4/9/2021
10:44:43 AM

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Plotted By: DavisCD

FOR INDEX OF SHEETS SEE SHEET 1B

THIS PROJECT WAS DEVELOPED UTILIZING THE DEPARTMENT'S ENGINEERING DESIGN PACKAGE (GEOPAK).
GEOPAK Computer Identification No. 112304

COMMONWEALTH OF VIRGINIA

PLAN AND PROFILE OF PROPOSED STATE HIGHWAY

ROANOKE COUNTY
FALLOWATER LANE EXTENSION
FR: ROUTE 419 (ELECTRIC RD) INTERSECTION
TO: 0.17 MI. SOUTH OF ROUTE 419 (ELECTRIC RD) INTERSECTION

STATE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.		789	9999-080-926 SEE TABULATIONS BELOW FOR SECTION NUMBERS	1

FUNCTIONAL CLASSIFICATION AND TRAFFIC DATA	
URBAN LOCAL STREET (GS-8) - 25 MPH MIN. DESIGN SPEED	
	Fr: ROUTE 419 (ELECTRIC RD) INTERSECTION To: 0.17 MI. S. OF ROUTE 419 (ELECTRIC RD) INTERSECTION
ADT (2018)	800
ADT (2038)	900
DHV	80
D (%) (design hour)	75
T (%) (design hour)	1
V (MPH)	❀

❀ See Plan and Profile Sheets for horizontal and vertical curve design speed data

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry Tolley L.L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, PE (540) 857-0000 (AECOM)
SUBSURFACE UTILITY BY, DATE InfraMap (804) 550-2937

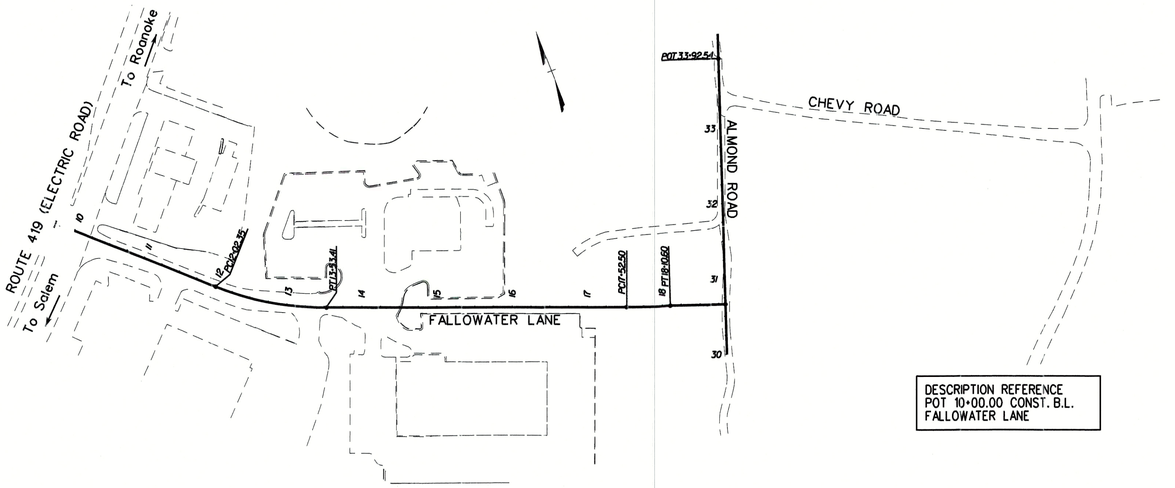
THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY AS AWARDED, INCLUDING ALL SUBSEQUENT REVISIONS, WILL BE THE OFFICIAL CONSTRUCTION PLANS. FOR INFORMATION RELATIVE TO ELECTRONIC FILES AND LAYERED PLANS, SEE GENERAL NOTES.

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

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENT'S 2016 ROAD AND BRIDGE SPECIFICATIONS, 2016 ROAD AND BRIDGE STANDARDS, 2009 MUTCD, 2011 VIRGINIA SUPPLEMENT TO THE MUTCD, 2011 VIRGINIA WORK AREA PROTECTION MANUAL, REV.2 AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY.

ALL CURVES ARE TO BE SUPERELEVATED, TRANSITIONED AND WIDENED IN ACCORDANCE WITH STANDARD TC-5.11U, EXCEPT WHERE OTHERWISE NOTED.

THE ORIGINAL APPROVED TITLE SHEET(S), INCLUDING ORIGINAL SIGNATURES, IS FILED IN THE VDOT CENTRAL OFFICE PLAN LIBRARY. ANY MISUSE OF ELECTRONIC FILES, INCLUDING SCANNED SIGNATURES, IS ILLEGAL AND ENFORCED TO THE FULL EXTENT OF THE LAW.



DESCRIPTION REFERENCE
POT 10+00.00 CONST. B.L.
FALLOWATER LANE

CONVENTIONAL SIGNS

STATE LINE	LEVEE OR EMBANKMENT
COUNTY LINE	BRIDGES
CITY,TOWN OR VILLAGE	CULVERTS
RIGHT OF WAY LINE	DROP INLET
FENCE LINE	POWER POLES
UNFENCED PROPERTY LINE	TELEPHONE OR TELEGRAPH POLES
FENCED PROPERTY LINE	TELEPHONE OR TELEGRAPH LINES
WATER LINE	HEDGE
SANITARY SEWER LINE	TREES
GAS LINE	HEAVY WOODS
ELECTRIC UNDERGROUND CABLE	GROUND ELEVATION
TRAVELED WAY	GRADE ELEVATION
GUARD RAIL	
RETAINING WALL	
RAILROADS	
BASE OR SURVEY LINE	

ROANOKE COUNTY POPULATION 92,414 (2010 CENSUS)

STATE PROJECT NO.	SECTION	FEDERAL AID PROJECT NO.	TYPE CODE	UPC NO.	LENGTH INCLUDING BRIDGE(S) FEET	LENGTH INCLUDING BRIDGE(S) MILES	LENGTH EXCLUDING BRIDGE(S) FEET	LENGTH EXCLUDING BRIDGE(S) MILES	TYPE PROJECT	DESCRIPTION
9999-080-926	P101		PENG	112304	861.83	0.163	861.83	0.163	Prelim. Engr.	FR: ROUTE 419 (ELECTRIC RD) INTERSECTION TO: 0.17 MI. SOUTH OF ROUTE 419 (ELECTRIC RD) INTERSECTION
	R201		ROWA	112304	846.79	0.160	846.79	0.160	Right of Way	FR: ROUTE 419 (ELECTRIC RD) INTERSECTION TO: 0.17 MI. SOUTH OF ROUTE 419 (ELECTRIC RD) INTERSECTION
	C501		1000	112304	861.83	0.163	861.83	0.163	Construction	FR: ROUTE 419 (ELECTRIC RD) INTERSECTION TO: 0.17 MI. SOUTH OF ROUTE 419 (ELECTRIC RD) INTERSECTION

NOTE: PROJECT LENGTH BASED ON FALLOWATER LANE CONSTRUCTION BASELINE

TIER 1 PROJECT

LOCALLY ADMINISTERED PROJECTS

Roanoke County

David M. Henderson
David M. Henderson
RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION

DATE	TITLE OF POSITION
2/7/20	County Engineer

David M. Henderson
RECOMMENDED FOR APPROVAL FOR CONSTRUCTION

DATE	TITLE OF POSITION
4/13/21	COUNTY ENGINEER

RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION

DATE	
3/17/20	T.W. DiGiulian, DISTRICT PLANNING AND INVESTMENT MANAGER
3/17/20	T.W. DiGiulian, DISTRICT PROJECT DEVELOPMENT ENGINEER

APPROVED FOR RIGHT OF WAY ACQUISITION

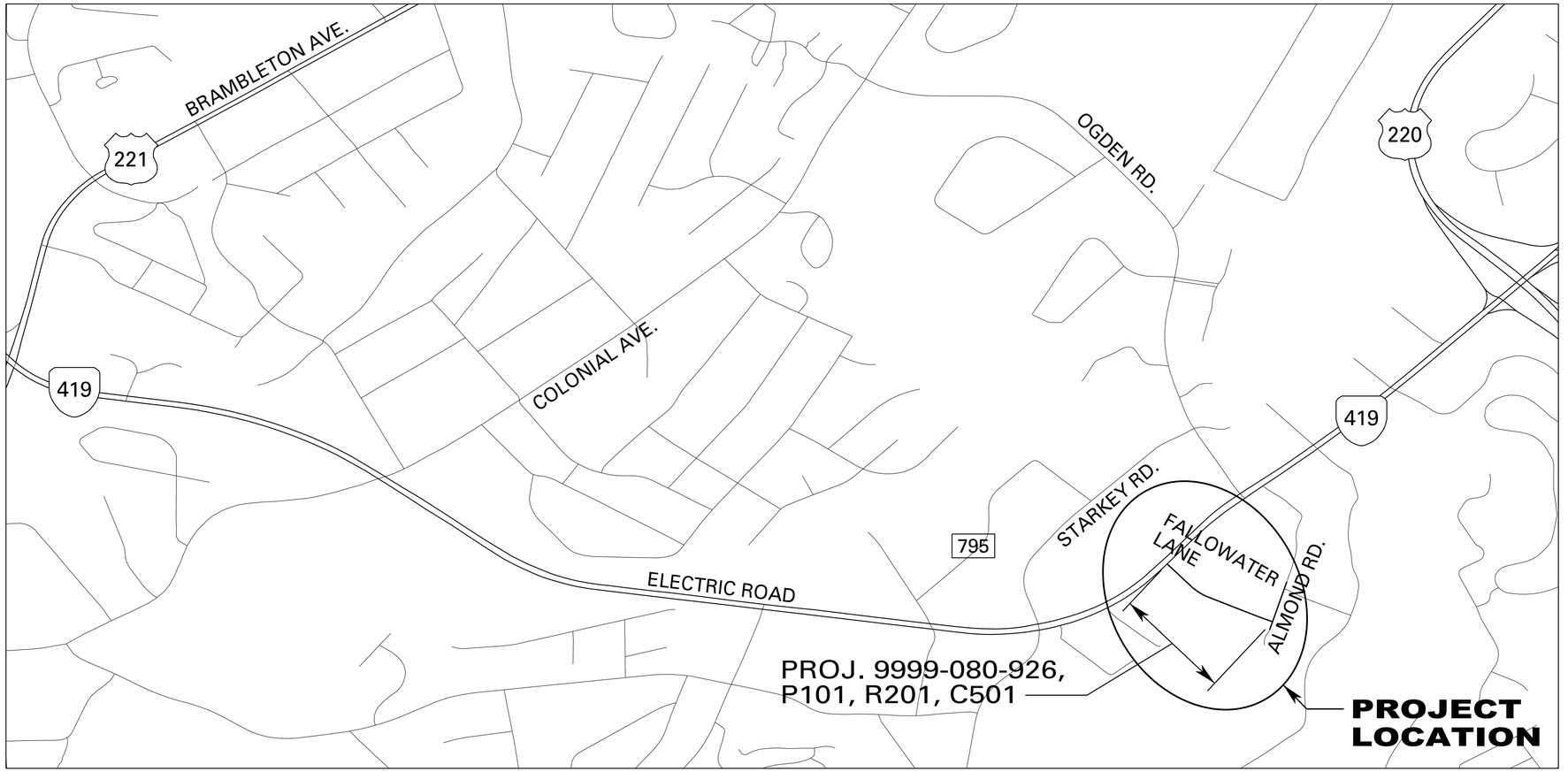
DATE	
3/17/20	K.H. King, DISTRICT ENGINEER/ADMINISTRATOR

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540)857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inframap (804) 550-2937

LOCATION MAP

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	1A

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



SCALE
0 500' 1000'

	PROJECT	SHEET NO.
	9999-080-926	1A

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-9411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540)857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inframap (804) 550-2937

INDEX OF SHEETS

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	IB

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

SHEET NO.	DESCRIPTION	STATIONS
I	TITLE SHEET	
IA	LOCATION MAP	
IB	INDEX OF SHEETS	
IC	RIGHT OF WAY DATA SHEET	
ID	REVISION DATA SHEET	
IE	NOT USED	
IF	SURVEY CONTROL DATA SHEET	
IG	CONSTRUCTION ALIGNMENT DATA SHEET	
IH	UNDERGROUND UTILITY TEST HOLE INFORMATION	
IJ	TRANSPORTATION MANAGEMENT PLAN	
2	GENERAL NOTES	
2A	TYPICAL SECTIONS	
2B	DEMOLITION OF BUILDINGS - CLEARING OF PARCELS - CLOSING OF WELLS - UNDERGROUND STORAGE TANK REMOVAL SUMMARY	
2C	ROADSIDE DEVELOPMENT SHEET	
2D	DRAINAGE DESCRIPTION SHEETS	
2E	NOT USED	
2F(1) - 2F(4)	STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEETS	
2G(1) - 2G(2)	STORM SEWER PROFILES	
2H(1) - 2H(2)	RETAINING WALL DETAILS	
3	PLAN SHEET	
3A	PROFILE SHEET	
3B	PHASE I EROSION AND SEDIMENT CONTROL PLAN	
3C	PHASE II EROSION AND SEDIMENT CONTROL PLAN	10+00 to 15+50
3D	ENTRANCE PROFILES	
3RW	RIGHT OF WAY SHEET	
4	PLAN SHEET	
4A	PROFILE SHEET	
4B	PHASE I EROSION AND SEDIMENT CONTROL PLAN	15+50 to 18+83.95
4C	PHASE II EROSION AND SEDIMENT CONTROL PLAN	
4D	ENTRANCE PROFILES	
4RW	RIGHT OF WAY SHEET	
5(1)	PAVEMENT MARKING AND PERMANENT SIGNAGE GENERAL NOTES AND LEGEND	
5(2)	SIGN SCHEDULE	
5(3) - 5(4)	PAVEMENT MARKING AND SIGNAGE PLANS	
6(1) - 6(5)	WATER LINE PLANS	
7(1) - 7(4)	SANITARY SEWER LINE PLANS	

TOTAL CROSS SECTION SHEETS 18 (SEE CROSS SECTION SHEET NUMBER I FOR INDEX OF SHEETS)

PROJECT MANAGER Cheryl Becker _ (540) 387-5399 (Salem) _ _ _ _ _ _ _ _ _ _ _
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540)857-3322 (AECOM) _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ .
SUBSURFACE UTILITY BY, DATE Inframap _ (804) 550-2937 _ _ _ _ _ _ _ _ _ _ .

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	IC

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: ROANOKE COUNTY

UPC No.: 112304

RIGHT OF WAY DATA SHEET

PARCEL NO.	LANDOWNER	SHEET NO.	AREA								EASEMENTS								PROFFERS
			TOTAL	FEE TAKING		PRESCRIPTIVE R/W		FEE REMAINDER			PERMANENT		UTILITY		TEMPORARY		TEMPORARY(ENTRANCES)		
			ACRES OR SQUARE FEET	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS		ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	YES / NO
001	ELECTRIC FIDELITY INVESTMENTS, LLC	3	1.151 AC.	581 SF				1.1380 AC.			51 SF				4,711 SF				
002	NATIONAL RETAIL PROPERTIES, LP	3,4	2.895 AC.	24,665 SF				2.329 AC.			7,176 SF		7,176 SF		72 SF				
003	OLD HERITAGE CORPORATION	4	19,447 SF	4,444 SF				15,003 SF			2,821 SF								
004	OLD HERITAGE CORPORATION	4	20,851 SF	4,542 SF				16,309 SF							2,200 SF				
005	PATTON PLACE, LLC	4	29,159 SF	2,868 SF				26,291 SF			706 SF				2,013 SF				
006	PATTON PLACE, LLC	4	8,314 SF	1,738 SF				6,576 SF			1,710 SF								
007	PATTON PLACE, LLC	4	1.591 AC.	10,431 SF				1.351 AC.			638 SF				6,316 SF				
008	D/O LAND AND DEVELOPMENT, LLC	3,4	1.882 AC.	13,674 SF				1.568 AC.			255 SF				7,702 SF				
009	ROANOKE PROPERTY 419, LLC	3	35,227 SF												1,265 SF				

PROJECT MANAGER Cheryl Becker _ (540) 387-5399 (Salem) _ _ _ _ _ _ _ _ _ _ _
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-9411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM) _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ .
SUBSURFACE UTILITY BY, DATE Inframap _ (804) 550-2937 _ _ _ _ _ _ _ _ _ _ .

REVISION DATA SHEET

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	ID

State Project: 9999-080-926, P101, R201, C501
Federal Project: N/A
From: ROUTE 419 (ELECTRIC RD) INTERSECTION
To: 0.17 MI. SOUTH OF ROUTE 419 (ELECTRIC RD) INTERSECTION
UPC Number: 112304

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

	PROJECT	SHEET NO.
	9999-080-926	ID

4/5/2021
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Plotted By: DavisCD

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540)857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inframap (804) 550-2937

SURVEY CONTROL DATA SHEET

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	1F

DESIGN FEATURES RELATING TO CONSTRUCTION
OR TO REGULATION AND CONTROL OF TRAFFIC
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NECESSARY BY THE DEPARTMENT

CONTROL POINT TABLE

Point Number	Northing	Easting	Elevation	Decscription
11001	3608612.5163	11052850.8974	1178.1310	PHO.MAG.SET
11002	3608223.6454	11052579.6395	1208.4860	PHO.MAG.SET
11005	3609165.3595	11051649.4291	1139.7850	PHO.MAG.SET
11006	3608733.9249	11051212.1655	1155.7540	PHO.MAG.SET

PROJECT	SHEET NO.
9999-080-926	1F

PROJECT MANAGER Cheryl Becker _(540) 387-5399_(Salem)_ _ _ _ _ _ _ _ _ _ _ _
SURVEYED BY, DATE Larry T. Ogle, Jr. LS, (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E., (540) 857-3322 (AECOM) _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
SUBSURFACE UTILITY BY, DATE Inframap _(804) 550-2937_ _ _ _ _ _ _ _ _ _

CONSTRUCTION ALIGNMENT DATA SHEET

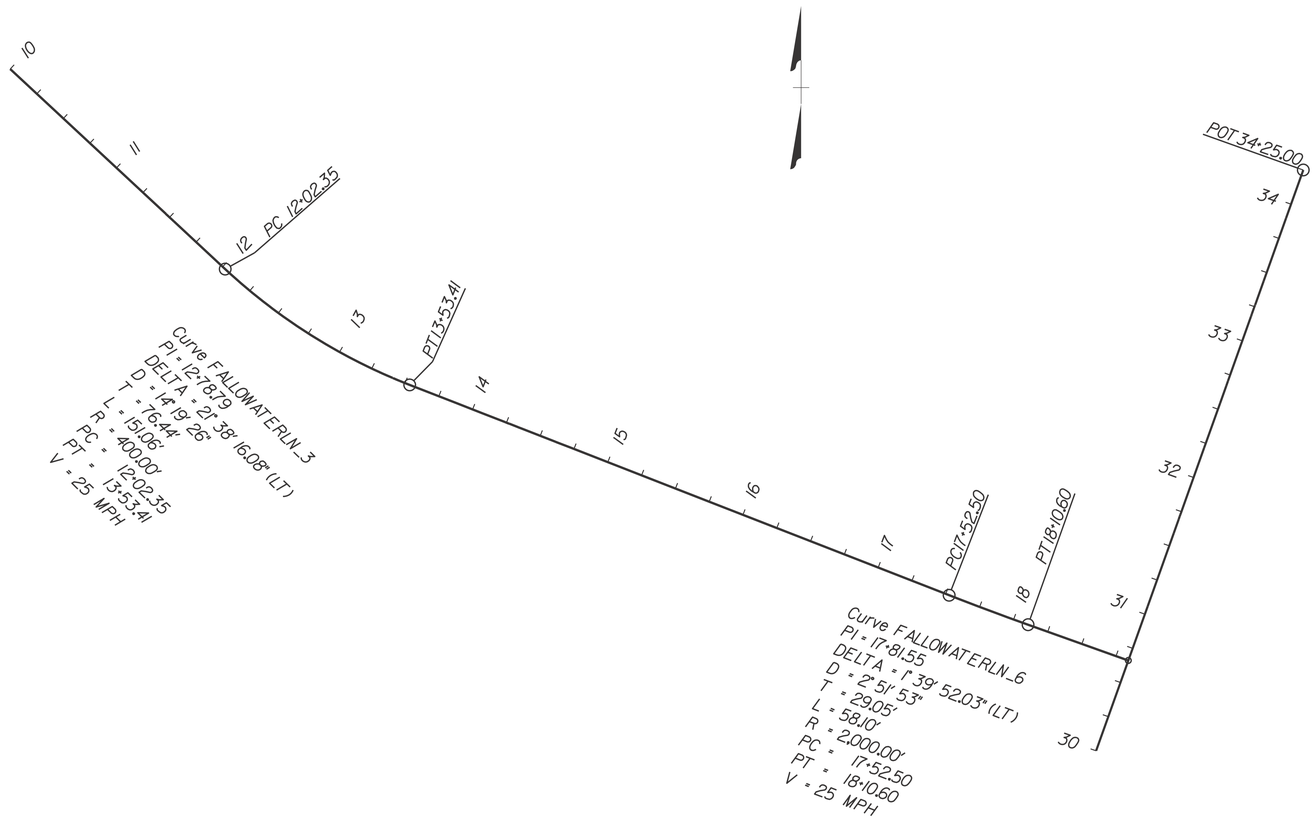
COMMONWEALTH OF VIRGINIA
JACK SCOTT HODGE
Lic. No. 15755
PROFESSIONAL ENGINEER

Jack S Hodge
2021.04.08 10:08:03 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
	VA.	789	9999-080-926, P-101, R-201, C-501	1G

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



FALLOWATER LANE

****

Point FALLOWATERLN1 N 3,608,917.1798 E 11,051,513.4985 Sta 10+00.00
Course from FALLOWATERLN1 to PC FALLOWATERLN_3 S 47° 03' 53.33" E Dist 202.3494

Curve Data

Curve FALLOWATERLN_3
P.I. Station 12+78.79 N 3,608,727.2760 E 11,051,717.6077
Delta = 21° 38' 16.08" (LT)
Degree = 14° 19' 26.20"
Tangent = 76.4408
Length = 151.0603
Radius = 400.0000
External = 7.2385
Long Chord = 150.1643
Mid.Ord. = 7.1098
P.C. Station 12+02.35 N 3,608,779.3453 E 11,051,661.6435
P.T. Station 13+53.41 N 3,608,699.5120 E 11,051,788.8282
C.C. N 3,609,072.1952 E 11,051,934.1117
Back = S 47° 03' 53.33" E
Ahead = S 68° 42' 09.40" E
Chord Bear = S 57° 53' 01.37" E

Course from PT FALLOWATERLN_3 to PC FALLOWATERLN_6 S 68° 42' 09.40" E Dist 399.0916

Curve Data

Curve FALLOWATERLN_6
P.I. Station 17+81.55 N 3,608,544.0065 E 11,052,187.7332
Delta = 1° 39' 52.03" (LT)
Degree = 2° 51' 53.24"
Tangent = 29.0522
Length = 58.1004
Radius = 2,000.0000
External = 0.2110
Long Chord = 58.0983
Mid.Ord. = 0.2110
P.C. Station 17+52.50 N 3,608,554.5585 E 11,052,160.6650
P.T. Station 18+10.60 N 3,608,534.2451 E 11,052,215.0965
C.C. N 3,610,417.9741 E 11,052,887.0825
Back = S 68° 42' 09.40" E
Ahead = S 70° 22' 01.44" E
Chord Bear = S 69° 32' 05.42" E

Course from PT FALLOWATERLN_6 to FALLOWATERLN8 S 70° 22' 01.44" E Dist 73.3460
Point FALLOWATERLN8 N 3,608,509.6014 E 11,052,284.1784 Sta 18+83.95

ALMOND ROAD

****

Point ALMONDRD1 N 3,608,447.3367 E 11,052,261.9666 Sta 30+00.00

Course from ALMONDRD1 to ALMONDRD2 N 19° 37' 58.56" E Dist 425.0000

Point ALMONDRD2 N 3,608,847.6291 E 11,052,404.7637 Sta 34+25.00

****

SCALE
0 50' 100'

	PROJECT	SHEET NO.
	9999-080-926	1G

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540)857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inf comp (804) 550-2937

UNDERGROUND UTILITIES TEST HOLE INFORMATION

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	IH

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

PLAN SHEET	TEST HOLE	DISTANCE (FEET)	(1) STATION & ROADWAY	OWNER	TYPE OF FACILITY	(2) ELEV. (FEET)	(3) CONFLICT YES/NO	(4) REMARKS	UTILITY (5) ADJUSTMENT REQUIRED
3	TH-1	0.5' LT	FALLOWATER STA. 10+50.0		6" WATER	1143.58'	NO	EX water is 2.5' above PR storm pipe	NO
3	TH-2	6.2' RT	FALLOWATER STA. 11+82.0		6" WATER	1152.38'	NO	EX water is 3.6' above PR storm pipe	NO
3	TH-3	4.6' RT	FALLOWATER STA. 13+66.0		6" WATER	1168.72'	NO	EX water is 2.0' above PR storm pipe	NO
3	N/A	4.0' LT	FALLOWATER STA. 10+49.0		8" SAN. SEWER	1143.68'	NO	EX sewer is 2.6' above PR storm pipe	NO
3	N/A	1.8' LT	FALLOWATER STA. 11+82.0		8" SAN. SEWER	1150.02'	NO	EX sewer is 1.8' above PR storm pipe	NO
3	N/A	15.0' LT	FALLOWATER STA. 12+53.0		8" SAN. SEWER	1159.60'	NO	EX sewer is 2.5' above PR storm pipe	NO
3	N/A	15.6' LT	FALLOWATER STA. 13+66.0		8" SAN. SEWER	1161.75'	NO	EX sewer is 2.2' below PR storm pipe	NO

PLAN SHEETS	TEST HOLES	DISTANCE (FEET)	(1) STATION & ROADWAY	OWNER	TYPE OF FACILITY	(2) ELEV. (FEET)	(3) CONFLICT YES/NO	(4) REMARKS	UTILITY (5) ADJUSTMENT REQUIRED

LEGEND

W

T/Tg Duct

SFM

G

NOTES:

(1) ALL TEST HOLES ARE REFERENCED FROM THE SURVEY BASELINE UNLESS OTHERWISE NOTED.

(2) ELEVATIONS SHOWN HEREON ARE TO THE TOP OF THE FACILITY UNLESS OTHERWISE NOTED.

(3) YES OR NO; NO INDICATES NO DIRECT CONFLICT, HOWEVER, CLEARANCE MAY BE LESS THAN ACCEPTABLE TO UTILITY OWNER.

(4) REMARKS TO INCLUDE CLEARANCE DIMENSION (REGARDLESS OF DISTANCE).

(5) YES OR NO; INFORMATION TO BE PROVIDED BY THE VDOT DISTRICT UTILITY ENGINEER.

PROJECT MANAGER: Cheryl Backer (540) 387-5399 (Salem)
SURVEYED BY, DATE: Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY: Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE: Jpf camap (804) 550-2937

TRANSPORTATION MANAGEMENT PLAN

COMMONWEALTH OF VIRGINIA
DUSTIN K. BROOKMAN
Lic. No. 040205666
PROFESSIONAL ENGINEER

Dustin Brookman
2021.04.08 10:27:53 -04'00'
AECOM TECH. SERV., INC.
Roanoke, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	IJ

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

MOT GENERAL NOTES

1. UNLESS OTHERWISE APPROVED, THE CONTRACTOR SHALL PLAN AND PROSECUTE THE WORK IN ACCORDANCE WITH THIS MAINTENANCE OF TRAFFIC PLAN.
2. ALL CONSTRUCTION SIGNING SHALL BE INSTALLED IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL (REVISION 2), SEPT. 2019, MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION AND THE VIRGINIA SUPPLEMENT TO THE 2009 MUTCD. EXCEPT AS NOTED ON PLANS. SIGN SPACING SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.
3. ALL SIGNS AND ANY OTHER DEVICES USED IN CONSTRUCTION ZONES SHALL BE FURNISHED BY THE CONTRACTOR AND SHALL BE KEPT CLEAN AND PROPERLY ALIGNED AT ALL TIMES.
4. ALL TRAFFIC CONTROL DEVICES AND SIGNS NECESSARY FOR THE MAINTENANCE OF TRAFFIC SHALL BE FURNISHED, INSTALLED AND MAINTAINED BY THE CONTRACTOR.
5. ALL CONSTRUCTION SIGNS AND IF USED, PORTABLE SIGN SUPPORTS THAT GOVERN TRAFFIC FLOW THROUGH THE WORK ZONE SHALL BE COVERED OR REMOVED AND STORED AWAY FROM TRAFFIC WHEN NOT IN USE.
6. MEASURES SHALL BE TAKEN TO ENSURE ADEQUATE SIGHT DISTANCES DURING CONSTRUCTION OPERATIONS. TRAFFIC CONTROL DEVICES, SIGNS, CONSTRUCTION EQUIPMENT, MATERIAL STORAGE OR ANY OTHER OBSTACLE WILL NOT BE ALLOWED TO INTERFERE WITH SIGHT DISTANCES AT ENTRANCES FOR THIS PROJECT.
7. EQUIPMENT AND/OR MATERIALS SHALL NOT BE STORED WITHIN THE ESTABLISHED CLEAR ZONE IN APPENDIX A OF THE 2011 VWAPM (REV.2).
8. GROUP 2 CHANNELIZING DEVICES AND SHADOW VEHICLE REQUIRED PER TTC-5.2 AND TTC-23.2 OF THE 2011 VWAPM (REV.2).
9. IF CONSTRUCTION OF THE FALLOWATER LANE INTERSECTION WITH ROUTE 419 REQUIRES MORE THAN A SHOULDER CLOSURE ALONG ROUTE 419, THEN TRAFFIC SHALL BE MAINTAINED ALONG ROUTE 419 ACCORDING TO TTC-16.2 OF THE VWAPM AS NECESSARY.
10. A 8' TYPE III BARRICADE W/ "ROAD CLOSED" SIGN SHALL BE PLACED ON ALMOND ROAD IN ADVANCE OF THE WORK AREA ALONG ALMOND ROAD.

TEMPORARY TRAFFIC CONTROL PLAN

1. PROJECT TMP TYPE: TYPE B CATEGORY III AS DEFINED BY I&IM 241.5.
2. PROJECT LOCATION: FALLOWATER LANE, ROANOKE COUNTY.
3. LENGTH AND WIDTH OF WORK ZONE: SEE PLAN SHEET 3 AND 4.
4. LANES AFFECTED BY THE PROJECT WORK: SEE PLAN SHEET 3 AND 4.
5. HOURS THE WORK ZONE WILL BE ACTIVE: THERE ARE NO TIME RESTRICTIONS FOR WORK ALONG FALLOWATER LANE. WORK IMPACTING ROUTE 419 (ELECTRIC ROAD) SHALL BE RESTRICTED TO NIGHTTIME WORK (9 PM - 7 AM).
6. LOCATION(S) WITHIN R/W FOR CONSTRUCTION EQUIPMENT AND STORAGE WITHIN APPROACH ROADWAY: COORDINATE WITH ROANOKE COUNTY.
7. PROPOSED TRAFFIC CONTROL DEFINITION: SEE DETAIL, THIS SHEET.
8. AFFECTED ENTRANCES, INTERSECTIONS, OR PEDESTRIAN ACCESS: CONTRACTOR TO MAINTAIN ACCESS TO ALL BUSINESSES AND ENTRANCES DURING CONSTRUCTION.
9. MAJOR TYPES OF TRAVELERS: LOCAL TRAFFIC. TRAFFIC COUNT IS 800 VEHICLES PER DAY.
10. THE WORK ZONE WILL BE MAINTAINED ACCORDING TO THE FOLLOWING TRAFFIC CONTROL APPLICATIONS FROM THE VWAPM (REVISION 2) DATED 2011:

    VWAPM FIGURE TTC-5.2 (SHOULDER OPERATION WITH MINOR ENCROACHMENT)
    VWAPM FIGURE TTC-23.2 (LANE CLOSURE ON A TWO-LANE ROADWAY USING FLAGGERS)
    VWAPM FIGURE TTC-16.2 (OUTSIDE LANE CLOSURE OPERATION ON A FOUR-LANE ROADWAY)

TRANSPORTATION OPERATIONS PLAN

THIS PLAN IS NOT REQUIRED ON THIS PROJECT. HOWEVER, A CONTACT LIST OF LOCAL EMERGENCY RESPONSE AGENCIES MUST BE KEPT AND MAINTAINED THROUGHOUT THE PROJECT LIFE CYCLE.

EMERGENCY CONTACT FOR THIS PROJECT SHALL BE 911.

TRAFFIC BACKUP NOTIFICATION: THE TRAFFIC OPERATIONS CENTER (540-375-0170) SHALL BE NOTIFIED OF TRAFFIC BACKUPS RELATED TO THE WORK BY THE PROJECT STAFF. THE TOC WILL UTILIZE THE AVAILABLE SYSTEMS (CAMERAS, SENSORS, ETC.) TO MONITOR THE WORK AREA AND ALL ADJACENT AREAS. THE TOC WILL MAKE ENTRIES INTO SYSTEMS THAT FEED THIS INFORMATION TO 511. THE TOC WILL UTILIZE ASSETS SUCH AS VARIABLE MESSAGE SIGNS TO ALERT MOTORISTS OF LANE CLOSURES AND OTHER INCIDENTS THAT MAY IMPACT TRAVEL. PCMS BOARDS SHALL BE EQUIPPED WITH CDMA CAPABILITIES.

THE TOC WILL ALSO MAKE NOTIFICATIONS TO DEPARTMENT STAFF. THE STAFF NOTIFICATIONS SHALL INCLUDE BUT NOT BE LIMITED TO THE DUTY OFFICER, AREA CONSTRUCTION ENGINEER, PROJECT MAINTENANCE OF TRAFFIC COORDINATOR, PROJECT MANAGER, RESIDENT ADMINISTRATOR, DISTRICT WORK ZONE SAFETY COORDINATOR, REGIONAL TRAFFIC ENGINEER, REGIONAL TRAFFIC OPERATIONS MANAGER, REGIONAL INCIDENT MANAGEMENT COORDINATOR, AND THE DISTRICT COMMUNICATIONS OFFICE OF ANY INCIDENTS AND EXPECTED TRAFFIC DELAYS.

THE TOC SHALL BE RESPONSIBLE FOR INTRA-AGENCY NOTIFICATIONS TO ENTITIES SUCH AS BUT NOT LIMITED TO VIRGINIA STATE POLICE, AND OTHER AFFECTED AGENCIES.

A REVIEW OF ALL MAJOR INCIDENTS, AS DETERMINED BY THE REGIONAL INCIDENT MANAGEMENT COORDINATOR, SHALL BE ACCOMPLISHED WITHIN 48 HOURS OF CLEARANCE OF THE INCIDENT. VDOT PROJECT STAFF, VDOT TRAFFIC ENGINEERING, REGIONAL OPERATIONS STAFF, CONTRACTOR STAFF, AND EMERGENCY RESPONDERS SHALL BE REPRESENTED AT THESE MEETINGS.

THE FOLLOWING IS A LIST OF EMERGENCY CONTACT AGENCIES:

ROANOKE COUNTY FIRE & RESCUE: 911 (NON-EMERGENCY 540-777-8701)
ROANOKE COUNTY POLICE: 540-562-3265
STATE POLICE: 540-375-9518 (AREA 40)

CONTACT NUMBERS:

ROANOKE COUNTY ENGINEER: DAVID M. HENDERSON, P.E. 540-772-2083

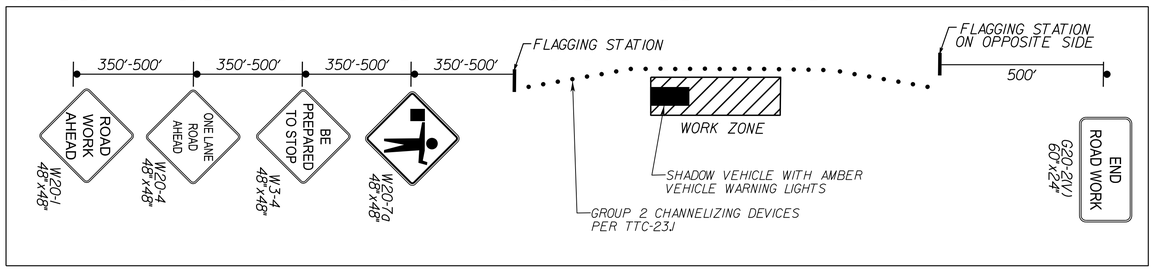
LCAWS NOTIFICATION: THE CONTRACTOR SHALL NOTIFY THE TOC BY 8 AM ON THURSDAY OF THE WEEK BEFORE ANY LANE AND SHOULDER CLOSURES.

PUBLIC COMMUNICATIONS PLAN

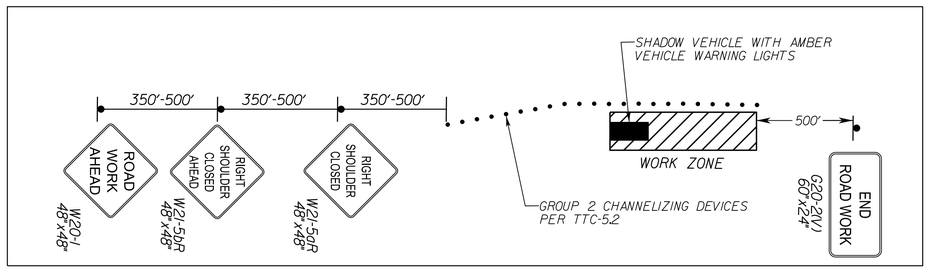
1. ANY SCHEDULED WORK PLANS THAT WILL CAUSE TRAFFIC DELAYS SHALL BE PROVIDED TO THE PUBLIC AFFAIRS OFFICE AT LEAST 72 HOURS IN ADVANCE OF THE CHANGE. THIS INCLUDES ANY CHANGES TO TRAFFIC PATTERNS. THIS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. IN THE EVENT THAT ANY UNSCHEDULED TRAFFIC DELAYS ARE EXPERIENCED RELATED TO THE WORK, THE TRAFFIC OPERATIONS CENTER (540-375-0170) SHALL BE CONTACTED BY THE CONTRACTOR. THE TRAFFIC OPERATIONS CENTER (TOC) WILL MAKE ALL ENTRIES INTO SYSTEMS THAT FEED INFORMATION INTO 511. THE TOC WILL ALSO MAKE NOTIFICATIONS TO DEPARTMENT STAFF. THE STAFF NOTIFICATIONS SHALL INCLUDE BUT NOT BE LIMITED TO: AREA CONSTRUCTION ENGINEER, PROJECT MAINTENANCE OF TRAFFIC COORDINATOR, PROJECT MANAGER, RESIDENT ADMINISTRATOR, DISTRICT WORK ZONE SAFETY COORDINATOR, REGIONAL TRAFFIC ENGINEER, REGIONAL TRAFFIC OPERATIONS MANAGER, REGIONAL INCIDENT MANAGEMENT COORDINATOR, AND THE DISTRICT COMMUNICATIONS OFFICE.
3. PCMS BOARDS SHALL BE PLACED ON BOTH DIRECTIONS OF ROUTE 419 (ELECTRIC ROAD) IN ADVANCE OF THE PROJECT AREA, FOR 2 WEEKS PRIOR TO THE START OF CONSTRUCTION. PCMS BOARDS MUST HAVE COMMUNICATION CAPABILITIES WITH THE TRAFFIC OPERATIONS CENTER. IMPLEMENTATION OF THE PCMS BOARDS SHALL BE COORDINATED WITH THE VDOT SALEM RESIDENCY.

TEMPORARY TRAFFIC CONTROL PLAN

SIGNAGE LAYOUT FOR LANE CLOSURE ON A TWO-LANE ROADWAY USING FLAGGERS (TTC-23.2 IN VWAPM, REV.2)



SIGNAGE LAYOUT FOR SHOULDER CLOSURE WITH MINOR ENCROACHMENT (TTC-5.2 IN VWAPM, REV.2)



	PROJECT	SHEET NO.
	9999-080-926	IJ

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-9411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inframap (804) 550-2937

GENERAL NOTES

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	2

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-2 Earthwork quantities on this project are based on anticipated settlement and may require adjusting during construction.

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: curb, curb & gutter, entrances, drop inlets, endwalls, pipes, light posts, etc.

G-6 The borrow material for this project shall be a minimum CBR 5 or as approved by the Materials Engineer.

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 this sheet 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-10 The proposed riprap may be omitted by the Engineer if the slope designated for placement of riprap is found to be comprised of solid rock or closely consolidated boulders with soundness, size and weight equal to, or exceeding, the specifications for the proposed riprap.

D-12 All existing drainage facilities labeled "To Be Abandoned" shall be left in place, backfilled and plugged in accordance with the VDOT Road and Bridge Standard PP-1. Basis of Payment will be C.Y. of Flowable Backfill.

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.

D-17 St'd. SL-1 Safety Slab locations are based on the assumed use of precast structures. If cast-in-place structures are utilized, and the interior chamber dimensions (length and width, or diameter) are less than 4 feet, the safety slabs shall not be installed.

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-5 That portion of the right of way lying within the Clear Zone or within a minimum of 10 feet from the edge of pavement or surfacing or within the limits of the construction slopes beyond 10 feet, shall be cleared and grubbed in accordance with the applicable VDOT Road and Bridge Specifications, Section 301, where sufficient right of way or construction easement is provided.

