





PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY Binker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE Accumack (804) 550-7740

# INDEX OF SHEETS

REVISED	STATE	ROUTE	STATE	PROJECT	SHEET NO.
	VA.	460		0011-154-254 R201, C501	1B

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

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2D-2D(3)	Stormwater Pollution Prevention Plan (SWPPP) Sheets	
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*4RW	Right of Way Plan Sheet	13+00.00 TO 20+50.00
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5A	Profile Sheet N. Franklin St.	20+50.00 TO 25+71.33
5B	Erosion and Sediment Control Phase 1 Plan	20+50.00 TO 25+71.33
5C	Erosion and Sediment Control Phase 2 Plan	20+50.00 TO 25+71.33
6	Plan Sheet Depot St.	52+07.62 TO 53+75.00
6A	Profile Sheet Depot St.	52+07.62 TO 56+13.96
6B	Erosion and Sediment Control Phase 1 Plan	52+07.62 TO 53+75.00
6C	Erosion and Sediment Control Phase 2 Plan	52+07.62 TO 53+75.00
7A	Drainage Descriptions	
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8(1)	Signing and Pavement Marking Plan Index of Sheets, General Notes & Legends	
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8(3)-8(6)	Signing and Pavement Marking Plans - N. Franklin St. - Depot Street	
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	Cross Section Index	
X1 - X26	Cross Sections - N. Franklin Street	
X27-X33	Cross Sections - Depot Street	
*	Denotes sheets included in future submission	

8/29/2024

	PROJECT 0011-154-254	SHEET NO. 1B
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ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

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REVISED	STATE	ROUTE	STATE	PROJECT	SHEET NO.
	VA.	460		0011-154-254 R201, C501	1C

# Right of Way Data Sheet

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

City/County: Montgomery County

UPC No.: 119471

AREA: Areas greater than or equal to 1 acre will be shown in acres to 3 decimal places (x.xxx AC). Areas less than 1 acre will be shown in square feet (xx,xxx SF).

PARCEL NO.	LANDOWNER	PLAN SHEET NO.	TOTAL	FEE TAKING	PRESCRIPTIVE R/W	FEE REMAINDER	PERMANENT EASEMENTS		UTILITY EASEMENTS		TEMP. EASEMENTS	PROFFERS	Montgomery Parcel ID
			ACRES	ACRES OR SQ. FEET	ACRES OR SQ. FEET	ACRES	DRAINAGE (SF)	DRAIN. SLOPE (SF)	VDOT UTILITY (ACRES OR SQ. FEET)	DANVILLE POWER (ACRES OR SQ. FEET)	CONSTRUCTION ENT. (SF)	YES/NO	
001	RTA USA LLC	3,4	0.885								140 SF		26964
002	LAURENCE LANE LLC, C/O DAVID HENRY	4	0.634	2095 SF		0.586					2465 SF		16489
003	RWW50 LLC	4	0.340	563 SF		0.327							7105
004	REAL PROPERTY HOLDING INC	4									957 SF		7479
005	RAYMOND BISHOP	4	0.099	1363 SF		0.068					1462 SF		26411
006	HILL PROPERIES + DESIGN, LLC	4	0.236								1311 SF		3186
007	J.STUART ARBUCKLE, JILL ANN ARBUCKLE	4,6	0.498	58.250 SF		0.497					129 SF		507

NOT TO SCALE

PROJECT  
0011-154-254

SHEET NO.  
1C

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# Survey Alignment Data Sheet

REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	460	0011-154-254 R201, C501	1F

DESIGN FEATURES RELATING TO CONSTRUCTION  
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Survey Control				
Point#	Northing	Easting	Elevation	Description
8	3,576,862.05	10,926,104.59	2,066.56	CP--R/C
9	3,577,121.47	10,925,733.23	2,052.86	CP--R/C
10	3,577,457.21	10,925,474.79	2,050.24	CP--R/C
11	3,577,727.28	10,925,214.37	2,058.54	CP- R/C
12	3,578,129.81	10,925,224.19	2,073.19	CP--R/C
30	3,577,344.89	10,925,721.58	2,078.74	CP--R/C
31	3,577,163.25	10,925,249.12	2,053.19	CP--R/C

8/27/2024

	PROJECT 0011-154-254	SHEET NO. 1F
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 SUBSURFACE UTILITY BY DATE AccuMark (804) 550-7240

# Construction Alignment Data Sheet

REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	460	0011-154-254 R201, C501	1G

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Alignment Name:	N Franklin Street		
Alignment Description:			
Alignment Style:	Linear\Road Design\Alignments\Horizontal\25 Scale Baselines		
	Station	Northing	Easting
Element: Linear			
START	( ) 6+56.820 R1	3578427.45	10925152.6
PC	( ) 9+99.927 R1	3578087.913	10925201.97
Tangential Direction:	S8.272°E		
Tangential Length:	343.107		
Element: Circular			
PC	( ) 9+99.927 R1	3578087.913	10925201.97
HPI	( ) 11+70.892 R1	3577918.727	10925226.57
CC	( ) 3578987.166	10931386.94	
PCC	( ) 13+41.773 R1	3577751.137	10925260.38
Radius:	6250		
Delta:	3.134°		
Degree of Curvature (Arc):	0.917°		
Length:	341.846		
Tangent:	170.966		
Chord:	341.804		
Middle Ordinate:	2.337		
External:	2.338		
Back Tangent Direction:	S8.272°E		
Back Radial Direction:	S81.728°W		
Chord Direction:	S9.839°E		
Ahead Radial Direction:	S78.594°W		
Ahead Tangent Direction:	S11.406°E		
Element: Circular			
PCC	( ) 13+41.773 R1	3577751.137	10925260.38
HPI	( ) 15+51.944 R1	3577545.117	10925301.94
CC	( ) 3577874.741	10925873.04	
PT	( ) 17+47.266 R1	3577406.071	10925459.54
Radius:	625.003		
Delta:	37.173°		
Degree of Curvature (Arc):	9.167°		
Length:	405.493		
Tangent:	210.171		
Chord:	398.419		
Middle Ordinate:	32.597		
External:	34.391		
Back Tangent Direction:	S11.406°E		
Back Radial Direction:	S78.594°W		
Chord Direction:	S29.993°E		
Ahead Radial Direction:	S41.421°W		
Ahead Tangent Direction:	S48.579°E		
Element: Linear			
PT	( ) 17+47.266 R1	3577406.071	10925459.54
PC	( ) 24+24.637 R1	3576957.931	10925967.48
Tangential Direction:	S48.579°E		
Tangential Length:	677.371		
Element: Circular			
PC	( ) 24+24.637 R1	3576957.931	10925967.48
HPI	( ) 24+89.075 R1	3576915.3	10926015.8
CC	( ) 3573546.029	10922957.26	
PT	( ) 25+53.504 R1	3576871.318	10926062.89
Radius:	4550		
Delta:	1.623°		
Degree of Curvature (Arc):	1.259°		
Length:	128.867		
Tangent:	64.438		
Chord:	128.862		
Middle Ordinate:	0.456		
External:	0.456		
Back Tangent Direction:	S48.579°E		
Back Radial Direction:	S41.421°W		
Chord Direction:	S47.768°E		
Ahead Radial Direction:	S43.044°W		
Ahead Tangent Direction:	S46.956°E		
Element: Linear			
PT	( ) 25+53.504 R1	3576871.318	10926062.89
END	( ) 26+36.966 R1	3576814.35	10926123.89
Tangential Direction:	S46.956°E		
Tangential Length:	83.462		

Alignment Name:	Depot Street		
Alignment Description:			
Alignment Style:	Linear\Road Design\Alignments\Horizontal\25 Scale Baselines		
	Station	Northing	Easting
Element: Linear			
START	( ) 50+00.000 R1	3577082.164	10925099.07
PC	( ) 51+51.342 R1	3577179.4	10925215.05
Tangential Direction:	N50.022°E		
Tangential Length:	151.342		
Element: Circular			
PC	( ) 51+51.342 R1	3577179.4	10925215.05
HPI	( ) 53+02.145 R1	3577276.29	10925330.6
CC	( ) 3577838.41	10924662.5	
PRC	( ) 54+49.913 R1	3577406.718	10925406.3
Radius:	860		
Delta:	19.892°		
Degree of Curvature (Arc):	6.662°		
Length:	298.571		
Tangent:	150.803		
Chord:	297.073		
Middle Ordinate:	12.925		
External:	13.122		
Back Tangent Direction:	N50.022°E		
Back Radial Direction:	S39.978°E		
Chord Direction:	N40.076°E		
Ahead Radial Direction:	S59.870°E		
Ahead Tangent Direction:	N30.130°E		
Element: Circular			
PRC	( ) 54+49.913 R1	3577406.718	10925406.3
HPI	( ) 55+29.711 R1	3577475.734	10925446.36
CC	( ) 3576904.75	10926271.19	
PT	( ) 56+09.172 R1	3577537.525	10925496.85
Radius:	1000		
Delta:	9.125°		
Degree of Curvature (Arc):	5.730°		
Length:	159.259		
Tangent:	79.798		
Chord:	159.091		
Middle Ordinate:	3.169		
External:	3.179		
Back Tangent Direction:	N30.130°E		
Back Radial Direction:	S59.870°E		
Chord Direction:	N34.693°E		
Ahead Radial Direction:	S50.745°E		
Ahead Tangent Direction:	N39.255°E		
Element: Linear			
PT	( ) 56+09.172 R1	3577537.525	10925496.85
END	( ) 59+22.700 R1	3577780.301	10925695.25
Tangential Direction:	N39.255°E		
Tangential Length:	313.528		

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	PROJECT 0011-154-254	SHEET NO. 1G
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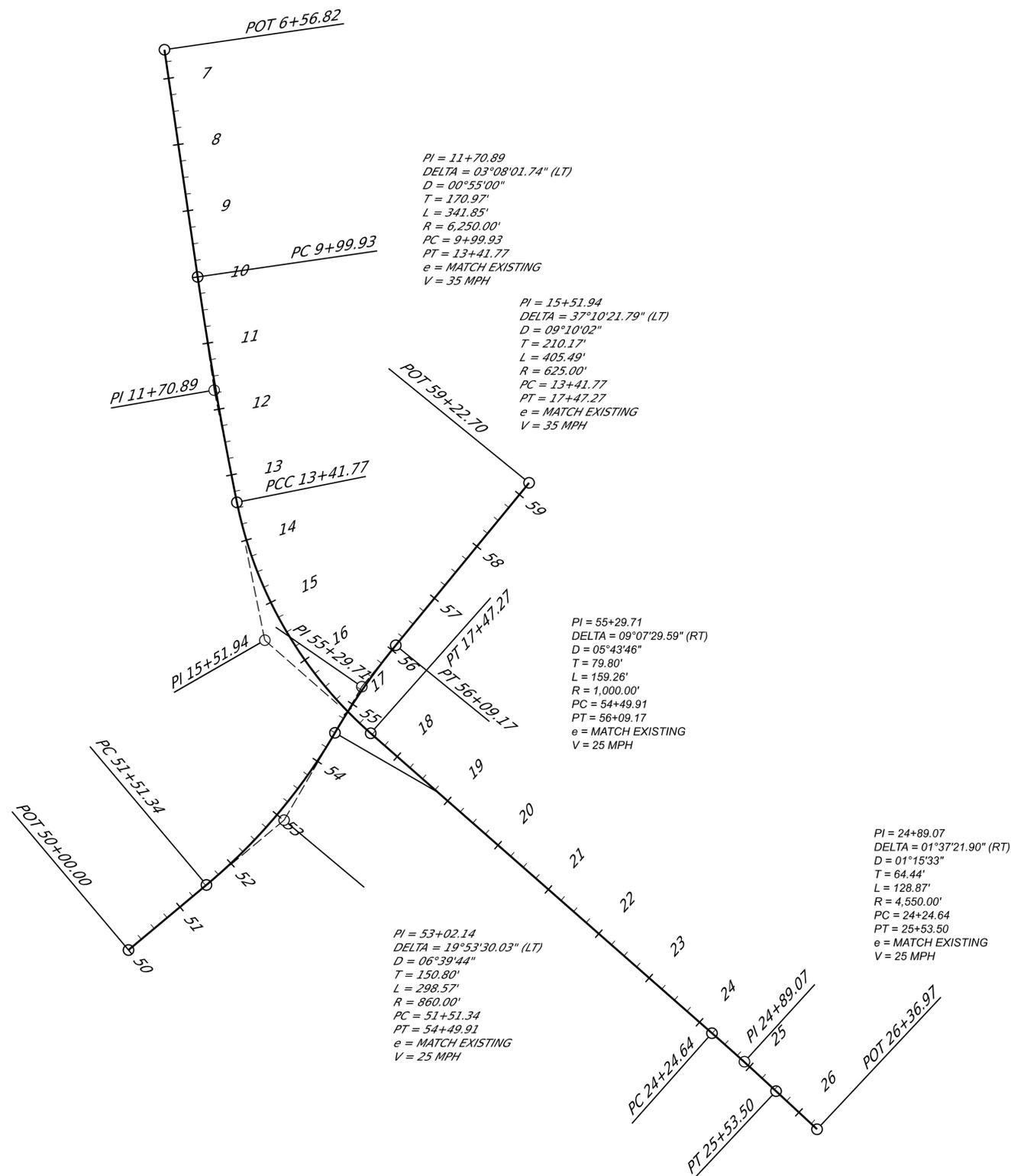
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 SUBSURFACE UTILITY BY, DATE: Accumack (804) 550-7740

# Construction Alignment Data Sheet

REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	460	0011-154-254 R201, C501	1G(1)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



8/27/2024

SCALE 0 100' 200'	PROJECT 0011-154-254	SHEET NO. 1G(1)
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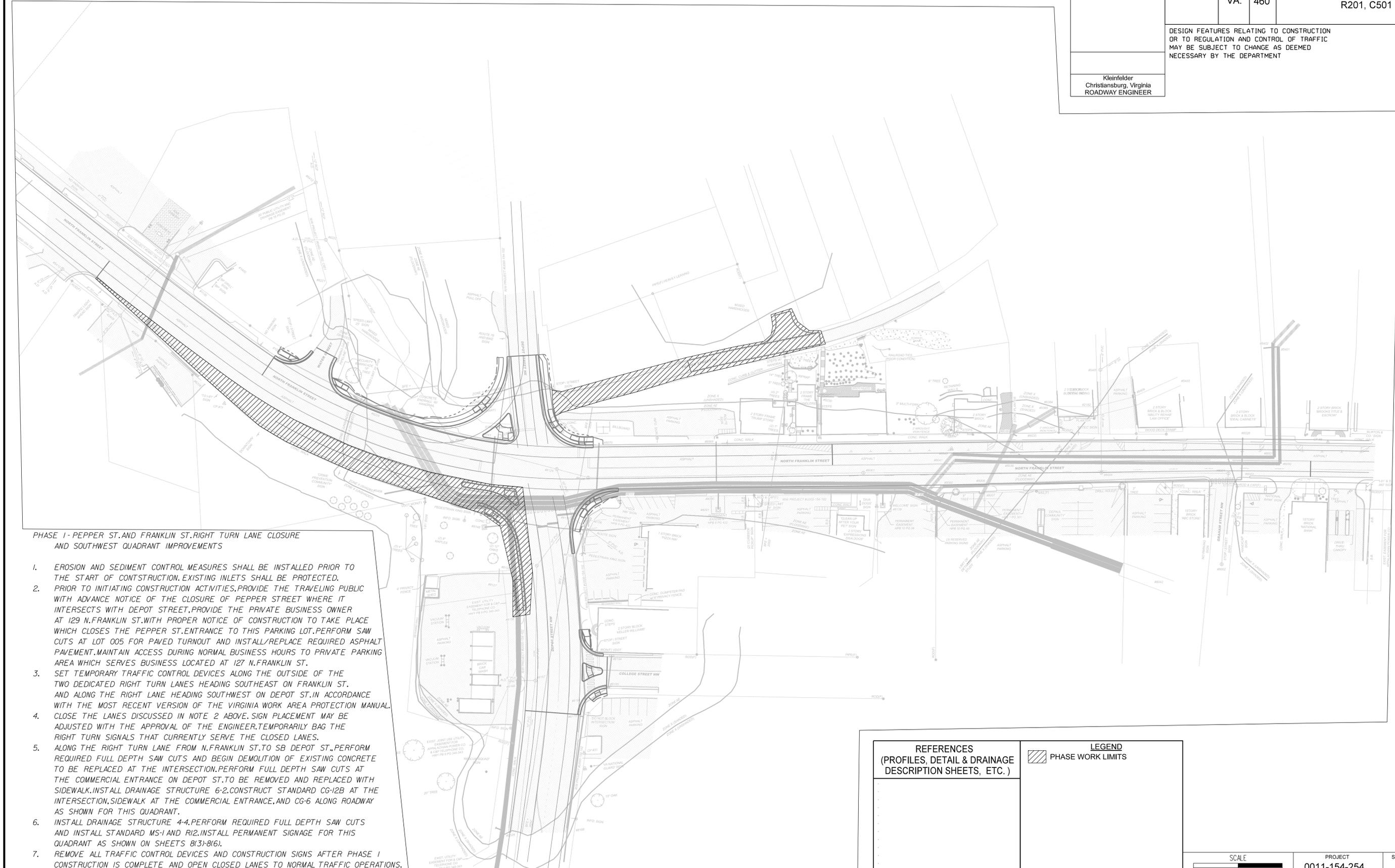
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PHASE I - TEMPORARY TRAFFIC CONTROL PLAN

REVISED	STATE	STATE		SHEET NO.
	VA.	ROUTE 460	PROJECT 0011-154-254 R201, C501	
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT				
Kleinfelder Christiansburg, Virginia ROADWAY ENGINEER				



PHASE I - PEPPER ST. AND FRANKLIN ST. RIGHT TURN LANE CLOSURE AND SOUTHWEST QUADRANT IMPROVEMENTS

1. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION. EXISTING INLETS SHALL BE PROTECTED.
2. PRIOR TO INITIATING CONSTRUCTION ACTIVITIES, PROVIDE THE TRAVELING PUBLIC WITH ADVANCE NOTICE OF THE CLOSURE OF PEPPER STREET WHERE IT INTERSECTS WITH DEPOT STREET. PROVIDE THE PRIVATE BUSINESS OWNER AT 129 N. FRANKLIN ST. WITH PROPER NOTICE OF CONSTRUCTION TO TAKE PLACE WHICH CLOSES THE PEPPER ST. ENTRANCE TO THIS PARKING LOT. PERFORM SAW CUTS AT LOT 005 FOR PAVED TURNOUT AND INSTALL/REPLACE REQUIRED ASPHALT PAVEMENT. MAINTAIN ACCESS DURING NORMAL BUSINESS HOURS TO PRIVATE PARKING AREA WHICH SERVES BUSINESS LOCATED AT 127 N. FRANKLIN ST.
3. SET TEMPORARY TRAFFIC CONTROL DEVICES ALONG THE OUTSIDE OF THE TWO DEDICATED RIGHT TURN LANES HEADING SOUTHEAST ON FRANKLIN ST. AND ALONG THE RIGHT LANE HEADING SOUTHWEST ON DEPOT ST. IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE VIRGINIA WORK AREA PROTECTION MANUAL. CLOSE THE LANES DISCUSSED IN NOTE 2 ABOVE. SIGN PLACEMENT MAY BE ADJUSTED WITH THE APPROVAL OF THE ENGINEER. TEMPORARILY BAG THE RIGHT TURN SIGNALS THAT CURRENTLY SERVE THE CLOSED LANES.
4. ALONG THE RIGHT TURN LANE FROM N. FRANKLIN ST. TO SB DEPOT ST., PERFORM REQUIRED FULL DEPTH SAW CUTS AND BEGIN DEMOLITION OF EXISTING CONCRETE TO BE REPLACED AT THE INTERSECTION. PERFORM FULL DEPTH SAW CUTS AT THE COMMERCIAL ENTRANCE ON DEPOT ST. TO BE REMOVED AND REPLACED WITH SIDEWALK. INSTALL DRAINAGE STRUCTURE 6-2. CONSTRUCT STANDARD CG-12B AT THE INTERSECTION, SIDEWALK AT THE COMMERCIAL ENTRANCE, AND CG-6 ALONG ROADWAY AS SHOWN FOR THIS QUADRANT.
5. INSTALL DRAINAGE STRUCTURE 4-4. PERFORM REQUIRED FULL DEPTH SAW CUTS AND INSTALL STANDARD MS-1 AND R12. INSTALL PERMANENT SIGNAGE FOR THIS QUADRANT AS SHOWN ON SHEETS 8(3)-8(6).
7. REMOVE ALL TRAFFIC CONTROL DEVICES AND CONSTRUCTION SIGNS AFTER PHASE I CONSTRUCTION IS COMPLETE AND OPEN CLOSED LANES TO NORMAL TRAFFIC OPERATIONS.

<p><b>REFERENCES</b> (PROFILES, DETAIL &amp; DRAINAGE DESCRIPTION SHEETS, ETC.)</p>	<p><b>LEGEND</b>   PHASE WORK LIMITS</p>
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SCALE 0 50' 100'	PROJECT 0011-154-254	SHEET NO. 1K(1)
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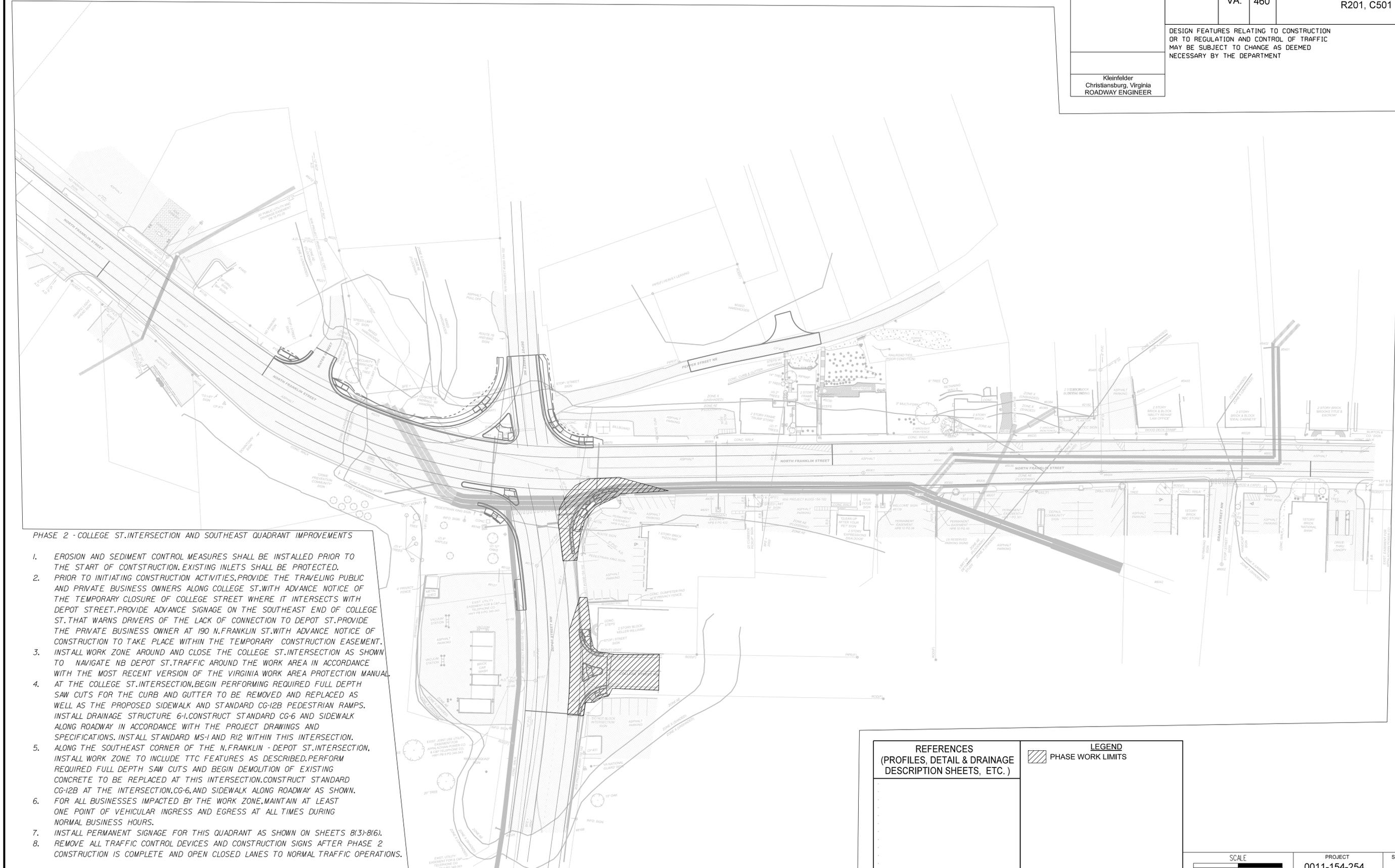
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PHASE 2 - TEMPORARY TRAFFIC CONTROL PLAN

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	1K(2)

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Kleinfelder  
 Christiansburg, Virginia  
 ROADWAY ENGINEER



PHASE 2 - COLLEGE ST. INTERSECTION AND SOUTHEAST QUADRANT IMPROVEMENTS

1. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION. EXISTING INLETS SHALL BE PROTECTED.
2. PRIOR TO INITIATING CONSTRUCTION ACTIVITIES, PROVIDE THE TRAVELING PUBLIC AND PRIVATE BUSINESS OWNERS ALONG COLLEGE ST. WITH ADVANCE NOTICE OF THE TEMPORARY CLOSURE OF COLLEGE STREET WHERE IT INTERSECTS WITH DEPOT STREET. PROVIDE ADVANCE SIGNAGE ON THE SOUTHEAST END OF COLLEGE ST. THAT WARNS DRIVERS OF THE LACK OF CONNECTION TO DEPOT ST. PROVIDE THE PRIVATE BUSINESS OWNER AT 190 N. FRANKLIN ST. WITH ADVANCE NOTICE OF CONSTRUCTION TO TAKE PLACE WITHIN THE TEMPORARY CONSTRUCTION EASEMENT.
3. INSTALL WORK ZONE AROUND AND CLOSE THE COLLEGE ST. INTERSECTION AS SHOWN TO NAVIGATE NB DEPOT ST. TRAFFIC AROUND THE WORK AREA IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE VIRGINIA WORK AREA PROTECTION MANUAL.
4. AT THE COLLEGE ST. INTERSECTION, BEGIN PERFORMING REQUIRED FULL DEPTH SAW CUTS FOR THE CURB AND GUTTER TO BE REMOVED AND REPLACED AS WELL AS THE PROPOSED SIDEWALK AND STANDARD CG-12B PEDESTRIAN RAMPS. INSTALL DRAINAGE STRUCTURE 6-1. CONSTRUCT STANDARD CG-6 AND SIDEWALK ALONG ROADWAY IN ACCORDANCE WITH THE PROJECT DRAWINGS AND SPECIFICATIONS. INSTALL STANDARD MS-1 AND R12 WITHIN THIS INTERSECTION.
5. ALONG THE SOUTHEAST CORNER OF THE N. FRANKLIN - DEPOT ST. INTERSECTION, INSTALL WORK ZONE TO INCLUDE TTC FEATURES AS DESCRIBED. PERFORM REQUIRED FULL DEPTH SAW CUTS AND BEGIN DEMOLITION OF EXISTING CONCRETE TO BE REPLACED AT THIS INTERSECTION. CONSTRUCT STANDARD CG-12B AT THE INTERSECTION, CG-6, AND SIDEWALK ALONG ROADWAY AS SHOWN.
6. FOR ALL BUSINESSES IMPACTED BY THE WORK ZONE, MAINTAIN AT LEAST ONE POINT OF VEHICULAR INGRESS AND EGRESS AT ALL TIMES DURING NORMAL BUSINESS HOURS.
7. INSTALL PERMANENT SIGNAGE FOR THIS QUADRANT AS SHOWN ON SHEETS 8(3)-8(6).
8. REMOVE ALL TRAFFIC CONTROL DEVICES AND CONSTRUCTION SIGNS AFTER PHASE 2 CONSTRUCTION IS COMPLETE AND OPEN CLOSED LANES TO NORMAL TRAFFIC OPERATIONS.

REFERENCES  
 (PROFILES, DETAIL & DRAINAGE  
 DESCRIPTION SHEETS, ETC.)

LEGEND  
 PHASE WORK LIMITS



PROJECT	SHEET NO.
0011-154-254	1K(2)

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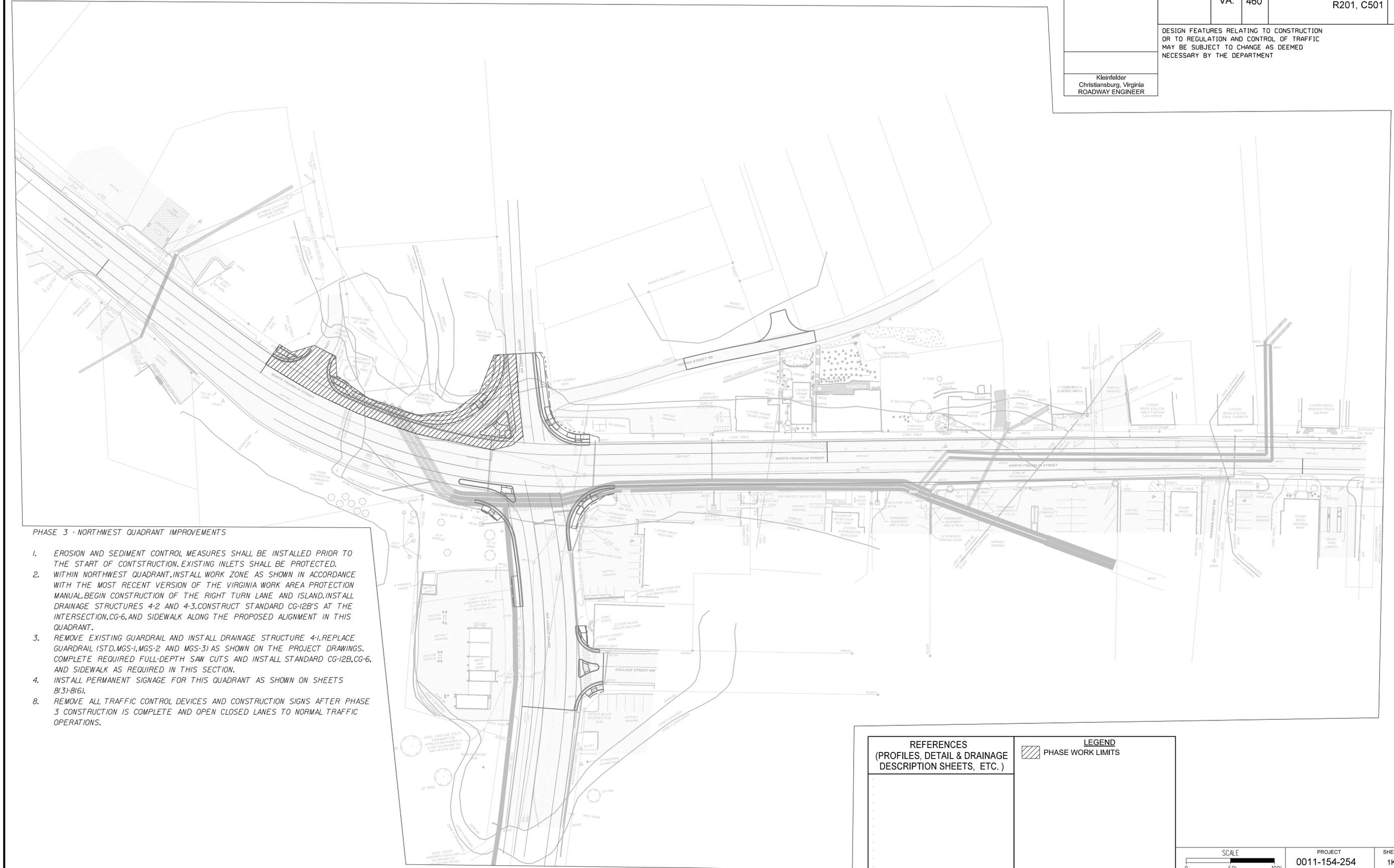
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PHASE 3 - TEMPORARY TRAFFIC CONTROL PLAN

REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	460	0011-154-254 R201, C501	1K(3)

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Kleinfelder  
 Christiansburg, Virginia  
 ROADWAY ENGINEER



PHASE 3 - NORTHWEST QUADRANT IMPROVEMENTS

1. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION. EXISTING INLETS SHALL BE PROTECTED.
2. WITHIN NORTHWEST QUADRANT, INSTALL WORK ZONE AS SHOWN IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE VIRGINIA WORK AREA PROTECTION MANUAL. BEGIN CONSTRUCTION OF THE RIGHT TURN LANE AND ISLAND. INSTALL DRAINAGE STRUCTURES 4-2 AND 4-3. CONSTRUCT STANDARD CG-12B'S AT THE INTERSECTION, CG-6, AND SIDEWALK ALONG THE PROPOSED ALIGNMENT IN THIS QUADRANT.
3. REMOVE EXISTING GUARDRAIL AND INSTALL DRAINAGE STRUCTURE 4-1. REPLACE GUARDRAIL (STD. MGS-1, MGS-2 AND MGS-3) AS SHOWN ON THE PROJECT DRAWINGS. COMPLETE REQUIRED FULL-DEPTH SAW CUTS AND INSTALL STANDARD CG-12B, CG-6, AND SIDEWALK AS REQUIRED IN THIS SECTION.
4. INSTALL PERMANENT SIGNAGE FOR THIS QUADRANT AS SHOWN ON SHEETS 8(3)-8(6).
8. REMOVE ALL TRAFFIC CONTROL DEVICES AND CONSTRUCTION SIGNS AFTER PHASE 3 CONSTRUCTION IS COMPLETE AND OPEN CLOSED LANES TO NORMAL TRAFFIC OPERATIONS.

REFERENCES  
 (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

LEGEND  
 PHASE WORK LIMITS



PROJECT	SHEET NO.
0011-154-254	1K(3)

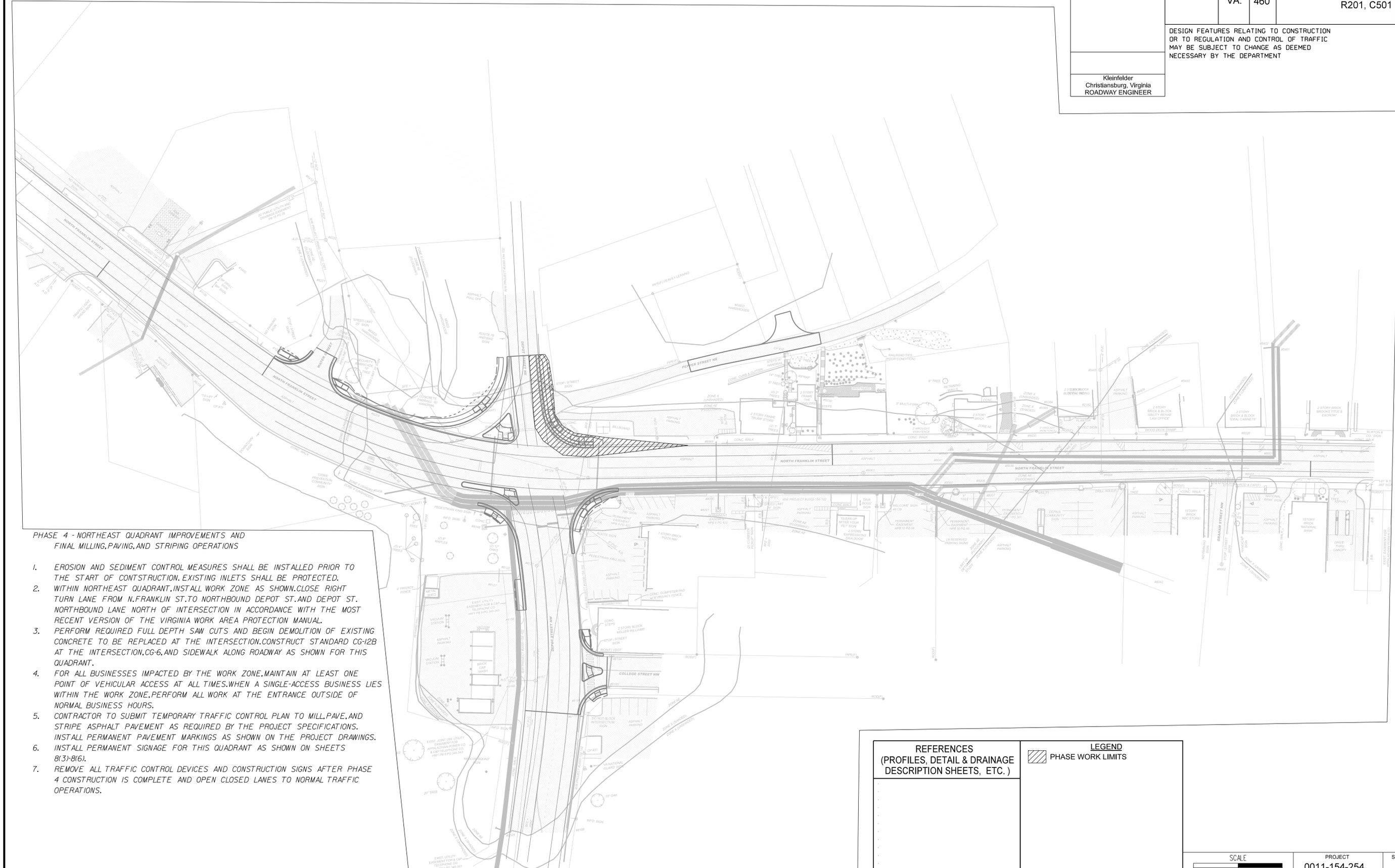
THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION.

ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE Accumark (804) 550-7240

PHASE 4 - TEMPORARY TRAFFIC CONTROL PLAN

REVISED	STATE	STATE		SHEET NO.
	VA.	ROUTE 460	PROJECT 0011-154-254 R201, C501	
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT				
Kleinfelder Christiansburg, Virginia ROADWAY ENGINEER				



PHASE 4 - NORTHEAST QUADRANT IMPROVEMENTS AND FINAL MILLING, PAVING, AND STRIPING OPERATIONS

1. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION. EXISTING INLETS SHALL BE PROTECTED.
2. WITHIN NORTHEAST QUADRANT, INSTALL WORK ZONE AS SHOWN. CLOSE RIGHT TURN LANE FROM N. FRANKLIN ST. TO NORTHBOUND DEPOT ST. AND DEPOT ST. NORTHBOUND LANE NORTH OF INTERSECTION IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE VIRGINIA WORK AREA PROTECTION MANUAL.
3. PERFORM REQUIRED FULL DEPTH SAW CUTS AND BEGIN DEMOLITION OF EXISTING CONCRETE TO BE REPLACED AT THE INTERSECTION. CONSTRUCT STANDARD CG-12B AT THE INTERSECTION, CG-6, AND SIDEWALK ALONG ROADWAY AS SHOWN FOR THIS QUADRANT.
4. FOR ALL BUSINESSES IMPACTED BY THE WORK ZONE, MAINTAIN AT LEAST ONE POINT OF VEHICULAR ACCESS AT ALL TIMES. WHEN A SINGLE-ACCESS BUSINESS LIES WITHIN THE WORK ZONE, PERFORM ALL WORK AT THE ENTRANCE OUTSIDE OF NORMAL BUSINESS HOURS.
5. CONTRACTOR TO SUBMIT TEMPORARY TRAFFIC CONTROL PLAN TO MILL, PAVE, AND STRIPE ASPHALT PAVEMENT AS REQUIRED BY THE PROJECT SPECIFICATIONS. INSTALL PERMANENT PAVEMENT MARKINGS AS SHOWN ON THE PROJECT DRAWINGS.
6. INSTALL PERMANENT SIGNAGE FOR THIS QUADRANT AS SHOWN ON SHEETS 8(3)-8(6).
7. REMOVE ALL TRAFFIC CONTROL DEVICES AND CONSTRUCTION SIGNS AFTER PHASE 4 CONSTRUCTION IS COMPLETE AND OPEN CLOSED LANES TO NORMAL TRAFFIC OPERATIONS.

REFERENCES  
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

LEGEND  
 PHASE WORK LIMITS



PROJECT	SHEET NO.
0011-154-254	1K(4)

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SUBSURFACE UTILITY BY, DATE AccuMark (804) 550-7740

# GENERAL NOTES

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

## GRADING

- G-1 The grade line denotes top of finished pavement unless shown otherwise on typical sections or plans.
- G-3 Earthwork quantities on this project are based on anticipated settlement and may require adjusting during construction. Payment will be made only for quantities actually moved.
- G-4 The cost of removal of all existing concrete items located in the area to be graded, including, but not limited to the following, shall be included in the price bid for regular excavation: \_\_\_\_\_
- G-6 The borrow material for this project shall be a minimum CBR \_\_\_\_\_ or as approved by the Materials Engineer.
- G-7 Material from regular excavation which is suitable for stabilization with hydraulic cement (lime) shall be placed in the top portion of the subgrade.

## DRAINAGE

- D-1 The horizontal location of all drainage structures shown on these plans is approximate only, with the exception of structures showing specific stations, special design bridges and storm sewer systems.
- D-2 The horizontal location and invert elevations shown for proposed culverts and storm sewer outfall pipes are based on existing survey data and required design criteria. If during construction, it is found that the horizontal location or invert elevations shown on the plans differ significantly from the horizontal location or elevations of the stream or swale in which the culvert or storm sewer outfall pipe is to be placed, the Engineer shall confer with, and get approval from, the applicable District Drainage Engineer before installing the culvert or storm sewer outfall pipe.
- D-3 The "H" dimensions shown on plans for drop inlets and junction boxes and the "L.F." dimensions shown for manholes are for estimating purposes and are based on the proposed invert elevations shown for the structure and the anticipated top (rim) elevation based on existing or proposed finished grade. The actual "H" or "L.F." dimensions are to be determined by the contractor from field conditions.
- D-6 Pipes shall conform to any of the allowable types shown on sheet number 7A, within the applicable height of cover limitations. For strength, sheet thickness, or class designation; available sizes; height of cover limitations; and other restrictions for a particular pipe type or height of cover, see the VDOT Road and Bridge Standard PC-1. Structural plate pipe may be substituted for corrugated pipe of the same size, provided the substitution complies with the applicable sections of the VDOT Road and Bridge Standards PC-1.
- D-8 Where open joint pipe is to be used, no joint shall be opened a distance exceeding 25% of the spigot length. Sealing of the pipe joint shall be in accordance with Section 302 of the applicable VDOT Road and Bridge Specifications.
- D-13 Existing drainage facilities being utilized as a part of the drainage system, and designated on the plans "To Be Cleaned Out" shall be cleaned as directed by the Engineer. The cost incidental to this shall be included in the contract price for other items.
- D-16 When CG-6 or CG-7 is specified on a radius (such as at a street intersection), the Engineer may approve a decrease in the cross slope of the gutter to facilitate proper drainage.

## PAVEMENT

- P-2 The pavement materials on this project will be paid for on a tonnage basis. The weight will vary in accordance with the specific gravity of the aggregates and the asphaltic content of the mix actually used to secure the design depth. The weight of the asphalt concrete is based on 95% of the theoretical maximum density.

## INCIDENTALS

- I-4 All trees located within the Clear Zone or within a minimum of 30 feet of the edge of pavement, within the limits of the right of way or construction easement, unless otherwise noted on plans or directed by the Engineer, shall be removed, as provided for a Section 301 of the applicable VDOT Road and Bridge Specifications.
- I-8A Clearing and grubbing shall be confined to those areas needed for construction. No trees or shrubs in ungraded areas shall be cut without the permission of the Engineer. Sta. . . . to Sta. . . .
- I-12 St'd. RM-2 right of way monuments shall be set by the Contractor.
- I-16 The "underground utilities" survey data on this project has been provided by consultant and copies are available from the Department.
- I-18 All pavement markings and traffic flow arrows shown on the roadway construction plans are schematic only. The actual location and application of pavement markings shall be in accordance with Section 704 of the applicable VDOT Road and Bridge Specifications, MUTCD, sequence of construction/traffic control plans, pavement marking plan sheets 8(3) thru 8(6) and as directed by the Engineer.

- I-19 The following outside sources, under contract with VDOT, have provided information on this project.

Hydraulic Design - Rinker Design Associates, LLC  
Roadway Design - Rinker Design Associates, LLC  
Utility Design - Rinker Design Associates, LLC  
Utility Designation - Rinker Design Associates, LLC  
Utility Location - Rinker Design Associates, LLC  
Survey - H&B Surveying and Mapping, LLC  
Bridge Design - N/A  
Traffic Design - Rinker Design Associates, LLC  
Landscape Design - N/A

If questions or problems arise during construction, please contact the Area Construction Engineer. DO NOT CONTACT THE OUTSIDE SOURCES.

- I-20 The Official Electronic PDF Version of the plans will override the paper copies or prints of specific layers.

Portions of this plan assembly have been CADD generated. To assist in the preparation of the bid and construction of the project, Microstation format (.dgn) files will be made available to the prime contractor during bids and after award of the contract.

- I-21 All electronic plan assemblies will include the construction plans in two formats: PDF files and MicroStation format (.dgn) files. Only the PDF files will be considered as part of the official plan assembly.

The MicroStation format (.dgn) files are furnished only as information for the contractor. These plans are developed in layers (levels) to aid in readability. (See the VDOT CADD Manual for CADD Level Structure). However, the construction items may or may not be in the proper layering scheme as described in the VDOT CADD Manual. The Microstation files will only match the scanned files if all required levels are turned on. A Microstation Software license is required to be able to read these files.

## EROSION AND SEDIMENT CONTROL (ESC)

- E-1 If the removal of Brush Silt Barrier is specified by the plans or required by the Engineer, the cost of removal and disposal of brush shall be in accordance with Section 109 of the applicable VDOT Road and Bridge Specifications.
- E-2 Rock for Check Dams, Inlet Protection, Erosion Control Stone and Riprap shall be in accordance with Section 203 and Section 414 of the applicable VDOT Road and Bridge Specifications.
- E-3 The following symbols are used to depict Erosion Control items in the plan assembly:



- E-4 Permanent vegetation shall be established on all denuded areas not otherwise stabilized with non-erodible materials. See the Roadside Development sheet for details on permanent vegetation establishment.

PROJECT	SHEET NO.
0011-154-254	2

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 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE Accumack (804) 550-7740

# Typical Sections

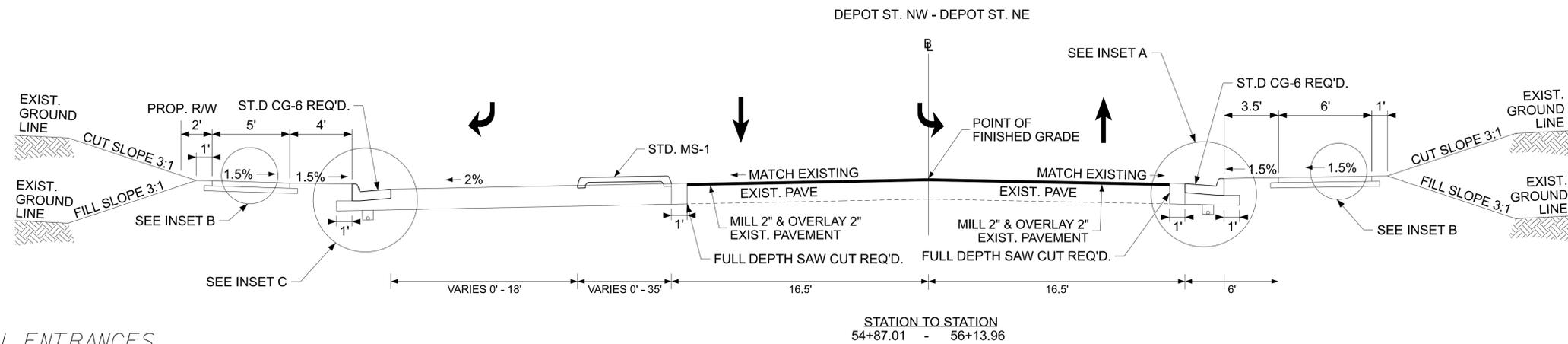
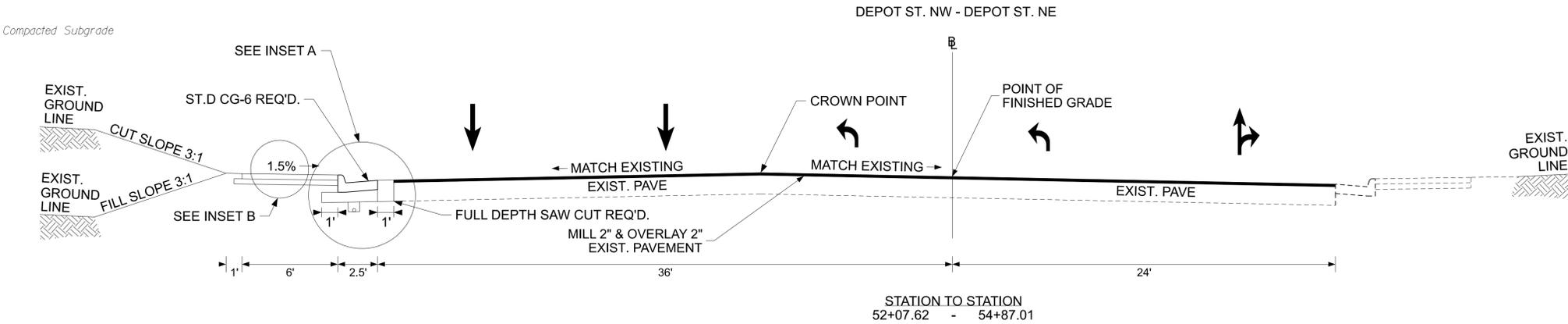
REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	2A(1)

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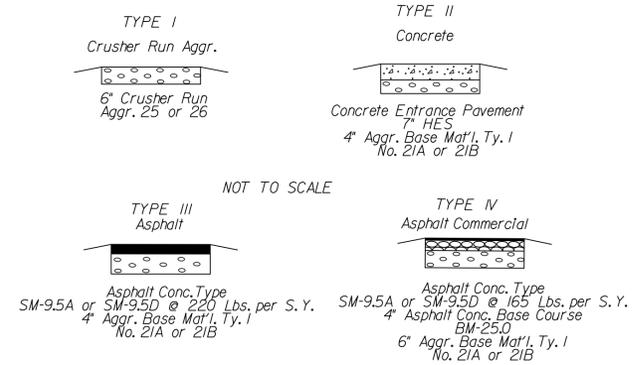
Rinker Design Associates, LLC  
 Glen Allen, Virginia  
 ROADWAY ENGINEER

## PAVEMENT LEGEND (PRELIMINARY)

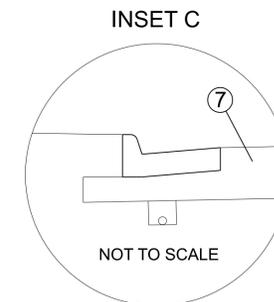
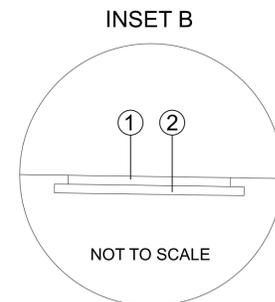
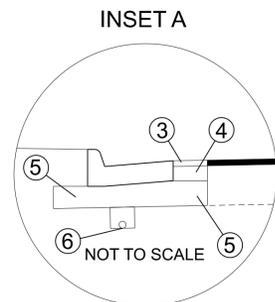
- ① 4" Hydraulic Cement Concrete Sidewalk (Class A3)
- ② 4" Aggregate Base Material, Type I, Size No. 21B, extended 6' beyond hydraulic cement concrete
- ③ 1.25" VDOT SM-9.5A Asphalt Surface Course
- ④ 3" VDOT BM-25.0 Asphalt Base Course
- ⑤ 6" Compacted VDOT 21-A Subbase Aggregate On A Compacted Subgrade
- ⑥ Standard UD-4



## PRIVATE AND COMMERCIAL ENTRANCES



The type of entrance (I, II, III, IV) to be constructed will be determined by the existing condition at the time of construction.



<b>NOT TO SCALE</b>	PROJECT 0011-154-254	SHEET NO. 2A(1)
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SUBSURFACE UTILITY BY, DATE AccuMark (804) 550-7240

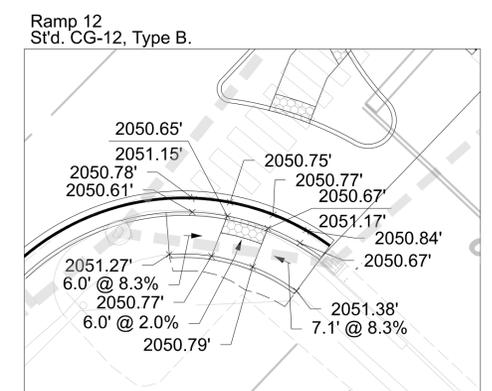
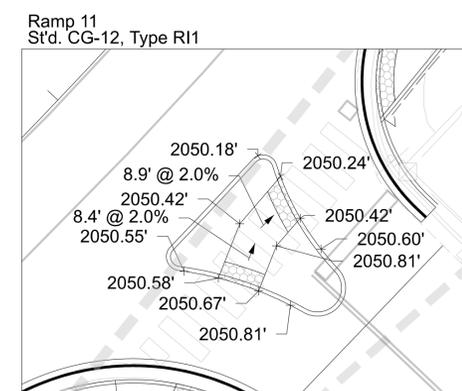
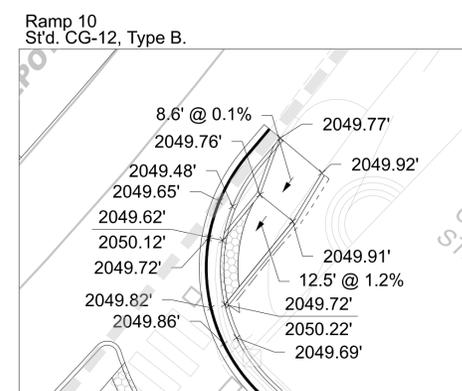
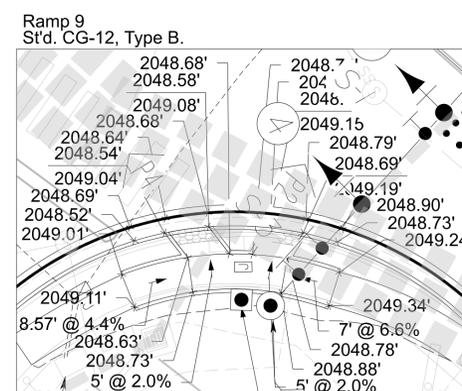
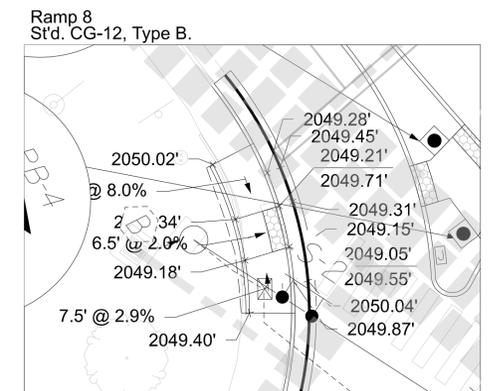
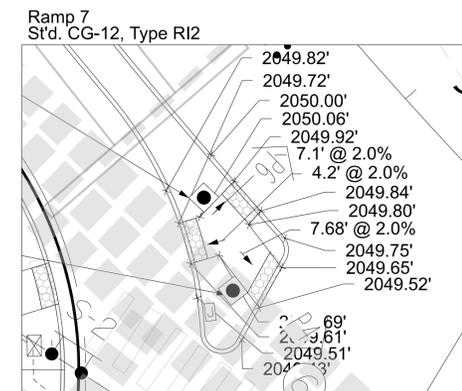
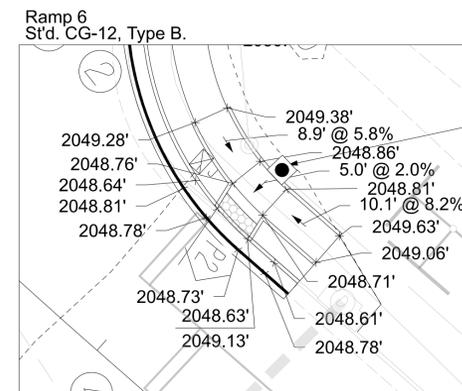
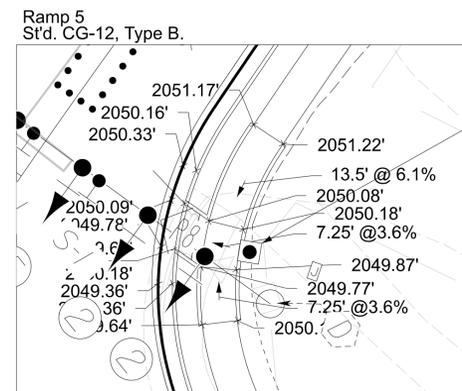
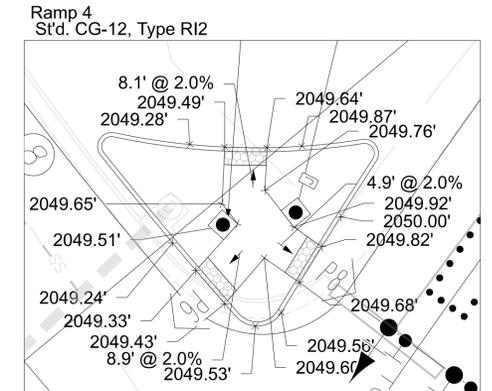
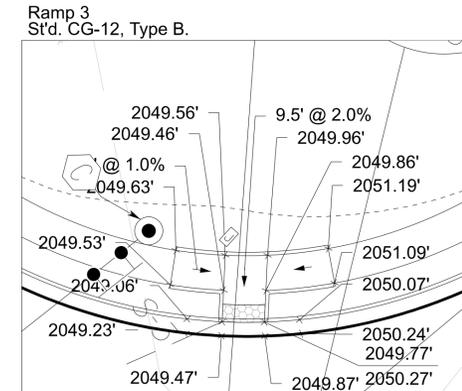
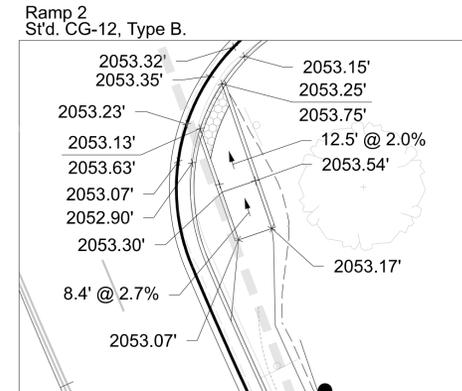
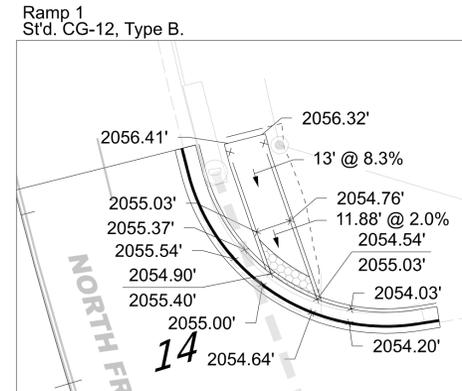
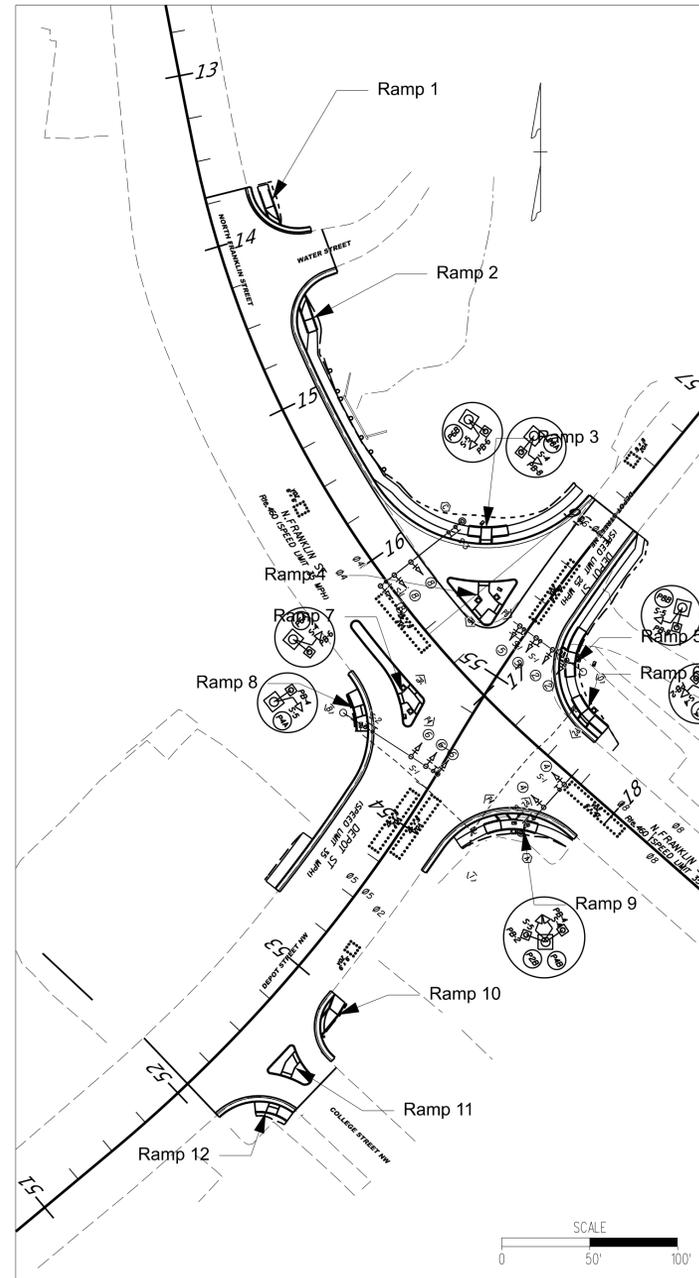
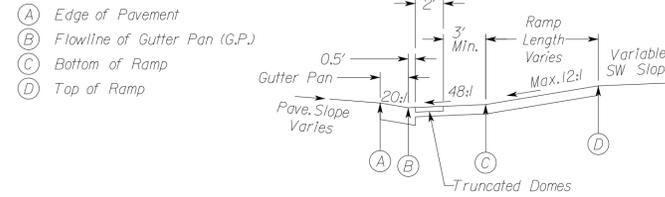
REVISED	STATE		STATE		SHEET NO.
	ROUTE	PROJECT	PROJECT	PROJECT	
	VA.	460	0011-154-254 R201, C501		2B

# CG-12 Details

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Rinker Design Associates, LLC  
Glen Allen, Virginia  
ROADWAY ENGINEER

Typical Curb Ramp Detail



PROJECT	SHEET NO.
0011-154-254	2B

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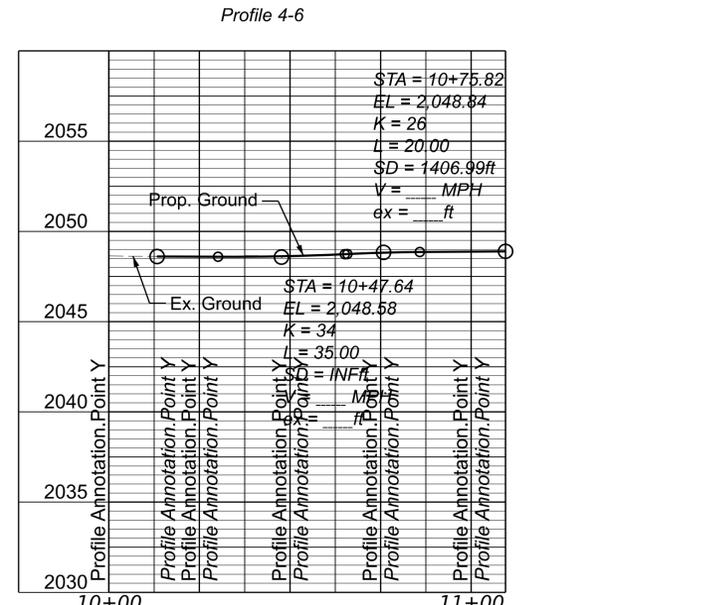
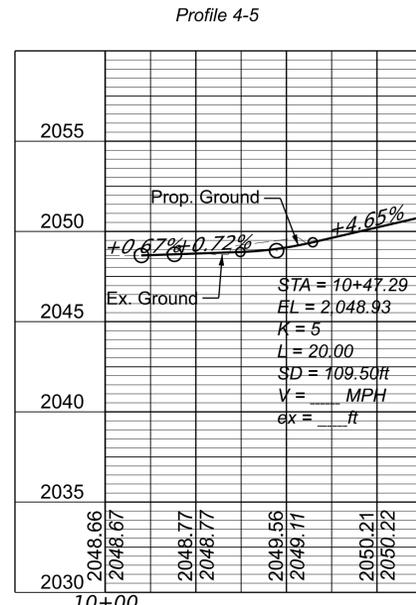
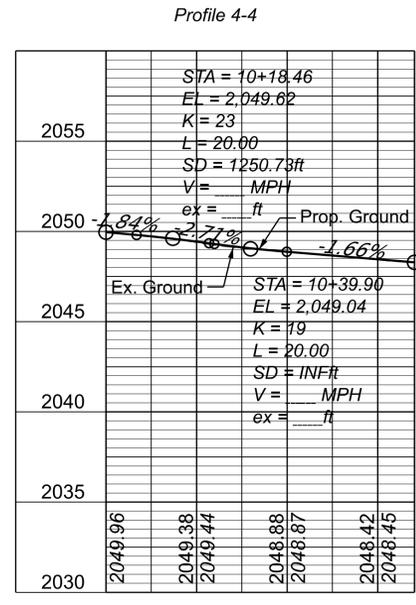
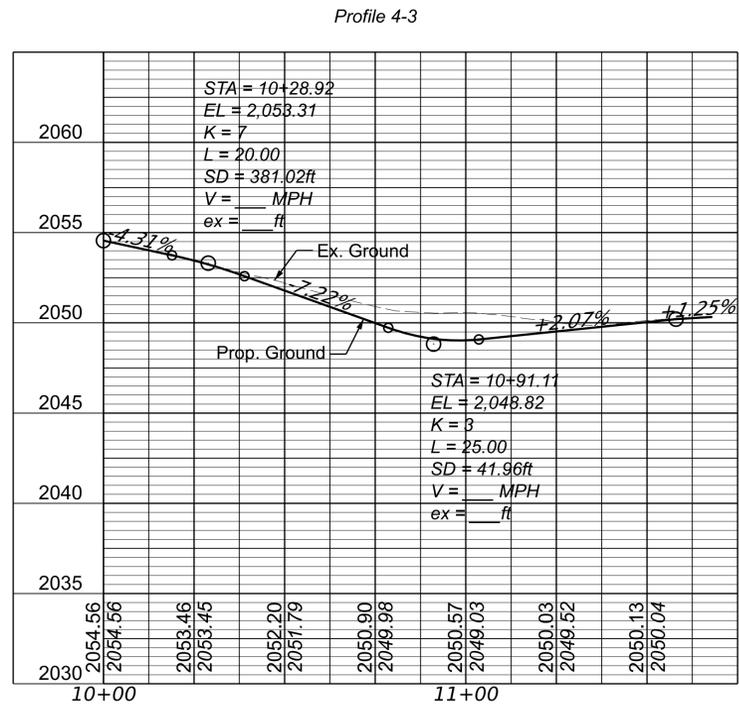
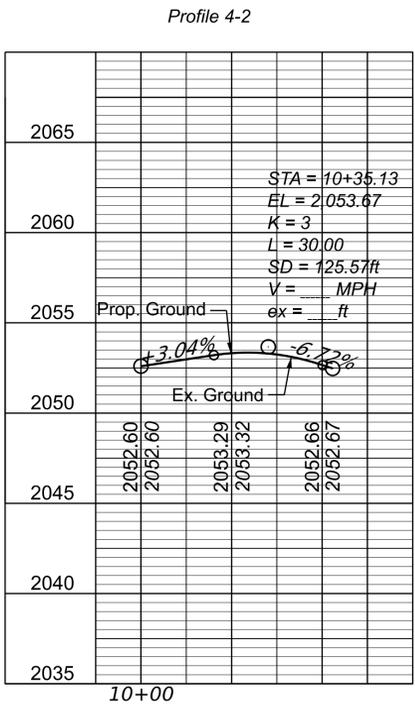
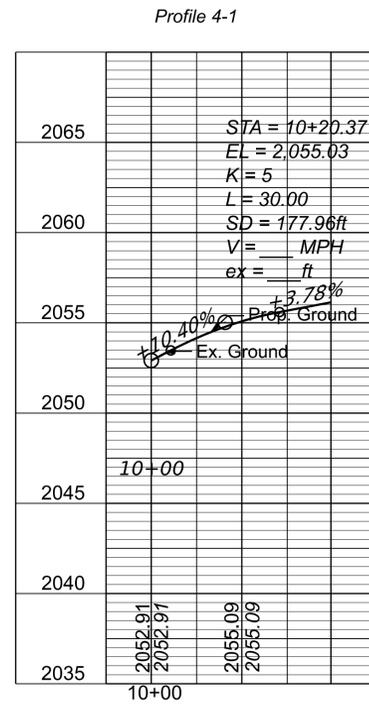
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8/27/2024

PROJECT MANAGER: Mike Kelley, P.E., Director of Engineering (540) 382-6120  
SURVEYED BY, DATE: H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
DESIGN BY: Rinker Design Associates, LLC (804) 612-0665  
SUBSURFACE UTILITY BY, DATE: Accumark (804) 550-7740

# RADIAL RETURN PROFILES

REVISED	STATE		STATE PROJECT		SHEET NO.
	STATE	ROUTE	PROJECT	PROJECT	
	VA.	460	0011-154-254 R201, C501		2B(1)
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT					
Rinker Design Associates, LLC Glen Allen, Virginia HYDRAULIC ENGINEER		Rinker Design Associates, LLC Glen Allen, Virginia ROADWAY ENGINEER			



8/27/2024

HOR: 1"=25' VERT: 1"=5'	PROJECT 0011-154-254	SHEET NO. 2B(1)
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REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	460	0011-154-254 R201, C501	2C
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT				
Rinker Design Associates, LLC Glen Allen, Virginia HYDRAULICS ENGINEER				

# Erosion & Sediment Control Notes

## EROSION AND SEDIMENT CONTROL MINIMUM STANDARDS:

- X 1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
- N/A 2. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
- X 3. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.
- X 4. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
- X 5. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
- N/A 6. SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.
- N/A a. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES.
- N/A b. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.
- X 7. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.
- X 8. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.
- X 9. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
- X 10. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
- X 11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
- N/A 12. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.
- N/A 13. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.
- N/A 14. ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.
- N/A 15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.
- X 16. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
  - X a. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
  - X b. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
  - X c. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
  - X d. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
  - X e. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER.
  - X f. APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH.

- X 17. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.
- X 18. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
- N/A 19. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS:
  - N/A a. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.
  - N/A b. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:
    - N/A (1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS 100 TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION;
    - N/A (2) (a) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS.
      - (b) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A 10-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND
      - (c) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A 10-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.
  - N/A c. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:
    - (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A 10-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL, THE BED, OR THE BANKS;
    - (2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE 10-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES;
    - (3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A 10-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR
    - (4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT DOWNSTREAM EROSION.
  - N/A d. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.
  - N/A e. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT.
  - N/A f. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE VESCP OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.
  - N/A g. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.
  - N/A h. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.
  - N/A i. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY.
  - N/A j. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.
  - N/A k. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE.

- N/A l. ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO (I) DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (II) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24-HOUR STORM; AND (III) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO §62.1-44.15:54 OR 62.1-44.15:65 OF THE ACT.
- N/A m. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF §62.1-44.15:52 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (§ 62.1-44.15:24 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES (I) ARE IN ACCORDANCE WITH PROVISIONS FOR TIME LIMITS ON APPLICABILITY OF APPROVED DESIGN CRITERIA IN 9VAC25-870-47 OR GRANDFATHERING IN 9VAC25-870-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATION, IN WHICH CASE THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF §62.1-44.15:52 A OF THE ACT SHALL APPLY, OR (II) ARE EXEMPT PURSUANT TO §62.1-44.15:34 C 7 OF THE ACT.
- N/A n. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25-870-66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATION SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF THIS SUBDIVISION 19.

X = Applicable to This Project  
 N/A = Not Applicable to This Project

8/27/2024

SCALE	PROJECT	SHEET NO.
0 25' 50'	0011-154-254	2C

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION.

ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February, 2023  
 DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE AccuMark (804) 550-7740

# Erosion & Sediment Control VESCH Narrative and Checklist

REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	460	0011-154-254 R201, C501	2C(1)
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT				
Rinker Design Associates, LLC Glen Allen, Virginia HYDRAULICS ENGINEER				

**PROJECT DESCRIPTION**

THIS PROJECT INVOLVES THE DESIGN AND CONSTRUCTION OF SIDEWALKS AND CROSSWALKS ALONG ROANOKE ST IN CHRISTIANSBURG, VA. THE SIDEWALK STARTS AT INTERSECTION OF DEPOT ST AND ROANOKE ST AND CONTINUES TO THE END OF BARKWOOD ST. THE TOTAL DISTURBED AREA FOR UPC 122102 IS 0.42 ACRES AND FOR UPC 122105 IS 0.45 ACRES.

**EXISTING SITE CONDITIONS**

TOPOGRAPHY FOR THE MAJORITY OF THE PROJECT AREA IS ROLLING WITH HEAVY FOREST COVER, EXCEPT ALONG THE EXISTING ROADWAYS. NO WETLANDS HAVE BEEN IDENTIFIED. THE PROJECT IS WITHIN THE LIMITS OF ONE WATERSHED - NE58, HUC12 #050500011802, CRAB CREEK.

**ADJACENT AREAS:**

AREAS ADJACENT TO THE PROJECT LIMITS ARE COMMERCIAL, AGRICULTURAL, AND RESIDENTIAL USES.

**OFFSITE AREAS:**

THERE IS NO ANTICIPATION THAT BORROW MATERIAL WILL BE NECESSARY FOR THIS PROJECT. IF DURING CONSTRUCTION THE CONTRACTOR REQUIRES OFFSITE BORROW MATERIAL, THIS EROSION CONTROL PLAN DOES NOT ADDRESS THESE AREAS AND THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING INDEPENDENT EROSION AND SEDIMENT CONTROL PLANS TO COVER OFFSITE. ANY OFFSITE BORROW OR SPOIL AREA MUST BE PERMITTED AND THE ENVIRONMENTAL ENGINEERING INSPECTOR MUST BE NOTIFIED PRIOR TO HAULING TO OR FROM.

**SOILS:**

THE SOILS ON THE SITE ARE A COMBINATION OF SANDY LOAM AND LOAM SOILS.

