PROJECT MANAGER Wendy Block Sanford, City of Fairfax, (703) 385-7889
SURVEYED BY Rinker Design Assoc., P.C. (703) 368-7373
DESIGN SUPERVISED BY Mark Gunn, P.E., Rinker Design Assoc., P.C. (703) 368-7373
DESIGNED BY Adam D. Welschenbach, P.E., Rinker Design Assoc., P.C. (703) 368-7373

INSERTABLE SHEETS ST'D. SPD-1 & SPD-2

REVISED	STATE	FEDERAL AID PROJECT OWNER	STATE ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	IH(12)

Rinker Design Associates, P.C.
Civil Engineering • Surveying • Land Planning
Transportation • Environmental
Right of Way Services
Office Locations

NORTHERN VIRGINIA DISTRICT

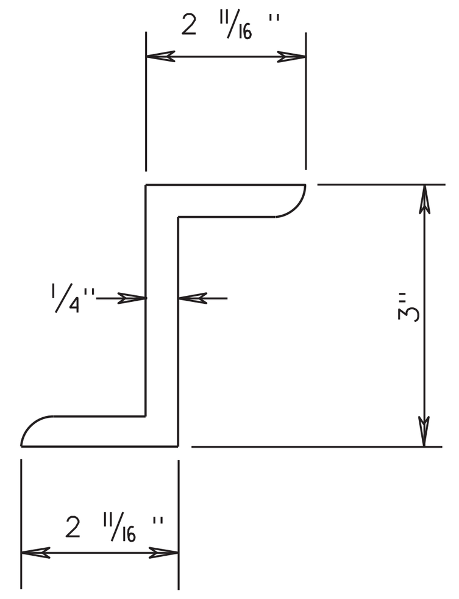
8/19/2014

SPD-1

SIGN PANEL DIMENSIONS W	H	c	d	ZEE BAR NO.
12'	4'	14"	20"	2
11'	5'	16"	28"	2
10'	6'	12"	4'-0"	2
12'	6'	12"	4'-0"	2
14'	6'	12"	4'-0"	2
16'	6'	12"	4'-0"	2
18'	6'	12"	4'-0"	2
20'	6'	12"	4'-0"	2
22'	6'	12"	4'-0"	2
24'	6'	12"	4'-0"	2
26'	6'	12"	4'-0"	2
28'	6'	12"	4'-0"	2
30'	6'	12"	4'-0"	2
10'	8'	12"	3'-0"	3
12'	8'	12"	3'-0"	3
14'	8'	12"	3'-0"	3
16'	8'	12"	3'-0"	3
18'	8'	12"	3'-0"	3
20'	8'	12"	3'-0"	3
22'	8'	12"	3'-0"	3
24'	8'	12"	3'-0"	3
26'	8'	12"	3'-0"	3
28'	8'	12"	3'-0"	3
30'	8'	12"	3'-0"	3
10'	10'	18"	3'-6"	3
12'	10'	18"	3'-6"	3
14'	10'	18"	3'-6"	3
16'	10'	18"	3'-6"	3
18'	10'	18"	3'-6"	3
20'	10'	18"	3'-6"	3
22'	10'	18"	3'-6"	3
24'	10'	18"	3'-6"	3

SIGN PANEL DIMENSIONS W	H	c	d	ZEE BAR NO.
26'	10'	18"	3'-6"	3
28'	10'	18"	3'-6"	3
30'	10'	18"	3'-6"	3
10'	9'	18"	3'-0"	3
12'	9'	18"	3'-0"	3
14'	9'	18"	3'-0"	3
16'	9'	18"	3'-0"	3
18'	9'	18"	3'-0"	3
20'	9'	18"	3'-0"	3
22'	9'	18"	3'-0"	3
24'	9'	18"	3'-0"	3
26'	9'	18"	3'-0"	3
28'	9'	18"	3'-0"	3
30'	9'	18"	3'-0"	3
12'	12'	18"	3'-0"	4
14'	12'	18"	3'-0"	4
16'	12'	18"	3'-0"	4
18'	12'	18"	3'-0"	4
20'	12'	21"	4'-3"	3
22'	12'	21"	4'-3"	3
24'	12'	21"	4'-3"	3
26'	12'	21"	4'-3"	3
28'	12'	21"	4'-3"	3
30'	12'	21"	4'-3"	3
14'	14'	18"	3'-8"	4
16'	14'	18"	3'-8"	4
18'	14'	18"	3'-8"	4
20'	14'	18"	3'-8"	4
22'	14'	18"	3'-8"	4
24'	14'	18"	3'-8"	4
26'	14'	18"	3'-8"	4
28'	14'	18"	3'-8"	4

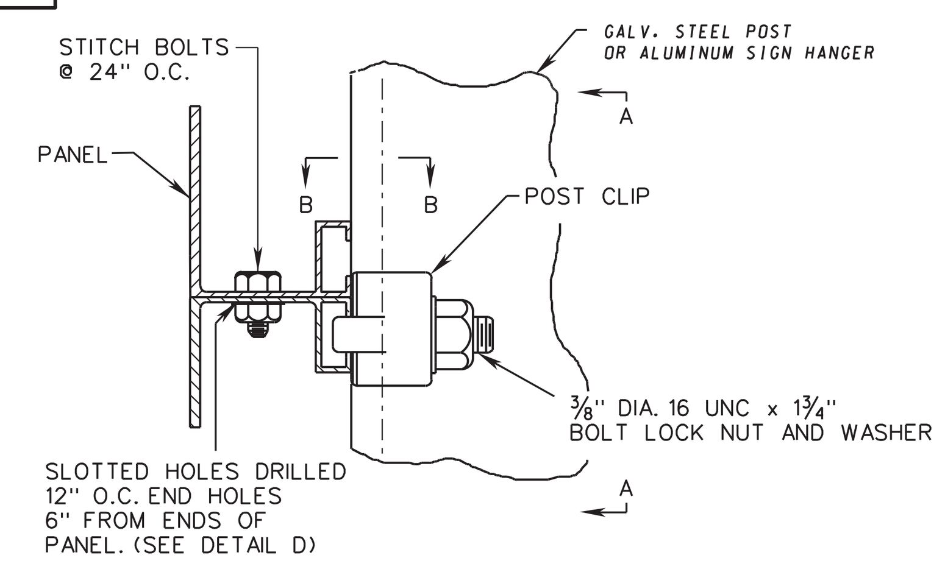
SIGN PANEL DIMENSIONS W	H	c	d	ZEE BAR NO.
30'	14'	18"	3'-8"	4
16'	16'	18"	3'-3"	5
18'	16'	18"	3'-3"	5
20'	16'	18"	3'-3"	5
22'	16'	18"	3'-3"	5
24'	16'	18"	3'-3"	5
26'	16'	18"	3'-3"	5
28'	16'	18"	3'-3"	5
30'	16'	18"	3'-3"	5
VARIES	2'-6'	9"	12"	2



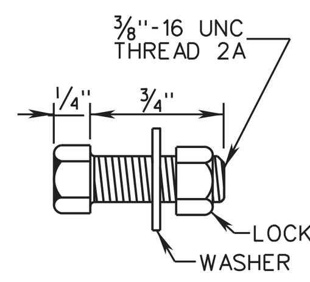
ZEE BAR

VDOT ROAD AND BRIDGE STANDARDS	SIGN PANEL DESIGN	SPECIFICATION REFERENCE
SHEET 2 OF 2 — 1325.11 — REVISION DATE 4/09	VIRGINIA DEPARTMENT OF TRANSPORTATION	701

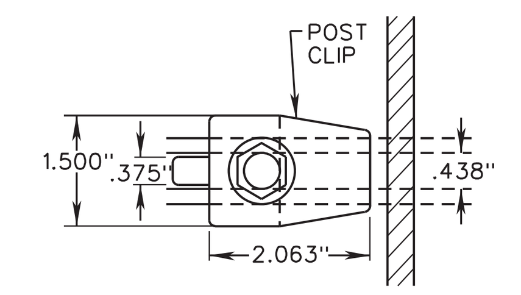
SPD-2



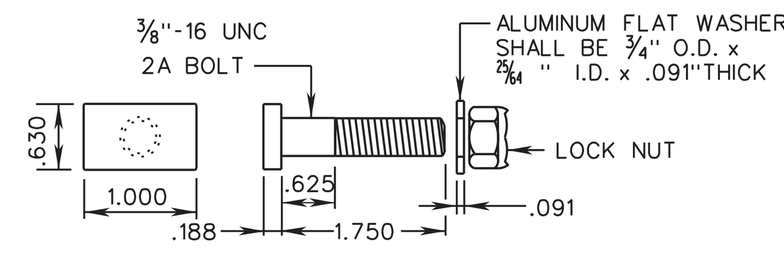
SIGN PANEL ASSEMBLY



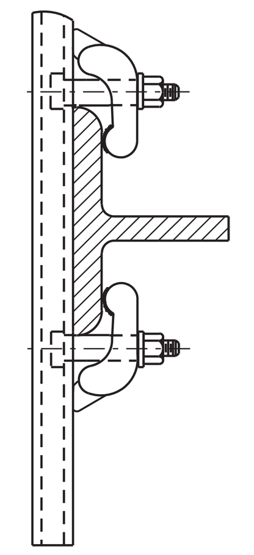
STITCH BOLT (TYP.)



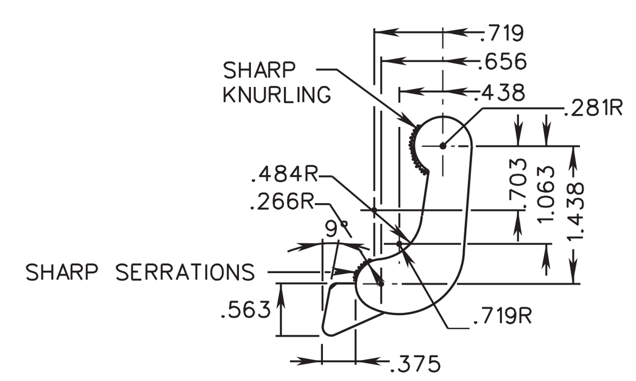
SECTION A-A



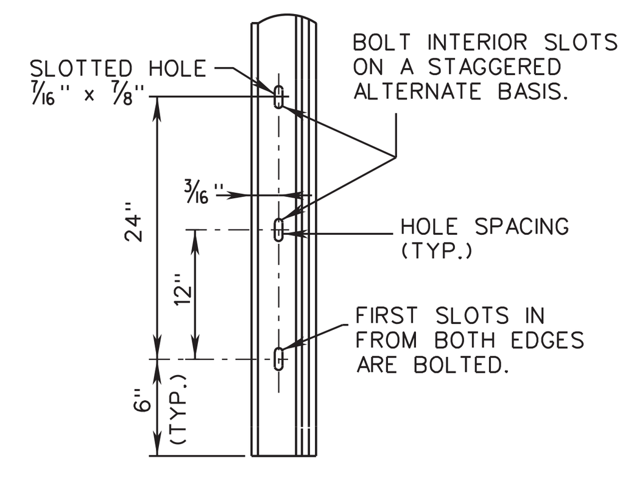
POST CLIP BOLT (TYP.)



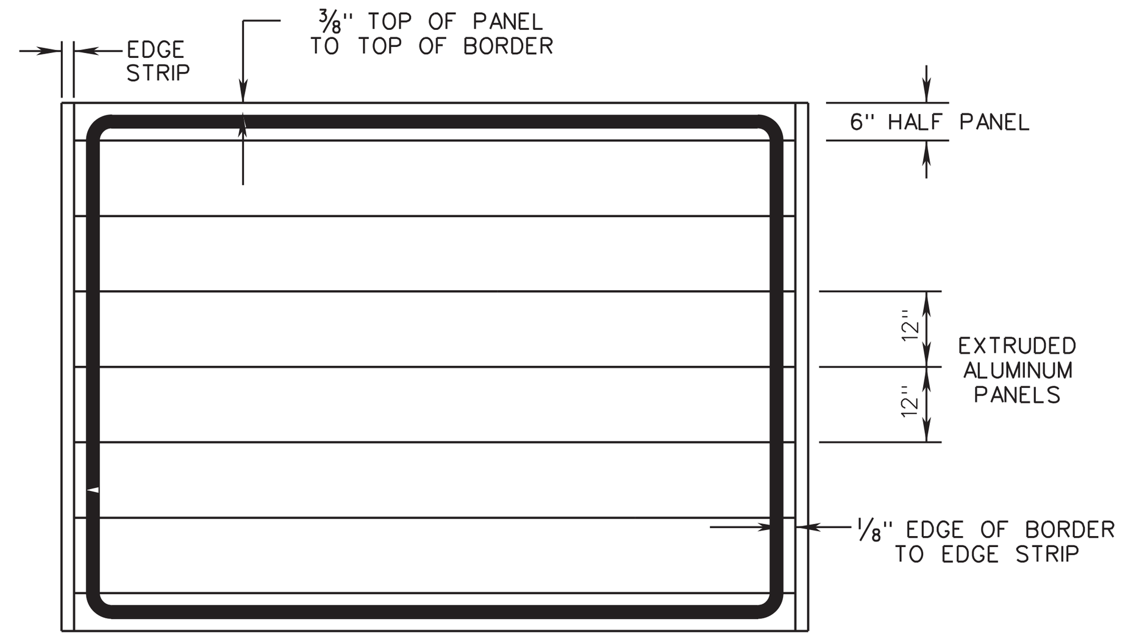
SECTION B-B



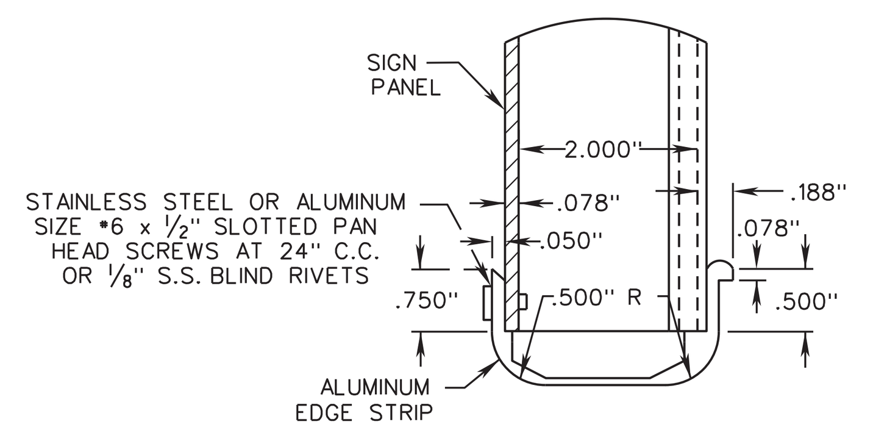
POST CLIP (TYP.)



DETAIL D



BORDER DETAIL



DETAIL OF EDGE STRIP

NOTE:

EDGE STRIP SHALL BE PLACED ON BOTH SIDES OF ALL EXTRUDED PANEL SIGNS.

DOUBLE POST CLIPS SHALL BE INSTALLED ON ALL SIGN HANGERS.

ALL SIGN PANELS INSTALLED ON OVERHEAD SIGN STRUCTURES SHALL BE BOLTED DIRECTLT TO THE SIGN HANGER MEMBERS AT THE BOTTOM AND TOP ROW AND POST CLIPS SHALL BE USED AT ALL OTHER MOUNTING POINTS.

VDOT ROAD AND BRIDGE STANDARDS	EXTRUDED SIGN PANEL DESIGN	SPECIFICATION REFERENCE
SHEET 2 OF 2 — 1325.21 — REVISION DATE 4/09	VIRGINIA DEPARTMENT OF TRANSPORTATION	701

PROJECT MANAGER Wendy Block Sanford, City of Fairfax, (703) 385-7889
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DESIGN SUPERVISED BY Mark Gunn, P.E., Rinker Design Assoc. P.C. (703) 368-7373
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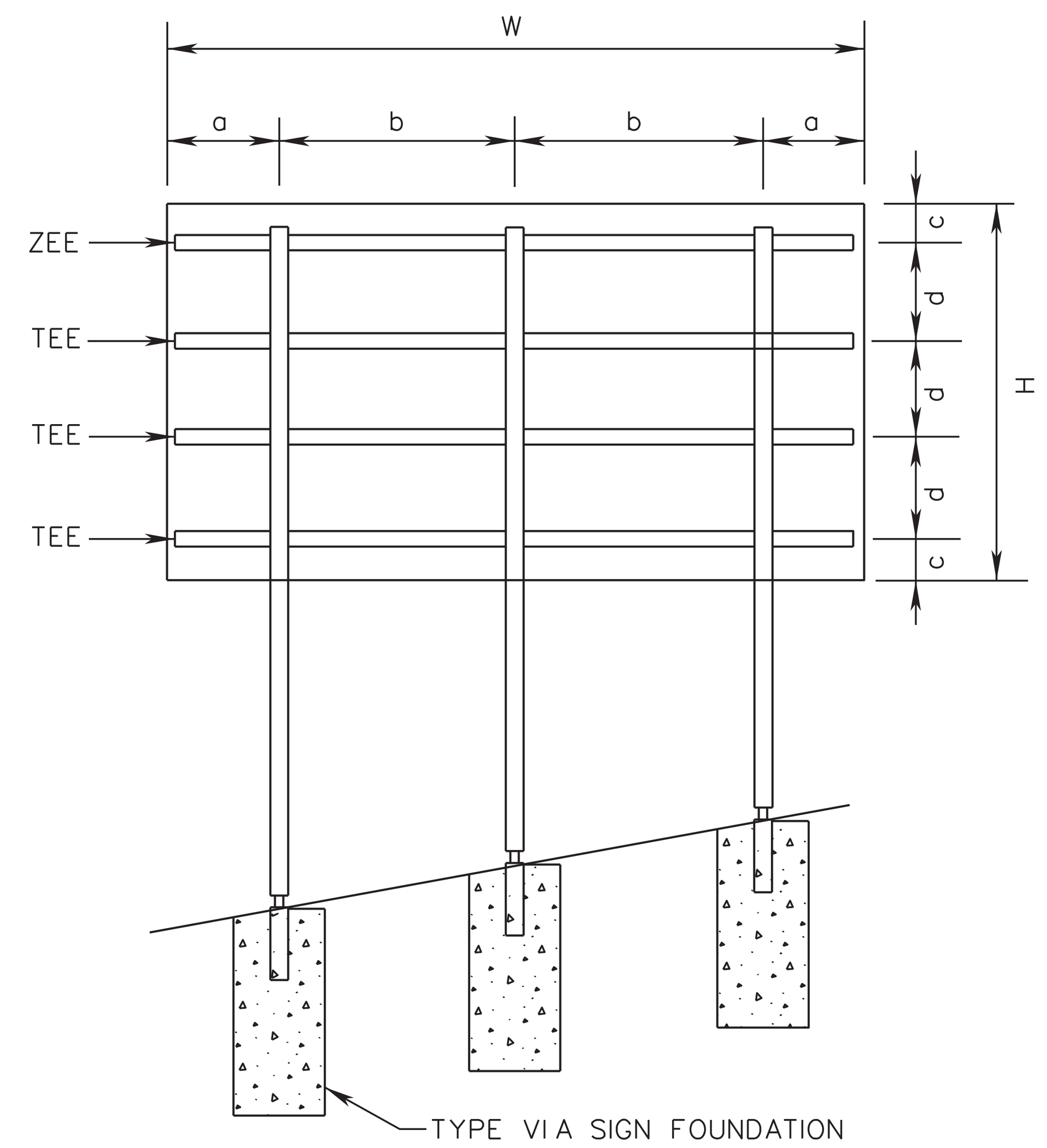
INSERTABLE SHEETS ST'D. SPD-3 & SPD-7

REVISED	STATE	FEDERAL AID PROJECT OWNER	ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	IH(13)