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. 10+00 to Sta. 18+83.95.

I-9 When no centerline alignment is shown for a proposed entrance, the entrance shall be constructed in the same location as the existing entrance.

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 5(1) thru 5(4) and as directed by the Engineer.

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

Hydraulic Design	-	AECOM
Roadway Design	-	AECOM
Utility Design	-	N/A
Utility Designation	-	N/A
Utility Location	-	N/A
Survey	-	LUMSDEN ASSOCIATES
Bridge Design	-	N/A
Traffic Design	-	AECOM
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:

EC-2, Ty. 1 / EC-2, Ty. 2 / EC-2, Ty. 3 / EC-2, Ty. 4	Denotes Rolled Erosion Control Product, Temporary, St'd. EC-2 Type 1, 2, 3 or 4
EC-3, Ty. 1 / EC-3, Ty. 2 / EC-3, Ty. 3	Denotes Rolled Erosion Control Product, Permanent, St'd. EC-3 Type 1, 2 or 3
TSF-A / TSF-B	Denotes Temporary Silt Fence, St'd EC-5 Type A or B
TDC	Denotes Temporary Diversion Channel, St'd EC-12
DD	Denotes Temporary Diversion Dike, St'd EC-9
TC-I	Denotes Turbidity Curtain, Type - Impervious
TC-P	Denotes Turbidity Curtain, Type - Pervious
RCD-1	Denotes Rock Check Dam, Type I; St'd EC-4
RCD-2	Denotes Rock Check Dam, Type II; St'd EC-4
IP-A	Denotes Inlet Protection, Type A; St'd EC-6
IP-B	Denotes Inlet Protection, Type B; St'd EC-6
TSI	Denotes Slope Interrupter; St'd EC-15

UTILITIES

U-1 The Contractor shall be responsible for identifying and coordinating the relocation of all existing gas lines in conflict with proposed improvements. The anticipated number of conflict points is a maximum of four. The cost of these relocations shall be included in the cost of other items. The Contractor shall contact CJ Boothe with Roanoke Gas Company (540-293-3821, christopher_boothe@roanokegas.com) at least 5 business days in advance of all gas relocation needs.

ALLOWABLE PIPE TYPES

ALLOWABLE TYPE OF STORM SEWER PIPE (UNLESS OTHERWISE SHOWN IN DRAINAGE DESCRIPTIONS)
(SEE ROAD AND BRIDGE STANDARD PC-1 FOR HEIGHT OF COVER LIMITATIONS FOR EACH TYPE)

LOCATION	CONCRETE	ALUMINUM COATED TYPE 2 STEEL SPIRAL RIB	POLYMER COATED (10/10) CORRUGATED STEEL SPIRAL RIB	POLYMER COATED (10/10) CORRUGATED STEEL DOUBLE WALL (SMOOTH INTERIOR)	ALUMINUM SPIRAL RIB	POLYVINYLCHLORIDE (PVC) (SMOOTH INTERIOR)	POLYETHYLENE (PE) CORRUGATED TYPE S	POLYPROPYLENE (PP) TYPE D OR S
FALLOWATER LANE	X					X	X	X
ALMOND ROAD	X					X	X	X

WVWA WATER AND SEWER NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE WESTERN VIRGINIA WATER AUTHORITY (WVWA) AVAILABLE AT WWW.WESTERNVAWATER.ORG OR BY CONTACTING THE AUTHORITY AT 540-853-5700. THE PROJECT SHALL ALSO COMPLY WITH THE GOVERNING JURISDICTION'S STANDARDS AND OTHER AGENCY STANDARDS (E.G., VDOT, DEQ, DCR, VDH, ETC.) WHERE APPLICABLE.
2. A MINIMUM COVER OF THREE (3) FEET IS REQUIRED ON ALL WVWA WATER AND SEWER LINES.
3. ALL EXISTING UTILITIES MAY NOT BE SHOWN IN THEIR EXACT LOCATIONS. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AND SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES IN THE AREAS OF CONSTRUCTION PRIOR TO STARTING WORK.
4. PLEASE SHOW ALL WVWA WATER AND SEWER UTILITIES ON ANY DEVELOPMENT PLAN.
5. THE LOCATION OF EXISTING UTILITIES ACROSS OR ALONG THE LINE OF PROPOSED WORK ARE NOT NECESSARILY SHOWN ON THE PLANS AND WHERE SHOWN ARE ONLY APPROXIMATELY CORRECT. THE CONTRACTOR SHALL ON HIS OWN INITIATIVE AND AT NO EXTRA COST, LOCATE ALL UNDERGROUND LINES AND STRUCTURES AND POTHOLE AS NECESSARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND STRUCTURES. ALL DAMAGE INCURRED TO EXISTING UTILITIES DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. PLAN APPROVAL BY THE WVWA DOES NOT REMOVE THE CONTRACTOR'S RESPONSIBILITY TO REMOVE OR RELOCATE ANY EXISTING CONFLICTS FOUND DURING CONSTRUCTION.
7. ALL PRIVATE UTILITY CONSTRUCTION, I.E. PIPING, VALVES, HYDRANTS, METERS AND BOXES, CLEAN OUTS, SANITARY SEWER MANHOLES, BEDDING, ETC. SHALL COMPLY WITH THE CURRENT VIRGINIA UNIFORM STATEWIDE BUILDING CODE (INCLUDING AMENDMENTS).
8. THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 18" CLEARANCE VERTICALLY AND TWO (2) FOOT MINIMUM HORIZONTALLY FROM THE OUTSIDE OF PIPE TO OUTSIDE OF PIPE WITH ALL OTHER UNDERGROUND UTILITIES. WHERE THIS CANNOT BE ACHIEVED, ADDITIONAL MEASURES IN ACCORDANCE WITH WVWA STANDARDS SHALL BE ENFORCED.
9. ALL UTILITY GRADE ADJUSTMENTS SHALL BE IN ACCORDANCE WITH WVWA STANDARDS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.
10. FIELD CHANGES SHALL BE SUBMITTED BY THE ENGINEER OF RECORD TO THE LOCALITY AND APPROVED BY THE WVWA.
11. PRIOR TO REQUESTING SUBSTANTIAL COMPLETION INSPECTION BY THE WVWA, THE DEVELOPER MUST SUBMIT AS BUILTS FOR REVIEW AND APPROVAL.

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inf comp (804) 550-2937

TYPICAL SECTIONS

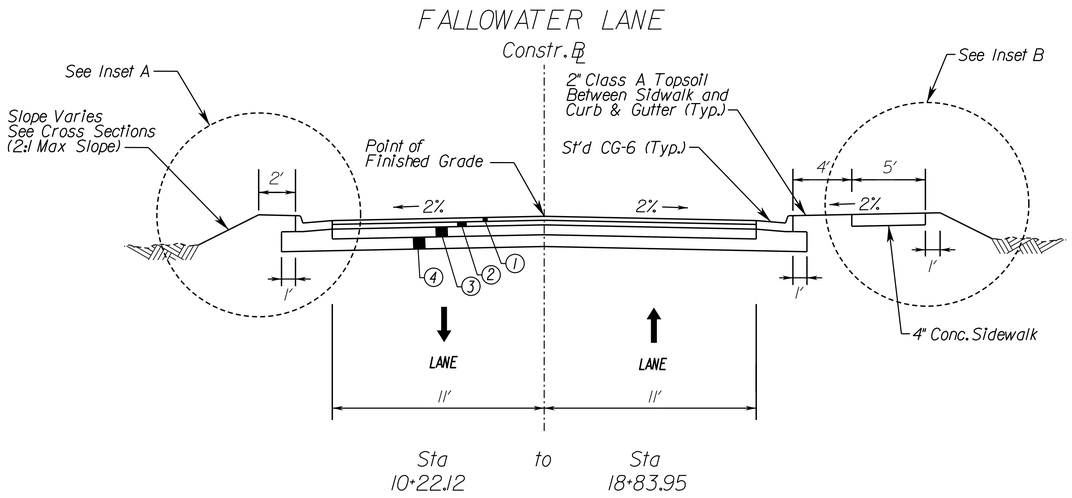
COMMONWEALTH OF VIRGINIA
JACK SCOTT HODGE
Lic. No. 15755
PROFESSIONAL ENGINEER

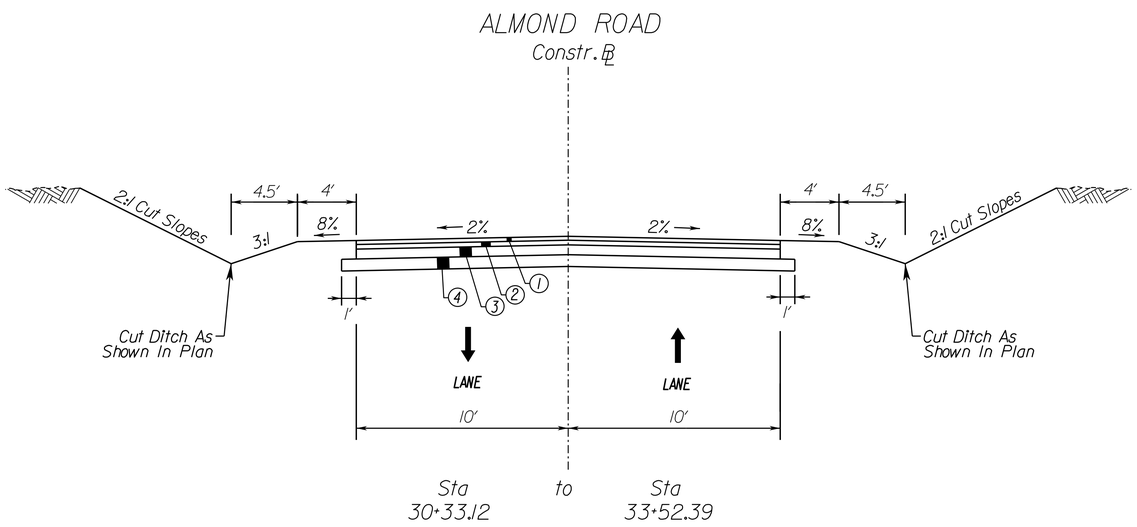
Jack S Hodge
2021.04.08 10:10:30 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	2A

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





PAVEMENT

① ASPHALT CONCRETE SURFACE COURSE, TYPE SM-9.5A @ 175 LBS/SY

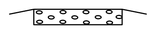
② 2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE IM-19.0A

③ 4" ASPHALT CONCRETE BASE COURSE, TYPE BM-25.0A

④ 8" AGGREGATE BASE MATERIAL, TYPE I, NO. 21 B

PRIVATE ENTRANCES

TYPE I
Crusher Run Aggr.

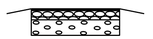


6" Crusher Run
Aggr. 25 or 26

TYPE III
Asphalt

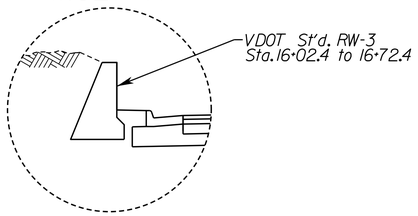
Asphalt Conc. Type
SM-9.5A @ 235 Lbs. per S.Y.
4" Aggr. Base Mat'l. Ty. I
No. 21B

TYPE IV
Asphalt Commercial

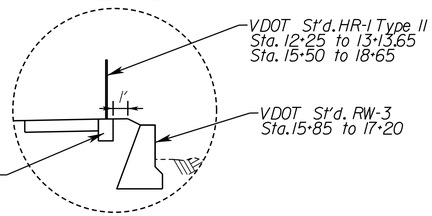


Asphalt Conc. Type
SM-9.5A @ 175 Lbs. per S.Y.
4" Asphalt Conc. Base Course
BM-25.0A
6" Aggr. Base Mat'l. Ty. I
No. 21B

INSET A



INSET B



NOT TO SCALE	PROJECT 9999-080-926	SHEET NO. 2A

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540)857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inframap (804) 550-2937

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	2B

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

DEMOLITION OF BUILDINGS - CLEARING OF PARCELS - CLOSING OF WELLS - UNDERGROUND STORAGE TANK REMOVAL SUMMARY

PLAN SHEET	PARCEL NUMBER	DEMOLITION NUMBER	LANDOWNER	STATION	DESCRIPTION	INCLUDED IN CONTRACT					NOT IN CONTRACT	
						DEMOLITION OF BUILDINGS	CLEARING OF PARCEL	CLOSING OF WELL	UNDERGROUND STORAGE TANK REMOVAL TYPE A	UNDERGROUND STORAGE TANK REMOVAL TYPE B	DEMOLITION CONTRACT	REMOVED BY OTHERS
						LUMP SUM	LUMP SUM	EACH	EACH	EACH		
3	008	D1	D/O LAND AND DEVELOPMENT, LLC	15+08 LT	LIGHTING STRUCTURE	1						
4	008	D2	D/O LAND AND DEVELOPMENT, LLC	15+51 RT	LIGHTING STRUCTURE	1						
4	002	D3	NATIONAL RETAIL PROPERTIES, LP	16+41 RT	LIGHTING STRUCTURE	1						

STRUCTURES TO BE REMOVED BY OTHERS

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
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SUBSURFACE UTILITY BY, DATE Inf comp (804) 550-2937

ROADSIDE DEVELOPMENT

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	2C

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

CORE MIX

MIX	LBS./ ACRES	DESCRIPTION
1	▲	✳ 100% CERTIFIED FINE FESCUE
2	▲	100% CERTIFIED TALL FESCUE
3✳	▲ 100	50% CERTIFIED TALL FESCUE ✳ 50% CERTIFIED FINE FESCUE
4	▲	50% ORCHARDGRASS 50% CERTIFIED KENTUCKY BLUEGRASS
5	▲	100% BERMUDAGRASS
C 1, 2 & 3	▲	CUSTOM MIX
T1	▲ 100	50% CERTIFIED TALL FESCUE 50% BARLEY, WINTER RYE OR WINTER WHEAT
T2	▲ 100	50% FOXTAIL MILLET 50% CERTIFIED TALL FESCUE

✳ FINE FESCUES INCLUDE CHEWINGS, CREEPING RED, HARD, SHEEP. SEE SEEDING SCHEDULE FOR TYPE(S) SPECIFIED FOR THIS PROJECT.

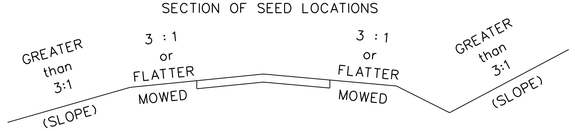
▲ ALL RATES TO BE SPECIFIED BY THE DISTRICT ROADSIDE MANAGER

✳ ✳ THESE ADDITIVES ARE NOT TO BE USED IN AREAS THAT WILL BE MOWED. (SLOPES 3:1 OR FLATTER)

ADDITIVES

TYPE	LBS./ ACRES	DESCRIPTION
A	▲	100% LOVEGRASS
B	▲ 15	100% BARLEY, WINTER RYE OR WINTER WHEAT
C	▲ 15	100% FOXTAIL MILLET
D	▲ 15	100% ANNUAL RYEGRASS
E	▲	100% BLUE GRAMA
F	▲	100% ALFALFA
G	▲ 5	100% WHITE CLOVER
H	▲ 20	✳ ✳ 100% CROWN VETCH (LEGUME)
I	▲	✳ ✳ 100% SEPICEA LESPEDEZA (LEGUME)
J	▲	✳ ✳ 100% BIRDSFOOT TREFOIL (LEGUME)
K	▲	POLLINATOR SEED MIX

SECTION OF SEED LOCATIONS



SEEDING SCHEDULE

CODES LISTED IN TABLE REFER TO THE LISTS OF CORE MIXES & ADDITIVES, WHICH SHOW SEED NAMES & APPLICATION RATES FOR THIS PROJECT.	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE
	SPRING MONTH & DATE		SUMMER MONTH & DATE		FALL MONTH & DATE		WINTER/DORMANT MONTH & DATE	
	3/16 to 5/31		6/1 to 9/15		9/16 to 10/31		11/1 to 3/15	
PROJECT NUMBERS AND/OR LOCATION								
9999-080-926	(3*)DH	(3*)DG	(3*)CH	(3*)CG	(3*)BH	(3*)BG	(3*)BH	(3*)BG
TEMPORARY SEEDING	T1	T1	T2	T2	T1	T1	T1	T1
✳ SPECIFIED TYPE(S) OF FINE FESCUE								
9999-080-926	HARD	HARD	HARD	HARD	HARD	HARD	HARD	HARD

NOTES:

1. RECOMMENDATIONS FOR THE APPLICATION OF SEED MIXTURES (CORE MIX AND ADDITIVES), FERTILIZER, LIME, ETC. SHALL BE OBTAINED FROM THE DISTRICT ROADSIDE MANAGER.
2. ALL SEED, FERTILIZER, LIME, MULCH, ETC. MUST BE IN CONFORMANCE WITH VDOT ROAD AND BRIDGE SPECIFICATIONS AND ANY APPLICABLE INFORMATIONAL & INSTRUCTIONAL MEMORANDA.
3. APPROXIMATELY 0.53 ACRES WILL BE DISTURBED ON THIS PROJECT AND WILL REQUIRE THE ESTABLISHMENT OF GRASSES AND/OR LEGUMES.
4. REGULAR SEED SHALL BE APPLIED AT THE RATES SHOWN IN THE CORE MIX, ADDITIVES, AND WHERE APPLICABLE, CUSTOM SEED MIX TABLES. SEEDING QUANTITIES SHOWN IN THE ROADSIDE DEVELOPMENT SUMMARY TABLE ARE BASED ON THE HIGHEST "NORMAL" SEEDING RATE FOR EACH CORE MIX (BY SEASON FOR BOTH MOWED AREAS AND NON-MOWED SLOPES), WITH A 25% INCREMENTAL ADJUSTMENT TO ACCOUNT FOR SEEDING PROGRESSION, SEEDING AFTER SIGN OR GUARDRAIL INSTALLATION, AND OTHER MINOR UNPLANNED DISTURBANCES.
5. REGULAR SEED SHALL BE FERTILIZED AT THE RATES SHOWN IN THE FERTILIZER SUMMARY TABLE. THE TOTAL FERTILIZER QUANTITIES SHOWN IN THE TABLES INCLUDES THE 25% INCREMENTAL ADJUSTMENT DESCRIBED ABOVE.
6. OVERSEEDING RATES SHALL BE 100% OF THE REGULAR SEED RATE WITHOUT THE INCREMENTAL ADJUSTMENT.
7. OVERSEEDING SHALL ONLY INCLUDE FERTILIZER ONCE, AT THE RATE SHOWN IN THE FERTILIZER SUMMARY TABLE. ADDITIONAL OVERSEEDING MAY BE DONE WITH NO FERTILIZER APPLIED, OR A SOIL TEST MAY BE PERFORMED TO DETERMINE THE SPECIFIC NUTRIENTS NECESSARY TO ESTABLISH THE GRASSES AND/OR LEGUMES.
8. THE ENGINEER WILL REQUIRE THE CONTRACTOR TO PERFORM SUPPLEMENTAL SEEDING WHEN LESS THAN 75% UNIFORM STAND OF THE PERMANENT GRASS (AND LEGUMES) SPECIFIED IN THE MIXTURES IS OBTAINED. (ANNUAL SPECIES SUCH AS RYE AND MILLET ARE TEMPORARY VARIETIES AND REQUIRE SUPPLEMENTAL SEEDING.)
9. LEGUME SEED SHALL BE INOCULATED WITH THE APPROPRIATE STRAIN AND RATE OF BACTERIA. FOR HYDROSEEDING, USE FIVE TIMES (5X) THE AMOUNT OF INOCULANT RECOMMENDED BY THE MANUFACTURER.
10. THE DATE SEED IS APPLIED SHALL BE USED TO DETERMINE WHETHER TO USE HULLED OR UNHULLED SEED FOR BERMUDAGRASS AND SERICEA LESPEDEZA. SPRING & SUMMER (3/16 TO 9/15): USE HULLED SEED
11. EROSION CONTROL MULCH IS TO BE USED ON AREAS AS DIRECTED BY THE ENGINEER.
12. WHEN EROSION CONTROL MULCH IS USED, IT SHALL PROVIDE 100% COVERAGE OF ALL DENUDED AREAS.
13. HECP SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS (OR RECOMMENDATIONS).

MULCH SUMMARY

LOCATION		MAX. SLOPE	AREA (ac.)	MULCH TYPE	INC. ADJ.	TOTAL AREA (ac.)
CORE MIX 1	MOW	4.00:1	0.20	HECP TYPE 1	0.05	0.25
CORE MIX 1	SLOPES	2.00:1	0.33	HECP TYPE 3	0.0825	0.41
CORE MIX 2	MOW	0.00:1	0.00	N/A	0	0.00
CORE MIX 2	SLOPES	0.00:1	0.00	N/A	0	0.00
CORE MIX 3	MOW	0.00:1	0.00	N/A	0	0.00
CORE MIX 3	SLOPES	0.00:1	0.00	N/A	0	0.00
TEMPORARY SEED		N/A	0.53	HECP TYPE 3	0	0.53

HECP TYPE	REGULAR SEED MOW	REGULAR SEED SLOPES	TEMPORARY SEED	OVER-SEEDING	TOTAL (ACRES)	TOTAL (SQ. YARDS)
TYPE 1	0.25	0.00	0.00	0.00	0.25	1,210
TYPE 2	0.00	0.00	0.00	0.00	0.00	0
TYPE 3	0.00	0.41	0.53	0.00	0.94	4,562
TYPE 4	0.00	0.00	0.00	0.00	0.00	0
N/A (TOO STEEP)	0.00	0.00	0.00	0.00	0.00	0

ROADSIDE DEVELOPMENT SUMMARY

PROJECT NUMBERS AND/OR LOCATION DESC.	REGULAR SEED	OVER SEEDING	LEGUME SEED	LEGUME OVER SEEDING	TEMPORARY SEED	⊗ 2" TOPSOIL CLASS A	LIME	FERTILIZER N NITROGEN	FERTILIZER P PHOSPHORUS	FERTILIZER K POTASSIUM	HECP (TYPE 1)	HECP (TYPE 2)	HECP (TYPE 3)	HECP (TYPE 4)
	LBS.	LBS.	LBS.	LBS.	LBS.	ACRES	TONS	LBS.	LBS.	LBS.	S. Y.	S. Y.	S. Y.	S. Y.
9999-080-926	76	61	7	6	53	0.53	2.39	51	70	35	1,210	0	4,562	0
TOTAL	76	61	7	6	53	0.53	2.39	51	70	35	1,210	0	4,562	0

⊗ DENOTES ITEM(S) TO BE PAID FOR ON THE BASIS OF PLAN QUANTITIES IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE CURRENT ROAD AND BRIDGE SPECIFICATIONS.

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inf comp (804) 550-2937

DRAINAGE DESCRIPTIONS

SHEET 3

Ex D-12
CONNECT NEW 54" STORM SEWER PIPE

3-1
1 MOD.DI-3B REQ'D.
L = 4', H = 7.7', INV.1137.25
ST'D ST-1 REQ'D.
MODIFICATION IS CONNECTION TO EXISTING 51" PIPES

3-3 — 3-2
15'-18" STORM SEWER PIPE REQ'D.(5' COVER)
INV.IN) 1137.97 INV.(OUT) 1137.17

3-2
ST'D JB-1 TYPE B TOWER REQ'D
H = 7.7' INV.1136.29
1 ST'D MH-1 FRAME AND COVER REQ'D
CONNECT TO EXISTING 51" PIPE
ST'D ST-1 REQ'D. ST'D IS-1 REQ'D.

3-2 — Ex D-12
15'-54" STORM SEWER PIPE REQ'D.(3' COVER)
INV.(IN) 1136.29 INV.(OUT) 1136.07
38 CY MINOR STRUCTURE EXCAVATION
CONTRACTOR TO MAINTAIN FLOW AS NECESSARY

3-3
1 STD.DI-3B REQ'D.
L = 10', H = 7.5', INV.1137.97
ST'D ST-1 REQ'D. ST'D IS-1 REQ'D.

3-4 — 3-3
28'-18" STORM SEWER PIPE REQ'D.(5' COVER)
INV.(IN) 1139.39 INV.(OUT) 1138.45

3-4
1 STD.DI-3B REQ'D.
L = 10', H = 6.6', INV.1139.39
ST'D ST-1 REQ'D.

3-6 — 3-3
134'-18" STORM SEWER PIPE REQ'D.(8' COVER)
INV.(IN) 1145.28 INV.(OUT) 1143.27

3-5
1 STD.DI-1 REQ'D
H=4.6' INV.1143.34
MODIFY EXISTING FLUME AS REQUIRED

3-5 — 3-4
12'-15" STORM SEWER PIPE REQ'D.(3' COVER)
INV.(IN) 1143.34 INV.(OUT) 1142.53

3-6
1 STD.DI-3B REQ'D.
L = 10', H = 10.5', INV.1145.28
ST'D ST-1 REQ'D.

3-7 — 3-6
27'-18" STORM SEWER PIPE REQ'D.(8' COVER)
INV.(IN) 1146.75 INV.(OUT) 1145.38

3-7
1 STD.DI-3B REQ'D.
L = 10', H = 9.0', INV.1146.75
ST'D ST-1 REQ'D.

3-8 — 3-6
115'-18" STORM SEWER PIPE REQ'D.(6' COVER)
(385' Radius with open joints - using 8' pipe joint lengths)
Joints are to be opened a maximum of 25% of the spigot or tongue length
INV.(IN) 1158.20 INV.(OUT) 1150.77

3-8
1 STD.DI-3B REQ'D.
L = 10', H = 7.8', INV.1158.20
ST'D ST-1 REQ'D.

SHEET 3 CONT.

3-12 — 3-8
56'-18" STORM SEWER PIPE REQ'D.(3' COVER)
INV.(IN) 1163.90 INV.(OUT) 1162.12

3-12
7.2' LF STD.MH 1 OR 2 REQ'D.
1 ST'D MH-1 FRAME AND COVER REQ'D.
INV.1163.90
ST'D ST-1 REQ'D. ST'D IS-1 REQ'D.

3-13 — 3-12
34'-18" STORM SEWER PIPE REQ'D.(4' COVER)
INV.(IN) 1164.68 INV.(OUT) 1164.10

3-13
1 STD.DI-3B REQ'D.
L = 10', H = 6.6', INV.1164.68
ST'D ST-1 REQ'D.

3-14
5.3' LF STD.MH 1 OR 2 REQ'D.
1 ST'D MH-1 FRAME AND COVER REQ'D.
INV.1166.15
CONNECT TO EXISTING 15" PIPE
ST'D ST-1 REQ'D.

3-14 — 3-13
8'-15" STORM SEWER PIPE REQ'D.(5' COVER)
INV.(IN) 1166.15 INV.(OUT) 1165.87

3-11
1 STD.DI-3B REQ'D.
L = 4', H = 5.9', INV.1167.12
ST'D ST-1 REQ'D. ST'D IS-1 REQ'D.

3-11 — 3-12
11'-15" STORM SEWER PIPE REQ'D.(5' COVER)
INV.(IN) 1167.12 INV.(OUT) 1166.50

3-17 — 3-11
116'-15" STORM SEWER PIPE REQ'D.(5' COVER)
INV.(IN) 1172.49 INV.(OUT) 1168.82

3-17
1 STD.DI-3B REQ'D.
L = 10', H = 7.8', INV.1172.49
ST'D ST-1 REQ'D. ST'D IS-1 REQ'D.

3-18 — 3-17
6'-15" STORM SEWER PIPE REQ'D.(3' COVER)
INV.(IN) 1175.57 INV.(OUT) 1174.88

3-18
1 STD.DI-1 REQ'D
H=4.0' INV.1175.57

3-19 — 3-17
27'-15" STORM SEWER PIPE REQ'D.(6' COVER)
INV.(IN) 1173.90 INV.(OUT) 1172.59

3-19
1 STD.DI-3B REQ'D.
L = 10', H = 6.4', INV.1173.90
ST'D ST-1 REQ'D. ST'D IS-1 REQ'D.

SHEET 4

4-1
1 STD.DI-3B REQ'D.
L = 10', H = 8.1', INV.1181.22
ST'D ST-1 REQ'D. ST'D IS-1 REQ'D.

4-1 — 3-19
212'-15" STORM SEWER PIPE REQ'D.(6' COVER)
INV.(IN) 1181.22 INV.(OUT) 1176.67

4-2
1 STD.DI-3B REQ'D.
L = 10', H = 7.5', INV.1181.82
ST'D ST-1 REQ'D. ST'D IS-1 REQ'D.

4-2 — 4-1
27'-15" STORM SEWER PIPE REQ'D.(6' COVER)
INV.(IN) 1181.82 INV.(OUT) 1181.32

4-3
1 STD.DI-7 REQ'D
Type 1 Grate Req'd.
H=3.7' INV.1183.55

4-3 — 4-2
68'-15" STORM SEWER PIPE REQ'D.(6' COVER)
INV.(IN) 1183.55 INV.(OUT) 1182.53

4-4
44' - 15" STORM SEWER PIPE REQ'D.(1' COVER)
INV.(IN) 1187.00 INV.(OUT) 1184.00
3 TONS St'd EC-1 Class 1 Req'd. Type A Installation.

4-5
1 MOD.EW-6 REQ'D (MODIFIED FOR TRIPLE ELLIPTICAL PIPES)
INV.1167.55

4-5 — 4-6
30'- TRIPLE 34" X 22" ELLIPTICAL CONCRETE PIPE CULVERT REQ'D.(2' COVER)
INV.(IN) 1167.55 INV.(OUT) 1167.10

4-6
1 MOD.EW-6 REQ'D (MODIFIED FOR TRIPLE ELLIPTICAL PIPES)
INV.1167.10
9 TONS St'd EC-1 Class 1 Req'd. Type A Installation.

4-7
34' - 15" STORM SEWER PIPE REQ'D.(1' COVER)
INV.(IN) 1167.40 INV.(OUT) 1167.10
2 ES-1 OR 2 REQ'D.
3 TONS St'd EC-1 Class 1 Req'd. Type A Installation.

COMMONWEALTH OF VIRGINIA
DUSTIN K. BROOKMAN
Lic. No. 040205666
PROFESSIONAL ENGINEER

Dustin Brookman
2021.04.08 07:57:16 -04'00'

AECOM TECH. SERV., Inc.
Roanoke, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	2D

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

Notes:

1. For all structures listed as MH-1 or MH-2, the contractor is responsible for determining whether an MH-1 or MH-2 manhole is required. Pay item shall be Manhole MH-1 or 2.

	PROJECT	SHEET NO.
	9999-080-926	2D

PROJECT MANAGER Cheryl Becker _(540) 387-5399 (Salem)_ _____
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540)857-3322 (AECOM) _____.
SUBSURFACE UTILITY BY, DATE Inframap _(804) 550-2937_ _____.

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	2F(1)

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

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET

The information contained in the SWPPP General Information sheets is intended to comply with the requirements of the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES Construction Permit) issued July 1, 2019 and VDOT's approved Annual ESC and SWM Standards and Specifications.

The SWPPP General Information sheets are to be completed and included in the construction plan set (or other such documents) for land disturbance activities that disturb an area equal to or greater than 10,000 square feet outside the Chesapeake Bay Preservation Area, or equal to or greater than 2,500 square feet in the area defined as Tidewater, Virginia in the Virginia Chesapeake Bay Preservation Act.

The County RLD (as defined in the latest IIM 242) will ensure that the information shown on the SWPPP General Information sheets is updated/revised as necessary in order to reflect changes that may occur during the construction phase of the land disturbing (construction) activity. The updated/revised sheets shall be maintained with the designated record set of plans (or other such documents)for the land disturbance (construction) activity.

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.

I further certify that this document and all other documents related to the SWPPP, as identified on the SWPPP General Information Sheets, are maintained at the activity site, or at a location convenient to the activity site where no on-site facilities are available, and such documents will be made available for review upon request in accordance with the provisions of the General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10) when applicable. Where the SWPPP documents are not stored on-site, a copy of such documents shall be in the possession of those with day to day operational control over the implementation of the SWPPP whenever they are on site.

* or ** Delegated Authority Signature"

Signature: _____
Printed Name: _____
Date:_____

(1) See Section 1, Item 11 relating to delegation of authority, and form LD-445H (Delegation of Authority).

ACRONYMS

CBPA - Chesapeake Bay Preservation Act
BMP - Best Management Practice
DEQ - Department of Environmental Quality
EPA - U.S. Environmental Protection Agency
ESC - Erosion and Sediment Control
IIM - Instructional and Informational Memorandum
R&B - Road and Bridge
RLD - Responsible Land Disturber
SWPPP - Stormwater Pollution Prevention Plan
TMDL - Total Maximum Daily Load
VDOT - Virginia Department of Transportation
VPDES - Virginia Pollutant Discharge Elimination System
VSMP - Virginia Stormwater Management Program
VESCP - Virginia Erosion and Sediment Control Program
WLA - Waste Load Allocation
SWM - Stormwater Management

SECTION I GENERAL INFORMATION

1. Activity Description - This project is a roadway extension project of Fallowater Lane. The project will include the addition of curb, gutter and sidewalk along Fallowater Lane. The project also includes widening and minor improvements along Almond Road from the new intersection of Almond Road and Fallowater Lane to the intersection of Chevy Road.

2. This land disturbance (construction) activity site is located in Roanoke County and approximately 1.81 acres will be disturbed by excavation, grading or other construction activities.

3.

A. This proposed activity disturbs one acre or greater and requires coverage under the VPDES General Permit for Discharges Of Stormwater from Construction Activities (the VPDES Construction Permit) as issued by the DEQ. A copy of the VPDES Construction Permit (VAR10), the registration information (LD-445 & LD-445C forms) and the permit coverage letter received from DEQ shall be maintained with other SWPPP documents for this land disturbing activity.

** 4. The location of on-site support facilities that will be covered under the VPDES Construction Permit coverage for this land disturbance (construction) activity shall be provided by the contractor and identified on the record set of plans or in other appropriate contract documents. Support facilities shall include, but not be limited to, borrow and disposal areas, construction and waste material storage areas, equipment and vehicle washing, maintenance, storage and fueling areas, storage areas for fertilizers, fuels or chemicals, concrete wash out areas, sanitary waste facilities and any other areas that may generate a stormwater or non-stormwater discharge directly related to the construction site.

** 5. Written Evidence of permit coverage shall be provided by the contractor for all support activities located outside of VDOT right of way or easement in the form of the Construction General Permit coverage letter: (List VPDES Permit * or Letter from VSMP Authority stating coverage not needed)

6. List the surface waters that have been identified as impaired in the DEQ 2012 305(b)/303(d) Water Quality Assessment Integrated Report for sediment, total suspended solids, turbidity, Nitrogen or Phosphorus. These pollutants are considered benthic impairments: Ore Branch

7. Identify the TMDL's where stormwater from construction activities discharges into a watershed with a TMDL waste load allocation established and approved by the State Water Control Board prior to July 1, 2016 for sediment, total suspended solids, turbidity, nitrogen or phosphorus: Ore Branch (E. Coli)

8. This land disturbance activity discharges stormwater to the following surface waters that have been identified as exceptional in Section 9VAC25-260-30 A 3 c of the Virginia Administrative Code: N/A

9. Locations of surface waters and locations where concentrated stormwater is discharged from this land disturbance (construction) activity are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity. Ore Branch: North of project area.

10. The ESC and SWM plans (where applicable) for this land disturbance (construction) activity have been developed in accordance with VDOT's Approved Annual Erosion and Sediment Control and Stormwater Management Standards and Specifications as approved by the DEQ.

11. List the RLD and other responsible parties for the land disturbance activity: (required for erosion and sediment control). The following individual(s) have "delegated authority" to sign all reports required by the construction permit including the SWPPP General Information Sheets and Inspection Reports (C-107). Reference form LD-445H for delegation of authority (form 445H for the project is hereby incorporated by reference into this SWPPP). These individual(s) has/have overall responsibility or the environmental matters for the project: (required only for permitted projects):

Name	Position	Responsibility
David Henderson, P.E.	RLD	Certify the SWPPP (with date & sig.)
	Certified Inspector	Sign (C-107) Inspection Form Part 1
	Certified Inspector	Sign (C-107) Inspection Form Part 2

* 12. The name of the County individual(s) responsible for the oversight inspection in accordance with IIM-LD-256 on these land disturbance construction activities as identified on these SWPPP General Information Sheets. The names will be updated and maintained with the other SWPPP documents for this land disturbance activity.

County Individuals	Position	Responsibility
	NPDES	NPDES coordinator responsible for the oversight inspection in accordance with IIM-LD-256
David Henderson, P.E.	County Engineer	County Engineer or designee(s) responsible for the review & the coordination approval of ESC SWM plan modification(s).

* 13. The ESC and P2 inspections for this land disturbing (construction) activity shall follow (Select Schedule 1 or 2, if schedule •2 is used, void note •14) as defined in 2016 R&B Specifications except for Section 107.16(e) 4.an Inspection Requirements Rain gauge notes apply only to Inspection Schedule 1.

** 14. The location of the on-site rain gage that will be used to determine the occurrence of a measurable storm event for the purposes of ESC and Pollution Prevention inspections will be provided by the contractor and identified on the record set of plans or in other appropriate SWPPP documents for this land disturbance activity:
(List location of rain gage).

The rain gage shall be observed daily at "_____" to determine the occurrence of a measurable storm event (i.e., 0.25 inches of rainfall or greater in a 24 hour period). A log book shall be maintained to record observation information which shall include (1) the date, (2) the time, (3) whether or not rainfall is occurring at the time of the observation, (4) the amount of accumulated rainfall in the gage, if any, and (5) whether or not an inspection is required based on the amount of accumulated rainfall in the gage.
If there is no rainfall occurring at the time of the observation, the observation information shall be noted in the log book and the rain gage emptied and replaced. An inspection is required if there is 0.25 inches or more accumulation noted in the rain gage.
If there is rainfall occurring at the time of the observation, the observation information is to be noted in the log book. The rain gage is not to be emptied but left to accumulate additional rainfall until the conclusion of the rainfall event. At the conclusion of the rainfall event, an observation of the rain gage shall be made and the observation information shall be noted in the log book and the rain gage emptied and replaced. An inspection is required if there is 0.25 inches or more accumulation noted in the rain gage.

15. The following VDOT documents are applicable to a) permitted projects b) non-permitted projects in Chesapeake Bay Preservation Areas (CBPA) with 2,500 S.F. to 1.0 acre of land disturbance c) non-permitted projects requiring a SWPPP and d) Non-permitted, Non-CBPA with BMP projects that have a water quantity BMP:

VDOT LD-445: Permitted projects, CBPA projects and Non-permitted, Non-CBPA with BMP projects that have a water quantity BMP and ESC projects > 10,000 s.f. but <1 acre.
VDOT LD-445A: Permitted projects only.
VDOT LD-445C: Projects that require a permit, ESC Plan, or SWPPP.
VDOT LD-445D: Permitted projects, CBPA projects and Non-permitted, Non-CBPA with BMP projects that have a water quantity BMP.
VDOT LD-445F: Emergency work projects (when applicable).
Water Quality Requirement (when applicable)
VDOT LD-445H: Permitted projects only.
VDOT C-107 Part I and Part II. All projects that require a permit or SWPPP.
VDOT LD-445I: AS&S Approval Form (when applicable)

16. If there is an excessive loading of sediment from the project (i.e. more than to be expected from the project with an implemented ESC plan) that is discovered within a local watershed with a sediment TMDL that allocates a WLA to VDOT's MS4, (see note •7) the contractor shall investigate the area of concern at the site within 24 hours of discovery and ensure all erosion and sediment control best management practices are being implemented in accordance with the permits approved standards and specifications required by Part I.B of the current Construction General Permit. If corrective action is necessary, the contractor shall initiate corrective actions no later than 5 business days after the initial investigation.

17. If excessive loading of sediment from a land disturbing activity that is not the responsibility of the contractor is discovered discharging into a MS-4, the contractor shall notify the municipality with jurisdiction over erosion and sediment control activities.

* Denotes information that is to be provided/completed by the RLD.

** Denotes information that is to be provided/completed by the contractor.

Revised 5/1/19

PROJECT	SHEET NO.
9999-080-926	2F(1)

PROJECT MANAGER Cheryl Becker _ (540) 387-5399 (Salem) _ _ _ _ _ _ _ _ _ _ _
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-9411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM) _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
SUBSURFACE UTILITY BY, DATE Inframap _ (804) 550-2937 _ _ _ _ _ _ _ _ _ _

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	2F(2)

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

SECTION II EROSION AND SEDIMENT CONTROL

✳✳ 1. The intended sequence and timing of activities that disturb soils at the site (e.g., grubbing, excavation, grading, utilities and infrastructure installation, etc.) shall be provided by the contractor in accordance with the current edition of Section 108.03 of the VDOT R&B Specifications and shall be included with the other SWPPP documents for this land disturbance (construction) activity.

2. Directions of stormwater flow and approximate slopes anticipated after major grading activities are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

3. Areas of soil disturbance and areas of the site which will not be disturbed are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

4. Locations of major structural and nonstructural ESC measures intended to filter, settle or similarly remove sediment are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

5. Locations where stabilization practices are expected to occur are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

6. A description of interim and permanent stabilization practices for the site are identified in the applicable sections of the documents identified in the Note 1 of Section IV.