**CRITICAL AREAS:**

THERE ARE STEEP SLOPES LOCATED ALONG THE RIGHT OF WAY WITHIN THE PROJECT AREA. THE CONTRACTOR IS TO BE EXTRA DILIGENT WITH EROSION AND SEDIMENT CONTROL MEASURES AROUND STOCKPILES, HAZMAT SOILS, STRUCTURES, AND ADJACENT PROPERTIES. THE CONTRACTOR IS TO INSPECT AFTER EVERY RAIN AND RESTORE TO PROPOSED CONDITIONS.

- STA 10+00 TO 13+75 (RIGHT)
- STA 12+00 TO 15+75 (LEFT)

WORK WILL BE PERFORMED IN THE CHANNEL AND THE CONTRACTOR WILL NEED TO PROTECT THE STREAM'S DOWNSTREAM AREAS FROM SEDIMENTATION.

**EROSION AND SEDIMENT CONTROL MEASURES:**

UNLESS OTHERWISE DIRECTED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MOST CURRENT MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION. DIVERSION DIKES, FILTER BARRIER, AND SILT FENCE FOR EXISTING STORM DRAINAGE STRUCTURES SHALL BE PLACED PRIOR TO EARTH MOVING OPERATIONS. THE MINIMUM STANDARDS OF THE VESCH SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE. FLEXIBILITY IS ALLOWED SO THESE MEASURES CAN BE ADJUSTED AS NEEDED DURING THE CONSTRUCTION PHASE.

**MAINTENANCE PROGRAM:**

THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREAS (IE, SEEDED, MULCHED, OR SODDED AREAS) ON A DAILY BASIS AND AFTER EACH RAINFALL EVENT TO ENSURE THAT ALL CONTROLS ARE FUNCTIONING PROPERLY. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR: INLET PROTECTION, SEDIMENT TRAPS, SILT FENCE AND CHECK DAMS WILL BE CHECKED REGULARLY FOR SEDIMENT BUILDUP WHICH WILL PREVENT DRAINAGE, AND IF THE GRAVEL IS CLOGGED BY SEDIMENT, IT SHALL BE REMOVED AND CLEANED OR REPLACED. THE SILT FENCE BARRIER WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC, AND SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALFWAY TO THE TOP OF THE BARRIER, AND THE SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED, AND AREAS SHALL BE FERTILIZED AND RESEEDED AS NEEDED. ANY DAMAGED CONTROLS SHALL BE REPAIRED BY THE END OF THE WORK DAY, INCLUDING RESEEDING AND MULCHING IF NECESSARY AT THE INSPECTOR'S APPROVAL.

**TEMPORARY AND PERMANENT STABILIZATION:**

TEMPORARY AND PERMANENT STABILIZATION SHALL BE APPLIED TO ALL DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADING IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS LEFT DORMANT FOR MORE THAN ONE YEAR. DISTURBED AREAS WITHIN 100 FEET OF DELINEATED WETLANDS SHALL BE CONTINUOUSLY PROSECUTED UNTIL COMPLETED AND STABILIZED IMMEDIATELY UPON COMPLETION OF THE WORK IN EACH IMPACTED AREA.

**CALCULATIONS**

ALL PERMANENT FACILITY CALCULATIONS, AS WELL AS OUTFALL AND RUNOFF CALCULATIONS HAVE BEEN PROVIDED IN THE DRAINAGE REPORT.

**PHASE 1 LAND DISTURBING/ CONSTRUCTION SEQUENCE:**

1. THE CONTRACTOR MUST GIVE THE COUNTY INSPECTOR 48 HOURS NOTIFICATION TO SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING FOR THE ISSUANCE OF A LAND DISTURBANCE PERMIT. THE CERTIFIED RESPONSIBLE LAND DISTURBER (CLRD) AND THE STORMWATER QUALIFIED PERSON MUST ATTEND THE PRE-CONSTRUCTION MEETING.
2. FLAG LIMITS OF CLEARING AND CONSTRUCT CONSTRUCTION ENTRANCES.
3. INSTALL TEMPORARY CONTROLS INCLUDING SILT FENCE AND INLET PROTECTION.
4. CLEAR AND GRUB REMAINDER OF THE SITE AS NECESSARY.
5. CONSTRUCT PERIMETER EROSION AND SEDIMENT CONTROLS.
6. STABILIZE ALL DENUDED AREAS ACCORDING TO THE SECTION TEMPORARY AND PERMANENT STABILIZATION.
7. THE CLRD AND THE ENVIRONMENTAL ENGINEERING INSPECTOR MUST MEET PRIOR TO PROCEEDING TO PHASE II OF THE EROSION CONTROL PLAN.

**PHASE II LAND DISTURBING SEQUENCE:**

1. CONSTRUCT PROPOSED STORM SEWER SYSTEM.
2. CONSTRUCT INLET AND OUTLET PROTECTION AT ALL APPLICABLE LOCATIONS.
3. ROUGH GRADE THE REMAINDER OF THE SITE.
4. INSTALL ALL CURB AND GUTTER AND PLACE BASE STONE PAVEMENT.
5. FINE GRADE SITE AND INSTALL ALL PERMANENT SEEDING AND FERTILIZE ALL GRASSED AREAS.
6. REMOVE ALL EROSION CONTROL MEASURES.
7. CLEAN SITE OF ALL TRASH AND DEBRIS.
8. HAVE THE INSPECTOR INSPECT ALL AREAS TO DETERMINE IF THE AREA IS ADEQUATELY STABILIZED.

**STORAGE YARD/LAY DOWN YARD**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF THE EQUIPMENT STORAGE AREA. THIS AREA MUST SHALL BE RESPONSIBLE FOR OBTAINING INDEPENDENT E&S CONTROL PERMITS TO COVER ANY OFF-SITE IMPACTS. STAY WITHIN THE PROJECT'S LIMITS OF DISTURBANCE, UNLESS AN OFF-SITE AREA IS COORDINATED AND THE CONTRACTOR

**EROSION AND SEDIMENT CONTROL STRUCTURES**

- **TEMPORARY SILT FENCE (3.05):**  
A temporary sediment barrier consisting of a synthetic filter fabric stretched across and attached to supporting posts and entrenched. (Per VDOT Standard EC-5)
- **STORM DRAIN INLET PROTECTION (3.07):**  
A sediment filter or an excavated impounding area around a storm drain drop inlet or curb inlet. (Per VDOT Standard EC-6 Type A and B)
- **OUTLET PROTECTION (3.18):**  
Structurally lined aprons or other acceptable energy dissipating devices placed at the outlets of pipes or paved channel sections. (Per VDOT Standard EC-1)

PROJECT	SHEET NO.
0011-154-254	2C(1)

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PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
DESIGN BY Binker Design Associates, LLC (804) 612-0665  
SUBSURFACE UTILITY BY, DATE Accumack (804) 550-7740

### STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET

REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	460	0011-154-254 R201, C501	2D

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



THE PLACE TO BE.  
**CHRISTIANSBURG VA**  
DEPARTMENTS OF ENGINEERING,  
PLANNING & BUILDING INSPECTIONS

100 East Main Street  
Christiansburg, VA 24073  
p: (540) 382-6120  
f: (540) 381-7238



### AUTHORIZATION STATEMENT FOR ANOTHER PERSON TO SIGN SWPPP RELATED DOCUMENTS:

#### OPERATOR SWPPP CERTIFICATION STATEMENT

"I certify under penalty of law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

\_\_\_\_\_  
Signature (Registration Statement Operator)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Phone #

\_\_\_\_\_  
Email Address

"I, \_\_\_\_\_, having signed the original VSMP registration certification statement for this project, authorize \_\_\_\_\_ (the authorization may be for either an individual or a position having responsibility for the overall operation of the regulated facility or activity) to sign all reports required by permits, including SWPPPs, and other information requested by the board, the department, or the permit-issuing authority."

"I, \_\_\_\_\_, having received authorization from the Construction Activity Operator to report information required under this permit, certify under penalty of law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

\_\_\_\_\_  
Signature (Registration Statement Signature)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature (Authorized Individual)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Phone # of Authorized Signatory

\_\_\_\_\_  
Email Address of Authorized Signatory

PROJECT  
0011-154-254  
SHEET NO.  
2D

PROJECT MANAGER: Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE: H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY: Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE: AccuMark (804) 550-7740

Utility Owners:

WATER & SEWER:

Christiansburg Water (CHB) - Requested, Received  
 100 E. Main St.  
 Christiansburg, VA 24073  
 Dayton Poff  
 540.382.6120  
 dpoff@christiansburg.org

ELECTRIC:

American Electric Power (AEP) - Requested, Received  
 2255 Prospect Drive  
 Christiansburg, VA 24073  
 David Edwards  
 540.381.2512  
 dcedwards@aep.com

GAS:

Atmos Energy (UCB) - Requested, Received (No Sizes)  
 Isaiah Greer  
 423.202.1455  
 isalahgreer@atmosenergy.com

TELECOMMUNICATIONS:

Comcast (CMC) - Requested, Received  
 8031 Corporate Drive Nottingham, MD 21236  
 Stephen Shelley  
 443.243.6904  
 NED-BLT\_BeltwayRegionDesignRequests@cable.comcast.com

Citizens (CTC) - Requested, Not Received  
 219 Webb's Mill Rd  
 Floyd, VA 24091  
 Eddie Bower  
 540.745.9570  
 eddiebower@citizens.coop

Fiberlight (FBL) - Requested, Received - No Facilities  
 45472 Holiday Drive Sterling, VA  
 Adam Nickerson  
 682.321.8437  
 Adam.Nickerson@Fiberlight.com

Middle Mile Infrastructure (MMI) Requested, No Response  
 Cameron Denton  
 650.334.5237  
 cameradenton@meta.com

Segra-Lumos (LMS) - Requested, Received  
 1 Lumos Plaza Waynesboro, VA 22980  
 Jared Morris  
 540.949.3466  
 Jared.Morris@segra.com

Shentel (STC) - Requested, Not Received  
 500 Shentel Way Edinburg, VA 22824  
 Chris Strosnider  
 540.303.0624  
 Chris.strosnider@emp.shentel.com

Verizon (VZN) - Requested, Received  
 Jeff Draper  
 540.265.7501  
 Jeffrey.draper@verizon.com

Windstream (WXN) - Requested, Received - No Facilities  
 McClean, VA  
 Jerry Richardson  
 804.422.4258  
 Jerry.richardson@windstream.com

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

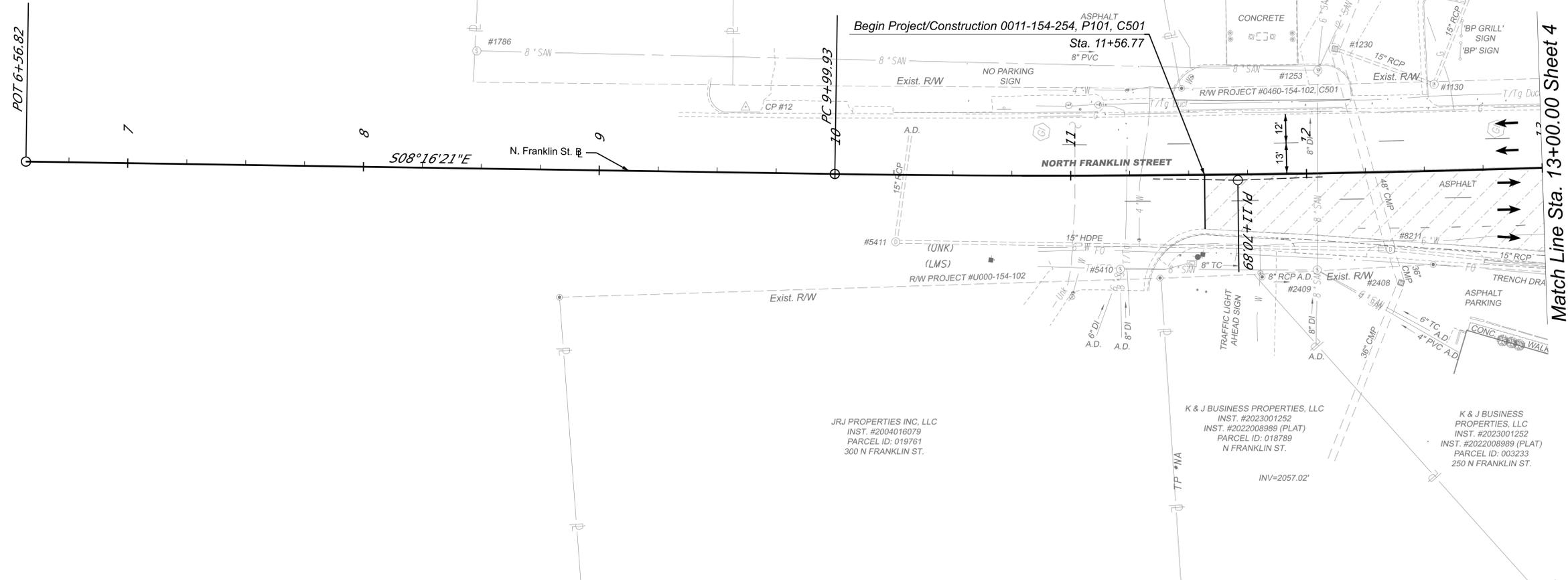
Rinker Design Associates, LLC  
 Glen Allen, Virginia  
 HYDRAULIC ENGINEER

Rinker Design Associates, LLC  
 Glen Allen, Virginia  
 ROADWAY ENGINEER

PI = 11+70.89  
 DELTA = 03°08'01.74" (LT)  
 D = 00°55'00"  
 T = 170.97'  
 L = 341.85'  
 R = 6,250.00'  
 PC = 9+99.93  
 PT = 13+41.77  
 e = MATCH EXISTING  
 V = 35 MPH

RPP, LLC.  
 INST. #2014003683  
 PB 16 PG 180  
 PARCEL ID: 012606  
 335 N FRANKLIN ST.

RT4 USA, LLC  
 INST. #2013006256  
 DB 625 PG 163 (PLAT)  
 PB 15 PG 25  
 PB 16 PG 180  
 PARCEL ID: 026964  
 255 N FRANKLIN ST.



**DRAINAGE DESIGN LEGEND**

	Denotes S'd.UD-4 Req'd.
	Denotes S'd.CD-2 Req'd.
	Denotes S'd.EW-12,21 Req'd.
	Denotes Outlet Pipe
	Denotes Pipe/Structure to Remain
	Denotes Pipe/Structure to be Removed

**REFERENCES**  
 (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Typical Sections	2A
N. Franklin St. Profile	3A
E&S Control Plan Phase 1	3B
E&S Control Plan Phase 2	3C

**LEGEND**

	Denotes Mill & Overlay
	Denotes Proposed Pavement
	Denotes Demolition of Pavement
	Denotes Proposed Concrete
	Denotes Temporary Easement
	Denotes Permanent Easement
	Denotes Construction Limits in Cuts
	Denotes Construction Limits in Fills



PROJECT	0011-154-254
SHEET NO.	3

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION.

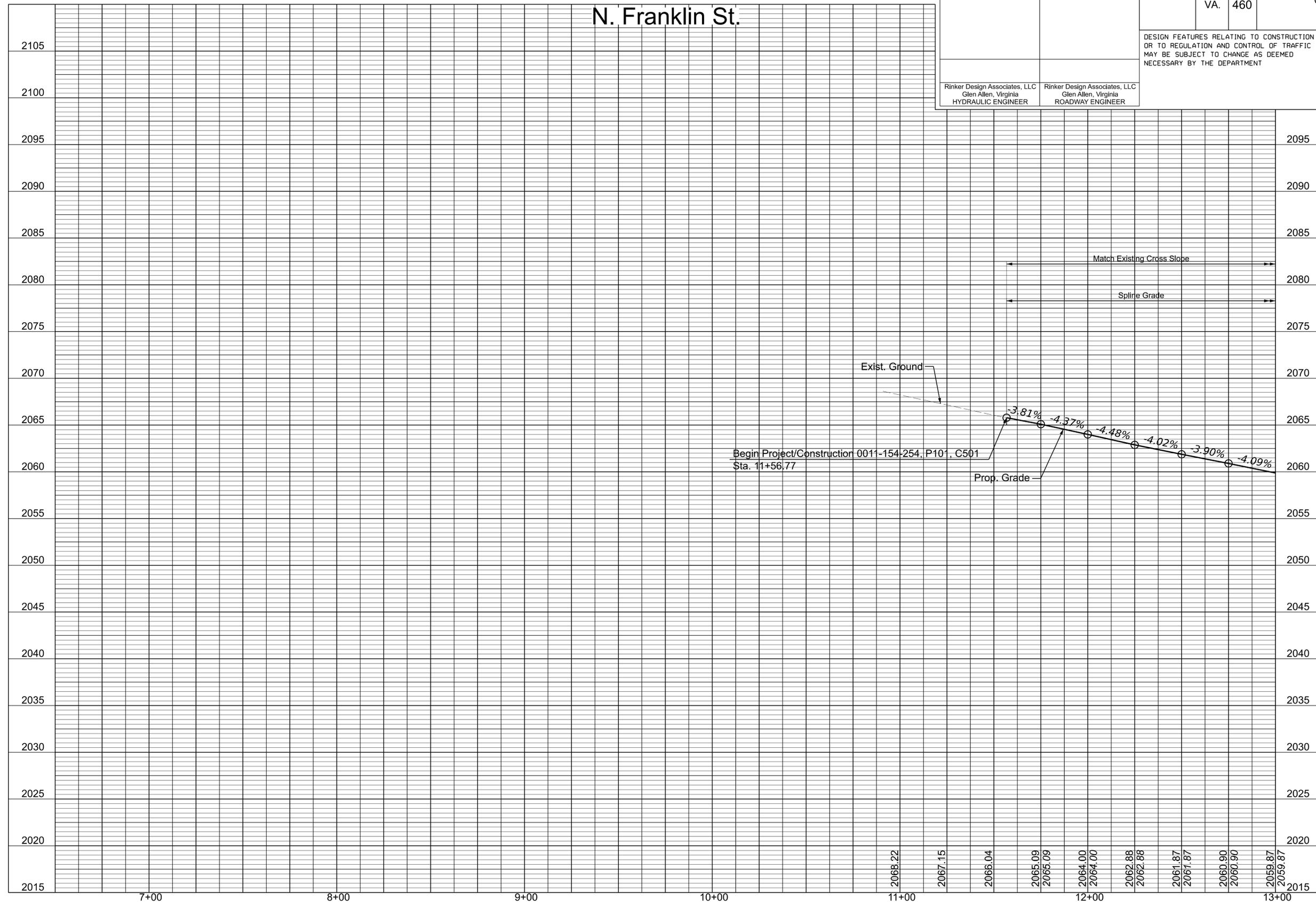
ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

9/16/2024

PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE AccuMark (804) 550-7740

REVISED	STATE	STATE	SHEET NO.
	ROUTE	PROJECT	
	VA.	0011-154-254 R201, C501	3A
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT			
Rinker Design Associates, LLC Glen Allen, Virginia HYDRAULIC ENGINEER		Rinker Design Associates, LLC Glen Allen, Virginia ROADWAY ENGINEER	

# N. Franklin St.



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION.

ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

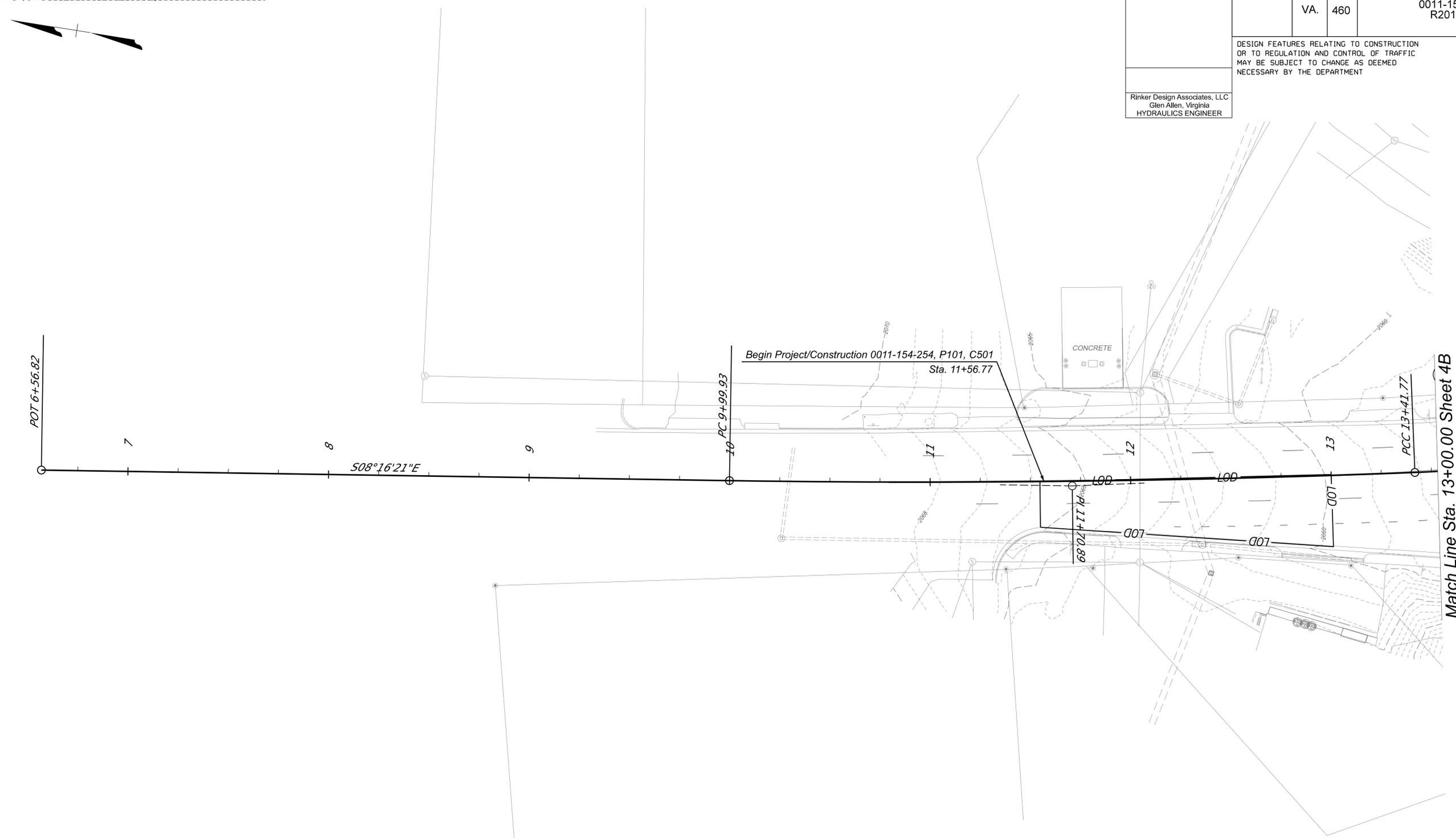
HOR: 1"=25' VERT: 1"=5'	PROJECT 0011-154-254	SHEET NO. 3A
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8/27/2024

PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February, 2023  
 DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE Accumark (804) 550-7740

# EROSION AND SEDIMENT CONTROL PHASE 1

REVISED	STATE	ROUTE	STATE	PROJECT	SHEET NO.
	VA.	460		0011-154-254 R201, C501	3B
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT					
Rinker Design Associates, LLC Glen Allen, Virginia HYDRAULICS ENGINEER					



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)		LEGEND	
Typical Sections	2A		Denotes Temporary Silt Fence A, St'd. EC-5
N. Franklin St. Profile	3A		Denotes Inlet Protection A/B/C; St'd. EC-6
E&S Control Plan Phase 2	3C		

SCALE 0 25' 50'	PROJECT 0011-154-254	SHEET NO. 3B
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ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

9/16/2024

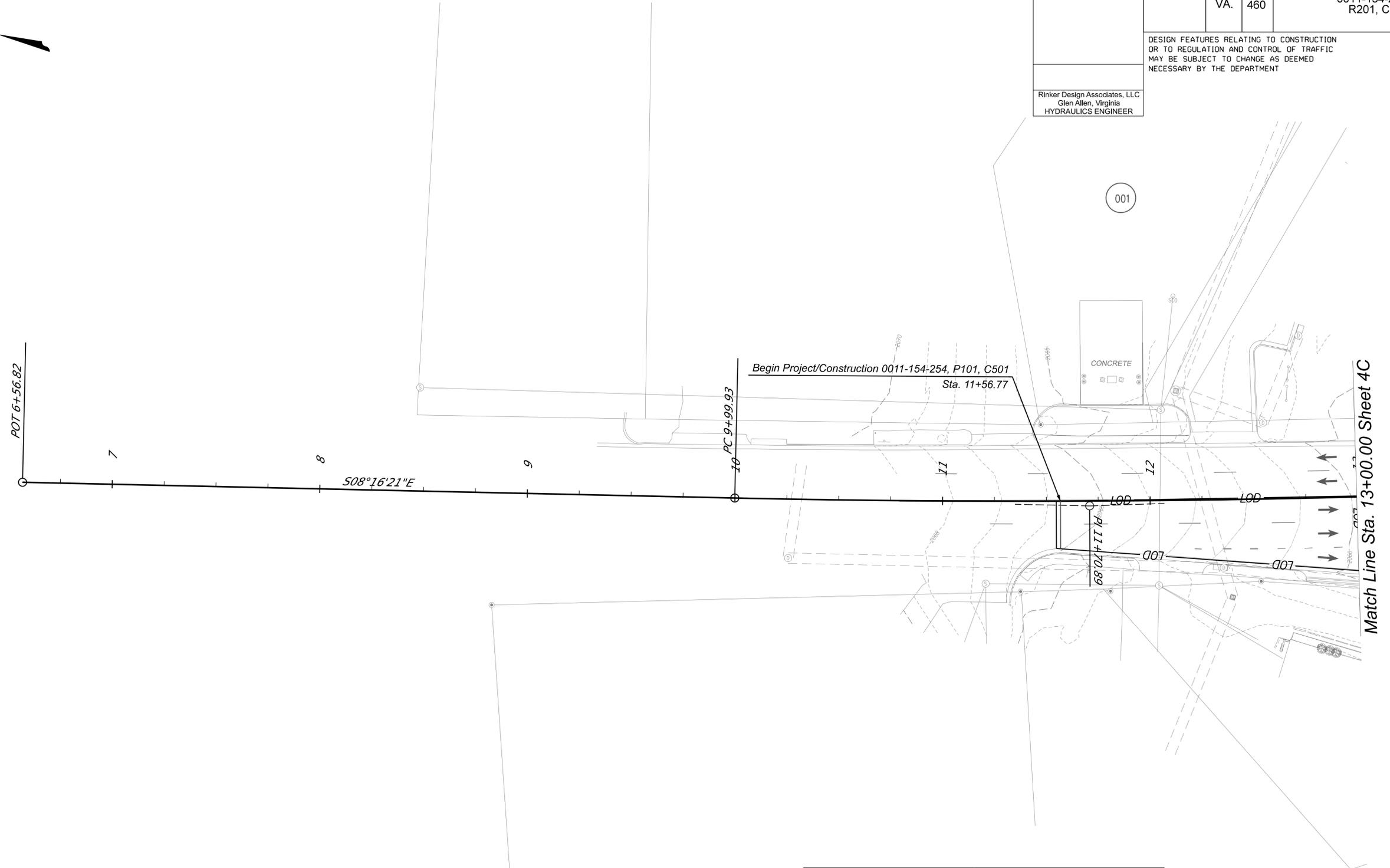
PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February, 2023  
 DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE Accumark (804) 550-7740

# EROSION AND SEDIMENT CONTROL PHASE 2

REVISED	STATE	ROUTE	STATE	PROJECT	SHEET NO.
	VA.	460		0011-154-254 R201, C501	3C

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Rinker Design Associates, LLC  
 Glen Allen, Virginia  
 HYDRAULICS ENGINEER



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)		LEGEND	
Typical Sections	2A		Denotes Temporary Silt Fence A, St'd. EC-5
N. Franklin St. Profile	3A		Denotes Inlet Protection A/B/C; St'd. EC-6
E&S Control Plan Phase 1	3B		

SCALE 0 25' 50'	PROJECT 0011-154-254	SHEET NO. 3C
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ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

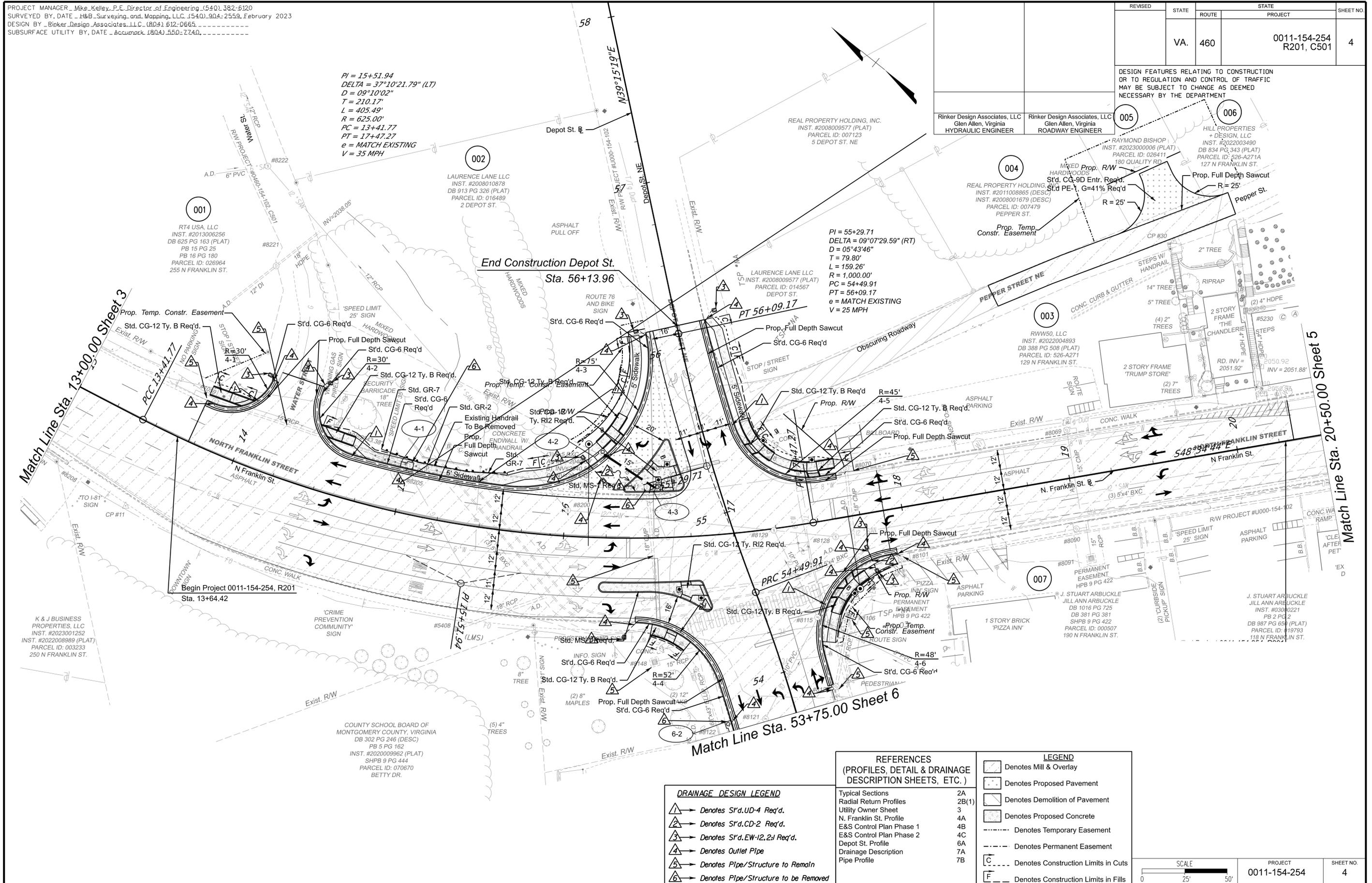
PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE AccuMark (804) 550-7240

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	4

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Rinker Design Associates, LLC  
 Glen Allen, Virginia  
 HYDRAULIC ENGINEER

Rinker Design Associates, LLC  
 Glen Allen, Virginia  
 ROADWAY ENGINEER



**DRAINAGE DESIGN LEGEND**

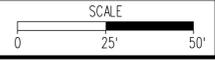
- ▲ Denotes S'd.UD-4 Req'd.
- ▲ Denotes S'd.CD-2 Req'd.
- ▲ Denotes S'd.EW-12,2J Req'd.
- ▲ Denotes Outlet Pipe
- ▲ Denotes Pipe/Structure to Remain
- ▲ Denotes Pipe/Structure to be Removed

**REFERENCES**  
 (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Typical Sections	2A
Radial Return Profiles	2B(1)
Utility Owner Sheet	3
N. Franklin St. Profile	4A
E&S Control Plan Phase 1	4B
E&S Control Plan Phase 2	4C
Depot St. Profile	6A
Drainage Description	7A
Pipe Profile	7B

**LEGEND**

- ▨ Denotes Mill & Overlay
- ▨ Denotes Proposed Pavement
- ▨ Denotes Demolition of Pavement
- ▨ Denotes Proposed Concrete
- Denotes Temporary Easement
- Denotes Permanent Easement
- Denotes Construction Limits in Cuts
- Denotes Construction Limits in Fills



PROJECT	0011-154-254
SHEET NO.	4

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION.