Rinker Design Associates, P.C.
Office Locations

SPD-3

SIGN PANEL DIMENSIONS W	H	a	b	c	d	ZEE BAR NO.	ZEE BAR SIZE	TEE NO.	CLAMPS NO.
24'	10'	5'-4"	13'-4"	18"	3'-6"	3	D	0	0
26'	10'	5'-10"	14'-4"	18"	3'-6"	3	D	0	0
28'	10'	6'-3"	15'-6"	18"	3'-6"	3	D	0	0
30'	10'	7'-3"	15'-6"	18"	3'-6"	3	D	0	0
10'	9'	1'-0"	8'-0"	18"	3'-0"	1	B	2	8
12'	9'	2'-0"	8'-0"	18"	3'-0"	1	B	2	8
14'	9'	3'-0"	8'-0"	18"	3'-0"	1	B	2	8
16'	9'	3'-6"	9'-0"	18"	3'-0"	3	C	0	0
18'	9'	4'-0"	10'-0"	18"	3'-0"	3	C	0	0
20'	9'	4'-6"	11'-0"	18"	3'-0"	3	C	0	0
22'	9'	4'-10"	12'-4"	18"	3'-0"	3	D	0	0
24'	9'	5'-4"	13'-4"	18"	3'-0"	3	D	0	0
26'	9'	5'-10"	14'-4"	18"	3'-0"	3	D	0	0
28'	9'	6'-10"	14'-4"	18"	3'-0"	3	D	0	0
30'	9'	7'-10"	14'-4"	18"	3'-0"	3	D	0	0
12'	12'	2'-0"	8'-0"	18"	3'-0"	1	B	3	12
14'	12'	3'-0"	8'-0"	18"	3'-0"	1	B	3	12
16'	12'	3'-6"	9'-0"	18"	3'-0"	1	B	3	12
18'	12'	4'-0"	10'-0"	18"	3'-0"	1	B	3	12
20'	12'	4'-6"	11'-0"	21"	4'-3"	3	B	0	0
22'	12'	4'10"	12'-4"	21"	4'-3"	3	C	0	0
24'	12'	5'-4"	13'-4"	21"	4'-3"	3	C	0	0
26'	12'	3'-10"	9'-2"	21"	4'-3"	1	B	2	12
28'	12'	4'-2"	9'-10"	21"	4'-3"	1	B	2	12
30'	12'	4'-6"	10'-6"	21"	4'-3"	1	B	2	12
14'	14'	3'-0"	8'-0"	18"	3'-8"	1	B	3	12
16'	14'	3'-6"	9'-0"	18"	3'-8"	1	B	3	12
18'	14'	4'-0"	10'-0"	18"	3'-8"	1	B	3	12
20'	14'	4'-6"	11'-0"	18"	3'-8"	1	B	3	12
22'	14'	3'-0"	8'-0"	18"	3'-8"	1	B	3	18
24'	14'	3'-7"	8'-5"	18"	3'-8"	1	B	3	18
26'	14'	3'-10"	9'-2"	18"	3'-8"	1	B	3	18
28'	14'	4'-2"	9'-10"	18"	3'-8"	1	B	3	18
30'	14'	4'-6"	10'-6"	18"	3'-8"	1	B	3	18
16'	16'	3'-6"	9'-0"	18"	3'-3"	1	B	4	16
18'	16'	4'-0"	10'-0"	18"	3'-3"	1	B	4	16
20'	16'	2'-0"	8'-0"	18"	3'-3"	1	B	4	24
22'	16'	3'-0"	8'-0"	18"	3'-3"	1	B	4	24
24'	16'	3'-7"	8'-5"	18"	3'-3"	1	B	4	24
26'	16'	3'-10"	9'-2"	18"	3'-3"	1	B	4	24
28'	16'	4'-2"	9'-10"	18"	3'-3"	1	B	4	24
30'	16'	4'-6"	10'-6"	18"	3'-3"	1	B	4	24
VARIES	2'-6"	-	-	9"	12"	2	B	-	-



VDOT ROAD AND BRIDGE STANDARDS	SIGN PANEL DESIGN	SPECIFICATION REFERENCE
SHEET 2 OF 3 / REVISION DATE 4/09 / 1325.31	VIRGINIA DEPARTMENT OF TRANSPORTATION	701

SPD-7

SIGN PANEL DIMENSIONS W	H	a	b	c	d	STIFFENER NO.	STIFFENER SIZE
12'	4'	2'-0"	8'-0"	11 1/2"	2'-1"	2	LARGE
11'	5'	1'-6"	8'-0"	1 1/2"	2'-0"	3	LARGE
10'	6'	1'-0"	8'-0"	4"	1'-8"	4	LARGE
12'	6'	2'-0"	8'-0"	11"	1'-8"	4	LARGE
14'	6'	2'-10"	8'-5"	0	3'-0"	3	LARGE
16'	6'	3'-2"	9'-7"	0"	3'-0"	3	LARGE
18'	6'	3'-7"	10'-10"	6"	1'-8"	4	LARGE
20'	6'	4'-0"	12'-0"	4"	1'-4"	5	LARGE
22'	6'	4'-5"	13'-2"	1"	1'-2"	6	LARGE
24'	6'	4'-10	14'-5"	3"	11"	7	LARGE
26'	6'	5'-2"	15'-7"	0"	8"	10	LARGE
10'	8'	1'-0"	8'-0"	8"	1'-8"	5	LARGE
12'	8'	2'-0"	8'-0"	6"	2'-4"	4	LARGE
14'	8'	2'-10"	8'-5"	1'-0"	3'-0"	3	LARGE
16'	8'	3'-2"	9'-7"	6"	2'-4"	4	LARGE
18'	8'	3'-7"	10'-10"	3"	1'-6"	6	LARGE
20'	8'	4'-0"	12'-0"	3"	1'-6"	6	LARGE
22'	8'	4'-5"	13'-2"	6"	12"	8	LARGE
24'	8'	4'-10"	14'-5"	3"	9"	11	LARGE
26'	8'	5'-2"	15'-7"	0"	8"	13	LARGE
10'	8'	1'-0"	8'-0"	8"	1'-8"	5	LARGE
12'	8'	2'-0"	8'-0"	6"	2'-4"	4	LARGE
14'	8'	2'-10"	8'-5"	1'-0"	3'-0"	3	LARGE
16'	8'	3'-2"	9'-7"	6"	2'-4"	4	LARGE
18'	8'	3'-7"	10'-10"	3"	1'-6"	6	LARGE
18'	8'	3'-7"	10'-10"	3"	1'-6"	6	LARGE
20'	8'	4'-0"	12'-0"	3"	1'-6"	6	LARGE
22'	8'	4'-5"	13'-2"	6"	12"	8	LARGE
24'	8'	4'-10"	14'-5"	3"	9"	11	LARGE
26'	8'	5'-2"	15'-7"	0	8"	13	LARGE
10'	10'	1'-0"	8'-0"	0	2'-0"	6	LARGE
12'	10'	2'-0"	8'-0"	4"	2'-4"	5	LARGE
14'	10'	2'-10"	8'-5"	6"	3'-0"	4	LARGE
16'	10'	3'-2"	9'-7"	4"	2'-4"	5	LARGE
18'	10'	3'-7"	10'-10"	0	1'-8"	7	LARGE
20'	10'	4'-0"	12'-0"	4"	1'-4"	8	LARGE
22'	10'	4'-5"	13'-2"	4"	1'-2"	9	LARGE
24'	10'	4'-10"	14'-5"	5"	10"	12	LARGE
26'	10'	5'-2"	15'-7"	0	8"	16	LARGE
10'	9'	1'-0"	8'-0"	4"	1'-8"	6	LARGE
12'	9'	2'-0"	8'-0"	4"	2'-1"	5	LARGE
14'	9'	2'-10"	8'-5"	0	3'-0"	4	LARGE
16'	9'	3'-2"	9'-7"	1'-0"	2'-4"	4	LARGE
18'	9'	3'-7"	10'-10"	4"	1'-8"	6	LARGE
20'	9'	4'-0"	12'-0"	0	1'-6"	7	LARGE
22'	9'	4'-5"	13'-2"	5"	1'-2"	8	LARGE
22'	9'	4'-5"	13'-2"	5"	1'-2"	8	LARGE
24'	9'	4'-10"	14'-5"	4"	10"	11	LARGE
26'	9'	5'-2"	15'-7"	2"	8"	14	LARGE
12'	12'	2'-0"	8'-0"	2"	2'-1"	6	LARGE
14'	12'	2'-10"	8'-5"	0	3'-0"	5	LARGE
16'	12'	3'-2"	9'-7"	2"	2'-4"	6	LARGE
18'	12'	3'-7"	10'-10"	2"	1'-8"	8	LARGE
20'	12'	4'-0"	12'-0"	8"	1'-4"	9	LARGE
22'	12'	4'-5"	13'-2"	2"	1'-2"	11	LARGE
24'	12'	4'-10"	14'-5"	1/2"	11"	14	LARGE
14'	14'	2'-10"	8'-5"	1'-0"	3'-0"	5	LARGE
16'	14'	3'-2"	9'-7"	0	2'-4"	7	LARGE
18'	14'	3'-7"	10'-10"	4"	1'-8"	9	LARGE
20'	14'	4'-0"	12'-0"	4"	1'-4"	11	LARGE
16'	16'	3'-2"	9'-7"	1'-0"	2'-4"	7	LARGE
18'	16'	3'-7"	10'-10"	6"	1'-8"	10	LARGE
VARIES	2'-6"	-	-	9"	12"	2	LARGE

SPECIFICATION REFERENCE	SIGN PANEL DESIGN	VDOT ROAD AND BRIDGE STANDARDS
701	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE 4/09 / SHEET 3 OF 3 / 1325.72

NORTHERN VIRGINIA DISTRICT

8/19/2014

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
-	0029-151-108	-	IH(13)

PROJECT MANAGER Wendy Block Sanford, City of Fairfax, (703) 385-7889
SURVEYED BY Rinker Design Assoc., P.C. (703) 368-7373
DESIGN SUPERVISED BY Mark Gunn, P.E., Rinker Design Assoc., P.C. (703) 368-7373
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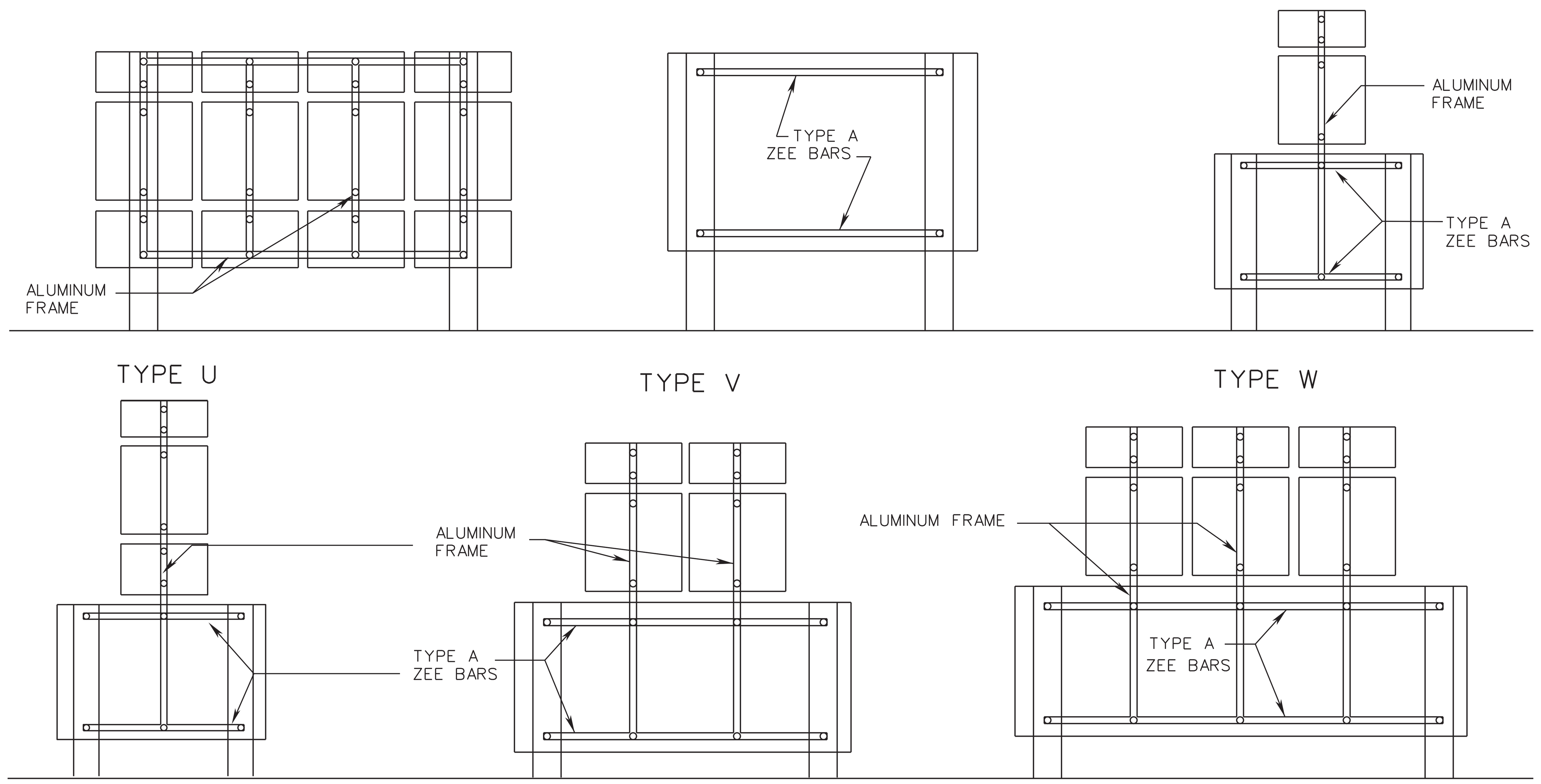
Rinker Design Associates, P.C.

INSERTABLE SHEET
ST'D. SPD-5

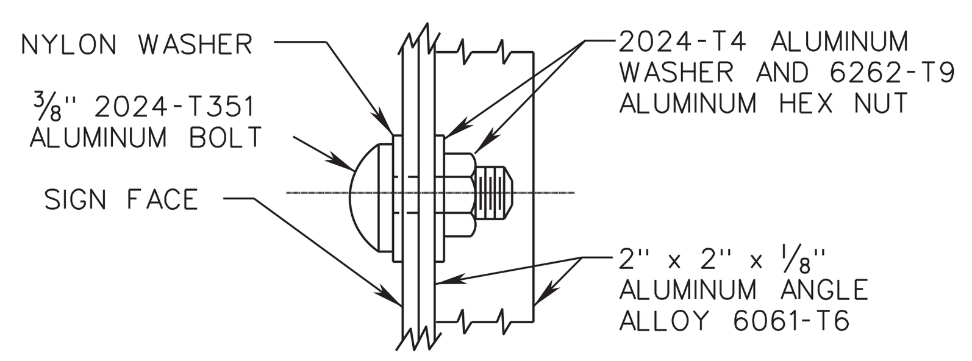
REVISED	STATE	FEDERAL AID PROJECT OWNER	ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	1H(14)

SPD-5



ALUMINUM FRAMING
SIGN PANEL ATTACHMENT DETAILS

(FOR SIGN PANEL ATTACHMENT TO Z BARS, SEE STANDARD SPD-1)



NOTES

NYLON WASHER SHALL BE 1/8" THICK MINIMUM WITH AN OUTSIDE DIAMETER OF 1" AND AN INSIDE DIAMETER OF 7/16".

TO OBTAIN A FLUSH MOUNTING SURFACE FOR SIGNS, ALL WOOD POST SHALL BE MORTISED WHERE NECESSARY TO RECESS THE FLANGE OF ALUMINUM ANGLE.

THE TYPE A ZEE BARS SHALL BE 2 3/8" X 1 1/4" X 3/16".

ALL VERTICAL AND HORIZONTAL SPACING BETWEEN SIGNS IN AN ASSEMBLY SHALL BE ONE INCH UNLESS SPECIFIED.

THESE ARE TYPICAL SIGN PANEL ASSEMBLIES; ALL ASSEMBLIES SHALL BE IN ACCORDANCE WITH PLAN DETAILS.

SPECIFICATION REFERENCE	SIGN PANEL DESIGN	VDOT ROAD AND BRIDGE STANDARDS	
701	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE 6-15-09	SHEET 2 OF 2 1325.51

NORTHERN VIRGINIA DISTRICT

8/19/2014

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
-	0029-151-108	-	1H(14)

PROJECT MANAGER Wendy Block Sanford, City of Fairfax, (703) 385-7889
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DESIGNED BY Adam D. Welschenbach, P.E., Rinker Design Assoc., P.C. (703) 368-7373

TRANSPORTATION MANAGEMENT PLAN & SEQUENCE OF CONSTRUCTION (TMP/SOC)

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam D Welschenbach
2015.03.02 13:25:47 -05'00'
Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISED	STATE	FEDERAL AID PROJECT OWNER	STATE ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	1J

General Notes

Temporary Traffic Control Plan

General Notes:

1 TMP/SOC Type B Project Information:

a Identify the project's TMP Type:
This project's TMP/SOC plan has been designed in conformance with a Type B TMP/SOC plan.

b Identify the work zone location, length, and widths:
The project location is as shown on Sheet 1A.
The work zone areas have been delineated as shown on the TMP/SOC plan sheets 1K through 1L(3).
The work zone lengths and widths vary by location as shown on the TMP/SOC plan sheets 1K through 1L(3).

c Note the hours the Construction Area will be active:
Construction Area shall be considered active when any impact to traffic occurs. (1st Cone in Road)
Construction Area hours have the following limitations:

Approved working hours, that require lane closure/signal work are as follows:
Monday through Thursday: 9:00am to 3:00pm
Friday: 9:00am to 12:00pm
Saturday: 9:00am to 9:00pm

Approved night working hours, that require lane closure/signal work are as follows:
Monday through Friday: 9:00pm to 5:00am

No lane closures will be allowed from noon on the day before a holiday until noon on the workday following the holiday. Holidays include all City, State and Federal holidays.

d The TMP/SOC plan, during construction, shall be in accordance with Sections 512, 701, 703 & 704 of the Virginia Department of Transportation Road and Bridge Specifications, dated 2007, the Virginia Work Area Protection Manual, dated June 2011, and the Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition, including the 2011 Virginia Supplement to the MUTCD.

e Note any existing entrances, existing intersections, or existing pedestrian access points that will be affected by the Construction Area or by the traffic control devices:

Existing Entrances:
The following existing commercial or private entrances shall remain open for the duration of construction, except as noted. The Contractor is permitted to construct the entrances in half-section at a time, with the use of flaggers during the approved working hours as shown in Note *1c. At the following locations are private or commercial entrances which shall have access maintained at all times:
Approx. Sta: 14+50 LT, 22+75 LT, 32+00 LT, 33+75 LT, 35+00 LT, 44+50 LT, 46+25 LT, 47+75 LT, 51+25 LT, and 58+50 LT
The following commercial or private entrances shall be closed during construction and Contractor is not expected to maintain access for vehicular traffic at the following locations:
Approx. Sta. 17+50 LT, 57+00 LT, and 58+00 LT. However all entrances may be partially closed during construction and shall not be re-opened for vehicular traffic until entrance construction is complete. Entrances at 57+00 LT and 58+00 LT shall not be closed at the same time. The Contractor shall schedule work accordingly to ensure all work is completed during allowable work hours and entrance opens during non-actual work zone hours.

Existing Intersections:
There are four signalized intersections within the project limits, all of which are to remain operational for the duration of construction. They are the intersections of:
Main Street (Route 236) / Fairfax Boulevard (U.S. Route 50) @ Lee Highway (U.S. Route 29) / Fairfax Boulevard (U.S. Route 29 and U.S. Route 50)
Main Street (Route 236) @ Chestnut Street
Main Street (Route 236) @ Maple Street
Lee Highway (U.S. Route 29) @ Commercial Entrance (Station 50+75)

There are three unsignalized intersections (with cross-overs) within the limits of this project:
Lee Highway (U.S. Route 29) @ Commercial Entrance (Sta. 47+75).
Main Street (Route 236) @ Hallman Street.
U.S. Route 50 (Fairfax Boulevard) at approximately Sta. 17+50. Only during Phase 1 of construction Contractor is to close the connection between Fairfax Boulevard and Service Road to construct curb and gutter. Appropriate road closure signage and barricades are required.

Existing Pedestrian Access Points:
Within the project limits, pedestrian access points are generally at the intersections and the Contractor shall maintain safe passage for pedestrians and bicyclists within the project for the duration of construction, via sidewalk closure(s) using applicable MUTCD and VWAPM applications. Contractor shall submit maintenance of pedestrian traffic plans to the City of Fairfax for their approval prior to the start of any construction activity. (This shall include locations of sidewalk barricades, sidewalk closed signs, pedestrian detour signage and applicable modifcations to signal pedestrian signals). The Contractor shall maintain pedestrian access on at least one side of the roadway and provide pedestrian crossings at existing crosswalk locations applicable. The cost to provide all materials, signage, labor, equipment for pedestrian access shall be incidental to the project and not paid for as a separete item.

Existing Bus Stops:
There are three bus stops within this project. The existing bus stops that are impacts are located at:
Approx. Sta. 16+75 LT and 46+50 LT.

Prior to the start of Phase 1, the Contractor shall coordinate with City of Fairfax to relocate existing bus stops at approx. Sta. 16+75 LT and 46+50 LT. After completion of Phase 1, these bus stops shall be reopened.

The Contractor shall coordinate with City of Fairfax, and provide a minimum of 14 days notice to pedestrians (by way of signage) for each bus stop relocation. The cost to relocate bus signage, provide signage to relocated bus stops, and all things necessary to coordinate and relocate existing bus stops to temporary relocation, including relocating bus signage back to its original location or proposed new location and restoring relocated location to pre-construction conditions, shall be incidental to the project, and not paid for as a separate item.

f Identify the major types of travelers:
The roadway carries large diverse types of travelers. In the peak hours however, daily commuters are the prevailing traveler type for this roadway.

g The Contractor, at no additional cost to the project and which shall be considered incidental to the cost of the project, shall:

Designate a person assigned to the project who will have the primary responsibility, with sufficient authority, for implementing the TMP/SOC and other safety and mobility aspects of the permit work. This person be in coordination with the City Construction Inspector during all work.