✳✳ 7. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated will be provided by the contractor and maintained with the record set of plans or other SWPPP documents for this land disturbance (construction) activity: (List how this will be tracked and the location)

8. A description and schedule of procedures to maintain vegetation, erosion and sediment control measures and other protective measures in good and effective operating conditions are identified in the current edition of Sections 107.16 and 303.03 of the VDOT R&B Specifications.

9. Nutrients shall be applied in accordance with the current edition of Sections 603 and 604 of the VDOT Road and Bridge Specifications. Nutrients shall not be applied during rainfall events. Top soil shall be applied in accordance with the current edition of section 602 of the latest Road and Bridge Specifications.

10. All engineering calculations supporting the design of erosion and sediment control measures proposed for this land disturbance (construction) activity are contained in the project drainage file located in the VDOT Salem District Hydraulics Section and will be made available for review upon request during normal business hours.

11. The temporary erosion and siltation control items shown on the ESC Plan for this land disturbing (construction) activity are intended to provide a general plan for controlling erosion and sediment within the project limits. The ESC Plan is based on field conditions at the time of plan development and an assumed sequence of construction for the project. The contractor, in conjunction with the VDOT Project Engineer and/or ESC Inspector, shall adjust the location, quantity and type of erosion and sediment control items required based on the actual field conditions encountered at the time of construction and the actual scheduling and sequencing of the construction activities. Significant changes to the proposed ESC Plan (e.g., those that require an engineering analysis, elimination of a perimeter control, change to ESC concept that would affect the quantity or direction of flow of water) shall be submitted to the applicable District Hydraulics Engineer for review and approval. Any changes to the proposed ESC Plan must be noted on the designated record set of plans which shall be retained on the project site and made available upon request during normal business hours.

12. The areas beyond the project's construction limits are to be protected from siltation. Perimeter controls such as silt fence, diversion dikes, turbidity curtains, etc. shall be installed prior to any grubbing operations or other earth moving activities.

13. Temporary earthen structures such as dikes and berms are to be stabilized immediately upon installation. Stabilization may include temporary or permanent seeding, riprap, aggregate, sod, mulching, and/or soil stabilization blankets and matting in conjunction with seeding.

14. All channel relocations are to be constructed during the earliest stage of construction and shall be constructed in accordance with all applicable permit requirements and shall be constructed in the dry wherever possible. Stabilization or vegetation shall be established before flow is redirected through the constructed area as directed by the Engineer.

15. The contractor shall plan and implement his land disturbance operations in order to:
- a. Control the volume and velocity of stormwater runoff within the site to minimize erosion.
- b. Control the peak flow rates, volume and velocity of stormwater discharges to minimize erosion at outlets and in downstream channels.
- c. Minimize the amount of soil exposed.
- d. Minimize the disturbance of steep slopes.
- e. Minimize sediment discharge from the site.
- f. Provide and maintain natural buffers around surface waters, direct stormwater runoff to vegetated areas and maximize stormwater infiltration, unless infeasible.
- g. Minimize soil compaction (except in those areas where compaction is required by the contract documents) and preserve topsoil where feasible.

✳✳ 16. The name of the individual(s) or contractor(s) responsible for the installation and maintenance of the erosion and sediment control measures shall be supplied by the contractor and maintained with the other SWPPP documents for this land disturbance (construction) activity.

17. Soil stockpiles temporarily placed within the project area or on VDOT right of way or easement shall be identified, stabilized, and protected with sediment trapping measures.

18. A construction entrance or other approved measure shall be installed at all locations where construction vehicular traffic access routes intersect a paved or a public road in order to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or a public road surface, the road shall be cleaned thoroughly at the end of each work day by shoveling or sweeping. Removed sediment shall be disposed of in accordance with Section 106.04 of the R&B Specifications.

19. Any variance, exception or deviation approved by DEQ must be listed below and supporting documentation (exception/variance/deviation request and DEQ approval) must be maintained with the SWPPP.

The following exceptions to the Water Quantity criteria of the VSMP Regulation have been approved by the DEQ for this land disturbance (construction) activity: (list all approved exceptions and include a brief description of the exception, the date approved and the approving DEQ Office)

Type(1)	Regulation Modified(2)	Approval Date(3)	Description of Variance

(1) Type of modification (Variance from ESC regulations, or Deviation from published guidance)
(2) Section of Regulation or Guidance Document Modified (e.g. ESC Min. Std. 15)
(3) Date that variance/exception/deviation was approved by DEQ.

SECTION III POST CONSTRUCTION STORMWATER MANAGEMENT

Choose the appropriate note 1A or 1B that is applicable to the proposed post construction SWM Plan for this land disturbance (construction) activity. (Delete, strikethrough or mark as NA those notes not applicable.)

1.

B. This land disturbance activity utilizes the Part IIB technical criteria (i.e., Runoff Reduction Method, Energy Balance Equation, etc.) in Section 9VAC25-870-62 et seq. of the VSMP Regulations.

2. An exception for (number) pounds of phosphorus removal has been granted for this land disturbance activity by the DEQ in its letter dated (date). (N/A)

3. Any variance, exception or deviation approved by DEQ must be listed below and supporting documentation (exception/variance/deviation request and DEQ approval) must be maintained with the SWPPP. (N/A)

The following exceptions to the Water Quantity criteria of the VSMP Regulation have been approved by the DEQ for this land disturbance activity: (list all approved exceptions and include a brief description of the exception, the date approved and the approving DEQ Office)

Type(1)	Regulation Modified(2)	Approval Date(3)	Description of Waiver

(1) Type of modification (Variance, or Exception from SWM Regulations or Deviation from published guidance)
(2) Section of Regulation or Guidance Document Modified (e.g. ESC Min. Std. 15)
(3) Date that variance/exception/deviation was approved by DEQ.

4. The permanent onsite SWM facilities or offsite strategies proposed to meet the water quality/quantity requirements for this land disturbance (construction) activity are listed in Section VI.

5. A description of all post-construction stormwater management measures that will be installed during the construction process to control pollutants in stormwater discharges after construction operations have been completed is included in the construction plan set (or other such documents) for this land disturbance (construction) activity.

6. All engineering calculations supporting the design of the post-construction stormwater management measures for this land disturbance (construction) activity, including an explanation of the technical basis used to select the practices, are contained in the project drainage file located in the VDOT Salem District Hydraulics Section and will be made available for review upon request during normal working business hours.

ACRONYMS

CBPA - Chesapeake Bay Preservation Act
BMP - Best Management Practice
DEQ - Department of Environmental Quality
EPA - U.S. Environmental Protection Agency
ESC - Erosion and Sediment Control
IIM - Instructional and Informational Memorandum
R&B - Road and Bridge
RLD - Responsible Land Disturber
SWPPP - Stormwater Pollution Prevention Plan
TMDL - Total Maximum Daily Load
VDOT - Virginia Department of Transportation
VPDES - Virginia Pollutant Discharge Elimination System
VSMP - Virginia Stormwater Management Program
VESCP - Virginia Erosion and Sediment Control Program
WLA - Waste Load Allocation
SWM - Stormwater Management

✳ Denotes information that is to be provided/ completed by the RLD.

✳✳ Denotes information that is to be provided/completed by the contractor.

Revised 5/1/19

	PROJECT	SHEET NO.
	9999-080-926	2F(2)

PROJECT MANAGER Cheryl Becker _ (540) 387-5399 (Salem) _ _ _ _ _ _ _ _ _ _
SURVEYED BY, DATE Larry T. Ogle, Jr L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM) _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
SUBSURFACE UTILITY BY, DATE Inframap _ (804) 550-2937 _ _ _ _ _ _ _ _ _ _

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	2F(3)

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

The information contained in the SWPPP General Information sheets is intended to comply with the requirements of the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES Construction Permit) issued July 1, 2019 and VDOT's approved Annual ESC and SWM Standards and Specifications.

The SWPPP General Information sheets are to be completed and included in the construction plan set (or other such documents) for land disturbance (construction) activities that disturb an area equal to or greater than 10,000 square feet outside the Chesapeake Bay Preservation Area, or equal to or greater than 2,500 square feet in the area defined as Tidewater, Virginia in the Virginia Chesapeake Bay Preservation Act.

The VDOT RLD will ensure that the information shown on the SWPPP General Information sheets is updated/revised as necessary in order to reflect changes that may occur during the construction phase of the land disturbing (construction) activity. The updated/revised sheets shall be maintained with the designated record set of plans (or other such documents) for the land disturbance (construction) activity.

SECTION IV SWPPP

1. All documents related to the SWPPP for this land disturbance (construction) activity shall be maintained at the activity site and shall be readily available for review upon request during normal business hours. Such documents include, but are not limited to, the construction plans (or other such documents), the ESC Plan, the Pollution Prevention Plan, the post construction SWM Plan (if applicable), the VDOT R&B Standards and Specifications, Supplemental Specifications, Special Provisions and Special Provision Copied Notes. Documents related to stormwater pollution prevention which are not a part of those documents referenced above, such as copies of the VPDES Construction Permit coverage letter (when applicable) and the VPDES General Permit For Discharges Of Stormwater From Construction Activities (when applicable) and those required to be developed by the contractor for pollution prevention associated with any on-site support facilities being included in the VPDES Construction Permit coverage for this land disturbance (construction) activity are to be maintained at the activity site with the other SWPPP documents for this land disturbance (construction) activity. Where no facilities are available at the activity site to maintain the SWPPP documents, they are to be kept by or with the designated RLD at a location convenient to the activity site where they would be made available for review upon request during normal business hours.

2. The SWPPP and any subsequent amendments, modifications and updates shall be implemented from commencement of land disturbance until termination of VPDES Construction Permit coverage or completion of land disturbance (construction) activities where no VPDES Construction Permit coverage is required.

✱✱ 3. For all on-site support facilities that will be included in the VPDES Construction Permit coverage for this land disturbance (construction) activity, the contractor shall develop a SWPPP in accordance with, but not limited to, Section 106.08, 107.02 and 107.16 of the VDOT Road and Bridge Specifications. The SWPPP for the on-site support facilities shall be maintained with and become a component of the SWPPP for this land disturbance (construction) activity. Support facilities shall include, but not be limited to, borrow and disposal areas, construction and waste material storage areas, equipment and vehicle washing, maintenance, storage and fueling areas, storage areas for fertilizers, fuels or chemicals, concrete wash out areas, sanitary waste facilities and any other areas that may generate a stormwater or non-stormwater discharge directly related to the construction site.

4. For those land disturbing (construction) activities requiring coverage under the VPDES Construction Permit, the SWPPP shall be made available for review upon the request of the DEQ, the EPA, the VSMP Authority, the VESCP Authority, local government officials or the operator of a municipal separate storm sewer system (MS4) receiving discharge from the construction site.

✱ 5. For those land disturbing (construction) activities requiring coverage under the VPDES Construction Permit, the VDOT RLD shall post, or have posted, a copy of the General Permit coverage letter and a copy of a completed LD-445A form, noting the name and contact information for the VDOT person responsible for the land disturbing (construction) activity and its SWPPP, outside the project's construction office along with other Federal and State mandated information. Where there is no construction office (e.g., a maintenance activity), the permit coverage letter and the LD-445A form are to be maintained with the other SWPPP documents for the land disturbing (construction) activity.

6. The SWPPP shall be made available for review by the public upon request. Such reviews shall be at a time and publicly accessible location convenient to the VDOT and shall be scheduled during normal business hours and no less than once per month.

SECTION V - POLLUTION PREVENTION PLAN

1. The following non-stormwater discharges from this land disturbing (construction) activity and any on-site support facilities are prohibited:
   a. Wastewater from concrete washouts.
   b. Wastewater from the washout and cleanout of stucco, paint, from release oils, curing compounds and other construction materials.
   c. Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance.
   d. Oils, toxic substances or hazardous substances from spills or other releases.
   e. Soaps, solvents or detergents used in equipment and vehicle washing.
   f. There shall be no discharge of floating solids or visible foam in other than trace amounts

2. The following non-stormwater discharges from this land disturbing (construction) activity and any on-site support facilities are allowed when discharged in compliance with the VPDES Construction Permit:
   a. Discharges from firefighting activities.
   b. Fire hydrant flushings.
   c. Waters used to wash vehicles or equipment where soaps, solvents or detergents have not been used and the wash water has been filtered, settled or similarly treated prior to discharge.
   d. Water used to control dust that has been filtered, settled or similarly treated prior to discharge.
   e. Potable water sources including uncontaminated waterline flushings managed in a manner to avoid stream impacts.
   f. Routine external building wash down where soaps, solvents or detergents have not been used and the wash water has been filtered, settled or similarly treated prior to discharge.
   g. Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (or where all spilled or leaked material has been removed prior to washing), where soaps, solvents or detergents have not been used and where the wash water has been filtered, settled or similarly treated prior to discharge.
   h. Uncontaminated air conditioning or compressor condensate.
   i. Uncontaminated ground water or spring water.
   j. Foundation or footing drains where flows are not contaminated with process materials such as solvents.
   k. Uncontaminated excavation dewatering, including dewatering trenches and excavations that have been filtered, settled or similarly treated prior to discharge.
   l. Landscape irrigation.

✱✱ 3. The contractor shall develop a Pollution Prevention Plan to address any of his on-site operations that have a potential to generate a pollutant that may reasonably be expected to affect the quality of stormwater discharges from this land disturbance (construction) activity. The Pollution Prevention Plan shall be developed in accordance with, but not limited to, Sections 106.08, 107.02 and 107.16 of the VDOT Road and Bridge Specifications and shall include a narrative with appropriate plan detail and shall be provided on standard 8.5 x 11 inch paper or larger and shall:
   a. Identify the potential pollutant-generating activities and the pollutant that is expected to be exposed to stormwater.
   b. Describe the location where the potential pollutant-generating activities will occur, or if identified on the record set of plans, reference the record set of plans.
   c. Identify all non-stormwater discharges, as described in note two of this section, that are or will be commingled with stormwater discharges from the construction activity, including any on-site support activities.
   d. Identify the person(s) or contractor(s) responsible for implementing and maintaining the pollution prevention practice or practices for each pollutant-generating activity.
   e. Describe the pollution prevention practices and procedures that will be implemented to:
      1) Prevent and respond to leaks, spills, and other releases, including procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases, and procedures for reporting leaks, spills, and other releases in accordance with Section 107.16 of the VDOT Road and Bridge Specifications and the requirements within the VPDES Construction Permit.
      2) Prevent the discharge of spilled and leaked fuels and chemicals from vehicle fueling and maintenance activities.
      3) Prevent the discharge of soaps, solvents, detergents, and wash water from construction materials, including procedures for the clean-up of stucco, paint, form release oils, and curing compounds.
      4) Minimize the discharge of pollutants from vehicle and equipment washing, wheel wash water, and other types of washing.
      5) Direct concrete wash water into a leak-proof container or leak-proof settling basin. The container or basin shall be designed so that no overflows can occur due to inadequate sizing or precipitation. Hardened concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wastes. Liquid concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wash waters and shall not be discharged to surface waters.
      6) Minimize the discharge of pollutants from storage, handling, and disposal of construction products, materials, and wastes including building products (such as asphalt sealants, copper flashing, roofing materials, adhesives, and concrete admixtures), pesticides, herbicides, insecticides, fertilizers, landscape materials, construction and domestic wastes (such as packaging materials), scrap construction materials, masonry products, timber, pipe and electrical cuttings, plastics, styrofoam, concrete, and other trash or building materials.
      7) Prevent the discharge of fuels, oils, and other petroleum products, hazardous or toxic wastes, waste concrete and sanitary wastes.
      8) Address any other discharge from any potential pollutant-generating activity not listed herein.
      9) Minimize the exposure of waste materials to precipitation by closing or covering waste containers during precipitation events and at the end of the business day, or implementing other similarly effective practices. Minimization of exposure is not required in case where the exposure to precipitation will not result in a discharge of pollutants.
      10) Describe and implement procedures for providing pollution prevention awareness (including but not limited to prevention practices, disposal practices and appropriate disposal locations) for all applicable wastes (including any wash water), to appropriate personnel.

✱ Denotes information that is to be provided/completed by the RLD.

✱✱ Denotes information that is to be provided/completed by the contractor.

Revised 5/1/19

	PROJECT	SHEET NO.
	9999-080-926	2F(3)

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inframap (804) 550-2937

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
GENERAL INFORMATION SHEET

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	2F(4)

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

The information contained in the SWPPP General Information sheets is intended to comply with the requirements of the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES Construction Permit) issued July 1, 2019 and VDOT's approved Annual ESC and SWM Standards and Specifications.

The SWPPP General Information sheets are to be completed and included in the construction plan set (or other such documents) for land disturbance (construction) activities that disturb an area equal to or greater than 10,000 square feet, or equal to or greater than 2,500 square feet in the area defined as Tidewater, Virginia in the Virginia Chesapeake Bay Preservation Act.

The VDOT RLD will ensure that the information shown on the SWPPP General Information sheets is updated/revised as necessary in order to reflect changes that may occur during the construction phase of the land disturbing (construction) activity. The updated/revised sheets shall be maintained with the designated record set of plans (or other such documents) for the land disturbance (construction) activity.

SECTION VI - PERMANENT BMP INFORMATION △

* Denotes information that is to be completed by the RLD.
( ) See note referenced by number in parentheses.

INSTALLED BMP INFORMATION
(VDOT Owned/Operated)

Plan Sheet(s)	Date BMP Made Functional	Type of BMP Installed (See Table A and C)	Geographic Location (County or City)	Latitude/Longitude (1)		VA 6th Order HUC (7)	Receiving Water (2)	Name of Impaired Water (9)	Acres Treated Per BMP (3)			* BMP Maintenance ID Number (10)	BMP Maintenance Manual (11)	BMP Inspection Manual (11)
				LAT	LONG				Impervious	Pervious	TOTAL		SECTION	SECTION

ALTERNATIVE BMP INFORMATION

Perpetual Nutrient Credits Acquired for Project

Plan Sheet(s)	Date	Type of BMP Installed (See Table B)	Geographic Location (County or City) (5)	Latitude/Longitude (1) (5)		VA 6th Order HUC (5) (7)	Receiving Water (2)	Name of Impaired Water (9)	Name of Nutrient Credit Generating Entity (6)	Nutrient Credits (lbs./TP./year) Acquired (6) (12)
				LAT	LONG					
3,4		Purchase of Nutrient Credits					Ore Branch	Ore Branch	Virginia Nutrient Bank	0.97

△ Any changes to the proposed SWM Plan or BMPs necessitated during the construction phase of the project that affects the proposed construction details or potentially affects the informationshown in the BMP Tables A and/or B shall be coordinated by the VDOT RLD with the appropriate VDOT District Hydraulics Engineer. The construction plans and the BMP Tables A and/or B are to be formally revised to reflect any authorized/approved changes to the proposed SWM Plan and/or the proposed BMP construction details. All plan revisions shall be completed in accordance with the Road Design Manual and the Construction Division IIM-CD-2013-12.01, signed and sealed in accordance with Department's sealing and signing policy IIM-LD-243 and filed with the construction record drawings maintained in the VDOT Central Office Plan File Room (ProjectWise). Prior to submitting for termination of coverage under the VPDES General Permit For The Discharge Of Stormwater From Construction Activities, the RLD shall have the District Maintenance Division review the BMPs installed with the project (BMP Table A) for acceptance of maintenance responsibility and to obtain a Maintenance ID number for each BMP listed in BMP Table A. The RLD shall use the informationin BMP Tables A and B along with the assigned Maintenance ID number and the date that the BMP became functional as a permanent control measure (for BMPs in Table A only) to complete the LD-445D form when certifying the construction of the BMPs and submitting for termination of coverage under theVPDES General Permit For The Discharge Of Stormwater From Construction Activities.

Table A: Permanent BMP Types (1999 Va. SWM Handbook)
Bio-retention Basin
Bio-retention Filter
Constructed Stormwater Wetlands
Extended Detention Basin
Extended Detention Basin Enhanced
Grassed Swale
Infiltration Basin
Infiltration Trench
Manufactured Treatment Device (MTD) (8)
Retention Basin I
Retention Basin II
Retention Basin III
Sand Filter
Vegetated Filter Strip
Other Approved Types (List Type)
Detention Basin

Table B: Alternative BMP Types
Comprehensive SWM Plan (Regional) Facility
Pollutant Loading Pro Rata Share Program
Other Approved Options (List Type) (4)

Table C: Permanent BMP Types (BMP Clearing House)
Sheet Flow to Vegetated Filter Strip
Grass Channel
Soil Compost Amendment
Permeable Pavement (Level 1)
Permeable Pavement (Level 2)
Infiltration Practice (Level 1)
Infiltration Practice (Level 2)
Bioretention (Level 1)
Bioretention (Level 2)
Dry Swale (Level 1)
Dry Swale (Level 2)
Wet Swale (Level 1)
Wet Swale (Level 2)
Filtering Practice (Level 1)
Filtering Practice (Level 2)
Constructed Wetlands (Level 1)
Constructed Wetlands (Level 2)
Extended Detention Pond (Level 1)
Extended Detention Pond (Level 2)
Wet Pond (Level 1)
Wet Pond (Level 2)
Manufactured Treatment Device (MTD)(8)
Other Approved Types (List Type)

NOTES:
(1) In decimal degrees to the nearest one ten-thousandth of a degree.

(2) For streams with no names, list "(Unnamed Tributary to downstream name)".

(3) Show acres treated to the nearest one hundreths acre.

(4) Include agreements with off-site BMP owners.

(5) Information pertains to the alternative BMP option location, where applicable. Exception - Not required for nutrient credit purchase option.

(6) Applies to the purchase of nutrient credits only.

(7) Virginia 6th Order HUC (VAHU6) Example - YO30.

(8) Final approved shop drawings of Manufactured Treatment Devices (MTDs) are to be included with the BMP information submitted with the LD-445D form.

(9) List the name of any impaired water to which the BMP discharges. The determination of impaired water shall be based on those streams listed as impaired in the DEQ 2012 305(b)/303(d) Water Quality Assessment Integrated Report and shall be the first named waterbody to which the BMP discharges. The impaired waters are those impaired by sediment, total suspended solids, turbidity, nitrogen or phosphorus.

(10) BMP Maintenance ID Number is to be assigned by the District Maintenance Division at permit termination or project completion. This ID number shall be assigned prior to the permit close out process and entered by the area construction engineer under this column, per IIM-LD-95

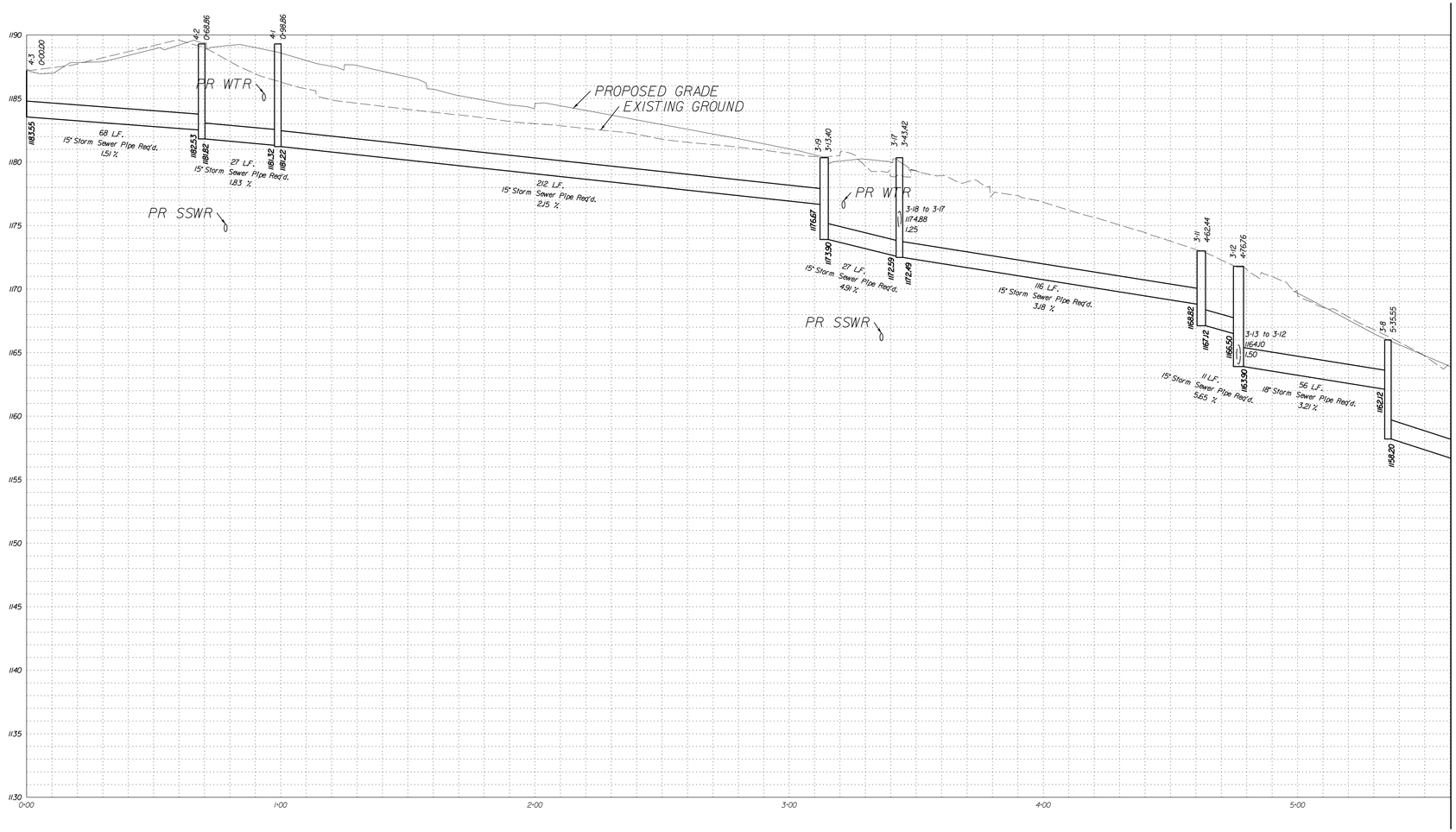
(11) Provide the section of each Maintenance manual that pertains to the type of BMP. Both manuals can be found at www.vdot.virginia.gov/business/manuals in the Maintenance selections. Example: Section 4 would be noted for both the maintenance and inspection manuals for a Bioretention I infiltration BMP.

(12) Nutrient credits purchased to the nearest one hundredth pound.

Revised 5/1/19

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inframap (804) 550-2937

STORM SEWER PROFILES



MATCHLINE SHEET 2G(2)

COMMONWEALTH OF VIRGINIA
DUSTIN K. BROOKMAN
Lic. No. 040205666
PROFESSIONAL ENGINEER

Dustin Brookman
2021.04.08 08:02:03 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
HYDRAULICS ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	2G(1)

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

HORIZ. SCALE 0 25' 50'
VERT. SCALE 0 5' 10'

Notes:

1) SS Pipe denotes Storm Sewer Pipe.

2) Storm Sewer Pipes shown on the profile are represented by their inner diameter dimension, and do not include wall thicknesses.

3) Not all Utilities are shown on the Storm Sewer Profiles, only those Utilities listed on the Utility Test Hole Data Sheet with the addition of Sanitary Sewer line crossings.

4) All Utility locations are approximate, and are based on information from the project's Test Hole Data Sheet. Utility information shown is specific to its corresponding Utility Test Hole location.

5) Utility Test Hole Information is located on Sheet 1H.

6) Utility clearance dimensions shown assume the use of concrete Storm Sewer Pipe and corresponding pipe thicknesses (worst case scenario).

	PROJECT	SHEET NO.
	9999-080-926	2G(1)

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
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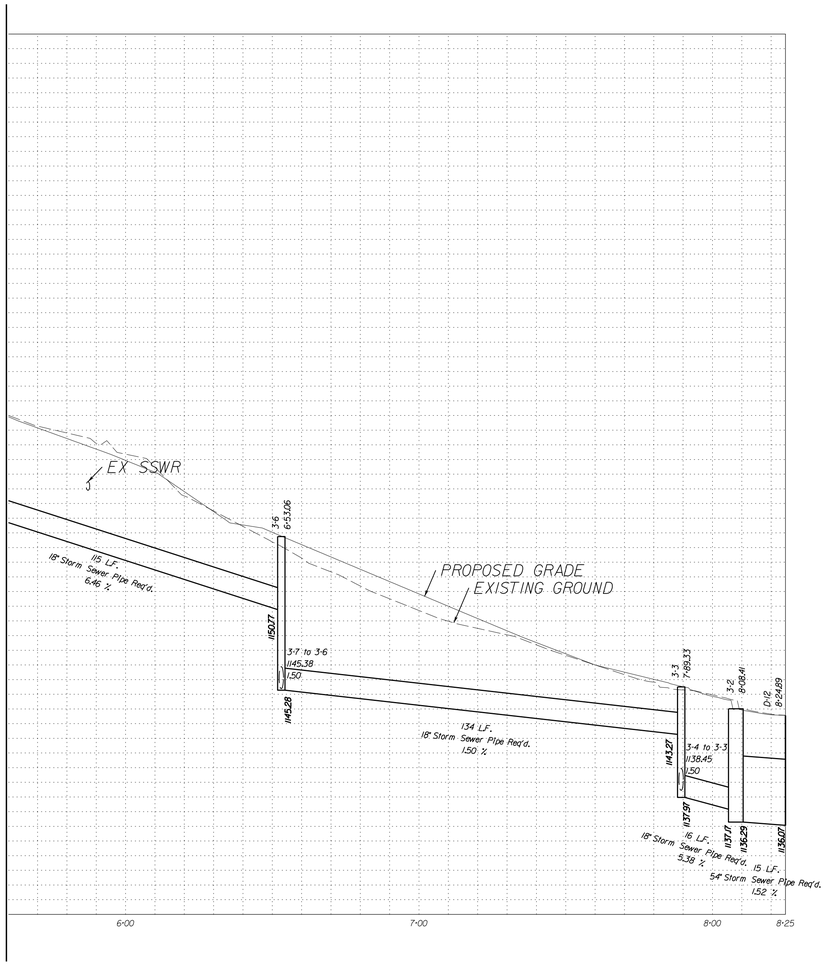
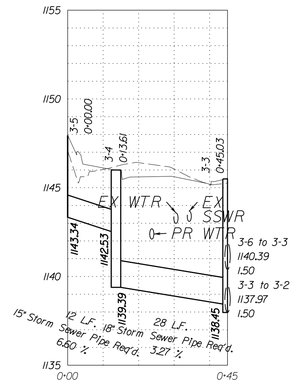
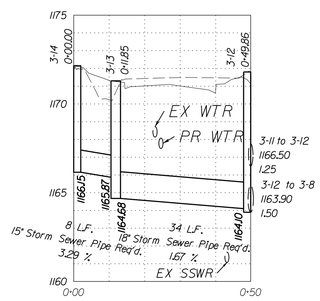
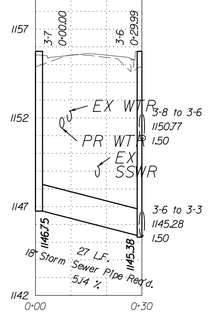
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inf comp (804) 550-2937

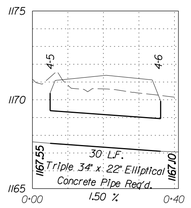
STORM SEWER PROFILES

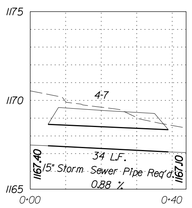


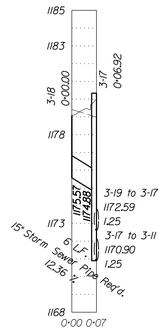












DUSTIN K. BROOKMAN
Lic. No. 040205666
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Dustin Brookman
2021.04.08 08:04:07 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
HYDRAULICS ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	2G(2)

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

HORIZ. SCALE 0 25' 50'
VERT. SCALE 0 5' 10'

Notes:

1) SS Pipe denotes Storm Sewer Pipe.

2) Storm Sewer Pipes shown on the profile are represented by their inner diameter dimension, and do not include wall thicknesses.

3) Not all Utilities are shown on the Storm Sewer Profiles, only those Utilities listed on the Utility Test Hole Data Sheet with the addition of Sanitary Sewer line crossings.

4) All Utility locations are approximate, and are based on information from the project's Test Hole Data Sheet. Utility information shown is specific to its corresponding Utility Test Hole location.

5) Utility Test Hole information is located on Sheet 1H.

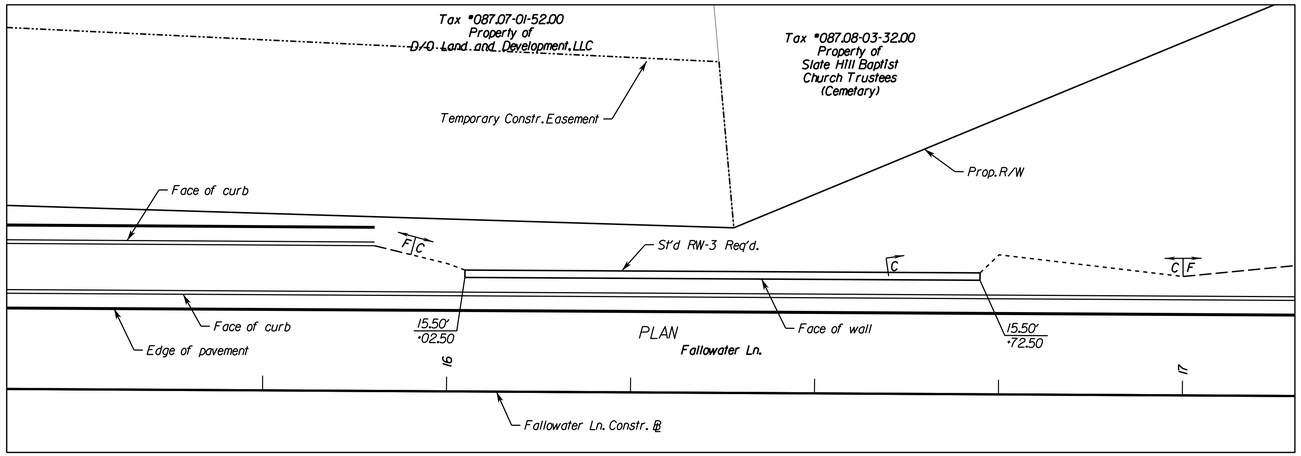
6) Utility clearance dimensions shown assume the use of concrete Storm Sewer Pipe and corresponding pipe thicknesses (worst case scenario).

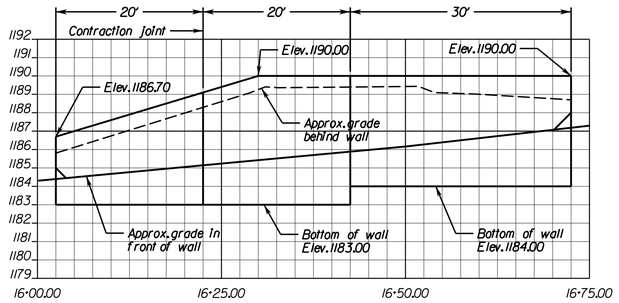
	PROJECT	SHEET NO.
	9999-080-926	2G(2)

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inframap (804) 550-2937

RETAINING WALL DETAILS

RETAINING WALL #1





PROFILE

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	2H(1)

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

DANIEL R DEAN Lic. No. 33530	JACK SCOTT HODGE Lic. No. 15755
Daniel R Dean 2021.04.09 14:31:27 -04'00'	Jack S Hodge 2021.04.08 10:14:35 -04'00'
AECOM TECH. SERV., INC. Roanoke, Virginia STRUCTURAL ENGINEER	AECOM TECH. SERV., INC. Roanoke, Virginia ROADWAY ENGINEER

NOTES:

1. POROUS BACKFILL THICKNESS SHALL BE 1'-0".
2. RETAINING WALLS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING CAPACITY OF 2000 psf. BEARING CONDITIONS SHALL BE VERIFIED IN THE FIELD.
3. CONTRACTOR SHALL TAKE MEASURES TO AVOID ANY IMPACT TO SLATE HILL BAPTIST CHURCH PROPERTY. SHORING OR BRACING MAY BE REQUIRED. COST OF PROPERTY PROTECTION SHALL BE INCLUDED IN PRICE BID FOR RETAINING WALL EXCAVATION.

Retaining Wall #1 Quantities

Retaining Wall RW-3	38 C.Y.
Porous Backfill	14 C.Y.
Retaining Wall Excavation	85 C.Y.

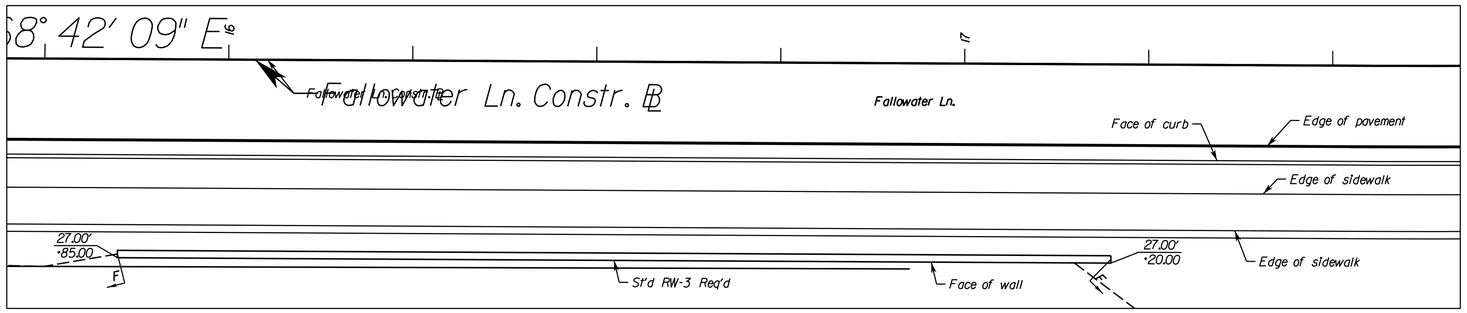
SCALE 0 10' 20' HORIZONTAL
SCALE 0 4' 8' VERTICAL

PROJECT	SHEET NO.
9999-080-926	2H(1)

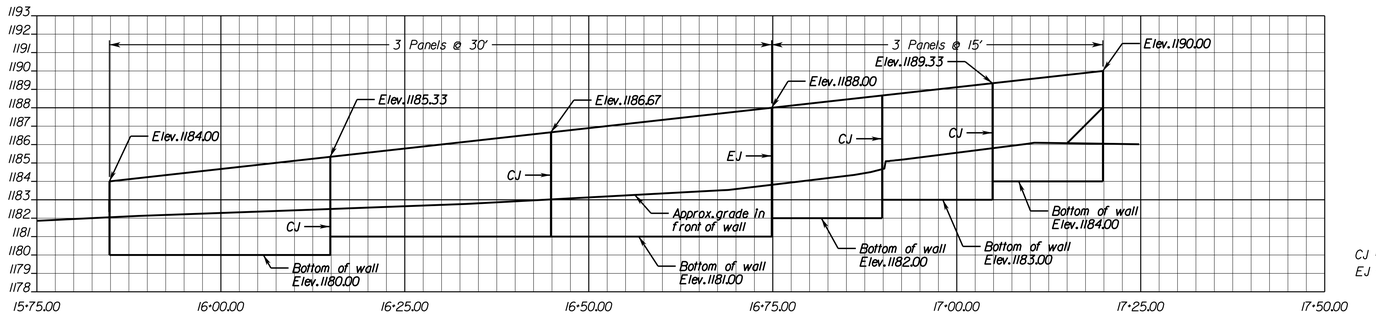
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inf camp (804) 550-2937

RETAINING WALL DETAILS

RETAINING WALL #2



PLAN



PROFILE

CJ = Contraction Joint
EJ = Expansion Joint

COMMONWEALTH OF VIRGINIA
DANIEL R DEAN
Lic. No.33530
PROFESSIONAL ENGINEER

Daniel R Dean
2021.04.09 14:32:52 -04'00'
AECOM TECH. SERV., INC.
Roanoke, Virginia
STRUCTURAL ENGINEER

COMMONWEALTH OF VIRGINIA
JACK SCOTT HODGE
Lic. No.15755
PROFESSIONAL ENGINEER

Jack S Hodge
2021.04.08 10:16:22 -04'00'
AECOM TECH. SERV., INC.
Roanoke, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	2H(2)

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

NOTES:

1. FOR ADDITIONAL NOTES, SEE SHEET 2H(1).

Retaining Wall #2 Quantities

Retaining Wall RW-3	65 C.Y.
Porous Backfill	25 C.Y.
Retaining Wall Excavation	85 C.Y.