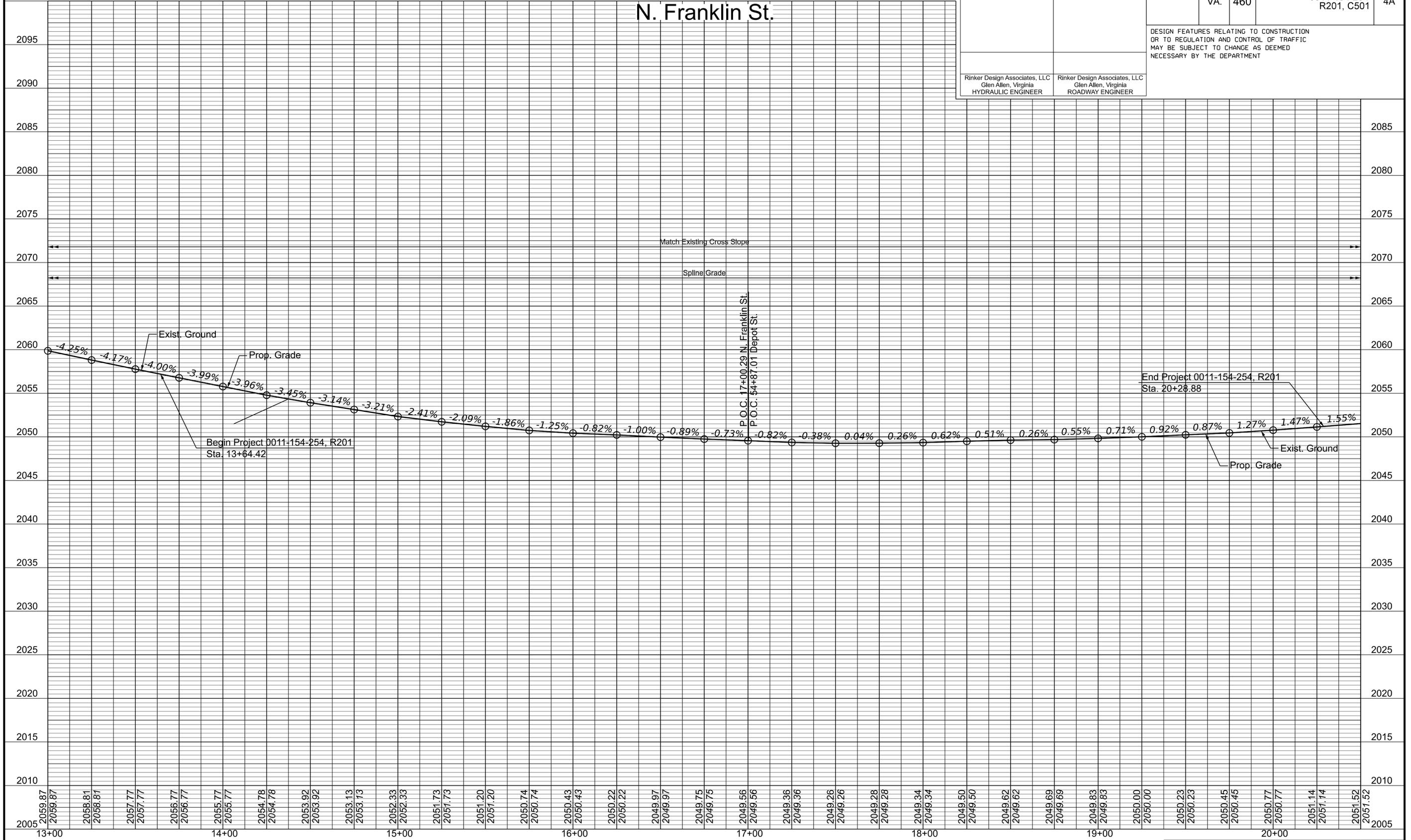
ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

9/16/2024

PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE Accumark (804) 550-7740

REVISED	STATE	STATE		SHEET NO.
	VA.	ROUTE	PROJECT	
		460	0011-154-254 R201, C501	4A
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT				
Rinker Design Associates, LLC Glen Allen, Virginia HYDRAULIC ENGINEER		Rinker Design Associates, LLC Glen Allen, Virginia ROADWAY ENGINEER		

# N. Franklin St.



8/27/2024

HOR: 1"=25' VERT: 1"=5'	PROJECT 0011-154-254	SHEET NO. 4A
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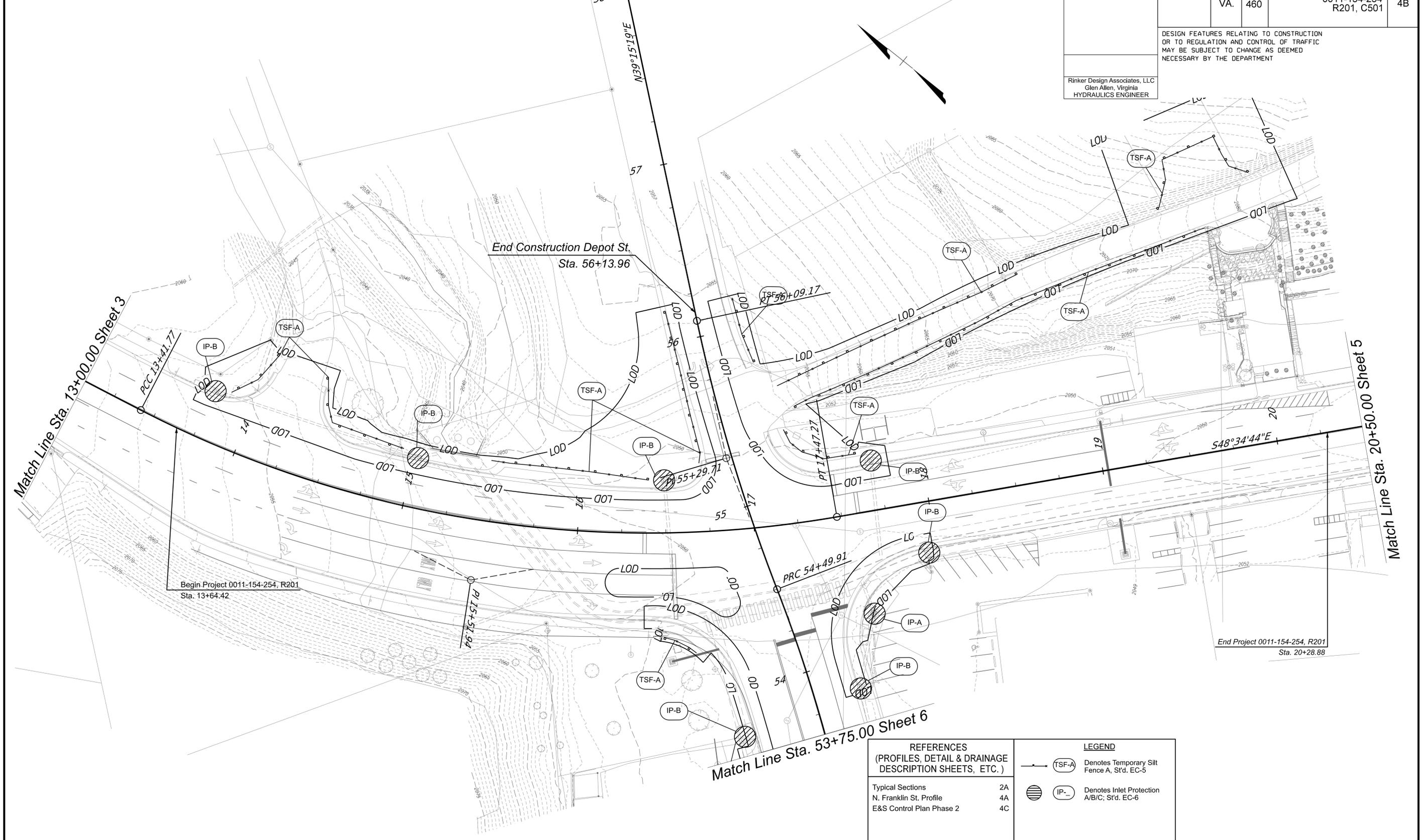
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ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February, 2023  
 DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE AccuMark (804) 550-7240

# EROSION AND SEDIMENT CONTROL PHASE 1

REVISED	STATE	ROUTE	STATE	PROJECT	SHEET NO.
	VA.	460		0011-154-254 R201, C501	
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT					
Rinker Design Associates, LLC Glen Allen, Virginia HYDRAULICS ENGINEER					



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)		LEGEND	
Typical Sections	2A	TSF-A	Denotes Temporary Silt Fence A, St'd. EC-5
N. Franklin St. Profile	4A	IP-A	Denotes Inlet Protection A/B/C, St'd. EC-6
E&S Control Plan Phase 2	4C		

SCALE 0 25' 50'	PROJECT 0011-154-254	SHEET NO. 4B
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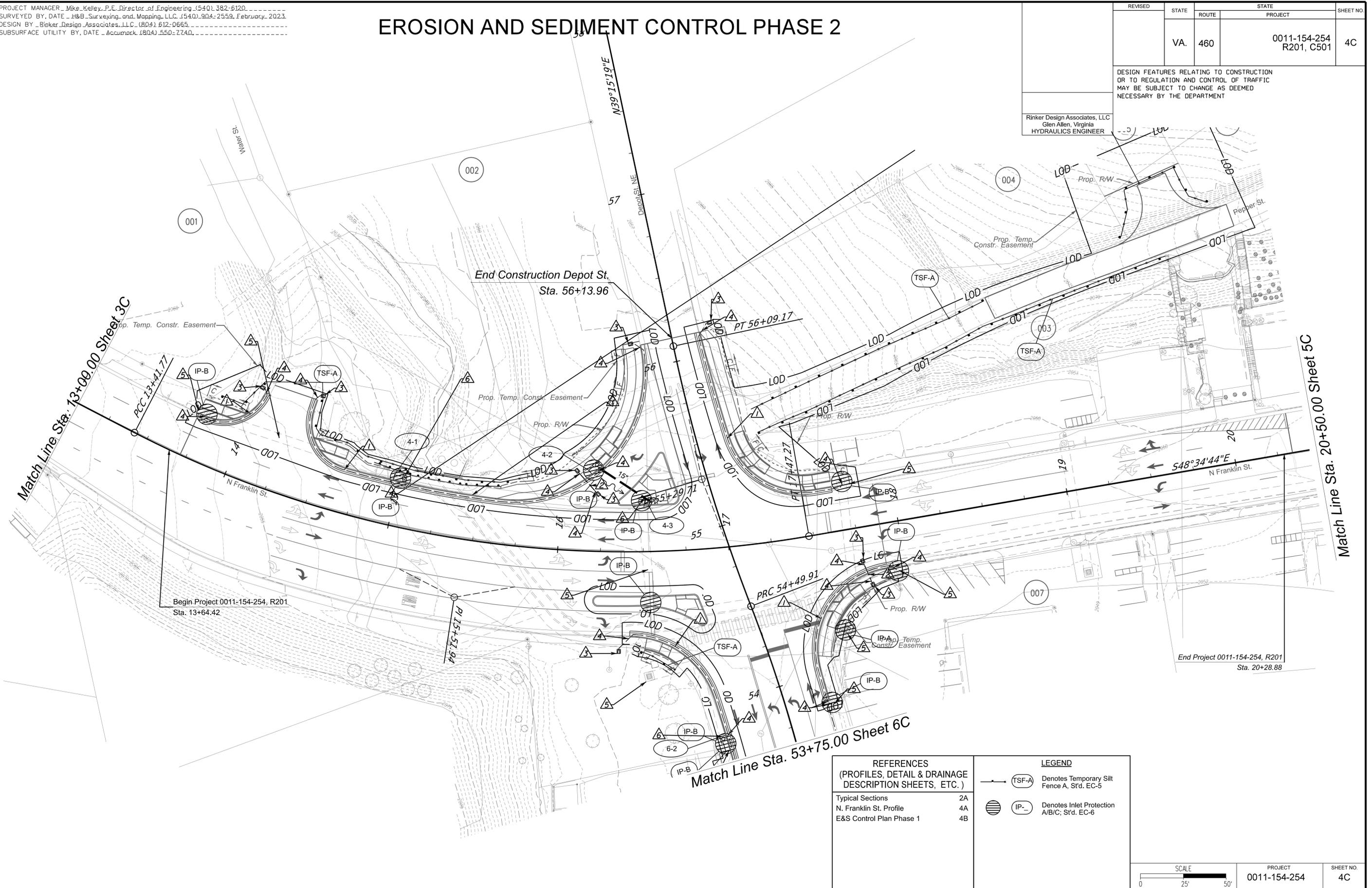
PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February, 2023.  
DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
SUBSURFACE UTILITY BY, DATE Accumark (804) 550-7240

# EROSION AND SEDIMENT CONTROL PHASE 2

REVISED	STATE	ROUTE	STATE	PROJECT	SHEET NO.
	VA.	460		0011-154-254 R201, C501	4C

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Rinker Design Associates, LLC  
Glen Allen, Virginia  
HYDRAULICS ENGINEER

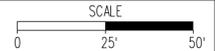


**REFERENCES**  
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Typical Sections	2A
N. Franklin St. Profile	4A
E&S Control Plan Phase 1	4B

**LEGEND**

	Denotes Temporary Silt Fence A, St'd. EC-5
	Denotes Inlet Protection A/B/C, St'd. EC-6



PROJECT	0011-154-254	SHEET NO.	4C
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ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

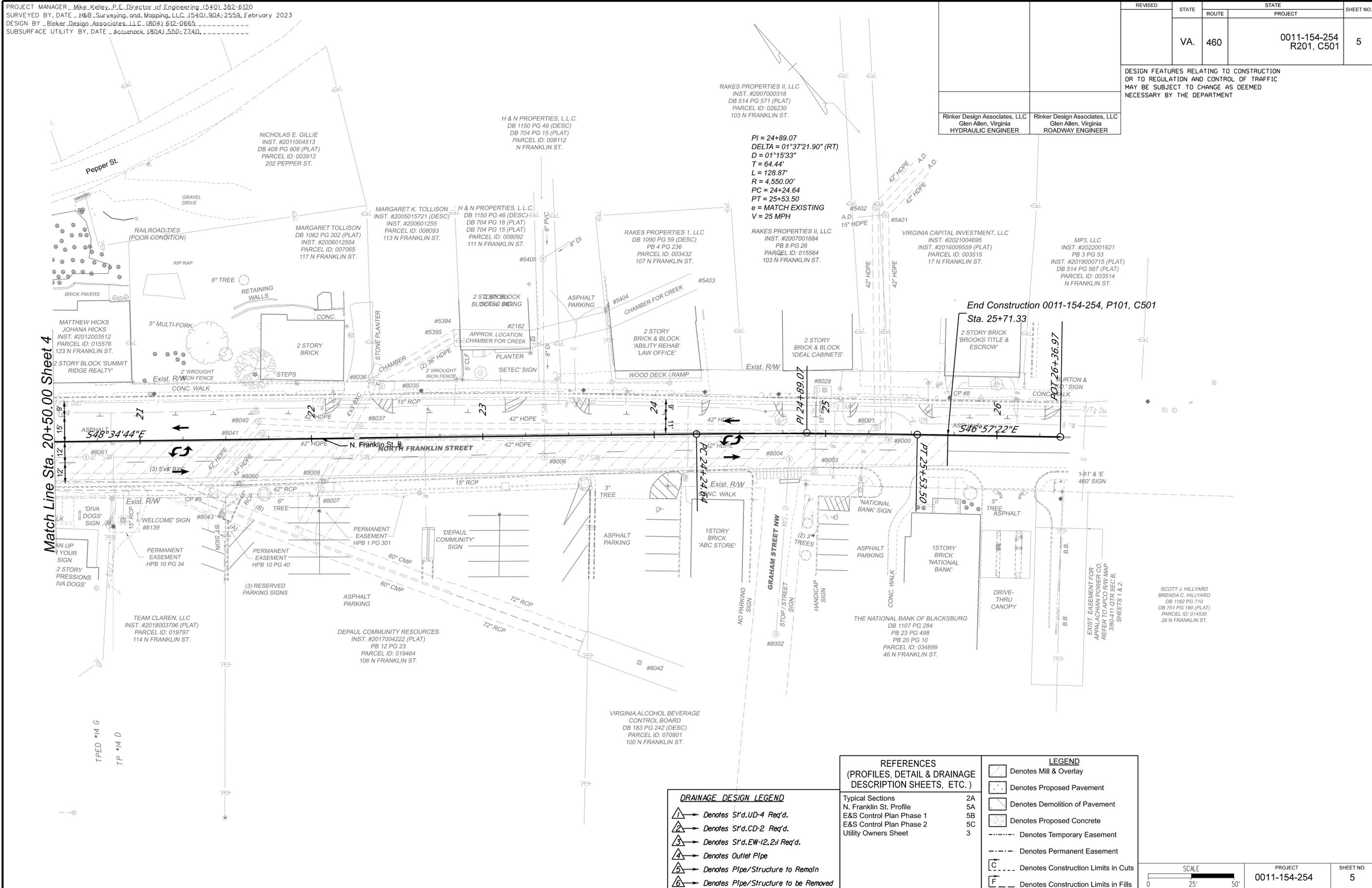
PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
SURVEYED BY DATE H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
SUBSURFACE UTILITY BY DATE Accumark (804) 550-7240

REVISED	STATE	ROUTE	STATE	PROJECT	SHEET NO.
	VA.	460		0011-154-254 R201, C501	5

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Rinker Design Associates, LLC  
Glen Allen, Virginia  
HYDRAULIC ENGINEER

Rinker Design Associates, LLC  
Glen Allen, Virginia  
ROADWAY ENGINEER



Match Line Sta. 20+50.00 Sheet 4

End Construction 0011-154-254, P101, C501

Sta. 25+71.33

PT 26+36.97

**DRAINAGE DESIGN LEGEND**

- 1. Denotes S'd.U.D-4 Req'd.
- 2. Denotes S'd.CD-2 Req'd.
- 3. Denotes S'd.EW-12,2J Req'd.
- 4. Denotes Outlet Pipe
- 5. Denotes Pipe/Structure to Remain
- 6. Denotes Pipe/Structure to be Removed

**REFERENCES**  
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Typical Sections	2A
N. Franklin St. Profile	5A
E&S Control Plan Phase 1	5B
E&S Control Plan Phase 2	5C
Utility Owners Sheet	3

**LEGEND**

- Denotes Mill & Overlay
- Denotes Proposed Pavement
- Denotes Demolition of Pavement
- Denotes Proposed Concrete
- Denotes Temporary Easement
- Denotes Permanent Easement
- Denotes Construction Limits in Cuts
- Denotes Construction Limits in Fills

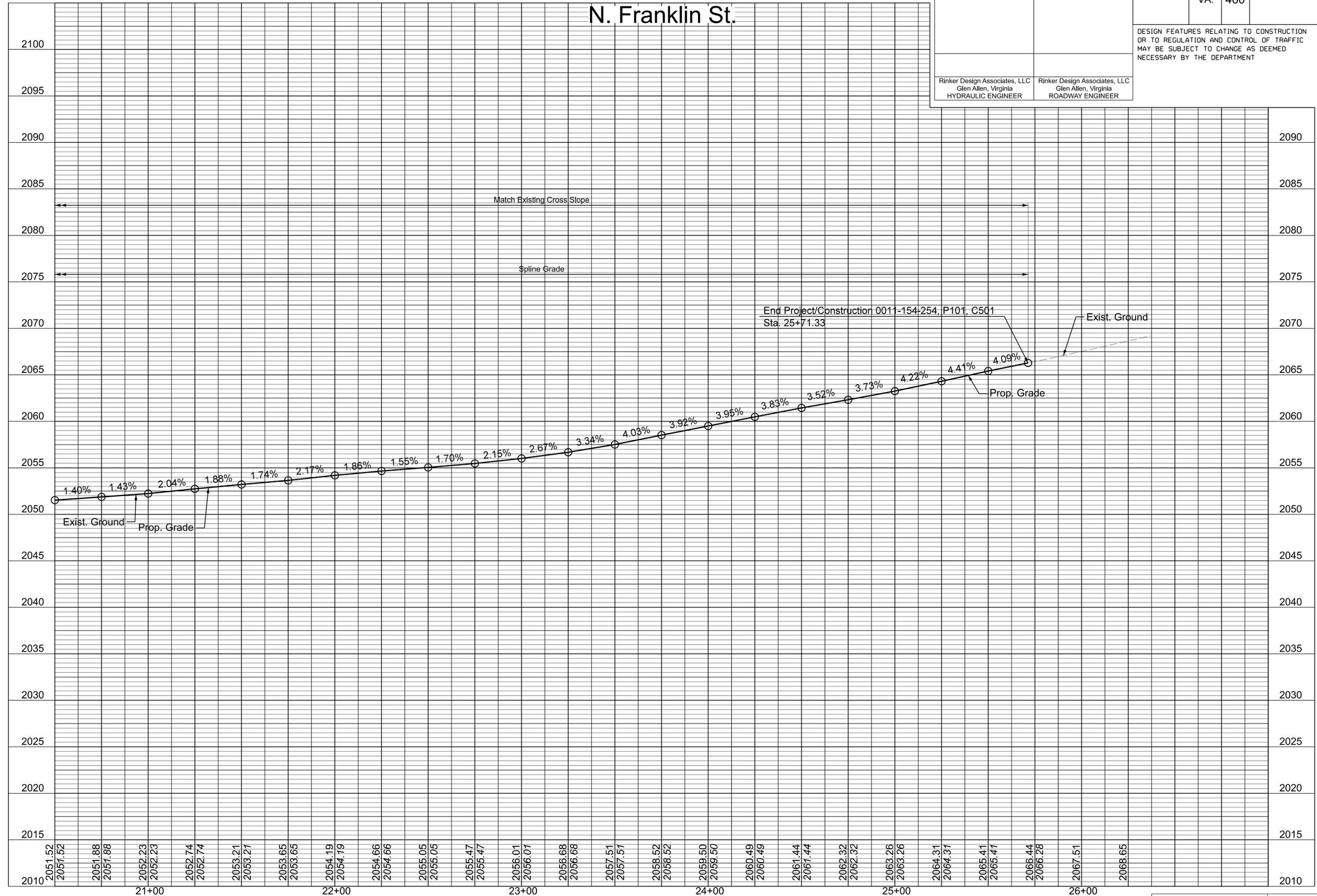
SCALE	PROJECT	SHEET NO.
0 25' 50'	0011-154-254	5

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ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE AccuMark (804) 550-7740

REVISED	STATE	ROUTE	STATE	PROJECT	SHEET NO.
	VA.	460		0011-154-254 R201, C501	5A
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT					
Rinker Design Associates, LLC Glen Allen, Virginia HYDRAULIC ENGINEER			Rinker Design Associates, LLC Glen Allen, Virginia ROADWAY ENGINEER		



8/27/2024

HOR: 1"=25'  
 VERT: 1"=5'

PROJECT: 0011-154-254  
 SHEET NO.: 5A

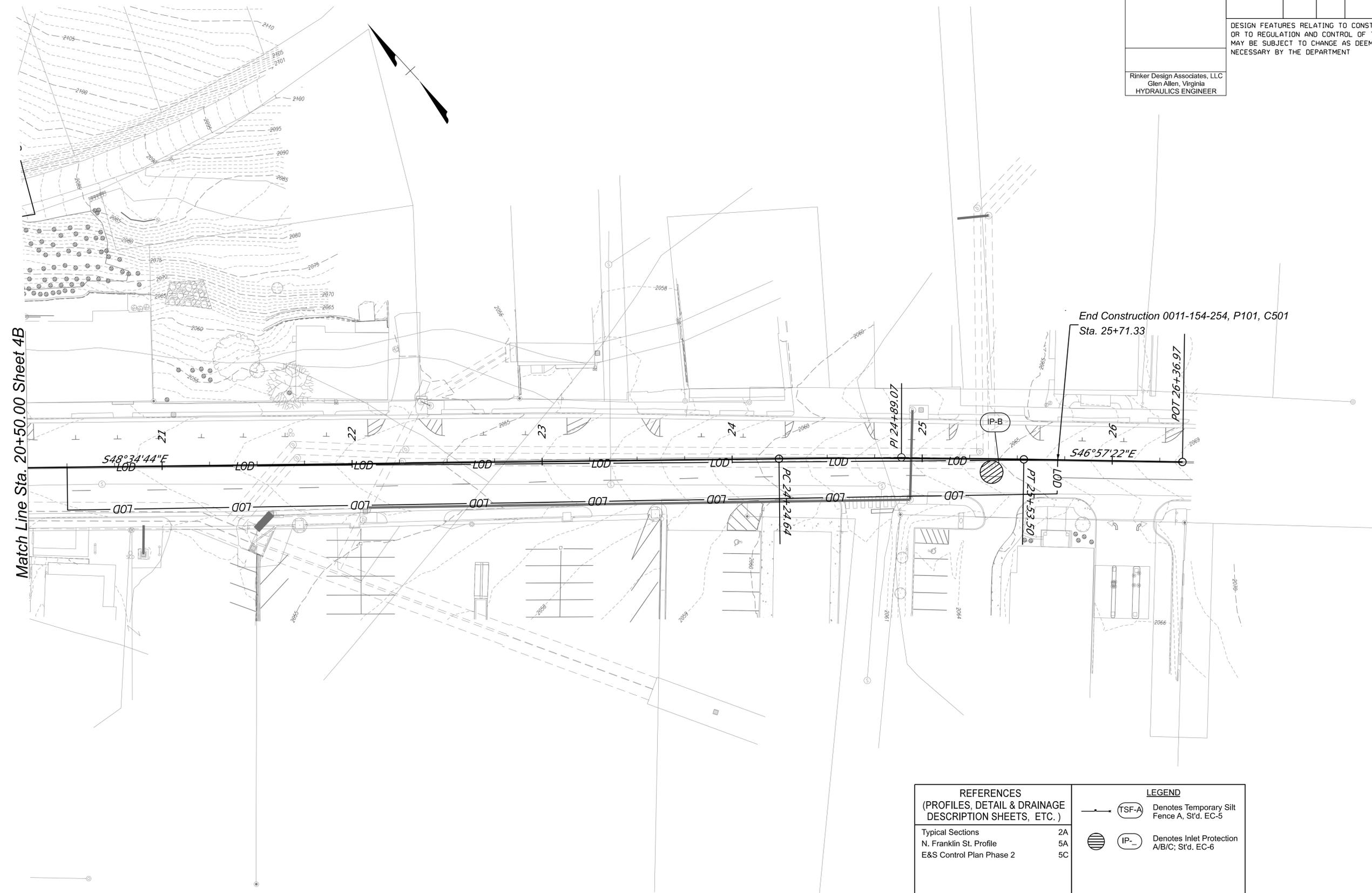
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ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February, 2023.  
 DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE AccuMark (804) 550-7240

# EROSION AND SEDIMENT CONTROL PHASE 1

REVISED	STATE		STATE		SHEET NO.
	ROUTE	PROJECT	PROJECT	PROJECT	
	VA.	460	0011-154-254 R201, C501		5B
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT					
Rinker Design Associates, LLC Glen Allen, Virginia HYDRAULICS ENGINEER					



SCALE 0 25' 50'	PROJECT 0011-154-254	SHEET NO. 5B
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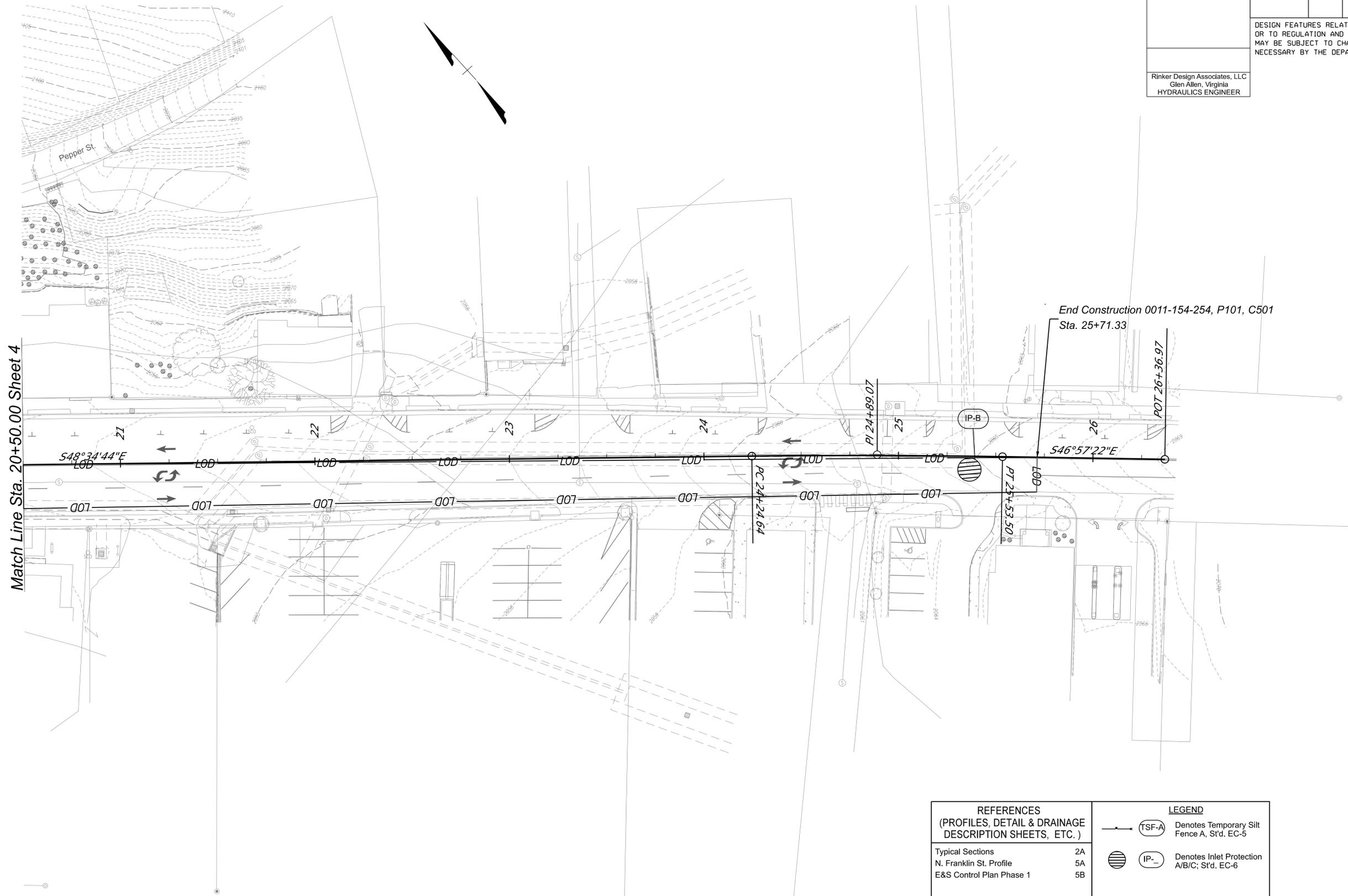
ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

9/16/2024

PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February, 2023.  
 DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE AccuMark (804) 550-7240

# EROSION AND SEDIMENT CONTROL PHASE 2

REVISED	STATE		STATE		SHEET NO.
	ROUTE	PROJECT	PROJECT	PROJECT	
	VA.	460	0011-154-254 R201, C501		5C
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT					
Rinker Design Associates, LLC Glen Allen, Virginia HYDRAULICS ENGINEER					



Match Line Sta. 20+50.00 Sheet 4

End Construction 0011-154-254, P101, C501  
Sta. 25+71.33

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)		LEGEND	
Typical Sections	2A		Denotes Temporary Silt Fence A, St'd. EC-5
N. Franklin St. Profile	5A		Denotes Inlet Protection A/B/C; St'd. EC-6
E&S Control Plan Phase 1	5B		

SCALE 0 25' 50'	PROJECT 0011-154-254	SHEET NO. 5C
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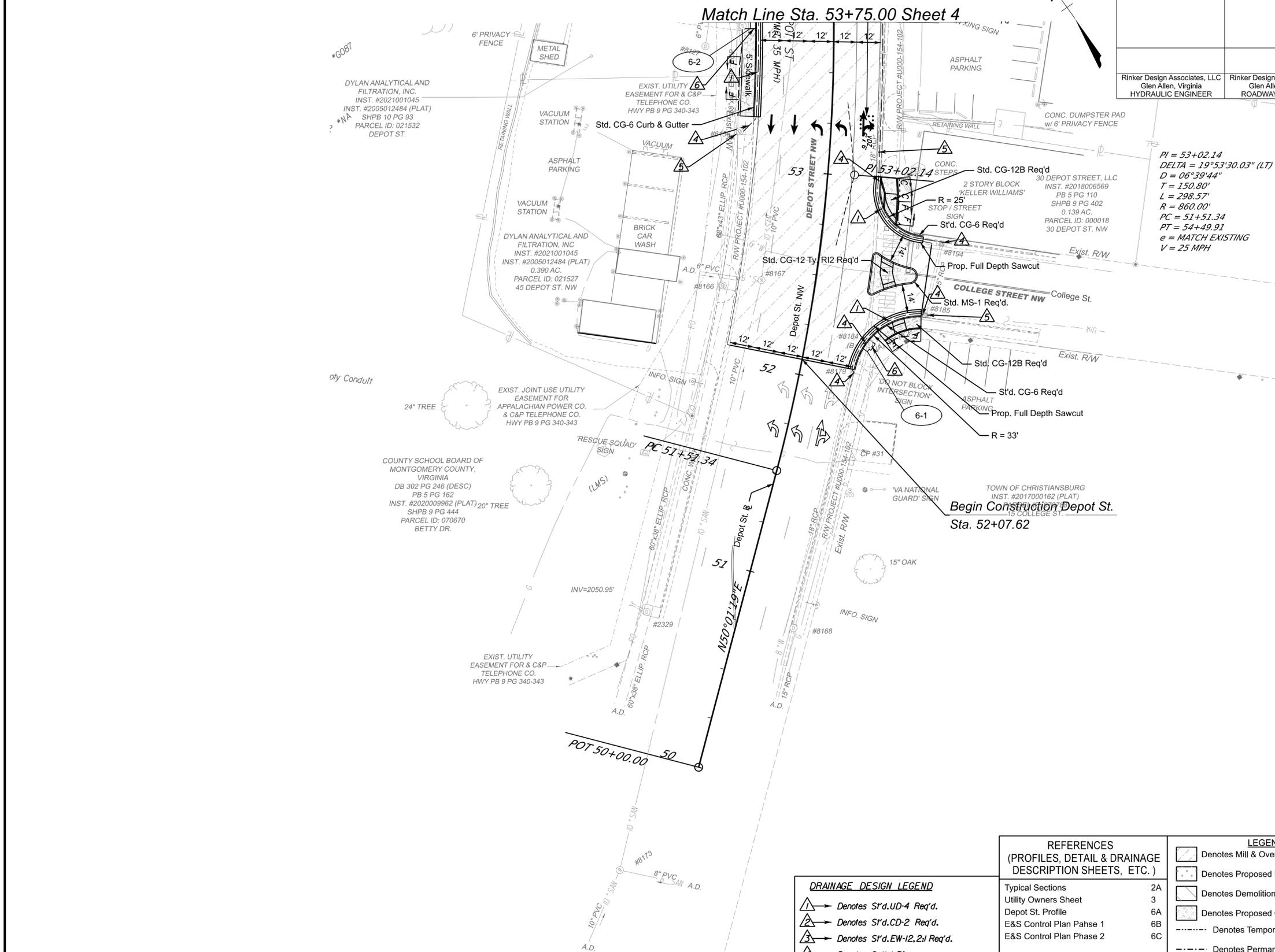
PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
SURVEYED BY DATE H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
SUBSURFACE UTILITY BY DATE AccuMark (804) 550-7740

REVISED	STATE	ROUTE	STATE	PROJECT	SHEET NO.
	VA.	460		0011-154-254 R201, C501	6

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Rinker Design Associates, LLC  
Glen Allen, Virginia  
HYDRAULIC ENGINEER

Rinker Design Associates, LLC  
Glen Allen, Virginia  
ROADWAY ENGINEER



**DRAINAGE DESIGN LEGEND**

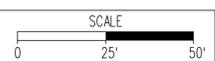
- Denotes S'd.UD-4 Req'd.
- Denotes S'd.CD-2 Req'd.
- Denotes S'd.EW-12,2J Req'd.
- Denotes Outlet Pipe
- Denotes Pipe/Structure to Remain
- Denotes Pipe/Structure to be Removed

**REFERENCES**  
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Typical Sections	2A
Utility Owners Sheet	3
Depot St. Profile	6A
E&S Control Plan Phase 1	6B
E&S Control Plan Phase 2	6C

**LEGEND**

- Denotes Mill & Overlay
- Denotes Proposed Pavement
- Denotes Demolition of Pavement
- Denotes Proposed Concrete
- Denotes Temporary Easement
- Denotes Permanent Easement
- Denotes Construction Limits in Cuts
- Denotes Construction Limits in Fills



PROJECT	0011-154-254
SHEET NO.	6

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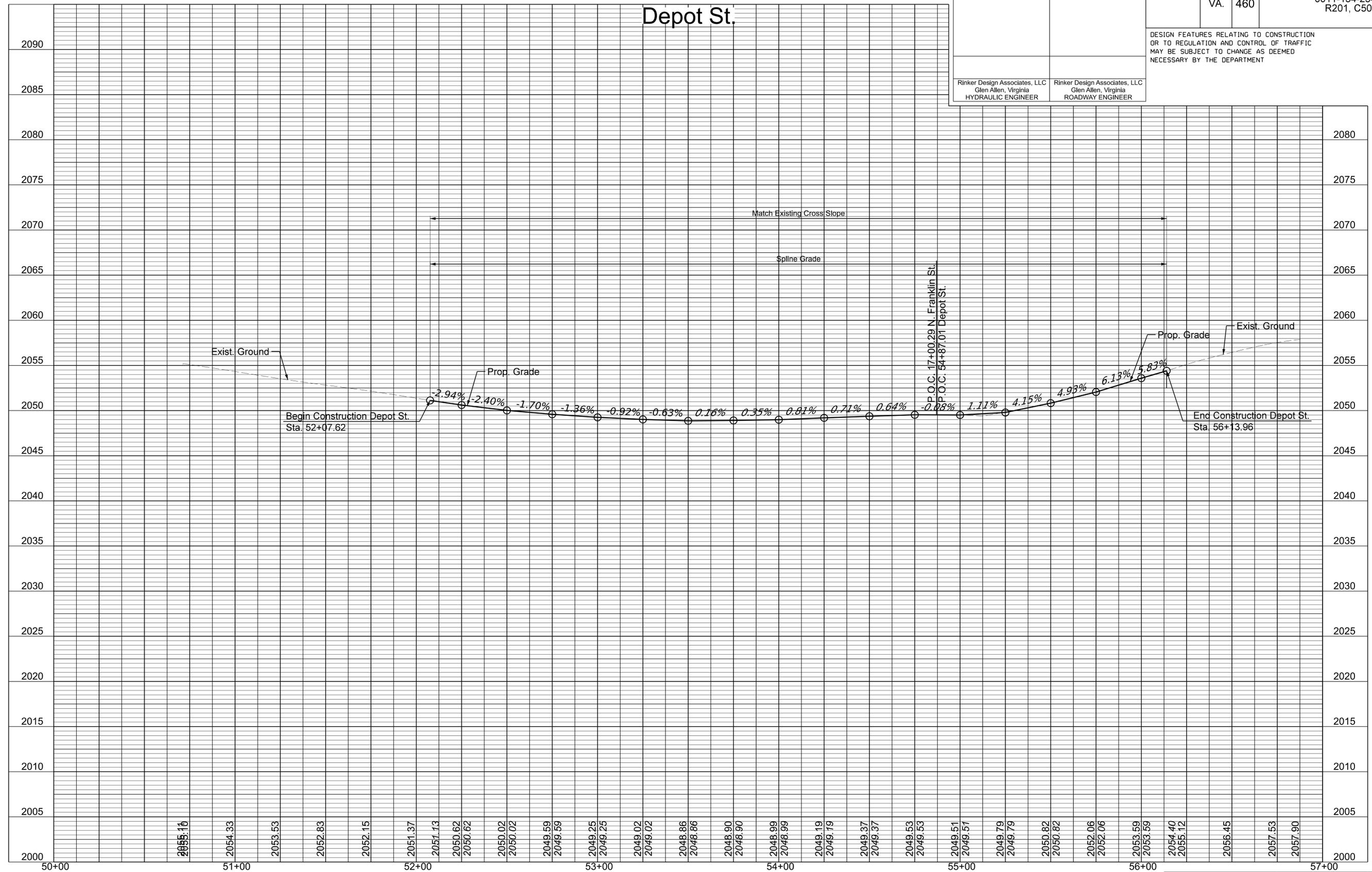
ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

9/16/2024

PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE Accumack (804) 550-7740

REVISED	STATE	STATE		SHEET NO.
	VA.	ROUTE	PROJECT	
		460	0011-154-254 R201, C501	6A
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT				
Rinker Design Associates, LLC Glen Allen, Virginia HYDRAULIC ENGINEER		Rinker Design Associates, LLC Glen Allen, Virginia ROADWAY ENGINEER		

# Depot St.



8/27/2024

HOR: 1"=25'	PROJECT	SHEET NO.
VERT: 1"=5'	0011-154-254	6A

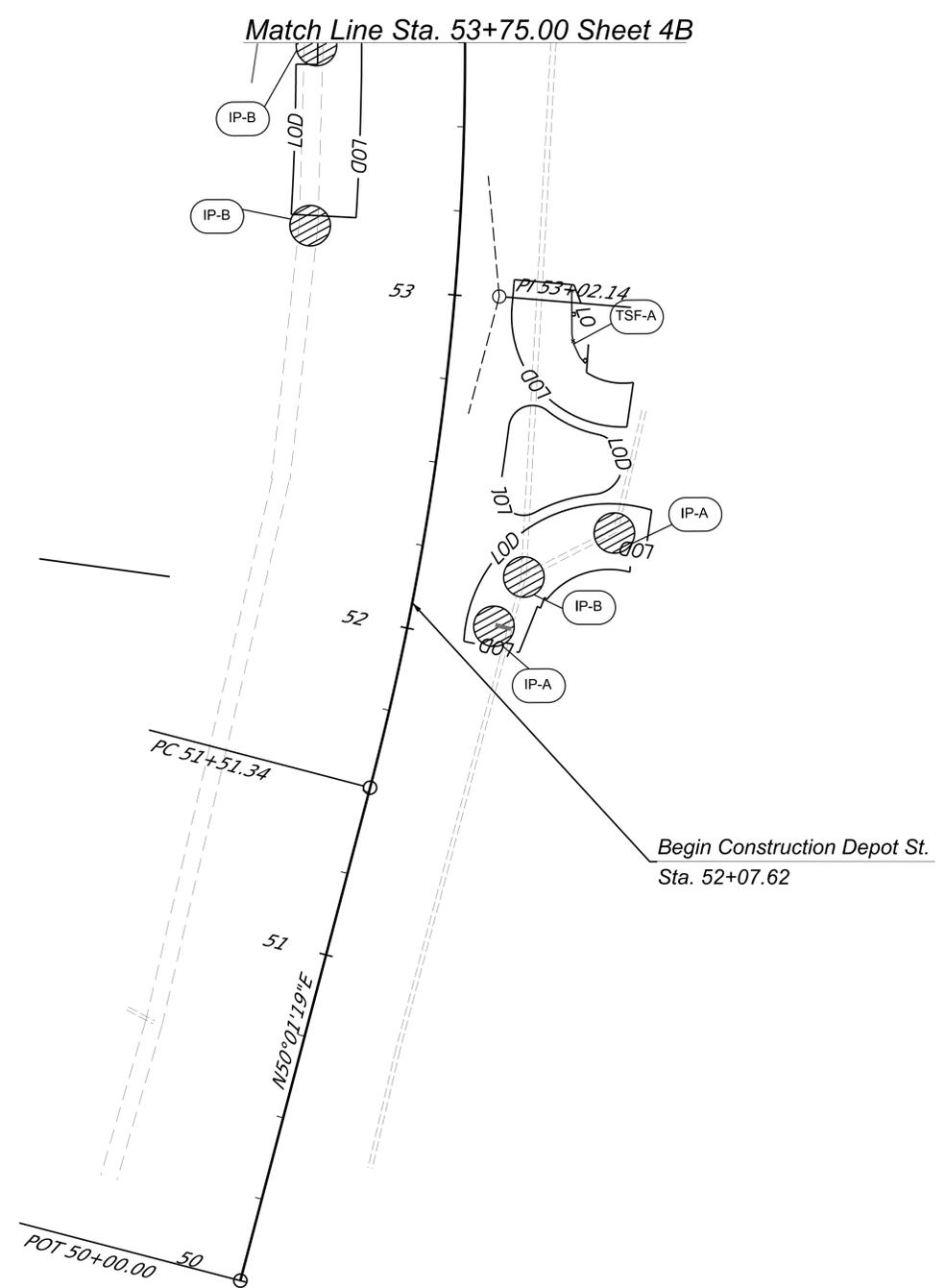
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PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February, 2023  
 DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE Accumark (804) 550-7740

# EROSION AND SEDIMENT CONTROL PHASE 1

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	6B
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT				
Rinker Design Associates, LLC Glen Allen, Virginia HYDRAULICS ENGINEER				



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)		LEGEND	
Typical Sections	2A		Denotes Temporary Silt Fence A, St'd. EC-5
Depot St. Profile	6A		Denotes Inlet Protection A/B/C; St'd. EC-6
E&S Control Plan Phase 2	6C		

SCALE 0 25' 50'	PROJECT 0011-154-254	SHEET NO. 6B
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9/16/2024



PROJECT MANAGER Mike Kelley, P.E. Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE Accumack (804) 550-7740

# Drainage Descriptions

REVISED	STATE	STATE PROJECT		SHEET NO.
		ROUTE	PROJECT	
	VA.	460	0011-154-254 R201, C501	7A
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT				
Rinker Design Associates, LLC Glen Allen, Virginia HYDRAULIC ENGINEER	Rinker Design Associates, LLC Glen Allen, Virginia ROADWAY ENGINEER			

Sheet 4

4-1 1 St'd. DI-3B Req'd.  
L= 6', H= 4.0', Inv = 2047.77  
Type B Nose Req'd.  
St'd. IS-1 Req'd.