Ensure that personnel assigned to the project are trained in traffic control to a level commensurate with their responsibilities in accordance with VDOT's work zone traffic control training guidelines.

Inform the Engineer and City Construction Inspector of any work requiring lane shifts, lane closures, and/or phase changes a minimum of two working days prior to implementing this activity.

Perform reviews of the Construction Area to ensure compliance with contract documents at regularly scheduled intervals at the direction of the Engineer and City Construction Inspector. Contractor shall maintain a copy of the temporary traffic control plan at the work site at all times.

Coordinate with City of Fairfax Police Department and City of Fairfax Fire/Rescue Department for any lane closures and any detours of any nature, at no additional cost to the project.

Schedule all phases of construction in such a manner that water, sanitary sewer, cable, fiber cable/optic cable, any overhanging utilities, and any underground utilities services will not be interrupted. The Contractor is solely responsible for any interruption in any utility service, and solely responsible for any repairs to the approval of the impacted utility service.

2 This TMP/SOC plan is intended as a guide. It is not to enumerate every detail which must be considered in the construction of each phase, but only to show the general handling of existing traffic. It shall be the responsibility of the Contractor to present a formal TMP/SOC plan with construction signage to the Engineer and City Construction Inspector for approval prior to any construction activity that may affect the existing pedestrian or vehicular traffic.

3 Contractor is to maintain at least one lane and separate left turns of traffic in each direction on Fairfax Boulevard, Lee Highway, and Main Street during construction of this project with a minimum clear roadway width in accordance with VDOT standard GS-10 unless otherwise approved by the Engineer. For street intersections, commercial connections, or private entrances, a minimum width no less than existing width shall be maintained at all times, unless approved by the Engineer.

4 All areas excavated below the existing pavement surface and within the clear zone as prescribed in the VWAPM at the conclusion of each workday, shall be backfilled to form an approximate 6:1 wedge against the existing pavement or newly constructed pavement surface for the safety and protection of vehicular traffic. All costs for placing, maintaining and removing 6:1 wedge shall be included in the price bid for other items in the contract and no additional compensation will be allowed.

5 No Concrete Traffic Barrier Service is to be installed for construction of this project.

6 Contractor shall follow the geotechnical recommendations for the project. Materials designated as unsuitable material as detailed in the geotechnical recommendations shall be disposed of offsite and are not to be used for any part of construction. Existing surface, aggregate base, and sub base material which will be demolished or obliterated during construction, and which are suitable for maintenance of traffic, should be utilized prior to the use of commercial material, subject to the approval of the Engineer.

7 Each phase of construction shall be completed to the installation of intermediate course asphalt prior to the start of the next phase unless otherwise directed by the Engineer.

8 Contractor shall ensure positive drainage for the duration of the project. Contractor shall add any additional temporary measures necessary to facilitate proper, positive drainage for the duration of construction.

9 The Contractor shall modify, as needed, existing signals for duration of construction as approved by the Engineer and City Engineer. Contractor shall provide maintenance of signals and associated detection equipment at no additional cost for the duration of construction. Vehicle detection shall be maintained at all operating signalized intersections.

10 Unless specified on the plans, all existing turn lanes shall be maintained at all times for the duration of construction.

11 The the cost to install/remove construction pavement markings and/or pre-approved black tape shall be incidental to the project and not paid for as a separete item. The cost to remove existing pavement markings for TMP/SOC purposes and/or ultimate conditions shall be incidental to the project and not paid for as a separete item.

12 Where Group 2 Channelizing Devices are used to separate the Construction Area and traffic, a minimum clear zone area as defined in the VWAPM is to be maintained.

13 The Contractor is to coordinate with City of Fairfax for location(s) of the construction staging area/field office. Contractor shall be responsible for obtaining all permits and/or easements as necessary at no additional cost to the project.

14 The Contractor shall present a formal plan for construction of ultimate signals as proposed in this plan, Sheet 12 Series, to be approved by the City of Fairfax. No construction activity is to begin until plan is presented and approved.

15 IMPLEMENTING THE TRANSPORTATION MANAGEMENT PLAN
During the first day of the new work zone traffic pattern, the project's Manager and project's Construction Inspector shall inspect the work zone to ensure compliance with the TMP. On the third to fifth day of implementation of the TMP's new work zone traffic pattern, the Construction Inspector shall conduct an on-site review of the work zone's performance in coordination with VDOT and recommend to the Contractor any required changes to the TMP to enhance the work zone's safety and mobility. All such changes shall be documented. An on-site review of the project's work zone traffic control by the City Construction Inspector and the Contractor shall be conducted (with coordination from VDOT) within 48 hours of any fatal incident/crash within the work zone.

16 EVALUATION OF THE TRANSPORTATION MANAGEMENT PLAN
A performance assessment of the TMP including area wide impacts on adjacent roadways shall be performed by the City of Fairfax with coordination from VDOT Engineers during construction. As circumstances dictate, a review of the overall effectiveness of the project's TMP shall be completed during the Post Construction Meeting and included with the Post Construction Report. A copy of the specific information on the effectiveness of the TMP will be forwarded to the City of Fairfax for review, with VDOT coordination. A copy of the TMP Interim/Post Construction Report Form can be obtained from the City of Fairfax, with coordination with VDOT.

17 PUBLIC COMMUNICATIONS PLAN
The Contractor shall be responsible for:

a Notifying the Project Manager and Construction Inspector two weeks in advance of any scheduled work plans and traffic delays.

b Notifying the Project Manager, Construction Inspector, and City of Fairfax of any unscheduled traffic delays.

c Contractor shall attend any and all meetings requested by the City of Fairfax at no additional cost the project.

d The Contractor shall, at no additional cost to the project, have four portable, changeable message signs (PCMS) to be deployed at the City's discrection for the duration of the project. PCMS shall be deployed within 1 hour of City request.

e The Contractor is required to coordinate minimum 45 days in advance with each property owner for the work to be completed in front and/or on property as part of project. Coordination in conjunction with City of Fairfax is required.

18 TRANSPORTATION OPERATIONS
The Contractor shall be responsible for implementing and providing the following:

a Notify the Regional Transportation Operations Center (TOC) 48 hours in advance in order to place lane closure information on the 511 System and VA-Traffic.

b Post a list of local emergency response agencies inside the project's construction office/trailer.

c Immediately report any traffic incidents that may occur in the work zone.

d Notify the project's Construction Inspector and City of Fairfax of any incidents and expected traffic delays.

e Within 24 hours of any incidents within the construction work zone, a review of the traffic controls shall be completed and necessary adjustments made to reduce the frequency and severity of any future incidents.

CONTACT NUMBERS

City Director of Public Works	David Summers, (703)-385-7810
City Project Manager	Wendy Block Sanford, (703) 385-7889
City Engineer	Peter Millard, (703)-246-6330
City Construction Inspector	Satoshi Eto/Chris Arnold, (703)-385-7828
Emergency Call	911
Non-Emergency Numbers:	
City of Fairfax Police	(703) 385-7960
City of Fairfax Fire & Rescue	(703) 385-7940

TMP/SOC Designer


Commonwealth of Virginia
Virginia Department of Transportation
VERIFICATION OF COMPLETION OF
ADVANCE WORK ZONE TRAFFIC CONTROL TRAINING AND FLAGGER CERTIFICATION

This is to verify that **Adam Welschenbach** has successfully completed training and an examination by the Department on the proper practices and methods for the installation, maintenance, removal of temporary traffic control devices and flagging operations.

Date: 4/3/2014
R. J. Khoury
State Traffic Engineer
Verification No.: 040314773
Expiration Date: 4/30/2018

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
-	0029-151-108	-	1J

NORTHERN VIRGINIA DISTRICT

3/2/2015

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PROJECT MANAGER Wendy Block Sanford, City of Fairfax, (703) 385-7889
SURVEYED BY Rinker Design Assoc., P.C. (703) 368-7373
DESIGN SUPERVISED BY Mark Gunn, P.E., Rinker Design Assoc., P.C. (703) 368-7373
DESIGNED BY Adam D. Welschenbach, P.E., Rinker Design Assoc., P.C. (703) 368-7373

TRANSPORTATION MANAGEMENT PLAN & SEQUENCE OF CONSTRUCTION (TMP/SOC)

Suggested Sequence of Construction

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam D Welschenbach
2014.08.20 18:40:59 -04'00'
Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISED	STATE	FEDERAL AID PROJECT OWNER	STATE ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	IJ(1)

Suggested Sequence of Construction:

General Phasing Notes:

1 VWAPM = VDOT's current edition of the Virginia Work Area Protection Manual.
MUTCD = FHWA's current edition Manual on Uniform Control Devices

2 The Contractor shall submit a temporary traffic control plan that prescribes the necessary traffic control measures for the work to be performed to be approved by the Engineer prior to the commencement of any work activities as indicated on the Temporary Traffic Control Plan Notes shown on Sheet IJ.

3 Prior to the start of construction, the Contractor shall install project limit signage in accordance with VWAPM TTC-53.0 and TTC-52.0. For the duration of construction, the Contractor shall ensure this signage remains in compliance if the project limits alter.

4 During all phases of construction, the Contractor is to maintain pedestrian access on at least one side of the roadway, providing continuous connectivity along Fairfax Boulevard, Lee Highway, and Main Street within the project limits. The Contractor may only use existing signalized crosswalk locations to guide pedestrians across all roadways to achieve this continuous connectivity.
To guide pedestrians, the Contractor is to follow the guidelines in VWAPM TTC-35.0 and VWAPM TTC-36.0 as necessary or as directed by the Engineer. When the Contractor presents traffic control plans for approval to the Engineer, they shall include pedestrian control in accordance with the VWAPM when impacting existing pedestrian trails, paths, or sidewalks. Contractor shall be solely responsible for all costs associated with maintaining pedestrian access which is to be incidental with the costs of implementing the Project's TMP/SOC, and not paid for as a separate item.

5 The Contractor shall be responsible to show the placement for Portable Changeable Message Sign, truck mounted impact attenuators, flagging stations, and temporary barricades on the plans submitted to the Engineer in accordance with the TMP/SOC General Note #2, Sheet IJ(1).

PHASE I:

1 The Contractor is to install all traffic control measures and devices in accordance with the VWAPM to construct the areas designated as Construction Areas shown on the plans for Phase I.

2 When the Construction Area is active along southbound Fairfax Boulevard (U.S. Route 29 / 50), southbound Lee Highway (U.S. Route 29), westbound Fairfax Boulevard (U.S. Route 50), or westbound Main Street (Route 236), the existing right through lane is to be closed using VWAPM TTC-16.0. All lane closures and partial lane closures with it's respective construction shall occur during night time hours.

3 The Contractor is to construct a majority of Phase I by implementing VWAPM TTC-16.0, TTC-23.0, TTC-29.0, and TTC-38.0 as necessary up to intermediate course pavement and complete all designated work areas:
Areas I through V are to be completed in Phase I:

Area I - Installation of Storm Sewer Crossings from Sta. 56+50 LT to 58+25 LT
The Contractor is to construct the area designated as Area I, as shown on the TMP/SOC Phase I plans. This construction may take several work days, and care should be taken to ensure the Construction Area is protected during non-work hours for vehicular traffic.
Contractor is to first close entrance and Service Road at Sta. 57+00 LT and construct storm sewer crossing and proposed entrance. All other adjacent entrances along Service Road are to remain open, and vehicular traffic is to be directed to use these entrances to access properties along Service Road. After construction of entrance and pipe crossing has been completed, Contractor is to open up entrance at Sta. 57+00 LT to vehicular traffic and close entrance and Service Road at Sta. 58+00 LT. Contractor is to construct storm sewer crossing and new entrance. All other adjacent entrances along Service Road are to remain open, and vehicular traffic is to be directed to use these entrances to access properties along Service Road. After construction of entrance and pipe crossing has been completed, Contractor is to open up entrance to vehicular traffic. Contractor is to coordinate entrance closings with City of Fairfax and with adjacent property owners.

Area II - Installation of Storm Sewer Crossing at Sta. 58+50 LT
The Contractor is to construct the area designated as Area II, as shown on the TMP/SOC Phase I plans. This construction may take several work days, and care should be taken to ensure the Construction Area is protected during non-work hours for vehicular traffic.
One lane is to remain open at all times during installation of storm sewer. Contractor is to close the westbound lane of entrance, implementing VWAPM TTC-23.0 and TTC-24.0, and construct pipe crossing and entrance up to center of existing entrance. Once completed, Contractor is to close the eastbound lane of entrance, implementing VWAPM TTC-23.0 and TTC-24.0, and finish construction of pipe crossing and entrance. Contractor must also ensure positive drainage throughout construction of storm sewer pipe crossing. Entrance shall be accessible during peak hours and non-peak hours, to permit the safe passage of vehicles and pedestrians in accordance with VDOT Standards and the VWAPM.

Area III - Installation of Storm Sewer Crossing at Sta. 47+75 LT
The Contractor is to construct the area designated as Area III, as shown on the TMP/SOC Phase I plans. This construction may take several work days, and care should be taken to ensure the Construction Area is protected during non-work hours for vehicular traffic.
One lane is to remain open at all times during installation of storm sewer. Contractor is to close the westbound lane of entrance, implementing VWAPM TTC-23.0 and TTC-24.0, and construct pipe crossing and entrance up to center of existing entrance. Once completed, Contractor is to close the eastbound lane of entrance, implementing VWAPM TTC-23.0 and TTC-24.0, and finish construction of pipe crossing and entrance. Contractor must also ensure positive drainage throughout construction of storm sewer pipe crossing.

Area IV - Installation of Storm Sewer Crossing at Hallman Street
Contractor is to construct the area designated as Area IV, as shown on the TMP/SOC Phase I plans. This construction may take several work days, and care should be taken to ensure the Construction Area is protected during non-work hours for vehicular traffic.
One lane is to remain open at all times during installation of storm sewer. Contractor is to close the southbound lane, implementing VWAPM TTC-23.0 and TTC-24.0, and construct pipe crossing up to center of Hallman Street. Once completed, Contractor is to close the northbound lane, implementing VWAPM TTC-23.0 and TTC-24.0, and finish construction of pipe crossing. Contractor must also ensure positive drainage throughout construction of storm sewer pipe crossing.

Area V - Installation of Storm Sewer Crossing at Sta. 33+75 LT
The Contractor is to construct the area designated as Area V, as shown on the TMP/SOC Phase I plans. This construction may take several work days, and care should be taken to ensure the Construction Area is protected during non-work hours for vehicular traffic.
One lane is to remain open at all times during installation of storm sewer. Contractor is to close the northbound lane of entrance, implementing VWAPM TTC-23.0 and TTC-24.0, and construct pipe crossing and proposed entrance up to center of existing entrance. Once completed, Contractor is to close the southbound lane of entrance, implementing VWAPM TTC-23.0 and TTC-24.0, and finish construction of pipe crossing and entrance. Contractor must also ensure positive drainage throughout construction of storm sewer pipe crossing.

4 The right turn lane on Southbound Fairfax Boulevard (U.S. Route 29 / 50) onto Westbound Fairfax Boulevard (U.S. Route 50) and the right turn lane on Southbound Lee Highway between Sta. 48+00 and Sta. 50+50 are both to be closed throughout Phase I of construction, including during hours when the work zone is not active. Contractor is to implement VWAPM TTC-29.0 to close these right turn lanes. Contractor is to coordinate with City of Fairfax and all utilities to provide protection of existing utility facilities prior to closure of the right turn lanes.

5 Contractor is to construct proposed water line and proposed sanitary line during Phase I in conjunction with construction of the Service Road along Fairfax Boulevard (U.S. Route 29 / 50 and U.S. Route 50). Construction of proposed water line and proposed sanitary line shall occur before proposed storm sewer structures and pipes which impact existing utility facilities are installed. Access to the Service Road and all entrances adjacent to it are to be maintained when construction work zone is not active. During active work zone hours, Contractor may close parts of the Service Road as necessary, however at least one lane of access must be maintained to all properties adjacent to the Service Road, unless otherwise directed by the Engineer. Construction on water line and sanitary line are to occur during night-time hours only. Contractor is to coordinate with Fairfax Water/City of Fairfax for relocation of lateral connections.

6 Access to entrances along Service Road, except where noted previously, is to be maintained at all times during Phase I of Construction. Contractor is to implement a flagging operation for existing Service Road between Sta. 55+00 LT and 62+00 LT, using VWAPM TTC-23.0. Prior to beginning construction along Service Road, coordination is required with City of Fairfax and adjacent property owners. Contractor shall provide adequate notice, schedule of planned activity, and corresponding signage to notify the public of entrance closures and Service Road construction prior to beginning of construction activities on the Service Road during this phase.

7 Contractor is to implement a flagging operation for existing Service Road between Sta. 14+50 LT and 26+50 LT, using VWAPM TTC-23.0. One lane is to remain open for vehicular traffic at all times. The Service Road connection at Sta. 17+50 LT is to be closed during Phase I construction, and all vehicular traffic is to be directed to use entrances at Sta. 14+50 LT or Sta. 22+75 LT. Upon completion of proposed entrance at Sta. 17+50 LT, entrance is to be opened up to vehicular traffic subject to approval by the City of Fairfax. All other private or commercial entrances shall have access maintained during this phase of construction. Contractor is to coordinate entrance closings with City of Fairfax and with adjacent property owners, and shall provide adequate notice, schedule of planned activity, and corresponding signage to notify the public of entrance closures and Service Road construction prior to beginning of construction activities on the Service Road during this phase.

8 Between approximately Stations 33+00 and 36+50, Contractor is to first construct all areas from proposed curb out to limits of construction at final grade. Contractor is then to build up existing pavement on right through lane from construction baseline out to proposed curb at a maximum of 4" build up per day, up to finished grade. At the end of each work day, Contractor is to open up existing right through lane to traffic. This construction may take several work days, and care should be taken to ensure the Construction Area is protected during non-work hours for vehicular traffic.

9 Entrance at Station 32+13 LT is to be completed during Phase I. This construction may take several work days, and care should be taken to ensure the Construction Area is protected during non-work hours for vehicular traffic. Contractor is to exercise care in construction of entrance due to potential impacts to adjacent retaining wall and parking lot. Contractor is also to coordinate with adjacent property owners prior to beginning any construction activity to coordinate any necessary closure of parking lots or roadways adjacent to the entrance.

10 Kamp Washington Shopping Center parking lot improvements are to be completed in Phase I. This construction may take several work days, and care should be taken to ensure the Construction Area is protected during non-work hours for vehicular traffic and pedestrian traffic accessing parking lot and shopping center. Contractor is also to coordinate with adjacent property owners prior to beginning any construction activity to coordinate any necessary closure of areas in parking lot or of roadways adjacent to the parking lot.

11 Modified MB-13 Median Barrier from Station 49+87.50 to 50+40.77 is to be completed during Phase I. This construction may take several work days, and care should be taken to ensure the Construction Area is protected during non-work hours for vehicular traffic. Contractor is also to coordinate with adjacent property owners prior to beginning any construction activity to coordinate any necessary closure of parking lots or roadways adjacent to the barriers.

12 Left through lane between approximately Station 32+80 and 36+50 is to be built up under traffic, as shown on the plans. Contractor is to implement VWAPM TTC-57.0 and TTC-58.0 to complete construction of this area during Phase I.

13 The Contractor is to complete all Phase I activity up to the intermediate course, unless directed by the Engineer. Final surface course application is to be done in later phases.

PHASE II:

1 The Contractor is to install all traffic control measures and devices in accordance with the VWAPM to construct the areas designated as Construction Areas shown on the plans for Phase II.

2 When the Construction Area is active along Fairfax Boulevard (U.S. Route 50), Lee Highway (U.S. Route 29), or Fairfax Boulevard (U.S. Route 29 / 50), the existing inside through lane is to be closed using VWAPM TTC-17.0. Contractor is also to close the outside through lane on westbound Main Street (Route 236). All lane closures and corresponding construction must occur during night time or non-peak hours.

3 The Contractor is to construct a majority of Phase II by implementing VWAPM TTC-16.0, TTC-17.0, TTC-27.0, and MUTCD TA-43 as necessary up to intermediate course pavement and complete all designated work area:
Area VI is to be completed in Phase II:

Area VI - Installation of Storm Sewer Crossing at Hallman Street
During night time hours or non-peak hours, the Contractor is to construct the area designated as Area VI, as shown on the TMP/SOC Phase II plans. This construction may take several work days, and care should be taken to ensure the Construction Area is protected during non-work hours for vehicular traffic.
Eastbound Main Street:
The Contractor should start with the right through lane and implement VWAPM TTC-16.0, and construct the pipe crossing up to the left through lane. Once completed, the Contractor should implement VWAPM TTC-17.0 for the left through lane, completing construction up to the median.