SCALE HORIZONTAL
0 10' 20'
SCALE VERTICAL
0 4' 8'

	PROJECT	SHEET NO.
	9999-080-926	2H(2)

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Infrasmap (804) 550-2937

ROADWAY PLAN

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	3

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

COMMONWEALTH OF VIRGINIA — DUSTIN K. BROOKMAN Lic. No. 040205666 — PROFESSIONAL ENGINEER
Dustin Brookman
2021.04.08 08:11:48 -04'00'
AECOM TECH. SERV., INC.
Roanoke, Virginia
HYDRAULICS ENGINEER

COMMONWEALTH OF VIRGINIA — JACK SCOTT HODGE Lic. No. 15755 — PROFESSIONAL ENGINEER
Jack S Hodge
2021.04.08 10:18:12 -04'00'
AECOM TECH. SERV., INC.
Roanoke, Virginia
ROADWAY ENGINEER

UTILITY OWNERS

APPALACHIAN ELECTRIC & POWER - ELECTRIC
Keith Freeman
Tel. No.: (540) 427-3643
kafreeman@aep.com

WESTERN VIRGINIA WATER AUTHORITY
Water / Sewer
601 S. Jefferson St. *100
Roanoke, VA 24011
Tel. No.: (540) 835-5700
Aaron Shearer
Aaron.shearer@westernvawater.org
Tel. No.: (540) 283-2941

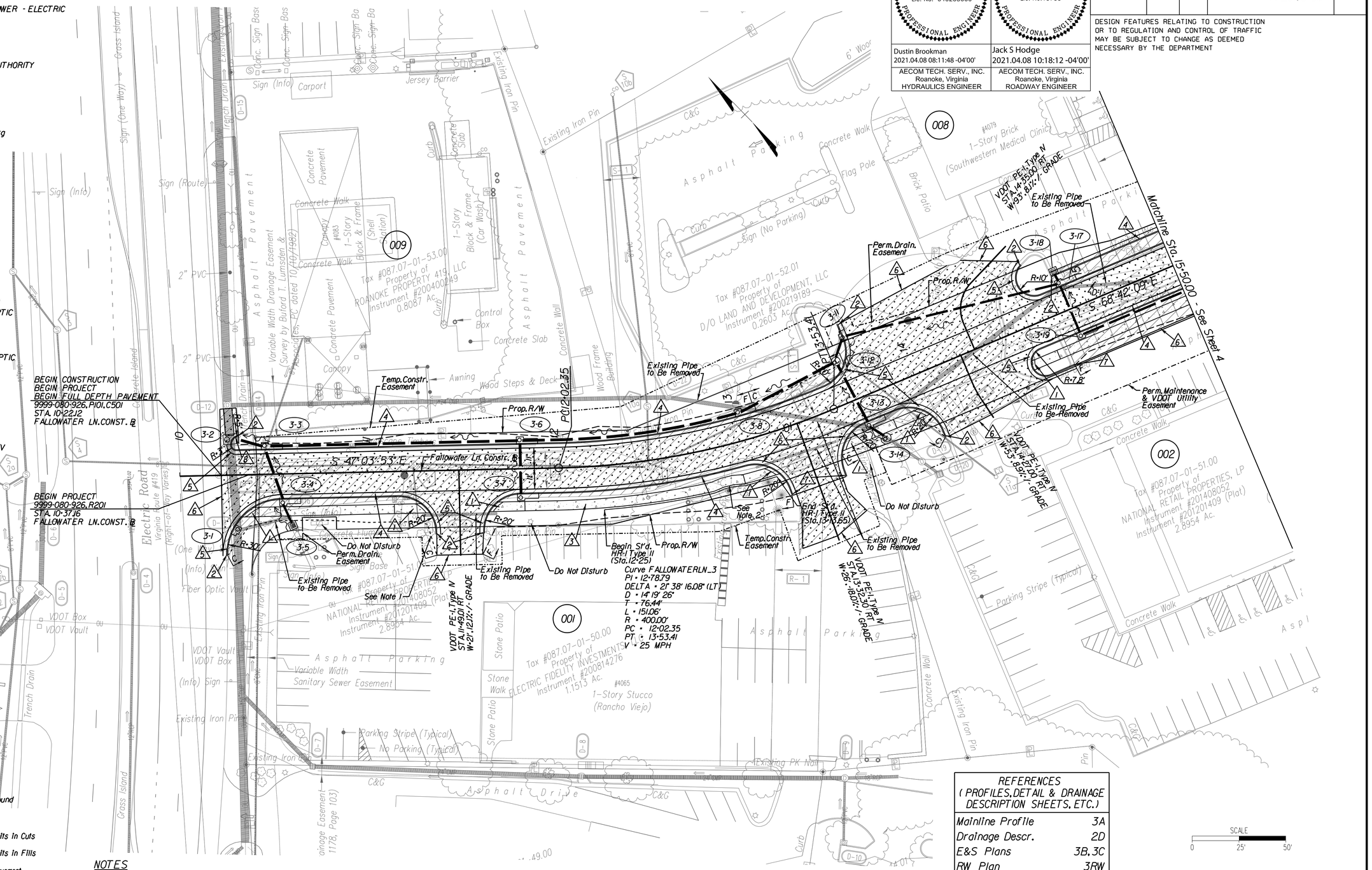
ROANOKE GAS - GAS
P.O. Box 13007
Roanoke, VA 13007
Tel. No.: (540) 777-3814
Pete Orr
pete_orr@roanokegas.com
Tel. No.: (540) 400-1013

VERIZON (VZN) - TELEPHONE
Jeff Draper
Tel. No.: (540) 265-7501

ROANOKE VALLEY BROADBAND AUTHORITY (RVBA) - FIBER OPTIC
Info@highspeedroanoke.net
Tel. No.: (540) 904-4739

LUMOS NETWORKS - FIBER OPTIC
1900 Roanoke Rd.
Daleville, VA 24083
Tel. No.: (540) 591-2008
R. Mark Munsey
munseyrm@lumosnet.com
Tel. No.: (540) 293-0120

COX COMMUNICATION, INC - CATV
Gregory Smith
gregory.smith2@cox.com



LEGEND

1. St'd. CG-12B Req'd.
2. Tie-In to Existing Curb
3. 5' Conc. Sidewalk Req'd.
4. St'd. CG-6 Req'd.
5. Radial St'd. CG-6 Req'd.
6. Saw Cut
7. Taper Curb Down to Ground
8. Radial St'd. CG-2 Req'd.

C ____ Denotes Construction Limits In Cuts
F __ __ Denotes Construction Limits In Fills
Denotes Demolition of Pavement
Denotes Proposed Pavement
Denotes Proposed Conc. Sidewalk

NOTES

1. Any Impacted Items Within the Temporary Construction Easement, Including But Not Limited To Plants, Curbing, and Pavement, Shall Be Replaced In Kind.
2. Sidewalk and Handrail Shall Be Shifted As Necessary To Avoid Impacting Utility Pole.

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

Mainline Profile	3A
Drainage Descr.	2D
E&S Plans	3B, 3C
RW Plan	3RW
Entrance Profiles	3D
Alignment Data	1G
Typical Sections	2A

SCALE 0 25' 50'

PROJECT	SHEET NO.
9999-080-926	3

4/5/2021
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Plotted By: DavisCD

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Infra Map (804) 550-2937

ROADWAY PROFILE

FALLOWATER LANE

STA = 14+68.26
EL = 1179.65
SSD = 280'
ex = -0.5%
K = 21
L = 100.00
V = 25 MPH

-3.70%

Match Line Sta. 15+50 - See Sheet 4A

-8.39%

EXISTING GROUND

PROPOSED GRADE

BEGIN CONSTRUCTION
BEGIN FULL DEPTH PAVEMENT
STA 10+22.12 CONST. ℄

1145.12

-8.39%

-0.33%

STA = 10+58.12
EL = 1145.24
ex = 0.7%
K = 9
L = 70.00

1195
1190
1185
1180
1175
1170
1165
1160
1155
1150
1145
1140
1135
1130
1125
1120

1145.13 1145.63 1146.85 1148.76 1150.85 1152.95 1155.05 1157.15 1159.24 1161.34 1163.44 1165.54 1167.63 1169.73 1171.83 1173.93 1176.01 1177.88 1179.46 1180.75 1181.75 1182.67

11+00.00 12+00.00 13+00.00 14+00.00 15+00.00

HORIZ. SCALE 0 25' 50'
VERT. SCALE 0 5' 10'

COMMONWEALTH OF VIRGINIA
JACK SCOTT HODGE
Lic. No. 15755
PROFESSIONAL ENGINEER

Jack S Hodge
2021.04.08 10:19:56 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	3A

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

PROJECT	SHEET NO.
9999-080-926	3A

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540)857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inframap (804) 550-2937

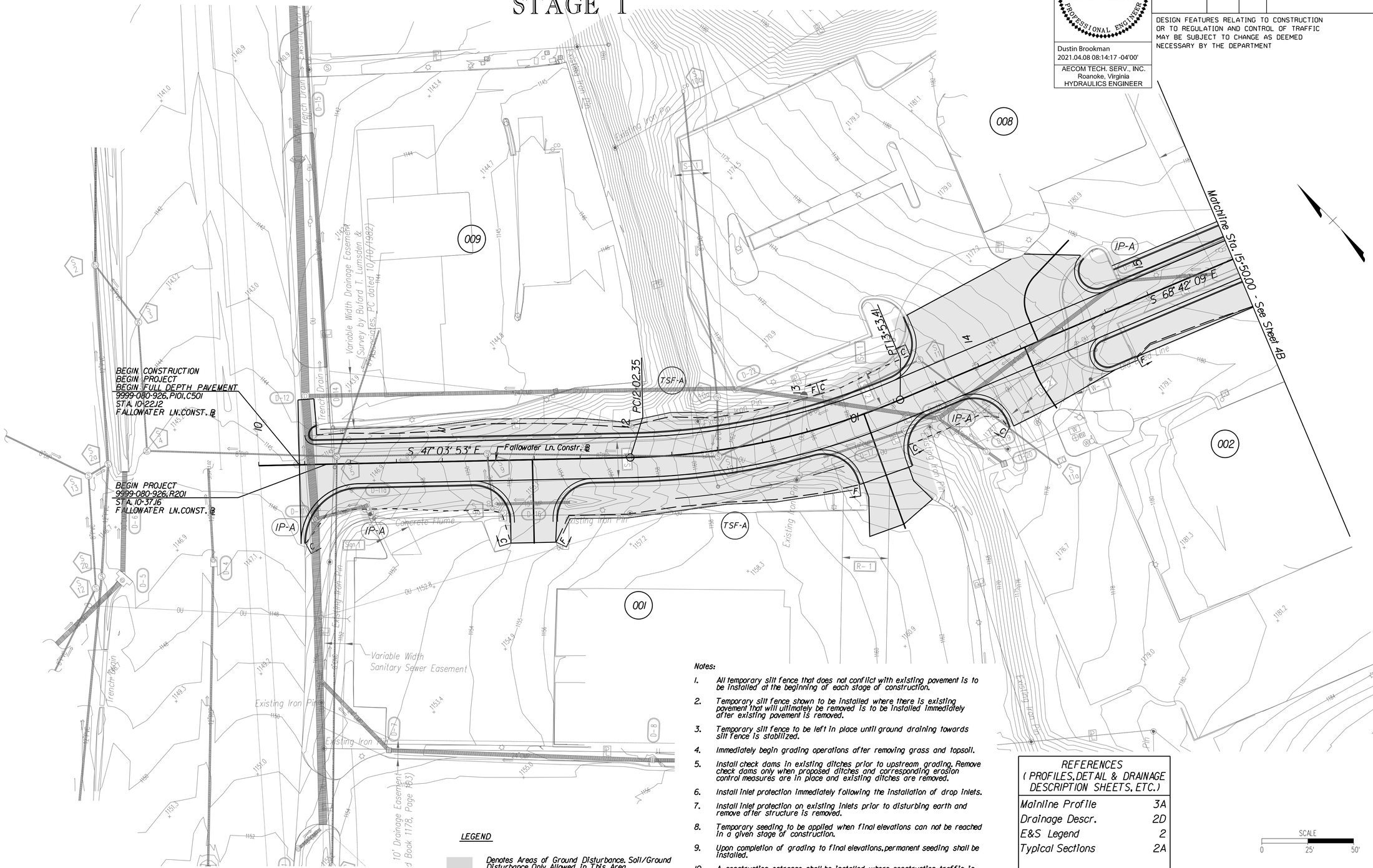
EROSION AND SEDIMENT CONTROL PLAN
STAGE 1

DUSTIN K. BROOKMAN
Lic. No. 040205666

Dustin Brookman
2021.04.08 08:14:17 -04'00'
AECOM TECH. SERV., INC.
Roanoke, Virginia
HYDRAULICS ENGINEER

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	3B

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



LEGEND

▨ Denotes Areas of Ground Disturbance. Soil/Ground Disturbance Only Allowed In This Area.

Notes:

1. All temporary silt fence that does not conflict with existing pavement is to be installed at the beginning of each stage of construction.
2. Temporary silt fence shown to be installed where there is existing pavement that will ultimately be removed is to be installed immediately after existing pavement is removed.
3. Temporary silt fence to be left in place until ground draining towards silt fence is stabilized.
4. Immediately begin grading operations after removing grass and topsoil.
5. Install check dams in existing ditches prior to upstream grading. Remove check dams only when proposed ditches and corresponding erosion control measures are in place and existing ditches are removed.
6. Install inlet protection immediately following the installation of drop inlets.
7. Install inlet protection on existing inlets prior to disturbing earth and remove after structure is removed.
8. Temporary seeding to be applied when final elevations can not be reached in a given stage of construction.
9. Upon completion of grading to final elevations, permanent seeding shall be installed.
10. A construction entrance shall be installed where construction traffic is expected to enter or cross a public road.

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

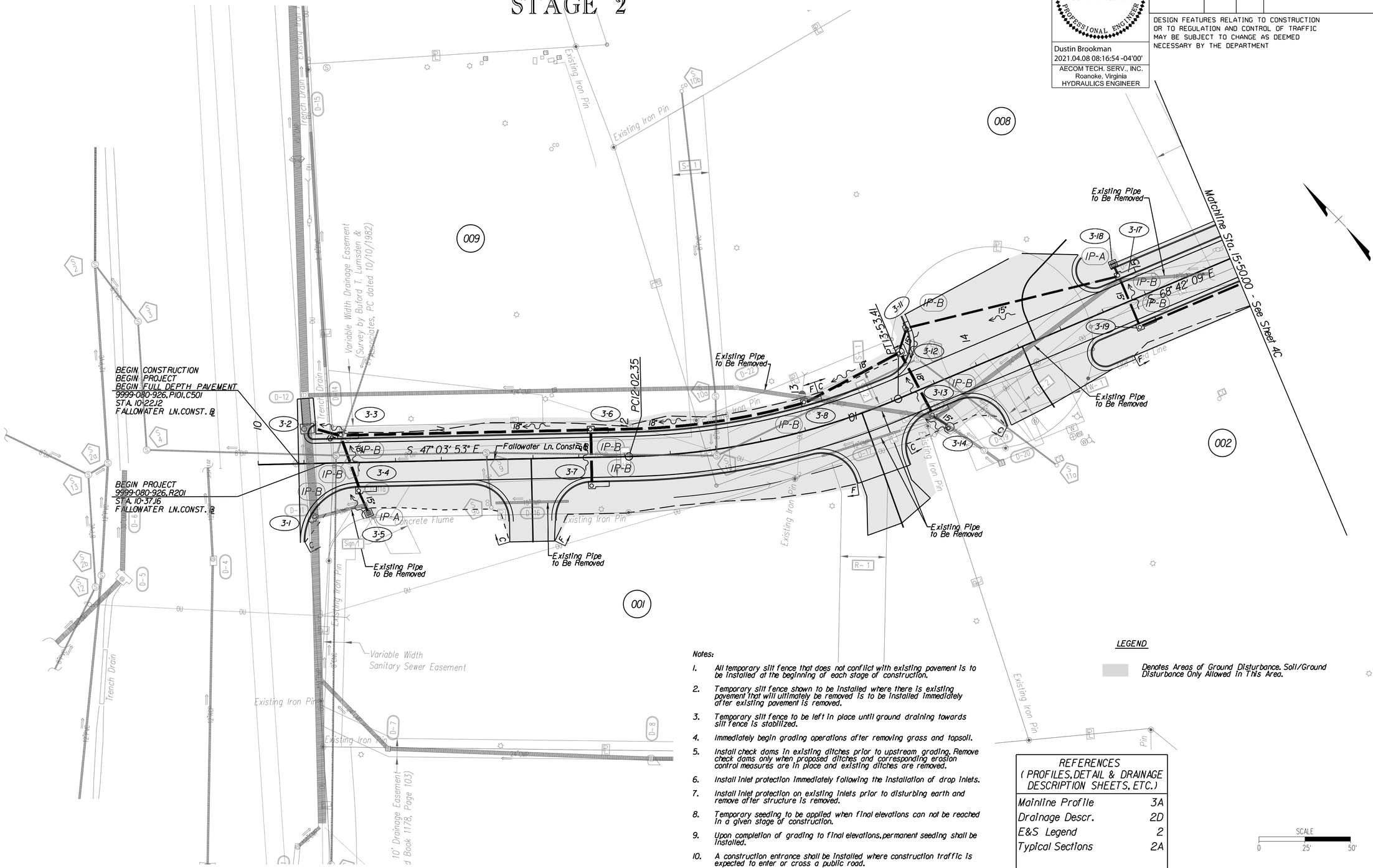
Mainline Profile	3A
Drainage Descr.	2D
E&S Legend	2
Typical Sections	2A

SCALE
0 25' 50'

PROJECT	SHEET NO.
9999-080-926	3B

PROJECT MANAGER Cheryl Backer (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inframap (804) 550-2937

EROSION AND SEDIMENT CONTROL PLAN
STAGE 2



Notes:

1. All temporary silt fence that does not conflict with existing pavement is to be installed at the beginning of each stage of construction.
2. Temporary silt fence shown to be installed where there is existing pavement that will ultimately be removed is to be installed immediately after existing pavement is removed.
3. Temporary silt fence to be left in place until ground draining towards silt fence is stabilized.
4. Immediately begin grading operations after removing grass and topsoil.
5. Install check dams in existing ditches prior to upstream grading. Remove check dams only when proposed ditches and corresponding erosion control measures are in place and existing ditches are removed.
6. Install inlet protection immediately following the installation of drop inlets.
7. Install inlet protection on existing inlets prior to disturbing earth and remove after structure is removed.
8. Temporary seeding to be applied when final elevations can not be reached in a given stage of construction.
9. Upon completion of grading to final elevations, permanent seeding shall be installed.
10. A construction entrance shall be installed where construction traffic is expected to enter or cross a public road.
11. One Dewatering Basin required for proposed 54" concrete pipe 3-2 to D-12 (existing structure) at approximate station 10+25 LT.

LEGEND

Denotes Areas of Ground Disturbance. Soil/Ground Disturbance Only Allowed In This Area.

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	3A
Drainage Descr.	2D
E&S Legend	2
Typical Sections	2A

SCALE
0 25' 50'

COMMONWEALTH OF VIRGINIA
DUSTIN K. BROOKMAN
Lic. No. 040205666
PROFESSIONAL ENGINEER

Dustin Brookman
2021.04.08 08:16:54 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
HYDRAULICS ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	3C

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

PROJECT	SHEET NO.
9999-080-926	3C

4/5/2021
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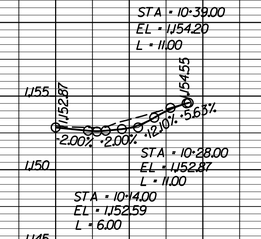
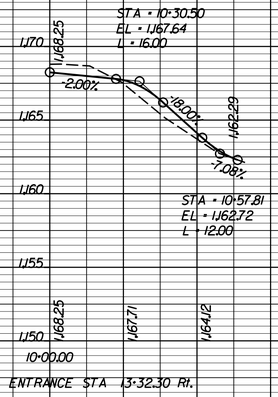
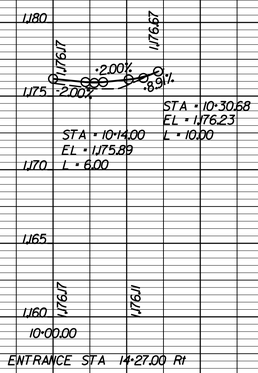
Plotted By: DavisCD

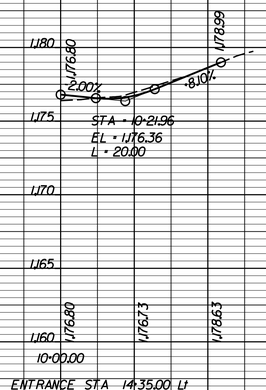
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Intrado Map (804) 550-2937

ENTRANCE PROFILES









COMMONWEALTH OF VIRGINIA
JACK SCOTT HODGE
Lic. No.15755
PROFESSIONAL ENGINEER

Jack S Hodge
2021.04.09 12:04:44 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	3D

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

HORIZ. SCALE 0 25' 50'
VERT. SCALE 0 5' 10'

	PROJECT	SHEET NO.
	9999-080-926	3D

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-0000 (AECOM)
SUBSURFACE UTILITY BY, DATE Infratrop (804) 550-2937

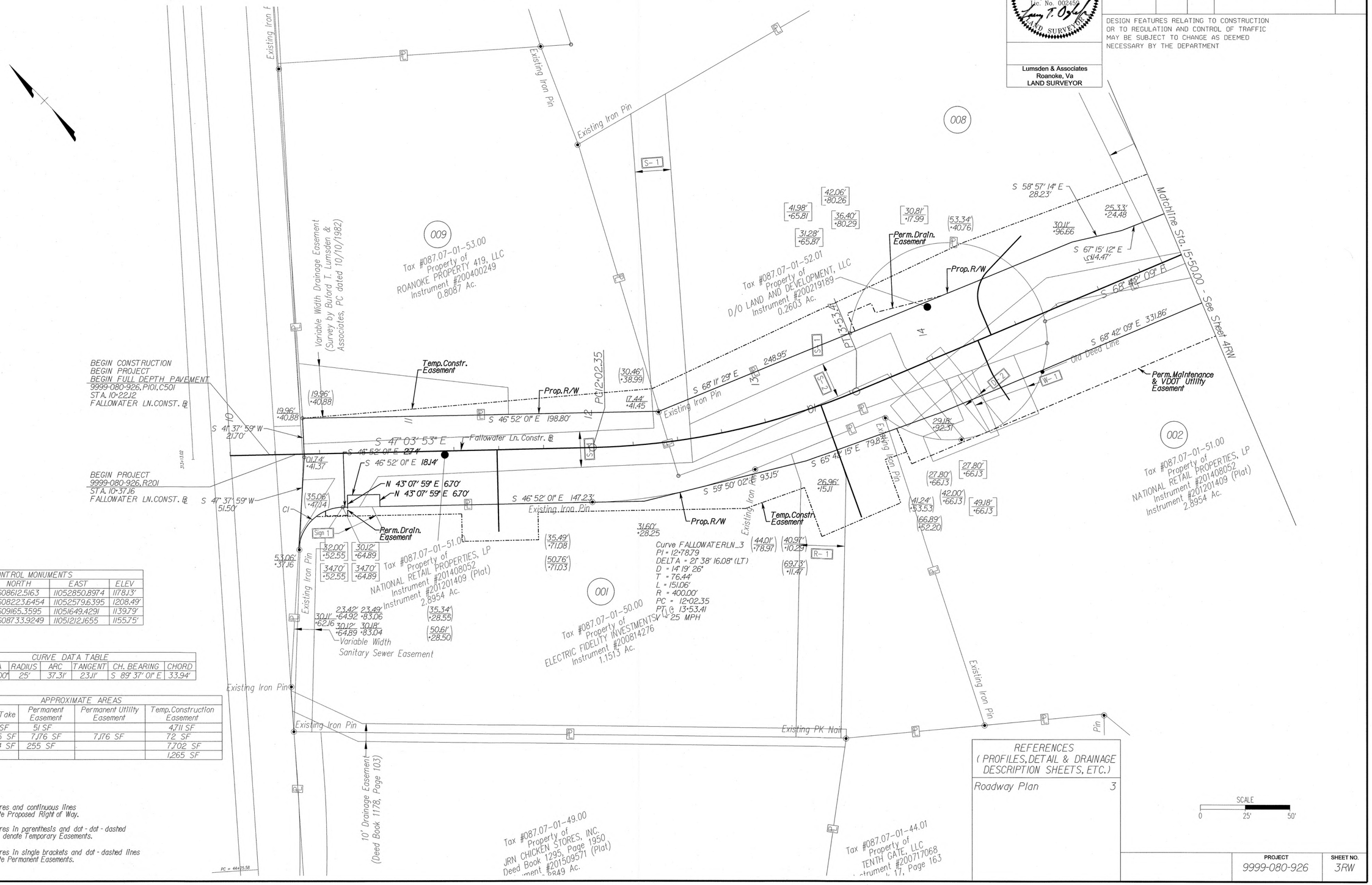
RIGHT OF WAY PLAN

COMMONWEALTH OF VIRGINIA
LARRY THOMAS OGLE, JR
07/23/2020
Lic. No. 002459
LAND SURVEYOR

Lumsden & Associates
Roanoke, Va
LAND SURVEYOR

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P101	3RW

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



CONTROL MONUMENTS			
MONUMENT	NORTH	EAST	ELEV
11001	3608612.5163	1105285O.8974	1178.13'
11002	3608223.6454	1105257O.6395	1208.49'
11003	3609165.3595	1105164O.4291	1139.79'
11004	3608733.9249	1105121O.1655	1155.75'

CURVE DATA TABLE						
CURVE	DELTA	RADIUS	ARC	TANGENT	CH. BEARING	CHORD
C1	85° 30' 00"	25'	37.31'	23.11'	S 89° 37' 01" E	33.94'

APPROXIMATE AREAS				
Parcel #	R/W Take	Permanent Easement	Permanent Utility Easement	Temp. Construction Easement
001	581 SF	51 SF		4,711 SF
002	24,665 SF	7,176 SF	7,176 SF	72 SF
008	13,674 SF	255 SF		7,702 SF
009				1,265 SF

00.00 / +00.00 — Figures and continuous lines denote Proposed Right of Way.

(00.00') / (+00.00) — Figures in parenthesis and dot - dot - dashed lines denote Temporary Easements.

[00.00'] / [+00.00] — Figures in single brackets and dot - dashed lines denote Permanent Easements.

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Roadway Plan	3

SCALE 0 25' 50'

PROJECT	SHEET NO.
9999-080-926	3RW

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inframap (804) 550-2937

ROADWAY PLAN

<u>UTILITY OWNERS</u>

APPALACHIAN ELECTRIC & POWER - ELECTRIC
Keith Freeman
Tel. No.: (540) 427-3643
kafreeman@aep.com

WESTERN VIRGINIA WATER AUTHORITY
Water / Sewer
601 S. Jefferson St. #100
Roanoke, VA 24011
Tel. No.: (540) 835-5700
Steven Eakin
steven.eakin@westernvawater.org
Tel. No.: (540) 283-2996

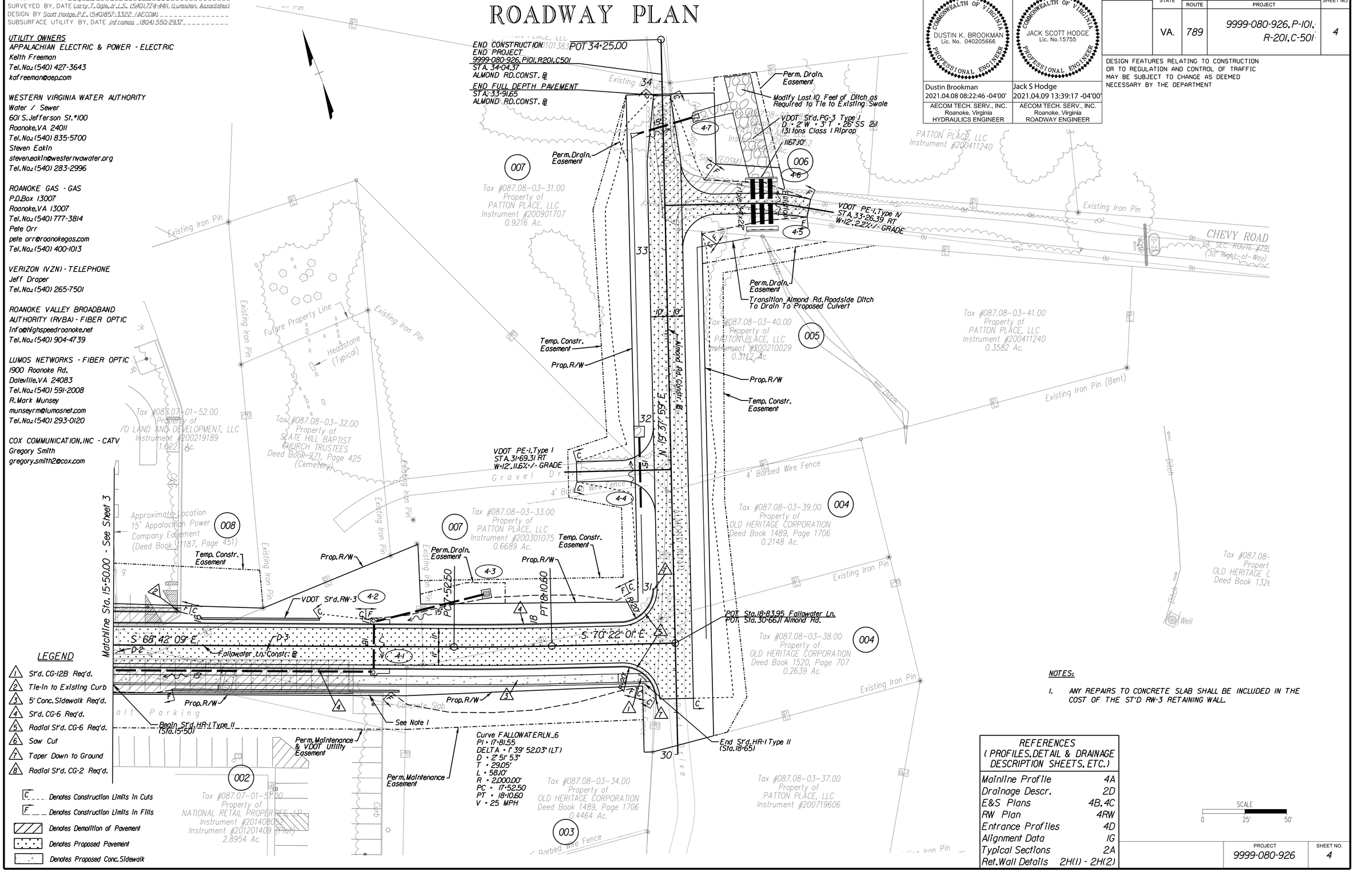
ROANOKE GAS - GAS
P.O. Box 13007
Roanoke, VA 13007
Tel. No.: (540) 777-3814
Pete Orr
pete orr@roanokegas.com
Tel. No.: (540) 400-1013

VERIZON (VZN) - TELEPHONE
Jeff Draper
Tel. No.: (540) 265-7501

ROANOKE VALLEY BROADBAND AUTHORITY (RVBA) - FIBER OPTIC
Info@highspeedroanoke.net
Tel. No.: (540) 904-4739

LUMOS NETWORKS - FIBER OPTIC
1900 Roanoke Rd.
Daleville, VA 24083
Tel. No.: (540) 591-2008
R. Mark Munsey
munseyrm@lumosnet.com
Tel. No.: (540) 293-0120

COX COMMUNICATION, INC - CATV
Gregory Smith
gregory.smith2@cox.com



<u>LEGEND</u>

1. Std. CG-12B Req'd.
2. Tie-in to Existing Curb
3. 5' Conc. Sidewalk Req'd.
4. Std. CG-6 Req'd.
5. Radial Std. CG-6 Req'd.
6. Saw Cut
7. Taper Down to Ground
8. Radial Std. CG-2 Req'd.

C _ _ _ Denotes Construction Limits In Cuts
F _ _ _ Denotes Construction Limits In Fills
Denotes Demolition of Pavement
Denotes Proposed Pavement
Denotes Proposed Conc. Sidewalk

COMMONWEALTH OF VIRGINIA — DUSTIN K. BROOKMAN Lic. No. 040205666 — PROFESSIONAL ENGINEER	COMMONWEALTH OF VIRGINIA — JACK SCOTT HODGE Lic. No. 15755 — PROFESSIONAL ENGINEER
Dustin Brookman	Jack S Hodge
2021.04.08 08:22:46 -04'00'	2021.04.09 13:39:17 -04'00'
AECOM TECH. SERV., INC. Roanoke, Virginia HYDRAULICS ENGINEER	AECOM TECH. SERV., INC. Roanoke, Virginia ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	4

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

<u>NOTES:</u>

1. ANY REPAIRS TO CONCRETE SLAB SHALL BE INCLUDED IN THE COST OF THE ST'D RW-3 RETAINING WALL.

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	4A
Drainage Descr.	2D
E&S Plans	4B, 4C
RW Plan	4RW
Entrance Profiles	4D
Alignment Data	1G
Typical Sections	2A
Ret. Wall Details	2H(1) - 2H(2)

SCALE
0 25' 50'

PROJECT	SHEET NO.
9999-080-926	4

4/5/2021
5:09:43 PM

d112304_04a.dgn
Plotted By: DavisCD

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Int'l. Map (804) 550-2937

ROADWAY PROFILE

ALMOND ROAD

BEGIN FULL DEPTH PAVEMENT
STA. 30+33.12 CONST. ℄

1.202.87

STA. 30+66.11 ALMOND RD. CONSTR. ℄
FALLOWATER LN. CONNECTION
STA. 18+83.95

-10.68%

STA = 31+70.56
EL = 1,188.20
SSD = 595'
ex = -0.12'
K = 26
L = 50.00

EXISTING GROUND

PROPOSED GRADE

-12.57%

-12.57%

END FULL DEPTH PAVEMENT
STA. 33+91.65 CONST. ℄

1,166.73

-3.44%

STA = 33+00.57
EL = 1,171.86
ex = 1.83'
K = 18
L = 160.00

1,205
1,200
1,195
1,190
1,185
1,180
1,175
1,170
1,165
1,160

1,201.07 | 1,198.40 | 1,195.73 | 1,193.07 | 1,190.39 | 1,187.56 | 1,184.50 | 1,181.37 | 1,178.41 | 1,175.92 | 1,173.73 | 1,171.90 | 1,170.43 | 1,169.31

31+00.00 | 32+00.00 | 33+00.00

FALLOWATER LANE

STA = 18+24.26
EL = 1,198.16
SSD = 220'
ex = -0.60'
K = 13
L = 80.00
V = 25 MPH

END CONSTRUCTION
END FULL DEPTH PAVEMENT
STA. 18+83.95 CONST. ℄
ALMOND RD. CONNECTION
STA. 30+66.11

1,199.35

-2.00%

-8.00%

-8.00%

PROPOSED GRADE

-3.70%

EXISTING GROUND

STA = 17+00.00
EL = 1,188.22
ex = 0.65'
K = 28
L = 120.00
V = 25 MPH

Match Line Sta 15+50 - See Sheet 3A

1,200
1,195
1,190
1,185
1,180

1,182.67 | 1,183.60 | 1,184.52 | 1,185.45 | 1,186.39 | 1,187.51 | 1,188.86 | 1,190.44 | 1,192.24 | 1,194.22 | 1,196.12 | 1,197.60 | 1,198.60 | 1,199.17

16+00.00 | 17+00.00 | 18+00.00

HORIZ. SCALE
0 25' 50'

VERT. SCALE
0 5' 10'

COMMONWEALTH OF VIRGINIA
JACK SCOTT HODGE
Lic. No. 15755
PROFESSIONAL ENGINEER

Jack S Hodge
2021.04.09 13:42:08 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
ROADWAY ENGINEER

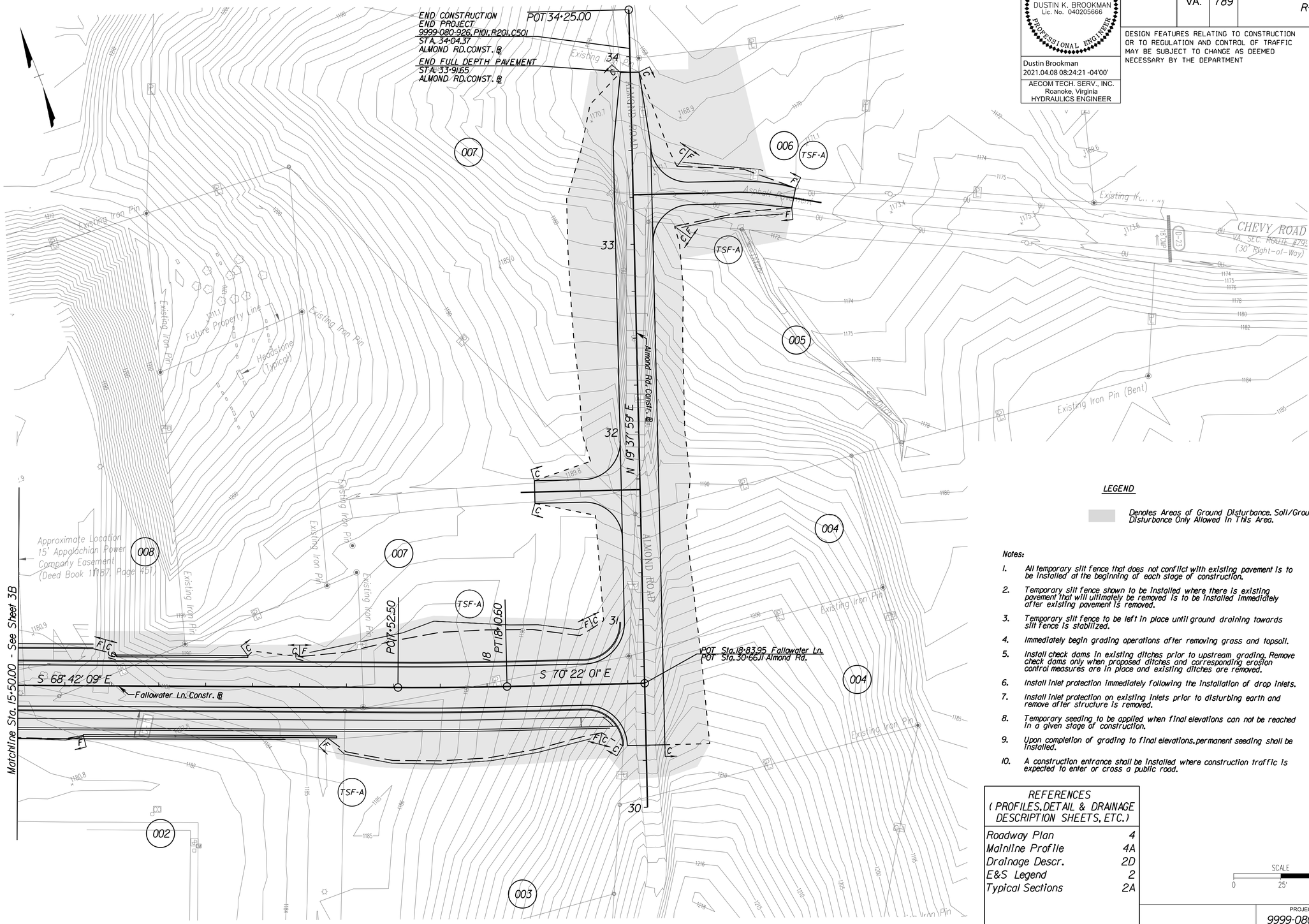
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	4A

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

PROJECT	SHEET NO.
9999-080-926	4A

PROJECT MANAGER Cheryl Backer (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540)857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Infocamp (804) 550-2937

EROSION AND SEDIMENT CONTROL PLAN - STAGE 1



COMMONWEALTH OF VIRGINIA
DUSTIN K. BROOKMAN
Lic. No. 040205666
PROFESSIONAL ENGINEER

Dustin Brookman
2021.04.08 08:24:21 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
HYDRAULICS ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	4B

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

LEGEND

Denotes Areas of Ground Disturbance. Soil/Ground Disturbance Only Allowed In This Area.

Notes:

1. All temporary silt fence that does not conflict with existing pavement is to be installed at the beginning of each stage of construction.
2. Temporary silt fence shown to be installed where there is existing pavement that will ultimately be removed is to be installed immediately after existing pavement is removed.
3. Temporary silt fence to be left in place until ground draining towards silt fence is stabilized.
4. Immediately begin grading operations after removing grass and topsoil.
5. Install check dams in existing ditches prior to upstream grading. Remove check dams only when proposed ditches and corresponding erosion control measures are in place and existing ditches are removed.
6. Install inlet protection immediately following the installation of drop inlets.
7. Install inlet protection on existing inlets prior to disturbing earth and remove after structure is removed.
8. Temporary seeding to be applied when final elevations can not be reached in a given stage of construction.
9. Upon completion of grading to final elevations, permanent seeding shall be installed.
10. A construction entrance shall be installed where construction traffic is expected to enter or cross a public road.