4-2 1 St'd. DI-3B Req'd.  
L= 6', H= 3.3', Inv = 2046.10  
Type B Nose Req'd.

4-2 - 4-3 32' - 15" Storm Sewer Pipe Req'd. (2' Cover)  
Silt-Tight Joint Type Req'd.  
Inv.(in) = 2046.10 Inv.(out) = 2045.72

4-3 1 St'd. DI-3B Req'd.  
L= 8', H= 3.6', Inv = 2045.62  
Type A Nose Req'd.  
St'd. IS-1 Req'd.

4-3 - 4-4 58' - 18" Existing Reinforced Concrete Pipe Req'd. (3' Cover)  
Silt-Tight Joint Type Req'd.  
Inv.(in) = 2045.62 Inv.(out) = 2045.22

4-4 1 St'd. DI-3B Req'd.  
L= 14', H= 4.5', Inv = 2045.12  
Type A Nose Req'd.  
St'd. IS-1 Req'd.

Sheet 6

6-1 1 St'd. DI-3B Req'd.  
L= 20', H= 4.4', Inv = 2047.00  
Type B Nose Req'd.  
St'd. IS-1 Req'd.

6-2 1 St'd. DI-3B Req'd.  
L= 8', H= 6.0', Inv = 2042.50  
Type B Nose Req'd.  
St'd. IS-1 Req'd.

8/27/2024

HOR: 1"=25' VERT: 1"=5'	PROJECT 0011-154-254	SHEET NO. 7A
----------------------------	-------------------------	-----------------

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION.

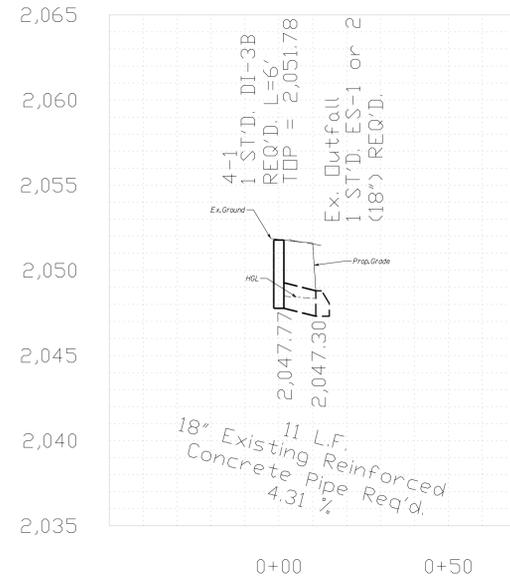
ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

PROJECT MANAGER - Mike Kelley, P.E., Director of Engineering (540) 382-6120  
SURVEYED BY, DATE - H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
DESIGN BY - Binker Design Associates, LLC (804) 612-0665  
SUBSURFACE UTILITY BY, DATE - Accumark (804) 550-7740

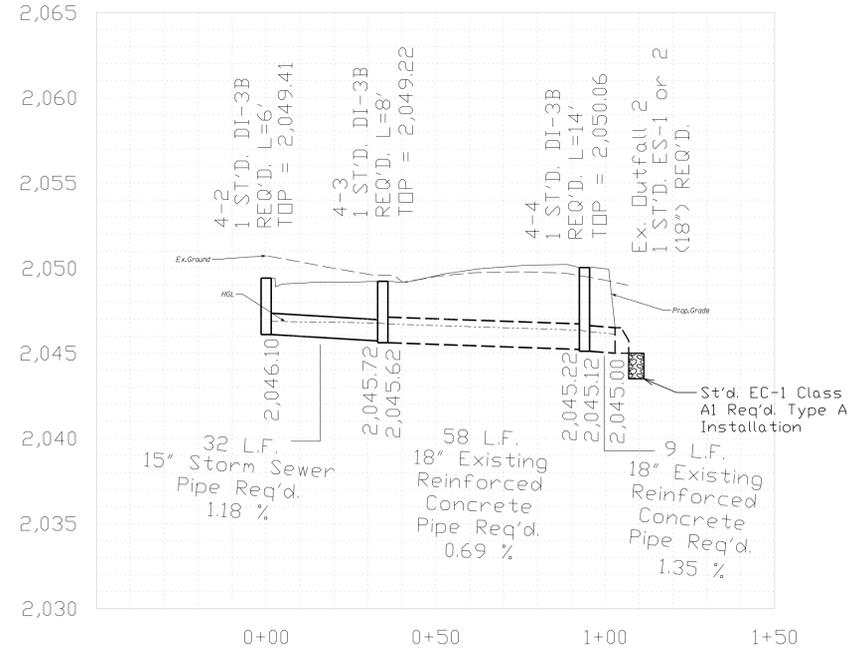
# Storm Sewer Profiles

REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
	VA.	460	0011-154-254 R201, C501	7B
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT				
Rinker Design Associates, LLC Glen Allen, Virginia HYDRAULIC ENGINEER	Rinker Design Associates, LLC Glen Allen, Virginia ROADWAY ENGINEER			

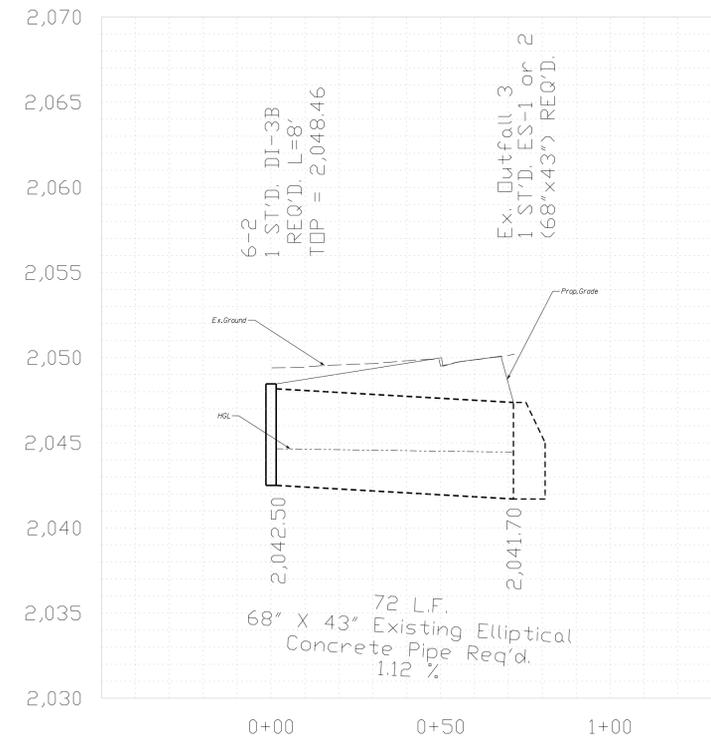
Storm Sewer Profile 4-1~Ex. Outfall



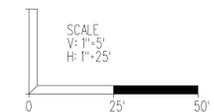
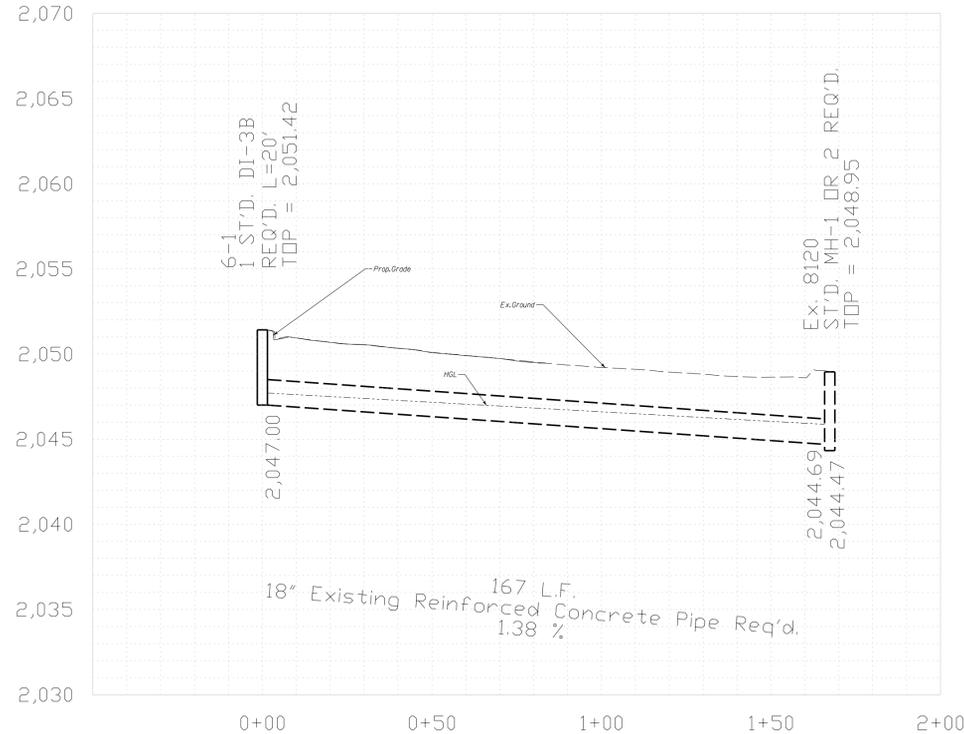
Storm Sewer Profile 4-2~Ex. Outfall 2



Storm Sewer Profile 6-2~Ex. Outfall 3



Storm Sewer Profile 6-1~Ex. 8120



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PROJECT MANAGER: Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE: H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY: Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE: AccuMark (804) 550-7740

# SIGNING & PAVEMENT MARKING PLAN

REVISED	STATE	ROUTE	STATE	PROJECT	SHEET NO.
	VA.	460		0011-154-254 R201, C501	

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

## GENERAL NOTES - SIGNING

- Unless otherwise approved by the Engineer, existing traffic signs, which are to be removed, shall remain in place until the new sign structure and critical message are in place.
- Proposed signs and sign structures shall not impact underground existing utilities. The Contractor is responsible for any disruption in Utility Service due to digging for signage structure. If the Proposed signage location will cause impact to existing Utility Service, sign location shall be relocated at the approval of the engineer, at no additional cost.
- All underground and overhead utilities shown on these plans are approximate only and may not be complete. At least 72 hours prior to beginning signing work, the Contractor shall contact "Miss Utility of Virginia" at 1-800-522-7001 to determine the extent, location, and to identify the utilities within the work area. If the Contractor perceives a conflict between utilities and the reviewed. The Contractor shall be responsible for repairing or replacing, at their own expense, any existing utilities, pavement, concrete items, that are damaged or disturbed during construction.
- The removal or modification of existing sign panels, structures, or foundations shall conform to Section 510 of the VDOT Road and Bridge Specifications.
- Unless otherwise indicated on the plans, all breakaway sign structures shall be located within 25' of the sign's indicated location or as directed by the Engineer, and within the existing or the proposed R/W.
- All existing and proposed sign locations are approximate and shall be field verified by the Contractor. All proposed sign locations shall be staked by the contractor and approved by the engineer prior to installation.
- All propose sign located adjacent to pedestrian walkways and path and path shall be mounted such that a minimum of 7' clearance exists from the walking surface to the bottom of the lowest sign panel.

## STANDARD SIGN LEGEND

PLAN ITEM	PLAN SYMBOL		SIGN LABELS	
	PROPOSED	EXISTING		
Single Post Sign Support			Proposed Sign Assemblies	Relocated Sign Assemblies
Double Post Sign Support				
Triple Post Sign Support			Denotes Sign Assembly No.	Denotes Sign Assembly No.
Flashing Beacon			Denotes Text No.	Denotes Text No.
O/H Cantilever Sign Support			Sign Relocation or Payable Sign Disposal/Salvage	
O/H Span Sign Support			<ul style="list-style-type: none"> <li>Denotes Existing Sign Structure and/or Sign Panel Type</li> <li>STRUCTURE &amp; SIGN PANEL                             <ul style="list-style-type: none"> <li>GM - Ground Mounted</li> <li>OM - Overhead Mounted</li> <li>CM - Cantilever Mounted</li> </ul> </li> <li>SIGN PANEL                             <ul style="list-style-type: none"> <li>SP-GM - Ground Mounted Sign Panel</li> <li>SP-OH - Overhead Mounted Sign Panel</li> </ul> </li> <li>STRUCTURE ONLY                             <ul style="list-style-type: none"> <li>ST-GM - Ground Mounted</li> </ul> </li> </ul>	
SIGN CALL-OUTS				
Existing Sign to Remain or to be Relocated				
Existing Sign to be Removed				
Proposed Sign Panel				

Denotes Action and Measurement & Payment Item  
 A - Remove & Dispose  
 B - Remove & Salvage  
 C - Relocate  
 D - Overlay Sign Panel

Signs noted on plans to be removed that do not have an accompanying sign label shall not be measured separately for payment. Removal and disposal for such signs shall be incidental to other contract items.

## GENERAL NOTES - PAVEMENT MARKING

- All proposed pavement shall be in accordance with the most current edition of each of the following and any revision thereof.
  - Manual on Uniform Traffic Control Devices. (MUTCD)
  - The Virginia Supplement to the Manual on Uniform Traffic Control Devices
  - The Virginia Department of Transportation Road and bridge Specifications
  - The Virginia Department of Transportation Road and bridge Standards
- Existing pavement markings that conflict with the proposed pavement markings, shall be removed via roadway overlay or completely eradicated.
- Limits of proposed pavement markings are approximate and shall be modified in the field to ensure that proposed pavement markings continue until existing pavement markings can be matched.

## INDEX OF SHEETS

Sheet No.:	Sheet Description:
8(1)	Index of Sheets, General Notes & Legends
8(2)*	Summary of Quantities
8(2A)*	Permanent Sign Schedule
8(2B)*	Sign Panel Details
8(3) - 8(6)	Signing & Pavement Marking Plans

\* To be included in future submissions.

## PAVEMENT MARKING LEGEND

- (A) Type B, Class I, White Pavement Line Marking, 4" Width
- (B) Type B, Class I, White Pavement Line Marking, 4" Width (10' Line, 30' Space)
- (C) Type B, Class I, White Pavement Line Marking, 4" Width (2' Line, 6' Space)
- (D) Type B, Class I, Double Yellow Pavement Line Marking, 4" Width
- (E) Type B, Class I, Double Yellow Pavement Line Marking Solid, 4" Width (10' Line, 30' Space)
- (F) Pavement Symbol Marking (Single Turn Arrow) Type B, Class II
- (G) Pavement Symbol Marking (Double Turn Arrow THRU/RT) Type B, Class II
- (H) Type B, Class I, White Pavement Line Marking, 24" Width

## TRAFFIC CONTROL DEVICE PLANS

SIGNING AND PAVEMENT MARKING PLAN  
 INDEX OF SHEETS, GENERAL NOTES &  
 LEGEND(S)

MONTGOMERY COUNTY

PROJECT	SHEET NO.
0011-154-254	8(1)

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION.

ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
DESIGN BY Binker Design Associates, LLC (804) 612-0665  
SUBSURFACE UTILITY BY, DATE AccuMark (804) 550-7740

# Signage Schedule

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	8(2)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

TEXT NO.	SIGN ASSEMBLY NO(S).	TEXT	SIGN ASSEMBLY COMPONENTS			SIGN PANEL AREA (s.f.)		PROP. SIGN STRUCTURE STD.	REMARKS	
			MUTCD STD.	PANEL SIZE		QTY.	Per ASSEMBLY			ALL ASSEMBLIES
				W	H					
1	401	  	D3-1	54"	12"	1	4.5	4.5	STP-1 TYPE A 2 1/2" 12 GA	
			D3-1	42"	12"	1	3.5	3.5		
			R1-1	36"	36"	1	9	9		
2	402		R2-1	30"	36"	1	7.5	7.5	STP-1 TYPE A 2" 14 GA	
3	403	 	M3-4	24"	12"	1	2	2	STP-1 TYPE A 2" 14 GA	
			M1-4	30"	24"	1	5	5		
			M6-3	21"	15"	1	2.2	2.2		
4	404, 501		R3-8b	24"	36"	2	6	12	STP-1 TYPE A 2" 14 GA	
5	601	  	D3-1	48"	12"	1	4	4	STP-1 TYPE A 2 1/2" 12 GA	
			D3-1	42"	12"	1	3.5	3.5		
			R1-1	36"	36"	1	9	9		

**NOTES:**

- 1) All signs shall be oriented as shown on the plans.
- 2) Sign color combinations shall be in accordance with the FHWA Standard Highway Signs and Markings Book and the 2011 Virginia Standard Highway Signs Book or as noted in the plans.
- 3) All positive contrast guide and specific service signs shall utilize fabrication letter Type L3 or L4 unless otherwise noted in the remarks. All other signs shall utilize fabrication letter Type L1 or L2 unless otherwise noted in the remarks.
- 4) All black sheeting shall be non-reflective.
- 5) Sign structures shall be installed per the noted sign St'd.
- 6) All St'd. STP-1 Structures to be single post unless otherwise noted.
- 7) Existing sign sizes approximated; existing sign dimensions shall be field verified to ensure proper sign structure is installed.

<b>TRAFFIC CONTROL DEVICE PLANS</b>	
SIGNING AND PAVEMENT MARKING PLAN INDEX OF SHEETS, GENERAL NOTES & LEGEND(S)	
MONTGOMERY COUNTY	
PROJECT 0011-154-254	SHEET NO. 8(2)

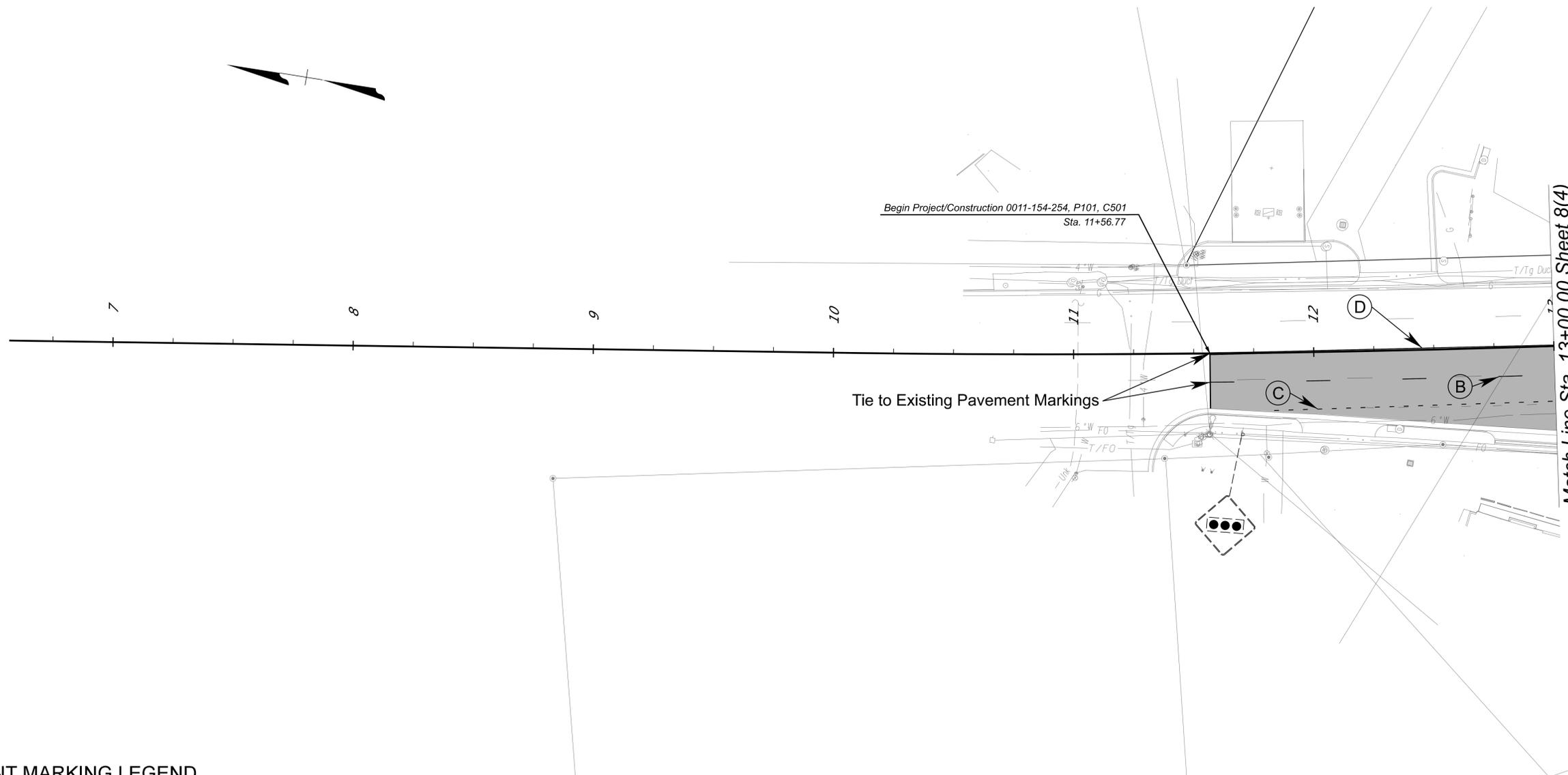
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 SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE AccuMark (804) 550-7740

# Signing and Pavement Marking Plan

REVISED	STATE	STATE	SHEET NO.
	ROUTE	PROJECT	
	VA.	0011-154-254 R201, C501	8(3)
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT			
Rinker Design Associates, P.C. Glen Allen, Virginia TRAFFIC ENGINEER			



## PAVEMENT MARKING LEGEND

- (A) Type B, Class I, White Pavement Line Marking, 4" Width
- (B) Type B, Class I, White Pavement Line Marking, 4" Width (10' Line, 30' Space)
- (C) Type B, Class I, White Pavement Line Marking, 4" Width (2' Line, 6' Space)
- (D) Type B, Class I, Double Yellow Pavement Line Marking, 4" Width
- (E) Type B, Class I, Double Yellow Pavement Line Marking Solid, 4" Width (10' Line, 30' Space)
- (F) Pavement Symbol Marking (Single Turn Arrow) Type B, Class II
- (G) Pavement Symbol Marking (Double Turn Arrow THRU/RT) Type B, Class II
- (H) Type B, Class I, White Pavement Line Marking, 24" Width

REFERENCES (PLAN AND DETAIL SHEETS)		TRAFFIC CONTROL DEVICE PLANS SIGNING AND PAVEMENT MARKING PLAN	
Roadway Plan Sheet	3		
MONTGOMERY COUNTY			
SCALE 0 25' 50'		PROJECT 0011-154-254	SHEET NO. 8(3)

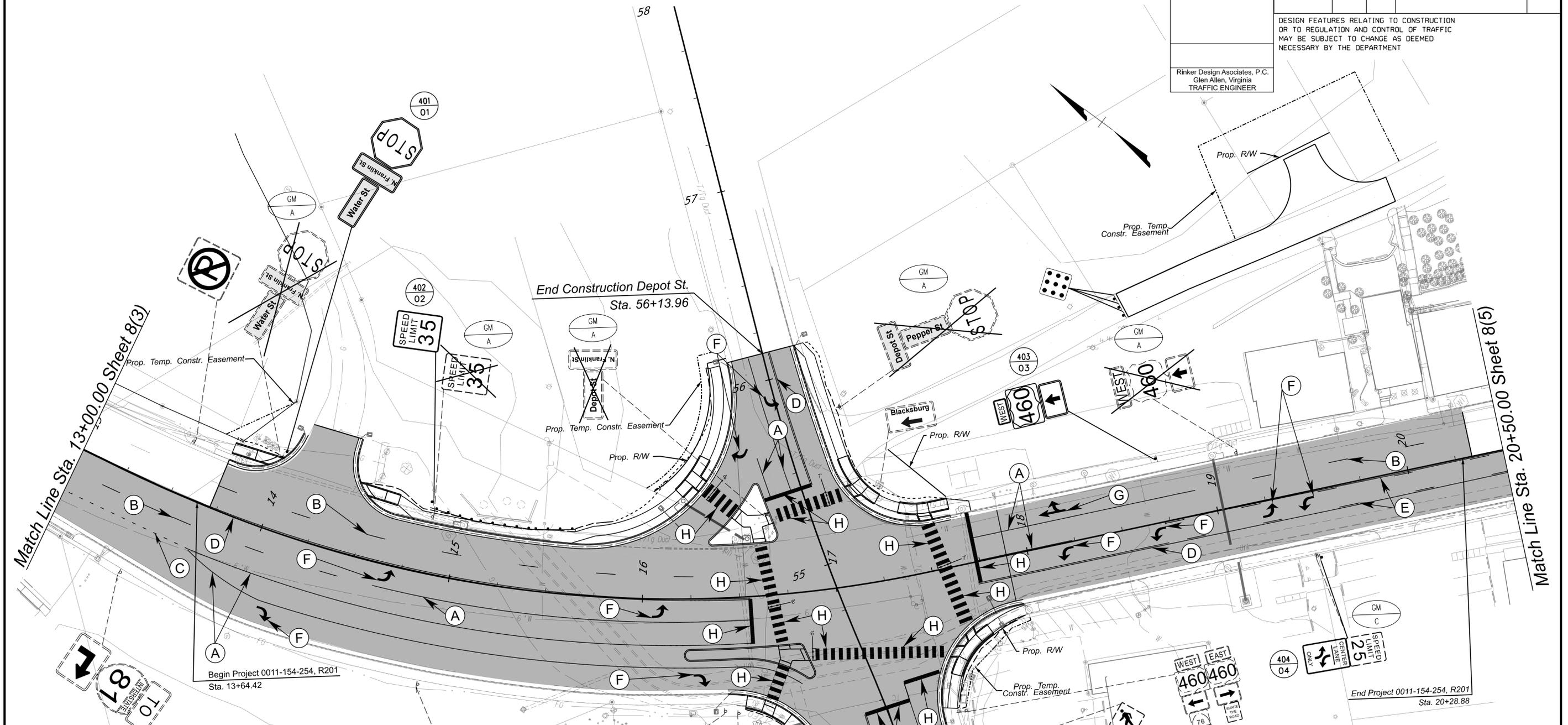
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 SUBSURFACE UTILITY BY, DATE AccuMark (804) 550-7740

# Signing and Pavement Marking Plan

REVISED	STATE	ROUTE	STATE	PROJECT	SHEET NO.
	VA.	460		0011-154-254 R201, C501	8(4)
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT					
Rinker Design Associates, P.C. Glen Allen, Virginia TRAFFIC ENGINEER					



### PAVEMENT MARKING LEGEND

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REFERENCES (PLAN AND DETAIL SHEETS)	TRAFFIC CONTROL DEVICE PLANS SIGNING AND PAVEMENT MARKING PLAN
Roadway Plan Sheet	4
MONTGOMERY COUNTY	
SCALE	PROJECT
0 25 50	0011-154-254
	SHEET NO.
	8(4)

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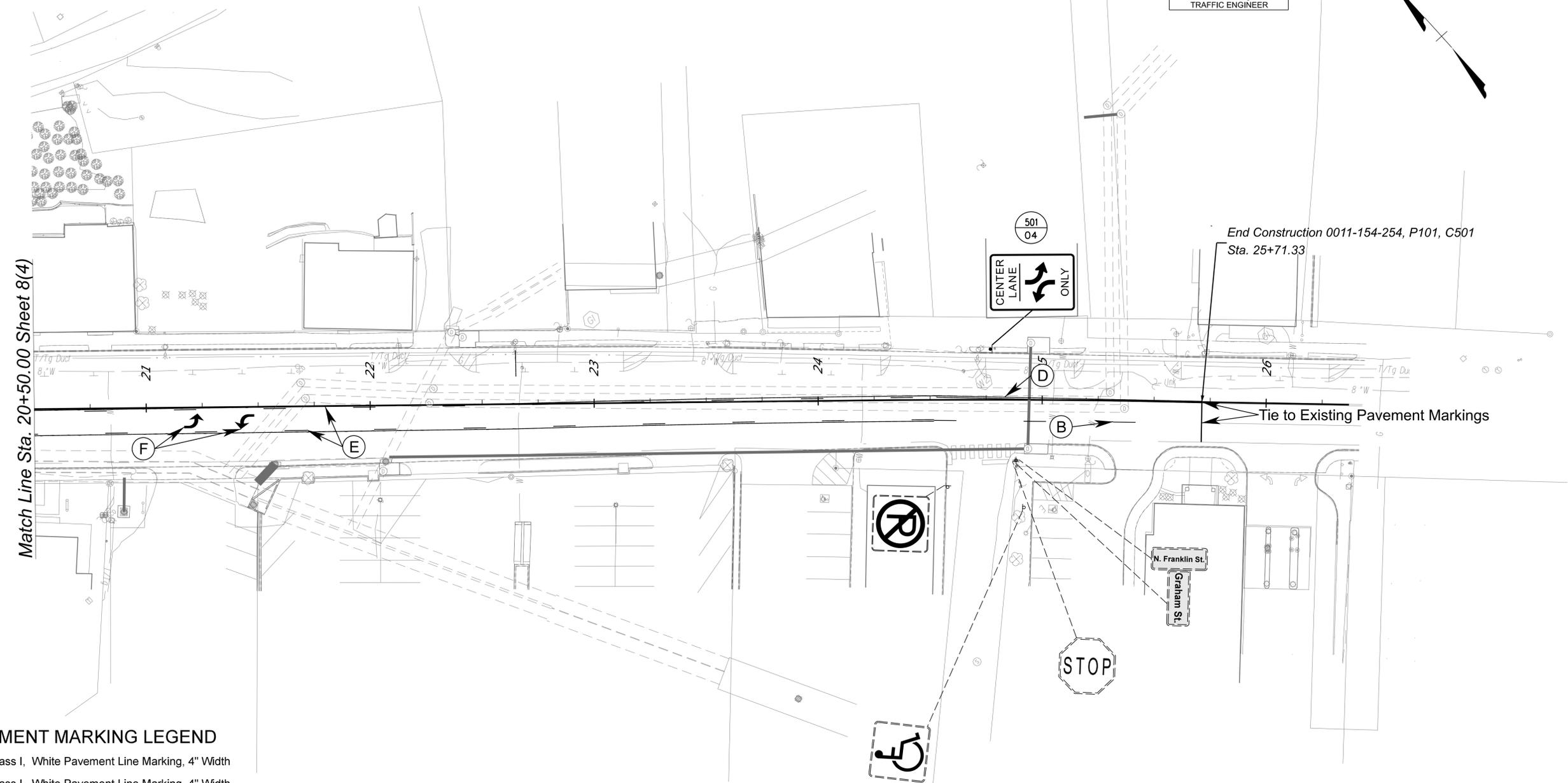
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9/16/2024

PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
DESIGN BY Rinker Design Associates, LLC (804) 612-0665  
SUBSURFACE UTILITY BY, DATE AccuMark (804) 550-7740

# Signing and Pavement Marking Plan

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	8(5)
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Rinker Design Associates, P.C. Glen Allen, Virginia TRAFFIC ENGINEER				



### PAVEMENT MARKING LEGEND

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REFERENCES (PLAN AND DETAIL SHEETS)	TRAFFIC CONTROL DEVICE PLANS SIGNING AND PAVEMENT MARKING PLAN
Roadway Plan Sheet	5
MONTGOMERY COUNTY	
SCALE 0 25' 50'	PROJECT 0011-154-254
	SHEET NO. 8(5)

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9/16/2024

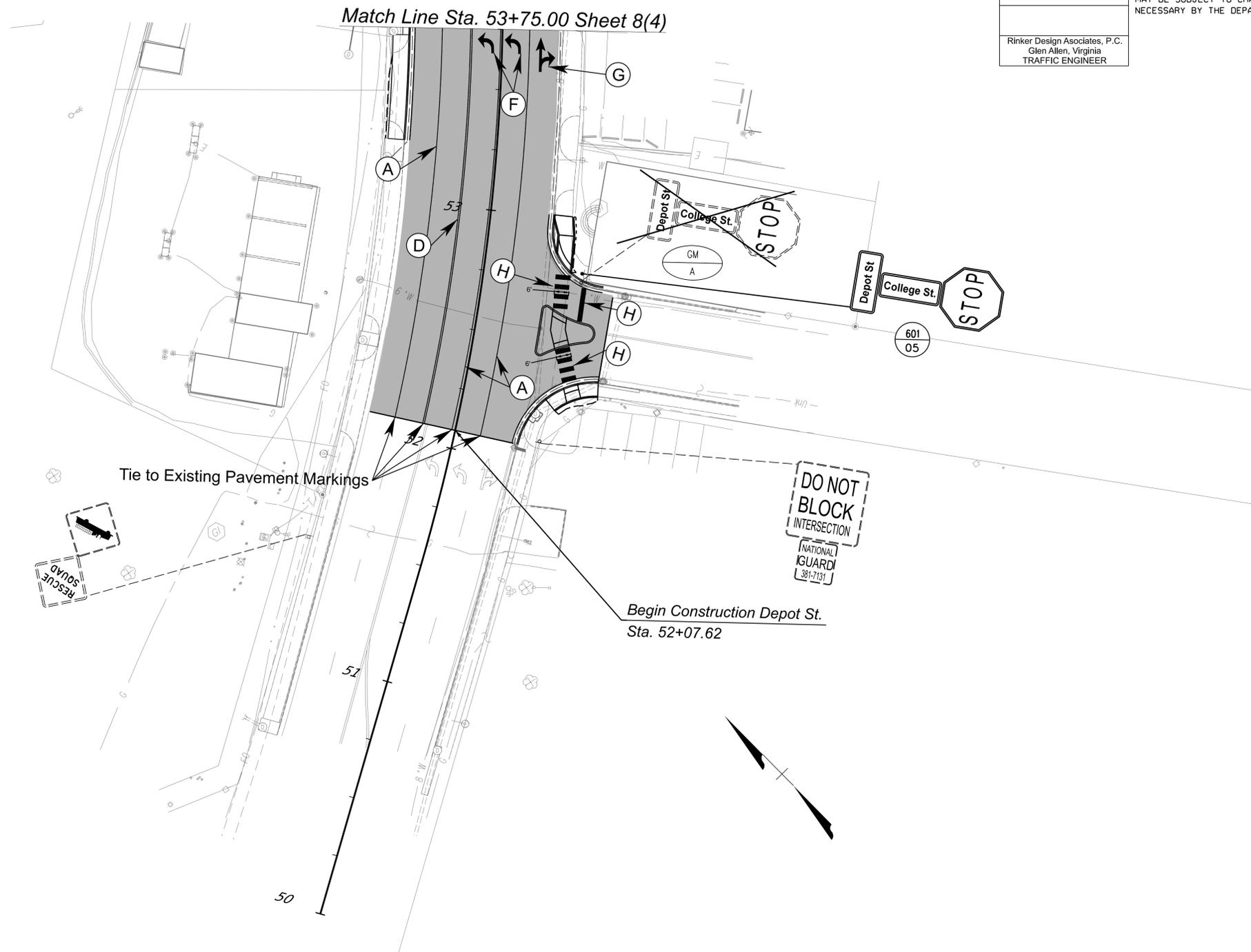
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 SURVEYED BY, DATE: H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY: Rinker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE: AccuMark (804) 550-7740

# Signing and Pavement Marking Plan

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	8(6)

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Rinker Design Associates, P.C.  
 Glen Allen, Virginia  
 TRAFFIC ENGINEER



## PAVEMENT MARKING LEGEND

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REFERENCES (PLAN AND DETAIL SHEETS)	TRAFFIC CONTROL DEVICE PLANS SIGNING AND PAVEMENT MARKING PLAN
Roadway Plan Sheet	6
MONTGOMERY COUNTY	
SCALE 0 25' 50'	PROJECT 0011-154-254
	SHEET NO. 8(6)

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 SURVEYED BY, DATE: H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY: Bicker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE: Accumack (804) 550-7740

### TRAFFIC SIGNAL PLAN

REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
	VA.	460	0011-154-254 R201, C501	9(1)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

### INDEX OF SHEETS

Sheet No.	Sheet Description
17(1)	Index of Sheets, General Notes & Legends
17(2)*	Summary of Quantities
17(2A)	Sign Fabrication Details
17(2B)	Pedestrian Pole Foundation Built Into Typical Detail
17(3)	Traffic Signal Plans - N. Franklin St. & Depot St N.E.