4 The Contractor is to complete all Phase II activity up to the intermediate course, unless directed by the Engineer. Final surface course application is to be done in later Phases. The Contractor is to install temporary pavement markings as necessary.

(No Graphical Plans)

PHASE III:

1 Upon completion of all locations designated for construction on plans for Phases I and II up to intermediate course, the adjacent lanes to the pavement widening are to be milled. The Contractor is to coordinate and install all necessary loop detectors per the signal plans and roadway plans prior to application of final surface course. Contractor is then to apply final surface course and final pavement markings per the plans. The Contractor should implement the following to complete the milling, application of final surface course, and final pavement markings:
As necessary, the Contractor shall implement VWAPM TTC-57.0 and TTC-58.0.

2 The Contractor is to install or relocate all signs as necessary prior to completion of Phase III.

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
-	0029-151-108	-	IJ(1)

Rinker Design Associates, P.C.
Civil Engineering - Surveying - Land Planning
Transportation - Environmental
Right of Way Services

NORTHERN VIRGINIA DISTRICT

8/20/2014

PROJECT MANAGER Wendy Block Sanford, City of Fairfax, (703) 385-7889
SURVEYED BY Rinker Design Assoc. P.C. (703) 368-7373
DESIGN SUPERVISED BY Mark Gunn, P.E., Rinker Design Assoc. P.C. (703) 368-7373
DESIGNED BY Adam D. Welschenbach, P.E., Rinker Design Assoc. P.C. (703) 368-7373

TRANSPORTATION MANAGEMENT PLAN & SEQUENCE OF CONSTRUCTION (TMP/SOC)

Typical Sections

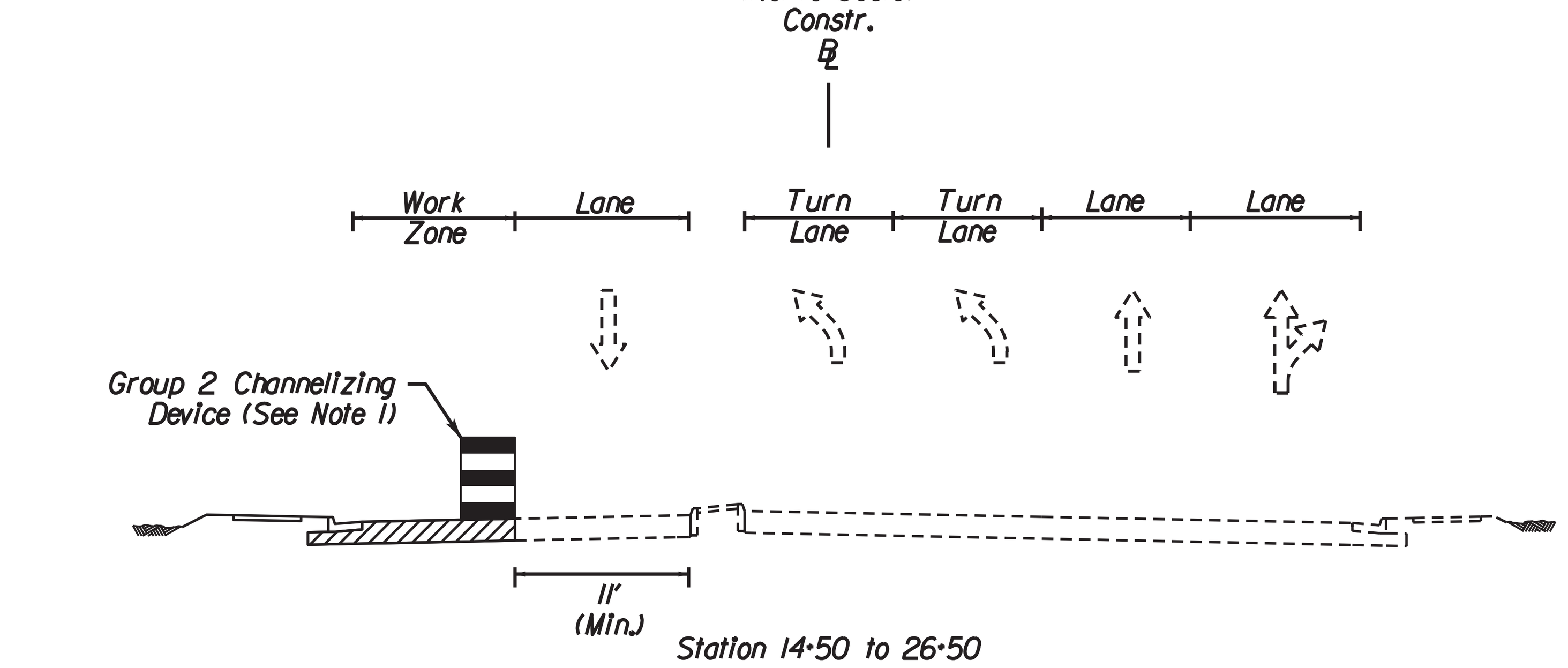
COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER
Adam D Welschenbach
2014.08.20 18:41:34 -04'00'
Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISED	STATE	FEDERAL AID PROJECT OWNER	ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	1J(2)

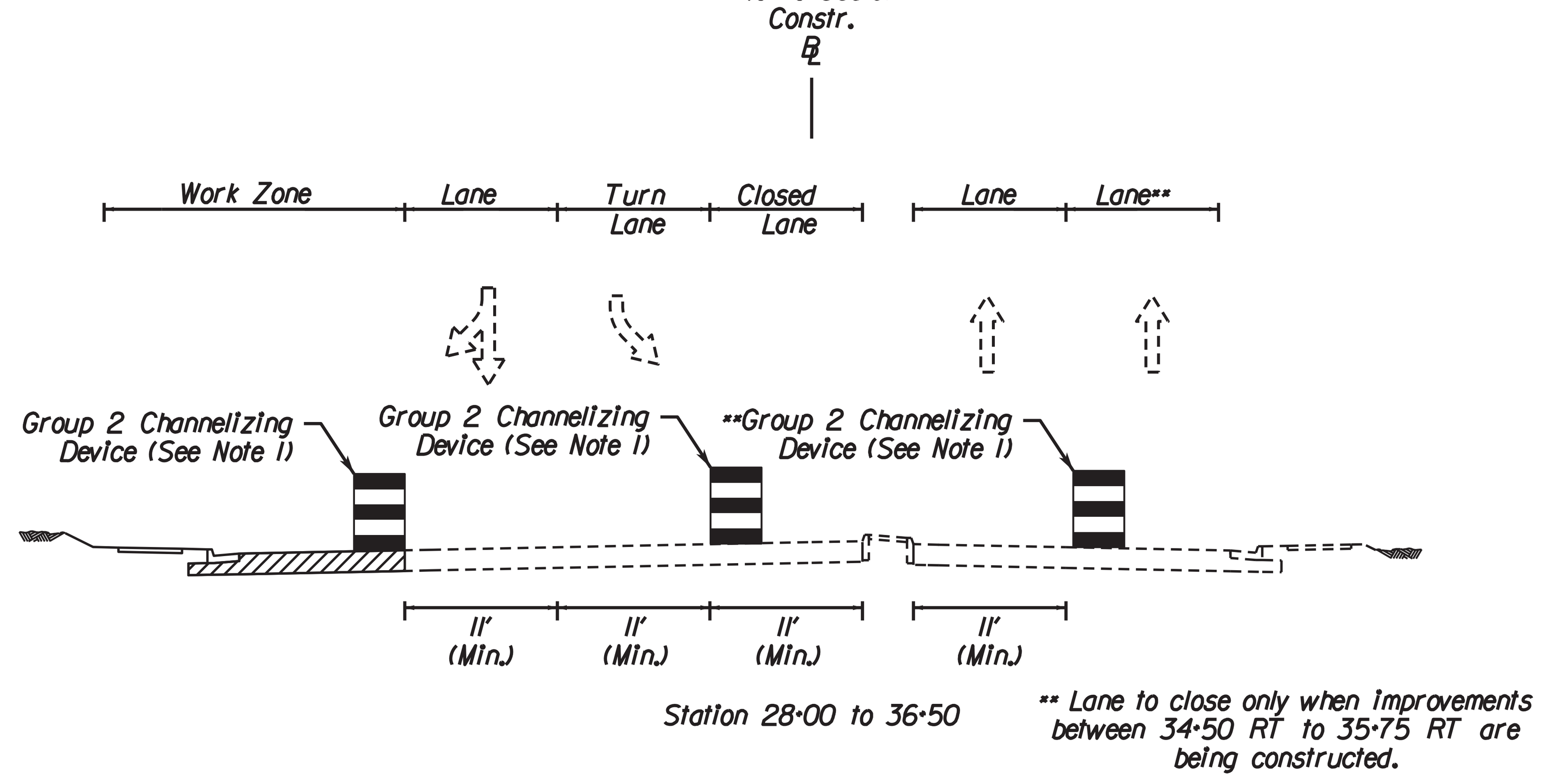
Phase I

Not Shown: Group 2 Channelization Devices shall have 1' shy (space) to edge of travel way

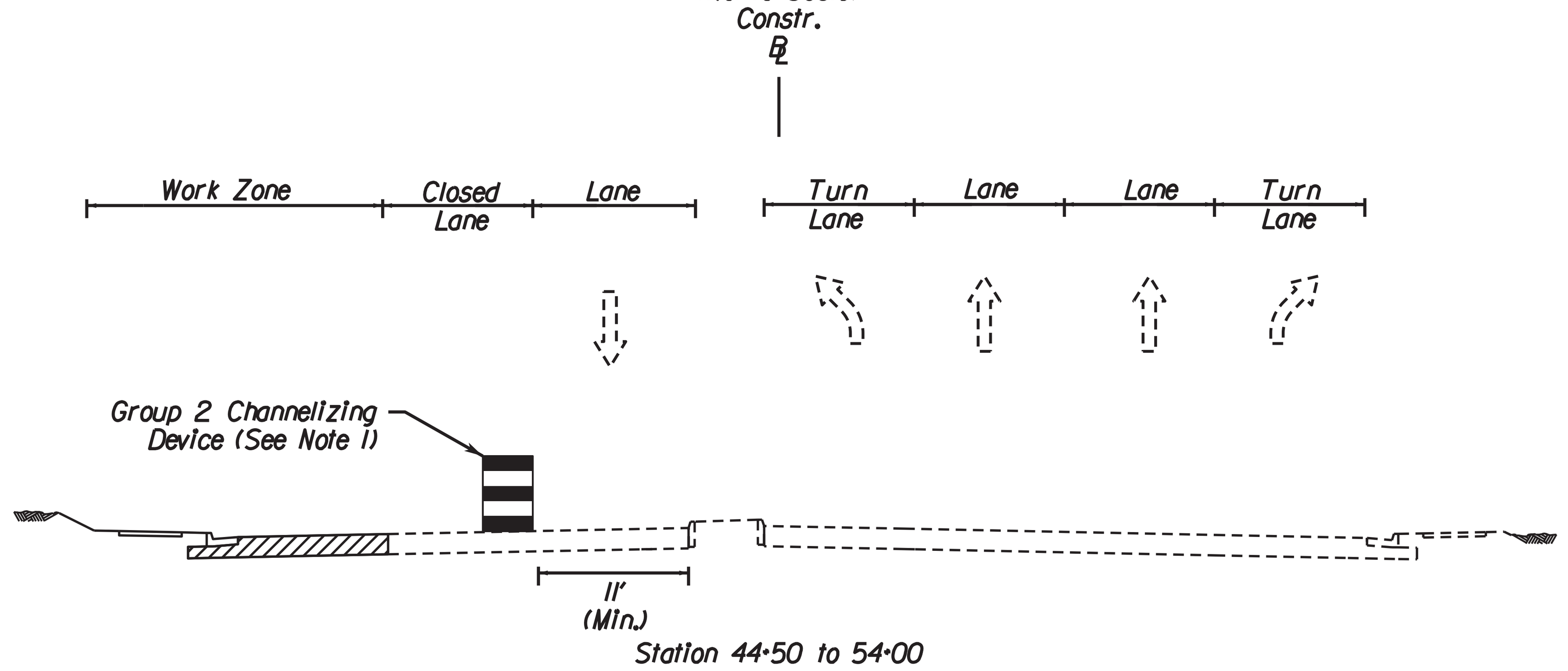
U.S. Route 50
Fairfax Blvd.
(Not to Scale)



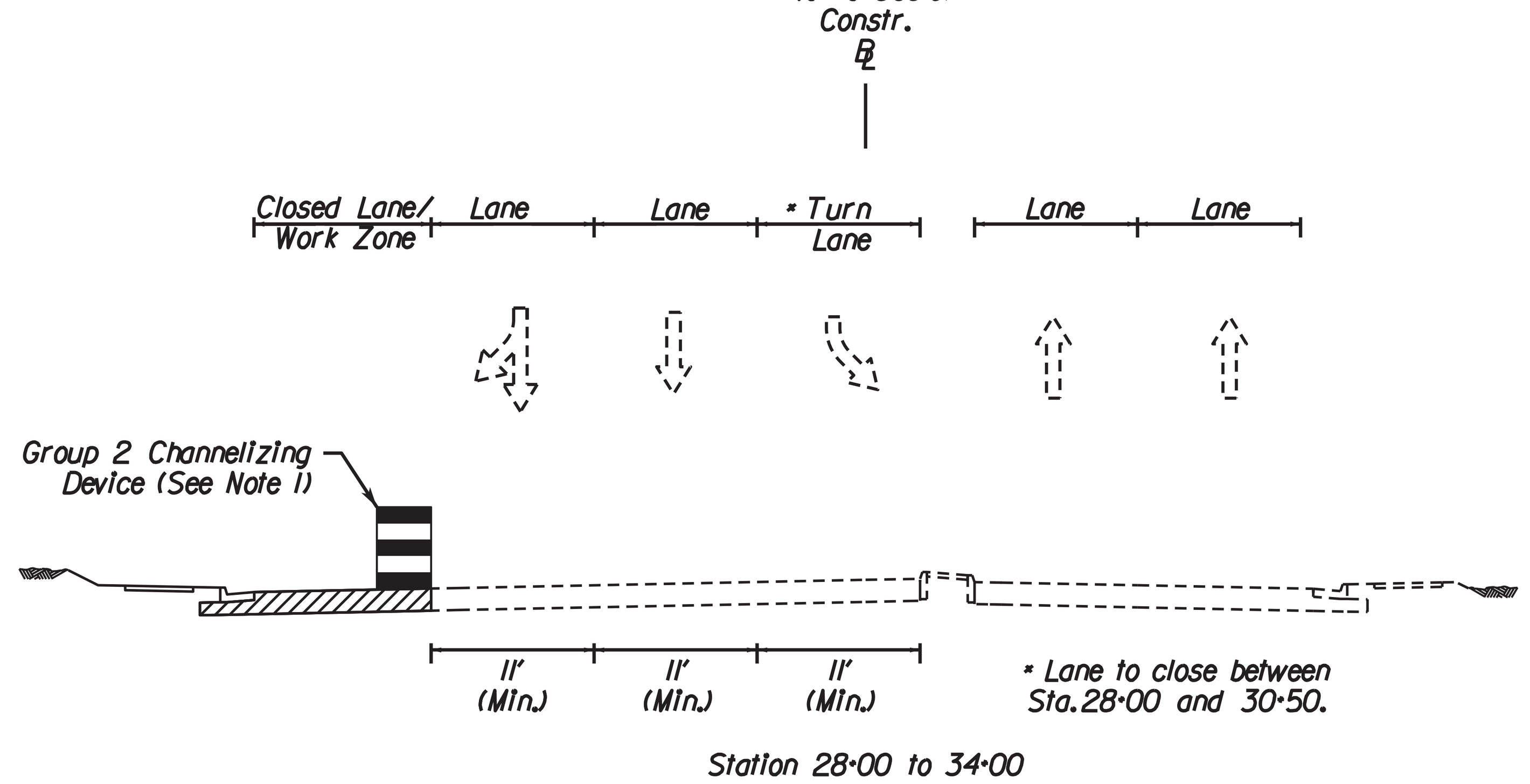
Route 236
Main Street
(Not to Scale)



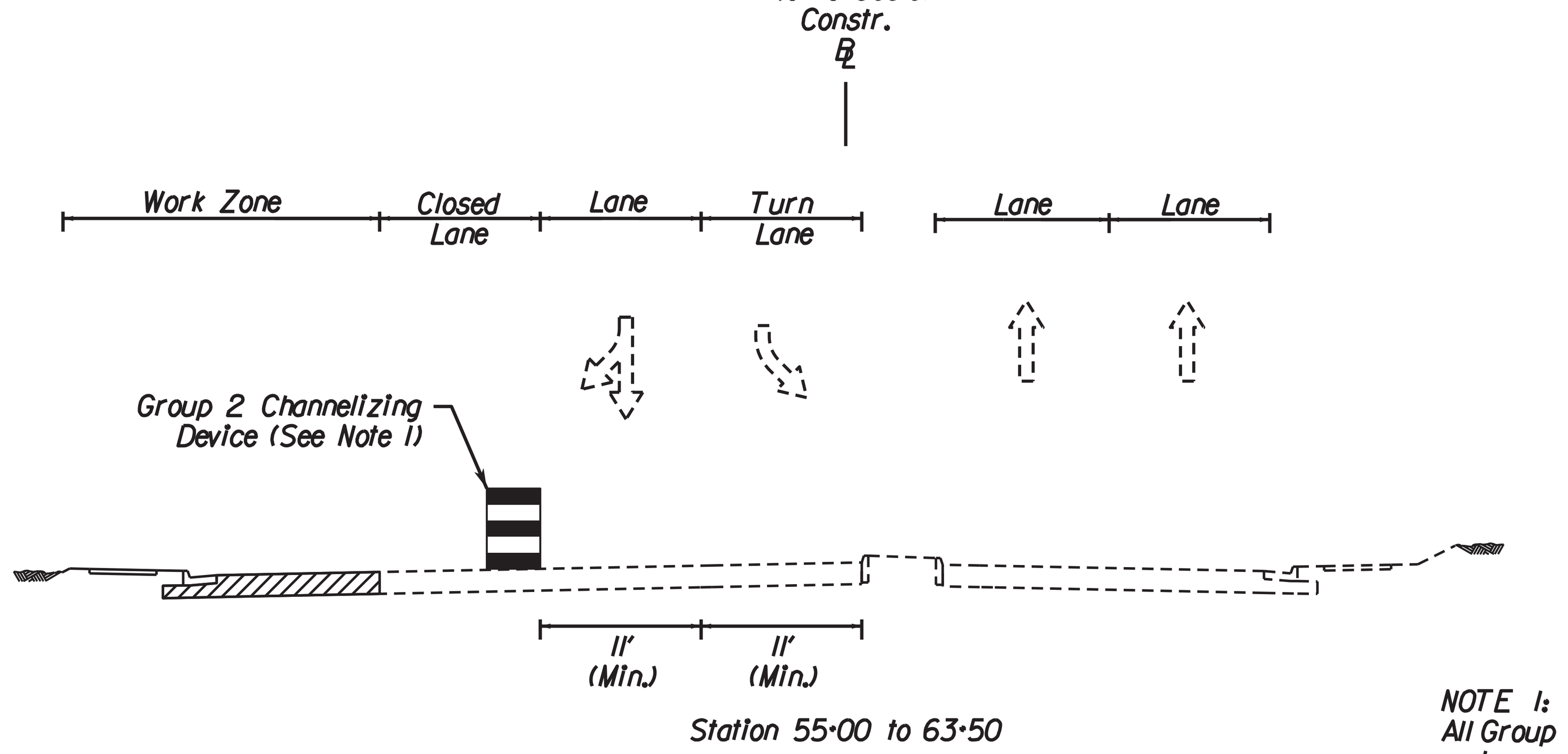
U.S. Route 29
Lee Highway
(Not to Scale)