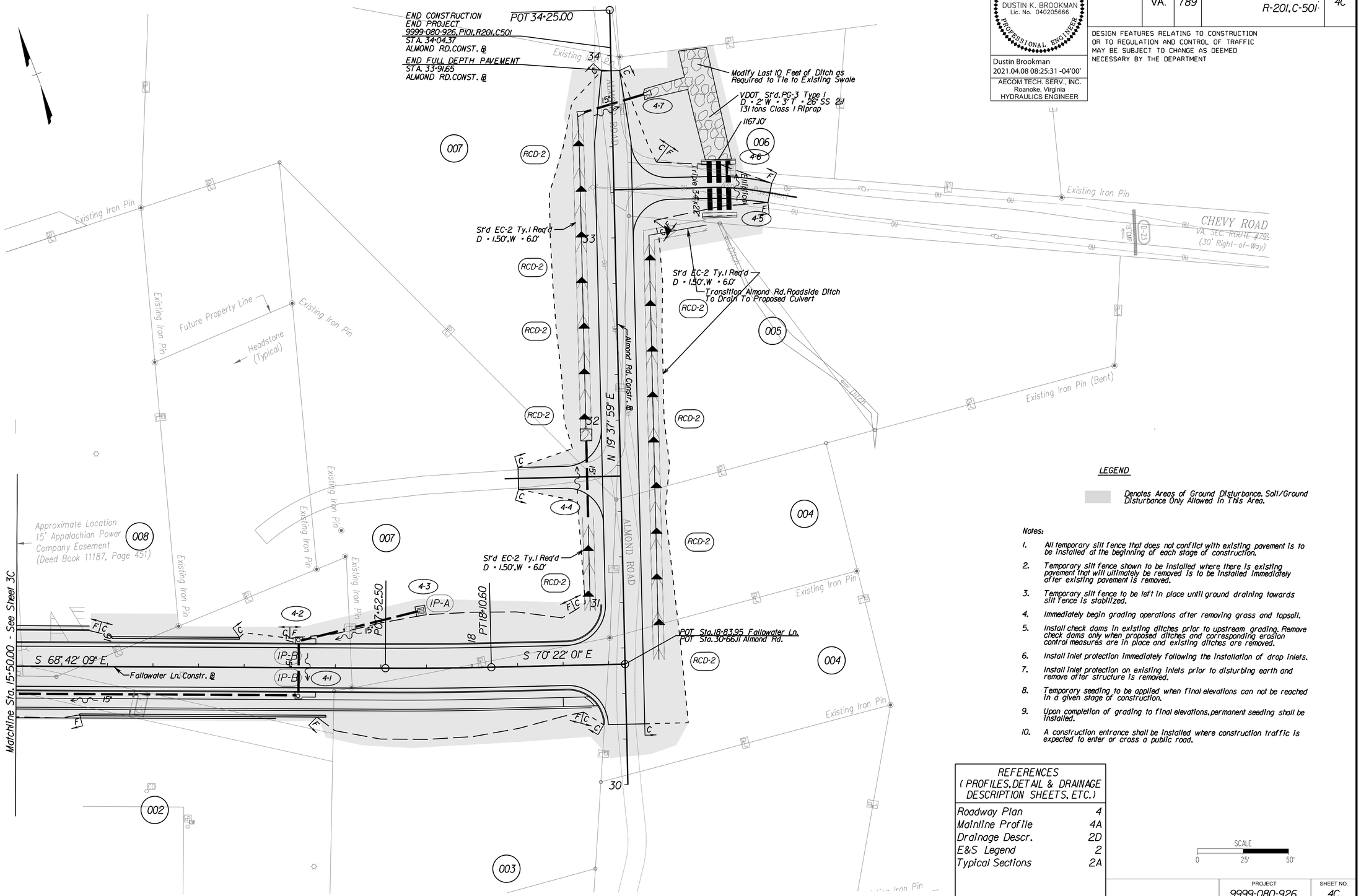
REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Roadway Plan	4
Mainline Profile	4A
Drainage Descr.	2D
E&S Legend	2
Typical Sections	2A

SCALE
0 25' 50'

PROJECT	SHEET NO.
9999-080-926	4B

PROJECT MANAGER Cheryl Backer (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Infoscap (804) 550-2937

EROSION AND SEDIMENT CONTROL PLAN - STAGE 2



DUSTIN K. BROOKMAN
Lic. No. 040205666
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Dustin Brookman
2021.04.08 08:25:31 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
HYDRAULICS ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	4C

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

LEGEND

Denotes Areas of Ground Disturbance. Soil/Ground Disturbance Only Allowed in This Area.

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10. A construction entrance shall be installed where construction traffic is expected to enter or cross a public road.

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Roadway Plan	4
Mainline Profile	4A
Drainage Descr.	2D
E&S Legend	2
Typical Sections	2A

SCALE
0 25' 50'

PROJECT	SHEET NO.
9999-080-926	4C

4/5/2021
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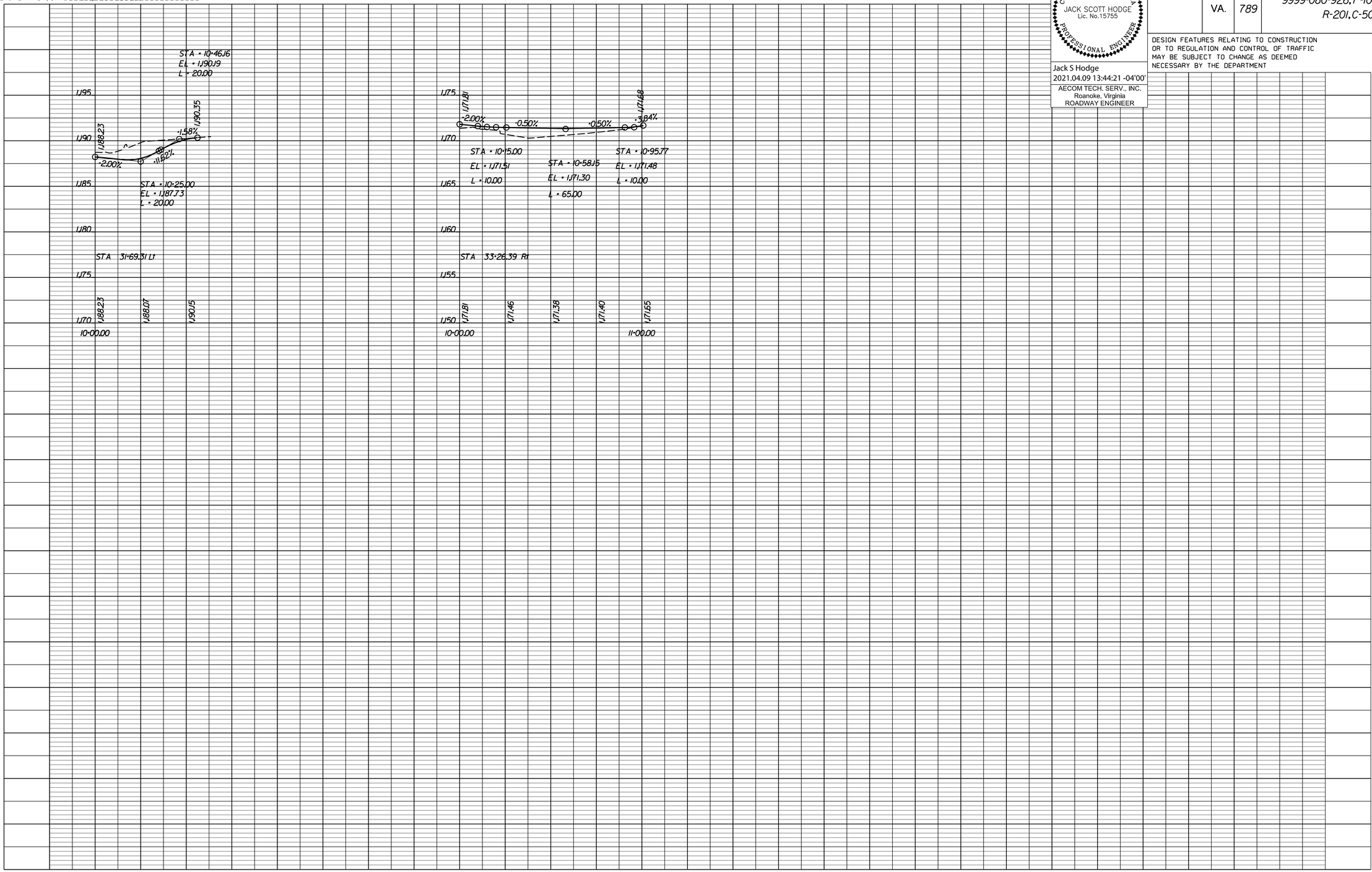
Plotted By: DavisCD

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Int'l Map (804) 550-2937

ENTRANCE PROFILES



JACK SCOTT HODGE
Lic. No. 15755
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Jack S Hodge
2021.04.09 13:44:21 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	4D

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

HORIZ. SCALE
0 25' 50'

VERT. SCALE
0 5' 10'

	PROJECT	SHEET NO.
	9999-080-926	4D

12/15/2020
1:32:44 PM

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Plotted By: SchaefferM

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden_Associates)
DESIGN BY Scott Hodge, P.E. (540)857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Informap (804) 550-2937

RIGHT OF WAY PLAN

COMMONWEALTH OF VIRGINIA
LARRY THOMAS OGLE, JR.
12/15/2020
Lic. No. 002459
LAND SURVEYOR

Lumsden & Associates
Roanoke, Va
LAND SURVEYOR

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	4RW

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

POT 34+25.00
END CONSTRUCTION
END PROJECT
9999-080-926, P101, R201, C501
STA. 34+04.37
ALMOND RD. CONST. ℄
END FULL DEPTH PAVEMENT
STA. 33+91.65
ALMOND RD. CONST. ℄

S 70° 22' 01" E 52.38'
30.88' +01.79
56.15' +04.37
Perm. Drain. Easement
30.88' +92.54
21.50' +92.54
21.50' +92.54
Existing Iron Pin
S 19° 37' 59" W 42.16'
30.88' +50.38
68.66' +47.16
S 07° 17' 56" W 12.78'
S 65° 29' 40" E 37.91'
71.38' +34.68

Tax #087.08-03-28.00
Property of
PATTON PLACE, LLC
Instrument #200218452
0.1909 Ac.

Tax #087.08-03-27.00
Property of
PATTON PLACE, LLC
Instrument #200411240

Tax #087.08-03-26.00
Property of
PATTON PLACE, LLC
Instrument #200225710

006

007

Tax #087.08-03-31.00
Property of
PATTON PLACE, LLC
Instrument #200901707
0.9216 Ac.

26.62' +66.60
Perm. Drain. Easement
21.50' +52.43
42.77' +25.00

Existing Iron Pin
Future Property Line
Existing Iron Pin
Headstone (Typical)
Existing Iron Pin

33
S 19° 37' 59" W 301.43'
Almond Rd. Constr. ℄
N 19° 37' 59" E
32

Temp. Constr. Easement
Prop. R/W
37.69' +89.56
61.16' +82.44

21.50' +10.40
124.62' +99.57
95.27' +02.65
Perm. Drain. Easement
21.50' +91.28
33.59' +85.53

Tax #087.08-03-40.00
Property of
PATTON PLACE, LLC
Instrument #200210029
0.3112 Ac.

005

Tax #087.08-03-41.00
Property of
PATTON PLACE, LLC
Instrument #200411240
0.3582 Ac.

Prop. R/W
Temp. Constr. Easement
Existing Iron Pin (Bent)

Tax #087.07-01-52.00
Property of
D/O LAND AND DEVELOPMENT, LLC
Instrument #200219189
1.6221 Ac.

Tax #087.08-03-32.00
Property of
SLATE HILL BAPTIST CHURCH TRUSTEES
Deed Book 271, Page 425
(Cemetery)

Approximate Location
15' Appalachian Power Company Easement
(Deed Book 11187, Page 451)

008

Existing Iron Pin
Existing Iron Pin
Existing Iron Pin

38.19' +59.64
38.10' +83.25
25.89' +83.13
31.23' +32.21
61.16' +54.17
30.00' +47.24

Tax #087.08-03-33.00
Property of
PATTON PLACE, LLC
Instrument #200301075
0.6689 Ac.

007

S 18° 22' 23" W 35.59'
60.88' +30.69
Temp. Constr. Easement
Prop. R/W
Perm. Drain. Easement
Prop. R/W
Temp. Constr. Easement
45.00' +36.77
39.32' +31.79
39.85' +53.95
22.44' +38.92
22.44' +38.92
25.34' +32.51
PC 7+52.50
PT 8+10.60
S 69° 35' 26" E 129.20'
N 88° 33' 59" E 99.50'
S 61° 15' 12" E 114.47'
16
17
18
31
S 19° 37' 59" W 299.30'

Existing Iron Pin
Existing Iron Pin
Existing Iron Pin

31.35' +50.00

Tax #087.08-03-39.00
Property of
OLD HERITAGE CORPORATION
Deed Book 1489, Page 1706
0.2148 Ac.

004

Tax #087.08-03-42.00
Property of
OLD HERITAGE CORPORATION
Deed Book 1326, Page 156

Matchline Sta. 15+50.00 - See Sheet 3RW

S 68° 42' 09" E
Fallowater Ln. Constr. ℄
POT Sta. 18+83.95 Fallowater Ln.
POT Sta. 30+66.11 Almond Rd.
S 70° 22' 01" E

Tax #087.08-03-38.00
Property of
OLD HERITAGE CORPORATION
Deed Book 1520, Page 707
0.2639 Ac.

004

25.00' +63.95
S 19° 37' 59" W 39.86'
41.80' +33.12
Existing Iron Pin

Prop. R/W
S 68° 42' 09" E 331.86'
Prop. R/W
S 71° 23' 04" E 140.63'

Perm. Maintenance & VDOT Utility Easement
29.18' +24.16
49.18' +24.63
Perm. Maintenance Easement

Curve FALLOWATERLN_6
PI = 17+81.55
DELTA = 1° 39' 52.03" (LT)
D = 2° 51' 53"
T = 29.05'
L = 58.10'
R = 2,000.00'
PC = 17+52.50
PT = 18+10.60
V = 25 MPH

45.00' +63.95
20.00' +01.75
14.79' +01.75
21.50' +10.50
21.50' +10.50
29.72' +12.48

Tax #087.08-03-37.00
Property of
PATTON PLACE, LLC
Instrument #200719606

30

S 83° 55' 32" E 37.33'
S 70° 22' 01" E 5.21'

Tax #087.07-01-51.00
Property of
NATIONAL RETAIL PROPERTIES, LP
Instrument #201408052
Instrument #201201409 (Plat)
2.8954 Ac.

002

Tax #087.08-03-34.00
Property of
OLD HERITAGE CORPORATION
Deed Book 1489, Page 1706
0.4464 Ac.

003

00.00 +00.00 Figures and continuous lines denote Proposed Right of Way.
(00.00 +00.00) Figures in parenthesis and dot-dot-dash lines denote Temporary Easements.
[00.00 +00.00] Figures in single brackets and dot-dash lines denote Permanent Easements.

CONTROL MONUMENTS			
MONUMENT	NORTH	EAST	ELEV
11001	3608612.5163	11052850.8974	1178.13'
11002	3608223.6454	11052579.6395	1208.49'
11003	3609165.3595	11051649.4291	1139.79'
11004	3608733.9249	11051212.1655	1155.75'

APPROXIMATE AREAS				
Parcel #	R/W Take	Permanent Easement	Permanent Utility Easement	Temp. Construction Easement
002	24,665 SF	7,176 SF	7,176 SF	72 SF
003	4,444 SF	2,821 SF		
004	4,542 SF			2,200 SF
005	2,868 SF	706 SF		2,013 SF
006	1,738 SF	1,710 SF		
007	10,431 SF	638 SF		6,316 SF
008	13,674 SF	255 SF		7,702 SF

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

Roadway Plan 4

SCALE
0 25' 50'

PROJECT	SHEET NO.
9999-080-926	4RW

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Infrasmap (804) 550-2937

PAVEMENT MARKING & PERMANENT SIGNAGE
GENERAL NOTES AND LEGEND

COMMONWEALTH OF VIRGINIA
DUSTIN K. BROOKMAN
Lic. No. 040205666
PROFESSIONAL ENGINEER

Dustin Brookman
2021.04.08 10:34:10 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	5(1)

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

1. All existing signs are to remain unless otherwise noted.

2. Signs are to be installed within R/W or easement.

3. The locations of all underground and overhead utilities shown on these plans are approximate only and may not be accurate. At least 72 hours prior to beginning signing work, the Contractor shall contact "Miss Utility of Virginia" at 1-800-552-7001 in order to determine the extent and location of all underground utilities within the project limits.
If the Contractor perceives a conflict between utilities and the proposed traffic signing equipment, the Contractor shall notify the Engineer immediately so that the conflict may be reviewed.

4. Sign panel design for signs mounted on Square Tube Posts shall conform to St'd. SPD-5. The Contractor shall verify the design of all sign panel assembly types not shown in this St'd. with the Engineer.

5. Reflectivity for new signs shall conform to the current Road and Bridge specifications, section 247.

GENERAL NOTES - PAVEMENT MARKING

1. All existing conflicting pavement markings shall be eradicated.

2. All proposed pavement markings shall tie into the existing markings at the limit of the proposed pavement markings.

3. Pavement markings on existing pavement are to remain unless noted otherwise on the plans. Existing pavement markings shown outside the limits of the new markings are approximate and shown for reference only.

4. Turn lane arrows, turn lane solid lines, and stop bars shall be located in accordance with St'd PM-4, unless otherwise noted. Location of the stop bar shall be field verified.

5. Spacing between double solid yellow lines shall be 4".

6. Longitudinal pavement markings on new roadway surface shall be located in accordance with the typical section unless otherwise noted in the plans.

STANDARD SIGN LEGEND

PLAN ITEM	PLAN SYMBOL PROPOSED	PLAN SYMBOL EXISTING
Single Post Sign Support		
Double Post Sign Support		
Triple Post Sign Support		
Flashing Beacon		
O/H Cantilever Sign Support		
O/H Span Sign Support		

SIGN CALL-OUTS

Existing Sign to Remain or to be Relocated — 95

Existing Sign to be Removed — 95

Proposed Sign Panel — 95

SIGN LABELS

Proposed Sign Assemblies

2808 / 3

denotes Sign Assembly No.

denotes Text No.

PROJECT	SHEET NO.
9999-080-926	5(1)

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inf comp (804) 550-2937

SIGN SCHEDULE

TEXT NO.	SIGN ASSEMBLY NO(s).	TEXT	SIGN ASSEMBLY COMPONENTS: MUTCD ST'D.	PANEL SIZE: W	PANEL SIZE: H	QTY.	SIGN PANEL AREA (s.f.): PER ASSEMBLY	SIGN PANEL AREA (s.f.): ALL ASSEMBLIES	PROP. SIGN STRUCTURE ST'D.	REMARKS
1	1, 2, 3	STOP	R1-1	36	36	3	9	27	STP-1, 2"	
2	4, 5	PAVEMENT ENDS	W8-3	36	36	2	9	18	STP-1, 2"	

COMMONWEALTH OF VIRGINIA
DUSTIN K. BROOKMAN
Lic. No. 040205666
PROFESSIONAL ENGINEER

Dustin Brookman
2021.04.08 10:35:44 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE: ROUTE	STATE: PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	5(2)

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

NOTES:

1) ALL SIGNS SHALL BE ORIENTATED AS SHOWN ON THE PLANS.
2) SIGN COLOR COMBINATIONS SHALL BE IN ACCORDANCE WITH THE FHWA SHS BOOK AND THE 2011 VIRGINIA SHS BOOK OR AS NOTED IN THE PLANS.
3) ALL POSITIVE CONTRAST GUIDE AND SPECIFIC SERVICE SIGNS SHALL UTILIZE FABRICATION LETTER TYPE L-3 OR L-4 UNLESS OTHERWISE NOTED IN THE REMARKS. ALL OTHER SIGNS SHALL UTILIZE FABRICATION LETTER TYPE L-1 OR L-2 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.

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inframap (804) 550-2937

PAVEMENT MARKING AND SIGNAGE PLAN

COMMONWEALTH OF VIRGINIA
DUSTIN K. BROOKMAN
Lic. No. 040205666
PROFESSIONAL ENGINEER

Dustin Brookman
2021.04.08 10:37:34 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	5(3)

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

SCALE
0 25' 50'

	PROJECT	SHEET NO.
	9999-080-926	5(3)

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inf camp (804) 550-2937

PAVEMENT MARKING AND SIGNAGE PLAN

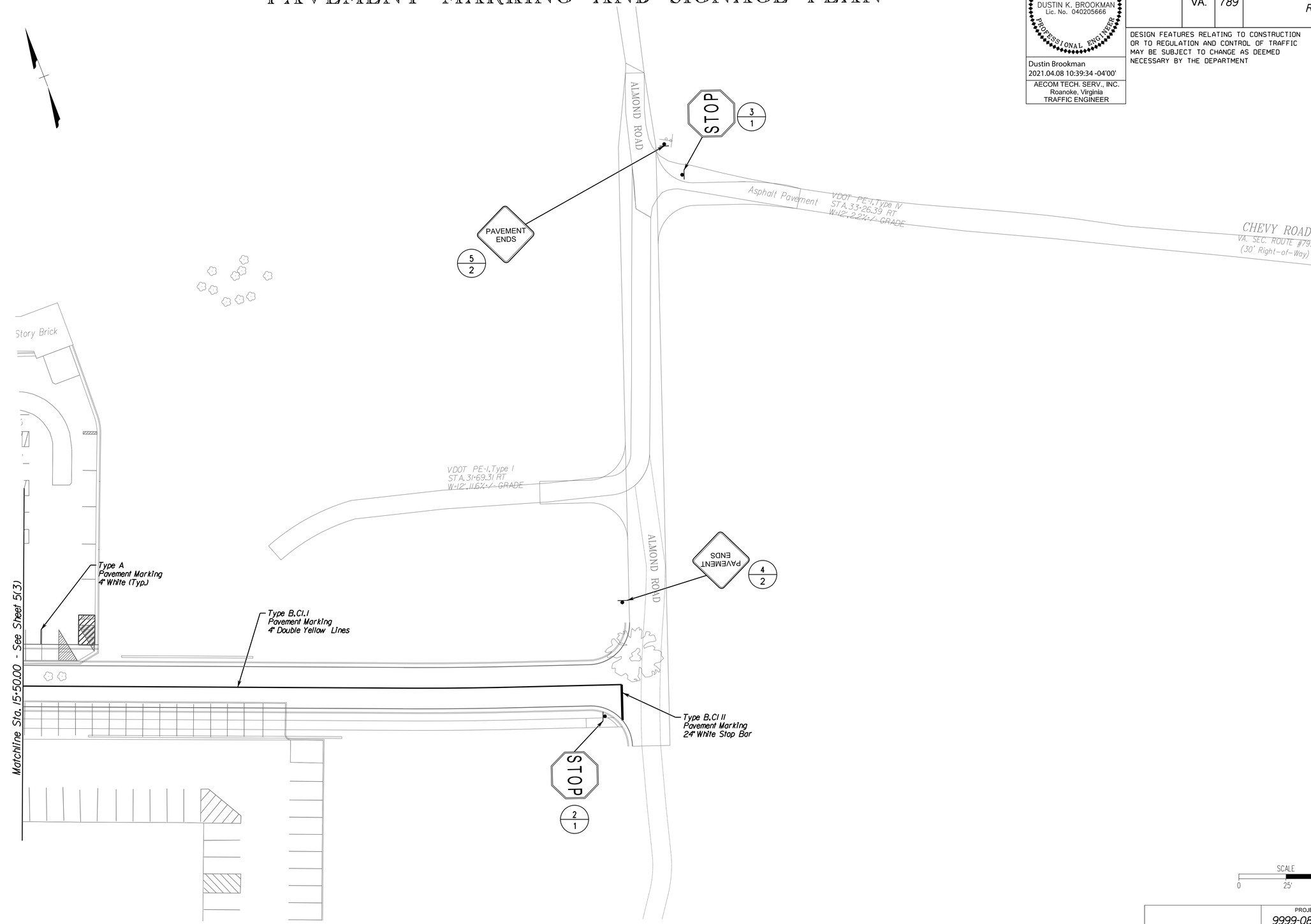
COMMONWEALTH OF VIRGINIA
DUSTIN K. BROOKMAN
Lic. No. 040205666
PROFESSIONAL ENGINEER

Dustin Brookman
2021.04.08 10:39:34 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	5(4)

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



SCALE
0 25' 50'

	PROJECT	SHEET NO.
	9999-080-926	5(4)

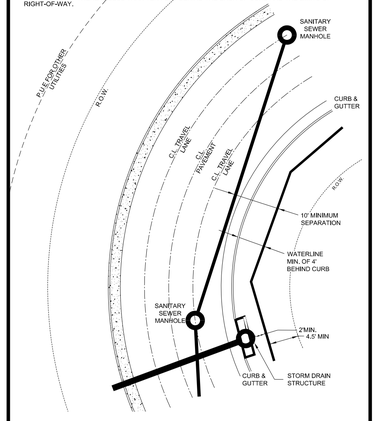
PROJECT MANAGER Cheryl Becker _(540) 387-5399 (Salem)_ _____
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-9411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540)857-3322 (AECOM) _____.
SUBSURFACE UTILITY BY, DATE Inframap _(804) 550-2937_ _____.

UTILITY DETAILS

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	6(1)

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

1. A WORK AREA WITH A MINIMUM CLEAR SPACE OF TEN FEET BEHIND THE BACK OF CURB SHALL BE PROVIDED FOR ALL WATER AND SEWER MAINS. A DEDICATED WATER OR SEWER EASEMENT MUST BE PROVIDED IF THERE IS LESS THAN TEN FEET BEHIND THE BACK OF CURB AND THE LIMITS OF RIGHT-OF-WAY.

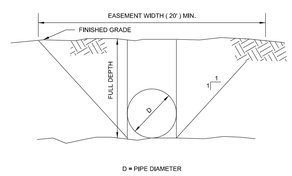


WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

PUBLIC WATER AND SANITARY SEWER
STANDARD CONFIGURATION IN PUBLIC ROADS — G-1

01/01/14

1. PUBLIC EASEMENT WIDTH SHALL BE DETERMINED BASED ON 1:1 SIDE SLOPE EXTENDING FROM THE FINISHED GRADE TO OUTSIDE EDGE OF PIPE (NOMINAL PIPE DIAMETER) ROUNDED UP TO THE NEAREST 1' INCREMENT, OR 20' MINIMUM, WHICHEVER IS GREATER.
2. THIS EASEMENT SHALL EXTEND ALONG THE ENTIRE LENGTH OF THE SUBJECT PIPE AT LEAST ONE HALF THE DISTANCE OF EASEMENT PAST CENTER OF LAST MANHOLE OR WATER APPURTENANCE.

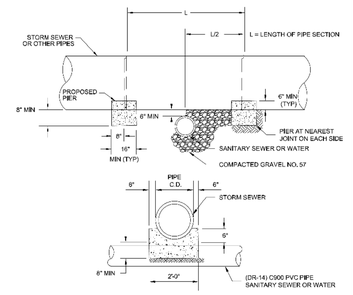


WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

SANITARY SEWER AND
WATER LINE EASEMENTS — G-3

01/01/14

1. PIER REQUIRED WHEN STORM DRAIN OR OTHER PIPES CROSSES OVER THE OTHER UTILITY WITH A VERTICAL CLEARANCE OF LESS THAN 18".
2. PIER TO BE BUILT ON UNDISTURBED EARTH.
3. CONCRETE TO BE READY MIX, CLASS A3.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

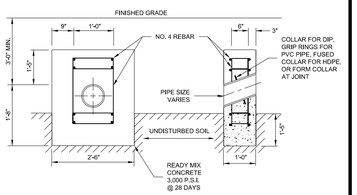
CONCRETE PIER — G-8

01/01/14

1. IN ADDITION TO ANCHOR BLOCKS, RESTRAINED JOINT PIPE WILL BE REQUIRED FOR ALL SLOPES EXCEEDING 20%
2. MINIMUM SPACING REQUIREMENTS SHALL BE AS FOLLOW:

* SLOPES 20% TO 35% = NO MORE THAN 36 FT ON CENTER
* SLOPES 35% TO 50% = NO MORE THAN 24 FT ON CENTER
* SLOPES 50% TO 60% = NO MORE THAN 16 FT ON CENTER

* ONLY ALLOWED WITH WRITTEN APPROVAL OF PARTICIPATING UTILITY

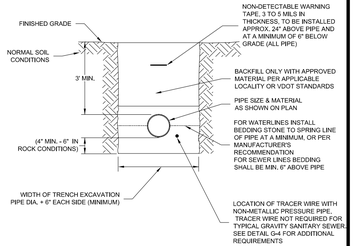


WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

ANCHOR BLOCK — G-10

01/01/14

1. BEDDING, HAUNCHING AND INITIAL BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THIS DETAIL AND MANUFACTURER'S RECOMMENDATION.
2. ALL PVC PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #68 STONE, OR CRUSHER RUN.
3. IN AREAS SUBJECTED TO VEHICULAR TRAFFIC, BEDDING STONE AND FILL SHALL BE PLACED IN 6" LIFTS FROM BOTTOM OF TRENCH TO 1' ABOVE THE PIPE AND THE REMAINING SHALL BE PLACED IN 10" LIFTS AND SHALL BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D 698.
4. BEDDING REQUIREMENTS FOR DUCTILE IRON WATER LINE ARE DEPENDENT ON MANUFACTURER'S BEDDING CRITERIA.
5. ALL EXCAVATIONS SHALL COMPLY WITH OSHA TECHNICAL MANUAL, CHAPTER 2, TITLED "EXCAVATIONS: HAZARD RECOGNITION IN TRENCHING AND SHORING."
6. THE TRACER WIRE SHALL BE PLACED ALONG THE LOWER QUADRANT OF THE PIPE. THE WIRE SHALL NOT TOUCH THE PIPE, BUT SHALL BE A MAXIMUM OF 6" FROM THE PIPE. NON-METALLIC SPACERS MAY BE USED TO MAINTAIN A SET DISTANCE FROM THE UTILITY.

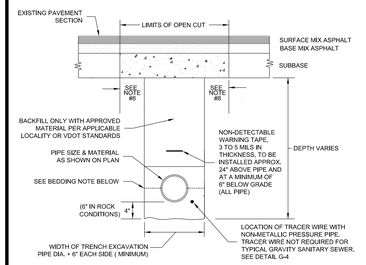


WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

BEDDING AND BACKFILL
OUTSIDE OF PAVED AREAS — G-11

08/01/15

1. BEDDING, HAUNCHING AND INITIAL BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THIS DETAIL AND MANUFACTURER'S RECOMMENDATION.
2. ALL PVC PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #68 STONE.
3. IN VDOT ROW, THE CONTRACTOR SHALL REPLACE THE PAVEMENT AS REQUIRED AND SPECIFIED BY VDOT. IN ROANOKE CITY, CONTRACTOR SHALL REPLACE PAVEMENT AS REQUIRED BY CITY OF ROANOKE RIGHT OF WAY EXCAVATION AND RESTORATION STANDARDS, LATEST EDITION.
4. ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE AS SPECIFIED BY VDOT OR APPLICABLE LOCALITY.
5. PRIOR TO CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS FROM VDOT AND/OR APPLICABLE LOCALITY.
6. IN AREAS SUBJECTED TO VEHICULAR TRAFFIC, BEDDING STONE AND FILL SHALL BE PLACED IN 6" LIFTS AND SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D 698.
7. ALL SEWER LINE PIPE SHALL BE BEDDED IN COMPACTED GRANULAR MATERIAL. BEDDING REQUIREMENTS FOR DUCTILE SEWER LINE ARE DEPENDENT ON MANUFACTURER'S BEDDING CRITERIA.
8. BENCH CUT ON EACH SIDE OF PAVEMENT SHALL BE IN ACCORDANCE WITH VDOT OR APPLICABLE LOCALITY'S SPECIFICATIONS.
9. ALL EXCAVATIONS SHALL COMPLY WITH OSHA TECHNICAL MANUAL, CHAPTER 2, TITLED "EXCAVATIONS: HAZARD RECOGNITION IN TRENCHING AND SHORING."
10. THE TRACER WIRE SHALL BE PLACED ALONG THE LOWER QUADRANT OF THE PIPE. THE WIRE SHALL NOT TOUCH THE PIPE, BUT SHALL BE A MAXIMUM OF 6" FROM THE PIPE. NON-METALLIC SPACERS MAY BE USED TO MAINTAIN A SET DISTANCE FROM THE UTILITY.



BEDDING: FOR WATERLINES, INSTALL BEDDING STONE TO SPRING LINE OF PIPE AT A MINIMUM, OR PER MANUFACTURER'S RECOMMENDATION. FOR SEWER LINES, BEDDING SHALL BE MINIMUM 6" ABOVE PIPE.

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

BEDDING AND BACKFILL
UNDER PAVEMENT AND IN RIGHT-OF-WAY — G-12

08/01/15

	PROJECT	SHEET NO.
	9999-080-926	6(1)

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Information (804) 550-2937

UTILITY DETAILS

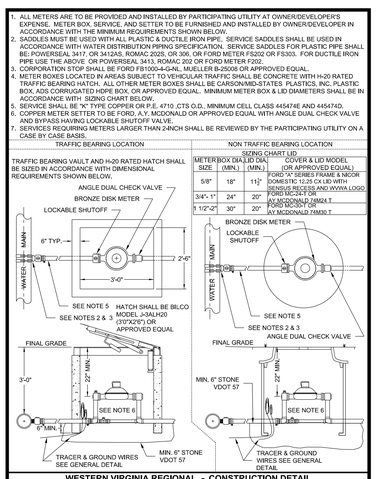
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	6(2)

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

1. ALL METERS ARE TO BE PROVIDED AND INSTALLED BY PARTICIPATING UTILITY AT OWNER/DEVELOPER'S EXPENSE. METER BOX, SERVICE, AND SETTER TO BE FURNISHED AND INSTALLED BY OWNER/DEVELOPER IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS SHOWN BELOW.
2. SADDLES MUST BE USED WITH ALL PLASTIC & DUCTILE IRON PIPE. SERVICE SADDLES SHALL BE USED IN ACCORDANCE WITH WATER DISTRIBUTION PIPING SPECIFICATION. SERVICE SADDLES FOR PLASTIC PIPE SHALL BE: POWERSEAL 3417, OR 3412AS, ROMAC 202S, OR 306, OR FORD METER FS202 OR FS303. FOR DUCTILE IRON PIPE USE THE ABOVE OR POWERSEAL 3413, ROMAC 202 OR FORD METER F202.
3. CORPORATION STOP SHALL BE FORD FB1000-4-G-NL, MUELLER B-25008 OR APPROVED EQUAL.
4. METER BOXES LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC SHALL BE CONCRETE WITH H-20 RATED TRAFFIC BEARING HATCH. ALL OTHER METER BOXES SHALL BE CARSON/MID-STATES PLASTICS, INC. PLASTIC BOX, A25 CORRUGATED HDPE BOX, OR APPROVED EQUAL. MINIMUM METER BOX & LID DIAMETERS SHALL BE IN ACCORDANCE WITH SIZING CHART BELOW.
5. SERVICE SHALL BE "K" TYPE COPPER OR P.E. 4710, CTS O.D., MINIMUM CELL CLASS 445474E AND 445474D.
6. COPPER METER SETTER TO BE FORD, A.Y. MCDONALD OR APPROVED EQUAL WITH ANGLE DUAL CHECK VALVE AND BYPASS HAVING LOCKABLE SHUTOFF VALVE.
7. SERVICES REQUIRING METERS LARGER THAN 2-INCH SHALL BE REVIEWED BY THE PARTICIPATING UTILITY ON A CASE BY CASE BASIS.

TRAFFIC BEARING LOCATION

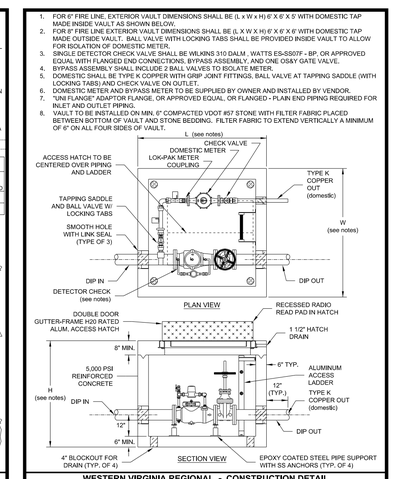
TRAFFIC BEARING VAULT AND H-20 RATED HATCH SHALL BE SIZED IN ACCORDANCE WITH DIMENSIONAL REQUIREMENTS SHOWN BELOW.



NON TRAFFIC BEARING LOCATION

SIZING CHART I.D.

METER BOX SIZE	DIA. I.D. (MIN.)	DIA. I.D. (MIN.)	COVER & LID MODEL (OR APPROVED EQUAL)
5/8"	18"	11½"	FORD 10" SERIES FRAME & NEOR DOMESTIC 12.25 CX LID WITH SENSUS RECESS AND WYHA LOGO
3/4"- 1"	24"	20"	FORD 16C-24-T OR A.Y. MCDONALD 74M30 T
1 1/2"-2"	30"	20"	FORD 16C-30-T OR A.Y. MCDONALD 74M30 T



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

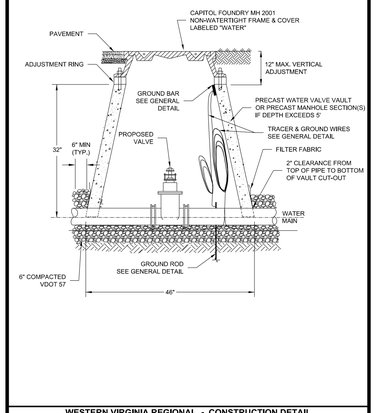
COMMERCIAL WATER SERVICE METER SIZES 5/8" - 2" — W-5 — 09/07/17

1. FOR 6" FIRE LINE, EXTERIOR VAULT DIMENSIONS SHALL BE (L x W x H) 6' X 6' X 5' WITH DOMESTIC TAP MADE INSIDE VAULT AS SHOWN BELOW.
2. FOR 8" FIRE LINE EXTERIOR VAULT DIMENSIONS SHALL BE (L X W X H) 6' X 6' X 6' WITH DOMESTIC TAP MADE OUTSIDE VAULT. BALL VALVE WITH LOCKING TABS SHALL BE PROVIDED INSIDE VAULT TO ALLOW FOR ISOLATION OF DOMESTIC METER.
3. SINGLE DETECTOR CHECK VALVE SHALL BE WILKINS 310 DALM , WATTS ES-SSOTF - BP, OR APPROVED EQUAL WITH FLANGED END CONNECTIONS, BYPASS ASSEMBLY, AND ONE OS&Y GATE VALVE.
4. BYPASS ASSEMBLY SHALL INCLUDE 2 BALL VALVES TO ISOLATE METER.
5. DOMESTIC SHALL BE TYPE K COPPER WITH GRIP JOINT FITTINGS, BALL VALVE AT TAPPING SADDLE (WITH LOCKING TABS) AND CHECK VALVE ON OUTLET.
6. DOMESTIC METER AND BYPASS METER TO BE SUPPLIED BY OWNER AND INSTALLED BY VENDOR.
7. "UNI FLANGE" ADAPTOR FLANGE, OR APPROVED EQUAL, OR FLANGED - PLAIN END PIPING REQUIRED FOR INLET AND OUTLET PIPING.
8. VAULT TO BE INSTALLED ON MIN. 6" COMPACTED VDOT #57 STONE WITH FILTER FABRIC PLACED BETWEEN BOTTOM OF VAULT AND STONE BEDDING. FILTER FABRIC TO EXTEND VERTICALLY A MINIMUM OF 6" ON ALL FOUR SIDES OF VAULT.

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

COMMERCIAL METER VAULT — W-7 — 09/07/17

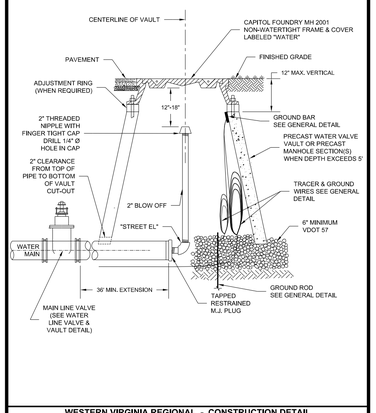
1. FILTER FABRIC TO BE INSTALLED BETWEEN BOTTOM OF PIPE AND STONE BEDDING. FABRIC TO EXTEND VERTICALLY A MINIMUM OF 6" FROM BOTTOM OF VAULT (FULL CIRCUMFERENCE).