\* To be Included in future submissions.

### STANDARD TRAFFIC SIGNAL LEGEND

PLAN ITEM	PLAN SYMBOL		PLAN ITEM	PLAN SYMBOL	
	PROPOSED	EXISTING		PROPOSED	EXISTING
Metal Signal Pole & Foundation and Mast Arm (As noted in Signal Pole Legend)			Electrical Service Meter		
Pedestal Pole and Foundation (Std.PF-2)			Electrical Service Safety Switch (Disconnect)		
Pedestal Pole and Foundation (Std.PA-3)			Controller Cabinet Ground Mounted		
Traffic Signal Head w/ Backplate			Controller Cabinet Pole Mounted		
Traffic Signal Head w/o Backplate			Master Controller Cabinet Ground Mounted		
Pedestrian Signal Head			Master Controller Cabinet Pole Mounted		
Pedestrian Pushbutton & Sign			Std.CF-1		
Traffic Signal Sign Mast Arm or Span Wire Mtd. Pole Mounted			Controller Cabinet & Foundation Std.CF-3		
Emergency Vehicle Pre-emption (EVP) Sensor w/ Conf. Light			Controller Cabinet & Foundation Std.CF-4		
Emergency Vehicle Pre-emption (EVP) Sensor w/o Conf. Light			Std.CF-1		
Video Detection Camera			Master Controller Cabinet & Foundation Std.CF-3		
Junction Box (Std.as noted on plans)			Master Controller Cabinet & Foundation Std.CF-4		
Signal Luminaire (250 W) and Arm			Uninterruptible Power Supply Cabinet		
Signal Luminaire (400 W) and Arm					
Loop Detector (Size as noted on plans)					
Video Detection Zone (Size as noted on plans)					
Conduit					

### LABELS

Signal Pole or Controller		Proposed Signal Head		Signal Phasing		Sign	S-1
Cable and Conduit		Existing Signal Head		Pedestrian Phasing		Video Detection Camera	VDC-1
Junction Box		Proposed Pedestrian Signal Head				Emergency Preemption Detector	EVP-1
		Existing Pedestrian Signal Head					

### TRAFFIC CONTROL DEVICE PLANS

TRAFFIC SIGNAL PLAN, GENERAL NOTES, INDEX OF SHEETS & LEGEND

MONTGOMERY COUNTY

PROJECT 0011-154-254

SHEET NO. 9(1)

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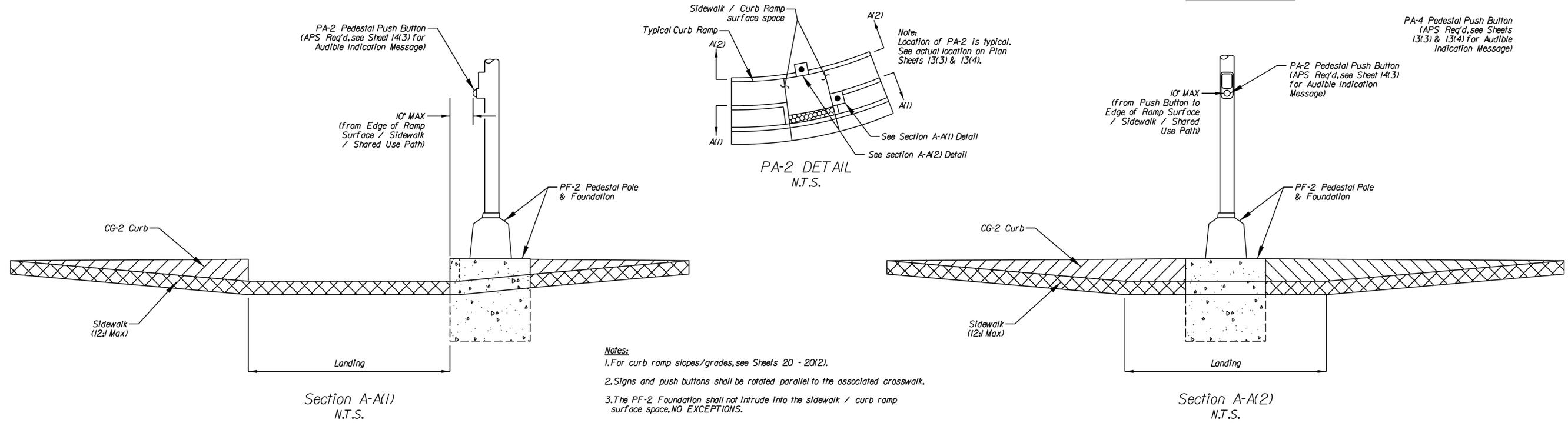
PROJECT MANAGER: Mike Kelley, P.E., Director of Engineering (540) 382-6120  
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 DESIGN BY: Binker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE: Accumark (804) 550-7740

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	9(2B)

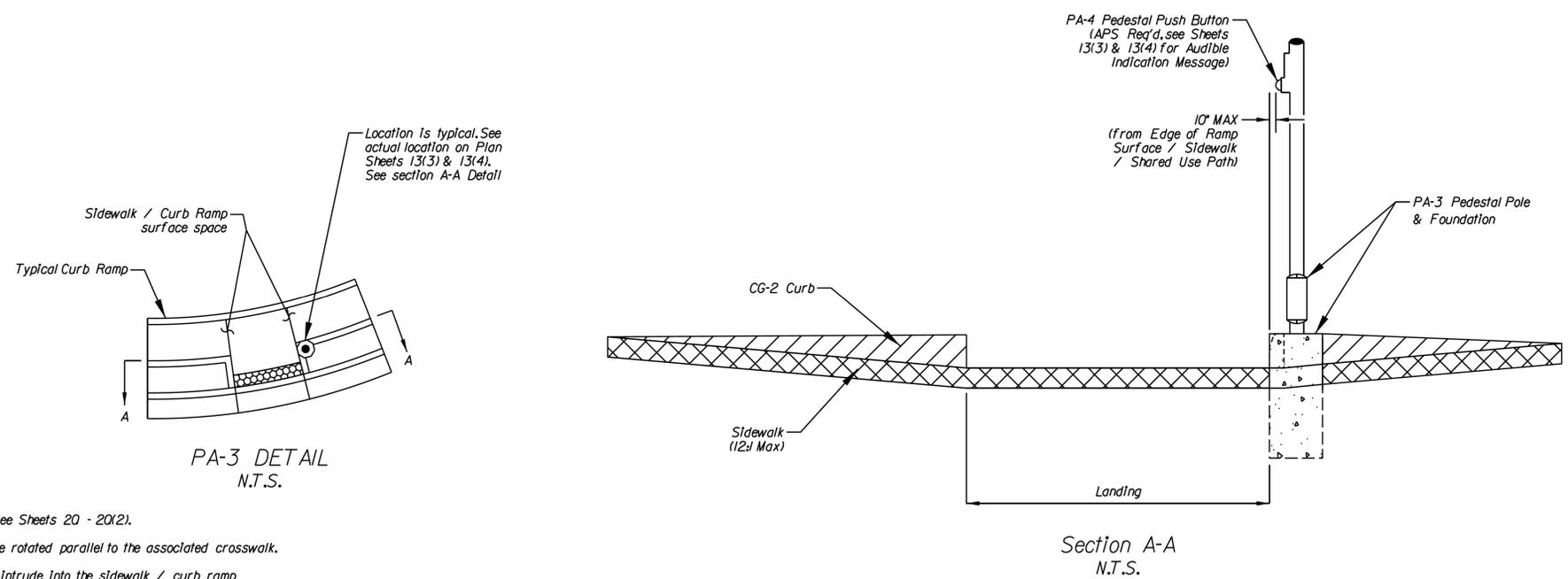
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Rinker Design Associates, P.C.  
Glen Allen, Virginia  
TRAFFIC ENGINEER

Pedestrian Pole Foundation Built into Typical Detail



PA-4 Pedestal Push Button (APS Req'd, see Sheets 13(3) & 13(4) for Audible Indication Message)



**Notes:**  
 1. For curb ramp slopes/grades, see Sheets 20 - 20(2).  
 2. Signs and push buttons shall be rotated parallel to the associated crosswalk.  
 3. The PF-2 Foundation shall not intrude into the sidewalk / curb ramp surface space, NO EXCEPTIONS.

TRAFFIC CONTROL DEVICE PLANS		
Pedestrian Pole Foundation Built into Typical Detail		
MONTGOMERY COUNTY		
Not to Scale	PROJECT 0011-154-254	SHEET NO. 9(2B)

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PROJECT MANAGER Mike Kelley, P.E., Director of Engineering (540) 382-6120  
SURVEYED BY, DATE H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
DESIGN BY Binker Design Associates, LLC (804) 612-0665  
SUBSURFACE UTILITY BY, DATE AccuMark (804) 550-7740

### Signal Pole & Controller Legend

(ALL DIMENSIONS ARE TO CENTER OF POLE)

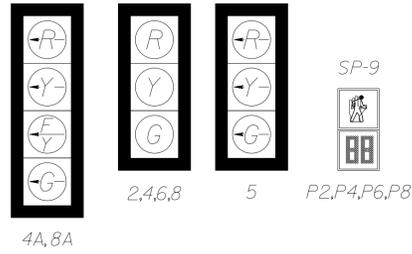
- (I) EXISTING CONTROLLER CABINET & FOUNDATION
- (A) MAST ARM POLE MP-3, TYPE A  
49' Arm 90° Angle to N. Franklin St Constr. @
- (B) EXISTING MAST ARM POLE  
65' Arm 270° Angle to Depot St Constr. @
- (C) MAST ARM POLE MP-3, TYPE BI  
60' Arm 270° Angle to N. Franklin St Constr. @
- (D) EXISTING MAST ARM POLE  
49' Arm 90° Angle to Depot St Constr. @

Rinker Design Associates, P.C.  
Glen Allen, Virginia  
TRAFFIC ENGINEER

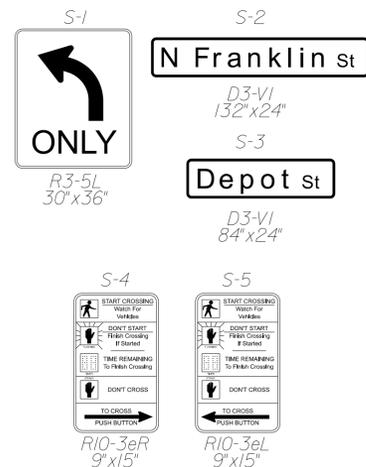
REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	9(3)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

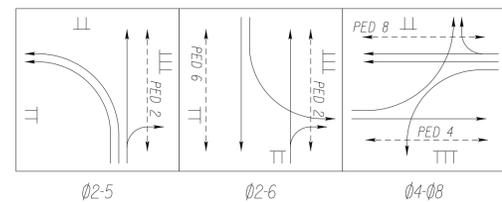
### Proposed Signals



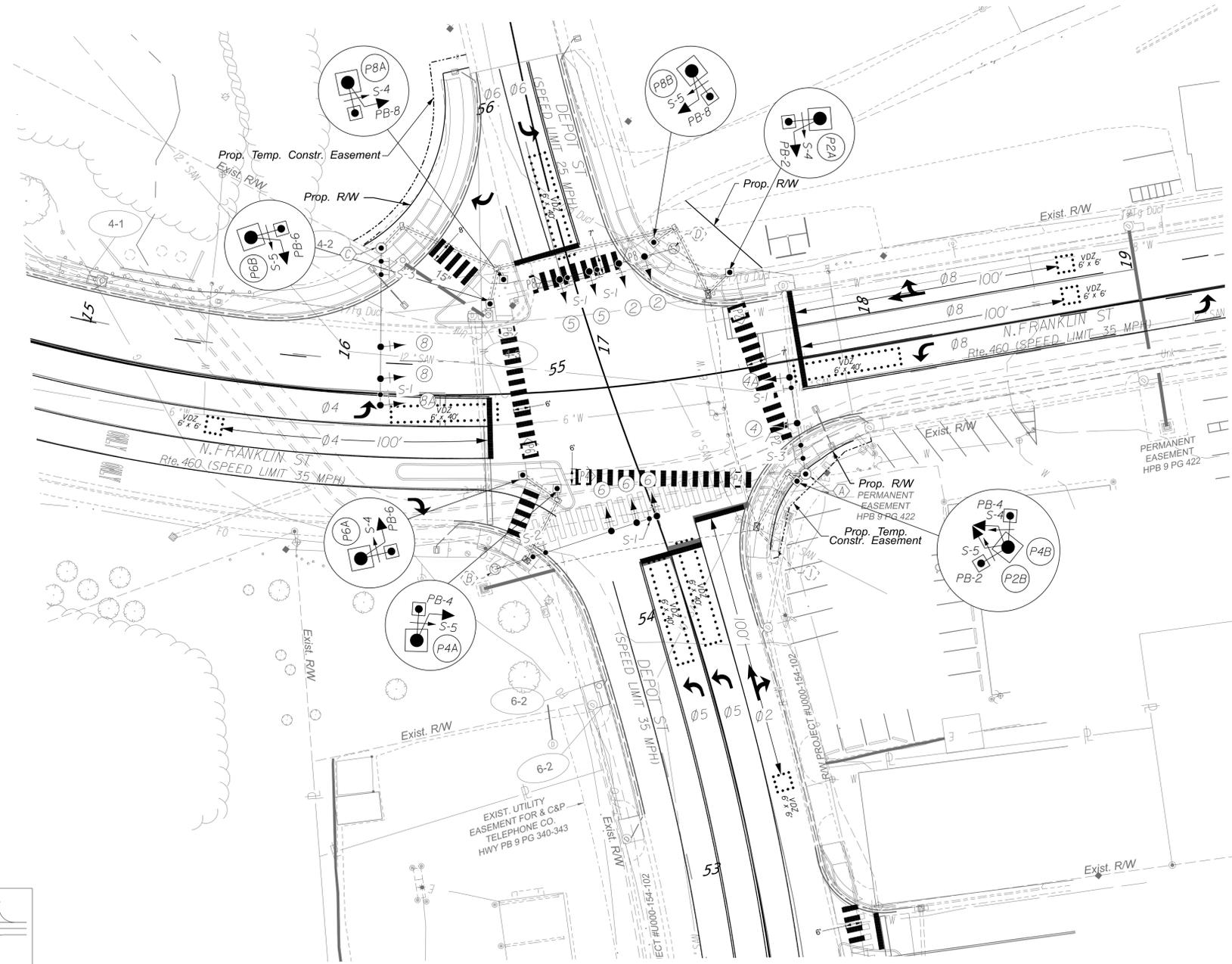
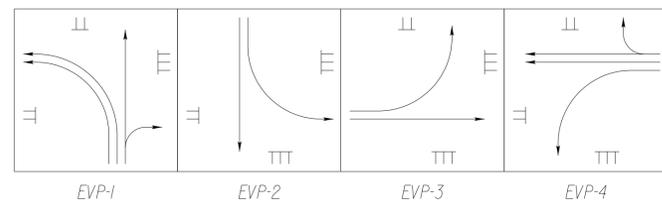
### Proposed Signs



### Phasing Diagram



### Preemption Diagram



### TRAFFIC CONTROL DEVICE PLANS TRAFFIC SIGNAL PLAN

MONTGOMERY COUNTY

SCALE 0 25' 50'	PROJECT 0011-154-254	SHEET NO. 9(3)
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ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

PROJECT MANAGER: Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE: H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY: Binker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE: Accumark (804) 550-7740

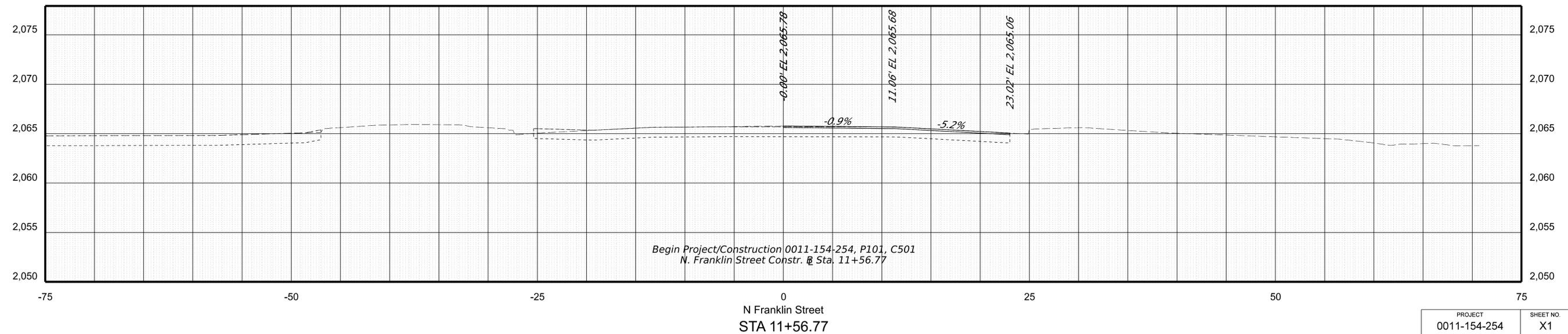
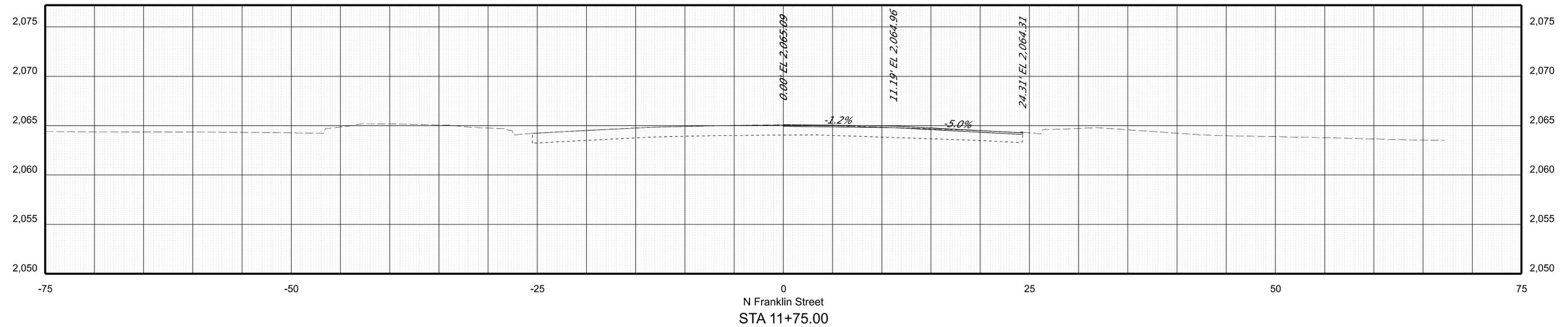
### CROSS SECTIONS

SCALE 1 IN. = 5 FT

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REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X1

CROSS SECTION SHEET INDEX	
N. FRANKLIN STREET	X1-X26
DEPOT STREET	X27-X33



PROJECT	SHEET NO.
0011-154-254	X1

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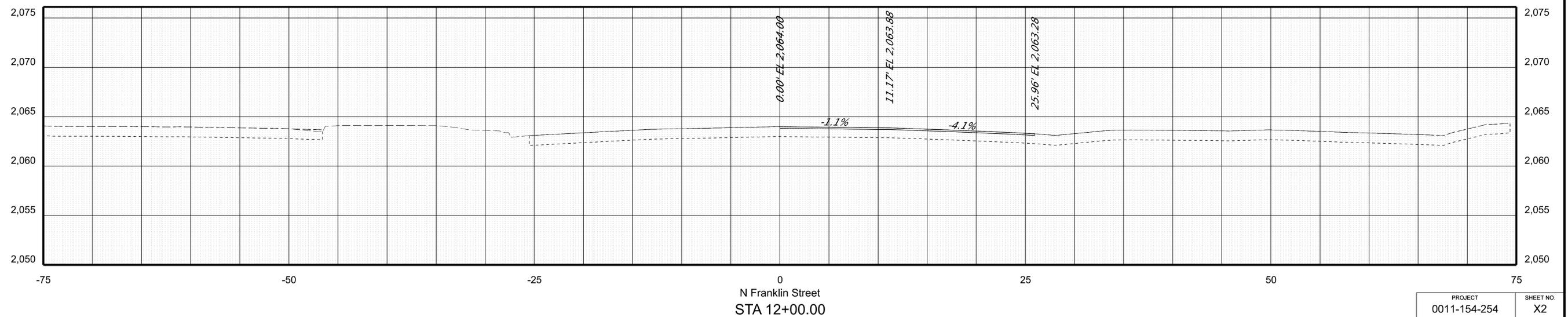
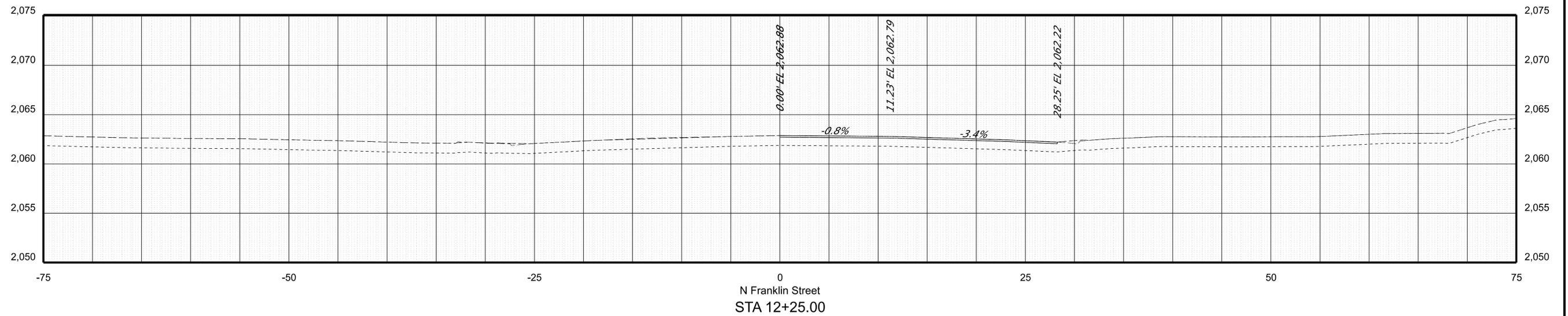
PROJECT MANAGER: Mike Kelley, P.E. Director of Engineering (540) 382-6120  
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REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X2



PROJECT	SHEET NO.
0011-154-254	X2

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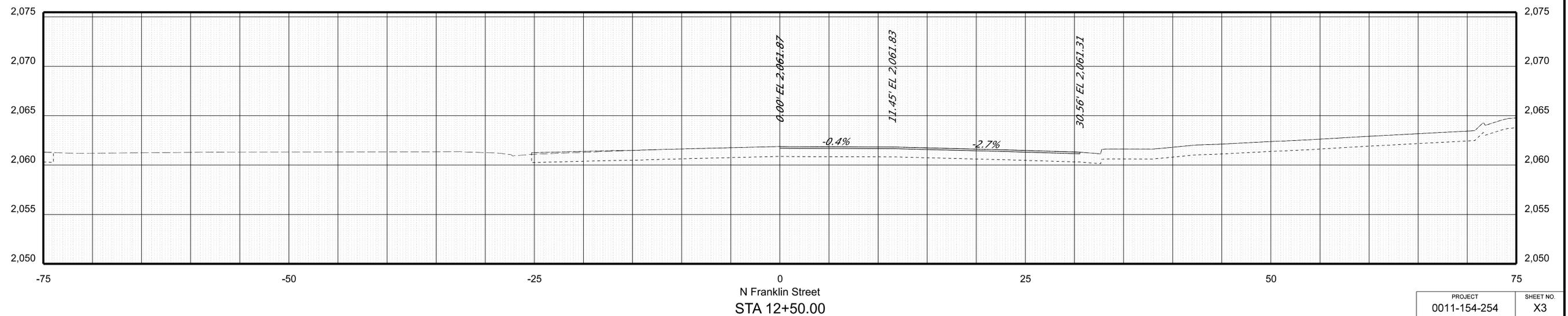
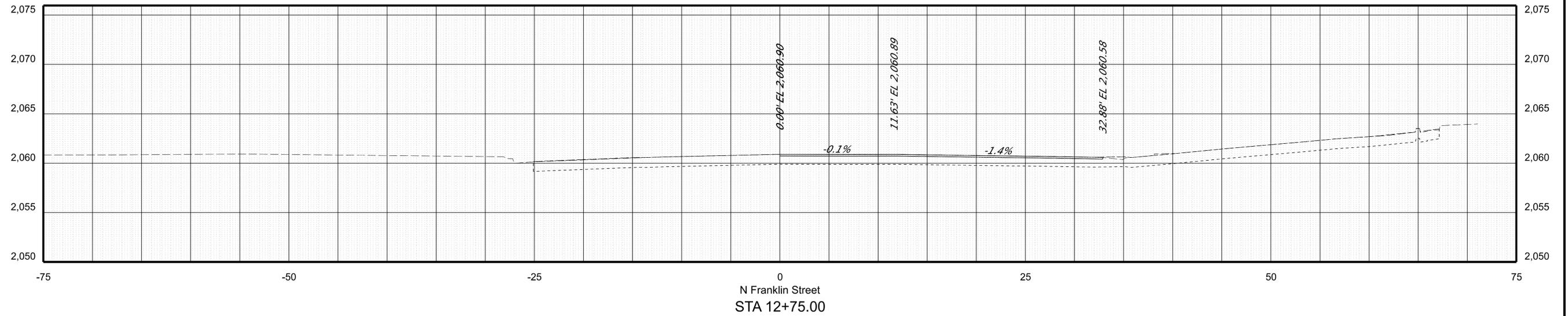
PROJECT MANAGER: Mike Kelley, P.E. Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE: H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
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 SUBSURFACE UTILITY BY, DATE: Accumark (804) 550-7740

### CROSS SECTIONS

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REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X3



PROJECT	SHEET NO.
0011-154-254	X3

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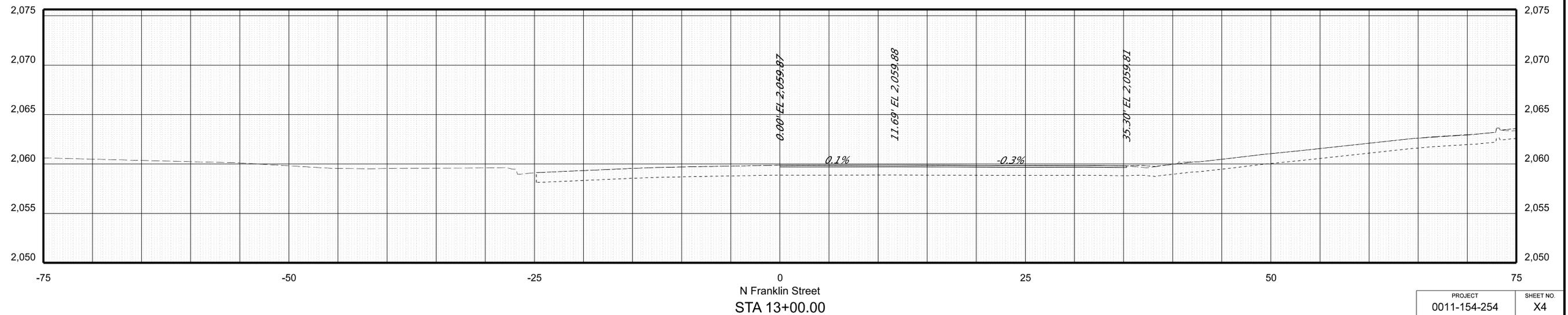
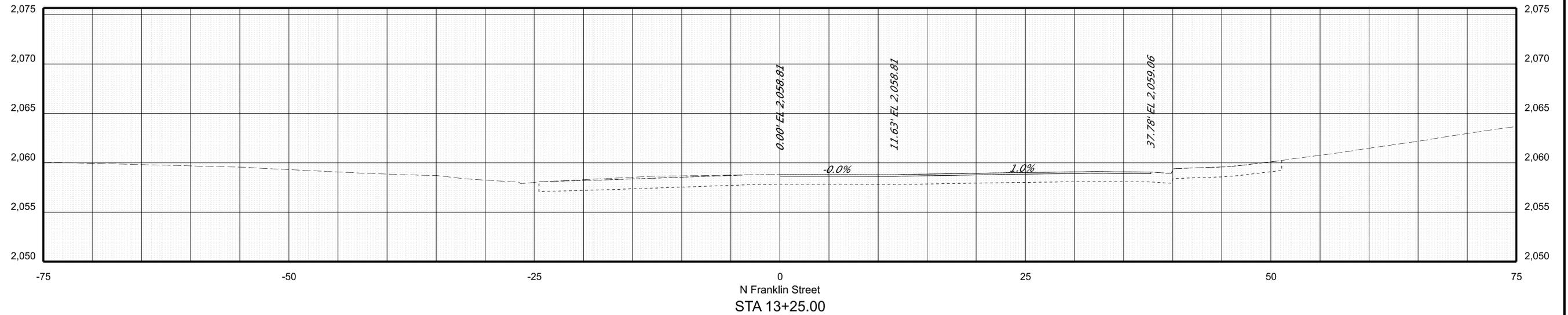
PROJECT MANAGER - Mike Kelley, P.E. Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE - H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY - Baker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE - Accumark (804) 550-7740

# CROSS SECTIONS

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REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X4



PROJECT	SHEET NO.
0011-154-254	X4

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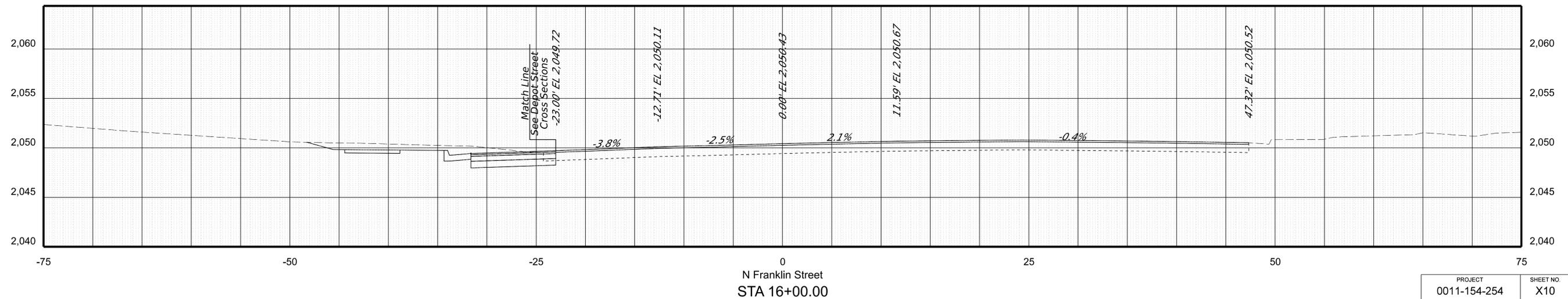
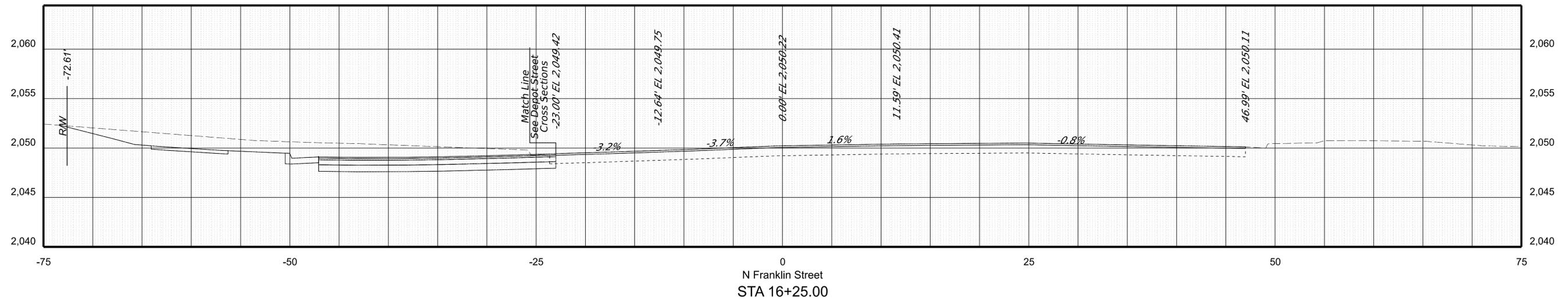
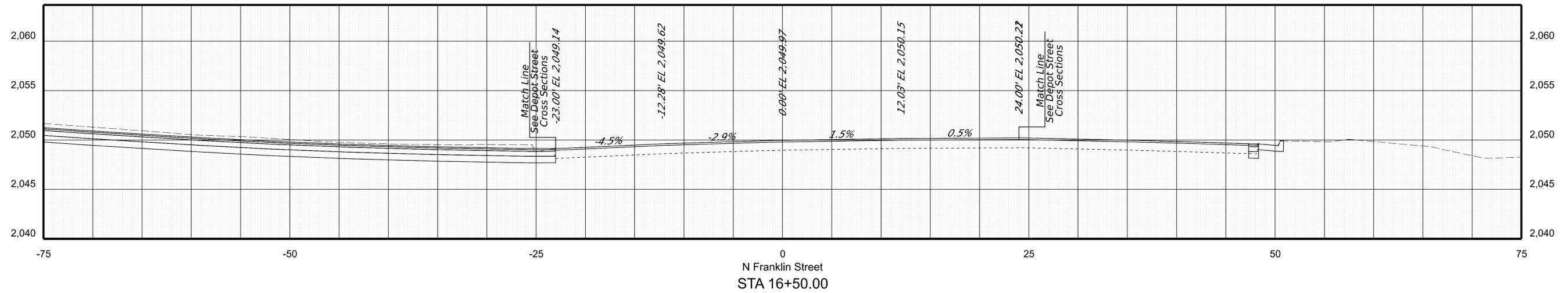
PROJECT MANAGER: Mike Kelley, P.E., Director of Engineering (540) 382-6120  
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 DESIGN BY: Binker Design Associates, LLC (R09) 612-0665  
 SUBSURFACE UTILITY BY: DATE: Accumark 1804) 550-7740

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REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X10