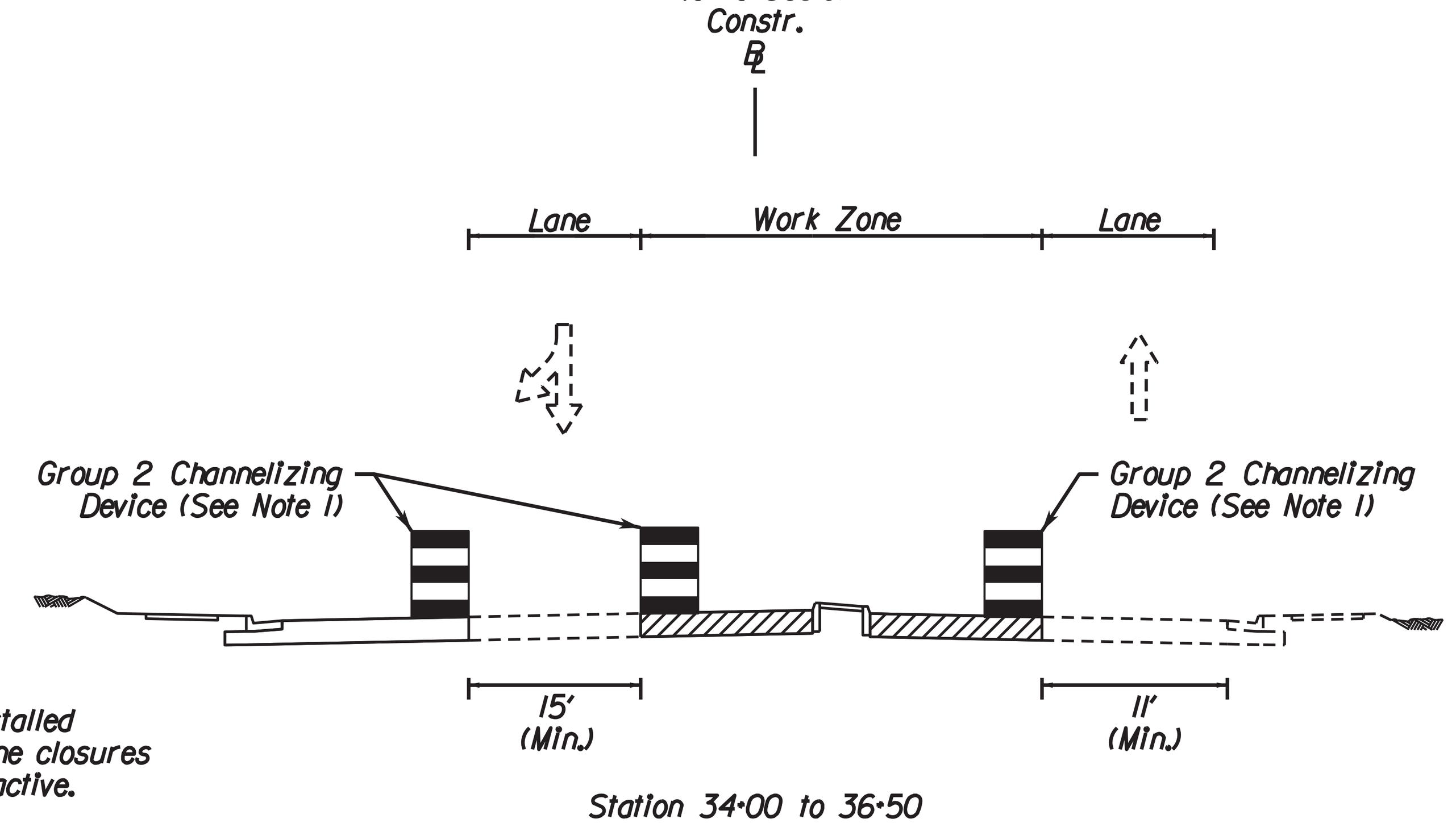
Route 236
Main Street
(Not to Scale)



U.S. Route 29/U.S. Route 50
Fairfax Blvd.
(Not to Scale)



Route 236
Main Street
(Not to Scale)

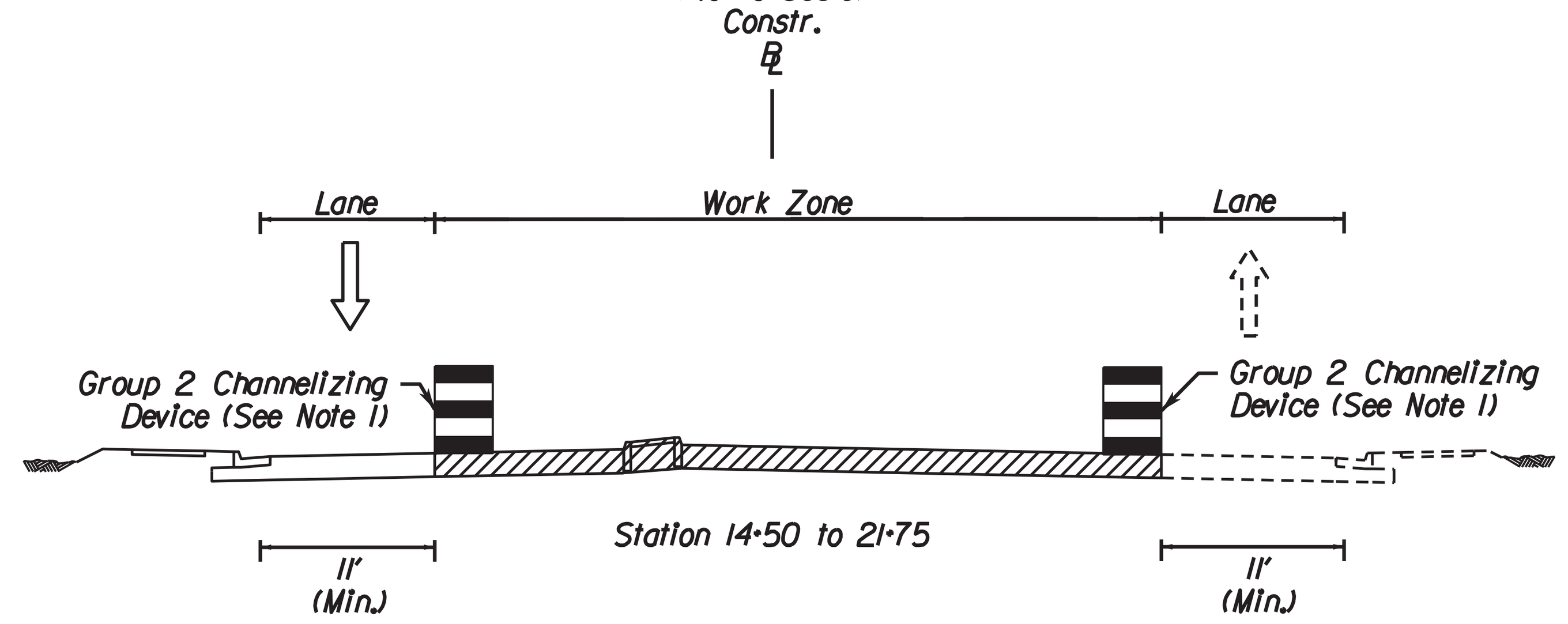


NOTE 1:
All Group 2 Channelizing Devices are to be installed and removed daily to facilitate construction. Lane closures to occur only when construction work zone is active.

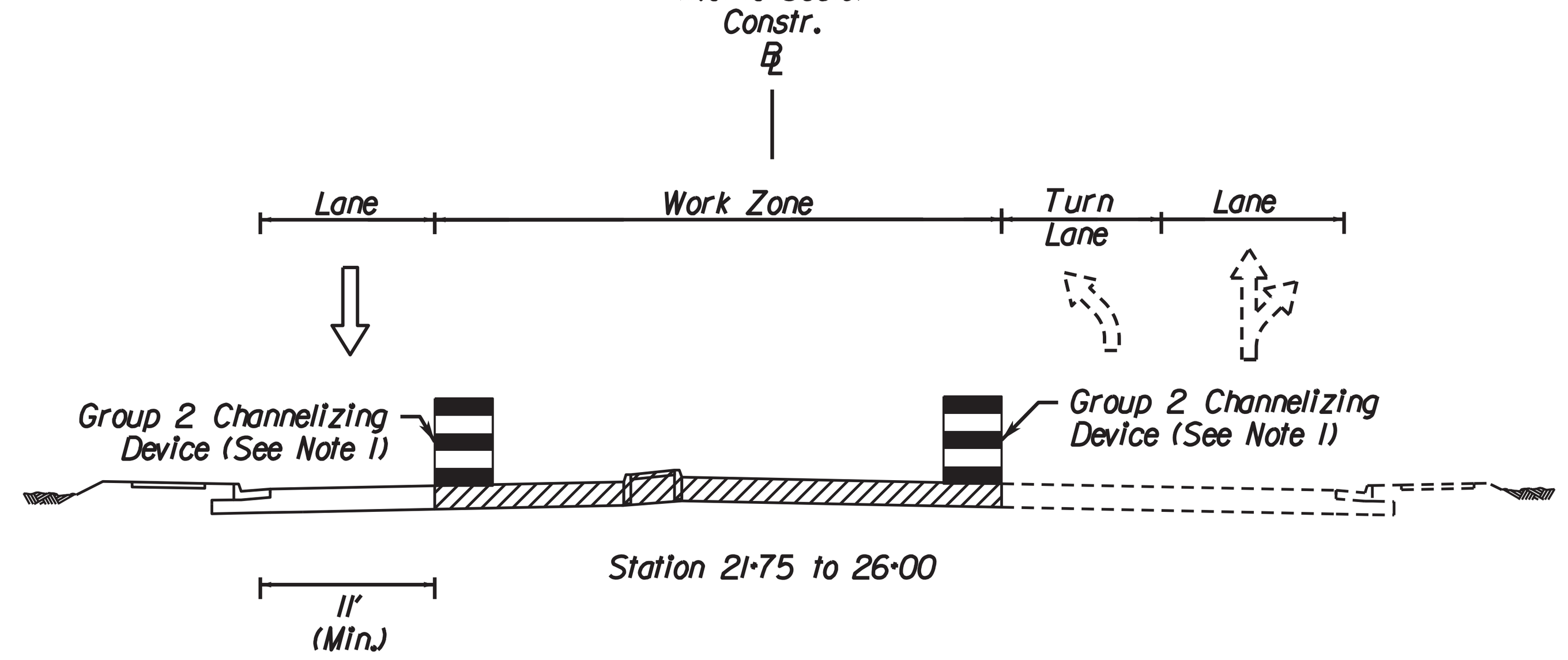
Phase II

Not Shown: Group 2 Channelization Devices shall have 1' shy (space) to edge of travel way

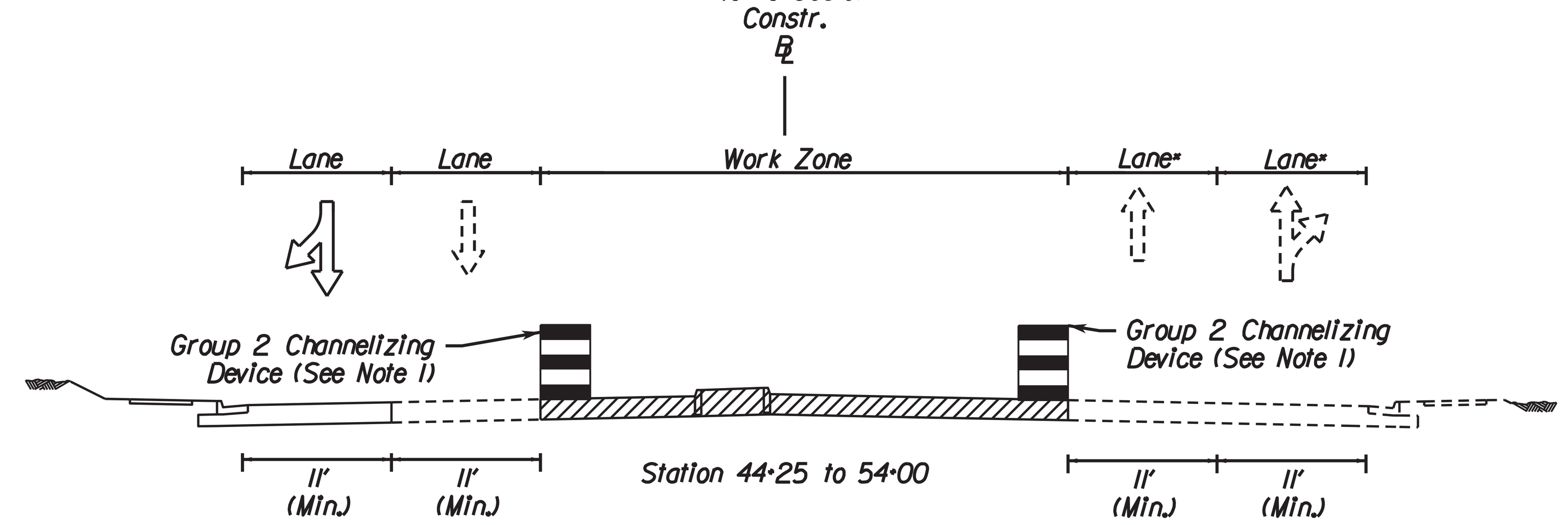
U.S. Route 50
Fairfax Blvd.
(Not to Scale)



U.S. Route 50
Fairfax Blvd.
(Not to Scale)

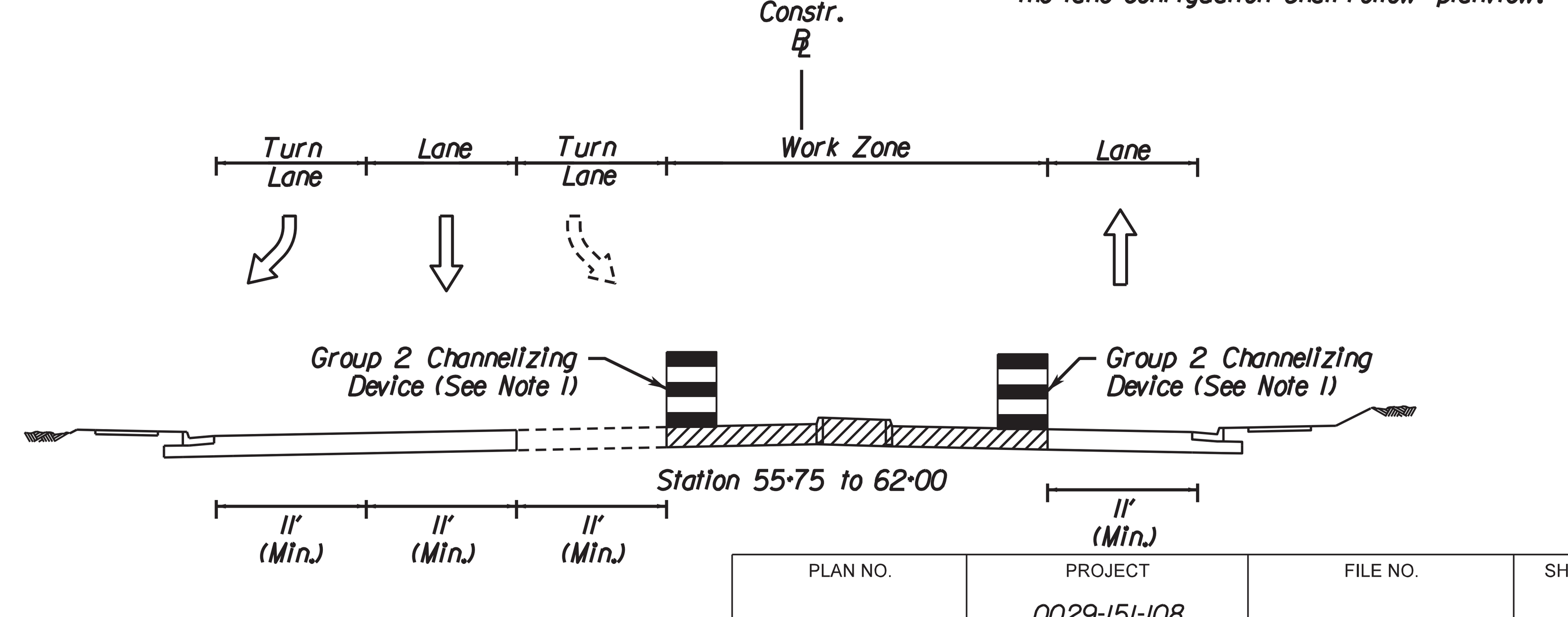


U.S. Route 29
Lee Highway
(Not to Scale)



U.S. Route 29/U.S. Route 50
Fairfax Blvd.
(Not to Scale)

* At approach to intersection of Route 29/50 the lane configuation shall follow planview.



PLAN NO.	PROJECT	FILE NO.	SHEET NO.
-	0029-151-108	-	1J(2)

Rinker Design Associates, P.C.
Office Locations

NORTHERN VIRGINIA DISTRICT

8/20/2014

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TMP/SOC: PHASE I

COMMONWEALTH OF VIRGINIA
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Adam D Welschenbach
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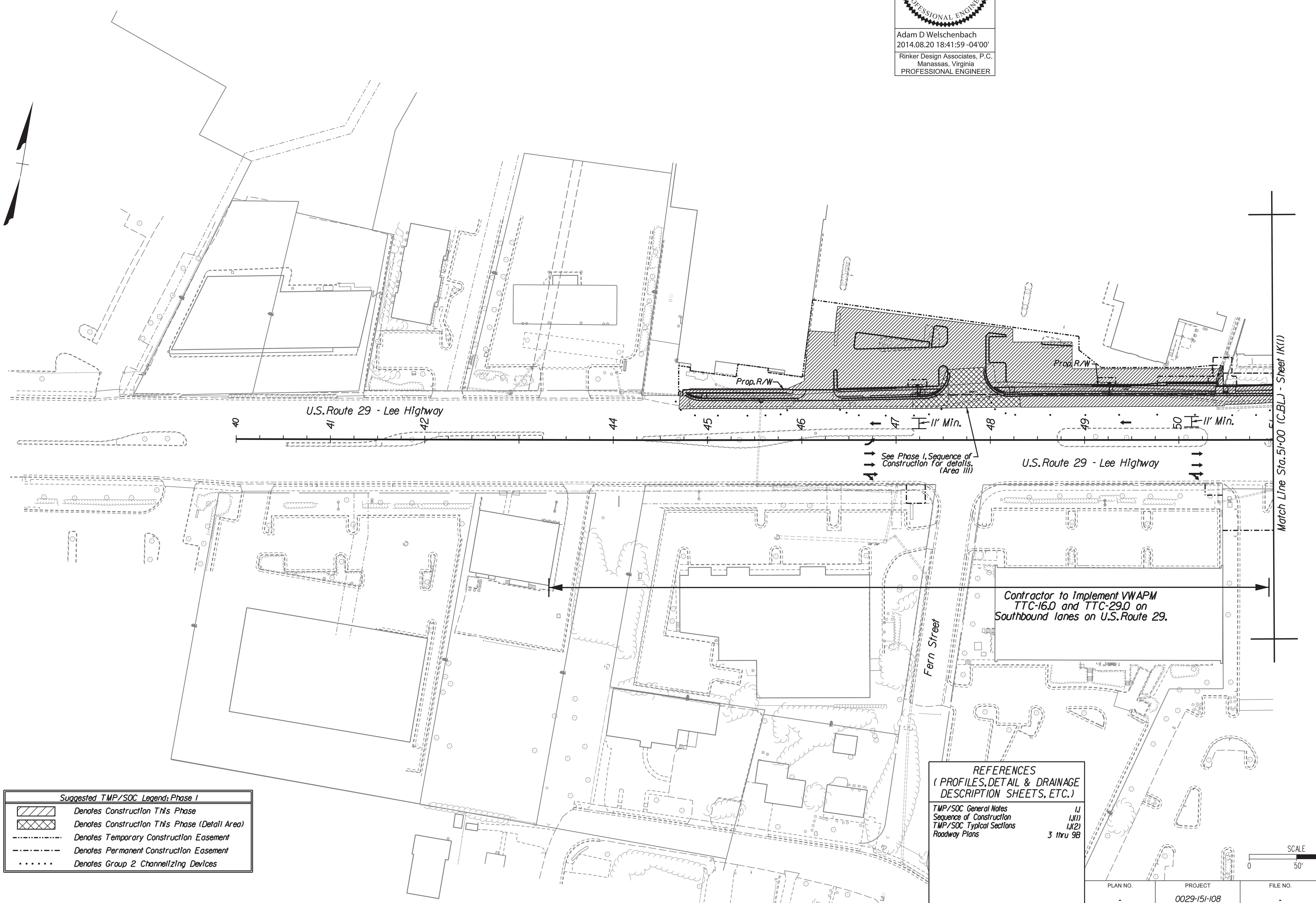
REVISED	STATE	FEDERAL AID PROJECT OWNER	ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	IK



Suggested TMP/SOC Legend: Phase I	
(hatch)	Denotes Construction This Phase
(crosshatch)	Denotes Construction This Phase (Detail Area)
-··-··-	Denotes Temporary Construction Easement
-·-·-	Denotes Permanent Construction Easement
· · · · · ·	Denotes Group 2 Channelizing Devices

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

TMP/SOC General Notes	1J
Sequence of Construction	1J(1)
TMP/SOC Typical Sections	1J(2)
Roadway Plans	3 thru 9B

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
-	0029-151-108	-	IK

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TMP/SOC: PHASE I

REVISED	STATE	FEDERAL AID PROJECT OWNER	ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	1K(1)