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

WATER LINE VALVE & VAULT — W-9 — 01/01/14

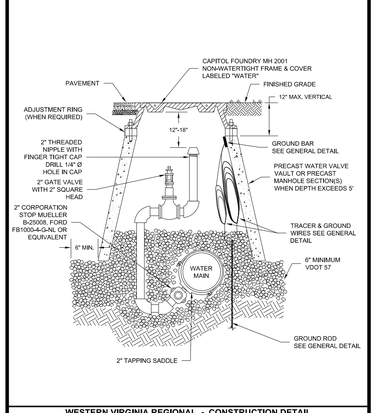
1. THE 2" PIPING AND "STREET EL" SHALL BE LEAD FREE BRASS OR DUCTILE IRON.
2. PIPE JOINTS SHALL BE RESTRAINED BEFORE GATE VALVE IN ACCORDANCE WITH DISTANCE SHOWN IN THE "MINIMUM THRUST RESTRAINT OF PIPE JOINTS DESIGN LENGTHS" DETAIL FOR VALVE / PLUG. PIPE JOINTS BETWEEN GATE VALVE AND BLOWOFF SHALL ALSO BE RESTRAINED.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

TEMPORARY END OF LINE BLOW-OFF ASSEMBLY — W-11 — 01/01/14

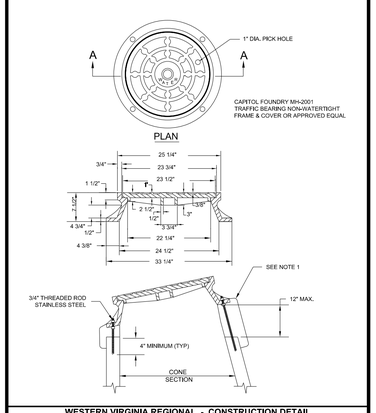
1. FIRE HYDRANTS MAY BE USED AT LOW POINTS IN PLACE OF BLOW-OFFS.
2. THE PIPING AND "STREET ELS" BETWEEN CORPORATION STOP AND 2" GATE VALVE SHALL BE LEAD FREE BRASS OR DUCTILE IRON PIPE.
3. THE POINT OF CONNECTION TO THE WATER MAIN SHALL BE LOCATED NEAR THE BOTTOM OF THE MAIN (AS SHOWN) TO FACILITATE REMOVAL OF ACCUMULATED SEDIMENT.
4. SADDLES FOR PLASTIC PIPE SHALL BE PER RESIDENTIAL WATER SERVICE DETAIL.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

IN-LINE BLOW-OFF ASSEMBLY — W-12 — 02/10/15

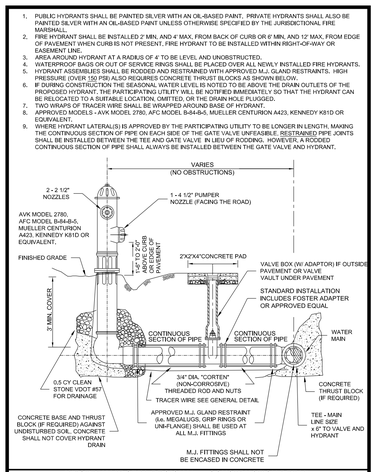
1. USE MODERATELY STIFF MIX OF NON SHRINK GROUT, SAND, AND 1/2" AND LESS DIAMETER GRAVEL WITH 28 DAYS. STRENGTH AT MINIMUM 3,000 P.S.I.
2. MIX IS TO BE FORCED INTO ALL GROOVES AND UNDER FLANGE OF FRAME AND LEFT AT OR ABOVE TOP OF FLANGE.
3. DO NOT BACKFILL AROUND FRAME AND COVER, FOR 48 HOURS AFTER CONCRETE IS PLACED. THE USE OF HIGH EARLY STRENGTH CEMENT WOULD REDUCE TIME TO (24 HRS.)
4. RESTRICT TRAFFIC LOAD FOR A MINIMUM OF 24 HOURS.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

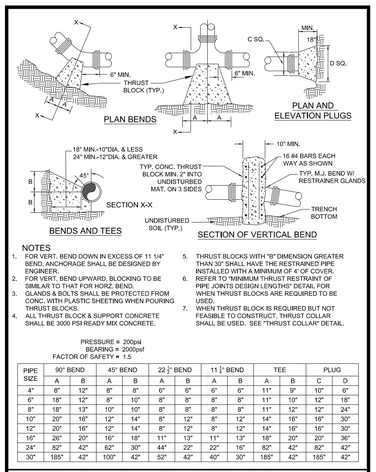
VAULT FRAME AND COVER — W-16 — 01/01/14

1. PUBLIC HYDRANTS SHALL BE PAINTED SILVER WITH AN OIL-BASED PAINT. PRIVATE HYDRANTS SHALL ALSO BE PAINTED SILVER WITH AN OIL-BASED PAINT UNLESS OTHERWISE SPECIFIED BY THE JURISDICTIONAL FIRE MARSHALL.
2. FIRE HYDRANT SHALL BE INSTALLED 2' MIN. AND 4' MAX. FROM BACK OF CURB OR 6' MIN. AND 12' MAX. FROM EDGE OF PAVEMENT WHEN CURB IS NOT PRESENT. FIRE HYDRANT TO BE INSTALLED WITHIN RIGHT-OF-WAY OR EASEMENT LINE.
3. AREA AROUND HYDRANT AT A RADIUS OF 4' TO BE LEVEL AND UNOBSTRUCTED.
4. WATERPROOF BAGS OR OUT OF SERVICE RINGS SHALL BE PLACED OVER ALL NEWLY INSTALLED FIRE HYDRANTS.
5. HYDRANT ASSEMBLIES SHALL BE ROD/D AND RESTRAINED WITH APPROVED M.J. GLAND RESTRAINTS. HIGH PRESSURE (OVER 150 PSI) ALSO REQUIRES CONCRETE THRUST BLOCKS AS SHOWN BELOW.
6. IF DURING CONSTRUCTION THE SEASONAL WATER LEVEL IS NOTED TO BE ABOVE THE DRAIN OUTLETS OF THE PROPOSED HYDRANT, THE PARTICIPATING UTILITY WILL BE NOTIFIED IMMEDIATELY SO THAT THE HYDRANT CAN BE RELOCATED TO A SUITABLE LOCATION, OMITTED, OR THE DRAIN HOLE PLUGGED.
7. TWO WRAPS OF TRACER WIRE SHALL BE WRAPPED AROUND BASE OF HYDRANT.
8. APPROVED MODELS: AVK M/CON 2780, AFC MODEL B-84-6-5, MUELLER CENTURION A423, KENNEDY K81D OR EQUIVALENT.
9. WHERE HYDRANT LATERAL(S) IS APPROVED BY THE PARTICIPATING UTILITY TO BE LONGER IN LENGTH, MAKING THE CONTINUOUS SECTION OF PIPE ON EACH SIDE OF THE GATE VALVE UNFEASIBLE, RESTRAINED PIPE JOINTS SHALL BE INSTALLED BETWEEN THE TEE AND GATE VALVE. IN LIEU OF RODDING, HOWEVER, A RODDED CONTINUOUS SECTION OF PIPE SHALL ALWAYS BE INSTALLED BETWEEN THE GATE VALVE AND HYDRANT.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

FIRE HYDRANT ASSEMBLY — W-17 — 02/10/15



NOTES

1. FOR VERT. BEND DOWN IN EXCESS OF 11 1/4° BEND, ANCHORAGE SHALL BE DESIGNED BY ENGINEER.
2. FOR VERT. BEND UPWARD, BLOCKING TO BE SIMILAR TO THAT FOR HORZ. BEND.
3. GLANDS & BOLTS SHALL BE PROTECTED FROM CONC. WITH PLASTIC SHEETING WHEN POURING THRUST BLOCKS.
4. ALL THRUST BLOCK & SUPPORT CONCRETE SHALL BE 3000 PSI READY MIX CONCRETE.
5. THRUST BLOCKS WITH "B" DIMENSION GREATER THAN 30" SHALL HAVE THE RESTRAINED PIPE INSTALLED WITH A MINIMUM OF 4' OF COVER.
6. REFER TO "MINIMUM THRUST RESTRAINT OF PIPE JOINTS DESIGN LENGTHS" DETAIL FOR WHEN THRUST BLOCKS ARE REQUIRED TO BE USED.
7. WHEN THRUST BLOCK IS REQUIRED BUT NOT FEASIBLE TO CONSTRUCT, THRUST COLLAR SHALL BE USED. SEE "THRUST COLLAR" DETAIL.

PRESSURE = 200psi
BEARING = 2000psf
FACTOR OF SAFETY = 1.5

PIPE SIZE	90° BEND		45° BEND		22 ½° BEND		11 ¼° BEND		TEE		PLUG	
	A	B	A	B	A	B	A	B	A	B	C	D
4"	8"	12"	8"	8"	6"	6"	6"	6"	11"	9"	10"	6"
6"	18"	12"	8"	10"	8"	8"	8"	8"	11"	10"	12"	18"
8"	18"	13"	10"	10"	8"	8"	8"	8"	11"	12"	12"	24"
10"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
12"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
16"	26"	20"	16"	18"	11"	13"	11"	13"	18"	20"	20"	36"
24"	82"	42"	62"	30"	44"	22"	16"	16"	82"	42"	82"	42"
30"	185"	42"	100"	42"	52"	42"	40"	30"	185"	42"	185"	42"

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

THRUST BLOCK REQUIREMENTS — W-18 — 02/10/15

FACTOR OF SAFETY = 1.5

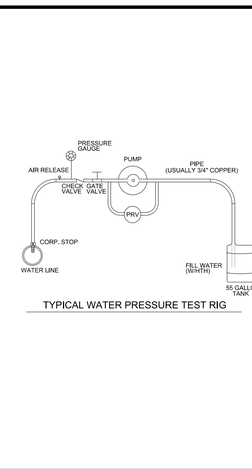
PIPE SIZE	PIPE MAT'L	90° BEND	45° BEND	22 ½° BEND	11 ¼° BEND	VALVE/ PLUG (NOTE 2)	TEE BRANCH (NOTE 3)	REDUCER (NOTE 4)	45° VERT.	22 ½° VERT.	11 ¼° VERT.
6"	D.I.	28'	21'	6"	3'	50'	26'	26'	21'	10'	5'
8"	D.I.	36'	21'	8'	4'	65'	41'	27'	27'	13'	7'
10"	D.I.	43'	21'	9'	5'	77'	53'	26'	32'	16'	8'
12"	D.I.	51'	21'	10'	5'	91'	67'	27'	38'	18'	9'
6"	PVC	29'	21'	6'	3'	78'	25'	40'	32'	16'	8'
8"	PVC	37'	21'	8'	4'	102'	49'	43'	42'	21'	10'
10"	PVC	44'	21'	9'	5'	122'	68'	41'	51'	25'	12'
12"	PVC	51'	21'	11'	6'	143'	89'	42'	60'	29'	15'

1. ALL JOINTS SHALL BE RESTRAINED ON BOTH SIDES OF THE FITTING AND DOCUMENTED BY THE INSPECTOR FOR THE LENGTH SHOWN UNLESS OTHERWISE INDICATED.
2. RESTRAINED LENGTH SHOWN REFERS TO ANY DESIGNED OR POTENTIAL LINE STOP, INCLUDING ALL GATE VALVES.
3. RESTRAINED LENGTH SHOWN REFERS TO THE BRANCH LINE ONLY. THE CONTINUOUS PIPE LENGTH OF THE MAIN RUN SHALL BE A MINIMUM OF 10' ON EACH SIDE OF THE TEE.
4. RESTRAINED LENGTH SHOWN IS BASED ON REDUCING PIPE DIAMETER TO ONE SIZE SMALLER THAN PIPE LISTED (ANY OTHER DIAMETER REDUCTION WILL REQUIRE ADDITIONAL CALCULATIONS BEFORE INSTALLATION). RESTRAINED LENGTH SHOWN IS UPSTREAM ON THE LARGE SIDE OF THE REDUCER.
5. 12" AND SMALLER DIAMETER: IF UNDER 150 PSI WORKING PRESSURE, RESTRAINED JOINT(S) ARE TO BE USED. IF EQUAL TO OR OVER 150 PSI WORKING PRESSURE, BOTH THRUST BLOCK(S) AND RESTRAINED JOINT(S) SHALL BE USED.

   LARGER THAN 12" DIAMETER: IF UNDER 100 PSI WORKING PRESSURE, RESTRAINED JOINT(S) ARE TO BE USED. IF EQUAL TO OR OVER 100 PSI WORKING PRESSURE, BOTH THRUST BLOCK(S) AND RESTRAINED JOINT(S) SHALL BE USED (UNLESS OTHERWISE APPROVED BY THE PARTICIPATING UTILITY).
6. FOR RESTRAINED JOINT PIPING REQUIREMENTS AT FITTING R.J. PVC AND R.J. DIP MAY BE USED INTERCHANGEABLY WITH APPROVAL FROM PARTICIPATING UTILITY. CONTRACTOR MUST PLAN ACCORDINGLY FOR THE DIFFERENCE IN PVC AND DIP BELL AND SPIGOT DIMENSIONS.

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

MINIMUM THRUST RESTRAINT OF PIPE JOINTS DESIGN LENGTHS — W-19 — 02/10/15



TYPICAL WATER PRESSURE TEST RIG

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

TYPICAL WATER PRESSURE TEST RIG — W-20 — 01/01/14

INSTALLATION OF DUCTILE IRON WATER MAINS
TABLE 3 AWWA C600-05
Maximum Joint Deflection Full Length of Pipe - Push on Type Joint

Nominal Pipe Size (inches)	Deflection Angle - θ (degree)	Maximum Offset - S" (inches) Joint Length 18-Feet	Maximum Offset - S" (inches) Joint Length 20-Feet	Approximate Radius of Curve - R" Produced by Succession of Joints Joint Length 18-Feet	Approximate Radius of Curve - R" Produced by Succession of Joints Joint Length 20-Feet
3	5°	19	21	205	230
4	5°	19	21	205	230
6	5°	19	21	205	230
8	5°	19	21	205	230
10	5°	19	21	205	230
12	5°	19	21	205	230
14	3°	11	12	340	380
16	3°	11	12	340	380
18	3°	11	12	340	380
20	3°	11	12	340	380
24	3°	11	12	340	380
30	3°	11	12	340	380

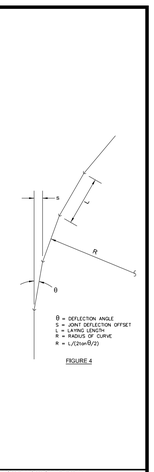
* SEE FIGURE 4.

For 14-inch and larger push-on joints, maximum deflection angle may be larger than shown above. Consult the manufacturer.

INSTALLATION OF DUCTILE IRON WATER MAINS
TABLE 4 AWWA C600-05
Maximum Joint Deflection Full Length of Pipe - Mechanical Joint Pipe

Nominal Pipe Size (inches)	Deflection Angle - θ (degree)	Maximum Offset - S" (inches) Joint Length 18-Feet	Maximum Offset - S" (inches) Joint Length 20-Feet	Approximate Radius of Curve - R" Produced by Succession of Joints Joint Length 18-Feet	Approximate Radius of Curve - R" Produced by Succession of Joints Joint Length 20-Feet
3	8°-18"	31	35	125	140
4	8°-18"	31	35	125	140
6	7°-07"	27	30	145	160
8	5°-21"	20	22	195	220
10	5°-21"	20	22	195	220
12	5°-21"	20	22	195	220
14	3°-35"	13.5	15	285	320
16	3°-35"	13.5	15	285	320
18	3°-00"	11	12	340	380
20	3°-00"	11	12	340	380
24	2°-23"	9	10	450	500

* SEE FIGURE 4.



θ = DEFLECTION ANGLE
L = JOINT DEFLECTION OFFSET
s = ARMING LENGTH
R = RADIUS OF CURVE
R = L/(2tanθ/2)

FIGURE 4

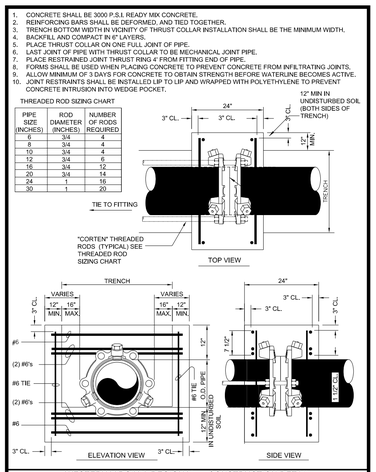
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

DUCTILE IRON PIPE DEFLECTION ALLOWANCE TABLES — W-22 — 01/01/14

1. CONCRETE SHALL BE 3000 P.S.I. READY MIX CONCRETE.
2. REINFORCING BARS SHALL BE DEFORMED, AND TIED TOGETHER.
3. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST COLLAR INSTALLATION SHALL BE THE MINIMUM WIDTH.
4. BACKFILL AND COMPACT IN 6" LAYERS.
5. PLACE THRUST COLLAR ON ONE FULL JOINT OF PIPE.
6. LAST JOINT OF PIPE WITH THRUST COLLAR TO BE MECHANICAL JOINT PIPE.
7. PLACE RESTRAINED JOINT THRUST RING 4' FROM FITTING END OF PIPE.
8. FORMS SHALL BE USED WHEN PLACING CONCRETE TO PREVENT CONCRETE FROM INFILTRATING JOINTS.
9. ALLOW MINIMUM OF 3 DAYS FOR CONCRETE TO OBTAIN STRENGTH BEFORE WATERLINE BECOMES ACTIVE.
10. JOINT RESTRAINTS SHALL BE INSTALLED LIP TO LIP AND WRAPPED WITH POLYETHYLENE TO PREVENT CONCRETE INTRUSION INTO WEDGE POCKET.

THREADED ROD SIZING CHART

PIPE SIZE (INCHES)	ROD DIAMETER (INCHES)	NUMBER OF RODS REQUIRED
6	3/4	4
8	3/4	4
10	3/4	4
12	3/4	6
16	3/4	12
20	3/4	14
24	1	16
30	1	20



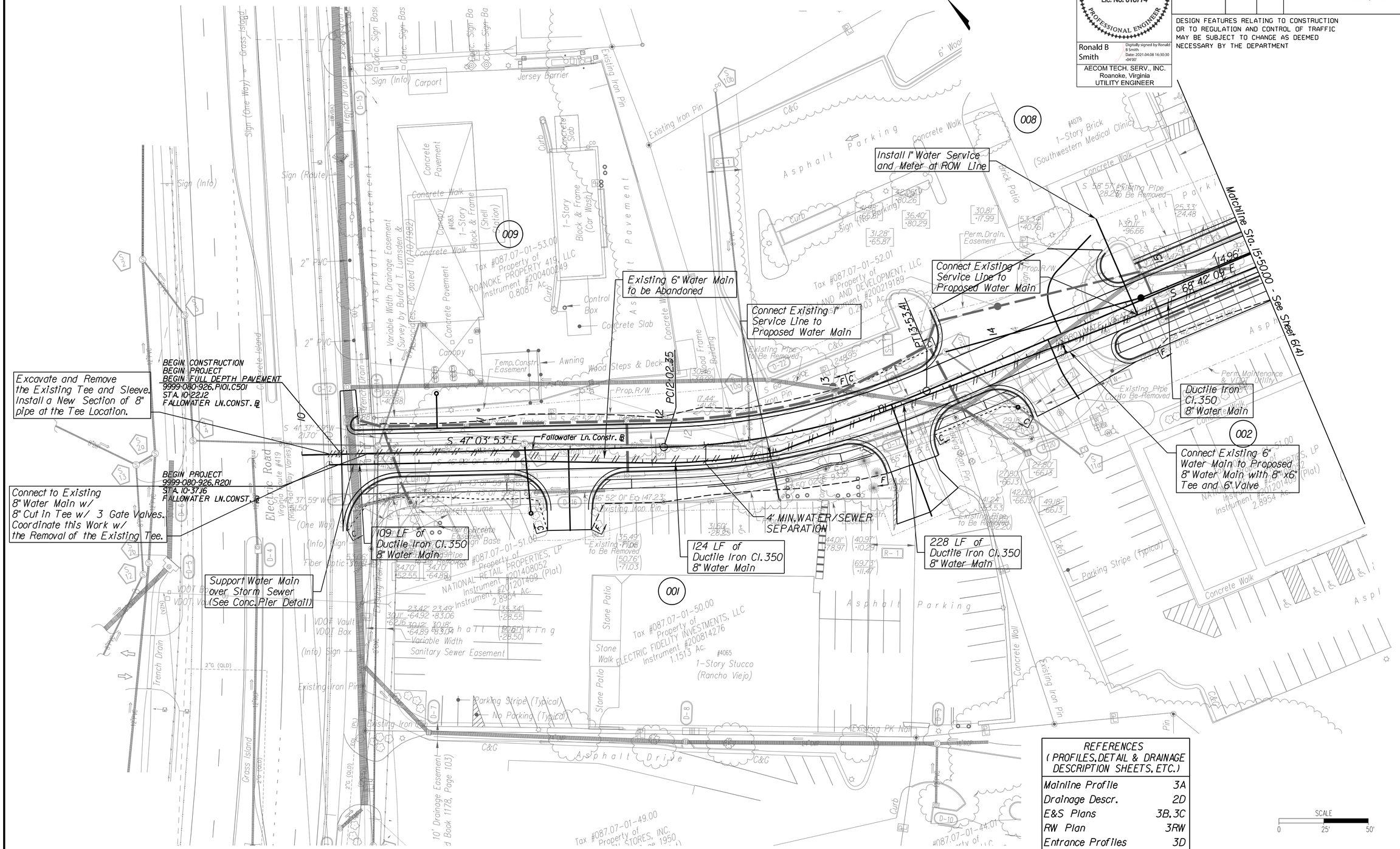
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

THRUST COLLAR DETAIL — W-23 — 01/01/14

PROJECT	SHEET NO.
9999-080-926	6(2)

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inf comp (804) 550-2937

UTILITY PLAN (WATER)



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	3A
Drainage Descr.	2D
E&S Plans	3B, 3C
RW Plan	3RW
Entrance Profiles	3D
Alignment Data	1G
Typical Sections	2A

SCALE
0 25' 50'

COMMONWEALTH OF VIRGINIA
RONALD B. SMITH
Lic. No. 016774
PROFESSIONAL ENGINEER

Ronald B Smith
Digitally signed by Ronald B Smith
Date: 2021.04.08 16:30:30 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
UTILITY ENGINEER

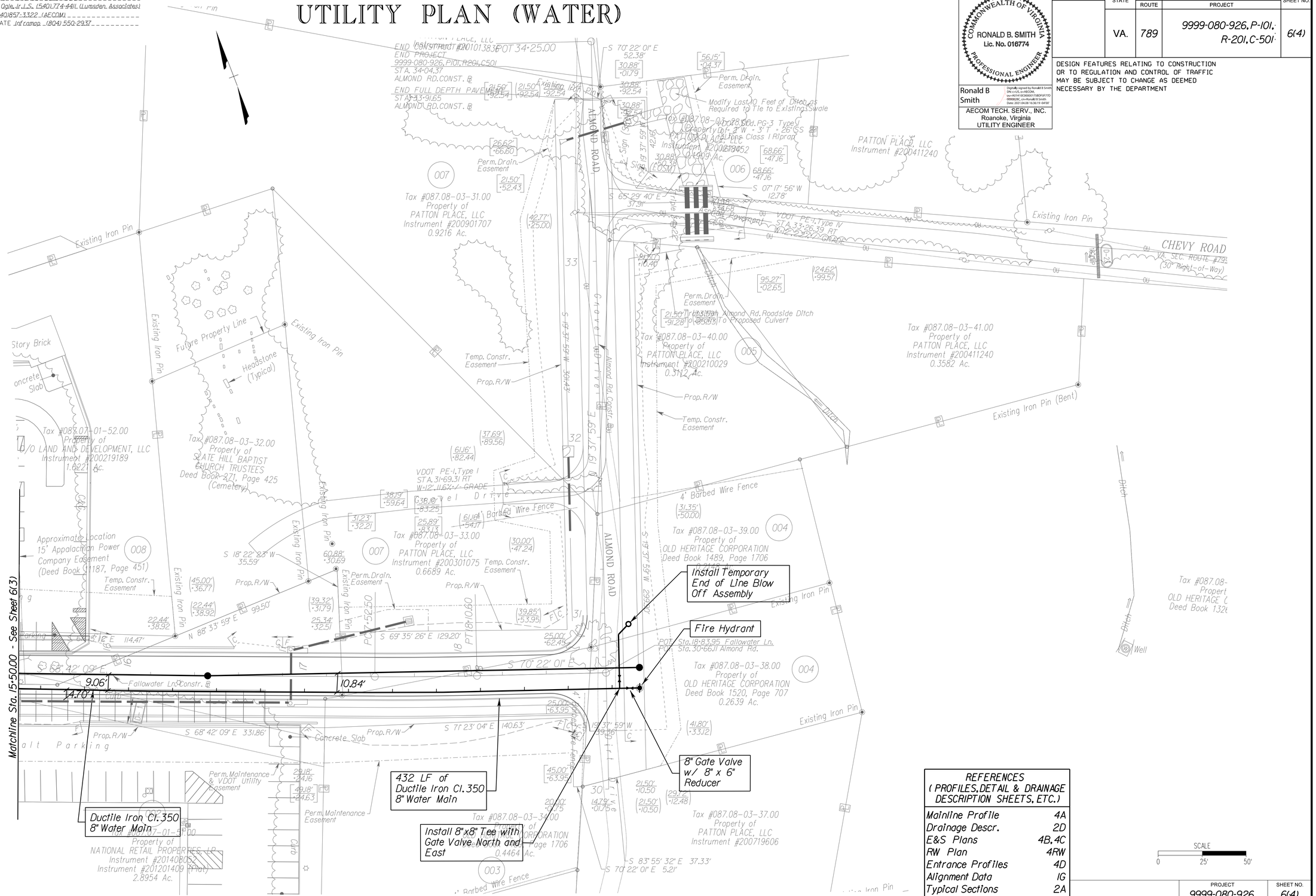
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	6(3)

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

PROJECT	SHEET NO.
9999-080-926	6(3)

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inf camp (804) 550-2937

UTILITY PLAN (WATER)



COMMONWEALTH OF VIRGINIA
RONALD B. SMITH
Lic. No. 016774
PROFESSIONAL ENGINEER

Ronald B Smith
Digitally signed by Ronald B Smith
DN: cn=US, o=AECOM, ou=A20410C000001738DF0F77D
Reason: I am the author of this document
Date: 2021.04.06 16:06:19 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
UTILITY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	6(4)

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

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	4A
Drainage Descr.	2D
E&S Plans	4B, 4C
RW Plan	4RW
Entrance Profiles	4D
Alignment Data	1G
Typical Sections	2A
Ret. Wall Details	2H(1) - 2H(2)

SCALE
0 25' 50'

PROJECT	SHEET NO.
9999-080-926	6(4)

4/5/2021
5:44:26 PM

dl12304_06_05.dgn
Plotted By: DavisCD

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Infra Map (804) 550-2937

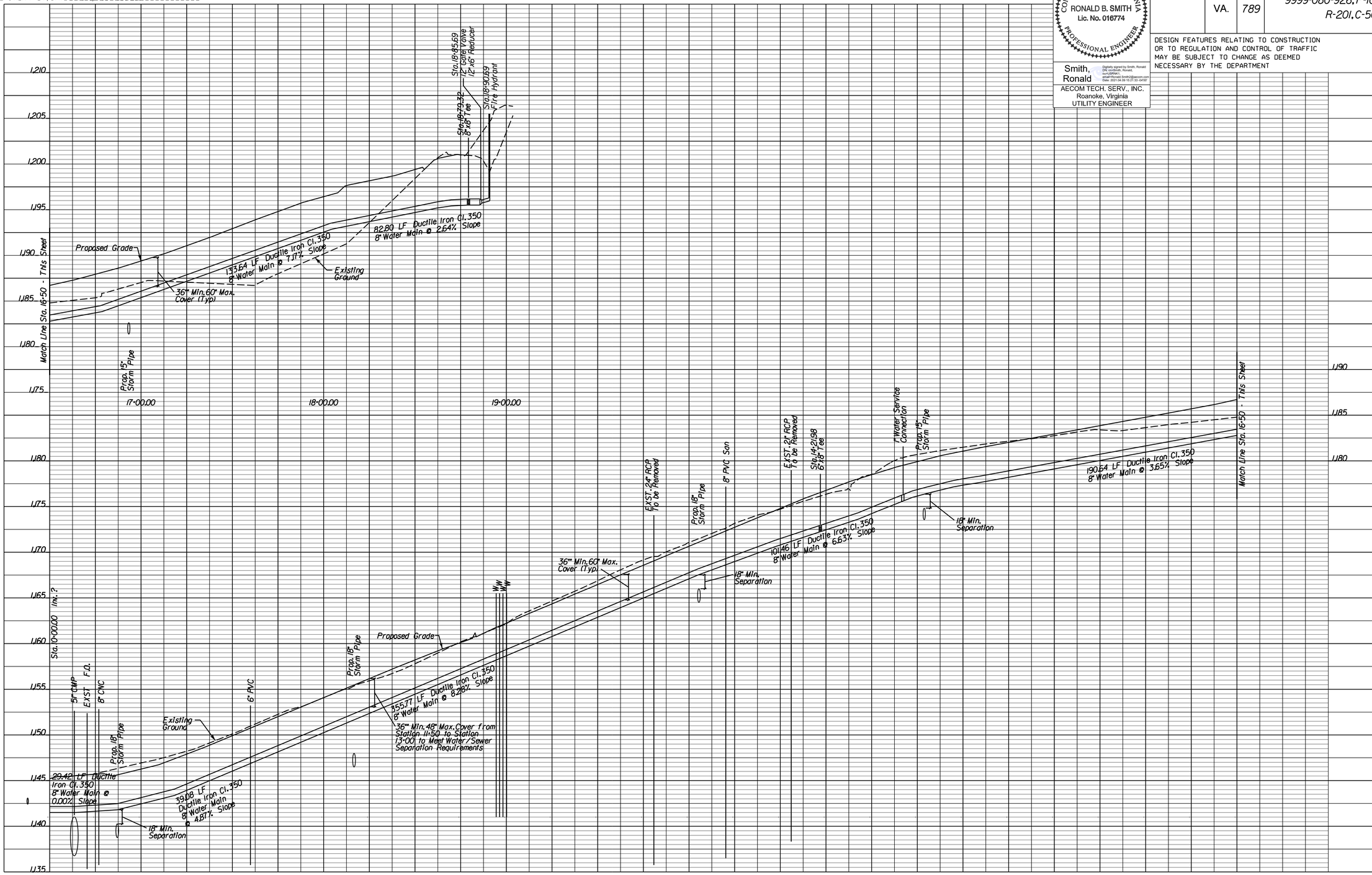
WATER LINE PROFILE

COMMONWEALTH OF VIRGINIA
RONALD B. SMITH
Lic. No. 016774
PROFESSIONAL ENGINEER

Smith, Ronald
Digitally signed by Smith, Ronald
DN: cn=Smith, Ronald, ou=USRKnox, email=Ronald.Smith2@aecom.com
Date: 2021.04.09 15:21:33 -04'00'
AECOM TECH. SERV., INC.
Roanoke, Virginia
UTILITY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	6(5)

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



HORIZ. SCALE 0 25' 50'
VERT. SCALE 0 5' 10'

PROJECT	SHEET NO.
9999-080-926	6(5)

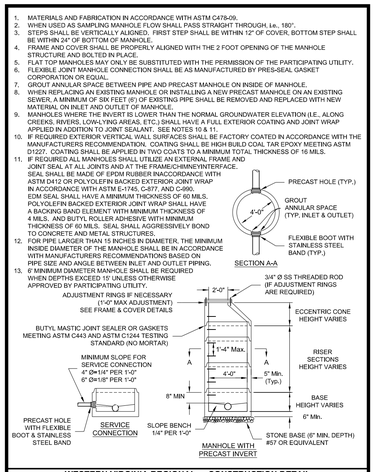
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inframap (804) 550-2937

UTILITY DETAILS

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	7(1)

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

1. MATERIALS AND FABRICATION IN ACCORDANCE WITH ASTM C478-09.
2. WHEN USED AS SAMPLING MANHOLE FLOW SHALL PASS STRAIGHT THROUGH, i.e., 180°.
3. STEPS SHALL BE VERTICALLY ALIGNED. FIRST STEP SHALL BE WITHIN 12" OF COVER, BOTTOM STEP SHALL BE WITHIN 24" OF BOTTOM OF MANHOLE.
4. FRAME AND COVER SHALL BE PROPERLY ALIGNED WITH THE 2 FOOT OPENING OF THE MANHOLE STRUCTURE AND BOLTED IN PLACE.
5. FLAT TOP MANHOLES MAY ONLY BE SUBSTITUTED WITH THE PERMISSION OF THE PARTICIPATING UTILITY.
6. FLEXIBLE JOINT MANHOLE CONNECTION SHALL BE AS MANUFACTURED BY PRES-SEAL GASKET CORPORATION OR EQUAL.
7. GROUT ANNULAR SPACE BETWEEN PIPE AND PRECAST MANHOLE ON INSIDE OF MANHOLE.
8. WHEN REPLACING AN EXISTING MANHOLE OR INSTALLING A NEW PRECAST MANHOLE ON AN EXISTING SEWER, A MINIMUM OF SIX FEET (6') OF EXISTING PIPE SHALL BE REMOVED AND REPLACED WITH NEW MATERIAL ON INLET AND OUTLET OF MANHOLE.
9. MANHOLES WHERE THE INVERT IS LOWER THAN THE NORMAL GROUNDWATER ELEVATION (I.E., ALONG CREEKS, RIVERS, LOW-LYING AREAS, ETC.) SHALL HAVE A FULL EXTERIOR COATING AND JOINT WRAP APPLIED IN ADDITION TO JOINT SEALANT. SEE NOTES 10 & 11.
10. IF REQUIRED EXTERIOR VERTICAL WALL SURFACES SHALL BE FACTORY COATED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION. COATING SHALL BE HIGH BUILD COAL TAR EPOXY MEETING ASTM D1227. COATING SHALL BE APPLIED IN TWO COATS TO A MINIMUM TOTAL THICKNESS OF 16 MILS.
11. IF REQUIRED ALL MANHOLES SHALL UTILIZE AN EXTERNAL FRAME AND JOINT SEAL AT ALL JOINTS AND AT THE FRAME/CHIMNEY INTERFACE. SEAL SHALL BE MADE OF EPDM RUBBER IN ACCORDANCE WITH ASTM D412 OR POLYOLEFIN BACKED EXTERIOR JOINT WRAP IN ACCORDANCE WITH ASTM E-1745, C-877, AND C-990. EDM SEAL SHALL HAVE A MINIMUM THICKNESS OF 60 MILS. POLYOLEFIN BACKED EXTERIOR JOINT WRAP SHALL HAVE A BACKING BAND ELEMENT WITH MINIMUM THICKNESS OF 4 MILS. AND BUTYL ROLLER ADHESIVE WITH MINIMUM THICKNESS OF 60 MILS. SEAL SHALL AGGRESSIVELY BOND TO CONCRETE AND METAL STRUCTURES.
12. FOR PIPE LARGER THAN 15 INCHES IN DIAMETER, THE MINIMUM INSIDE DIAMETER OF THE MANHOLE SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS BASED ON PIPE SIZE AND ANGLE BETWEEN INLET AND OUTLET PIPING.
13. 6' MINIMUM DIAMETER MANHOLE SHALL BE REQUIRED WHEN DEPTH EXCEED 15' UNLESS OTHERWISE APPROVED BY PARTICIPATING UTILITY.

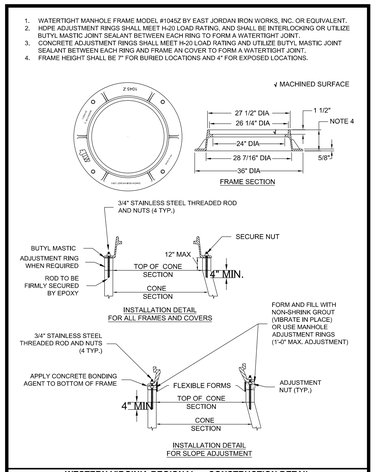


WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

4' STANDARD MANHOLE
FOR PIPE 15" OR SMALLER
(FOR DEPTHS UP TO 15 FEET)

08/01/15 **S-1**

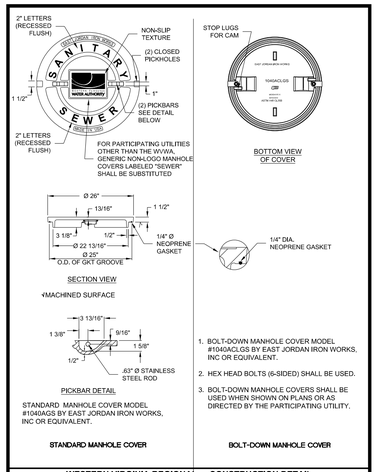
1. WATERTIGHT MANHOLE FRAME MODEL #1045Z BY EAST JORDAN IRON WORKS, INC. OR EQUIVALENT.
2. HDPE ADJUSTMENT RINGS SHALL MEET H-20 LOAD RATING, AND SHALL BE INTERLOCKING OR UTILIZE BUTYL MASTIC JOINT SEALANT BETWEEN EACH RING TO FORM A WATERTIGHT JOINT.
3. CONCRETE ADJUSTMENT RINGS SHALL MEET H-20 LOAD RATING AND UTILIZE BUTYL MASTIC JOINT SEALANT BETWEEN EACH RING AND FRAME AN COVER TO FORM A WATERTIGHT JOINT.
4. FRAME HEIGHT SHALL BE 7" FOR BURIED LOCATIONS AND 4" FOR EXPOSED LOCATIONS.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

WATERTIGHT
MANHOLE FRAME

01/01/14 **S-4**



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

WATERTIGHT
MANHOLE COVER

01/01/14 **S-5**

MINIMUM SPECIFIED TIME REQUIRED FOR A 1.0 PSIG PRESSURE DROP FOR A SIZE AND LENGTH OF PIPE INDICATED FOR Q = 0.0015

1 PIPE DIAMETER (IN)	2 MINIMUM TIME (MIN:SEC)	3 LENGTH FOR MINIMUM TIME (FT)	4 TIME FOR LONGER LENGTH (SEC)	SPECIFICATION TIME FOR LENGTH (L) SHOWN (MIN:SEC)							
				100 FT	150 FT	200 FT	250 FT	300 FT	350 FT	400FT	450 FT
4	3:46	597	.380 L	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	.854 L	5:40	5:40	5:40	5:40	5:40	5:40	5:42	6:24
8	7:34	298	1,520 L	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24
10	9:26	239	2,374 L	9:26	9:26	9:26	9:26	9:53	11:52	13:51	15:49
12	11:20	199	3,418 L	11:20	11:20	11:20	11:24	14:15	17:05	19:56	22:47
15	14:10	159	5,342 L	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04
18	17:00	133	7,692 L	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41
21	19:50	114	10,470 L	19:50	26:10	34:54	43:37	52:21	61:00	69:48	78:31
24	22:40	99	13,674 L	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33
27	25:30	88	17,306 L	28.51	43:16	57:41	72:07	86:32	100:57	115:22	129:48
30	28:20	80	21,366 L	35.37	53:25	71:13	89:02	106:50	124:38	142:26	160.15
33	31:10	72	25,852 L	43.05	64:38	86:10	107:43	129:16	150:43	172:21	193:53
36	34:00	66	30,768 L	51.17	76:55	102:34	128:12	153:50	179:29	205:07	230:46
42	39:48	57	41,883 L	69.48	104:42	139:37	174:30	209:24	244:19	279:13	314:07
48	45:34	50	54,705 L	91.10	136:45	182:21	227:55	273:31	319:06	364:42	410:17
54	51:02	44	69,236 L	115.24	173:05	230:47	288:29	346:11	403:53	461:34	519:16
60	56:40	40	85,476 L	142.28	213:41	284:55	356:09	427:23	498:37	569:50	641:04

NOTE: IF THERE HAS BEEN NO LEAKAGE (ZERO PSIG DROP) AFTER ONE HOUR OF TESTING, THE TEST SHALL BE ACCEPTED AND THE TEST COMPLETE.

UM-B-6-04

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

LOW-PRESSURE AIR TESTING TABLE

01/01/14 **S-18**

	PROJECT	SHEET NO.
	9999-080-926	7(1)

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inframap (804) 550-2937

UTILITY PLAN (SANITARY)

COMMONWEALTH OF VIRGINIA
RONALD B. SMITH
Lic. No. 016774
PROFESSIONAL ENGINEER

Smith, Ronald
AECOM TECH. SERV., INC.
Roanoke, Virginia
UTILITY ENGINEER

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	7(2)

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

NOTES:

1. Sanitary sewer Manhole Connection Shall be Completed by Coring the Manhole and Installing a Rubber Boot.
2. Existing Manhole Grates will be Adjusted to the New Proposed Grade using Details Provided in WVWA Detail S-4.