PROJECT	SHEET NO.
0011-154-254	X10

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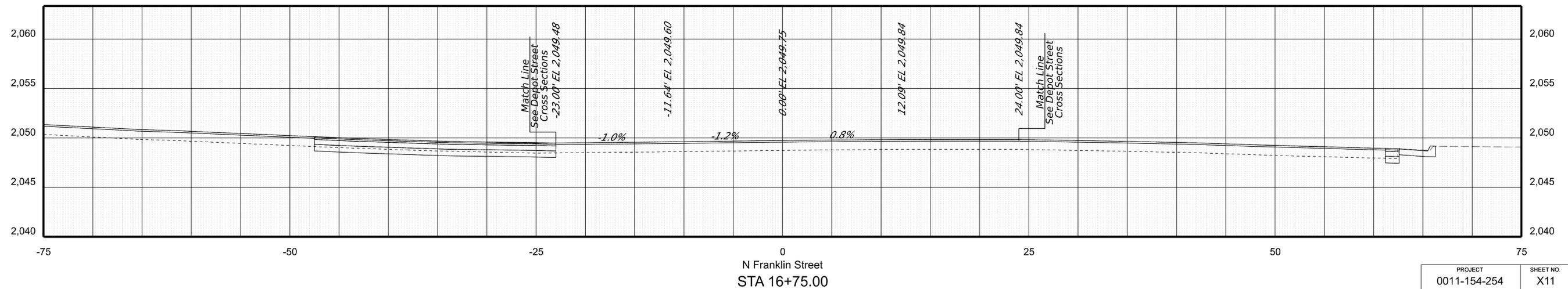
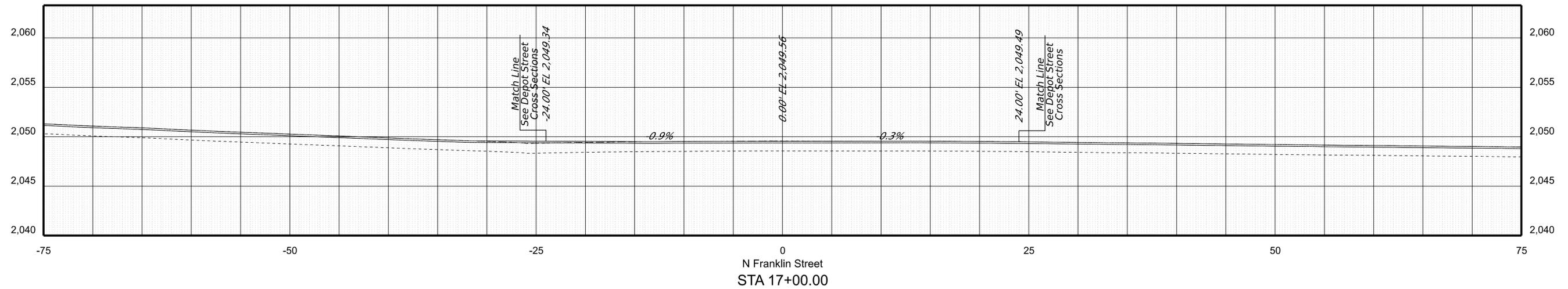
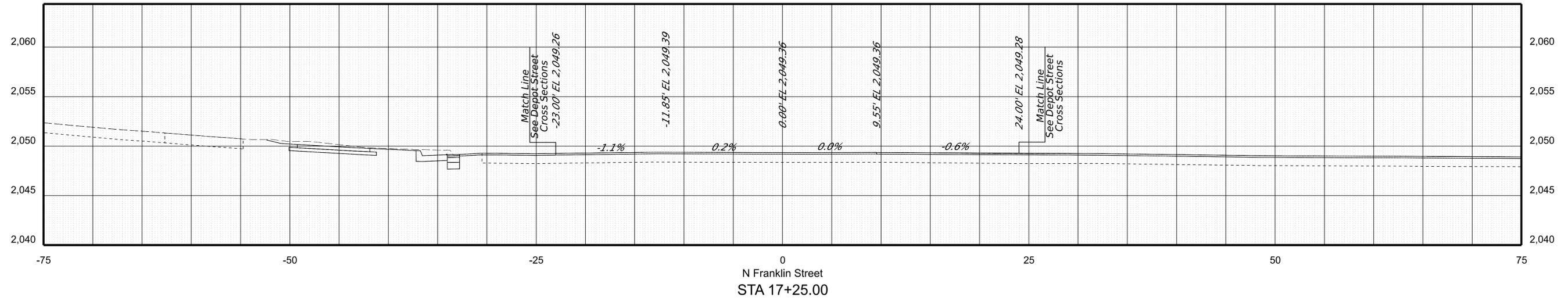
PROJECT MANAGER: Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY: DATE: H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY: Binker Design Associates, LLC (RD9) 612-0665  
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REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	460	0011-154-254 R201, C501	X11



PROJECT	SHEET NO.
0011-154-254	X11

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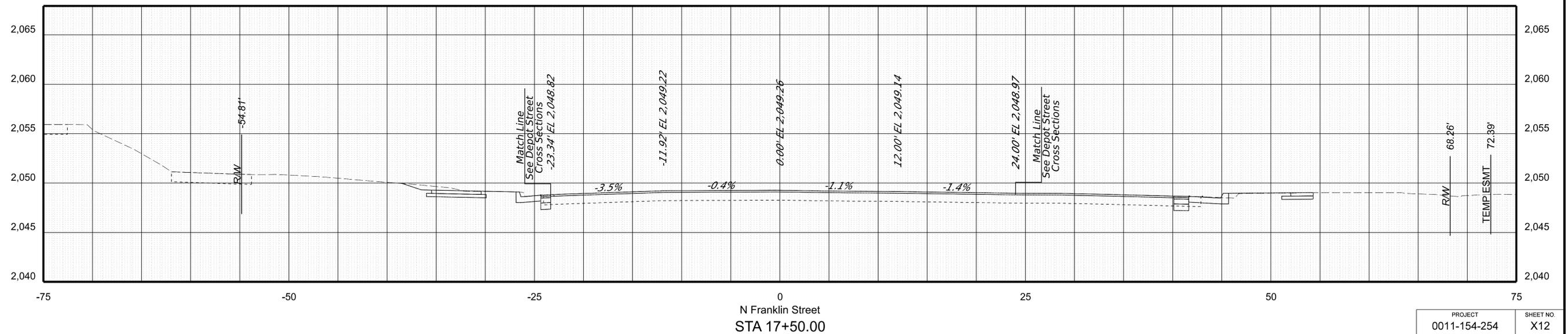
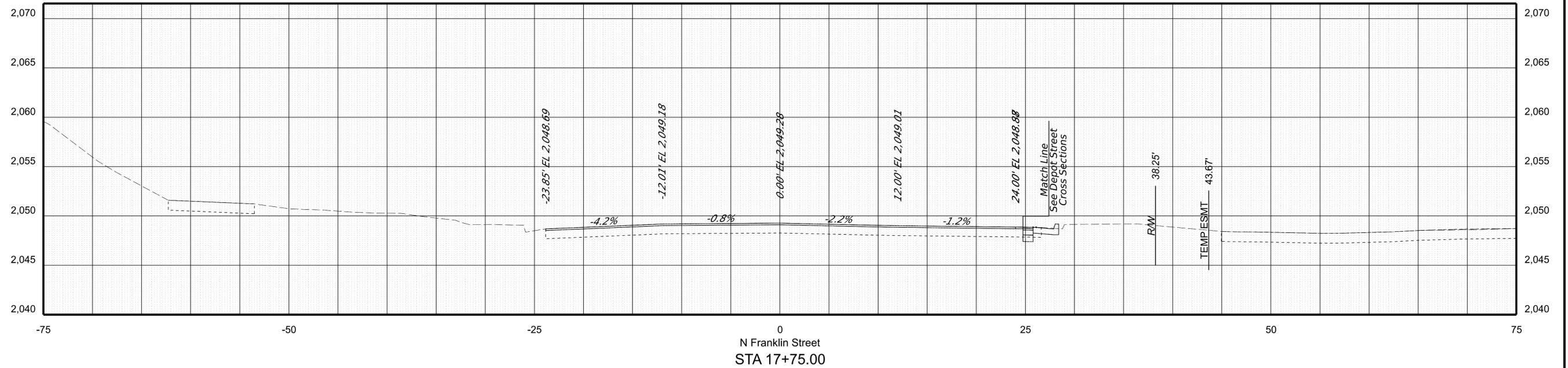
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 SURVEYED BY, DATE: H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
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 SUBSURFACE UTILITY BY, DATE: Accumark (804) 550-7740

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SCALE 1 IN. = 5 FT

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REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X12



PROJECT	SHEET NO.
0011-154-254	X12

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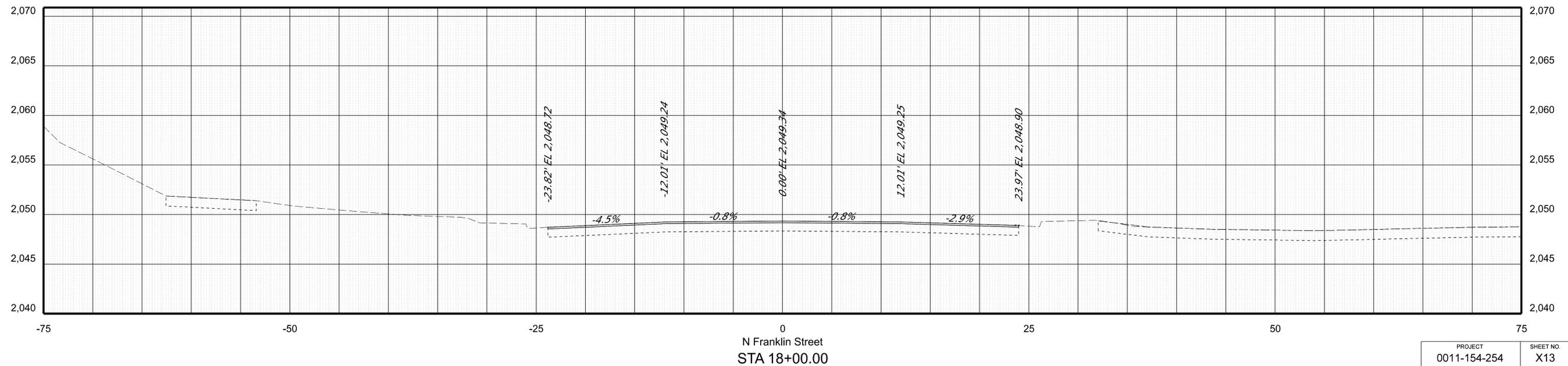
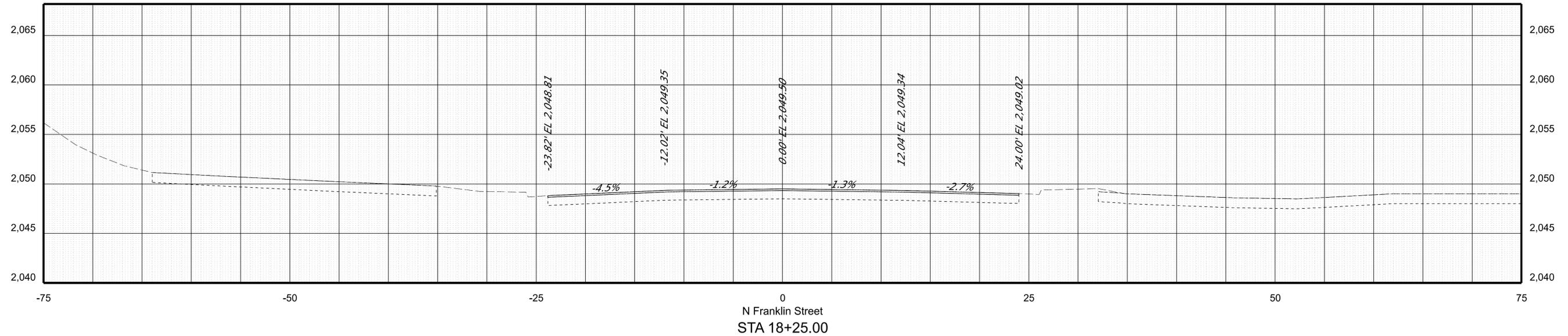
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REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X13



PROJECT	SHEET NO.
0011-154-254	X13

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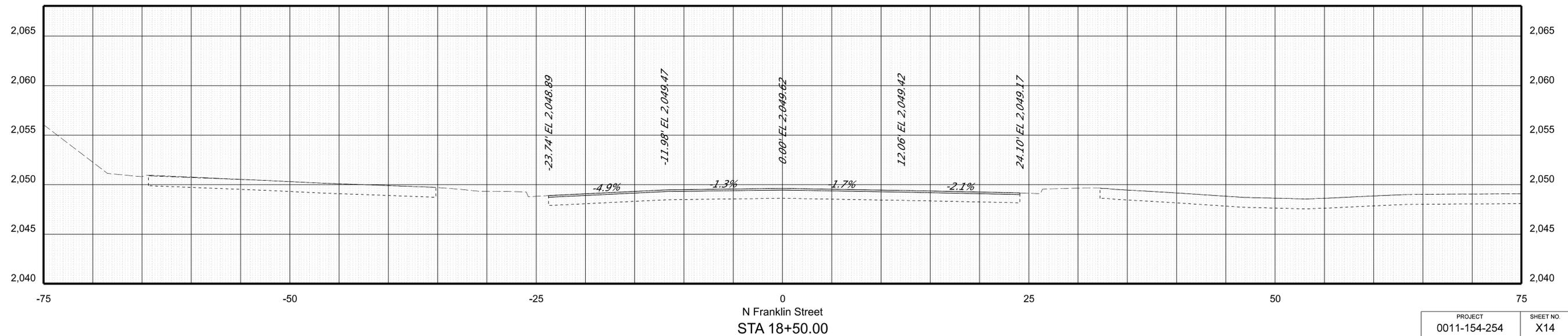
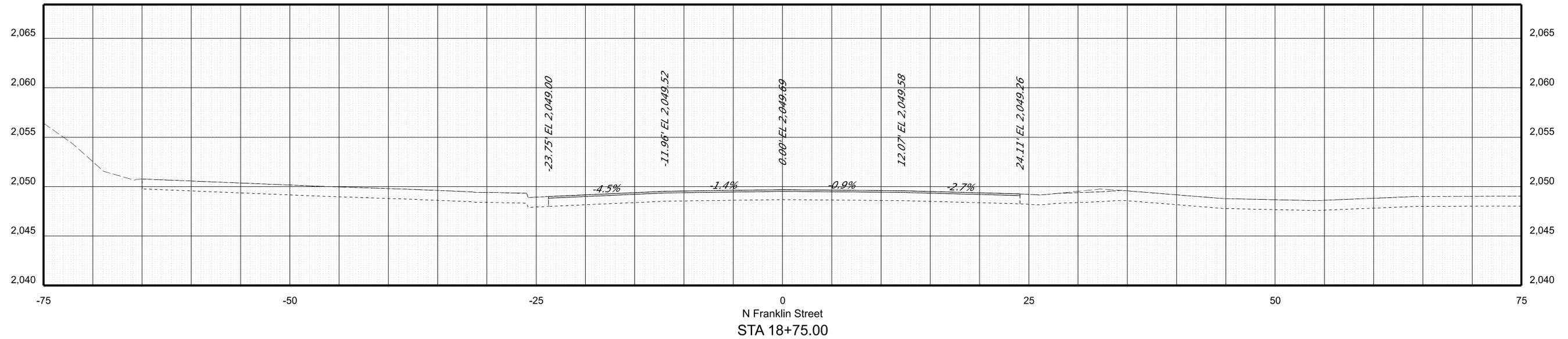
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CROSS SECTIONS  
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REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X14



PROJECT	SHEET NO.
0011-154-254	X14

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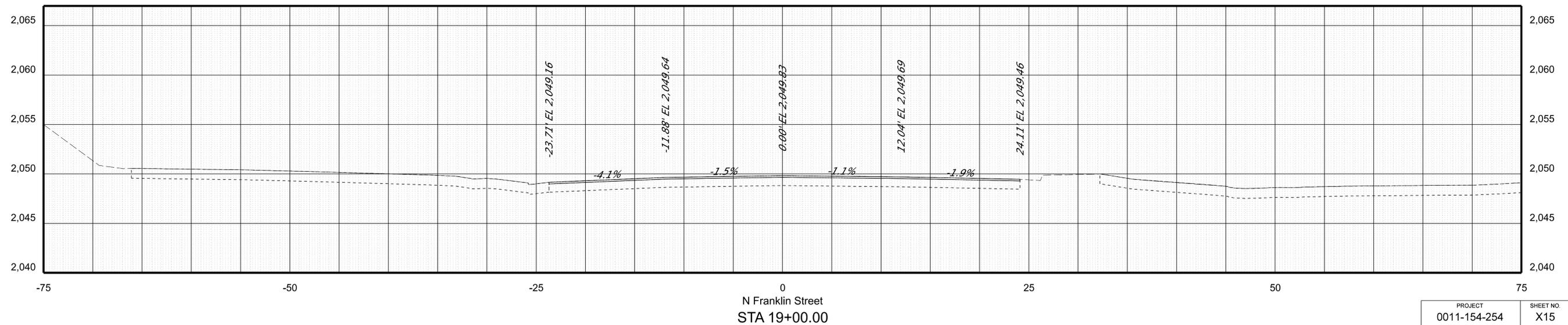
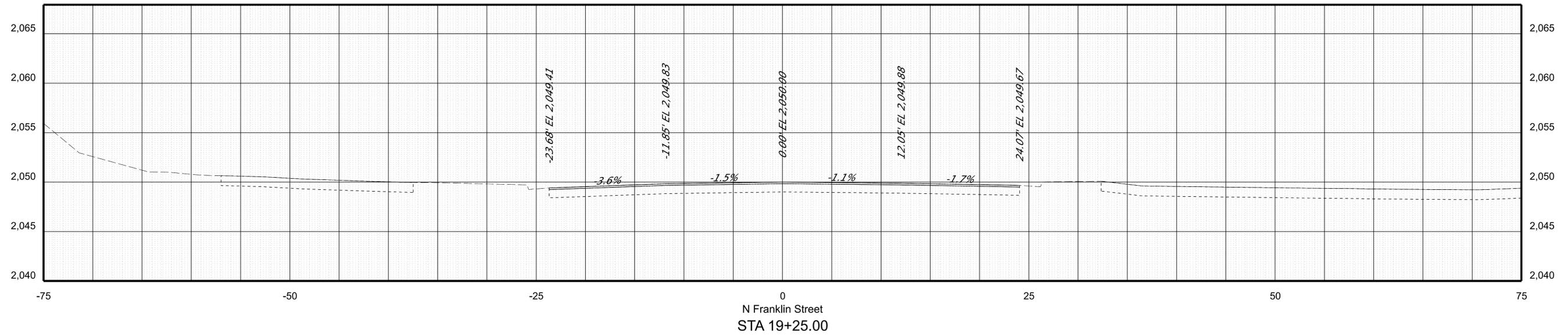
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REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X15



PROJECT	SHEET NO.
0011-154-254	X15

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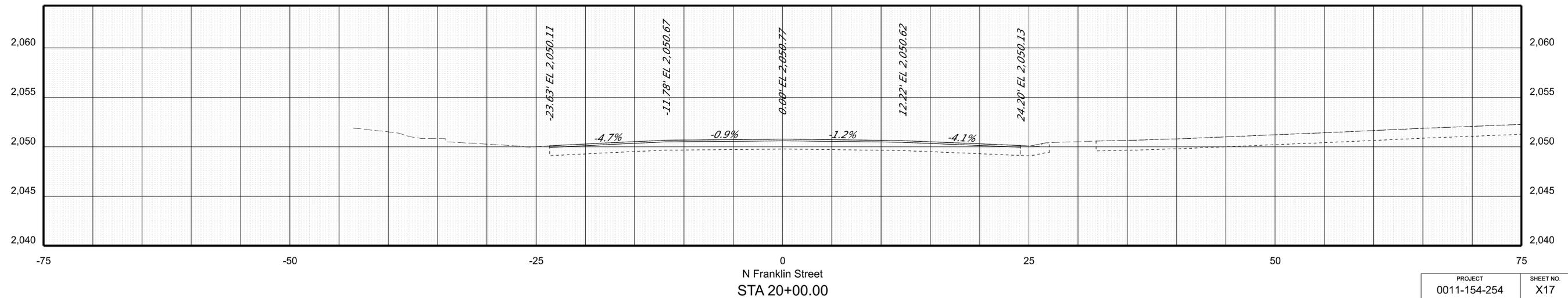
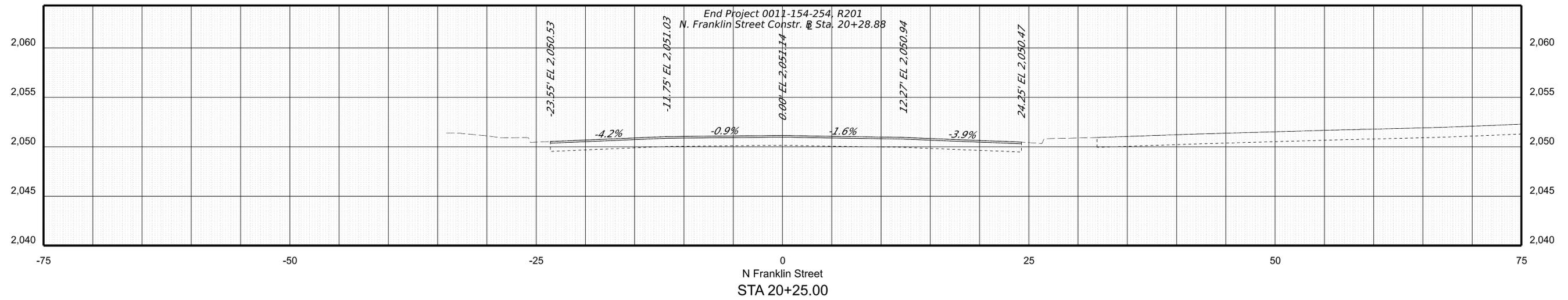
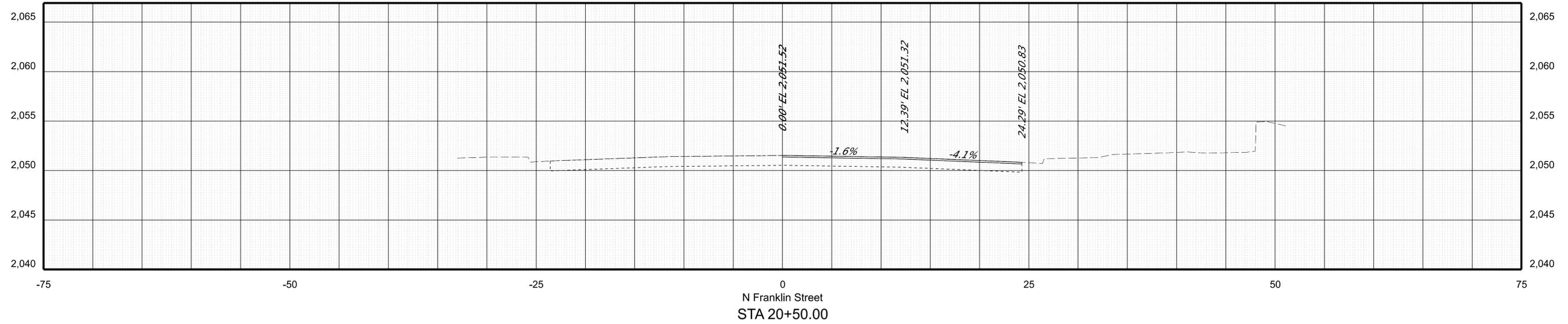
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	VA.	460	0011-154-254 R201, C501	X17



PROJECT	SHEET NO.
0011-154-254	X17

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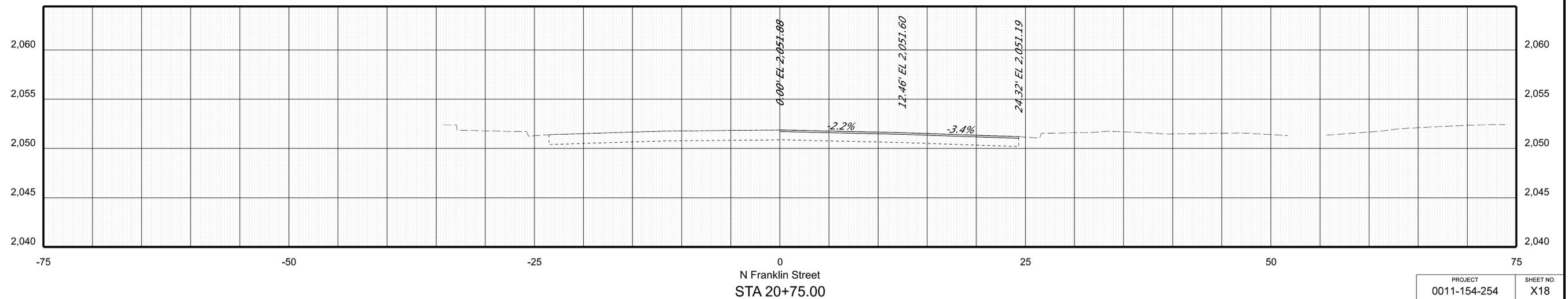
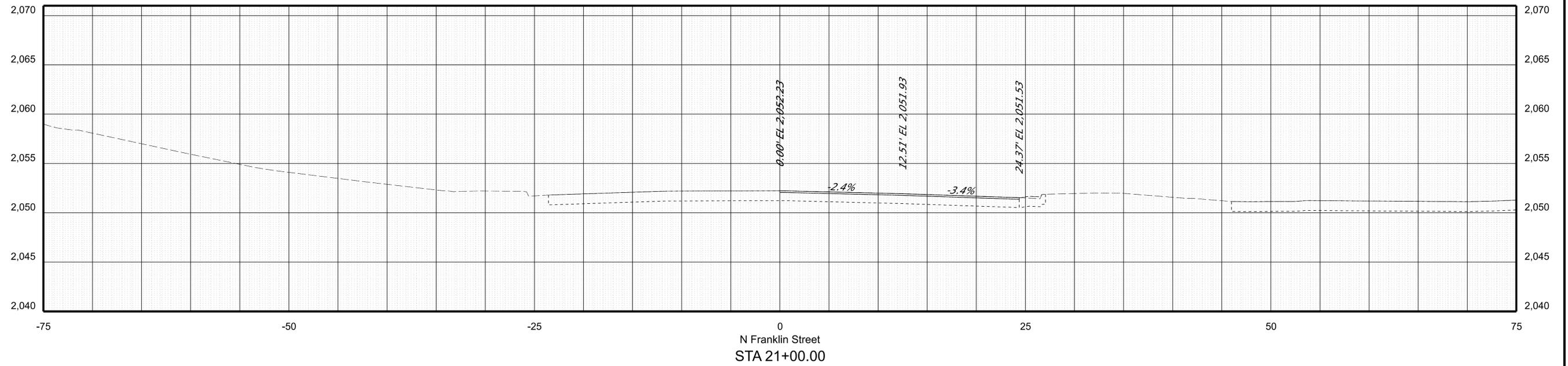
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REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X18



PROJECT	SHEET NO.
0011-154-254	X18

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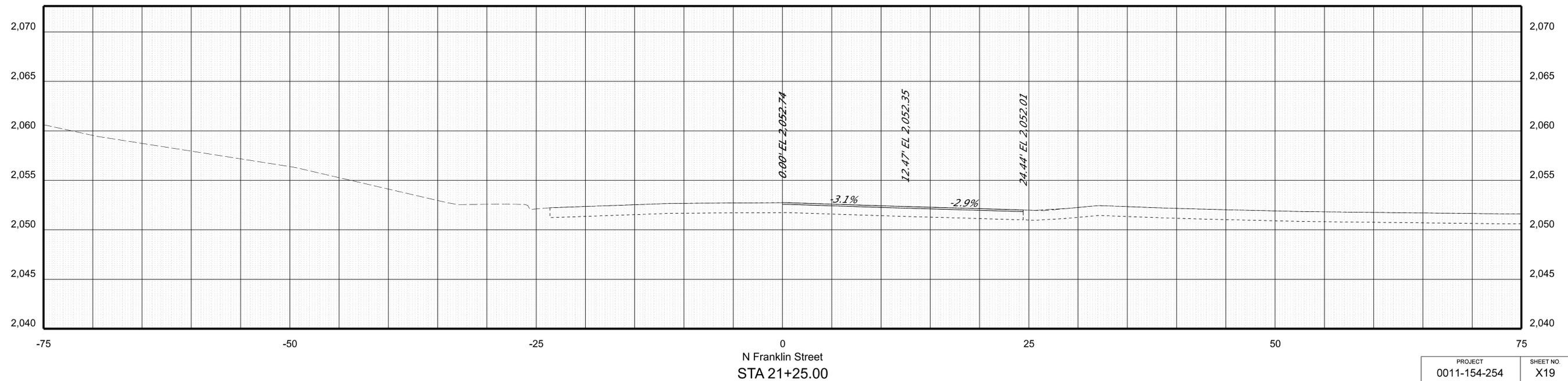
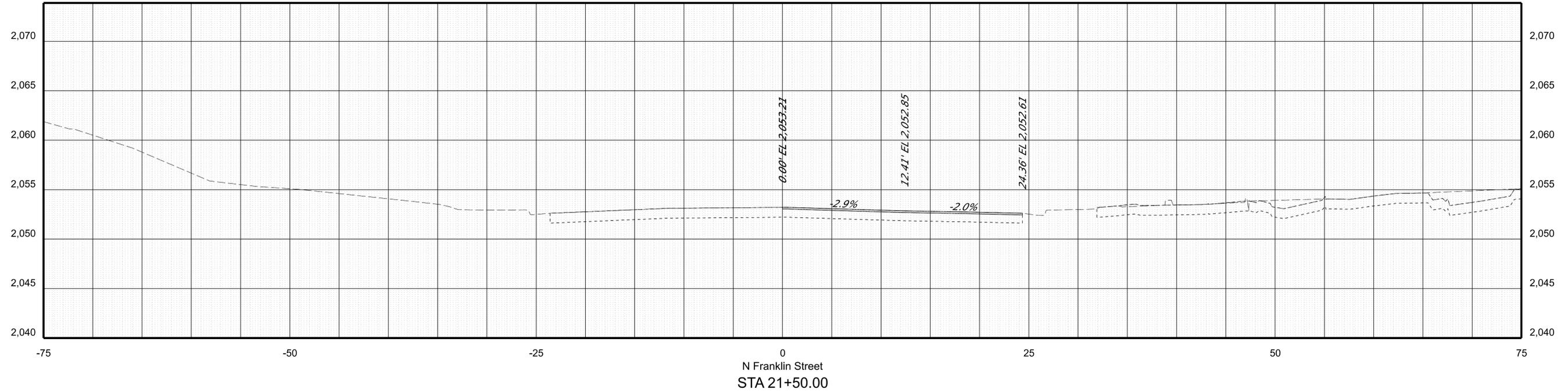
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REVISED	STATE	STATE PROJECT		SHEET NO.
	ROUTE			
	VA.	460	0011-154-254 R201, C501	X19



PROJECT	SHEET NO.
0011-154-254	X19

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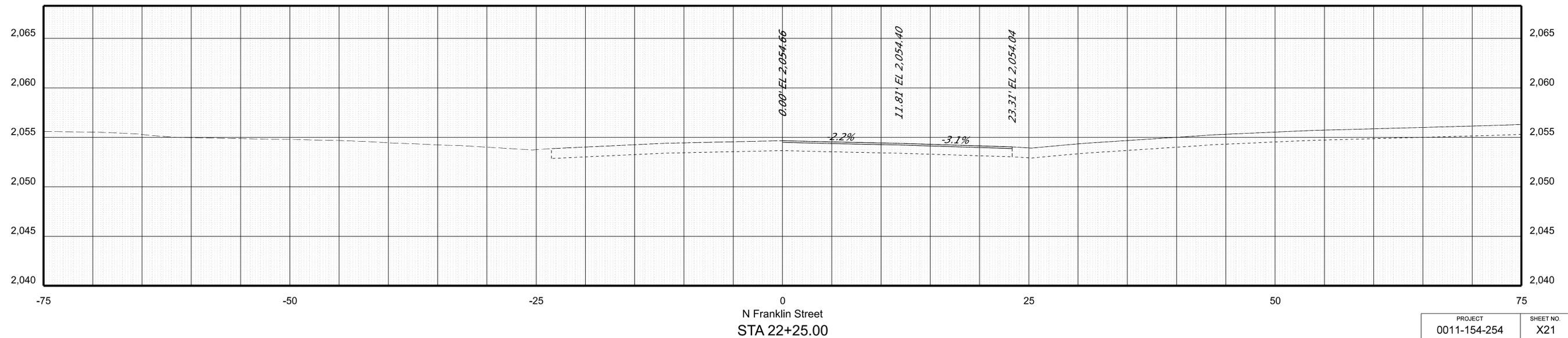
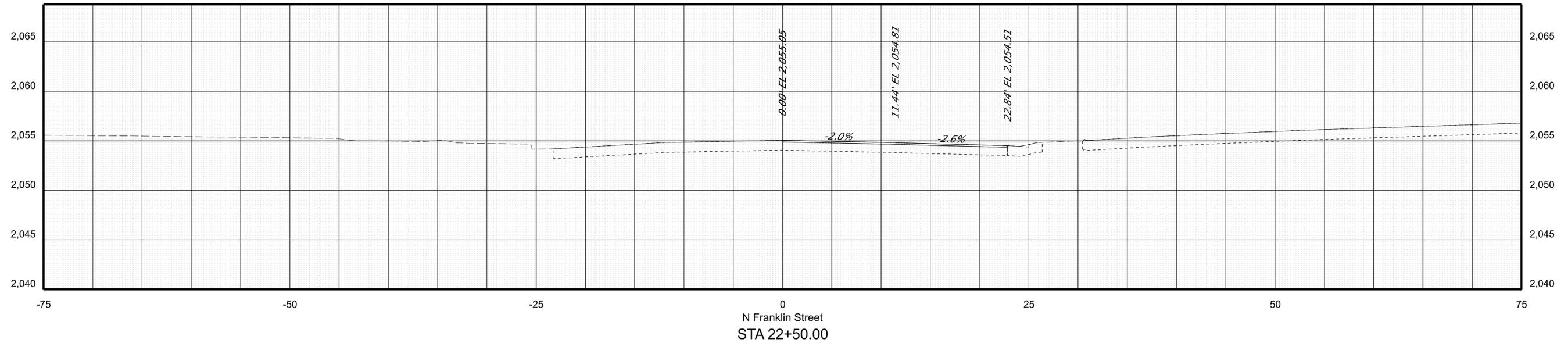
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REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X21



PROJECT	SHEET NO.
0011-154-254	X21

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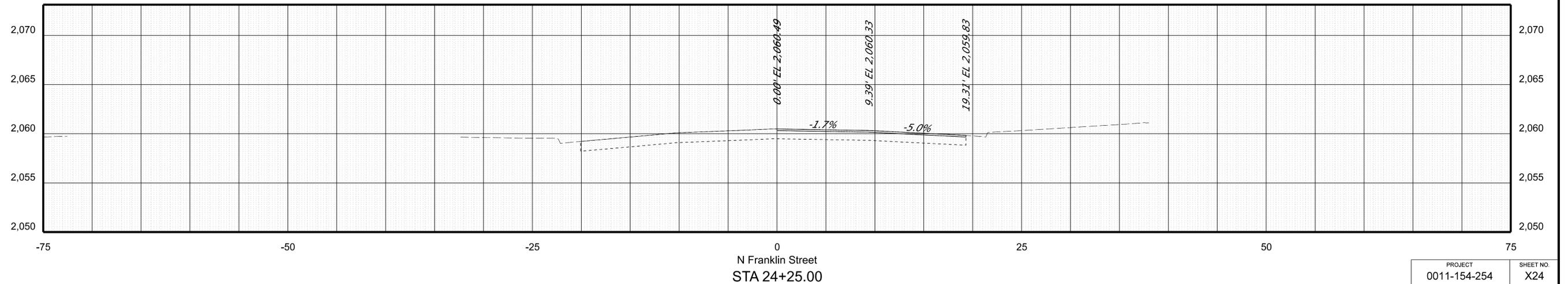
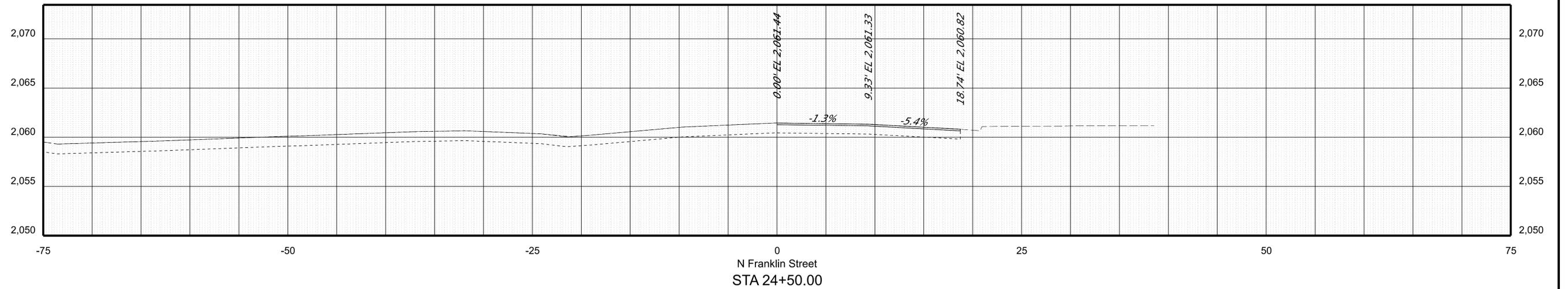
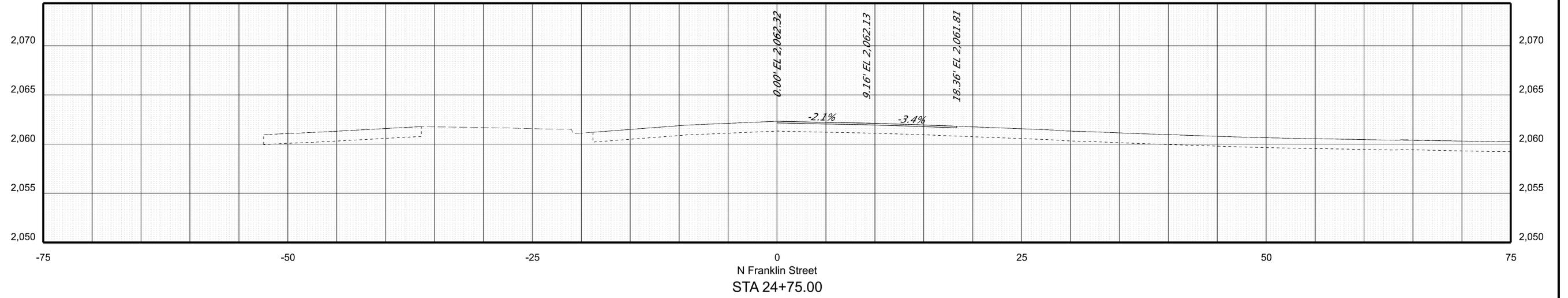
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	VA.	460	0011-154-254 R201, C501	X24