COMMONWEALTH OF VIRGINIA — ADAM D. WELSCHENBACH Lic. No. 044359 — PROFESSIONAL ENGINEER

Adam D Welschenbach
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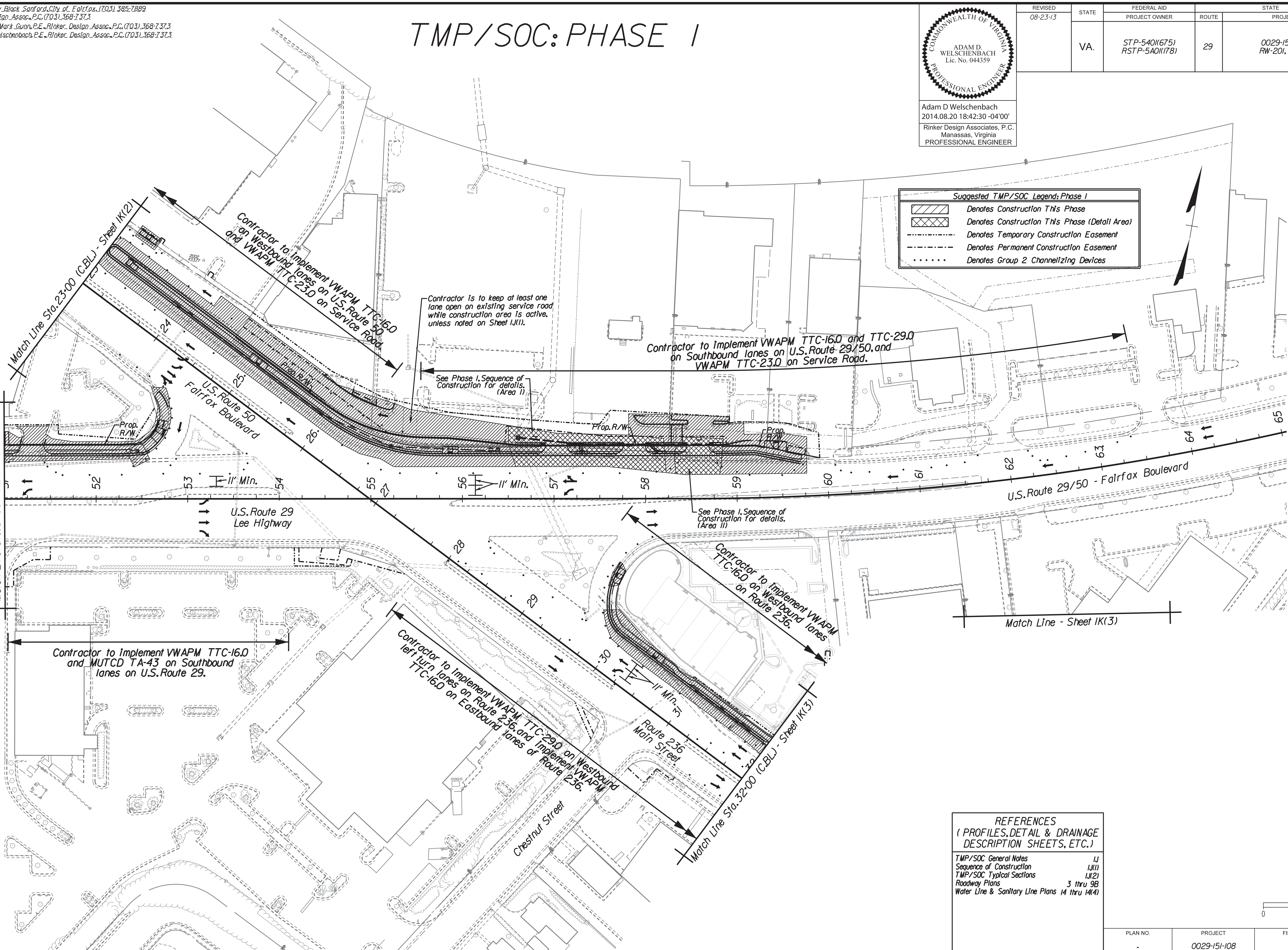

Suggested TMP/SOC Legend: Phase I

- Denotes Construction This Phase
- Denotes Construction This Phase (Detail Area)
- Denotes Temporary Construction Easement
- Denotes Permanent Construction Easement
- Denotes Group 2 Channelizing Devices

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

TMP/SOC General Notes	1J
Sequence of Construction	1J(1)
TMP/SOC Typical Sections	1J(2)
Roadway Plans	3 thru 9B
Water Line & Sanitary Line Plans	14 thru 14(4)

SCALE 0 50' 100'

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
-	0029-151-108	-	1K(1)

Rinker Design Associates, P.C.
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NORTHERN VIRGINIA DISTRICT

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TMP/SOC: PHASE I

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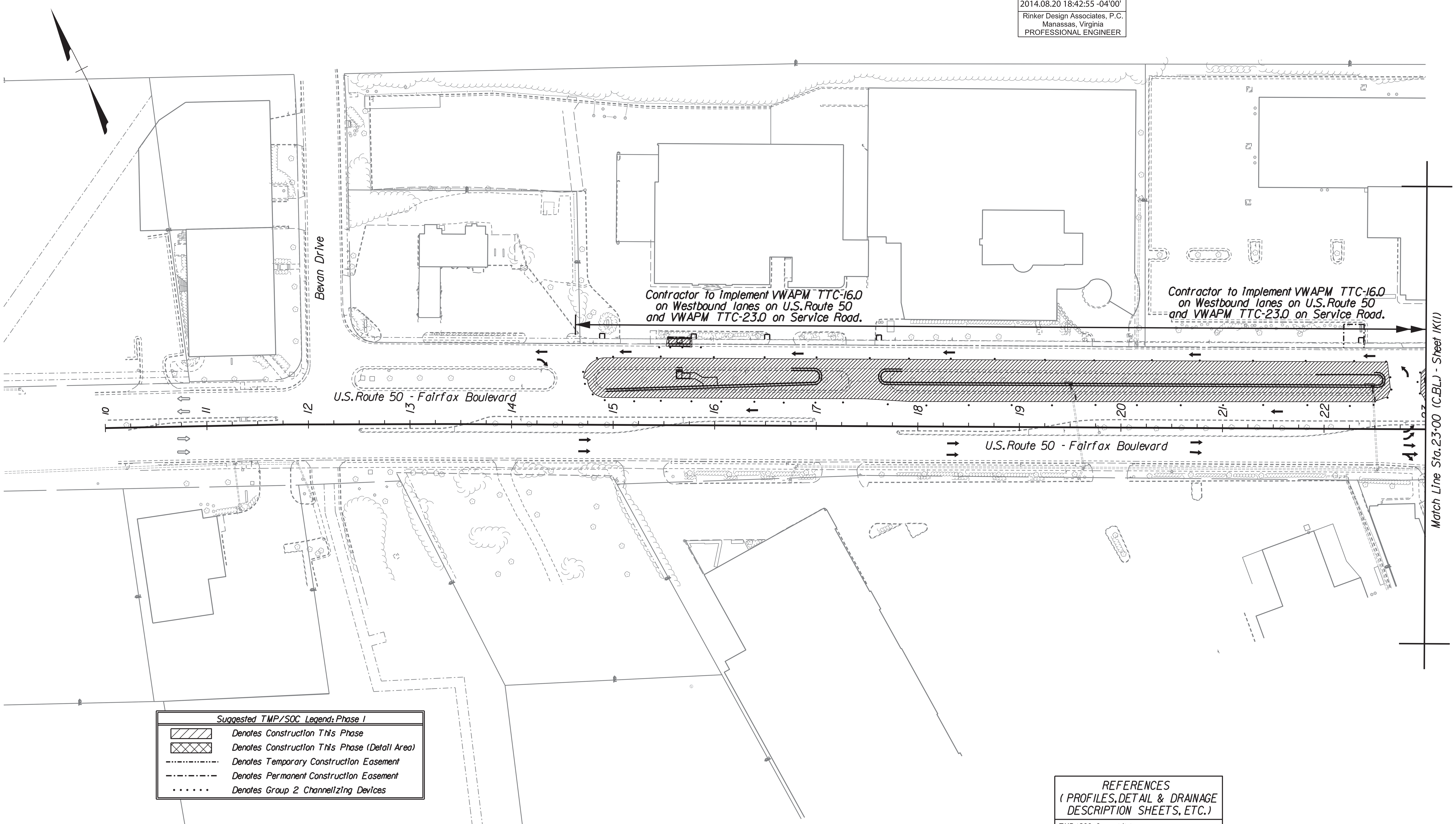
REVISED	STATE	FEDERAL AID PROJECT OWNER	ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	1K(2)



Suggested TMP/SOC Legend: Phase I	
(hatched)	Denotes Construction This Phase
(cross-hatched)	Denotes Construction This Phase (Detail Area)
—··—··—	Denotes Temporary Construction Easement
—·—·—	Denotes Permanent Construction Easement
· · · · · ·	Denotes Group 2 Channelizing Devices

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

TMP/SOC General Notes	1J
Sequence of Construction	1J(1)
TMP/SOC Typical Sections	1J(2)
Roadway Plans	3 thru 9B

SCALE 0 50' 100'

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
-	0029-151-108	-	1K(2)

NORTHERN VIRGINIA DISTRICT

8/20/2014

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TMP/SOC: PHASE I

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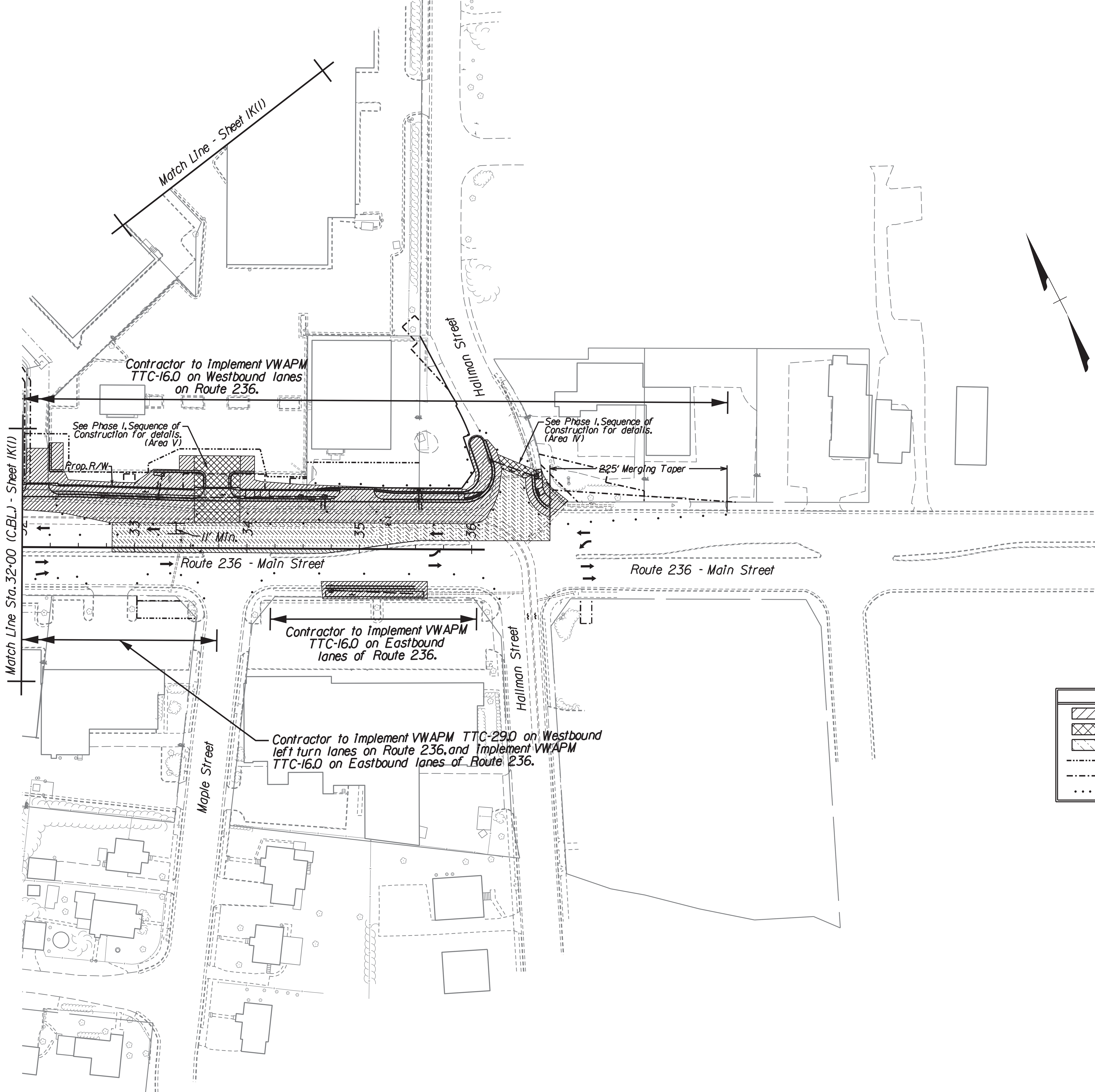
REVISED	STATE	FEDERAL AID PROJECT OWNER	ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	IK(3)



Suggested TMP/SOC Legend: Phase I

Symbol	Description
(hatch)	Denotes Construction This Phase
(cross-hatch)	Denotes Construction This Phase (Detail Area)
(light hatch)	Denotes Construction This Phase (Built Under Traffic)
-··-··-	Denotes Temporary Construction Easement
-·-·-·-	Denotes Permanent Construction Easement
· · · · · ·	Denotes Group 2 Channelizing Devices

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

TMP/SOC General Notes	1J
Sequence of Construction	1J(1)
TMP/SOC Typical Sections	1J(2)
Roadway Plans	3 thru 9B

SCALE
0 50' 100'

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
-	0029-151-108	-	IK(3)

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NORTHERN VIRGINIA DISTRICT

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TMP/SOC: PHASE II

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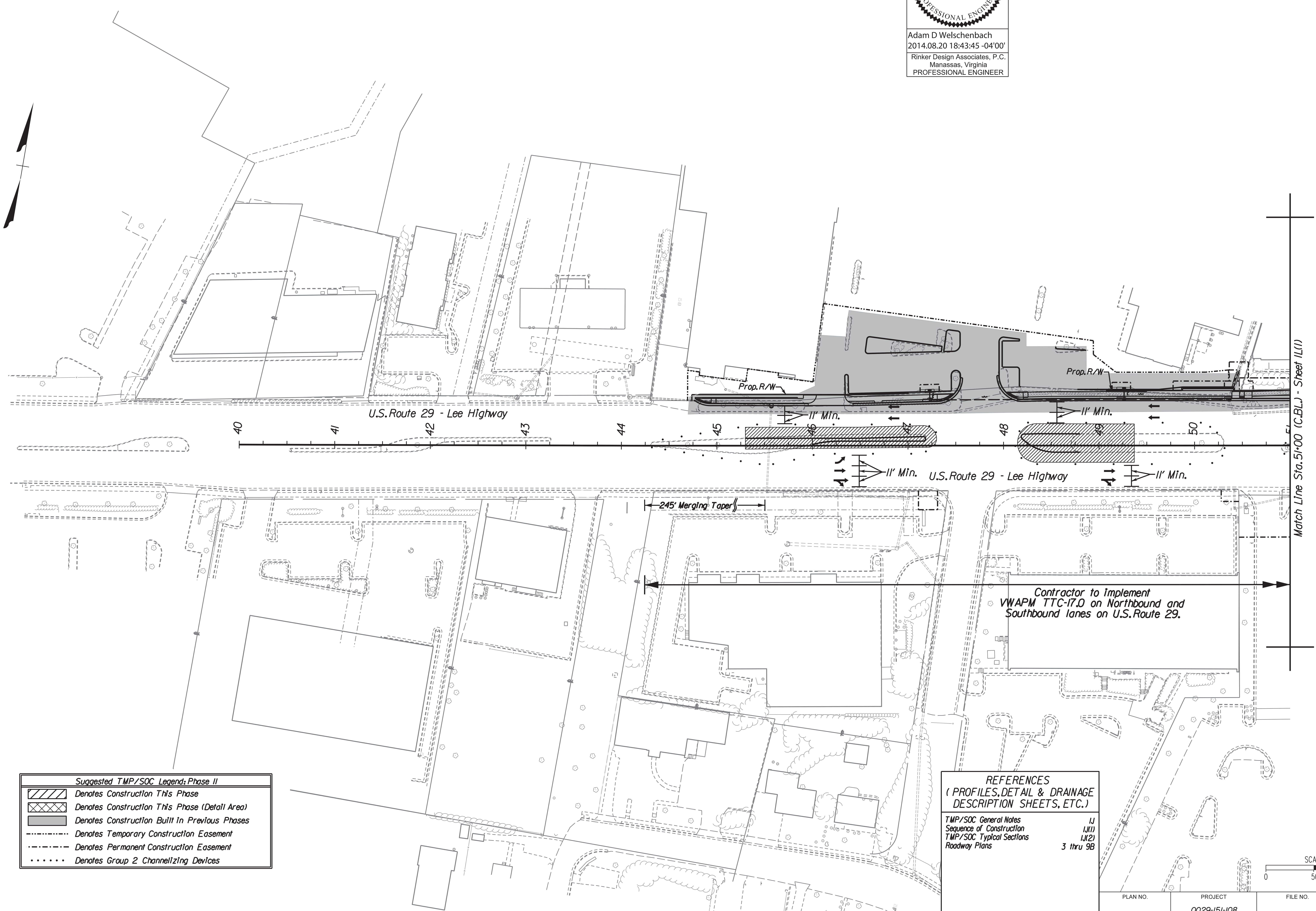
REVISED	STATE	FEDERAL AID PROJECT OWNER	ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	1L



Suggested TMP/SOC Legend: Phase II	
(hatched)	Denotes Construction This Phase
(cross-hatched)	Denotes Construction This Phase (Detail Area)
(shaded)	Denotes Construction Built In Previous Phases
-··-··-	Denotes Temporary Construction Easement
-·-·-	Denotes Permanent Construction Easement
· · · · · ·	Denotes Group 2 Channelizing Devices

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

TMP/SOC General Notes	1J
Sequence of Construction	1J(1)
TMP/SOC Typical Sections	1J(2)
Roadway Plans	3 thru 9B

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
-	0029-151-108	-	1L

NORTHERN VIRGINIA DISTRICT

8/20/2014

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TMP/SOC: PHASE II

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REVISED	STATE	FEDERAL AID PROJECT OWNER	STATE ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	IL(1)

Suggested TMP/SOC Legend: Phase II

- Denotes Construction This Phase
- Denotes Construction This Phase (Detail Area)
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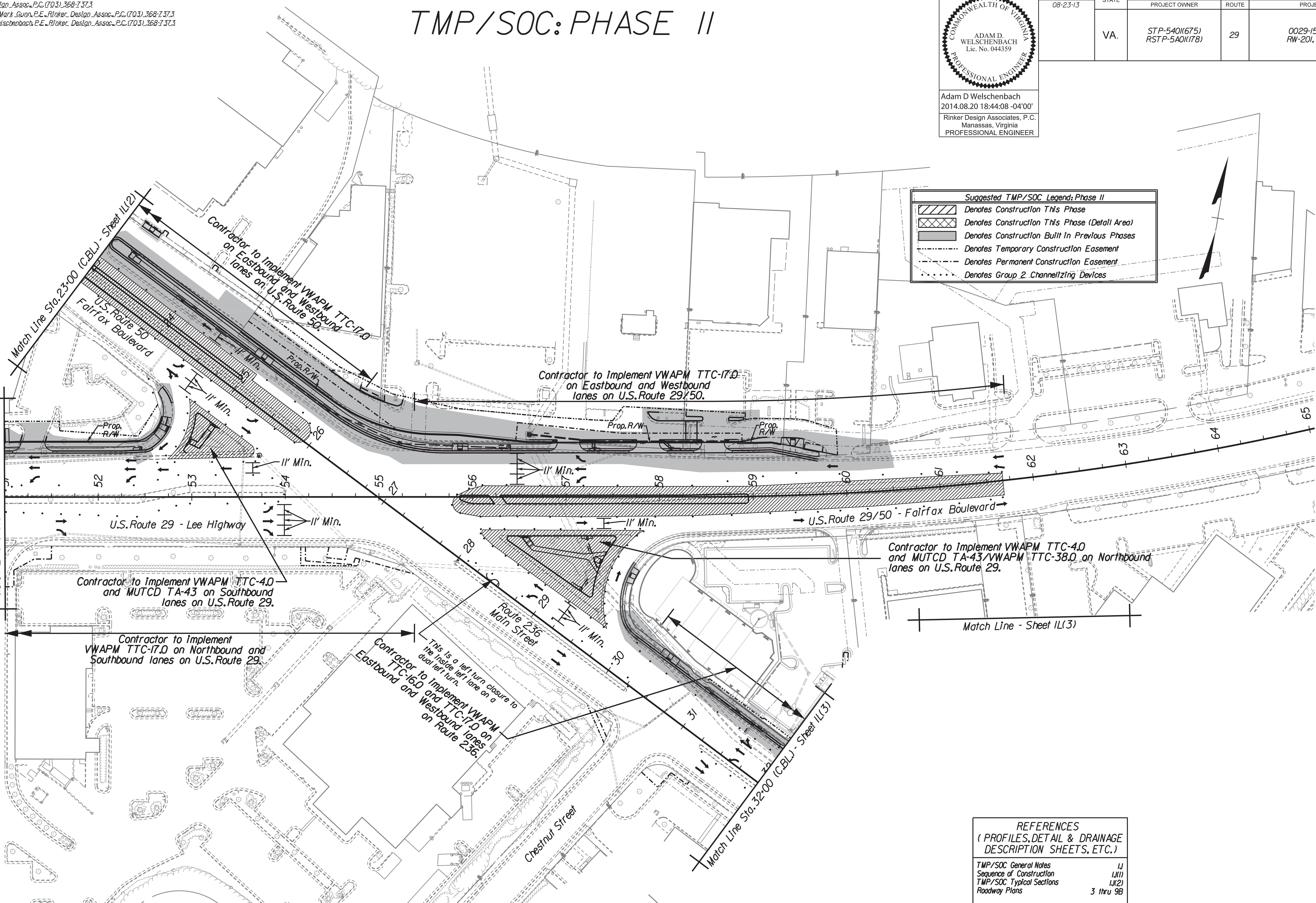
- Denotes Temporary Construction Easement
- Denotes Permanent Construction Easement
- Denotes Group 2 Channelizing Devices