173 LF 8" PVC SDR21 Sanitary Sewer Pipe
008
7(2)-2 Sanitary Manhole 15 LF
113 LF 8" PVC SDR21 Sanitary Sewer Pipe
7(2)-1 Connect to Existing Sanitary Sewer Manhole 11 LF
Adjust MH Grate
Existing Rim 1172.15'
Proposed Rim 1172.37'
Existing Rim 1145.35'
Proposed Rim 1145.40'
Disconnect and Abandon Existing 4" Service
Install 8"x6" Service Tee and 6" Service Line and Cleanout
Existing Rim 1161.30'
Proposed Rim 1161.30'
Existing Rim 1150.86
Proposed Rim 1151.00'
BEGIN CONSTRUCTION
BEGIN PROJECT
BEGIN FULL DEPTH PAVEMENT
9999-080-926, P101, C501
STA. 10+22.12
FALLOWATER LN. CONST. ℄
BEGIN PROJECT
9999-080-926, R201
STA. 10+37.16
FALLOWATER LN. CONST. ℄
S 47° 03' 53" E
Fallowater Ln. Constr. ℄
S 68° 42' 09" E
Matchline Sta. 15+50.00 - See Sheet 7(3)
PC 12+02.35
PT 13+53.41
Install 8" Cleanout on the Service Line @ ROW Line
Remove 4" Service Line and Cleanout and Replace with 6" Service Line and Cleanout.
Adjust MH Grate
Curve FALLOWATERLN_3
PI = 12+78.79
DELTA = 21° 38' 16.08" (LT)
D = 14° 19' 26"
T = 76.44'
L = 151.06'
R = 400.00'
PC = 12+02.35
PT = 13+53.41
V = 25 MPH
009
001
002
Tax #087.07-01-53.00
Property of
ROANOKE PROPERTY 419, LLC
Tax #087.07-01-50.00
Property of
ELECTRIC FIDELITY INVESTMENTS
1.1513 Ac.
1-Story Stucco
(Rancho Viejo)
Tax #087.07-01-51.00
Property of
NATIONAL RETAIL PROPERTIES, LP
Instrument #201408052
Instrument #201201409 (Plat)
2.8954 Ac.
Electric Road
Virginia Route #419
Asphalt Parking
Concrete Walk
Variable Width Sanitary Sewer Easement
SCALE
0
25'
50'

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

Mainline Profile	3A
Drainage Descr.	2D
E&S Plans	3B, 3C
RW Plan	3RW
Entrance Profiles	3D
Alignment Data	1G
Typical Sections	2A

4/5/2021
5:54:17 PM

dl12304_07_03.dgn
Plotted By: DavisCD

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inframap (804) 550-2937

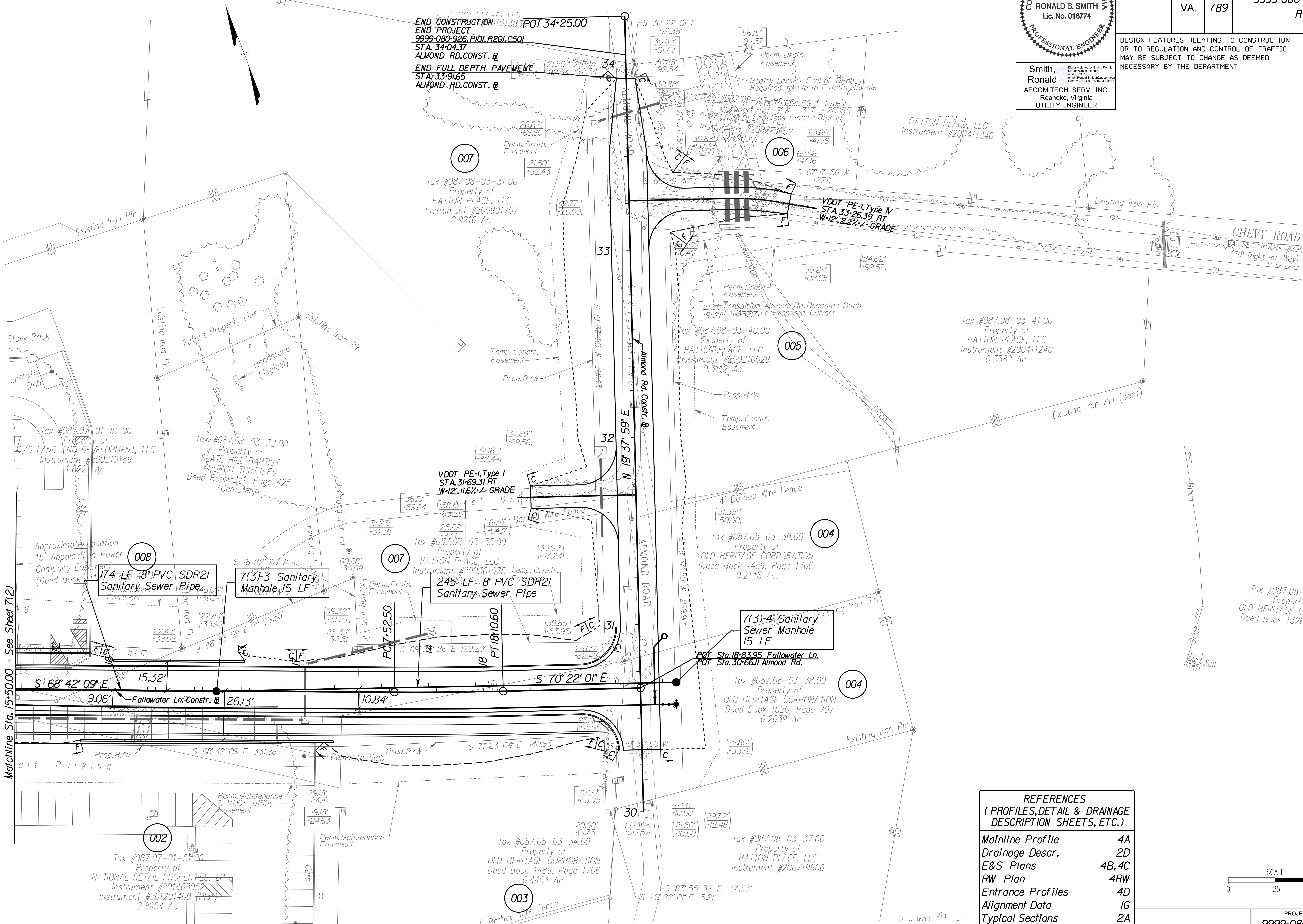
UTILITY PLAN (SANITARY)

COMMONWEALTH OF VIRGINIA
RONALD B. SMITH
Lic. No. 016774
PROFESSIONAL ENGINEER

Smith, Ronald
AECOM TECH. SERV., INC.
Roanoke, Virginia
UTILITY ENGINEER

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	7(3)

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



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	4A
Drainage Descr.	2D
E&S Plans	4B, 4C
RW Plan	4RW
Entrance Profiles	4D
Alignment Data	1G
Typical Sections	2A
Ret. Wall Details	2H(1) - 2H(2)

SCALE
0 25' 50'

PROJECT	SHEET NO.
9999-080-926	7(3)

4/5/2021
5:56:36 PM

dl12304_07_04.dgn
Plotted By: DavisCD

PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Int'l. Map (804) 550-2937

SANITARY SEWER PROFILE

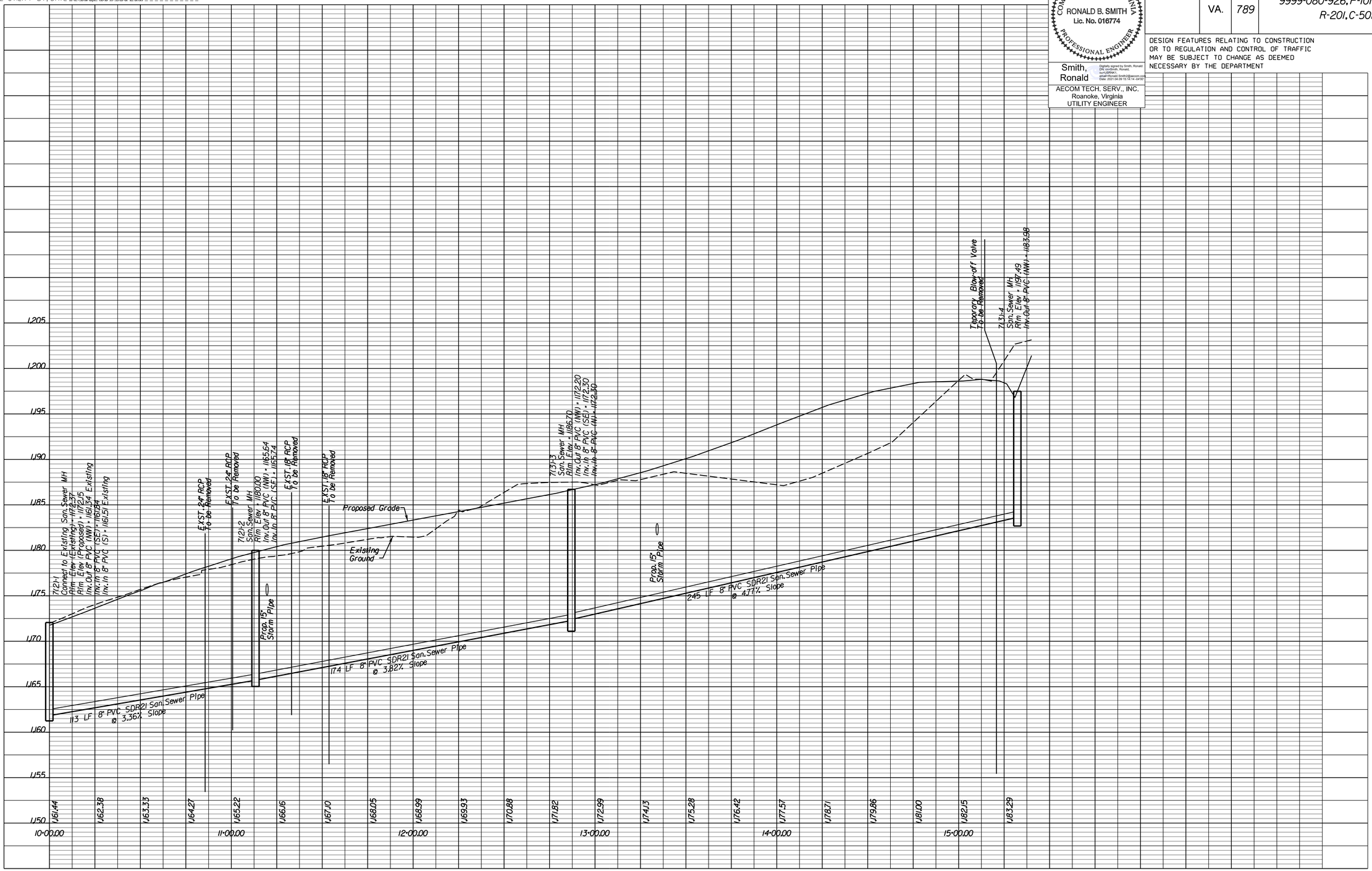
COMMONWEALTH OF VIRGINIA
RONALD B. SMITH
Lic. No. 016774
PROFESSIONAL ENGINEER

Smith, Ronald
Digitally signed by Smith, Ronald
DN: cn=Smith, Ronald, ou=USPNA, email=Ronald.Smith2@aecom.com
Date: 2021.04.09 15:16:14 -04'00'

AECOM TECH. SERV., INC.
Roanoke, Virginia
UTILITY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	7(4)

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



HORIZ. SCALE
0 25' 50'

VERT. SCALE
0 5' 10'

PROJECT	SHEET NO.
9999-080-926	7(4)

4/5/2021
3:31:50 PM

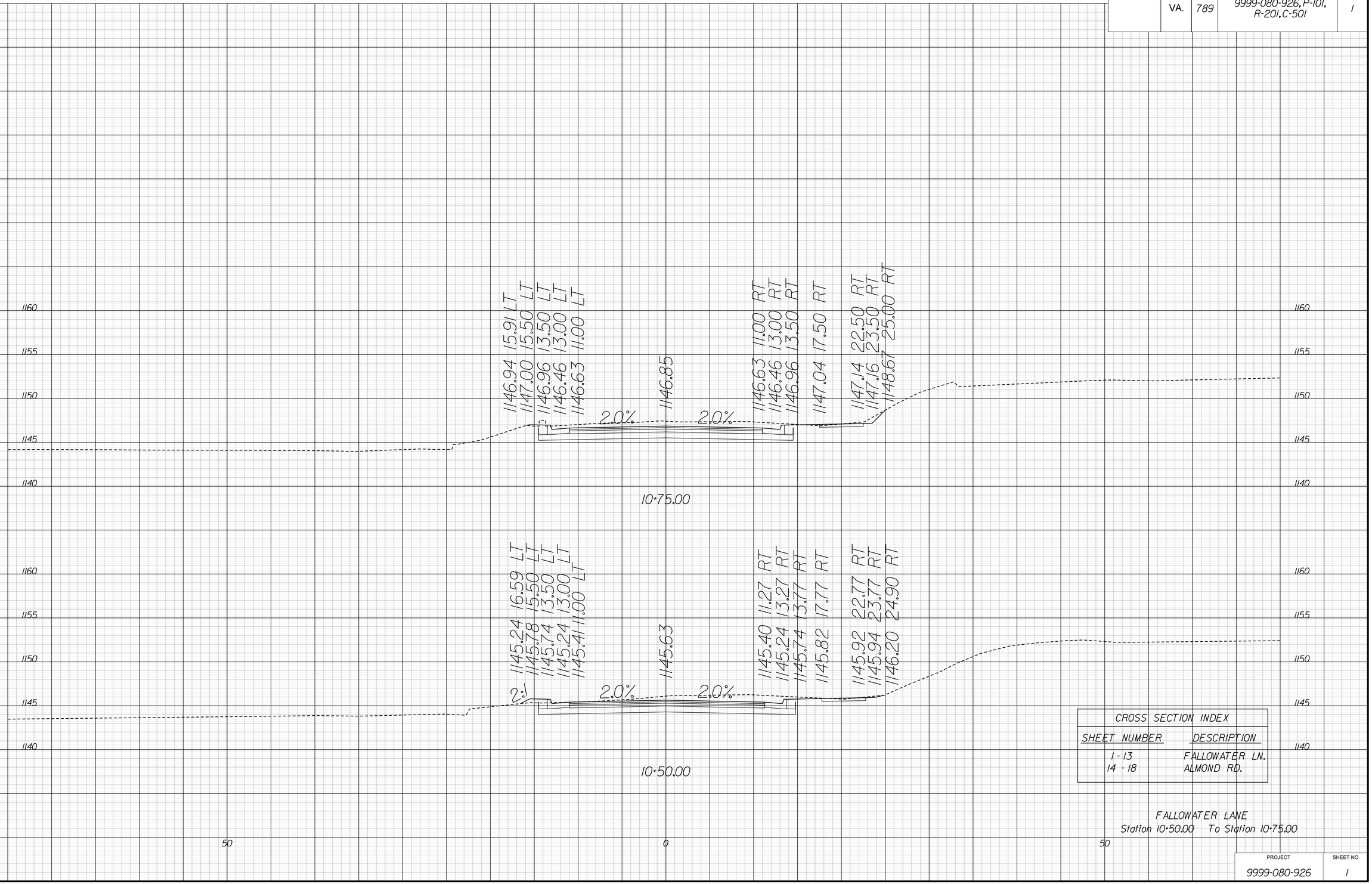
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, PE (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE InfraMap (804) 550-2937

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	1



CROSS SECTION INDEX	
SHEET NUMBER	DESCRIPTION
1 - 13	FALLOWATER LN.
14 - 18	ALMOND RD.

FALLOWATER LANE
Station 10+50.00 To Station 10+75.00

PROJECT	SHEET NO.
9999-080-926	1

4/5/2021
3:32:40 PM

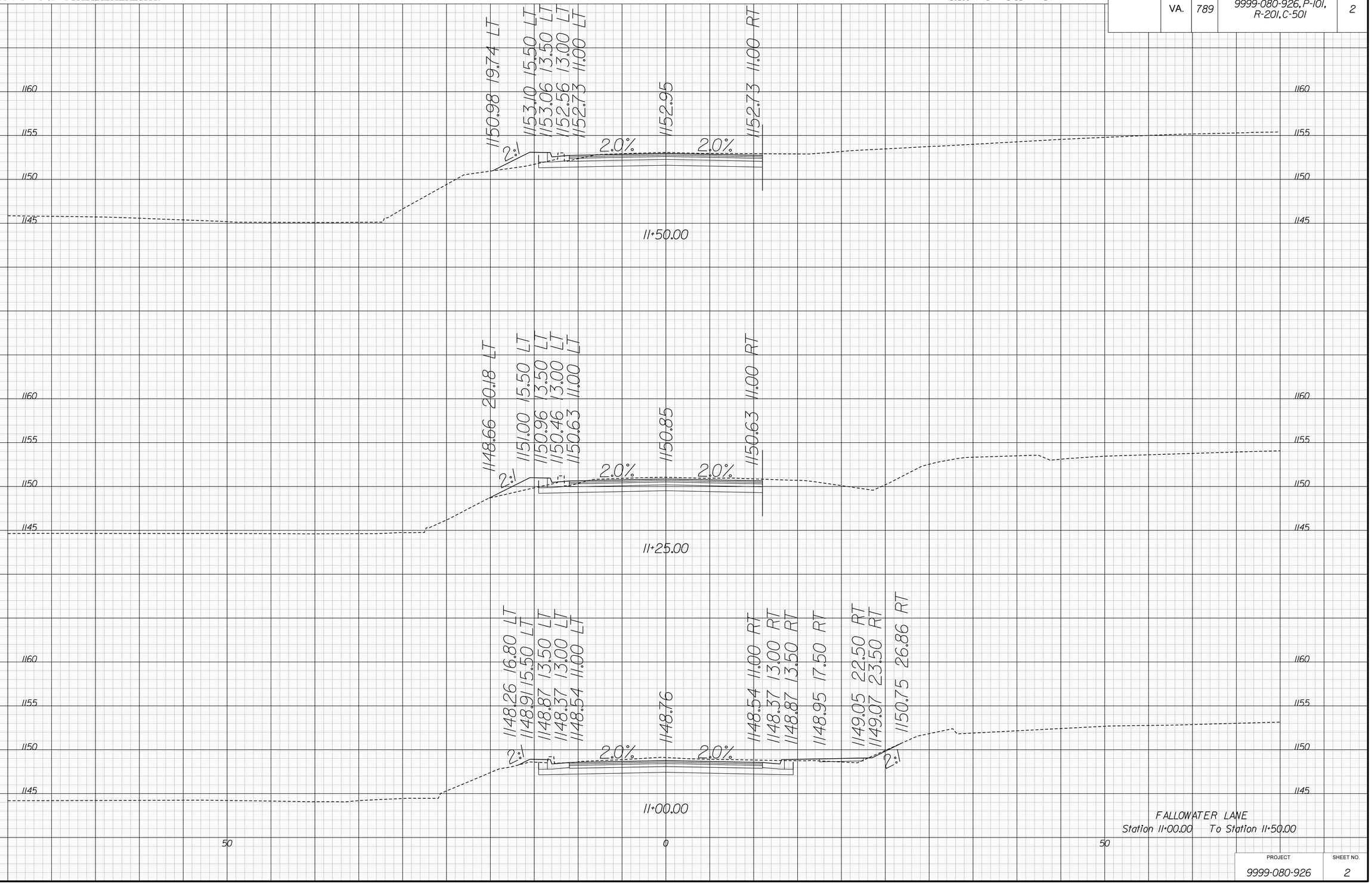
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem) _ _ _ _
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM) _ _ _ _ _ _ _
SUBSURFACE UTILITY BY, DATE Info Map (804) 550-2937 _ _ _

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	2



FALLOWATER LANE
Station 11+00.00 To Station 11+50.00

PROJECT	SHEET NO.
9999-080-926	2

4/5/2021
3:32:42 PM

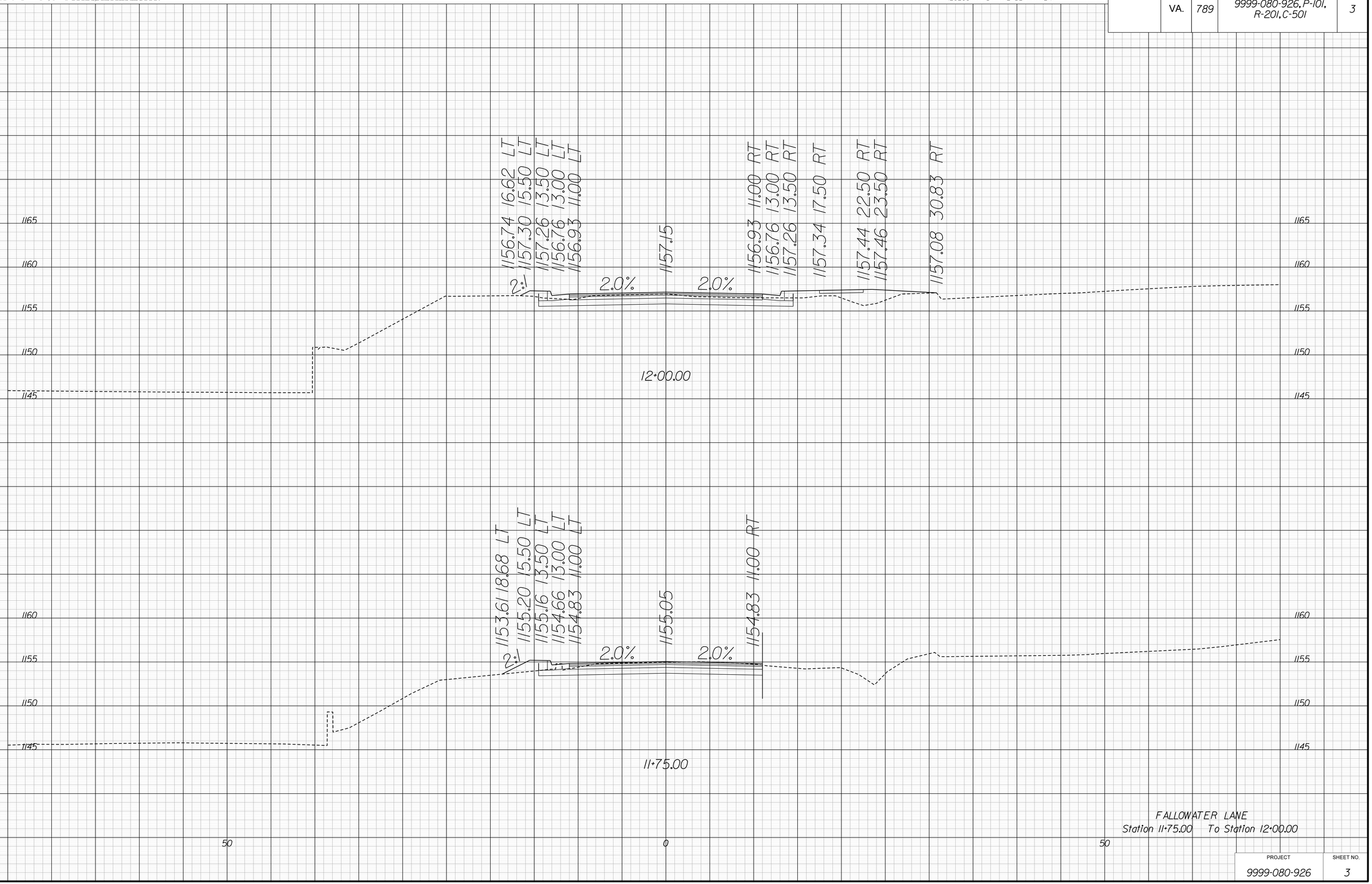
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Infrasmap (804) 550-2937

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	3



FALLOWATER LANE
Station 11+75.00 To Station 12+00.00

PROJECT	SHEET NO.
9999-080-926	3

4/5/2021
3:32:45 PM

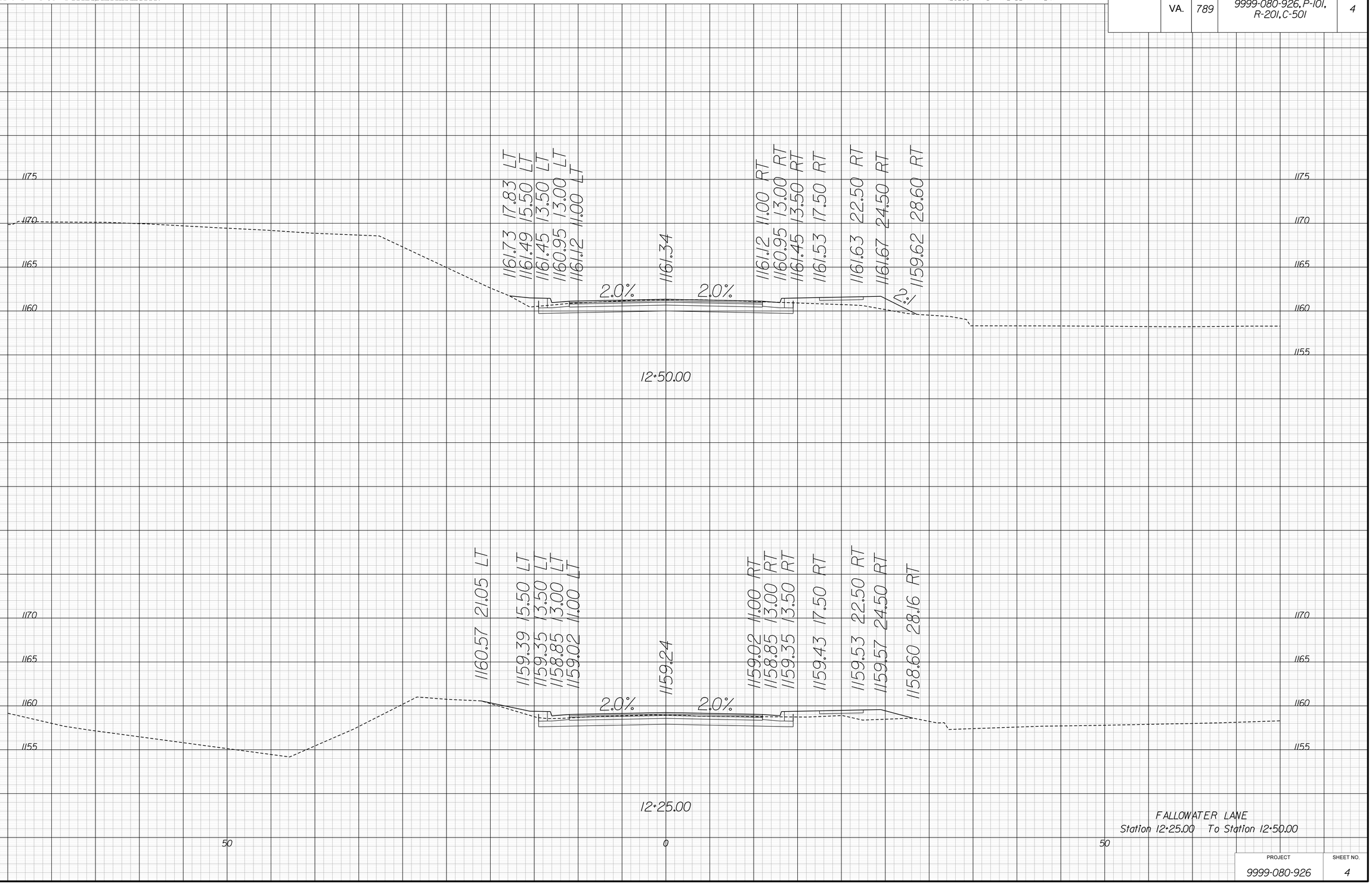
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, PE (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Infrasmap (804) 550-2937

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	4



FALLOWATER LANE
Station 12+25.00 To Station 12+50.00

PROJECT	SHEET NO.
9999-080-926	4

4/5/2021
3:32:47 PM

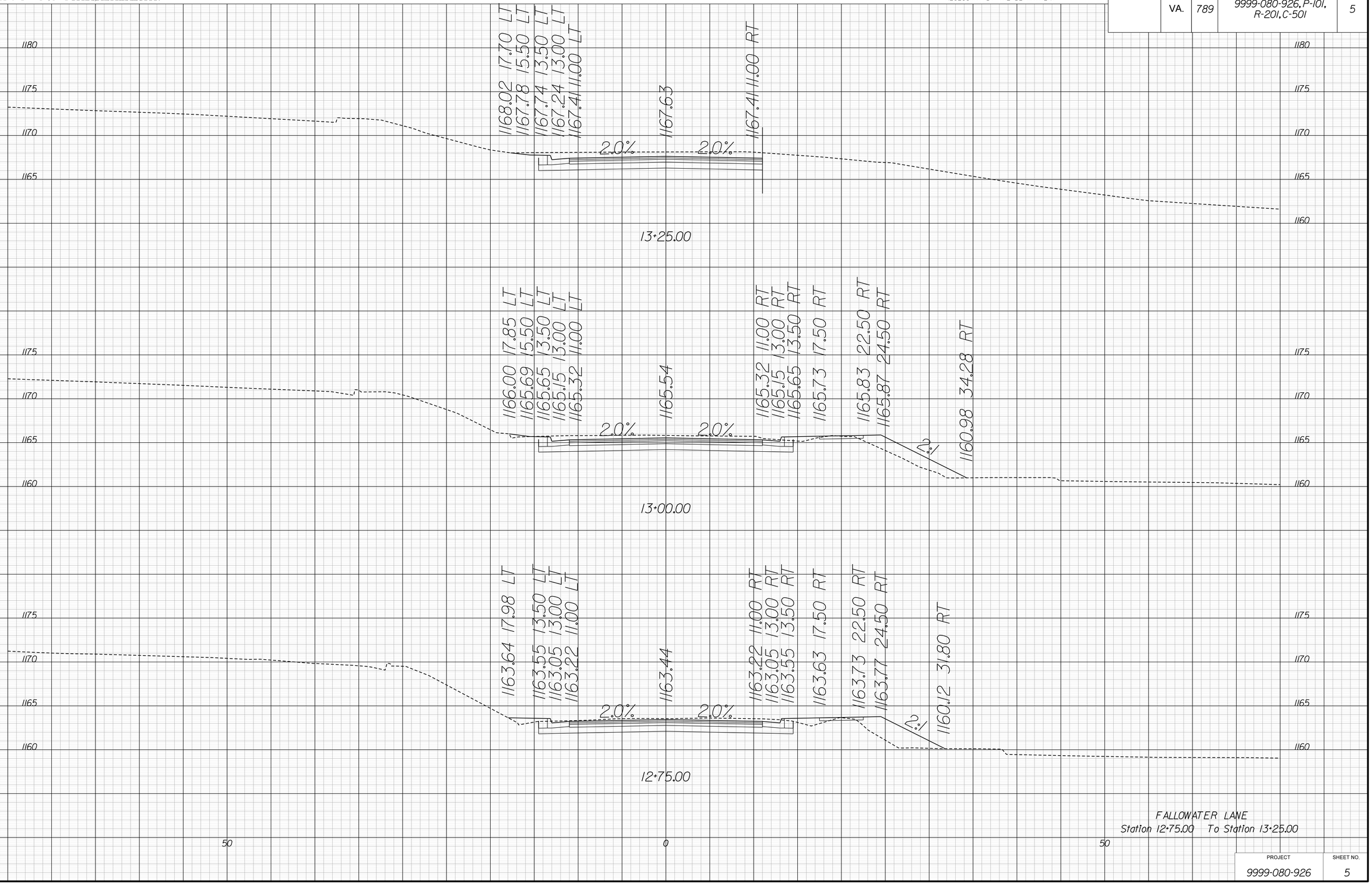
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem) _ _ _
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, PE (540) 857-3322 (AECOM) _ _ _ _ _ _ _
SUBSURFACE UTILITY BY, DATE Info Map (804) 550-2937 _ _ _

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	5



FALLOWATER LANE
Station 12+75.00 To Station 13+25.00

PROJECT	SHEET NO.
9999-080-926	5

4/5/2021
3:32:49 PM

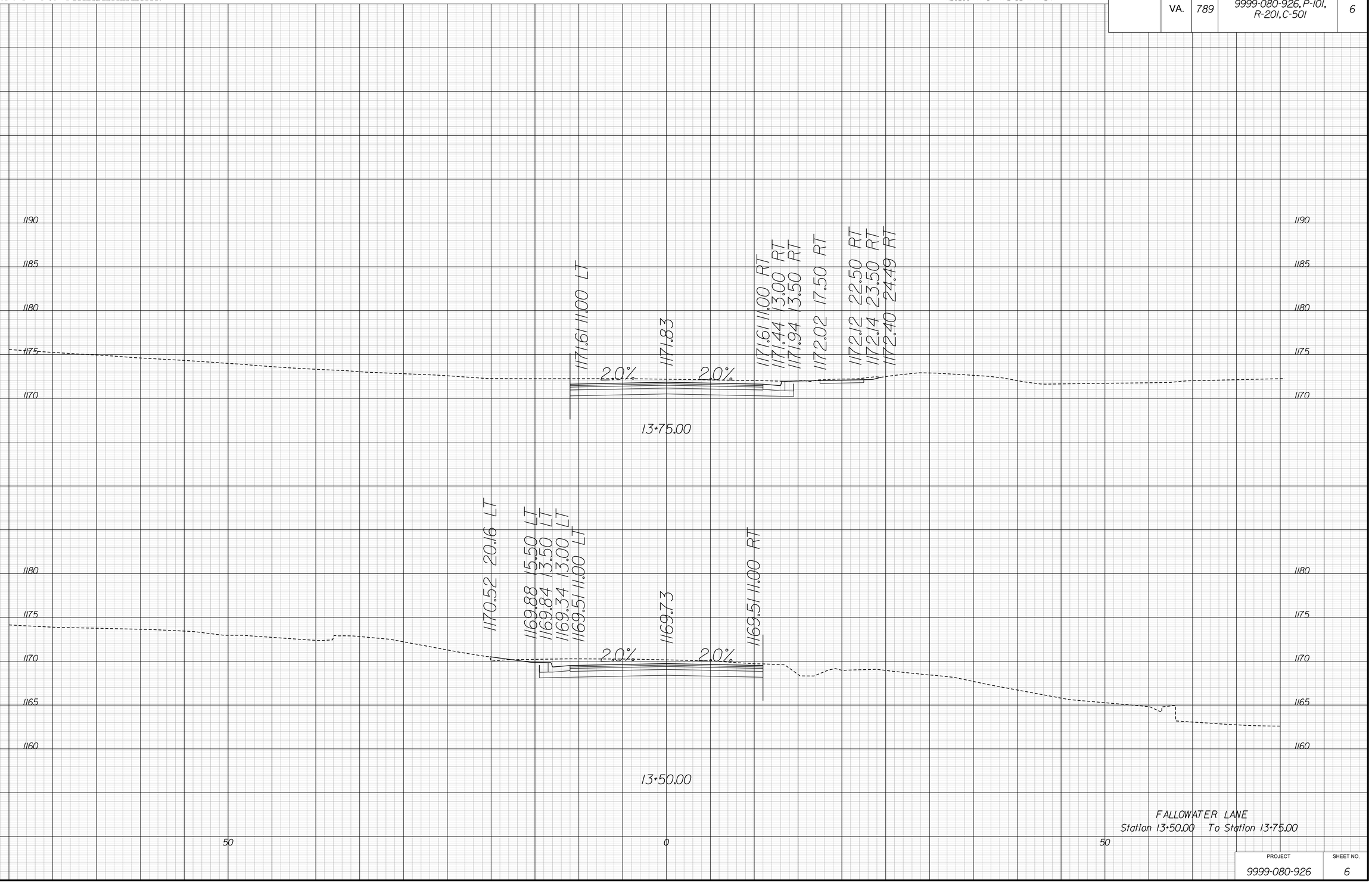
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, PE (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE InfraMap (804) 550-2937

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	6



FALLOWATER LANE
Station 13+50.00 To Station 13+75.00

PROJECT	SHEET NO.
9999-080-926	6

4/5/2021
3:32:52 PM

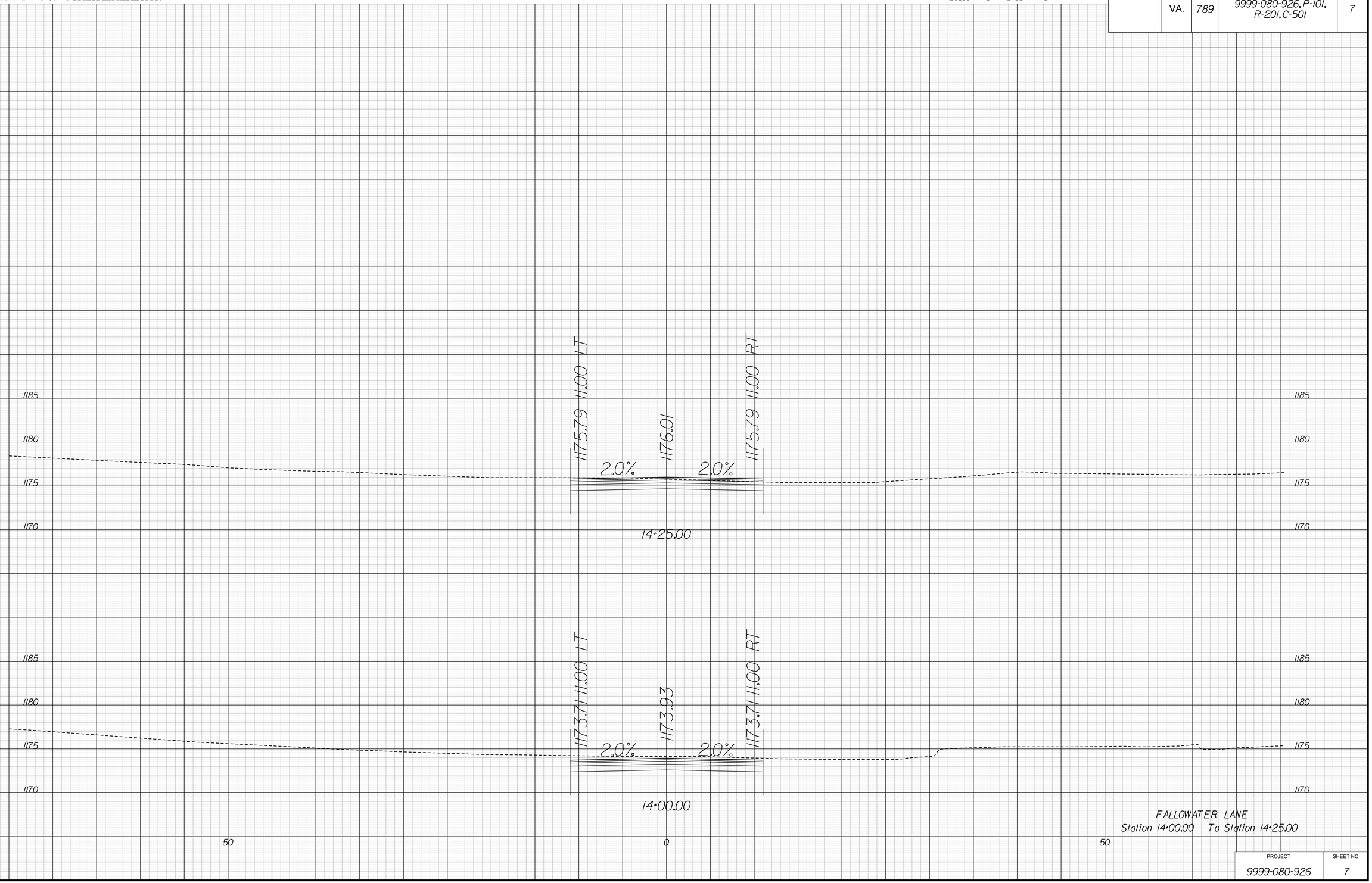
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem) _ _ _ _
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM) _ _ _ _ _ _ _
SUBSURFACE UTILITY BY, DATE Info Map (804) 550-2937 _ _ _

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	7



FALLOWATER LANE
Station 14+00.00 To Station 14+25.00

PROJECT	SHEET NO.
9999-080-926	7

4/5/2021
3:32:54 PM

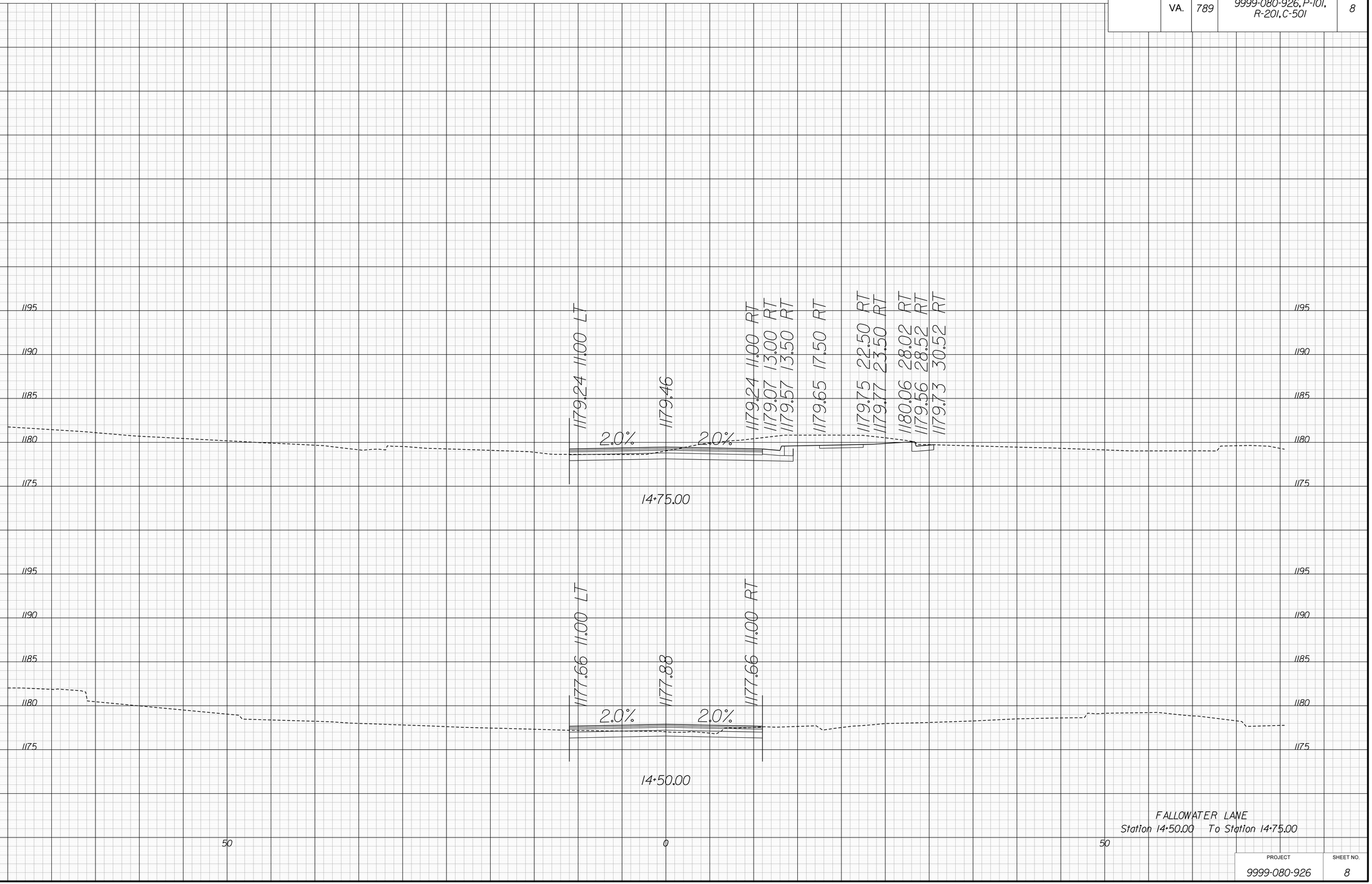
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem) _ _ _ _
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM) _ _ _ _ _ _ _
SUBSURFACE UTILITY BY, DATE Info Map (804) 550-2937 _ _ _

