF 46

DATE
1-2022
SIGNATURE
P.E. NUMBER
DATE

PROJ. MANAGER
M. Kersbergen
DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

BY
KJP
SBH