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

TMP/SOC General Notes	IJ
Sequence of Construction	IJ(1)
TMP/SOC Typical Sections	IJ(2)
Roadway Plans	3 thru 9B

SCALE 0 50' 100'

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
-	0029-151-108	-	IL(1)

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TMP/SOC: PHASE II

COMMONWEALTH OF VIRGINIA
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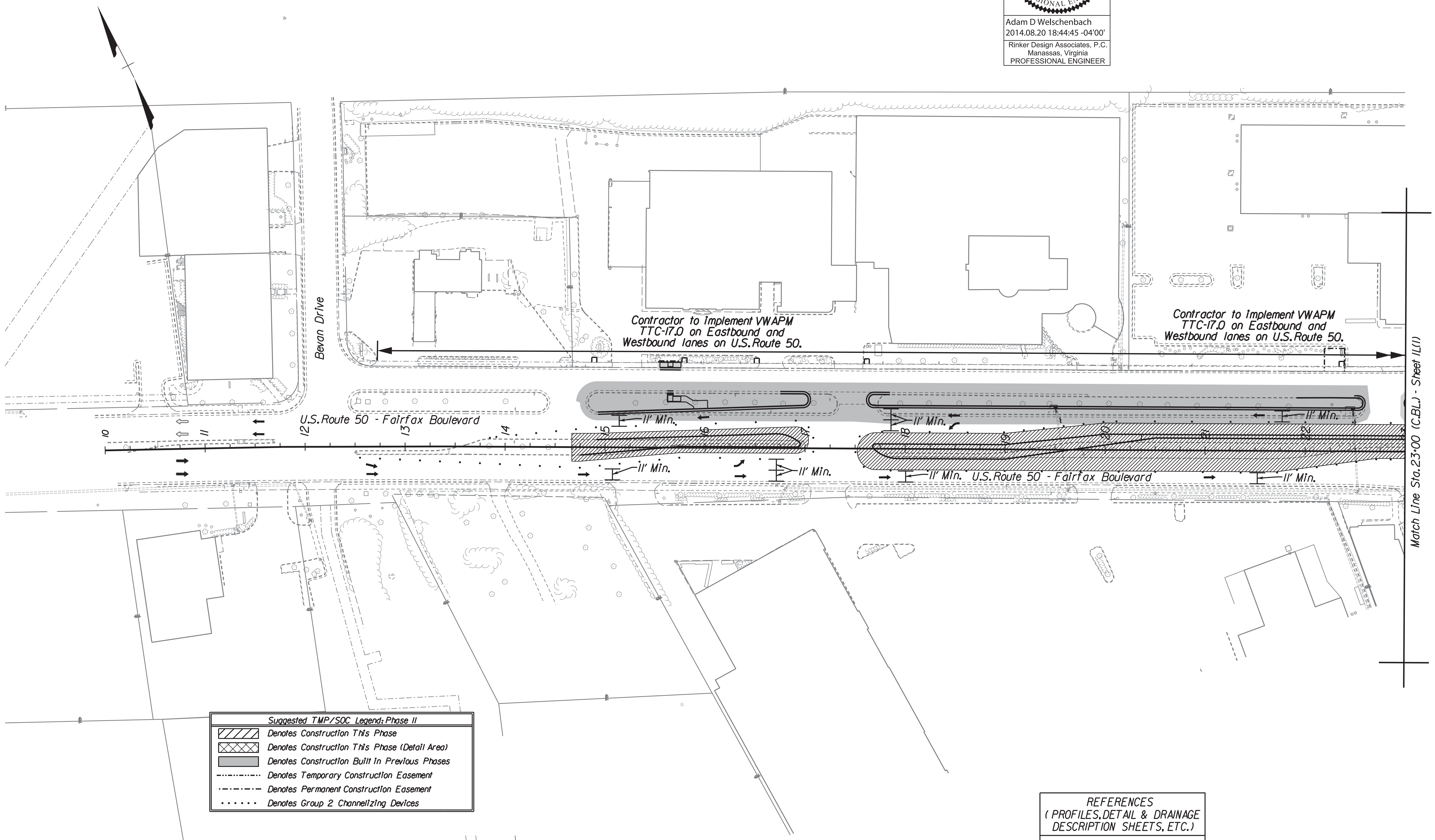
REVISED	STATE	FEDERAL AID PROJECT OWNER	ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	IL(2)



Suggested TMP/SOC Legend: Phase II	
(hatch)	Denotes Construction This Phase
(cross-hatch)	Denotes Construction This Phase (Detail Area)
(shaded)	Denotes Construction Built In Previous Phases
-··-··-	Denotes Temporary Construction Easement
-·-·-	Denotes Permanent Construction Easement
· · · · · ·	Denotes Group 2 Channelizing Devices

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

TMP/SOC General Notes	IJ
Sequence of Construction	IJ(1)
TMP/SOC Typical Sections	IJ(2)
Roadway Plans	3 thru 9B

SCALE 0 50' 100'

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
-	0029-151-108	-	IL(2)

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TMP/SOC: PHASE II

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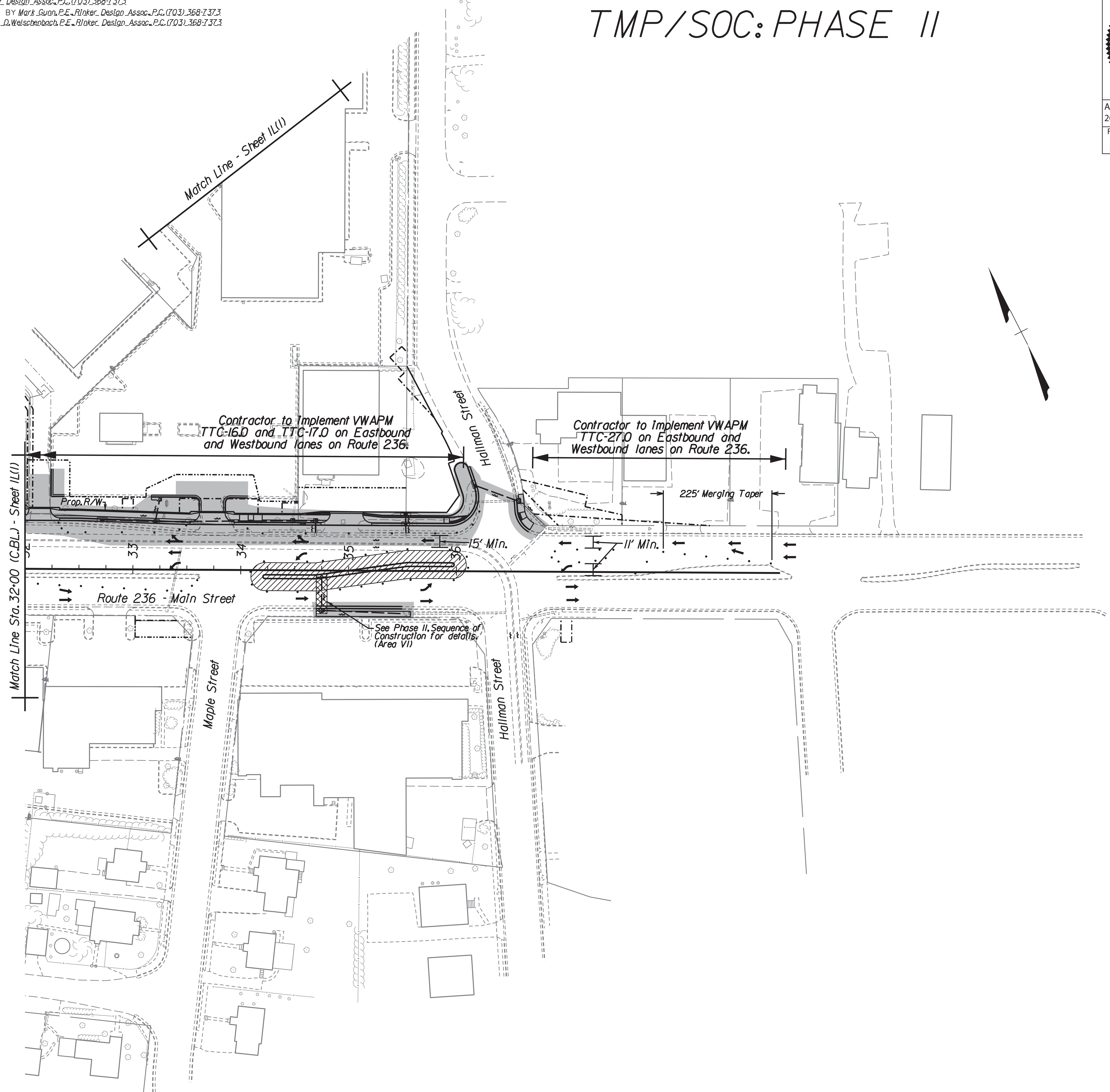
REVISED	STATE	FEDERAL AID PROJECT OWNER	STATE ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	IL(3)



Suggested TMP/SOC Legend: Phase II	
(hatched)	Denotes Construction This Phase
(cross-hatched)	Denotes Construction This Phase (Detail Area)
(shaded)	Denotes Construction Built In Previous Phases
- - · - · · -	Denotes Temporary Construction Easement
— · — · —	Denotes Permanent Construction Easement
· · · · · ·	Denotes Group 2 Channelizing Devices

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

TMP/SOC General Notes	IJ
Sequence of Construction	IJ(1)
TMP/SOC Typical Sections	IJ(2)
Roadway Plans	3 thru 9B

SCALE 0 50' 100'

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
-	0029-151-108	-	IL(3)

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Erosion & Sediment Control Plan Notes and Details

COMMONWEALTH OF VIRGINIA
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REVISED	STATE	FEDERAL AID PROJECT OWNER	ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	1N

EROSION AND SEDIMENT CONTROL (ESC) GENERAL NOTES

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 and Sediment Control items in the plan assembly:

- (TFB) Denotes Temporary Filter Barrier,St'd EC-5
- (TSF) Denotes Temporary Silt Fence,St'd EC-5
- (DIST-A) Denotes Drop Inlet Protection Type A
- (DIST-B) Denotes Drop Inlet Protection Type B
- (PS) Denotes Permanent Seeding

EROSION AND SEDIMENT CONTROL NARRATIVE

Project Description - This project proposes an improvement of the intersection of Lee Highway (Rt.29),Fairfax Boulevard (Rt.50),and Main Street (Rt.236).The improvement includes a roadway widening with sidewalk along the north and west bound lanes of Rt.29,Rt.50,and Rt.236 and milling/overlay of the east and south bound lanes on Rt.29,Rt.50,and Rt.236.Approximately 9.6 acres,consisting primarily of mill and overlay activities,will be disturbed during construction.

Existing Site Conditions - Lee Highway,Fairfax Boulevard,and Main Street are existing 4 lane divided roads with turn lanes in an urban area.Land use in this area is business and commercial.Runoff from this project is within Accotink Creek Watershed.Vegetation surrounding this project is mainly short grass and several small landscaped areas.

Adjacent Areas - Adjacent areas are business and commercial parking lots.

Off-site Areas - There will be impacts to adjacent parcels associated with the construction of this project. All necessary right-of-way,easements,and provisions will be acquired prior to the start of construction.The contractor shall be responsible for the locations of acceptable offsite borrow and/or disposal sites,and these shall be in accordance with VDOT regulations.

Soils - There are no ditches proposed in this project.All of the project runoff runs through a series of existing drainage systems.Please see Sheet 1N(2) for soils table.

Critical Areas - There are no critical areas within the site.

Erosion and Sediment Control Measures - Unless otherwise directed,all vegetative and structural erosion and sediment control practices shall be constructed and maintained in accordance with the most current minimum standards and specifications of the Virginia Erosion and Sediment Control Handbook. Silt fence and inlet protections for existing storm drainage structures shall be placed prior to earth moving operations.The minimum standards of the VESCH shall be adhered to unless otherwise waived or approved by a variance.

Land Disturbing/Construction Sequence
1. Flag limits of clearing and grading.
2. Install temporary sediment barrier including silt fence and inlet protection.
3. Obtain site inspector's approval of Phase I controls.
4. After inspector's approval of initial controls,clear and grub remainder of the site as necessary.
5. Construct storm sewer system. Install inlet protections at all applicable locations.
6. Rough grade the remainder of the site.
7. Fine grade site and install all landscaping including permanent seeding and fertilize all grassed areas.
8. Clean site of all trash and debris.
9. Have the inspector inspect all areas to determine if they are adequately stabilized.

Maintenance Program - The Contractor shall make a visual inspection of all mechanical controls and newly stabilized areas (i.e.seeded,mulched,or sodded areas) on a daily basis and after each rainfall event to ensure that all controls are functioning properly. The following items will be checked in particular: the silt fence barrier will be checked regularly for undermining or deterioration of the fabric,and sediment shall be removed when the level of sediment deposition reaches halfway to the top of the barrier; and the seeded areas will be checked regularly to ensure that a good stand is maintained,and areas shall be fertilized and reseeded as needed. Any damaged controls shall be repaired by the end of the work day,including reseeding and mulching if necessary. The Contractor may install additional measures should he/she deem it necessary at the inspector's approval.

Permanent Stabilization - Permanent stabilization shall be done in accordance with the VESCH. Seeding shall be according to Std.& Spec.3.32,Permanent Seeding,of the handbook.

Stormwater Runoff Considerations - The project runoff flows to existing dual 66" concrete pipes along Main St. from many locations.For drainage and outfall calculations,see drainage computations and outfall analysis booklets which have been provided under separate cover.

At the time of land disturbing activities within state right of way the contractor shall have a representative with Erosion and Sediment Control Certification (ESCCC) at the project site.

SCALE
0 25' 50'

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Erosion & Sediment Control Plan Notes and Details

COMMONWEALTH OF VIRGINIA
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REVISED	STATE	FEDERAL AID PROJECT OWNER	ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	1N(1)

4VAC50-30-40. Minimum Standards. (MS-19)

A VESCP must be consistent with the following criteria, techniques and methods:

1. Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.
2. During construction of the project, soil stock piles and borrow areas shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as borrow areas and soil intentionally transported from the project site.
3. A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, mature enough to survive and will inhibit erosion.
4. Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land-disturbing activity and shall be made functional before upslope land disturbance takes place.
5. Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.
6. Sediment traps and sediment basins shall be designed and constructed based upon the total drainage area to be served by the trap or basin.
   a. The minimum storage capacity of a sediment trap shall be 134 cubic yards per acre of drainage area and the trap shall only control drainage areas less than three acres.
   b. Surface runoff from disturbed areas that is comprised of flow from drainage areas greater than or equal to three acres shall be controlled by a sediment basin. The minimum storage capacity of a sediment basin shall be 134 cubic yards per acre of drainage area. The outfall system shall, at a minimum, maintain the structural integrity of the basin during a 25-year storm of 24-hour duration. Runoff coefficients used in runoff calculations shall correspond to a bare earth condition or those conditions expected to exist while the sediment basin is utilized.
7. Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.
8. Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.
9. Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.
10. All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.
11. Before newly constructed stormwater conveyance channels or pipes are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel.
12. When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction. Non-erodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by non-erodible cover materials.
13. When a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary vehicular stream crossing constructed of non-erodible material shall be provided.
14. All applicable federal, state and local chapters pertaining to working in or crossing live watercourses shall be met.
15. The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.
16. Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:
   a. No more than 500 linear feet of trench may be opened at one time.
   b. Excavated material shall be placed on the uphill side of trenches.
   c. Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.
   d. Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization.
   e. Restabilization shall be accomplished in accordance with this chapter.
   f. Applicable safety chapters shall be complied with.
17. Where construction vehicle access routes intersect paved or public roads, provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or public road surface, the road surface shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual development lots as well as to larger land-disturbing activities.
18. All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the VESCP authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.
19. Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion and damage due to increases in volume, velocity and peak flow rate of stormwater runoff for the stated frequency storm of 24-hour duration in accordance with the following standards and criteria. Stream restoration and relocation projects that incorporate natural channel design concepts are not man-made channels and shall be exempt from any flow rate capacity and velocity requirements for natural or man-made channels:
   a. Concentrated stormwater runoff leaving a development site shall be discharged directly into an adequate natural or man-made receiving channel, pipe or storm sewer system. For those sites where runoff is discharged into a pipe or pipe system, downstream stability analyses at the outfall of the pipe or pipe system shall be performed.
   b. Adequacy of all channels and pipes shall be verified in the following manner:
      1) The applicant shall demonstrate that the total drainage area to the point of analysis within the channel is one hundred times greater than the contributing drainage area of the project in question; or
      2)
         a) Natural channels shall be analyzed by the use of a two-year storm to verify that stormwater will not overtop channel banks nor cause erosion of channel bed or banks.
         b) All previously constructed man-made channels shall be analyzed by the use of a ten-year storm to verify that stormwater will not overtop its banks and by the use of a two-year storm to demonstrate that stormwater will not cause erosion of channel bed or banks; and
         c) Pipes and storm sewer systems shall be analyzed by the use of a ten-year storm to verify that stormwater will be contained within the pipe or system.
   c. If existing natural receiving channels or previously constructed man-made channels or pipes are not adequate, the applicant shall:
      1) Improve the channels to a condition where a ten-year storm will not overtop the banks and a two-year storm will not cause erosion to channel the bed or banks; or
      2) Improve the pipe or pipe system to a condition where the ten-year storm is contained within the appurtenances;
      3) Develop a site design that will not cause the pre-development peak runoff rate from a two-year storm to increase when runoff outfalls into a natural channel or will not cause the pre-development peak runoff rate from a ten-year storm to increase when runoff outfalls into a man-made channel; or
      4) Provide a combination of channel improvement, stormwater detention or other measures which is satisfactory to the VESCP authority to prevent downstream erosion.
   d. The applicant shall provide evidence of permission to make the improvements.
   e. All hydrologic analyses shall be based on the existing watershed characteristics and the ultimate development condition of the subject project.
   f. If the applicant chooses an option that includes stormwater detention, he shall obtain approval from the VESCP of a plan for maintenance of the detention facilities. The plan shall set forth the maintenance requirements of the facility and the person responsible for performing the maintenance.
   g. Outfall from a detention facility shall be discharged to a receiving channel, and energy dissipators shall be placed at the outfall of all detention facilities as necessary to provide a stabilized transition from the facility to the receiving channel.
   h. All on-site channels must be verified to be adequate.
   i. Increased volumes of sheet flows that may cause erosion or sedimentation on adjacent property shall be diverted to a stable outlet, adequate channel, pipe or pipe system, or to a detention facility.
   j. In applying these stormwater management criteria, individual lots or parcels in a residential, commercial or industrial development shall not be considered to be separate development projects. Instead, the development, as a whole, shall be considered to be a single development project. Hydrologic parameters that reflect the ultimate development condition shall be used in all engineering calculations.
   k. All measures used to protect properties and waterways shall be employed in a manner which minimizes impacts on the physical, chemical and biological integrity of rivers, streams and other waters of the state.
   l. Any plan approved prior to July 1, 2014, that provides for stormwater management that addresses any flow rate capacity and velocity requirements for natural or man-made channels shall satisfy the flow rate capacity and velocity requirements for natural or man-made channels if the practices are designed to (i) detain the water quality volume and to release it over 48 hours; (ii) detain and release over a 24-hour period the expected rainfall resulting from the one year, 24-hour storm; and (iii) reduce the allowable peak flow rate resulting from the 1.5, 2, and 10-year, 24-hour storms to a level that is less than or equal to the peak flow rate from the site assuming it was in a good forested condition, achieved through multiplication of the forested peak flow rate by a reduction factor that is equal to the runoff volume from the site when it was in a good forested condition divided by the runoff volume from the site in its proposed condition, and shall be exempt from any flow rate capacity and velocity requirements for natural or man-made channels as defined in any regulations promulgated pursuant to 10.1-562 or 10.1-570 of the Act.
   m. For plans approved on and after July 1, 2014, the flow rate capacity and velocity requirements of 10.1-561 A of the Act and this subsection shall be satisfied by compliance with water quantity requirements in the Stormwater Management Act (10.1-603.2 et seq. of the Code of Virginia) and attendant regulations, unless such land-disturbing activities are in accordance with 4VAC50-60-48 of the Virginia Stormwater Management Program (VSMP) Permit Regulations.
   n. Compliance with the water quantity minimum standards set out in 4VAC50-60-66 of the Virginia Stormwater Management Program (VSMP) Permit Regulations shall be deemed to satisfy the requirements of Minimum Standard 19.