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	8



FALLOWATER LANE
Station 14+50.00 To Station 14+75.00

PROJECT	SHEET NO.
9999-080-926	8

4/5/2021
3:32:55 PM

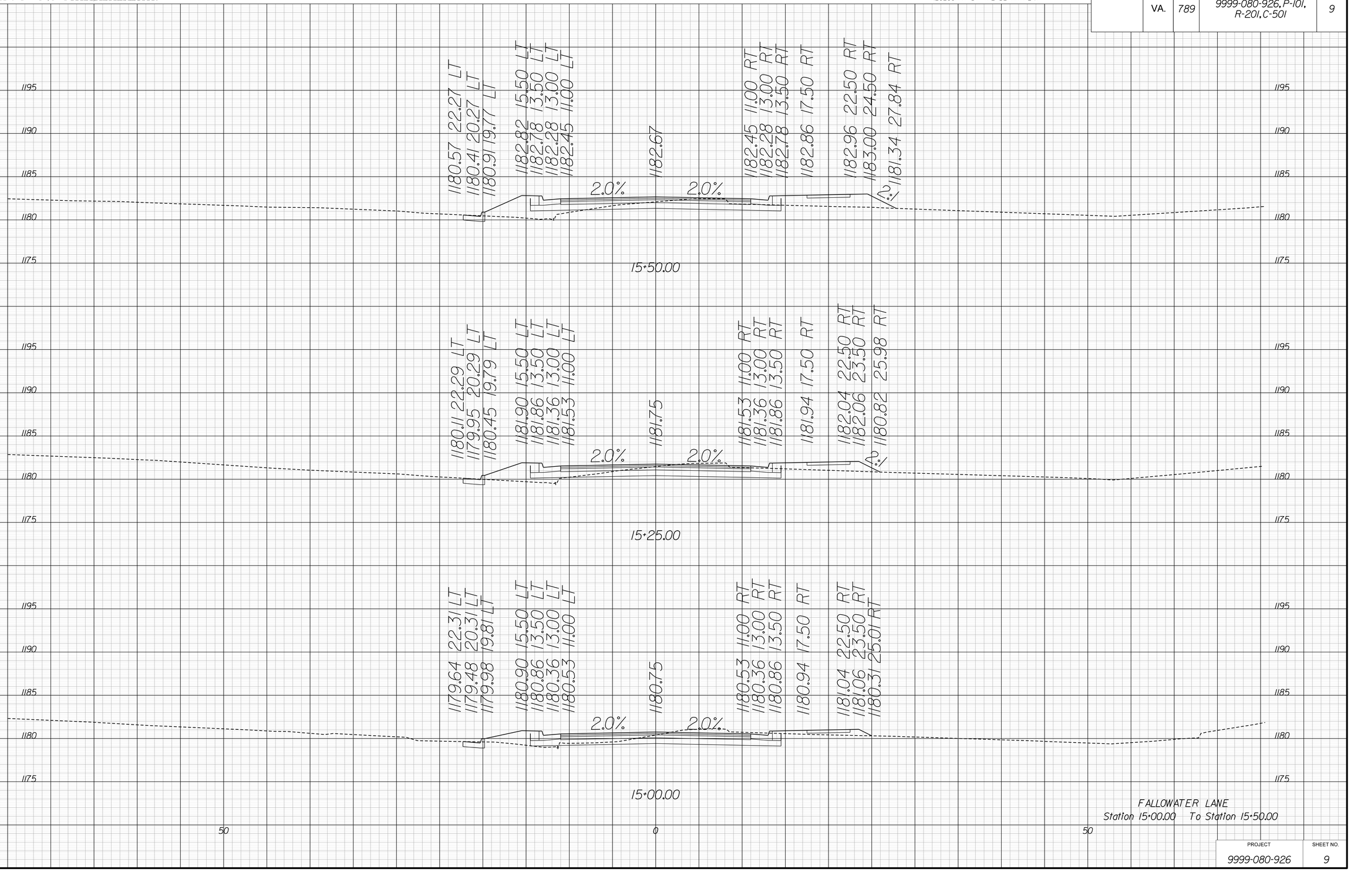
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, PE (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE InfoMap (804) 550-2937

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	9



FALLOWATER LANE
Station 15+00.00 To Station 15+50.00

PROJECT	SHEET NO.
9999-080-926	9

4/5/2021
3:32:59 PM

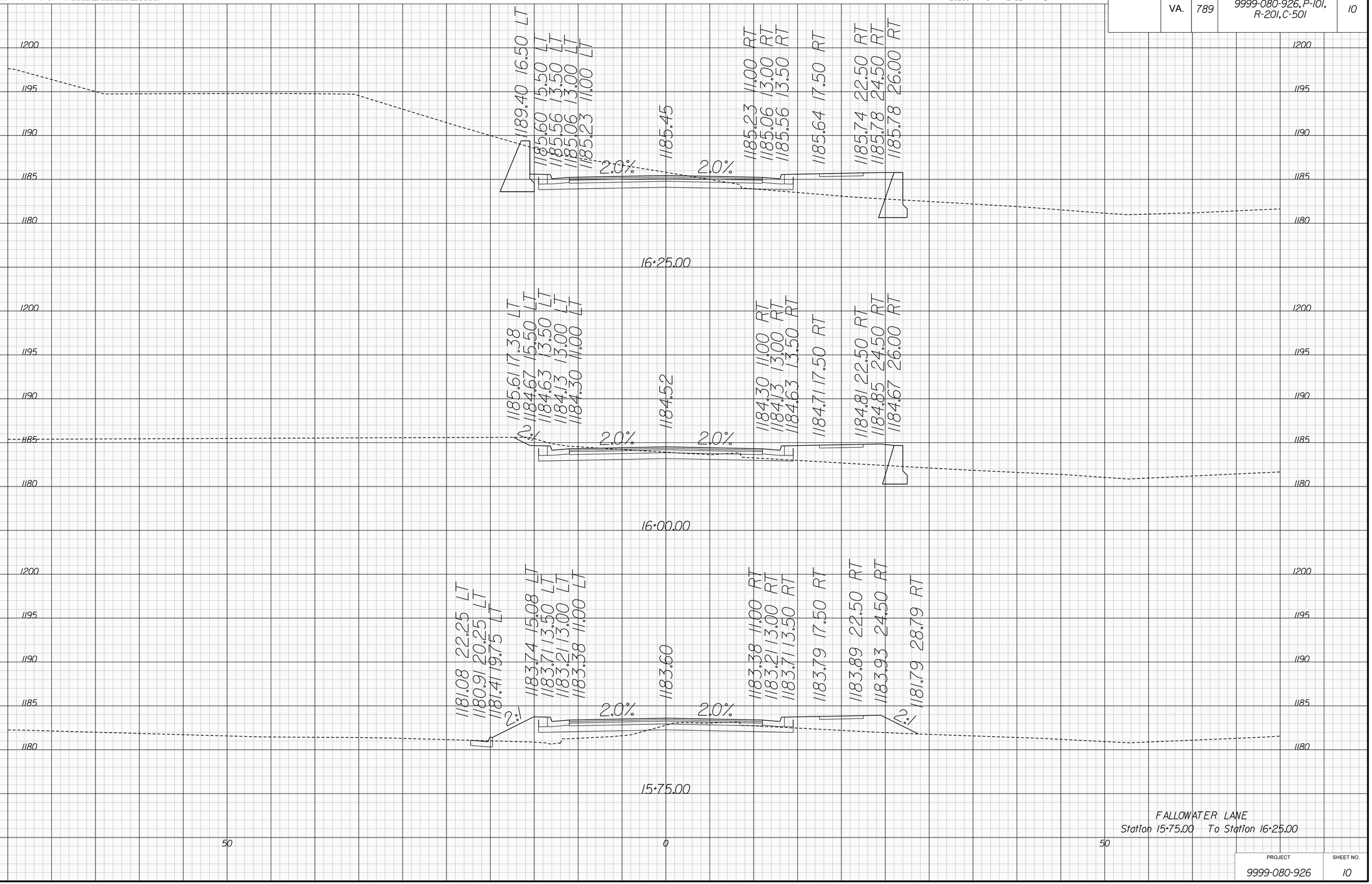
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, PE (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Infrastructure (804) 550-2937

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	10



FALLOWATER LANE
Station 15+75.00 To Station 16+25.00

PROJECT	SHEET NO.
9999-080-926	10

4/5/2021
3:33:01 PM

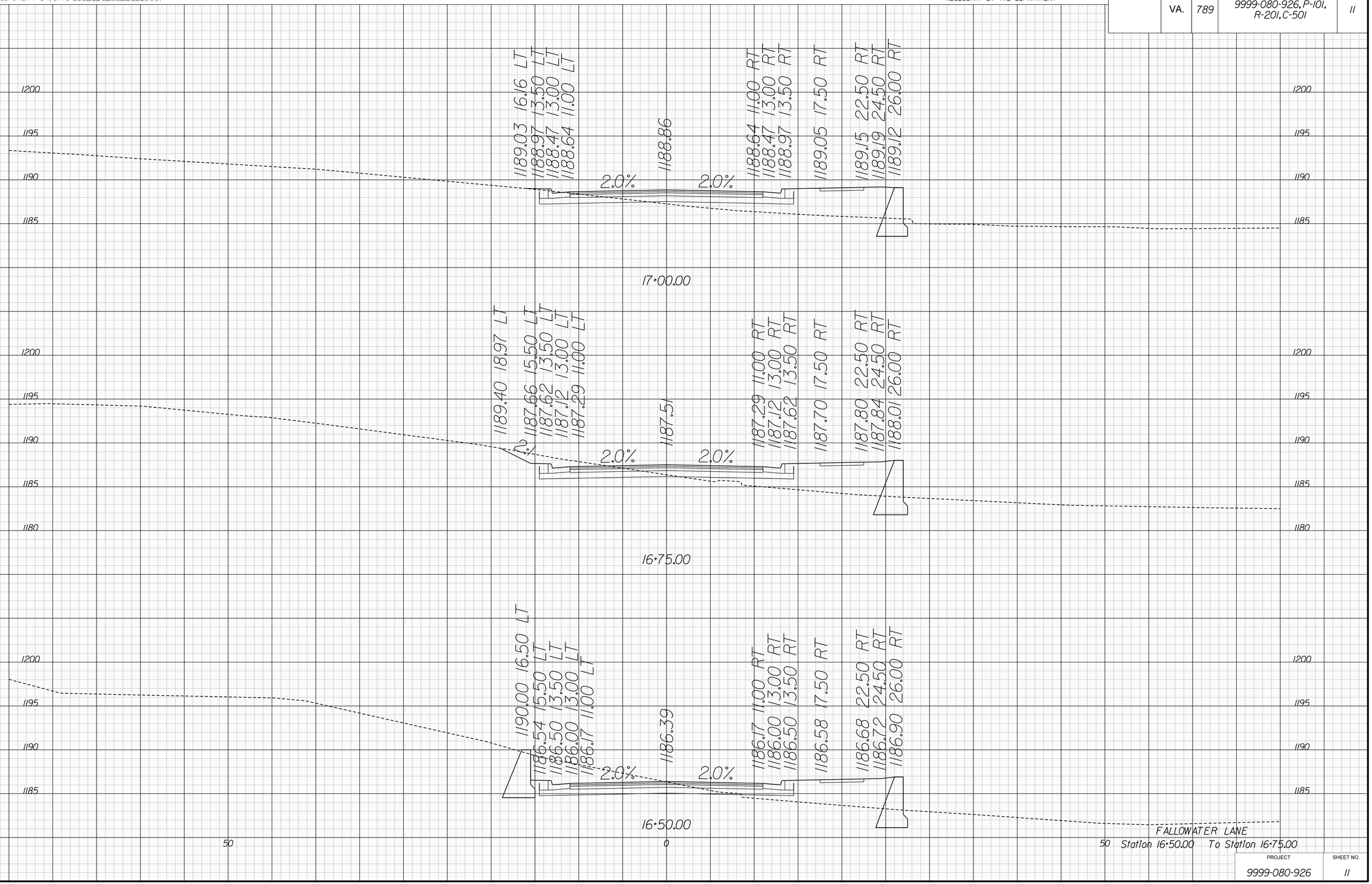
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, PE (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE InfoMap (804) 550-2937

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	11



FALLOWATER LANE
Station 16+50.00 To Station 16+75.00

PROJECT	SHEET NO.
9999-080-926	11

4/5/2021
3:33:05 PM

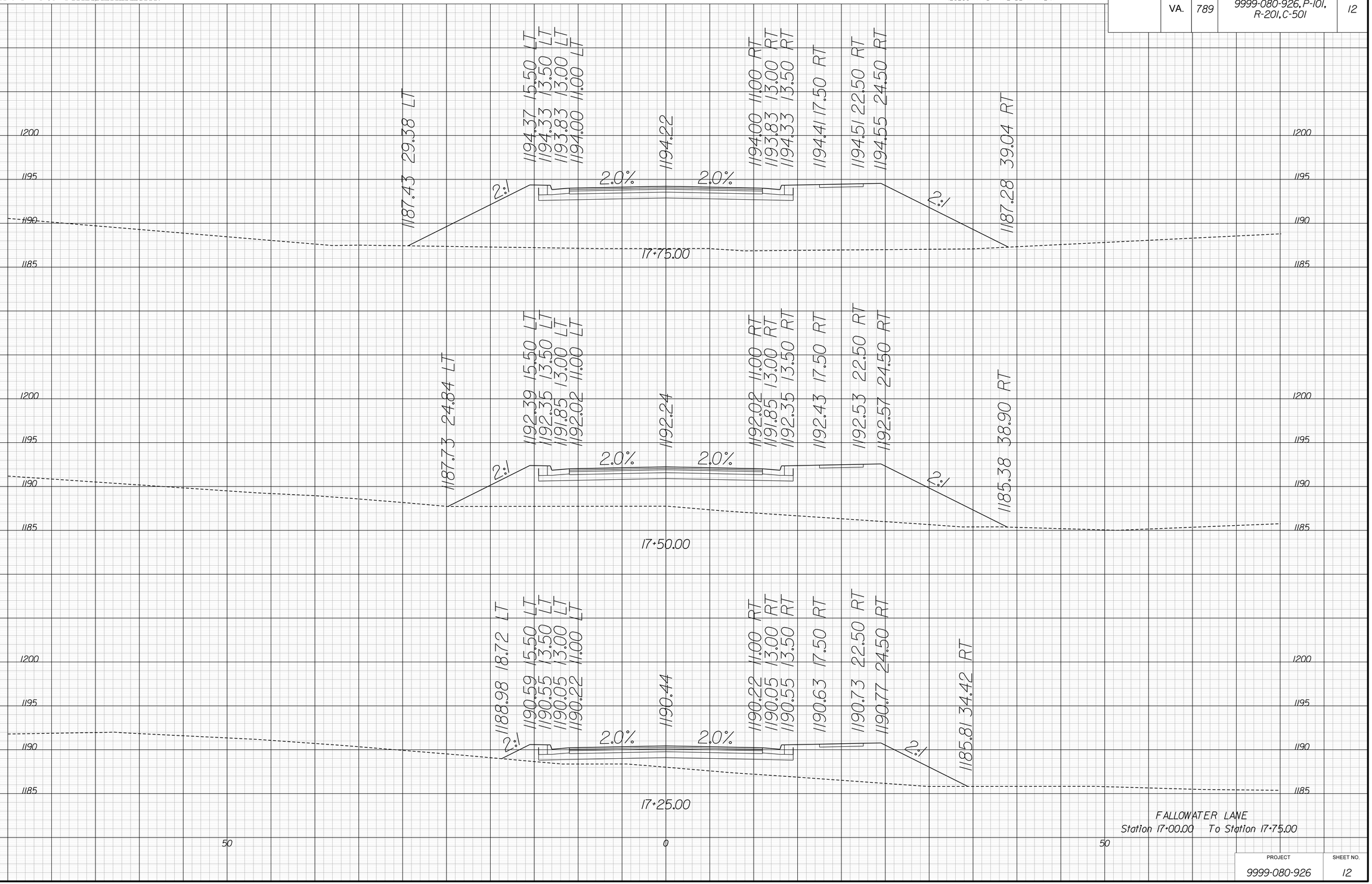
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, PE (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE InfoMap (804) 550-2937

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	12



FALLOWATER LANE
Station 17+00.00 To Station 17+75.00

PROJECT	SHEET NO.
9999-080-926	12

4/5/2021
3:33:07 PM

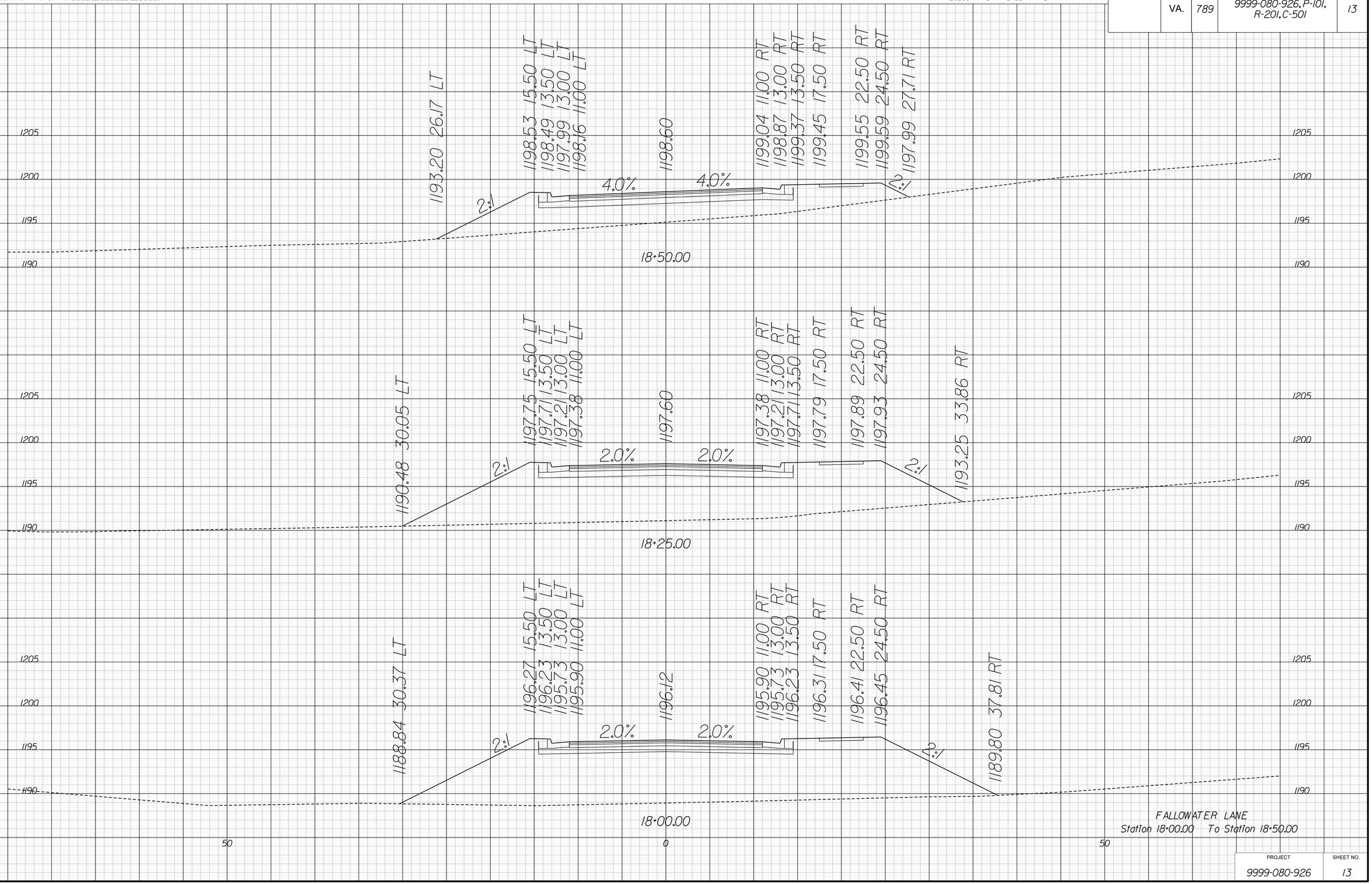
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Infrasource (804) 550-2937

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	13



FALLOWATER LANE
Station 18+00.00 To Station 18+50.00

PROJECT	SHEET NO.
9999-080-926	13

4/5/2021
3:35:48 PM

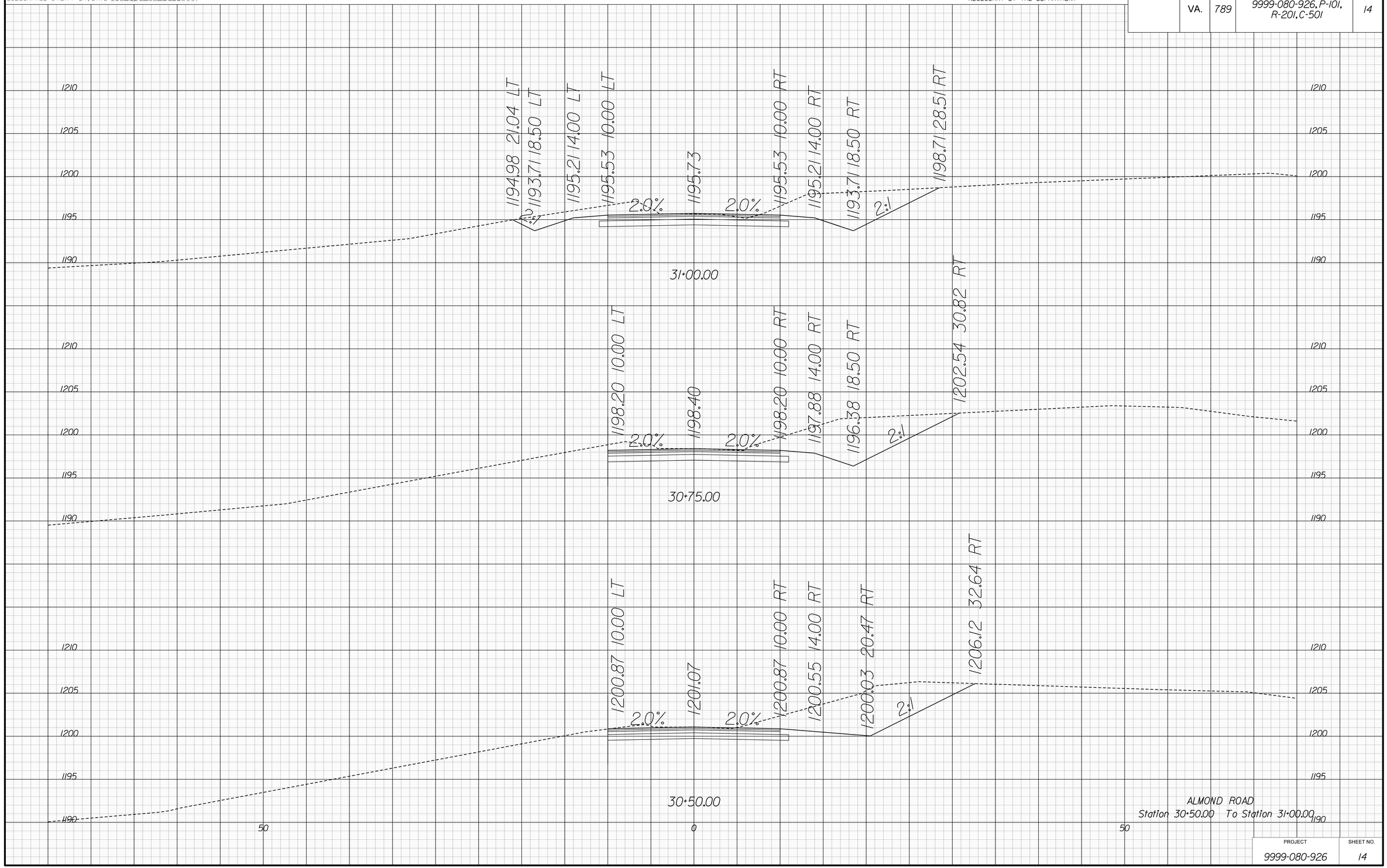
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, PE (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Infrasmap (804) 550-2937

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	14



ALMOND ROAD
Station 30+50.00 To Station 31+00.00

PROJECT	SHEET NO.
9999-080-926	14

4/5/2021
3:35:50 PM

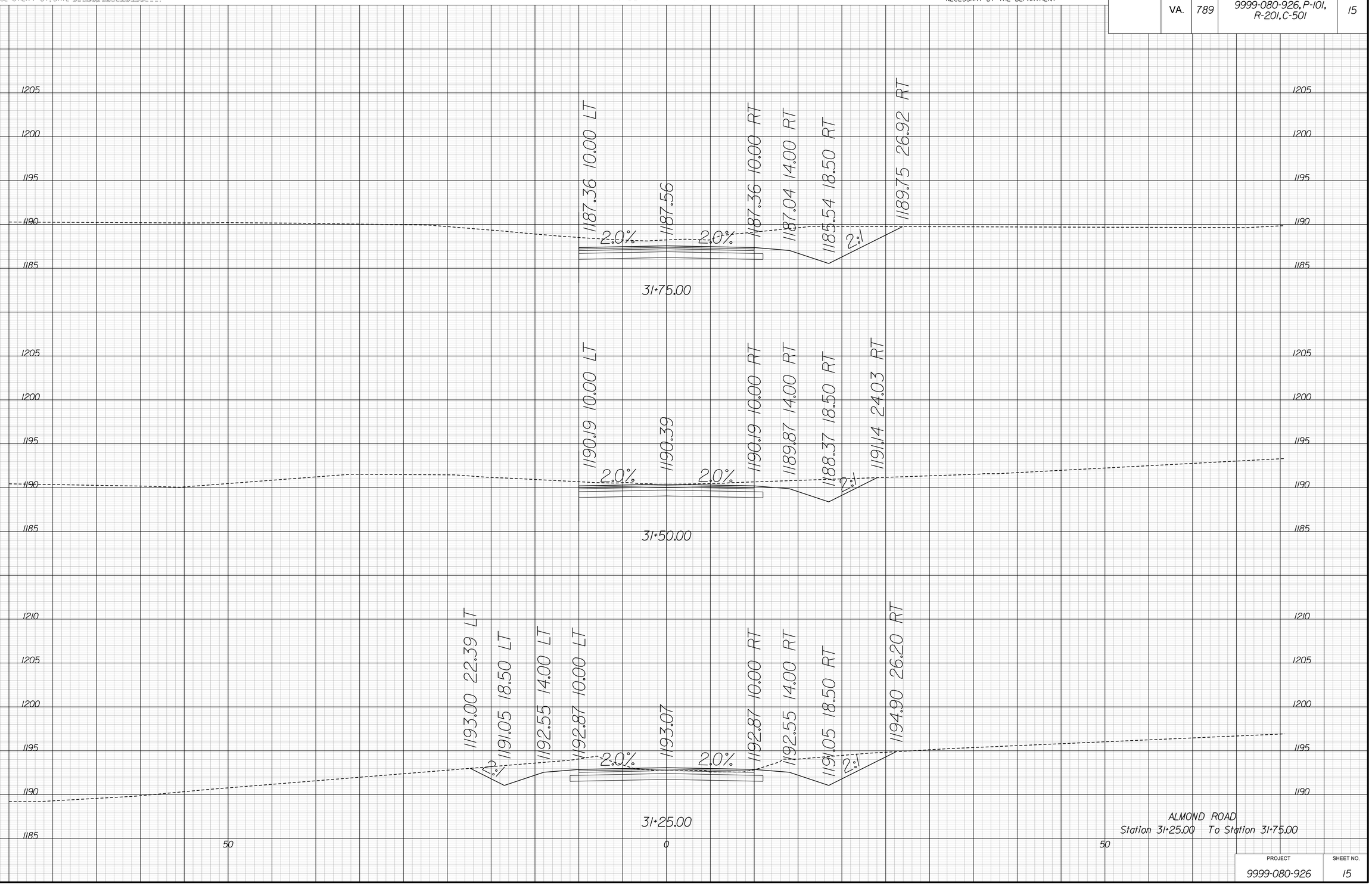
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem) _ _ _ _
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM) _ _ _ _ _ _ _
SUBSURFACE UTILITY BY, DATE Infrastructure (804) 550-2937 _ _ _

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	15



ALMOND ROAD
Station 31+25.00 To Station 31+75.00

PROJECT	SHEET NO.
9999-080-926	15

4/5/2021
3:35:52 PM

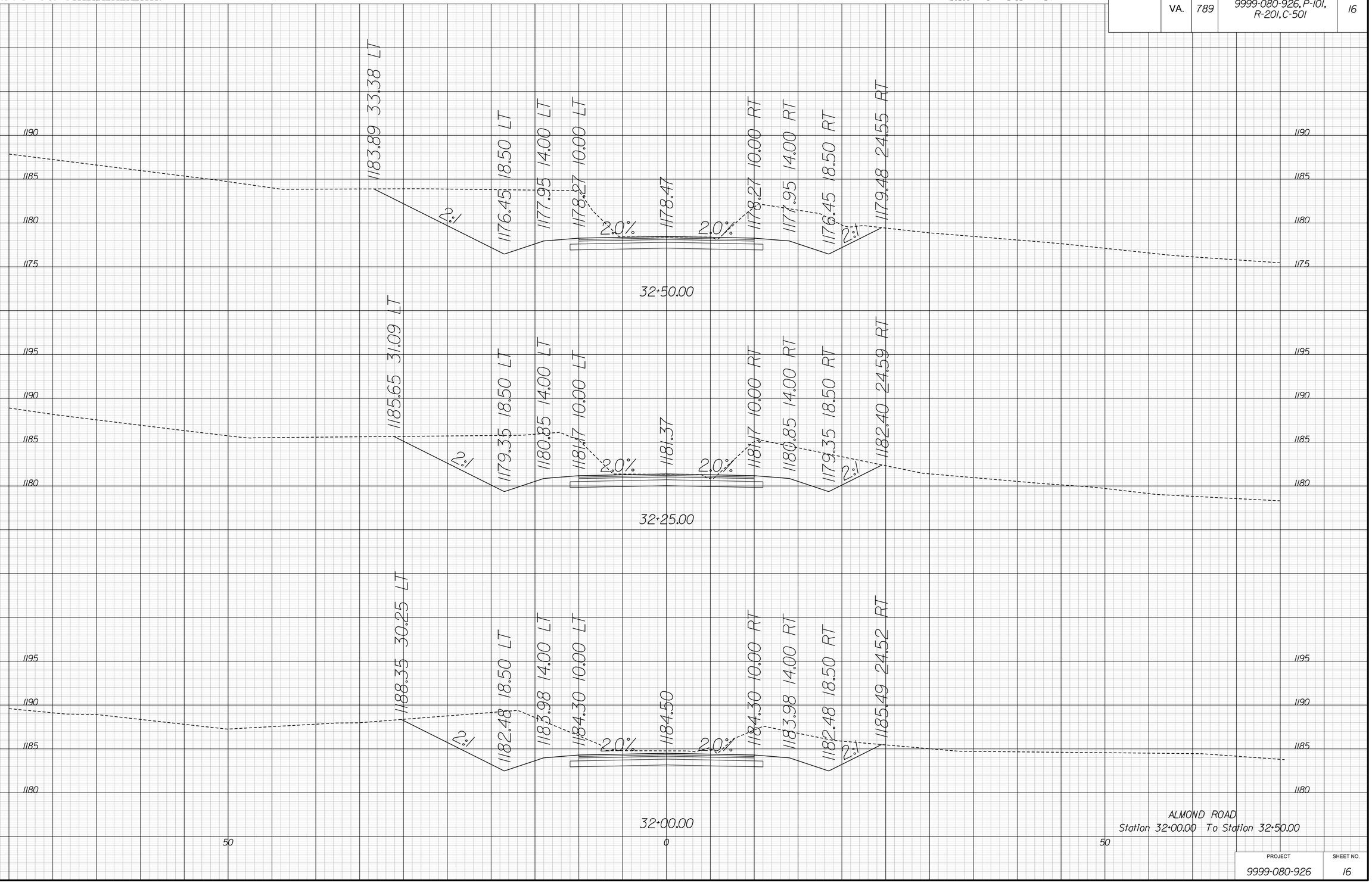
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem) _ _ _ _
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM) _ _ _ _ _ _ _
SUBSURFACE UTILITY BY, DATE Info Map (804) 550-2937 _ _ _

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	16



ALMOND ROAD
Station 32+00.00 To Station 32+50.00

PROJECT	SHEET NO.
9999-080-926	16

4/5/2021
3:35:54 PM

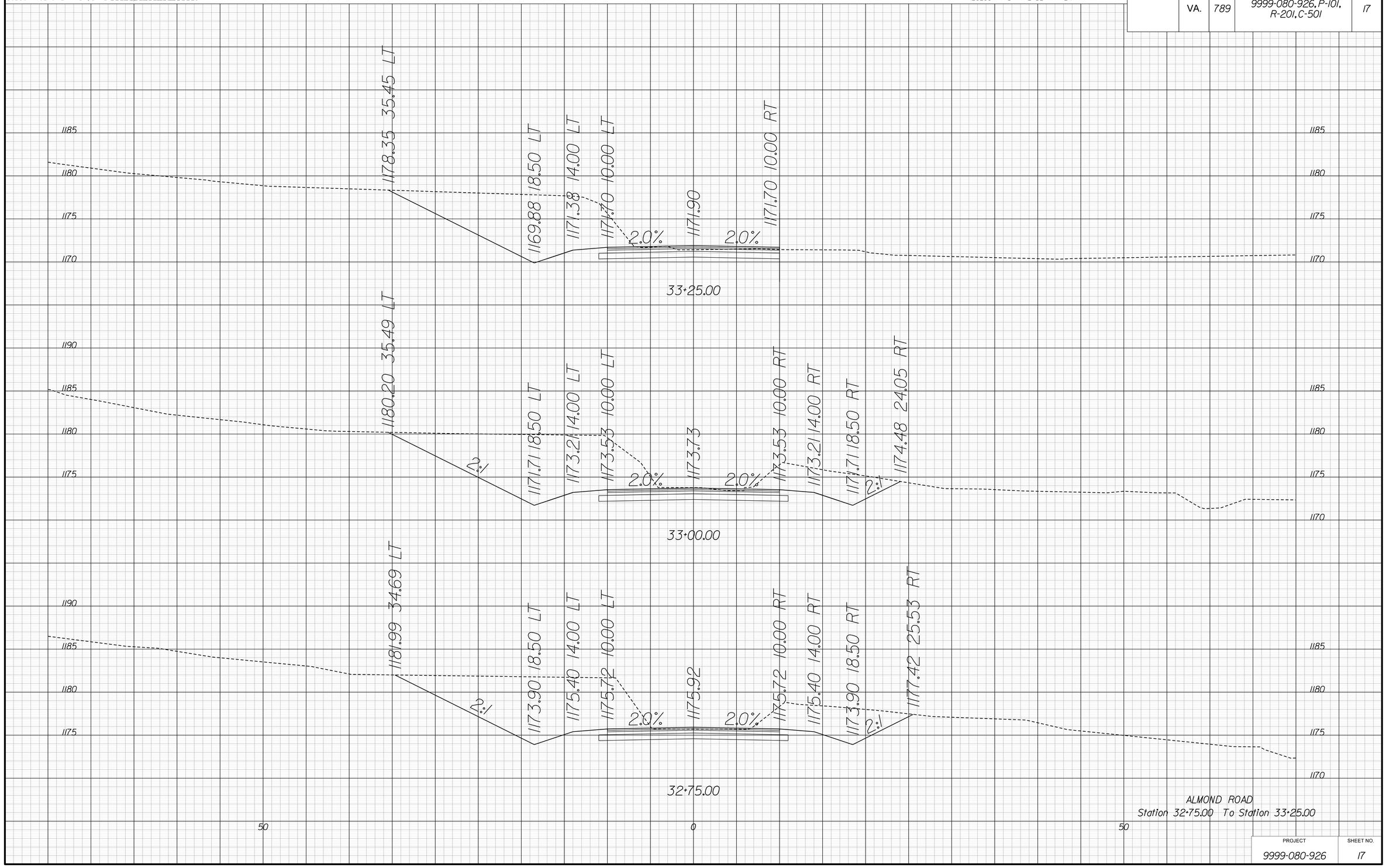
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem) _ _ _ _
SURVEYED BY, DATE Larry T. Ogle, Jr., L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, P.E. (540) 857-3322 (AECOM) _ _ _ _ _ _ _
SUBSURFACE UTILITY BY, DATE Info Map (804) 550-2937 _ _ _.

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	17



ALMOND ROAD
Station 32+75.00 To Station 33+25.00

PROJECT	SHEET NO.
9999-080-926	17

4/5/2021
3:35:56 PM

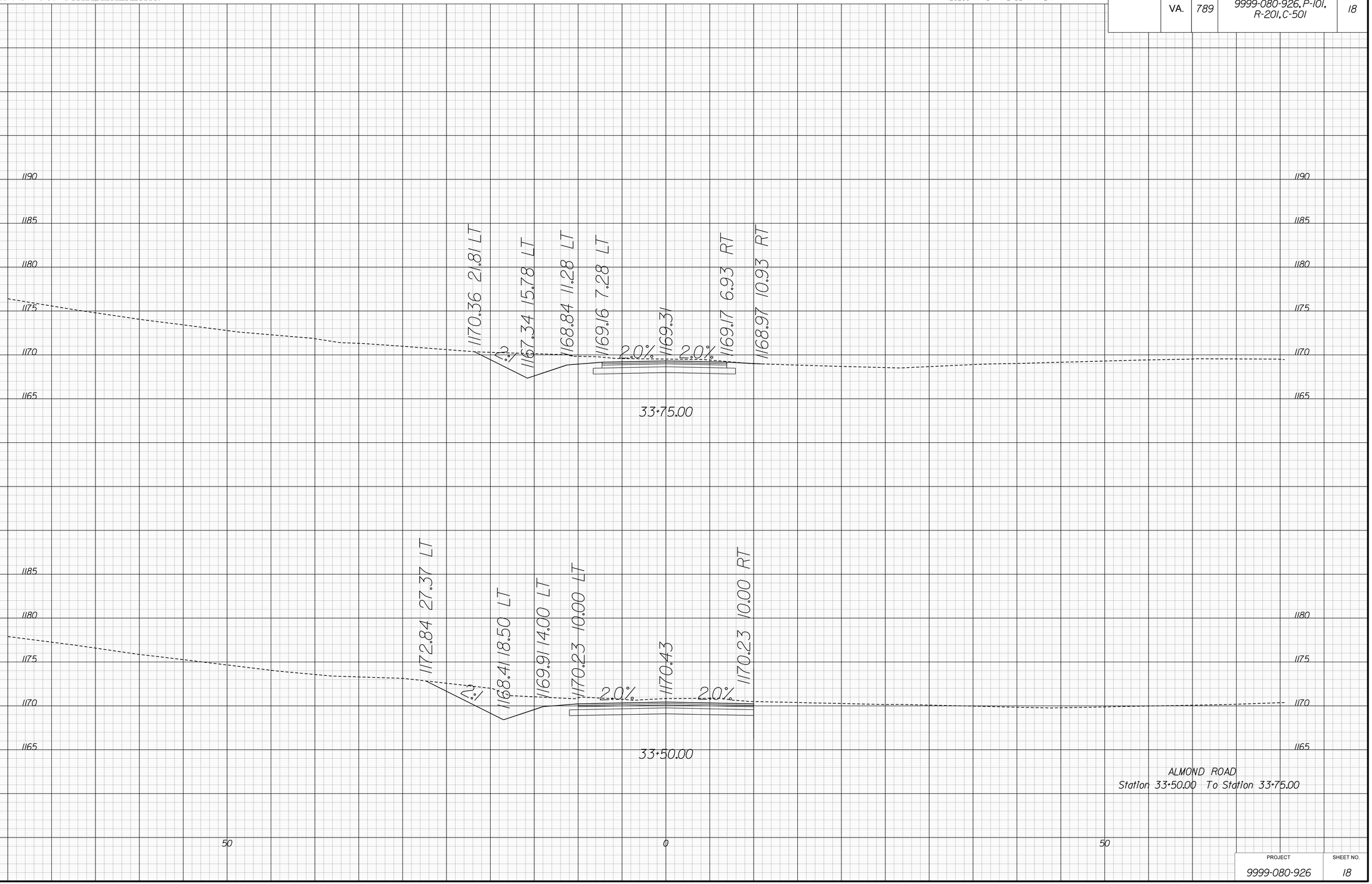
PROJECT MANAGER Cheryl Becker (540) 387-5399 (Salem)
SURVEYED BY, DATE Larry T. Ogle, Jr. L.S. (540) 774-4411 (Lumsden Associates)
DESIGN BY Scott Hodge, PE (540) 857-3322 (AECOM)
SUBSURFACE UTILITY BY, DATE Inframap (804) 550-2937

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 ROUTE	STATE PROJECT	SHEET NO.
	VA.	789	9999-080-926, P-101, R-201, C-501	18



ALMOND ROAD
Station 33+50.00 To Station 33+75.00

PROJECT	SHEET NO.
9999-080-926	18