PROJECT	SHEET NO.
0011-154-254	X24

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ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

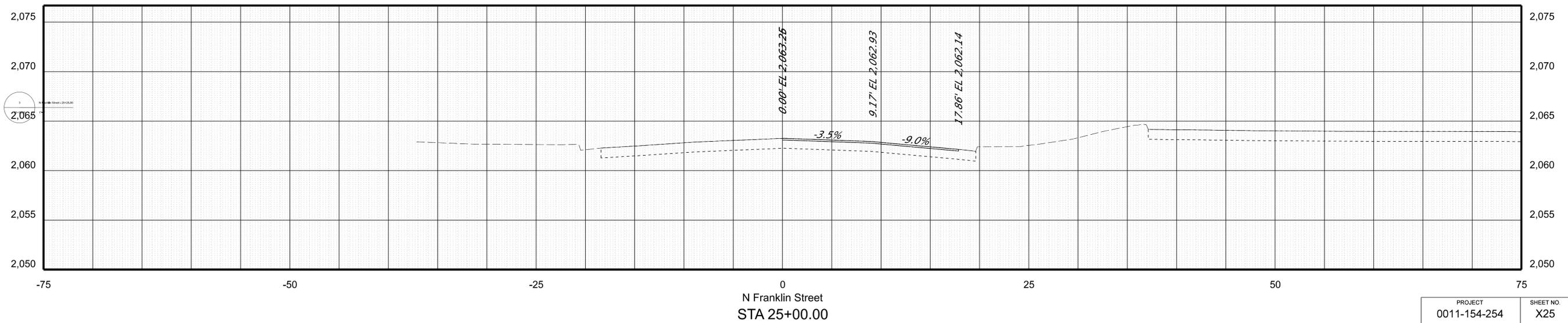
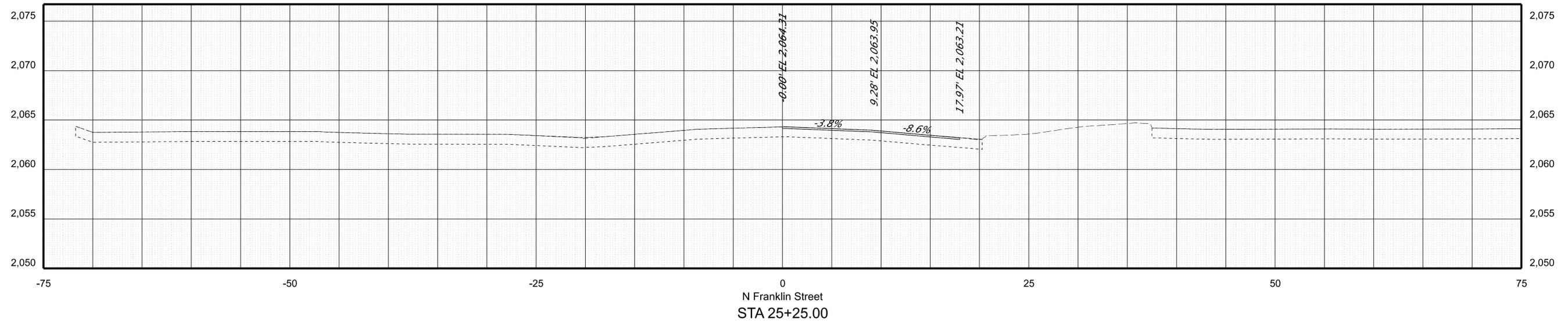
PROJECT MANAGER - Mike Kelley, P.E. Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE - H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY - Binker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE - Accumark (804) 550-7740

## CROSS SECTIONS

SCALE 1 IN. = 5 FT

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	STATE	STATE PROJECT		SHEET NO.
	ROUTE			
	VA.	460	0011-154-254 R201, C501	X25



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ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

PROJECT 0011-154-254	SHEET NO. X25
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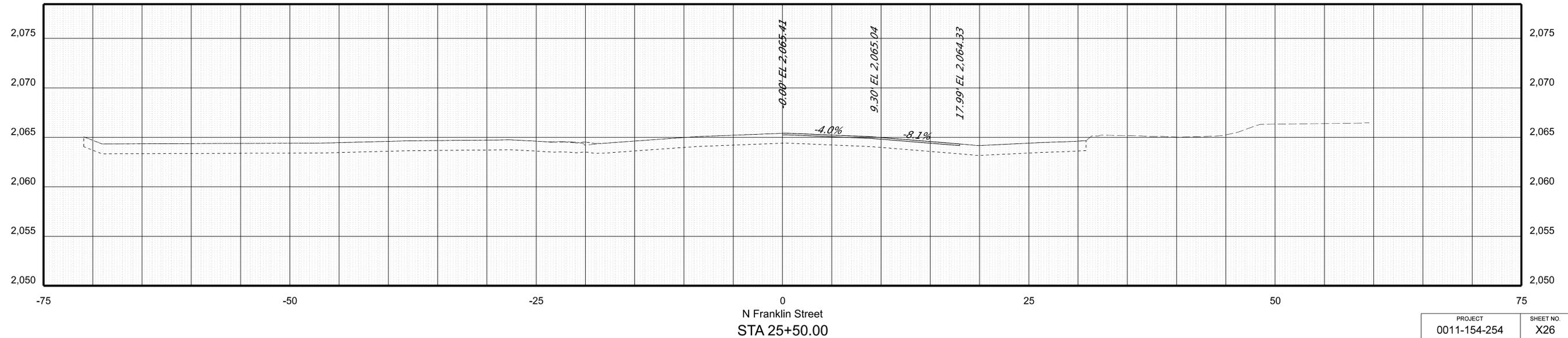
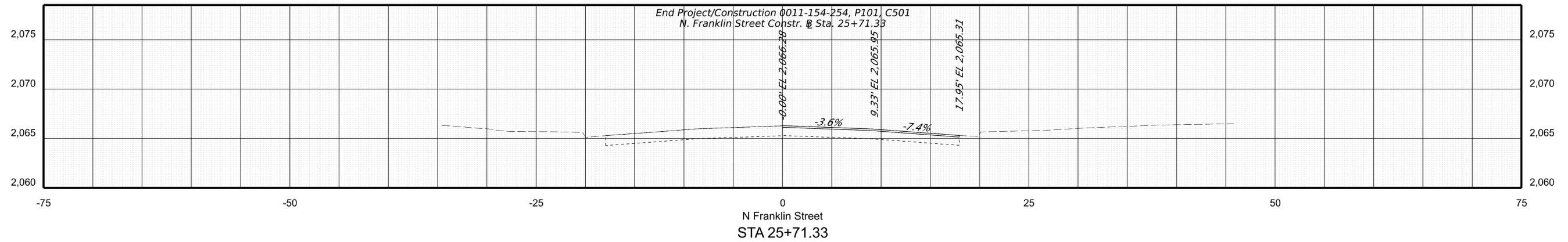
PROJECT MANAGER: Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY, DATE: H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY: Baker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY, DATE: Accumark (804) 550-7740

# CROSS SECTIONS

SCALE 1 IN. = 5 FT

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X26



PROJECT	SHEET NO.
0011-154-254	X26

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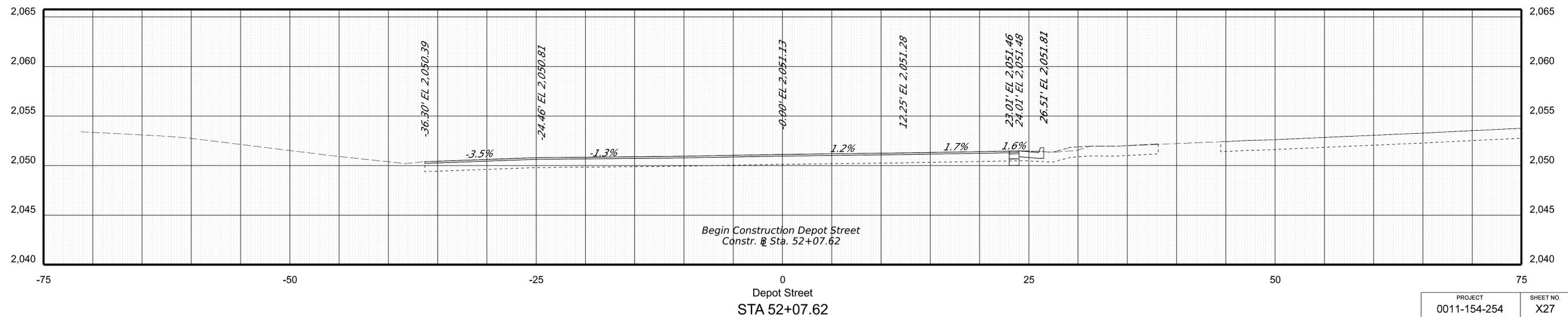
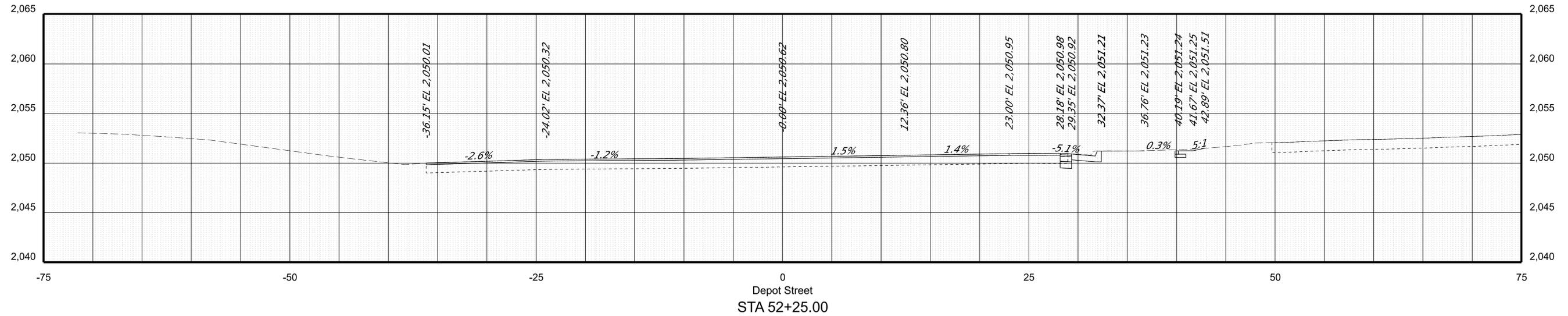
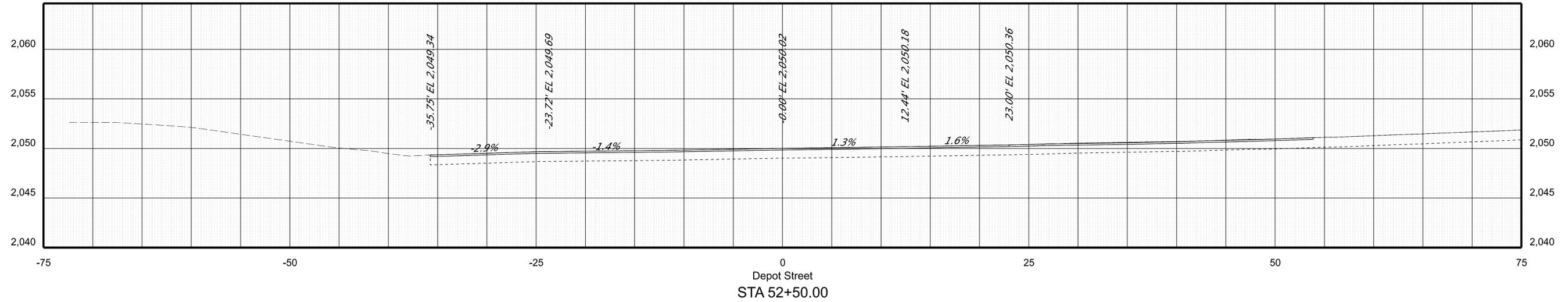
PROJECT MANAGER Mike Kelley, P.E. Director of Engineering (540) 382-6120  
 SURVEYED BY DATE H&B Surveying and Mapping, LLC 15401 904-2559, February 2023  
 DESIGN BY Binker Design Associates, LLC (R09) 612-0665  
 SUBSURFACE UTILITY BY DATE Accumark 1804) 550-7740

### CROSS SECTIONS

SCALE 1 IN. = 5 FT

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X27



PROJECT	SHEET NO.
0011-154-254	X27

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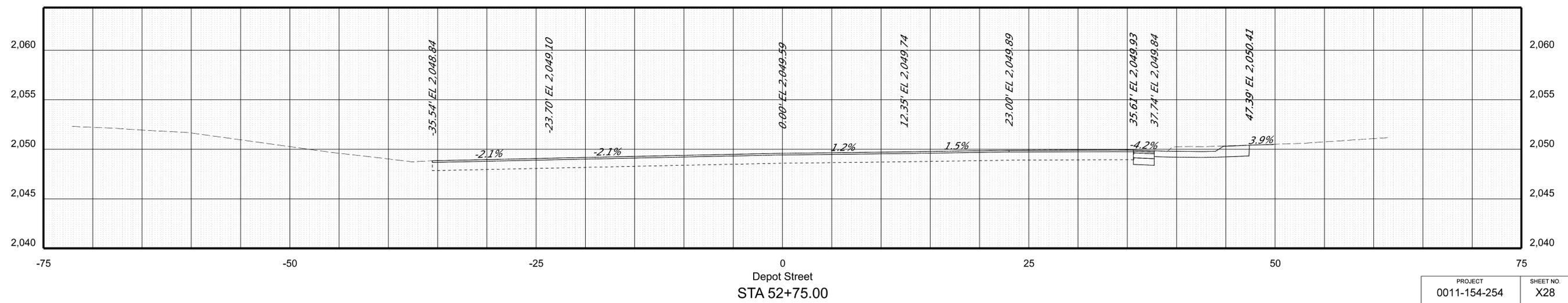
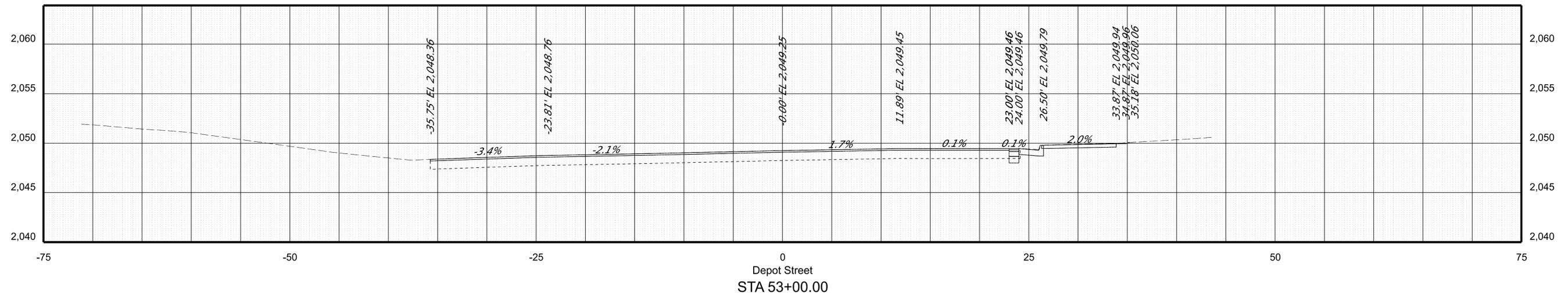
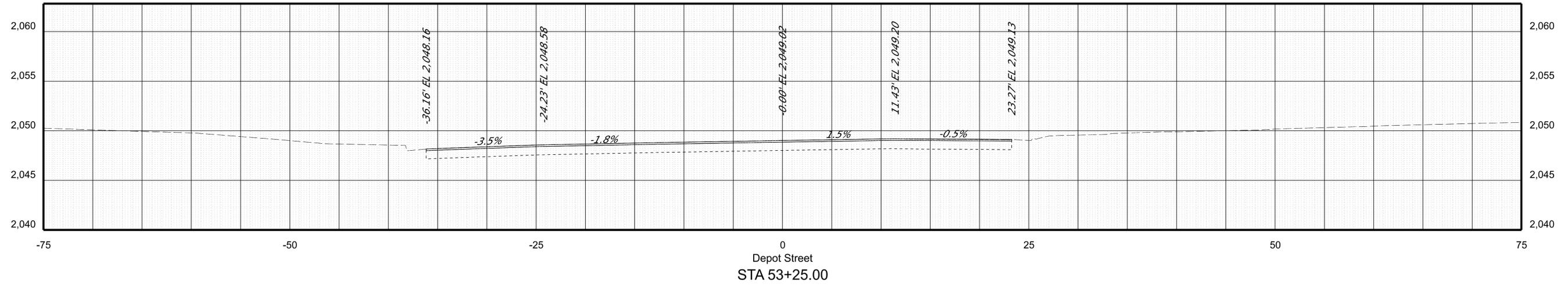
PROJECT MANAGER: Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY: DATE: H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY: Baker Design Associates, LLC (RD9) 612-0665  
 SUBSURFACE UTILITY BY: DATE: Accumark (804) 550-7740

### CROSS SECTIONS

SCALE 1 IN. = 5 FT

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REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X28



PROJECT	SHEET NO.
0011-154-254	X28

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ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

8/23/2024

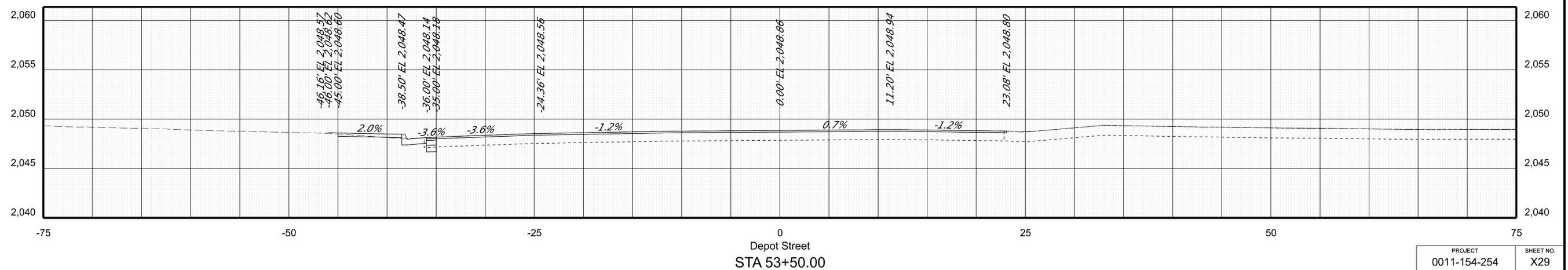
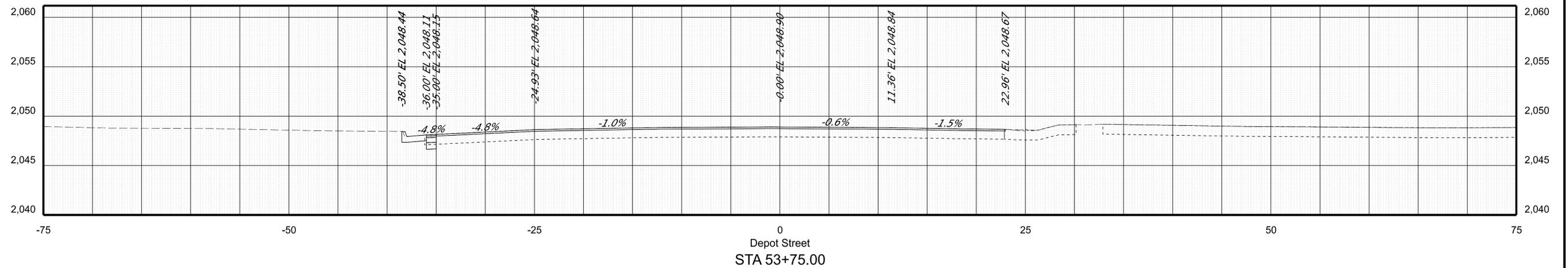
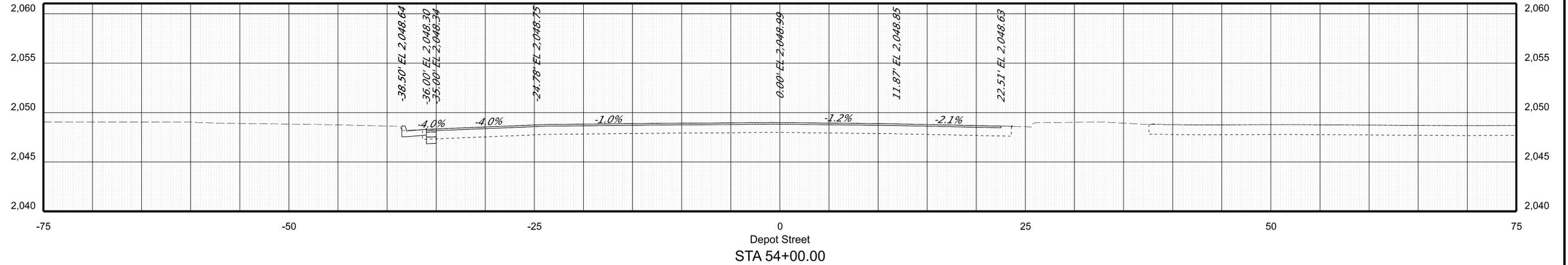
PROJECT MANAGER: Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY: DATE: H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY: Binker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY: DATE: AccuMark (804) 550-7740

### CROSS SECTIONS

SCALE 1 IN. = 5 FT

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X29



PROJECT	SHEET NO.
0011-154-254	X29

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ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS

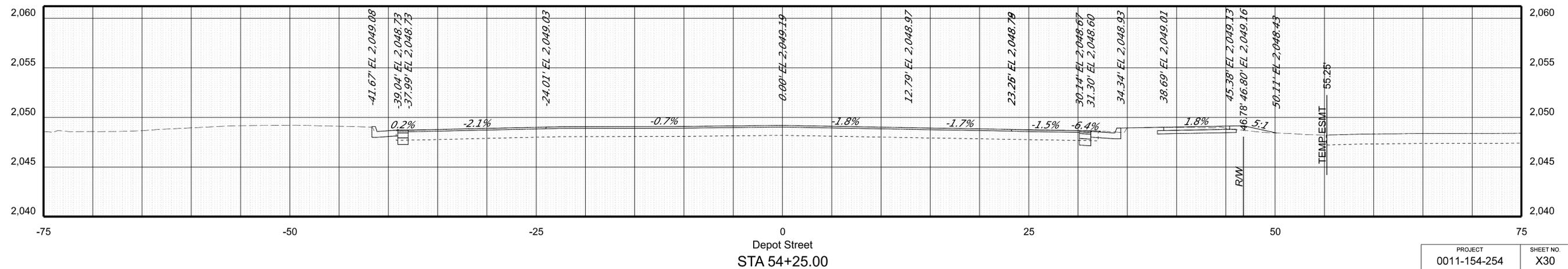
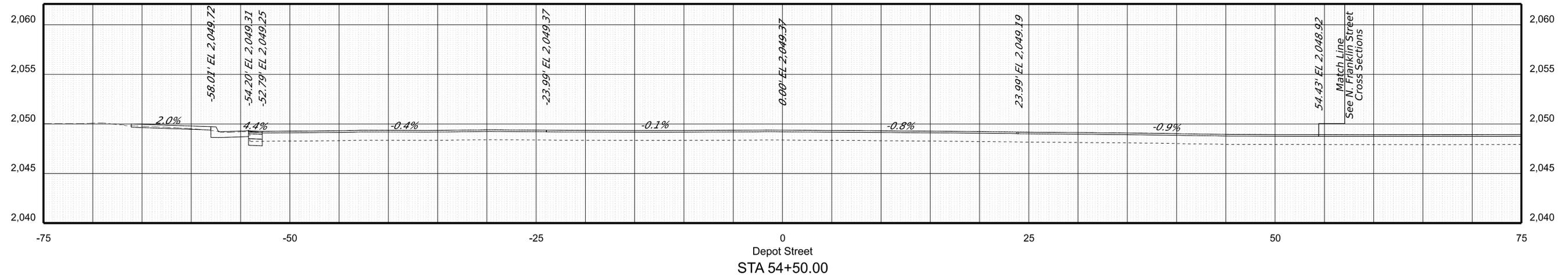
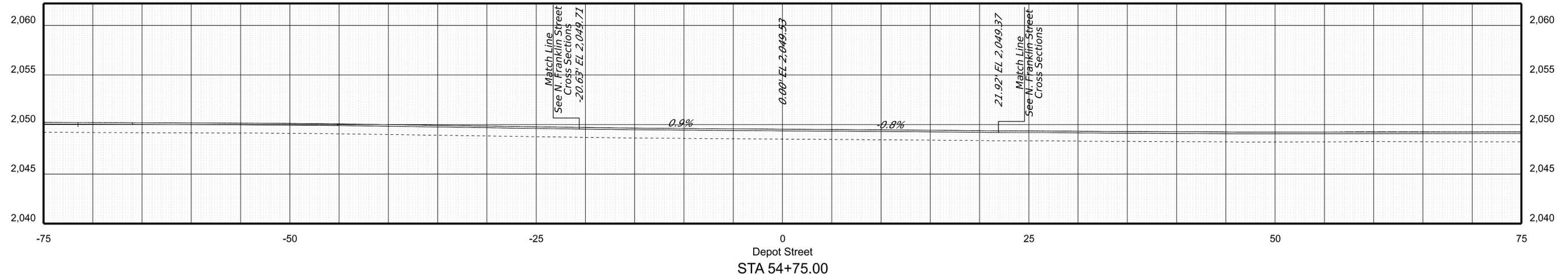
PROJECT MANAGER: Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY: DATE: H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY: Baker Design Associates, LLC (RD#) 612-0665  
 SUBSURFACE UTILITY BY: DATE: Accumark (804) 550-7740

### CROSS SECTIONS

SCALE 1 IN. = 5 FT

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	STATE	ROUTE	STATE	SHEET NO.
			PROJECT	
	VA.	460	0011-154-254 R201, C501	X30



PROJECT	SHEET NO.
0011-154-254	X30

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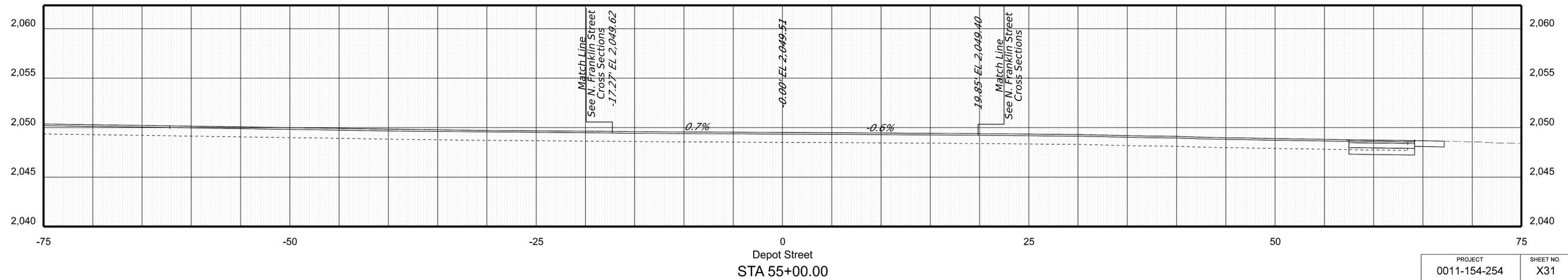
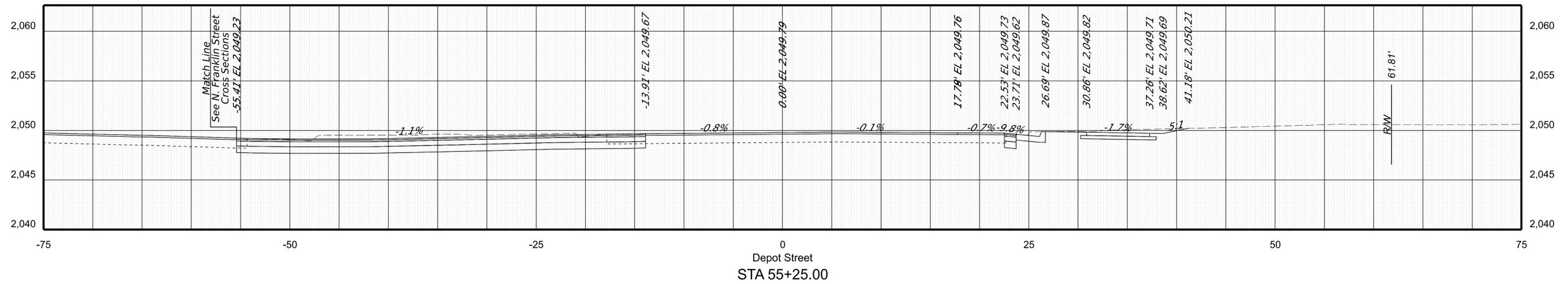
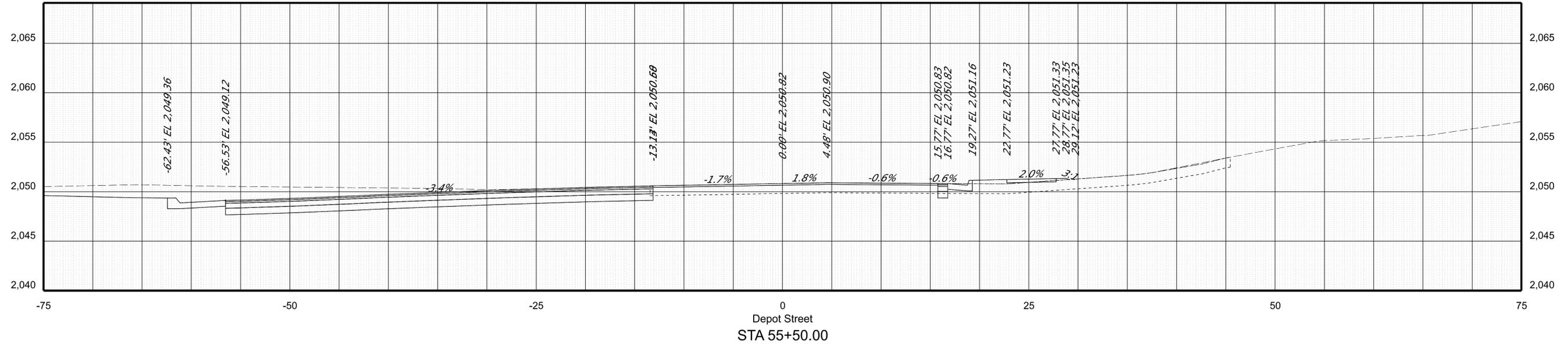
PROJECT MANAGER: Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY: DATE: H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY: Binker Design Associates, LLC (804) 612-0665  
 SUBSURFACE UTILITY BY: DATE: Accumark (804) 550-7740

### CROSS SECTIONS

SCALE 1 IN. = 5 FT

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X31



PROJECT	SHEET NO.
0011-154-254	X31

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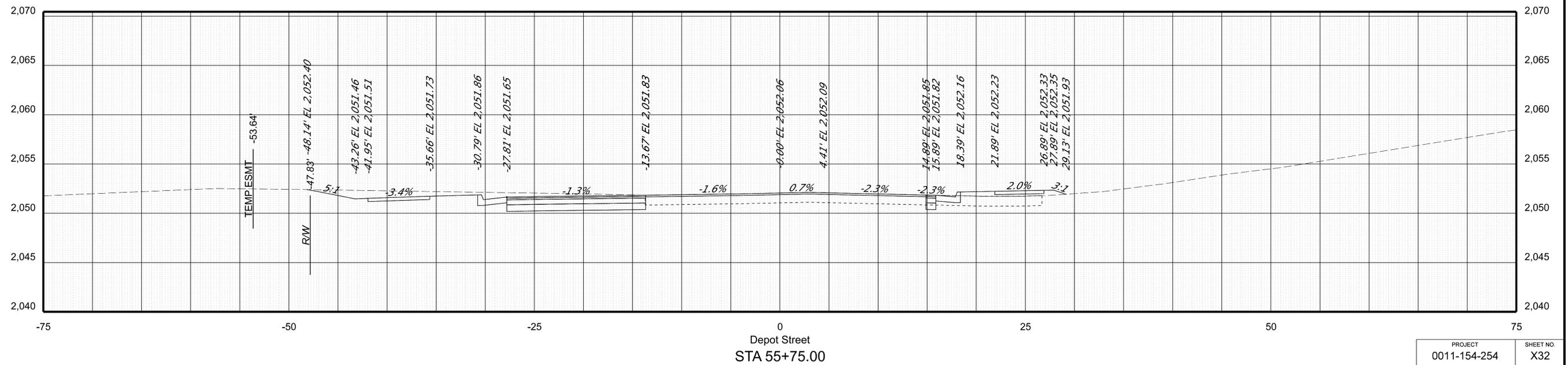
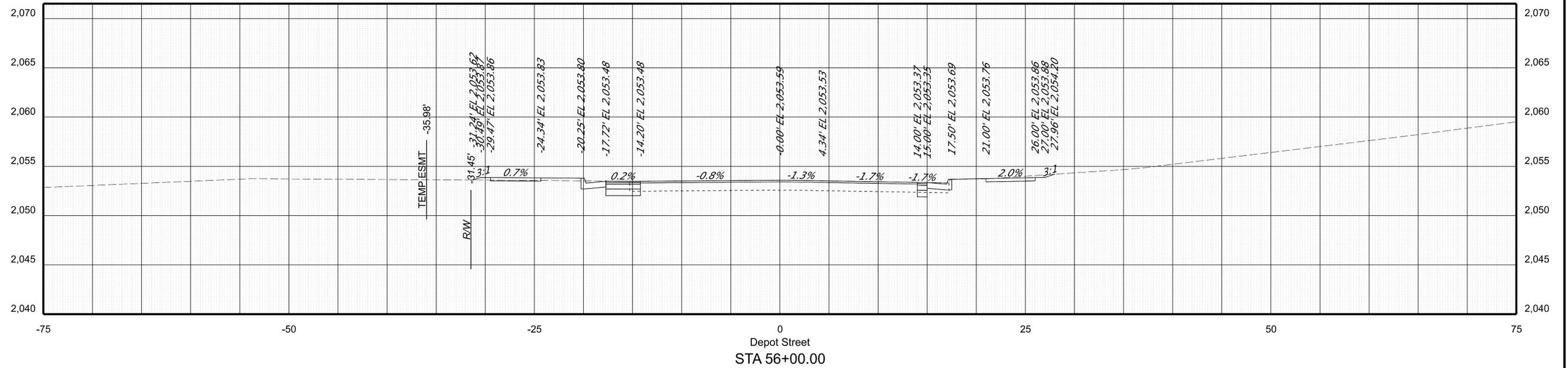
PROJECT MANAGER: Mike Kelley, P.E., Director of Engineering (540) 382-6120  
 SURVEYED BY: DATE: H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY: Baker Design Associates, LLC (RD9) 612-0665  
 SUBSURFACE UTILITY BY: DATE: Accumark (804) 550-7740

### CROSS SECTIONS

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REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X32



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PROJECT	SHEET NO.
0011-154-254	X32

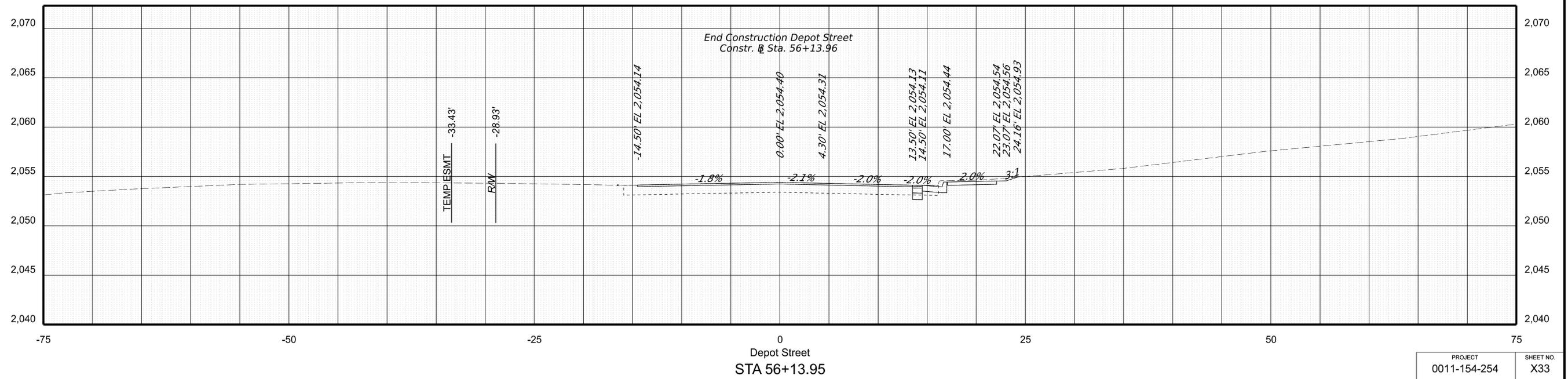
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 SURVEYED BY, DATE: H&B Surveying and Mapping, LLC (540) 904-2559, February 2023  
 DESIGN BY: Binker Design Associates, LLC (804) 612-0665  
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REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	460	0011-154-254 R201, C501	X33



PROJECT	SHEET NO.
0011-154-254	X33

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8/23/2024