CHECKLIST

FOR EROSION AND SEDIMENT CONTROL PLANS

X Minimum Standards - All applicable Minimum Standards must be addressed.

NARRATIVE

X Project description - Briefly describes the nature and purpose of the land-disturbing activity, and the area (acres) to be disturbed.

X Existing site conditions - A description of the existing topography, vegetation and drainage.

X Adjacent areas - A description of neighboring areas such as streams, lakes, residential areas, roads, etc., which might be affected by the land disturbance.

X Off-site areas - Describe any off-site land-disturbing activities that will occur (including borrow sites, waste or surplus areas, etc.). Will any other areas be disturbed?

X Soils - A brief description of the soils on the site giving such information as soil name, mapping unit, erodibility, permeability, depth, texture and soil structure.

X Critical areas - A description of areas on the site which have potentially serious erosion problems (e.g., steep slopes, channels, wet weather/underground springs, etc.).

X Erosion and sediment control measures - A description of the methods which will be used to control erosion and sedimentation on the site. (Controls should meet the specifications in Chapter 3.)

X Permanent stabilization - A brief description, including specifications, of how the site will be stabilized after construction is completed.

X Stormwater runoff considerations - Will the development site cause an increase in peak runoff rates? Will the increase in runoff cause flooding or channel degradation downstream? Describe the strategy to control stormwater runoff.

X Calculations - Detailed calculations for the design of temporary sediment basins, permanent stormwater detention basins, diversions, channels, etc. Include calculations for pre- and post-development runoff.

X Vicinity map - A small map locating the site in relation to the surrounding area. Include any landmarks which might assist in locating the site.

X Indicate north - The direction of north in relation to the site.

X Limits of clearing and grading - Areas which are to be cleared and graded.

X Existing contours - The existing contours of the site.

X Final contours - Changes to the existing contours, including final drainage patterns.

X Existing vegetation - The existing tree lines, grassed areas, or unique vegetation.

X Soils - The boundaries of different soil types.

X Existing drainage patterns - The dividing lines and the direction of flow for the different drainage areas. Include the size (acreage) of each drainage area.

X Critical erosion areas - Areas with potentially serious erosion problems. (See Chapter 6 for criteria.)

X Site Development - Show all improvements such as buildings, parking lots, access roads, utility construction, etc.

X Location of practices - The locations of erosion and sediment controls and stormwater management practices used on the site. Use the standard symbols and abbreviations in Chapter 3 of this handbook.

X Off-site areas - Identify any off-site land-disturbing activities (e.g., borrow sites, waste areas, etc.). Show location of erosion controls. (Is there sufficient information to assure adequate protection and stabilization?)

N/A Detail drawings - Any structural practices used that are not referenced to the E&S handbook or local handbooks should be explained and illustrated with detail drawings.

X Maintenance - A schedule of regular inspections and repair of erosion and sediment control structures should be set forth.

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Soils Map & Table

REVISED	STATE	FEDERAL AID PROJECT OWNER	STATE ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	IN(2)

COMMONWEALTH OF VIRGINIA
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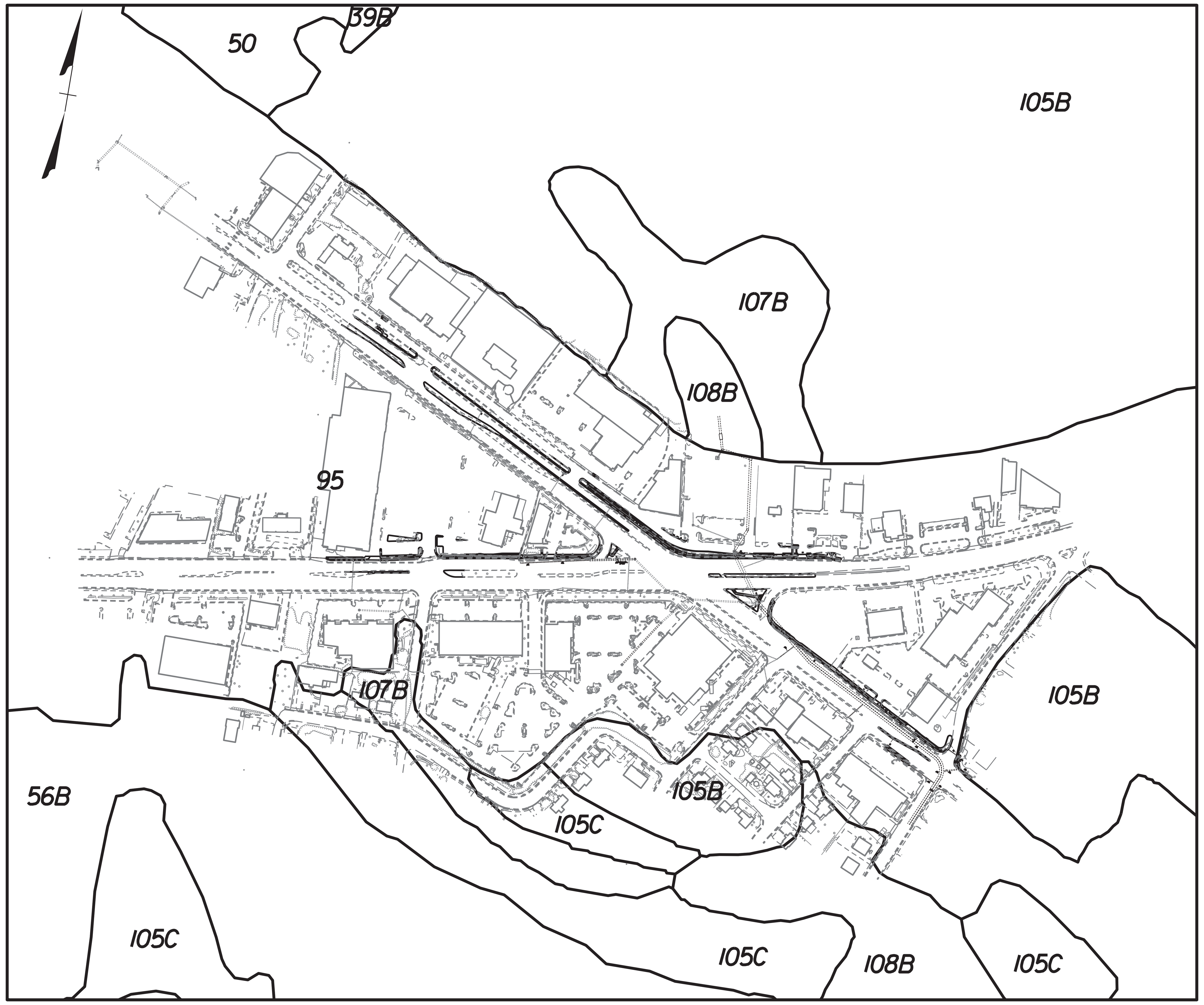
Mapping Unit	Soil Name	NRCS Description	Erodibility	Permeability	Depth of Soil (ft)	AASHTO or USCS Classification	Depth (in)	Max Water Velocity (ft/s)	Manning's n-Flow Depth 0.5-2.0 ft
39B	Glenelg silt loam, 2-7% slope	The Glenelg component makes up 85 percent of the map unit. Slopes are 2 to 7 percent. This component is on interfluves on piedmonts. The parent material consists of residuum weathered from mica schist and/or residuum weathered from phyllite. Depth to a root restrictive later is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.	moderate	moderately rapid	5.9	A-7	0-6	4.0	0.025
						A-6	6-27	3.5	0.025
						A-6	27-71	3.5	0.025
50	Hattontown silt loam, 0-25% slope	The Hattontown component makes up 100 percent of the map unit. Slopes are 0 to 25 percent. This component is on interfluves on basins. The parent material consists of mine spoil or earthy fill derived from basalt and/or mine spoil or earthy fill derived from diabase. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 57 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 0 percent. Nonirrigated land capability is 2e. This soil does not meet hydric criteria.	severe	moderately slow	5	A-7	0-4	4.0	0.025
						A-6	4-60	3.5	0.025
56B	Hattontown - Orange complex, 2-7% slope	The Hattontown component makes up 45% of the map unit. Slopes are 0 to 15 percent. This component is on interfluves on basins. The parent material consists of mine spoil or earthy fill derived from basalt and/or mine spoil or earthy fill derived from diabase. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 57 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 0 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.	severe	slow to moderately slow	5	A-2	0-4	4.5	0.030
						A-7	4-60	4.0	0.025
		The Orange component makes up 40 percent of the map unit. Slopes are 2 to 7 percent. This component is on interfluves on piedmonts. The parent material consists of residuum weathered from diabase. Depth to a root restrictive layer, bedrock, paralithic, is 40 to 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is high. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April, November, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.				A-6	0-8	3.5	0.025
						A-7	8-50	4.0	0.025
						A-7	50-58	4.0	0.025
95	Urbanland	Generated brief soil descriptions are created for major soil components. The Urban Land is a miscellaneous area.	-	-	-	-	-	-	-
105B	Wheaton-Glenelg complex, 2-7% slope	The Wheaton component makes up 45 percent of the map unit. Slopes are 2 to 15 percent. This component is on interfluves on piedmonts. The parent material consists of mine spoil or earthy fill derived from phyllite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.	moderate	moderate	5.9	A-4	0-9	2.3	0.020
						A-2	9-60	4.5	0.030
		The Glenelg component makes up 40 percent of the map unit. Slopes are 2 to 7 percent. This component is on interfluves on piedmonts. The parent material consists of residuum weathered from mica schist and/or residuum weathered from phyllite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.				A-4	0-6	2.3	0.020
						A-6	6-27	3.5	0.025
						A-4	27-71	2.3	0.020
105C	Wheaton-Glenelg complex, 7-15% slope	The Wheaton component makes up 45 percent of the map unit. Slopes are 2 to 25 percent. This component is on interfluves on piedmonts. The parent material consists of mine spoil or earthy fill derived from phyllite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.	moderate	moderate	5.9	A-2	0-9	4.5	0.030
						A-2	9-60	4.5	0.030
		The Glenelg component makes up 40 percent of the map unit. Slopes are 7 to 14 percent. This component is on interfluves on piedmonts. The parent material consists of residuum weathered from mica schist and/or residuum weathered from phyllite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.				A-7	0-6	4.0	0.025
						A-6	6-27	3.5	0.025
						A-2	27-71	4.5	0.030
107B	Wheaton-Meadowville complex, 2-7% slope	The Wheaton component makes up 46 percent of the map unit. Slopes are 2 to 15 percent. This component is on interfluves on piedmonts. The parent material consists of mine spoil or earthy fill derived from phyllite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.	slight to moderate	moderately rapid	6	A-2	0-9	4.5	0.030
						A-2	9-60	4.5	0.030
		The Meadowville component makes up 44 percent of the map unit. Slopes are 0 to 2 percent. This component is on drainageways on piedmonts. The parent material consists of local alluvium over residuum weathered from schist. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 44 inches during January, February, March, April, May, December. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.				A-4	0-12	2.3	0.020
						A-6	12-31	3.5	0.025
						A-6	31-39	3.5	0.025
						A-4	39-72	2.3	0.020
108B	Wheaton-Sumerduck complex, 2-7% slope	The Wheaton component makes up 45 percent of the map unit. Slopes are 2 to 15 percent. This component is on interfluves on piedmonts. The parent material consists of mine spoil or earthy fill derived from phyllite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.	moderate	moderately slow	8.3	A-4	0-9	2.3	0.020
						A-4	9-60	2.3	0.020
		The Sumerduck component makes up 40 percent of the map unit. Slopes are 2 to 7 percent. This component is on drainageways on piedmonts. The parent material consists of alluvium derived from schist and/or alluvium derived from phyllite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during January, February, March, April, November, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.				A-6	0-4	3.5	0.025
						A-7	4-31	4.0	0.025
						A-2	31-100	4.5	0.030



PLAN NO.	PROJECT	FILE NO.	SHEET NO.
-	0029-151-108	-	IN(2)

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Office Locations

NORTHERN VIRGINIA DISTRICT

8/20/2014

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Erosion & Sediment Control Plan: Phase I

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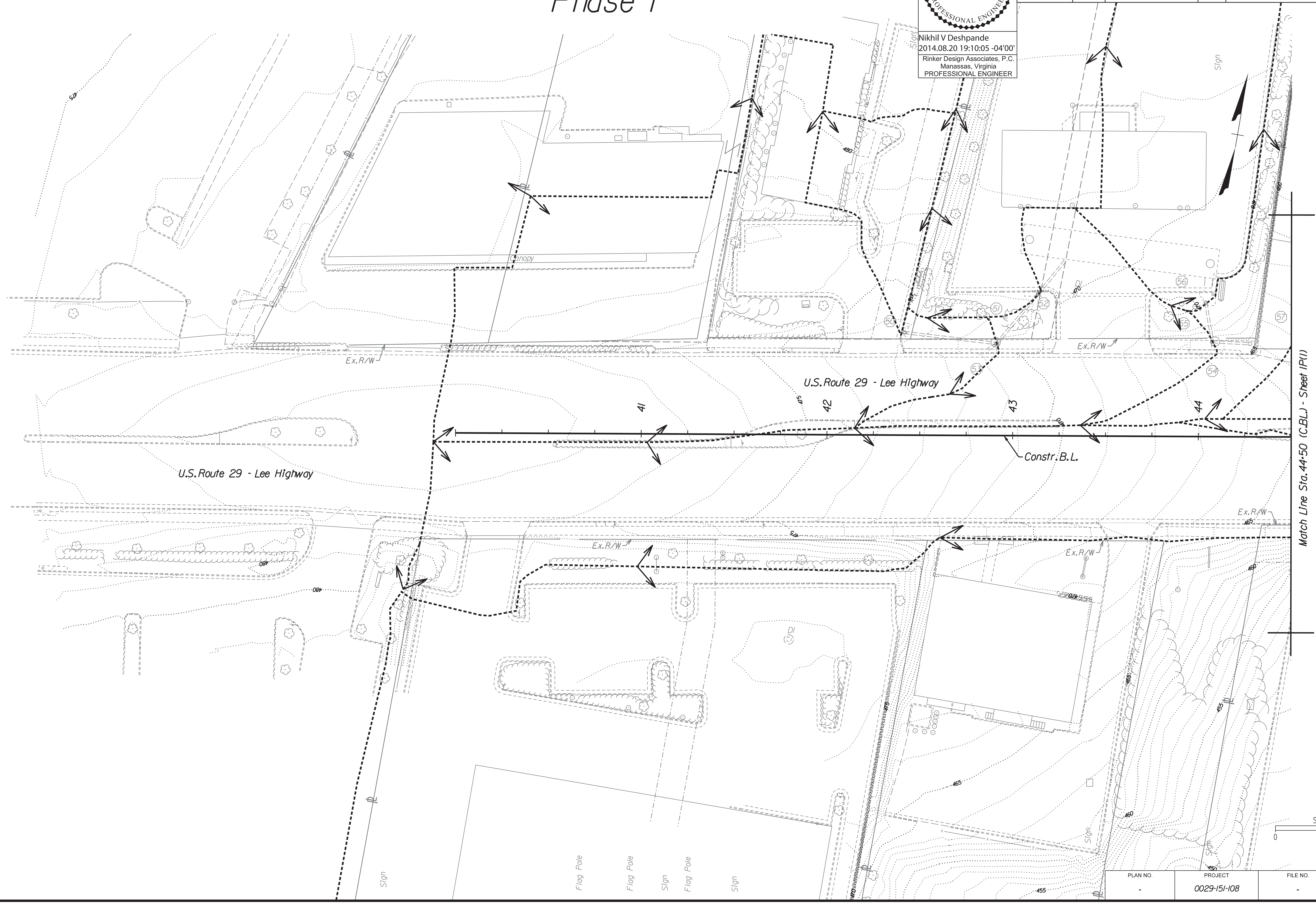
REVISED	STATE	FEDERAL AID PROJECT OWNER	STATE ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-540I(675) RSTP-5A0I(I78)	29	0029-I5I-I08 RW-20I, C-50I	IP



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REVISED	STATE	FEDERAL AID PROJECT OWNER	ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	IP(1)

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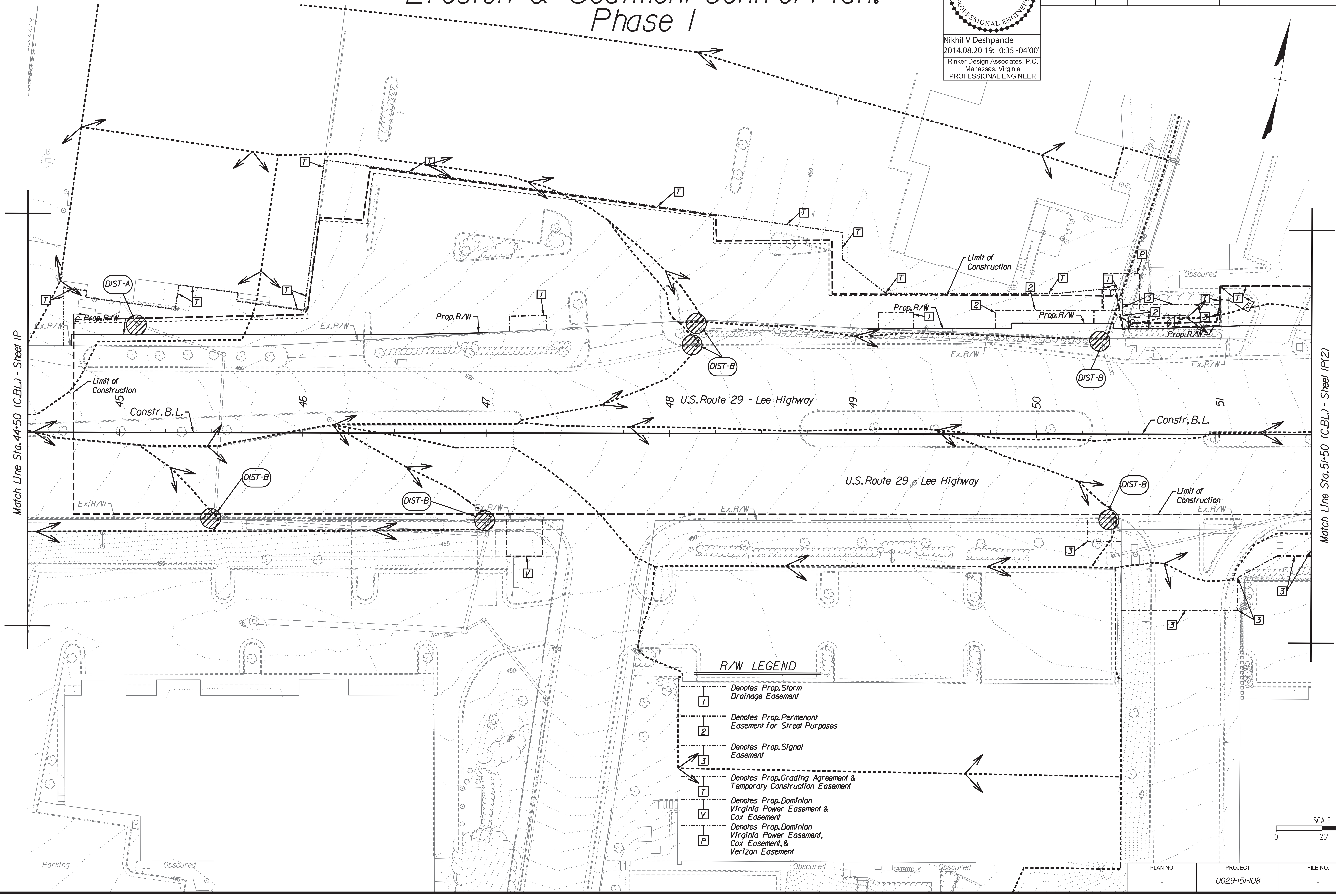
Erosion & Sediment Control Plan: Phase I



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Erosion & Sediment Control Plan: Phase I

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REVISED	STATE	FEDERAL AID PROJECT OWNER	ROUTE	STATE PROJECT	SHEET NO.
08-23-13	VA.	STP-5401(675) RSTP-5A01(178)	29	0029-151-108 RW-201, C-501	IP(2)

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
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